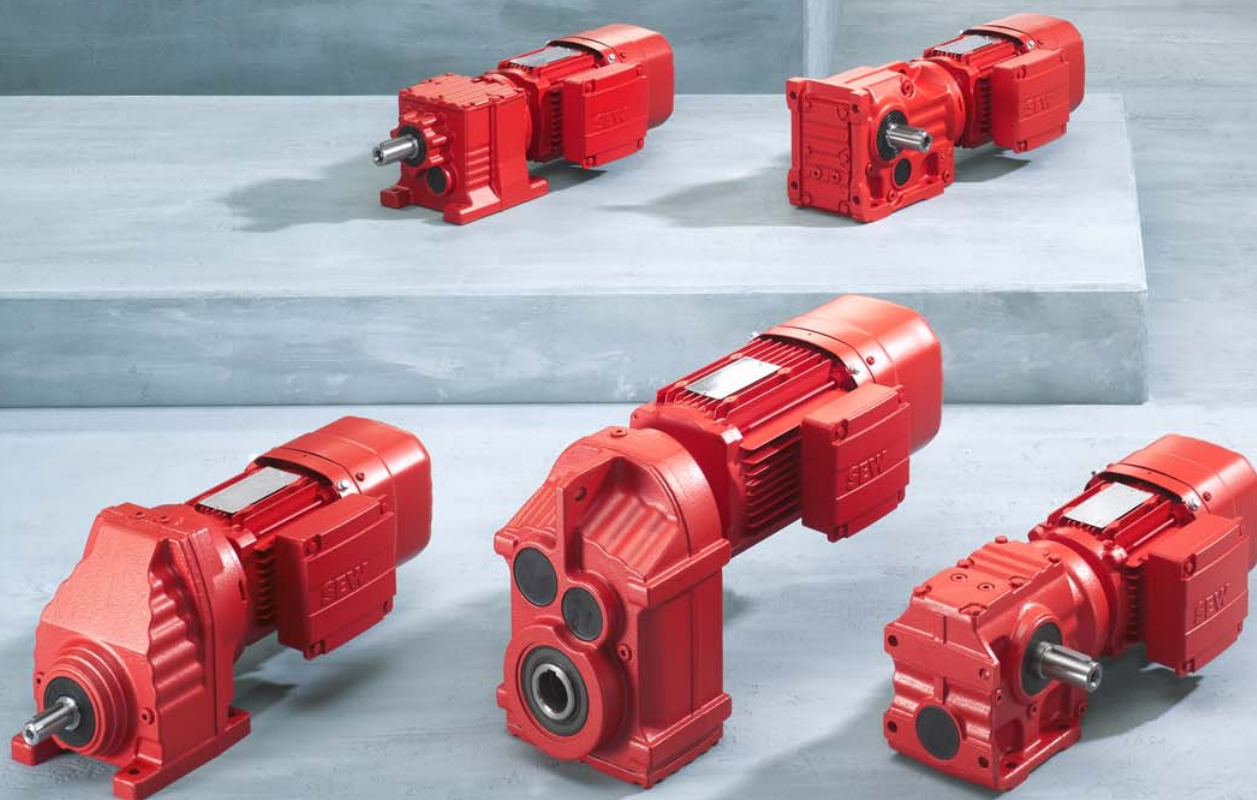




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## **Catalog**

### **DRE Gearmotors (IE2)**





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## **1 Introduction**

### **1.1 The SEW-EURODRIVE Group of Companies**

#### **1.1.1 Global presence**

Driving the world – with innovative drive solutions for all industries and for every application. Products and systems from SEW-EURODRIVE are used all over the world. Be it in the automotive, building materials, food and beverage or metal-processing industry: The decision to use drive technology "made by SEW-EURODRIVE" stands for reliability for both functionality and investment.

We are represented in the most important branches of industry all over the world: with 15 manufacturing plants and 76 Drive Technology Centers worldwide and our customer support, which we consider an integrative service that continues our commitment to outstanding quality.

#### **1.1.2 Always the right drive**

The SEW-EURODRIVE modular concept offers millions of combinations. This wide selection enables you to choose the correct drive for all applications, each based on the required speed and torque range, space available, and the ambient conditions. Gear units and gearmotors offering a unique and finely tuned performance range and the best economic prerequisites to face your drive challenges.

The modular DR motor system comprises the energy-efficiency motor variants IE1 to IE4 and was designed and produced with all the worldwide requirements for energy efficiency classes in mind. In all relevant countries, the DR motor was approved and certified without any problems. In combination with gear units from SEW-EURODRIVE, the energy-efficient drives achieve highest levels of efficiency.

The gearmotors are electronically empowered by MOVITRAC<sup>®</sup> frequency inverters, MOVIDRIVE<sup>®</sup> drive inverters and MOVIAXIS<sup>®</sup> multi-axis servo inverters, a combination that blends perfectly with the existing SEW-EURODRIVE program. As is the case for mechanical systems, development, production and assembly is carried out completely by SEW-EURODRIVE. In combination with our drive electronics, these drives provide the utmost in flexibility.

Products of the servo drive system, such as low backlash servo gear units, compact servomotors or MOVIAXIS<sup>®</sup> multi-axis servo drives provide precision and dynamics. From single-axis or multi-axis applications all the way to synchronized process sequences, servo drive systems by SEW-EURODRIVE offer a flexible and customized implementation of your application.

For economical, decentralized installations, SEW-EURODRIVE offers components from its decentralized drive system, such as MOVIMOT<sup>®</sup>, the gearmotor with integrated frequency inverter or MOVI-SWITCH<sup>®</sup>, the gearmotor with integrated switching and protection function. SEW-EURODRIVE hybrid cables have been designed specifically to ensure cost-effective solutions, independent of the philosophy behind the system or the size of the system. The latest developments from SEW-EURODRIVE: DRC electronic motor, MOVIGEAR<sup>®</sup> mechatronic drive system, MOVIFIT<sup>®</sup> decentralized drive control, MOVIPRO<sup>®</sup> decentralized drive, positioning and application controller, and MOVITRANS<sup>®</sup> system components for contactless energy transfer.

Power, quality and sturdy design combined in one standard product: With SEW-EURODRIVE, high torque industrial gear units achieve large movements. The modular concept will once again provide optimum adaptation of industrial gear units to meet a wide range of different applications.



**1.2 Products and systems from SEW-EURODRIVE**

The products and systems from SEW-EURODRIVE are divided into four product groups.

- Gearmotors and frequency inverters
- Servo drive systems
- Decentralized drive systems
- VARIOLUTION® and MAXOLUTION®
- Industrial gear units

Products and systems used in applications of several groups are listed in a separate group entitled "products and systems covering several product groups." Consult the following tables to locate the products and systems included in the respective product group:

<b>Gearmotors and frequency inverters</b>		
<b>Gear units / gearmotors</b>	<b>Motors</b>	<b>Frequency inverters</b>
<ul style="list-style-type: none"> <li>• Helical gear units / helical gearmotors</li> <li>• Parallel-shaft helical gear units / parallel-shaft helical gearmotors</li> <li>• Helical-bevel gear units / helical-bevel gearmotors</li> <li>• Helical-worm gear units / helical-worm gearmotors</li> <li>• SPIROPLAN® right-angle gearmotors</li> <li>• Drives for electrified monorail systems</li> <li>• Geared torque motors</li> <li>• Pole-changing gearmotors</li> <li>• Variable speed gear units / variable speed gearmotors</li> <li>• Aseptic gearmotors</li> <li>• ATEX, IECEx and HazLoc-NA® compliant gear units / gearmotors</li> <li>• ATEX, IECEx and HazLoc-NA® compliant variable-speed gear units</li> </ul>	<ul style="list-style-type: none"> <li>• Asynchronous AC motors / AC brakemotors</li> <li>• Pole-changing AC motors / AC brakemotors</li> <li>• Energy-efficient motors</li> <li>• Explosion-proof AC motors / AC brakemotors</li> <li>• Torque motors</li> <li>• Single-phase motors / single-phase brakemotors</li> <li>• Asynchronous linear motors</li> </ul>	<ul style="list-style-type: none"> <li>• MOVITRAC® frequency inverters</li> <li>• MOVIDRIVE® inverters</li> <li>• Control, technology and communication options for inverters</li> </ul>

<b>Servo drive systems</b>		
<b>Servo gear units / servo gearmotors</b>	<b>Servomotors</b>	<b>Servo drive inverters / servo inverters</b>
<ul style="list-style-type: none"> <li>• Low backlash planetary servo gear units / planetary gearmotors</li> <li>• Low backlash helical-bevel servo gear units / helical-bevel gearmotors</li> <li>• R, F, K, S, W gear units / gearmotors</li> <li>• Explosion-proof servo gear units / servo gearmotors</li> </ul>	<ul style="list-style-type: none"> <li>• Asynchronous servomotors / servo brakemotors</li> <li>• Synchronous servomotors / servo brakemotors</li> <li>• Explosion-proof servomotors / servo brakemotors</li> <li>• Synchronous linear motors</li> </ul>	<ul style="list-style-type: none"> <li>• MOVIDRIVE® servo inverters</li> <li>• MOVIAXIS® multi-axis servo inverters</li> <li>• Control, technology and communication options for servo drive inverters and servo inverters</li> </ul>



Decentralized drive systems		
Decentralized drives	Communication and installation	Contactless energy transfer
<ul style="list-style-type: none"> <li>• DRC electronic motor / MOVIGEAR<sup>®</sup> mechatronic drive system               <ul style="list-style-type: none"> <li>– DBC – Direct Binary Communication</li> <li>– DAC – Direct AS-Interface Communication</li> <li>– DSC – Direct SBus Communication</li> <li>– SNI – Single Line Network Installation</li> </ul> </li> <li>• MOVIMOT<sup>®</sup> gearmotors with integrated frequency inverter</li> <li>• MOVIMOT<sup>®</sup> motors / brakemotors with integrated frequency inverter</li> <li>• MOVI-SWITCH<sup>®</sup> gearmotors with integrated switching and protection function</li> <li>• MOVI-SWITCH<sup>®</sup> motors/brakemotors with integrated switching and protection function</li> <li>• Explosion-proof MOVIMOT<sup>®</sup> and MOVI-SWITCH<sup>®</sup> gearmotors</li> </ul>	<ul style="list-style-type: none"> <li>• Fieldbus interfaces</li> <li>• Field distributors for decentralized installation</li> <li>• MOVIFIT<sup>®</sup> product range               <ul style="list-style-type: none"> <li>– MOVIFIT<sup>®</sup> FDC for controlling MOVIGEAR<sup>®</sup> and DRC drive units</li> <li>– MOVIFIT<sup>®</sup> MC for controlling MOVIMOT<sup>®</sup> drives</li> <li>– MOVIFIT<sup>®</sup> SC with integrated electronic motor switch</li> <li>– MOVIFIT<sup>®</sup> FC with integrated frequency inverter</li> </ul> </li> <li>• MOVIPRO<sup>®</sup> product range               <ul style="list-style-type: none"> <li>– MOVIPRO<sup>®</sup> SDC decentralized drive and position controller</li> <li>– MOVIPRO<sup>®</sup> ADC decentralized drive and application controller</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• MOVITRANS<sup>®</sup> system               <ul style="list-style-type: none"> <li>– Stationary components for energy supply</li> <li>– Mobile components for energy consumption</li> <li>– Line cables and installation material</li> </ul> </li> </ul>
VARIOLUTION <sup>®</sup> and MAXOLUTION <sup>®</sup>		
<ul style="list-style-type: none"> <li>• VARIOLUTION<sup>®</sup> packages for high technical solution expertise in plants and machines</li> <li>• MAXOLUTION<sup>®</sup> systems for customer-specific system solutions and plants</li> </ul>		
Industrial gear units		
<ul style="list-style-type: none"> <li>• Helical gear units</li> <li>• Bevel-helical gear units</li> <li>• Planetary gear units</li> </ul>		
Products and systems covering several product groups		
<ul style="list-style-type: none"> <li>• Operator terminals</li> <li>• MOVI-PLC<sup>®</sup> drive-based control system</li> <li>• Components of the type "functional safety"</li> <li>• Diagnostic units</li> </ul>		

In addition to products and systems, SEW-EURODRIVE offers a comprehensive range of services. These include:

- Technical consulting
- Application software
- Seminars and training
- Extensive technical documentation
- Worldwide customer service

Visit our website at

**[www.sew-eurodrive.com](http://www.sew-eurodrive.com)**

The website provides comprehensive information and services.





## 1.3 Documentation

### 1.3.1 Content of this publication

This "DRE Gearmotors (IE2)" catalog provides a detailed description of the following product groups offered by SEW-EURODRIVE:

- DRE helical gearmotors
- DRE parallel-shaft helical gearmotors
- DRE helical-bevel gearmotors
- DRE helical-worm gearmotors
- DRE-SPIROPLAN® gearmotors

### 1.3.2 Additional documentation

You can order additional documentation from SEW-EURODRIVE or download it from the homepage. The complete range of technical documentation is available in various languages for download from the web at [www.sew-eurodrive.com](http://www.sew-eurodrive.com).

#### *Catalogs*

- DRS gearmotors (IE1)
- DRP gearmotors (IE3)
- Asynchronous servo gearmotors
- Synchronous servo gearmotors
- AC motors
- Synchronous servomotors
- DRC electronic motors
- Variable speed gearmotors
- Pole-changing gearmotors
- Geared torque motors
- Gear units
- Servo gear units
- Explosion-proof drives
- Explosion-proof AC motors

#### *Drive Engineering – Practical Implementation*

You find detailed documentation about the entire topic of electrical drive engineering in the publications of the "Drive Engineering – Practical Implementation" series:

- Project planning for drives
- EMC in drive engineering – basic theoretical principles and EMC-compliant installation in practice
- Efficient plant automation with mechatronic drive solutions
- SEW encoder systems
- Servo technology
- Explosion-proof drives to EU Directive 94/9/EC

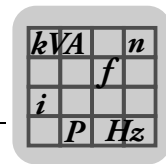
**1.4 Product names and trademarks**

All product names in this documentation are trademarks or registered trademarks of their respective titleholders.

**1.5 Copyright notice**

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## 2 Product description

### 2.1 Product features

#### 2.1.1 Operating temperature

Gear units and gearmotors from SEW-EURODRIVE can be operated in a wide range of ambient temperatures. The following standard temperature ranges are permitted for filling the gear units according to the lubricant table:

Gear unit	Filled with	Permitted standard temperature range
<b>K..19, K..29</b>	CLP(PG) VG460	-20 °C to +60 °C
<b>K..37 – 187, R and F</b>	CLP(CC) VG220	-15 °C to +40 °C
<b>S</b>	CLP(CC) VG680	0 °C to +40 °C
<b>W</b>	CLP(SEW-PG) VG460	-20 °C to +40 °C

The nominal data of the gear units and gearmotors specified in the catalog refer to an ambient temperature of +25 °C.

Gear units and gearmotors from SEW-EURODRIVE can be operated outside the standard temperature range if project planning is adapted to ambient temperatures from as low as up to -40 °C in the intensive cooling range until up to +60 °C. Project planning must take special operating conditions into account and adapt the drive to the ambient conditions by selecting suitable lubricants and seals.

This kind of project planning is generally recommended for increased ambient temperatures as of size 97 and for helical-worm gear units with small gear ratios. SEW-EURODRIVE will gladly carry out this project planning for you.

If the drive is to be operated on a frequency inverter, you must also consider the project planning notes for the inverter and take into account the thermal effects of inverter operation.

#### 2.1.2 Installation altitude

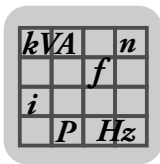
Due to the low air density at high installation altitudes, heat dissipation on the surface of motors and gear units decreases. The rated data listed in the catalog applies to an installation altitude of maximum 1000 m above sea level. Installation altitudes of more than 1000 m asl must be taken into account for project planning of gear units and gearmotors.

#### 2.1.3 Power and torque

The power and torque ratings listed in the catalogs refer to mounting position M1 and similar mounting positions in which the input stage is not completely submerged in oil. In addition, the gearmotors are assumed to be standard versions with standard lubrication and under normal ambient conditions.

#### 2.1.4 Speeds

The quoted output speeds of the gearmotors are recommended values. You can calculate the rated output speed based on the rated motor speed and the gear unit ratio. Please note that the actual output speed depends on the motor load and the supply system conditions.



### 2.1.5 Noise

The noise levels of all SEW-EURODRIVE gear units, motors and gearmotors are well within the maximum permitted noise levels set forth in the VDI guideline 2159 for gear units and IEC/EN 60034 for motors.

### 2.1.6 Painting

The gear units, motors and gearmotors from SEW-EURODRIVE are painted as follows:

Gear unit	Painting according to standard 1843
R, F, K, S, W gear units	Blue/gray RAL 7031

Special paints are available on request.

### 2.1.7 Heat dissipation and accessibility

The gearmotors / brakemotors must be mounted on the driven machine in such a way that both axially and radially, there is enough space left for unimpeded air admission and heat dissipation, for maintenance work on the brake and, if required, for the MOVIMOT® inverter. Please also refer to the notes in the motor dimension sheets.

### 2.1.8 Weight

Please note that the weight information shown in the catalogs excludes the oil fill for the gear units and gearmotors. The weight varies according to gear unit design and gear unit size. The lubricant fill depends on the mounting position, which means that in this case no universally applicable information can be given. Refer to the "Design and operating notes / lubricants" chapter for recommended lubricant fill quantities depending on the mounting position. For the exact weight, refer to the order confirmation.

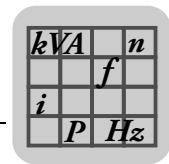
### 2.1.9 Reduced backlash variant

Helical, parallel-shaft helical and helical-bevel gear units with reduced backlash are available as of gear unit size 37. The circumferential backlash of these gear units is considerably less than that of the standard versions so that positioning tasks can be solved with great precision. The circumferential backlash is specified in angular minutes in the technical data. The circumferential backlash for the output shaft is specified without load (max. 1% of the rated output torque); the gear unit input end is blocked. For further information, refer to chapter "Design and operating notes / Reduced backlash gear units".

### 2.1.10 Multi-stage gearmotors

You can achieve particularly low output speeds by using multi-stage gear units or multi-stage gearmotors. This requires a helical gear unit on the input end as a second gear unit.

It may be necessary to limit the motor power to match the maximum permitted output torque of the gear unit.



### 2.1.11 RM gear units, RM gearmotors

RM gear units and RM gearmotors are a special type of helical gear units with an extended output bearing hub. They were designed especially for agitating applications and allow for high overhung and axial loads and bending moments. The other data are the same as for standard helical gear units and standard helical gearmotors. You find special project planning notes for RM gearmotors in the "Project planning/RM gear units" chapter.

### 2.1.12 SPIROPLAN® right-angle gearmotors

SPIROPLAN® right-angle gearmotors are robust, single- and two-stage right-angle gearmotors with SPIROPLAN® gearing. The difference to the helical-worm gear units is the material combination of the steel-on-steel gearing, the special tooth meshing relationships and the aluminum housing. As a result, the SPIROPLAN® right-angle gearmotors are wear-free, very quiet-running and lightweight.

The particularly short design and the aluminum housing make for very compact and lightweight drive solutions.

The wear-free gearing and lifetime lubrication make for long periods of maintenance-free operation. The identical hole spacing in the foot and face as well as the same shaft height to both makes for a number of mounting options.

Two different flange diameters are available. On request, SPIROPLAN® right-angle gearmotors can be equipped with a torque arm.

### 2.1.13 Brakemotors

On request, motors and gearmotors can be supplied with an integrated mechanical brake. The SEW-EURODRIVE brake is an electromagnetic disk brake with a DC coil that releases electrically and brakes using spring force. Due to its operating principle, the brake is applied if the power fails. It meets the basic safety requirements. The brake can also be released mechanically if equipped with manual brake release. For this purpose, the brake is supplied with either a hand lever with automatic reset or an adjustable setscrew. The brake is controlled by a brake controller that is either installed in the motor wiring space or in the control cabinet.

A characteristic feature of the brakes is their extremely short design. The brake bearing end shield is a part of both the motor and the brake. The integrated construction of the SEW-EURODRIVE brakemotor permits particularly compact and sturdy solutions.

### 2.1.14 International markets

On request, SEW-EURODRIVE supplies UL registered motors or CSA certified motors with connection conditions according to CSA and NEMA standard.

On request, SEW-EURODRIVE supplies UL registered MOVIMOT® drives with connection conditions according to NEMA standards.

For the Japanese market, SEW-EURODRIVE offers motors conforming to JIS standard. Contact your sales representative to assist you in such cases.



#### 2.1.15 Components on the input side

The following components on the input side are available for gear units from SEW-EURODRIVE:

- **Input covers with input shaft extension, optionally with**
  - Centering shoulder
  - Backstop
  - Motor mounting platform
- **Adapter**
  - For mounting IEC or NEMA motors with the option of a backstop
  - For mounting servomotors with a square flange
  - With torque limiting safety couplings and speed or slip monitor
  - With hydraulic start-up coupling, also available with disk brake or backstop

#### 2.1.16 Swing base

A swing base is a drive unit consisting of helical-bevel gear unit, hydraulic centrifugal coupling and electric motor. The complete arrangement is mounted to a rigid mounting rail.

Motor swings are available with the following optional accessories:

- Torque arm
- Mechanical thermal monitoring unit
- Contactless thermal monitoring unit

## 2.2 Corrosion and surface protection

### 2.2.1 General information

SEW-EURODRIVE offers various optional protective measures for operating motors and gearmotors under special ambient conditions.

The protective measures comprise two groups:

- Corrosion protection KS for motors
- Surface protection OS for motors and gear units

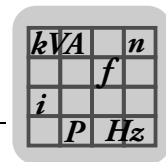
For motors, optimum protection is offered by a combination of corrosion protection KS and surface protection OS.

Special optional protective measures for the output shafts are also available.

### 2.2.2 KS corrosion protection

KS corrosion protection for motors comprises the following measures:

- All retaining screws that are loosened during operation are made of stainless steel.
- The nameplates are made of stainless steel.
- Various motor parts are coated with a finishing varnish.
- The flange contact surfaces and shaft ends are treated with a temporary anti-corrosion agent.
- Additional measures for brakemotors.



A sticker labeled "KORROSIONSSCHUTZ" (corrosion protection) on the fan guard indicates that special treatment has been applied.




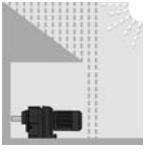
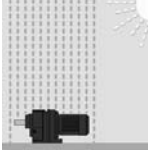
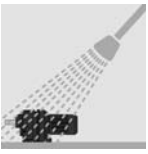

### INFORMATION

The following motor options are not available with KS corrosion protection:

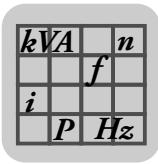
- Forced cooling fan /V
- Shaft-centered encoders /ES, /ES7, /EG, /EG7, /EV7, /AS, /AS7, /AG, /AG7, /AV7

#### 2.2.3 OS surface protection

In addition to the standard surface protection, motors and gear units are available with surface protection OS1 to OS4. The special measure "Z" is also available in addition. Special measure "Z" means that large contour recesses are filled with rubber before painting.

Surface protection, <sup>1)2)</sup>	Ambient conditions	Sample applications
<b>Standard</b> 	Suitable for machines and systems in buildings and rooms indoors with neutral atmospheres. Similar to corrosivity category <sup>3)</sup> : <ul style="list-style-type: none"> <li>• C1 (negligible)</li> </ul>	<ul style="list-style-type: none"> <li>• Machines and systems in the automobile industry</li> <li>• Transport systems in logistics</li> <li>• Conveyor belts at airports</li> </ul>
<b>OS1</b> 	Suitable for environments prone to condensation and atmospheres with low humidity or contamination, such as applications outdoors under roof or with protection. According to corrosivity category <sup>3)</sup> : <ul style="list-style-type: none"> <li>• C2 (low)</li> </ul>	<ul style="list-style-type: none"> <li>• Systems in saw mills</li> <li>• Hall gates</li> <li>• Agitators and mixers</li> </ul>
<b>OS2</b> 	Suitable for environments with high humidity or moderate atmospheric contamination, such as applications outdoors subject to direct weathering. According to corrosivity category <sup>3)</sup> : <ul style="list-style-type: none"> <li>• C3 (moderate)</li> </ul>	<ul style="list-style-type: none"> <li>• Applications in amusement parks</li> <li>• Funiculars and chair-lifts</li> <li>• Applications in gravel plants</li> <li>• Systems in nuclear power plants</li> </ul>
<b>OS3</b> 	Suitable for environments with high humidity and occasionally severe atmospheric and chemical contamination. Occasionally acidic or caustic wet cleaning. Also for applications in coastal areas with moderate salt load. According to corrosivity category <sup>3)</sup> : <ul style="list-style-type: none"> <li>• C4 (high)</li> </ul>	<ul style="list-style-type: none"> <li>• Sewage treatment plants</li> <li>• Port cranes</li> <li>• Mining applications</li> </ul>
<b>OS4</b> 	Suitable for environments with permanent humidity or severe atmospheric or chemical contamination. Regular acidic and caustic wet cleaning, also with chemical cleaning agents. According to corrosivity category <sup>3)</sup> : <ul style="list-style-type: none"> <li>• C5-1 (very high)</li> </ul>	<ul style="list-style-type: none"> <li>• Drives in malting plants</li> <li>• Wet areas in the beverage industry</li> <li>• Conveyor belts in the food industry</li> </ul>

1) Motors/brakemotors in degree of protection IP56 or IP66 are only available with OS2, OS3, or OS4 surface protection.  
 2) Gearmotors with surface protection OS2 - OS4 are only offered in combination with KS corrosion protection for motors.  
 3) According to DIN EN ISO 12944-2, classification of ambient conditions



### 2.2.4 Special protection measures

Gearmotor output shafts can be treated with special optional protective measures for operation subject to severe environmental pollution or in particularly demanding applications.

Measures	Protection principle	Suitable for
Fluorocarbon rubber oil seal	High quality material	Drives subject to chemical contamination
Coating on output shaft end	Surface treatment on the contact surface of the oil seal	Severe environmental impact and in conjunction with fluorocarbon rubber oil seal
Output shaft made of stainless steel	Surface protection with high-quality material	Particularly demanding applications in terms of surface protection

### 2.2.5 NOCO® fluid

As standard, SEW-EURODRIVE supplies NOCO® fluid corrosion protection and lubricant with every hollow shaft gear unit. Use NOCO® fluid when installing hollow shaft gear units. Using this fluid helps prevent contact corrosion and makes it easier to disassemble the drive at a later time. NOCO® fluid is also suitable for protecting machined metal surfaces that do not have corrosion protection, such as parts of shaft ends or flanges. You can also order larger quantities of NOCO® fluid from SEW-EURODRIVE.

NOCO® fluid is food grade according to USDA-H1. The food-grade NOCO® fluid has a corresponding NSF-H1 label on the packaging.

## 2.3 Extended storage

### 2.3.1 Type

You can also order gear units designed for "extended storage". SEW-EURODRIVE recommends the extended storage type for storage periods longer than 9 months.

The lubricant of gear units for extended storage is mixed with a VCI anti-corrosion agent (volatile corrosion inhibitors). Please note that this VCI anti-corrosion agent is only effective in a temperature range of -25 °C to +50 °C. The flange contact surfaces and shaft ends are also treated with an anti-corrosion agent. If not specified otherwise in your order, the gear unit with "extended storage" option will be supplied with OS1 surface protection. Instead of OS1, you can order OS2, OS3 or OS4.

Surface protection	Suitable for
OS1	Low environmental impact
OS2	Medium environmental impact
OS3	High environmental impact
OS4	Very high environmental impact

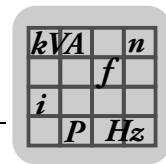


### INFORMATION

The gear units must remain tightly sealed until taken into operation to prevent the VCI corrosion protection agent from evaporating.

The gear units come with the oil fill according to the specified mounting position (M1 – M6). Always check the oil level before you take the gear unit into operation.





### 2.3.2 Storage conditions

Observe the storage conditions specified in the following table for extended storage:

Climate zone	Packaging <sup>1)</sup>	Storage <sup>2)</sup>	Storage duration
Temperate (Europe, USA, Canada, China and Russia, excluding tropical zones)	Packed in containers, with desiccant and moisture indicator sealed in the plastic wrap.	Under roof, protected against rain and snow, shock-free.	Up to 3 years with regular checks of the packaging and moisture indicator (rel. humidity < 50%).
	Open	Under roof and enclosed at constant temperature and atmospheric humidity (5 °C < $\vartheta$ < 50 °C, < 50% relative humidity). No sudden temperature fluctuations. Controlled ventilation with filter (free from dust and dirt). No aggressive vapors, no shocks.	2 years or more with regular inspections. Check for cleanliness and mechanical damage during inspection. Check corrosion protection.
Tropical (Asia, Africa, Central and South America, Australia, New Zealand excluding temperate zones)	Packed in containers, with desiccant and moisture indicator sealed in the plastic wrap.	Under roof, protected against rain and shocks.	Up to 3 years with regular checks of the packaging and moisture indicator (rel. humidity < 50%).
	Protected against insect damage and mildew by chemical treatment.  Open	Under roof and enclosed at constant temperature and atmospheric humidity (5 °C < $\vartheta$ < 50 °C, < 50% relative humidity). No sudden temperature fluctuations. Controlled ventilation with filter (free from dust and dirt). No aggressive vapors, no shocks. Protected against insect damage.	2 years or more with regular inspections. Check for cleanliness and mechanical damage during inspection. Check corrosion protection.

- 1) The packaging must be carried out by an experienced company using the packaging materials that have been explicitly specified for the particular application.
- 2) SEW-EURODRIVE recommends to store the gear units according to the mounting position.

## 2.4 Condition monitoring: Oil aging sensor

### 2.4.1 DUO10A diagnostic unit

The diagnostic unit consists of a temperature sensor and the actual evaluation unit. The service life curves of the oil grades common in SEW gear units are stored in the evaluation unit. SEW-EURODRIVE can customize any oil grade in the diagnostic unit. Standard parameterization is performed directly on the evaluation unit. During operation, the evaluation unit uses the oil temperature to continuously calculate the remaining service life in days until the next oil change. The remaining service life is displayed directly on the evaluation unit. The end of the service life can also be transferred to a higher-level system via a binary signal and be evaluated or visualized there.

Using the DUO10A diagnostic unit, the system operator no longer has to replace the oil within predefined intervals, but can adapt the replacement interval individually to the actual load. The benefits are reduced maintenance and service costs, and increased system availability.

## 2.5 Oil expansion tank

The oil expansion tank allows the lubricant or air space of the gear unit to expand. This means no lubricant can escape the breather valve at high operating temperatures.

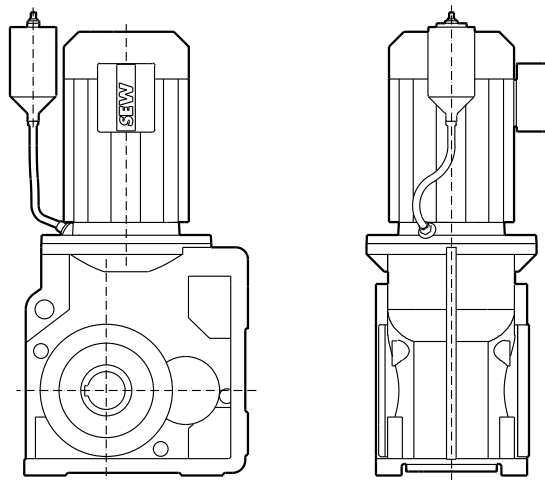
SEW-EURODRIVE recommends to use oil expansion tanks for gear units and gearmotors in M4 mounting position and for input speeds > 2000 rpm.



## Product description

### Explosion protection according to ATEX

The following figure shows the oil expansion tank:



The oil expansion tank is provided as assembly kit. It is intended for mounting onto the gearmotor. However, if installation space is limited or if the expansion tank is intended for gear units without motor, it can be mounted to nearby machine parts.

For further information, please contact your SEW-EURODRIVE sales representative.

## 2.6 Explosion protection according to ATEX

### 2.6.1 Area of application

EU directive 94/9/EC or ATEX lays down new regulations for explosion protection in all types of devices for the European market. This means the directive also applies to gear units. Since July 1, 2003, EU directive 94/9/EC has been applicable without restrictions to the use of gearmotors and motors within the European Union. Other European countries, such as Switzerland, have fallen in with this regulation since.

### 2.6.2 Scope

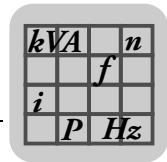
SEW-EURODRIVE supplies explosion-proof gear units in accordance with the corresponding ATEX directive. This also applies to options and accessories in explosion-proof design.

Depending on their features and dimensions, explosion-proof gear units are suitable for:

- Potentially explosive gas atmosphere, zone 1 or 2.
- Potentially explosive dust atmosphere, zone 21 or 22.

SEW-EURODRIVE supplies gearmotors and motors in the following categories for use in zones 1, 21, 2, and 22:

- II2G
- II2D
- II3GD
- II3D



Stand-alone gear units with components on the input side are available in the following categories:

- Gear units with AM adapter and input shaft assembly for use in zones 1, 21, 2 and 22
  - II2GD
- Gear units with AR adapter for use in zones 2 and 22
  - II3GD

AT adapters and drives on a swing base are not available according to ATEX regulation.

### 2.6.3 Other documentation

For detailed information about explosion-proof SEW-EURODRIVE products, refer to the "Explosion-Proof Drives" catalog and the "Explosion-Proof AC Motors" catalog.



### 3 Overview of types and type designations

#### 3.1 Variants and gear unit options

Below an overview of type designations for R, F, K, S, and W gear units and their options.

##### 3.1.1 Helical gear units

Designation	
RX..	Single-stage foot-mounted
RXF..	Single-stage B5 flange-mounted
R..	Foot-mounted
R..F	Foot-mounted and B5 flange-mounted
RF..	B5 flange-mounted
RZ..	B14 flange-mounted
RM..	B5 flange-mounted with extended bearing hub

##### 3.1.2 Parallel-shaft helical gear units

Designation	
F..	Foot-mounted
FA..B	Foot-mounted and hollow shaft
FH..B	Foot-mounted and hollow shaft with shrink disk
FV..B	Foot-mounted and hollow shaft with splined hollow shaft to DIN 5480
FF..	B5 flange-mounted
FAF..	B5 flange-mounted and hollow shaft
FHF..	B5 flange-mounted and hollow shaft with shrink disk
FVF..	B5 flange-mounted and hollow shaft with splined hollow shaft to DIN 5480
FA..	Hollow shaft
FH..	Hollow shaft with shrink disk
FT..	Hollow shaft with TorqLOC <sup>®</sup> hollow shaft mounting system
FV..	Splined hollow shaft according DIN 5480
FAZ..	B14 flange-mounted and hollow shaft
FHZ..	B14 flange-mounted and hollow shaft with shrink disk
FVZ..	B14 flange-mounted and hollow shaft with splined hollow shaft to DIN 5480



### 3.1.3 Helical-bevel gear units

Designation	
K..	Foot-mounted
KA..B	Foot-mounted and hollow shaft
KAF.B	Foot-mounted, B5 flange, hollow shaft
KF..B	Foot-mounted, B5 flange
KH..B	Foot-mounted and hollow shaft with shrink disk
KHF.B	Foot-mounted, B5 flange, hollow shaft with shrink disk
KV..B	Foot-mounted and hollow shaft with splined hollow shaft to DIN 5480
KF..	B5 flange-mounted
KAF..	B5 flange-mounted and hollow shaft
KHF..	B5 flange-mounted and hollow shaft with shrink disk
KVF..	B5 flange-mounted and hollow shaft with splined hollow shaft to DIN 5480
KA..	Hollow shaft
KH..	Hollow shaft with shrink disk
KT..	Hollow shaft with TorqLOC <sup>®</sup> hollow shaft mounting system
KV..	Splined hollow shaft according DIN 5480
KAZ..	B14 flange-mounted and hollow shaft
KHZ..	B14 flange-mounted and hollow shaft with shrink disk
KVZ..	B14 flange-mounted and hollow shaft with splined hollow shaft to DIN 5480

### 3.1.4 Helical-worm gear units

Designation	
S..	Foot-mounted
SF..	B5 flange-mounted
SAF..	B5 flange-mounted and hollow shaft
SHF..	B5 flange-mounted and hollow shaft with shrink disk
SA..	Hollow shaft
SH..	Hollow shaft with shrink disk
ST..	Hollow shaft with TorqLOC <sup>®</sup> hollow shaft mounting system
SAZ..	B14 flange-mounted and hollow shaft
SHZ..	B14 flange-mounted and hollow shaft with shrink disk



#### 3.1.5 SPIROPLAN® gear units

Designation	
W..	Foot-mounted
WF..	Flange-mounted
WAF..	Flange-mounted and hollow shaft
WA..	Hollow shaft
WA..B	Foot-mounted and hollow shaft
WH..B	Foot-mounted and hollow shaft with shrink disk
WHF..	Flange-mounted, hollow shaft with shrink disk
WH..	Hollow shaft with shrink disk
WT..	Hollow shaft with TorqLOC® hollow shaft mounting system

#### 3.1.6 Options

R, F and K gear units:

Designation	
/R	Reduced backlash

K, S and W gear units:

Designation	
/T	With torque arm

F gear units

Designation	
/G	With rubber buffer

#### 3.1.7 Condition monitoring

Designation	Option
/DUO	Diagnostic Unit Oil = Oil aging sensor



### 3.2 Variants and options of the DR. motor series

The type designations of the DR. motor series and its options are listed below.

#### 3.2.1 Designation of the motors

Variant	Description
DR.	2-, 4- and 6-pole energy-efficient motors in energy efficiency classes IE1 (DRS), IE2 (DRE) and IE3 (DRP) each
DRL..	4-pole asynchronous servomotors
EDR.	4-pole explosion-proof EDRS and EDRE motors
DRK..	4-pole single-phase motors with running capacitor
DRM..	12-pole torque motors
DR..J <sup>1)</sup>	4-pole line start permanent magnet (LSPM) energy-efficient motors in energy efficiency classes IE2 (DRE), IE3 (DRP) and IE4 (DRU)
71 – 315	Sizes: 71 / 80 / 90 / 100 / 112 / 132 / 160 / 180 / 200 / 225 / 250 / 280 / 315
K – L, MC, LC	Lengths: K= very short / S = short / M = medium / L = long MC / LC = Rotors with copper cage
2, 4, 6, 8/2, 8/4, 4/2	Number of poles

1) Detailed information about this motor type is provided in a separate document

#### 3.2.2 Output options

Option	Description
/FI	IEC foot-mounted motor
/FF	IEC flange-mounted motor with bore holes
/FT	IEC flange-mounted motor with threads
/FE	IEC flange-mounted motor with bore and IEC feet
/FY	IEC flange-mounted motor with threads and IEC feet
/FL	General flange-mounted motor (other than IEC)
/FK	General flange-mounted motor (deviating from IEC) with feet
/FG	SEW attached gearmotors as stand-alone motor
/FM	SEW attached gearmotor with IEC feet
/FC	C-face flange-mounted motor, dimensions in inch

#### 3.2.3 Mechanical attachments

Variant	Description
BE..	Spring-loaded brake with specification of size
HR	Manual brake release, automatic disengaging
HF	Manual brake release, lockable



## Overview of types and type designations

### Variants and options of the DR. motor series

Option	Description
/RS	Backstop
/MSW	MOVI-SWITCH®
/MI	Motor identification module for MOVIMOT®
/MM03 – MM40	MOVIMOT®
/MO	MOVIMOT® option(s)

#### 3.2.4 Temperature sensor / temperature detection

Option	Description
/TF	Temperature sensor (PTC thermistor or PTC resistor)
/TH	Thermostat (bimetallic switch)
/KY	One KTY84 – 130 sensor
/PT	One/three PT100 sensor(s)

#### 3.2.5 Encoders

Option	Description
/ES7S /EG7S /EH7S /EV7S	Mount-on speed sensor with sin/cos interface
/ES7R /EG7R /EH7R	Mount-on speed sensor with TTL (RS-422) interface, V = 9 – 26 V
/EI7C <sup>1)</sup>	Mount-on speed sensor with HTL interface
/EI76 /EI72 /EI71	Mount-on speed sensor with HTL interface and 6 / 2 / 1 period(s)
/AS7W /AG7W	Mount-on absolute encoder, RS-485 interface (multi-turn)
/AS7Y /AG7Y /AH7Y	Mount-on absolute encoder, SSI interface (multi-turn)
/ES7A /EG7A	Mount-on adapter for encoders from the SEW portfolio
/XV.A	Mount-on adapter for non-SEW encoders
/XV..	Mounted non-SEW speed sensors

1) Also available in functional safety design indicated by "FS"





### 3.2.6 Connection options

Option	Description
/IS	Integrated plug connector
/ASE.	HAN 10ES plug connector on terminal box with single locking latch (cage clamp contacts on motor end)
/ASB.	HAN 10ES plug connector on terminal box with double locking latch (cage clamp contacts on motor end)
/ACE.	HAN 10E plug connector on terminal box with single locking latch (crimp contacts on motor end)
/ACB.	HAN 10E plug connector on terminal box with double locking latch (crimp contacts on motor end)
/AME. /ABE. /ADE. /AKE.	HAN Modular 10B plug connector on terminal box with single locking latch (crimp contacts on motor end)
/AMB. /ABB. /ADB. /AKB.	HAN Modular 10B plug connector on terminal box with double locking latch (crimp contacts on motor end)
/KCC	6- or 10-pole terminal strip with cage clamp contacts (for DR.71 – DR.132, depending on the variant)
/KC1	C1-profile-compliant connection of the electric monorail system drive (VDI guideline 3643) (for DR71, 80). Alternatively for DR.90 – 132 for a more compact connection range
/IV	Other industrial plug connectors according to customer specifications

### 3.2.7 Ventilation

Option	Description
/V	Forced cooling fan
/VH	Radial fan on fan guard
/Z	Additional inertia (flywheel fan)
/AL	Metal fan
/U	Non-ventilated (without fan)
/OL	Non-ventilated (closed B side)
/C	Canopy for the fan guard
/LF	Air filter
/LN	Low-noise fan guard (for DR.71 – 132)

### 3.2.8 Storage

Option	Description
/NS	Relubrication device (only for DR.250, 280, 315)
/ERF	Reinforced bearing A-side with rolling bearing (only for DR.250, 280, 315)
/NIB	Insulated bearing B-side (only for DR.250, 280, 315)



#### 3.2.9 Condition monitoring

Option	Description
/DUB	Diagnostic unit brake = brake monitoring

#### 3.2.10 Explosion-proof motors

Option	Description
/2GD	Motors according to 94/9/EC, category 2 (gas / dust)
/2G	Motors according to 94/9/EC, category 2 (gas)
/3GD	Motors according to 94/9/EC, category 3 (gas / dust)
/3D	Motors according to 94/9/EC, category 3 (dust)
/VE	Forced cooling fan for motors according to 94/9/EC, category 3 (gas / dust)

For detailed information about explosion-proof motors of the EDR.. series, refer to the "Explosion-Proof AC Motors" catalog.

#### 3.2.11 Other options

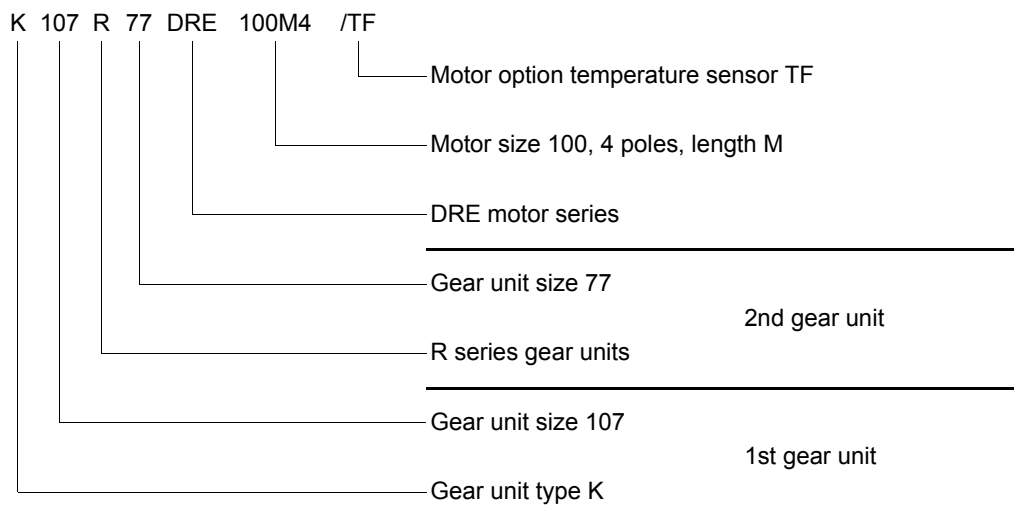
Option	Description
/DH	Condensation drain hole
/RI	Reinforced winding insulation
/RI2	Reinforced winding insulation with increased resistance against partial discharge
/2W	Second shaft end on the motor / brakemotor



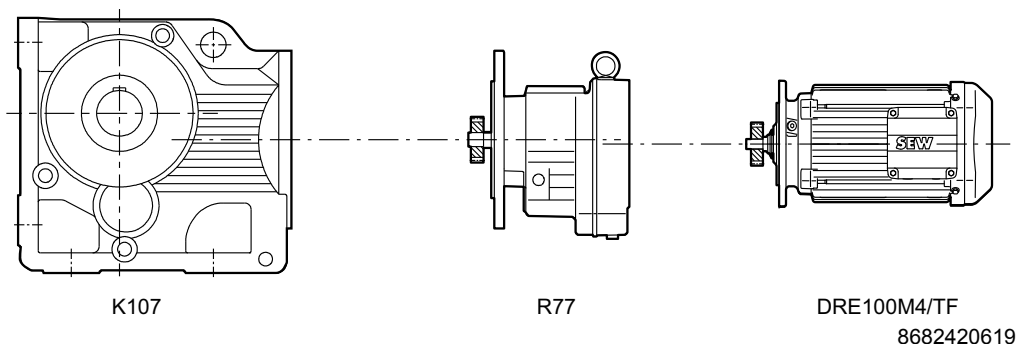
### 3.3 Example of the type designation of a DR. gearmotor

The type designation of the gearmotor starts from the component on the output end.

For instance, a multi-stage helical-bevel gearmotor with temperature sensor in the motor winding has the following type designation:



Example: DR gearmotor



Other examples:

- **RF 97 /R DRP100L4 BE2 HR**
  - Gear unit type: Reduced backlash (/R) helical gear unit in flange-mounted design
  - Gear unit size: 97
  - DRP motor series
  - Motor size 100L, 4 poles
  - Motor options: BE2 brake with self-reengaging manual brake release (HR)
- **FAF 47 /R DRS90L4 BE2 /C**
  - Gear unit type: Reduced backlash (/R) parallel-shaft helical gear unit, B5 flange, hollow shaft
  - Gear unit size: 47
  - DRS motor series
  - Motor size 90L, 4 poles
  - Motor options: BE2 brake and protection canopy for the fan guard (/C)



### 3.4 Gearmotor types

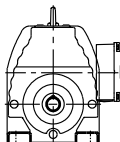
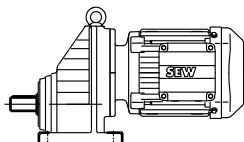


#### INFORMATION

The types described in this chapter refer to DR. gearmotors from SEW-EURODRIVE. They also apply to gear units without motors.

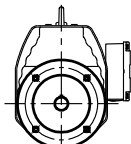
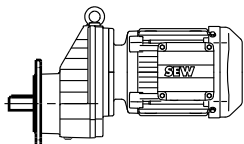
#### 3.4.1 Helical gearmotors

The following types of helical gearmotors are available:



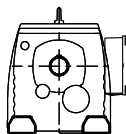
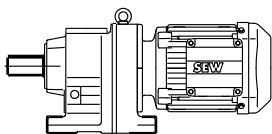
#### RX..DR..

Single-stage, foot-mounted helical gearmotor



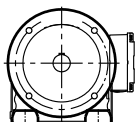
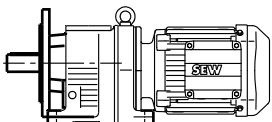
#### RXF..DR..

Single-stage, B5 flange-mounted helical gearmotor



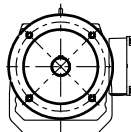
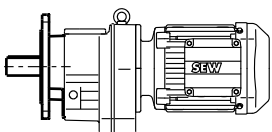
#### R..DR..

Foot-mounted helical gearmotor



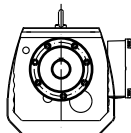
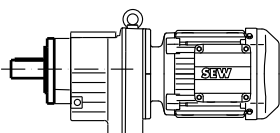
#### R..F DR..

Foot and B5 flange-mounted helical gearmotor



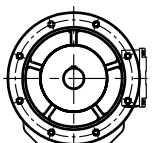
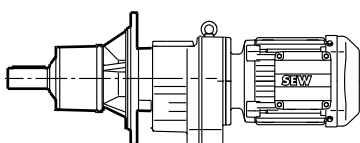
#### RF..DR..

B5 flange-mounted helical gearmotor



#### RZ..DR..

B14 flange-mounted helical gearmotor



#### RM..DR..

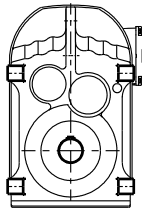
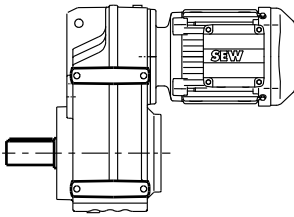
B5 flange-mounted helical gearmotor with extended bearing hub

4978459019

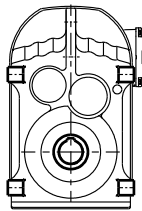
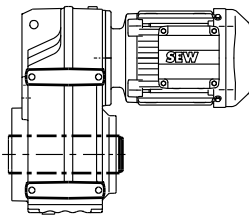


### 3.4.2 Parallel-shaft helical gearmotors

The following types of parallel-shaft helical gearmotors are available:

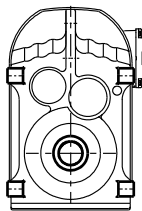
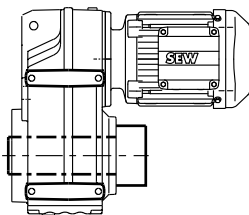


**F..DR..**  
Foot-mounted parallel-shaft helical gearmotor

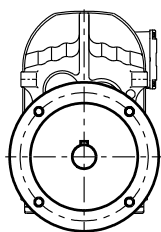
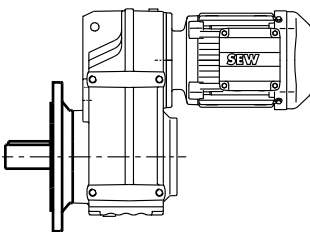


**FA..B DR..**  
Foot-mounted parallel-shaft helical gearmotor with hollow shaft

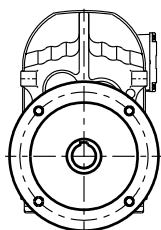
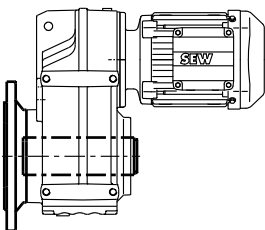
**FV..B DR..**  
Foot-mounted parallel-shaft helical gearmotor with hollow shaft and splining to DIN 5480



**FH..B DR..**  
Foot-mounted parallel-shaft helical gearmotor with hollow shaft and shrink disk



**FF..DR..**  
B5 flange-mounted parallel-shaft helical gearmotor



**FAF..DR..**  
B5 flange-mounted parallel-shaft helical gearmotor with hollow shaft

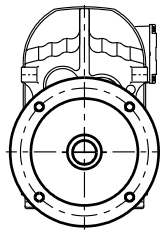
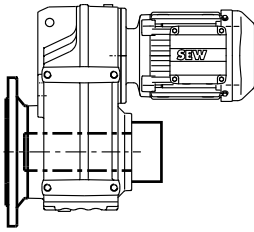
**FVF..DR..**  
B5 flange-mounted parallel-shaft helical gearmotor with hollow shaft and splining to DIN 5480

9007204233269515



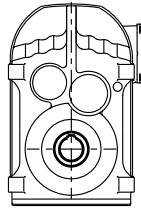
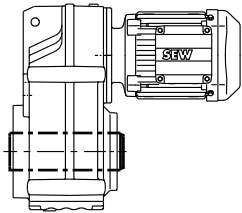
## Overview of types and type designations

### Gearmotor types



#### **FHF..DR..**

B5 flange-mounted parallel-shaft helical gearmotor with hollow shaft and shrink disk

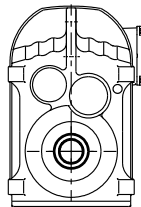
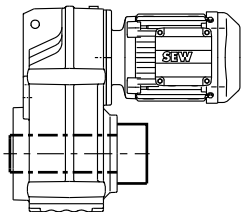


#### **FA..DR..**

Parallel-shaft helical gearmotor with hollow shaft

#### **FV..DR..**

Parallel-shaft helical gearmotor with hollow shaft and splining to DIN 5480

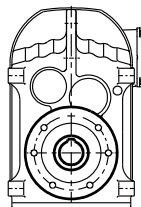
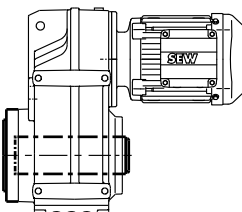


#### **FH..DR..**

Parallel-shaft helical gearmotor with hollow shaft and shrink disk

#### **FT..DR..**

Parallel-shaft helical gearmotor with hollow shaft and TorqLOC<sup>®</sup> hollow shaft mounting system

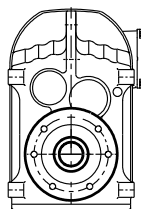
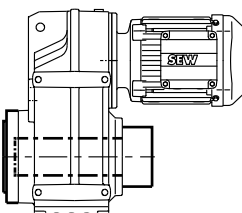


#### **FAZ..DR..**

B14 flange-mounted parallel-shaft helical gearmotor with hollow shaft

#### **FVZ..DR..**

B14 flange-mounted parallel-shaft helical gearmotor with hollow shaft and splining to DIN 5480



#### **FHZ..DR..**

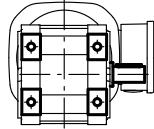
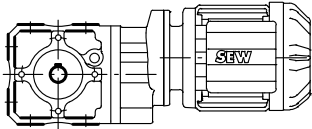
B14 flange-mounted parallel-shaft helical gearmotor with hollow shaft and shrink disk

9007204233271179



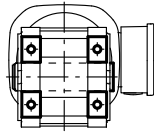
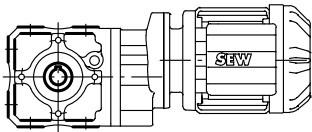
### 3.4.3 Helical-bevel gearmotors, gear unit sizes K..9

The following types of helical-bevel gearmotors with gear units of size K..9 are available:



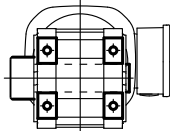
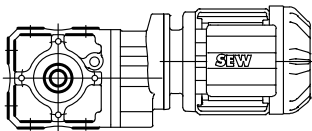
**K.9DR..**

Foot-mounted helical-bevel gearmotor



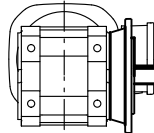
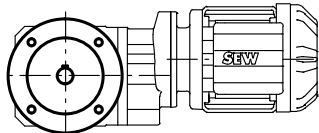
**KA.9B..DR..**

Foot-mounted helical-bevel gearmotor with hollow shaft



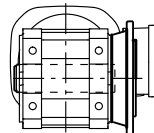
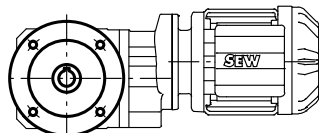
**KH.9B..DR..**

Foot-mounted helical-bevel gearmotor with hollow shaft and shrink disk



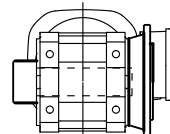
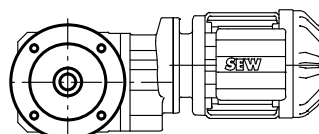
**KF.9B..DR..**

Foot-mounted helical-bevel gearmotor with B5 flange



**KAF.9B..DR..**

Foot-mounted helical-bevel gearmotor with B5 flange and hollow shaft



**KHF.9B..DR..**

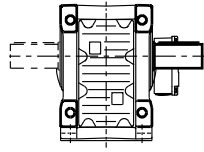
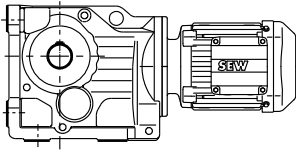
Foot-mounted helical-bevel gearmotor with B5 flange, hollow shaft and shrink disk

8986538507



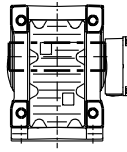
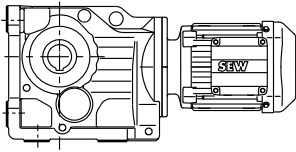
#### 3.4.4 Helical-bevel gearmotors, gear unit sizes K..7

The following types of helical-bevel gearmotors with gear units of size K..7 are available:



##### **K..7..DR..**

Foot-mounted helical-bevel gearmotor

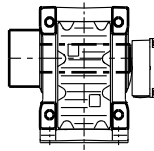
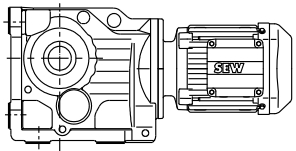


##### **KA..7B..DR..**

Foot-mounted helical-bevel gearmotor with hollow shaft

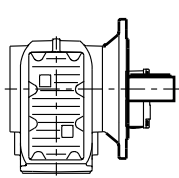
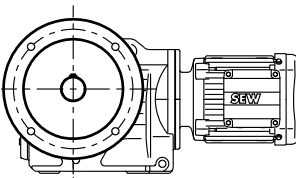
##### **KV..7B..DR..**

Foot-mounted helical-bevel gearmotor with hollow shaft and splining to DIN 5480



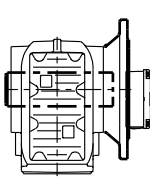
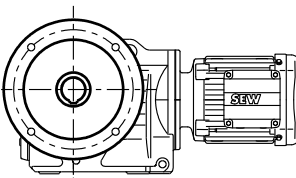
##### **KH..7B..DR..**

Foot-mounted helical-bevel gearmotor with hollow shaft and shrink disk



##### **KF..7..DR..**

B5 flange-mounted helical-bevel gearmotor



##### **KAF..7..DR..**

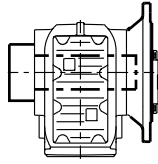
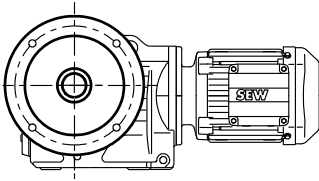
B5 flange-mounted helical-bevel gearmotor with hollow shaft

##### **KVF..7..DR..**

B5 flange-mounted helical-bevel gearmotor with hollow shaft and splining to DIN 5480

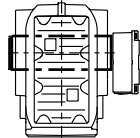
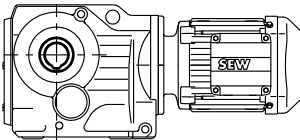
9007204233281035





**KHF..7..DR..**

B5 flange-mounted helical-bevel gearmotor with hollow shaft and shrink disk

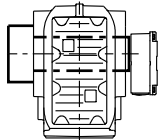
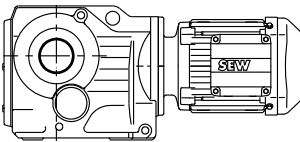


**KA..7..DR..**

Helical-bevel gearmotor with hollow shaft

**KV..7..DR..**

Helical-bevel gearmotor with hollow shaft and splining to DIN 5480

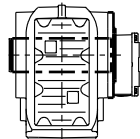
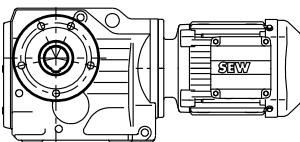


**KH..7..DR..**

Helical-bevel gearmotor with hollow shaft and shrink disk

**KT..7..DR..**

Helical-bevel gearmotor with hollow shaft and TorqLOC® hollow shaft mounting system

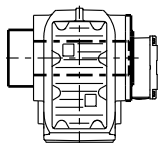
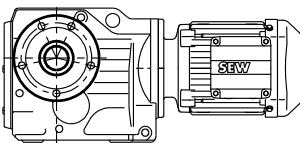


**KAZ..7..DR..**

B14 flange-mounted helical-bevel gearmotor with hollow shaft

**KVZ..7..DR..**

B14 flange-mounted helical-bevel gearmotor with hollow shaft and splining to DIN 5480



**KHZ..7..DR..**

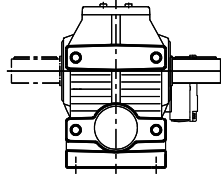
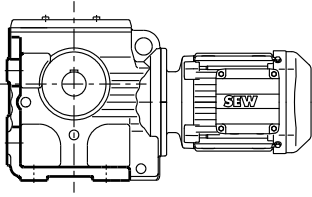
B14 flange-mounted helical-bevel gearmotor with hollow shaft and shrink disk

9007204233282699



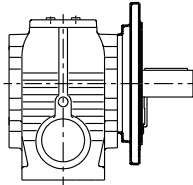
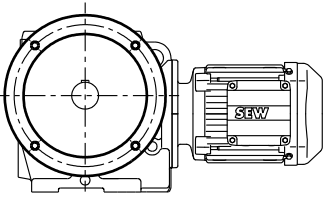
#### 3.4.5 Helical-worm gearmotors

The following types of helical-worm gearmotors are available:



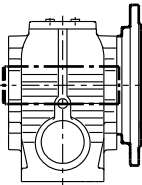
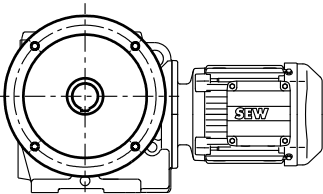
#### **S..DR..**

Foot-mounted helical-worm gearmotor



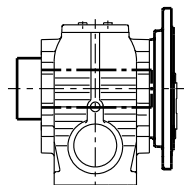
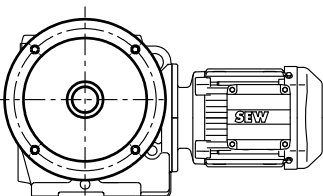
#### **SF..DR..**

B5 flange-mounted helical-worm gearmotor



#### **SAF..DR..**

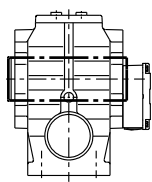
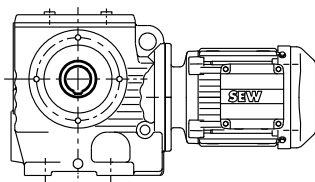
B5 flange-mounted helical-worm gearmotor with hollow shaft



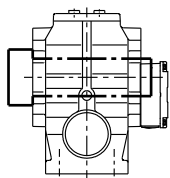
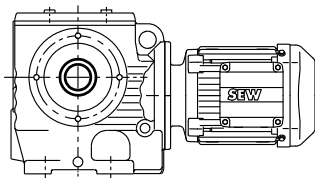
#### **SHF..DR..**

B5 flange-mounted helical-worm gearmotor with hollow shaft and shrink disk

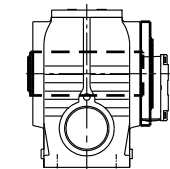
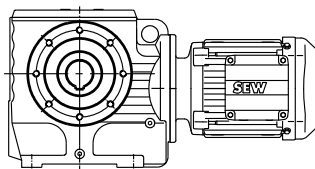
4978544395



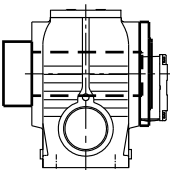
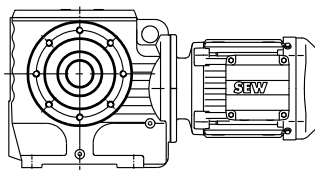
**SA..DR..**  
Helical-worm gearmotor with hollow shaft



**SH..DR..**  
Helical-worm gearmotor with hollow shaft and shrink disk



**ST..DR..**  
Helical-worm gearmotor with hollow shaft and TorqLOC® hollow shaft mounting system



**SAZ..DR..**  
B14 flange-mounted helical-worm gearmotor with hollow shaft



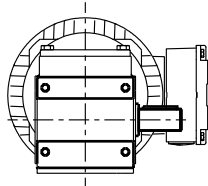
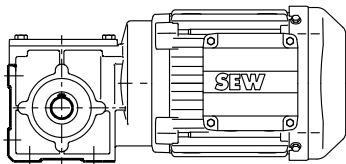
**SHZ..DR..**  
B14 flange-mounted helical-worm gearmotor with hollow shaft and shrink disk

4978546059

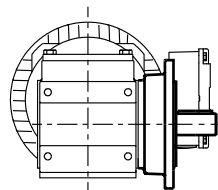
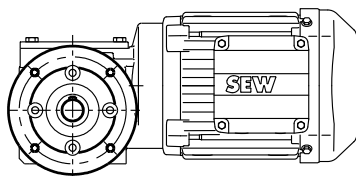


#### 3.4.6 SPIROPLAN® gearmotors, gear unit sizes W..10, W..20, W..30

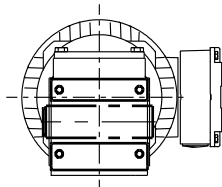
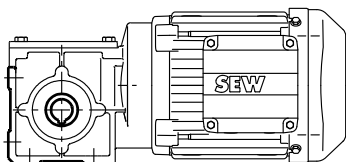
The following types of SPIROPLAN® gearmotor sizes W..10, W..20 and W..30 are available:



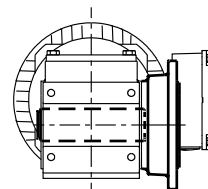
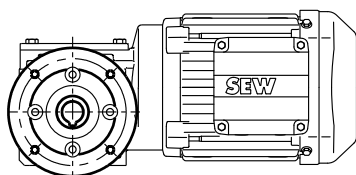
**W10..DR., W20..DR., W30..DR.,**  
Foot-mounted SPIROPLAN® gearmotor



**WF10..DR., WF20..DR., WF30..DR..**  
Flange-mounted SPIROPLAN® gearmotor



**WA10..DR., WA20..DR., WA30..DR..**  
SPIROPLAN® gearmotor with hollow shaft



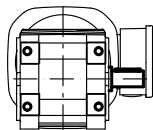
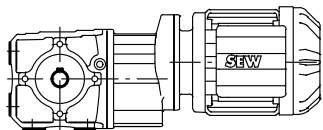
**WAF10..DR., WAF20..DR., WAF30..DR..**  
Flange-mounted SPIROPLAN® gearmotor with hollow shaft

4978548747



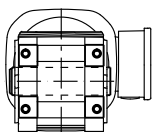
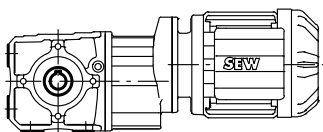
3.4.7 SPIROPLAN® gearmotors, gear unit sizes W..37 and W..47

The following types of SPIROPLAN® gearmotor sizes W..37 and W..47 are available:

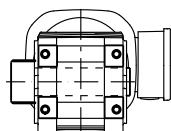
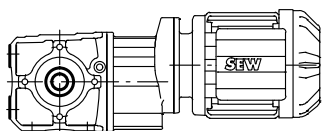


**W37..DR., W47..DR..**  
Foot-mounted SPIROPLAN® gearmotor

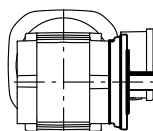
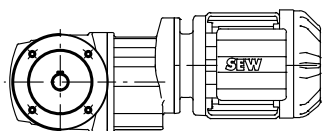
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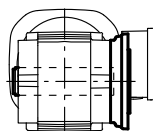
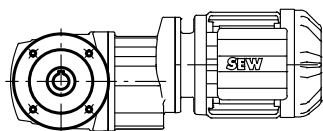
**WA37..B DR., WA47..B DR..**  
Foot-mounted SPIROPLAN® gearmotor with hollow shaft



**WH37..B DR., WH47..B DR..**  
Foot-mounted SPIROPLAN® gearmotor with hollow shaft and shrink disk



**WF37..DR., WF47..DR..**  
B5 flange-mounted SPIROPLAN® gearmotor



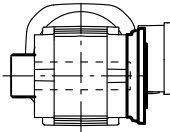
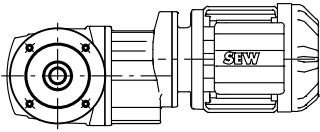
**WAF37..DR., WAF47..DR..**  
B5 flange-mounted SPIROPLAN® gearmotor with hollow shaft

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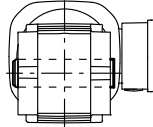
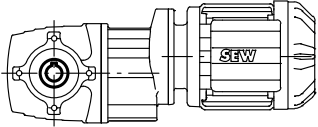
## Overview of types and type designations

### Gearmotor types



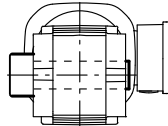
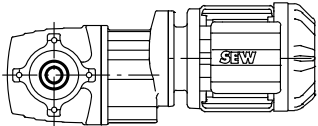
#### **WHF37..DR.., WHF47..DR..**

B5 flange-mounted SPIROPLAN® gearmotor with hollow shaft and shrink disk



#### **WA37..DR.., WA47..DR..**

SPIROPLAN® gearmotor with hollow shaft



#### **WH37..DR.., WH47..DR..**

SPIROPLAN® gearmotor with hollow shaft and shrink disk

#### **WT37..DR.., WT47..DR..**

SPIROPLAN® gearmotor with hollow shaft and TorqLOC® hollow shaft mounting system

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## 4 Project planning for drives

### 4.1 Additional publications

For more detailed information about the project planning for drives, refer to the website of SEW-EURODRIVE where you can download the following publications of the "Drive Engineering – Practical Implementation" series. The series can also be ordered as hard copy.

- Project planning for drives
- EMC in Drive Engineering – Basic Theoretical Principles and EMC-Compliant Installation in Practice
- Efficient Plant Automation with Mechatronic Drive Solutions
- SEW encoder systems
- Servo technology
- Drive Engineering – Practical Implementation: Explosion-Proof Drives to EU Directive 94/9/EC

The complete range of technical documentation is available in various languages for download from the web at

[www.sew-eurodrive.com](http://www.sew-eurodrive.com)

### 4.2 Drive and gear unit selection data

Certain data of the application have to be provided to being able to precisely define the components for your drive.

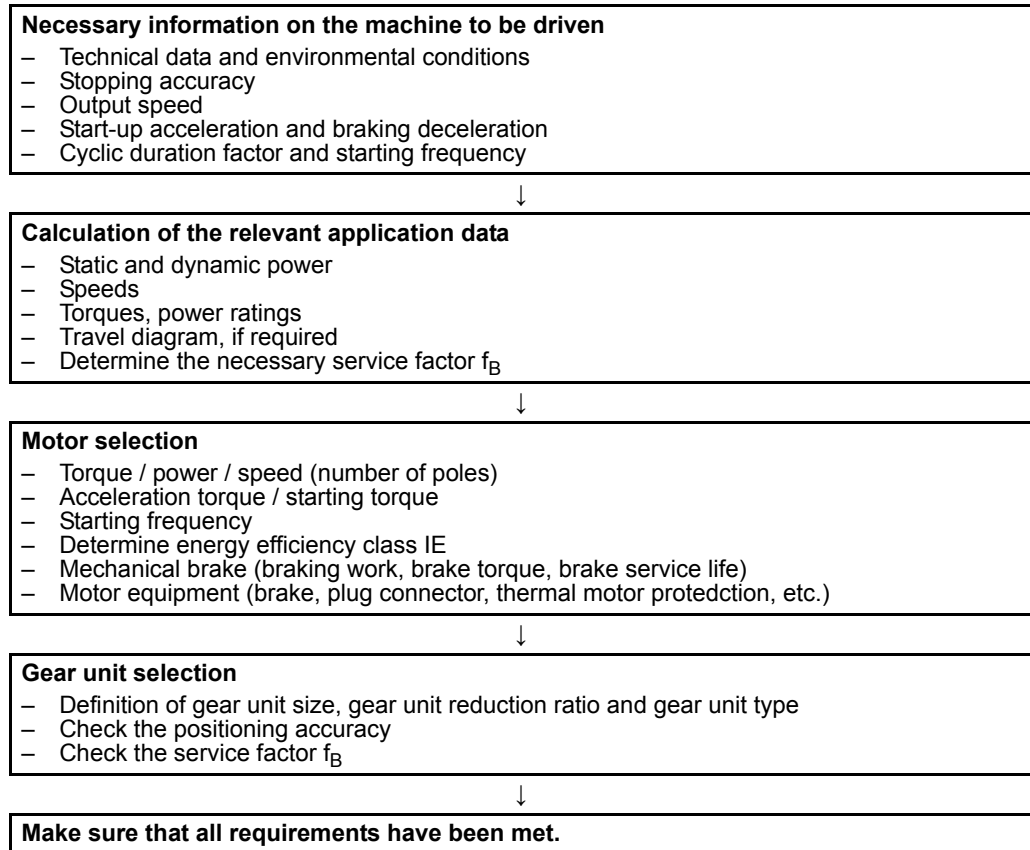
Designation	Meaning	Unit
$n_{amin}$	Minimum output speed	[1/min]
$n_{amax}$	Maximum output speed	[1/min]
$P_a$ at $n_{amin}$	Output power at minimum output speed	[kW]
$P_a$ at $n_{amax}$	Output power at maximum output speed	[kW]
$M_a$ at $n_{amin}$	Output torque at minimum output speed	[Nm]
$M_a$ at $n_{amax}$	Output torque at maximum output speed	[Nm]
$F_A$	Axial load (tension and compression) on the output shaft	[N]
$J_{load}$	Mass moment of inertia to be driven	[10 <sup>-4</sup> kgm <sup>2</sup> ]
<b>R, F, K, S, W M1 - M6</b>	Mounting position and required gear unit type → Mounting position of gear units chapter (page 54), → Project planning notes for R, F, K, S, W gear units chapter (page 42)	-
<b>IP..</b>	Required degree of protection	-
$\vartheta_{amb}$	Ambient temperature	[°C]
<b>H</b>	Installation altitude	[m above sea level]
<b>S.., ..% cdf</b>	Duty type and cyclic duration factor (cdf) or exact load cycle can be entered.	-
<b>Z</b>	Starting frequency; alternatively, exact load cycle can be specified	[1/h]
$f_{line}$	Line frequency	[Hz]
$V_{mot}$ $V_{brake}$	Operating voltage of motor and brake	[V]
$M_B$	Required braking torque	[Nm]
<b>For inverter operation: Required control type and setting range</b>		



#### 4.3 Project planning procedure – DR. motors

##### 4.3.1 Drive selection – non-controlled operation

The following flow diagram illustrates the project planning procedure for a non-controlled drive. The drive consists of a gearmotor operated on the grid.

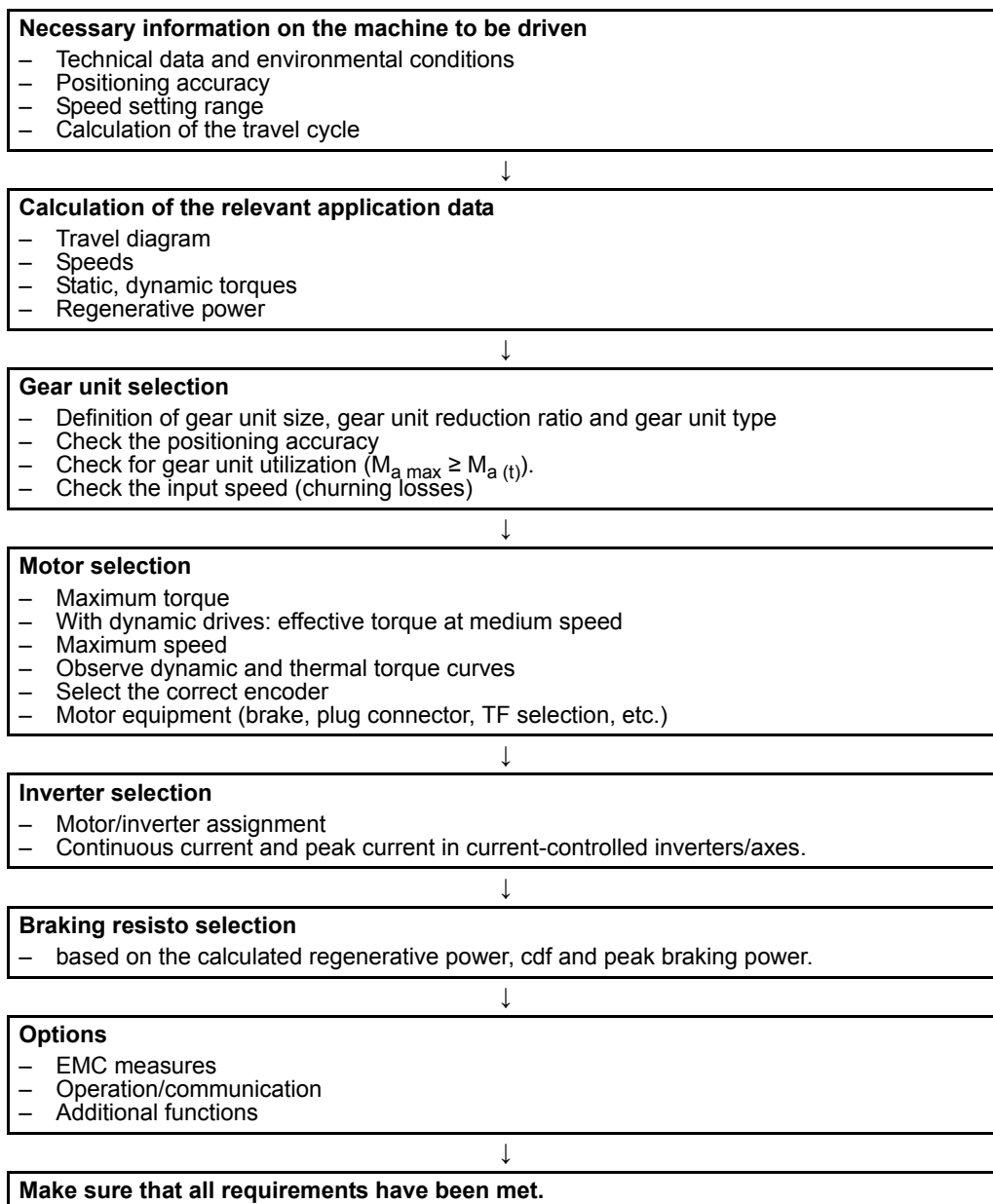






### 4.3.2 Drive selection – controlled operation

The following flow diagram illustrates the project planning procedure for a positioning drive. The drive consists of a gearmotor that is powered by an inverter.





#### 4.4 Project planning information – R, F, K, S, W gear units

##### 4.4.1 Efficiency of gear units

###### General information

The efficiency of gear units is mainly determined by the gearing and bearing friction. Keep in mind that the starting efficiency of a gear unit is always less than its efficiency at operating speed. This factor is especially pronounced in the case of helical-worm and SPIROPLAN® right-angle gearmotors.

###### R, F, K gear units

The efficiency of helical, parallel-shaft and helical-bevel gear units varies with the number of gear stages, between 96% (3-stage), 97% (2-stage) and 98% (1-stage).

###### S and W gear units

The gearing in helical-worm and SPIROPLAN® gear units produces a high proportion of sliding friction. This is the reason why these gear units have higher gearing losses and lower efficiency than R, F or K gear units.

The efficiency depends on the following factors:

- Gear ratio of the helical-worm or SPIROPLAN® stage
- Input speed
- Gear unit temperature

Helical-worm gear units from SEW-EURODRIVE are helical gear/worm combinations that are significantly more efficient than plain worm gear units.

The efficiency may reach  $\eta < 0.5$  if the helical-worm gear stage has a very high gear ratio.

The SPIROPLAN® W37/W47 gear units from SEW-EURODRIVE have an efficiency of more than 90%, which drops only slightly even for large gear unit ratios.

###### Self-locking

Retrodriving torque in helical-worm or SPIROPLAN® gear units produces an efficiency of  $\eta' = 2 - 1/\eta$ , which is significantly less favorable than the forward efficiency. The helical-worm or SPIROPLAN® gear unit is self-locking if the forward efficiency  $\eta$  is  $\leq 0.5$ . Some SPIROPLAN® gear units are dynamically self-locking. Contact SEW-EURODRIVE if you want to make technical use of the braking effect of self-locking characteristics.



#### INFORMATION

Note that the self-locking effect of helical-worm or SPIROPLAN® gear units is not permitted as the sole safety function for hoists.



*Run-in phase*

The tooth flanks of new helical-worm and SPIROPLAN® gear units are not yet completely smooth. This makes for a greater friction angle and less efficiency during the run-in phase than during later operation. This effect intensifies with increasing gear unit ratio. Subtract the following values from the listed efficiency during the run-in phase:

	Worm	
	i range	$\eta$ reduction
<b>1-start</b>	About 50 – 280	About 12%
<b>2-start</b>	About 20 – 75	About 6%
<b>3-start</b>	About 20 – 90	About 3%
<b>5-start</b>	About 6 – 25	About 3%
<b>6-start</b>	About 7 – 25	About 2%

i range	SPIROPLAN® W..
	$\eta$ reduction
About 30 – 75	About 8%
About 10 – 30	About 5%
About 3 – 10	About 3%

The run-in phase usually lasts 48 hours. Helical-worm and SPIROPLAN® gear units achieve their listed rated efficiency values when the following conditions have been met:

- The gear unit has been completely run-in
- The gear unit has reached nominal operating temperature
- The recommended lubricant has been filled
- The gear unit is operating in the rated load range

*Churning losses*

In certain gear unit mounting positions (see chapter "Gear Unit Mounting Positions"), the first gearing stage is completely immersed in the lubricant. When the circumferential velocity of the input stage is high, considerable churning losses occur in larger gear units that must be taken into account. Contact SEW-EURODRIVE if you wish to use gear units of this type.

To reduce churning losses to a minimum, use gear units in M1 mounting position.

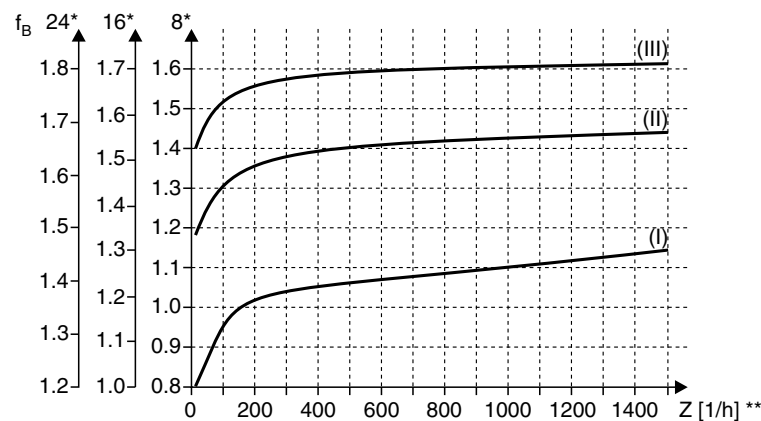


#### 4.5 Service factor

##### 4.5.1 Determining the service factor

The effect of the driven machine on the gear unit is taken into account to a sufficient level of accuracy using the service factor  $f_B$ . The service factor is determined according to the daily operating time and the starting frequency  $Z$ . Three load classifications are taken into account depending on the mass acceleration factor. You can read the service factor applicable to your application from figure 3. The service factor determined from this diagram must be smaller than or equal to the service factor according to the selection tables.

$$M_a \times f_B \leq M_{amax}$$



\* Daily operating time in hours/day

\*\* Starting frequency  $Z$ : The cycles include all starting and braking procedures as well as changeovers from low to high speed and vice versa.

**Load classification** Three load classifications are distinguished:

- (I) Uniform, permitted mass acceleration factor  $\leq 0.2$
- (II) Non-uniform, permitted mass acceleration factor  $\leq 3$
- (III) Heavy shock load, permitted mass acceleration factor  $\leq 10$

**Mass acceleration factor** The mass acceleration factor is calculated as follows:

$$\text{Mass acceleration factor} = \frac{\text{All external mass moments of inertia}}{\text{Mass moment of inertia at motor end}}$$

"All external mass moments of inertia" are the mass moments of inertia of the driven machine and the gear unit, scaled down to the motor speed. The calculation for scaling down to motor speed is performed using the following formula:

$$J_X = J \times \left( \frac{n}{n_M} \right)^2$$

$J_X$  = Mass moment of inertia scaled down to the motor shaft

$J$  = Mass moment of inertia with reference to the output speed of the gear unit

$n$  = Output speed of the gear unit

$n_M$  = Motor speed

"Mass moment of inertia at the motor end" is the mass moment of inertia of the motor and, if installed, the brake and the flywheel fan ( $Z$  fan).



Service factors  $f_B > 1.8$  may occur with large mass acceleration factors ( $> 10$ ), high levels of backlash in the transmission elements or large overhung loads. Contact SEW-EURODRIVE in such cases.

#### 4.5.2 Servicefactor: SEW $f_B$

The method for determining the maximum permitted continuous torque  $M_{amax}$  and using this value to derive the service factor  $f_B = M_{amax} / M_a$  is not defined in a standard and varies greatly from manufacturer to manufacturer. Even at a SEW service factor of  $f_B = 1$ , the gear units afford an extremely high level of safety and reliability in the fatigue strength range (exception: wearing of the worm wheel in helical-worm gear units). The service factor may differ from specifications of other gear unit manufacturers. If you are in doubt, contact SEW-EURODRIVE for more detailed information on your specific drive.

#### Example

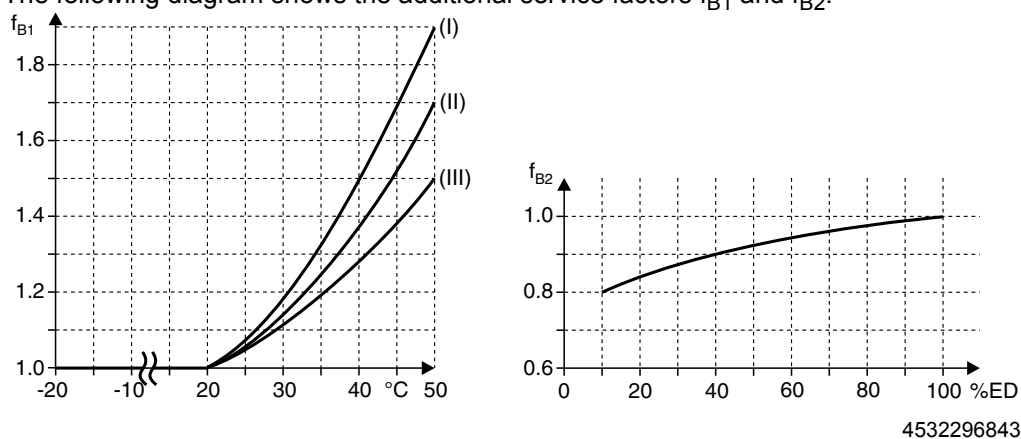
Mass acceleration factor 2.5 (load classification II), operating time 14 hours/day (read off at 16 h/d) and 300 cycles/hour produce a service factor  $f_B = 1.51$  as shown in the figure on the previous page. According to the selection tables, the selected gearmotor must have an SEW  $f_B$  value of 1.51 or greater.

#### 4.5.3 Helical-worm gear units

Two further service factors have to be taken into account with helical-worm gear units in addition to the service factor  $f_B$  shown in the above diagram. These are:

- $f_{B1}$  = Service factor from ambient temperature
- $f_{B2}$  = Service factor from cyclic duration factor

The additional service factors  $f_{B1}$  and  $f_{B2}$  can be determined by referring to the diagram below. For  $f_{B1}$ , the load classification is taken into account in the same way as for  $f_B$ . The following diagram shows the additional service factors  $f_{B1}$  and  $f_{B2}$ :



$$cdf(\%) = \frac{\text{Time under load in min/h}}{60} \times 100$$

Contact SEW-EURODRIVE in case of temperatures below -20 °C ( $\rightarrow f_{B1}$ ).

The total service factor for helical-worm gear units is calculated as follows:

$$f_{Bges} = f_B \times f_{B1} \times f_{B2}$$



#### Example

The gearmotor with the service factor  $f_B = 1.51$  in the previous example is to be a helical-worm gearmotor.

Ambient temperature  $\vartheta = 40\text{ °C} \rightarrow f_{B1} = 1.38$  (read off at load classification II)

Time under load = 40 min/h  $\rightarrow$  cdf = 66.67 %  $\rightarrow f_{B2} = 0.95$

The total service factor is  $f_{Btot} = 1.51 \times 1.38 \times 0.95 = 1.98$

According to the selection tables, the selected helical-worm gearmotor must have an SEW  $f_B$  service factor of 1.98 or greater.

## 4.6 Overhung and axial loads

### 4.6.1 Determining the overhung load

An important factor for determining the resulting overhung load is the type of transmission element mounted to the shaft end. The following transmission element factors  $f_Z$  must be considered for various transmission elements.

Transmission element	Transmission element factor $f_Z$	Comments
Gears	1.15	< 17 teeth
Chain sprockets	1.40	< 13 teeth
Chain sprockets	1.25	< 20 teeth
Narrow V-belt pulleys	1.75	Influence of pre-tensioning
Flat belt pulleys	2.50	Influence of pre-tensioning
Toothed belt pulleys	2.00 – 2.50	Influence of pre-tensioning
Gear rack pinion, pre-tensioned	2.00	Influence of pre-tensioning

The overhung load exerted on the motor or gear shaft is calculated as follows:

$$F_R = \frac{M_d \times 2000}{d_0} \times f_Z$$

$F_R$  = Overhung load in N

$M_d$  = Torque in Nm

$d_0$  = Mean diameter of the installed transmission element in mm

$f_Z$  = Transmission element factor

### 4.6.2 Higher permitted overhung loads

Exactly considering the force application angle  $\alpha$  and the direction of rotation makes it possible to achieve a higher overhung load than listed in the selection tables.

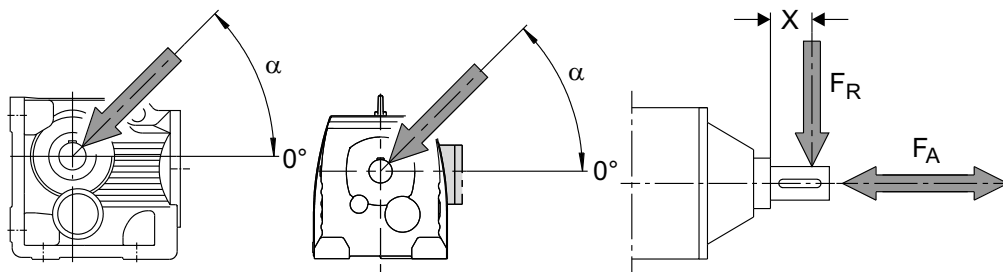
Furthermore, higher output shaft loads are permitted if heavy duty bearings are installed, especially with R, F and K gear units.

Contact SEW-EURODRIVE in such cases.



### 4.6.3 Definition of the force application

Force application is defined according to the following figure:



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$F_X$  = Permitted overhung load at point x [N]

$F_A$  = Permitted axial load [N]

### 4.6.4 Permitted axial forces

If there is no overhung load, then an axial load  $F_A$  (tension or compression) amounting to 50% of the overhung load given in the selection tables is permitted. This condition applies to the following gearmotors:

- Helical gearmotors except for R..137... to R..167...
- Parallel-shaft and helical-bevel gearmotors with solid shaft except for F97...
- Helical-worm gearmotors with solid shaft



#### INFORMATION

Contact SEW-EURODRIVE for all other types of gear units and in the event of significantly greater axial loads or combinations of overhung load and axial load.

### 4.6.5 On the output side: Overhung load conversion for off-center force application

The permitted overhung load values  $F_{Ra\max}$  and  $F_{Rapk}$  listed in the data tables are valid for force application at  $l/2$  (solid shaft) or force application at the shaft end face (hollow shaft). If the force is applied closer or further away from the gear unit, the permitted overhung loads must be redetermined again according to the project planning workflow. The following conditions must be met:

$$F_R \leq F_{Ra\max} \cdot \frac{a}{b+x} [N] \quad F_R \leq \frac{c}{f+x} [N]$$

$F_{Ra\max}$  = Permitted overhung load [N]

$x$  = Distance from the shaft shoulder to the force application point in [mm]

$a, b, f$  = Gear unit constants for overhung load conversion [mm]

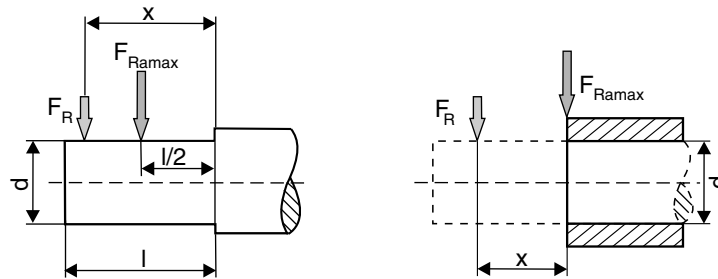
$c$  = Gear unit constant for overhung load conversion [Nmm]



## Project planning for drives

### Overhung and axial loads

The following figure shows the overhung load  $F_R$  with increased distance  $x$  to the gear unit.



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*Gear unit constants for overhung load conversion*

Gear unit type	a [mm]	b [mm]	c [Nmm]	f [mm]	d [mm]	l [mm]
RX57	43.5	23.5	$1.51 \times 10^5$	34.2	20	40
RX67	52.5	27.5	$2.42 \times 10^5$	39.7	25	50
RX77	60.5	30.5	$1.95 \times 10^5$	0	30	60
RX87	73.5	33.5	$7.69 \times 10^5$	48.9	40	80
RX97	86.5	36.5	$1.43 \times 10^6$	53.9	50	100
RX107	102.5	42.5	$2.47 \times 10^6$	62.3	60	120
R07	72.0	52.0	$4.67 \times 10^4$	11	20	40
R17	88.5	68.5	$6,527 \times 10^4$	17	20	40
R27	106.5	81.5	$1.56 \times 10^5$	11.8	25	50
R37	118	93	$1.24 \times 10^5$	0	25	50
R47	137	107	$2.44 \times 10^5$	15	30	60
R57	147.5	112.5	$3.77 \times 10^5$	18	35	70
R67	168.5	133.5	$2.65 \times 10^5$	0	35	70
R77	173.7	133.7	$3.97 \times 10^5$	0	40	80
R87	216.7	166.7	$8.47 \times 10^5$	0	50	100
R97	255.5	195.5	$1.06 \times 10^6$	0	60	120
R107	285.5	215.5	$2.06 \times 10^6$	0	70	140
R137	343.5	258.5	$4.58 \times 10^6$	0	90	170
R147	402	297	$8.65 \times 10^6$	33	110	210
R167	450	345	$1.26 \times 10^7$	0	120	210
F27	109.5	84.5	$1.13 \times 10^5$	0	25	50
F37	123.5	98.5	$1.07 \times 10^5$	0	25	50
F47	153.5	123.5	$1.40 \times 10^5$	0	30	60
F57	170.7	135.7	$2.70 \times 10^5$	0	35	70
F67	181.3	141.3	$4.12 \times 10^5$	0	40	80
F77	215.8	165.8	$7.87 \times 10^5$	0	50	100
F87	263	203	$1.06 \times 10^6$	0	60	120
F97	350	280	$2.09 \times 10^6$	0	70	140
F107	373.5	288.5	$4.23 \times 10^6$	0	90	170
F127	442.5	337.5	$9.45 \times 10^6$	0	110	210
F157	512	407	$1.05 \times 10^7$	0	120	210





Gear unit type	a [mm]	b [mm]	c [Nmm]	f [mm]	d [mm]	l [mm]
K19	103.7	83.7	$8.66 \times 10^4$	0	20	40
K29	124.5	99.5	$1.26 \times 10^5$	0	25	50
K37	123.5	98.5	$1.30 \times 10^5$	0	25	50
K47	153.5	123.5	$1.40 \times 10^5$	0	30	60
K57	169.7	134.7	$2.70 \times 10^5$	0	35	70
K67	181.3	141.3	$4.12 \times 10^5$	0	40	80
K77	215.8	165.8	$7.69 \times 10^5$	0	50	100
K87	252	192	$1.64 \times 10^6$	0	60	120
K97	319	249	$2.80 \times 10^6$	0	70	140
K107	373.5	288.5	$5.53 \times 10^6$	0	90	170
K127	443.5	338.5	$8.31 \times 10^6$	0	110	210
K157	509	404	$1.18 \times 10^7$	0	120	210
K167	621.5	496.5	$1.88 \times 10^7$	0	160	250
K187	720.5	560.5	$3.04 \times 10^7$	0	190	320
S37	118.5	98.5	$6.0 \times 10^4$	0	20	40
S47	130	105	$1.33 \times 10^5$	0	25	50
S57	150	120	$2.14 \times 10^5$	0	30	60
S67	184	149	$3.04 \times 10^5$	0	35	70
S77	224	179	$5.26 \times 10^5$	0	45	90
S87	281.5	221.5	$1.68 \times 10^6$	0	60	120
S97	326.3	256.3	$2.54 \times 10^6$	0	70	140
W10	84.8	64.8	$3.6 \times 10^4$	0	16	40
W20	98.5	78.5	$4.4 \times 10^4$	0	20	40
W30	109.5	89.5	$6.0 \times 10^4$	0	20	40
W37	121.1	101.1	$6.95 \times 10^4$	0	20	40
W47	145.5	115.5	$4.26 \times 10^5$	35.6	30	60

Values for types not listed are available on request.

## 4.7 Multi-stage gearmotors

### 4.7.1 General information

You can achieve extremely low output speeds by using multi-stage gear units or multi-stage gearmotors. This means an additional second gear unit, usually a helical gear unit, is installed in front of the gear unit or between gear unit and motor.

The resulting total reduction ratio might make gear unit protection necessary.

### 4.7.2 Limiting the motor power

Reduce the maximum output motor power according to the maximum permitted output torque on the gear unit ( $M_{a \max}$ ). For this purpose you first have to determine the maximum permitted motor torque ( $M_{N \text{ zul}}$ ).

You can calculate the maximum permitted motor torque as follows:

$$M_{N \text{ zul}} = \frac{M_{a \max}}{i_{ges} \cdot \eta_{ges}}$$

Use this maximum permitted motor torque  $M_{N \text{ zul}}$  and the load diagram of the motor to determine the associated value for the motor current.



Take appropriate measures to prevent the continuous current consumption of the motor from exceeding the pre-determined value for the motor torque  $M_{N\ zul}$ . An appropriate measure would be to set the trip current of the motor protection switch to this maximum current value. A motor protection switch offers the option to compensate for a brief overload, for example during the startup phase of the motor. A suitable measure for inverter drives is to limit the output current of the inverter according to the determined motor current.

#### 4.7.3 Checking brake torques

If you use a multi-stage brakemotor, you have to limit the braking torque ( $M_B$ ) according to the maximum permitted motor torque  $M_{N\ zul}$ . The maximum permitted braking torque is 200%  $M_{N\ zul}$ .

$$M_{B\ max} \leq 200\% M_{N\ zul}$$

If you have questions regarding the starting frequency of multi-stage brakemotors, please consult SEW-EURODRIVE.

#### 4.7.4 Avoiding blockage

Blockage on the output side of the multi-stage gear unit or multi-stage gearmotor is not permitted. The reason is that indeterminable torques and uncontrolled overhung and axial loads may occur. The gear units may suffer irreparable damage as a result.



#### INFORMATION

Consult SEW-EURODRIVE if blockages of the multi-stage gear unit or multi-stage gearmotor cannot be avoided due to the application.

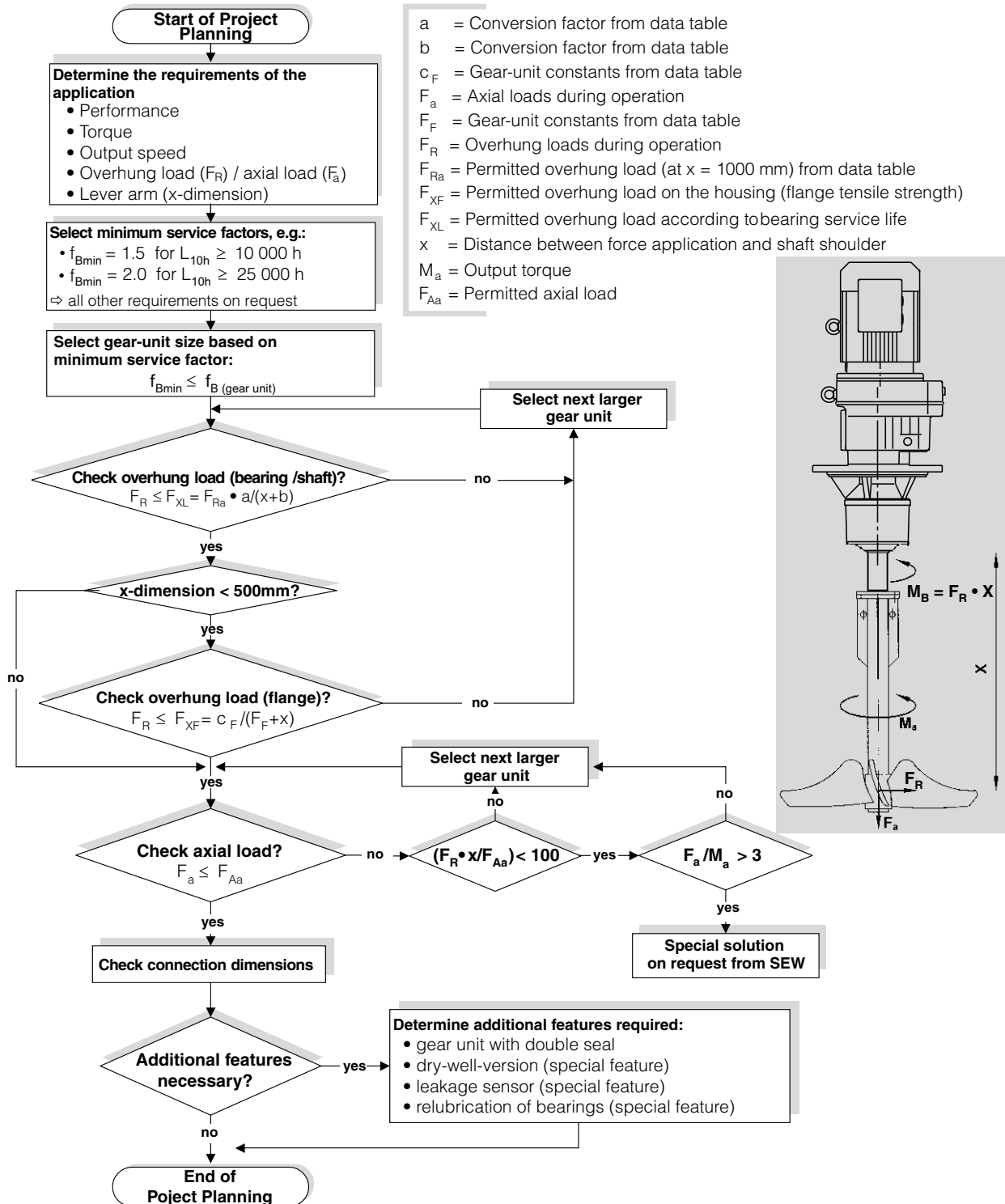
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## 4.8 Project planning for RM gear units

### 4.8.1 Project planning procedure

Take account of the higher overhung loads and axial forces when planning projects with RM helical gearmotors with extended bearing housing. Observe the following project planning procedure:



8698551435



#### 4.8.2 Permitted overhung loads and axial forces

The following table shows the permitted overhung loads  $F_{Ra}$  and axial loads  $F_{Aa}$  for various service factors  $f_B$  and nominal bearing service life  $L_{10h}$ .

$$f_{Bmin} = 1.5; L_{10h} = 10\,000\text{ h}$$

		$n_a$ [1/min]							
		< 16	16-25	26-40	41-60	61-100	101-160	161-250	251-400
RM57	$F_{Ra}$ [N]	400	400	400	400	400	405	410	415
	$F_{Aa}$ [N]	18800	15000	11500	9700	7100	5650	4450	3800
RM67	$F_{Ra}$ [N]	575	575	575	580	575	585	590	600
	$F_{Aa}$ [N]	19000	18900	15300	11900	9210	7470	5870	5050
RM77	$F_{Ra}$ [N]	1200	1200	1200	1200	1200	1210	1210	1220
	$F_{Aa}$ [N]	22000	22000	19400	15100	11400	9220	7200	6710
RM87	$F_{Ra}$ [N]	1970	1970	1970	1970	1980	1990	2000	2010
	$F_{Aa}$ [N]	30000	30000	23600	18000	14300	11000	8940	8030
RM97	$F_{Ra}$ [N]	2980	2980	2980	2990	3010	3050	3060	3080
	$F_{Aa}$ [N]	40000	36100	27300	20300	15900	12600	9640	7810
RM107	$F_{Ra}$ [N]	4230	4230	4230	4230	4230	4230	3580	3830
	$F_{Aa}$ [N]	48000	41000	30300	23000	18000	13100	9550	9030
RM137	$F_{Ra}$ [N]	8710	8710	8710	8710	7220	5060	3980	6750
	$F_{Aa}$ [N]	70000	70000	70000	57600	46900	44000	35600	32400
RM147	$F_{Ra}$ [N]	11100	11100	11100	11100	11100	10600	8640	10800
	$F_{Aa}$ [N]	70000	70000	69700	58400	45600	38000	32800	30800
RM167	$F_{Ra}$ [N]	14600	14600	14600	14600	14600	14700	-	-
	$F_{Aa}$ [N]	70000	70000	70000	60300	45300	36900	-	-

$$f_{Bmin} = 2.0; L_{10h} = 25\,000\text{ h}$$

		$n_a$ [1/min]							
		< 16	16-25	26-40	41-60	61-100	101-160	161-250	251-400
RM57	$F_{Ra}$ [N]	410	410	410	410	410	415	415	420
	$F_{Aa}$ [N]	12100	9600	7350	6050	4300	3350	2600	2200
RM67	$F_{Ra}$ [N]	590	590	590	595	590	595	600	605
	$F_{Aa}$ [N]	15800	12000	9580	7330	5580	4460	3460	2930
RM77	$F_{Ra}$ [N]	1210	1210	1210	1210	1210	1220	1220	1220
	$F_{Aa}$ [N]	20000	15400	11900	9070	6670	5280	4010	3700
RM87	$F_{Ra}$ [N]	2000	2000	2000	2000	2000	1720	1690	1710
	$F_{Aa}$ [N]	24600	19200	14300	10600	8190	6100	5490	4860
RM97	$F_{Ra}$ [N]	3040	3040	3040	3050	3070	3080	2540	2430
	$F_{Aa}$ [N]	28400	22000	16200	11600	8850	6840	5830	4760
RM107	$F_{Ra}$ [N]	4330	4330	4330	4330	4330	3350	2810	2990
	$F_{Aa}$ [N]	32300	24800	17800	13000	9780	8170	5950	5620
RM137	$F_{Ra}$ [N]	8850	8850	8850	8830	5660	4020	3200	5240
	$F_{Aa}$ [N]	70000	59900	48000	37900	33800	31700	25600	23300
RM147	$F_{Ra}$ [N]	11400	11400	11400	11400	11400	8320	6850	8440
	$F_{Aa}$ [N]	70000	60600	45900	39900	33500	27900	24100	22600
RM167	$F_{Ra}$ [N]	15100	15100	15100	15100	15100	13100	-	-
	$F_{Aa}$ [N]	70000	63500	51600	37800	26800	23600	-	-



#### 4.8.3 Conversion factors and gear unit constants

The following conversion factors and gear unit constants apply to calculating the permitted overhung load  $F_{xL}$  at point  $x \neq 1000$  mm for RM gearmotors:

Gear unit type	a	b	$c_F (f_B = 1.5)$	$c_F (f_B = 2.0)$	$F_F$
RM57	1047	47	1220600	1260400	277
RM67	1047	47	2047600	2100000	297.5
RM77	1050	50	2512800	2574700	340.5
RM87	1056.5	56.5	4917800	5029000	414
RM97	1061	61	10911600	11124100	481
RM107	1069	69	15367000	15652000	554.5
RM137	1088	88	25291700	25993600	650
RM147	1091	91	30038700	31173900	756
RM167	1089.5	89.5	42096100	43654300	869

#### 4.8.4 Additional weight of RM gear units

Type	Additional weight compared to RF with reference to the smallest RF flange $\Delta m$ [kg]
RM57	12.0
RM67	15.8
RM77	25.0
RM87	29.7
RM97	51.3
RM107	88.0
RM137	111.1
RM147	167.4
RM167	195.4



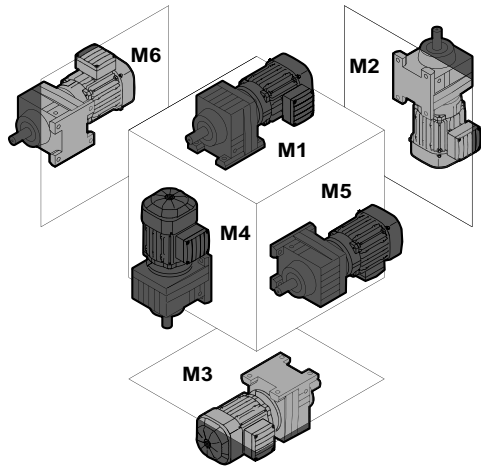
**Gear unit mounting positions and order information**

General mounting position information – R, F, K, S, W gear units

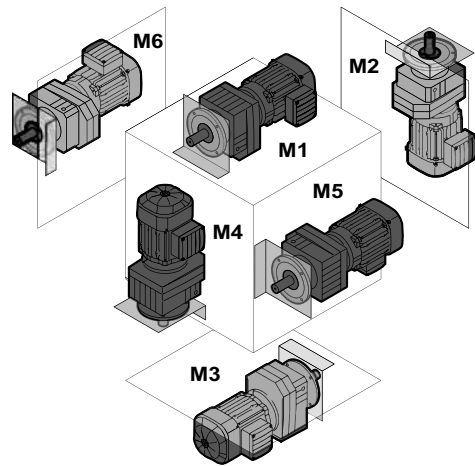
**5 Gear unit mounting positions and order information**

**5.1 General mounting position information – R, F, K, S, W gear units**

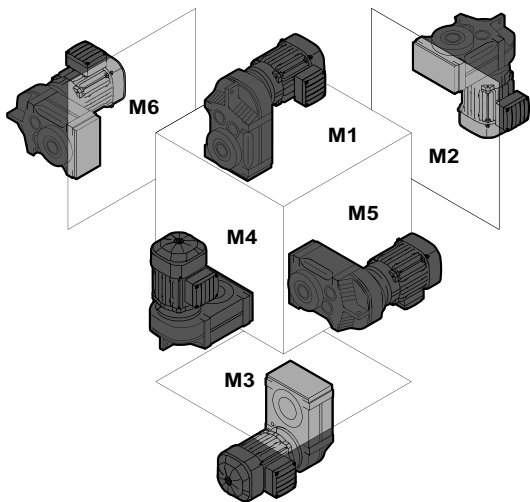
SEW-EURODRIVE distinguishes between the 6 gear unit mounting positions M1 – M6. The following illustration shows the mounting positions of the gear units:



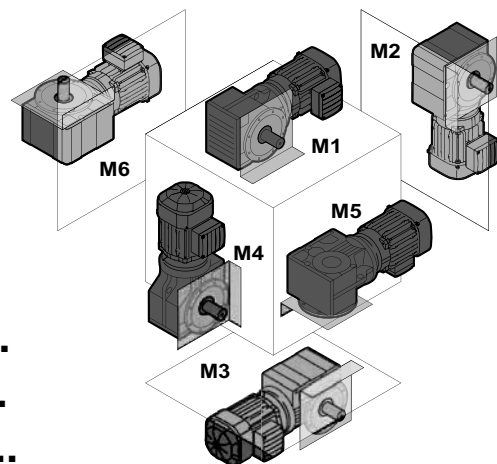
**R..**



**F..**



**K..  
S..  
W..**



27021597783032715



5.2 Order information



**INFORMATION**

The following order information is required for R, F, K and S gear units or gearmotors in addition to the mounting position to exactly determine the type of drive.

This information is also required for SPIROPLAN® gearmotors (W gearmotors) that do not depend on a particular mounting position.

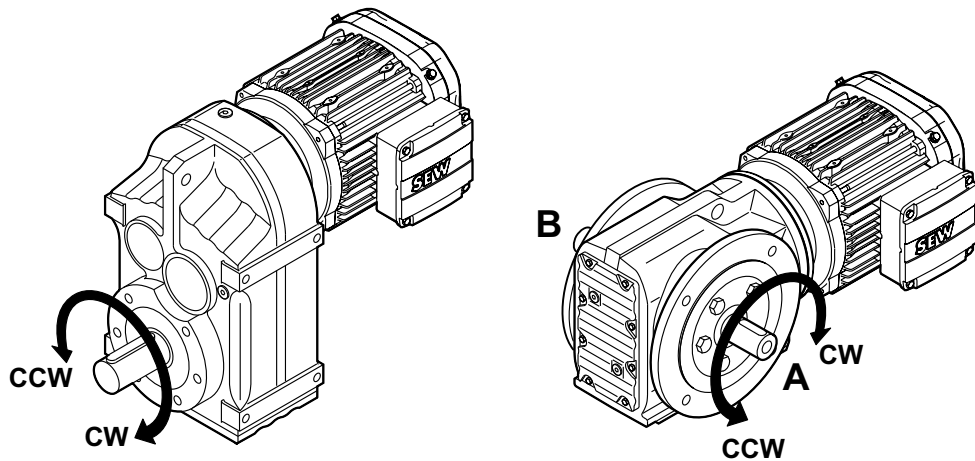
5.2.1 The following applies to all gear units and gearmotors

Observe the following notes for all gear units and gearmotors from SEW-EURODRIVE.

*Output direction of rotation with back-stop*

If the drive has an RS backstop, you have to indicate the direction of rotation of the output for the drive. The following definition applies:

As viewed onto the output shaft: Clockwise (CW) = Rotating clockwise  
Counterclockwise (CCW) = Rotating counterclockwise



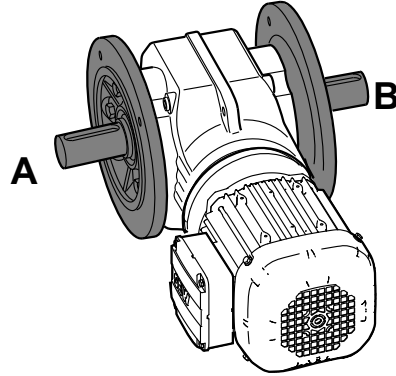
In right-angle gear units, you also have to indicate whether the direction of rotation is given looking onto the A or B end.



*Position of the output shaft and the output flange*

In right-angle gear units, you also have to indicate the position of the output shaft and the output flange:

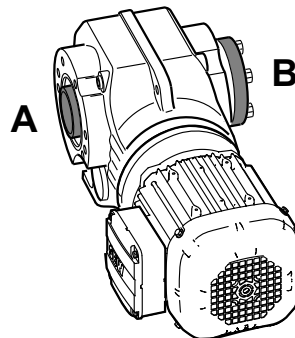
- A or B or AB



*Position of the output end in right-angle gear units*

In shaft mounted right-angle gear units with a shrink disk, you also have to indicate whether the A or B end is the output end. In the figure below, the A end is the output end. The shrink disk is located opposite the output end.

In shaft mounted right-angle gear units, the output end is equivalent to the shaft position of right-angle gear units with solid shaft.



### INFORMATION

For the permitted mounting surfaces (= hatched area), refer to the mounting position sheets.

**Example:** Only the mounting surface at the bottom is possible with helical-bevel gear units K167/K187 in mounting positions M5 and M6.

#### 5.2.2 Position of motor terminal box and cable entry

The position of the motor terminal box has so far been specified indicated with 0°, 90°, 180° or 270° as viewed onto the fan guard = B-end, see the following figure. A change in the product standard EN 60034 specifies that the following designations will have to be used for terminal box positions for foot-mounted motors in the future:

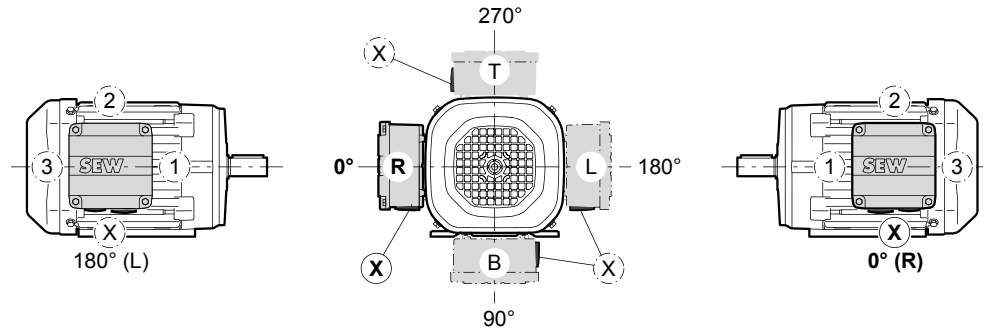
- As viewed onto the output shaft = A-end
- Designation as R (right), B (bottom), L (left) and T (top)





This new designation applies to foot-mounted motors without a gear unit in mounting position B3 (= M1). For gearmotors, the previous designation is retained. The following figure shows both designations. Where the mounting position of the motor changes, R, B, L and T are rotated accordingly. In motor mounting position B8 (= M3), T is at the bottom.

The position of the cable entry can be selected as well. "X" (= normal position), "1", "2" or "3" are possible, see following figure.



Unless indicated otherwise, you will receive the terminal box type 0° with "X" cable entry. For mounting position M3, we recommend that you select cable entry "2".

### INFORMATION



Only cable entries and "2" are possible for DR63 motors. Exception: This limitation does not apply with IS plug connectors.

### INFORMATION



When the **terminal box is in the 90° (B) position**, check to see if the gearmotor has to be supported.

### Software support

Not all cable entry positions X, 1, 2, 3 and terminal box positions 0°(R), 90°(B), 180°(L), 270°(T) are possible in any case. Some additional features for the motor require a connection inside the terminal box, which means this terminal box is larger than the standard terminal box due to the normative air gaps and creepage distances. The dimension sheets only depict the standard terminal box.

Dimensions not listed in the dimension sheets can be determined with the DRIVECAD software, which is available from DriveGate® on the SEW-EURODRIVE website.

- For registered DriveGate® users: <https://portal.drivegate.biz/drivecad>
- For new users: [www.sew-eurodrive.com](http://www.sew-eurodrive.com) → DriveGate® login



#### 5.2.3 Sample orders

Type (examples)	Mounting position	Shaft position	Flange position	Terminal box position	Cable entry position	Direction of rotation of output
K47DRS71M4/RS	M2	A	-	0°	"X"	CW
SF77DRE100L4	M6	AB	AB	90°	"3"	-
KA97DRE132M4	M4	B	-	270°	"2"	-
KH107DRP160M4	M1	A	-	180°	"3"	-
KAF67A	M3	A	B	-	-	-

#### 5.2.4 Changing the mounting position

It is important that you read the following information when you operate the gearmotor in a mounting position other than indicated in the order:

- Adjust the lubricant fill quantity so that it matches the new mounting position.
- Adjust the position of the breather valve
- For helical-bevel gearmotors: Contact SEW-EURODRIVE customer service prior to changing to mounting position M5 or M6 and when changing from M5 to M6, or vice versa.
- For helical-worm gearmotors: Contact SEW-EURODRIVE customer service when changing to mounting position M2 or M3.



### 5.3 Key to the mounting position sheets



#### INFORMATION

SPIROPLAN® gearmotors are not dependant on the mounting position, except for W..37 and W..47 in mounting position M4. However, mounting positions M1 to M6 are also shown for SPIROPLAN® gearmotors to assist you in working with this documentation.



#### INFORMATION

- SPIROPLAN® gearmotors W..20 to W..30 cannot be equipped with breather valves, oil level plugs or drain plugs.
- SPIROPLAN® gearmotors W..37 and W..47 can be equipped with breather valve, oil level plug or drain plug.

#### 5.3.1 Symbols used

The following table shows the symbols used in the mounting position sheets and what they mean.

Symbol	Meaning
	Breather valve
	Oil level plug <sup>1)</sup>
	Oil drain plug

1) Does not apply to the 1st gear unit (large gear unit) of multi-stage drives.

#### 5.3.2 Churning losses

\* → (Page XX)

Some mounting positions may result in churning losses. Contact SEW-EURODRIVE in case of the following combinations:

Mounting position	Gear unit type	Gear unit size	Input speed [rpm]
<b>M2, M4</b>	R	97 ... 107	> 2500
		> 107	>1500
<b>M2, M3, M4, M5, M6</b>	F	97 ... 107	> 2500
		> 107	> 1500
	K	77 ... 107	> 2500
		> 107	> 1500
	S	77 ... 97	> 2500

#### 5.3.3 Displayed shaft

Note the following information regarding display of shafts in the mounting position sheets:



#### INFORMATION

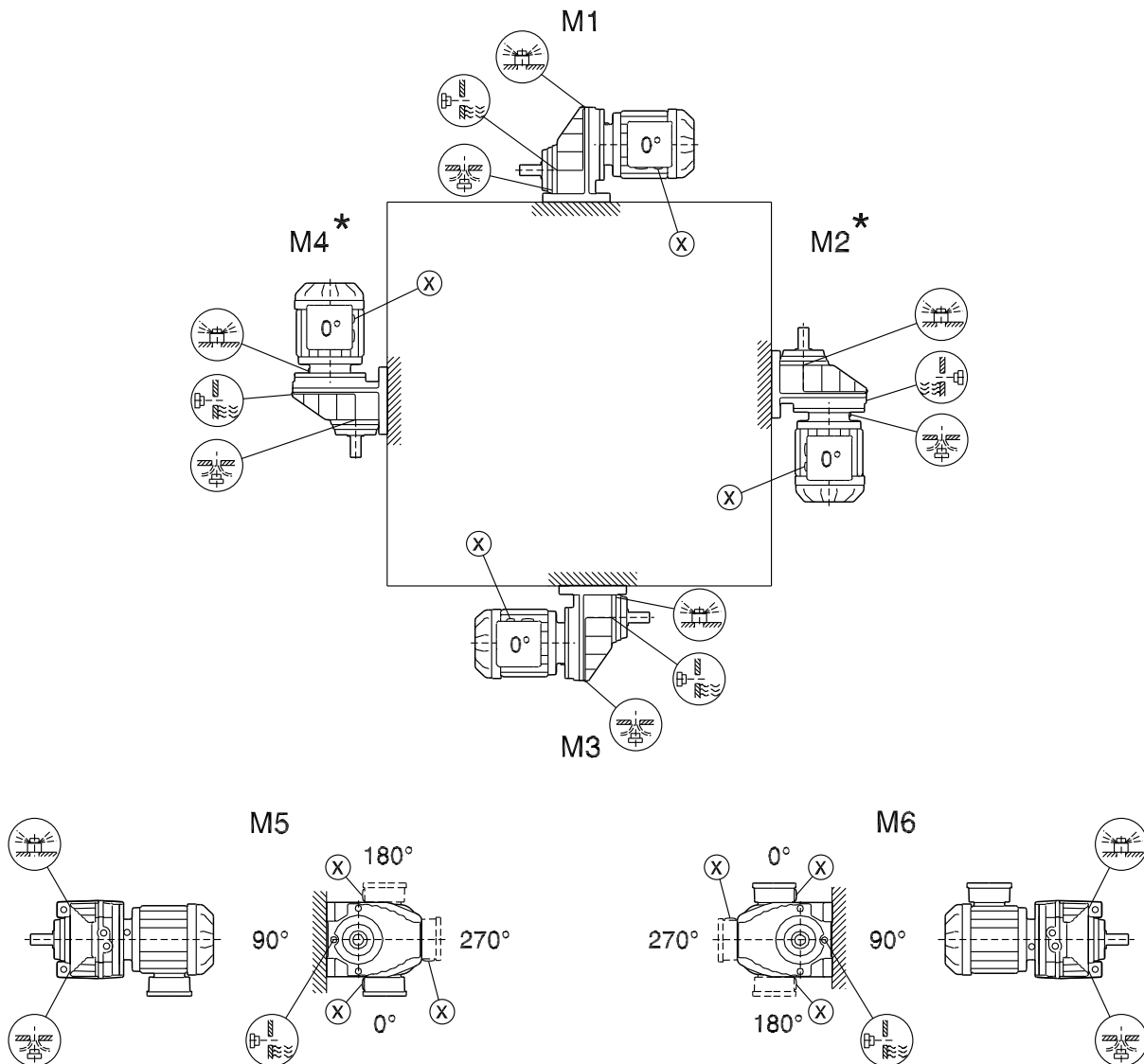
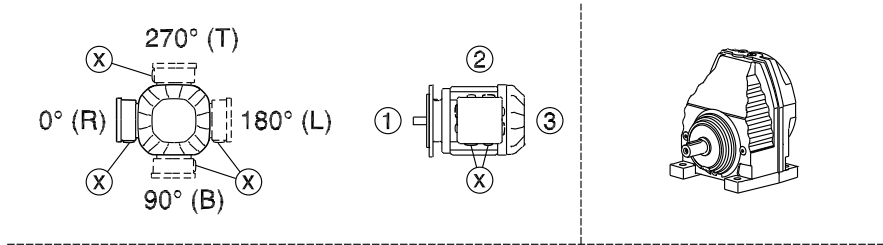
- **For gear units with solid shaft:** The displayed shaft is always on the A end.
- **For shaft-mounted gear units:** The shaft with dashed lines represents the customer shaft. The output end (= shaft position) is always shown on the A end.



**5.4 Mounting positions of helical gearmotors**

**5.4.1 RX57-RX107**

04 043 03 00

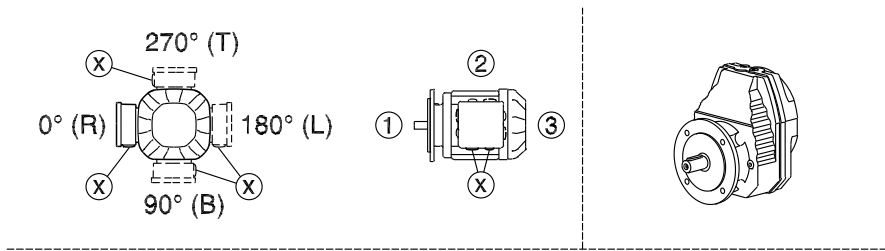


\* → (page 59)

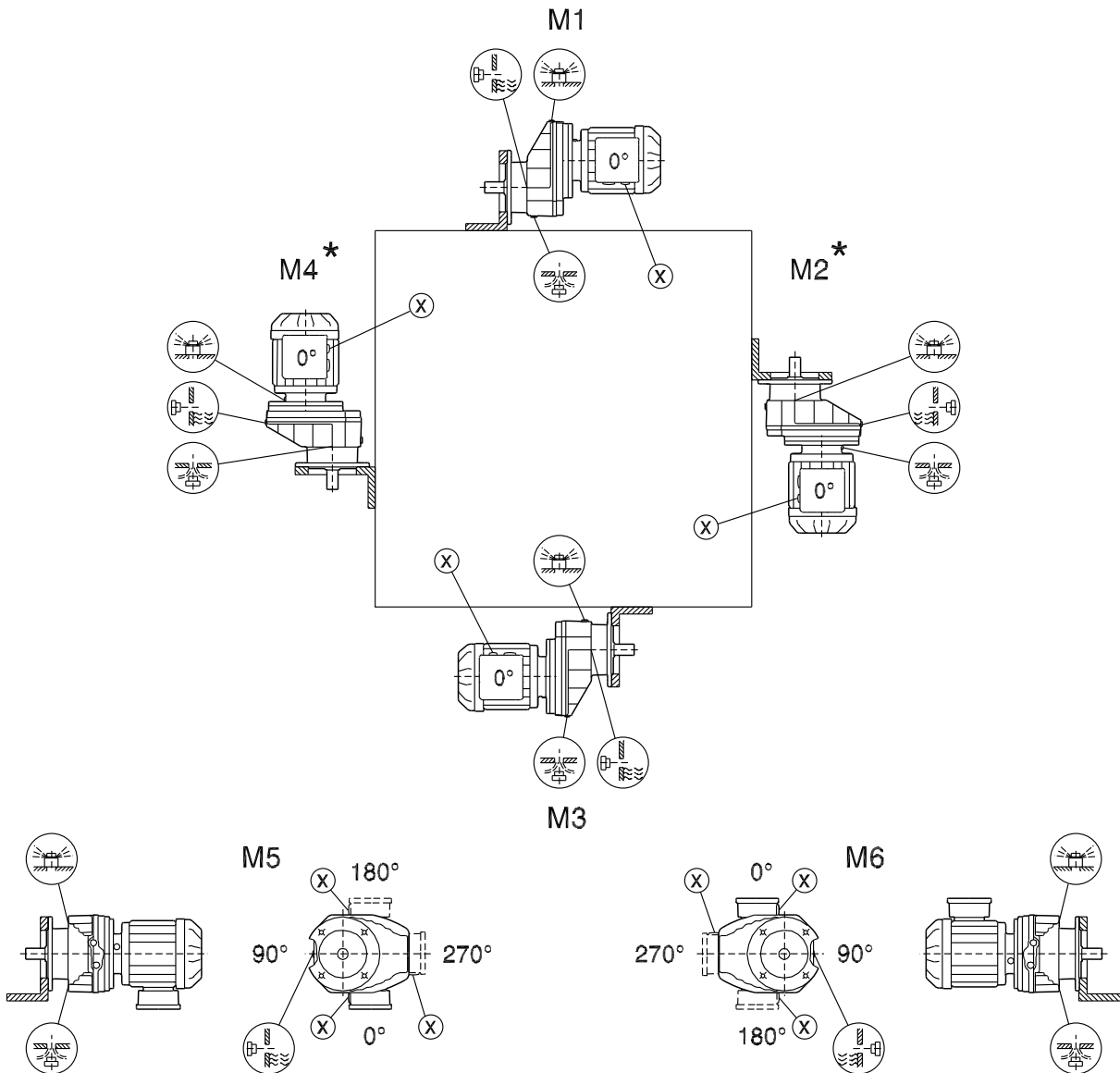


5.4.2 RXF57-RXF107

04 044 03 00



5



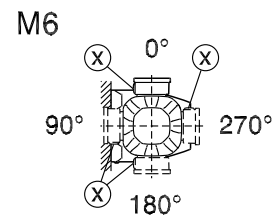
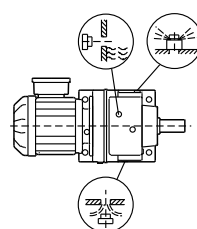
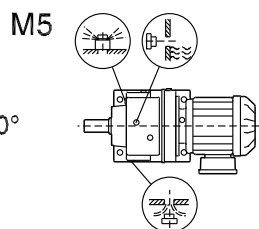
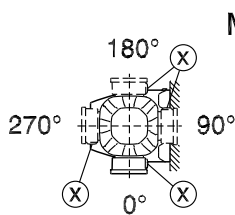
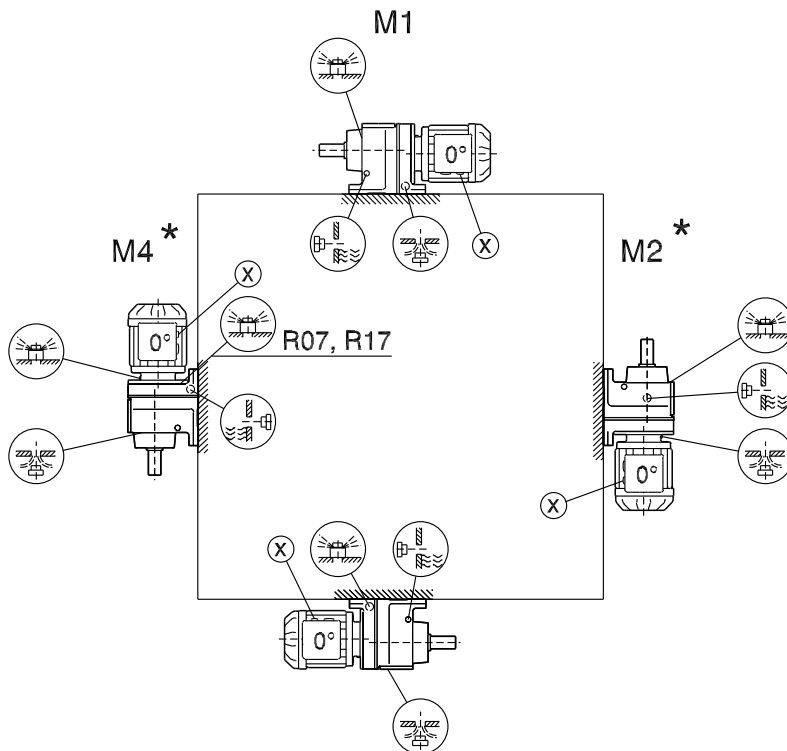
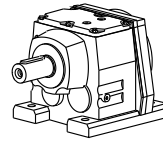
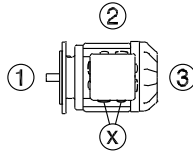
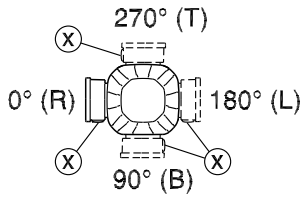
\* → (page 59)



**Gear unit mounting positions and order information**  
 Mounting positions of helical gearmotors

5.4.3 R07-R167

04 040 04 00



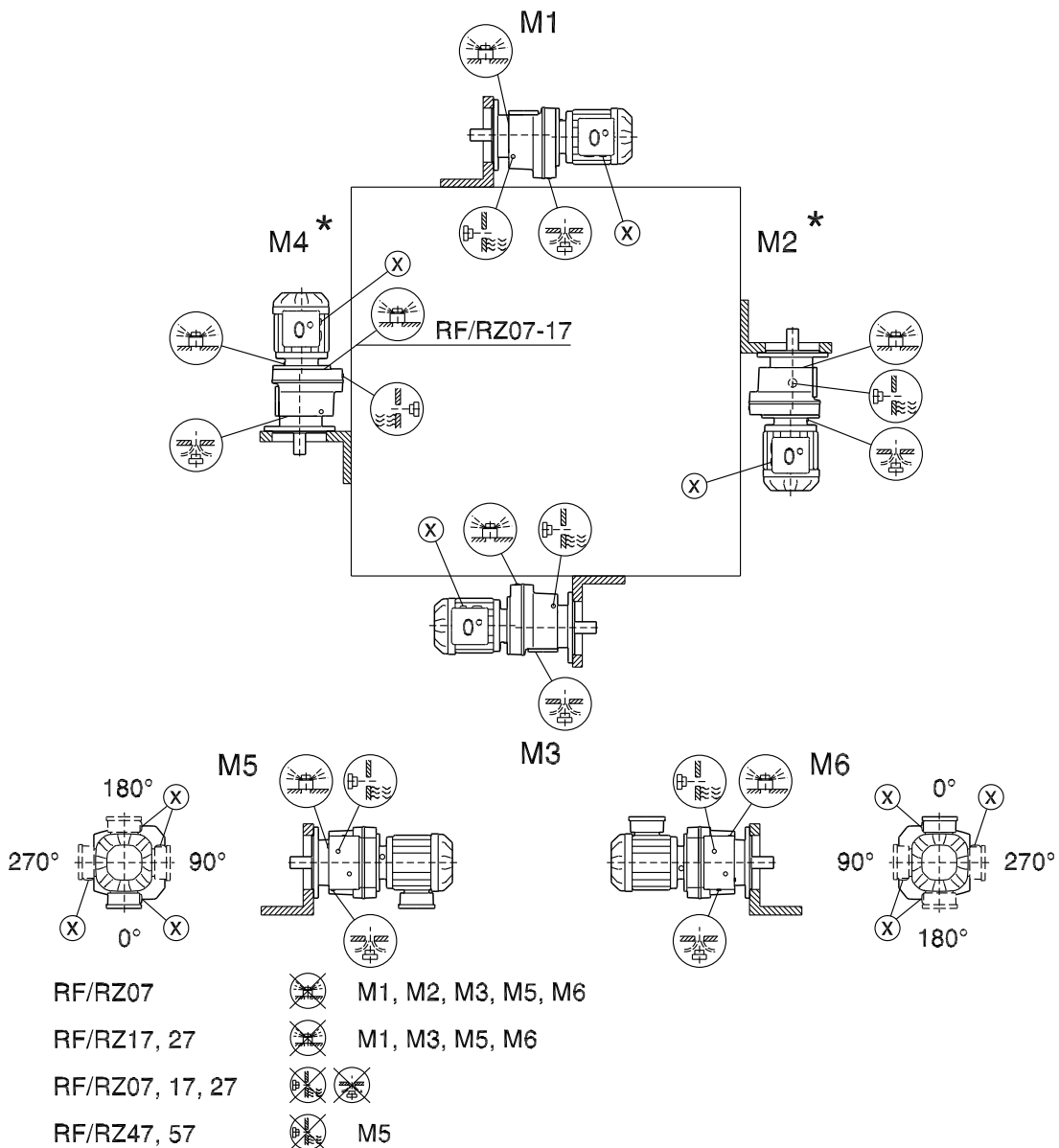
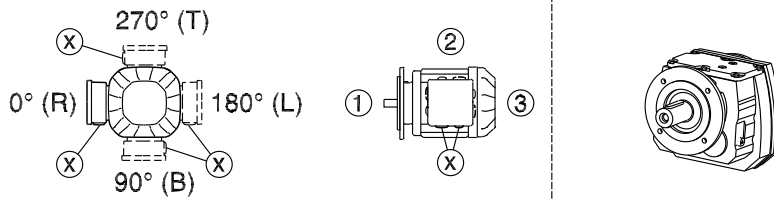
- |               |                    |
|---------------|--------------------|
| R07           | M1, M2, M3, M5, M6 |
| R17, R27      | M1, M3, M5, M6     |
| R07, R17, R27 |                    |
| R47, R57      | M5                 |

\* → (page 59)



5.4.4 RF07-RF167, RZ07-RZ87

04 041 04 00



\* → (page 59)

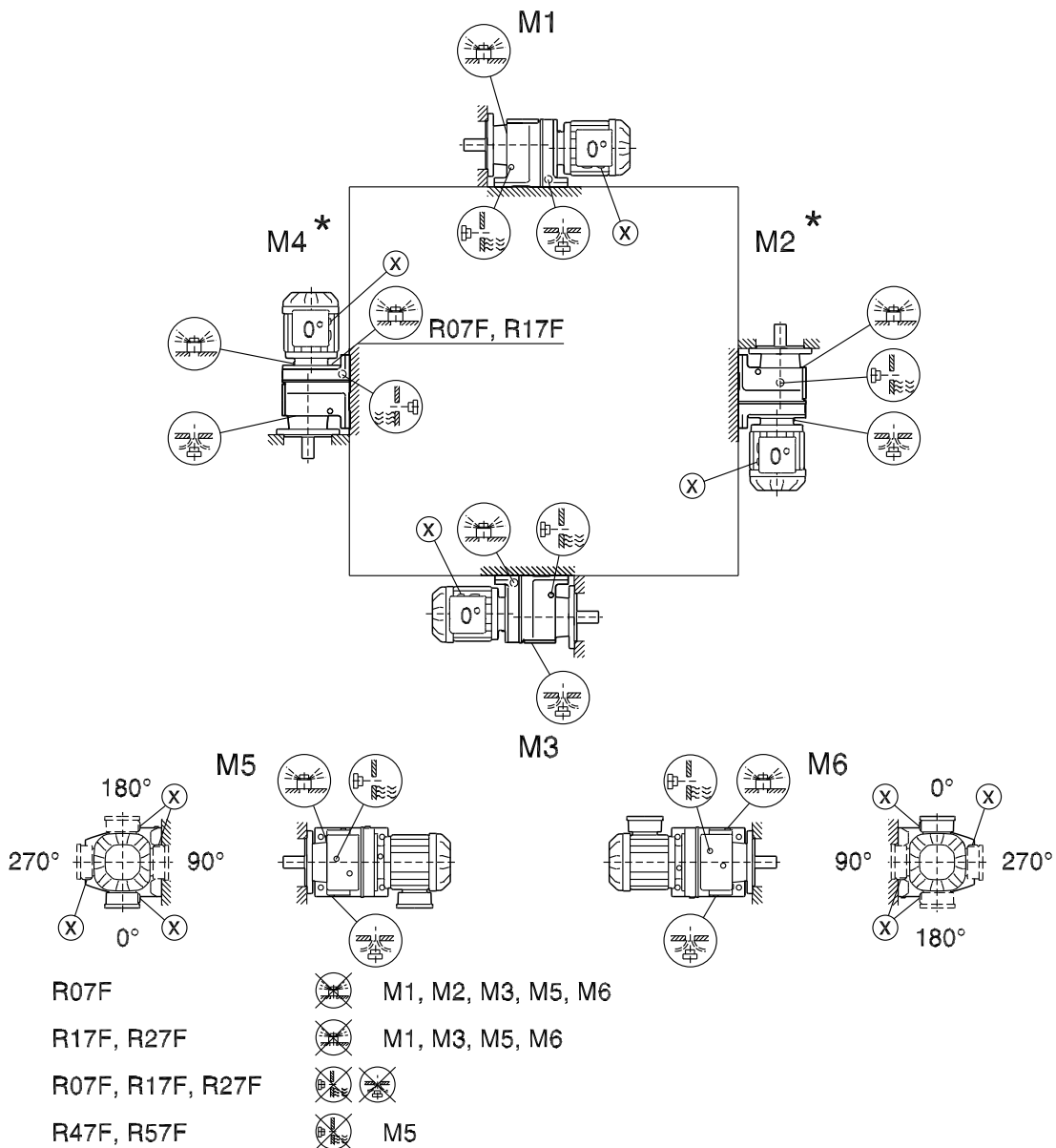
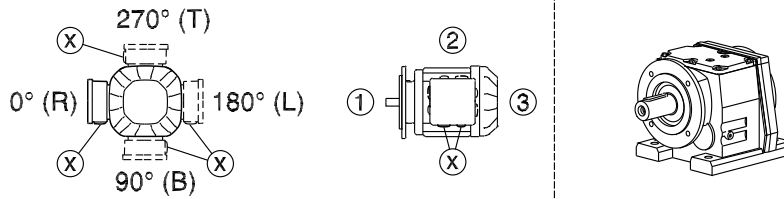


# Gear unit mounting positions and order information

## Mounting positions of helical gearmotors

### 5.4.5 R07F-R87F

04 042 04 00



\* → (page 59)

Observe the notes in chapter "Project planning for gear units" / "Overhung and axial loads" (page 46).

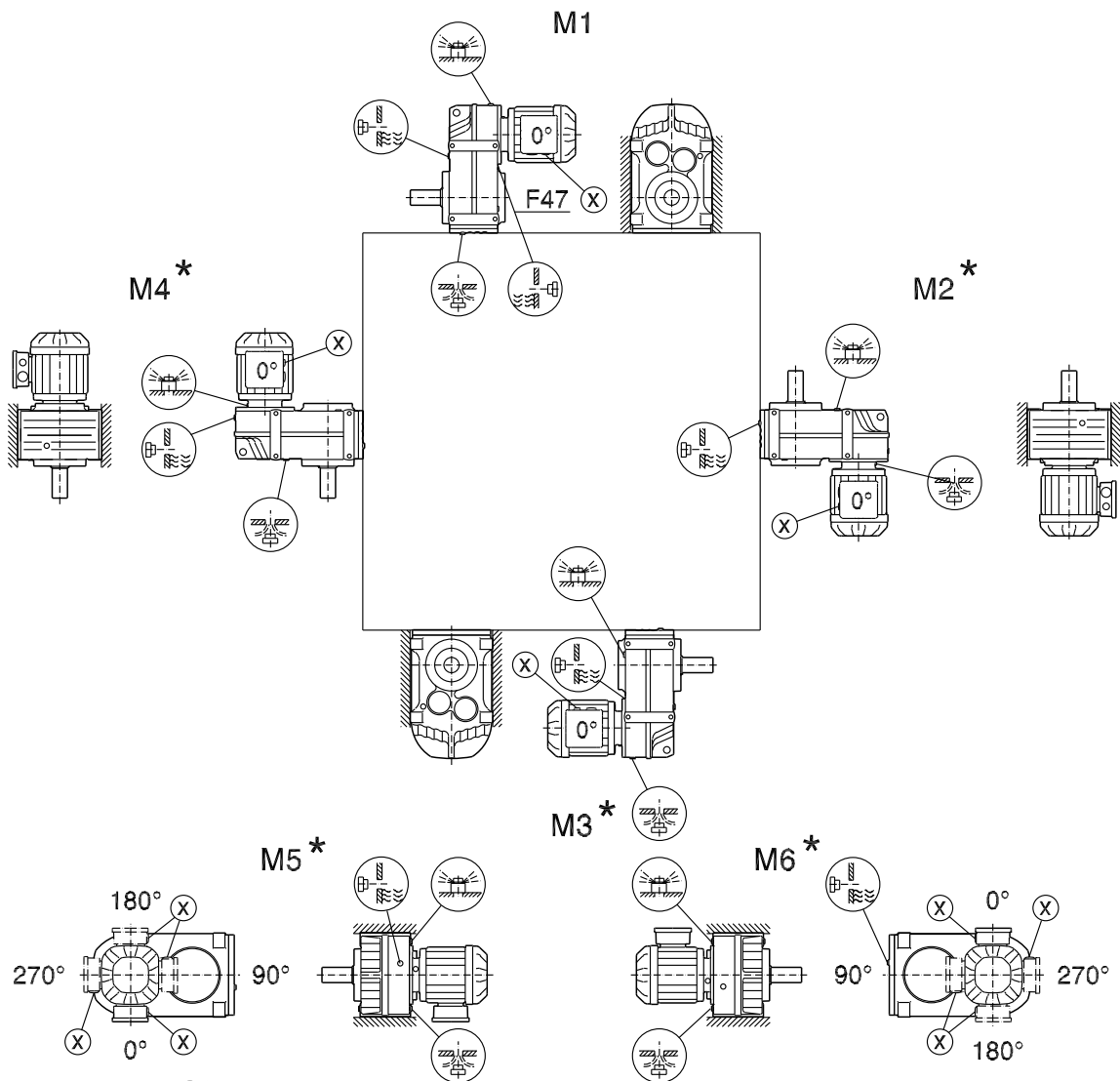
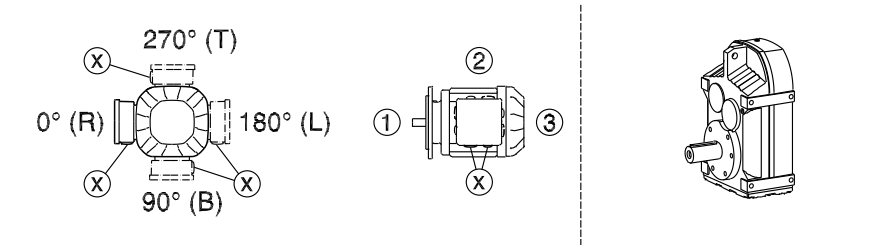




**5.5 Mounting positions of parallel-shaft helical gearmotors**

**5.5.1 F/FA..B/FH27B-157B, FV27B-107B**

42 042 04 00



- F..27 M1, M3, M5, M6
- F..27 M1 - M6
- F..27 M1, M3, M5, M6

\* → (page 59)

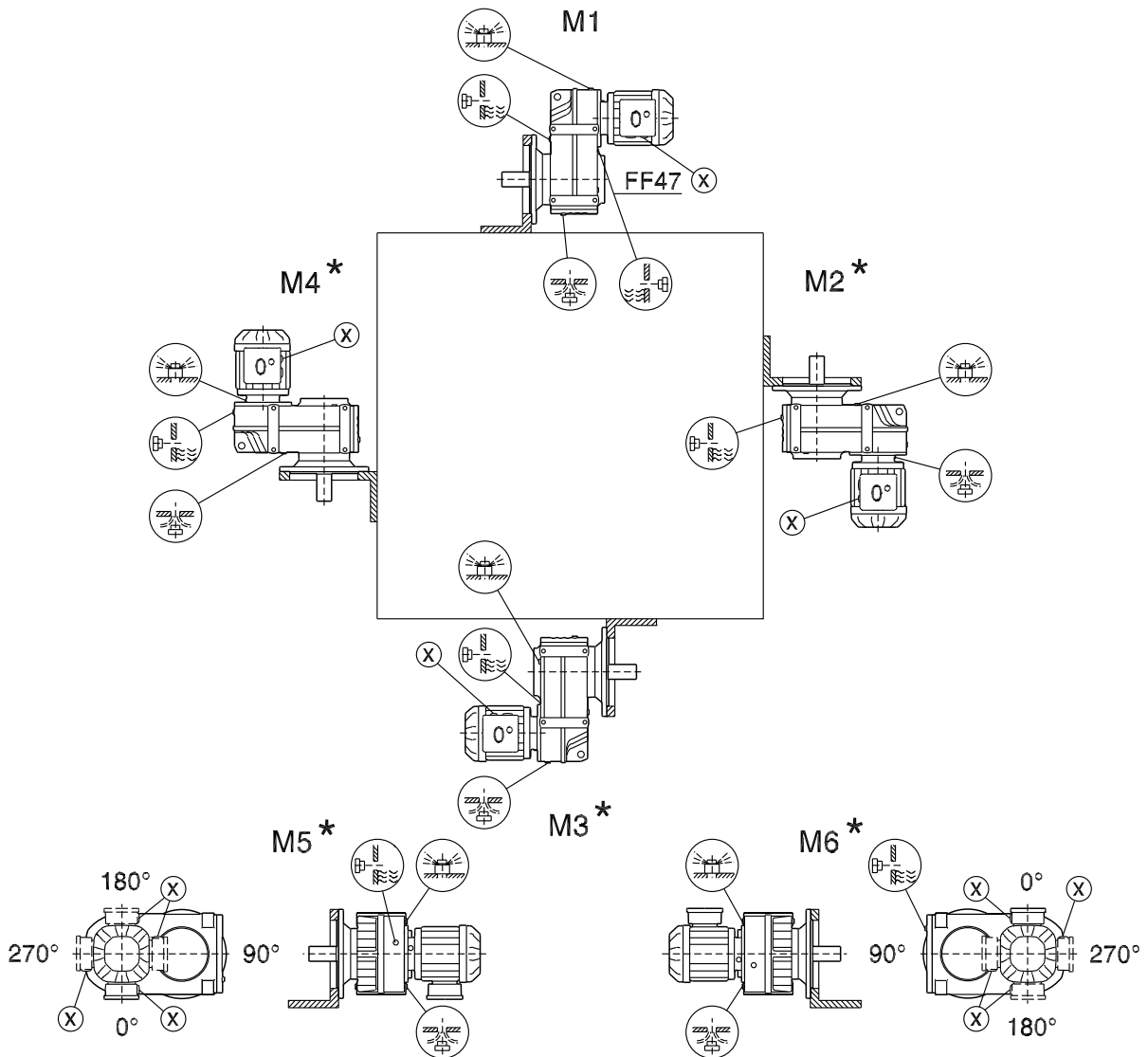
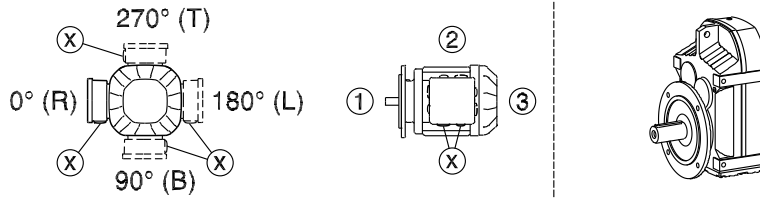


# Gear unit mounting positions and order information

## Mounting positions of parallel-shaft helical gearmotors

### 5.5.2 FF/FAF/FHF/FAZ/FHZ27-157, FVF/FVZ27-107

42 043 04 00



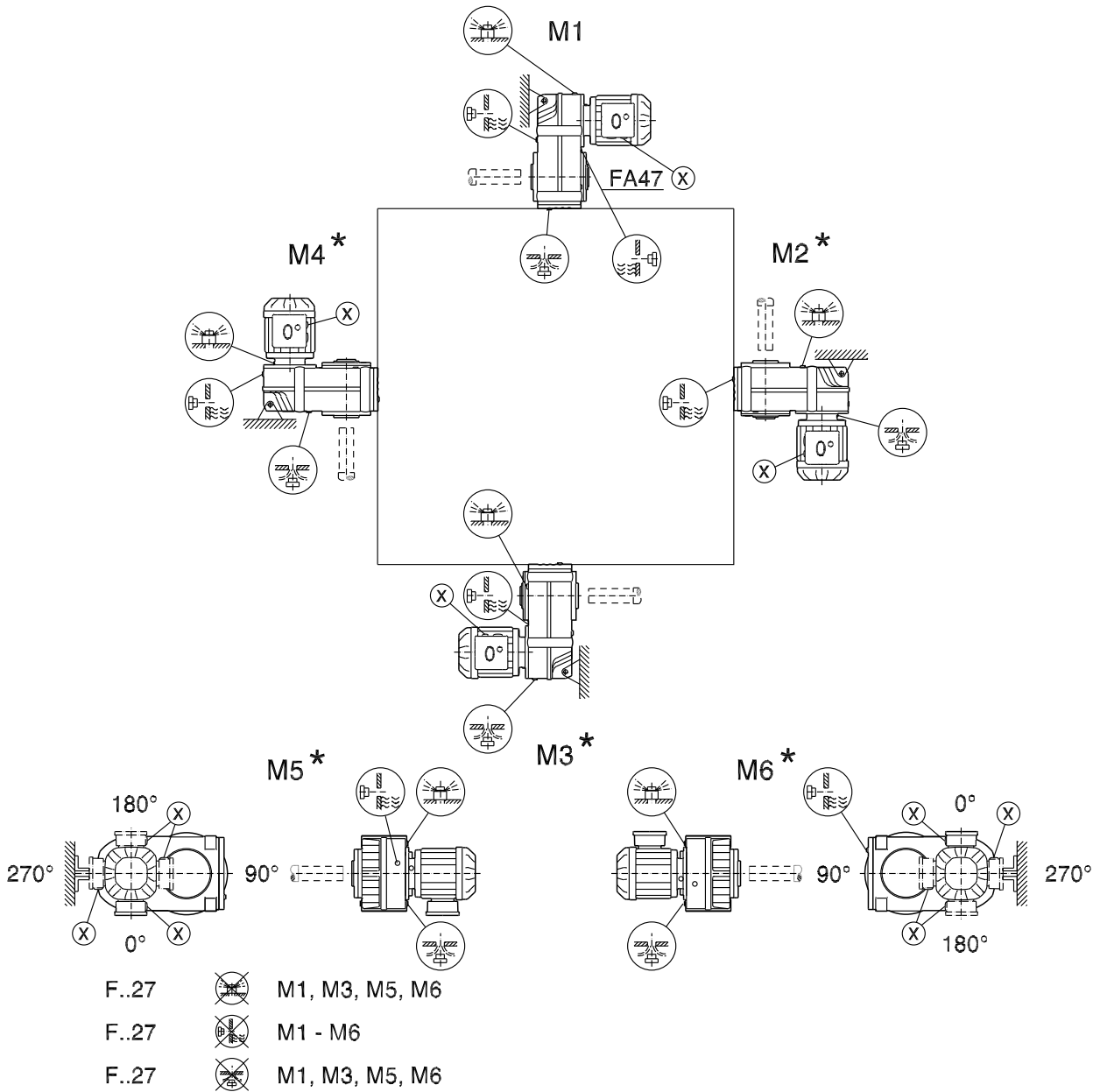
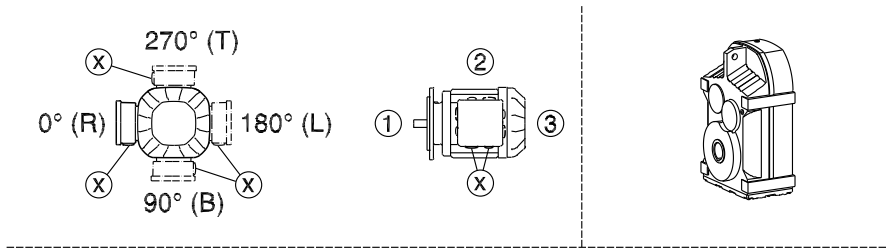
- F..27 M1, M3, M5, M6
- F..27 M1 - M6
- F..27 M1, M3, M5, M6

\* → (page 59)



5.5.3 FA/FH27-157, FV27-107, FT37-97

42 044 04 00



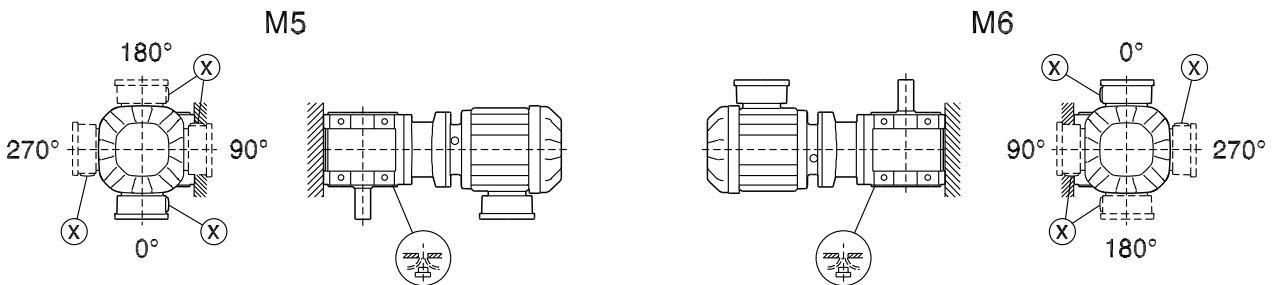
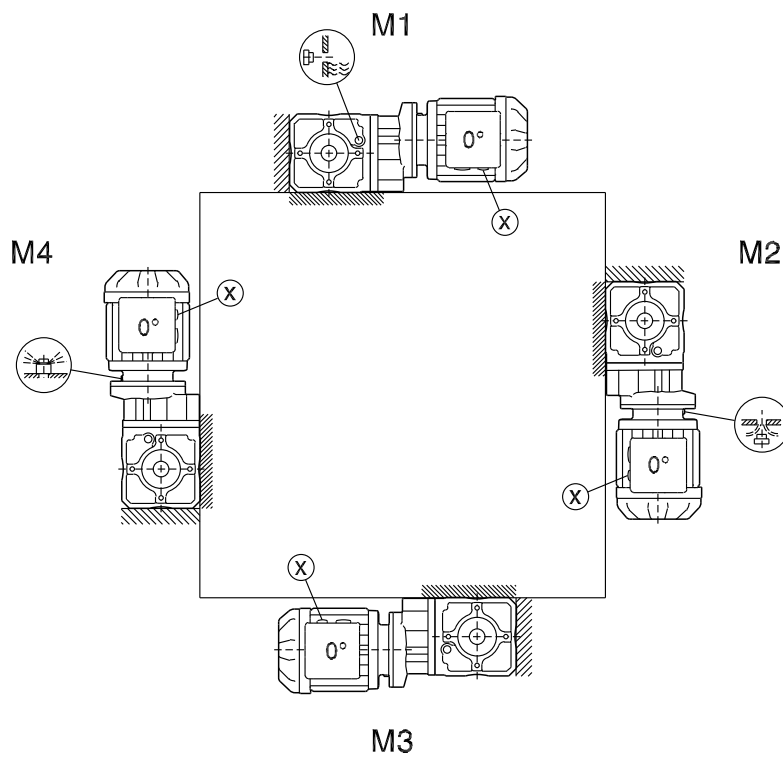
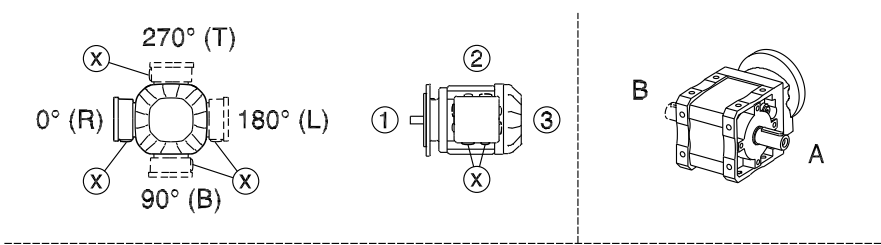
\* → (page 59)



**5.6 Mounting positions of helical-bevel gearmotors**

**5.6.1 K/KA..B/KH19B-29B**

33 010 00 13



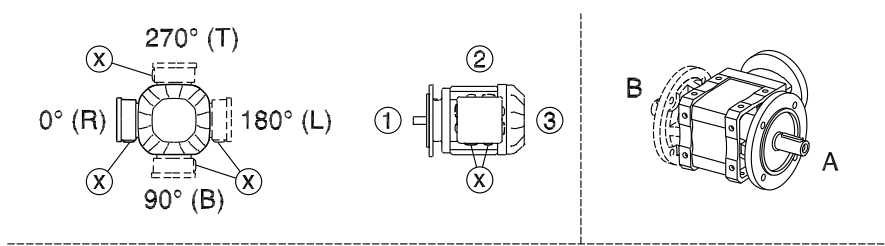
\* → (page 59)

Observe the notes in chapter "Project planning for gear units" / "Overhung and axial loads" (page 46).

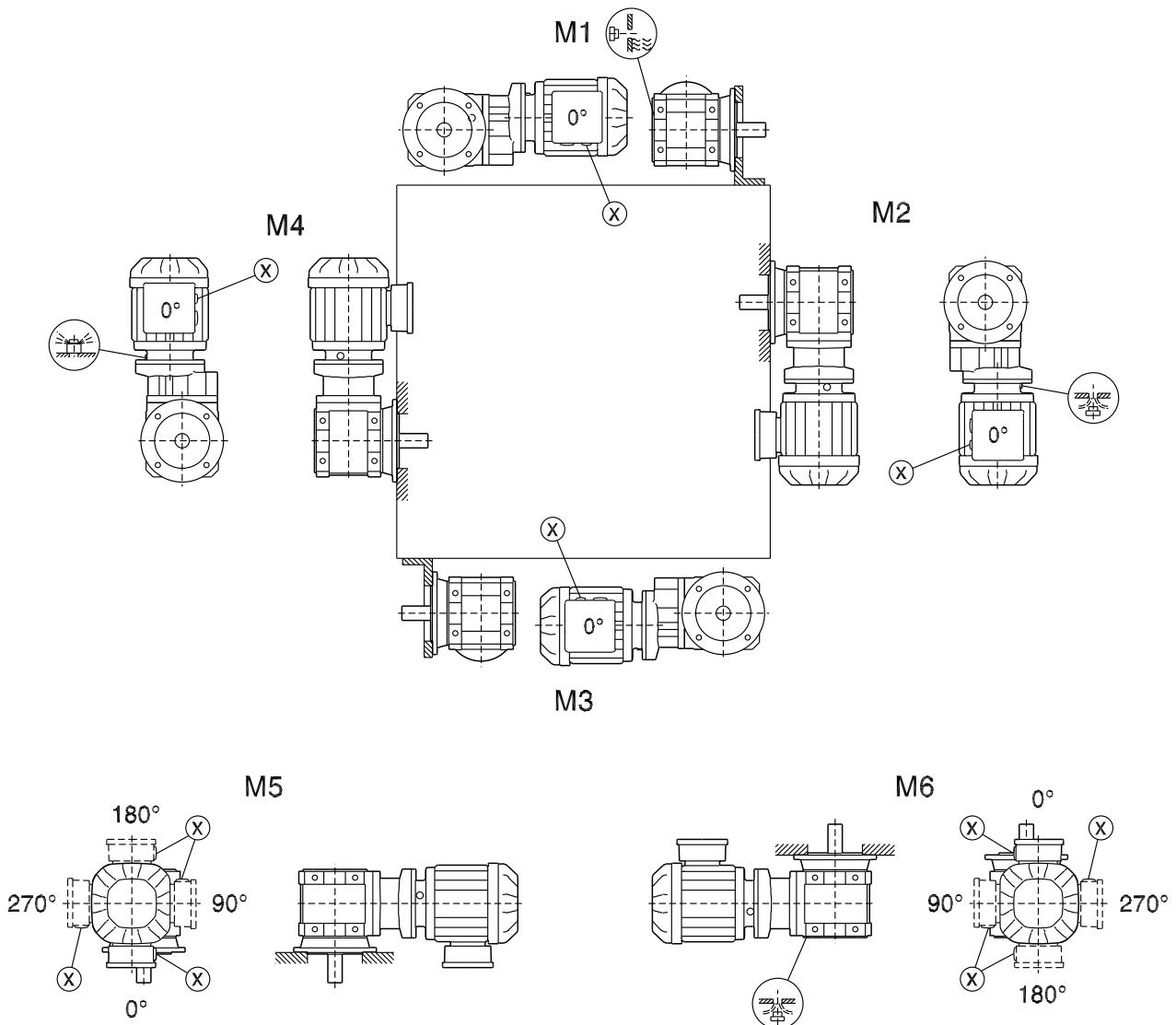


**5.6.2 KF..B/KAF..B/KHF19B-29B**

**33 011 00 13**



**5**



\* → (page 59)

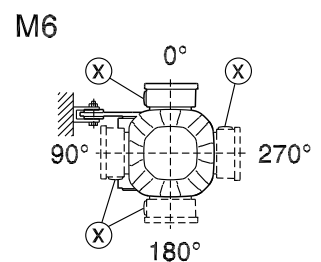
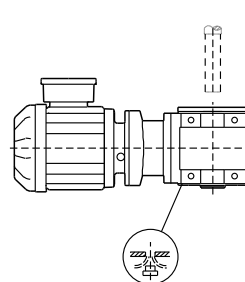
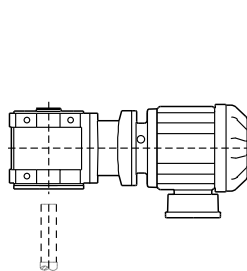
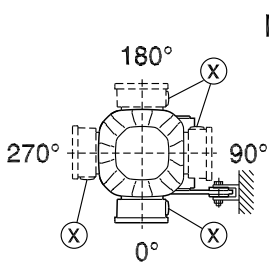
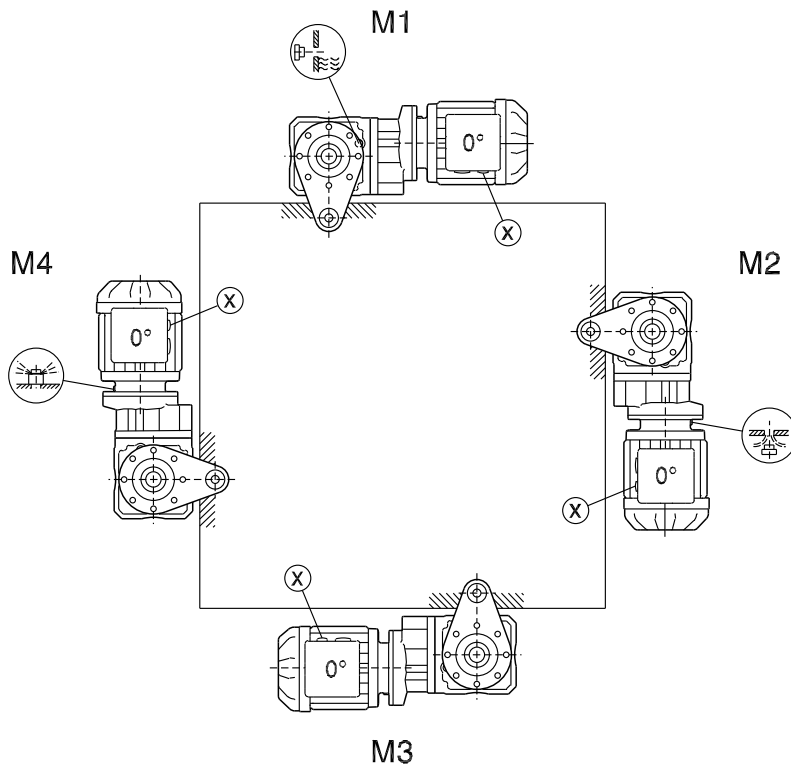
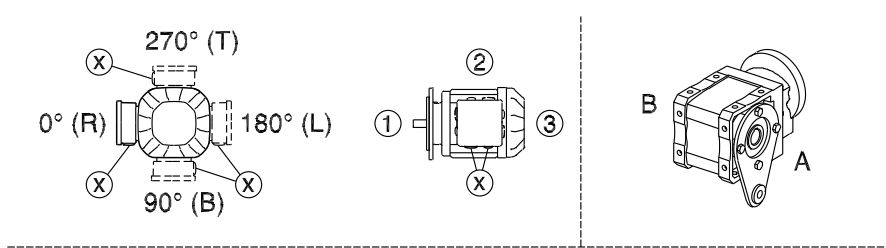
Observe the notes in chapter "Project planning for gear units" / "Overhung and axial loads" (page 46).



**Gear unit mounting positions and order information**  
 Mounting positions of helical-bevel gearmotors

5.6.3 KA..B/KH19B-29B

33 012 00 13



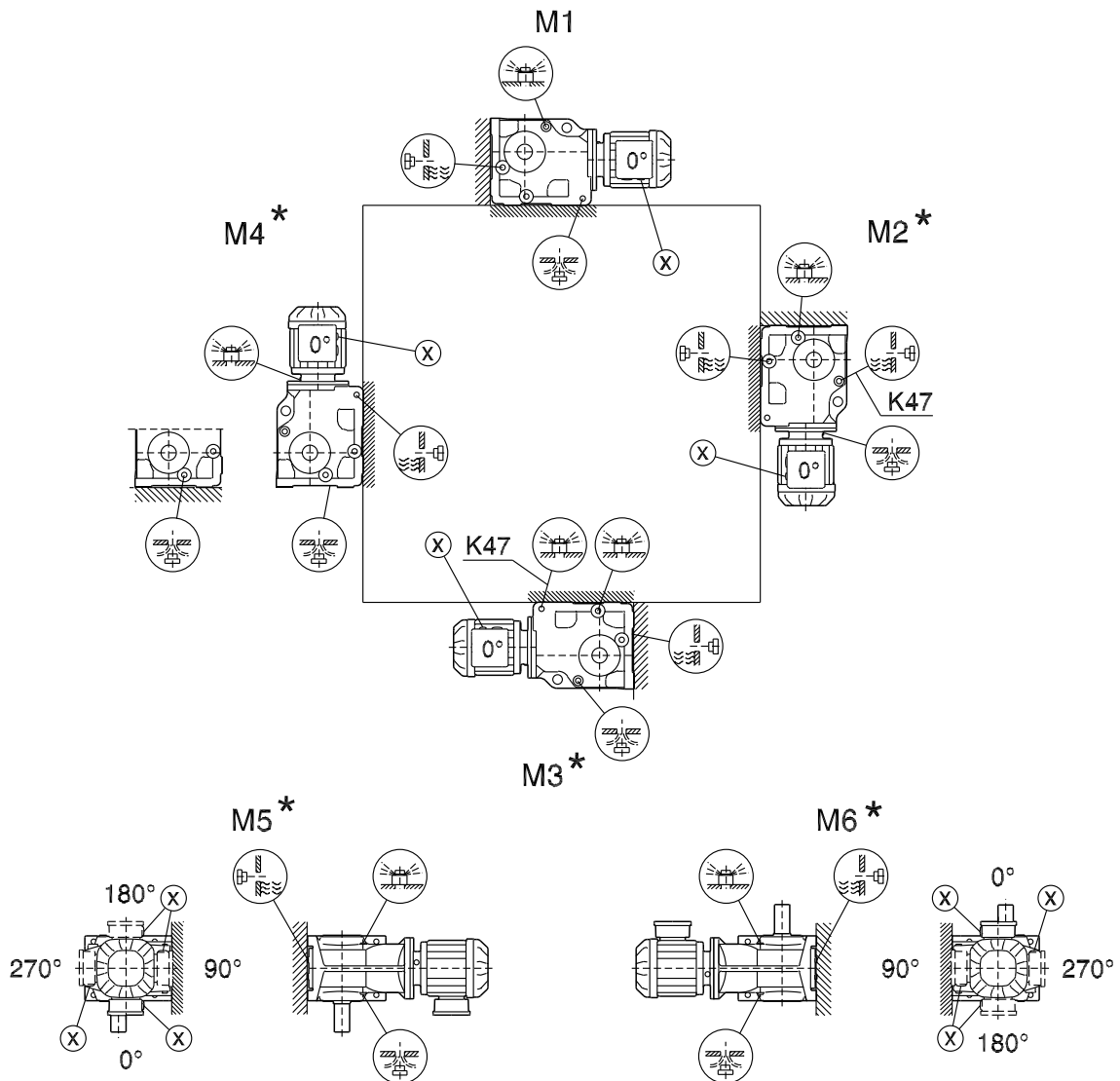
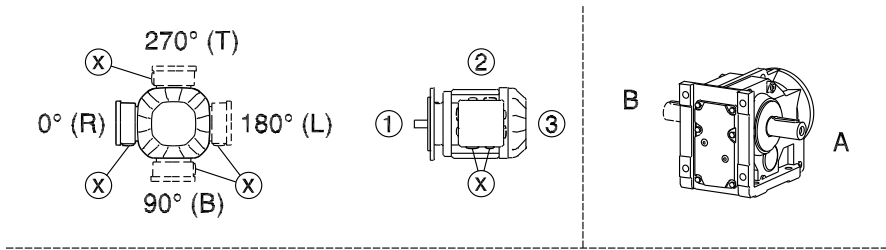
\* → (page 59)

Observe the notes in chapter "Project planning for gear units" / "Overhung and axial loads" (page 46).



5.6.4 K/KA..B/KH37B-157B, KV37B-107B

34 025 04 00



\* → (page 59)

Observe the notes in chapter "Project planning for gear units" / "Overhung and axial loads" (page 46).

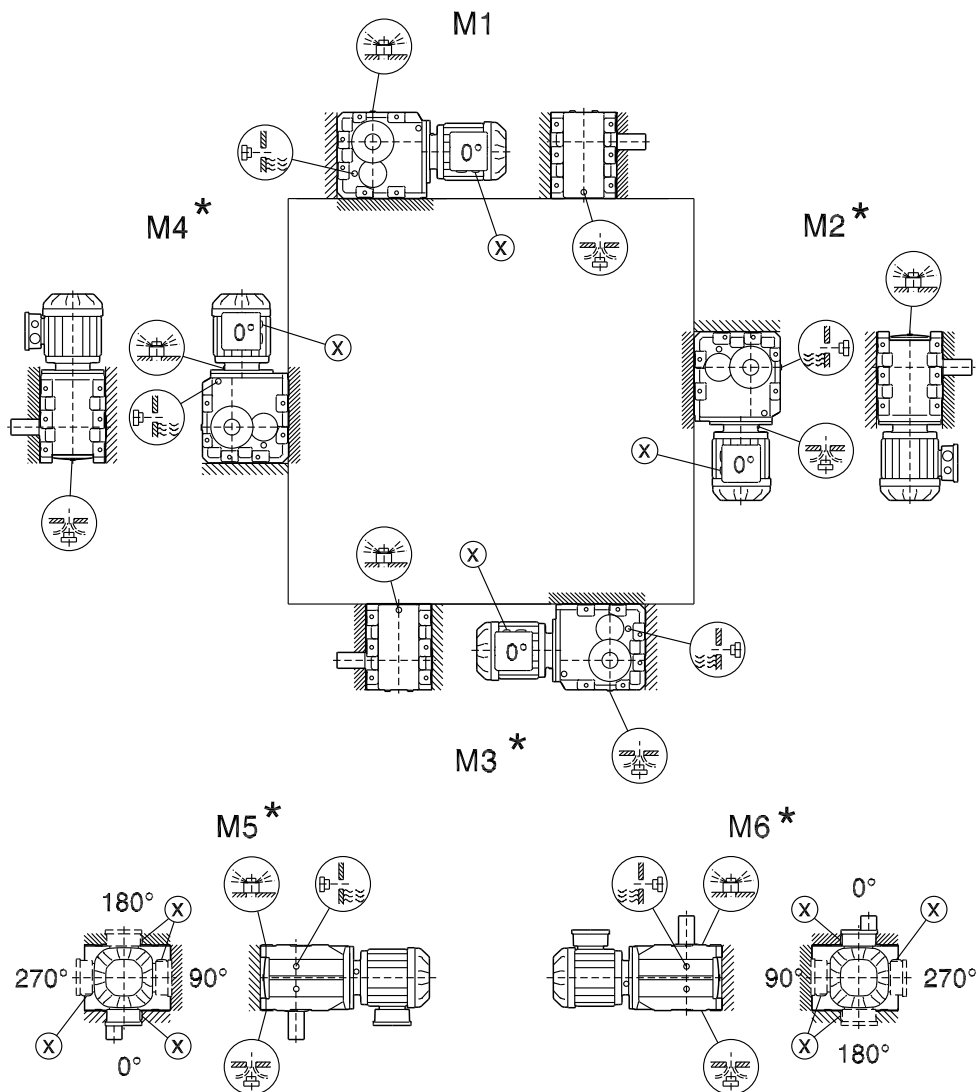
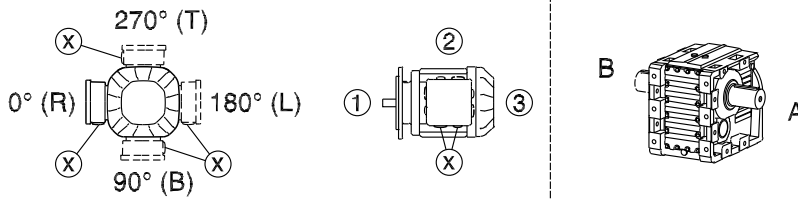


# Gear unit mounting positions and order information

## Mounting positions of helical-bevel gearmotors

### 5.6.5 K167-187, KH167B-187B

34 026 04 00



\* → (page 59)

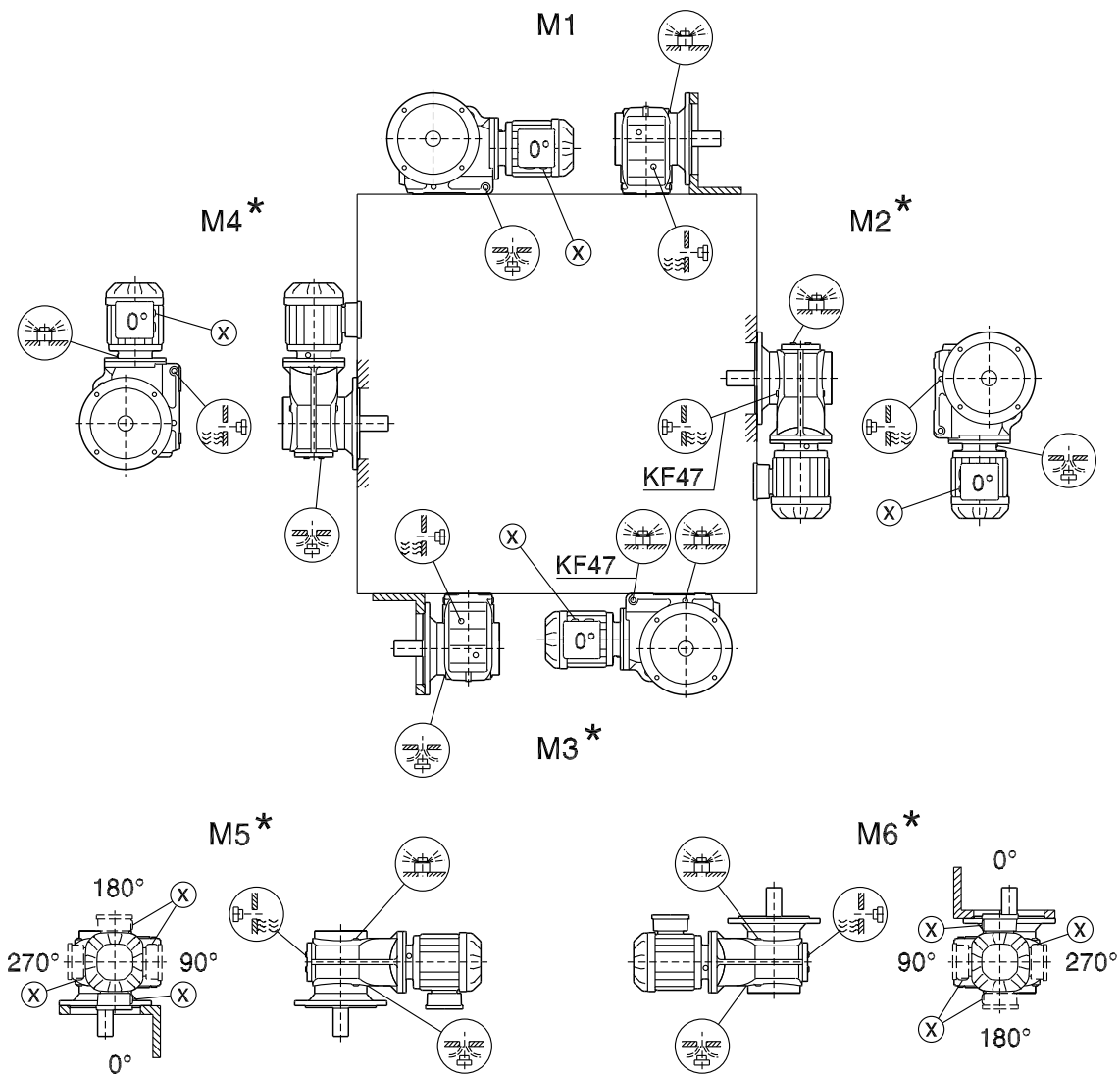
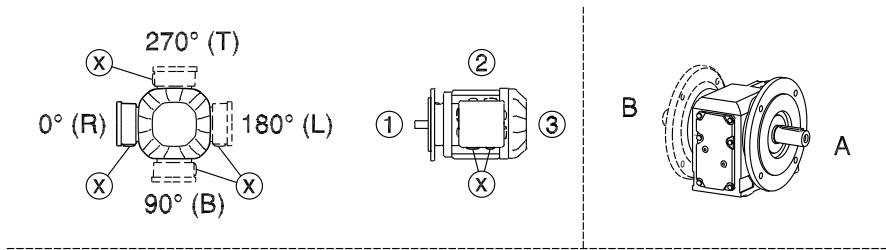
Observe the notes in chapter "Project planning for gear units" / "Overhung and axial loads" (page 46).





5.6.6 KF/KAF/KHF/KAZ/KHZ37-157, KVF/KVZ37-107

34 027 04 00



\* → (page 59)

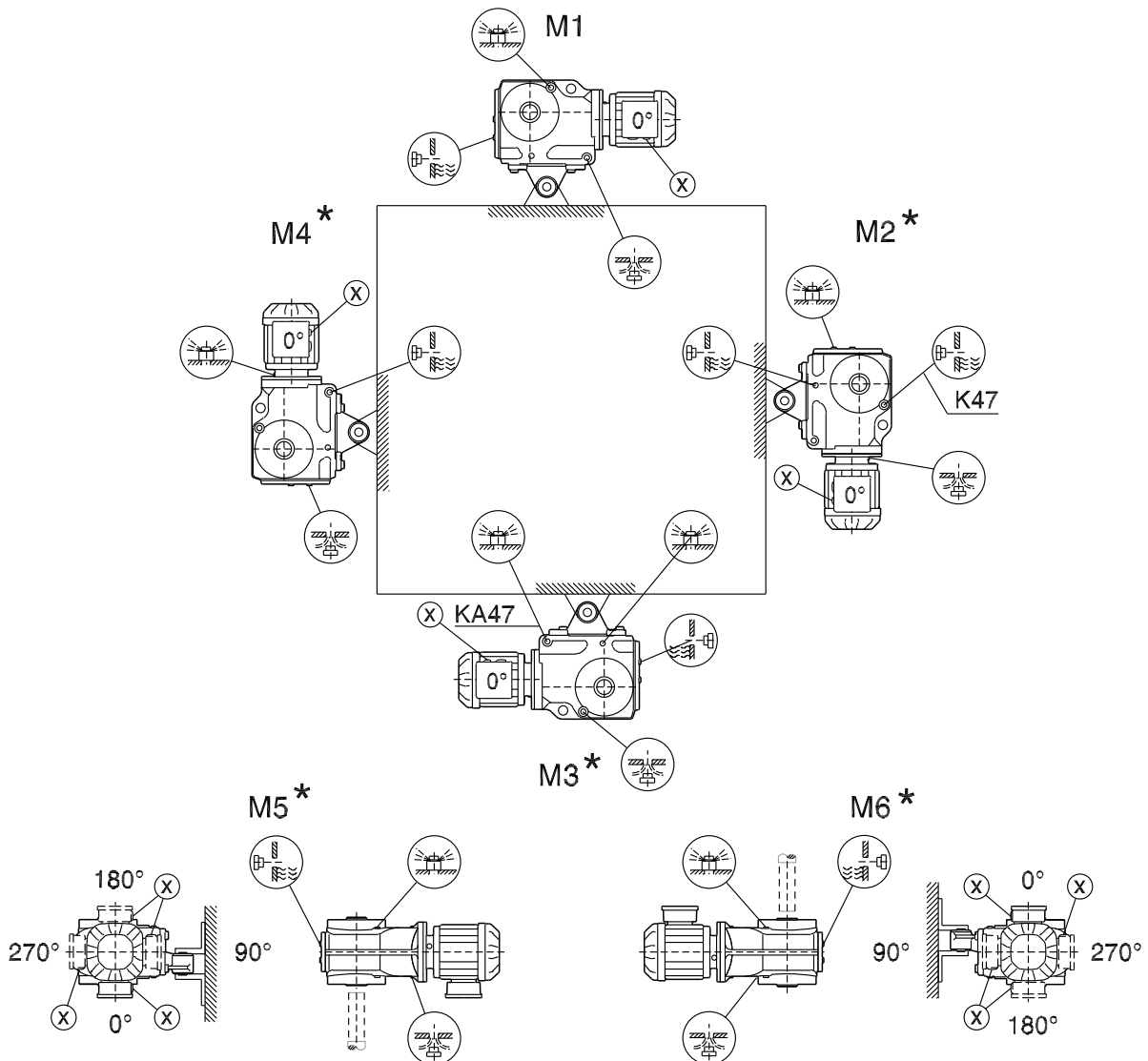
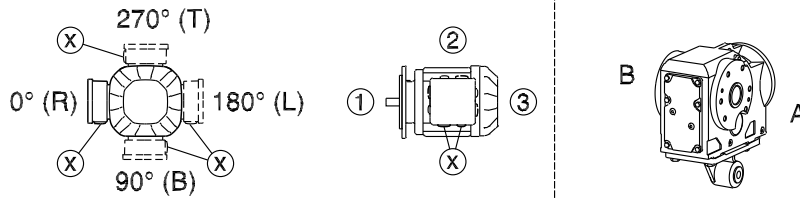


# Gear unit mounting positions and order information

## Mounting positions of helical-bevel garmotors

### 5.6.7 KA/KH37-157, KV37-107, KT37-97

39 025 05 00

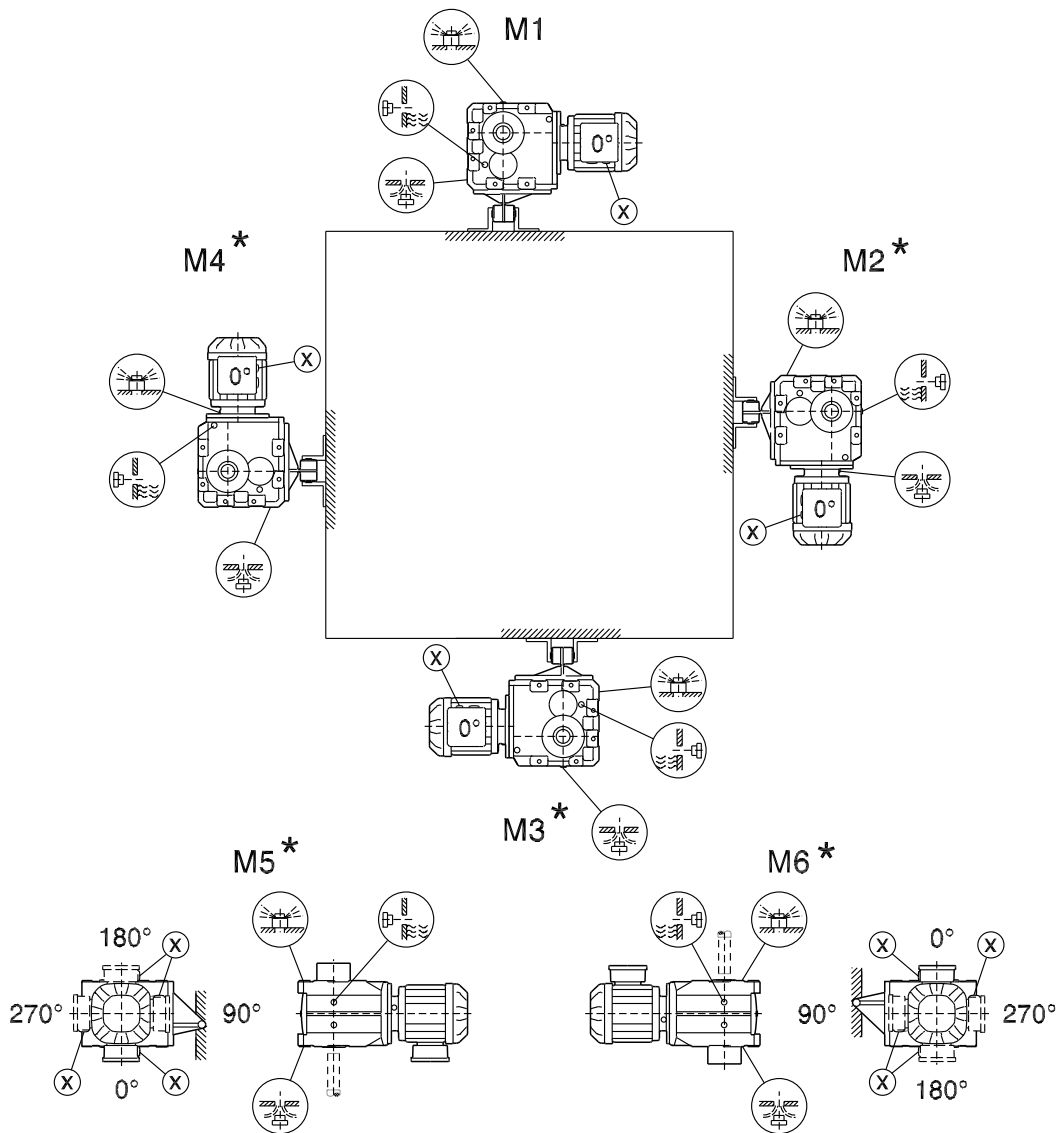
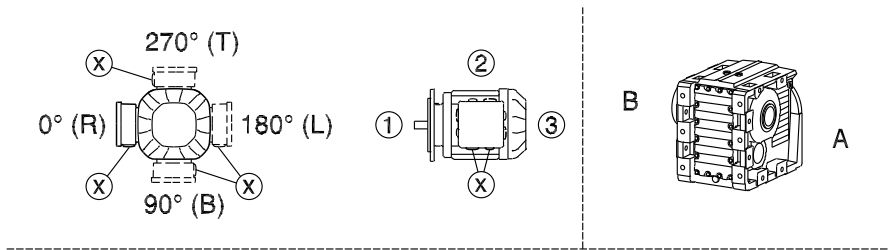


\* → (page 59)



**5.6.8 KH167-187**

39 026 05 00



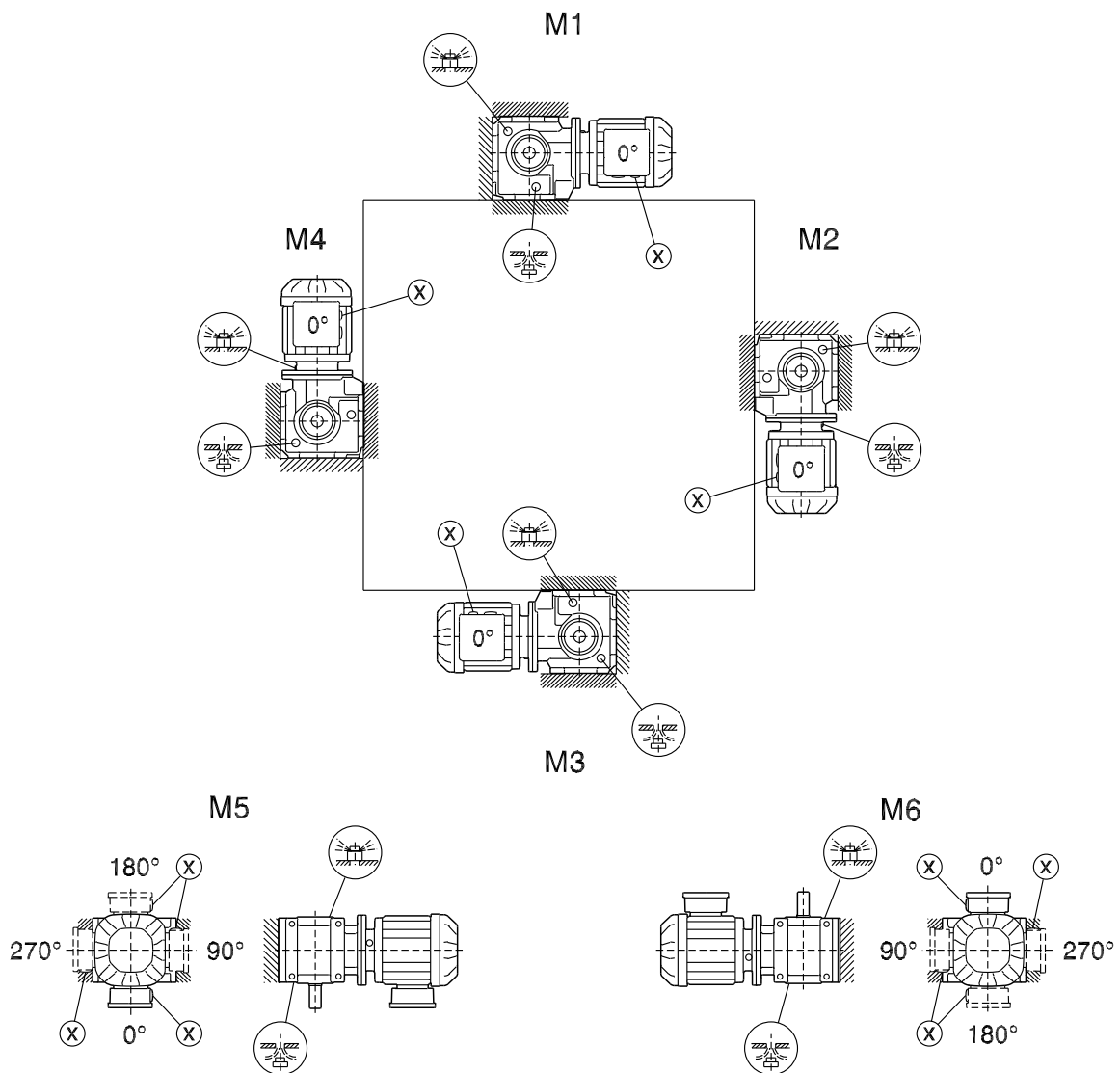
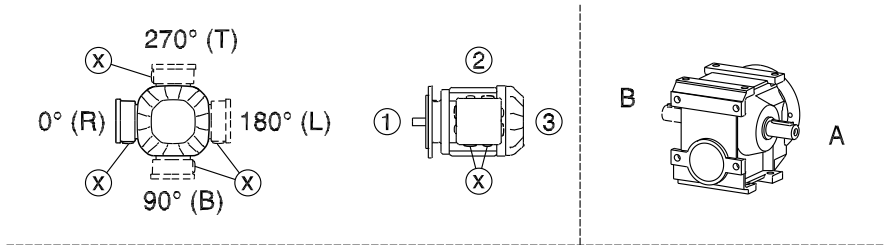
\* → (page 59)



**5.7 Mounting positions of helical-worm gearmotors**

**5.7.1 S37**

05 025 04 00



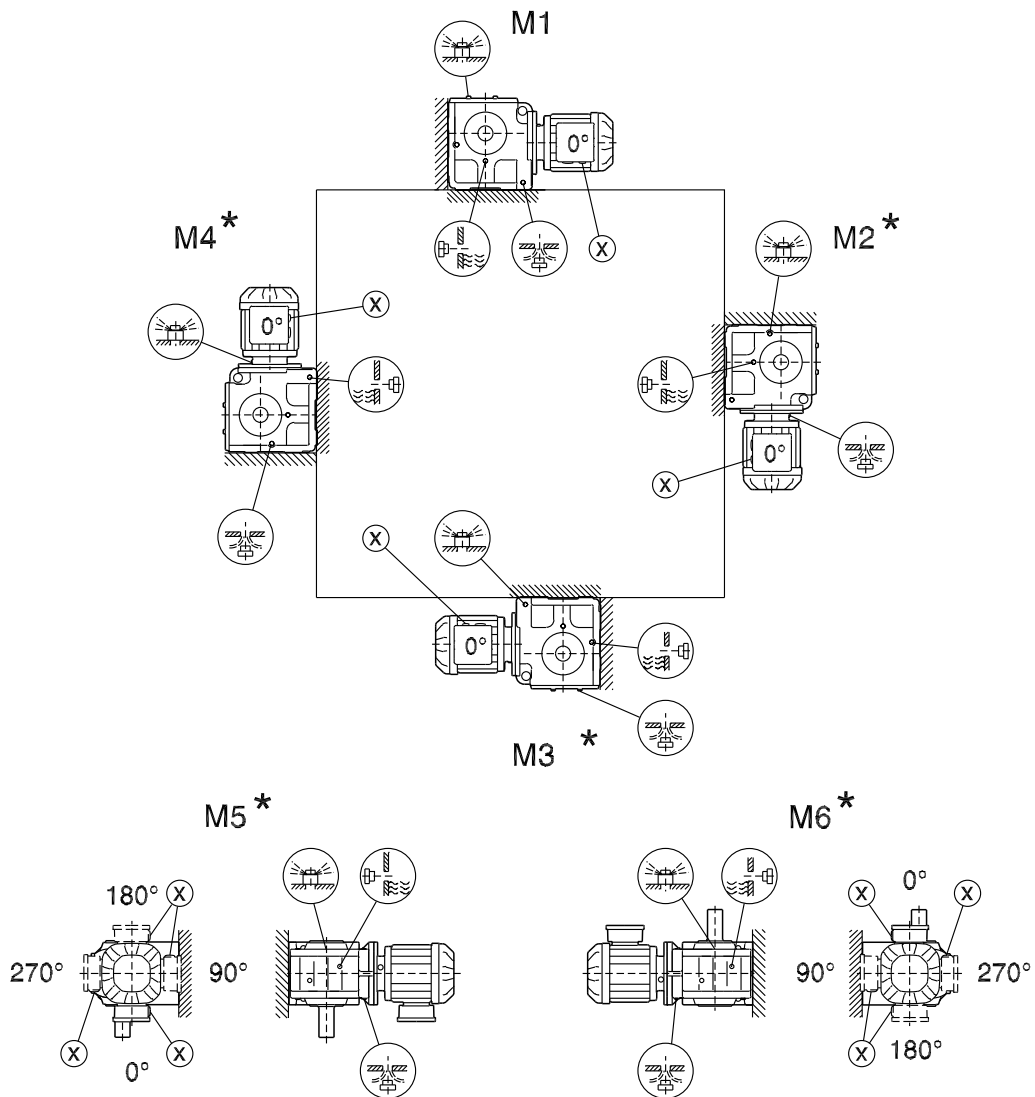
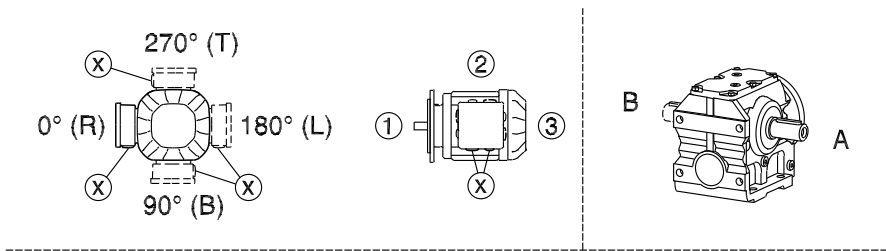
\* → (page 59)

Observe the notes in chapter "Project planning for gear units" / "Overhung and axial loads" (page 46).



**5.7.2 S47-S97**

05 026 04 00



\* → (page 59)

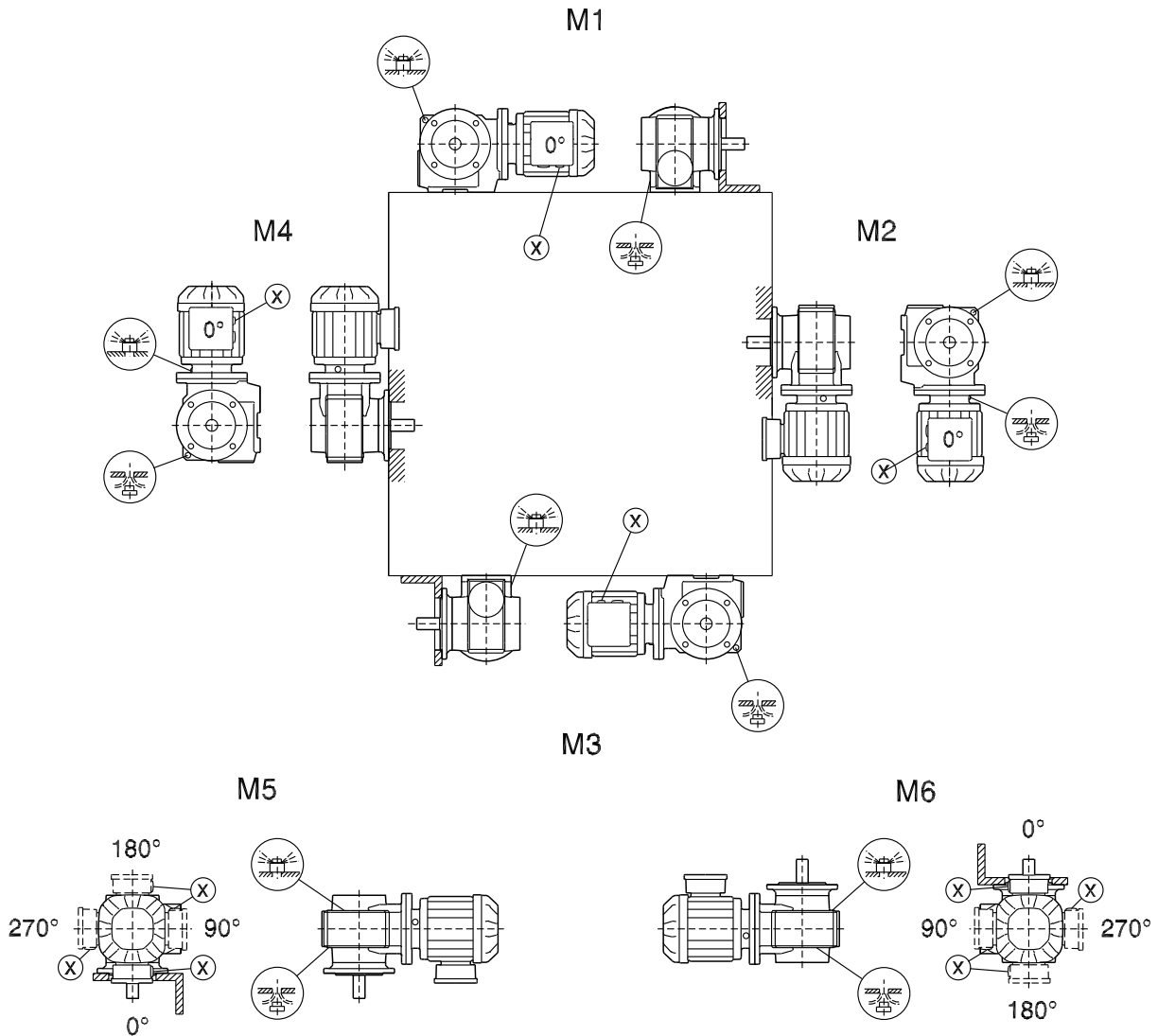
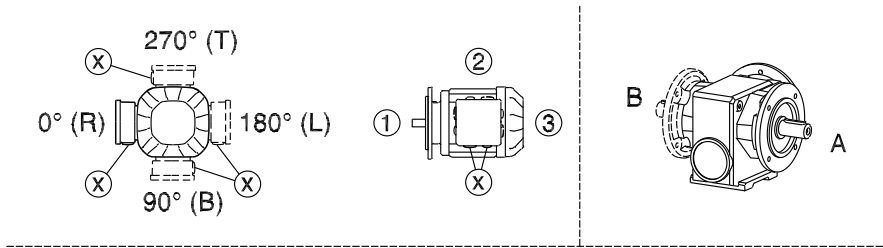
Observe the notes in chapter "Project planning for gear units" / "Overhung and axial loads" (page 46).



**Gear unit mounting positions and order information**  
 Mounting positions of helical-worm gearmotors

5.7.3 SF/SAF/SHF37

05 027 04 00

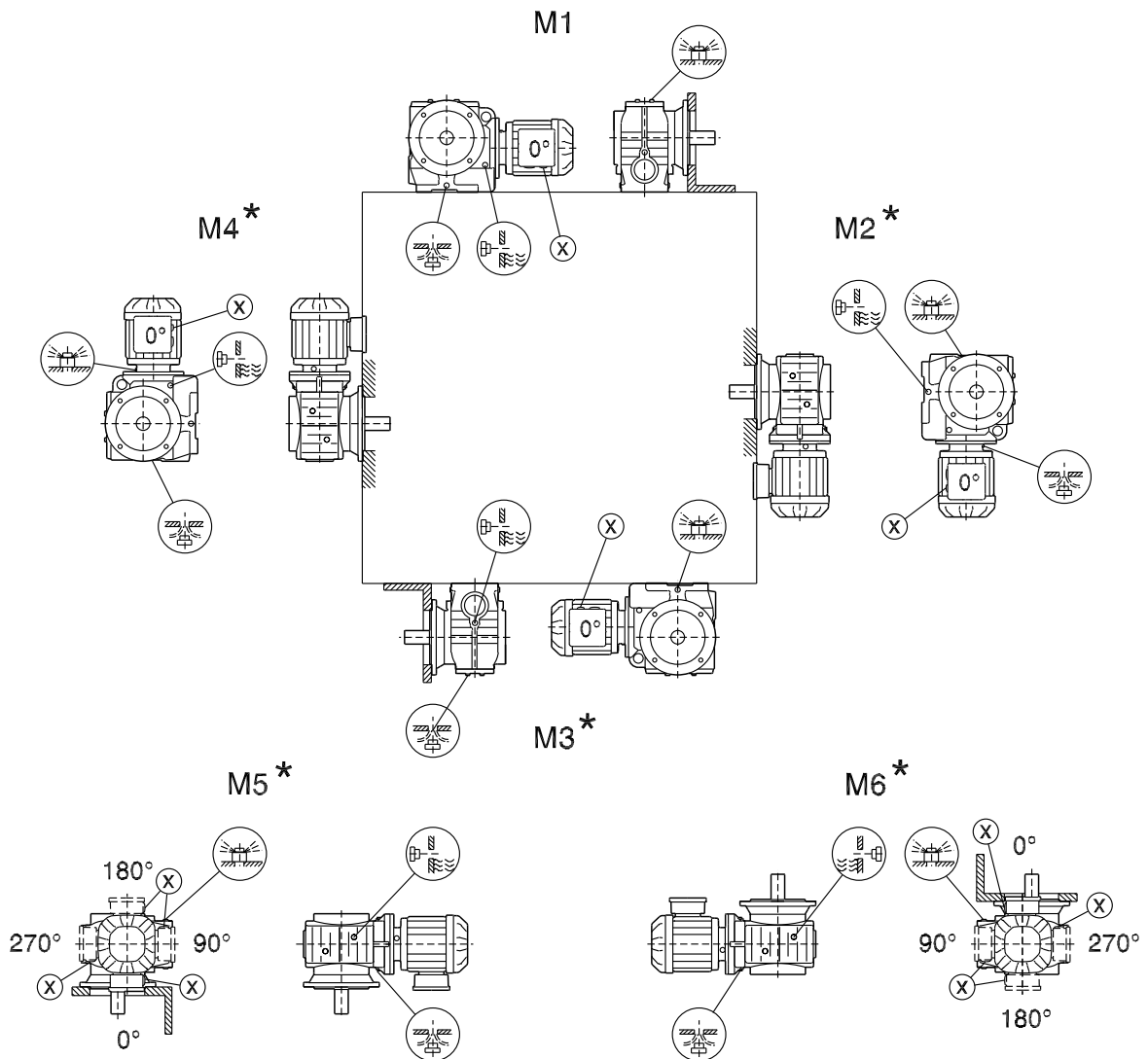
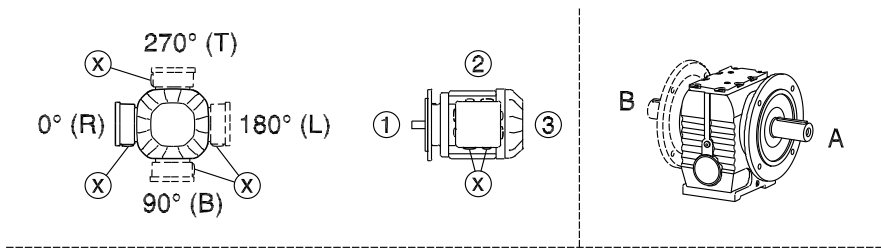


\* → (page 59)



5.7.4 SF/SAF/SHF/SAZ/SHZ47-97

05 028 04 00

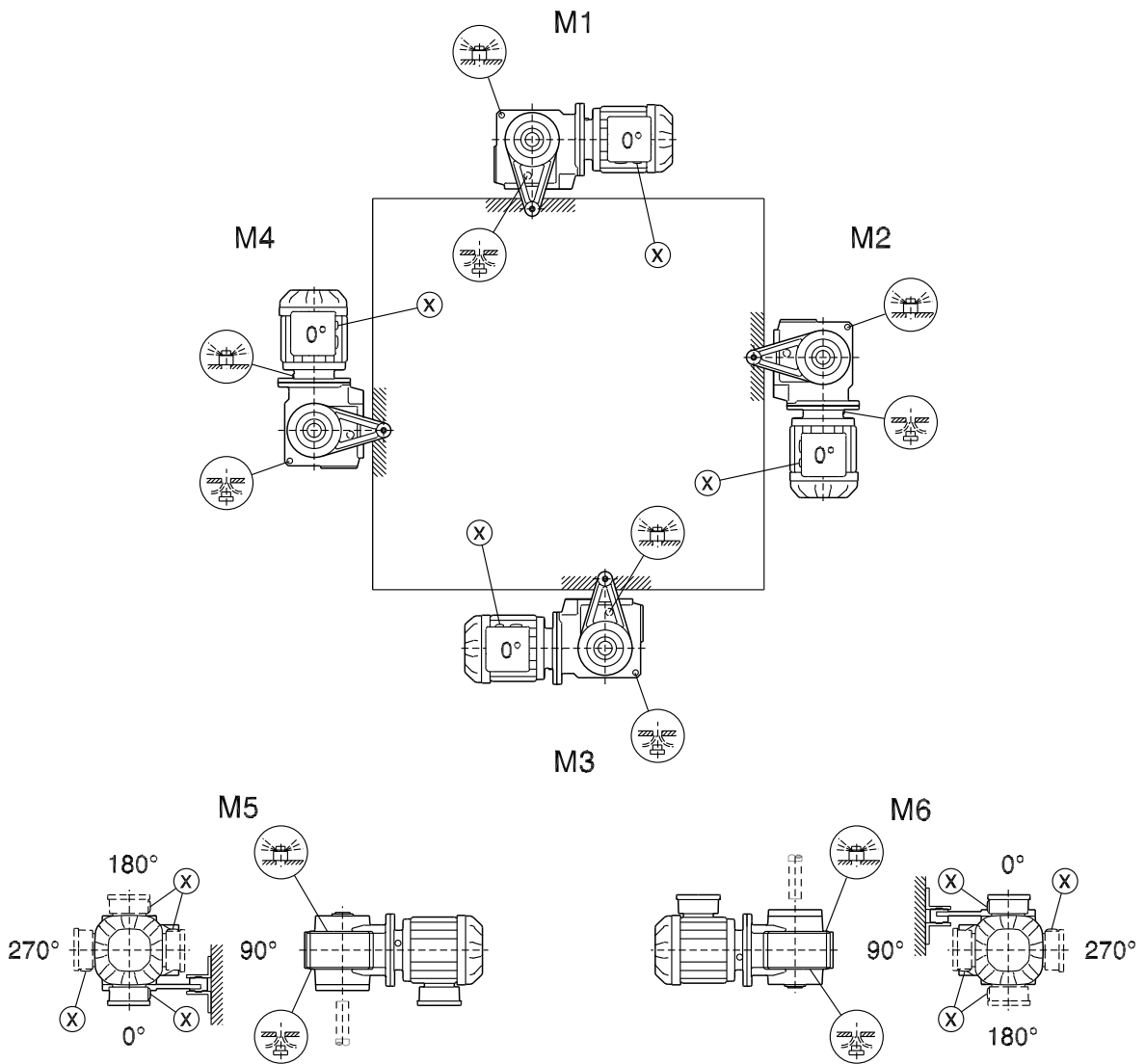
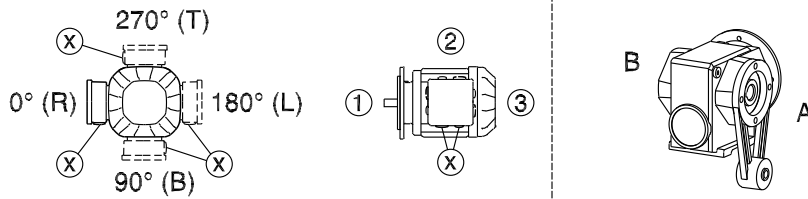


\* → (page 59)



5.7.5 SA/SH/ST37

28 020 05 00



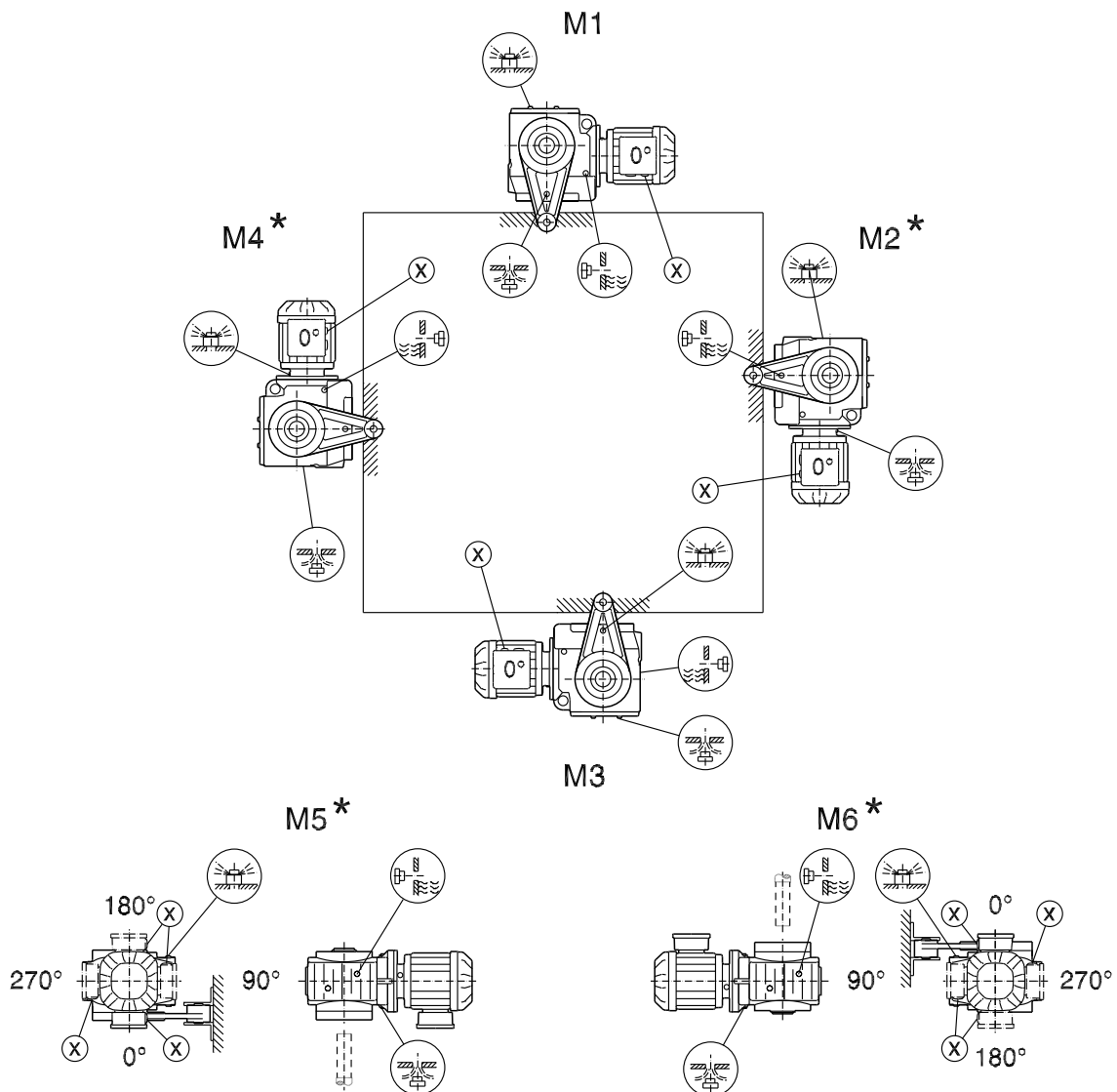
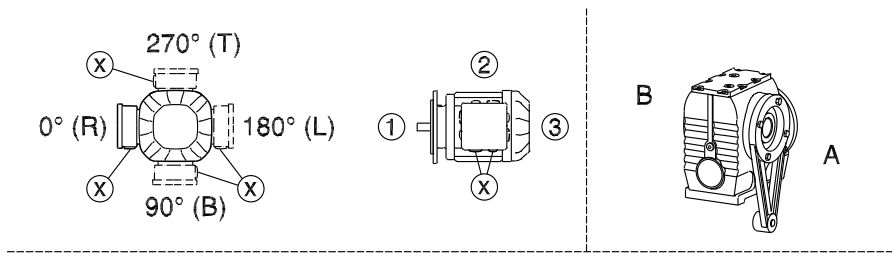
\* → (page 59)





**5.7.6 SA/SH/ST47-97**

28 021 04 00



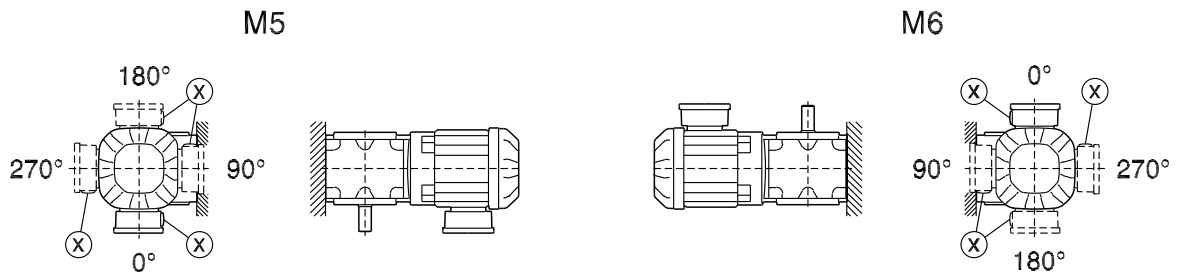
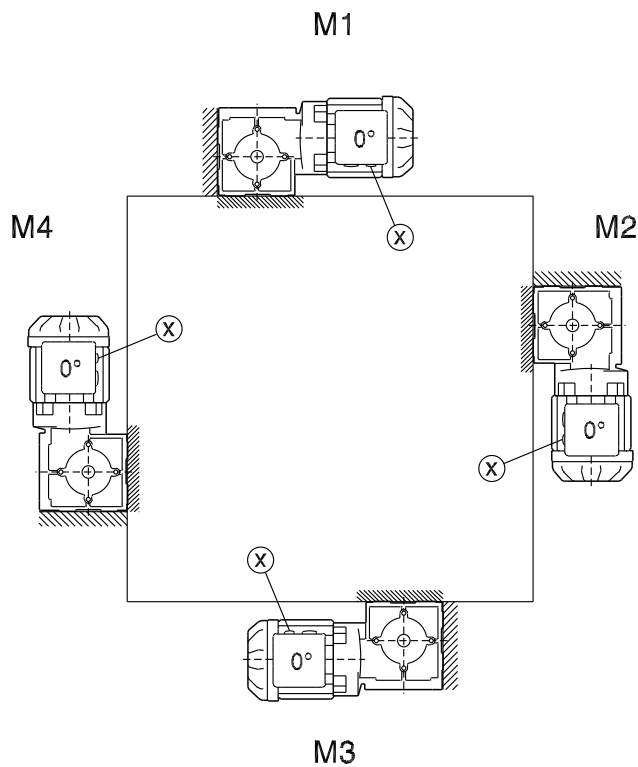
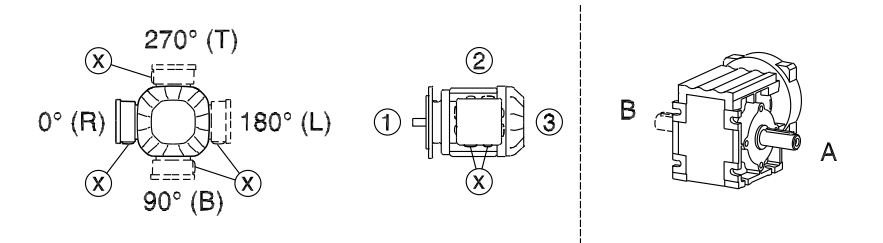
\* → (page 59)



**5.8 Mounting positions of SPIROPLAN® gearmotors**

**5.8.1 W10-30**

20 001 02 02

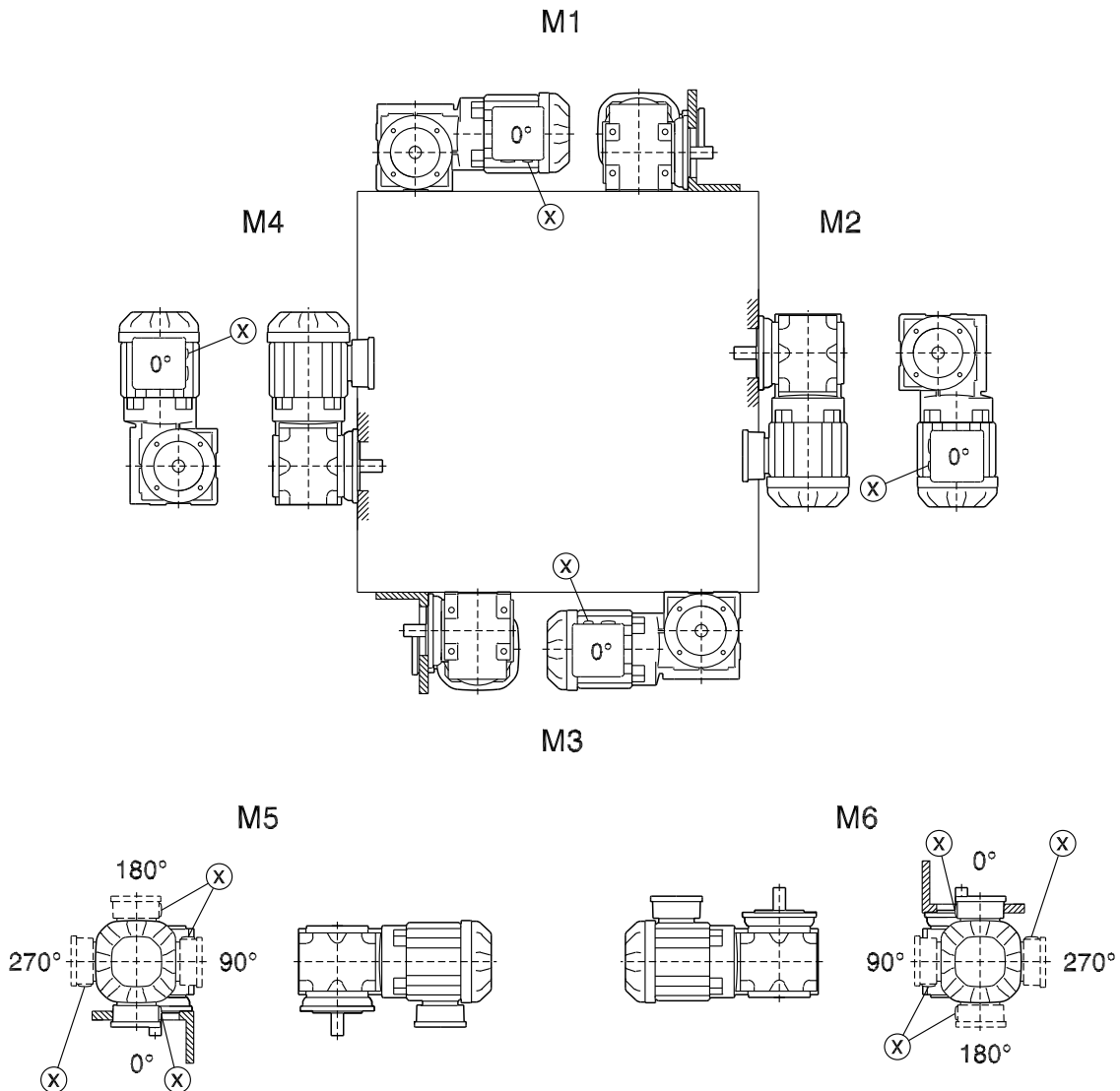
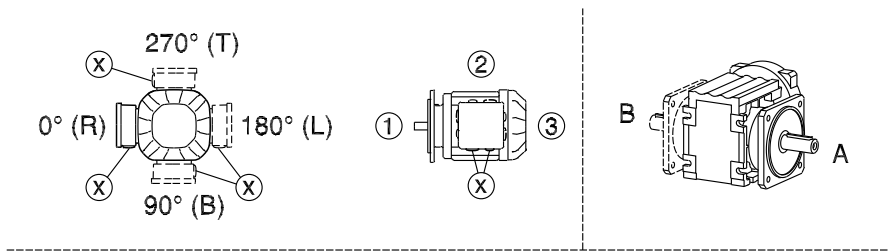


\* → (page 59)



5.8.2 WF10-30

20 002 02 02



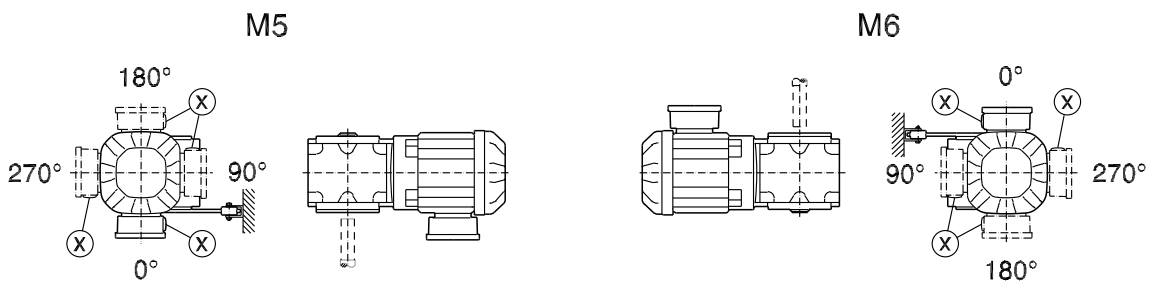
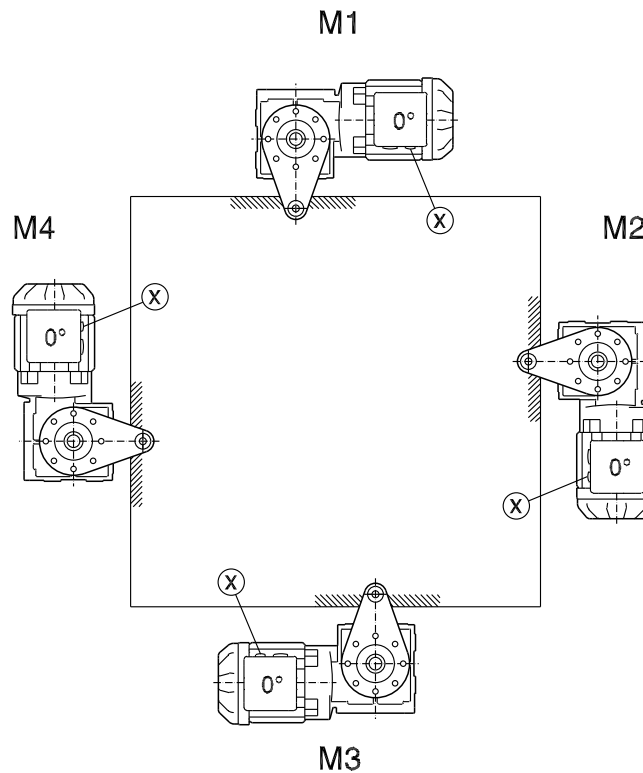
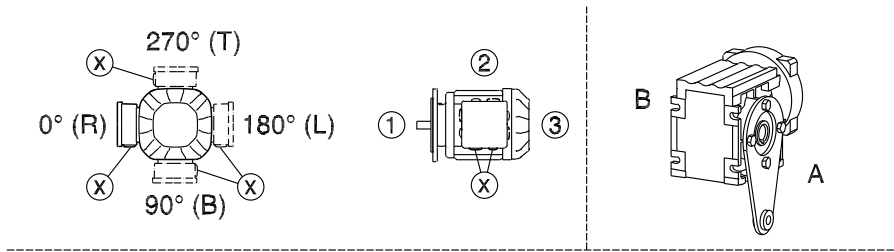
\* → (page 59)



**Gear unit mounting positions and order information**  
 Mounting positions of SPIROPLAN® gearmotors

5.8.3 WA10-30

20 003 03 02

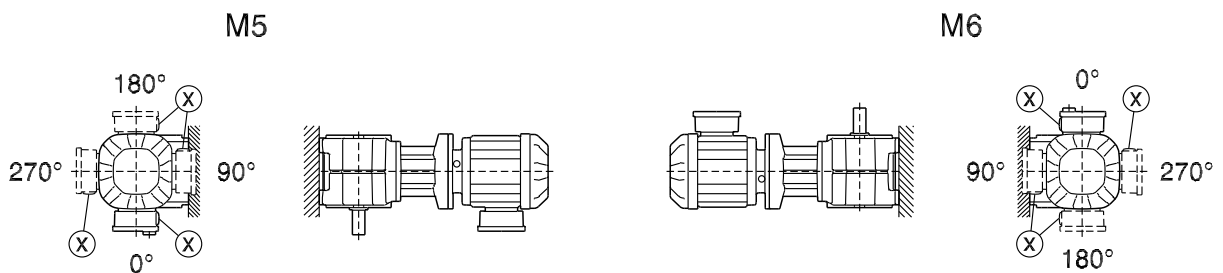
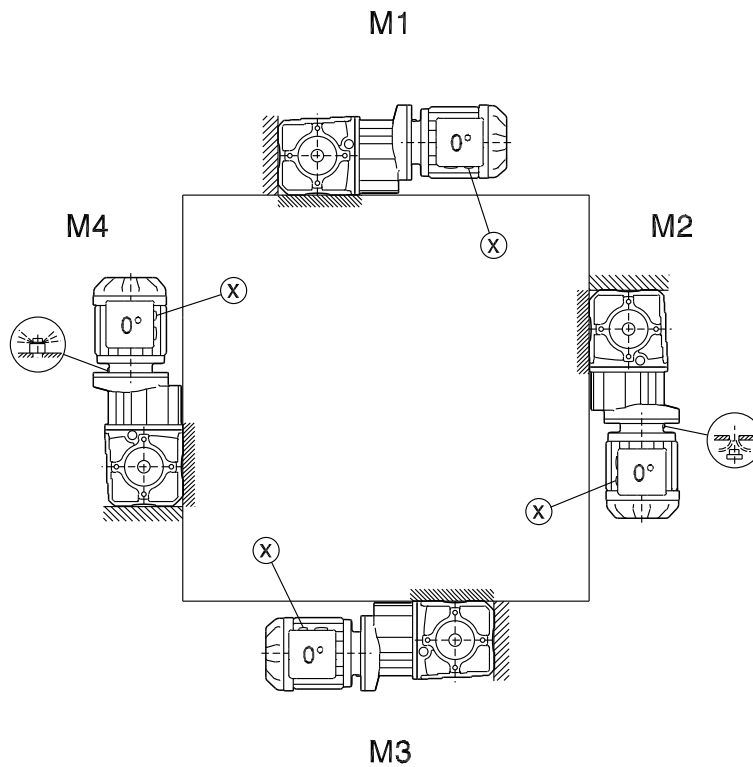
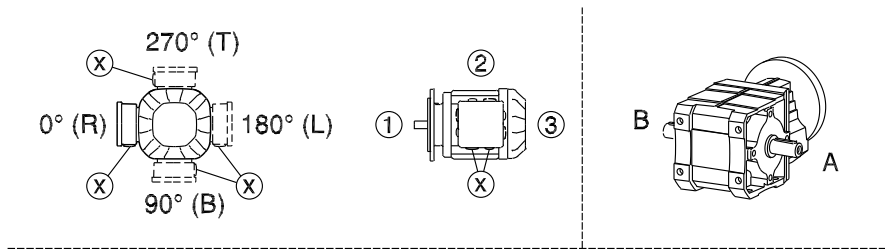


\* → (page 59)



5.8.4 W/WA..B/WH37B-47B

20 012 02 07



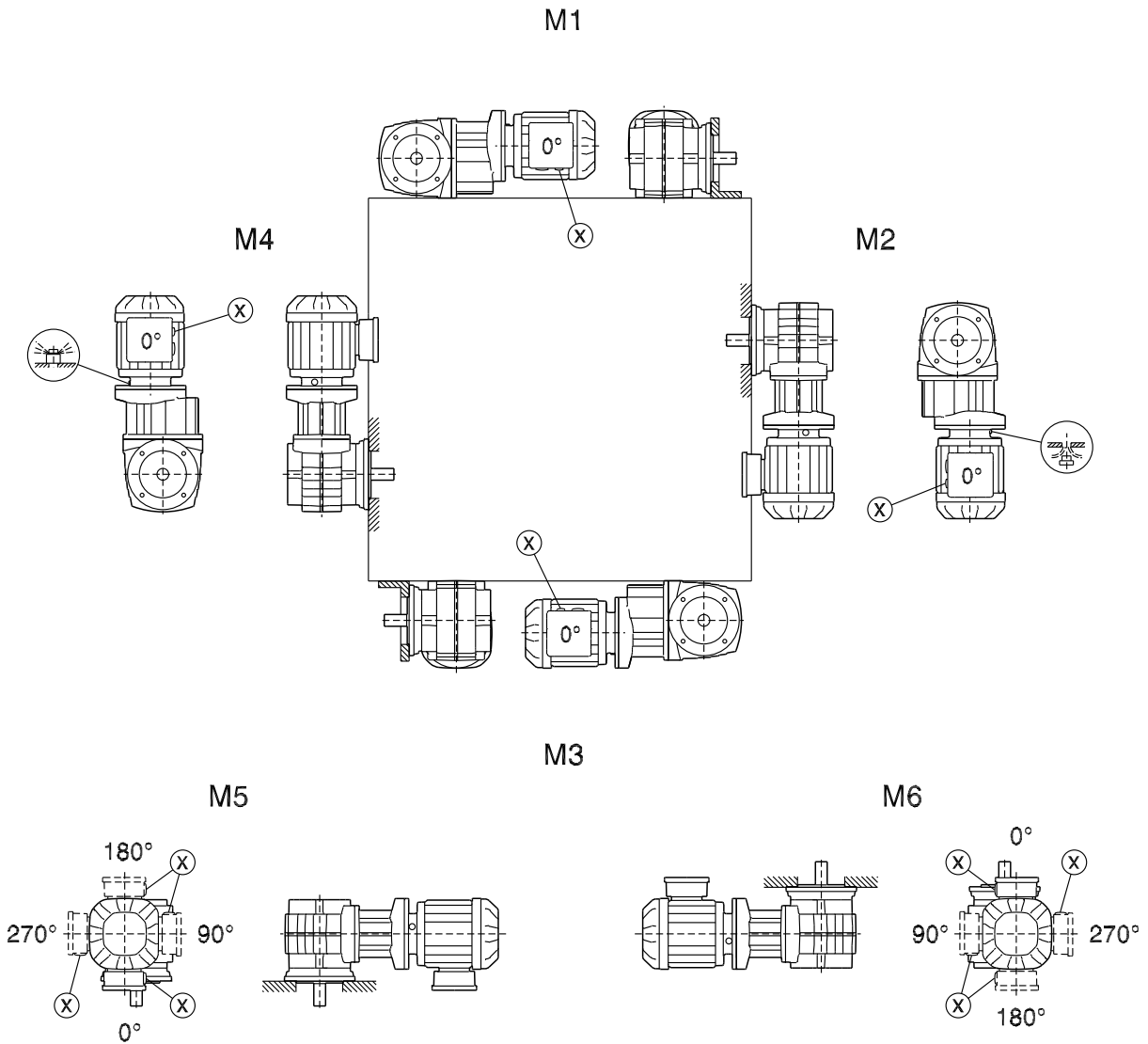
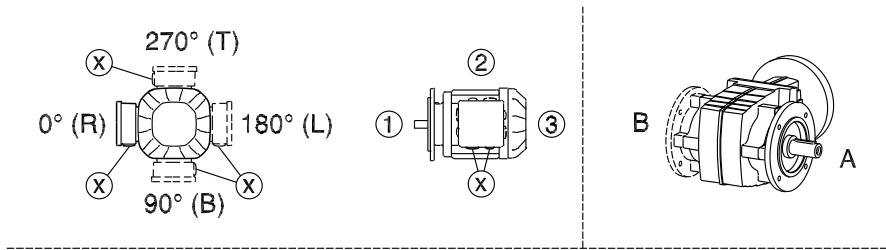
\* → (page 59)



**Gear unit mounting positions and order information**  
 Mounting positions of SPIROPLAN® gearmotors

5.8.5 WF/WAF/WHF37-47

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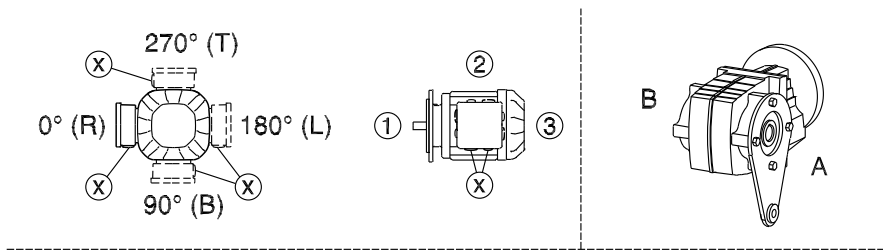


\* → (page 59)



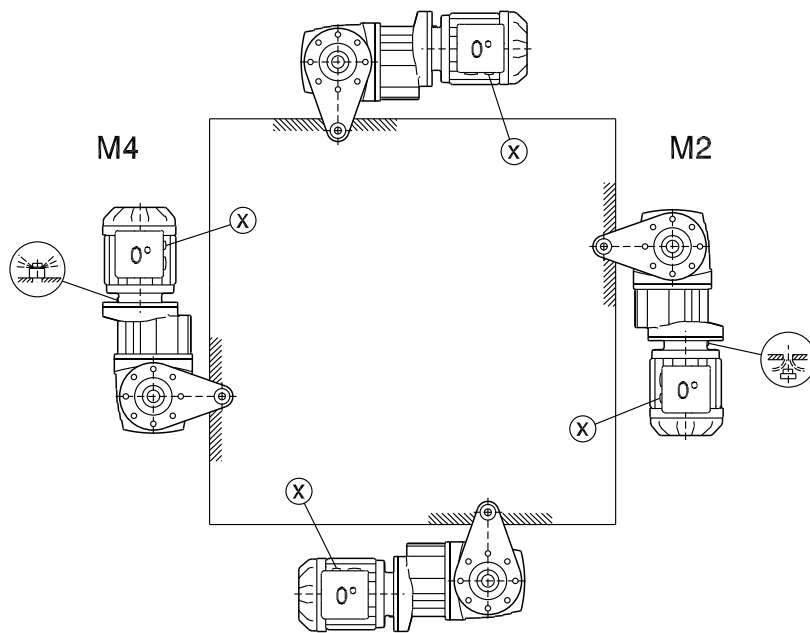
5.8.6 WA/WH/WT37-47

20 014 02 07



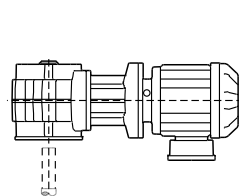
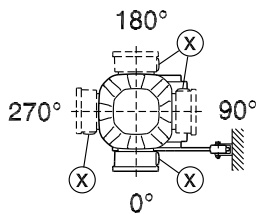
5

M1

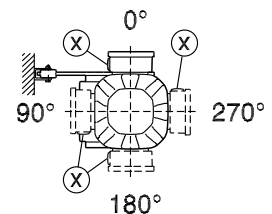


M3

M5



M6

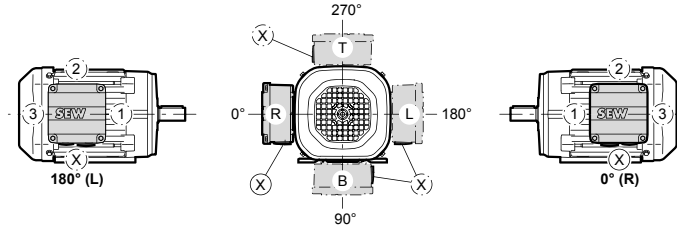


\* → (page 59)



**5.9 Mounting positions of AC motors**

**5.9.1 Motor terminal box position and cable entry**



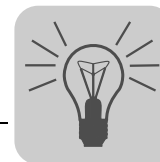
8670476811

**5.9.2 Mounting positions**

<p><b>B3</b></p>	<p><b>B6</b></p>	<p><b>B7</b></p>
<p><b>B8</b></p>	<p><b>V5</b></p>	<p><b>V6</b></p>
<p><b>B5</b></p>	<p><b>V1</b></p>	<p><b>V15</b></p>
<p><b>B35</b></p>	<p><b>V3</b></p>	<p><b>V36</b></p>
<p><b>B14</b></p>	<p><b>V18</b></p>	<p><b>V17</b></p>
<p><b>B34</b></p>	<p><b>V19</b></p>	<p><b>V37</b></p>
<p><b>B65</b></p>	<p><b>B75</b></p>	<p><b>B85</b></p>

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## 6 Design and operating notes

### 6.1 Lubricants

Unless a special arrangement is made, SEW-EURODRIVE supplies the drives with a lubricant fill adapted for the specific gear unit and mounting position. The mounting position (M1 – M6, see chapter "Mounting positions") must be specified in the order. If you change the mounting position later, you will have to adapt the lubricant fill to the new mounting position, see chapter "Lubricant fill quantities" (page 92).

#### 6.1.1 Bearing greases

The rolling bearings in SEW gear units are given a factory-fill with the greases listed below. SEW-EURODRIVE recommends regreasing rolling bearings with a grease filling at the same time as changing the oil.

	Ambient temperature	Manufacturer	Type
Gear unit rolling bearings	-40 °C to +80 °C	Fuchs	Renolit CX-TOM 15
	-40 °C to +80 °C	Klüber	Petamo GHY 133 N
	-40 °C to +40 °C	Castrol	Oberen FS 2
	-20 °C to +40 °C	Fuchs	Plantogel 2S



#### INFORMATION

The following grease quantities are required:




- **For fast-running bearings (gear unit input side):**  
Fill the cavities between the rolling elements one-third full with grease.
- **For slow-running bearings (gear unit output end):**  
Fill the cavities between the rolling elements two-thirds full with grease.



#### 6.1.2 Lubricant table

The lubricant table on the following page shows the permitted lubricants for SEW-EURODRIVE gear units.

#### Key to the lubricant table

CLP PG	= Polyglycol (W gear units, conforms to USDA-H1)
CLP HC	= Synthetic hydrocarbons
E	= Ester oil (water hazard classification 1 (German regulation – "WKG"))
HCE	= Synthetic hydrocarbons + ester oil (USDA - H1 certification)
HLP	= Hydraulic oil
	= Synthetic lubricant (= synthetic-based bearing grease)
1)	Helical-worm gear units with PG oil: please consult SEW-EURODRIVE
2)	Special lubricant only for SPIROPLAN® gear units
3)	Use $SEW f_B \geq 1.2$
4)	Bear in mind the critical starting behavior at low temperatures.
5)	Low-viscosity grease
6)	Ambient temperature
7)	Grease
	Lubricant for the food industry (food grade oil)
	Biodegradable oil (lubricant for agriculture, forestry, and water management)



Lubricant table

01 751 09 04

	6)	DIN (ISO)	ISO, NLGI	Mobil®	Shell	bp	LIQUI MOLY	Castrol	FUCHS	TOTAL
R...	Standard -15	CLP (CC)	VG 220	Mobilgear 600 XP 220	Shell Omala S2 G 220	BP Energol GR-XP 220	Kilberoil GEM 1-220 N	Tribol Optimol Optigear BM 220	Renolin CLP 220	Carter EP 220
K..37-187 (HK...)	+80	CLP PG	VG 220	Mobil Glygoyle 220	Shell Omala S4 WE 220	BP Energol SG-XP 220	Kilbersynth GH 6-220	Optiflex A 220	Renolin PG 220	Carter SY 220
F...	+60	CLP HC	VG 220	Mobil SHC 630	Shell Omala S4 GX 220		Kilbersynth GEM 4-220 N	Optigear Synthetic X 220	Renolin Unisyn CLP 220	Carter SH 220
	+40	CLP HC	VG 150	Mobil SHC 629	Shell Omala S4 GX 150		Kilbersynth GEM 4-150 N	Optigear Synthetic X 150	Renolin Unisyn CLP 150	Carter SH 150
	+25	CLP (CC)	VG 150	Mobilgear 600 XP 150	Shell Omala S2 G 150	BP Energol GR-XP 150	Kilberoil GEM 1-150 N	Optigear BM 100	Renolin CLP 150	Carter EP 150
	+20	CLP HC	VG 68	Mobil SHC 626	Shell Omala S4 GX 68				Renolin Unisyn CLP 68	
	+0	CLP HC	VG 32	Mobil SHC 624			Kilber-Summit HySyn FG-32	Optilieb HY 32	Renolin Unisyn OL 32	Dacnis SH 32
K..19 K..29	Standard +60	CLP PG	VG 460				Kilbersynth GH 6-460			
	+60	H1 PG	VG 460				Kilbersynth UH1 6-460			
S...(HS...)	Standard +40	CLP (CC)	VG 680	Mobilgear 600 XP 680	Shell Omala S2 G 680	BP Energol GR-XP 680	Kilberoil GEM 1-680 N	Tribol Optigear EM 680	Renolin SEW 680	Carter EP 680
	+80	CLP PG	VG 680	Mobil glygoyle 680	Shell Omala S4 WE 680	BP Energol SG-XP 680	Kilbersynth GH 6-680	Optiflex A 680	Renolin PG 680	
	+60	CLP HC	VG 460	Mobil SHC 634	Shell Omala S4 GX 460		Kilbersynth GEM 4-460 N	Optigear Synthetic X 460	Renolin Unisyn CLP 460	Carter SH 460
	+30	CLP HC	VG 150	Mobil SHC 629	Shell Omala S4 GX 150		Kilbersynth GEM 4-150 N	Optigear Synthetic X 150	Renolin Unisyn CLP 150	Carter SH 150
	+10	CLP (CC)	VG 150	Mobilgear 600 XP 150	Shell Omala S2 G 150	BP Energol GR-XP 150	Kilberoil GEM 1-150 N	Tribol Optigear BM 150	Renolin CLP 150	Carter EP 150
	+40	CLP PG	VG 220	Mobil Glygoyle 220	Shell Omala S4 WE 220	BP Energol SG-XP 220	Kilbersynth GH 6-220	Optiflex A 220	Renolin PG 220	Carter SY 220
	+20	CLP HC	VG 68	Mobil SHC 626	Shell Omala S4 GX 68				Renolin Unisyn CLP 68	
	0	CLP HC	VG 32	Mobil SHC 624			Kilber-Summit HySyn FG-32	Alphasyn T32	Renolin Unisyn OL 32	Dacnis SH 32
R.. K..37-187 / HK.. F.. S.. / HS..	-10 +40 -20 +30 -40 0 -20 +40	CLPHC NSF H1 E	VG 460				Kilberoil 4UH1-460 N	Optilieb GT 460	Cassida Fluid GL 460	
W...(HW...)	Standard +40	SEW PG	VG 460	Mobil Synth Gear Oil 75.W90			Kilberoil 4UH1-220 N	Optilieb GT 220	Cassida Fluid GL 220	
	+10	API GL5	SAE 75W90 (~VG 100)				Kilberoil 4UH1-68 N	Optilieb HY 68	Cassida Fluid HF 68	
PS.F..	Standard +80	H1 PG	VG 460	Mobil SHC 624			Kilberbio CA2-460	Plantogear 460 S		
	+60	CLP PG	VG 220				Kilbersynth UH1 6-460			
	+20	H1 PG	VG 460				Kilbersynth UH1 6-220			
	0	CLP HC	VG 32				Kilbersynth UH1 6-460			
PS.C..	Standard +40	CLP (CC)	VG 220	Mobilgear 600 XP 220						
	+40	DIN 51 818	NLGI 00	Mobilux EP 004						
	+40	DIN 51 818	NLGI 1				Kilbersynth UH1 14-151			
	0	CLP HC	VG 32	Mobil SHC 624						
BS.F..	Standard +60	CLP PG	VG 220				Kilbersynth GH 6-220			
	+60	H1 PG	VG 460				Kilbersynth UH1 6-460			

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#### 6.1.3 Lubricant fill quantities

The specified fill quantities are **recommended values**. The exact values vary depending on the number of gear stages and reduction ratio. Check the **oil level plug for the exact oil quantity** when you fill in the oil.

The following tables show guide values for lubricant fill quantities in relation to the mounting position M1 – M6.

*Helical (R) gear units*

R..., R..F

Gear unit	Fill quantity in liters					
	M1 <sup>1)</sup>	M2	M3	M4	M5	M6
R07	0.12	0.20	0.20	0.20	0.20	0.20
R17	0.25	0.55	0.35	0.55	0.35	0.40
R27	0.25/0.40	0.70	0.50	0.70	0.50	0.50
R37	0.30/0.95	0.85	0.95	1.05	0.75	0.95
R47	0.70/1.50	1.60	1.50	1.65	1.50	1.50
R57	0.80/1.70	1.90	1.70	2.10	1.70	1.70
R67	1.10/2.30	2.40	2.80	2.90	1.80	2.00
R77	1.20/3.00	3.30	3.60	3.80	2.50	3.40
R87	2.30/6.0	6.4	7.2	7.2	6.3	6.5
R97	4.60/9.8	11.7	11.7	13.4	11.3	11.7
R107	6.0/13.7	16.3	16.9	19.2	13.2	15.9
R137	10.0/25.0	28.0	29.5	31.5	25.0	25.0
R147	15.4/40.0	46.5	48.0	52.0	39.5	41.0
R167	27.0/70.0	82.0	78.0	88.0	66.0	69.0

1) The larger gear unit of multi-stage gear units must be filled with the larger oil volume.

RF..

Gear unit	Fill quantity in liters					
	M1 <sup>1)</sup>	M2	M3	M4	M5	M6
RF07	0.12	0.20	0.20	0.20	0.20	0.20
RF17	0.25	0.55	0.35	0.55	0.35	0.40
RF27	0.25/0.40	0.70	0.50	0.70	0.50	0.50
RF37	0.35/0.95	0.90	0.95	1.05	0.75	0.95
RF47	0.65/1.50	1.60	1.50	1.65	1.50	1.50
RF57	0.80/1.70	1.80	1.70	2.00	1.70	1.70
RF67	1.20/2.50	2.50	2.70	2.80	1.90	2.10
RF77	1.20/2.60	3.10	3.30	3.60	2.40	3.00
RF87	2.40/6.0	6.4	7.1	7.2	6.3	6.4
RF97	5.1/10.2	11.9	11.2	14.0	11.2	11.8
RF107	6.3/14.9	15.9	17.0	19.2	13.1	15.9
RF137	9.5/25.0	27.0	29.0	32.5	25.0	25.0
RF147	16.4/42.0	47.0	48.0	52.0	42.0	42.0
RF167	26.0/70.0	82.0	78.0	88.0	65.0	71.0

1) The larger gear unit of multi-stage gear units must be filled with the larger oil volume.



RX..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
<b>RX57</b>	0.60	0.80	1.30	1.30	0.90	0.90
<b>RX67</b>	0.80	0.80	1.70	1.90	1.10	1.10
<b>RX77</b>	1.10	1.50	2.60	2.70	1.60	1.60
<b>RX87</b>	1.70	2.50	4.80	4.80	2.90	2.90
<b>RX97</b>	2.10	3.40	7.4	7.0	4.80	4.80
<b>RX107</b>	3.90	5.6	11.6	11.9	7.7	7.7

RXF..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
<b>RXF57</b>	0.50	0.80	1.10	1.10	0.70	0.70
<b>RXF67</b>	0.70	0.80	1.50	1.40	1.00	1.00
<b>RXF77</b>	0.90	1.30	2.40	2.00	1.60	1.60
<b>RXF87</b>	1.60	1.95	4.90	3.95	2.90	2.90
<b>RXF97</b>	2.10	3.70	7.1	6.3	4.80	4.80
<b>RXF107</b>	3.10	5.7	11.2	9.3	7.2	7.2



Parallel-shaft  
helical (F) gear  
units

F.., FA..B, FH..B, FV..B

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
F..27	0.60	0.80	0.65	0.70	0.60	0.60
F..37	0.95	1.25	0.70	1.25	1.00	1.10
F..47	1.50	1.80	1.10	1.90	1.50	1.70
F..57	2.60	3.50	2.10	3.50	2.80	2.90
F..67	2.70	3.80	1.90	3.80	2.90	3.20
F..77	5.9	7.3	4.30	8.0	6.0	6.3
F..87	10.8	13.0	7.7	13.8	10.8	11.0
F..97	18.5	22.5	12.6	25.2	18.5	20.0
F..107	24.5	32.0	19.5	37.5	27.0	27.0
F..127	40.5	54.5	34.0	61.0	46.3	47.0
F..157	69.0	104.0	63.0	105.0	86.0	78.0

FF..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
FF27	0.60	0.80	0.65	0.70	0.60	0.60
FF37	1.00	1.25	0.70	1.30	1.00	1.10
FF47	1.60	1.85	1.10	1.90	1.50	1.70
FF57	2.80	3.50	2.10	3.70	2.90	3.00
FF67	2.70	3.80	1.90	3.80	2.90	3.20
FF77	5.9	7.3	4.30	8.1	6.0	6.3
FF87	10.8	13.2	7.8	14.1	11.0	11.2
FF97	19.0	22.5	12.6	25.6	18.9	20.5
FF107	25.5	32.0	19.5	38.5	27.5	28.0
FF127	41.5	55.5	34.0	63.0	46.3	49.0
FF157	72.0	105.0	64.0	106.0	87.0	79.0

FA.., FH.., FV.., FAF.., FAZ.., FHF.., FHZ.., FVF.., FVZ.., FT..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
F..27	0.60	0.80	0.65	0.70	0.60	0.60
F..37	0.95	1.25	0.70	1.25	1.00	1.10
F..47	1.50	1.80	1.10	1.90	1.50	1.70
F..57	2.70	3.50	2.10	3.40	2.90	3.00
F..67	2.70	3.80	1.90	3.80	2.90	3.20
F..77	5.9	7.3	4.30	8.0	6.0	6.3
F..87	10.8	13.0	7.7	13.8	10.8	11.0
F..97	18.5	22.5	12.6	25.2	18.5	20.0
F..107	24.5	32.0	19.5	37.5	27.0	27.0
F..127	39.0	54.5	34.0	61.0	45.0	46.5
F..157	68.0	103.0	62.0	104.0	85.0	79.5



Helical-bevel (K)  
gear units



### INFORMATION

All K..9 gear have a universal mounting position, which means that K..9 gear units of the same variant are filled with the same amount of oil independent of the mounting position. An exception to this is the M4 mounting position.

K.., KA..B, KH..B, KV..B

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
K..19	0.35	0.35	0.35	0.38	0.35	0.35
K..29	0.65	0.65	0.65	0.8	0.65	0.65
K..37	0.50	1.00	1.00	1.25	0.95	0.95
K..47	0.80	1.30	1.50	2.00	1.60	1.60
K..57	1.10	2.20	2.20	2.80	2.30	2.10
K..67	1.10	2.40	2.60	3.45	2.60	2.60
K..77	2.20	4.10	4.40	5.8	4.20	4.40
K..87	3.70	8.0	8.7	10.9	8.0	8.0
K..97	7.0	14.0	15.7	20.0	15.7	15.5
K..107	10.0	21.0	25.5	33.5	24.0	24.0
K..127	21.0	41.5	44.0	54.0	40.0	41.0
K..157	31.0	62.0	65.0	90.0	58.0	62.0
K..167	33.0	95.0	105.0	123.0	85.0	84.0
K..187	53.0	152.0	167.0	200	143.0	143.0

6

KF..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
KF19	0.35	0.35	0.35	0.38	0.35	0.35
KF29	0.75	0.75	0.75	0.9	0.75	0.75
KF37	0.50	1.10	1.10	1.50	1.00	1.00
KF47	0.80	1.30	1.70	2.20	1.60	1.60
KF57	1.20	2.20	2.40	3.15	2.50	2.30
KF67	1.10	2.40	2.80	3.70	2.70	2.70
KF77	2.10	4.10	4.40	5.9	4.50	4.50
KF87	3.70	8.2	9.0	11.9	8.4	8.4
KF97	7.0	14.7	17.3	21.5	15.7	16.5
KF107	10.0	21.8	25.8	35.1	25.2	25.2
KF127	21.0	41.5	46.0	55.0	41.0	41.0
KF157	31.0	66.0	69.0	92.0	62.0	62.0



KA.., KH.., KV.., KAF.., KHF.., KVF.., KAZ.., KHZ.., KVZ.., KT..

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
<b>K..19</b>	0.35	0.35	0.35	0.38	0.35	0.35
<b>K..29</b>	0.65	0.65	0.65	0.8	0.65	0.65
<b>K..37</b>	0.50	1.00	1.00	1.40	1.00	1.00
<b>K..47</b>	0.80	1.30	1.60	2.15	1.60	1.60
<b>K..57</b>	1.20	2.20	2.40	3.15	2.70	2.40
<b>K..67</b>	1.10	2.40	2.70	3.70	2.60	2.60
<b>K..77</b>	2.10	4.10	4.60	5.9	4.40	4.40
<b>K..87</b>	3.70	8.2	8.8	11.1	8.0	8.0
<b>K..97</b>	7.0	14.7	15.7	20.0	15.7	15.7
<b>K..107</b>	10.0	20.5	24.0	32.4	24.0	24.0
<b>K..127</b>	21.0	41.5	43.0	52.0	40.0	40.0
<b>K..157</b>	31.0	66.0	67.0	87.0	62.0	62.0
<b>K..167</b>	33.0	95.0	105.0	123.0	85.0	84.0
<b>K..187</b>	53.0	152.0	167.0	200	143.0	143.0





Helical-worm (S)  
gear units

S

Gear unit	Fill quantity in liters					
	M1	M2	M3 <sup>1)</sup>	M4	M5	M6
S..37	0.25	0.40	0.50	0.55	0.40	0.40
S..47	0.35	0.80	0.70/0.90	1.00	0.80	0.80
S..57	0.50	1.20	1.00/1.20	1.45	1.30	1.30
S..67	1.00	2.00	2.20/3.10	3.10	2.60	2.60
S..77	1.90	4.20	3.70/5.4	5.9	4.40	4.40
S..87	3.30	8.1	6.9/10.4	11.3	8.4	8.4
S..97	6.8	15.0	13.4/18.0	21.8	17.0	17.0

1) The larger gear unit of multi-stage gear units must be filled with the larger oil volume.

6

SF..

Gear unit	Fill quantity in liters					
	M1	M2	M3 <sup>1)</sup>	M4	M5	M6
SF37	0.25	0.40	0.50	0.55	0.40	0.40
SF47	0.40	0.90	0.90/1.05	1.05	1.00	1.00
SF57	0.50	1.20	1.00/1.50	1.55	1.40	1.40
SF67	1.00	2.20	2.30/3.00	3.20	2.70	2.70
SF77	1.90	4.10	3.90/5.8	6.5	4.90	4.90
SF87	3.80	8.0	7.1/10.1	12.0	9.1	9.1
SF97	7.4	15.0	13.8/18.8	22.6	18.0	18.0

1) The larger gear unit of multi-stage gear units must be filled with the larger oil volume.

SA.., SH.., SAF.., SHZ.., SAZ.., SHF.., ST..

Gear unit	Fill quantity in liters					
	M1	M2	M3 <sup>1)</sup>	M4	M5	M6
S..37	0.25	0.40	0.50	0.50	0.40	0.40
S..47	0.40	0.80	0.70/0.90	1.00	0.80	0.80
S..57	0.50	1.10	1.00/1.50	1.50	1.20	1.20
S..67	1.00	2.00	1.80/2.60	2.90	2.50	2.50
S..77	1.80	3.90	3.60/5.0	5.8	4.50	4.50
S..87	3.80	7.4	6.0/8.7	10.8	8.0	8.0
S..97	7.0	14.0	11.4/16.0	20.5	15.7	15.7

1) The larger gear unit of multi-stage gear units must be filled with the larger oil volume.



SPIROPLAN®  
 (W) gear units



### INFORMATION

SPIROPLAN® gear units W..10 to W..30 have a universal mounting position, which means that gear units of the same variant are filled with the same amount of oil independent of the mounting position.

The oil fill quantity of SPIROPLAN® gear units W..37 and W..47 in mounting position M4 is different from that of the other mounting positions.

Gear unit	Fill quantity in liters					
	M1	M2	M3	M4	M5	M6
W..10	0.16					
W..20	0.24					
W..30	0.40					
W..37		0.50		0.70		0.50
W..47		0.90		1.40		0.90
WF47		0.90		1.55		0.90
WA47		0.80		1.40		0.80



## 6.2 Reduced backlash gear unit types

Helical, parallel-shaft helical and helical-bevel gear units with reduced backlash are available as of gear unit size 37. The rotational clearance of these gear units is considerably less than that of the standard versions so that positioning tasks can be solved with great precision. The rotational clearance is specified in angular minutes ['] in the technical data. The rotational clearance for the output shaft is specified without load (max. 1% of the rated output torque); the gear unit input end is blocked.

The reduced backlash variant is available for the following gear units:

- Helical gear units (R), sizes 37 to 167
- Parallel-shaft helical gear units (F), sizes 37 to 157
- Helical-bevel gear units (K), sizes 37 to 187

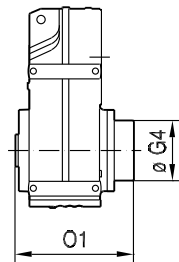
Multi-stage gear units are not available with reduced backlash.

The dimensions of the reduced backlash variants correspond to the dimensions of the standard designs, except for parallel-shaft gear units FH.87 and FH.97 with reduced backlash.

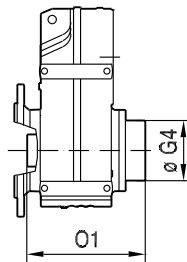
The following figure shows the dimensions of FH.87 and FH.97 gear units with reduced backlash:

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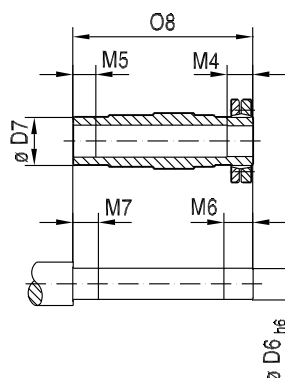
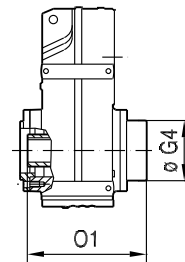
**FH../R**  
**FH..B/R**



**FHF../R**



**FHZ../R**



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Type	D6	D7	G4	M4	M5	M6	M7	O1	O8
FH.87/R	Ø 65 <sub>h6</sub>	Ø 85	Ø 163	41	40	46	45	312.5	299.5
FH.97/R	Ø 75 <sub>h6</sub>	Ø 95	Ø 184	55	50	60	55	382.5	367



### 6.3 Installation / removal of gear units with hollow shaft and key



#### INFORMATION

- Always use the supplied NOCO<sup>®</sup> fluid for installation. The fluid facilitates removal as it prevents contact corrosion.
  - The key dimension X is specified by the customers, but  $X > DK$  must apply, see following figure.
- 

#### 6.3.1 Installation

SEW-EURODRIVE recommends 2 ways of installing gear units with hollow shaft and key onto the input shaft of the driven machine (= customer shaft):

1. Use the provided fastening parts for installation.
2. Use the optional installation/removal kit for installation.

##### 1. Supplied fastening parts

The following fastening parts are provided as standard:

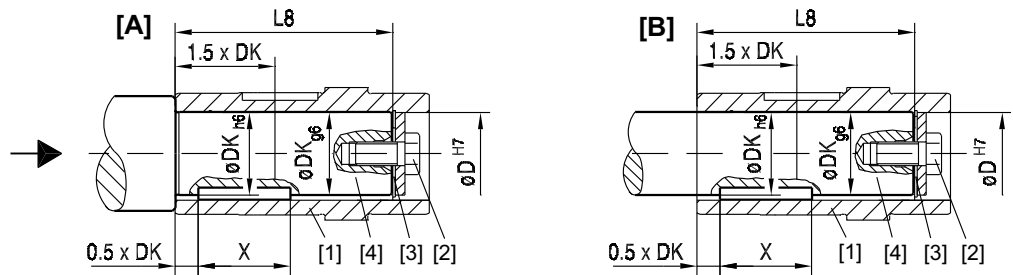
- Retaining screw with washer (2)
- Retaining ring (3)

#### Note the following information concerning the customer shaft:

- The installation length of the customer shaft with contact shoulder (A) must be  $L8 - 1 \text{ mm}$ .
- The installation length of the customer shaft without contact shoulder (B) must equal  $L8$ .



The following figure shows the customer shaft with contact shoulder (A) and without contact shoulder (B).



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- |     |                             |     |                |
|-----|-----------------------------|-----|----------------|
| [1] | Hollow shaft                | [3] | Retaining ring |
| [2] | Retaining screw with washer | [4] | Customer shaft |

### Dimensions and tightening torque:

The retaining screw (2) must be tightened to the tightening torque MS given in the following table:

Gear unit type	D <sup>H7</sup> in mm	DK in mm	L8 in mm	MS in Nm
WA..10	16	16	69	8
WA..20	18	18	84	
WA..20	20	20	92	
KA..19	20	20	92	20
FA..27	25	25	88	
KA..29		30	107	
KA..29				8
WA..30, WA..37	20	20	105	
SA..37, BSAF202			104	
FA..37, KA..37, SA..47	30	30	105	20
BSAF302	25	25	118	
SA..47, WA..37			105	
SAF402	30	30	138	20
FA..47, KA..47, SA..57	35	35	132	
WA..47	30	30	122	
SA..57			132	
FA..57, KA..57	40	40	142	40
BSAF502			158	
FA..67, KA..67			156	
SA..67			144	80
SA..67	45	45	144	
BSAF602	55	55	179	
FA..77, KA..77, SA..77	50	50	183	40
SA..77	60	60	180	
FA..87, KA..87			210	
SA..87			220	
SA..87	70	70	220	80
BSAF802	60	60	222	
FA..97, KA..97	70	70	270	
SA..97			260	
FA..107, KA..107	80	80	313	200
SA..97	90	90	255	
FA..107, KA..107	90	90	313	
FA..127, KA..127	100	100	373	
FA..157, KA..157	120	120	460	



## Design and operating notes

### Installation / removal of gear units with hollow shaft and key

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#### *2nd installation / removal kit*

You can use the optional installation / removal kit for installation. You can order the kit for the specific gear unit type(s) by quoting the part numbers in the table below. The delivery includes:

- Spacer tube for installation without contact shoulder (5)
- Retaining screw for installation (2)
- Forcing washer for removal (7)
- Locked nut for removal (8)

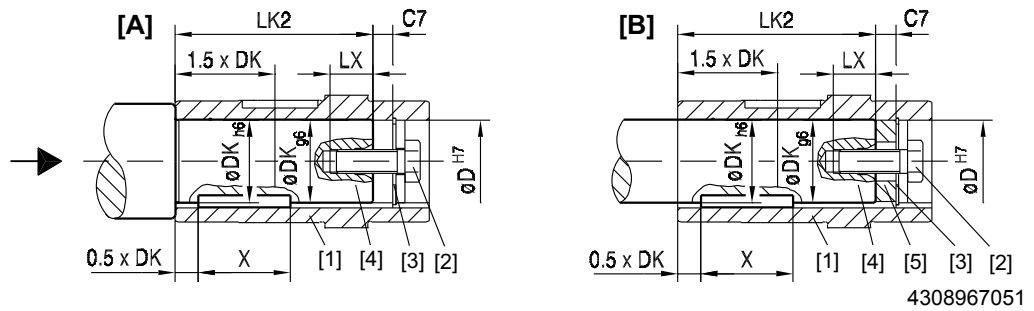
The short retaining screw delivered as standard is not required.

#### **Note the following information concerning the customer shaft:**

- The installation length of the customer shaft must be LK2. Do not use the spacer if the customer shaft **has a contact shoulder (A)**.
- The installation length of the customer shaft must be LK2. Use the spacer tube if the customer shaft **has no contact shoulder (B)**.



The following figure shows the customer shaft with contact shoulder (A) and without contact shoulder (B).



- [1] Hollow shaft
- [2] Retaining screw with washer
- [3] Retaining ring
- [4] Customer shaft
- [5] Spacer tube

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**Dimensions, tightening torques and part numbers:**

The retaining screw (2) must be tightened to the tightening torque MS given in the following table:

Type	D <sup>H7</sup> mm	DK mm	LK2 mm	LX <sup>+2</sup> mm	C7 mm	MS Nm	Part number of installation / removal kit
WA..10	16	16	57	12.5	11	8	643 712 5
WA..20	18	18	72	16	12		643 682 X
WA..20, WA..30, WA..37	20	20	72, 93				
SA..37	20	20	92	16	12	8	643 683 8
KA..19			80				
KA..29	25	25	95	22	16	20	643 684 6
FA..27			72				
SA..47			89				
WA..47	30	30	106				
FA..37, KA..37			89				
SA..47			89				
SA..57			116				
KA..29	35	35	95	28	18	40	643 686 2
FA..47, KA..47, SA..57			114				
FA..57, KA..57	40	40	124	36	18	40	643 687 0
FA..67			138				
KA..67			138				
SA..67			126				
SA..67	45	45	126	42	22	80	643 688 9
FA..77, KA..77, SA..77	50	50	165				643 689 7
FA..87, KA..87	60	60	188				50
SA..77			158				
SA..87			198				
FA..97, KA..97	70	70	248	42	22	80	643 691 9
SA..87			198				
SA..97			238				
FA..107, KA..107	80	80	287	50	26	200	106 821 12
FA..107, KA..107	90	90	287				643 692 7
SA..97			229				
FA..127, KA..127	100	100	347	50	26	200	643 693 5
FA..157, KA..157	120	120	434				643 694 3



## Design and operating notes

### Installation / removal of gear units with hollow shaft and key

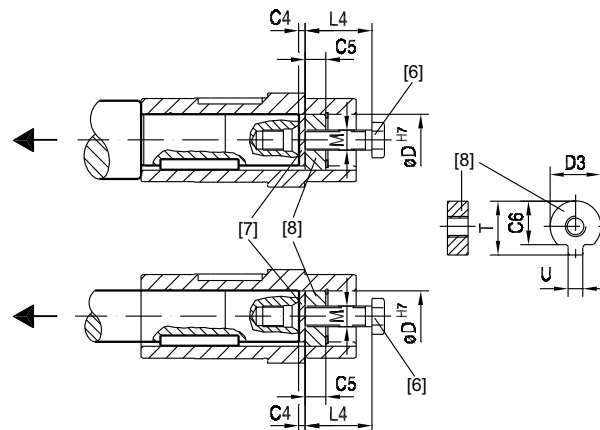
#### Removal

Applies only if the installation / removal kit was previously used for installation.

Proceed as follows for removal:

1. Loosen the retaining screw (6).
2. Remove the circlip (3) and, if used, the spacer tube (5).
3. Insert the forcing disk (7) and the fixed nut (8) between the customer's shaft (4) and circlip (3) as shown in the following figure.
4. Re-install the circlip (3).
5. Re-install the retaining screw (6). Now you can force the gear unit off the shaft.

The following figure shows the removal of a gear unit with hollow shaft and key.



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[6] Retaining screw

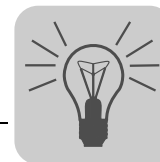
[8] Locked nut for removal

[7] Forcing washer

#### Dimensions and part numbers:

Type	$D^{H7}$ [mm]	M	C4 [mm]	C5 [mm]	C6 [mm]	U <sup>-0.5</sup> [mm]	T <sup>-0.5</sup> [mm]	D3 <sup>-0.5</sup> [mm]	L4 [mm]	Part number of installation / removal kit
WA..10	16	M5	5	5	12	4.5	18	15.7	50	643 712 5
WA..20	18	M6	5	6	13.5	5.5	20.5	17.7	25	643 682 X
WA..20, WA..30, SA..37, WA..37, KA..19	20	M6	5	6	15.5	5.5	22.5	19.7	25	643 683 8
FA..27, SA..47, WA..47, KA..29	25	M10	5	10	20	7.5	28	24.7	35	643 684 6
FA..37, KA..37, SA..47, SA..57, WA..47, KA..29	30	M10	5	10	25	7.5	33	29.7	35	643 685 4
FA..47, KA..47, SA..57	35	M12	5	12	29	9.5	38	34.7	45	643 686 2
FA..57, KA..57, FA..67, KA..67, SA..67	40	M16	5	12	34	11.5	41.9	39.7	50	643 687 0
SA..67	45	M16	5	12	38.5	13.5	48.5	44.7	50	643 688 9
FA..77, KA..77, SA..77	50	M16	5	12	43.5	13.5	53.5	49.7	50	643 689 7
FA..87, KA..87, SA..77, SA..87	60	M20	5	16	56	17.5	64	59.7	60	643 690 0
FA..97, KA..97, SA..87, SA..97	70	M20	5	16	65.5	19.5	74.5	69.7	60	643 691 9
FA..107, KA..107	80	M20	5	20	75.5	21.5	85	79.7	70	106 8211 2
FA..107, KA..107, SA..97	90	M24	5	20	80	24.5	95	89.7	70	643 692 7
FA..127, KA..127	100	M24	5	20	89	27.5	106	99.7	70	643 693 5
FA..157, KA..157	120	M24	5	20	107	31	127	119.7	70	643 694 3

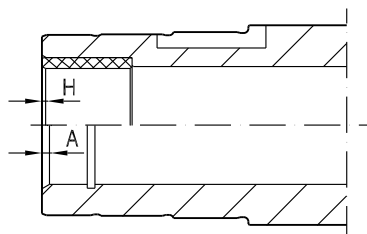




## 6.4 Gear units with hollow shaft

### 6.4.1 Chamfers on hollow shafts

The following illustration shows the chamfers on parallel-shaft helical, helical-bevel, helical-worm and SPIROPLAN® gear units with hollow shaft:



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6

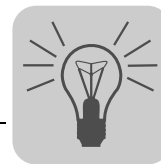
Gear unit	Design	
	with hollow shaft (A)	with hollow shaft and shrink disk (H)
W..10	1.5 × 30°	-
W..20	2 × 30°	-
W..30	2 × 30°	-
F..27	2 × 30°	0.5 × 45°
K..19	2 × 30°	0.5 × 45°
K..29	2 × 30°	0.5 × 45°
F../K../S../W..37	2 × 30°	0.5 × 45°
F../K../S../W..47	2 × 30°	0.5 × 45°
S..57	2 × 30°	0.5 × 45°
F../K..57	2 × 30°	0.5 × 45°
F../K../S..67	2 × 30°	0.5 × 45°
F../K../S..77	2 × 30°	0.5 × 45°
F../K../S..87	3 × 30°	0.5 × 45°
F../K../S..97	3 × 30°	0.5 × 45°
F../K..107	3 × 30°	0.5 × 45°
F../K..127	5 × 30°	0.5 × 45°
F../K..157	5 × 30°	0.5 × 45°
KH167	-	0.5 × 45°
KH187	-	0.5 × 45°



#### 6.4.2 Special motor/gear unit combinations

Please note for parallel-shaft helical gearmotors with hollow shaft (FA..B, FV..B, FH..B, FAF, FVF, FHF, FA, FV, FH, FT, FAZ, FVZ, FHZ):

- If you are using a customer shaft pushed through on the motor end, there may be a collision when a "small gear unit" is used in combination with a "large motor."
- Check the motor dimension AC to decide whether there will be a collision with a pushed-through customer shaft.

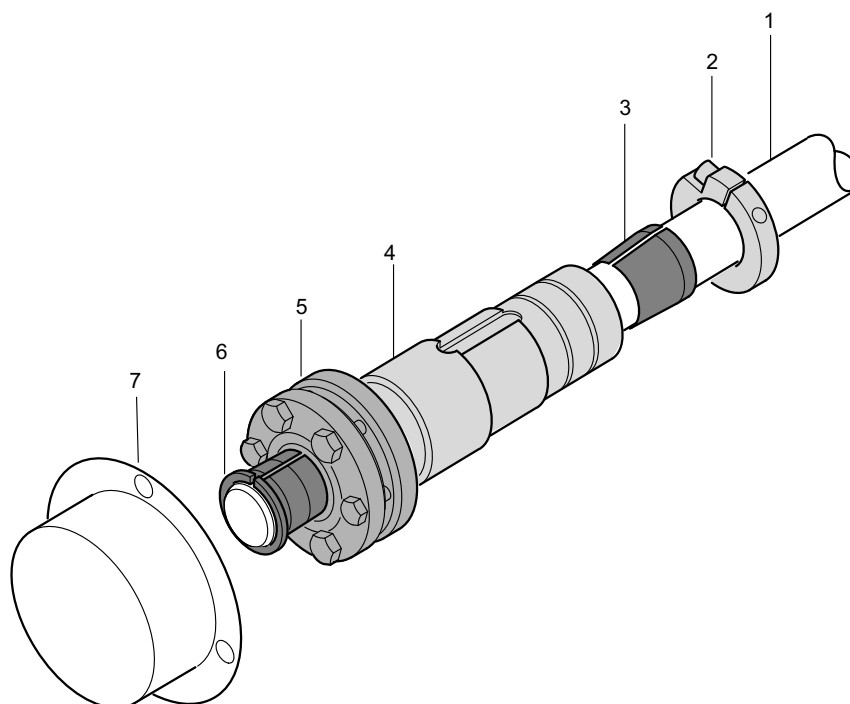


## 6.5 TorqLOC® mounting system for hollow shaft gear units

### 6.5.1 Description of TorqLOC®

The TorqLOC® hollow shaft mounting system is used for achieving a non-positive connection between customer shaft and the hollow shaft in the gear unit. As a result, the TorqLOC® hollow shaft mounting system is an alternative to the hollow shaft with shrink disk, the hollow shaft with key and the splined hollow shaft that have been used so far.

The TorqLOC® hollow shaft mounting system consists of the following components:



4309625867

- |     |                           |     |                       |
|-----|---------------------------|-----|-----------------------|
| [1] | Customer shaft            | [5] | Shrink disk           |
| [2] | Clamping ring             | [6] | Conical steel bushing |
| [3] | Conical bronze bushing    | [7] | Fixed cover           |
| [4] | Hollow shaft in gear unit |     |                       |

### 6.5.2 Advantages of TorqLOC®

The TorqLOC® hollow shaft mounting system is characterized by the following advantages:

- Cost saving as the customer shaft can be made from drawn material up to quality h11.
- Cost saving as different customer shaft diameters can be realized with one hollow shaft diameter and different bushings.
- Simple installation as there is no need to accommodate any shaft connections.
- Simple removal even after many hours of operation as the formation of contact corrosion has been reduced and the conical connections can easily be released.

**6.5.3 Technical data**

The TorqLOC<sup>®</sup> hollow shaft mounting system is approved for input torques of 92 Nm to 18000 Nm.

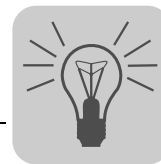
The following gear units are available with TorqLOC<sup>®</sup> hollow shaft mounting system:

- Parallel-shaft helical gear units in gear unit sizes 37 to 157 (FT37 – FT157)
- Helical-bevel gear units in gear unit sizes 37 to 157 (KT37 – KT157)
- Helical-worm gear units in gear unit sizes 37 to 97 (ST37 – ST97)
- SPIROPLAN<sup>®</sup> gear unit sizes 37 and 47 (WT.7)

*Available options*

The following options are available for gear units with TorqLOC<sup>®</sup> hollow shaft mounting system:

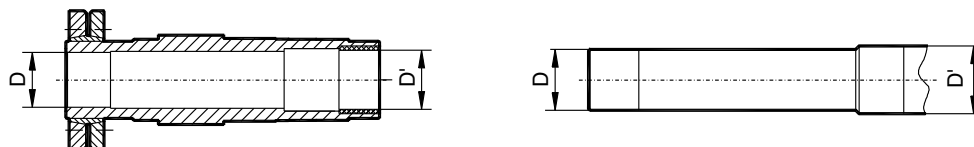
- Helical-bevel, helical-worm and SPIROPLAN<sup>®</sup> gear units with TorqLOC<sup>®</sup> (KT..., ST..., WT.7..): The "torque arm" (../T) option is available.
- Parallel-shaft helical gear units with TorqLOC<sup>®</sup> (FT..): The "rubber buffer" (../G) option is available.



## 6.6 Shouldered hollow shaft option with shrink disk

As an option, gear units with hollow shaft and shrink disk (parallel-shaft helical gear units FH/FHF/FHZ37 – 157, helical-bevel gear units KH/KHF/KHZ37 – 157 and helical-worm gear units SH/SHF/SHZ47 – 97) can be supplied with a larger bore diameter  $D'$ .

$D' = D$  as standard.



Gear unit	Bore diameter D / optionally D' mm
FH/FHF/FHZ37, KH/KHF/KHZ37, SH/SHF/SHZ47	30 / 32
FH/FHF/FHZ47, KH/KHF/KHZ47, SH/SHF/SHZ57	35 / 36
FH/FHF/FHZ57, KH/KHF/KHZ57	40 / 42
FH/FHF/FHZ67, KH/KHF/KHZ67, SH/SHF/SHZ67	40 / 42
FH/FHF/FHZ77, KH/KHF/KHZ77, SH/SHF/SHZ77	50 / 52
FH/FHF/FHZ87, KH/KHF/KHZ87, SH/SHF/SHZ87	65 / 66
FH/FHF/FHZ97, KH/KHF/KHZ97, SH/SHF/SHZ97	75 / 76
FH/FHF/FHZ107, KH/KHF/KHZ107	95 / 96
FH/FHF/FHZ127, KH/KHF/KHZ127	105 / 106
FH/FHF/FHZ157, KH/KHF/KHZ157	125 / 126

Diameter  $D/D'$  must be specified when ordering gear units with a shouldered hollow shaft (optional bore diameter  $D'$ ).

### 6.6.1 Sample order

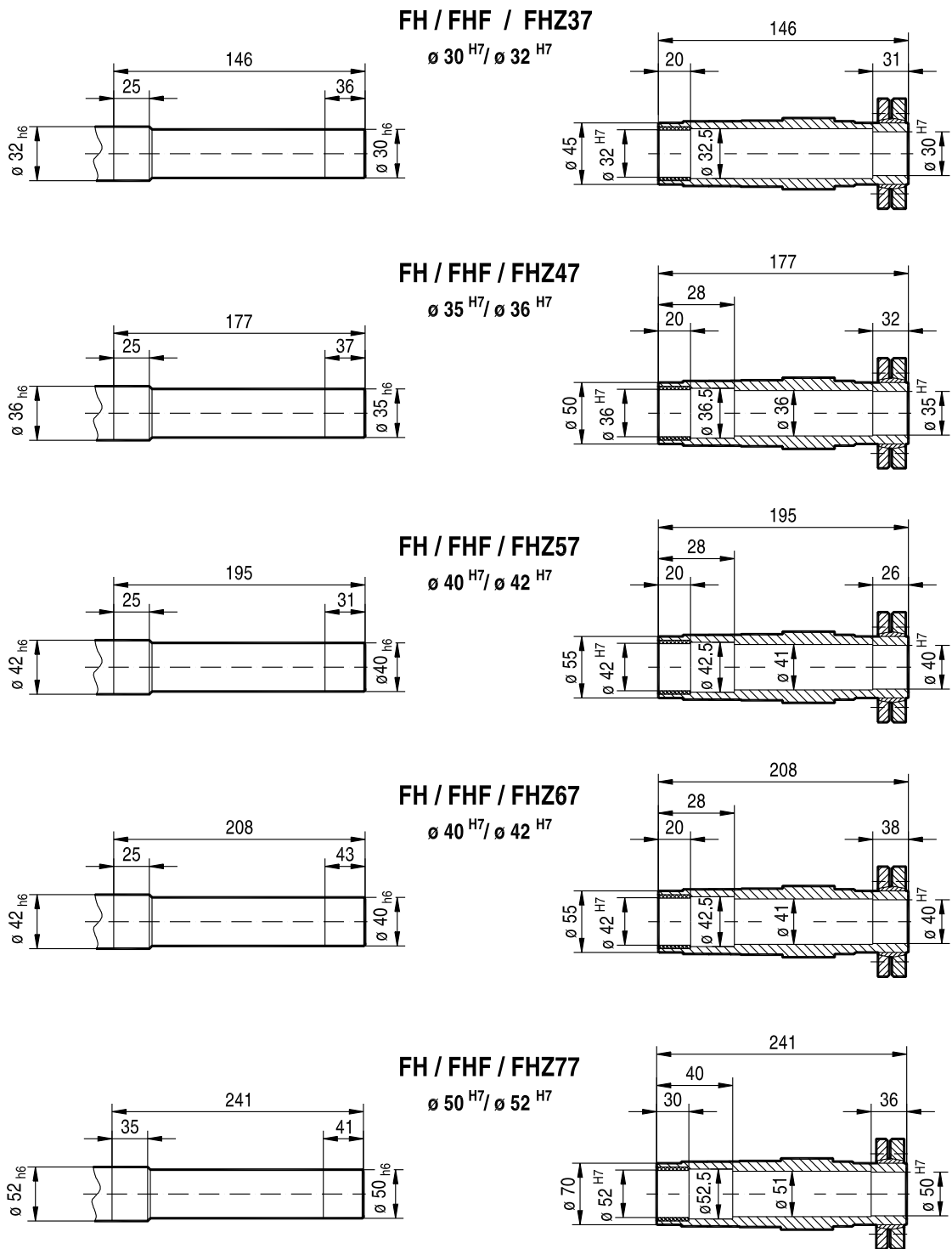
FH37 DRS80M4 with hollow shaft 30/32 mm

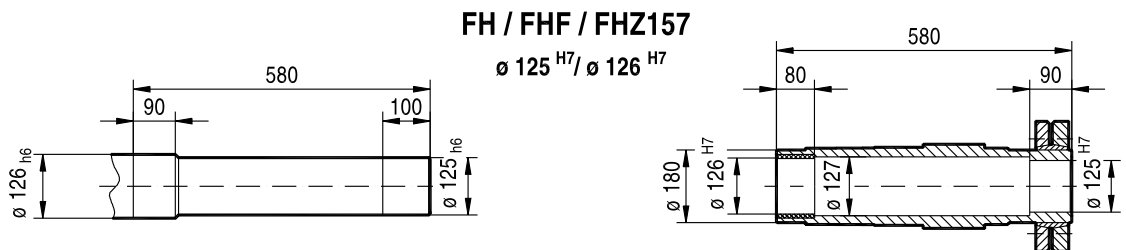
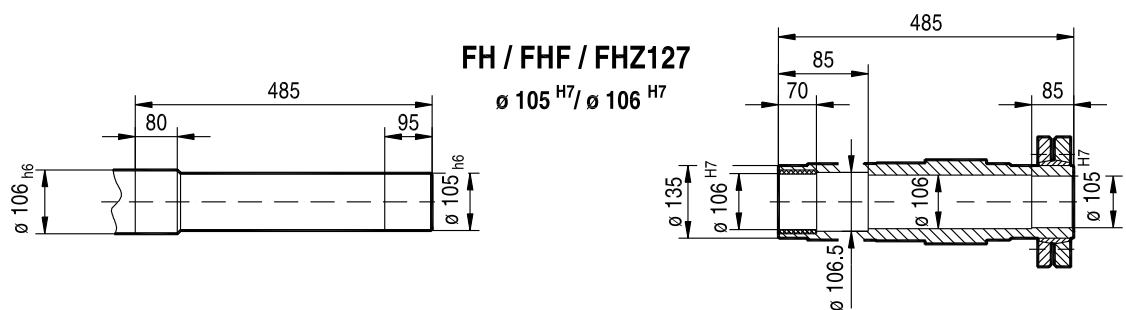
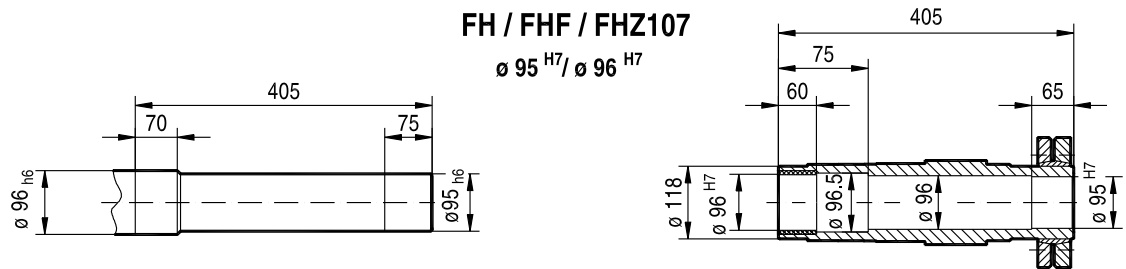
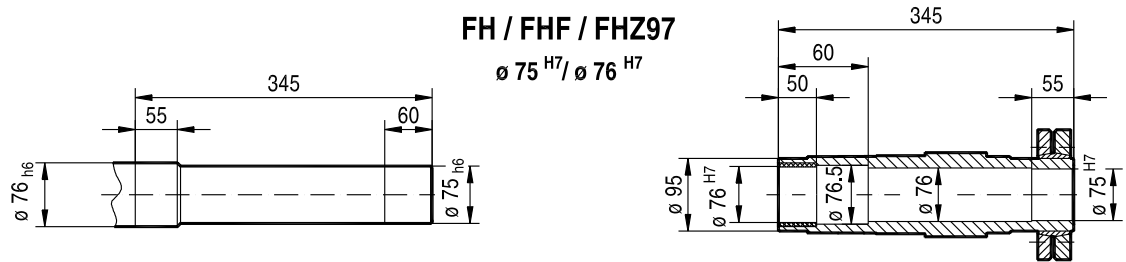
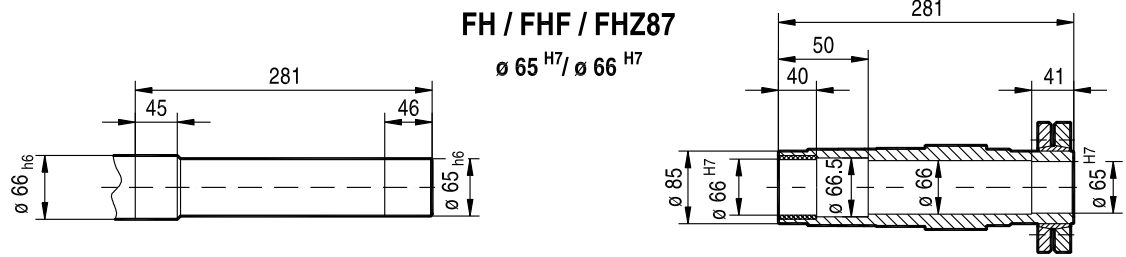


## Design and operating notes

### Shouldered hollow shaft option with shrink disk

#### 6.6.2 Parallel-shaft helical gear units with shouldered hollow shaft (dimensions in mm):



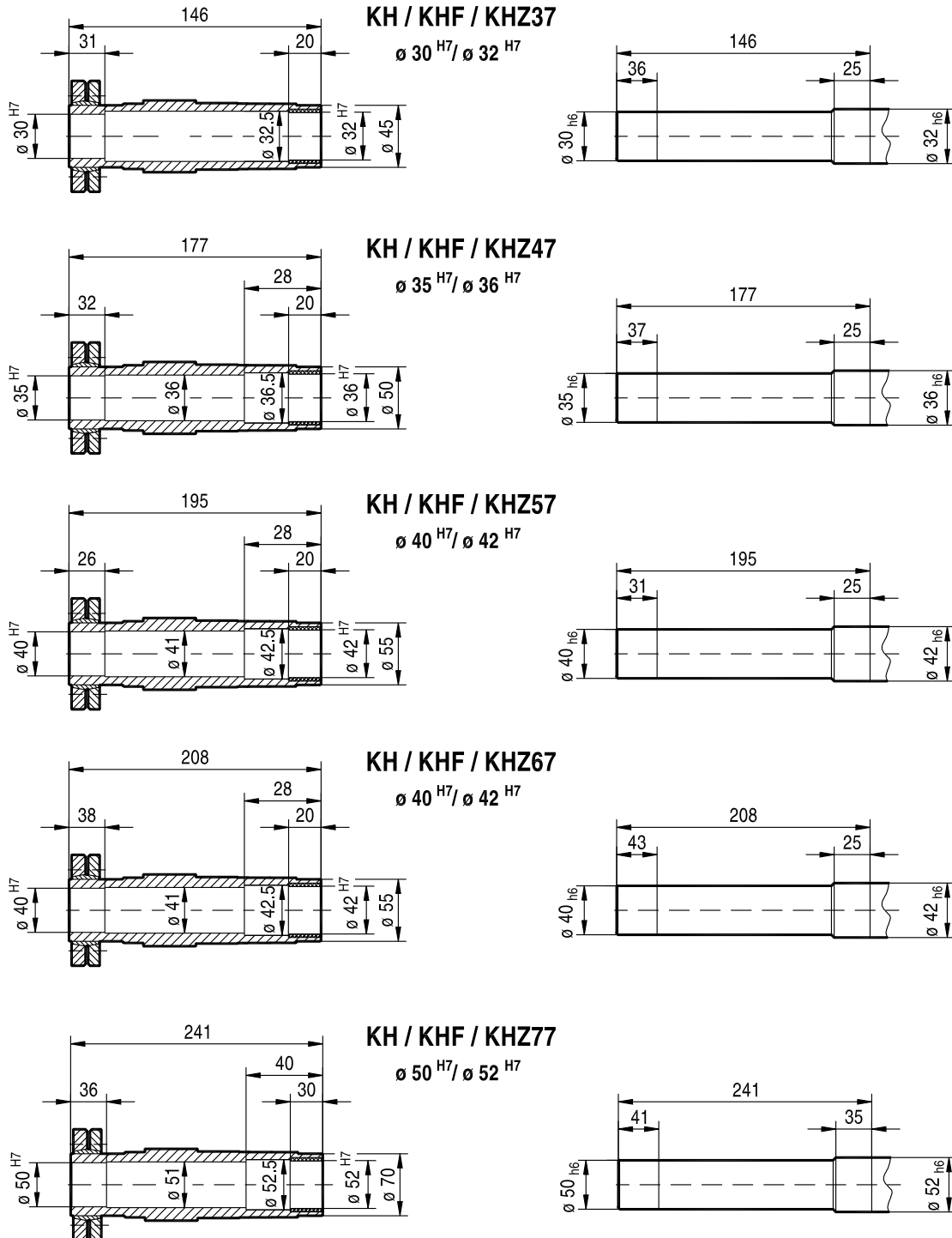




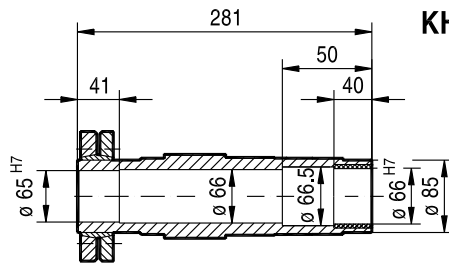
## Design and operating notes

### Shouldered hollow shaft option with shrink disk

#### 6.6.3 Helical-bevel gear units with shouldered hollow shaft (dimensions in mm):

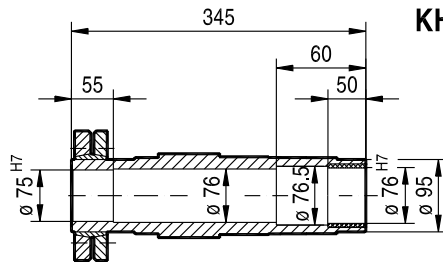
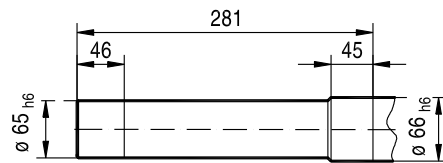






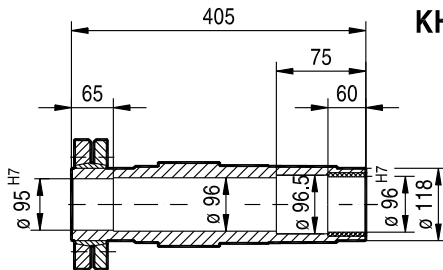
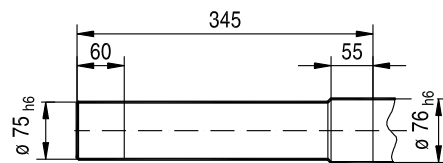
**KH / KHF / KHZ87**

$\varnothing 65^{H7} / \varnothing 66^{H7}$



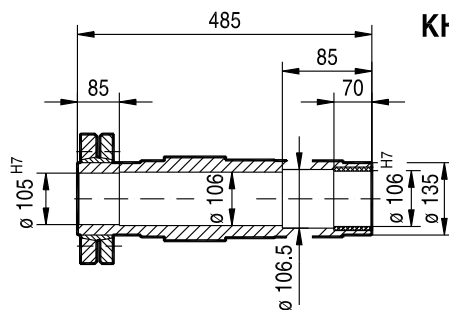
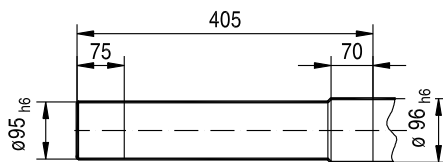
**KH / KHF / KHZ97**

$\varnothing 75^{H7} / \varnothing 76^{H7}$



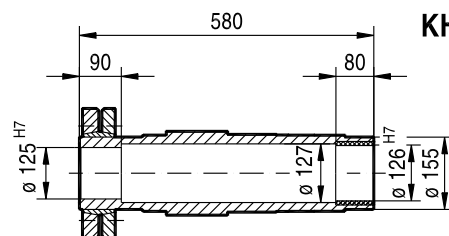
**KH / KHF / KHZ107**

$\varnothing 95^{H7} / \varnothing 96^{H7}$



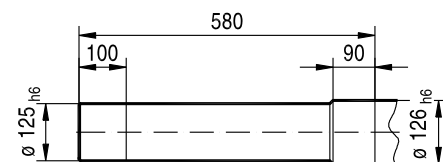
**KH / KHF / KHZ127**

$\varnothing 105^{H7} / \varnothing 106^{H7}$



**KH / KHF / KHZ157**

$\varnothing 125^{H7} / \varnothing 126^{H7}$

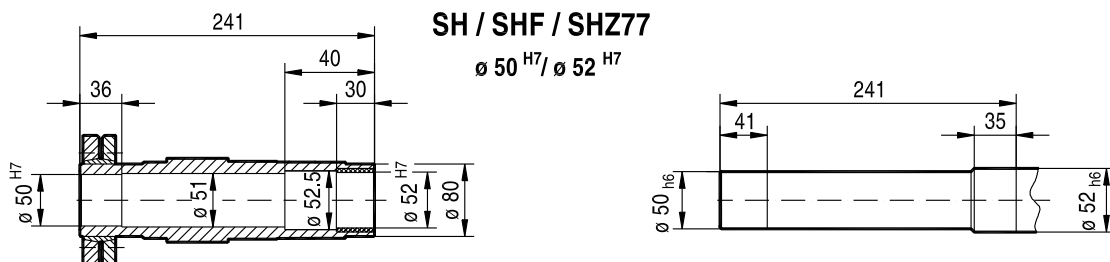
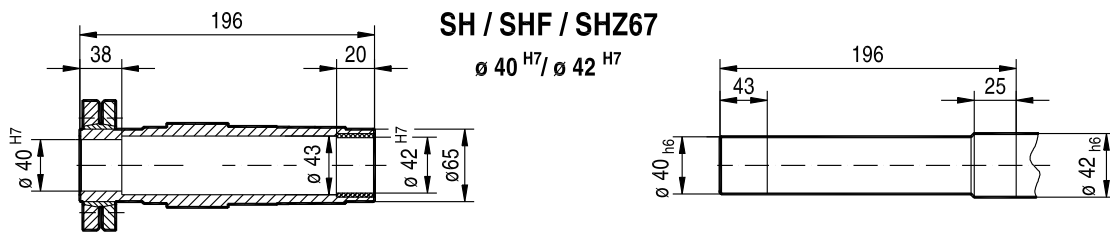
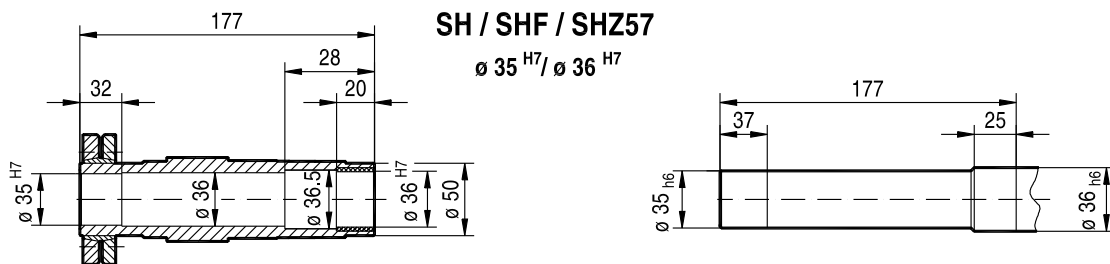
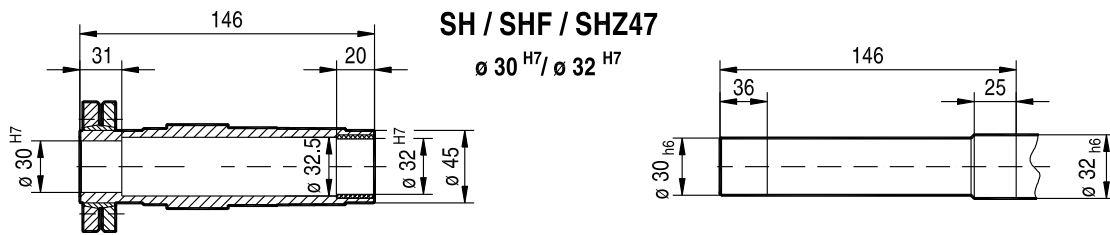


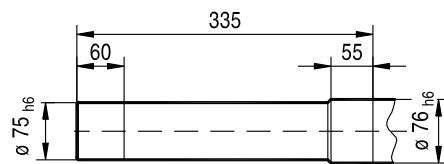
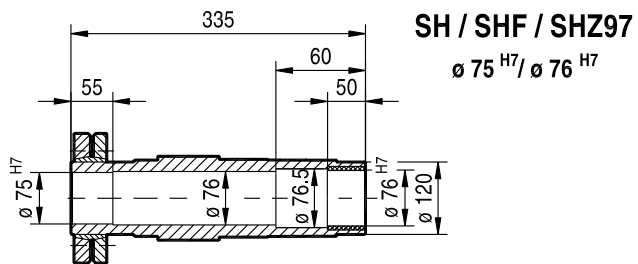
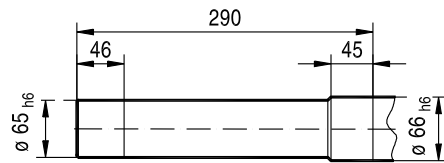
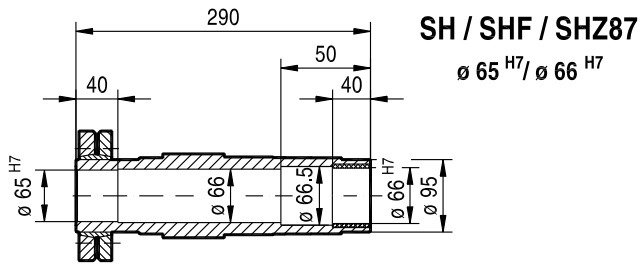


## Design and operating notes

### Shouldered hollow shaft option with shrink disk

#### 6.6.4 Helical-worm gear units with shouldered hollow shaft (dimensions in mm):

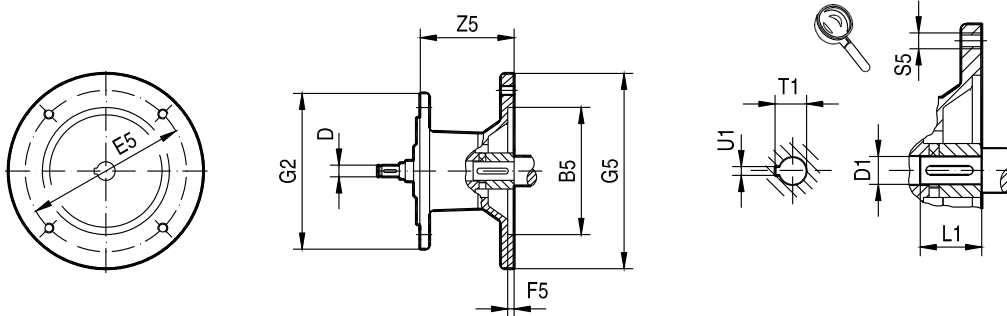






#### 6.7 Adapters for mounting IEC motors

23 002 100



Gear unit type	Adapter type	Dimensions in mm												
		B5	D	E5	F5	G2	G5	S5	Z5	D1	L1	T1	U1	
R..27, R..37 F..27, F..37, F..47 K..19, K..29, K..37 S..37, S..47, S..57 W..37	AM63	95	10	115	3.5	120	140	M8	72	11	23	12.8	4	
	AM71 <sup>1)</sup>	110		130	4		160			14	30	16.3	5	
	AM80 <sup>1)</sup>	130	12	165	4.5		200	M10	106	19	40	21.8	6	
	AM90 <sup>1)</sup>		14							24	50	27.3	8	
R..47 <sup>2)</sup> , R..57, R..67 F..57, F..67 K..47 <sup>2)</sup> , K..57, K..67 S..67 W..47	AM63	95	10	115	3.5	160	140	M8	66	11	23	12.8	4	
	AM71	110		130	4		160			14	30	16.3	5	
	AM80	130	12	165	4.5		200	M10	99	19	40	21.8	6	
	AM90		14							24	50	27.3	8	
	AM100 <sup>1)</sup>	180	16	215	5		250	M12	134	28	60	31.3	8	
	AM112 <sup>1)</sup>		18							300	191	38	80	41.3
AM132S/M <sup>1)</sup>	230	22	265											
R..77 F..77 K..77 S..77	AM63	95	10	115	3.5	200	140	M8	60	11	23	12.8	4	
	AM71	110		130	4		160			14	30	16.3	5	
	AM80	130	12	165	4.5		200	M10	92	19	40	21.8	6	
	AM90		14							24	50	27.3	8	
	AM100 <sup>1)</sup>	180	16	215	5		250	M12	126	28	60	31.3	8	
	AM112 <sup>1)</sup>		18							300	179	38	80	41.3
AM132S/M <sup>1)</sup>	230	22	265											
AM132ML <sup>1)</sup>		28												
R..87 F..87 K..87 S..87 <sup>3)</sup>	AM80	130	12	165	4.5	250	200	M10	87	19	40	21.8	6	
	AM90		14							24	50	27.3	8	
	AM100	180	16	215	5		250	M12	121	28	60	31.3	8	
	AM112		18							300	174	38	80	41.3
	AM132S/M	230	22	265										
	AM132ML		28		350		232	42	110	45.3	12			
AM160 <sup>1)</sup>	250	28	300	6										
AM180 <sup>1)</sup>		32												

1) Check dimension 1/2 G5 because component may protrude past foot-mounting surface if installed on R, K, S or W foot-mounted gear unit.

2) Not with AM112

3) Not with AM180



23 003 100

Fig.1

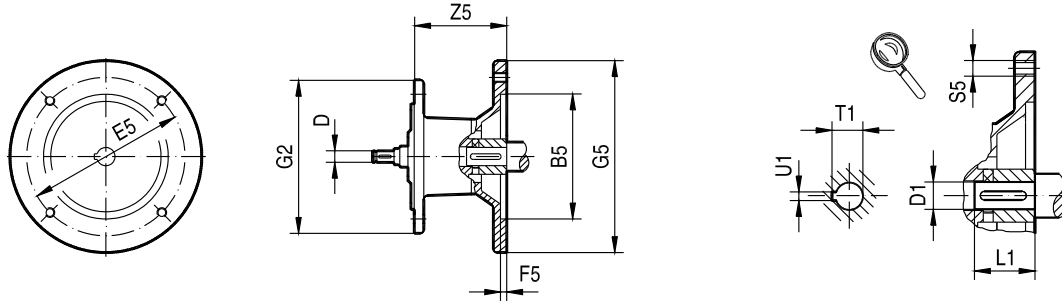
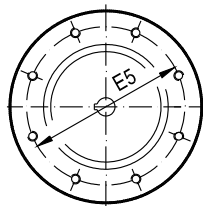


Fig.2

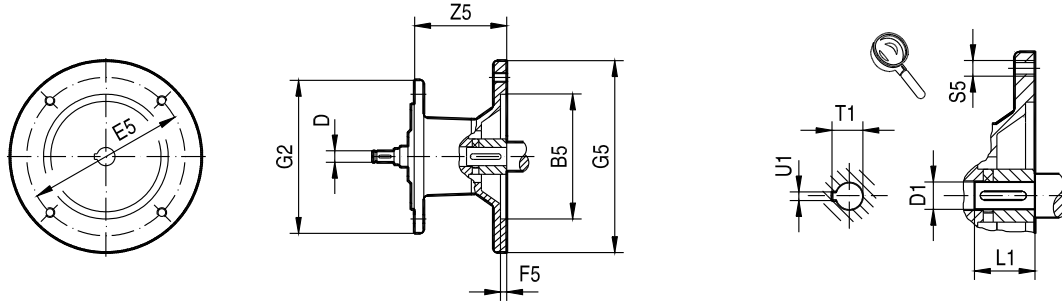
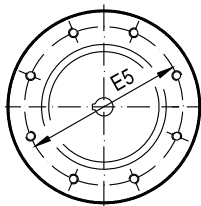


Gear unit type	Adapter type	Fig.	Dimensions in mm												
			B5	D	E5	F5	G2	G5	S5	Z5	D1	L1	T1	U1	
R..97 F..97 K..97 S..97 <sup>1)</sup>	AM100	1	180	16	215	5	300	250	M12	116	28	60	31.3	8	
	AM112			18											
	AM132S/M		230	22	265										
	AM132ML			28											
	AM160		250	28	300			6	350	M16	227	42	110	45.3	12
	AM180			32											
	AM200		300	38	350			7	400	268	55	59.3	16		
R..107 F..107 K..107	AM100	1	180	16	215	5	350	250	M12	110	28	60	31.3	8	
	AM112			18											
	AM132S/M		230	22	265										
	AM132ML			28											
	AM160		250	28	300			6	350	M16	221	42	110	45.3	12
	AM180			32											
	AM200		300	38	350			7	400	262	55	59.3	16		
AM225	350	38		400		450	277							60	140
R..137	AM132S/M	1	230	22	265	5	400	300	M12	156	38	80	41.3	10	
	AM132ML			28											
	AM160		250	28	300			6	350	M16	214	42	110	45.3	12
	AM180			32											
	AM200		300	38	350			7	400	255	55	59.3	16		
	AM225			350										38	400

1) Not with AM200



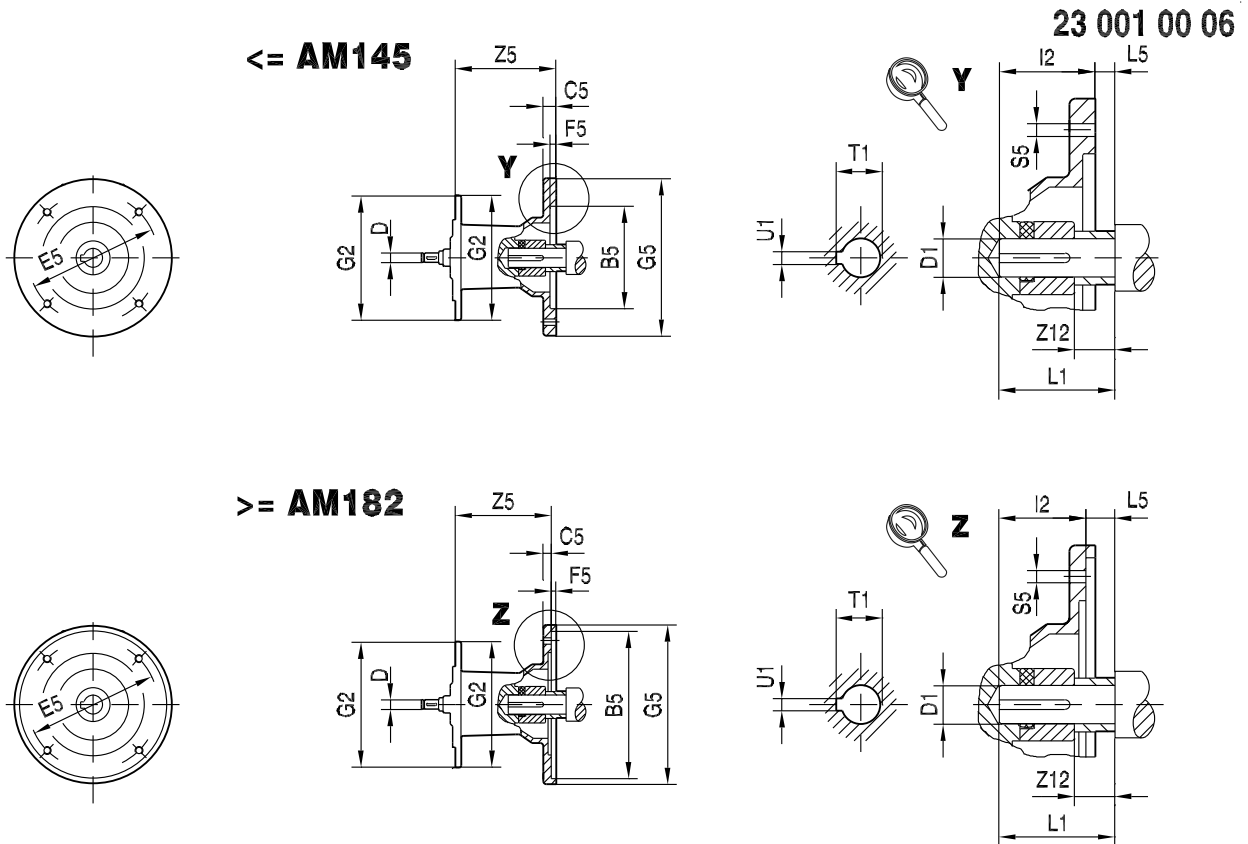
23 004 100

**Fig.1****Fig.2**

Gear unit type	Adapter type	Fig.	Dimensions in mm											
			B5	D	E5	F5	G2	G5	S5	Z5	D1	L1	T1	U1
R..147 F..127 K..127	AM132S/M	1	230	22	265	5	450	300	M12	148	38	80	41.3	10
	AM132ML			28							38			
	AM160	250	28	300	6	350		M16	206	42	110	45.3	12	
	AM180		32											48
	AM200	300	38	350	7	400		M16	247	55	140	59.3	16	
	AM225		38											60
	AM250	450	48	500	7	550		M16	336	65	140	69.4	18	
	AM280		75											75
R..167 F..157 K..157 K..167 K..187	AM160	1	250	28	300	6	550	350	M16	198	42	110	45.3	12
	AM180			32							48			
	AM200			38							55			
	AM225	350	38	400	7	450		M16	254	60	140	64.4	18	
	AM250		48											65
	AM280	450	48	500	7	550		M16	328	75	140	79.9	20	

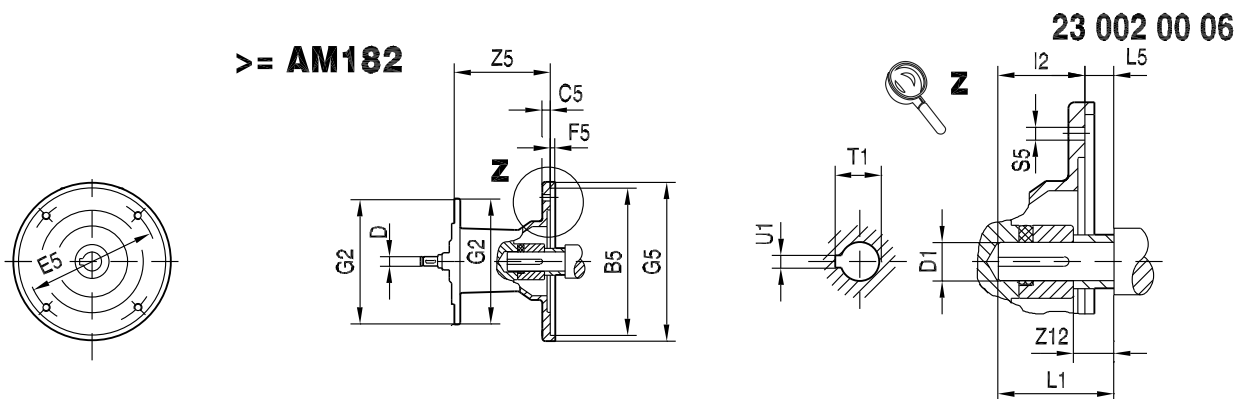


6.8 Adapters for mounting NEMA motors



6

Gear unit type	Adapter type	Dimensions in mm																			
		B5	C5	D	E5	F5	G2	G5	I2	L5	S5	Z5	Z12	D1	L1	T1	U1				
R..27, R..37 F..27, F..37, F..47 K..19, K..29, K..37 S..37, S..47, S..57 W..37	AM56	114.3	11	10	149.2	4.5	120	170	52.55	-4.8	10.5	93.5	16.5	15.875	47	18.1	4.76				
	AM143			12																	
	AM145		12	14										54.1	3			117	14.5	22.225	57
R..47, R..57, R..67 F..57, F..67 K..47, K..57, K..67 S..67 W..47	AM56	114.3	11	10	149.2	4.5	160	170	52.55	-4.8	10.5	87	16.5	15.875	47	18.1	4.76				
	AM143			12																	
	AM145		12	14										54.1	3			110.5	14.5	22.225	57
	AM182	215.9	10	16	184	5	228	15	66.85	3	15	147.5	16.5	28.575	69	31.7	6.35				
	AM184		18																		
AM213/215		11	22					79.55	6.3		200.5	15.8	34.925	85	38.7	7.94					
R..77 F..77 K..77 S..77	AM56	114.3	11	10	149.2	4.5	200	170	52.55	-4.8	10.5	81	16.5	15.875	47	18.1	4.76				
	AM143			12																	
	AM145		12	14										54.1	3			103.5	14.5	22.225	57
	AM182	215.9	10	16	184	5	228	15	66.85	3	15	139.5	16.5	28.575	69	31.7	6.35				
	AM184		18																		
AM213/215		11	22					79.55	6.3		188.5	15.8	34.925	85	38.7	7.94					
R..87 F..87 K..87 S..87	AM143	114.3	12	12	149.2	4.5	250	170	54.1	3	10.5	98.5	14.5	22.225	57	24.7	4.76				
	AM145			14																	
	AM182	215.9	10	16	184	5	228	15	66.85	3	15	134.5	16.5	28.575	69	31.7	6.35				
	AM184		18																		
	AM213/215		11	22									79.55	6.3		183.5	15.8	34.925	85	38.7	7.94
	AM254/256		12	28									95.3	6.3		234	8.8	41.275	101	45.8	9.53
AM284/286	266.7	15	32	228.6	5	286		111.05	6.3	15	241	15.8	47.625	117	53.4	12.7					



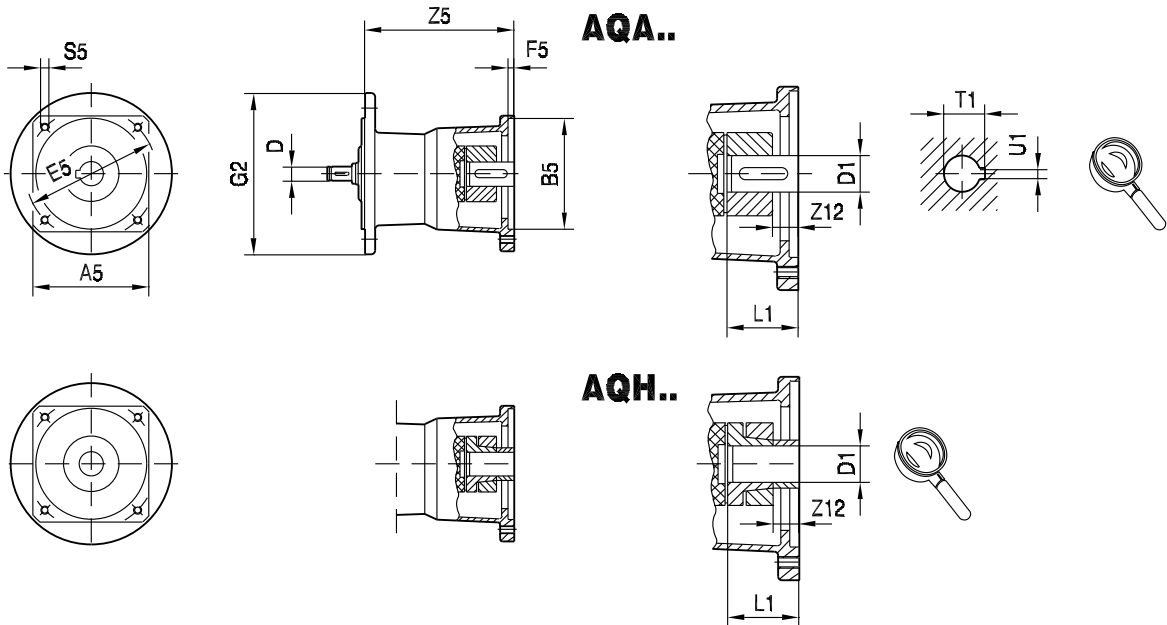
Gear unit type	Adapter type	Dimensions in mm															
		B5	C5	D	E5	F5	G2	G5	I2	L5	S5	Z5	Z12	D1	L1	T1	U1
R..97 F..97 K..97 S..97	AM182	215.9	10	16	184	5	300	228	66.85	3	15	129.5	16.5	28.575	69	31.7	6.35
	AM184		18	79.55					6.3	178.5		15.8	34.925	85	38.7	7.94	
	AM213/215		11	22					95.3	6.3		229	8.8	41.275	101	45.8	9.53
	AM254/256	12	28	111.05	6.3	15		236	15.8	47.625	117	53.4	12.7				
	AM284/286	266.7	20	32	228.6	5		286	111.05	6.3	15	236	15.8	47.625	117	53.4	12.7
	AM324/326	317.5	17	38	279.4	5		356	127.05	6.3	17.5	296	34.8	53.975	133	60	12.7
AM364/365	317.5	17	38	279.4	5	356	143.05	6.3	17.5	296	34.8	60.325	149	67.6	15.875		
R..107 F..107 K..107	AM182	215.9	10	16	184	5	350	228	66.85	3	15	123.5	16.5	28.575	69.85	31.7	6.35
	AM184		18	79.55					6.3	172.5		15.8	34.925	85.85	38.7	7.94	
	AM213/215		11	22					95.3	6.3		223	8.8	41.275	101.6	45.8	9.53
	AM254/256	12	28	111.05	6.3	15		230	15.8	47.625	117.35	53.4	12.7				
	AM284/286	266.7	15	32	228.6	5		286	111.05	6.3	15	230	15.8	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	38	279.4	5		356	127.05	6.3	17.5	290	34.8	53.975	133.35	60	12.7
AM364/365	317.5	17	38	279.4	5	356	143.05	6.3	17.5	290	34.8	60.325	149.35	67.6	15.875		
R..137	AM213/215	215.9	11	22	184	5	400	228	79.55	6.3	15	165.5	15.8	34.925	85.85	38.7	7.94
	AM254/256		12	28					95.3	6.3		216	8.8	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	32	228.6	5		286	111.05	6.3	15	223	15.8	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	38	279.4	5		356	127.05	6.3	17.5	283	34.8	53.975	133.35	60	12.7
	AM364/365	317.5	17	38	279.4	5		356	143.05	6.3	17.5	283	34.8	60.325	149.35	67.6	15.875
R..147 F..127 K..127	AM213/215	215.9	11	22	184	5	450	228	79.55	6.3	15	157.5	15.8	34.925	85.85	38.7	7.94
	AM254/256		12	28					95.3	6.3		208	8.8	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	32	228.6	5		286	111.05	6.3	15	215	15.8	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	38	279.4	5		356	127.05	6.3	17.5	275	34.8	53.975	133.35	60	12.7
	AM364/365	317.5	17	38	279.4	5		356	143.05	6.3	17.5	275	34.8	60.325	149.35	67.6	15.875
R..167 F..157 K..167 K..187	AM254/256	215.9	12	28	184	5	550	228	95.3	6.3	15	200	8.8	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	32	228.6	5		286	111.05	6.3	15	207	15.8	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	38	279.4	5		356	127.05	6.3	17.5	267	34.8	53.975	133.35	60	12.7
	AM364/365			143.05					60.325					149.35	67.6	15.875	





6.9 Adapters for mounting servomotors

23 005 01 00



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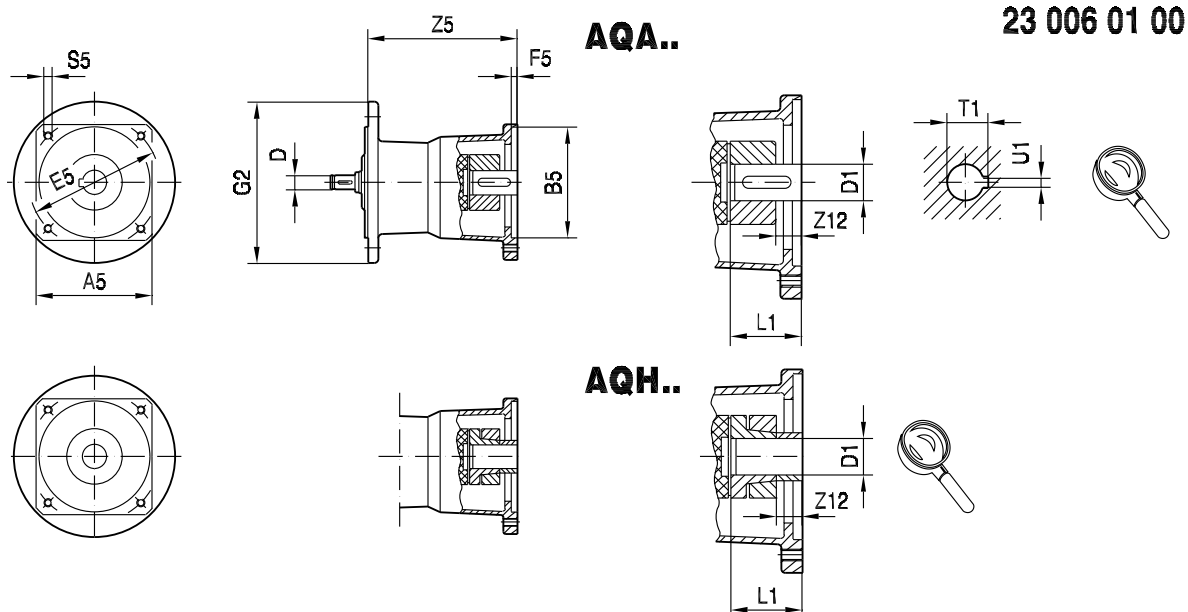
Gear unit type	Adapter type	Dimensions in mm													
		A5	B5	D	E5	F5	G2	S5	Z5	Z12 <sup>1)</sup>	Z12 <sup>2)</sup>	D1	L1	T1 <sup>1)</sup>	U1 <sup>1)</sup>
R..27, R..37 F..27, F..37, F..47 K..19, K..29, K..37 S..37, S..47, S..57 W..37	AQ..80/1	82	60	10 12	75	3	120	M5	104.5	5.5	5.5	11	23	12.8	4
	AQ..80/2		50		95			14				30	16.3	5	
	AQ..80/3		80	100	14			30	16.3	5					
	AQ..100/1	100	80	10 12 14	100	4		M6	129.5	-	-	14	30	16.3	5
	AQ..100/2		95		115			19				40	21.8	6	
	AQ..100/3		80		100			19	40	21.8	6				
	AQ..100/4		95		115			19	40	21.8	6				
	AQ..115/1	115	95	16	130	6		M8	152.5	11	23	19	40	21.8	6
	AQ..115/2		110					24				50	27.3	8	
	AQ..115/3		110					16	16	24	50	27.3	8		
R..47, R..57, R..67 F..57, F..67 K..47 <sup>3)</sup> , K..57, K..67 S..67 W..47	AQ..80/1	82	60	10 12	75	3	160	M5	98	5.5	5.5	11	23	12.8	4
	AQ..80/2		50		95			14				30	16.3	5	
	AQ..80/3		80	100	14			30	16.3	5					
	AQ..100/1	100	80	10 12 14	100	4		M6	122.5	-	-	14	30	16.3	5
	AQ..100/2		95		115			19				40	21.8	6	
	AQ..100/3		80		100			19	40	21.8	6				
	AQ..100/4		95		115			19	40	21.8	6				
	AQ..115/1	115	95	16	130	6		M8	145.5	11	23	19	40	21.8	6
	AQ..115/2		110					24				50	27.3	8	
	AQ..115/3		110					16	16	24	50	27.3	8		
	AQ..140/1	140	110	16 18 22	165	5		M10	175	16	16	24	50	27.3	8
	AQ..140/2		130									32	60	35.5	10
	AQ..140/3		130					28	60	31.3	8				
	AQ..140/4		130					32	60	35.3	10				
	AQ..160/1	162	155	22 28	190	5		M12	237.5	24	24	32	60	35.3	10
AQ..190/1	130	32	60				35.3					10			
AQ..190/2	190	180	215				38	80	41.3	10					
AQ..190/3	190	180	215	38	80	41.3	10								

- 1) For variants with keyway (AQA..).
- 2) For variants with clamping ring hub (AQH..).
- 3) Not with AQ190



## Design and operating notes

### Adapters for mounting servomotors



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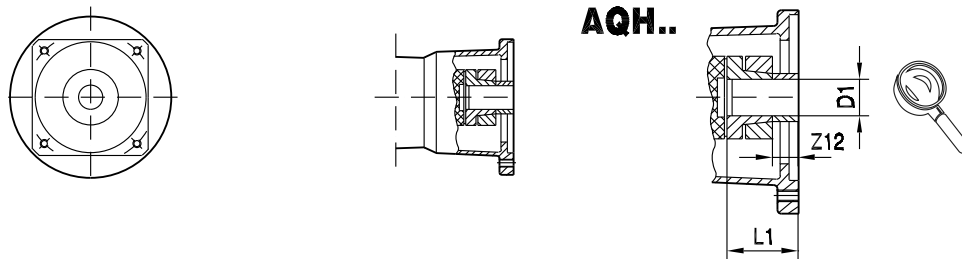
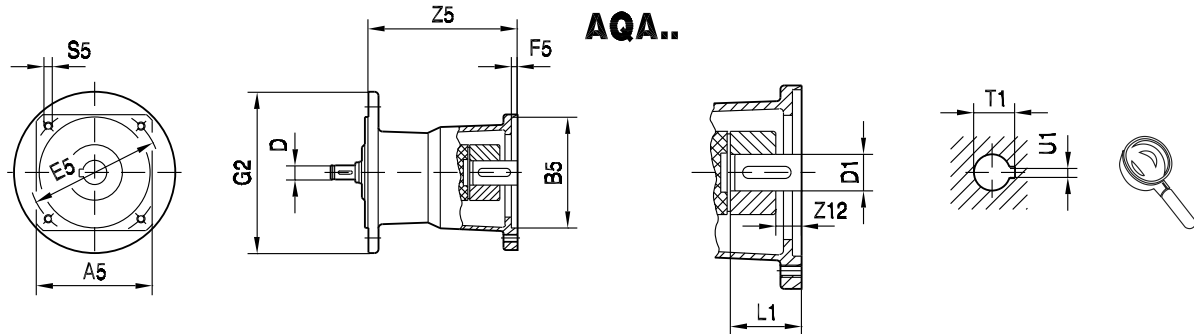
Gear unit type	Adapter type	Dimensions in mm																														
		A5	B5	D	E5	F5	G2	S5	Z5	Z12 <sup>1)</sup>	Z12 <sup>2)</sup>	D1	L1	T1 <sup>1)</sup>	U1 <sup>1)</sup>																	
R..77 F..77 K..77 S..77	AQ..80/1	82	60	10	75	3	200	M5	92	5.5	5.5	11	23	12.8	4																	
	AQ..80/2		12	75	14			30				16.3				5																
	AQ..80/3		50	95	30												16.3	5														
	AQ..100/1	100	80	10	100	4			M6	115.5	-		-	14	30				16.3	5												
	AQ..100/2		95		100			M6	129.5			2		14		19					40	21.8	6									
	AQ..100/3		80		100												M8	129.5						2	14	19	40	21.8	6			
	AQ..100/4	95	115	M8	129.5	2				14	19		40		21.8				6													
	AQ..115/1	115	95					16	130			M8		138.5		11				23	19	40	21.8							6		
	AQ..115/2		110														16	16						24	50	27.3	8					
	AQ..115/3			16	16	24				50	27.3		8																			
	AQ..140/1	140						110	16			165		5	M10	167			16	16	24	50	27.3					8				
	AQ..140/2		130					18									22	32						60	35.3	10						
	AQ..140/3			180	22	22				28	31.3		8																			
	AQ..140/4																										190		22	22	32	35.3
	AQ..160/1	162							155			22		215	M12	225.5			24	24	32	60	35.3					10				
	AQ..190/1		190					130									28	215						M12	249.5	34						
	AQ..190/2			180	22	215				M12	249.5		34																			
	AQ..190/3	180							22			215		M12	249.5	34			34	38	80	41.3	10									
AQ..100/1	100		80				12	100									4	M6						110.5	-	-	14	30	16.3	5		
AQ..100/2			95	14	100	M6				124.5	2		14					19									40				21.8	6
AQ..100/3		80	16						115			M8		124.5	2	14			19	40	21.8	6										
AQ..100/4		95																					115									
AQ..115/1	115	95					16	130									M8							133.5	11	23		19	40	21.8		
AQ..115/2		110		16	16	24				50	27.3		8																			
AQ..115/3			16						16			24		50	27.3	8																
AQ..140/1	140						110	16									165	5	M10	162	16	16	24	50	27.3	8						
AQ..140/2		130		18	22	32	60			35.3	10																					
AQ..140/3			175						22			22	28	31.3	8																	
AQ..140/4																190											22	22	32	35.3	10	
AQ..160/1	162							155									22	215	M12	220.5	24	24	32	60	35.3	10						
AQ..190/1		190		130	28	215	M12			244.5	34																					34
AQ..190/2			180						22			215	M12	244.5	34																	
AQ..190/3	180							22								215	M12	244.5	34	34	38	80	41.3	10								

1) For variants with keyway (AQA..).

2) For variants with clamping ring hub (AQH..).



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Gear unit type	Adapter type	Dimensions in mm														
		A5	B5	D	E5	F5	G2	S5	Z5	Z12 <sup>1)</sup>	Z12 <sup>2)</sup>	D1	L1	T1 <sup>1)</sup>	U1 <sup>1)</sup>	
R..97 F..97 K..97 S..97	AQ..140/1	140	110	16 18 22	165	5	300	M10	157	16	16	24	50	27.3	8	
	AQ..140/2		130													
	AQ..140/3		190													
	AQ..140/4		190													
	AQ..160/1	162	155	22	215			M12	215.5	24	24	32	60	35.3	10	
	AQ..190/1	190	130	28	215				239.5	34	34	38	80	41.3	10	
	AQ..190/2	190	180	28	215				209.5	24	24	32	60	35.3	10	
AQ..190/3	190	180	28	215	233.5	34	34	38	80	41.3	10					
R..107 F..107 K..107	AQ..140/1	140	110	16 18 22	165	5	350	M10	151	16	16	24	50	27.3	8	
	AQ..140/2		130													
	AQ..140/3		190													
	AQ..140/4		190													
AQ..160/1	162	155	22	215	M12			209.5	24	24	32	60	35.3	10		
AQ..190/1	190	130	28	215				233.5	34	34	38	80	41.3	10		
AQ..190/2	190	180	28	215				202.5	24	24	32	60	35.3	10		
AQ..190/3	190	180	28	215	226.5	34	34	38	80	41.3	10					
R..137	AQ..190/1	190	130	22 28	215	5	400	M12	194.5	24	24	32	60	35.3	10	
	AQ..190/2		180													
	AQ..190/3		180													
R..147 F..127 K..127	AQ..190/1	190	130	22 28	215		5	450	M12	218.5	34	34	38	80	41.3	10
	AQ..190/2		180													
	AQ..190/3		180													

- 1) For variants with keyway (AQA..).
- 2) For variants with clamping ring hub (AQH..).



#### 6.10 Torque arms

##### 6.10.1 Available torque arms



#### CAUTION

Danger due to static overdetermination if gear units with foot (e.g. KA19/29B, KA127/157B or FA127/157B) are mounted both via the torque arm and via the foot plate.

Risk of injuries and damage to property.

- Especially with KAx9B/T variants, concurrent use of the foot plates and the torque arm is not permitted.
- KAx9B/T variants may only be mounted via torque arms.
- Kx9 and KAx9B variants may only be mounted via the foot plate.
- If you want to use foot plates and torque arms for mounting, consult SEW-EURODRIVE.

Gear unit	Size	
	19	29
KA, KH, KV, KT	1068 411 5	1068 410 7

Gear unit	Size					
	27	37	47	57	67	77
KA, KH, KV, KT	-	643 425 8	643 428 2	643 431 2	643 431 2	643 434 7
SA, SH, ST	-	126 994 1	644 237 4	644 240 4	644 243 9	644 246 3
FA, FH, FV, FT Rubber buffer (2 pieces)	013 348 5	013 348 5	013 348 5	013 348 5	013 348 5	013 349 3

Gear unit	Size				
	87	97	107	127	157
KA, KH, KV, KT	643 437 1	643 440 1	643 443 6	643 294 8	-
SA, SH, ST	644 249 8	644 252 8	-	-	-
FA, FH, FV, FT Rubber buffer (2 pieces)	013 349 3	013 350 7	013 350 7	013 351 5	013 347 7

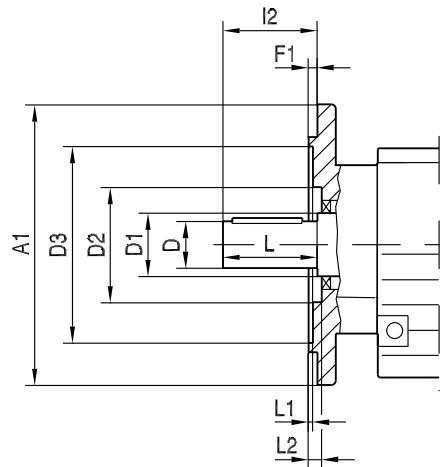
Gear unit	Size				
	10	20	30	37	47
WA	1 061 021 9	1 68 073 0	1 68 011 0	1 061 129 0	1 061 187 8

##### 6.10.2 Torque arms for KH167..., KH187..

As standard, torque arms are not available for gear unit sizes KH167.. and KH187... Consult SEW-EURODRIVE if you need torque arms for these gear units.



6.11 Flange contours of RF.. and R..F gear units



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Check dimensions L1 and L2 for selection and installation of output elements.

Type	Dimensions in mm											
	A1	D	D1	D2		D3	F1	I2	L	L1		L2
				RF	R..F					RF	R..F	
RF07, R07F	120	20	22	38	38	72	3	40	40	2	2	6
	140 <sup>1)</sup>				-	85	3			2	-	6
	160 <sup>1)</sup>				-	100	3.5			2.5	-	6.5
RF17, R17F	120	20	25	46	46	65	3	40	40	1	1	5
	140				-	78	3			1	-	5
	160 <sup>1)</sup>				-	95	3.5			1	-	6
RF27, R27F	120	25	30	54	54	66	3	50	50	1	1	6
	140				-	79	3			3	-	7
	160				-	92	3.5			3	-	7
RF37, R37F	120	25	35	60	63	70	3	50	50	5	4	7
	160				-	96	3.5			1	-	7.5
	200 <sup>1)</sup>				-	119	3.5			1	-	7.5
RF47, R47F	140	30	35	72	64	82	3	60	60	4	1	6
	160				-	96	3.5			0.5	-	6.5
	200				-	116	3.5			0.5	-	6.5
RF57, R57F	160	35	40	76	75	96	3.5	70	70	4	2.5	5
	200				-	116	3.5			0	-	5
	250 <sup>1)</sup>				-	160	4			0.5	-	5.5
RF67, R67F	200	35	50	90	90	118	3.5	70	70	2	4	7
	250				-	160	4			1	-	7.5
RF77, R77F	250	40	52	112	100	160	4	80	80	0.5	2.5	7
	300 <sup>1)</sup>				-	210	4			0.5	-	7
RF87, R87F	300	50	62	123	122	210	4	100	100	0	1.5	8
	350				-	226	5			1	-	9
RF97	350	60	72	136		236	5	120	120	0		9
	450					320						
RF107	350	70	82	157		232	5	140	140	0		11
	450			186	316							
RF137	450	90	108	180		316	5	170	170	0		10
	550					416						
RF147	450	110	125	210		316	5	210	210	0		10
	550					416						
RF167	550	120	145	290		416	5	210	210	1		10
	660					517				6		2

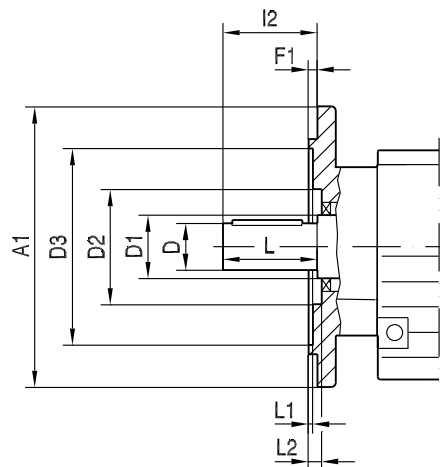
1) The flange contour protrudes from under the base surface.



## Design and operating notes

Flange contours of FF., KF., SF. and WF. gear units

### 6.12 Flange contours of FF., KF., SF. and WF. gear units

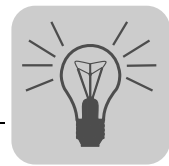


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Check dimensions L1 and L2 for selection and installation of output elements.

Type	Dimensions in mm									
	A1	D	D1	D2	D3	F1	I2	L	L1	L2
FF27	160	25	40	66	96	3.5	50	50	3	18.5
FF37	160	25	30	70	94	3.5	50	50	2	6
FF47	200	30	40	72	115	3.5	60	60	3.5	7.5
FF57	250	35	40	84	155	4	70	70	4	9
FF67	250	40	50	84	155	4	80	80	4	9
FF77	300	50	55	82	205	4	100	100	5	9
FF87	350	60	65	115	220	5	120	120	5	9
FF97	450	70	75	112	320	5	140	140	8	10
FF107	450	90	100	159	318	5	170	170	16	9
FF127	550	110	118	-	420	5	210	210	10	-
FF157	660	120	135	190	520	6	210	210	8	14
KF19	120	20	25	-	70	2.5	40	40	-	11.5
KF19	160	20	25	-	100	2.5	40	40	-	11.5
KF29	160	25	30	-	109	3.5	50	50	-	6.5
KF29	200	25	30	-	115	3.5	50	50	-	6.5
KF37	160	25	30	70	94	3.5	50	50	2	6
KF47	200	30	40	72	115	3.5	60	60	3.5	7.5
KF57	250	35	40	84	155	4	70	70	4	9
KF67	250	40	50	84	155	4	80	80	4	9
KF77	300	50	55	82	205	4	100	100	5	9
KF87	350	60	65	115	220	5	120	120	5	9
KF97	450	70	75	112	320	5	140	140	8	10
KF107	450	90	100	159	318	5	170	170	16	9
KF127	550	110	118	-	420	5	210	210	10	-
KF157	660	120	135	190	520	6	210	210	8	14
SF37	120	20	25	-	68	3	40	40	6	-
SF37	160	20	25	-	96	3.5	40	40	5.5	-
SF47	160	25	30	70	94	3.5	50	50	2	6
SF57	200	30	40	72	115	3.5	60	60	3.5	7.5
SF67	200	35	45	-	115	3.5	70	70	8.5	-
SF77	250	45	55	108	160	4	90	90	8	9
SF87	350	60	65	130	220	5	120	120	6	10
SF97	450	70	75	150	320	5	140	140	8.5	10
WF10	80	16	25	-	39	2.5	40	40	30	-
WF10	120	16	25	39	74	3	40	40	5	30
WF20	110	20	30	44	53	-4	40	40	27	35

Table continued on next page.



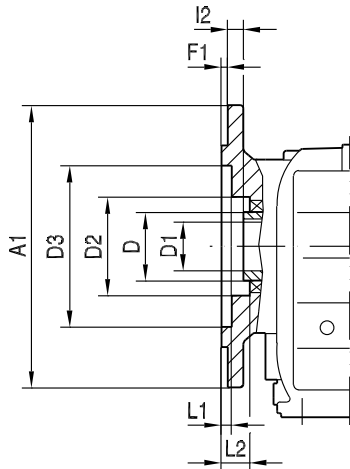
Type	Dimensions in mm									
	A1	D	D1	D2	D3	F1	I2	L	L1	L2
WF20	120	20	30	-	45	2.5	40	40	37.5	-
WF30	120	20	30	48	63	2.5	40	40	18	27
WF30	160	20	30	48	63	2.5	40	40	33	42
WF37	120	20	30	-	70	2.5	40	40	-	10.5
WF37	160	20	30	-	70	2.5	40	40	-	25.5
WF47	160	30	35	-	92	3.5	10	60	6	-



## Design and operating notes

Flange contours of FAF.., KAF.., SAF.. and WAF.. gear units

### 6.13 Flange contours of FAF.., KAF.., SAF.. and WAF.. gear units



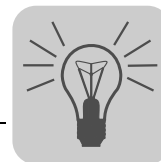
18014402819885835

Check dimensions L1 and L2 for selection and installation of output elements.

Type	Dimensions in mm								
	A1	D	D1	D2	D3	F1	I2	L1	L2
FAF27	160	40	25	66	96	3.5	20	3	18.5
FAF37	160	45	30	62	94	3.5	24	2	30
FAF47	200	50	35	70	115	3.5	25	3.5	31.5
FAF57	250	55	40	76	155	4	23.5	4	31
FAF67	250	55	40	76	155	4	23	4	31
FAF77	300	70	50	95	205	4	37	5	45
FAF87	350	85	60	120	220	5	30	5	39
FAF97	450	95	70	135	320	5	41.5	5.5	51
FAF107	450	118	90	224	320	5	41	16	52
FAF127	550	135	100	185	420	5	51	6	63
FAF157	660	155	120	200	520	6	60	10	74
KAF19	120	30	20	60	70	2.5	25	9	25.5
KAF19	160	30	20	60	100	2.5	25	9	25.5
KAF29	160	40	25 / 30	-	105	3.5	33.5	-	6.5
KAF29	200	40	25 / 30	-	118	3.5	33.5	-	6.5
KAF37	160	45	30	62	94	3.5	24	2	30
KAF47	200	50	35	70	115	3.5	25	3.5	8.5
KAF57	250	55	40	76	155	4	23.5	4	31
KAF67	250	55	40	76	155	4	23	4	31
KAF77	300	70	50	95	205	4	37	5	45
KAF87	350	85	60	120	220	5	30	5	39
KAF97	450	95	70	135	320	5	41.5	5.5	51
KAF107	450	118	90	224	320	5	41	16	52
KAF127	550	135	100	185	420	5	51	6	63
KAF157	660	155	120	200	520	6	60	10	74
SAF37	120	35	20	-	68	3	15	6	-
SAF37	160	35	20	-	96	3.5	15	5.5	-
SAF47	160	45	30 / 25	62	94	3.5	24	2	30
SAF57	200	50	35 / 30	70	115	3.5	25	3.5	31.5
SAF67	200	65	45 / 40	91	115	3.5	42.5	4	48.5
SAF77	250	80	60 / 50	112	164	4	45.5	5	53.5
SAF87	350	95	70 / 60	131	220	5	52.5	6	62.5
SAF97	450	120	90 / 70	160	320	5	60	6.5	69
WAF10	80	25	16	-	39	2.5	23	30	-
WAF10	120	25	16	39	74	3	23	5	30
WAF20	110	30	18 / 20	44	53	-4	30	27	35

Table continued on next page.





Type	Dimensions in mm								
	A1	D	D1	D2	D3	F1	I2	L1	L2
WAF20	120	30	18 / 20	-	45	2.5	30	37.5	-
WAF30	120	30	20	48	63	2.5	19.5	18	27
WAF30	160	30	20	48	63	2.5	34.5	33	42
WAF37	120	35	20 / 25	54	70	2.5	19.5	10.5	27
WAF37	160	35	20 / 25	54	70	2.5	34.5	25.5	42
WAF47	160	45	25 / 30	72	92	3.5	10	6	45

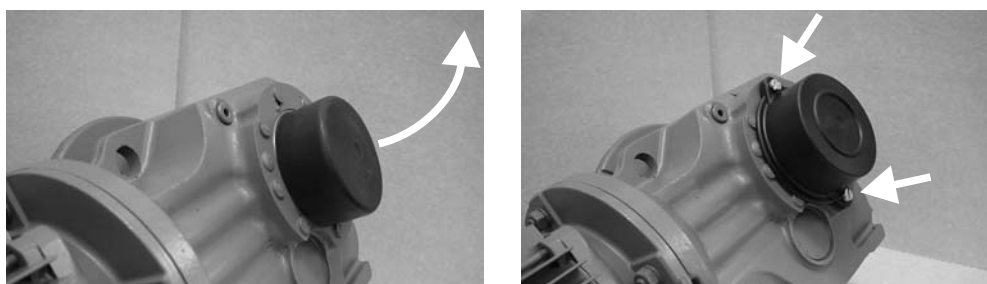
## 6.14 Fixed covers

Parallel-shaft helical gear units, helical-bevel gear units, helical-worm and SPIROPLAN® gear units with hollow shafts and shrink disks of size 37 up to size 97 come equipped with a rotating cover as standard. If fixed covers are required for these gear units for safety reasons, you can order them for the respective gear unit types by quoting the part numbers in the following tables.

The following gear unit types with hollow shaft and shrink disk come equipped with a fixed cover with gasket as standard.

- Explosion-proof parallel-shaft, helical-bevel, helical-worm and SPIROPLAN® gear units
- Parallel-shaft helical gear units size 27
- Parallel-shaft and helical-bevel gear units size 107 and greater

The following figure shows how to replace the rotating cover with a fixed cover.



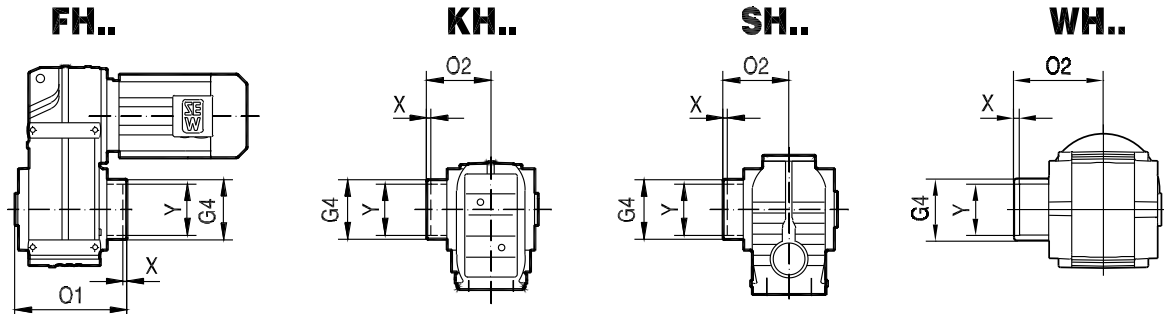
4310406923

1. Pull off the rotating cover
2. Install and fasten the fixed cover



#### 6.14.1 Part numbers and dimensions

The following figure shows the different gear unit variants:



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Parallel-shaft helical gearmotors	FH..37	FH..47	FH..57	FH..67	FH..77	FH..87	FH..97
Part number	643 513 0	643 514 9	643 515 7	643 515 7	643 516 5	643 517 3	643 518 1
G4	78	88	100	100	121	164	185
O1	157	188.5	207.5	221.5	255	295	363.5
X	2	4.5	7.5	6	6	4	6.5
Y	75	83	83	93	114	159	174

Helical-bevel gearmotors <sup>1)</sup>	KH..19	KH..29
Part number	1068 415 8	1068 416 6
G4 in mm	62	68
O2 in mm	83	90
X in mm	2	4
Y in mm	50	60

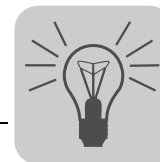
1) Not possible in foot-mounted helical-bevel gear units with hollow shafts and shrink disk (KH..B).

Helical-bevel gearmotors <sup>1)</sup>	KH..37	KH..47	KH..57	KH..67	KH..77	KH..87	KH..97
Part number	643 513 0	643 514 9	643 515 7	643 515 7	643 516 5	643 517 3	643 518 1
G4 in mm	78	88	100	100	121	164	185
O2 in mm	95	111.5	122.5	129	147	172	210.5
X in mm	0	1.5	5.5	3	1	2	4.5
Y in mm	75	83	83	93	114	159	174

1) Not possible in foot-mounted helical-bevel gear units with hollow shafts and shrink disk (KH..B).

Helical-worm gearmotors	SH..37	SH..47	SH..57	SH..67	SH..77	SH..87	SH..97
Part number	643 512 2	643 513 0	643 514 9	643 515 7	643 516 5	643 517 3	643 518 1
G4 in mm	59	78	88	100	121	164	185
O2 in mm	88	95	111.5	123	147	176	204.5
X in mm	1	0	1.5	3	1	0	0.5
Y in mm	53	75	83	93	114	159	174

SPIROPLAN® gearmotors	WH..37	WH..47
Part number	1 061 136 3	1 061 194 0
G4 in mm	68	80.5
O2 in mm	95.5	109.5
X in mm	11	12.5
Y in mm	50	72



## 6.15 Condition monitoring: Oil aging sensor

### 6.15.1 Technical data of oil aging sensor

DUO10A diagnostic unit

DUO10A	Technical data		
Preset oil grades	OIL1	CLP mineral oil	$T_{max} = 100^{\circ}\text{C}$
		Bio oil	$T_{max} = 100^{\circ}\text{C}$
	OIL2	CLP HC synthetic oil	$T_{max} = 130^{\circ}\text{C}$
		CLP PAO oil	$T_{max} = 130^{\circ}\text{C}$
	OIL3	CLP PG polyglycol	$T_{max} = 130^{\circ}\text{C}$
OIL4	Food grade oil	$T_{max} = 100^{\circ}\text{C}$	
Switch outputs	1: Early warning (time to next oil change can be set to between 2 and 100 days) 2: Main alarm (time to oil change 0 days) 3: Temperature $T_{max}$ exceeded 4: DUO10A is ready for operation		
Permitted oil temperature	-40 °C to +130 °C		
Permitted temperature sensor	PT1000		
EMC	IEC1000-4-2/3/4/6		
Ambient temperature	-25 °C to +70 °C		
Operating voltage	DC 18 – 28 V		
Current consumption for DC 24 V	< 90 mA		
Protection class	III		
Degree of protection	IP67 (optionally IP69K)		
Housing materials	Evaluation unit: V2A, EPDM/X, PBT, FPM Temperature sensor: V4A		
Electrical connection	Evaluation unit: M12 plug connector PT1000 temperature sensor: M12 plug connector		

Designations and part numbers



Designation	Description	Part number
DUO10A	Evaluation unit (basic unit)	1 343 875 1
DUO10A-PUR-M12-5m	5 m PUR cable with 1 connector	1 343 877 8
DUO10A-PVC-M12-5m	5 m PVC cable with 1 connector	1 343 878 6
DUO10A	Angle bracket	1 343 880 8
DUO10A D = 34	Mounting clamp	1 343 879 4





## Design and operating notes

### Condition monitoring: Oil aging sensor

Designation	Description	Part number
<b>W4843 PT1000</b> 	PT1000 temperature sensor	1 343 881 6
<b>W4843_4x0.34-2m-PUR</b>	2 m PUR cable for PT1000 <sup>1)</sup>	1 343 882 4
<b>W4843_4x0.34-2m-PVC</b>	2 m PVC cable for PT1000 <sup>2)</sup>	1 343 883 2
<b>DUO10A</b> 	Protection cap (for aseptic design, IP69K)	1 343 902 2

- 1) PUR cables are particularly suited for use in oil-contaminated environments.  
 2) PVC cables are particularly suited for use in moist environments.

*Mounting to standard gear units (R, F, K, S)*

Adapter for mounting the PT1000 temperature sensor in screw plug holes:

Complete adapter for PT1000 sensor	Part number
<b>M10 × 1</b>	1 343 903 0
<b>M12 × 1.5</b>	1 343 904 9
<b>M22 × 1.5</b>	1 343 905 7
<b>M33 × 2</b>	1 343 906 5
<b>M42 × 2</b>	1 343 907 3

Mounting base for installing the diagnostic unit at the gear unit with an angle bracket:

Mounting base with sealing ring	Part number
<b>M10 × 1</b>	1 343 441 1
<b>M12 × 1.5</b>	1 343 827 1
<b>M22 × 1.5</b>	1 343 829 8
<b>M33 × 2</b>	1 343 830 1
<b>M42 × 2</b>	1 343 832 8



## 7 Important information on selection tables and dimension drawings

### 7.1 Possible geometrical combinations

#### 7.1.1 Structure of the tables

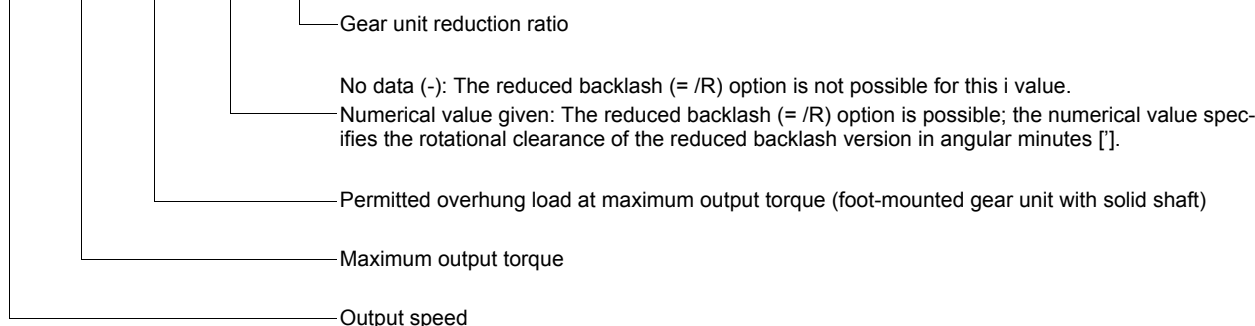
These tables show geometrically possible combinations of single-speed gear units and AC (brake) motors. Please contact SEW-EURODRIVE for information on pole-changing AC (brake) motors.

The following data is provided for each combination and an input speed  $n_i = 1400$  rpm:

- Output speed ( $n_a$ )
- Maximum output torque ( $M_{amax}$ )
- Permitted overhung load ( $F_{Ra}$ ) at maximum output torque, applies to foot-mounted gear units with solid shaft
- Gear unit reduction ratio ( $i$ )

**Torsion angle  $\phi_{(R)}$ :** If no value is specified, the gear unit is not available with the "reduced backlash (/R)" option in this gear unit reduction ratio. If a numerical value is given, this gear unit is also available with "reduced backlash (/R)" option. The numerical value specifies the rotational clearance of the reduced backlash version in angular minutes ['].

R77, $n_e=1400$ 1/min										820 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\phi$ (/R) [']	$i$	DR63 DR63M ...	DRS71 DRS80S ...	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
					3						
7.2	820	9920	6.4	195.24							
8.4	820	9920	6.5	166.59							



\* Finite gear unit reduction ratio

	Combination with the motor in the header <b>is possible</b> .
	Combination with the motor in the header <b>is not possible</b> .

Helical gear units (R), with the exception of the single stage RX gear unit, and parallel-shaft helical gear units (F) have two or three stages, depending on the gear unit reduction ratio. The tables indicate whether the subsequent  $i$  ranges are two or three stage. Multi-stage gear units always have a helical gear unit as their primary gear unit; it explains why the number of stages is also given for multi-stage gear units.

2 For R and F gear units: Number of stages of the subsequent gear ratios (two or three stages).

For multi-stage gear units: Stages of the following ratios (2-2, 3-3, 2-3 or 3-2 stages).

3 3 The number of stages of the primary gear unit (= small gear unit) is given on the right; the number of stages of the output gear unit (= large gear unit) is given on the left.

Helical-bevel, SPIROPLAN® and helical-worm gear units (K, W and S) have a defined number of stages. This is why the number of stages is not listed in the tables.

- Helical-bevel gear units (K): K..7 always 3-stage, K..9 always 2-stage
- SPIROPLAN® gear units (W): W..10 to W..30 always 1-stage, W..37 and W..47 always 2-stage
- Helical-worm gear units (S): Always 2-stage



## 7.2 Selection tables for gearmotors

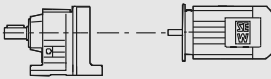

### 7.2.1 Structure of the selection tables

The two figures below illustrate the structure of the selection tables for gearmotors. There are two types of selection tables:

1. For standard output speeds, sorted by the rated power  $P_m$  [kW] of the driving motor.
2. For extremely low output speeds, always multi-stage gearmotors sorted by the maximum permitted output torque  $M_{a \max}$  [Nm].

#### Table for standard output speeds:

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$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{RA}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
Nominal power of driving motor	Output speed	Output torque	Gear unit reduction ratio	Permitted overhung load on output end	Service factor	Gear unit type	Motor type	Weight	Dimension sheet page number

\* Finite gear unit reduction ratio

1) Overhung load for foot-mounted gear units with solid shaft; overhung loads for other gear unit types upon request.



### INFORMATION

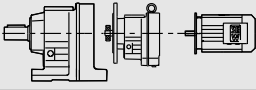

Only applies to SPIROPLAN® (W) gearmotors:

- If a lubricant is used for the food industry (food grade), SEW  $f_B \geq 1.2$  required.



Table for extremely low output speeds (multi-stage gearmotors):

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$M_{a\ max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{RA}^{1)}$ [N]		$m$ [kg]	
Max. permitted output torque	Output speed	Gear unit reduction ratio	Permitted overhung load on output end	Gear unit types	Weight	Dimension sheet page number
				Motor type		

\* Finite gear unit reduction ratio

1) Overhung load for foot-mounted gear units with solid shaft; overhung loads for other gear unit types upon request



**INFORMATION**

In drives for particularly low output speeds (multi-stage gearmotors), the motor power must be limited to the maximum permitted output torque of the gear unit.



### 7.3 Dimension sheet information

#### 7.3.1 Symbols for scope of delivery



= Standard parts supplied by SEW-EURODRIVE.



= Standard parts not supplied by SEW-EURODRIVE.

#### 7.3.2 Tolerances

##### Shaft heights

The following tolerances apply to the indicated dimensions:

$\eta$	$\leq 250$ mm	→ -0.5 mm
$\eta$	$> 250$ mm	→ -1 mm

**Foot-mounted gear units:** Check the mounted motor because it may project below the mounting surface.

##### Shaft ends

Diameter tolerance:

$\emptyset$	$\leq 50$ mm	→ ISO k6
$\emptyset$	$> 50$ mm	→ ISO m6

Center bores according to DIN 332, shape DR:

$\emptyset$	= 7 – 10 mm	→ M3	$\emptyset$	$> 30$ – 38 mm	→ M12
$\emptyset$	$> 10$ – 13 mm	→ M4	$\emptyset$	$> 38$ – 50 mm	→ M16
$\emptyset$	$> 13$ – 16 mm	→ M5	$\emptyset$	$> 50$ – 85 mm	→ M20
$\emptyset$	$> 16$ – 21 mm	→ M6	$\emptyset$	$> 85$ – 130 mm	→ M24
$\emptyset$	$> 21$ – 24 mm	→ M8	$\emptyset$	$> 130$ mm	→ M30
$\emptyset$	$> 24$ – 30 mm	→ M10			

Keys: according to DIN 6885 (domed type)

##### Hollow shafts

Diameter tolerance:

$\emptyset$  → ISO H7 measured with plug gauge

Keys: according to DIN 6885 (domed type)

Exception: Key for WA37 with shaft  $\emptyset$  25 mm according to DIN 6885-3 (low form)

##### Multiple-spline shafts

$D_m$  = Measuring roller diameter  
 $M_e$  = Check size

##### Flanges

Centering shoulder tolerance:

$\emptyset$	$\leq 230$ mm (flange sizes A120 – A300)	→ ISO j6
$\emptyset$	$> 230$ mm (flange sizes A350 A660)	→ ISO h6

Up to 3 different flange dimensions are available for each size of helical gear units, SPIROPLAN® gear units, AC (brake) motors and explosion-proof AC (brake) motors. The respective dimension drawings show the permitted flanges for each size.





### 7.3.3 Eyebolts, lifting eyes

R07...R27 helical gear units, motors up to DR100 and SPIROPLAN® gearmotors W..10 to W..30 are delivered without special transportation fixtures. All other gear units and motors are equipped with cast-on lifting eyes, screw-on lifting eyes or screw-on eyebolts.

Gear unit / #motor type	Screw-on		Cast-on lifting eyes
	eyebolts	lifting eyes	
R..37-R..57	-	•	-
R..67-R..107	•	-	-
RX57-RX67	-	•	-
RX77-RX107	•	-	-
F..27-F..157	-	-	•
K..19 - K..29	-	•	-
K..37-K..157	-	-	•
K..167-K..187	•	-	-
S..37-S..47	-	•	-
S..57-S..97	-	-	•
W37-W47	-	•	-
≥ DR112	•	-	-

### 7.3.4 Breather valves

The gear unit dimension drawings always show the screw plugs. The corresponding screw plug is replaced by an activated breather valve at the factory depending on the ordered mounting position M1 – M6. The result may be slightly altered contour dimensions.

### 7.3.5 Shrink disk connection

Hollow shaft gear unit with shrink disk connection: If required, please request a detailed data sheet on shrink disks, data sheet no. 33 753 nn 95.

### 7.3.6 Splined hollow shaft

FV.. hollow shaft gear unit sizes 27 to 107, and KV.. sizes 37 to 107 are supplied with splining according to standard 5480.

### 7.3.7 Rubber buffer for FA/FH/FV/FT

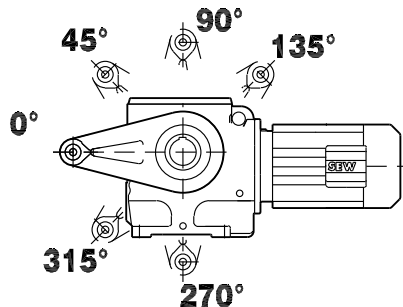
Preload rubber buffer by the indicated value mL. The characteristic curve of spring for the rubber buffers is available at SEW-EURODRIVE on request.



#### 7.3.8 Position of the torque arm

*Helical-worm and SPIROPLAN® gear units*

The following illustration shows the possible torque arm positions for helical-worm gear units and SPIROPLAN® gear units (135° position not possible with SPIROPLAN® gear units) as well as the respective angles:



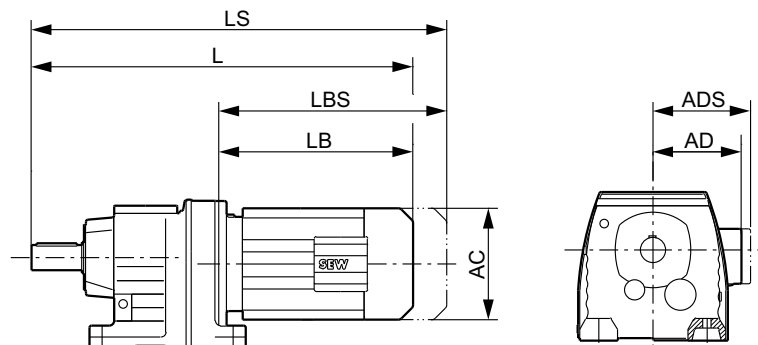
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For more information about torque arms, refer to the respective dimension sheets of the gearmotors.

Gearmotor	Dimension sheets from page
Helical-bevel gearmotors	(page 483)
Helical-worm gearmotors	(page 585)
SPIROPLAN® gearmotors	(page 664)

#### 7.3.9 Dimension designations of motors

Following an overview of motor dimension designations:



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- L = Total length of the gearmotor
- LS = Total length of gearmotor including brake
- LB = Length of the motor
- LBS = Length of the brakemotor
- AC = Diameter of the motor
- AD = Distance between the center of the motor shaft and the top part of the terminal box
- ADS = Distance between the center of the brakemotor shaft and the top part of the terminal box



## 7.4 Gearmotor dimensions

### 7.4.1 Motor options

The motor dimensions can change when installing motor options. Refer to the dimension drawings of the motor options in the "AC Motors" catalog.

### 7.4.2 Special designs

The terminal box dimensions in special designs might vary from the standard.

### 7.4.3 EN 50347

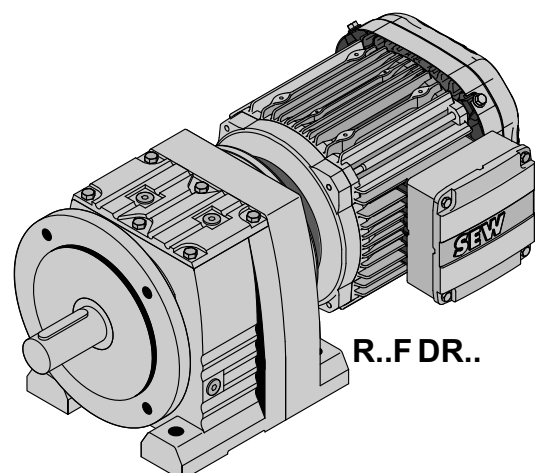
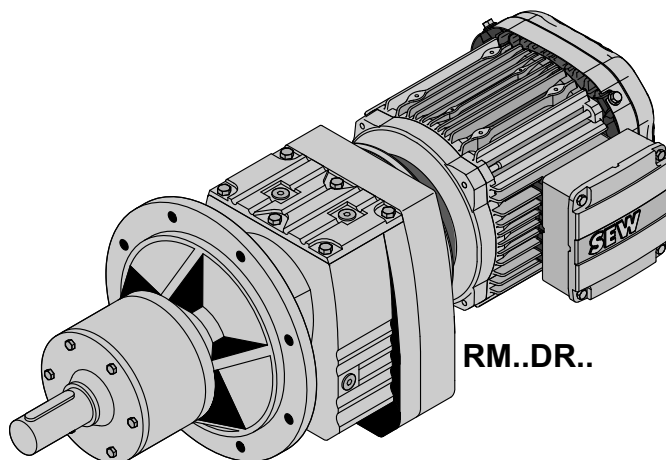
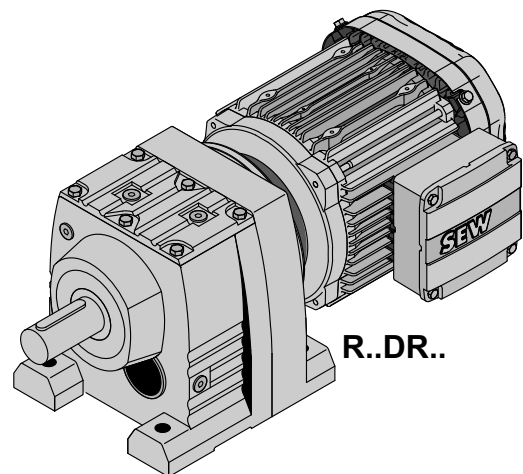
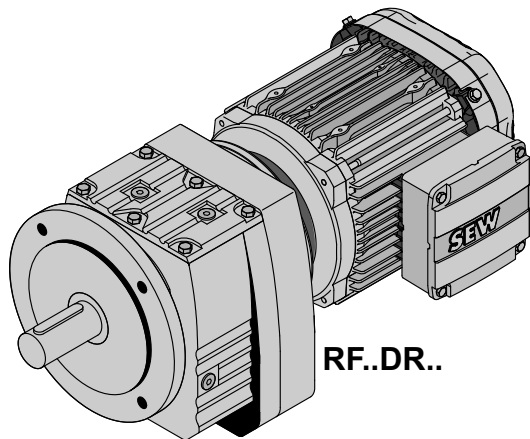
European standard EN 50347 became effective in August 2001. This standard adopts the dimension designations for three-phase AC motors for sizes 56 to 315M and flange sizes 65 to 740 from the IEC 72-1 standard.

The new dimension designations given in EN 50347 / IEC 72-1 are used for the dimensions in question in the dimension tables of the dimensions sheets.

kVA	n
	f
i	
P	Hz

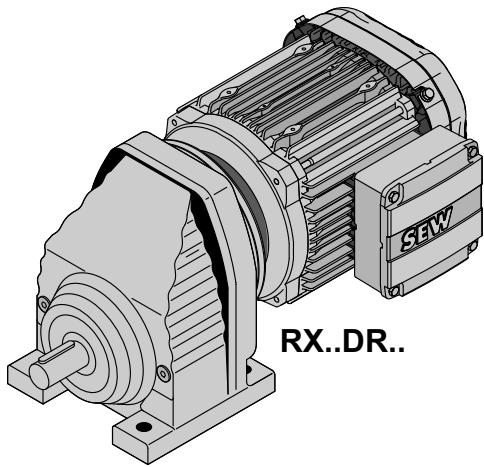
**R..DRE/DRS**

R, RF, R..F, RM, RX, RXF, RZ..DR..

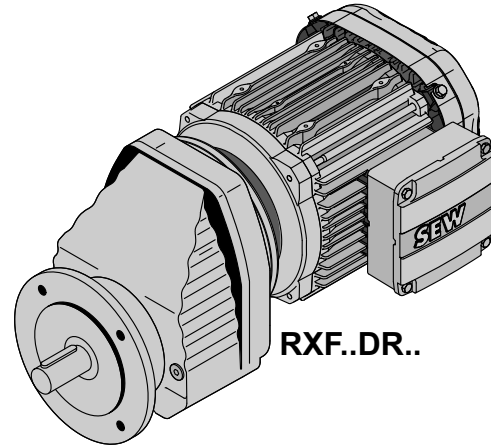
**8 R..DRE/DRS****8.1 R, RF, R..F, RM, RX, RXF, RZ..DR..**

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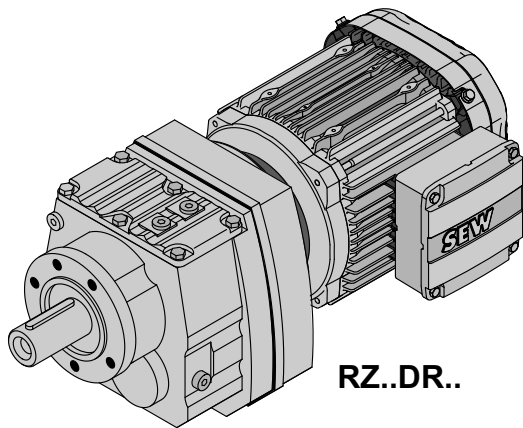
kVA	n
i	f
P	Hz



RX..DR..

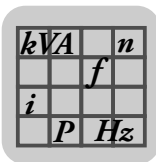


RXF..DR..



RZ..DR..

8962221323


**8.2 R.. → DRE/DRS**

<b>RX57, <math>n_e=1400</math> 1/min</b>						<b>69 Nm</b>				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
255	39	3100	-	5.50*						
276	36	3030	-	5.07						
322	68	2640	-	4.35						
369	69	2480	-	3.79						
394	69	2420	-	3.55*						
446	65	2320	-	3.14						
481	67	2170	-	2.91						
530	69	1810	-	2.64*						
591	69	1500	-	2.37						
686	69	1070	-	2.04						
729	69	880	-	1.92*						
848	69	430	-	1.65						
946	68	112	-	1.48						
1075	63	132	-	1.30						

<b>RX67, <math>n_e=1400</math> 1/min</b>						<b>134 Nm</b>				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
231	43	4000	-	6.07						
270	75	3580	-	5.18						
309	82	3350	-	4.53						
326	80	3300	-	4.30*						
371	87	3090	-	3.77						
438	100	2800	-	3.20*						
484	106	2640	-	2.89						
551	118	2000	-	2.54						
583	123	1530	-	2.40*						
686	134	230	-	2.04						
753	126	225	-	1.86						
870	114	245	-	1.61						
1000	104	205	-	1.40*						

<b>RX77, <math>n_e=1400</math> 1/min</b>						<b>215 Nm</b>					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
175	57	6330	-	8.00*							
187	53	6200	-	7.47							
218	103	5600	-	6.41							
249	110	5300	-	5.63							
262	103	5240	-	5.35*							
296	123	4890	-	4.73							
347	143	4490	-	4.04*							
378	153	4280	-	3.70							
431	182	3140	-	3.25*							
455	193	2490	-	3.08*							
519	215	1030	-	2.70							
576	215	425	-	2.43							
657	200	360	-	2.13							
745	187	255	-	1.88*							

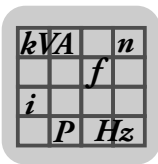


RX77, $n_e=1400$ 1/min						215 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
838	173	240	-	1.67							
986	155	240	-	1.42							

RX87, $n_e=1400$ 1/min						405 Nm						
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC
162	139	7890	-	8.65								
183	149	7500	-	7.63								
194	140	7380	-	7.20*								
217	192	6860	-	6.45								
252	225	6330	-	5.56*								
276	250	5990	-	5.07								
311	290	5520	-	4.50*								
370	305	5050	-	3.78								
402	405	2810	-	3.48								
453	405	2030	-	3.09								
507	405	1200	-	2.76*								
565	405	470	-	2.48								
651	385	42	-	2.15								
725	355	185	-	1.93								
875	315	74	-	1.60*								
1005	290	74	-	1.39								



RX97, $n_e=1400$ 1/min						595 Nm							
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
170	225	9570	-	8.23									
196	260	8960	-	7.16*									
213	300	8510	-	6.56									
242	420	7650	-	5.79									
285	395	7240	-	4.91									
310	595	6210	-	4.52									
347	595	5450	-	4.04									
385	595	4610	-	3.64*									
424	595	3820	-	3.30									
479	595	2890	-	2.92									
530	595	2020	-	2.64									
625	595	545	-	2.24*									
714	570	19	-	1.96									
854	505	51	-	1.64									
986	455	132	-	1.42									

RX107, $n_e=1400$ 1/min						830 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	
211	460	9660	-	6.63*							
250	455	9040	-	5.61							
270	695	7780	-	5.19							
301	695	7380	-	4.65							
333	830	6140	-	4.20*							
367	830	5260	-	3.81							



R..DRE/DRS  
R.. → DRE/DRS

RX107, $n_e=1400$ 1/min						830 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
414	830	4190	-	3.38						
456	830	3300	-	3.07						
530	830	1850	-	2.64*						
609	830	760	-	2.30						
718	765	420	-	1.95						
819	705	345	-	1.71						
972	645	315	-	1.44						

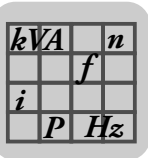
R07, $n_e=1400$ 1/min						50 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DT56M DT56L DR63S DR63M DR63L DRS71S DRS71M						
 3											
18	50	1510	-	78.24							
20	50	1510	-	71.47							
23	50	1510	-	60.32							
27	50	1510	-	51.52							
29	50	1470	-	47.78							
32	50	1420	-	44.16							
34	50	1380	-	41.31							
35	50	1370	-	40.34							
36	50	1340	-	38.51							
41	50	1270	-	34.05							
48	50	1190	-	29.08							
52	50	1150	-	26.97							
60	50	1080	-	23.32							
64	50	1040	-	21.73							
 2											
76	50	960	-	18.31							
84	50	920	-	16.73							
99	50	850	-	14.12							
116	50	790	-	12.06							
125	50	760	-	11.18							
145	50	710	-	9.67							
155	50	685	-	9.01							
178	49	645	-	7.85							
187	43	595	-	7.48							
205	43	535	-	6.83							
243	40	530	-	5.76							
285	37	530	-	4.92							
306	36	520	-	4.57							
354	34	505	-	3.95							
380	33	500	-	3.68							
436	31	495	-	3.21							





R17, $n_e=1400$ 1/min					85 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
3						
17	85	1770	-	81.64		
20	85	1770	-	70.39		
21	85	1770	-	65.61		
24	85	1770	-	57.35		
26	85	1770	-	53.76		
30	85	1770	-	47.44		
32	85	1770	-	44.18		
36	85	1770	-	38.61		
39	85	1770	-	36.20		
44	85	1770	-	31.94		
49	85	1770	-	28.32		
58	85	1650	-	24.07		
2						
55	85	1680	-	25.23		
60	85	1620	-	23.15		
71	85	1500	-	19.71		
82	85	1400	-	16.99		
88	85	1350	-	15.84		
101	85	1270	-	13.84		
108	85	1230	-	12.98		
122	81	1180	-	11.45		
138	77	1140	-	10.15		
162	72	1090	-	8.63		
185	56	1040	-	7.55		
199	55	1010	-	7.04		
228	54	950	-	6.15		
243	53	930	-	5.76		
275	51	890	-	5.09		
310	48	870	-	4.51		
366	45	820	-	3.83		

R27, $n_e=1400$ 1/min					130 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
3								
10	130	4230	-	135.09				
11	130	4230	-	123.91				
13	130	4230	-	105.49				
15	130	4230	-	90.96				
17	130	4230	-	84.78				
19	130	4230	-	74.11				
20	130	4180	-	69.47				
23	130	3980	-	61.30				
25	130	3840	-	55.87				
29	130	3630	-	48.17				
31	130	3530	-	44.90				
36	130	3350	-	39.25				
38	130	3260	-	36.79				
43	130	3100	-	32.47				
49	130	2950	-	28.78				



R..DRE/DRS  
R.. → DRE/DRS

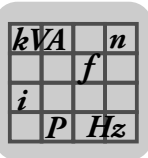
R27, $n_e=1400$ 1/min					130 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
57	130	2760	-	24.47				
2								
49	130	2940	-	28.37				
54	130	2840	-	26.09				
63	130	2660	-	22.32				
72	130	2510	-	19.35				
77	130	2440	-	18.08				
90	130	2290	-	15.63				
105	130	2140	-	13.28*				
118	129	1980	-	11.86				
138	122	1890	-	10.13				
149	122	900	-	9.41				
172	116	870	-	8.16				
183	112	900	-	7.63*				
212	106	880	-	6.59				
250	99	880	-	5.60*				
280	95	860	-	5.00*				
328	87	920	-	4.27				
350	85	900	-	4.00*				
415	79	900	-	3.37				

R27R17, $n_e=1400$ 1/min					130 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M		
3  3								
0.16	130	4230	-	8612				
0.19	130	3320	-	7425				
0.20	130	4230	-	6921				
0.23	130	4230	-	6050				
0.27	130	3320	-	5217				
0.30	130	4230	-	4661				
0.34	130	3320	-	4073				
0.40	130	4230	-	3516				
0.44	130	4230	-	3160				
0.51	130	4230	-	2763				
0.58	130	4230	-	2414				
0.66	130	4230	-	2110				
0.75	130	4230	-	1862				
0.86	130	3320	-	1625				
0.98	130	4230	-	1434				
1.1	130	4230	-	1254				
2  3								
0.77	130	4230	-	1822				
0.89	130	4230	-	1580				
0.96	130	4230	-	1464				
1.1	130	4230	-	1270				
1.3	130	4230	-	1100				
1.4	130	4230	-	972				
1.7	130	4230	-	840				
1.9	130	4230	-	741				
2.1	130	4230	-	654				
2.5	130	4230	-	566				



R27R17, n <sub>e</sub> =1400 1/min						130 Nm	
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M	
2.8	130	4230	-	499			
3  2							
1.3	130	4230	-	1101			
1.5	130	4230	-	962			
1.7	130	3320	-	848			
1.9	130	3320	-	743			
2.2	130	4230	-	649			
2.5	130	4230	-	567			
2.8	130	4230	-	509			
3.2	130	4230	-	432			
3.6	130	4230	-	387			
4.1	130	3320	-	339			
4.7	130	3320	-	296			
5.4	130	4230	-	259			
6.1	130	4230	-	229			
7.0	130	4230	-	200			
7.9	130	3320	-	177			
8.4	130	4230	-	166			
9.3	130	4230	-	150			
9.9	130	4230	-	141			
11	130	3320	-	124			
13	130	4230	-	110			
15	130	4230	-	94			
2  2							
3.2	130	4230	-	440			
3.7	130	4230	-	381			
4.3	130	4230	-	329			
4.8	130	4230	-	290			
5.5	130	4230	-	256			
6.2	130	4230	-	227			
6.9	130	4230	-	203			
7.8	130	4230	-	179			
9.0	130	4230	-	156			
10	130	4230	-	135			
12	130	4230	-	118			
13	130	4230	-	104			
16	130	4230	-	90			

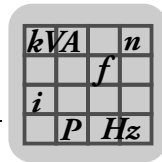
R37, n <sub>e</sub> =1400 1/min						200 Nm		
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
3								
10	200	4940	7.9	134.82				
11	200	4940	8	123.66				
13	200	4940	8	105.28				
15	200	4940	8	90.77				
17	200	4940	8	84.61				
19	200	4940	8	73.96				
20	200	4940	8	69.33				
23	200	4940	8.1	61.18				
25	200	4940	8.7	55.76				
29	200	4940	8.7	48.08				



R..DRE/DRS  
R.. → DRE/DRS

R37, $n_e=1400$ 1/min						200 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L DRE100M DRE100LC
31	200	4940	8.8	44.81			
36	200	4760	8.8	39.17			
38	200	4540	8.9	36.72			
43	200	4120	8.9	32.40			
49	200	3740	9	28.73			
57	200	3240	9	24.42			
2							
49	200	3690	7.3	28.32			
54	185	3860	7.4	26.03			
63	200	2970	7.4	22.27			
73	200	2570	7.5	19.31			
78	200	2390	7.5	18.05			
90	200	2010	7.7	15.60			
106	190	1880	7.9	13.25			
118	183	1810	8	11.83			
138	170	1820	8.1	10.11			
148	167	1760	8.2	9.47			
176	156	1720	8.4	7.97			
210	144	1000	12.1	6.67			
247	142	760	12.4	5.67			
277	135	790	12.7	5.06			
324	126	820	13	4.32			
346	122	840	13.2	4.05			
411	112	900	13.7	3.41			

R37R17, $n_e=1400$ 1/min						200 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M	
3  3							
0.16	200	4940	-	8595			
0.19	200	4940	-	7411			
0.20	200	4940	-	6907			
0.23	200	4940	-	6038			
0.27	200	4940	-	5206			
0.30	200	4940	-	4651			
0.34	200	4940	-	4065			
0.38	200	4940	-	3658			
0.44	200	4940	-	3154			
0.51	200	4940	-	2757			
0.58	200	4940	-	2409			
0.66	200	4940	-	2106			
0.75	200	4940	-	1856			
0.86	200	4940	-	1622			
0.98	200	4940	-	1431			
1.1	200	4940	-	1251			
2  3							
0.77	200	4940	-	1818			
0.89	200	4940	-	1576			
1.0	200	4940	-	1359			
1.1	200	4940	-	1267			
1.3	200	4940	-	1098			
1.4	200	4940	-	970			



R37R17, $n_e=1400$ 1/min					200 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
1.7	200	4940	-	839		
1.9	200	4940	-	740		
2.1	200	4940	-	653		
2.4	200	4940	-	577		
2.8	200	4940	-	498		

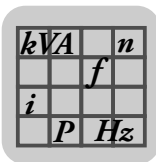


1.3	200	4940	-	1099		
1.5	200	4940	-	960		
1.7	200	4940	-	847		
1.9	200	4940	-	741		
2.2	200	4940	-	647		
2.5	200	4940	-	566		
2.8	200	4940	-	508		
3.2	200	4940	-	431		
3.6	200	4940	-	387		
4.1	200	4940	-	338		
4.7	200	4940	-	296		
5.4	200	4940	-	259		
6.1	200	4940	-	228		
7.0	200	4940	-	199		
8.1	200	4940	-	172		
9.3	200	4940	-	150		
11	200	4940	-	130		
11	200	4940	-	124		
13	200	4940	-	110		
15	200	4940	-	94		



3.2	200	4940	-	439		
3.7	200	4940	-	378		
4.3	200	4940	-	328		
4.8	200	4940	-	289		
5.3	200	4940	-	265		
6.2	200	4940	-	226		
6.9	200	4940	-	202		
7.8	200	4940	-	179		
9.0	200	4940	-	156		
10	200	4940	-	135		
11	200	4940	-	127		
13	200	4940	-	104		
16	200	4940	-	90		

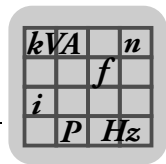
R47, $n_e=1400$ 1/min					300 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
7.9	300	5420	6.9	176.88						
8.6	300	5420	6.9	162.94						
10	300	5420	6.9	139.99						
11	300	5420	6.9	121.87						
12	300	5420	6.9	114.17						
14	300	5420	7	100.86						
15	300	5420	7	93.68						



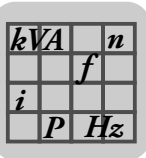
R..DRE/DRS  
R.. → DRE/DRS

R47, $n_e=1400$ 1/min					300 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
16	300	5420	7	84.90						
18	300	5420	7	76.23						
20	300	5420	7.6	68.54						
22	300	5420	7.6	64.21						
25	300	5420	7.6	56.73						
27	300	5350	7.6	52.69						
29	300	5140	7.7	47.75						
33	300	4930	7.7	42.87						
38	300	4630	7.7	36.93						
40	300	4520	7.7	34.73						
47	300	4240	7.8	29.88						
52	300	4050	7.9	26.70						
59	300	3840	8	23.59						
2										
41	240	4680	6.5	33.79						
45	220	4610	6.5	31.12						
52	300	4050	6.6	26.74						
60	300	3820	6.6	23.28						
64	300	3710	6.7	21.81						
73	295	3530	6.8	19.27						
78	290	3390	6.8	17.89						
86	275	3350	6.9	16.22						
96	265	3230	7	14.56						
112	250	3080	7.1	12.54						
119	245	3020	7.1	11.79						
138	230	2880	7.3	10.15						
154	220	2780	7.7	9.07						
175	205	2690	7.8	8.01						
180	163	2720	9.5	7.76*						
201	159	2620	9.7	6.96						
233	156	2470	9.9	6.00						
248	155	2410	10	5.64*						
289	150	2280	10.3	4.85						
323	146	2190	11.1	4.34						
366	144	2080	11.4	3.83						

R47R37, $n_e=1400$ 1/min					300 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC		
3  3										
0.10	300	5420	-	13598						
0.11	300	5420	-	12472						
0.13	300	5420	-	10619						
0.15	300	5420	-	9155						
0.16	300	5420	-	8534						
0.19	300	5420	-	7460						
0.20	300	5420	-	6993						
0.23	300	5420	-	6171						
0.25	300	5420	-	5624						
0.29	300	5420	-	4849						
0.31	300	5420	-	4520						
0.35	300	5420	-	3951						
0.38	300	5420	-	3704						



R47R37, n <sub>e</sub> =1400 1/min					300 Nm			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
0.43	300	5420	-	3268				
0.48	300	5420	-	2898				
0.57	300	5420	-	2463				
2								
0.54	300	5420	-	2598				
0.59	300	5420	-	2383				
0.69	300	5420	-	2029				
0.80	300	5420	-	1749				
0.86	300	5420	-	1630				
0.98	300	5420	-	1425				
1.0	300	5420	-	1336*				
1.2	300	5420	-	1179				
1.3	300	5420	-	1074				
1.5	300	5420	-	927				
1.6	300	5420	-	863				
1.9	300	5420	-	755				
2.0	300	5420	-	708				
2.2	300	5420	-	624				
2.5	300	5420	-	554				
3.0	300	5420	-	471				
3								
0.49	300	5420	-	2856				
0.53	300	5420	-	2625				
0.62	300	5420	-	2246				
0.72	300	5420	-	1948				
0.77	300	5420	-	1821				
0.89	300	5420	-	1573				
1.2	300	5420	-	1193				
1.4	300	5420	-	1020				
1.5	300	5420	-	955				
1.7	300	5420	-	804				
2.1	300	5420	-	673				
2.4	300	5420	-	572				
2.7	300	5420	-	510				
3.2	300	5420	-	436				
3.4	300	5420	-	408				
4.1	300	5420	-	344				
2								
2.6	300	5420	-	546				
2.8	300	5420	-	502				
3.3	300	5420	-	429				
3.8	300	5420	-	372				
4.0	300	5420	-	348				
4.7	300	5420	-	301				
5.5	300	5420	-	255				
6.1	300	5420	-	228				
7.2	300	5420	-	195				
7.7	300	5420	-	182				
9.1	300	5420	-	154				
11	300	5420	-	129				
13	300	5420	-	109				
14	300	5420	-	98				



R..DRE/DRS  
R.. → DRE/DRS

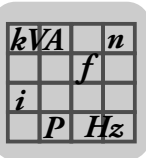
R57, $n_e=1400$ 1/min						450 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
3										
7.5	450	7100	6.9	186.89						
8.1	450	7100	6.9	172.17						
9.5	450	7100	6.9	147.92						
11	450	7100	6.9	128.77						
12	450	7100	6.9	120.63						
13	450	7100	7	106.58						
14	450	7100	7	98.99						
16	450	7100	7	89.71						
17	450	7100	7	80.55						
20	450	7100	7.5	69.23						
22	450	6980	7.5	64.85						
24	450	6630	7.6	57.29						
26	450	6430	7.6	53.22						
29	450	6170	7.6	48.23						
32	450	5900	7.6	43.30						
38	450	5530	7.6	37.30*						
40	450	5390	7.7	35.07						
46	450	5040	7.7	30.18						
52	450	4800	7.8	26.97						
2										
53	450	4750	6.4	26.31						
56	450	4640	6.5	24.99*						
64	450	4370	6.6	21.93						
75	450	4050	6.7	18.60*						
83	450	3860	6.7	16.79						
95	435	3690	6.8	14.77*						
100	430	3610	6.8	13.95*						
118	405	3430	6.9	11.88						
130	390	3330	7.2	10.79						
150	370	3180	7.4	9.35						
155	375	2010	8.7	9.06						
176	355	2020	8.8	7.97						
186	350	1950	8.8	7.53						
218	335	1770	9	6.41						
241	320	1820	9.6	5.82						
277	305	1730	9.9	5.05						
319	280	1900	10.1	4.39						

R57R37, $n_e=1400$ 1/min						450 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC		
3  3										
0.10	450	7100	-	14369						
0.12	450	7100	-	12095						
0.13	450	7100	-	10860						
0.15	450	7100	-	9445						
0.17	450	7100	-	8480						
0.19	450	7100	-	7312						
0.21	450	7100	-	6521						
0.25	450	7100	-	5585						
0.28	450	7100	-	4928						





R57R37, n <sub>e</sub> =1400 1/min					450 Nm			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
0.32	450	7100	-	4378				
0.36	450	7100	-	3873				
0.42	450	7100	-	3344				
0.48	450	7100	-	2907				
0.55	450	7100	-	2567				
0.62	450	7100	-	2244				
0.71	450	7100	-	1967				
2  3								
0.47	450	7100	-	2957				
0.56	450	7100	-	2508				
0.61	450	7100	-	2309				
0.70	450	7100	-	1991				
0.79	450	7100	-	1768				
0.92	450	7100	-	1520				
1.0	450	7100	-	1342*				
1.2	450	7100	-	1164				
1.4	450	7100	-	1027				
1.6	450	7100	-	894				
1.7	450	7100	-	805				
2.0	450	7100	-	683				
2.3	450	7100	-	603				
2.6	450	7100	-	534				
3.1	450	7100	-	454				
3.4	450	7100	-	410				
3  2								
0.81	450	7100	-	1732				
0.90	450	7100	-	1555				
1.0	450	7100	-	1399				
1.2	450	7100	-	1189				
1.4	450	7100	-	1034				
1.8	450	7100	-	782				
2.1	450	7100	-	678				
2.3	450	7100	-	604				
2.6	450	7100	-	537				
3.0	450	7100	-	471				
3.9	450	7100	-	357				
4.4	450	7100	-	319				
5.1	450	7100	-	273				
5.8	450	7100	-	241				
6.5	450	7100	-	215				
7.5	450	7100	-	187				
8.5	450	7100	-	164				
9.9	450	7100	-	142				
2  2								
3.9	450	7100	-	359				
4.3	450	7100	-	324				
4.8	450	7100	-	290				
5.3	450	7100	-	262				
5.7	450	7100	-	246*				
6.4	450	7100	-	220*				
7.4	450	7100	-	188				
8.8	450	7100	-	159				
9.6	450	7100	-	146				
10	450	7100	-	134				

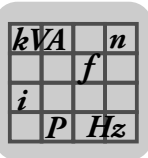


R..DRE/DRS  
R.. → DRE/DRS

R67, $n_e=1400$ 1/min						600 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
3										
7.0	600	7560	6.4	199.81						
7.6	600	7560	6.4	184.07						
8.9	600	7560	6.4	158.14						
10	600	7560	6.4	137.67						
11	600	7560	6.4	128.97						
12	600	7560	6.5	113.94						
13	600	7560	6.5	105.83						
15	600	7560	6.5	95.91						
16	600	7560	6.5	86.11						
19	600	7560	6.5	74.17						
20	600	7560	6.5	69.75						
23	600	7560	7	61.26						
25	600	7560	7	56.89						
27	600	7560	7.1	51.56						
30	600	7560	7.1	46.29						
35	580	7790	7.1	39.88*						
37	570	7900	7.1	37.50						
43	540	8210	7.2	32.27						
49	520	8400	7.3	28.83						
2										
50	540	8210	6	28.13						
52	540	8210	6	26.72						
60	560	8010	6.1	23.44						
70	600	7560	6.2	19.89						
78	590	7330	6.2	17.95						
89	560	7130	6.3	15.79						
94	550	6980	6.3	14.91						
110	520	6640	6.4	12.70						
121	500	6500	6.7	11.54						
140	470	6220	6.8	10.00						
161	440	5960	7	8.70*						
180	380	5830	8.3	7.79						
190	370	5790	8.3	7.36*						
223	330	5590	8.5	6.27						
246	310	5450	9.1	5.70						
284	290	5210	9.4	4.93						
326	270	5000	9.7	4.29						
R67R37, $n_e=1400$ 1/min						600 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC		
3  3										
0.09	600	7560	-	15361						
0.11	600	7560	-	12931						
0.12	600	7560	-	11996						
0.14	600	7560	-	10097						
0.15	600	7560	-	9066						
0.18	600	7560	-	7816						
0.21	600	7560	-	6732						
0.23	600	7560	-	5970						
0.27	600	7560	-	5268						



R67R37, n <sub>e</sub> =1400 1/min					600 Nm			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
0.30	600	7560	-	4680				
0.34	600	7560	-	4136				
0.39	600	7560	-	3566				
0.45	600	7560	-	3125				
0.51	600	7560	-	2745				
0.58	600	7560	-	2403				
2  3								
0.52	600	7560	-	2682				
0.57	600	7560	-	2460				
0.67	600	7560	-	2094				
0.78	600	7560	-	1805				
0.86	600	7560	-	1629				
0.95	600	7560	-	1471				
1.0	600	7560	-	1379				
1.3	600	7560	-	1109				
1.5	600	7560	-	956				
1.6	600	7560	-	891				
1.9	600	7560	-	730				
2.2	600	7560	-	644				
2.5	600	7560	-	571				
2.9	600	7560	-	486				
3  2								
0.66	600	7560	-	2136				
0.76	600	7560	-	1852				
0.85	600	7560	-	1652				
0.98	600	7560	-	1432				
1.1	600	7560	-	1259				
1.3	600	7560	-	1106				
1.7	600	7560	-	836				
1.9	600	7560	-	750				
2.2	600	7560	-	646				
2.4	600	7560	-	574				
2.8	600	7560	-	495				
3.2	600	7560	-	438				
3.6	600	7560	-	388				
4.1	600	7560	-	344				
4.8	600	7560	-	294				
5.4	600	7560	-	261				
6.0	600	7560	-	234				
7.0	600	7560	-	200				
8.0	600	7560	-	176				
8.9	600	7560	-	158				
2  2								
3.2	600	7560	-	443				
3.6	600	7560	-	384				
3.9	600	7560	-	359				
4.5	600	7560	-	310				
5.3	600	7560	-	264*				
6.0	600	7560	-	235				
7.0	600	7560	-	201				
7.7	600	7560	-	181				
8.8	600	7560	-	159				



R..DRE/DRS  
R.. → DRE/DRS

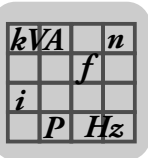
R77, $n_e=1400$ 1/min						820 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
3											
7.2	820	9920	6.4	195.24*							
8.4	820	9920	6.5	166.59							
9.6	820	9920	6.4	145.67							
10	820	9920	6.4	138.39							
12	820	9920	6.5	121.42							
14	820	9920	6.5	102.99							
15	820	9920	6.5	92.97							
17	820	9920	6.5	81.80							
18	820	9920	6.5	77.24							
21	820	9920	6.5	65.77							
24	820	9920	7.1	57.68							
27	820	9920	7.1	52.07							
31	820	9920	7.1	45.81							
32	820	9920	7.1	43.26							
38	820	9920	7.1	36.83							
42	820	9920	7.2	33.47							
48	820	9920	7.3	29.00							
55	780	10100	7.3	25.23							
2											
60	820	8870	6.1	23.37							
65	820	8250	6.1	21.43							
74	780	7980	6.1	18.80							
79	780	7620	6.2	17.82*							
90	740	7390	6.2	15.60							
100	720	7050	6.5	14.05							
114	690	6740	6.4	12.33							
129	660	6490	6.5	10.88							
145	630	6300	6.7	9.64							
163	630	4110	7.5	8.59							
181	610	3940	7.9	7.74							
206	580	3850	7.8	6.79							
234	540	3990	8	5.99*							
264	510	3990	8.4	5.31*							

R77R37, $n_e=1400$ 1/min						820 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC			
3  3											
0.09	820	9920	-	16370							
0.09	820	9920	-	15015							
0.10	820	9920	-	13885							
0.11	820	9920	-	12783							
0.13	820	9920	-	11021							
0.14	820	9920	-	9788							
0.16	820	9920	-	8714							
0.18	820	9920	-	7617							
0.21	820	9920	-	6770							
0.24	820	9920	-	5838							
0.27	820	9920	-	5184							
0.31	820	9920	-	4470							
0.35	820	9920	-	3999							



R77R37, n <sub>e</sub> =1400 1/min					820 Nm			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
0.40	820	9920	-	3488				
0.46	820	9920	-	3053				
0.52	820	9920	-	2671				
2  3								
0.44	820	9920	-	3151				
0.48	820	9920	-	2890				
0.57	820	9920	-	2460				
0.66	820	9920	-	2121				
0.71	820	9920	-	1977				
0.81	820	9920	-	1728				
0.86	820	9920	-	1620				
0.98	820	9920	-	1430				
1.1	820	9920	-	1303				
1.2	820	9920	-	1124				
1.3	820	9920	-	1047				
1.5	820	9920	-	915				
1.6	820	9920	-	858				
1.8	820	9920	-	757				
2.1	820	9920	-	671				
2.5	820	9920	-	571				
3  2								
0.60	820	9920	-	2345				
0.68	820	9920	-	2070				
0.77	820	9920	-	1822				
0.89	820	9920	-	1580				
1.0	820	9920	-	1394				
1.1	820	9920	-	1218				
1.3	820	9920	-	1084*				
1.5	820	9920	-	940				
1.7	820	9920	-	821				
1.9	820	9920	-	731				
2.2	820	9920	-	646				
2.5	820	9920	-	560				
2.9	820	9920	-	488				
3.2	820	9920	-	436				
3.8	820	9920	-	373				
4.3	820	9920	-	327				
4.8	820	9920	-	289				
5.4	820	9920	-	260				
6.2	820	9920	-	224				
7.1	820	9920	-	197				
8.3	820	9920	-	169				
9.4	820	9920	-	149				
2  2								
2.7	820	9920	-	520				
3.1	820	9920	-	451				
3.3	820	9920	-	422				
3.8	820	9920	-	365				
4.5	820	9920	-	310*				
5.1	820	9920	-	276				
5.9	820	9920	-	236				
6.3	820	9920	-	221				
7.5	820	9920	-	186				



R..DRE/DRS  
R.. → DRE/DRS

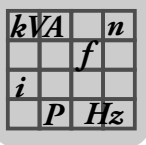
R87, $n_e=1400$ 1/min						1550 Nm						
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC
3												
5.7	1550	16900	6	246.54								
6.5	1550	16900	6	216.54								
6.8	1550	16900	6	205.71								
7.7	1550	16900	6	181.77								
9.0	1550	16900	6	155.34								
9.8	1550	16900	6	142.41								
11	1550	16900	6	124.97								
12	1550	16900	6	118.43*								
14	1550	16900	6	103.65								
15	1550	16900	6	93.38								
17	1550	16900	6	81.92								
19	1550	16900	6.4	72.57								
22	1550	15800	6.4	63.68*								
23	1550	15200	6.4	60.35*								
27	1550	13500	6.5	52.82								
29	1550	12300	6.5	47.58								
34	1550	10800	6.5	41.74								
38	1550	9470	6.5	36.84*								
43	1550	8220	6.6	32.66*								
50	1500	7370	6.6	27.88								
2												
41	1500	9480	5.5	34.40*								
45	1550	7820	5.5	31.40								
50	1550	6640	5.5	27.84*								
60	1550	5000	5.5	23.40								
65	1500	4970	5.7	21.51								
73	1440	4800	5.7	19.10								
82	1390	4580	5.8	17.08*								
91	1340	4450	5.9	15.35								
105	1280	4220	6	13.33								
117	1230	4120	6	11.93								
141	1180	3520	6.1	9.90*								
153	1210	99	6.3	9.14*								
170	1160	225	6.6	8.22								
196	1070	820	6.7	7.13								
219	1020	970	6.8	6.39								
264	910	1710	7	5.30*								

R87R57, $n_e=1400$ 1/min						1550 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	
3  3											
0.08	1550	16900	-	17452							
0.09	1550	16900	-	15310							
0.10	1550	16900	-	13813							
0.12	1550	16900	-	12025							
0.13	1550	16900	-	10549							
0.15	1550	16900	-	9244							
0.17	1550	16900	-	8109							
0.20	1550	16900	-	7038							
0.23	1550	16900	-	6174							
0.26	1550	16900	-	5449							



R87R57, n <sub>e</sub> =1400 1/min					1550 Nm					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
0.29	1550	16900	-	4831						
0.33	1550	16900	-	4206						
0.37	1550	16900	-	3744						
0.43	1550	16900	-	3233						
0.49	1550	16900	-	2873						
0.56	1550	16900	-	2518						
0.63	1550	16900	-	2209						
0.71	1550	16900	-	1961						
1.4	1550	16900	-	994						
1.6	1550	16900	-	881						
2  3										
0.35	1550	16900	-	4020						
0.38	1550	16900	-	3703						
0.44	1550	16900	-	3182						
0.51	1550	16900	-	2770						
0.54	1550	16900	-	2595						
0.66	1550	16900	-	2129						
0.73	1550	16900	-	1930						
0.81	1550	16900	-	1733						
0.94	1550	16900	-	1489						
1.0	1550	16900	-	1395						
1.1	1550	16900	-	1232						
1.2	1550	16900	-	1145						
1.4	1550	16900	-	1037						
1.5	1550	16900	-	931						
1.7	1550	16900	-	802*						
1.9	1550	16900	-	754						
2.2	1550	16900	-	649						
2.4	1550	16900	-	580						
3  2										
0.81	1550	16900	-	1737						
0.92	1550	16900	-	1524						
1.1	1550	16900	-	1303						
1.2	1550	16900	-	1143						
1.4	1550	16900	-	1008						
1.6	1550	16900	-	885						
1.8	1550	16900	-	776						
2.0	1550	16900	-	685*						
2.3	1550	16900	-	599						
2.7	1550	16900	-	525						
3.1	1550	16900	-	456*						
3.5	1550	16900	-	398						
4.0	1550	16900	-	352						
4.6	1550	16900	-	305						
5.2	1550	16900	-	268						
5.9	1550	16900	-	236*						
6.7	1550	16900	-	209*						
2  2										
2.6	1550	16900	-	538						
3.0	1550	16900	-	472						
3.5	1550	16900	-	400						
3.9	1550	16900	-	361						
4.7	1550	16900	-	300						
5.5	1550	16900	-	256						



R..DRE/DRS  
R.. → DRE/DRS

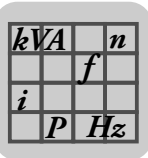
R87R57, $n_e=1400$ 1/min										1550 Nm
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
6.0	1550	16900	-	232						
7.2	1550	16900	-	195						

R97, $n_e=1400$ 1/min														3000 Nm
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	
3														
4.8	3000	19800	5.7	289.74										
5.5	3000	19800	5.7	255.71										
5.8	3000	19800	5.7	241.25										
6.5	3000	19800	5.7	216.28										
7.5	3000	19800	5.7	186.30										
8.2	3000	19800	5.7	170.02										
9.3	3000	19800	5.7	150.78										
11	3000	19800	5.7	126.75										
12	3000	19800	5.7	116.48										
14	3000	19800	5.7	103.44										
15	3000	19800	5.7	92.48										
17	3000	19800	5.8	83.15										
19	3000	18000	5.8	72.17										
21	3000	16300	6.1	65.21										
23	3000	14800	6.2	59.92										
26	3000	12900	6.2	53.21										
29	3000	11100	6.2	47.58										
33	3000	9480	6.2	42.78										
38	3000	7410	6.3	37.13										
42	2890	7160	6.3	33.25										
51	2670	7260	6.3	27.58										
2														
44	2560	10600	5.3	32.05										
51	2560	8380	5.3	27.19										
56	2830	4140	5.4	25.03										
63	2720	4060	5.5	22.37										
70	2610	4110	5.5	20.14										
77	2500	4270	5.6	18.24										
87	2400	4130	5.6	16.17										
96	2300	4240	5.6	14.62										
113	2190	3850	5.7	12.39										
129	2090	3720	5.8	10.83										
151	2030	-	5.6	9.29										
167	2030	-	5.7	8.39										
197	2000	-	5.8	7.12										
225	1890	-	5.9	6.21										
269	1780	-	6.1	5.20										
311	1630	-	6.2	4.50*										





R97R57, n <sub>e</sub> =1400 1/min					3000 Nm					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
3  3										
0.06	3000	19800	-	21769						
0.07	3000	19800	-	19332						
0.08	3000	19800	-	17230						
0.09	3000	19800	-	14999						
0.11	3000	19800	-	13320						
0.13	3000	19800	-	11156						
0.14	3000	19800	-	10030						
0.16	3000	19800	-	8706						
0.18	3000	19800	-	7692						
0.21	3000	19800	-	6708						
0.24	3000	19800	-	5931						
0.27	3000	19800	-	5161						
0.31	3000	19800	-	4559						
0.35	3000	19800	-	4004						
0.40	3000	19800	-	3481						
2  3										
0.30	3000	19800	-	4678						
0.32	3000	19800	-	4309						
0.38	3000	19800	-	3702						
0.46	3000	19800	-	3019						
0.52	3000	19800	-	2668						
0.62	3000	19800	-	2245						
0.69	3000	19800	-	2016						
0.81	3000	19800	-	1733						
0.86	3000	19800	-	1623						
0.98	3000	19800	-	1434						
1.2	3000	19800	-	1207						
1.3	3000	19800	-	1084						
1.5	3000	19800	-	934						
1.6	3000	19800	-	878						
1.9	3000	19800	-	755						
3  2										
0.46	3000	19800	-	3065						
0.51	3000	19800	-	2722						
0.61	3000	19800	-	2311						
0.67	3000	19800	-	2078						
0.77	3000	19800	-	1823						
0.88	3000	19800	-	1583						
1.0	3000	19800	-	1396						
1.1	3000	19800	-	1228						
1.3	3000	19800	-	1069						
1.5	3000	19800	-	938						
1.7	3000	19800	-	824						
1.9	3000	19800	-	737						
2.2	3000	19800	-	632						
2.5	3000	19800	-	560						
2.9	3000	19800	-	484						
3.2	3000	19800	-	431						
3.7	3000	19800	-	379						
4.2	3000	19800	-	336						
4.7	3000	19800	-	296						
5.6	3000	19800	-	249						
6.0	3000	19800	-	234						



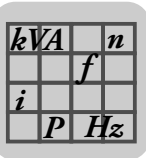
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R.. → DRE/DRS

R97R57, $n_e=1400$ 1/min						3000 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
6.7	3000	19800	-	209						
2  2										
2.2	3000	19800	-	625						
2.6	3000	19800	-	549						
3.0	3000	19800	-	466						
3.3	3000	19800	-	420						
3.8	3000	19800	-	370						
4.0	3000	19800	-	349						
4.7	3000	19800	-	297						
5.2	3000	19800	-	270						
6.2	3000	19800	-	227						

R107, $n_e=1400$ 1/min						4300 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
3										
5.6	4300	29500	7	251.15						
6.1	4300	29500	7	229.95						
6.9	4300	29500	7	203.16						
8.1	4300	29500	7	172.34						
8.8	4300	29500	7	158.68						
9.9	4300	29500	7	141.83						
11	4300	29500	7	127.68						
12	4300	29500	7	115.63						
14	4300	29500	7	102.53						
15	4300	29500	7	92.70						
18	4300	29500	7.1	78.57						
19	4300	29500	7.3	72.88						
21	4300	29200	7.3	65.60*						
24	4300	28000	7.4	59.41						
27	4300	26600	7.4	52.68						
29	4300	25500	7.4	47.63						
35	4300	23800	7.4	40.37*						
40	4300	22400	7.4	35.26						
47	4300	20700	7.5	29.49						
2										
45	4300	21100	6.7	30.77						
51	4300	20100	6.8	27.58						
56	4300	19200	6.8	24.90*						
62	4300	18300	6.9	22.62						
70	4300	17300	6.9	20.07						
77	4300	16600	6.8	18.21						
89	4300	15400	6.9	15.65						
102	4300	14400	6.9	13.66						
121	4300	13300	7	11.59						
138	4300	12400	7.1	10.13						
164	4300	11300	7.2	8.56						
178	2970	13800	8.8	7.86						
210	2970	12800	8.9	6.66						
241	2970	12100	9	5.82						
285	2900	11300	9.3	4.92						



R107R77, n <sub>e</sub> =1400 1/min					4300 Nm						
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
3  3											
0.07	4300	29500	-	20018							
0.08	4300	29500	-	17080							
0.09	4300	29500	-	14936							
0.11	4300	29500	-	12829							
0.12	4300	29500	-	11256							
0.15	4300	29500	-	9547							
0.16	4300	29500	-	8618							
0.18	4300	29500	-	7583							
0.21	4300	29500	-	6743							
0.24	4300	29500	-	5914							
0.27	4300	29500	-	5168							
0.32	4300	29500	-	4435							
0.36	4300	29500	-	3896							
0.41	4300	29500	-	3432							
0.46	4300	29500	-	3039							
0.52	4300	29500	-	2688							
0.60	4300	29500	-	2339							
2  3											
0.36	4300	29500	-	3918							
0.42	4300	29500	-	3343							
0.46	4300	29500	-	3034							
0.53	4300	29500	-	2653							
0.61	4300	29500	-	2280							
0.68	4300	29500	-	2067							
0.83	4300	29500	-	1693							
0.90	4300	29500	-	1550							
1.00	4300	29500	-	1407							
1.2	4300	29500	-	1209							
1.3	4300	29500	-	1055							
1.5	4300	29500	-	919							
1.7	4300	29500	-	815							
2.0	4300	29500	-	717							
2.2	4300	29500	-	626							
2.7	4300	29500	-	528							
3  2											
0.70	4300	29500	-	1987							
0.77	4300	29500	-	1827							
0.88	4300	29500	-	1599							
1.0	4300	29500	-	1400*							
1.1	4300	29500	-	1226							
1.3	4300	29500	-	1104							
1.5	4300	29500	-	939							
1.7	4300	29500	-	822							
2.3	4300	29500	-	614							
2.6	4300	29500	-	544							
2.8	4300	29500	-	492							
3.4	4300	29500	-	417							
3.8	4300	29500	-	369							
4.3	4300	29500	-	323							
4.9	4300	29500	-	285							
5.5	4300	29500	-	253							
6.5	4300	29500	-	214*							



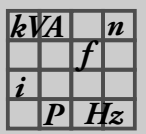
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R.. → DRE/DRS

R107R77, $n_e=1400$ 1/min						4300 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
7.5	4300	29500	-	187							
2  2											
3.0	4300	29500	-	469							
3.3	4300	29500	-	426							
3.7	4300	29500	-	377							
4.3	4300	29500	-	325							
4.9	4300	29500	-	284							
5.5	4300	29500	-	256							
6.4	4300	29500	-	220							
7.3	4300	29500	-	193							
8.1	4300	29500	-	172							

R137, $n_e=1400$ 1/min						8000 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M		
3											
6.3	8000	53400	6	222.60*							
7.4	8000	53400	6	188.45							
8.0	8000	53400	6.1	174.40*							
9.0	8000	53400	6.1	156.31							
9.9	8000	53400	6.1	141.12*							
11	8000	53400	6.1	128.18							
12	8000	53400	6.1	113.72							
14	8000	53400	6.1	103.20*							
16	8000	53400	6.1	88.70*							
17	8000	53400	6.4	80.91*							
19	8000	53400	6.4	73.49							
21	8000	53400	6.4	65.20							
24	8000	53400	6.4	59.17*							
28	8000	53400	6.4	50.86*							
32	8000	53400	6.4	44.39							
37	8000	53400	6.4	37.65							
43	8000	53400	6.5	32.91							
50	7680	54100	6.5	27.83							
2											
47	7780	53900	5.7	29.57*							
58	8000	49400	5.8	24.12							
64	8000	47100	5.8	22.00*							
74	8000	43500	5.9	19.04*							
83	8000	40600	5.9	16.80*							
96	8000	37300	5.9	14.51							
109	8000	34700	6	12.83							
130	8000	31100	6.1	10.79							
161	7840	27600	6.1	8.71							
184	5110	39000	8	7.59							
219	5110	35900	8.2	6.38							
272	4600	34500	8.2	5.15							



R137R77, n <sub>e</sub> =1400 1/min											8000 Nm
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
3  3											
0.06	8000	53400	-	22203*							
0.07	8000	53400	-	18945							
0.08	8000	53400	-	16566							
0.09	8000	53400	-	14777							
0.11	8000	53400	-	12921							
0.12	8000	53400	-	11712							
0.13	8000	53400	-	10573*							
0.16	8000	53400	-	8784							
0.19	8000	53400	-	7479							
0.21	8000	53400	-	6559							
0.24	8000	53400	-	5834							
0.27	8000	53400	-	5116							
0.31	8000	53400	-	4464							
0.36	8000	53400	-	3928*							
0.41	8000	53400	-	3454							
0.47	8000	53400	-	2993							
2  3											
0.30	8000	53400	-	4709*							
0.35	8000	53400	-	4018							
0.40	8000	53400	-	3514							
0.42	8000	53400	-	3338							
0.48	8000	53400	-	2929							
0.56	8000	53400	-	2484							
0.62	8000	53400	-	2242*							
0.75	8000	53400	-	1863							
0.88	8000	53400	-	1586							
1.0	8000	53400	-	1391							
1.1	8000	53400	-	1256							
1.3	8000	53400	-	1105							
1.3	8000	53400	-	1043							
1.6	8000	53400	-	888							
2.0	8000	53400	-	699							
2.3	8000	53400	-	609							
3  2											
0.53	8000	53400	-	2658							
0.58	8000	53400	-	2412							
0.68	8000	53400	-	2073*							
0.76	8000	53400	-	1839*							
0.88	8000	53400	-	1598							
1.0	8000	53400	-	1397							
1.1	8000	53400	-	1226*							
1.3	8000	53400	-	1090*							
1.5	8000	53400	-	951							
1.7	8000	53400	-	831							
1.9	8000	53400	-	730							
2.2	8000	53400	-	629							
2.5	8000	53400	-	560							
2.9	8000	53400	-	490*							
3.3	8000	53400	-	428							
3.7	8000	53400	-	381							
4.3	8000	53400	-	323							
4.8	8000	53400	-	291							
5.5	8000	53400	-	255*							

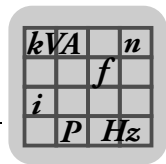


R..DRE/DRS  
R.. → DRE/DRS

R137R77, $n_e=1400$ 1/min						8000 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
6.3	8000	53400	-	223							
7.1	8000	53400	-	197*							
8.0	8000	53400	-	175							
2  2											
2.5	8000	53400	-	564							
2.7	8000	53400	-	517							
3.1	8000	53400	-	453*							
3.7	8000	53400	-	376							
4.1	8000	53400	-	339							
4.7	8000	53400	-	297							

R147, $n_e=1400$ 1/min						13000 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M			
3											
8.6	13000	62700	5.5	163.31							
9.5	13000	62700	5.5	146.91							
12	13000	62700	5.5	119.86							
13	13000	62700	5.5	109.31							
15	13000	62700	5.5	94.60*							
17	13000	62700	5.5	83.47							
19	13000	62700	5.5	72.09							
21	13000	62700	5.8	66.99							
23	13000	62700	5.8	61.09							
26	13000	62700	5.8	52.87							
30	13000	62700	5.8	46.65							
35	13000	62700	5.8	40.29							
39	13000	62700	5.9	35.64							
47	13000	62700	5.9	29.95							
58	11900	64700	5.9	24.19							
2											
68	12000	64600	5.2	20.44							
78	10500	67000	5.3	18.04							
90	13000	62700	5.3	15.64							
101	12600	63400	5.3	13.91							
117	13000	60400	5.4	11.99							
144	13000	54400	5.5	9.74							
169	13000	49900	5.6	8.26							
193	8670	58400	7.5	7.25							
238	8670	53200	7.6	5.89							
280	8670	49300	7.8	5.00							

R147R77, $n_e=1400$ 1/min						13000 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
3  3											
0.06	13000	62700	-	23401							
0.07	13000	62700	-	21342							
0.08	13000	62700	-	18210							
0.09	13000	62700	-	15923							



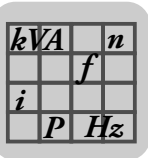
R147R77, $n_e=1400$ 1/min					13000 Nm							
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC	
0.10	13000	62700	-	14075								
0.11	13000	62700	-	12344								
0.13	13000	62700	-	11143								
0.14	13000	62700	-	9743								
0.17	13000	62700	-	8443								
0.19	13000	62700	-	7307								
0.22	13000	62700	-	6447								
0.25	13000	62700	-	5568								
0.28	13000	62700	-	4926								
0.32	13000	62700	-	4325								
0.37	13000	62700	-	3754								
0.42	13000	62700	-	3302								
0.48	13000	62700	-	2898								



0.55	13000	62700	-	2555							
0.63	13000	62700	-	2211							
0.72	13000	62700	-	1951							
0.82	13000	62700	-	1705							
0.91	13000	62700	-	1536							
1.1	13000	62700	-	1329							
1.2	13000	62700	-	1166							
1.4	13000	62700	-	1029							
1.6	13000	62700	-	889							
1.8	13000	62700	-	784							
2.0	13000	62700	-	695							
2.3	13000	62700	-	619							
2.5	13000	62700	-	558							
2.9	13000	62700	-	489							
3.4	13000	62700	-	415							

R147R87, $n_e=1400$ 1/min					13000 Nm							
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC
2.6	13000	62700	-	533								
3.0	13000	62700	-	462								
3.3	13000	62700	-	426								
3.8	13000	62700	-	368								
4.3	13000	62700	-	326								
5.0	13000	62700	-	280								
5.7	13000	62700	-	247								
6.5	13000	62700	-	214								
7.4	13000	62700	-	189								
8.8	13000	62700	-	159								

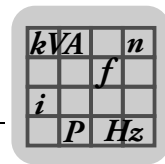
R167, $n_e=1400$ 1/min					18000 Nm						
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M	DRE315S DRE315K	DRE315M DRE315L	
6.1	18000	120000	5.2	229.71							
7.5	18000	120000	5.2	186.93*							
9.1	18000	120000	5.2	153.07							
10	18000	120000	5.2	139.98							



<b>R167, n<sub>e</sub>=1400 1/min</b>						<b>18000 Nm</b>				
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [°]	i	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M	DRE315S DRE315K	DRE315M DRE315L
11	18000	120000	5.2	121.81*						
13	18000	120000	5.2	107.49						
15	18000	120000	5.2	93.19						
17	18000	120000	5.2	82.91*						
19	18000	120000	5.6	73.70*						
21	18000	120000	5.6	67.40						
24	18000	120000	5.6	58.65						
27	18000	120000	5.6	51.76						
31	18000	120000	5.6	44.87						
35	18000	120000	5.6	39.92						
41	18000	120000	5.6	34.41						
50	18000	120000	5.7	27.96						
59	18000	116500	5.7	23.71						
2										
30	7000	120000	5	46.00						
37	9000	120000	5	37.74						
46	10000	120000	5	30.71						
57	14000	120000	5.1	24.57						
64	13000	120000	5.1	21.85						
74	16000	111400	5.1	19.03						
82	15000	108900	5.1	16.98						
97	18000	93800	5.2	14.48						
117	17000	88700	5.3	11.99						
137	17000	82500	5.3	10.24						

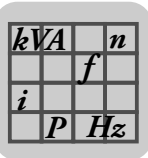
<b>R167R97, n<sub>e</sub>=1400 1/min</b>						<b>18000 Nm</b>							
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [°]	i	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
3  3													
0.05	18000	120000	-	27001									
0.06	18000	120000	-	22482									
0.07	18000	120000	-	20002*									
0.08	18000	120000	-	17361									
0.09	18000	120000	-	15446									
0.10	18000	120000	-	14051									
0.12	18000	120000	-	11812									
0.13	18000	120000	-	10509									
0.15	18000	120000	-	9631									
0.18	18000	120000	-	7749									
0.20	18000	120000	-	6894									
0.23	18000	120000	-	6077									
0.26	18000	120000	-	5407									
0.30	18000	120000	-	4650									
0.34	18000	120000	-	4129									
0.38	18000	120000	-	3692									
0.45	18000	120000	-	3099									
3  2													
0.53	18000	120000	-	2657*									
0.60	18000	120000	-	2333									
0.67	18000	120000	-	2085									
0.75	18000	120000	-	1877									
0.84	18000	120000	-	1670*									
0.97	18000	120000	-	1438									

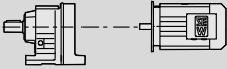





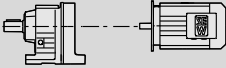

R167R97, n <sub>e</sub> =1400 1/min													18000 Nm
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
1.1	18000	120000	-	1279									
1.2	18000	120000	-	1123									
1.4	18000	120000	-	999									
1.6	18000	120000	-	861									
1.8	18000	120000	-	760									
2.1	18000	120000	-	656									
2.4	18000	120000	-	579									
2.8	18000	120000	-	503									
3.2	18000	120000	-	432									
3.7	18000	120000	-	376									
4.2	18000	120000	-	335									
4.6	18000	120000	-	303									
5.0	18000	120000	-	279									

R167R107, n <sub>e</sub> =1400 1/min													18000 Nm
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M			
2  3													
0.38	18000	120000	-	3637									
0.42	18000	120000	-	3330									
0.51	18000	120000	-	2757									
0.57	18000	120000	-	2436									
0.61	18000	120000	-	2298									
0.68	18000	120000	-	2066									
0.76	18000	120000	-	1849									
0.84	18000	120000	-	1674									
0.94	18000	120000	-	1485									
1.0	18000	120000	-	1342									
1.1	18000	120000	-	1229									
1.3	18000	120000	-	1111									
1.5	18000	120000	-	950									
1.6	18000	120000	-	860									
1.8	18000	120000	-	763									
2.0	18000	120000	-	690									
2.4	18000	120000	-	585									
2.7	18000	120000	-	511									
3  2													
4.0	18000	120000	-	349									
4.7	18000	120000	-	295									
5.2	18000	120000	-	270									
6.1	18000	120000	-	229									
7.0	18000	120000	-	200									
8.3	18000	120000	-	169									
2  2													
3.1	18000	120000	-	446									
3.5	18000	120000	-	399									
3.9	18000	120000	-	361									
4.3	18000	120000	-	328									
4.8	18000	120000	-	291									
5.3	18000	120000	-	264									
6.2	18000	120000	-	227									
7.1	18000	120000	-	198									
8.3	18000	120000	-	168									


**8.3 R..DRE/DRS [kW]**

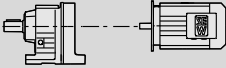

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.09</b>	17	52	78.24	1490	0.95				
	18	47	71.47	1520	1.05				
	22	40	60.32	1560	1.25				
	25	34	51.52	1590	1.45				
	27	32	47.78	1600	1.60				
	29	29	44.16	1610	1.70				
	31	27	41.31	1600	1.85	R 07	DT 56M4	5.8	250
	32	27	40.34	1590	1.85	RF 07	DT 56M4	5.8	251
	34	26	38.51	1570	1.95				
	38	22	34.05	1520	2.2				
	45	19	29.08	1460	2.6				
	48	18	26.97	1430	2.8				
	56	15	23.32	1370	3.2				
	60	14	21.73	1350	3.5				
	71	12	18.31	1280	4.1				
	78	11	16.73	1250	4.5				
	92	9.3	14.12	1190	5.4				
	108	8.0	12.06	1140	6.2				
	116	7.4	11.18	1110	6.8				
	134	6.4	9.67	1060	7.8				
144	6.0	9.01	1040	8.3					
166	5.2	7.85	1000	9.4	R 07	DT 56M4	5.7	250	
174	4.9	7.48	980	8.8	RF 07	DT 56M4	5.7	251	
190	4.5	6.83	960	9.6					
226	3.8	5.76	910	11					
264	3.3	4.92	860	11					
285	3.0	4.57	840	12					
329	2.6	3.95	800	13					
353	2.4	3.68	790	14					
405	2.1	3.21	755	15					
<b>0.12</b>	0.06	13300	21342	62000	1.00				
	0.08	11300	18210	65700	1.15				
	0.09	9920	15923	67900	1.30				
	0.10	8770	14075	69400	1.50				
	0.11	7640	12344	70700	1.70	R 147R77	DR 63S4	420	287
	0.12	6730	11143	71600	1.95	RF 147R77	DR 63S4	430	287
	0.14	6030	9743	72200	2.2	RM 147R77	DR 63S4	600	287
	0.16	4830	8443	73100	2.7				
	0.19	4180	7307	73400	3.1				
	0.21	3690	6447	73700	3.5				
	0.25	3180	5568	73900	4.1				
	0.11	8050	12921	53300	1.00				
	0.12	7250	11712	54900	1.10				
	0.13	6390	10573	56400	1.25				
	0.16	5020	8784	58400	1.60	R 137R77	DR 63S4	290	287
	0.18	4090	7479	59400	1.95	RF 137R77	DR 63S4	310	287
	0.21	4060	6559	59400	1.95	RM 137R77	DR 63S4	425	287
	0.24	3190	5834	60200	2.5				
	0.27	3160	5116	60200	2.5				
	0.18	4410	7583	28800	0.95				
0.20	3690	6743	32400	1.15					
0.23	3660	5914	32500	1.15	R 107R77	DR 63S4	200	287	
0.27	2820	5168	35500	1.50	RF 107R77	DR 63S4	210	287	
0.31	2530	4435	36100	1.70	RM 107R77	DR 63S4	295	287	
0.35	2260	3896	36500	1.90					
0.45	1880	3039	36900	2.3					
0.35	2470	3918	36200	1.75					
0.41	2100	3343	36700	2.0					
0.45	1910	3034	36900	2.2	R 107R77	DR 63S4	195	287	
0.52	1670	2653	37100	2.6	RF 107R77	DR 63S4	200	287	
0.61	1430	2280	37300	3.0	RM 107R77	DR 63S4	290	287	
0.67	1290	2067	37400	3.3					
0.30	3050	4559	17700	1.00	R 97R57	DR 63S4	130	287	
0.34	2560	4004	23700	1.15	RF 97R57	DR 63S4	145	287	
0.40	2270	3481	25200	1.30	RM 97R57	DR 63S4	195	287	



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						R	RF	RM	DR		
0.12	0.29	3230	4678	4840	0.95						
	0.32	2980	4309	20400	1.00						
	0.37	2560	3702	23700	1.15						
	0.46	2080	3019	26100	1.45	R	97R57	DR	63S4	125	287
	0.52	1800	2668	27100	1.65	RF	97R57	DR	63S4	140	287
	0.61	1480	2245	27700	2.0	RM	97R57	DR	63S4	195	287
	0.68	1300	2016	27900	2.3						
	0.80	1190	1733	28000	2.5						
	0.45	2120	3065	25900	1.40						
	0.51	1880	2722	26800	1.60						
0.60	1590	2311	27500	1.90	R	97R57	DR	63S4	130	287	
0.66	1430	2078	27700	2.1	RF	97R57	DR	63S4	145	287	
0.76	1230	1823	28000	2.4	RM	97R57	DR	63S4	195	287	
0.87	1070	1583	28200	2.8							
0.99	900	1396	28300	3.3							
1.1	770	1228	28400	3.9							
0.48	1760	2873	15200	0.90	R	87R57	DR	63S4	86	287	
0.70	1300	1961	18500	1.20	RF	87R57	DR	63S4	93	287	
					RM	87R57	DR	63S4	125	287	
0.53	1780	2595	15000	0.85	R	87R57	DR	63S4	85	287	
0.65	1430	2129	17700	1.10	RF	87R57	DR	63S4	92	287	
0.72	1270	1930	18600	1.20	RM	87R57	DR	63S4	120	287	
0.80	1120	1733	19300	1.40							
0.79	1140	1737	19200	1.35							
0.91	1000	1524	19800	1.55							
1.1	810	1303	20000	1.90	R	87R57	DR	63S4	85	287	
1.2	710	1143	20000	2.2	RF	87R57	DR	63S4	92	287	
1.6	580	885	20000	2.6	RM	87R57	DR	63S4	120	287	
1.8	510	776	20000	3.0							
2.0	450	685	20000	3.4							
2.3	360	599	20000	4.3							
1.1	930	1303	8660	0.85	R	77R37	DR	63S4	45	287	
1.2	795	1124	10100	1.05	RF	77R37	DR	63S4	51	287	
1.3	740	1047	10600	1.10	RM	77R37	DR	63S4	76	287	
1.5	635	915	11300	1.30							
1.1	820	1218	9910	1.00							
1.3	740	1084	10600	1.10	R	77R37	DR	63S4	46	287	
1.5	660	940	11200	1.25	RF	77R37	DR	63S4	52	287	
1.7	520	821	12000	1.55	RM	77R37	DR	63S4	77	287	
1.9	475	731	12200	1.70							
2.1	455	646	12300	1.80							
2.6	375	520	12600	2.2	R	77R37	DR	63S4	45	287	
3.1	320	451	12700	2.5	RF	77R37	DR	63S4	51	287	
3.3	300	422	12800	2.7	RM	77R37	DR	63S4	76	287	
3.8	255	365	12900	3.2							
1.6	625	891	7190	0.95	R	67R37	DR	63S4	40	287	
1.9	505	730	8530	1.20	RF	67R37	DR	63S4	43	287	
2.1	440	644	9060	1.35	RM	67R37	DR	63S4	59	287	
2.4	385	571	9430	1.55							
2.8	320	486	9790	1.85							
1.6	590	836	7670	1.00							
1.8	490	750	8630	1.20	R	67R37	DR	63S4	41	287	
2.1	440	646	9050	1.35	RF	67R37	DR	63S4	44	287	
2.4	400	574	9330	1.50	RM	67R37	DR	63S4	60	287	
2.8	345	495	9660	1.75							
3.2	285	438	9940	2.1							
1.8	550	782	4650	0.80							
2.0	455	678	7070	1.00							
2.3	410	604	7260	1.10	R	57R37	DR	63S4	34	287	
2.6	370	537	7400	1.20	RF	57R37	DR	63S4	38	287	
2.9	325	471	7550	1.35	RM	57R37	DR	63S4	50	287	
3.9	240	357	7760	1.85							
4.3	215	319	7820	2.1							
3.8	255	359	7730	1.75							
4.3	230	324	7790	1.95	R	57R37	DR	63S4	33	287	
4.8	200	290	7840	2.2	RF	57R37	DR	63S4	37	287	
5.3	185	262	7880	2.4	RM	57R37	DR	63S4	49	287	
5.6	170	246	7900	2.6							
6.3	150	220	7930	3.0							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

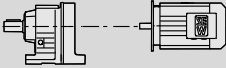

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
0.12	2.7	340	510	4360	0.85						
	3.2	285	436	5480	1.05	R	47R37	DR	63S4	28	287
	3.4	265	408	5590	1.10	RF	47R37	DR	63S4	28	287
	4.0	215	344	5780	1.35						
	2.8	365	502	3020	0.80						
	3.2	310	429	5350	0.95						
	3.7	265	372	5580	1.10						
	4.0	245	348	5670	1.20	R	47R37	DR	63S4	28	287
	4.6	210	301	5810	1.40	RF	47R37	DR	63S4	28	287
	5.4	177	255	5920	1.70						
	6.0	156	228	5980	1.95						
	7.1	130	195	6040	2.3						
	4.1	225	338	4570	0.90						
	4.7	210	296	4780	0.95						
	5.3	184	259	5130	1.10	R	37R17	DR	63S4	17	287
	6.0	163	228	5360	1.25	RF	37R17	DR	63S4	19	287
	6.9	140	199	5550	1.40						
	8.0	122	172	5680	1.65						
	4.2	235	328	3730	0.85						
4.8	205	289	4880	1.00							
5.2	192	265	5040	1.05	R	37R17	DR	63S4	17	287	
6.1	156	226	5410	1.30	RF	37R17	DR	63S4	18	287	
6.8	144	202	5520	1.40							
7.7	125	179	5660	1.60							
6.0	158	229	4090	0.80							
6.9	138	200	4200	0.95	R	27R17	DR	63S4	11	287	
7.8	121	177	4270	1.05	RF	27R17	DR	63S4	11	287	
8.3	116	166	4290	1.10							
6.1	157	227	4100	0.85							
6.8	144	203	4170	0.90	R	27R17	DR	63S4	11	287	
7.7	125	179	4260	1.05	RF	27R17	DR	63S4	11	287	
8.8	106	156	4330	1.25							
4.6	245	195.24*	12900	3.3	R	77	DR	63M6	37	271	
5.4	210	166.59	13000	3.9	RF	77	DR	63M6	43	272	
6.2	186	145.67	13000	4.4	RM	77	DR	63M6	68	272	
4.5	250	199.81	10100	2.4							
4.9	230	184.07	10100	2.6							
5.7	200	158.14	10300	3.0	R	67	DR	63M6	30	268	
6.5	175	137.67	10300	3.4	RF	67	DR	63M6	33	269	
7.0	164	128.97	10400	3.6	RM	67	DR	63M6	49	269	
7.9	145	113.94	10400	4.1							
6.9	166	199.81	10300	3.6	R	67	DR	63S4	30	268	
7.5	153	184.07	10400	3.9	RF	67	DR	63S4	33	269	
					RM	67	DR	63S4	49	269	
4.8	235	186.89	7780	1.90							
5.2	215	172.17	7820	2.0							
6.1	188	147.92	7870	2.4	R	57	DR	63M6	23	265	
7.0	164	128.77	7910	2.7	RF	57	DR	63M6	27	266	
7.5	154	120.63	7920	2.9	RM	57	DR	63M6	39	266	
8.4	136	106.58	7950	3.3							
9.1	126	98.99	7960	3.6							
7.4	155	186.89	7920	2.9	R	57	DR	63S4	23	265	
8.0	143	172.17	7940	3.2	RF	57	DR	63S4	27	266	
9.3	123	147.92	7960	3.7	RM	57	DR	63S4	39	266	
11	107	128.77	7980	4.2							
5.1	225	176.88	5760	1.35							
5.5	205	162.94	5830	1.45	R	47	DR	63M6	18	262	
6.4	178	139.99	5920	1.70	RF	47	DR	63M6	18	263	
7.4	155	121.87	5980	1.95							
7.8	147	176.88	6000	2.0							
8.5	135	162.94	6030	2.2							
9.9	116	139.99	6070	2.6							
11	101	121.87	6100	3.0	R	47	DR	63S4	18	262	
12	95	114.17	6100	3.2	RF	47	DR	63S4	18	263	
14	84	100.86	6120	3.6							
15	78	93.68	6130	3.9							



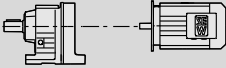

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						R	RF	DR	DR		
0.12	6.7	172	134.82	5270	1.15						
	7.3	157	123.66	5400	1.25						
	8.6	134	105.28	5600	1.50	R	37	DR	63M6	14	259
	9.9	116	90.77	5730	1.75	RF	37	DR	63M6	16	260
	11	108	84.61	5770	1.85						
	12	94	73.96	5850	2.1						
	10	112	134.82	5750	1.80						
	11	103	123.66	5800	1.95						
	13	87	105.28	5880	2.3	R	37	DR	63S4	14	259
	15	75	90.77	5930	2.6	RF	37	DR	63S4	16	260
	16	70	84.61	5950	2.8						
	19	61	73.96	5980	3.3						
	7.3	158	123.91	4090	0.80						
	8.5	134	105.49	4210	0.95						
	9.9	116	90.96	4300	1.10	R	27	DR	63M6	8.3	256
	11	108	84.78	4320	1.20	RF	27	DR	63M6	8.2	257
	12	94	74.11	4370	1.40						
	10	112	135.09	4310	1.15						
11	103	123.91	4340	1.25							
13	88	105.49	4390	1.50							
15	76	90.96	4420	1.70							
16	70	84.78	4440	1.85							
19	62	74.11	4460	2.1	R	27	DR	63S4	8.3	256	
20	58	69.47	4460	2.2	RF	27	DR	63S4	8.2	257	
23	51	61.30	4400	2.6							
25	46	55.87	4280	2.8							
29	40	48.17	4090	3.2							
31	37	44.90	4000	3.5							
11	104	81.64	300	0.80							
13	90	70.39	1470	0.95							
14	84	65.61	1860	1.00	R	17	DR	63M6	7.6	253	
16	73	57.35	2440	1.15	RF	17	DR	63M6	7.5	254	
17	68	53.76	2500	1.25							
19	60	47.44	2500	1.40							
17	68	81.64	2500	1.25							
20	58	70.39	2500	1.45							
21	54	65.61	2500	1.55							
24	48	57.35	2500	1.80							
26	45	53.76	2500	1.90							
29	39	47.44	2500	2.2	R	17	DR	63S4	7.6	253	
31	37	44.18	2500	2.3	RF	17	DR	63S4	7.5	254	
36	32	38.61	2430	2.6							
38	30	36.20	2390	2.8							
43	26	31.94	2310	3.2							
49	24	28.32	2230	3.6							
57	20	24.07	2130	4.2							
23	50	60.32	1500	1.00							
27	43	51.52	1550	1.15							
29	40	47.78	1560	1.25							
31	37	44.16	1530	1.35							
33	34	41.31	1510	1.45							
34	34	40.34	1500	1.50	R	07	DR	63S4	6.4	250	
36	32	38.51	1490	1.55	RF	07	DR	63S4	6.4	251	
41	28	34.05	1440	1.75							
47	24	29.08	1390	2.1							
51	22	26.97	1360	2.2							
59	19	23.32	1320	2.6							
63	18	21.73	1290	2.8							
22	53	60.32	1480	0.95							
25	45	51.52	1540	1.10							
27	42	47.78	1550	1.20							
29	39	44.16	1550	1.30							
31	36	41.31	1530	1.35							
32	36	40.34	1520	1.40	R	07	DT	56L4	5.8	250	
34	34	38.51	1510	1.45	RF	07	DT	56L4	5.8	251	
38	30	34.05	1460	1.65							
45	26	29.08	1410	1.95							
48	24	26.97	1380	2.1							
56	21	23.32	1340	2.4							
60	19	21.73	1310	2.6							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

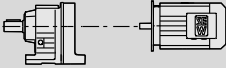

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]			
<b>0.12</b>	75	15	18.31	1230	3.3					
	82	14	16.73	1200	3.6					
	98	12	14.12	1150	4.3					
	114	10	12.06	1100	5.0					
	123	9.3	11.18	1070	5.4					
	143	8.0	9.67	1030	6.2					
	153	7.5	9.01	1010	6.7					
	176	6.5	7.85	970	7.5	R 07	DR 63S4	6.3	250	
	185	6.2	7.48	950	6.9	RF 07	DR 63S4	6.3	251	
	202	5.7	6.83	930	7.5					
	239	4.8	5.76	880	8.3					
	280	4.1	4.92	840	9.0					
	302	3.8	4.57	820	9.5					
	350	3.3	3.95	785	10					
	375	3.1	3.68	765	11					
	430	2.7	3.21	735	11					
		71	16	18.31	1250	3.1				
		78	15	16.73	1220	3.4				
		92	12	14.12	1170	4.0				
		108	11	12.06	1120	4.7				
116		9.9	11.18	1090	5.0					
134		8.5	9.67	1050	5.9					
144		7.9	9.01	1030	6.3					
166		6.9	7.85	980	7.1	R 07	DT 56L4	5.7	250	
174		6.6	7.48	970	6.5	RF 07	DT 56L4	5.7	251	
190		6.0	6.83	950	7.2					
226		5.1	5.76	900	7.8					
264		4.3	4.92	860	8.6					
285		4.0	4.57	840	9.0					
329		3.5	3.95	800	9.7					
353		3.2	3.68	780	10					
405		2.8	3.21	750	11					
	227	5.0	6.07	4260	8.6	RX 67	DR 63S4	16	240	
	267	4.3	5.18	4050	17	RXF 67	DR 63S4	20	241	
	305	3.8	4.53	3870	22					
	321	3.6	4.30*	3810	22					
	251	4.6	5.50*	3360	8.5					
	272	4.2	5.07	3270	8.6					
	317	3.6	4.35	3120	19					
	364	3.1	3.79	2980	22					
	389	2.9	3.55*	2910	24					
	440	2.6	3.14	2800	25	RX 57	DR 63S4	14	238	
	474	2.4	2.91	2730	28	RXF 57	DR 63S4	16	239	
	523	2.2	2.64*	2640	31					
	582	2.0	2.37	2550	34					
	676	1.7	2.04	2430	41					
	719	1.6	1.92*	2380	43					
	835	1.4	1.65	2260	49					
	<b>0.18</b>	0.09	14900	14075	50900	0.85				
0.11		13000	12344	62500	1.00					
0.12		11600	11143	65200	1.10					
0.14		10300	9743	67300	1.25					
0.16		8550	8443	69700	1.50	R 147R77	DR 63M4	420	287	
0.18		7400	7307	70900	1.75	RF 147R77	DR 63M4	430	287	
0.20		6530	6447	71800	2.00	RM 147R77	DR 63M4	600	287	
0.24		5640	5568	72500	2.3					
0.27		5140	4926	72800	2.5					
0.31		4420	4325	73300	2.9					
0.35		3920	3754	73600	3.3					
0.40		3370	3302	73800	3.8					
		0.15	8900	8784	50100	0.90				
		0.18	7390	7479	54600	1.10				
		0.20	6950	6559	55500	1.15	R 137R77	DR 63M4	290	287
		0.23	5760	5834	57400	1.40	RF 137R77	DR 63M4	310	287
		0.26	5420	5116	57900	1.50	RM 137R77	DR 63M4	425	287
		0.30	4520	4464	59000	1.75				
		0.34	3980	3928	59500	2.0				



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
0.18	0.28	5060	4709	58300	1.60						
	0.33	4320	4018	59200	1.85	R	137R77	DR	63M4	280	287
	0.38	3770	3514	59700	2.1	RF	137R77	DR	63M4	300	287
	0.40	3580	3338	59900	2.2	RM	137R77	DR	63M4	415	287
	0.45	3140	2929	60200	2.5						
	0.30	4490	4435	28400	0.95	R	107R77	DR	63M4	200	287
	0.34	3980	3896	31100	1.10	RF	107R77	DR	63M4	210	287
	0.43	3220	3039	34200	1.35	RM	107R77	DR	63M4	295	287
	0.34	4210	3918	29900	1.00						
	0.39	3590	3343	32800	1.20						
0.44	3260	3034	34100	1.30	R	107R77	DR	63M4	195	287	
0.50	2850	2653	35400	1.50	RF	107R77	DR	63M4	200	287	
0.58	2450	2280	36200	1.75	RM	107R77	DR	63M4	290	287	
0.64	2210	2067	36500	1.95							
0.66	2100	1987	36700	2.0							
0.72	1870	1827	36900	2.3	R	107R77	DR	63M4	200	287	
0.83	1590	1599	37200	2.7	RF	107R77	DR	63M4	205	287	
0.94	1430	1400	37300	3.0	RM	107R77	DR	63M4	295	287	
1.1	1220	1226	37400	3.5							
0.49	2990	2668	20000	1.00							
0.59	2480	2245	24200	1.20							
0.65	2200	2016	25500	1.35							
0.76	1960	1733	26500	1.50							
0.81	1840	1623	27000	1.65	R	97R57	DR	63M4	125	287	
0.92	1610	1434	27500	1.85	RF	97R57	DR	63M4	140	287	
1.1	1330	1207	27900	2.2	RM	97R57	DR	63M4	195	287	
1.2	1180	1084	28000	2.5							
1.4	1000	934	28200	3.0							
1.5	930	878	28300	3.2							
1.8	790	755	28400	3.8							
0.49	3090	2722	15900	0.95	R	97R57	DR	63M4	130	287	
0.57	2620	2311	23400	1.15	RF	97R57	DR	63M4	145	287	
0.64	2350	2078	24800	1.25	RM	97R57	DR	63M4	195	287	
0.89	1690	1489	15900	0.90							
0.95	1580	1395	16700	1.00							
1.1	1380	1232	18000	1.10	R	87R57	DR	63M4	85	287	
1.2	1270	1145	18600	1.20	RF	87R57	DR	63M4	92	287	
1.3	1140	1037	19200	1.35	RM	87R57	DR	63M4	120	287	
1.4	1010	931	19800	1.50							
1.6	860	802	20000	1.80							
0.87	1680	1524	15900	0.90							
1.0	1390	1303	17900	1.10	R	87R57	DR	63M4	85	287	
1.2	1220	1143	18900	1.25	RF	87R57	DR	63M4	92	287	
1.5	970	885	19900	1.60	RM	87R57	DR	63M4	120	287	
1.7	850	776	20000	1.80							
1.5	970	858	5830	0.85							
1.7	850	757	9590	0.95	R	77R37	DR	63M4	45	287	
2.0	750	671	10500	1.10	RF	77R37	DR	63M4	51	287	
2.3	630	571	11400	1.30	RM	77R37	DR	63M4	76	287	
1.6	880	821	9230	0.90							
1.8	800	731	10100	1.00							
2.0	745	646	10500	1.10							
2.4	645	560	11300	1.25	R	77R37	DR	63M4	46	287	
2.7	550	488	11800	1.50	RF	77R37	DR	63M4	52	287	
3.0	485	436	12100	1.70	RM	77R37	DR	63M4	77	287	
3.5	420	373	12400	1.95							
4.0	365	327	12600	2.2							
4.6	325	289	12700	2.5							
2.3	635	571	7060	0.95	R	67R37	DR	63M4	40	287	
2.7	535	486	8250	1.10	RF	67R37	DR	63M4	43	287	
					RM	67R37	DR	63M4	59	287	
2.3	655	574	5820	0.90							
2.7	565	495	7950	1.05							
3.0	480	438	8740	1.25	R	67R37	DR	63M4	41	287	
3.4	425	388	9160	1.40	RF	67R37	DR	63M4	44	287	
3.8	390	344	9380	1.55	RM	67R37	DR	63M4	60	287	
4.5	315	294	9800	1.90							
5.1	290	261	9920	2.1							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## R..DRE/DRS R..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>0.18</b>	2.9	500	454	6650	0.90	R	57R37	DR	63M4	33	287
	3.2	450	410	7090	1.00	RF	57R37	DR	63M4	37	287
						RM	57R37	DR	63M4	49	287
	2.8	535	471	5250	0.85						
	3.7	400	357	7300	1.10						
	4.1	355	319	7460	1.25	R	57R37	DR	63M4	34	287
	4.8	300	273	7630	1.50	RF	57R37	DR	63M4	38	287
	5.5	260	241	7730	1.75	RM	57R37	DR	63M4	50	287
	6.1	230	215	7790	1.95						
3.7	420	359	7230	1.05							
4.1	375	324	7380	1.20							
4.6	335	290	7530	1.35	R	57R37	DR	63M4	33	287	
5.0	300	262	7620	1.50	RF	57R37	DR	63M4	37	287	
5.4	280	246	7680	1.60	RM	57R37	DR	63M4	49	287	
6.0	245	220	7750	1.80							
7.0	210	188	7830	2.1							
8.3	177	159	7890	2.6							
4.4	345	301	4150	0.85	R	47R37	DR	63M4	28	287	
5.2	290	255	5460	1.05	RF	47R37	DR	63M4	28	287	
5.8	255	228	5620	1.15							
6.8	215	195	5790	1.40							
6.6	225	199	4510	0.85	R	37R17	DR	63M4	17	287	
7.7	199	172	4960	1.00	RF	37R17	DR	63M4	19	287	
8.8	173	150	5260	1.15							
6.5	230	202	4050	0.85	R	37R17	DR	63M4	17	287	
7.4	205	179	4870	0.95	RF	37R17	DR	63M4	18	287	
8.5	176	156	5220	1.15							
9.4	157	141	4100	0.85	R	27R17	DR	63M4	11	287	
11	139	124	4190	0.95	RF	27R17	DR	63M4	11	287	
12	124	110	4260	1.05							
14	105	94	4340	1.25							
9.8	152	135	4120	0.85	R	27R17	DR	63M4	11	287	
11	139	118	4190	0.95	RF	27R17	DR	63M4	11	287	
13	121	104	4270	1.10							
15	104	90	4340	1.25							
4.5	385	195.24*	12500	2.1	R	77	DR	63L6	38	271	
5.2	325	166.59	12700	2.5	RF	77	DR	63L6	43	272	
6.0	285	145.67	12800	2.8	RM	77	DR	63L6	68	272	
6.3	270	138.39	12900	3.0							
7.2	235	121.42	12900	3.4							
6.8	250	195.24*	12900	3.2	R	77	DR	63M4	37	271	
7.9	215	166.59	13000	3.8	RF	77	DR	63M4	43	272	
9.1	190	145.67	13000	4.3	RM	77	DR	63M4	68	272	
9.5	180	138.39	13000	4.6							
4.4	390	199.81	9370	1.50							
4.7	360	184.07	9560	1.65							
5.5	310	158.14	9830	1.90							
6.3	270	137.67	10000	2.2	R	67	DR	63L6	30	268	
6.8	250	128.97	10100	2.4	RF	67	DR	63L6	34	269	
7.6	225	113.94	10200	2.7	RM	67	DR	63L6	49	269	
8.2	205	105.83	10200	2.9							
9.1	190	95.91	10300	3.2							
10	170	86.11	10300	3.5							
12	146	74.17	10400	4.1							
12	138	69.75	10400	4.4							
6.6	260	199.81	10100	2.3							
7.2	235	184.07	10100	2.5							
8.4	205	158.14	10200	2.9	R	67	DR	63M4	30	268	
9.6	179	137.67	10300	3.4	RF	67	DR	63M4	33	269	
10	168	128.97	10300	3.6	RM	67	DR	63M4	49	269	
12	148	113.94	10400	4.0							
12	138	105.83	10400	4.4							
4.7	365	186.89	7420	1.20	R	57	DR	63L6	24	265	
5.0	340	172.17	7510	1.30	RF	57	DR	63L6	27	266	
5.9	290	147.92	7650	1.55	RM	57	DR	63L6	39	266	
6.8	250	128.77	7740	1.75							
7.2	235	120.63	7780	1.90							

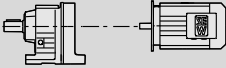





P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
						R	RF	RM	DR			
0.18	7.1	240	186.89	7770	1.85							
	7.7	220	172.17	7810	2.0							
	8.9	193	147.92	7860	2.3							
	10	168	128.77	7900	2.7	R	57		DR	63M4	23	265
	11	157	120.63	7920	2.9	RF	57		DR	63M4	27	266
	12	139	106.58	7940	3.2	RM	57		DR	63M4	39	266
	13	129	98.99	7950	3.5							
	15	117	89.71	7970	3.8							
	7.5	230	176.88	5740	1.30							
	8.1	210	162.94	5810	1.40							
	9.4	182	139.99	5910	1.65							
	11	159	121.87	5980	1.90	R	47		DR	63M4	18	262
	12	149	114.17	6000	2.0	RF	47		DR	63M4	18	263
	13	131	100.86	6040	2.3							
	14	122	93.68	6060	2.5							
16	111	84.90	6080	2.7								
17	99	76.23	6100	3.0								
7.0	240	123.66	3060	0.80								
8.3	205	105.28	4840	0.95	R	37		DR	63L6	15	259	
9.6	179	90.77	5190	1.10	RF	37		DR	63L6	16	260	
10	167	84.61	5310	1.20								
9.8	176	134.82	5230	1.15								
11	161	123.66	5370	1.25								
13	137	105.28	5580	1.45								
15	118	90.77	5710	1.70								
16	110	84.61	5760	1.80	R	37		DR	63M4	14	259	
18	96	73.96	5840	2.1	RF	37		DR	63M4	16	260	
19	90	69.33	5870	2.2								
22	80	61.18	5920	2.5								
24	73	55.76	5940	2.8								
27	63	48.08	5960	3.2								
11	161	123.91	4070	0.80								
13	137	105.49	4200	0.95								
15	118	90.96	4280	1.10								
16	110	84.78	4320	1.20								
18	96	74.11	4360	1.35								
19	90	69.47	4380	1.45								
22	80	61.30	4320	1.65								
24	73	55.87	4210	1.80	R	27		DR	63M4	8.3	256	
27	63	48.17	4040	2.1	RF	27		DR	63M4	8.2	257	
29	58	44.90	3960	2.2								
34	51	39.25	3810	2.5								
36	48	36.79	3740	2.7								
41	42	32.47	3610	3.1								
46	38	28.78	3480	3.5								
54	32	24.47	3310	4.1								
47	37	28.37	3460	3.5								
51	34	26.09	3380	3.8								
59	29	22.32	3220	4.5								
68	25	19.35	3090	5.2	R	27		DR	63M4	8.0	256	
73	24	18.08	3020	5.5	RF	27		DR	63M4	8.0	257	
84	20	15.63	2890	6.4								
99	17	13.28*	2750	7.5								
16	106	81.64	47	0.80								
19	92	70.39	1330	0.95								
20	85	65.61	1740	1.00								
23	75	57.35	2350	1.15								
25	70	53.76	2500	1.20								
28	62	47.44	2450	1.40								
30	58	44.18	2410	1.50	R	17		DR	63M4	7.6	253	
34	50	38.61	2340	1.70	RF	17		DR	63M4	7.5	254	
36	47	36.20	2300	1.80								
41	42	31.94	2240	2.0								
47	37	28.32	2170	2.3								
55	31	24.07	2080	2.7								
52	33	25.23	2110	2.6								
57	30	23.15	2060	2.8	R	17		DR	63M4	7.3	253	
67	26	19.71	1970	3.3	RF	17		DR	63M4	7.2	254	
78	22	16.99	1890	3.8								

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

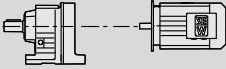

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.18</b>	28	62	47.78	1100	0.80				
	30	58	44.16	1340	0.85				
	32	54	41.31	1390	0.95				
	33	52	40.34	1380	0.95				
	34	50	38.51	1380	1.00	<b>R 07</b>	<b>DR 63M4</b>	6.4	250
	39	44	34.05	1350	1.15	<b>RF 07</b>	<b>DR 63M4</b>	6.4	251
	45	38	29.08	1310	1.30				
	49	35	26.97	1290	1.40				
	57	30	23.32	1250	1.65				
	61	28	21.73	1240	1.75				
	72	24	18.31	1190	2.1				
	79	22	16.73	1160	2.3				
	94	18	14.12	1120	2.7				
	109	16	12.06	1070	3.2				
	118	15	11.18	1050	3.4				
	137	13	9.67	1010	4.0				
	146	12	9.01	990	4.3				
	168	10	7.85	960	4.8	<b>R 07</b>	<b>DR 63M4</b>	6.3	250
	177	9.7	7.48	940	4.4	<b>RF 07</b>	<b>DR 63M4</b>	6.3	251
	193	8.9	6.83	920	4.8				
229	7.5	5.76	880	5.3					
268	6.4	4.92	840	5.8					
289	5.9	4.57	820	6.1					
334	5.1	3.95	785	6.7					
359	4.8	3.68	765	6.9					
412	4.2	3.21	735	7.4					
243	7.1	11.18	860	7.0					
281	6.1	9.67	820	8.2					
302	5.7	9.01	810	8.8					
346	5.0	7.85	775	9.8					
364	4.7	7.48	765	9.2					
398	4.3	6.83	740	10	<b>R 07</b>	<b>DR 63S2</b>	6.3	250	
472	3.6	5.76	705	11	<b>RF 07</b>	<b>DR 63S2</b>	6.3	251	
552	3.1	4.92	670	12					
596	2.9	4.57	655	12					
689	2.5	3.95	625	14					
739	2.3	3.68	615	14					
848	2.0	3.21	585	16					
143	12	6.07	4940	3.6	<b>RX 67</b>	<b>DR 63L6</b>	17	240	
168	10	5.18	4690	7.4	<b>RXF 67</b>	<b>DR 63L6</b>	21	241	
192	8.9	4.53	4490	9.2					
202	8.5	4.30*	4410	9.4					
218	7.9	6.07	4310	5.4					
255	6.7	5.18	4090	11					
292	5.9	4.53	3920	14					
307	5.6	4.30*	3850	14					
350	4.9	3.77	3690	18	<b>RX 67</b>	<b>DR 63M4</b>	16	240	
412	4.2	3.20*	3500	24	<b>RXF 67</b>	<b>DR 63M4</b>	20	241	
457	3.8	2.89	3380	28					
519	3.3	2.54	3240	36					
550	3.1	2.40*	3180	40					
646	2.7	2.04	3020	50					
158	11	5.50*	3880	3.6					
172	10	5.07	3780	3.6	<b>RX 57</b>	<b>DR 63L6</b>	14	238	
200	8.6	4.35	3600	7.9	<b>RXF 57</b>	<b>DR 63L6</b>	16	239	
230	7.5	3.79	3440	9.2					
240	7.2	5.50*	3400	5.4					
261	6.6	5.07	3310	5.4					
303	5.7	4.35	3150	12					
348	4.9	3.79	3010	14					
372	4.6	3.55*	2940	15					
421	4.1	3.14	2830	16	<b>RX 57</b>	<b>DR 63M4</b>	14	238	
453	3.8	2.91	2760	18	<b>RXF 57</b>	<b>DR 63M4</b>	16	239	
500	3.4	2.64*	2670	20					
557	3.1	2.37	2580	22					
647	2.7	2.04	2460	26					
688	2.5	1.92*	2410	28					
799	2.2	1.65	2290	31					



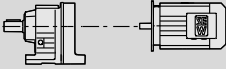

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>0.25</b>	0.13	15100	9743	48200	0.85						
	0.15	12700	8443	63100	1.00						
	0.18	11000	7307	66200	1.20						
	0.20	9740	6447	68100	1.35						
	0.23	8410	5568	69800	1.55	R	147R77	DR	63L4	420	287
	0.26	7590	4926	70700	1.70	RF	147R77	DR	63L4	430	287
	0.30	6570	4325	71700	2.00	RM	147R77	DR	63L4	600	287
	0.35	5790	3754	72400	2.2						
	0.39	5020	3302	72900	2.6						
	0.45	4370	2898	73300	3.0						
0.22	8660	5834	51100	0.90	R	137R77	DR	63L4	290	287	
0.25	7960	5116	53500	1.00	RF	137R77	DR	63L4	310	287	
0.29	6740	4464	55800	1.20	RM	137R77	DR	63L4	425	287	
0.33	5930	3928	57100	1.35							
0.28	7430	4709	54600	1.10	R	137R77	DR	63L4	280	287	
0.32	6340	4018	56500	1.25	RF	137R77	DR	63L4	300	287	
0.37	5540	3514	57700	1.45	RM	137R77	DR	63L4	415	287	
0.39	5260	3338	58100	1.50							
0.44	4620	2929	58900	1.75							
0.49	4180	2658	59300	1.90	R	137R77	DR	63L4	290	287	
0.54	3800	2412	59700	2.1	RF	137R77	DR	63L4	310	287	
0.63	3260	2073	60100	2.4	RM	137R77	DR	63L4	420	287	
0.71	2810	1839	60500	2.8							
0.93	2180	1397	60800	3.7							
1.1	1880	1226	61000	4.2							
0.43	4730	3039	25600	0.90	R	107R77	DR	63L4	205	287	
					RF	107R77	DR	63L4	210	287	
					RM	107R77	DR	63L4	295	287	
0.43	4780	3034	23600	0.90	R	107R77	DR	63L4	195	287	
					RF	107R77	DR	63L4	200	287	
					RM	107R77	DR	63L4	290	287	
0.65	3100	1987	34600	1.40							
0.71	2790	1827	35600	1.55							
0.81	2400	1599	36300	1.80	R	107R77	DR	63L4	200	287	
0.93	2140	1400	36600	2.0	RF	107R77	DR	63L4	205	287	
1.1	1840	1226	36900	2.3	RM	107R77	DR	63L4	295	287	
1.4	1430	939	37300	3.0							
1.6	1230	822	37400	3.5							
0.75	2840	1733	22000	1.05	R	97R57	DR	63L4	125	287	
0.80	2650	1623	23200	1.15	RF	97R57	DR	63L4	145	287	
					RM	97R57	DR	63L4	195	287	
0.71	2960	1823	21100	1.00							
0.82	2570	1583	23700	1.15							
0.93	2230	1396	25400	1.35							
1.1	1940	1228	26600	1.55	R	97R57	DR	63L4	130	287	
1.2	1750	1069	27300	1.70	RF	97R57	DR	63L4	145	287	
1.4	1520	938	27600	1.95	RM	97R57	DR	63L4	195	287	
1.6	1300	824	27900	2.3							
1.8	1160	737	28100	2.6							
2.1	990	632	28200	3.0							
1.1	1850	1145	10700	0.85	R	87R57	DR	63L4	85	287	
1.2	1660	1037	16000	0.95	RF	87R57	DR	63L4	93	287	
1.4	1480	931	17400	1.05	RM	87R57	DR	63L4	120	287	
1.6	1260	802	18600	1.20							
1.1	1790	1143	14700	0.85							
1.5	1420	885	17800	1.10							
1.7	1240	776	18700	1.25	R	87R57	DR	63L4	86	287	
1.9	1100	685	19400	1.40	RF	87R57	DR	63L4	93	287	
2.2	920	599	20000	1.65	RM	87R57	DR	63L4	125	287	
2.5	810	525	20000	1.90							
2.8	715	456	20000	2.2							
4.9	415	268	20000	3.7							
2.3	910	571	8910	0.90	R	77R37	DR	63L4	46	287	
					RF	77R37	DR	63L4	52	287	
					RM	77R37	DR	63L4	77	287	

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

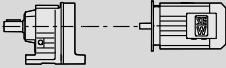

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]				
<b>0.25</b>	2.3	920	560	8780	0.90						
	2.7	795	488	10100	1.05						
	3.0	705	436	10900	1.15	R	77R37	DR	63L4	47	287
	3.5	605	373	11500	1.35	RF	77R37	DR	63L4	53	287
	4.0	530	327	11900	1.55	RM	77R37	DR	63L4	78	287
	4.5	470	289	12200	1.75						
	5.0	420	260	12400	1.95						
	5.8	355	224	12600	2.3						
	3.4	620	388	7290	0.95						
	3.8	565	344	7950	1.05	R	67R37	DR	63L4	41	287
	4.4	465	294	8870	1.30	RF	67R37	DR	63L4	45	287
	5.0	420	261	9180	1.40	RM	67R37	DR	63L4	60	287
	5.6	380	234	9460	1.60						
	6.5	320	200	9780	1.85						
	7.4	275	176	9980	2.2						
	8.2	250	158	10100	2.4						
	3.4	640	384	6960	0.95						
	3.6	600	359	7550	1.00	R	67R37	DR	63L4	41	287
	4.2	515	310	8430	1.15	RF	67R37	DR	63L4	44	287
	4.9	435	264	9100	1.40	RM	67R37	DR	63L4	59	287
	5.5	385	235	9420	1.55						
	6.5	325	201	9750	1.85						
	7.2	295	181	9900	2.0						
	4.1	515	319	6050	0.85						
4.8	435	273	7160	1.05	R	57R37	DR	63L4	35	287	
5.4	380	241	7380	1.20	RF	57R37	DR	63L4	38	287	
6.0	340	215	7510	1.30	RM	57R37	DR	63L4	50	287	
7.0	300	187	7630	1.50							
7.9	260	164	7730	1.75							
9.2	225	142	7800	2.00							
4.0	540	324	4980	0.85							
4.5	480	290	6950	0.95	R	57R37	DR	63L4	34	287	
5.0	435	262	7160	1.05	RF	57R37	DR	63L4	37	287	
5.3	405	246	7280	1.10	RM	57R37	DR	63L4	49	287	
5.9	360	220	7440	1.25							
5.7	370	228	2440	0.80							
6.7	315	195	5320	0.95	R	47R37	DR	63L4	29	287	
7.1	295	182	5440	1.00	RF	47R37	DR	63L4	29	287	
8.5	245	154	5680	1.20							
8.7	245	150	2540	0.80							
10	210	130	4790	0.95	R	37R17	DR	63L4	18	287	
10	200	124	4930	1.00	RF	37R17	DR	63L4	19	287	
12	178	110	5200	1.10							
14	152	94	5460	1.30							
9.7	220	135	4660	0.90							
10	210	127	4770	0.95	R	37R17	DR	63L4	18	287	
12	174	104	5250	1.15	RF	37R17	DR	63L4	19	287	
14	150	90	5470	1.35							
4.6	520	195.24*	12000	1.55	R	77	DRS	71S6	39	271	
5.4	440	166.59	12300	1.85	RF	77	DRS	71S6	45	272	
6.1	385	145.67	12500	2.1	RM	77	DRS	71S6	70	272	
6.7	355	195.24*	12600	2.3							
7.8	305	166.59	12800	2.7	R	77	DR	63L4	38	271	
8.9	265	145.67	12900	3.1	RF	77	DR	63L4	43	272	
9.4	250	138.39	12900	3.2	RM	77	DR	63L4	68	272	
11	220	121.42	13000	3.7							
4.5	530	199.81	8280	1.15							
4.9	490	184.07	8660	1.20							
5.7	420	158.14	9190	1.40	R	67	DRS	71S6	32	268	
6.5	365	137.67	9540	1.65	RF	67	DRS	71S6	35	269	
6.9	340	128.97	9670	1.75	RM	67	DRS	71S6	51	269	
7.8	300	113.94	9870	1.95							
8.5	280	105.83	9960	2.1							



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.25</b>	6.5	365	199.81	9540	1.65				
	7.1	335	184.07	9700	1.80				
	8.2	290	158.14	9930	2.1				
	9.4	250	137.67	10100	2.4	R 67	DR 63L4	30 268	
	10	235	128.97	10100	2.5	RF 67	DR 63L4	34 269	
	11	205	113.94	10200	2.9	RM 67	DR 63L4	49 269	
	12	194	105.83	10300	3.1				
	14	176	95.91	10300	3.4				
	15	158	86.11	10400	3.8				
	4.8	495	186.89	6760	0.90				
	5.2	455	172.17	7060	1.00				
	6.0	390	147.92	7330	1.15	R 57	DRS 71S6	26 265	
	7.0	340	128.77	7500	1.30	RF 57	DRS 71S6	29 266	
	7.4	320	120.63	7570	1.40	RM 57	DRS 71S6	41 266	
	8.4	280	106.58	7670	1.60				
9.0	260	98.99	7720	1.70					
7.0	340	186.89	7500	1.30					
7.6	315	172.17	7580	1.40					
8.8	270	147.92	7700	1.65					
10	235	128.77	7780	1.90	R 57	DR 63L4	24 265		
11	220	120.63	7810	2.0	RF 57	DR 63L4	27 266		
12	196	106.58	7860	2.3	RM 57	DR 63L4	39 266		
13	182	98.99	7880	2.5					
14	165	89.71	7910	2.7					
16	148	80.55	7930	3.0					
19	127	69.23	7960	3.5					
7.4	320	176.88	5280	0.90					
8.0	295	162.94	5420	1.00					
9.3	255	139.99	5630	1.15					
11	220	121.87	5770	1.35					
11	205	114.17	5820	1.45					
13	185	100.86	5900	1.60					
14	172	93.68	5940	1.75	R 47	DR 63L4	19 262		
15	156	84.90	5980	1.90	RF 47	DR 63L4	19 263		
17	140	76.23	6020	2.1					
19	126	68.54	6050	2.4					
20	118	64.21	6070	2.5					
23	104	56.73	6090	2.9					
25	97	52.69	6100	3.1					
27	88	47.75	6080	3.4					
9.6	245	134.82	2630	0.80					
11	225	123.66	4560	0.90					
12	193	105.28	5030	1.05					
14	167	90.77	5320	1.20					
15	155	84.61	5420	1.30					
18	136	73.96	5580	1.45					
19	127	69.33	5650	1.55	R 37	DR 63L4	15 259		
21	112	61.18	5750	1.80	RF 37	DR 63L4	16 260		
23	102	55.76	5800	1.95					
27	88	48.08	5870	2.3					
29	82	44.81	5760	2.4					
33	72	39.17	5540	2.8					
35	67	36.72	5430	3.0					
40	60	32.40	5230	3.4					
15	156	84.78	4100	0.85					
18	136	74.11	4210	0.95					
19	128	69.47	4240	1.00					
21	113	61.30	4180	1.15					
23	103	55.87	4090	1.25					
27	88	48.17	3940	1.45	R 27	DR 63L4	9.0 256		
29	82	44.90	3870	1.60	RF 27	DR 63L4	8.9 257		
33	72	39.25	3730	1.80					
35	68	36.79	3660	1.90					
40	60	32.47	3540	2.2					
45	53	28.78	3420	2.5					
53	45	24.47	3270	2.9					

kVA	n
f	
i	
P	H <sub>Z</sub>

**R..DRE/DRS**  
R..DRE/DRS [kW]

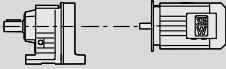

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>		m [kg]		
<b>0.25</b>	46	52	28.37	3410	2.5				
	50	48	26.09	3330	2.7				
	58	41	22.32	3180	3.2				
	67	36	19.35	3050	3.7				
	72	33	18.08	2990	3.9				
	83	29	15.63	2860	4.5				
	98	24	13.28*	2730	5.3				
	110	22	11.86	2630	5.9				
	128	19	10.13	2510	6.6	R 27	DR 63L4	8.7	256
	138	17	9.41	2440	7.0	RF 27	DR 63L4	8.6	257
	159	15	8.16	2330	7.7				
	170	14	7.63*	2280	8.0				
	197	12	6.59	2180	8.8				
	232	10	5.60*	2080	9.6				
	260	9.2	5.00*	2000	10				
	304	7.8	4.27	1900	11				
	325	7.3	4.00*	1870	12				
	386	6.2	3.37	1770	13				
	23	105	57.35	156	0.80				
	24	99	53.76	785	0.85				
27	87	47.44	1630	1.00					
29	81	44.18	2000	1.05	R 17	DR 63L4	8.3	253	
34	71	38.61	2200	1.20	RF 17	DR 63L4	8.2	254	
36	66	36.20	2180	1.30					
41	59	31.94	2120	1.45					
46	52	28.32	2070	1.65					
54	44	24.07	2000	1.90					
52	46	25.23	2020	1.85					
56	42	23.15	1980	2.0					
66	36	19.71	1910	2.4					
77	31	16.99	1840	2.7	R 17	DR 63L4	8.0	253	
82	29	15.84	1810	2.9	RF 17	DR 63L4	7.9	254	
94	25	13.84	1740	3.4					
100	24	12.98	1720	3.6					
114	21	11.45	1660	3.9					
38	62	34.05	1090	0.80					
45	53	29.08	1200	0.95					
48	50	26.97	1190	1.00	R 07	DR 63L4	7.2	250	
56	43	23.32	1170	1.15	RF 07	DR 63L4	7.2	251	
60	40	21.73	1160	1.25					
71	34	18.31	1120	1.50					
78	31	16.73	1100	1.65					
92	26	14.12	1070	1.95					
108	22	12.06	1030	2.3					
116	20	11.18	1010	2.4					
134	18	9.67	980	2.8					
144	16	9.01	960	3.0					
166	14	7.85	930	3.4	R 07	DR 63L4	7.0	250	
174	14	7.48	920	3.1	RF 07	DR 63L4	7.0	251	
190	12	6.83	900	3.4					
226	11	5.76	860	3.8					
264	9.0	4.92	820	4.1					
285	8.4	4.57	800	4.3					
329	7.3	3.95	770	4.7					
353	6.8	3.68	755	4.8					
405	5.9	3.21	725	5.2					
238	10	11.18	840	5.0					
275	8.7	9.67	810	5.8					
295	8.1	9.01	795	6.2					
339	7.0	7.85	765	7.0					
356	6.7	7.48	755	6.4					
389	6.1	6.83	735	7.0	R 07	DR 63M2	6.3	250	
461	5.2	5.76	700	7.7	RF 07	DR 63M2	6.3	251	
540	4.4	4.92	665	8.4					
583	4.1	4.57	650	8.8					
674	3.5	3.95	625	9.7					
723	3.3	3.68	610	10					
829	2.9	3.21	585	11					



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>0.25</b>	148	16	6.07	4860	2.6						
	173	14	5.18	4620	5.4	RX	67	DRS	71S6	19	240
	198	12	4.53	4420	6.8	RXF	67	DRS	71S6	23	241
	208	12	4.30*	4350	7.0						
	214	11	6.07	4310	3.9						
	251	9.5	5.18	4100	7.9						
	287	8.3	4.53	3920	9.9						
	302	7.9	4.30*	3860	10						
	345	6.9	3.77	3700	13	RX	67	DR	63L4	17	240
	406	5.9	3.20*	3500	17	RXF	67	DR	63L4	21	241
	450	5.3	2.89	3390	20						
	511	4.7	2.54	3250	25						
	542	4.4	2.40*	3190	28						
	636	3.8	2.04	3020	35						
	163	15	5.50*	3820	2.6						
	177	14	5.07	3720	2.7	RX	57	DRS	71S6	16	238
	206	12	4.35	3540	5.9	RXF	57	DRS	71S6	18	239
	236	10	3.79	3390	6.8						
	236	10	5.50*	3390	3.9						
	257	9.3	5.07	3300	3.9						
299	8.0	4.35	3150	8.5							
343	7.0	3.79	3010	9.9							
366	6.5	3.55*	2950	11							
414	5.8	3.14	2830	11	RX	57	DR	63L4	14	238	
446	5.3	2.91	2760	13	RXF	57	DR	63L4	16	239	
492	4.8	2.64*	2680	14							
548	4.4	2.37	2580	16							
637	3.7	2.04	2460	19							
677	3.5	1.92*	2410	20							
787	3.0	1.65	2300	23							
<b>0.37</b>	0.19	15900	7307	37500	0.80						
	0.21	14000	6447	60400	0.90						
	0.25	12100	5568	64300	1.05	R	147R77	DRS	71S4	425	287
	0.28	10900	4926	66400	1.20	RF	147R77	DRS	71S4	430	287
	0.32	9470	4325	68500	1.35	RM	147R77	DRS	71S4	600	287
	0.37	8310	3754	70000	1.55						
	0.42	7230	3302	71100	1.80						
	0.48	6320	2898	71900	2.1						
	0.31	9730	4464	36000	0.80	R	137R77	DRS	71S4	290	287
	0.35	8570	3928	51500	0.95	RF	137R77	DRS	71S4	315	287
						RM	137R77	DRS	71S4	425	287
	0.34	9080	4018	48100	0.90						
	0.39	7940	3514	53500	1.00						
	0.41	7540	3338	54300	1.05	R	137R77	DRS	71S4	280	287
	0.47	6610	2929	56000	1.20	RF	137R77	DRS	71S4	305	287
	0.56	5600	2484	57600	1.45	RM	137R77	DRS	71S4	415	287
	0.62	5020	2242	58400	1.60						
	0.52	5990	2658	57000	1.35						
	0.57	5440	2412	57800	1.45						
	0.67	4670	2073	58800	1.70						
	0.75	4060	1839	59400	1.95	R	137R77	DRS	71S4	290	287
	0.99	3130	1397	60200	2.6	RF	137R77	DRS	71S4	315	287
	1.1	2710	1226	60500	2.9	RM	137R77	DRS	71S4	425	287
	1.3	2440	1090	60700	3.3						
	1.4	2130	951	60900	3.8						
	0.67	4660	2067	27300	0.90						
	0.82	3790	1693	31900	1.15						
	0.89	3420	1550	33500	1.25	R	107R77	DRS	71S4	200	287
	0.98	3100	1407	34600	1.40	RF	107R77	DRS	71S4	205	287
	1.1	2660	1209	35900	1.60	RM	107R77	DRS	71S4	290	287
	1.3	2330	1055	36400	1.85						
	0.69	4450	1987	28600	0.95						
	0.76	4030	1827	30800	1.05						
	0.86	3490	1599	33200	1.25	R	107R77	DRS	71S4	205	287
	0.99	3090	1400	34600	1.40	RF	107R77	DRS	71S4	210	287
	1.1	2670	1226	35900	1.60	RM	107R77	DRS	71S4	295	287
	1.5	2070	939	36700	2.1						
	1.7	1790	822	37000	2.4						

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
0.37	1.1	2760	1207	22500	1.10	R	97R57	DRS	71S4	130	287
	1.3	2460	1084	24300	1.20	RF	97R57	DRS	71S4	145	287
						RM	97R57	DRS	71S4	195	287
	0.99	3170	1396	10800	0.95						
	1.1	2770	1228	22500	1.10						
	1.3	2470	1069	24200	1.20						
	1.5	2160	938	25700	1.40	R	97R57	DRS	71S4	130	287
	1.7	1860	824	26900	1.60	RF	97R57	DRS	71S4	145	287
	1.9	1660	737	27400	1.80	RM	97R57	DRS	71S4	200	287
	2.2	1420	632	27700	2.1						
3.2	980	431	28200	3.1							
3.6	850	379	28300	3.5							
4.1	765	336	28400	3.9							
1.7	1810	802	13800	0.85	R	87R57	DRS	71S4	87	287	
1.8	1690	754	15800	0.90	RF	87R57	DRS	71S4	94	287	
2.1	1440	649	17600	1.05	RM	87R57	DRS	71S4	125	287	
1.8	1770	776	15100	0.85							
2.0	1560	685	16800	1.00							
2.3	1330	599	18300	1.15	R	87R57	DRS	71S4	88	287	
2.6	1170	525	19100	1.30	RF	87R57	DRS	71S4	95	287	
3.0	1020	456	19700	1.50	RM	87R57	DRS	71S4	125	287	
5.2	595	268	20000	2.6							
5.8	525	236	20000	2.9							
2.6	1260	538	18700	1.25	R	87R57	DRS	71S4	86	287	
2.9	1100	472	19400	1.40	RF	87R57	DRS	71S4	93	287	
3.4	920	400	20000	1.65	RM	87R57	DRS	71S4	125	287	
3.8	830	361	20000	1.85							
3.7	860	373	9520	0.95							
4.2	755	327	10500	1.10							
4.8	670	289	11100	1.20							
5.3	600	260	11600	1.35	R	77R37	DRS	71S4	49	287	
6.2	505	224	12000	1.60	RF	77R37	DRS	71S4	55	287	
7.0	445	197	12300	1.85	RM	77R37	DRS	71S4	80	287	
8.2	385	169	12500	2.1							
9.3	340	149	12700	2.4							
4.7	665	294	4670	0.90	R	67R37	DRS	71S4	43	287	
5.3	600	261	7550	1.00	RF	67R37	DRS	71S4	47	287	
5.9	535	234	8220	1.10	RM	67R37	DRS	71S4	62	287	
6.9	455	200	8930	1.30							
3.1	1130	289.74	28100	2.6	R	97	DRS	71M6	110	277	
3.5	990	255.71	28200	3.0	RF	97	DRS	71M6	125	278	
3.8	940	241.25	28300	3.2	RM	97	DRS	71M6	175	278	
4.2	840	216.28	28400	3.6							
3.7	960	246.54	20000	1.60							
4.2	840	216.54	20000	1.85	R	87	DRS	71M6	67	274	
4.4	800	205.71	20000	1.95	RF	87	DRS	71M6	74	275	
5.0	705	181.77	20000	2.2	RM	87	DRS	71M6	105	275	
5.8	605	155.34	20000	2.6							
6.4	555	142.41	20000	2.8							
5.4	650	166.59	11200	1.25	R	77	DRS	71M6	41	271	
6.2	565	145.67	11700	1.45	RF	77	DRS	71M6	46	272	
6.5	540	138.39	11900	1.50	RM	77	DRS	71M6	71	272	
7.1	495	195.24*	12100	1.65							
8.3	425	166.59	12400	1.90							
9.5	370	145.67	12600	2.2	R	77	DRS	71S4	39	271	
10.0	350	138.39	12600	2.3	RF	77	DRS	71S4	45	272	
11	310	121.42	12800	2.6	RM	77	DRS	71S4	70	272	
13	260	102.99	12900	3.1							
15	235	92.97	12900	3.4							
5.7	615	158.14	7350	0.95	R	67	DRS	71M6	34	268	
6.6	535	137.67	8240	1.10	RF	67	DRS	71M6	37	269	
7.0	500	128.97	8550	1.20	RM	67	DRS	71M6	52	269	
7.9	440	113.94	9030	1.35							

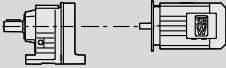





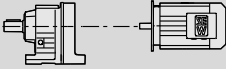

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
0.37	6.9	510	199.81	8480	1.15						
	7.5	470	184.07	8820	1.25						
	8.7	400	158.14	9300	1.50						
	10	350	137.67	9620	1.70						
	11	330	128.97	9740	1.80						
	12	290	113.94	9920	2.1	R	67	DRS	71S4	32	268
	13	270	105.83	10000	2.2	RF	67	DRS	71S4	35	269
	14	245	95.91	10100	2.4	RM	67	DRS	71S4	51	269
	16	220	86.11	10200	2.7						
	19	190	74.17	10300	3.2						
	20	179	69.75	10300	3.4						
	23	157	61.26	10400	3.8						
	24	146	56.89	10400	4.1						
	7.0	500	128.77	6610	0.90	R	57	DRS	71M6	27	265
	7.5	470	120.63	7010	0.95	RF	57	DRS	71M6	30	266
	8.5	415	106.58	7250	1.10	RM	57	DRS	71M6	42	266
	9.1	385	98.99	7360	1.15						
	7.4	475	186.89	6980	0.95						
	8.0	440	172.17	7140	1.00						
	9.3	375	147.92	7380	1.20						
	11	325	128.77	7540	1.35						
	11	305	120.63	7610	1.45						
	13	270	106.58	7700	1.65	R	57	DRS	71S4	26	265
	14	250	98.99	7740	1.80	RF	57	DRS	71S4	29	266
15	225	89.71	7800	1.95	RM	57	DRS	71S4	41	266	
17	205	80.55	7840	2.2							
20	177	69.23	7890	2.5							
21	166	64.85	7910	2.7							
24	147	57.29	7760	3.1							
26	136	53.22	7600	3.3							
29	124	48.23	7380	3.6							
9.9	355	139.99	3490	0.85							
11	310	121.87	5350	0.95							
12	290	114.17	5460	1.05							
14	255	100.86	5620	1.15							
15	235	93.68	5700	1.25							
16	215	84.90	5790	1.40							
18	195	76.23	5870	1.55							
20	176	68.54	5930	1.70	R	47	DRS	71S4	20	262	
21	164	64.21	5960	1.80	RF	47	DRS	71S4	20	263	
24	145	56.73	6010	2.1							
26	135	52.69	5990	2.2							
29	122	47.75	5820	2.4							
32	110	42.87	5650	2.7							
37	94	36.93	5410	3.2							
40	89	34.73	5310	3.4							
41	86	33.79	5270	2.8							
44	80	31.12	5140	2.8	R	47	DRS	71S4	20	262	
52	68	26.74	4920	4.4	RF	47	DRS	71S4	20	263	
59	60	23.28	4720	5.0							
63	56	21.81	4620	5.4							
15	230	90.77	4250	0.85	R	37	DRS	71S4	17	259	
16	215	84.61	4720	0.90	RF	37	DRS	71S4	18	260	
19	189	73.96	5070	1.05							
20	178	69.33	5210	1.15							
23	157	61.18	5410	1.30							
25	143	55.76	5530	1.40							
29	123	48.08	5580	1.60							
31	115	44.81	5480	1.75	R	37	DRS	71S4	17	259	
35	100	39.17	5280	2.00	RF	37	DRS	71S4	18	260	
38	94	36.72	5190	2.1							
43	83	32.40	5010	2.4							
48	74	28.73	4850	2.7							
57	62	24.42	4620	3.2							
49	72	28.32	4830	2.8							
53	67	26.03	4710	2.8	R	37	DRS	71S4	17	259	
62	57	22.27	4500	3.5	RF	37	DRS	71S4	18	260	
71	49	19.31	4320	4.0							
76	46	18.05	4230	4.3							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

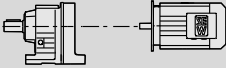

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]							
0.37	88	40	15.60	4050	5.0	R	37	DRS	71S4	17	259						
	104	34	13.25	3850	5.6												
	117	30	11.83	3720	6.0	RF	37	DRS	71S4	18	260						
	23	157	61.30	3870	0.85	R	27	DRS	71S4	11	256						
	25	143	55.87	3800	0.90												
	29	123	48.17	3680	1.05												
	31	115	44.90	3620	1.15												
	35	100	39.25	3510	1.30												
	38	94	36.79	3460	1.40												
	42	83	32.47	3350	1.55												
	48	74	28.78	3250	1.75												
	56	63	24.47	3110	2.1												
	RF	27	DRS	71S4	11							257					
	49	73	28.37	3240	1.80	R	27	DRS	71S4	11	256						
	53	67	26.09	3170	1.95												
	62	57	22.32	3040	2.3												
	71	50	19.35	2920	2.6												
	76	46	18.08	2860	2.8												
	88	40	15.63	2750	3.2												
	104	34	13.28*	2620	3.8												
	RF	27	DRS	71S4	11	257											
	36	99	38.61	770	0.85	R	17	DRS	71S4	10	253						
	38	93	36.20	1260	0.90												
	43	82	31.94	1910	1.05												
	49	72	28.32	1880	1.15												
	57	62	24.07	1830	1.40												
	RF	17	DRS	71S4	10	254											
	55	65	25.23	1840	1.30	R	17	DRS	71S4	9.8	253						
	60	59	23.15	1820	1.45												
	70	50	19.71	1760	1.70												
	81	44	16.99	1710	1.95												
	87	40	15.84	1680	2.1												
	100	35	13.84	1630	2.4												
	106	33	12.98	1610	2.6												
	121	29	11.45	1560	2.8												
	136	26	10.15	1520	3.0												
	160	22	8.63	1460	3.3												
	183	19	7.55	1370	2.9												
	196	18	7.04	1350	3.1												
	224	16	6.15	1300	3.4												
	239	15	5.76	1280	3.6												
	271	13	5.09	1240	3.9												
	306	12	4.51	1200	4.2												
	360	9.8	3.83	1140	4.6												
	RF	17	DRS	71S4	9.7							254					
	75	47	18.31	1000	1.05							R	07	DRS	71S4	8.8	250
	82	43	16.73	980	1.15												
	98	36	14.12	960	1.40												
114	31	12.06	940	1.60													
123	29	11.18	930	1.75													
143	25	9.67	900	2.0													
153	23	9.01	890	2.2													
176	20	7.85	860	2.4													
185	19	7.48	860	2.2													
202	18	6.83	840	2.5													
239	15	5.76	810	2.7													
280	13	4.92	780	2.9													
302	12	4.57	765	3.1													
350	10	3.95	735	3.4													
375	9.4	3.68	720	3.5													
430	8.2	3.21	695	3.8													
RF	07	DRS	71S4	8.8	251												
274	13	9.67	780	3.9	R	07	DR	63L2	7.0	250							
294	12	9.01	765	4.2													
337	10	7.85	740	4.7													
354	10	7.48	730	4.3													
388	9.1	6.83	715	4.7													
460	7.7	5.76	680	5.2													
538	6.6	4.92	650	5.6													
580	6.1	4.57	640	5.9													
671	5.3	3.95	610	6.4													
720	4.9	3.68	600	6.7													
826	4.3	3.21	575	7.2													
RF	07	DR	63L2	7.0							251						



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						RX	RXF	DRS	71M6		
0.37	175	20	5.18	4560	3.7						
	200	18	4.53	4370	4.6	RX	67	DRS	71M6	20	240
	210	17	4.30*	4300	4.8	RXF	67	DRS	71M6	24	241
	240	15	3.77	4130	5.9						
	227	16	6.07	4200	2.8						
	267	13	5.18	3990	5.6						
	305	12	4.53	3820	7.1						
	321	11	4.30*	3760	7.3						
	366	9.7	3.77	3600	9.0	RX	67	DRS	71S4	19	240
	431	8.2	3.20*	3420	12	RXF	67	DRS	71S4	23	241
	478	7.4	2.89	3310	14						
	543	6.5	2.54	3170	18						
	575	6.1	2.40*	3110	20						
	675	5.2	2.04	2950	26						
	208	17	4.35	3490	4.0	RX	57	DRS	71M6	17	238
	239	15	3.79	3340	4.7	RXF	57	DRS	71M6	19	239
	255	14	3.55*	3280	5.0						
	251	14	5.50*	3300	2.8						
	272	13	5.07	3210	2.8						
	317	11	4.35	3060	6.1						
	364	9.7	3.79	2930	7.1						
	389	9.1	3.55*	2870	7.6						
	440	8.0	3.14	2760	8.1	RX	57	DRS	71S4	16	238
	474	7.5	2.91	2690	8.9	RXF	57	DRS	71S4	18	239
	523	6.8	2.64*	2610	10						
	582	6.1	2.37	2520	11						
	676	5.2	2.04	2400	13						
	719	4.9	1.92*	2350	14						
835	4.2	1.65	2240	16							
0.55	0.23	19500	6077	120000	0.90	R	167R97	DRS	71M4	760	287
	0.26	17300	5407	120000	1.05	RF	167R97	DRS	71M4	760	287
	0.30	14700	4650	120000	1.20	RM	167R97	DRS	71M4	960	287
	0.33	12800	4129	120000	1.40						
	0.28	16600	4926	26700	0.80						
	0.32	14400	4325	56500	0.90	R	147R77	DRS	71M4	425	287
	0.37	12600	3754	63300	1.05	RF	147R77	DRS	71M4	430	287
	0.42	11000	3302	66200	1.20	RM	147R77	DRS	71M4	600	287
	0.48	9670	2898	68200	1.35						
	0.54	8750	2555	69400	1.50						
	0.62	7580	2211	70800	1.70						
	0.71	6680	1951	71600	1.95	R	147R77	DRS	71M4	425	287
	0.81	5720	1705	72400	2.3	RF	147R77	DRS	71M4	430	287
	0.90	5120	1536	72900	2.5	RM	147R77	DRS	71M4	600	287
	1.0	4430	1329	73300	2.9						
	1.2	3850	1166	73600	3.4						
	0.56	8510	2484	51800	0.95	R	137R77	DRS	71M4	280	287
						RF	137R77	DRS	71M4	305	287
						RM	137R77	DRS	71M4	415	287
	0.52	9110	2658	47600	0.90						
	0.57	8260	2412	52800	0.95						
	0.67	7100	2073	55200	1.15						
	0.75	6210	1839	56700	1.30						
	0.86	5330	1598	58000	1.50	R	137R77	DRS	71M4	290	287
	0.99	4760	1397	58700	1.70	RF	137R77	DRS	71M4	315	287
	1.1	4150	1226	59300	1.90	RM	137R77	DRS	71M4	425	287
	1.3	3710	1090	59800	2.2						
	1.4	3240	951	60200	2.5						
	1.7	2770	831	60500	2.9						
	0.98	4750	1407	24800	0.90						
	1.1	4080	1209	30600	1.05						
	1.3	3560	1055	32900	1.20	R	107R77	DRS	71M4	200	287
1.5	3110	919	34600	1.40	RF	107R77	DRS	71M4	205	287	
1.7	2780	815	35600	1.55	RM	107R77	DRS	71M4	295	287	
1.9	2430	717	36300	1.75							
2.2	2120	626	36600	2.0							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

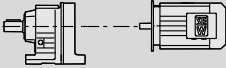

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>0.55</b>	0.99	4730	1400	25600	0.90						
	1.1	4110	1226	30400	1.05	R	107R77	DRS	71M4	205	287
	1.2	3680	1104	32400	1.15	RF	107R77	DRS	71M4	210	287
	1.5	3170	939	34400	1.35	RM	107R77	DRS	71M4	300	287
	1.7	2750	822	35700	1.55						
	1.7	2820	824	22100	1.05						
	1.9	2530	737	23900	1.20						
	2.2	2160	632	25700	1.40						
	2.5	1880	560	26800	1.60	R	97R57	DRS	71M4	130	287
	2.8	1640	484	27400	1.85	RF	97R57	DRS	71M4	150	287
3.2	1480	431	27700	2.0	RM	97R57	DRS	71M4	200	287	
3.6	1300	379	27900	2.3							
4.1	1160	336	28100	2.6							
4.7	1010	296	28200	3.0							
5.5	840	249	28400	3.6							
2.6	1780	525	15000	0.85							
3.0	1550	456	16900	1.00	R	87R57	DRS	71M4	89	287	
3.5	1340	398	18200	1.15	RF	87R57	DRS	71M4	96	287	
3.9	1190	352	19000	1.30	RM	87R57	DRS	71M4	125	287	
4.5	1020	305	19700	1.50							
2.9	1660	472	16100	0.95	R	87R57	DRS	71M4	87	287	
3.4	1400	400	17900	1.10	RF	87R57	DRS	71M4	95	287	
3.8	1260	361	18700	1.25	RM	87R57	DRS	71M4	125	287	
5.0	970	276	6200	0.85	R	77R37	DRS	71M4	49	287	
5.8	820	236	9850	1.00	RF	77R37	DRS	71M4	55	287	
6.2	770	221	10300	1.05	RM	77R37	DRS	71M4	80	287	
7.4	645	186	11300	1.25							
3.2	1660	289.74	27400	1.80	R	97	DRS	80S6	110	277	
3.6	1460	255.71	27700	2.0	RF	97	DRS	80S6	130	278	
3.8	1380	241.25	27800	2.2	RM	97	DRS	80S6	180	278	
4.2	1240	216.28	28000	2.4							
4.8	1100	289.74	28100	2.7	R	97	DRS	71M4	110	277	
5.4	970	255.71	28200	3.1	RF	97	DRS	71M4	125	278	
5.7	910	241.25	28300	3.3	RM	97	DRS	71M4	175	278	
6.4	820	216.28	28400	3.6							
3.7	1410	246.54	17800	1.10	R	87	DRS	80S6	69	274	
4.2	1240	216.54	18800	1.25	RF	87	DRS	80S6	76	275	
4.4	1180	205.71	19100	1.30	RM	87	DRS	80S6	105	275	
5.0	1040	181.77	19700	1.50							
5.9	890	155.34	20000	1.75							
5.6	930	246.54	20000	1.65							
6.4	820	216.54	20000	1.90							
6.7	780	205.71	20000	2.00							
7.6	690	181.77	20000	2.2	R	87	DRS	71M4	67	274	
8.9	590	155.34	20000	2.6	RF	87	DRS	71M4	74	275	
9.7	540	142.41	20000	2.9	RM	87	DRS	71M4	105	275	
11	475	124.97	20000	3.3							
12	450	118.43*	20000	3.4							
13	390	103.65	20000	3.9							
8.3	630	166.59	11400	1.30							
9.5	550	145.67	11800	1.50							
10.0	525	138.39	12000	1.55							
11	460	121.42	12200	1.75	R	77	DRS	71M4	41	271	
13	390	102.99	12500	2.1	RF	77	DRS	71M4	46	272	
15	350	92.97	12600	2.3	RM	77	DRS	71M4	71	272	
17	310	81.80	12800	2.6							
18	290	77.24	12800	2.8							
21	250	65.77	12900	3.3							
8.7	600	158.14	7540	1.00							
10	520	137.67	8360	1.15							
11	490	128.97	8660	1.20							
12	430	113.94	9110	1.40							
13	400	105.83	9320	1.50	R	67	DRS	71M4	34	268	
14	365	95.91	9550	1.65	RF	67	DRS	71M4	37	269	
16	325	86.11	9750	1.85	RM	67	DRS	71M4	52	269	
19	280	74.17	9960	2.1							
20	265	69.75	10000	2.3							
23	230	61.26	10200	2.6							
24	215	56.89	10200	2.8							



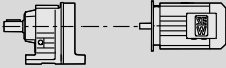

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
0.55	11	455	120.63	7060	1.00						
	13	405	106.58	7290	1.10						
	14	375	98.99	7390	1.20						
	15	340	89.71	7510	1.30						
	17	305	80.55	7610	1.45						
	20	260	69.23	7720	1.70	R	57	DRS	71M4	27	265
	21	245	64.85	7750	1.80	RF	57	DRS	71M4	30	266
	24	215	57.29	7500	2.1	RM	57	DRS	71M4	42	266
	26	200	53.22	7360	2.2						
	29	184	48.23	7160	2.4						
	32	165	43.30	6960	2.7						
	37	142	37.30*	6670	3.2						
	39	134	35.07	6560	3.4						
	52	100	26.31	6030	4.5	R	57	DRS	71M4	26	265
	55	95	24.99*	5940	4.7	RF	57	DRS	71M4	29	266
	63	84	21.93	5720	5.4	RM	57	DRS	71M4	41	266
	74	71	18.60*	5440	6.4						
	15	355	93.68	3610	0.85						
	16	320	84.90	5290	0.95						
	18	290	76.23	5470	1.05						
	20	260	68.54	5610	1.15						
	21	240	64.21	5690	1.25						
	24	215	56.73	5800	1.40	R	47	DRS	71M4	22	262
	26	200	52.69	5750	1.50	RF	47	DRS	71M4	22	263
	29	182	47.75	5610	1.65						
	32	163	42.87	5450	1.85						
	37	140	36.93	5240	2.1						
	40	132	34.73	5160	2.3						
	46	114	29.88	4950	2.6						
	52	102	26.74	4800	3.0	R	47	DRS	71M4	21	262
	59	89	23.28	4610	3.4	RF	47	DRS	71M4	21	263
	63	83	21.81	4520	3.6						
	23	230	61.18	4210	0.85						
	25	210	55.76	4780	0.95						
	29	183	48.08	5150	1.10						
	31	171	44.81	5220	1.15	R	37	DRS	71M4	18	259
	35	149	39.17	5050	1.35	RF	37	DRS	71M4	19	260
	38	140	36.72	4980	1.45						
	43	123	32.40	4820	1.60						
48	109	28.73	4680	1.85							
57	93	24.42	4480	2.2							
62	85	22.27	4370	2.4							
71	74	19.31	4200	2.7							
76	69	18.05	4120	2.9	R	37	DRS	71M4	18	259	
88	59	15.60	3960	3.4	RF	37	DRS	71M4	19	260	
104	50	13.25	3780	3.8							
117	45	11.83	3650	4.1							
35	149	39.25	3270	0.85							
38	140	36.79	3230	0.95							
42	124	32.47	3150	1.05	R	27	DRS	71M4	12	256	
48	110	28.78	3070	1.20	RF	27	DRS	71M4	12	257	
56	93	24.47	2960	1.40							
62	85	22.32	2900	1.55							
71	74	19.35	2800	1.75							
76	69	18.08	2750	1.90							
88	60	15.63	2650	2.2							
104	50	13.28*	2540	2.6							
116	45	11.86	2460	2.9							
136	38	10.13	2360	3.2							
147	36	9.41	2280	3.4	R	27	DRS	71M4	12	256	
169	31	8.16	2190	3.7	RF	27	DRS	71M4	12	257	
181	29	7.63*	2150	3.9							
209	25	6.59	2070	4.2							
246	21	5.60*	1970	4.6							
276	19	5.00*	1910	5.0							
323	16	4.27	1820	5.3							
345	15	4.00*	1780	5.6							
410	13	3.37	1690	6.2							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

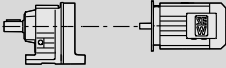

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$			$m$ [kg]			
<b>0.55</b>	52	100	53.76	630	0.85						
	59	89	47.44	1530	0.95	R	17	DRS	71M2	11	253
	64	83	44.18	1600	1.05	RF	17	DRS	71M2	11	254
	73	72	38.61	1580	1.20						
	70	75	19.71	1580	1.15						
	81	65	16.99	1560	1.30						
	87	60	15.84	1540	1.40						
	100	53	13.84	1510	1.60						
	106	49	12.98	1490	1.70						
	121	44	11.45	1460	1.85						
	136	39	10.15	1430	2.00	R	17	DRS	71M4	11	253
	160	33	8.63	1380	2.2	RF	17	DRS	71M4	11	254
	183	29	7.55	1290	1.95						
	196	27	7.04	1270	2.0						
	224	23	6.15	1230	2.3						
	239	22	5.76	1220	2.4						
	271	19	5.09	1180	2.6						
	306	17	4.51	1150	2.8						
	360	15	3.83	1100	3.1						
	326	16	8.63	1160	4.5						
	372	14	7.55	1090	4.0	R	17	DRS	71M2	11	253
	399	13	7.04	1070	4.2	RF	17	DRS	71M2	11	254
	457	12	6.15	1040	4.7						
	153	34	18.31	810	1.45						
	168	31	16.73	795	1.60						
	199	26	14.12	775	1.90						
	233	22	12.06	755	2.2						
	251	21	11.18	745	2.4						
	291	18	9.67	725	2.8						
	312	17	9.01	715	3.0						
	358	15	7.85	690	3.3	R	07	DRS	71M2	10	250
	376	14	7.48	685	3.1	RF	07	DRS	71M2	10	251
	411	13	6.83	670	3.4						
	487	11	5.76	645	3.7						
	571	9.2	4.92	620	4.0						
	615	8.5	4.57	605	4.2						
	712	7.4	3.95	585	4.6						
	764	6.9	3.68	570	4.8						
	876	6.0	3.21	550	5.2						
	177	30	5.18	4480	2.5	RX	67	DRS	80S6	22	240
	202	26	4.53	4300	3.2	RXF	67	DRS	80S6	26	241
	213	25	4.30*	4230	3.2						
	243	22	3.77	4060	4.0						
	267	20	5.18	3950	3.8						
	305	17	4.53	3790	4.8						
	321	16	4.30*	3720	4.9						
	366	14	3.77	3570	6.0						
	431	12	3.20*	3390	8.2	RX	67	DRS	71M4	20	240
	478	11	2.89	3280	9.6	RXF	67	DRS	71M4	24	241
	543	9.7	2.54	3150	12						
	575	9.1	2.40*	3090	14						
	675	7.8	2.04	2940	17						
	743	7.1	1.86	2850	18						
	858	6.1	1.61	2720	19						
	210	25	4.35	3420	2.7						
	241	22	3.79	3280	3.2						
	258	20	3.55*	3220	3.4	RX	57	DRS	80S6	20	238
	292	18	3.14	3100	3.6	RXF	57	DRS	80S6	22	239
	314	17	2.91	3030	4.0						



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.55</b>	317	17	4.35	3020	4.1				
	364	14	3.79	2890	4.8				
	389	14	3.55*	2840	5.1				
	440	12	3.14	2730	5.5				
	474	11	2.91	2660	6.0				
	523	10	2.64*	2580	6.9	RX 57	DRS 71M4	17	238
	582	9.0	2.37	2500	7.7	RXF 57	DRS 71M4	19	239
	676	7.8	2.04	2380	8.8				
	719	7.3	1.92*	2330	9.4				
	835	6.3	1.65	2220	11				
	935	5.6	1.48	2140	12				
1060	5.0	1.30	2060	13					
<b>0.75</b>	0.31	19800	4650	120000	0.90	R 167R97	DRE 80M4	760	287
	0.35	17300	4129	120000	1.05	RF 167R97	DRE 80M4	770	287
						RM 167R97	DRE 80M4	960	287
	0.54	11600	2657	120000	1.55	R 167R97	DRE 80M4	760	287
	0.62	10000	2333	120000	1.80	RF 167R97	DRE 80M4	760	287
	0.69	8880	2085	120000	2.0	RM 167R97	DRE 80M4	960	287
	1.0	6280	1438	120000	2.9				
	0.43	14600	3302	54100	0.90	R 147R77	DRE 80M4	430	287
	0.50	12800	2898	62900	1.00	RF 147R77	DRE 80M4	440	287
						RM 147R77	DRE 80M4	600	287
	0.56	11600	2555	65300	1.10				
	0.65	10000	2211	67700	1.30				
	0.74	8860	1951	69300	1.45	R 147R77	DRE 80M4	430	287
	0.84	7610	1705	70700	1.70	RF 147R77	DRE 80M4	435	287
	0.93	6830	1536	71500	1.90	RM 147R77	DRE 80M4	600	287
	1.1	5910	1329	72300	2.2				
	1.2	5150	1166	72800	2.5				
	0.77	8370	1863	52400	0.95	R 137R77	DRE 80M4	285	287
	0.90	7090	1586	55200	1.15	RF 137R77	DRE 80M4	310	287
	1.0	6320	1391	56500	1.25	RM 137R77	DRE 80M4	420	287
	1.1	5680	1256	57500	1.40				
	0.69	9410	2073	42400	0.85				
	0.78	8260	1839	52800	0.95				
	0.90	7110	1598	55200	1.10				
	1.0	6320	1397	56500	1.25	R 137R77	DRE 80M4	295	287
	1.2	5520	1226	57700	1.45	RF 137R77	DRE 80M4	320	287
	1.3	4930	1090	58500	1.60	RM 137R77	DRE 80M4	430	287
	1.5	4300	951	59200	1.85				
	1.7	3700	831	59800	2.2				
	2.0	3220	730	60200	2.5				
	1.4	4740	1055	25200	0.90	R 107R77	DRE 80M4	205	287
	1.6	4140	919	30300	1.05	RF 107R77	DRE 80M4	210	287
	1.8	3690	815	32400	1.15	RM 107R77	DRE 80M4	300	287
	1.5	4210	939	29900	1.00	R 107R77	DRE 80M4	210	287
	1.8	3670	822	32500	1.15	RF 107R77	DRE 80M4	215	287
	3.9	1640	369	37100	2.6	RM 107R77	DRE 80M4	305	287
	4.4	1430	323	37300	3.0				
	2.3	2870	632	21800	1.05				
	2.6	2510	560	24000	1.20				
	3.0	2180	484	25600	1.40				
	3.3	1960	431	26500	1.50	R 97R57	DRE 80M4	135	287
	3.8	1720	379	27300	1.75	RF 97R57	DRE 80M4	155	287
4.3	1530	336	27600	1.95	RM 97R57	DRE 80M4	205	287	
4.8	1340	296	27900	2.2					
5.8	1120	249	28100	2.7					
3.6	1790	398	15000	0.85					
4.1	1580	352	16700	1.00	R 87R57	DRE 80M4	94	287	
4.7	1360	305	18100	1.15	RF 87R57	DRE 80M4	100	287	
5.4	1200	268	18900	1.30	RM 87R57	DRE 80M4	130	287	
6.1	1060	236	19600	1.45					
4.0	1660	361	16000	0.95	R 87R57	DRE 80M4	92	287	
4.8	1370	300	18000	1.10	RF 87R57	DRE 80M4	100	287	
5.6	1160	256	19100	1.35	RM 87R57	DRE 80M4	130	287	
3.7	1940	255.71	26600	1.55	R 97	DRE 90L6	120	277	
3.9	1830	241.25	27000	1.65	RF 97	DRE 90L6	135	278	
4.4	1640	216.28	27400	1.80	RM 97	DRE 90L6	190	278	

kVA	n
f	
i	P
H <sub>Z</sub>	

**R..DRE/DRS**  
R..DRE/DRS [kW]

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>		m [kg]			
0.75	5.0	1440	289.74	27700	2.1					
	5.6	1270	255.71	27900	2.4	R	97	DRE 80M4	115	277
	6.0	1200	241.25	28000	2.5	RF	97	DRE 80M4	130	278
	6.6	1070	216.28	28100	2.8	RM	97	DRE 80M4	180	278
	7.7	920	186.30	28300	3.2					
	8.4	840	170.02	28400	3.5					
	4.3	1640	216.54	16200	0.95	R	87	DRE 90L6	79	274
	4.6	1560	205.71	16800	1.00	RF	87	DRE 90L6	86	275
	5.2	1380	181.77	18000	1.10	RM	87	DRE 90L6	115	275
	6.0	1180	155.34	19000	1.30	R	87	DRE 90L6	79	274
	6.6	1080	142.41	19500	1.45	RF	87	DRE 90L6	86	275
						RM	87	DRE 90L6	115	275
	5.8	1230	246.54	18800	1.25					
	6.6	1080	216.54	19500	1.45					
	7.0	1020	205.71	19700	1.50					
7.9	900	181.77	20000	1.70	R	87	DRE 80M4	72	274	
9.2	775	155.34	20000	2.0	RF	87	DRE 80M4	79	275	
10	710	142.41	20000	2.2	RM	87	DRE 80M4	110	275	
11	620	124.97	20000	2.5						
12	590	118.43*	20000	2.6						
14	515	103.65	20000	3.0						
15	465	93.38	20000	3.3						
8.6	830	166.59	9810	1.00	R	77	DRE 80M4	46	271	
9.8	725	145.67	10700	1.15	RF	77	DRE 80M4	52	272	
10	690	138.39	11000	1.20	RM	77	DRE 80M4	77	272	
12	605	121.42	11500	1.35						
14	510	102.99	12000	1.60						
15	460	92.97	12200	1.75						
18	405	81.80	12500	2.0	R	77	DRE 80M4	46	271	
19	385	77.24	12500	2.1	RF	77	DRE 80M4	52	272	
22	325	65.77	12700	2.5	RM	77	DRE 80M4	77	272	
25	285	57.68	12800	2.8						
28	255	52.07	12900	3.2						
31	225	45.81	13000	3.6						
33	215	43.26	13000	3.8						
11	640	128.97	7000	0.95						
13	565	113.94	7920	1.05						
14	525	105.83	8320	1.15						
15	475	95.91	8760	1.25						
17	425	86.11	9140	1.40	R	67	DRE 80M4	38	268	
19	370	74.17	9520	1.60	RF	67	DRE 80M4	42	269	
21	345	69.75	9640	1.70	RM	67	DRE 80M4	57	269	
23	305	61.26	9860	1.95						
25	280	56.89	9960	2.1						
28	255	51.56	10100	2.3						
31	230	46.29	10200	2.6						
13	530	106.58	5490	0.85						
14	490	98.99	6900	0.90						
16	445	89.71	7120	1.00	R	57	DRE 80M4	32	265	
18	400	80.55	7300	1.10	RF	57	DRE 80M4	35	266	
21	345	69.23	7470	1.30	RM	57	DRE 80M4	47	266	
22	320	64.85	7360	1.40						
25	285	57.29	7150	1.55						
27	265	53.22	7030	1.70						
30	240	48.23	6860	1.85						
33	215	43.30	6670	2.1	R	57	DRE 80M4	32	265	
38	186	37.30*	6420	2.4	RF	57	DRE 80M4	35	266	
41	175	35.07	6320	2.6	RM	57	DRE 80M4	47	266	
48	151	30.18	6060	3.0						
53	135	26.97	5880	3.3						
55	131	26.31	5840	3.4						
57	125	24.99*	5760	3.6	R	57	DRE 80M4	31	265	
65	109	21.93	5540	4.1	RF	57	DRE 80M4	34	266	
77	93	18.60*	5290	4.8	RM	57	DRE 80M4	46	266	
21	340	68.54	4460	0.90						
22	320	64.21	5300	0.95	R	47	DRE 80M4	27	262	
25	280	56.73	5510	1.05	RF	47	DRE 80M4	27	263	

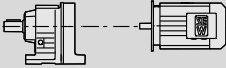





$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>0.75</b>	27	260	52.69	5440	1.15						
	30	235	47.75	5320	1.25						
	33	210	42.87	5190	1.40						
	39	184	36.93	5010	1.65	R	47	DRE	80M4	27	262
	41	173	34.73	4930	1.75	RF	47	DRE	80M4	27	263
	48	149	29.88	4750	2.0						
	54	133	26.70	4610	2.2						
	61	118	23.59	4460	2.6						
	54	134	26.74	4610	2.2						
	62	116	23.28	4450	2.6						
66	109	21.81	4370	2.8	R	47	DRE	80M4	26	262	
74	96	19.27	4220	3.1	RF	47	DRE	80M4	26	263	
80	89	17.89	4140	3.2							
88	81	16.22	4020	3.4							
30	240	48.08	3550	0.85	R	37	DRE	80M4	23	259	
32	220	44.81	4480	0.90	RF	37	DRE	80M4	24	260	
37	196	39.17	4760	1.00							
39	183	36.72	4700	1.10							
44	162	32.40	4570	1.25	R	37	DRE	80M4	23	259	
50	143	28.73	4450	1.40	RF	37	DRE	80M4	24	260	
59	122	24.42	4280	1.65							
64	111	22.27	4180	1.80							
74	96	19.31	4040	2.1							
80	90	18.05	3960	2.2							
92	78	15.60	3810	2.6	R	37	DRE	80M4	23	259	
108	66	13.25	3650	2.9	RF	37	DRE	80M4	24	260	
121	59	11.83	3540	3.1							
142	50	10.11	3380	3.4							
152	47	9.47	3320	3.5							
50	144	28.78	2860	0.90	R	27	DRE	80M4	17	256	
59	122	24.47	2780	1.05	RF	27	DRE	80M4	17	257	
64	111	22.32	2730	1.15							
74	97	19.35	2650	1.35							
79	90	18.08	2610	1.45							
92	78	15.63	2520	1.65							
108	66	13.28*	2430	1.95							
121	59	11.86	2360	2.2	R	27	DRE	80M4	17	256	
142	50	10.13	2270	2.4	RF	27	DRE	80M4	17	257	
152	47	9.41	2190	2.6							
176	41	8.16	2110	2.8							
188	38	7.63*	2070	2.9							
218	33	6.59	1990	3.2							
256	28	5.60*	1900	3.6							
287	25	5.00*	1850	3.8							
73	98	19.71	820	0.85							
84	85	16.99	1390	1.00							
91	79	15.84	1380	1.10							
104	69	13.84	1370	1.25							
111	65	12.98	1360	1.30							
125	57	11.45	1340	1.40							
141	51	10.15	1320	1.50							
166	43	8.63	1280	1.65	R	17	DRE	80M4	16	253	
190	38	7.55	1190	1.50	RF	17	DRE	80M4	16	254	
204	35	7.04	1180	1.55							
233	31	6.15	1150	1.75							
249	29	5.76	1140	1.85							
282	25	5.09	1110	2.0							
318	22	4.51	1080	2.1							
374	19	3.83	1040	2.4							
252	28	11.45	1180	2.8							
285	25	10.15	1150	3.1							
335	21	8.63	1110	3.4							
383	19	7.55	1040	3.0							
411	17	7.04	1020	3.2	R	17	DRE	80M2	16	253	
470	15	6.15	990	3.6	RF	17	DRE	80M2	16	254	
501	14	5.76	980	3.7							
568	13	5.09	950	4.0							
641	11	4.51	920	4.3							
754	9.5	3.83	880	4.7							

kVA	n
f	
i	P Hz

R..DRE/DRS  
R..DRE/DRS [kW]

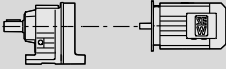

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	i	$F_{Ra}^{1)}$ [N]	SEW $f_B$					m [kg]	
0.75	208	34	4.53	4210	2.4						
	219	33	4.30*	4140	2.4	RX 67		DRE 90L6		32	240
	249	29	3.77	3980	3.0	RXF 67		DRE 90L6		36	241
	294	24	3.20*	3780	4.1						
	277	26	5.18	3860	2.9						
	317	23	4.53	3700	3.6						
	334	22	4.30*	3640	3.7						
	380	19	3.77	3500	4.6						
	448	16	3.20*	3320	6.2						
	497	14	2.89	3220	7.4	RX 67		DRE 80M4		25	240
	565	13	2.54	3090	9.3	RXF 67		DRE 80M4		29	241
	598	12	2.40*	3030	10						
	702	10	2.04	2880	13						
	773	9.3	1.86	2790	14						
	892	8.0	1.61	2670	14						
	248	29	3.79	3200	2.4						
	265	27	3.55*	3140	2.6	RX 57		DRE 90L6		30	238
	300	24	3.14	3020	2.7	RXF 57		DRE 90L6		32	239
	323	22	2.91	2960	3.0						
	356	20	2.64*	2870	3.4						
330	22	4.35	2940	3.1							
379	19	3.79	2820	3.6							
404	18	3.55*	2770	3.9							
458	16	3.14	2660	4.1							
493	14	2.91	2600	4.6							
544	13	2.64*	2520	5.2	RX 57		DRE 80M4		22	238	
605	12	2.37	2440	5.8	RXF 57		DRE 80M4		24	239	
703	10	2.04	2330	6.8							
747	9.6	1.92*	2280	7.2							
869	8.2	1.65	2180	8.4							
972	7.4	1.48	2100	9.2							
1100	6.5	1.30	2020	9.7							
1.1	0.53	17600	2657	120000	1.00						
	0.61	15300	2333	120000	1.15						
	0.68	13600	2085	120000	1.30	R	167R97	DRE 90M4		760	287
	0.76	12100	1877	120000	1.50	RF	167R97	DRE 90M4		770	287
	0.85	10800	1670	120000	1.65	RM	167R97	DRE 90M4		960	287
	0.99	9540	1438	120000	1.90						
	1.1	8480	1279	120000	2.1						
	1.3	7390	1123	120000	2.4						
	0.64	15000	2211	49600	0.85						
	0.73	13200	1951	62100	1.00						
	0.83	11400	1705	65500	1.15						
	0.92	10300	1536	67300	1.25						
	1.1	8920	1329	69200	1.45	R	147R77	DRE 90M4		430	287
	1.2	7790	1166	70500	1.65	RF	147R77	DRE 90M4		440	287
	1.4	6850	1029	71500	1.90	RM	147R77	DRE 90M4		610	287
	1.6	5940	889	72300	2.2						
	1.8	5220	784	72800	2.5						
	2.0	4600	695	73200	2.8						
	1.0	9470	1391	41400	0.85						
	1.1	8530	1256	51700	0.95	R	137R77	DRE 90M4		290	287
	1.3	7480	1105	54500	1.05	RF	137R77	DRE 90M4		315	287
	1.4	7050	1043	55300	1.15	RM	137R77	DRE 90M4		425	287
	1.6	5980	888	57100	1.35						
	1.0	9490	1397	41100	0.85						
	1.2	8300	1226	52700	0.95						
	1.3	7400	1090	54600	1.10						
	1.5	6460	951	56300	1.25	R	137R77	DRE 90M4		300	287
	1.7	5580	831	57600	1.45	RF	137R77	DRE 90M4		325	287
	2.0	4870	730	58600	1.65	RM	137R77	DRE 90M4		435	287
	2.3	4160	629	59300	1.90						
2.5	3770	560	59700	2.1							
2.9	3250	490	60200	2.5							
2.0	4850	717	20800	0.90	R	107R77	DRE 90M4		210	287	
					RF	107R77	DRE 90M4		215	287	
					RM	107R77	DRE 90M4		300	287	



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
1.1	2.3	4090	614	30500	1.05						
	2.6	3610	544	32700	1.20						
	2.9	3260	492	34000	1.30						
	3.4	2760	417	35600	1.55	R	107R77	DRE	90M4	215	287
	3.8	2470	369	36200	1.75	RF	107R77	DRE	90M4	220	287
	4.4	2160	323	36600	2.00	RM	107R77	DRE	90M4	305	287
	5.0	1900	285	36900	2.3						
	5.6	1670	253	37100	2.6						
	3.3	2940	431	21300	1.00						
	3.7	2580	379	23600	1.15						
4.2	2290	336	25100	1.30	R	97R57	DRE	90M4	140	287	
4.8	2010	296	26300	1.50	RF	97R57	DRE	90M4	160	287	
5.7	1680	249	27400	1.80	RM	97R57	DRE	90M4	210	287	
6.1	1570	234	27500	1.90							
6.8	1400	209	27800	2.1							
5.3	1810	268	13600	0.85	R	87R57	DRE	90M4	99	287	
6.0	1600	236	16600	0.95	RF	87R57	DRE	90M4	105	287	
6.8	1400	209	17900	1.10	RM	87R57	DRE	90M4	135	287	
5.6	1750	256	15300	0.90	R	87R57	DRE	90M4	97	287	
6.1	1590	232	16600	0.95	RF	87R57	DRE	90M4	105	287	
7.3	1340	195	18200	1.15	RM	87R57	DRE	90M4	135	287	
4.4	2410	216.28	24500	1.25	R	97	DRE	100M6	125	277	
5.0	2080	186.30	26100	1.45	RF	97	DRE	100M6	140	278	
					RM	97	DRE	100M6	195	278	
5.6	1890	255.71	26800	1.60							
5.9	1780	241.25	27200	1.70							
6.6	1590	216.28	27500	1.90							
7.6	1370	186.30	27800	2.2	R	97	DRE	90M4	115	277	
8.4	1250	170.02	28000	2.4	RF	97	DRE	90M4	135	278	
9.4	1110	150.78	28100	2.7	RM	97	DRE	90M4	185	278	
11	930	126.75	28300	3.2							
12	860	116.48	28300	3.5							
6.6	1600	216.54	16600	0.95	R	87	DRE	90M4	76	274	
6.9	1520	205.71	17100	1.00	RF	87	DRE	90M4	83	275	
7.8	1340	181.77	18200	1.15	RM	87	DRE	90M4	115	275	
9.1	1140	155.34	19200	1.35							
10.0	1050	142.41	19600	1.45							
11	920	124.97	20000	1.70							
12	870	118.43*	20000	1.75							
14	765	103.65	20000	2.0	R	87	DRE	90M4	76	274	
15	690	93.38	20000	2.2	RF	87	DRE	90M4	83	275	
17	605	81.92	20000	2.6	RM	87	DRE	90M4	115	275	
20	535	72.57	20000	2.9							
22	470	63.68*	20000	3.3							
24	445	60.35*	20000	3.5							
27	390	52.82	20000	4.0							
12	890	121.42	9130	0.90	R	77	DRE	90M4	50	271	
14	760	102.99	10400	1.10	RF	77	DRE	90M4	55	272	
15	685	92.97	11000	1.20	RM	77	DRE	90M4	80	272	
17	605	81.80	11500	1.35							
18	570	77.24	11700	1.45							
22	485	65.77	12100	1.70							
25	425	57.68	12400	1.90	R	77	DRE	90M4	50	271	
27	385	52.07	12500	2.1	RF	77	DRE	90M4	55	272	
31	335	45.81	12700	2.4	RM	77	DRE	90M4	80	272	
33	320	43.26	12700	2.6							
39	270	36.83	12900	3.0							
42	245	33.47	12900	3.3							
16	635	86.11	7090	0.95							
19	545	74.17	8120	1.10							
20	515	69.75	8440	1.15							
23	450	61.26	8960	1.30							
25	420	56.89	9200	1.45	R	67	DRE	90M4	43	268	
28	380	51.56	9450	1.55	RF	67	DRE	90M4	47	269	
31	340	46.29	9670	1.75	RM	67	DRE	90M4	62	269	
36	295	39.88*	9910	1.95							
38	275	37.50	9980	2.0							
44	235	32.27	10100	2.3							
49	210	28.83	10200	2.4							

kVA	n
f	
i	P Hz

**R..DRE/DRS**  
R..DRE/DRS [kW]

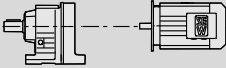

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						R	RF	RM	DRE 90M4		
1.1	50	205	28.13	10200	2.6						
	53	198	26.72	10100	2.7	R	67		DRE 90M4	42	268
	61	173	23.44	9690	3.2	RF	67		DRE 90M4	46	269
	71	147	19.89	9230	4.1	RM	67		DRE 90M4	61	269
	21	510	69.23	6260	0.90	R	57		DRE 90M4	37	265
	22	475	64.85	6830	0.95	RF	57		DRE 90M4	40	266
	25	420	57.29	6690	1.05	RM	57		DRE 90M4	52	266
	27	390	53.22	6600	1.15						
	29	355	48.23	6470	1.25						
	33	320	43.30	6330	1.40	R	57		DRE 90M4	37	265
	38	275	37.30*	6120	1.65	RF	57		DRE 90M4	40	266
	40	255	35.07	6040	1.75	RM	57		DRE 90M4	52	266
	47	220	30.18	5830	2.0						
	53	200	26.97	5670	2.3						
	54	195	26.31	5630	2.3						
	57	185	24.99*	5560	2.4	R	57		DRE 90M4	36	265
	65	162	21.93	5380	2.8	RF	57		DRE 90M4	39	266
	76	138	18.60*	5150	3.3	RM	57		DRE 90M4	51	266
	85	124	16.79	5000	3.6						
	30	350	47.75	3810	0.85						
	33	315	42.87	4840	0.95						
	38	270	36.93	4700	1.10	R	47		DRE 90M4	32	262
	41	255	34.73	4650	1.15	RF	47		DRE 90M4	32	263
	48	220	29.88	4510	1.35						
	53	198	26.70	4400	1.50						
	60	174	23.59	4270	1.70						
	61	172	23.28	4260	1.75						
	65	161	21.81	4190	1.85						
	74	142	19.27	4070	2.1						
	79	132	17.89	4000	2.2						
	88	120	16.22	3900	2.3	R	47		DRE 90M4	31	262
	98	108	14.56	3790	2.5	RF	47		DRE 90M4	31	263
	113	93	12.54	3640	2.7						
	120	87	11.79	3580	2.8						
	140	75	10.15	3430	3.1						
	157	67	9.07	3320	3.3						
	44	235	32.40	2950	0.85	R	37		DRE 90M4	27	259
	49	210	28.73	3340	0.95	RF	37		DRE 90M4	29	260
	58	181	24.42	3750	1.10						
	74	143	19.31	3830	1.40	R	37		DRE 90M4	27	259
	79	134	18.05	3780	1.50	RF	37		DRE 90M4	28	260
	91	115	15.60	3650	1.75						
	107	98	13.25	3510	1.95						
	120	88	11.83	3410	2.1						
	140	75	10.11	3280	2.3						
	150	70	9.47	3220	2.4	R	37		DRE 90M4	27	259
	178	59	7.97	3080	2.6	RF	37		DRE 90M4	28	260
	213	49	6.67	2910	2.9						
	251	42	5.67	2780	3.4						
	281	37	5.06	2690	3.6						
	73	143	19.35	2430	0.90						
	79	134	18.08	2410	0.95						
	91	116	15.63	2350	1.10						
	107	98	13.28*	2280	1.30						
	120	88	11.86	2230	1.45						
	140	75	10.13	2160	1.65						
	151	70	9.41	2070	1.75						
	174	60	8.16	2000	1.90	R	27		DRE 90M4	21	256
	186	56	7.63*	1980	2.00	RF	27		DRE 90M4	21	257
	215	49	6.59	1910	2.2						
	254	41	5.60*	1840	2.4						
	284	37	5.00*	1780	2.6						
	332	32	4.27	1710	2.8						
	355	30	4.00*	1680	2.9						
	421	25	3.37	1610	3.2						



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
<b>1.1</b>	216	49	13.28*	1950	2.7						
	242	43	11.86	1890	3.0						
	283	37	10.13	1820	3.3						
	305	34	9.41	1750	3.6						
	352	30	8.16	1690	3.9						
	376	28	7.63*	1660	4.0	R	27	DRE	90M2	21	256
	435	24	6.59	1590	4.4	RF	27	DRE	90M2	21	257
	512	20	5.60*	1520	4.8						
	574	18	5.00*	1470	5.2						
	672	16	4.27	1410	5.6						
	718	15	4.00*	1380	5.8						
	852	12	3.37	1310	6.4						
	252	42	5.63	5650	2.6	RX	77	DRE	90M4	40	242
	265	40	5.35*	5560	2.6	RXF	77	DRE	90M4	42	243
	300	35	4.73	5360	3.5						
	249	42	3.77	3900	2.1	RX	67	DRE	100M6	37	240
						RXF	67	DRE	100M6	41	241
	314	34	4.53	3640	2.4						
	330	32	4.30*	3590	2.5						
	376	28	3.77	3450	3.1						
444	24	3.20*	3280	4.2							
492	21	2.89	3180	5.0							
559	19	2.54	3060	6.3	RX	67	DRE	90M4	30	240	
592	18	2.40*	3000	6.9	RXF	67	DRE	90M4	34	241	
695	15	2.04	2860	8.9							
765	14	1.86	2770	9.2							
883	12	1.61	2650	9.6							
1015	10	1.40*	2530	10							
300	35	3.14	2940	1.85	RX	57	DRE	100M6	35	238	
356	30	2.64*	2800	2.3	RXF	57	DRE	100M6	37	239	
375	28	3.79	2770	2.5							
400	26	3.55*	2720	2.6							
453	23	3.14	2620	2.8							
487	22	2.91	2560	3.1							
538	20	2.64*	2490	3.5							
599	18	2.37	2410	3.9	RX	57	DRE	90M4	27	238	
696	15	2.04	2300	4.6	RXF	57	DRE	90M4	29	239	
740	14	1.92*	2260	4.9							
859	12	1.65	2160	5.7							
962	11	1.48	2080	6.2							
1090	9.6	1.30	2000	6.6							
<b>1.5</b>	0.61	21100	2333	120000	0.85						
	0.69	18700	2085	120000	0.95						
	0.76	16700	1877	120000	1.05						
	0.86	14900	1670	120000	1.20	R	167R97	DRE	90L4	760	287
	0.99	13000	1438	120000	1.40	RF	167R97	DRE	90L4	770	287
	1.1	11600	1279	120000	1.55	RM	167R97	DRE	90L4	960	287
	1.3	10100	1123	120000	1.75						
	1.4	9040	999	120000	2.00						
	3.4	3850	426	73600	3.4	R	147R87	DRE	90L4	455	287
	3.9	3330	368	73900	3.9	RF	147R87	DRE	90L4	465	287
						RM	147R87	DRE	90L4	630	287
	0.84	15600	1705	41200	0.85						
	0.93	14100	1536	60300	0.90						
	1.1	12200	1329	64200	1.05						
	1.2	10600	1166	66800	1.20						
	1.4	9380	1029	68600	1.40	R	147R77	DRE	90L4	435	287
	1.6	8130	889	70200	1.60	RF	147R77	DRE	90L4	445	287
	1.8	7150	784	71200	1.80	RM	147R77	DRE	90L4	610	287
	2.1	6320	695	71900	2.1						
	2.3	5690	619	72400	2.3						
2.6	5120	558	72900	2.5							
1.4	9620	1043	38400	0.85	R	137R77	DRE	90L4	295	287	
1.6	8170	888	53000	1.00	RF	137R77	DRE	90L4	315	287	
2.0	6400	699	56400	1.25	RM	137R77	DRE	90L4	430	287	
2.4	5550	609	57700	1.45							

kVA	n
f	
i	P Hz

R..DRE/DRS  
R..DRE/DRS [kW]

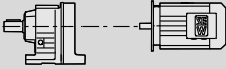

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	i	$F_{Ra}^{1)}$ [N]	SEW $f_B$					m [kg]	
1.5	1.3	10000	1090	27000	0.80						
	1.5	8800	951	50500	0.90						
	1.7	7630	831	54200	1.05						
	2.0	6670	730	55900	1.20						
	2.3	5710	629	57400	1.40	R	137R77	DRE	90L4	300	287
	2.6	5150	560	58200	1.55	RF	137R77	DRE	90L4	325	287
	2.9	4460	490	59000	1.80	RM	137R77	DRE	90L4	435	287
	3.3	3890	428	59600	2.0						
	3.8	3500	381	59900	2.3						
	4.4	2970	323	60400	2.7						
	2.7	4830	528	21700	0.90	R	107R77	DRE	90L4	210	287
						RF	107R77	DRE	90L4	215	287
						RM	107R77	DRE	90L4	305	287
	2.6	4950	544	15700	0.85						
	2.9	4470	492	28500	0.95	R	107R77	DRE	90L4	215	287
3.4	3790	417	31900	1.15	RF	107R77	DRE	90L4	220	287	
3.9	3380	369	33600	1.25	RM	107R77	DRE	90L4	310	287	
4.4	2960	323	35100	1.45							
3.0	4400	469	28900	1.00	R	107R77	DRE	90L4	210	287	
					RF	107R77	DRE	90L4	215	287	
					RM	107R77	DRE	90L4	305	287	
4.2	3120	336	14100	0.95							
4.8	2740	296	22700	1.10	R	97R57	DRE	90L4	145	287	
5.7	2300	249	25100	1.30	RF	97R57	DRE	90L4	160	287	
6.1	2140	234	25800	1.40	RM	97R57	DRE	90L4	210	287	
6.8	1920	209	26700	1.55							
3.7	3820	251.15	31800	1.10							
4.1	3500	229.95	33200	1.25	R	107	DRE	100L6	185	279	
4.6	3090	203.16	34600	1.40	RF	107	DRE	100L6	190	280	
5.4	2620	172.34	36000	1.65	RM	107	DRE	100L6	280	280	
5.9	2410	158.68	36300	1.80							
6.6	2160	141.83	36600	2.00							
5.6	2560	255.71	23700	1.15							
5.9	2410	241.25	24500	1.25							
6.6	2160	216.28	25700	1.40							
7.7	1860	186.30	26900	1.60							
8.4	1700	170.02	27300	1.75	R	97	DRE	90L4	120	277	
9.5	1510	150.78	27600	2.00	RF	97	DRE	90L4	135	278	
11	1260	126.75	27900	2.4	RM	97	DRE	90L4	190	278	
12	1160	116.48	28100	2.6							
14	1030	103.44	28200	2.9							
15	920	92.48	28300	3.2							
7.9	1820	181.77	13200	0.85							
9.2	1550	155.34	16900	1.00	R	87	DRE	90L4	79	274	
10	1420	142.41	17700	1.10	RF	87	DRE	90L4	86	275	
11	1250	124.97	18700	1.25	RM	87	DRE	90L4	115	275	
12	1180	118.43*	19000	1.30							
14	1030	103.65	19700	1.50							
15	930	93.38	20000	1.65							
17	820	81.92	20000	1.90							
20	725	72.57	20000	2.1							
22	635	63.68*	20000	2.4	R	87	DRE	90L4	79	274	
24	600	60.35*	20000	2.6	RF	87	DRE	90L4	86	275	
27	525	52.82	20000	2.9	RM	87	DRE	90L4	115	275	
30	475	47.58	20000	3.2							
34	415	41.74	20000	3.7							
39	365	36.84*	19500	4.2							
15	930	92.97	8750	0.90	R	77	DRE	90L4	52	271	
17	810	81.80	9930	1.00	RF	77	DRE	90L4	58	272	
19	770	77.24	10300	1.05	RM	77	DRE	90L4	83	272	
22	655	65.77	11200	1.25							
25	575	57.68	11700	1.40							
27	520	52.07	12000	1.55							
31	455	45.81	12300	1.80							
33	430	43.26	12400	1.90	R	77	DRE	90L4	52	271	
39	365	36.83	12600	2.2	RF	77	DRE	90L4	58	272	
43	335	33.47	12700	2.4	RM	77	DRE	90L4	83	272	
49	290	29.00	12500	2.8							
57	250	25.23	12000	3.1							



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						R	RF	RM	DRE 90L4		
1.5	61	230	23.37	11700	3.5	R	77	DRE	90L4	51	271
	67	210	21.43	11400	3.8	RF	77	DRE	90L4	57	272
	76	188	18.80	11000	4.1	RM	77	DRE	90L4	82	272
	23	610	61.26	7390	1.00						
	25	565	56.89	7900	1.05						
	28	515	51.56	8440	1.15						
	31	460	46.29	8880	1.30	R	67	DRE	90L4	46	268
	36	395	39.88*	9340	1.45	RF	67	DRE	90L4	49	269
	38	375	37.50	9490	1.50	RM	67	DRE	90L4	65	269
	44	320	32.27	9770	1.65						
	50	285	28.83	9930	1.80						
	51	280	28.13	9950	1.90						
	54	265	26.72	9810	2.0	R	67	DRE	90L4	45	268
	61	230	23.44	9460	2.4	RF	67	DRE	90L4	48	269
	72	199	19.89	9030	3.0	RM	67	DRE	90L4	64	269
	80	180	17.95	8770	3.3						
	27	530	53.22	5450	0.85	R	57	DRE	90L4	39	265
	30	480	48.23	6000	0.95	RF	57	DRE	90L4	43	266
	33	430	43.30	5900	1.05	RM	57	DRE	90L4	55	266
	38	370	37.30*	5760	1.20						
	41	350	35.07	5690	1.30	R	57	DRE	90L4	39	265
	47	300	30.18	5530	1.50	RF	57	DRE	90L4	43	266
	53	270	26.97	5400	1.65	RM	57	DRE	90L4	55	266
	54	260	26.31	5370	1.70						
	57	250	24.99*	5310	1.80						
	65	215	21.93	5160	2.0						
	77	186	18.60*	4960	2.4	R	57	DRE	90L4	38	265
	85	168	16.79	4840	2.7	RF	57	DRE	90L4	42	266
	97	148	14.77*	4680	2.9	RM	57	DRE	90L4	54	266
	103	140	13.95*	4610	3.1						
	120	119	11.88	4420	3.4						
	39	365	36.93	2750	0.80						
	41	345	34.73	4130	0.85	R	47	DRE	90L4	34	262
	48	295	29.88	4210	1.00	RF	47	DRE	90L4	34	263
	54	265	26.70	4130	1.10						
	61	235	23.59	4040	1.25						
	61	230	23.28	4030	1.30						
	66	215	21.81	3980	1.35						
	74	193	19.27	3870	1.55						
	80	179	17.89	3810	1.60						
	88	162	16.22	3730	1.70						
	98	146	14.56	3640	1.80						
	114	126	12.54	3510	2.00						
	121	118	11.79	3460	2.1						
	141	102	10.15	3330	2.3	R	47	DRE	90L4	33	262
	158	91	9.07	3230	2.4	RF	47	DRE	90L4	34	263
	178	80	8.01	3120	2.6						
	184	78	7.76*	3050	2.1						
205	70	6.96	2970	2.3							
238	60	6.00	2850	2.6							
254	56	5.64*	2800	2.7							
295	49	4.85	2690	3.1							
330	43	4.34	2600	3.4							
373	38	3.83	2510	3.8							
74	193	19.31	2700	1.05	R	37	DRE	90L4	29	259	
79	181	18.05	2880	1.10	RF	37	DRE	90L4	31	260	
92	156	15.60	3190	1.30							
108	133	13.25	3340	1.45							
121	118	11.83	3260	1.55							
141	101	10.11	3140	1.70							
151	95	9.47	3100	1.75							
179	80	7.97	2970	1.95							
214	67	6.67	2810	2.2	R	37	DRE	90L4	29	259	
252	57	5.67	2700	2.5	RF	37	DRE	90L4	31	260	
283	51	5.06	2620	2.7							
331	43	4.32	2510	2.9							
353	40	4.05	2460	3.0							
419	34	3.41	2350	3.3							

kVA	n
f	
i	
P	H <sub>Z</sub>

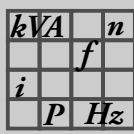
**R..DRE/DRS**  
R..DRE/DRS [kW]

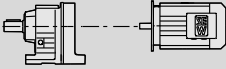

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>			m [kg]			
<b>1.5</b>	214	67	13.25	2840	2.8						
	239	60	11.83	2760	3.1						
	280	51	10.11	2640	3.3	R	37	DRE	90M2	27	259
	299	48	9.47	2600	3.5	RF	37	DRE	90M2	28	260
	355	40	7.97	2480	3.9						
	91	157	15.63	1740	0.85						
	108	133	13.28*	2050	1.00						
	121	119	11.86	2070	1.10						
	141	101	10.13	2020	1.20						
	175	82	8.16	1880	1.40						
188	76	7.63*	1860	1.45	R	27	DRE	90L4	24	256	
217	66	6.59	1810	1.60	RF	27	DRE	90L4	23	257	
255	56	5.60*	1750	1.75							
286	50	5.00*	1700	1.90							
335	43	4.27	1640	2.0							
358	40	4.00*	1620	2.1							
424	34	3.37	1550	2.3							
239	60	11.86	1820	2.2							
279	51	10.13	1750	2.4							
347	41	8.16	1630	2.8							
371	39	7.63*	1600	2.9							
429	33	6.59	1550	3.2	R	27	DRE	90M2	21	256	
505	28	5.60*	1480	3.5	RF	27	DRE	90M2	21	257	
566	25	5.00*	1440	3.8							
663	22	4.27	1380	4.0							
708	20	4.00*	1360	4.2							
840	17	3.37	1290	4.6							
254	56	5.63	5560	1.95							
267	54	5.35*	5470	1.90							
302	47	4.73	5270	2.6							
354	40	4.04*	5030	3.5							
386	37	3.70	4900	4.1	RX	77	DRE	90L4	42	242	
440	33	3.25*	4700	5.6	RXF	77	DRE	90L4	45	243	
464	31	3.08*	4620	6.2							
530	27	2.70	4430	8.0							
589	24	2.43	4290	8.8							
316	45	4.53	3560	1.80							
333	43	4.30*	3510	1.85							
379	38	3.77	3380	2.3							
447	32	3.20*	3220	3.1							
495	29	2.89	3120	3.7	RX	67	DRE	90L4	32	240	
563	26	2.54	3010	4.6	RXF	67	DRE	90L4	36	241	
596	24	2.40*	2950	5.1							
700	20	2.04	2810	6.5							
770	19	1.86	2730	6.8							
889	16	1.61	2610	7.1							
1020	14	1.40*	2500	7.4							
377	38	3.79	2690	1.80							
403	36	3.55*	2640	1.95							
456	31	3.14	2550	2.1							
491	29	2.91	2500	2.3							
542	26	2.64*	2430	2.6							
603	24	2.37	2350	2.9	RX	57	DRE	90L4	30	238	
700	20	2.04	2250	3.4	RXF	57	DRE	90L4	32	239	
745	19	1.92*	2210	3.6							
866	16	1.65	2120	4.2							
969	15	1.48	2040	4.6							
1095	13	1.30	1970	4.8							
<b>2.2</b>	0.85	22300	1670	120000	0.80						
	0.99	19400	1438	120000	0.90						
	1.1	17300	1279	120000	1.05						
	1.3	15100	1123	120000	1.20	R	167R97	DRE	100M4	770	287
	1.4	13400	999	120000	1.35	RF	167R97	DRE	100M4	770	287
	1.6	11600	861	120000	1.55	RM	167R97	DRE	100M4	970	287
	1.9	10200	760	120000	1.75						
	2.2	8620	656	120000	2.1						

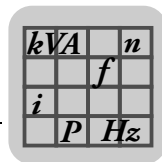




$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					 m [kg]	
<b>2.2</b>	2.7	7110	533	71200	1.85						
	3.1	6120	462	72100	2.1	R	147R87	DRE	100M4	460	287
	3.3	5750	426	72400	2.3	RF	147R87	DRE	100M4	470	287
	3.9	4970	368	73000	2.6	RM	147R87	DRE	100M4	640	287
	4.4	4390	326	73300	3.0						
	1.2	15800	1166	38600	0.80						
	1.4	13900	1029	60600	0.95						
	1.6	12000	889	64400	1.10						
	1.8	10600	784	66800	1.20	R	147R77	DRE	100M4	440	287
	2.0	9410	695	68600	1.40	RF	147R77	DRE	100M4	450	287
	2.3	8450	619	69800	1.55	RM	147R77	DRE	100M4	610	287
	2.6	7600	558	70700	1.70						
	2.9	6650	489	71600	1.95						
	2.0	9510	699	40600	0.85	R	137R77	DRE	100M4	300	287
	2.3	8260	609	52800	0.95	RF	137R77	DRE	100M4	320	287
						RM	137R77	DRE	100M4	435	287
	2.0	9920	730	31700	0.80						
	2.3	8510	629	51800	0.95						
	2.5	7640	560	54100	1.05						
	2.9	6640	490	56000	1.20						
	3.3	5790	428	57300	1.40	R	137R77	DRE	100M4	305	287
	3.7	5200	381	58100	1.55	RF	137R77	DRE	100M4	330	287
	4.4	4410	323	59100	1.80	RM	137R77	DRE	100M4	440	287
	4.9	3970	291	59500	2.0						
	5.6	3470	255	60000	2.3						
	6.4	3040	223	60300	2.6						
	4.4	4400	323	28900	1.00						
	5.0	3870	285	31600	1.10	R	107R77	DRE	100M4	220	287
	5.6	3420	253	33400	1.25	RF	107R77	DRE	100M4	225	287
	6.6	2900	214	35200	1.50	RM	107R77	DRE	100M4	315	287
	4.4	4490	325	28400	0.95	R	107R77	DRE	100M4	215	287
						RF	107R77	DRE	100M4	220	287
						RM	107R77	DRE	100M4	310	287
	6.8	2840	209	22000	1.05	R	97R57	DRE	100M4	150	287
						RF	97R57	DRE	100M4	165	287
						RM	97R57	DRE	100M4	215	287
	4.7	4460	203.16	28500	0.95						
	5.5	3790	172.34	32000	1.15	R	107	DRE	112M6	195	279
	6.0	3490	158.68	33200	1.25	RF	107	DRE	112M6	200	280
	6.7	3120	141.83	34600	1.40	RM	107	DRE	112M6	290	280
	5.7	3700	251.15	32300	1.15	R	107	DRE	100M4	185	279
	6.2	3390	229.95	33600	1.25	RF	107	DRE	100M4	190	280
	7.0	2990	203.16	35000	1.45	RM	107	DRE	100M4	275	280
	8.3	2540	172.34	36100	1.70						
	9.0	2330	158.68	36400	1.85						
	10	2090	141.83	36700	2.1	R	107	DRE	100M4	185	279
	11	1880	127.68	36900	2.3	RF	107	DRE	100M4	190	280
	12	1700	115.63	37100	2.5	RM	107	DRE	100M4	275	280
	14	1510	102.53	37200	2.8						
	15	1360	92.70	37300	3.2						
	6.6	3180	216.28	10200	0.95	R	97	DRE	100M4	125	277
	7.6	2740	186.30	22700	1.10	RF	97	DRE	100M4	140	278
	8.4	2500	170.02	24000	1.20	RM	97	DRE	100M4	195	278
	9.4	2220	150.78	25400	1.35						
	11	1860	126.75	26900	1.60						
	12	1710	116.48	27300	1.75						
	14	1520	103.44	27600	1.95						
	15	1360	92.48	27800	2.2	R	97	DRE	100M4	125	277
	17	1220	83.15	28000	2.4	RF	97	DRE	100M4	140	278
	20	1060	72.17	28200	2.8	RM	97	DRE	100M4	195	278
	22	960	65.21	27600	3.1						
	24	880	59.92	26900	3.4						
	27	780	53.21	26000	3.8						
	30	700	47.58	25200	4.3						
	11	1840	124.97	11700	0.85						
	12	1740	118.43*	15400	0.90	R	87	DRE	100M4	84	274
	14	1520	103.65	17100	1.00	RF	87	DRE	100M4	91	275
	15	1370	93.38	18000	1.15	RM	87	DRE	100M4	120	275
	17	1200	81.92	18900	1.30						


**R..DRE/DRS**  
**R..DRE/DRS [kW]**

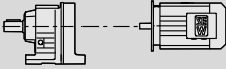

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>2.2</b>	20	1060	72.57	19600	1.45						
	22	930	63.68*	20000	1.65						
	24	880	60.35*	20000	1.75						
	27	775	52.82	20000	2.00	<b>R</b>	<b>87</b>	<b>DRE</b>	<b>100M4</b>	84	274
	30	700	47.58	20000	2.2	<b>RF</b>	<b>87</b>	<b>DRE</b>	<b>100M4</b>	91	275
	34	615	41.74	19800	2.5	<b>RM</b>	<b>87</b>	<b>DRE</b>	<b>100M4</b>	120	275
	39	540	36.84*	19100	2.8						
	44	480	32.66*	18500	3.2						
	41	505	34.40*	18800	3.0						
	45	460	31.40	18300	3.4	<b>R</b>	<b>87</b>	<b>DRE</b>	<b>100M4</b>	82	274
	51	410	27.84*	17600	3.8	<b>RF</b>	<b>87</b>	<b>DRE</b>	<b>100M4</b>	89	275
	61	345	23.40	16700	4.5	<b>RM</b>	<b>87</b>	<b>DRE</b>	<b>100M4</b>	120	275
	66	315	21.51	16300	4.7						
	22	960	65.77	6520	0.85	<b>R</b>	<b>77</b>	<b>DRE</b>	<b>100M4</b>	57	271
	25	850	57.68	9630	0.95	<b>RF</b>	<b>77</b>	<b>DRE</b>	<b>100M4</b>	63	272
	27	765	52.07	10400	1.05	<b>RM</b>	<b>77</b>	<b>DRE</b>	<b>100M4</b>	88	272
	31	675	45.81	11100	1.20						
	33	635	43.26	11300	1.30						
	39	540	36.83	11900	1.50	<b>R</b>	<b>77</b>	<b>DRE</b>	<b>100M4</b>	57	271
	43	490	33.47	12100	1.65	<b>RF</b>	<b>77</b>	<b>DRE</b>	<b>100M4</b>	63	272
49	425	29.00	12100	1.90	<b>RM</b>	<b>77</b>	<b>DRE</b>	<b>100M4</b>	88	272	
56	370	25.23	11600	2.1							
61	340	23.37	11400	2.4							
66	315	21.43	11100	2.6	<b>R</b>	<b>77</b>	<b>DRE</b>	<b>100M4</b>	56	271	
76	275	18.80	10700	2.8	<b>RF</b>	<b>77</b>	<b>DRE</b>	<b>100M4</b>	61	272	
80	260	17.82*	10600	3.0	<b>RM</b>	<b>77</b>	<b>DRE</b>	<b>100M4</b>	86	272	
91	225	15.60	10200	3.2							
101	205	14.05	9880	3.5							
36	585	39.88*	7700	1.00	<b>R</b>	<b>67</b>	<b>DRE</b>	<b>100M4</b>	51	268	
38	550	37.50	8080	1.05	<b>RF</b>	<b>67</b>	<b>DRE</b>	<b>100M4</b>	54	269	
44	475	32.27	8790	1.15	<b>RM</b>	<b>67</b>	<b>DRE</b>	<b>100M4</b>	70	269	
49	425	28.83	9170	1.20							
61	345	23.44	9110	1.60							
72	290	19.89	8740	2.0							
79	260	17.95	8510	2.2							
90	230	15.79	8220	2.4	<b>R</b>	<b>67</b>	<b>DRE</b>	<b>100M4</b>	50	268	
96	215	14.91	8090	2.5	<b>RF</b>	<b>67</b>	<b>DRE</b>	<b>100M4</b>	53	269	
112	187	12.70	7740	2.8	<b>RM</b>	<b>67</b>	<b>DRE</b>	<b>100M4</b>	69	269	
123	170	11.54	7530	2.9							
143	147	10.00	7230	3.2							
164	128	8.70*	6940	3.4							
183	115	7.79	6730	3.3							
38	545	37.30*	4750	0.80	<b>R</b>	<b>57</b>	<b>DRE</b>	<b>100M4</b>	44	265	
41	515	35.07	5100	0.85	<b>RF</b>	<b>57</b>	<b>DRE</b>	<b>100M4</b>	48	266	
47	445	30.18	5020	1.00	<b>RM</b>	<b>57</b>	<b>DRE</b>	<b>100M4</b>	60	266	
53	395	26.97	4950	1.15							
65	320	21.93	4790	1.40							
77	270	18.60*	4650	1.65							
85	245	16.79	4560	1.80							
96	215	14.77*	4440	2.0	<b>R</b>	<b>57</b>	<b>DRE</b>	<b>100M4</b>	43	265	
102	205	13.95*	4380	2.1	<b>RF</b>	<b>57</b>	<b>DRE</b>	<b>100M4</b>	47	266	
120	175	11.88	4220	2.3	<b>RM</b>	<b>57</b>	<b>DRE</b>	<b>100M4</b>	59	266	
132	159	10.79	4130	2.4							
152	138	9.35	3980	2.7							
157	134	9.06	3970	2.8							
179	118	7.97	3840	3.0							
131	160	21.93	4130	2.8							
155	136	18.60*	3970	3.3	<b>R</b>	<b>57</b>	<b>DRE</b>	<b>100M2</b>	43	265	
172	122	16.79	3870	3.7	<b>RF</b>	<b>57</b>	<b>DRE</b>	<b>100M2</b>	47	266	
195	108	14.77*	3740	4.0	<b>RM</b>	<b>57</b>	<b>DRE</b>	<b>100M2</b>	59	266	
206	102	13.95*	3680	4.2							

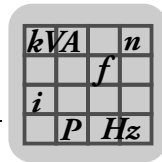


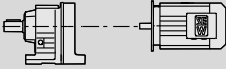

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
<b>2.2</b>	74	280	19.27	3550	1.05						
	88	235	16.22	3460	1.15						
	98	210	14.56	3390	1.25						
	114	185	12.54	3300	1.35						
	121	174	11.79	3260	1.40						
	140	150	10.15	3160	1.55						
	157	134	9.07	3080	1.65						
	178	118	8.01	2990	1.75	R	47	DRE	100M4	38	262
	184	114	7.76*	2900	1.45	RF	47	DRE	100M4	38	263
	205	103	6.96	2830	1.55						
	238	88	6.00	2730	1.75						
	253	83	5.64*	2690	1.85						
	294	72	4.85	2590	2.1						
	329	64	4.34	2520	2.3						
	372	56	3.83	2440	2.6						
	149	140	19.27	3110	2.1						
	178	118	16.22	2990	2.3						
	198	106	14.56	2920	2.5						
	230	92	12.54	2810	2.7	R	47	DRE	100M2	38	262
	244	86	11.79	2760	2.8	RF	47	DRE	100M2	38	263
284	74	10.15	2660	3.1							
318	66	9.07	2580	3.3							
359	58	8.01	2490	3.5							
91	230	15.60	1110	0.85	R	37	DRE	100M4	34	259	
108	195	13.25	1690	0.95	RF	37	DRE	100M4	36	260	
120	174	11.83	2010	1.05							
141	149	10.11	2380	1.15							
151	140	9.47	2500	1.20							
179	118	7.97	2760	1.35							
214	98	6.67	2480	1.45	R	37	DRE	100M4	34	259	
252	84	5.67	2560	1.70	RF	37	DRE	100M4	36	260	
282	75	5.06	2500	1.80							
330	64	4.32	2400	2.00							
352	60	4.05	2370	2.0							
418	50	3.41	2270	2.2							
185	114	15.60	2780	1.75	R	37	DRE	100M2	34	259	
217	97	13.25	2680	1.95	RF	37	DRE	100M2	36	260	
243	86	11.83	2620	2.1							
285	74	10.11	2520	2.3							
304	69	9.47	2480	2.4							
361	58	7.97	2380	2.7							
432	49	6.67	2250	3.0	R	37	DRE	100M2	34	259	
508	41	5.67	2150	3.4	RF	37	DRE	100M2	36	260	
569	37	5.06	2090	3.7							
666	32	4.32	2000	4.0							
712	30	4.05	1960	4.1							
845	25	3.41	1870	4.5							
141	149	10.13	1140	0.80							
216	97	6.59	1150	1.10							
254	83	5.60*	1410	1.20	R	27	DRE	100M4	29	256	
285	74	5.00*	1550	1.30	RF	27	DRE	100M4	29	257	
334	63	4.27	1530	1.40							
356	59	4.00*	1510	1.45							
423	50	3.37	1460	1.60							
217	97	13.28*	1710	1.35							
243	86	11.86	1680	1.50							
284	74	10.13	1630	1.65							
437	48	6.59	1450	2.2	R	27	DRE	100M2	29	256	
514	41	5.60*	1400	2.4	RF	27	DRE	100M2	29	257	
576	36	5.00*	1370	2.6							
674	31	4.27	1320	2.8							
720	29	4.00*	1300	2.9							
855	25	3.37	1240	3.2							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

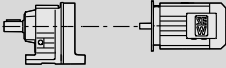

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>2.2</b>	301	70	4.73	5160	1.75				
	353	60	4.04*	4930	2.4				
	385	55	3.70	4810	2.8				
	438	48	3.25*	4620	3.8				
	463	45	3.08*	4550	4.2				
	529	40	2.70	4370	5.4	RX 77	DRE 100M4	47	242
	587	36	2.43	4230	6.0	RXF 77	DRE 100M4	49	243
	669	31	2.13	4060	6.4				
	758	28	1.88*	3910	6.8				
	855	25	1.67	3760	7.0				
	1000	21	1.42	3580	7.4				
	378	56	3.77	3270	1.55				
	445	47	3.20*	3120	2.1				
	493	43	2.89	3040	2.5				
	561	38	2.54	2930	3.2	RX 67	DRE 100M4	37	240
	594	35	2.40*	2880	3.5	RXF 67	DRE 100M4	41	241
	697	30	2.04	2750	4.4				
	767	27	1.86	2670	4.6				
	886	24	1.61	2560	4.8				
	1020	21	1.40*	2450	5.0				
	454	46	3.14	2440	1.40				
540	39	2.64*	2340	1.75					
601	35	2.37	2270	2.00					
698	30	2.04	2180	2.3	RX 57	DRE 100M4	35	238	
742	28	1.92*	2140	2.4	RXF 57	DRE 100M4	37	239	
862	24	1.65	2060	2.8					
965	22	1.48	1990	3.1					
1090	19	1.30	1920	3.3					
<b>3.0</b>	1.3	20300	1123	120000	0.90				
	1.5	18100	999	120000	1.00	R 167R97	DRE 100LC4	770	287
	1.7	15600	861	120000	1.15	RF 167R97	DRE 100LC4	780	287
	1.9	13800	760	120000	1.30	RM 167R97	DRE 100LC4	970	287
	2.2	11600	656	120000	1.55				
	2.9	8950	503	120000	2.0				
	2.7	9590	533	68300	1.35				
	3.2	8270	462	70000	1.55	R 147R87	DRE 100LC4	465	287
	3.4	7740	426	70600	1.70	RF 147R87	DRE 100LC4	475	287
	4.0	6680	368	71600	1.95	RM 147R87	DRE 100LC4	640	287
	4.5	5910	326	72300	2.2				
	5.2	5010	280	72900	2.6				
	1.6	16200	889	33100	0.80				
	1.9	14200	784	58800	0.90	R 147R77	DRE 100LC4	445	287
	2.1	12600	695	63300	1.05	RF 147R77	DRE 100LC4	450	287
	2.4	11300	619	65700	1.15	RM 147R77	DRE 100LC4	620	287
	2.6	10200	558	67500	1.25				
	3.0	8920	490	50000	0.90				
	3.4	7790	428	53800	1.05				
	3.8	6980	381	55400	1.15	R 137R77	DRE 100LC4	310	287
	4.5	5920	323	57200	1.35	RF 137R77	DRE 100LC4	335	287
	5.0	5330	291	58000	1.50	RM 137R77	DRE 100LC4	445	287
	5.7	4650	255	58800	1.70				
	6.5	4080	223	59400	1.95				
	2.8	9600	517	38800	0.85	R 137R77	DRE 100LC4	300	287
	3.2	8420	453	52200	0.95	RF 137R77	DRE 100LC4	325	287
						RM 137R77	DRE 100LC4	435	287
	5.8	4600	253	27700	0.95	R 107R77	DRE 100LC4	225	287
	6.8	3900	214	31500	1.10	RF 107R77	DRE 100LC4	230	287
	7.8	3400	187	33500	1.25	RM 107R77	DRE 100LC4	320	287
	5.7	4730	256	25500	0.90	R 107R77	DRE 100LC4	220	287
						RF 107R77	DRE 100LC4	225	287
					RM 107R77	DRE 100LC4	315	287	
6.0	4760	158.68	24600	0.90	R 107	DRE 132S6	200	279	
6.7	4250	141.83	29700	1.00	RF 107	DRE 132S6	205	280	
7.5	3830	127.68	31800	1.10	RM 107	DRE 132S6	295	280	



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
3.0	6.3	4520	229.95	28200	0.95						
	7.2	4000	203.16	31000	1.10						
	8.4	3390	172.34	33600	1.25						
	9.2	3120	158.68	34500	1.40						
	10	2790	141.83	35600	1.55	R	107	DRE	100LC4	190	279
	11	2510	127.68	36200	1.70	RF	107	DRE	100LC4	195	280
	13	2270	115.63	36500	1.90	RM	107	DRE	100LC4	280	280
	14	2010	102.53	36800	2.1						
	16	1820	92.70	37000	2.4						
	19	1540	78.57	35500	2.8						
	20	1430	72.88	34800	3.0						
	9.6	2960	150.78	20900	1.00						
	11	2490	126.75	24100	1.20						
	12	2290	116.48	25100	1.30						
	14	2030	103.44	26200	1.45						
	16	1820	92.48	27000	1.65						
	18	1630	83.15	27400	1.85						
	20	1420	72.17	27500	2.1	R	97	DRE	100LC4	130	277
	22	1280	65.21	26700	2.3	RF	97	DRE	100LC4	145	278
	24	1170	59.92	26100	2.5	RM	97	DRE	100LC4	200	278
27	1040	53.21	25300	2.9							
31	930	47.58	24500	3.2							
34	840	42.78	23800	3.6							
39	730	37.13	22800	4.1							
44	650	33.25	22100	4.4							
16	1830	93.38	12000	0.85	R	87	DRE	100LC4	89	274	
18	1610	81.92	16500	0.95	RF	87	DRE	100LC4	96	275	
20	1420	72.57	17700	1.10	RM	87	DRE	100LC4	125	275	
23	1250	63.68*	18700	1.25							
24	1180	60.35*	19000	1.30							
28	1030	52.82	19700	1.50							
31	930	47.58	19800	1.65	R	87	DRE	100LC4	89	274	
35	820	41.74	19200	1.90	RF	87	DRE	100LC4	96	275	
40	725	36.84*	18500	2.1	RM	87	DRE	100LC4	125	275	
45	640	32.66*	17900	2.4							
52	545	27.88	17200	2.7							
42	675	34.40*	18200	2.2							
46	615	31.40	17800	2.5							
52	545	27.84*	17200	2.8	R	87	DRE	100LC4	87	274	
62	460	23.40	16300	3.4	RF	87	DRE	100LC4	94	275	
68	420	21.51	15900	3.5	RM	87	DRE	100LC4	125	275	
76	375	19.10	15400	3.8							
85	335	17.08*	14900	4.1							
95	300	15.35	14400	4.4							
32	900	45.81	9090	0.90	R	77	DRE	100LC4	62	271	
34	850	43.26	9620	0.95	RF	77	DRE	100LC4	68	272	
40	725	36.83	10700	1.15	RM	77	DRE	100LC4	93	272	
43	655	33.47	11200	1.25							
50	570	29.00	11600	1.45	R	77	DRE	100LC4	62	271	
58	495	25.23	11200	1.55	RF	77	DRE	100LC4	68	272	
					RM	77	DRE	100LC4	93	272	
62	460	23.37	11000	1.80							
68	420	21.43	10700	1.95							
77	370	18.80	10400	2.1							
82	350	17.82*	10200	2.2							
93	305	15.60	9880	2.4	R	77	DRE	100LC4	61	271	
104	275	14.05	9600	2.6	RF	77	DRE	100LC4	66	272	
118	240	12.33	9250	2.8	RM	77	DRE	100LC4	91	272	
134	210	10.88	8930	3.1							
151	190	9.64	8630	3.3							
169	169	8.59	8400	3.7							
188	152	7.74	8150	4.0							
214	134	6.79	7830	4.3							

$kVA$	$n$
$f$	
$i$	$P$
$H_z$	

R..DRE/DRS  
R..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
3.0	62	460	23.44	8660	1.20						
	73	390	19.89	8350	1.55						
	81	350	17.95	8150	1.65						
	92	310	15.79	7900	1.80	R	67	DRE	100LC4	55	268
	98	290	14.91	7790	1.85	RF	67	DRE	100LC4	58	269
	115	250	12.70	7470	2.1	RM	67	DRE	100LC4	74	269
	126	225	11.54	7290	2.2						
	146	197	10.00	7010	2.4						
	54	530	26.97	4430	0.85						
						R	57	DRE	100LC4	49	265
						RF	57	DRE	100LC4	53	266
						RM	57	DRE	100LC4	65	266
	66	430	21.93	4360	1.05	R	57	DRE	100LC4	48	265
	78	365	18.60*	4280	1.25	RF	57	DRE	100LC4	52	266
	87	330	16.79	4220	1.35	RM	57	DRE	100LC4	64	266
	98	290	14.77*	4140	1.50						
	104	270	13.95*	4100	1.55						
	122	230	11.88	3980	1.75						
	135	210	10.79	3900	1.85						
156	184	9.35	3790	2.0							
161	178	9.06	3780	2.1	R	57	DRE	100LC4	48	265	
183	157	7.97	3670	2.3	RF	57	DRE	100LC4	52	266	
193	148	7.53	3620	2.4	RM	57	DRE	100LC4	64	266	
227	126	6.41	3480	2.6							
250	115	5.82	3400	2.8							
288	99	5.05	3280	3.1							
331	86	4.39	3160	3.2							
130	220	21.93	3930	2.0	R	57	DRE	100L2	46	265	
153	187	18.60*	3800	2.4	RF	57	DRE	100L2	50	266	
170	169	16.79	3720	2.7	RM	57	DRE	100L2	62	266	
193	148	14.77*	3610	2.9	R	57	DRE	100L2	46	265	
204	140	13.95*	3560	3.1	RF	57	DRE	100L2	50	266	
240	119	11.88	3420	3.4	RM	57	DRE	100L2	62	266	
264	108	10.79	3340	3.6							
90	315	16.22	2200	0.85	R	47	DRE	100LC4	43	262	
100	285	14.56	2650	0.90	RF	47	DRE	100LC4	43	263	
116	245	12.54	3040	1.00							
123	230	11.79	3020	1.05							
143	200	10.15	2950	1.15							
160	178	9.07	2890	1.25							
182	158	8.01	2820	1.30							
188	153	7.76*	2720	1.05	R	47	DRE	100LC4	43	262	
209	137	6.96	2660	1.15	RF	47	DRE	100LC4	43	263	
243	118	6.00	2590	1.30							
258	111	5.64*	2560	1.40							
300	96	4.85	2470	1.55							
336	85	4.34	2410	1.70							
380	75	3.83	2340	1.90							
242	119	11.79	2660	2.1							
281	102	10.15	2570	2.2							
314	91	9.07	2500	2.4							
356	80	8.01	2420	2.6							
368	78	7.76*	2360	2.1	R	47	DRE	100L2	41	262	
409	70	6.96	2300	2.3	RF	47	DRE	100L2	41	263	
475	60	6.00	2210	2.6							
505	57	5.64*	2180	2.7							
587	49	4.85	2090	3.1							
657	44	4.34	2030	3.4							
744	38	3.83	1960	3.7							
144	199	10.11	920	0.85	R	37	DRE	100LC4	39	259	
154	186	9.47	1130	0.90	RF	37	DRE	100LC4	41	260	
182	157	7.97	1610	1.00							
218	131	6.67	1350	1.10							
257	112	5.67	1700	1.25							
288	100	5.06	1900	1.35	R	37	DRE	100LC4	39	259	
337	85	4.32	2110	1.50	RF	37	DRE	100LC4	41	260	
360	80	4.05	2180	1.55							
427	67	3.41	2160	1.65							

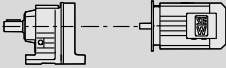



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]							
3.0	282	102	10.11	2360	1.65	R	37	DRE	100L2	37	259						
	301	95	9.47	2370	1.75												
	357	80	7.97	2280	1.95												
	427	67	6.67	2160	2.2	R	37	DRE	100L2	37	259						
	503	57	5.67	2080	2.5												
	563	51	5.06	2020	2.6												
	660	43	4.32	1950	2.9												
	704	41	4.05	1910	3.0												
	836	34	3.41	1830	3.3												
	260	110	5.60*	450	0.90	R	27	DRE	100LC4	34	256						
	291	98	5.00*	695	0.95												
	341	84	4.27	970	1.05												
	364	79	4.00*	1070	1.10												
	432	66	3.37	1280	1.20												
	432	66	6.59	1280	1.60	R	27	DRE	100L2	32	256						
	509	56	5.60*	1320	1.75												
	570	50	5.00*	1300	1.90												
	667	43	4.27	1260	2.0												
	712	40	4.00*	1240	2.1												
	846	34	3.37	1190	2.3												
	225	127	6.45	7050	1.50							RX	87	DRE	100LC4	69	244
	262	110	5.56*	6760	2.0												
	287	100	5.07	6580	2.5												
	323	89	4.50*	6350	3.3												
	385	74	3.78	6040	4.1												
	308	93	4.73	5000	1.30	RX	77	DRE	100LC4	52	242						
	360	80	4.04*	4780	1.80												
	393	73	3.70	4670	2.1												
	448	64	3.25*	4500	2.8												
	472	61	3.08*	4430	3.2												
	386	74	3.77	3120	1.15	RX	67	DRE	100LC4	42	240						
	455	63	3.20*	3000	1.60												
	504	57	2.89	2920	1.85												
	572	50	2.54	2820	2.4												
	606	47	2.40*	2780	2.6												
	712	40	2.04	2660	3.3												
	783	37	1.86	2590	3.4												
	904	32	1.61	2480	3.6												
	1040	28	1.40*	2380	3.8												
	464	62	3.14	2310	1.05							RX	57	DRE	100LC4	40	238
	551	52	2.64*	2220	1.35												
	614	47	2.37	2160	1.50												
	713	40	2.04	2080	1.70												
	758	38	1.92*	2050	1.85												
	881	32	1.65	1970	2.1												
	986	29	1.48	1910	2.3												
	1115	26	1.30	1850	2.4												
	4.0	1.7	20800	861	120000	0.85	R	167R97	DRE	132S4	790	287					
1.9		18400	760	120000	1.00												
2.2		15600	656	120000	1.15												
2.9		12000	503	120000	1.50												
3.9		8990	376	120000	2.0												
4.4		8000	335	120000	2.2												
2.7		12800	533	63000	1.00	R	147R87	DRE	132S4	480	287						
3.2		11000	462	66100	1.15												
3.4		10300	426	67300	1.25												
4.0		8930	368	69200	1.45												
4.5		7890	326	70400	1.65												
5.2		6720	280	71600	1.95												
5.9		5930	247	72300	2.2												
6.8		5120	214	72900	2.5												
7.7		4530	189	73200	2.9												
9.2		3810	159	73600	3.4												
2.4		15100	619	48900	0.85							R	147R77	DRE	132S4	460	287
2.6		13600	558	61400	0.95												
3.0		11900	489	64700	1.10												
3.5		10100	415	67600	1.30												

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## R..DRE/DRS

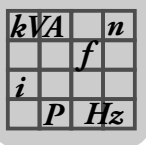
### R..DRE/DRS [kW]

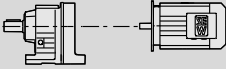

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>4.0</b>	3.8	9300	381	44400	0.85						
	4.5	7890	323	53600	1.00	R	137R77	DRE	132S4	325	287
	5.0	7100	291	55200	1.15	RF	137R77	DRE	132S4	350	287
	5.7	6210	255	56700	1.30	RM	137R77	DRE	132S4	460	287
	6.5	5440	223	57800	1.45						
	3.9	9290	376	44600	0.85	R	137R77	DRE	132S4	315	287
	4.3	8360	339	52400	0.95	RF	137R77	DRE	132S4	340	287
	4.9	7320	297	54800	1.10	RM	137R77	DRE	132S4	450	287
	7.8	4550	187	28000	0.95	R	107R77	DRE	132S4	240	287
						RF	107R77	DRE	132S4	245	287
						RM	107R77	DRE	132S4	335	287
	7.6	4750	193	24700	0.90	R	107R77	DRE	132S4	235	287
	8.5	4250	172	29700	1.00	RF	107R77	DRE	132S4	240	287
						RM	107R77	DRE	132S4	330	287
	4.3	8850	222.60*	50300	0.90						
	5.1	7490	188.45	54400	1.05	R	137	DRE	132M6	300	281
	5.5	6930	174.40*	55500	1.15	RF	137	DRE	132M6	325	282
	6.1	6210	156.31	56700	1.30	RM	137	DRE	132M6	435	282
	6.8	5610	141.12*	57600	1.40						
	7.5	5100	128.18	58300	1.55						
	8.4	4520	113.72	59000	1.75	R	137	DRE	132M6	300	281
	9.3	4100	103.20*	59400	1.95	RF	137	DRE	132M6	325	282
	11	3520	88.70*	59900	2.3	RM	137	DRE	132M6	435	282
	8.5	4500	172.34	28300	0.95						
	9.2	4150	158.68	30200	1.05						
	10	3710	141.83	32300	1.15						
	11	3340	127.68	33800	1.30						
	13	3020	115.63	34900	1.40						
	14	2680	102.53	35900	1.60	R	107	DRE	132S4	200	279
	16	2420	92.70	36200	1.75	RF	107	DRE	132S4	205	280
	19	2050	78.57	34600	2.1	RM	107	DRE	132S4	295	280
	20	1900	72.88	34000	2.3						
	22	1710	65.60*	33000	2.5						
	25	1550	59.41	32100	2.8						
	28	1370	52.68	31000	3.1						
	13	3040	116.48	17900	1.00						
	14	2700	103.44	22900	1.10						
	16	2410	92.48	24500	1.25						
	18	2170	83.15	25700	1.40						
	20	1880	72.17	26500	1.60						
	22	1700	65.21	25900	1.75	R	97	DRE	132S4	145	277
	24	1560	59.92	25300	1.90	RF	97	DRE	132S4	160	278
	27	1390	53.21	24600	2.2	RM	97	DRE	132S4	210	278
	31	1240	47.58	23900	2.4						
	34	1110	42.78	23200	2.7						
	39	970	37.13	22300	3.1						
	44	860	33.25	21600	3.3						
	46	830	32.05	21400	3.0						
	54	710	27.19	20500	3.6	R	97	DRE	132S4	140	277
	58	650	25.03	20000	4.3	RF	97	DRE	132S4	155	278
	65	585	22.37	19300	4.6	RM	97	DRE	132S4	210	278
	72	525	20.14	18700	5.0						
	23	1660	63.68*	13600	0.95	R	87	DRE	132S4	105	274
	24	1570	60.35*	14200	1.00	RF	87	DRE	132S4	110	275
	28	1380	52.82	15500	1.10	RM	87	DRE	132S4	140	275
	31	1240	47.58	16200	1.25						
	35	1090	41.74	17000	1.40	R	87	DRE	132S4	105	274
	40	960	36.84*	17500	1.60	RF	87	DRE	132S4	110	275
	45	850	32.66*	17400	1.80	RM	87	DRE	132S4	140	275
	52	725	27.88	16700	2.1						

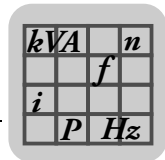




P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						R	RF	RM	DRE		
<b>4.0</b>	42	900	34.40*	17600	1.65						
	46	820	31.40	17200	1.90						
	52	725	27.84*	16700	2.1						
	62	610	23.40	16000	2.5						
	68	560	21.51	15600	2.7	R	87	DRE	132S4	100	274
	76	495	19.10	15100	2.9	RF	87	DRE	132S4	110	275
	85	445	17.08*	14600	3.1	RM	87	DRE	132S4	140	275
	95	400	15.35	14200	3.3						
	110	345	13.33	13600	3.7						
	122	310	11.93	13200	3.9						
	40	960	36.83	7040	0.85	R	77	DRE	132S4	76	271
	44	870	33.47	9370	0.95	RF	77	DRE	132S4	82	272
	50	755	29.00	10500	1.10	RM	77	DRE	132S4	105	272
	58	660	25.23	10700	1.20						
	62	610	23.37	10500	1.35						
68	560	21.43	10300	1.45							
78	490	18.80	10000	1.60							
82	465	17.82*	9880	1.65							
94	405	15.60	9560	1.80							
104	365	14.05	9320	1.95	R	77	DRE	132S4	75	271	
118	320	12.33	9010	2.1	RF	77	DRE	132S4	81	272	
134	280	10.88	8710	2.3	RM	77	DRE	132S4	105	272	
151	250	9.64	8430	2.5							
170	220	8.59	8250	2.8							
189	200	7.74	8010	3.0							
215	178	6.79	7710	3.3							
244	157	5.99*	7430	3.4							
275	139	5.31*	7160	3.7							
73	520	19.89	7920	1.15							
81	465	17.95	7760	1.25							
92	410	15.79	7560	1.35							
98	390	14.91	7460	1.40							
115	330	12.70	7200	1.55							
127	300	11.54	7040	1.65	R	67	DRE	132S4	69	268	
146	260	10.00	6790	1.80	RF	67	DRE	132S4	72	269	
168	225	8.70*	6560	1.95	RM	67	DRE	132S4	88	269	
187	200	7.79	6390	1.85							
198	193	7.36*	6300	1.90							
233	164	6.27	6030	2.0							
256	149	5.70	5870	2.1							
296	129	4.93	5640	2.2							
340	112	4.29	5420	2.4							
78	485	18.60*	3660	0.90	R	57	DRE	132S4	63	265	
87	435	16.79	3820	1.00	RF	57	DRE	132S4	66	266	
99	385	14.77*	3790	1.15	RM	57	DRE	132S4	78	266	
105	365	13.95*	3770	1.20							
123	310	11.88	3700	1.30							
135	280	10.79	3650	1.40							
156	240	9.35	3570	1.50							
161	235	9.06	3570	1.60	R	57	DRE	132S4	63	265	
183	205	7.97	3490	1.70	RF	57	DRE	132S4	66	266	
194	197	7.53	3450	1.80	RM	57	DRE	132S4	78	266	
228	168	6.41	3330	2.0							
251	152	5.82	3260	2.1							
289	132	5.05	3160	2.3							
333	115	4.39	3050	2.4							
144	265	10.15	2060	0.85							
161	235	9.07	2440	0.95							
182	205	8.01	2630	1.00							
210	182	6.96	2470	0.85	R	47	DRE	132S4	58	262	
243	157	6.00	2420	1.00	RF	47	DRE	132S4	58	263	
259	148	5.64*	2400	1.05							
301	127	4.85	2340	1.20							
337	113	4.34	2290	1.30							
381	100	3.83	2230	1.45							


**R..DRE/DRS**  
**R..DRE/DRS [kW]**

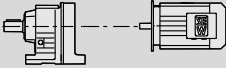

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
						R	RF	RM	DRE			
<b>4.0</b>	179	210	16.22	2640	1.30							
	199	192	14.56	2600	1.40							
	231	165	12.54	2530	1.50							
	246	155	11.79	2500	1.60							
	286	134	10.15	2430	1.70							
	320	119	9.07	2380	1.85							
	362	106	8.01	2320	1.95	<b>R</b>	<b>47</b>		<b>DRE</b>	<b>112M2</b>	53	262
	374	102	7.76*	2240	1.60	<b>RF</b>	<b>47</b>		<b>DRE</b>	<b>112M2</b>	53	263
	416	92	6.96	2190	1.75							
	484	79	6.00	2120	1.95							
	514	74	5.64*	2090	2.1							
	598	64	4.85	2020	2.4							
	669	57	4.34	1960	2.6							
	757	50	3.83	1900	2.8							
	263	146	5.56*	6580	1.55							
	288	133	5.07	6420	1.90	<b>RX</b>	<b>87</b>		<b>DRE</b>	<b>132S4</b>	83	244
	324	118	4.50*	6210	2.5	<b>RXF</b>	<b>87</b>		<b>DRE</b>	<b>132S4</b>	88	245
	386	99	3.78	5910	3.1							
	361	106	4.04*	4630	1.35							
	394	97	3.70	4530	1.60							
	449	85	3.25*	4380	2.1							
	474	81	3.08*	4310	2.4							
	542	70	2.70	4160	3.0	<b>RX</b>	<b>77</b>		<b>DRE</b>	<b>132S4</b>	66	242
	601	64	2.43	4040	3.4	<b>RXF</b>	<b>77</b>		<b>DRE</b>	<b>132S4</b>	69	243
	685	56	2.13	3890	3.6							
	777	49	1.88*	3750	3.8							
	876	44	1.67	3620	4.0							
	1025	37	1.42	3450	4.2							
456	84	3.20*	2860	1.20								
505	76	2.89	2790	1.40								
574	66	2.54	2710	1.75								
608	63	2.40*	2670	1.95	<b>RX</b>	<b>67</b>		<b>DRE</b>	<b>132S4</b>	57	240	
714	54	2.04	2560	2.5	<b>RXF</b>	<b>67</b>		<b>DRE</b>	<b>132S4</b>	61	241	
786	49	1.86	2500	2.6								
908	42	1.61	2400	2.7								
1045	37	1.40*	2310	2.8								
553	69	2.64*	1730	1.00								
616	62	2.37	1840	1.10								
715	53	2.04	1950	1.30	<b>RX</b>	<b>57</b>		<b>DRE</b>	<b>132S4</b>	54	238	
760	50	1.92*	1950	1.35	<b>RXF</b>	<b>57</b>		<b>DRE</b>	<b>132S4</b>	56	239	
884	43	1.65	1880	1.60								
989	39	1.48	1830	1.75								
1120	34	1.30	1780	1.85								
<b>5.5</b>	2.2	21800	656	120000	0.85							
	2.5	19000	579	120000	0.95							
	2.9	16700	503	120000	1.10							
	3.4	14200	432	120000	1.25	<b>R</b>	<b>167R97</b>		<b>DRE</b>	<b>132M4</b>	800	287
	3.9	12500	376	120000	1.45	<b>RF</b>	<b>167R97</b>		<b>DRE</b>	<b>132M4</b>	800	287
	4.3	11100	335	120000	1.60	<b>RM</b>	<b>167R97</b>		<b>DRE</b>	<b>132M4</b>	1000	287
	4.8	9970	303	120000	1.80							
	5.2	9190	279	120000	1.95							
	3.2	15400	462	45000	0.85							
	3.4	14300	426	58400	0.90							
	4.0	12300	368	63900	1.05	<b>R</b>	<b>147R87</b>		<b>DRE</b>	<b>132M4</b>	490	287
	4.5	10900	326	66400	1.20	<b>RF</b>	<b>147R87</b>		<b>DRE</b>	<b>132M4</b>	500	287
	5.2	9340	280	68700	1.40	<b>RM</b>	<b>147R87</b>		<b>DRE</b>	<b>132M4</b>	670	287
	5.9	8240	247	70000	1.60							
	6.8	7120	214	71200	1.80							
	7.7	6300	189	72000	2.1							
	5.9	8880	163.31	69300	1.45	<b>R</b>	<b>147</b>		<b>DRE</b>	<b>160M6</b>	450	283
	6.6	7990	146.91	70300	1.65	<b>RF</b>	<b>147</b>		<b>DRE</b>	<b>160M6</b>	460	284
	8.0	6520	119.86	71800	2.00	<b>RM</b>	<b>147</b>		<b>DRE</b>	<b>160M6</b>	630	284
	8.8	5940	109.31	72300	2.2	<b>R</b>	<b>147</b>		<b>DRE</b>	<b>160M6</b>	450	283
	10	5140	94.60*	72800	2.5	<b>RF</b>	<b>147</b>		<b>DRE</b>	<b>160M6</b>	460	284
	12	4540	83.47	73200	2.9	<b>RM</b>	<b>147</b>		<b>DRE</b>	<b>160M6</b>	630	284



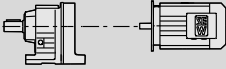

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
5.5	5.5	9490	174.40*	41100	0.85						
	6.2	8500	156.31	51800	0.95	R	137	DRE	160M6	320	281
	6.8	7680	141.12*	54100	1.05	RF	137	DRE	160M6	345	282
	7.5	6970	128.18	55400	1.15	RM	137	DRE	160M6	455	282
	8.5	6180	113.72	56700	1.30						
	9.4	5610	103.20*	57600	1.40	R	137	DRE	160M6	320	281
						RF	137	DRE	160M6	345	282
						RM	137	DRE	160M6	455	282
	6.5	8030	222.60*	53300	1.00						
	7.7	6800	188.45	55700	1.20	R	137	DRE	132M4	300	281
	8.3	6290	174.40*	56600	1.25	RF	137	DRE	132M4	325	282
	9.3	5640	156.31	57600	1.40	RM	137	DRE	132M4	435	282
	10	5090	141.12*	58300	1.55						
	11	4620	128.18	58800	1.75						
	13	4100	113.72	59400	1.95						
	14	3720	103.20*	59800	2.2						
16	3200	88.70*	60200	2.5	R	137	DRE	132M4	300	281	
18	2920	80.91*	60400	2.7	RF	137	DRE	132M4	325	282	
20	2650	73.49	60600	3.0	RM	137	DRE	132M4	435	282	
22	2350	65.20	60800	3.4							
25	2130	59.17*	60900	3.8							
29	1830	50.86*	61000	4.4							
11	4600	127.68	27700	0.95							
13	4170	115.63	30100	1.05							
14	3700	102.53	32300	1.15							
16	3340	92.70	33800	1.30							
19	2830	78.57	33400	1.50	R	107	DRE	132M4	215	279	
20	2630	72.88	32800	1.65	RF	107	DRE	132M4	220	280	
22	2360	65.60*	31900	1.80	RM	107	DRE	132M4	305	280	
24	2140	59.41	31200	2.0							
28	1900	52.68	30200	2.3							
31	1710	47.63	29400	2.5							
36	1450	40.37*	28100	3.0							
18	3000	83.15	19700	1.00							
20	2600	72.17	22000	1.15							
22	2350	65.21	24600	1.25							
24	2160	59.92	24200	1.40							
27	1920	53.21	23500	1.55	R	97	DRE	132M4	155	277	
31	1710	47.58	22900	1.75	RF	97	DRE	132M4	175	278	
34	1540	42.78	22400	1.95	RM	97	DRE	132M4	225	278	
39	1340	37.13	21600	2.2							
44	1200	33.25	21000	2.4							
53	990	27.58	20000	2.7							
45	1150	32.05	20800	2.2							
54	980	27.19	19900	2.6							
58	900	25.03	19500	3.1	R	97	DRE	132M4	150	277	
65	800	22.37	18900	3.4	RF	97	DRE	132M4	170	278	
72	725	20.14	18400	3.6	RM	97	DRE	132M4	220	278	
80	655	18.24	17900	3.8							
90	580	16.17	17300	4.1							
31	1710	47.58	15700	0.90							
35	1500	41.74	17200	1.05	R	87	DRE	132M4	115	274	
40	1320	36.84*	17100	1.15	RF	87	DRE	132M4	120	275	
45	1170	32.66*	16700	1.30	RM	87	DRE	132M4	150	275	
52	1000	27.88	16100	1.50							
52	1000	27.84*	16100	1.55							
62	840	23.40	15400	1.85							
68	775	21.51	15100	1.95							
76	685	19.10	14600	2.1							
85	615	17.08*	14200	2.3							
95	550	15.35	13800	2.4	R	87	DRE	132M4	115	274	
109	480	13.33	13300	2.7	RF	87	DRE	132M4	120	275	
122	430	11.93	12900	2.9	RM	87	DRE	132M4	150	275	
147	355	9.90*	12200	3.3							
159	330	9.14*	12100	3.7							
177	295	8.22	11700	3.9							
204	255	7.13	11200	4.2							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

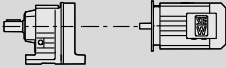

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
5.5	77	675	18.80	9300	1.15	R	77	DRE	132M4	87	271
	82	640	17.82*	9370	1.20	RF	77	DRE	132M4	93	272
	93	560	15.60	9120	1.30	RM	77	DRE	132M4	120	272
	104	505	14.05	8920	1.40						
	118	440	12.33	8650	1.55						
	134	390	10.88	8400	1.70						
	151	345	9.64	8160	1.80	R	77	DRE	132M4	87	271
	169	310	8.59	8040	2.0	RF	77	DRE	132M4	93	272
	188	275	7.74	7820	2.2	RM	77	DRE	132M4	120	272
	214	245	6.79	7540	2.4						
	243	215	5.99*	7280	2.5						
	274	192	5.31*	7040	2.7						
	92	570	15.79	6700	1.00						
	98	535	14.91	6990	1.00						
	115	455	12.70	6790	1.15						
	126	415	11.54	6670	1.20						
	146	360	10.00	6480	1.30						
	167	310	8.70*	6280	1.40	R	67	DRE	132M4	81	268
	187	280	7.79	6160	1.35	RF	67	DRE	132M4	84	269
	198	265	7.36*	6070	1.40	RM	67	DRE	132M4	100	269
	232	225	6.27	5840	1.45						
	255	205	5.70	5700	1.50						
	295	178	4.93	5490	1.65						
	339	155	4.29	5290	1.75						
	332	158	8.70*	5300	2.8						
	371	142	7.79	5160	2.7						
	393	134	7.36*	5080	2.8	R	67	DRE	132S2	69	268
	461	114	6.27	4850	2.9	RF	67	DRE	132S2	72	269
	507	104	5.70	4720	3.0	RM	67	DRE	132S2	88	269
	586	90	4.93	4530	3.2						
	673	78	4.29	4350	3.5						
	98	530	14.77*	1840	0.80	R	57	DRE	132M4	75	265
	104	500	13.95*	2170	0.85	RF	57	DRE	132M4	78	266
	122	425	11.88	2980	0.95	RM	57	DRE	132M4	90	266
	135	385	10.79	3270	1.00						
	156	335	9.35	3240	1.10						
	183	285	7.97	3220	1.25						
	193	270	7.53	3190	1.30	R	57	DRE	132M4	75	265
	227	230	6.41	3120	1.45	RF	57	DRE	132M4	78	266
	250	210	5.82	3070	1.50	RM	57	DRE	132M4	90	266
	288	182	5.05	2990	1.65						
	331	158	4.39	2900	1.75						
	309	170	9.35	2930	2.2						
	363	145	7.97	2850	2.4						
	384	137	7.53	2820	2.6	R	57	DRE	132S2	63	265
	451	116	6.41	2710	2.9	RF	57	DRE	132S2	66	266
	496	106	5.82	2650	3.0	RM	57	DRE	132S2	78	266
	573	92	5.05	2560	3.3						
	658	80	4.39	2470	3.5						
	300	175	4.85	1910	0.85	R	47	DRE	132M4	70	262
	336	156	4.34	2110	0.95	RF	47	DRE	132M4	70	263
	380	138	3.83	2070	1.05						
	230	225	12.54	1740	1.10						
	245	210	11.79	1920	1.15						
	285	184	10.15	2250	1.25						
	319	165	9.07	2220	1.35						
	361	146	8.01	2170	1.40	R	47	DRE	132S2	58	262
	482	109	6.00	2000	1.45	RF	47	DRE	132S2	58	263
	512	102	5.64*	1970	1.50						
	595	88	4.85	1920	1.70						
	666	79	4.34	1870	1.85						
	754	70	3.83	1820	2.1						
	220	235	6.63*	10400	1.90						
	259	200	5.61	9930	2.2	RX	107	DRE	132M4	150	248
	280	187	5.19	9710	3.7	RXF	107	DRE	132M4	170	249
	313	168	4.65	9410	4.1						



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>5.5</b>	251	205	5.79	8340	2.0				
	296	177	4.91	7970	2.2				
	322	163	4.52	7790	3.6				
	360	146	4.04	7540	4.1				
	400	131	3.64*	7320	4.5				
	441	119	3.30	7110	5.0	RX 97	DRE 132M4	120	246
	498	106	2.92	6860	5.6	RXF 97	DRE 132M4	125	247
	551	95	2.64	6660	6.2				
	650	81	2.24*	6330	7.4				
	744	71	1.96	6080	8.1				
	889	59	1.64	5750	8.5				
	1025	51	1.42	5500	8.9				
	323	162	4.50*	6010	1.80				
	385	136	3.78	5740	2.2				
	419	126	3.48	5610	3.2				
	471	111	3.09	5430	3.6	RX 87	DRE 132M4	95	244
	527	100	2.76*	5260	4.1	RXF 87	DRE 132M4	100	245
	586	90	2.48	5110	4.5				
	676	78	2.15	4900	5.0				
	448	117	3.25*	4200	1.55				
472	111	3.08*	4150	1.75					
540	97	2.70	4010	2.2					
599	88	2.43	3900	2.4	RX 77	DRE 132M4	78	242	
683	77	2.13	3770	2.6	RXF 77	DRE 132M4	81	243	
774	68	1.88*	3640	2.8					
873	60	1.67	3520	2.9					
1020	51	1.42	3370	3.0					
572	92	2.54	2540	1.30					
606	87	2.40*	2520	1.40					
712	74	2.04	2420	1.80	RX 67	DRE 132M4	69	240	
783	67	1.86	2370	1.90	RXF 67	DRE 132M4	73	241	
904	58	1.61	2290	1.95					
1040	50	1.40*	2210	2.1					
713	74	2.04	715	0.95					
758	69	1.92*	800	1.00					
881	60	1.65	980	1.15	RX 57	DRE 132M4	66	238	
986	53	1.48	1060	1.30	RXF 57	DRE 132M4	68	239	
1115	47	1.30	1190	1.35					
<b>7.5</b>	2.9	22700	503	120000	0.80				
	3.4	19300	432	120000	0.95				
	3.9	16900	376	120000	1.05	R 167R97	DRE 132MC4	800	287
	4.4	15100	335	120000	1.20	RF 167R97	DRE 132MC4	810	287
	4.9	13500	303	120000	1.35	RM 167R97	DRE 132MC4	1000	287
	5.3	12500	279	120000	1.45				
	4.5	14800	326	52600	0.90				
	5.2	12600	280	63300	1.05				
	6.0	11100	247	66000	1.15	R 147R87	DRE 132MC4	495	287
	6.9	9660	214	68300	1.35	RF 147R87	DRE 132MC4	500	287
	7.8	8540	189	69700	1.50	RM 147R87	DRE 132MC4	670	287
	9.3	7180	159	71200	1.80				
	7.8	9180	188.45	46500	0.85				
	8.4	8490	174.40*	51900	0.95	R 137	DRE 132MC4	305	281
	9.4	7610	156.31	54200	1.05	RF 137	DRE 132MC4	325	282
	10	6870	141.12*	55600	1.15	RM 137	DRE 132MC4	435	282
	11	6240	128.18	56700	1.30				
	13	5540	113.72	57700	1.45				
	14	5020	103.20*	58400	1.60				
	17	4320	88.70*	59200	1.85	R 137	DRE 132MC4	305	281
18	3940	80.91*	59600	2.0	RF 137	DRE 132MC4	325	282	
20	3580	73.49	59900	2.2	RM 137	DRE 132MC4	435	282	
23	3170	65.20	60200	2.5					
25	2880	59.17*	60400	2.8					
29	2470	50.86*	60700	3.2					

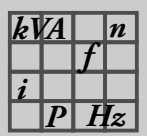
kVA	n
f	
i	P
	H <sub>Z</sub>

**R..DRE/DRS**  
R..DRE/DRS [kW]

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>		m [kg]				
<b>7.5</b>	16	4510	92.70	28200	0.95						
	19	3820	78.57	31600	1.10						
	20	3550	72.88	31100	1.20						
	22	3190	65.60*	30400	1.35						
	25	2890	59.41	29800	1.50	R	107	DRE	132MC4	215	279
	28	2560	52.68	29000	1.70	RF	107	DRE	132MC4	220	280
	31	2320	47.63	28300	1.85	RM	107	DRE	132MC4	310	280
	36	1960	40.37*	27100	2.2						
	42	1710	35.26	26200	2.5						
	50	1430	29.49	25000	3.0						
	48	1490	30.77	25300	2.9	R	107	DRE	132MC4	210	279
	53	1340	27.58	24600	3.2	RF	107	DRE	132MC4	215	280
	59	1210	24.90*	23900	3.5	RM	107	DRE	132MC4	305	280
	65	1100	22.62	23200	3.9						
	25	2910	59.92	21500	1.05						
	28	2590	53.21	22100	1.15	R	97	DRE	132MC4	160	277
	31	2310	47.58	21600	1.30	RF	97	DRE	132MC4	175	278
	34	2080	42.78	21200	1.45	RM	97	DRE	132MC4	225	278
	40	1800	37.13	20600	1.65						
	44	1610	33.25	20100	1.80	R	97	DRE	132MC4	160	277
	53	1340	27.58	19200	2.00	RF	97	DRE	132MC4	175	278
						RM	97	DRE	132MC4	225	278
	46	1560	32.05	19900	1.65						
	54	1320	27.19	19200	1.95	R	97	DRE	132MC4	155	277
	59	1210	25.03	18800	2.3	RF	97	DRE	132MC4	170	278
	66	1090	22.37	18300	2.5	RM	97	DRE	132MC4	225	278
	73	980	20.14	17800	2.7						
	81	880	18.24	17300	2.8						
	40	1790	36.84*	14800	0.85	R	87	DRE	132MC4	120	274
	45	1590	32.66*	15600	0.95	RF	87	DRE	132MC4	125	275
	53	1350	27.88	15200	1.10	RM	87	DRE	132MC4	155	275
	53	1350	27.84*	15200	1.15						
	63	1140	23.40	14600	1.35						
	68	1040	21.51	14400	1.45						
	77	930	19.10	14000	1.55						
	86	830	17.08*	13600	1.65						
	96	745	15.35	12600	1.80	R	87	DRE	132MC4	115	274
	110	645	13.33	12800	1.95	RF	87	DRE	132MC4	125	275
	123	580	11.93	12500	2.1	RM	87	DRE	132MC4	155	275
148	480	9.90*	11900	2.4							
161	445	9.14*	11800	2.7							
179	400	8.22	11500	2.9							
206	345	7.13	11000	3.1							
230	310	6.39	10700	3.3							
277	255	5.30*	10100	3.5							
78	910	18.80	5530	0.85							
82	860	17.82*	5920	0.90							
94	755	15.60	6770	0.95							
105	680	14.05	7310	1.05							
119	600	12.33	7850	1.15	R	77	DRE	132MC4	90	271	
135	525	10.88	7960	1.25	RF	77	DRE	132MC4	96	272	
152	465	9.64	7770	1.35	RM	77	DRE	132MC4	120	272	
171	415	8.59	7690	1.50							
190	375	7.74	7540	1.60							
216	330	6.79	7290	1.75							
245	290	5.99*	7060	1.85							
277	255	5.31*	6840	1.95							
116	615	12.70	4420	0.85							
127	560	11.54	5020	0.90							
147	485	10.00	5750	0.95							
169	420	8.70*	5900	1.05	R	67	DRE	132MC4	84	268	
189	375	7.79	5610	1.00	RF	67	DRE	132MC4	87	269	
200	355	7.36*	5760	1.05	RM	67	DRE	132MC4	105	269	
235	305	6.27	5560	1.10							
258	275	5.70	5450	1.10							
298	240	4.93	5270	1.20							
342	205	4.29	5100	1.30							



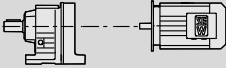

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>7.5</b>	184	385	7.97	1130	0.90						
	195	365	7.53	1420	0.95	R	57	DRE	132MC4	78	265
	229	310	6.41	2130	1.05	RF	57	DRE	132MC4	81	266
	252	280	5.82	2470	1.15	RM	57	DRE	132MC4	93	266
	291	245	5.05	2750	1.25						
	335	210	4.39	2700	1.30						
	197	360	14.77*	2590	1.20						
	209	340	13.95*	2800	1.25						
	245	290	11.88	2780	1.40						
	270	265	10.79	2750	1.45						
	311	230	9.35	2700	1.60	R	57	DRE	132M2	75	265
	365	196	7.97	2660	1.80	RF	57	DRE	132M2	78	266
	387	185	7.53	2640	1.90	RM	57	DRE	132M2	90	266
	454	158	6.41	2560	2.1						
500	143	5.82	2520	2.2							
577	124	5.05	2440	2.5							
663	108	4.39	2370	2.6							
222	320	6.63*	10000	1.45							
262	270	5.61	9620	1.65	RX	107	DRE	132MC4	155	248	
283	250	5.19	9420	2.8	RXF	107	DRE	132MC4	170	249	
316	225	4.65	9140	3.1							
350	200	4.20*	8890	4.1							
254	280	5.79	8020	1.50							
299	235	4.91	7700	1.65							
325	220	4.52	7530	2.7	RX	97	DRE	132MC4	120	246	
364	197	4.04	7310	3.0	RXF	97	DRE	132MC4	130	247	
404	177	3.64*	7100	3.4							
446	161	3.30	6910	3.7							
503	142	2.92	6680	4.2							
327	215	4.50*	5720	1.30							
389	184	3.78	5500	1.65							
423	169	3.48	5380	2.4							
476	150	3.09	5220	2.7							
533	134	2.76*	5080	3.0	RX	87	DRE	132MC4	98	244	
592	121	2.48	4940	3.4	RXF	87	DRE	132MC4	105	245	
682	105	2.15	4750	3.7							
762	94	1.93	4610	3.8							
919	78	1.60*	4370	4.0							
1055	68	1.39	4200	4.3							
452	158	3.25*	3890	1.15							
477	150	3.08*	3910	1.30							
545	131	2.70	3800	1.65							
605	118	2.43	3710	1.80	RX	77	DRE	132MC4	81	242	
690	104	2.13	3600	1.95	RXF	77	DRE	132MC4	84	243	
782	92	1.88*	3480	2.0							
882	81	1.67	3380	2.1							
1035	69	1.42	3240	2.2							
578	124	2.54	1600	0.95							
612	117	2.40*	1700	1.05							
719	100	2.04	1890	1.35	RX	67	DRE	132MC4	72	240	
792	90	1.86	2000	1.40	RXF	67	DRE	132MC4	76	241	
914	78	1.61	2120	1.45							
1050	68	1.40*	2070	1.50							
<b>9.2</b>	3.9	20900	376	120000	0.85	R	167R97	DRE	160M4	820	287
	4.4	18600	335	120000	0.95	RF	167R97	DRE	160M4	830	287
	4.8	16700	303	120000	1.05	RM	167R97	DRE	160M4	1020	287
	5.2	15400	279	120000	1.15						
	5.2	15600	280	41700	0.85						
	5.9	13800	247	61000	0.95	R	147R87	DRE	160M4	520	287
	6.9	11900	214	64700	1.10	RF	147R87	DRE	160M4	520	287
	7.8	10500	189	67000	1.25	RM	147R87	DRE	160M4	690	287
	9.2	8860	159	69300	1.45						
	9.0	9790	163.31	68100	1.35	R	147	DRE	160M4	450	283
	10.0	8800	146.91	69400	1.50	RF	147	DRE	160M4	460	284
	12	7180	119.86	71200	1.80	RM	147	DRE	160M4	630	284


**R..DRE/DRS**  
**R..DRE/DRS [kW]**

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
						R	RF	RM	DRE			160M4
<b>9.2</b>	13	6550	109.31	71700	2.00							
	15	5670	94.60*	72500	2.3	<b>R</b>	<b>147</b>		<b>DRE</b>	<b>160M4</b>	450	283
	18	5000	83.47	72900	2.6	<b>RF</b>	<b>147</b>		<b>DRE</b>	<b>160M4</b>	460	284
	20	4320	72.09	73400	3.0	<b>RM</b>	<b>147</b>		<b>DRE</b>	<b>160M4</b>	630	284
	22	4010	66.99	73500	3.2							
	<b>9.4</b>	9370	156.31	43200	0.85							
	10	8460	141.12*	52000	0.95	<b>R</b>	<b>137</b>		<b>DRE</b>	<b>160M4</b>	320	281
	11	7680	128.18	54000	1.05	<b>RF</b>	<b>137</b>		<b>DRE</b>	<b>160M4</b>	345	282
	13	6810	113.72	55700	1.15	<b>RM</b>	<b>137</b>		<b>DRE</b>	<b>160M4</b>	455	282
	14	6180	103.20*	56700	1.30							
	17	5310	88.70*	58000	1.50							
	18	4850	80.91*	58600	1.65	<b>R</b>	<b>137</b>		<b>DRE</b>	<b>160M4</b>	320	281
	20	4400	73.49	59100	1.80	<b>RF</b>	<b>137</b>		<b>DRE</b>	<b>160M4</b>	345	282
	22	3910	65.20	59600	2.0	<b>RM</b>	<b>137</b>		<b>DRE</b>	<b>160M4</b>	455	282
	25	3540	59.17*	59900	2.2							
	29	3040	50.86*	60300	2.6							
	33	2660	44.39	60600	3.0							
	19	4710	78.57	26300	0.90							
	20	4370	72.88	29100	1.00							
	22	3930	65.60*	29300	1.10							
	25	3560	59.41	28700	1.20	<b>R</b>	<b>107</b>		<b>DRE</b>	<b>160M4</b>	235	279
	28	3150	52.68	28000	1.35	<b>RF</b>	<b>107</b>		<b>DRE</b>	<b>160M4</b>	245	280
	31	2850	47.63	27400	1.50	<b>RM</b>	<b>107</b>		<b>DRE</b>	<b>160M4</b>	330	280
	36	2420	40.37*	26400	1.80							
	42	2110	35.26	25600	2.0							
	50	1760	29.49	24500	2.4							
	48	1840	30.77	24700	2.3							
	53	1650	27.58	24100	2.6	<b>R</b>	<b>107</b>		<b>DRE</b>	<b>160M4</b>	230	279
	59	1490	24.90*	23400	2.9	<b>RF</b>	<b>107</b>		<b>DRE</b>	<b>160M4</b>	235	280
	65	1350	22.62	22800	3.2	<b>RM</b>	<b>107</b>		<b>DRE</b>	<b>160M4</b>	325	280
	73	1200	20.07	22100	3.6							
	28	3190	53.21	9960	0.95	<b>R</b>	<b>97</b>		<b>DRE</b>	<b>160M4</b>	180	277
	31	2850	47.58	20600	1.05	<b>RF</b>	<b>97</b>		<b>DRE</b>	<b>160M4</b>	195	278
	34	2560	42.78	20300	1.15	<b>RM</b>	<b>97</b>		<b>DRE</b>	<b>160M4</b>	250	278
	39	2220	37.13	19800	1.35	<b>R</b>	<b>97</b>		<b>DRE</b>	<b>160M4</b>	180	277
	44	1990	33.25	19400	1.45	<b>RF</b>	<b>97</b>		<b>DRE</b>	<b>160M4</b>	195	278
	53	1650	27.58	18600	1.60	<b>RM</b>	<b>97</b>		<b>DRE</b>	<b>160M4</b>	250	278
	59	1500	25.03	18200	1.90							
	65	1340	22.37	17800	2.0							
	73	1200	20.14	17300	2.2	<b>R</b>	<b>97</b>		<b>DRE</b>	<b>160M4</b>	175	277
	80	1090	18.24	16900	2.3	<b>RF</b>	<b>97</b>		<b>DRE</b>	<b>160M4</b>	195	278
	91	960	16.17	16400	2.5	<b>RM</b>	<b>97</b>		<b>DRE</b>	<b>160M4</b>	245	278
	100	870	14.62	16000	2.6							
	118	740	12.39	15300	3.0							
	68	1280	21.51	13800	1.15							
	77	1140	19.10	13500	1.25							
	86	1020	17.08*	13200	1.35							
	95	920	15.35	12900	1.45							
	110	795	13.33	12500	1.60	<b>R</b>	<b>87</b>		<b>DRE</b>	<b>160M4</b>	135	274
	123	715	11.93	12200	1.70	<b>RF</b>	<b>87</b>		<b>DRE</b>	<b>160M4</b>	145	275
	148	590	9.90*	11600	2.00	<b>RM</b>	<b>87</b>		<b>DRE</b>	<b>160M4</b>	175	275
	160	545	9.14*	11600	2.2							
	178	490	8.22	11300	2.4							
	205	425	7.13	10900	2.5							
	229	380	6.39	10500	2.7							
	104	840	14.05	4860	0.85							
	119	735	12.33	5710	0.95	<b>R</b>	<b>77</b>		<b>DRE</b>	<b>160M4</b>	110	271
	135	650	10.88	6360	1.00	<b>RF</b>	<b>77</b>		<b>DRE</b>	<b>160M4</b>	115	272
	152	575	9.64	6860	1.10	<b>RM</b>	<b>77</b>		<b>DRE</b>	<b>160M4</b>	140	272
	189	460	7.74	6360	1.30							
	216	405	6.79	6760	1.40	<b>R</b>	<b>77</b>		<b>DRE</b>	<b>160M4</b>	110	271
	244	355	5.99*	6900	1.50	<b>RF</b>	<b>77</b>		<b>DRE</b>	<b>160M4</b>	115	272
	276	315	5.31*	6690	1.60	<b>RM</b>	<b>77</b>		<b>DRE</b>	<b>160M4</b>	140	272
	282	310	5.19	9200	2.2							
	315	275	4.65	8950	2.5							
	349	250	4.20*	8720	3.3	<b>RX</b>	<b>107</b>		<b>DRE</b>	<b>160M4</b>	175	248
	384	225	3.81	8500	3.6	<b>RXF</b>	<b>107</b>		<b>DRE</b>	<b>160M4</b>	190	249
	433	200	3.38	8220	4.1							

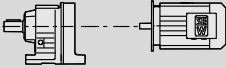





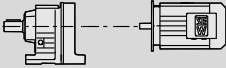

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>9.2</b>	324	270	4.52	7340	2.2				
	362	240	4.04	7140	2.4				
	402	215	3.64*	6950	2.7				
	444	198	3.30	6770	3.0				
	501	175	2.92	6560	3.4	RX 97	DRE 160M4	145	246
	554	158	2.64	6380	3.8	RXF 97	DRE 160M4	150	247
	654	134	2.24*	6090	4.4				
	749	117	1.96	5860	4.9				
	895	98	1.64	5560	5.2				
	1035	85	1.42	5330	5.4				
	421	205	3.48	5200	1.95				
	475	185	3.09	5060	2.2				
	531	166	2.76*	4930	2.4				
	590	149	2.48	4800	2.7	RX 87	DRE 160M4	120	244
	680	129	2.15	4630	3.0	RXF 87	DRE 160M4	125	245
760	116	1.93	4500	3.1					
916	96	1.60*	4280	3.3					
1055	83	1.39	4120	3.5					
603	146	2.43	3060	1.50					
688	128	2.13	3200	1.55					
779	113	1.88*	3300	1.65	RX 77	DRE 160M4	105	242	
879	100	1.67	3270	1.75	RXF 77	DRE 160M4	105	243	
1030	85	1.42	3140	1.80					
<b>11.0</b>	5.0	19100	295	120000	0.95				
	5.5	17700	270	120000	1.00	R 167R107	DRE 160MC4	880	287
	6.4	15000	229	120000	1.20	RF 167R107	DRE 160MC4	880	287
	7.4	13000	200	120000	1.40	RM 167R107	DRE 160MC4	1080	287
	8.7	10900	169	120000	1.65				
	5.1	19400	291	120000	0.90	R 167R107	DRE 160MC4	870	287
						RF 167R107	DRE 160MC4	880	287
						RM 167R107	DRE 160MC4	1070	287
	4.4	22200	335	120000	0.80	R 167R97	DRE 160MC4	830	287
	4.9	19900	303	120000	0.90	RF 167R97	DRE 160MC4	830	287
	5.3	18400	279	120000	1.00	RM 167R97	DRE 160MC4	1030	287
	6.0	16400	247	29900	0.80				
	6.9	14100	214	60000	0.90	R 147R87	DRE 160MC4	520	287
	7.8	12500	189	63600	1.05	RF 147R87	DRE 160MC4	530	287
	9.3	10500	159	67000	1.25	RM 147R87	DRE 160MC4	700	287
	6.4	16300	229.71	120000	1.10	R 167	DRE 160MC4	700	285
	7.9	13300	186.93*	120000	1.35	RF 167	DRE 160MC4	710	286
						RM 167	DRE 160MC4	900	286
	9.6	10900	153.07	120000	1.65				
	11	9960	139.98	120000	1.80	R 167	DRE 160MC4	700	285
	12	8670	121.81*	120000	2.1	RF 167	DRE 160MC4	710	286
	14	7650	107.49	120000	2.4	RM 167	DRE 160MC4	900	286
	16	6630	93.19	120000	2.7				
	18	5900	82.91*	120000	3.0				
	9.0	11600	163.31	65200	1.10	R 147	DRE 160MC4	455	283
	10	10400	146.91	67100	1.25	RF 147	DRE 160MC4	465	284
	12	8530	119.86	69700	1.50	RM 147	DRE 160MC4	630	284
	13	7780	109.31	70500	1.65				
	16	6730	94.60*	71600	1.95				
	18	5940	83.47	72300	2.2	R 147	DRE 160MC4	455	283
20	5130	72.09	72900	2.5	RF 147	DRE 160MC4	465	284	
22	4770	66.99	73100	2.7	RM 147	DRE 160MC4	630	284	
24	4350	61.09	73300	3.0					
28	3760	52.87	73700	3.4					

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

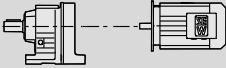

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>11.0</b>	10	10000	141.12*	28200	0.80				
	12	9120	128.18	47300	0.90				
	13	8090	113.72	53200	1.00				
	14	7340	103.20*	54700	1.10				
	17	6310	88.70*	56500	1.25				
	18	5760	80.91*	57400	1.40	R 137	DRE 160MC4	325	281
	20	5230	73.49	58100	1.55	RF 137	DRE 160MC4	350	282
	23	4640	65.20	58800	1.70	RM 137	DRE 160MC4	460	282
	25	4210	59.17*	59300	1.90				
	29	3620	50.86*	59900	2.2				
	33	3160	44.39	60200	2.5				
	39	2680	37.65	60600	3.0				
	45	2340	32.91	60800	3.4				
	22	4670	65.60*	27300	0.90				
	25	4230	59.41	27500	1.00				
	28	3750	52.68	27000	1.15	R 107	DRE 160MC4	240	279
	31	3390	47.63	26500	1.25	RF 107	DRE 160MC4	250	280
	37	2870	40.37*	25600	1.50	RM 107	DRE 160MC4	335	280
	42	2510	35.26	24900	1.70				
	50	2100	29.49	23900	2.0				
	48	2190	30.77	24100	1.95				
	53	1960	27.58	23500	2.2				
	59	1770	24.90*	22900	2.4	R 107	DRE 160MC4	235	279
	65	1610	22.62	22400	2.7	RF 107	DRE 160MC4	240	280
	74	1420	20.07	21700	3.0	RM 107	DRE 160MC4	330	280
	81	1290	18.21	21100	3.3				
	34	3040	42.78	18000	1.00				
	40	2640	37.13	18900	1.15	R 97	DRE 160MC4	185	277
	44	2360	33.25	18600	1.20	RF 97	DRE 160MC4	200	278
	53	1960	27.58	18000	1.35	RM 97	DRE 160MC4	255	278
	59	1780	25.03	17600	1.60				
	66	1590	22.37	17200	1.70	R 97	DRE 160MC4	180	277
	73	1430	20.14	16800	1.80	RF 97	DRE 160MC4	200	278
	81	1290	18.24	16500	1.90	RM 97	DRE 160MC4	250	278
	91	1150	16.17	16000	2.1				
	101	1040	14.62	15600	2.2				
	119	880	12.39	15000	2.5	R 97	DRE 160MC4	180	277
	136	770	10.83	14500	2.7	RF 97	DRE 160MC4	200	278
	159	660	9.29	14200	3.1	RM 97	DRE 160MC4	250	278
	176	595	8.39	13800	3.4				
	207	505	7.12	13100	4.0				
	237	440	6.21	12600	4.3				
	69	1530	21.51	13200	1.00	R 87	DRE 160MC4	140	274
	77	1360	19.10	12900	1.05	RF 87	DRE 160MC4	150	275
	86	1210	17.08*	12700	1.15	RM 87	DRE 160MC4	180	275
96	1090	15.35	12500	1.25					
111	940	13.33	12100	1.35					
124	840	11.93	11800	1.45					
149	705	9.90*	11300	1.65	R 87	DRE 160MC4	140	274	
161	650	9.14*	11400	1.85	RF 87	DRE 160MC4	150	275	
179	585	8.22	11100	2.00	RM 87	DRE 160MC4	180	275	
207	505	7.13	10700	2.1					
231	455	6.39	10400	2.2					
278	375	5.30*	9840	2.4					
136	770	10.88	4410	0.85	R 77	DRE 160MC4	115	271	
153	685	9.64	5130	0.90	RF 77	DRE 160MC4	120	272	
					RM 77	DRE 160MC4	145	272	
191	550	7.74	4750	1.10					
217	480	6.79	5350	1.20	R 77	DRE 160MC4	115	271	
246	425	5.99*	5800	1.25	RF 77	DRE 160MC4	120	272	
278	375	5.31*	6150	1.35	RM 77	DRE 160MC4	145	272	
284	365	5.19	8950	1.90					
317	330	4.65	8720	2.1					
351	295	4.20*	8510	2.8					
387	270	3.81	8300	3.0	RX 107	DRE 160MC4	180	248	
436	240	3.38	8050	3.4	RXF 107	DRE 160MC4	200	249	
480	215	3.07	7840	3.8					
559	188	2.64*	7520	4.4					



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>11.0</b>	326	320	4.52	7120	1.85				
	365	285	4.04	6940	2.1				
	405	255	3.64*	6760	2.3				
	447	230	3.30	6600	2.5				
	505	205	2.92	6400	2.9	RX 97	DRE 160MC4	150	246
	558	188	2.64	6240	3.2	RXF 97	DRE 160MC4	155	247
	658	160	2.24*	5970	3.7				
	754	139	1.96	5750	4.1				
	901	116	1.64	5470	4.3				
	1040	101	1.42	5240	4.5				
	424	245	3.48	5000	1.65				
	478	215	3.09	4880	1.85	RX 87	DRE 160MC4	125	244
	534	197	2.76*	4770	2.1	RXF 87	DRE 160MC4	130	245
	594	177	2.48	4660	2.3				
	685	153	2.15	4500	2.5				
	765	137	1.93	4380	2.6	RX 87	DRE 160MC4	125	244
	922	114	1.60*	4170	2.8	RXF 87	DRE 160MC4	130	245
	1060	99	1.39	4020	2.9				
607	173	2.43	1980	1.25					
692	152	2.13	2220	1.30					
785	134	1.88*	2400	1.40	RX 77	DRE 160MC4	110	242	
885	119	1.67	2530	1.45	RXF 77	DRE 160MC4	110	243	
1035	101	1.42	2630	1.55					
<b>15.0</b>	6.4	20700	229	120000	0.85	R 167R107	DRE 180M4	920	287
	7.3	18000	200	120000	1.00	RF 167R107	DRE 180M4	930	287
	8.6	15200	169	120000	1.20	RM 167R107	DRE 180M4	1120	287
	6.5	20800	227	120000	0.85	R 167R107	DRE 180M4	910	287
	7.4	18100	198	120000	1.00	RF 167R107	DRE 180M4	920	287
						RM 167R107	DRE 180M4	1120	287
	6.4	22400	229.71	120000	0.80	R 167	DRE 180M4	740	285
	7.8	18200	186.93*	120000	1.00	RF 167	DRE 180M4	750	286
						RM 167	DRE 180M4	950	286
	9.6	14900	153.07	120000	1.20				
	10	13600	139.98	120000	1.30				
	12	11900	121.81*	120000	1.50	R 167	DRE 180M4	740	285
	14	10500	107.49	120000	1.70	RF 167	DRE 180M4	750	286
	16	9110	93.19	120000	2.00	RM 167	DRE 180M4	950	286
	18	8100	82.91*	120000	2.2				
	20	7200	73.70*	120000	2.5				
	22	6580	67.40	120000	2.7				
	9.0	15900	163.31	37100	0.80	R 147	DRE 180M4	500	283
	10.0	14300	146.91	58000	0.90	RF 147	DRE 180M4	510	284
	12	11700	119.86	65100	1.10	RM 147	DRE 180M4	670	284
	13	10600	109.31	66800	1.20				
	15	9240	94.60*	68800	1.40				
	18	8160	83.47	70100	1.60				
	20	7040	72.09	71300	1.85	R 147	DRE 180M4	500	283
	22	6540	66.99	71700	2.00	RF 147	DRE 180M4	510	284
	24	5970	61.09	72200	2.2	RM 147	DRE 180M4	670	284
	28	5160	52.87	72800	2.5				
	31	4560	46.65	73200	2.8				
	14	10000	103.20*	27000	0.80	R 137	DRE 180M4	370	281
	17	8670	88.70*	51100	0.90	RF 137	DRE 180M4	395	282
	18	7910	80.91*	53600	1.00	RM 137	DRE 180M4	500	282
	20	7180	73.49	55000	1.10				
	22	6370	65.20	56400	1.25				
	25	5780	59.17*	57400	1.40				
	29	4970	50.86*	58400	1.60	R 137	DRE 180M4	370	281
	33	4340	44.39	59200	1.85	RF 137	DRE 180M4	395	282
	39	3680	37.65	59800	2.2	RM 137	DRE 180M4	500	282
	45	3210	32.91	60200	2.5				
	53	2720	27.83	60500	2.8				
	31	4650	47.63	24400	0.90	R 107	DRE 180M4	285	279
	36	3940	40.37*	23900	1.10	RF 107	DRE 180M4	295	280
	42	3440	35.26	23400	1.25	RM 107	DRE 180M4	380	280
50	2880	29.49	22600	1.50					

kVA	n
f	
i	P Hz

R..DRE/DRS  
R..DRE/DRS [kW]

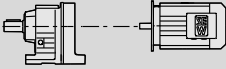

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	i	$F_{Ra}^{1)}$ [N]	SEW $f_B$		m [kg]	
<b>15.0</b>	48	3000	30.77	22800	1.45			
	53	2690	27.58	22300	1.60			
	59	2430	24.90*	21900	1.75			
	65	2210	22.62	21400	1.95	R 107	DRE 180M4	280 279
	73	1960	20.07	20900	2.2	RF 107	DRE 180M4	285 280
	80	1780	18.21	20400	2.4	RM 107	DRE 180M4	375 280
	94	1530	15.65	19700	2.8			
	107	1330	13.66	19000	3.2			
	53	2690	27.58	16500	1.00	R 97	DRE 180M4	230 277
						RF 97	DRE 180M4	245 278
					RM 97	DRE 180M4	295 278	
59	2440	25.03	16300	1.15				
65	2180	22.37	16100	1.25				
73	1960	20.14	15800	1.35				
80	1780	18.24	15500	1.40				
91	1580	16.17	15200	1.50	R 97	DRE 180M4	225 277	
100	1420	14.62	14900	1.60	RF 97	DRE 180M4	245 278	
118	1210	12.39	14400	1.80	RM 97	DRE 180M4	295 278	
135	1050	10.83	14000	1.95				
158	900	9.29	13800	2.2				
175	820	8.39	13400	2.5				
206	695	7.12	12800	2.9				
236	605	6.21	12400	3.1				
86	1660	17.08*	11600	0.85	R 87	DRE 180M4	185 274	
95	1500	15.35	11500	0.90	RF 87	DRE 180M4	195 275	
110	1300	13.33	11300	1.00	RM 87	DRE 180M4	225 275	
123	1160	11.93	11100	1.05				
148	960	9.90*	10700	1.20				
160	890	9.14*	11000	1.35	R 87	DRE 180M4	185 274	
178	800	8.22	10700	1.45	RF 87	DRE 180M4	195 275	
205	695	7.13	10300	1.55	RM 87	DRE 180M4	225 275	
229	620	6.39	10100	1.65				
276	515	5.30*	9590	1.75				
282	505	5.19	8430	1.35				
315	450	4.65	8250	1.55	RX 107	DRE 180M4	225 248	
349	410	4.20*	8080	2.0	RXF 107	DRE 180M4	240 249	
384	370	3.81	7920	2.2				
433	330	3.38	7700	2.5				
477	300	3.07	7530	2.8				
555	255	2.64*	7250	3.2	RX 107	DRE 180M4	225 248	
636	225	2.30	7000	3.7	RXF 107	DRE 180M4	240 249	
750	191	1.95	6700	4.0				
858	167	1.71	6460	4.2				
1015	141	1.44	6160	4.6				
324	440	4.52	6660	1.35				
362	395	4.04	6520	1.50				
402	355	3.64*	6390	1.65				
444	320	3.30	6260	1.85				
501	285	2.92	6100	2.1	RX 97	DRE 180M4	190 246	
554	255	2.64	5960	2.3	RXF 97	DRE 180M4	200 247	
654	215	2.24*	5730	2.7				
749	191	1.96	5540	3.0				
895	160	1.64	5290	3.2				
1035	138	1.42	5080	3.3				
421	335	3.48	4280	1.20				
475	300	3.09	4500	1.35	RX 87	DRE 180M4	170 244	
531	265	2.76*	4420	1.50	RXF 87	DRE 180M4	175 245	
590	240	2.48	4340	1.65				
680	210	2.15	4230	1.85				
760	189	1.93	4130	1.90	RX 87	DRE 180M4	170 244	
916	156	1.60*	3960	2.0	RXF 87	DRE 180M4	175 245	
1055	136	1.39	3840	2.1				
<b>18.5</b>	7.8	22500	186.93*	120000	0.80	R 167	DRE 180L4	760 285
	9.6	18400	153.07	120000	1.00	RF 167	DRE 180L4	770 286
	10	16800	139.98	120000	1.05	RM 167	DRE 180L4	970 286
	12	14600	121.81*	120000	1.25			



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						R	RF	RM	DRE		
18.5	14	12900	107.49	120000	1.40						
	16	11200	93.19	120000	1.60						
	18	9990	82.91*	120000	1.80	R	167	DRE	180L4	760	285
	20	8880	73.70*	120000	2.0	RF	167	DRE	180L4	770	286
	22	8120	67.40	120000	2.2	RM	167	DRE	180L4	970	286
	25	7070	58.65	120000	2.6						
	12	14400	119.86	57000	0.90	R	147	DRE	180L4	520	283
	13	13100	109.31	62300	1.00	RF	147	DRE	180L4	530	284
	15	11400	94.60*	65600	1.15	RM	147	DRE	180L4	690	284
	18	10000	83.47	67700	1.30						
	20	8690	72.09	69500	1.50						
	22	8070	66.99	70200	1.60	R	147	DRE	180L4	520	283
	24	7360	61.09	71000	1.75	RF	147	DRE	180L4	530	284
	28	6370	52.87	71900	2.0	RM	147	DRE	180L4	690	284
	31	5620	46.65	72500	2.3						
	36	4850	40.29	73000	2.7						
	18	9750	80.91*	35600	0.80	R	137	DRE	180L4	390	281
	20	8860	73.49	50200	0.90	RF	137	DRE	180L4	415	282
	22	7860	65.20	53700	1.00	RM	137	DRE	180L4	520	282
	25	7130	59.17*	55100	1.10						
29	6130	50.86*	56800	1.30							
33	5350	44.39	58000	1.50	R	137	DRE	180L4	390	281	
39	4540	37.65	58900	1.75	RF	137	DRE	180L4	415	282	
45	3960	32.91	59500	2.0	RM	137	DRE	180L4	520	282	
53	3350	27.83	60100	2.3							
50	3560	29.57*	59900	2.2							
61	2900	24.12	60400	2.8	R	137	DRE	180L4	380	281	
67	2650	22.00*	60600	3.0	RF	137	DRE	180L4	405	282	
77	2290	19.04*	60800	3.5	RM	137	DRE	180L4	510	282	
87	2020	16.80*	60900	4.0							
36	4860	40.37*	20200	0.90	R	107	DRE	180L4	305	279	
42	4250	35.26	22000	1.00	RF	107	DRE	180L4	310	280	
50	3550	29.49	21500	1.20	RM	107	DRE	180L4	400	280	
59	3000	24.90*	20900	1.45							
65	2720	22.62	20600	1.60							
73	2410	20.07	20100	1.80							
80	2190	18.21	19700	1.95							
94	1880	15.65	19100	2.3	R	107	DRE	180L4	300	279	
107	1640	13.66	18500	2.6	RF	107	DRE	180L4	305	280	
126	1390	11.59	17800	3.1	RM	107	DRE	180L4	395	280	
145	1220	10.13	17200	3.5							
186	940	7.86	16300	3.1							
220	800	6.66	15600	3.7							
73	2420	20.14	14900	1.05							
80	2190	18.24	14700	1.15							
91	1950	16.17	14500	1.25							
100	1760	14.62	14200	1.30							
118	1490	12.39	13800	1.45	R	97	DRE	180L4	245	277	
135	1300	10.83	13500	1.60	RF	97	DRE	180L4	265	278	
158	1110	9.29	13400	1.80	RM	97	DRE	180L4	315	278	
175	1010	8.39	13100	2.0							
206	850	7.12	12600	2.3							
236	745	6.21	12100	2.5							
282	625	5.20	11600	2.8							
326	540	4.50*	11100	3.0							
110	1600	13.33	10600	0.80							
123	1430	11.93	10400	0.85							
148	1190	9.90*	10200	1.00	R	87	DRE	180L4	205	274	
160	1100	9.14*	10600	1.10	RF	87	DRE	180L4	215	275	
178	990	8.22	10300	1.15	RM	87	DRE	180L4	245	275	
205	860	7.13	10000	1.25							
229	770	6.39	9770	1.30							
276	635	5.30*	9350	1.40							
349	505	4.20*	7710	1.65							
384	460	3.81	7580	1.80	RX	107	DRE	180L4	245	248	
433	405	3.38	7400	2.0	RXF	107	DRE	180L4	260	249	
477	370	3.07	7250	2.2							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

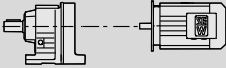

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>18.5</b>	<b>555</b>	315	2.64*	7000	2.6						
	<b>636</b>	275	2.30	6780	3.0	<b>RX</b>	<b>107</b>	<b>DRE</b>	<b>180L4</b>	245	248
	<b>750</b>	235	1.95	6510	3.2	<b>RXF</b>	<b>107</b>	<b>DRE</b>	<b>180L4</b>	260	249
	<b>858</b>	205	1.71	6290	3.4						
	<b>1015</b>	174	1.44	6020	3.7						
	<b>402</b>	435	3.64*	6060	1.35						
	<b>444</b>	395	3.30	5960	1.50						
	<b>501</b>	350	2.92	5830	1.70						
	<b>554</b>	315	2.64	5710	1.85	<b>RX</b>	<b>97</b>	<b>DRE</b>	<b>180L4</b>	210	246
	<b>654</b>	270	2.24*	5510	2.2	<b>RXF</b>	<b>97</b>	<b>DRE</b>	<b>180L4</b>	220	247
	<b>749</b>	235	1.96	5350	2.4						
	<b>895</b>	197	1.64	5120	2.6						
	<b>1035</b>	171	1.42	4940	2.7						
	<b>531</b>	330	2.76*	3040	1.20						
	<b>590</b>	295	2.48	3340	1.35						
<b>680</b>	255	2.15	3630	1.50	<b>RX</b>	<b>87</b>	<b>DRE</b>	<b>180L4</b>	185	244	
<b>760</b>	230	1.93	3820	1.55	<b>RXF</b>	<b>87</b>	<b>DRE</b>	<b>180L4</b>	190	245	
<b>916</b>	193	1.60*	3770	1.65							
<b>1055</b>	168	1.39	3660	1.75							
<b>22</b>	<b>9.6</b>	21800	153.07	120000	0.85	<b>R</b>	<b>167</b>	<b>DRE</b>	<b>180LC4</b>	780	285
	<b>11</b>	19900	139.98	120000	0.90	<b>RF</b>	<b>167</b>	<b>DRE</b>	<b>180LC4</b>	780	286
	<b>12</b>	17300	121.81*	120000	1.05	<b>RM</b>	<b>167</b>	<b>DRE</b>	<b>180LC4</b>	980	286
	<b>14</b>	15300	107.49	120000	1.20						
	<b>16</b>	13200	93.19	120000	1.35						
	<b>18</b>	11800	82.91*	120000	1.50	<b>R</b>	<b>167</b>	<b>DRE</b>	<b>180LC4</b>	780	285
	<b>20</b>	10400	73.70*	120000	1.70	<b>RF</b>	<b>167</b>	<b>DRE</b>	<b>180LC4</b>	780	286
	<b>22</b>	9590	67.40	120000	1.90	<b>RM</b>	<b>167</b>	<b>DRE</b>	<b>180LC4</b>	980	286
	<b>25</b>	8350	58.65	120000	2.2						
	<b>28</b>	7370	51.76	120000	2.4						
	<b>33</b>	6390	44.87	120000	2.8						
	<b>13</b>	15500	109.31	42800	0.85	<b>R</b>	<b>147</b>	<b>DRE</b>	<b>180LC4</b>	530	283
	<b>16</b>	13400	94.60*	61700	0.95	<b>RF</b>	<b>147</b>	<b>DRE</b>	<b>180LC4</b>	540	284
	<b>18</b>	11800	83.47	64800	1.10	<b>RM</b>	<b>147</b>	<b>DRE</b>	<b>180LC4</b>	700	284
	<b>20</b>	10200	72.09	67400	1.25						
	<b>22</b>	9540	66.99	68400	1.35						
	<b>24</b>	8700	61.09	69500	1.50						
	<b>28</b>	7530	52.87	70800	1.75	<b>R</b>	<b>147</b>	<b>DRE</b>	<b>180LC4</b>	530	283
	<b>32</b>	6640	46.65	71700	1.95	<b>RF</b>	<b>147</b>	<b>DRE</b>	<b>180LC4</b>	540	284
	<b>37</b>	5730	40.29	72400	2.3	<b>RM</b>	<b>147</b>	<b>DRE</b>	<b>180LC4</b>	700	284
	<b>41</b>	5070	35.64	72900	2.6						
	<b>49</b>	4260	29.95	73400	3.0						
	<b>23</b>	9280	65.20	44700	0.85	<b>R</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	400	281
	<b>25</b>	8420	59.17*	52200	0.95	<b>RF</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	425	282
	<b>29</b>	7240	50.86*	54900	1.10	<b>RM</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	540	282
	<b>33</b>	6320	44.39	56500	1.25						
	<b>39</b>	5360	37.65	57900	1.50	<b>R</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	400	281
	<b>45</b>	4680	32.91	58800	1.70	<b>RF</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	425	282
	<b>53</b>	3960	27.83	59500	1.95	<b>RM</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	540	282
	<b>50</b>	4210	29.57*	59300	1.85						
	<b>61</b>	3430	24.12	60000	2.3	<b>R</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	390	281
	<b>67</b>	3130	22.00*	60200	2.6	<b>RF</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	415	282
	<b>77</b>	2710	19.04*	60500	3.0	<b>RM</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	530	282
	<b>88</b>	2390	16.80*	60700	3.3						
	<b>102</b>	2060	14.51	60900	3.9	<b>R</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	390	281
	<b>115</b>	1820	12.83	61000	4.4	<b>RF</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	415	282
						<b>RM</b>	<b>137</b>	<b>DRE</b>	<b>180LC4</b>	530	282
	<b>42</b>	5020	35.26	10900	0.85	<b>R</b>	<b>107</b>	<b>DRE</b>	<b>180LC4</b>	315	279
	<b>50</b>	4200	29.49	20400	1.00	<b>RF</b>	<b>107</b>	<b>DRE</b>	<b>180LC4</b>	325	280
						<b>RM</b>	<b>107</b>	<b>DRE</b>	<b>180LC4</b>	410	280
	<b>59</b>	3540	24.90*	20000	1.20	<b>R</b>	<b>107</b>	<b>DRE</b>	<b>180LC4</b>	310	279
	<b>65</b>	3220	22.62	19700	1.35	<b>RF</b>	<b>107</b>	<b>DRE</b>	<b>180LC4</b>	315	280
	<b>74</b>	2850	20.07	19300	1.50	<b>RM</b>	<b>107</b>	<b>DRE</b>	<b>180LC4</b>	405	280



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
22	81	2590	18.21	19000	1.65						
	94	2220	15.65	18400	1.95						
	108	1940	13.66	17900	2.2						
	127	1650	11.59	17300	2.6	R	107	DRE	180LC4	310	279
	146	1440	10.13	16800	3.0	RF	107	DRE	180LC4	315	280
	172	1210	8.56	16100	3.5	RM	107	DRE	180LC4	405	280
	188	1110	7.86	16000	2.6						
	221	940	6.66	15300	3.1						
	253	820	5.82	14800	3.6						
	73	2860	20.14	14000	0.90	R	97	DRE	180LC4	255	277
	81	2590	18.24	13900	0.95	RF	97	DRE	180LC4	275	278
	91	2300	16.17	13700	1.05	RM	97	DRE	180LC4	325	278
	101	2080	14.62	13500	1.10						
	119	1760	12.39	13200	1.25						
	136	1540	10.83	12900	1.35						
	159	1320	9.29	13100	1.55	R	97	DRE	180LC4	255	277
	176	1190	8.39	12800	1.70	RF	97	DRE	180LC4	275	278
	207	1010	7.12	12300	1.95	RM	97	DRE	180LC4	325	278
	237	880	6.21	11900	2.1						
	284	740	5.20	11300	2.4						
	328	640	4.50*	10900	2.5						
	149	1410	9.90*	9640	0.85						
	161	1300	9.14*	10100	0.95	R	87	DRE	180LC4	215	274
	179	1170	8.22	9950	1.00	RF	87	DRE	180LC4	225	275
	207	1010	7.13	9680	1.05	RM	87	DRE	180LC4	255	275
231	900	6.39	9470	1.10							
278	750	5.30*	9100	1.20							
351	595	4.20*	7330	1.40							
387	540	3.81	7220	1.55	RX	107	DRE	180LC4	255	248	
436	480	3.38	7080	1.70	RXF	107	DRE	180LC4	270	249	
480	435	3.07	6950	1.90							
559	375	2.64*	6750	2.2							
640	325	2.30	6550	2.5							
755	275	1.95	6310	2.8	RX	107	DRE	180LC4	255	248	
863	240	1.71	6110	2.9	RXF	107	DRE	180LC4	270	249	
1020	205	1.44	5860	3.1							
405	515	3.64*	5720	1.15							
447	465	3.30	5650	1.25							
505	415	2.92	5550	1.45							
558	375	2.64	5460	1.60	RX	97	DRE	180LC4	225	246	
658	315	2.24*	5290	1.85	RXF	97	DRE	180LC4	230	247	
754	275	1.96	5150	2.0							
901	230	1.64	4950	2.2							
1040	200	1.42	4780	2.2							
534	390	2.76*	1310	1.05							
594	350	2.48	1750	1.15							
685	305	2.15	2190	1.25	RX	87	DRE	180LC4	200	244	
765	270	1.93	2480	1.30	RXF	87	DRE	180LC4	205	245	
922	225	1.60*	2780	1.40							
1060	198	1.39	3060	1.45							
30	14	20800	107.49	120000	0.85	R	167	DRE	200L4	860	285
	16	18000	93.19	120000	1.00	RF	167	DRE	200L4	870	286
	18	16100	82.91*	120000	1.10	RM	167	DRE	200L4	1070	286
	20	14300	73.70*	120000	1.25						
	22	13000	67.40	120000	1.40						
	25	11300	58.65	120000	1.60						
	28	10000	51.76	120000	1.80	R	167	DRE	200L4	860	285
	33	8710	44.87	120000	2.1	RF	167	DRE	200L4	870	286
	37	7750	39.92	120000	2.3	RM	167	DRE	200L4	1070	286
	43	6680	34.41	120000	2.7						
	53	5430	27.96	120000	3.3						
	62	4600	23.71	120000	3.9						
	18	16200	83.47	33300	0.80	R	147	DRE	200L4	620	283
	20	14000	72.09	60500	0.95	RF	147	DRE	200L4	630	284
	22	13000	66.99	62600	1.00	RM	147	DRE	200L4	790	284
	24	11800	61.09	64800	1.10						

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**R..DRE/DRS**  
R..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>30</b>	28	10200	52.87	67400	1.25						
	32	9060	46.65	69000	1.45	R	147	DRE	200L4	620	283
	37	7820	40.29	70500	1.65	RF	147	DRE	200L4	630	284
	41	6920	35.64	71400	1.90	RM	147	DRE	200L4	790	284
	49	5810	29.95	72400	2.2						
	61	4690	24.19	73100	2.5						
	72	3960	20.44	73600	3.0	R	147	DRE	200L4	600	283
	82	3500	18.04	73800	3.0	RF	147	DRE	200L4	610	284
	94	3030	15.64	74000	4.3	RM	147	DRE	200L4	780	284
	29	9870	50.86*	32800	0.80						
	33	8620	44.39	51300	0.95	R	137	DRE	200L4	490	281
	39	7310	37.65	54800	1.10	RF	137	DRE	200L4	510	282
	45	6390	32.91	56400	1.25	RM	137	DRE	200L4	620	282
	53	5400	27.83	57900	1.40						
	61	4680	24.12	58800	1.70	R	137	DRE	200L4	480	281
	67	4270	22.00*	59200	1.85	RF	137	DRE	200L4	500	282
	77	3690	19.04*	59800	2.2	RM	137	DRE	200L4	610	282
	88	3260	16.80*	60100	2.4						
	102	2810	14.51	59500	2.8						
	115	2490	12.83	58400	3.2	R	137	DRE	200L4	480	281
	137	2090	10.79	56600	3.8	RF	137	DRE	200L4	500	282
	194	1470	7.59	53300	3.5	RM	137	DRE	200L4	610	282
	231	1230	6.38	51200	4.1						
	74	3890	20.07	17600	1.10						
	81	3530	18.21	17400	1.20						
	94	3030	15.65	17100	1.40						
	108	2650	13.66	16800	1.60						
	127	2250	11.59	16300	1.90	R	107	DRE	200L4	400	279
	146	1960	10.13	15900	2.2	RF	107	DRE	200L4	405	280
	172	1660	8.56	15400	2.6	RM	107	DRE	200L4	495	280
188	1520	7.86	15500	1.95							
221	1290	6.66	14900	2.3							
253	1130	5.82	14400	2.6							
300	950	4.92	13700	3.0							
101	2840	14.62	12000	0.80							
119	2400	12.39	11900	0.90	R	97	DRE	200L4	345	277	
136	2100	10.83	11800	1.00	RF	97	DRE	200L4	360	278	
159	1800	9.29	12300	1.15	RM	97	DRE	200L4	415	278	
176	1630	8.39	12100	1.25							
207	1380	7.12	11700	1.45	R	97	DRE	200L4	345	277	
237	1200	6.21	11300	1.55	RF	97	DRE	200L4	360	278	
284	1000	5.20	10900	1.75	RM	97	DRE	200L4	415	278	
328	870	4.50*	10500	1.85							
436	655	3.38	6370	1.25							
480	595	3.07	6300	1.40							
559	510	2.64*	6180	1.60	RX	107	DRE	200L4	345	248	
640	445	2.30	6050	1.85	RXF	107	DRE	200L4	360	249	
755	375	1.95	5870	2.0							
863	330	1.71	5710	2.1							
1020	280	1.44	5520	2.3							
505	565	2.92	3140	1.05							
558	510	2.64	3580	1.15							
658	435	2.24*	4070	1.35	RX	97	DRE	200L4	310	246	
754	380	1.96	4460	1.50	RXF	97	DRE	200L4	320	247	
901	315	1.64	4570	1.60							
1040	275	1.42	4450	1.65							
<b>37</b>	16	22200	93.19	120000	0.80						
	18	19800	82.91*	120000	0.90						
	20	17600	73.70*	120000	1.00						
	22	16100	67.40	120000	1.10						
	25	14000	58.65	120000	1.30	R	167	DRE	225S4	890	285
	29	12300	51.76	120000	1.45	RF	167	DRE	225S4	900	286
	33	10700	44.87	120000	1.70	RM	167	DRE	225S4	1100	286
	37	9540	39.92	120000	1.90						
	43	8230	34.41	120000	2.2						
	53	6680	27.96	120000	2.7						

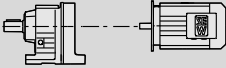





P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
37	48	7340	30.71	120000	1.35						
	60	5870	24.57	120000	2.4	R	167	DRE	225S4	890	285
	68	5220	21.85	120000	2.5	RF	167	DRE	225S4	890	286
	78	4550	19.03	120000	3.5	RM	167	DRE	225S4	1090	286
	87	4060	16.98	120000	3.7						
	22	16000	66.99	36200	0.80	R	147	DRE	225S4	650	283
	24	14600	61.09	55000	0.90	RF	147	DRE	225S4	660	284
	28	12600	52.87	63400	1.05	RM	147	DRE	225S4	820	284
	32	11100	46.65	66000	1.15						
	37	9630	40.29	68300	1.35	R	147	DRE	225S4	650	283
	41	8520	35.64	69700	1.50	RF	147	DRE	225S4	660	284
	49	7160	29.95	71200	1.80	RM	147	DRE	225S4	820	284
	61	5780	24.19	72400	2.1						
	72	4880	20.44	73000	2.4	R	147	DRE	225S4	630	283
	82	4310	18.04	73400	2.4	RF	147	DRE	225S4	640	284
	94	3740	15.64	73700	3.5	RM	147	DRE	225S4	810	284
	106	3320	13.91	73900	3.8	R	147	DRE	225S4	630	283
						RF	147	DRE	225S4	640	284
						RM	147	DRE	225S4	810	284
	39	9000	37.65	49200	0.90	R	137	DRE	225S4	520	281
	45	7870	32.91	53700	1.00	RF	137	DRE	225S4	540	282
	53	6650	27.83	56000	1.15	RM	137	DRE	225S4	650	282
	61	5770	24.12	57400	1.40	R	137	DRE	225S4	510	281
	67	5260	22.00*	58100	1.50	RF	137	DRE	225S4	530	282
	78	4550	19.04*	57800	1.75	RM	137	DRE	225S4	640	282
	88	4010	16.80*	57300	2.00						
	102	3470	14.51	56500	2.3						
	115	3070	12.83	55700	2.6						
	137	2580	10.79	54400	3.1	R	137	DRE	225S4	510	281
	170	2080	8.71	52500	3.8	RF	137	DRE	225S4	530	282
	195	1810	7.59	51800	2.8	RM	137	DRE	225S4	640	282
	232	1520	6.38	50000	3.4						
	287	1230	5.15	47700	3.7						
	74	4800	20.07	16100	0.90						
	81	4350	18.21	16100	1.00						
	94	3740	15.65	15900	1.15						
	108	3260	13.66	15700	1.30						
127	2770	11.59	15400	1.55	R	107	DRE	225S4	430	279	
146	2420	10.13	15100	1.75	RF	107	DRE	225S4	435	280	
172	2040	8.56	14700	2.1	RM	107	DRE	225S4	520	280	
188	1870	7.86	15000	1.60							
222	1590	6.66	14400	1.85							
254	1390	5.82	14000	2.1							
300	1170	4.92	13400	2.5							
436	800	3.38	4510	1.05							
481	730	3.07	4990	1.15							
559	630	2.64*	5560	1.30							
641	550	2.30	5610	1.50	RX	107	DRE	225S4	375	248	
756	465	1.95	5480	1.65	RXF	107	DRE	225S4	390	249	
865	405	1.71	5370	1.70							
1025	345	1.44	5220	1.85							
45	20	21400	73.70*	120000	0.85	R	167	DRE	225M4	920	285
	22	19500	67.40	120000	0.90	RF	167	DRE	225M4	920	286
	25	17000	58.65	120000	1.05	RM	167	DRE	225M4	1120	286
	29	15000	51.76	120000	1.20						
	33	13000	44.87	120000	1.40						
	37	11600	39.92	120000	1.55	R	167	DRE	225M4	920	285
	43	10000	34.41	120000	1.80	RF	167	DRE	225M4	920	286
	53	8120	27.96	120000	2.2	RM	167	DRE	225M4	1120	286
	62	6890	23.71	120000	2.6						
	48	8920	30.71	120000	1.10						
	60	7140	24.57	120000	1.95	R	167	DRE	225M4	910	285
	68	6350	21.85	120000	2.0	RF	167	DRE	225M4	920	286
	78	5530	19.03	120000	2.9	RM	167	DRE	225M4	1110	286
	87	4930	16.98	120000	3.0						

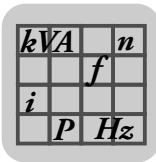
kVA	n
f	
i	P Hz

R..DRE/DRS  
R..DRE/DRS [kW]

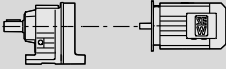

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
45	28	15300	52.87	45500	0.85							
	32	13500	46.65	61500	0.95	R	147	DRE	225M4	670	283	
	37	11700	40.29	65100	1.10	RF	147	DRE	225M4	680	284	
	41	10300	35.64	67300	1.25	RM	147	DRE	225M4	840	284	
	49	8700	29.95	69500	1.50							
	61	7030	24.19	71300	1.70							
	72	5940	20.44	72300	2.0							
	82	5240	18.04	72800	2.0	R	147	DRE	225M4	650	283	
	95	4540	15.64	73200	2.9	RF	147	DRE	225M4	660	284	
	106	4040	13.91	73500	3.1	RM	147	DRE	225M4	830	284	
	123	3480	11.99	73800	3.7							
	204	2100	7.25	74300	4.1							
	45	9560	32.91	39600	0.85	R	137	DRE	225M4	540	281	
	53	8090	27.83	51300	0.95	RF	137	DRE	225M4	560	282	
						RM	137	DRE	225M4	670	282	
	61	7010	24.12	52400	1.15	R	137	DRE	225M4	530	281	
	67	6390	22.00*	52900	1.25	RF	137	DRE	225M4	550	282	
	78	5530	19.04*	53300	1.45	RM	137	DRE	225M4	660	282	
	88	4880	16.80*	53400	1.65							
	102	4210	14.51	53200	1.90							
	115	3730	12.83	52700	2.1							
	137	3130	10.79	51900	2.6	R	137	DRE	225M4	530	281	
	170	2530	8.71	50500	3.1	RF	137	DRE	225M4	550	282	
	195	2200	7.59	50200	2.3	RM	137	DRE	225M4	660	282	
	232	1850	6.38	48600	2.8							
	287	1490	5.15	46600	3.1							
	94	4550	15.65	14600	0.95							
	108	3970	13.66	14600	1.10							
	128	3360	11.59	14400	1.30							
	146	2940	10.13	14300	1.45	R	107	DRE	225M4	450	279	
	173	2480	8.56	14000	1.75	RF	107	DRE	225M4	455	280	
	188	2280	7.86	14400	1.30	RM	107	DRE	225M4	540	280	
	222	1930	6.66	13900	1.55							
	254	1690	5.82	13600	1.75							
	300	1430	4.92	13100	2.0							
	437	980	3.38	1420	0.85							
	481	890	3.07	2130	0.95							
	560	765	2.64*	3010	1.10	RX	107	DRE	225M4	395	248	
	641	670	2.30	3680	1.25	RXF	107	DRE	225M4	410	249	
	756	565	1.95	4230	1.35							
	865	495	1.71	4570	1.40							
	1025	420	1.44	4880	1.55							
	55	25	20800	58.65	120000	0.85						
		28	18400	51.76	120000	1.00						
		33	15900	44.87	120000	1.15	R	167	DRE	250M4	1050	285
37		14200	39.92	120000	1.25	RF	167	DRE	250M4	1060	286	
43		12200	34.41	120000	1.45	RM	167	DRE	250M4	1250	286	
53		9950	27.96	120000	1.80							
62		8440	23.71	120000	2.1							
60		8740	24.57	120000	1.60	R	167	DRE	250M4	1040	285	
68		7770	21.85	120000	1.65	RF	167	DRE	250M4	1050	286	
77		6770	19.03	120000	2.4	RM	167	DRE	250M4	1250	286	
87		6040	16.98	120000	2.5	R	167	DRE	250M4	1040	285	
102		5150	14.48	120000	3.5	RF	167	DRE	250M4	1050	286	
123		4270	11.99	120000	4.0	RM	167	DRE	250M4	1250	286	
32		16600	46.65	26600	0.80							
37		14300	40.29	58200	0.90	R	147	DRE	250M4	800	283	
41		12600	35.64	63300	1.00	RF	147	DRE	250M4	810	284	
49		10600	29.95	66800	1.20	RM	147	DRE	250M4	980	284	
61		8610	24.19	69600	1.40							
72		7270	20.44	71100	1.65							
82		6420	18.04	71900	1.65	R	147	DRE	250M4	790	283	
94		5560	15.64	72500	2.3	RF	147	DRE	250M4	800	284	
106		4950	13.91	73000	2.5	RM	147	DRE	250M4	960	284	
123		4260	11.99	73400	3.0							
151		3460	9.74	73800	3.8	R	147	DRE	250M4	790	283	
203		2580	7.25	74200	3.4	RF	147	DRE	250M4	800	284	
250		2090	5.89	72500	4.1	RM	147	DRE	250M4	960	284	



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
55	77	6770	19.04*	47800	1.20	R	137	DRE	250M4	660	281
	88	5980	16.80*	48500	1.35	RF	137	DRE	250M4	690	282
	102	5160	14.51	48900	1.55	RM	137	DRE	250M4	800	282
	115	4560	12.83	49000	1.75						
	137	3840	10.79	48800	2.1						
	169	3100	8.71	48000	2.5	R	137	DRE	250M4	660	281
	194	2700	7.59	48100	1.90	RF	137	DRE	250M4	690	282
	231	2270	6.38	46900	2.2	RM	137	DRE	250M4	800	282
286	1830	5.15	45200	2.5							
75	33	21700	44.87	120000	0.85						
	37	19300	39.92	120000	0.95	R	167	DRE	280S4	1130	285
	43	16600	34.41	120000	1.10	RF	167	DRE	280S4	1130	286
	53	13500	27.96	120000	1.35	RM	167	DRE	280S4	1330	286
	62	11400	23.71	120000	1.55						
	60	11800	24.57	120000	1.20						
	68	10500	21.85	120000	1.25						
	78	9210	19.03	120000	1.75	R	167	DRE	280S4	1120	285
	87	8210	16.98	120000	1.85	RF	167	DRE	280S4	1130	286
	102	7000	14.48	120000	2.6	RM	167	DRE	280S4	1320	286
	123	5800	11.99	116600	2.9						
	145	4950	10.24	112800	3.4						
	49	14400	29.95	56500	0.90	R	147	DRE	280S4	880	283
	61	11700	24.19	65100	1.00	RF	147	DRE	280S4	890	284
						RM	147	DRE	280S4	1050	284
	72	9890	20.44	67900	1.20						
	82	8720	18.04	69500	1.20						
	95	7560	15.64	70800	1.70						
	106	6730	13.91	71600	1.85	R	147	DRE	280S4	860	283
	123	5800	11.99	72400	2.2	RF	147	DRE	280S4	870	284
152	4710	9.74	73100	2.8	RM	147	DRE	280S4	1040	284	
179	3990	8.26	73500	3.2							
204	3500	7.25	73100	2.5							
251	2850	5.89	70100	3.0							
296	2410	5.00	67600	3.6							
90	37	23100	39.92	120000	0.80	R	167	DRE	280M4	1130	285
	43	19900	34.41	120000	0.90	RF	167	DRE	280M4	1130	286
	53	16200	27.96	120000	1.10	RM	167	DRE	280M4	1330	286
	62	13700	23.71	120000	1.30						
	78	11000	19.03	120000	1.45	R	167	DRE	280M4	1120	285
						RF	167	DRE	280M4	1130	286
						RM	167	DRE	280M4	1320	286
	87	9860	16.98	120000	1.50						
	102	8400	14.48	117300	2.1	R	167	DRE	280M4	1120	285
	123	6960	11.99	113500	2.4	RF	167	DRE	280M4	1130	286
	145	5940	10.24	110100	2.9	RM	167	DRE	280M4	1320	286
	95	9080	15.64	69000	1.45	R	147	DRE	280M4	860	283
	106	8070	13.91	70200	1.55	RF	147	DRE	280M4	870	284
						RM	147	DRE	280M4	1040	284
	123	6960	11.99	71400	1.85						
	152	5650	9.74	72500	2.3	R	147	DRE	280M4	860	283
	179	4790	8.26	73000	2.7	RF	147	DRE	280M4	870	284
	204	4210	7.25	70900	2.1	RM	147	DRE	280M4	1040	284
	251	3420	5.89	68300	2.5						
	296	2900	5.00	66100	3.0						
110	53	19800	27.96	117100	0.90	R	167	DRE	315K4	1440	285
	63	16700	23.71	116900	1.05	RF	167	DRE	315K4	1440	286
						RM	167	DRE	315K4	1640	286
	78	13400	19.03	115500	1.20	R	167	DRE	315K4/ERF/NS	1430	285
						RF	167	DRE	315K4/ERF/NS	1440	286
						RM	167	DRE	315K4/ERF/NS	1630	286
	87	12000	16.98	114300	1.25						
	102	10200	14.48	112200	1.75	R	167	DRE	315K4	1430	285
	124	8490	11.99	109300	2.0	RF	167	DRE	315K4	1440	286
	145	7250	10.24	106500	2.3	RM	167	DRE	315K4	1630	286
132	63	20100	23.71	107900	0.90	R	167	DRE	315S4	1520	285
						RF	167	DRE	315S4	1520	286
						RM	167	DRE	315S4	1720	286





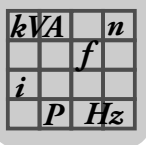
**R..DRE/DRS**  
R..DRE/DRS [kW]

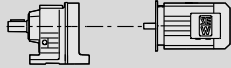

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>132</b>	<b>78</b>	16100	19.03	108300	1.00	<b>R</b>	<b>167</b>	<b>DRE</b>	<b>315S4/ERF/NS</b>	1510	285
	<b>87</b>	14400	16.98	107800	1.05	<b>RF</b>	<b>167</b>	<b>DRE</b>	<b>315S4/ERF/NS</b>	1520	286
						<b>RM</b>	<b>167</b>	<b>DRE</b>	<b>315S4/ERF/NS</b>	1710	286
	<b>103</b>	12200	14.48	106700	1.45	<b>R</b>	<b>167</b>	<b>DRE</b>	<b>315S4</b>	1510	285
	<b>124</b>	10100	11.99	104700	1.65	<b>RF</b>	<b>167</b>	<b>DRE</b>	<b>315S4</b>	1520	286
	<b>145</b>	8680	10.24	102600	1.95	<b>RM</b>	<b>167</b>	<b>DRE</b>	<b>315S4</b>	1710	286
<b>160</b>	<b>103</b>	14900	14.48	99700	1.20	<b>R</b>	<b>167</b>	<b>DRE</b>	<b>315M4</b>	1670	285
	<b>124</b>	12300	11.99	98900	1.40	<b>RF</b>	<b>167</b>	<b>DRE</b>	<b>315M4</b>	1680	286
	<b>145</b>	10500	10.24	97600	1.60	<b>RM</b>	<b>167</b>	<b>DRE</b>	<b>315M4</b>	1870	286



8.4 R..R..DRE/DRS [Nm]

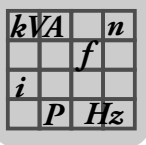
$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]		
130	0.16	8612	4230							
	0.19	7425	4230							
	0.20	6921	4230							
	0.23	6050	4230							
	0.26	5217	4230							
	0.30	4661	4230		R	27R17	DR	63S4	12	287
	0.34	4073	4230		RF	27R17	DR	63S4	11	287
	0.39	3516	4230							
	0.44	3160	4230							
	0.50	2763	4230							
	0.57	2414	4230							
	0.65	2110	4230							
	0.76	1822	4230							
	0.87	1580	4230							
	0.94	1464	4230							
	1.1	1270	4230							
	1.2	1100	4230		R	27R17	DR	63S4	11	287
	1.4	972	4230		RF	27R17	DR	63S4	11	287
	1.6	840	4230							
	1.9	741	4230							
	2.1	654	4230							
	2.4	566	4230							
	2.8	499	4230							
	3.1	440	4230							
	3.6	381	4230							
	4.2	329	4230							
	4.8	290	4230		R	27R17	DR	63S4	11	287
	5.4	256	4230		RF	27R17	DR	63S4	11	287
	6.1	227	4230							
	6.8	203	4230							
7.4	179	4230								
8.5	156	4230		R	27R17	DR	63M4	11	287	
9.8	135	4230		RF	27R17	DR	63M4	11	287	
11	118	4230								
12	104	4230		R	27R17	DR	63L4	12	287	
14	90	4230		RF	27R17	DR	63L4	12	287	
200	0.16	8595	4940							
	0.19	7411	4940							
	0.20	6907	4940							
	0.23	6038	4940							
	0.27	5206	4940							
	0.30	4651	4940		R	37R17	DR	63S4	17	287
	0.34	4065	4940		RF	37R17	DR	63S4	19	287
	0.38	3658	4940							
	0.44	3154	4940							
	0.50	2757	4940							
	0.57	2409	4940							
	0.66	2106	4940							
	0.76	1818	4940							
	0.88	1576	4940							
	1.0	1359	4940							
	1.1	1267	4940							
	1.3	1098	4940							
	1.4	970	4940		R	37R17	DR	63S4	17	287
	1.6	839	4940		RF	37R17	DR	63S4	19	287
	1.9	740	4940							
	2.1	653	4940							
	2.4	577	4940							
	2.8	498	4940							
	3.1	439	4940							
	3.6	378	4940		R	37R17	DR	63S4	17	287
	4.2	328	4940		RF	37R17	DR	63S4	18	287
	4.8	289	4940							
	5.0	265	4940							
	5.8	226	4940		R	37R17	DR	63M4	17	287
	6.5	202	4940		RF	37R17	DR	63M4	18	287
7.4	179	4940								


**R..DRE/DRS**  
**R..R..DRE/DRS [Nm]**

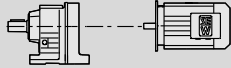

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]		
200	8.4	156	4940							
	9.7	135	4940	R	37R17	DR	63L4	18	287	
	10	127	4940	RF	37R17	DR	63L4	19	287	
	13	104	4940	R	37R17	DRS	71S4	19	287	
	15	90	4940	RF	37R17	DRS	71S4	21	287	
300	0.10	13598	5420							
	0.11	12472	5420							
	0.13	10619	5420							
	0.15	9155	5420							
	0.16	8534	5420							
	0.18	7460	5420							
	0.20	6993	5420							
	0.22	6171	5420							
	0.25	5624	5420		R	47R37	DR	63S4	29	287
	0.28	4849	5420		RF	47R37	DR	63S4	29	287
	0.31	4520	5420							
	0.35	3951	5420							
	0.37	3704	5420							
	0.42	3268	5420							
	0.48	2898	5420							
	0.56	2463	5420							
	0.53	2598	5420							
	0.58	2383	5420							
	0.68	2029	5420							
	0.79	1749	5420							
	0.85	1630	5420							
	0.97	1425	5420		R	47R37	DR	63S4	29	287
	1.0	1336	5420		RF	47R37	DR	63S4	29	287
	1.2	1179	5420							
	1.3	1074	5420							
	1.5	927	5420							
	1.6	863	5420							
	1.8	755	5420							
	2.5	546	5420		R	47R37	DR	63S4	28	287
	2.8	502	5420		RF	47R37	DR	63S4	28	287
	3.2	429	5420							
	3.6	372	5420		R	47R37	DR	63M4	28	287
3.8	348	5420		RF	47R37	DR	63M4	28	287	
4.4	301	5420								
5.1	255	5420		R	47R37	DR	63L4	29	287	
5.7	228	5420		RF	47R37	DR	63L4	29	287	
450	0.10	14369	7100							
	0.11	12095	7100							
	0.13	10860	7100							
	0.15	9445	7100							
	0.16	8480	7100							
	0.19	7312	7100							
	0.21	6521	7100							
	0.25	5585	7100		R	57R37	DR	63S4	34	287
	0.28	4928	7100		RF	57R37	DR	63S4	38	287
	0.32	4378	7100		RM	57R37	DR	63S4	50	287
	0.36	3873	7100							
	0.41	3344	7100							
	0.47	2907	7100							
	0.54	2567	7100							
	0.61	2244	7100							
	0.70	1967	7100							
	0.80	1732	7100							
	0.89	1555	7100							
	0.99	1399	7100		R	57R37	DR	63S4	34	287
	1.2	1189	7100		RF	57R37	DR	63S4	38	287
	1.3	1034	7100		RM	57R37	DR	63S4	50	287
	1.8	782	7100							
	2.0	678	7100							
	2.2	604	7100		R	57R37	DR	63M4	34	287
	2.5	537	7100		RF	57R37	DR	63M4	38	287
	2.8	471	7100		RM	57R37	DR	63M4	50	287



$M_{a\ max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
450	3.6	357	7100	R	57R37	DR	63L4	35	287
	4.1	319	7100	RF	57R37	DR	63L4	38	287
				RM	57R37	DR	63L4	50	287
	5.1	273	7100	R	57R37	DRS	71S4	37	287
	5.7	241	7100	RF	57R37	DRS	71S4	40	287
				RM	57R37	DRS	71S4	52	287
600	0.09	15361	7560						
	0.11	12931	7560						
	0.12	11996	7560						
	0.14	10097	7560						
	0.15	9066	7560						
	0.18	7816	7560						
	0.20	6732	7560						
	0.23	5970	7560	R	67R37	DR	63S4	41	287
	0.26	5268	7560	RF	67R37	DR	63S4	44	287
	0.29	4680	7560	RM	67R37	DR	63S4	60	287
	0.33	4136	7560						
	0.39	3566	7560						
	0.44	3125	7560						
	0.50	2745	7560						
	0.57	2403	7560						
	0.51	2682	7560						
	0.56	2460	7560						
	0.66	2094	7560	R	67R37	DR	63S4	40	287
	0.76	1805	7560	RF	67R37	DR	63S4	43	287
	0.85	1629	7560	RM	67R37	DR	63S4	59	287
	0.94	1471	7560						
	1.0	1379	7560						
	1.8	730	7560	R	67R37	DR	63M4	40	287
	2.3	571	7560	RF	67R37	DR	63M4	43	287
				RM	67R37	DR	63M4	59	287
	2.7	486	7560	R	67R37	DR	63L4	41	287
				RF	67R37	DR	63L4	44	287
				RM	67R37	DR	63L4	60	287
	0.84	1652	7560	R	67R37	DR	63S4	41	287
	0.96	1432	7560	RF	67R37	DR	63S4	44	287
	1.1	1259	7560	RM	67R37	DR	63S4	60	287
	1.2	1106	7560						
	1.6	836	7560	R	67R37	DR	63M4	41	287
	1.8	750	7560	RF	67R37	DR	63M4	44	287
	2.0	646	7560	RM	67R37	DR	63M4	60	287
	2.3	574	7560						
	2.6	495	7560	R	67R37	DR	63L4	41	287
	3.0	438	7560	RF	67R37	DR	63L4	45	287
	3.4	388	7560	RM	67R37	DR	63L4	60	287
	4.0	344	7560	R	67R37	DRS	71S4	43	287
	4.7	294	7560	RF	67R37	DRS	71S4	47	287
				RM	67R37	DRS	71S4	62	287
820	0.08	16370	9920						
	0.09	15015	9920						
	0.10	13885	9920						
	0.11	12783	9920						
	0.13	11021	9920						
	0.14	9788	9920						
	0.16	8714	9920						
	0.18	7617	9920	R	77R37	DR	63S4	46	287
	0.20	6770	9920	RF	77R37	DR	63S4	52	287
	0.24	5838	9920	RM	77R37	DR	63S4	77	287
	0.27	5184	9920						
	0.31	4470	9920						
	0.35	3999	9920						
	0.40	3488	9920						
	0.45	3053	9920						
	0.52	2671	9920						



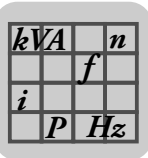
**R..DRE/DRS**  
**R..R..DRE/DRS [Nm]**

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]				$m$ [kg]	
<b>820</b>	0.44	3151	9920					
	0.48	2890	9920					
	0.56	2460	9920					
	0.65	2121	9920	R	77R37	DR	63S4	45 287
	0.70	1977	9920	RF	77R37	DR	63S4	51 287
	0.80	1728	9920	RM	77R37	DR	63S4	76 287
	0.85	1620	9920					
	0.97	1430	9920					
	1.1	1303	9920					
	1.2	1124	9920					
	1.3	1047	9920	R	77R37	DR	63M4	45 287
	1.4	915	9920	RF	77R37	DR	63M4	51 287
	1.5	858	9920	RM	77R37	DR	63M4	76 287
	1.7	757	9920					
	1.9	671	9920	R	77R37	DR	63L4	46 287
	2.3	571	9920	RF	77R37	DR	63L4	52 287
				RM	77R37	DR	63L4	77 287
	2.3	560	9920	R	77R37	DR	63L4	47 287
				RF	77R37	DR	63L4	53 287
				RM	77R37	DR	63L4	78 287
	2.8	488	9920	R	77R37	DRS	71S4	49 287
	3.2	436	9920	RF	77R37	DRS	71S4	55 287
	3.7	373	9920	RM	77R37	DRS	71S4	80 287
	4.2	327	9920	R	77R37	DRS	71M4	50 287
4.8	289	9920	RF	77R37	DRS	71M4	56 287	
5.3	260	9920	RM	77R37	DRS	71M4	81 287	
<b>1550</b>	0.08	17452	16900					
	0.09	15310	16900					
	0.10	13813	16900					
	0.11	12025	16900					
	0.13	10549	16900					
	0.15	9244	16900					
	0.17	8109	16900	R	87R57	DR	63S4	86 287
	0.20	7038	16900	RF	87R57	DR	63S4	93 287
	0.22	6174	16900	RM	87R57	DR	63S4	125 287
	0.25	5449	16900					
	0.29	4831	16900					
	0.33	4206	16900					
	0.37	3744	16900					
	0.43	3233	16900					
	0.48	2873	16900					
	0.67	1961	16900	R	87R57	DR	63M4	86 287
				RF	87R57	DR	63M4	93 287
				RM	87R57	DR	63M4	125 287
	0.34	4020	16900	R	87R57	DR	63S4	85 287
	0.43	3182	16900	RF	87R57	DR	63S4	92 287
	0.50	2770	16900	RM	87R57	DR	63S4	120 287
	0.53	2595	16900					
	0.62	2129	16900					
	0.68	1930	16900	R	87R57	DR	63M4	85 287
	0.76	1733	16900	RF	87R57	DR	63M4	92 287
	0.89	1489	16900	RM	87R57	DR	63M4	120 287
	0.95	1395	16900					
	1.0	1232	16900	R	87R57	DR	63L4	85 287
	1.1	1145	16900	RF	87R57	DR	63L4	93 287
	1.2	1037	16900	RM	87R57	DR	63L4	120 287
	1.7	802	16900	R	87R57	DRS	71S4	87 287
	1.8	754	16900	RF	87R57	DRS	71S4	94 287
				RM	87R57	DRS	71S4	125 287
	0.76	1737	16900	R	87R57	DR	63M4	85 287
	0.87	1524	16900	RF	87R57	DR	63M4	92 287
				RM	87R57	DR	63M4	120 287
1.0	1303	16900	R	87R57	DR	63L4	86 287	
1.3	1008	16900	RF	87R57	DR	63L4	93 287	
			RM	87R57	DR	63L4	125 287	
1.6	885	16900	R	87R57	DRS	71S4	88 287	
2.0	685	16900	RF	87R57	DRS	71S4	95 287	
			RM	87R57	DRS	71S4	125 287	

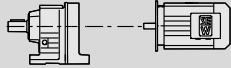





$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]		
1550	2.3	599	16900	R	87R57	DRS	71M4	89	287	
				RF	87R57	DRS	71M4	96	287	
				RM	87R57	DRS	71M4	125	287	
	3.6 4.1	398 352	16900 16900	R	87R57	DRE	80M4	94	287	
				RF	87R57	DRE	80M4	100	287	
				RM	87R57	DRE	80M4	130	287	
	4.6 5.3	305 268	16900 16900	R	87R57	DRE	90M4	99	287	
				RF	87R57	DRE	90M4	105	287	
				RM	87R57	DRE	90M4	135	287	
	2.6 2.9	538 472	16900 16900	R	87R57	DRS	71M4	87	287	
				RF	87R57	DRS	71M4	95	287	
				RM	87R57	DRS	71M4	125	287	
	3.6 4.0	400 361	16900 16900	R	87R57	DRE	80M4	92	287	
				RF	87R57	DRE	80M4	100	287	
				RM	87R57	DRE	80M4	130	287	
	4.7 5.6	300 256	16900 16900	R	87R57	DRE	90M4	97	287	
				RF	87R57	DRE	90M4	105	287	
				RM	87R57	DRE	90M4	135	287	
	3000	0.06	21769	19800						
		0.07	19332	19800						
		0.08	17230	19800						
		0.09	14999	19800						
		0.10	13320	19800						
		0.12	11156	19800	R	97R57	DR	63S4	130	287
0.14		10030	19800	RF	97R57	DR	63S4	145	287	
0.16		8706	19800	RM	97R57	DR	63S4	195	287	
0.18		7692	19800							
0.21		6708	19800							
0.23		5931	19800							
0.27		5161	19800							
0.33 0.38		4004 3481	19800 19800	R	97R57	DR	63M4	130	287	
				RF	97R57	DR	63M4	145	287	
				RM	97R57	DR	63M4	195	287	
0.29		4678	19800	R	97R57	DR	63S4	125	287	
				RF	97R57	DR	63S4	140	287	
				RM	97R57	DR	63S4	195	287	
0.31 0.36 0.44		4309 3702 3019	19800 19800 19800	R	97R57	DR	63M4	125	287	
				RF	97R57	DR	63M4	140	287	
				RM	97R57	DR	63M4	195	287	
0.49 0.58 0.64		2668 2245 2016	19800 19800 19800	R	97R57	DR	63L4	125	287	
				RF	97R57	DR	63L4	145	287	
				RM	97R57	DR	63L4	195	287	
0.80 0.85 0.96		1733 1623 1434	19800 19800 19800	R	97R57	DRS	71S4	130	287	
				RF	97R57	DRS	71S4	145	287	
				RM	97R57	DRS	71S4	195	287	
1.1 1.3 1.5 1.6		1207 1084 934 878	19800 19800 19800 19800	R	97R57	DRS	71M4	130	287	
				RF	97R57	DRS	71M4	145	287	
				RM	97R57	DRS	71M4	195	287	
1.9		755	19800	R	97R57	DRE	80M4	135	287	
				RF	97R57	DRE	80M4	150	287	
				RM	97R57	DRE	80M4	200	287	
0.76 0.87 0.99		1823 1583 1396	19800 19800 19800	R	97R57	DRS	71S4	130	287	
				RF	97R57	DRS	71S4	145	287	
				RM	97R57	DRS	71S4	200	287	
1.1 1.3 1.5		1228 1069 938	19800 19800 19800	R	97R57	DRS	71M4	130	287	
				RF	97R57	DRS	71M4	150	287	
				RM	97R57	DRS	71M4	200	287	
1.7 2.0		824 737	19800 19800	R	97R57	DRE	80M4	135	287	
				RF	97R57	DRE	80M4	155	287	
				RM	97R57	DRE	80M4	205	287	
2.2 2.5 2.9		632 560 484	19800 19800 19800	R	97R57	DRE	90M4	140	287	
				RF	97R57	DRE	90M4	160	287	
				RM	97R57	DRE	90M4	210	287	
3.3 3.8 4.2		431 379 336	19800 19800 19800	R	97R57	DRE	90L4	145	287	
				RF	97R57	DRE	90L4	160	287	
	RM			97R57	DRE	90L4	210	287		

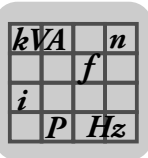


## R..DRE/DRS R..R..DRE/DRS [Nm]

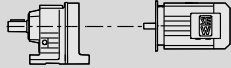

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]		
3000	4.8	296	19800	R	97R57	DRE	100M4	150	287	
	5.7	249	19800	RF	97R57	DRE	100M4	165	287	
	6.1	234	19800	RM	97R57	DRE	100M4	215	287	
	2.3	625	19800	R	97R57	DRE	90M4	140	287	
	2.6	549	19800	RF	97R57	DRE	90M4	155	287	
				RM	97R57	DRE	90M4	205	287	
	5.3	270	19800	R	97R57	DRE	100M4	145	287	
	6.3	227	19800	RF	97R57	DRE	100M4	160	287	
				RM	97R57	DRE	100M4	215	287	
	4300	0.07	20018	29500						
		0.08	17080	29500						
		0.09	14936	29500	R	107R77	DR	63S4	200	287
0.11		12829	29500	RF	107R77	DR	63S4	210	287	
0.12		11256	29500	RM	107R77	DR	63S4	295	287	
0.14		9547	29500							
0.16		8618	29500							
0.18		7583	29500							
0.20		6743	29500	R	107R77	DR	63M4	200	287	
0.22		5914	29500	RF	107R77	DR	63M4	210	287	
0.26		5168	29500	RM	107R77	DR	63M4	295	287	
0.30		4435	29500							
0.33		3896	29500	R	107R77	DR	63L4	205	287	
0.43		3039	29500	RF	107R77	DR	63L4	210	287	
				RM	107R77	DR	63L4	295	287	
0.33		3918	29500	R	107R77	DR	63L4	195	287	
0.39		3343	29500	RF	107R77	DR	63L4	200	287	
0.43		3034	29500	RM	107R77	DR	63L4	290	287	
0.52		2653	29500	R	107R77	DRS	71S4	200	287	
0.61		2280	29500	RF	107R77	DRS	71S4	205	287	
0.67		2067	29500	RM	107R77	DRS	71S4	290	287	
0.82		1693	29500	R	107R77	DRS	71M4	200	287	
0.89		1550	29500	RF	107R77	DRS	71M4	205	287	
0.98		1407	29500	RM	107R77	DRS	71M4	295	287	
1.2		1209	29500	R	107R77	DRE	80M4	205	287	
1.4		1055	29500	RF	107R77	DRE	80M4	210	287	
				RM	107R77	DRE	80M4	300	287	
1.5		919	29500	R	107R77	DRE	90M4	210	287	
1.7		815	29500	RF	107R77	DRE	90M4	215	287	
2.0		717	29500	RM	107R77	DRE	90M4	300	287	
2.3		626	29500	R	107R77	DRE	90L4	210	287	
2.7		528	29500	RF	107R77	DRE	90L4	215	287	
				RM	107R77	DRE	90L4	305	287	
0.69		1987	29500	R	107R77	DRS	71S4	205	287	
				RF	107R77	DRS	71S4	210	287	
				RM	107R77	DRS	71S4	295	287	
0.76		1827	29500	R	107R77	DRS	71M4	205	287	
0.86		1599	29500	RF	107R77	DRS	71M4	210	287	
0.99		1400	29500	RM	107R77	DRS	71M4	300	287	
1.2		1226	29500	R	107R77	DRE	80M4	210	287	
1.3		1104	29500	RF	107R77	DRE	80M4	215	287	
				RM	107R77	DRE	80M4	305	287	
1.5		939	29500	R	107R77	DRE	90M4	215	287	
1.7		822	29500	RF	107R77	DRE	90M4	220	287	
				RM	107R77	DRE	90M4	305	287	
2.3		614	29500	R	107R77	DRE	90L4	215	287	
2.6		544	29500	RF	107R77	DRE	90L4	220	287	
2.9		492	29500	RM	107R77	DRE	90L4	310	287	
3.4		417	29500	R	107R77	DRE	100M4	220	287	
3.9		369	29500	RF	107R77	DRE	100M4	225	287	
4.4		323	29500	RM	107R77	DRE	100M4	315	287	
5.1		285	29500	R	107R77	DRE	100LC4	225	287	
5.8		253	29500	RF	107R77	DRE	100LC4	230	287	
				RM	107R77	DRE	100LC4	320	287	
6.8	214	29500	R	107R77	DRE	132S4	240	287		
7.8	187	29500	RF	107R77	DRE	132S4	245	287		
			RM	107R77	DRE	132S4	335	287		



$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
4300	3.0	469	29500	R	107R77	DRE	90L4	210	287
				RF	107R77	DRE	90L4	215	287
				RM	107R77	DRE	90L4	305	287
	3.4	426	29500	R	107R77	DRE	100M4	215	287
				RF	107R77	DRE	100M4	220	287
				RM	107R77	DRE	100M4	310	287
	5.1	284	29500	R	107R77	DRE	100LC4	220	287
				RF	107R77	DRE	100LC4	225	287
				RM	107R77	DRE	100LC4	315	287
	5.7	256	29500	R	107R77	DRE	100LC4	220	287
				RF	107R77	DRE	100LC4	225	287
				RM	107R77	DRE	100LC4	315	287
	6.6	220	29500	R	107R77	DRE	132S4	235	287
				RF	107R77	DRE	132S4	240	287
				RM	107R77	DRE	132S4	330	287
7.6	193	29500	R	107R77	DRE	132S4	235	287	
			RF	107R77	DRE	132S4	240	287	
			RM	107R77	DRE	132S4	330	287	
8.4	172	29500	R	107R77	DRE	132M4	245	287	
			RF	107R77	DRE	132M4	250	287	
			RM	107R77	DRE	132M4	340	287	
8000	0.06	22203	53400						
	0.07	18945	53400	R	137R77	DR	63S4	290	287
	0.08	16566	53400	RF	137R77	DR	63S4	310	287
	0.09	14777	53400	RM	137R77	DR	63S4	425	287
	0.11	12921	53400						
	0.11	11712	53400	R	137R77	DR	63M4	290	287
	0.12	10573	53400	RF	137R77	DR	63M4	310	287
	0.15	8784	53400	RM	137R77	DR	63M4	425	287
	0.17	7479	53400	R	137R77	DR	63L4	290	287
	0.20	6559	53400	RF	137R77	DR	63L4	310	287
	0.22	5834	53400	RM	137R77	DR	63L4	425	287
	0.27	5116	53400	R	137R77	DRS	71S4	290	287
	0.31	4464	53400	RF	137R77	DRS	71S4	315	287
	0.35	3928	53400	RM	137R77	DRS	71S4	425	287
	0.40	3454	53400	R	137R77	DRS	71M4	290	287
	0.46	2993	53400	RF	137R77	DRS	71M4	315	287
				RM	137R77	DRS	71M4	425	287
	0.29	4709	53400	R	137R77	DRS	71S4	280	287
	0.34	4018	53400	RF	137R77	DRS	71S4	305	287
				RM	137R77	DRS	71S4	415	287
	0.39	3514	53400						
	0.41	3338	53400	R	137R77	DRS	71M4	280	287
	0.47	2929	53400	RF	137R77	DRS	71M4	305	287
	0.56	2484	53400	RM	137R77	DRS	71M4	415	287
	0.64	2242	53400	R	137R77	DRE	80M4	285	287
	0.77	1863	53400	RF	137R77	DRE	80M4	310	287
				RM	137R77	DRE	80M4	420	287
	0.90	1586	53400	R	137R77	DRE	90M4	290	287
	1.0	1391	53400	RF	137R77	DRE	90M4	315	287
	1.1	1256	53400	RM	137R77	DRE	90M4	425	287
	1.3	1105	53400	R	137R77	DRE	90L4	295	287
	1.4	1043	53400	RF	137R77	DRE	90L4	315	287
	1.6	888	53400	RM	137R77	DRE	90L4	430	287
	2.0	699	53400	R	137R77	DRE	100M4	300	287
	2.3	609	53400	RF	137R77	DRE	100M4	320	287
				RM	137R77	DRE	100M4	435	287
	0.52	2658	53400	R	137R77	DRS	71M4	290	287
	0.57	2412	53400	RF	137R77	DRS	71M4	315	287
				RM	137R77	DRS	71M4	425	287
	0.69	2073	53400	R	137R77	DRE	80M4	295	287
	0.78	1839	53400	RF	137R77	DRE	80M4	320	287
				RM	137R77	DRE	80M4	430	287
	0.89	1598	53400	R	137R77	DRE	90M4	300	287
	1.0	1397	53400	RF	137R77	DRE	90M4	325	287
	1.2	1226	53400	RM	137R77	DRE	90M4	435	287
1.3	1090	53400	R	137R77	DRE	90L4	300	287	
1.5	951	53400	RF	137R77	DRE	90L4	325	287	
			RM	137R77	DRE	90L4	435	287	
1.7	831	53400	R	137R77	DRE	100M4	305	287	
2.0	730	53400	RF	137R77	DRE	100M4	330	287	
2.3	629	53400	RM	137R77	DRE	100M4	440	287	



## R..DRE/DRS R..R..DRE/DRS [Nm]

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]		
<b>8000</b>	2.6	560	53400	R	137R77	DRE	100LC4	310	287	
	3.0	490	53400	RF	137R77	DRE	100LC4	335	287	
				RM	137R77	DRE	100LC4	445	287	
	3.4	428	53400	R	137R77	DRE	132S4	325	287	
	3.8	381	53400	RF	137R77	DRE	132S4	350	287	
				RM	137R77	DRE	132S4	460	287	
	4.5	323	53400	R	137R77	DRE	132M4	340	287	
	5.0	291	53400	RF	137R77	DRE	132M4	360	287	
	5.7	255	53400	RM	137R77	DRE	132M4	475	287	
	2.6	564	53400	R	137R77	DRE	100LC4	300	287	
	2.8	517	53400	RF	137R77	DRE	100LC4	325	287	
	3.2	453	53400	RM	137R77	DRE	100LC4	435	287	
	3.9	376	53400	R	137R77	DRE	132S4	315	287	
	4.3	339	53400	RF	137R77	DRE	132S4	340	287	
				RM	137R77	DRE	132S4	450	287	
	4.9	297	53400	R	137R77	DRE	132M4	330	287	
				RF	137R77	DRE	132M4	350	287	
				RM	137R77	DRE	132M4	465	287	
	<b>13000</b>	0.06	23401	62700	R	147R77	DR	63S4	420	287
		0.06	21342	62700	RF	147R77	DR	63S4	430	287
					RM	147R77	DR	63S4	600	287
		0.07	18210	62700	R	147R77	DR	63M4	420	287
		0.08	15923	62700	RF	147R77	DR	63M4	430	287
		0.09	14075	62700	RM	147R77	DR	63M4	600	287
0.11		12344	62700							
0.12		11143	62700	R	147R77	DR	63L4	420	287	
0.13		9743	62700	RF	147R77	DR	63L4	430	287	
				RM	147R77	DR	63L4	600	287	
0.16		8443	62700	R	147R77	DRS	71S4	425	287	
0.19		7307	62700	RF	147R77	DRS	71S4	430	287	
0.21		6447	62700	RM	147R77	DRS	71S4	600	287	
0.25		5568	62700	R	147R77	DRS	71M4	425	287	
0.28		4926	62700	RF	147R77	DRS	71M4	430	287	
0.32		4325	62700	RM	147R77	DRS	71M4	600	287	
0.38		3754	62700	R	147R77	DRE	80M4	430	287	
0.43		3302	62700	RF	147R77	DRE	80M4	440	287	
				RM	147R77	DRE	80M4	600	287	
0.49		2898	62700	R	147R77	DRE	90M4	435	287	
				RF	147R77	DRE	90M4	440	287	
				RM	147R77	DRE	90M4	610	287	
0.56		2555	62700	R	147R77	DRE	90M4	430	287	
0.64		2211	62700	RF	147R77	DRE	90M4	440	287	
0.73		1951	62700	RM	147R77	DRE	90M4	610	287	
0.84		1705	62700	R	147R77	DRE	90L4	435	287	
0.93		1536	62700	RF	147R77	DRE	90L4	445	287	
				RM	147R77	DRE	90L4	610	287	
1.1		1329	62700	R	147R77	DRE	100M4	440	287	
1.2		1166	62700	RF	147R77	DRE	100M4	450	287	
1.4		1029	62700	RM	147R77	DRE	100M4	610	287	
1.6		889	62700	R	147R77	DRE	100LC4	445	287	
1.9		784	62700	RF	147R77	DRE	100LC4	450	287	
				RM	147R77	DRE	100LC4	620	287	
2.1		695	62700	R	147R77	DRE	132S4	460	287	
2.4		619	62700	RF	147R77	DRE	132S4	465	287	
2.6		558	62700	RM	147R77	DRE	132S4	630	287	
3.0		489	62700	R	147R77	DRE	132M4	470	287	
				RF	147R77	DRE	132M4	480	287	
				RM	147R77	DRE	132M4	650	287	
2.7		533	62700	R	147R87	DRE	132M4	490	287	
3.2		462	62700	RF	147R87	DRE	132M4	500	287	
3.4		426	62700	RM	147R87	DRE	132M4	670	287	
4.0		368	62700	R	147R87	DRE	132MC4	495	287	
4.5		326	62700	RF	147R87	DRE	132MC4	500	287	
				RM	147R87	DRE	132MC4	670	287	
5.2		280	62700	R	147R87	DRE	160M4	520	287	
5.9		247	62700	RF	147R87	DRE	160M4	520	287	
			RM	147R87	DRE	160M4	690	287		



$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
<b>13000</b>	6.9	214	62700	R	147R87	DRE	160MC4	520	287
				RF	147R87	DRE	160MC4	530	287
				RM	147R87	DRE	160MC4	700	287
<b>18000</b>	0.05	27001	120000						
	0.06	22482	120000						
	0.07	20002	120000						
	0.08	17361	120000	R	167R97	DRS	71M4	760	287
	0.09	15446	120000	RF	167R97	DRS	71M4	760	287
	0.10	14051	120000	RM	167R97	DRS	71M4	960	287
	0.12	11812	120000						
	0.13	10509	120000						
	0.14	9631	120000						
	0.19	7749	120000	R	167R97	DRE	80M4	760	287
	0.21	6894	120000	RF	167R97	DRE	80M4	770	287
				RM	167R97	DRE	80M4	960	287
	0.23	6077	120000	R	167R97	DRS	71M4	760	287
				RF	167R97	DRS	71M4	760	287
				RM	167R97	DRS	71M4	960	287
	0.27	5407	120000	R	167R97	DRE	80M4	760	287
				RF	167R97	DRE	80M4	770	287
	0.31	4650	120000	RM	167R97	DRE	80M4	960	287
				R	167R97	DRE	90M4	760	287
	0.34	4129	120000	RF	167R97	DRE	90M4	770	287
				RM	167R97	DRE	90M4	960	287
	0.38	3692	120000	R	167R97	DRE	90L4	760	287
				RF	167R97	DRE	90L4	770	287
	0.54	2657	120000	RM	167R97	DRE	90L4	960	287
				R	167R97	DRE	100M4	770	287
	0.61	2333	120000	RF	167R97	DRE	100M4	770	287
				RM	167R97	DRE	100M4	970	287
	0.69	2085	120000	R	167R97	DRE	100LC4	770	287
				RF	167R97	DRE	100LC4	780	287
	0.76	1877	120000	RM	167R97	DRE	100LC4	970	287
				R	167R97	DRE	132S4	790	287
	0.85	1670	120000	RF	167R97	DRE	132S4	790	287
				RM	167R97	DRE	132S4	990	287
	0.99	1438	120000	R	167R97	DRE	132M4	800	287
				RF	167R97	DRE	132M4	800	287
	1.1	1279	120000	RM	167R97	DRE	132M4	1000	287
				R	167R97	DRE	132MC4	800	287
	1.3	1123	120000	RF	167R97	DRE	132MC4	810	287
				RM	167R97	DRE	132MC4	1000	287
	1.5	999	120000	R	167R97	DRE	160M4	820	287
				RF	167R97	DRE	160M4	830	287
	1.7	861	120000	RM	167R97	DRE	160M4	1020	287
				R	167R97	DRE	160MC4	830	287
	1.9	760	120000	RF	167R97	DRE	160MC4	830	287
				RM	167R97	DRE	160MC4	1030	287
	2.2	656	120000	R	167R107	DRE	160MC4	880	287
				RF	167R107	DRE	160MC4	880	287
RM				167R107	DRE	160MC4	1080	287	
2.5	579	120000	R	167R107	DRE	180M4	920	287	
			RF	167R107	DRE	180M4	930	287	
2.9	503	120000	RM	167R107	DRE	180M4	1120	287	
			R	167R107	DRE	160MC4	870	287	
3.4	432	120000	RF	167R107	DRE	160MC4	880	287	
			RM	167R107	DRE	160MC4	1070	287	
3.9	376	120000	R	167R107	DRE	180M4	910	287	
			RF	167R107	DRE	180M4	920	287	
4.4	335	120000	RM	167R107	DRE	180M4	1120	287	
			R	167R107	DRE	180M4	920	287	
4.9	303	120000	RF	167R107	DRE	180M4	920	287	
			RM	167R107	DRE	180M4	1120	287	
5.0	295	120000	R	167R107	DRE	180M4	920	287	
			RF	167R107	DRE	180M4	920	287	
5.1	291	120000	RM	167R107	DRE	180M4	1120	287	
			R	167R107	DRE	180M4	910	287	
5.4	270	120000	RF	167R107	DRE	180M4	920	287	
			RM	167R107	DRE	180M4	1120	287	
6.4	229	120000	R	167R107	DRE	180M4	910	287	
			RF	167R107	DRE	180M4	920	287	
7.3	200	120000	RM	167R107	DRE	180M4	1120	287	
			R	167R107	DRE	180M4	910	287	
5.1	291	120000	RF	167R107	DRE	180M4	920	287	
			RM	167R107	DRE	180M4	1120	287	
5.6	264	120000	R	167R107	DRE	180M4	910	287	
			RF	167R107	DRE	180M4	920	287	
6.5	227	120000	RM	167R107	DRE	180M4	1120	287	
			R	167R107	DRE	180M4	910	287	
7.4	198	120000	RF	167R107	DRE	180M4	920	287	
			RM	167R107	DRE	180M4	1120	287	

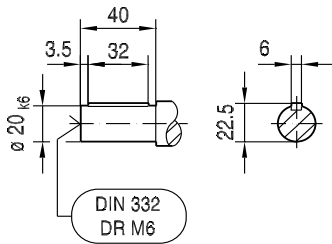
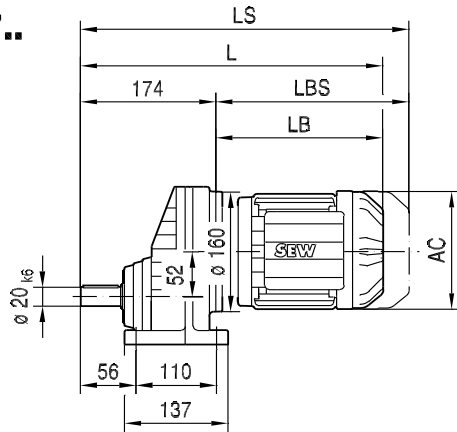


R..DRE/DRS  
R..DR.. [mm]

### 8.5 R..DR.. [mm]

01 081 00 06

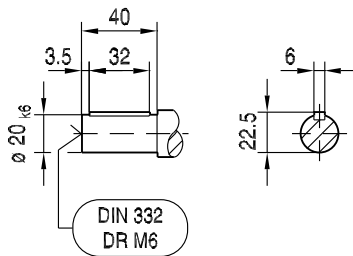
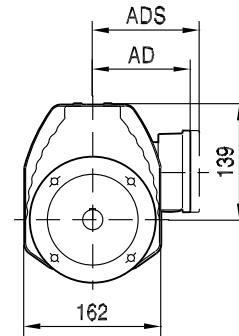
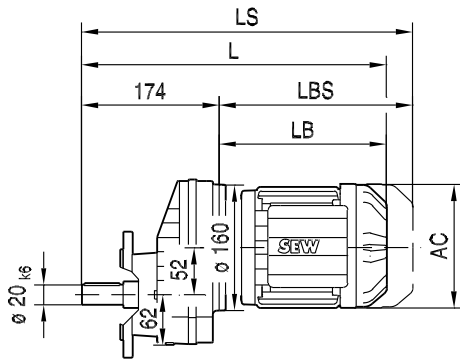
**RX57..**



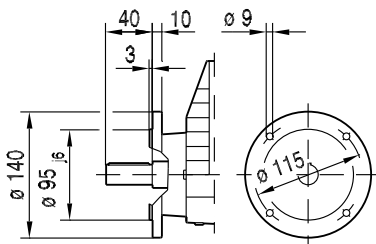
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	156	179	179	197	197	221	221
AD	105	119	119	128	128	140	140	157	157	170	170
ADS	105	129	129	139	139	150	150	158	158	172	172
L	359	370	395	404	435	437	457	487	517	564	614
LS	414	438	463	485	516	530	550	580	610	676	726
LB	185	196	221	230	261	263	283	313	343	390	440
LBS	240	264	289	311	342	356	376	406	436	502	552

01 082 02 06

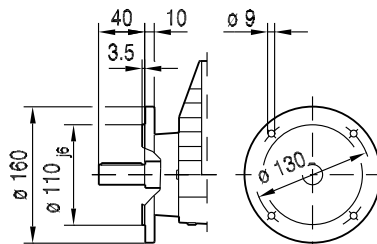
**RXF57..**



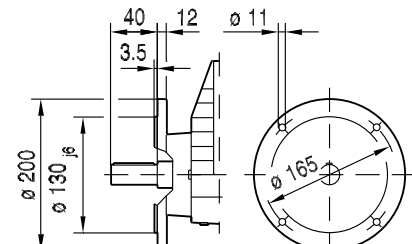
**$\varnothing 140$**



**$\varnothing 160$**



**$\varnothing 200$**



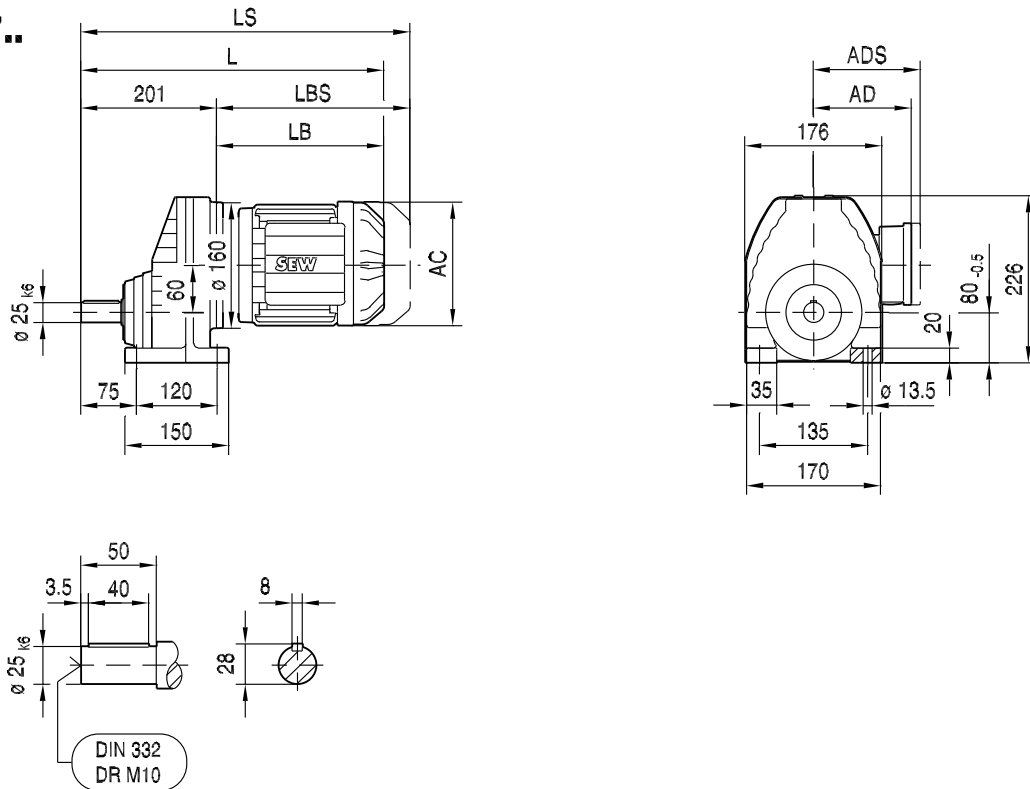
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	156	179	179	197	197	221	221
AD	105	119	119	128	128	140	140	157	157	170	170
ADS	105	129	129	139	139	150	150	158	158	172	172
L	359	370	395	404	435	437	457	487	517	564	614
LS	414	438	463	485	516	530	550	580	610	676	726
LB	185	196	221	230	261	263	283	313	343	390	440
LBS	240	264	289	311	342	356	376	406	436	502	552



R..DRE/DRS  
R..DR.. [mm]

01 083 00 06

RX67..

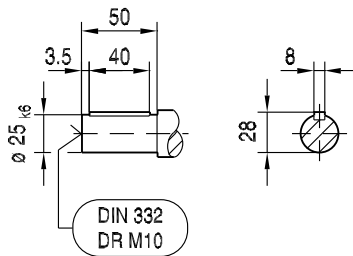
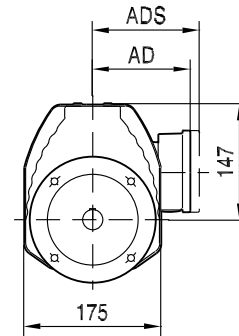
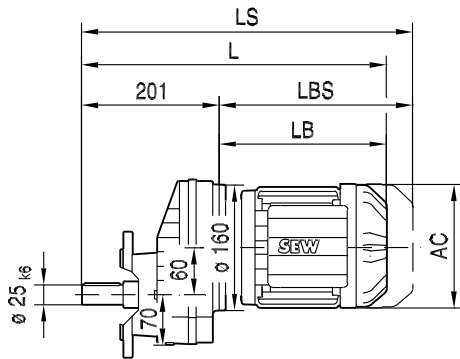


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	156	179	179	197	197	221	221
AD	105	119	119	128	128	140	140	157	157	170	170
ADS	105	129	129	139	139	150	150	158	158	172	172
L	386	397	422	431	462	464	484	514	544	591	641
LS	441	465	490	512	543	557	577	607	637	703	753
LB	185	196	221	230	261	263	283	313	343	390	440
LBS	240	264	289	311	342	356	376	406	436	502	552

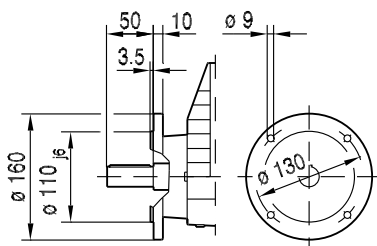


01 084 00 06

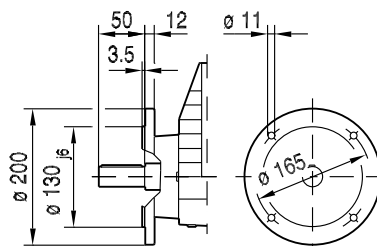
**RXF67..**



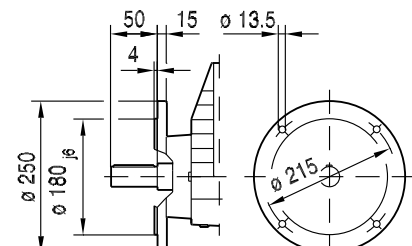
**$\varnothing 160$**



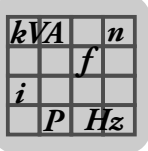
**$\varnothing 200$**



**$\varnothing 250$**



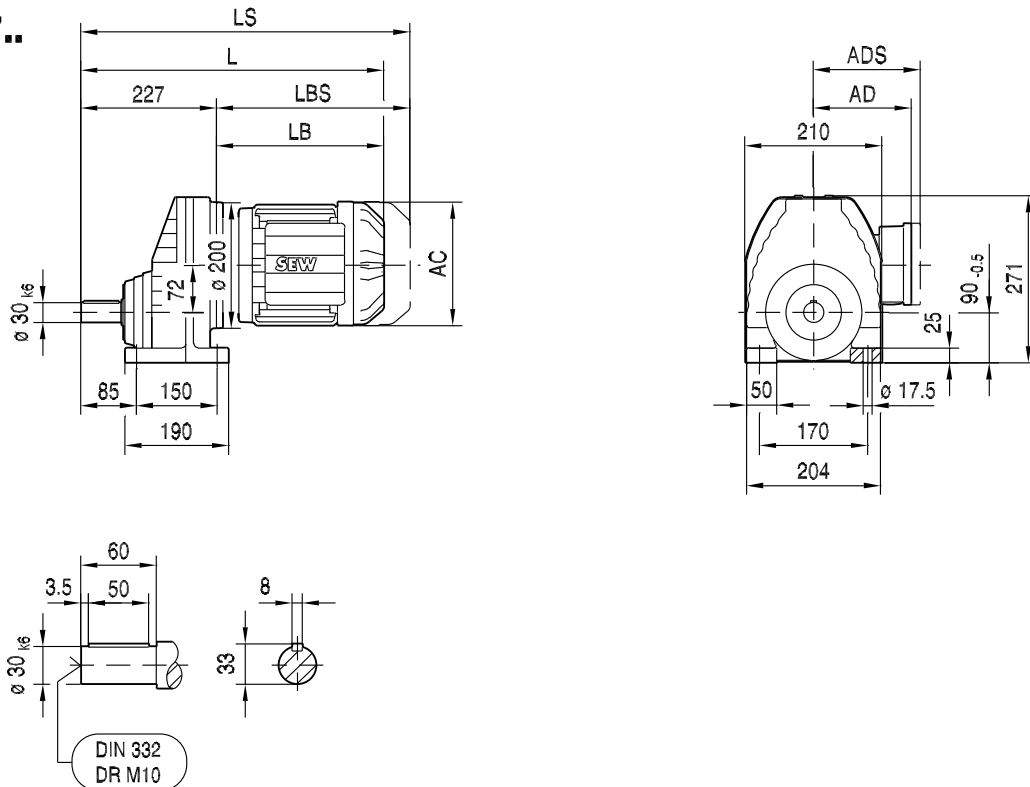
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	156	179	179	197	197	221	221
AD	105	119	119	128	128	140	140	157	157	170	170
ADS	105	129	129	139	139	150	150	158	158	172	172
L	386	397	422	431	462	464	484	514	544	591	641
LS	441	465	490	512	543	557	577	607	637	703	753
LB	185	196	221	230	261	263	283	313	343	390	440
LBS	240	264	289	311	342	356	376	406	436	502	552



R..DRE/DRS  
R..DR.. [mm]

01 085 00 06

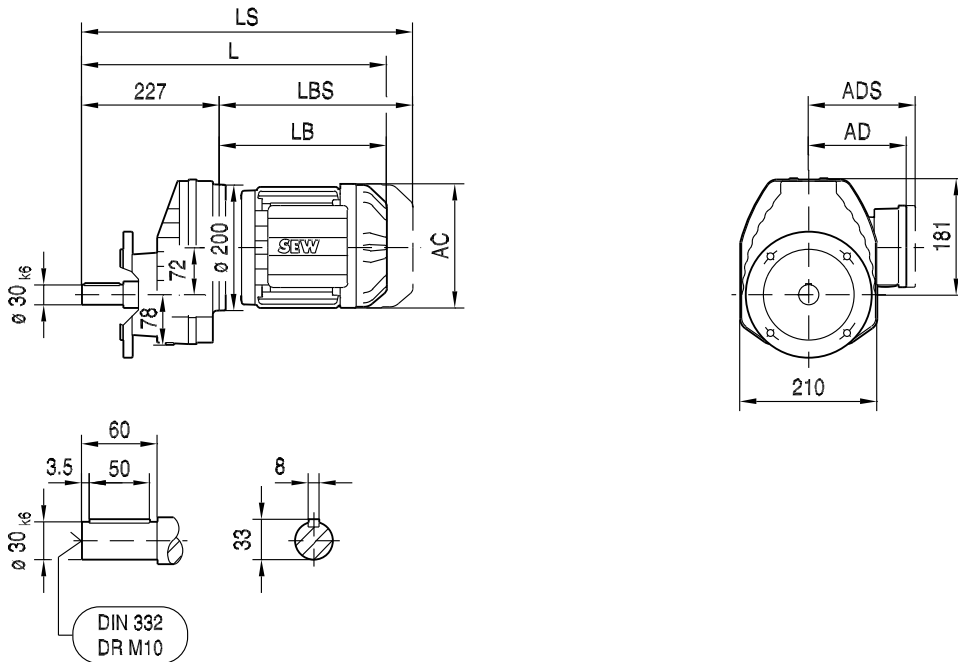
RX77..



(→ 136)	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	
AC	179	179	197	197	221	221	270	
AD	140	140	157	157	170	170	228	
ADS	150	150	158	158	172	172	228	
L	483	503	533	563	606	656	697	
LS	576	596	626	656	718	768	834	
LB	256	276	306	336	379	429	470	
LBS	349	369	399	429	491	541	607	

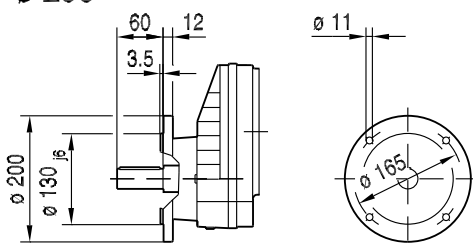
01 086 00 06

**RXF77..**

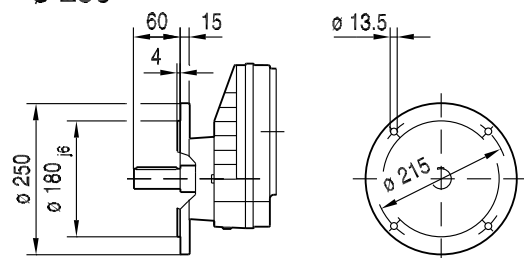


8

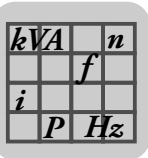
**ø 200**



**ø 250**



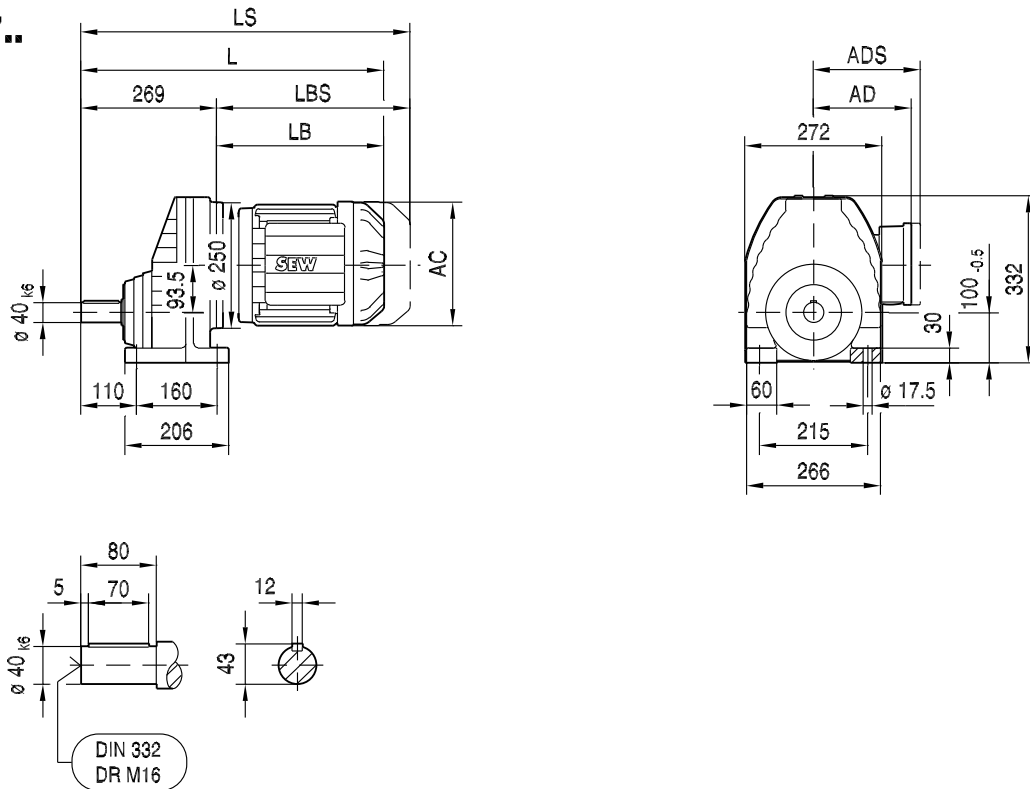
(→ 136)	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	
AC	179	179	197	197	221	221	270	
AD	140	140	157	157	170	170	228	
ADS	150	150	158	158	172	172	228	
L	483	503	533	563	606	656	697	
LS	576	596	626	656	718	768	834	
LB	256	276	306	336	379	429	470	
LBS	349	369	399	429	491	541	607	



R..DRE/DRS  
R..DR.. [mm]

01 087 00 06

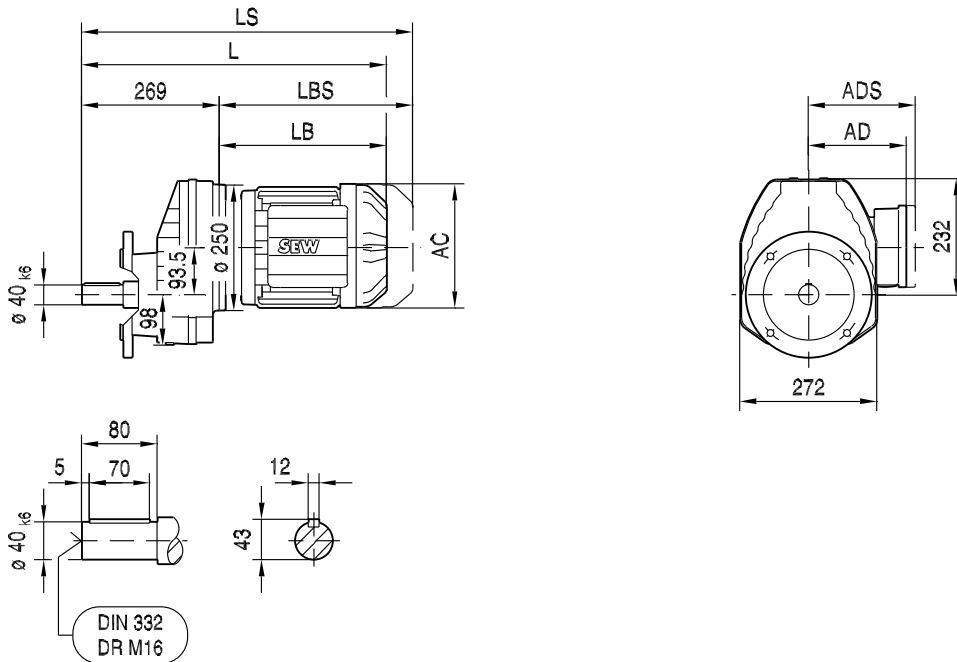
RX87..



(→ 136)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC		
AC	197	221	221	270	316	316		
AD	157	170	170	228	253	253		
ADS	158	172	172	228	253	253		
L	600	643	693	734	803	863		
LS	693	755	805	871	992	1052		
LB	331	374	424	465	534	594		
LBS	424	486	536	602	723	783		

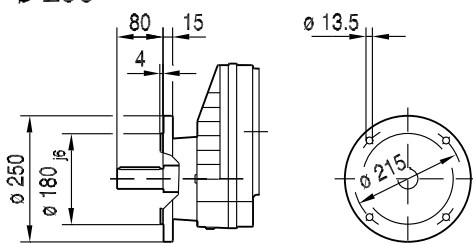
01 088 00 06

**RXF87..**

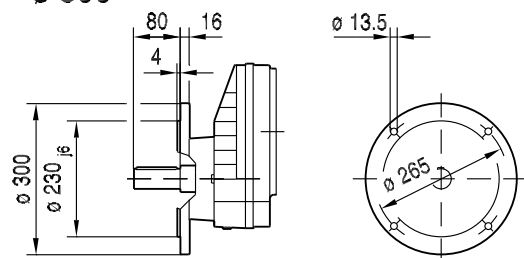


8

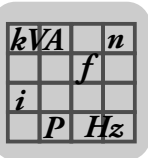
**∅ 250**



**∅ 300**



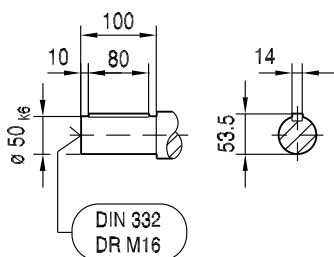
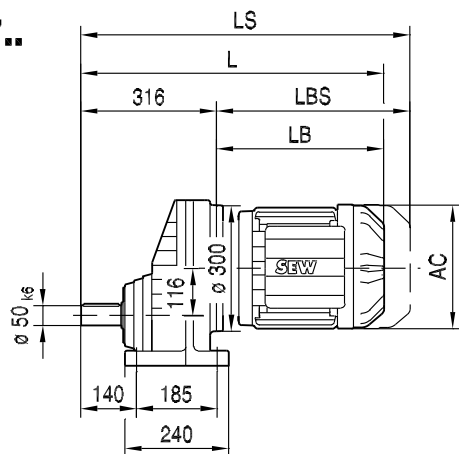
(→ 136)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC		
AC	197	221	221	270	316	316		
AD	157	170	170	228	253	253		
ADS	158	172	172	228	253	253		
L	600	643	693	734	803	863		
LS	693	755	805	871	992	1052		
LB	331	374	424	465	534	594		
LBS	424	486	536	602	723	783		



R..DRE/DRS  
R..DR.. [mm]

01 089 00 06

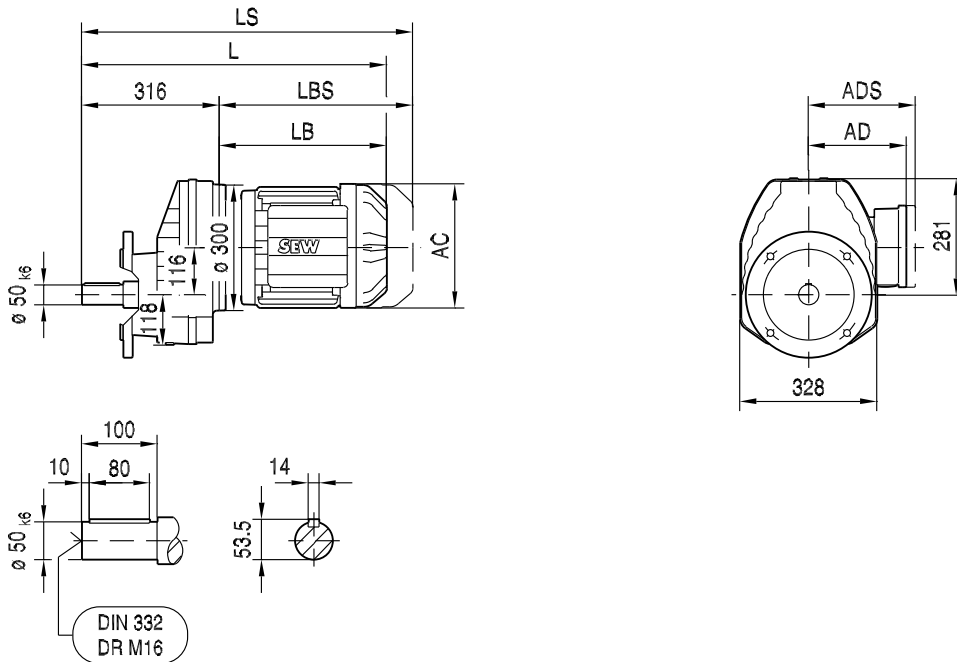
RX97..



(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200			
AC	221	270	316	316	394			
AD	170	228	253	253	283			
ADS	172	228	253	253	283			
L	735	776	845	905	978			
LS	847	913	1034	1094	1183			
LB	419	460	529	589	662			
LBS	531	597	718	778	867			

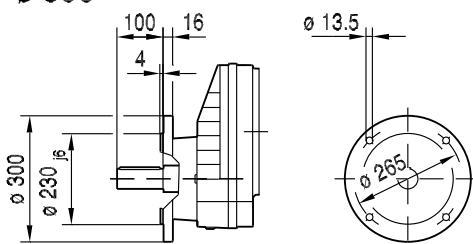
01 090 00 06

**RXF97..**

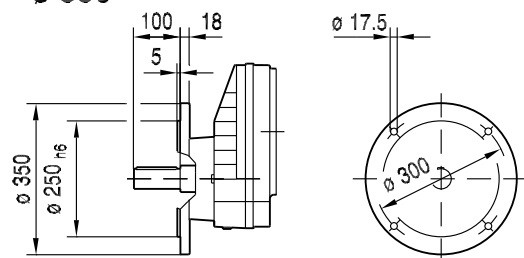


8

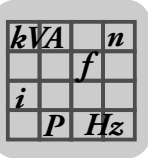
**$\varnothing 300$**



**$\varnothing 350$**



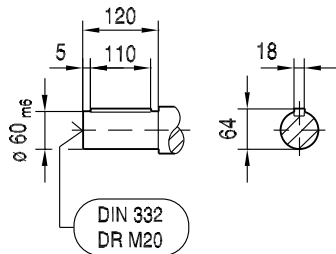
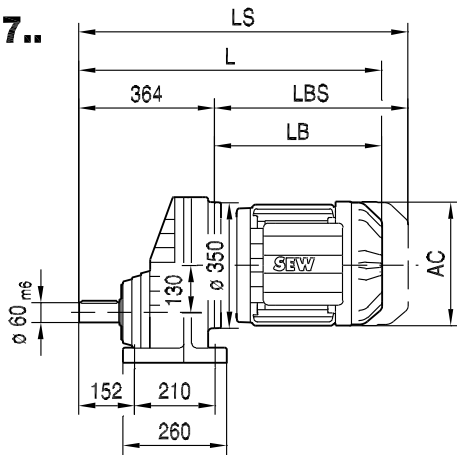
(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200			
AC	221	270	316	316	394			
AD	170	228	253	253	283			
ADS	172	228	253	253	283			
L	735	776	845	905	978			
LS	847	913	1034	1094	1183			
LB	419	460	529	589	662			
LBS	531	597	718	778	867			



R..DRE/DRS  
R..DR.. [mm]

01 091 00 06

RX107..

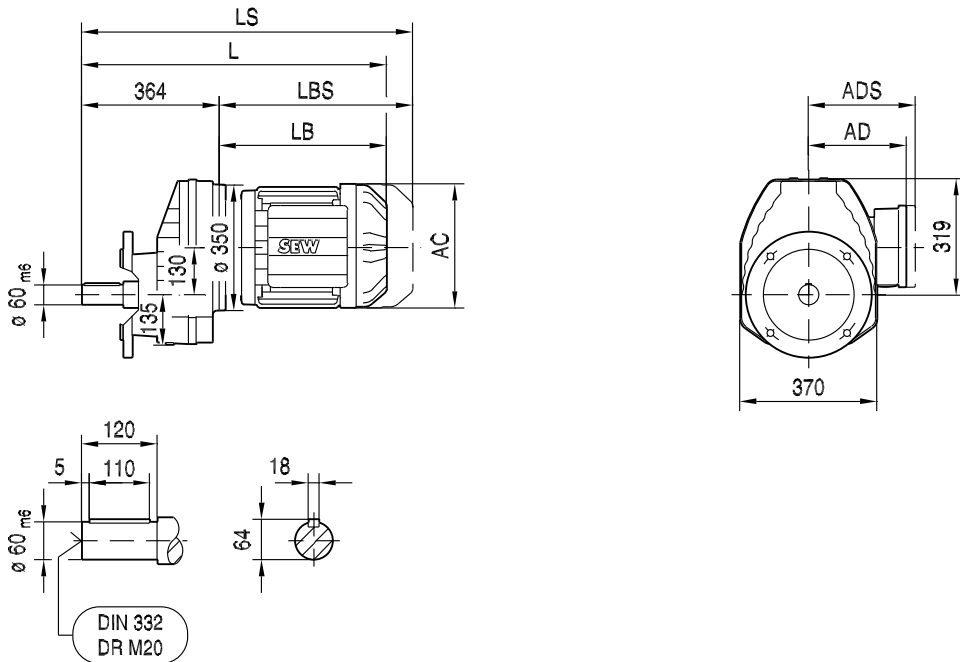


(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	
AC	221	270	316	316	394	394	394	
AD	170	228	253	253	283	283	283	
ADS	172	228	253	253	283	283	283	
L	777	818	887	947	1020	1020	1070	
LS	889	955	1076	1136	1225	1225	1275	
LB	413	454	523	583	656	656	706	
LBS	525	591	712	772	861	861	911	



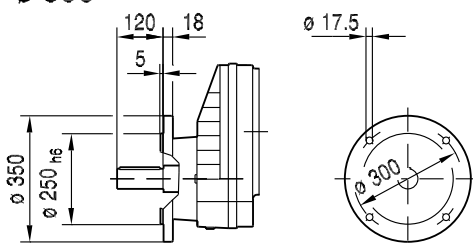
01 092 00 06

**RXF107..**

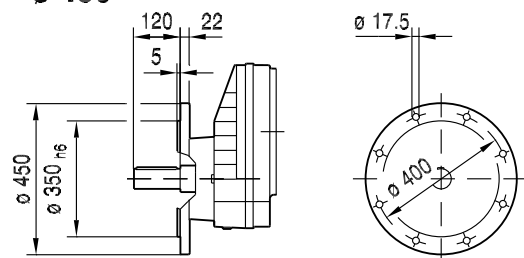


8

**∅ 350**



**∅ 450**



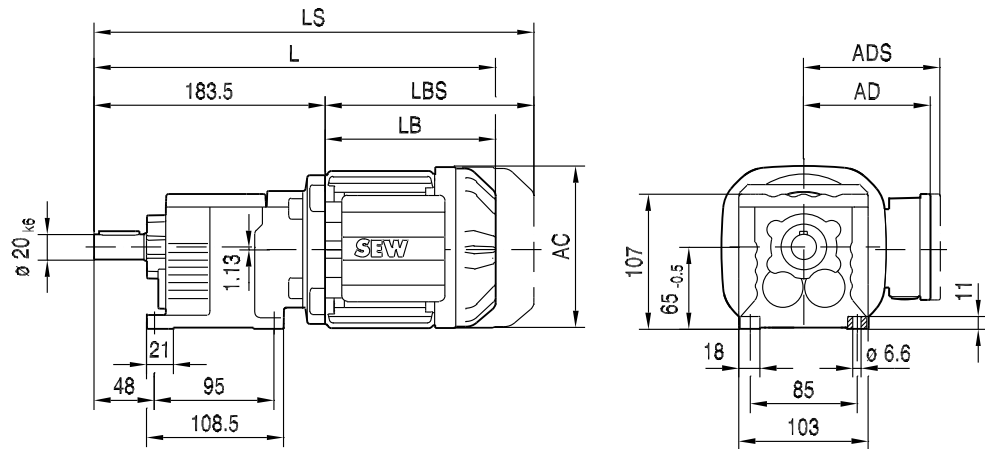
(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	
AC	221	270	316	316	394	394	394	
AD	170	228	253	253	283	283	283	
ADS	172	228	253	253	283	283	283	
L	777	818	887	947	1020	1020	1070	
LS	889	955	1076	1136	1225	1225	1275	
LB	413	454	523	583	656	656	706	
LBS	525	591	712	772	861	861	911	

kVA	n
f	
i	
P	H <sub>z</sub>

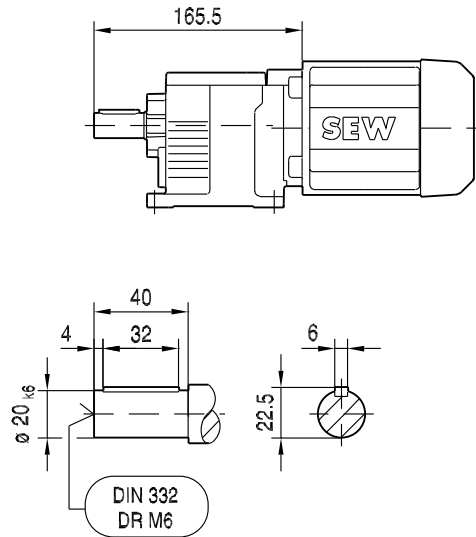
R..DRE/DRS  
R..DR.. [mm]

01 093 00 06

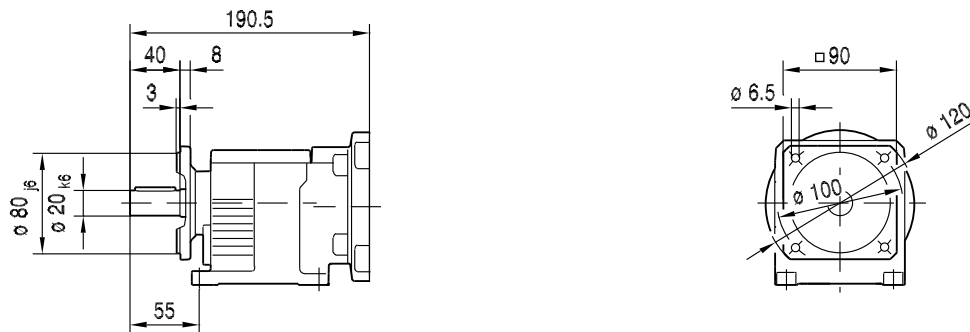
**R07..  
DR..**



**DT56..**



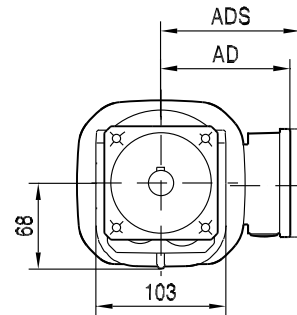
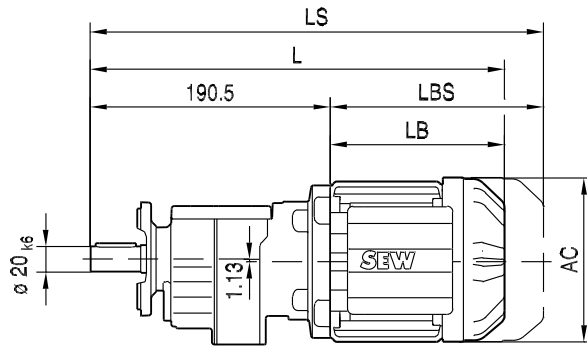
**R07F..**



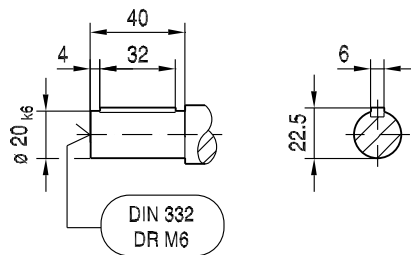
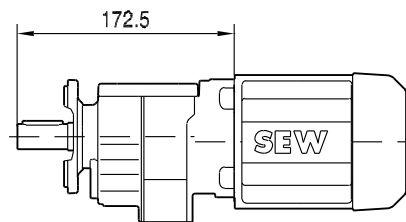
(→ 136)	DT56..	DR63..	DR71S	DR71M				
AC	109	132	139	139				
AD	87	105	119	119				
ADS	87	105	129	129				
L	302	333	344	369				
LS	338	388	412	437				
LB	136	149	160	185				
LBS	172	204	228	253				

01 095 00 06

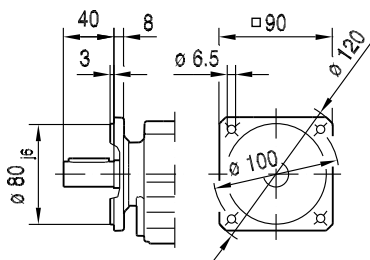
**RF07..  
DR..**



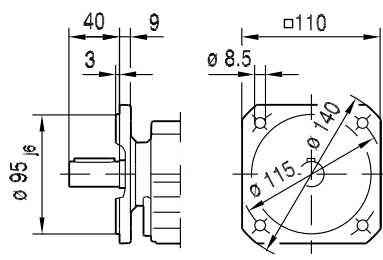
**DT56..**



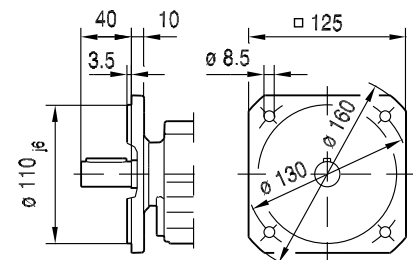
**∅ 120**



**∅ 140**



**∅ 160**



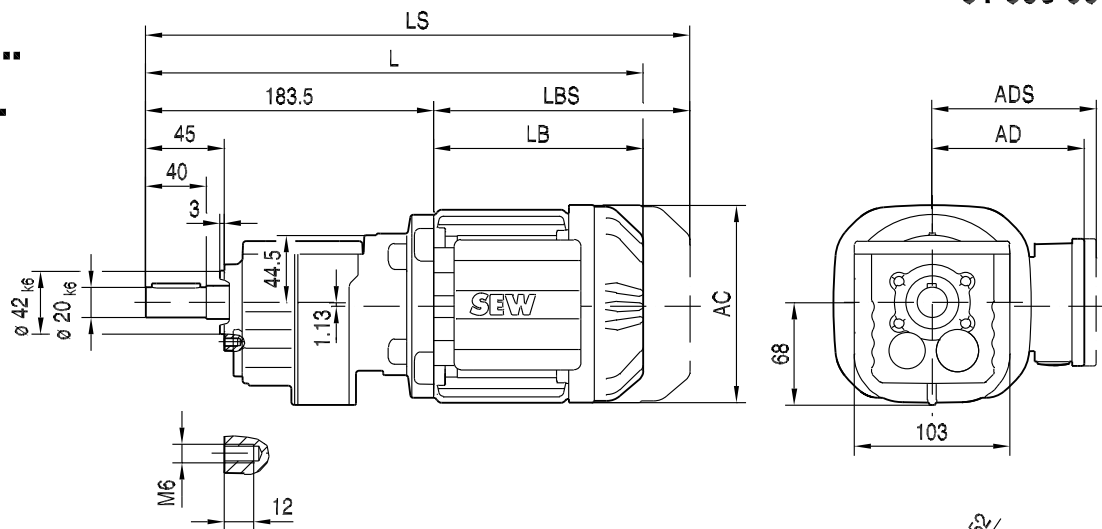
(→ 136)	DT56..	DR63..	DR71S	DR71M				
AC	109	132	139	139				
AD	87	105	119	119				
ADS	87	105	129	129				
L	309	340	351	376				
LS	345	395	419	444				
LB	136	149	160	185				
LBS	172	204	228	253				

$kVA$	$n$
$i$	$f$
$P$	$H_z$

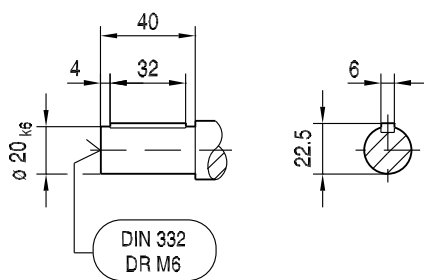
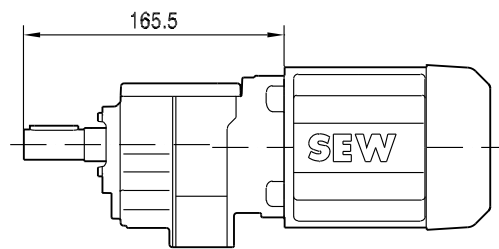
R..DRE/DRS  
R..DR.. [mm]

01 096 00 06

RZ07..  
DR..



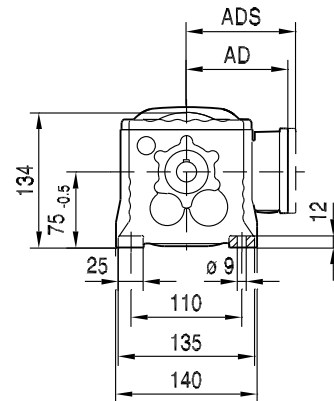
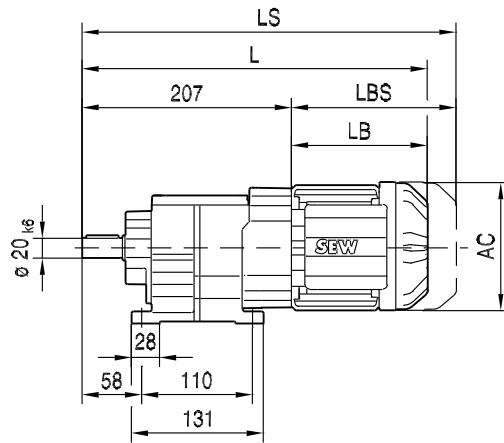
DT56..



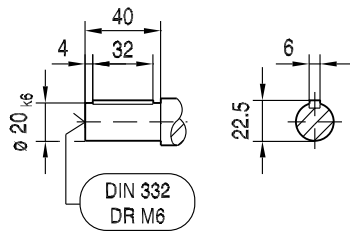
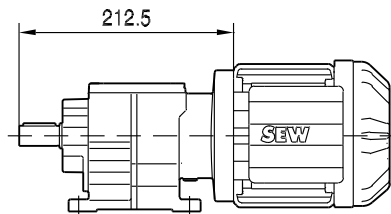
(→ 136)	DT56..	DR63..	DR71S	DR71M				
AC	109	132	139	139				
AD	87	105	119	119				
ADS	87	105	129	129				
L	302	333	344	369				
LS	338	388	412	437				
LB	136	149	160	185				
LBS	172	204	228	253				

01 097 00 06

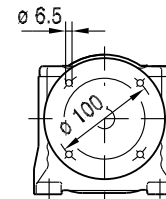
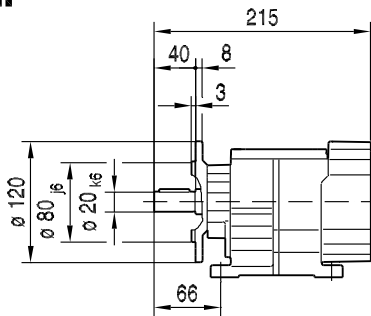
**R17..**



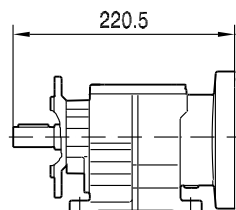
**DR80..**



**R17F..**



**DR80..**



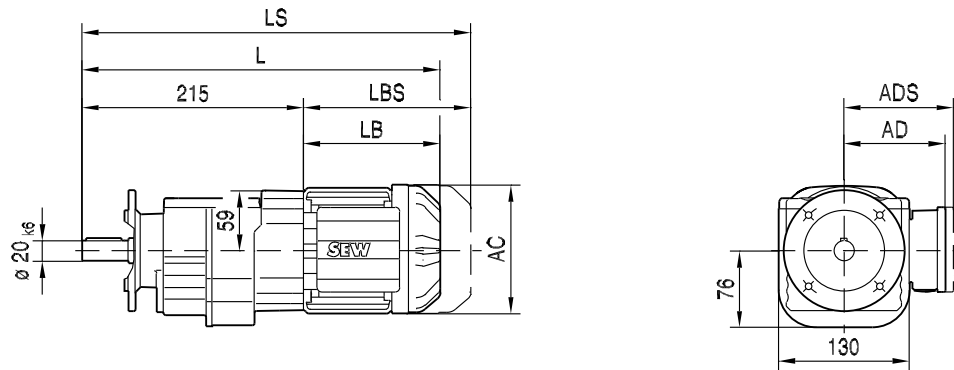
(→ 136)	DR63..	DR71S	DR71M	DR80M				
AC	132	139	139	156				
AD	105	119	119	128				
ADS	105	129	129	139				
L	356	367	392	433				
LS	411	435	460	514				
LB	149	160	185	220				
LBS	204	228	253	301				



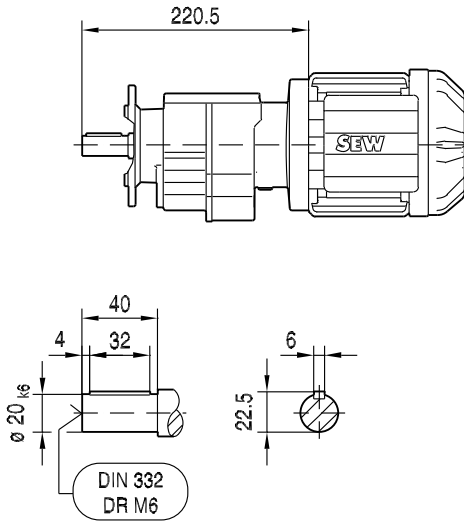
R..DRE/DRS  
R..DR.. [mm]

01 098 00 06

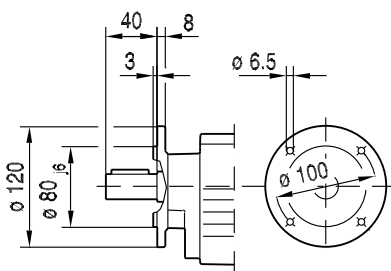
**RF17..**



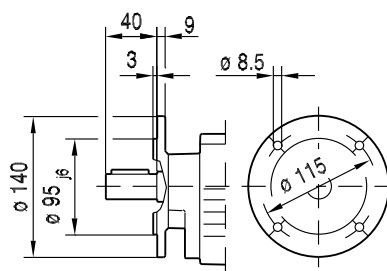
**DR80..**



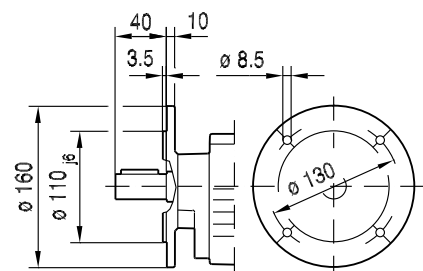
**ø 120**



**ø 140**



**ø 160**

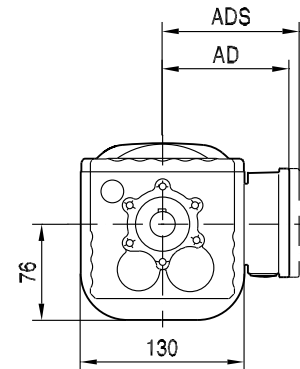
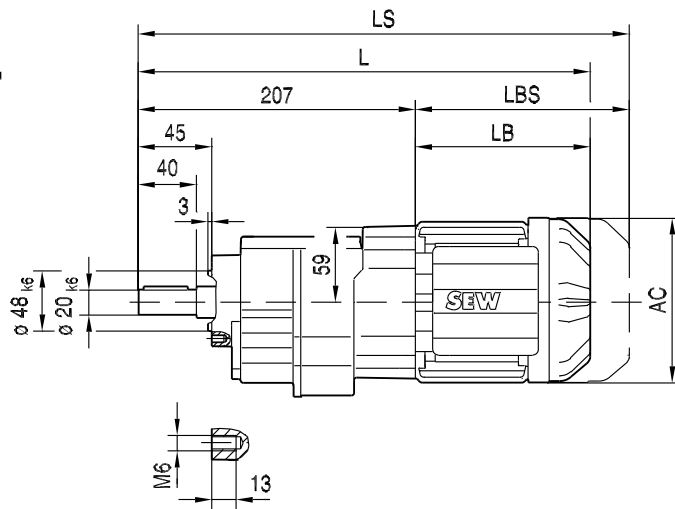


(→ 136)	DR63..	DR71S	DR71M	DR80M				
AC	132	139	139	156				
AD	105	119	119	128				
ADS	105	129	129	139				
L	364	375	400	441				
LS	419	443	468	522				
LB	149	160	185	220				
LBS	204	228	253	301				

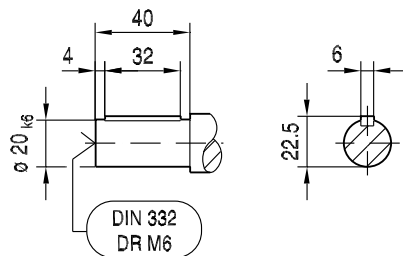
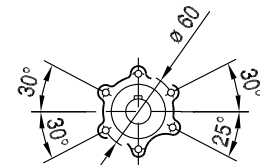
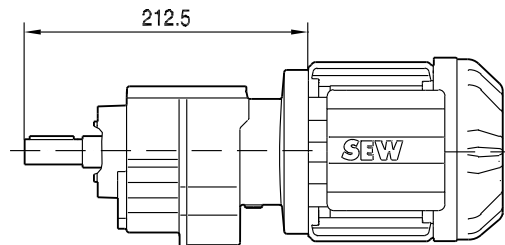
$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

01 099 00 06

**RZ17..**



**DR80..**



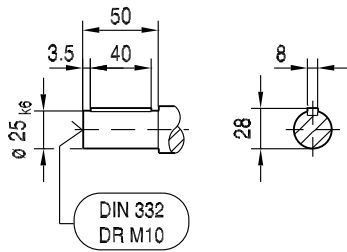
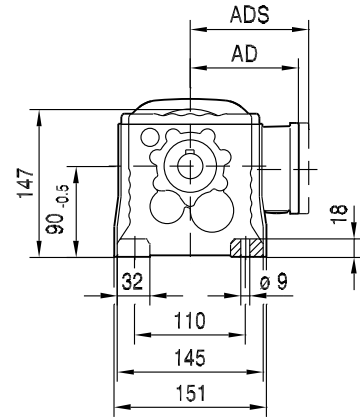
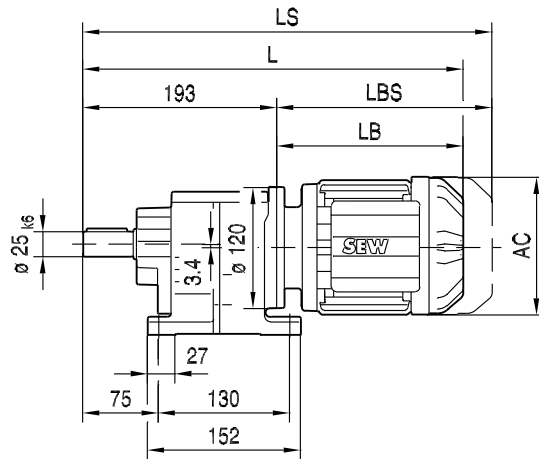
(→ 136)	DR63..	DR71S	DR71M	DR80M				
AC	132	139	139	156				
AD	105	119	119	128				
ADS	105	129	129	139				
L	356	367	392	433				
LS	411	435	460	514				
LB	149	160	185	220				
LBS	204	228	253	301				



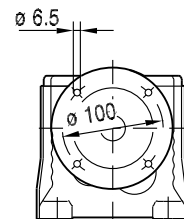
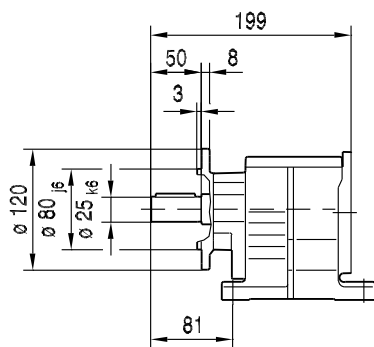
R..DRE/DRS  
R..DR.. [mm]

01 100 00 06

**R27..**



**R27F..**

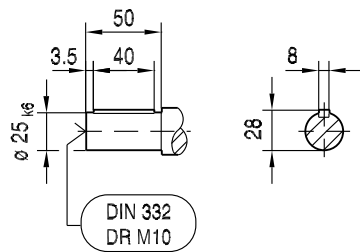
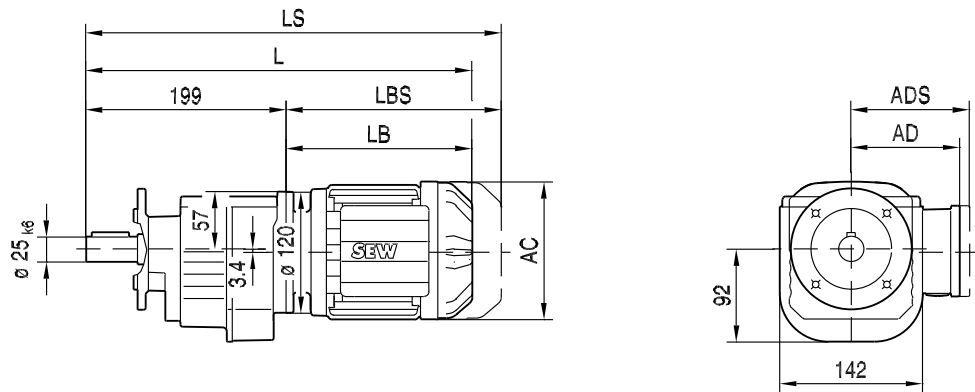


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	384	395	420	461	465	485	515	545
LS	439	463	488	542	558	578	608	638
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445



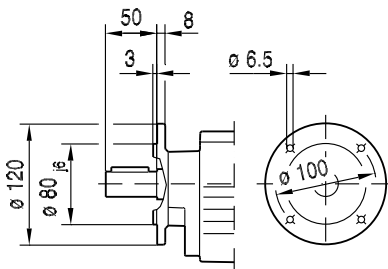
01 101 00 06

**RF27..**

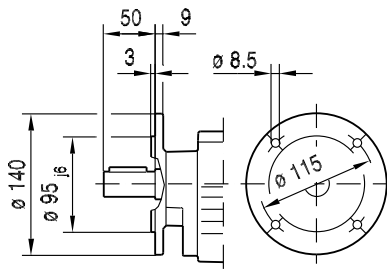


8

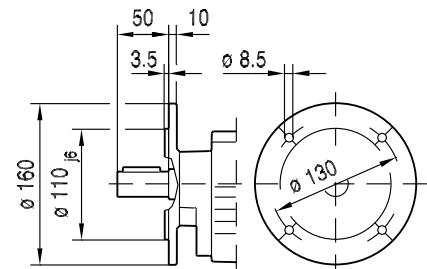
**Ø 120**



**Ø 140**



**Ø 160**

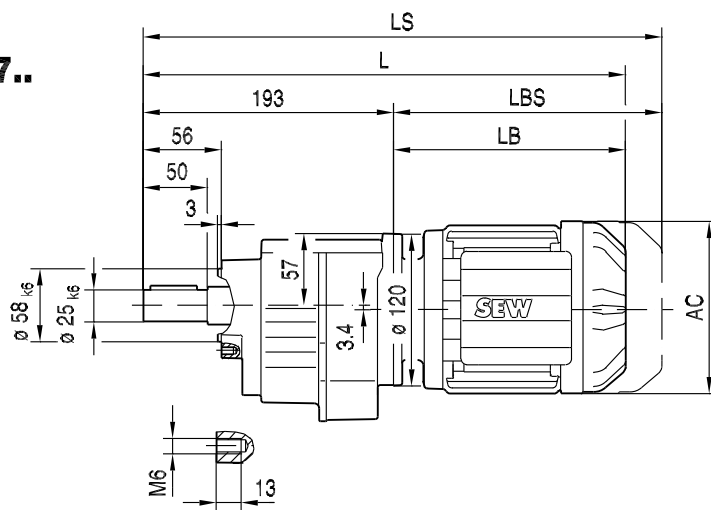


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	390	401	426	467	471	491	521	551
LS	445	469	494	548	564	584	614	644
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445

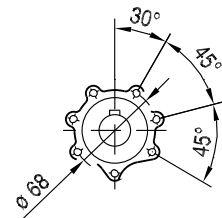
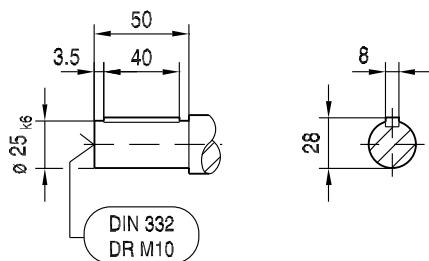
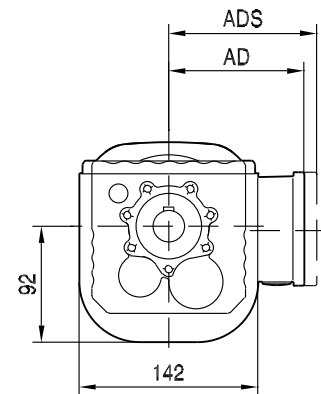
kVA	n
f	
i	P Hz

R..DRE/DRS  
R..DR.. [mm]

RZ27..



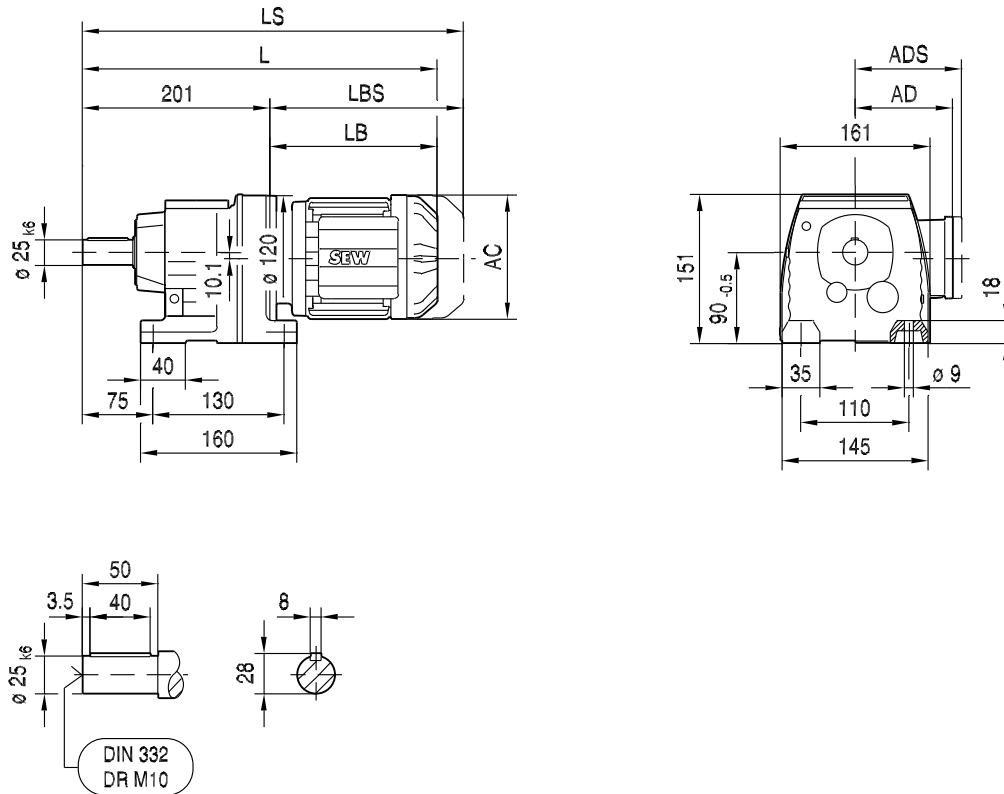
01 102 00 06



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	384	395	420	461	465	485	515	545
LS	439	463	488	542	558	578	608	638
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445

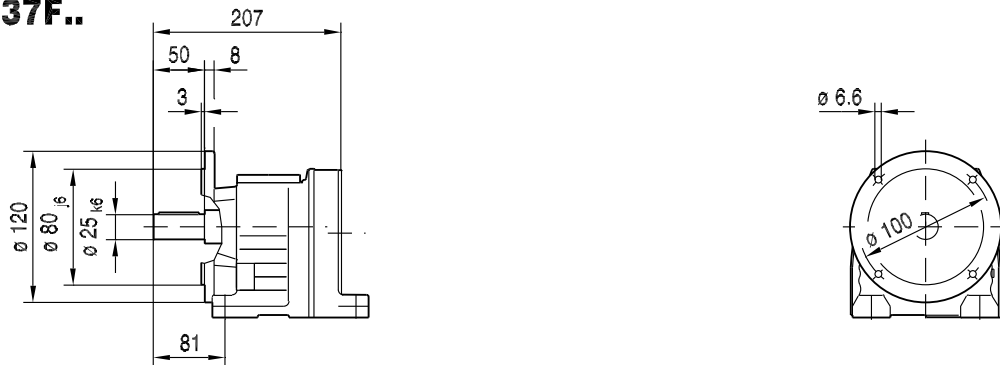
01 103 00 06

**R37..**



8

**R37F..**



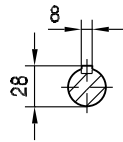
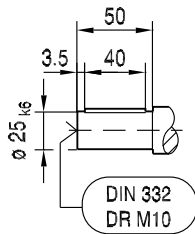
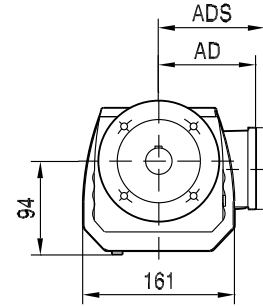
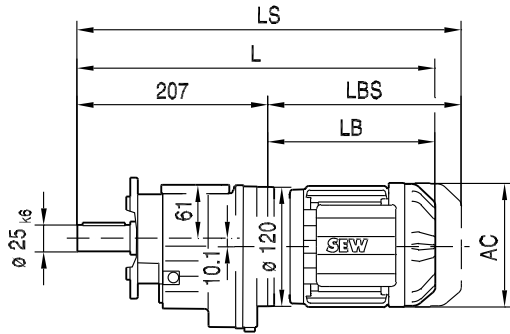
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	392	403	428	469	473	493	523	553
LS	447	471	496	550	566	586	616	646
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445



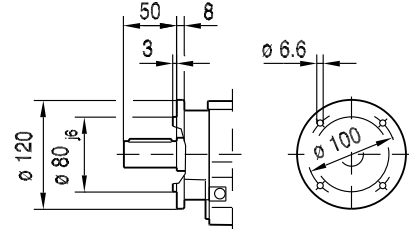
R..DRE/DRS  
R..DR.. [mm]

01 104 01 06

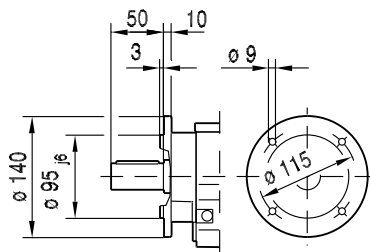
**RF37..**



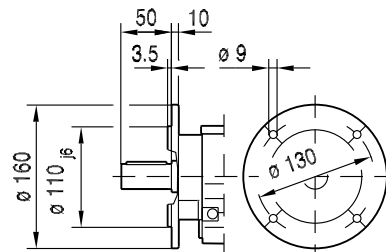
**∅ 120**



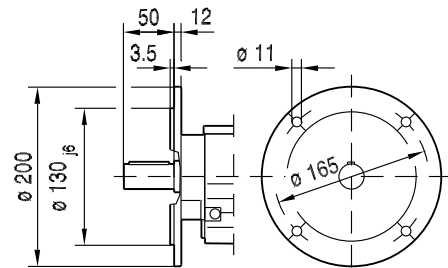
**∅ 140**



**∅ 160**



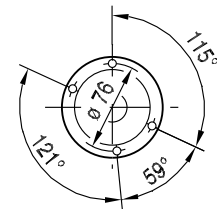
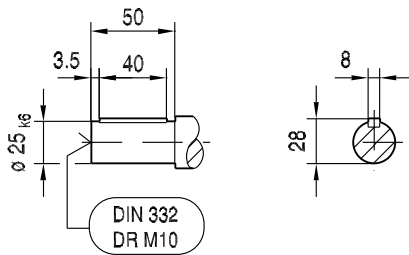
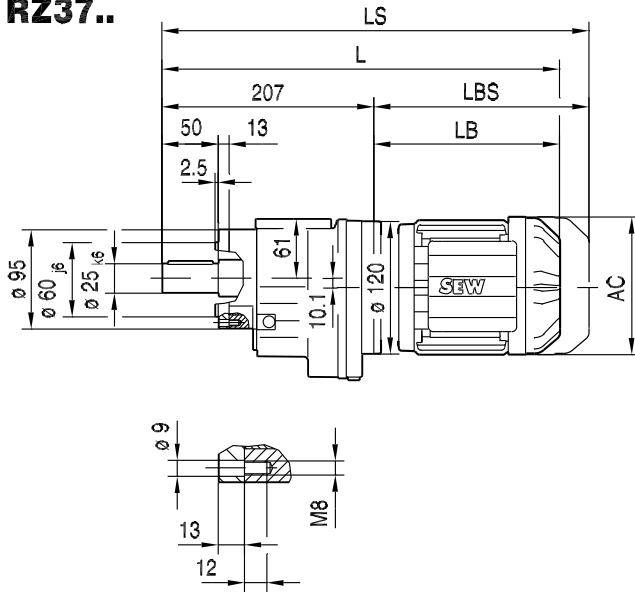
**∅ 200**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	398	409	434	475	479	499	529	559
LS	453	477	502	556	572	592	622	652
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445

RZ37..

01 105 00 06



8

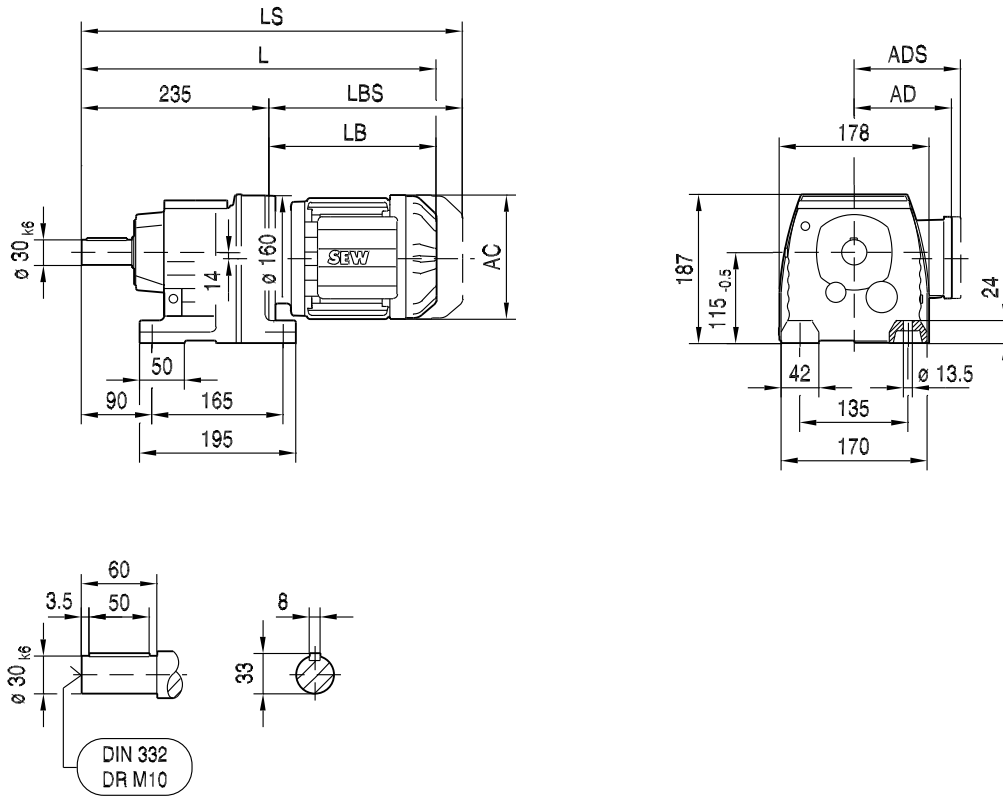
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	398	409	434	475	479	499	529	559
LS	453	477	502	556	572	592	622	652
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445



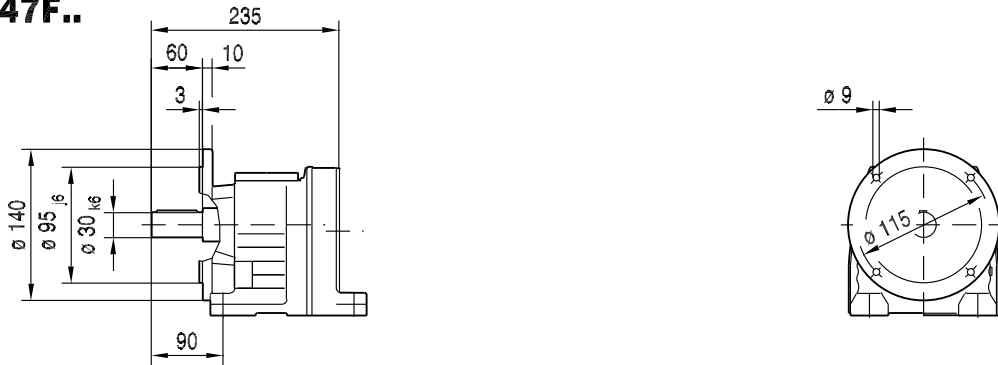
R..DRE/DRS  
R..DR.. [mm]

01 106 00 06

**R47..**



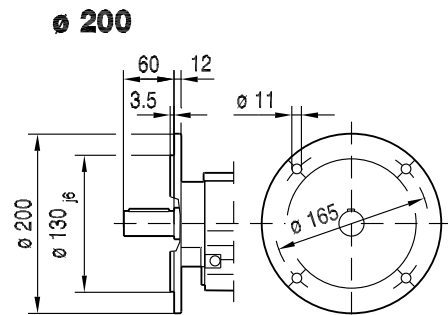
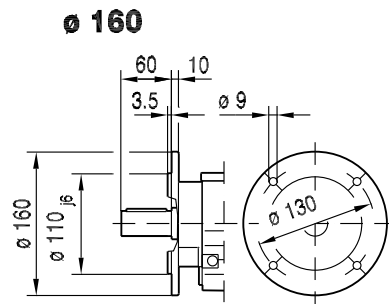
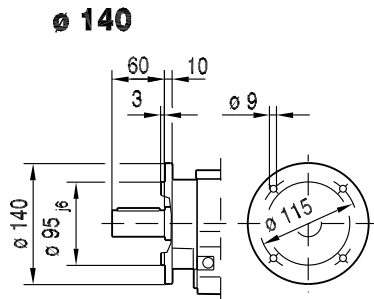
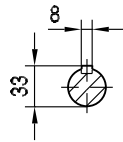
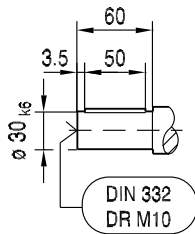
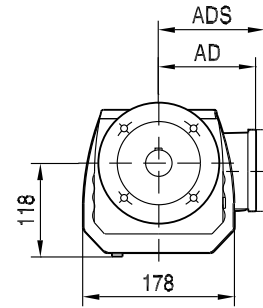
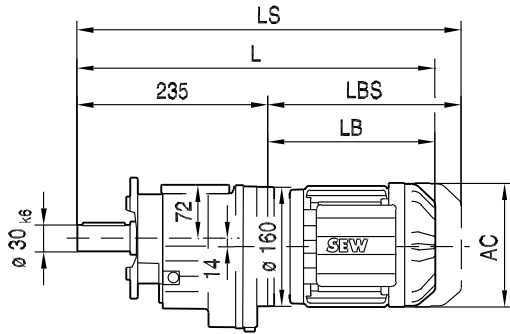
**R47F..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221	221
AD	105	119	119	128	140	140	157	157	170	170	170
ADS	105	129	129	139	150	150	158	158	172	172	172
L	420	431	456	496	498	518	548	578	590	625	675
LS	475	499	524	577	591	611	641	671	702	737	787
LB	185	196	221	261	263	283	313	343	355	390	440
LBS	240	264	289	342	356	376	406	436	467	502	552

01 107 00 06

**RF47..**



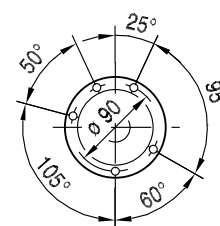
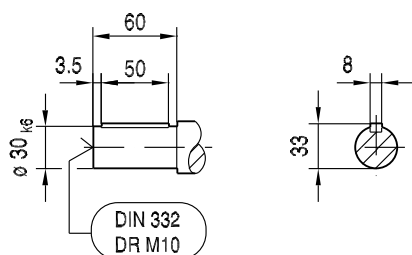
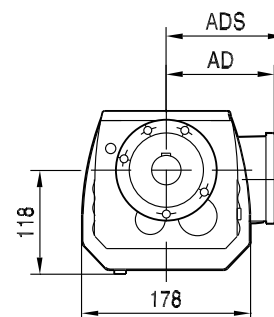
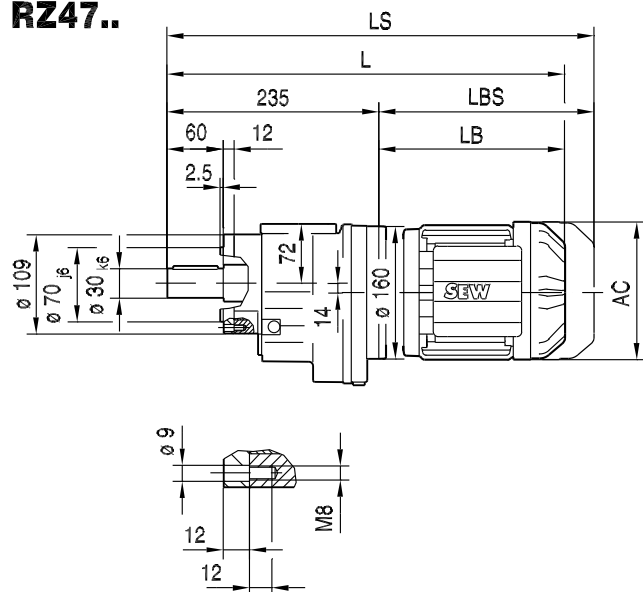
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221	221
AD	105	119	119	128	140	140	157	157	170	170	170
ADS	105	129	129	139	150	150	158	158	172	172	172
L	420	431	456	496	498	518	548	578	590	625	675
LS	475	499	524	577	591	611	641	671	702	737	787
LB	185	196	221	261	263	283	313	343	355	390	440
LBS	240	264	289	342	356	376	406	436	467	502	552

<i>kVA</i>	<i>n</i>
<i>f</i>	
<i>i</i>	
<i>P</i>	<i>H<sub>Z</sub></i>

R..DRE/DRS  
R..DR.. [mm]

RZ47..

01 108 00 06

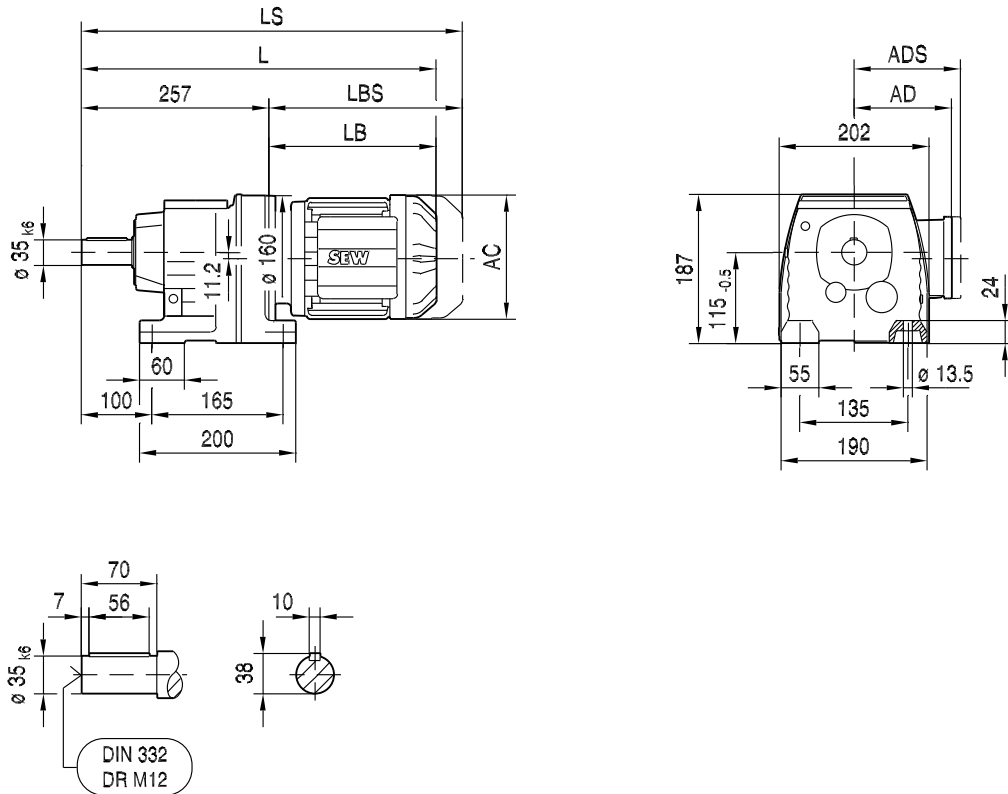


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221	221
AD	105	119	119	128	140	140	157	157	170	170	170
ADS	105	129	129	139	150	150	158	158	172	172	172
L	420	431	456	496	498	518	548	578	590	625	675
LS	475	499	524	577	591	611	641	671	702	737	787
LB	185	196	221	261	263	283	313	343	355	390	440
LBS	240	264	289	342	356	376	406	436	467	502	552



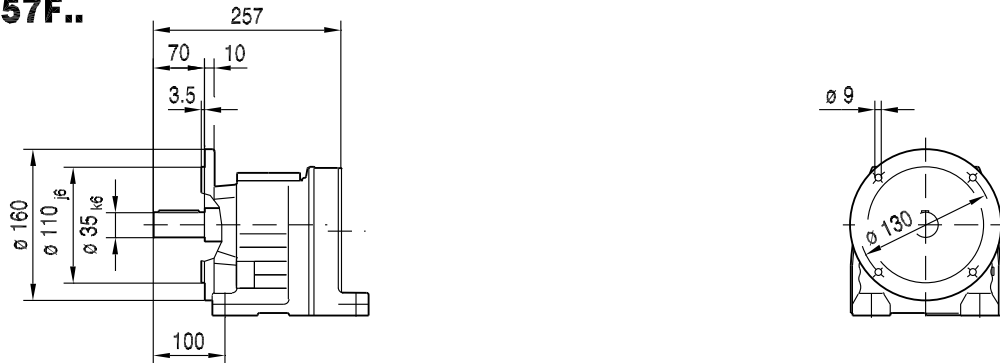
01 109 00 06

**R57..**



8

**R57F..**



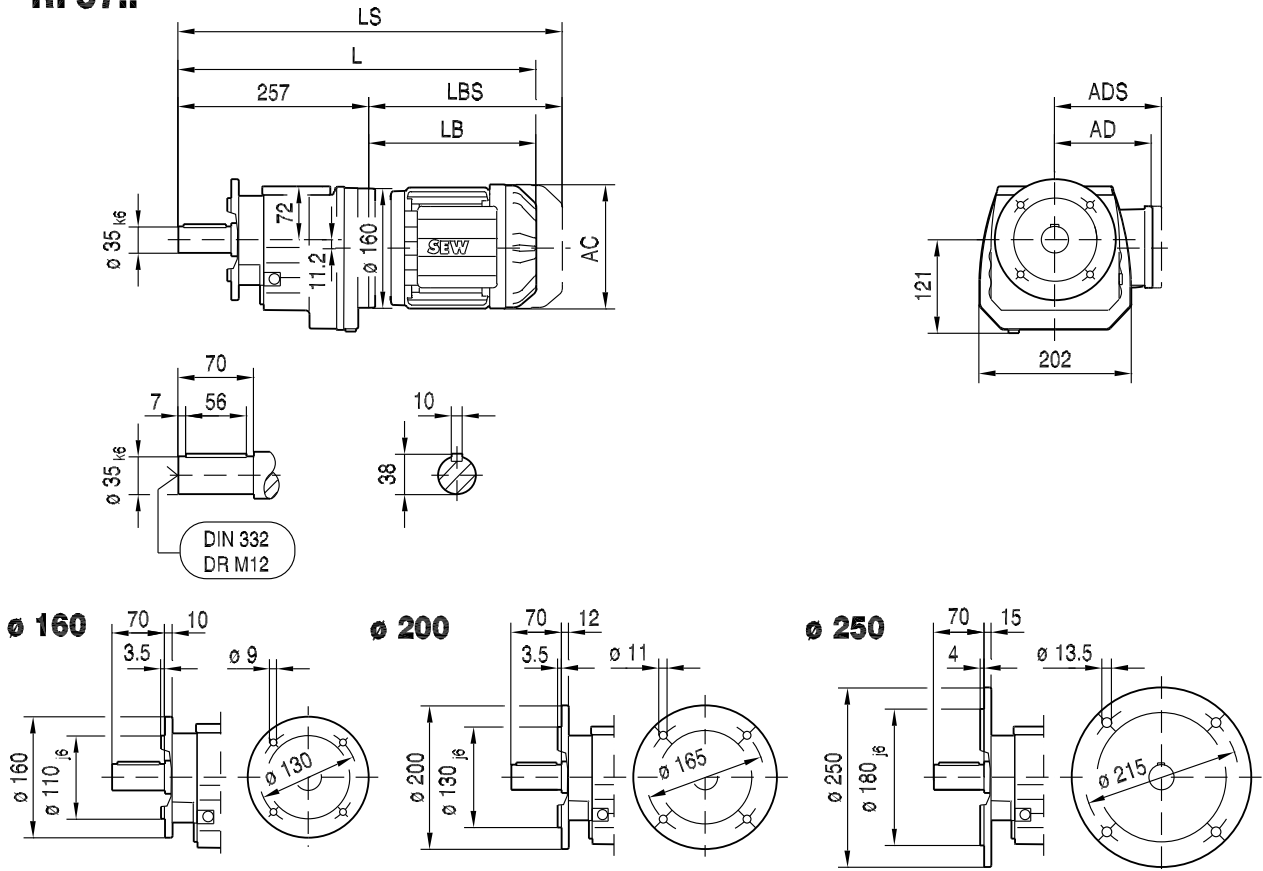
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	442	453	478	518	520	540	570	600	647	697
LS	497	521	546	599	613	633	663	693	759	809
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552



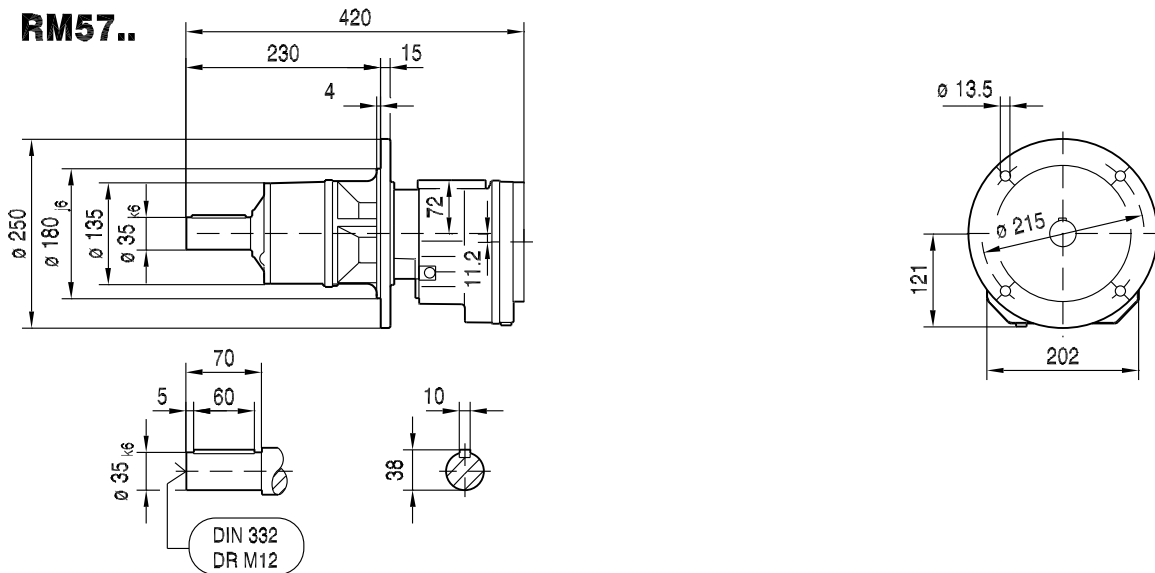
R..DRE/DRS  
R..DR.. [mm]

01 110 00 06

**RF57..**



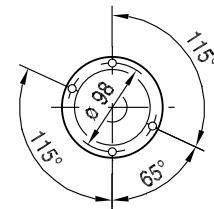
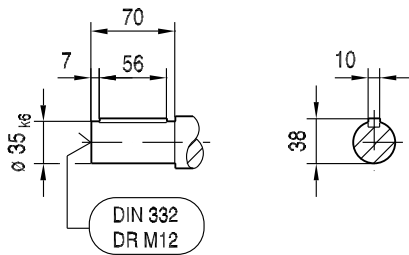
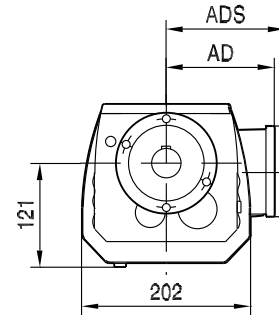
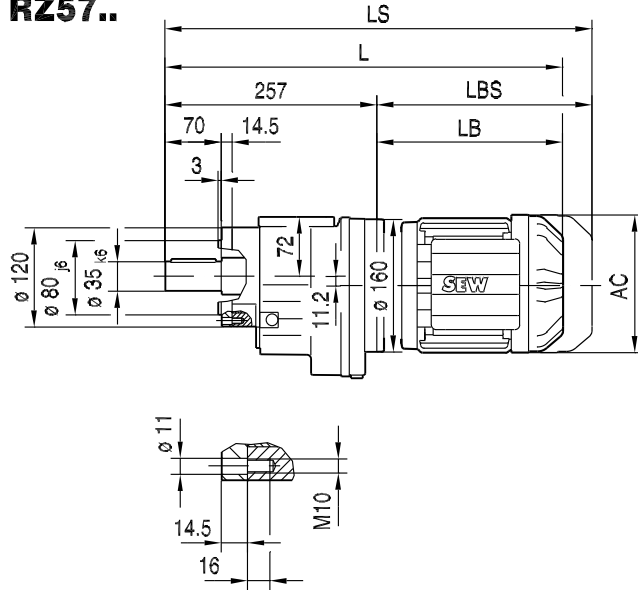
**RM57..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	442	453	478	518	520	540	570	600	647	697
LS	497	521	546	599	613	633	663	693	759	809
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

**RZ57..**

01 111 00 06



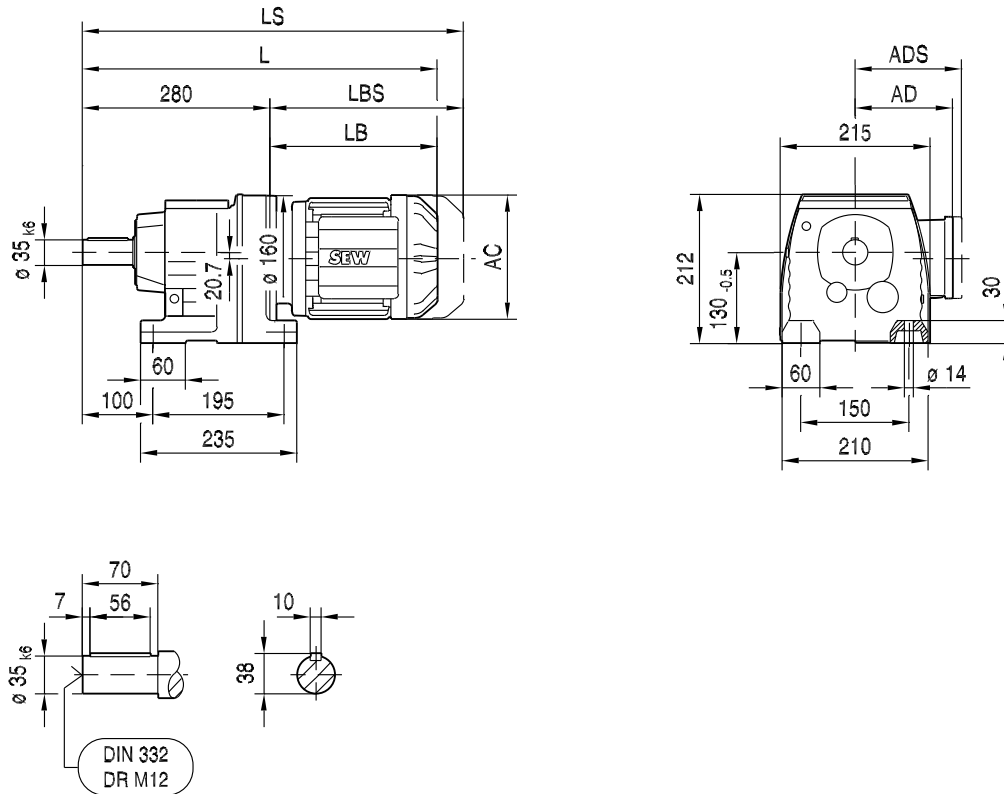
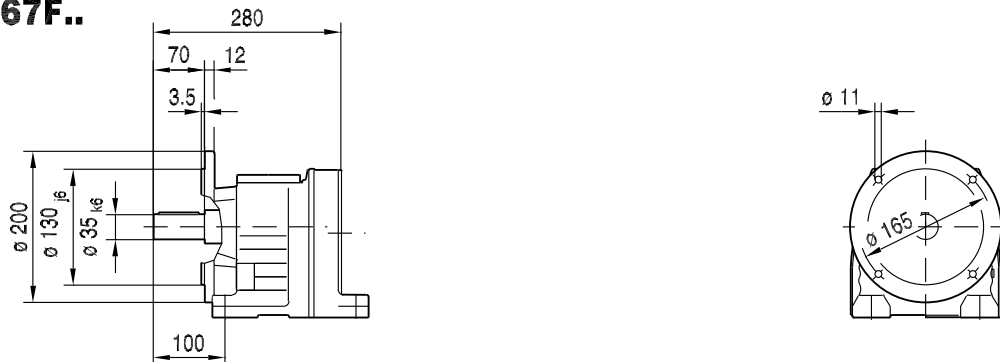
8

(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	442	453	478	518	520	540	570	600	647	697
LS	497	521	546	599	613	633	663	693	759	809
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

kVA	n
f	
i	P Hz

R..DRE/DRS  
R..DR.. [mm]

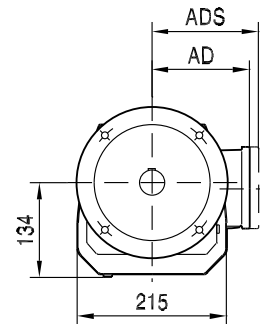
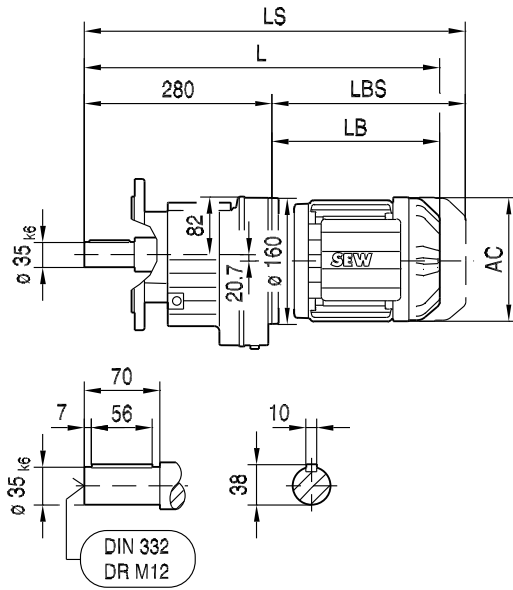
01 112 00 06

**R67..****R67F..**

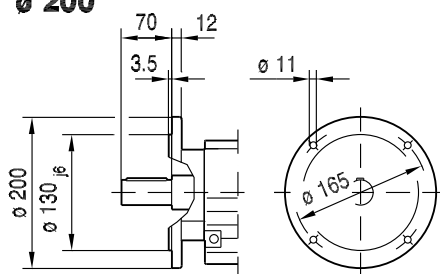
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	465	476	501	541	543	563	593	623	670	720
LS	520	544	569	622	636	656	686	716	782	832
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

01 113 00 06

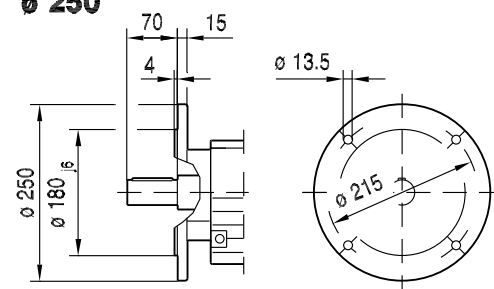
**RF67..**



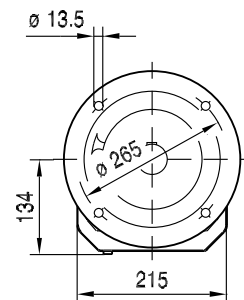
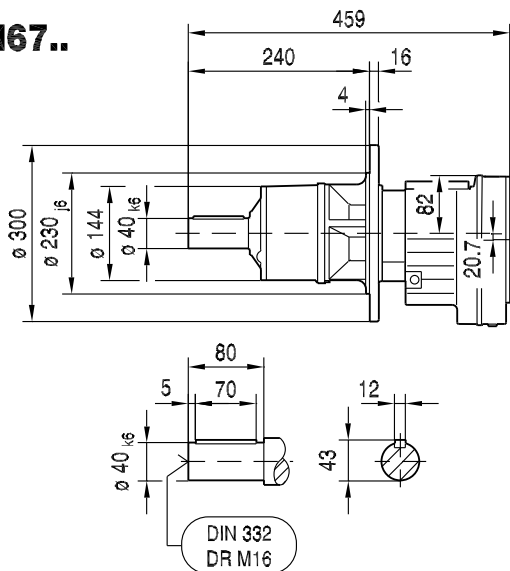
**∅ 200**



**∅ 250**



**RM67..**



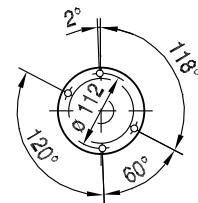
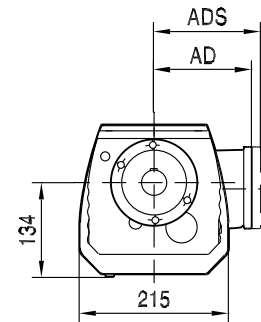
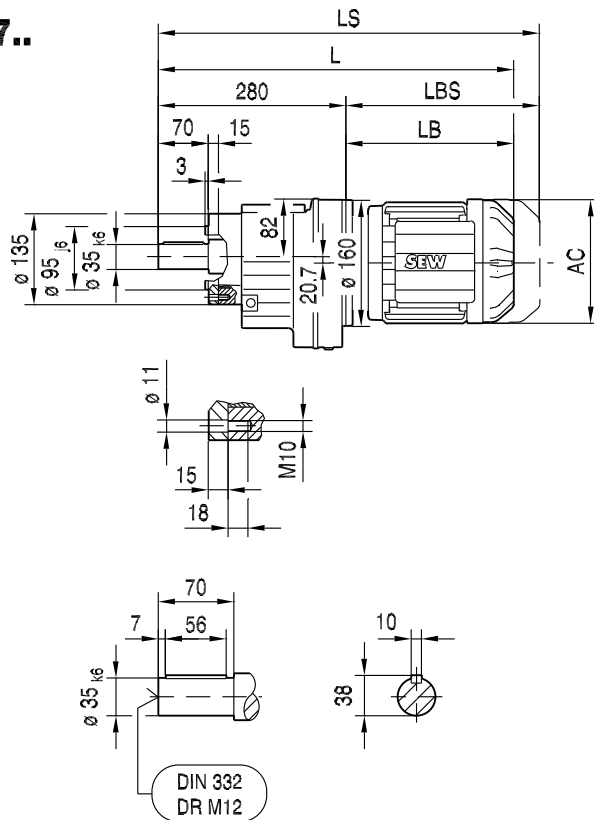
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	465	476	501	541	543	563	593	623	670	720
LS	520	544	569	622	636	656	686	716	782	832
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

kVA	n
f	
i	
P	H <sub>Z</sub>

R..DRE/DRS  
R..DR.. [mm]

01 114 00 06

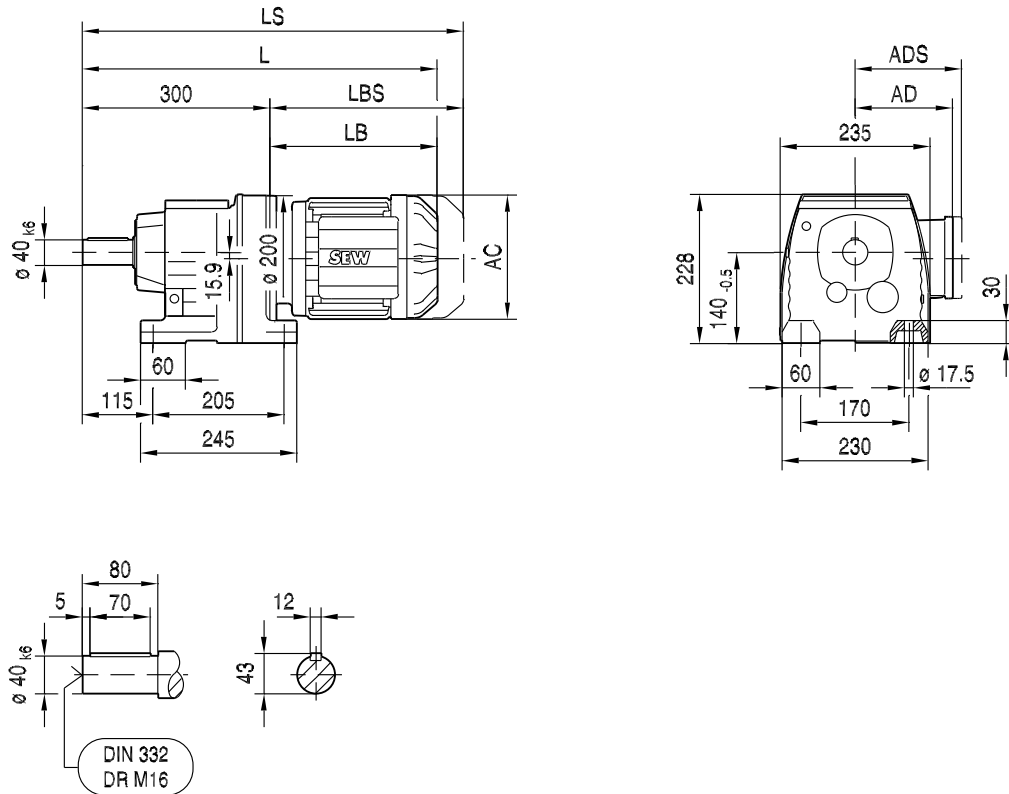
RZ67..



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	465	476	501	541	543	563	593	623	670	720
LS	520	544	569	622	636	656	686	716	782	832
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

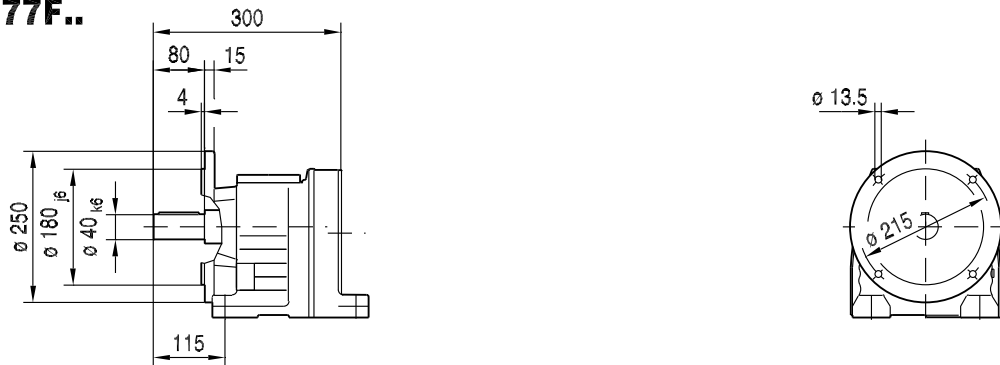
01 115 00 06

**R77..**



8

**R77F..**



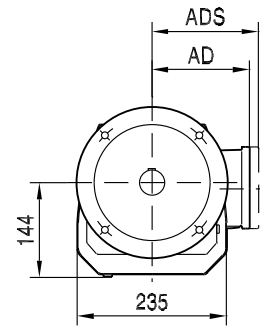
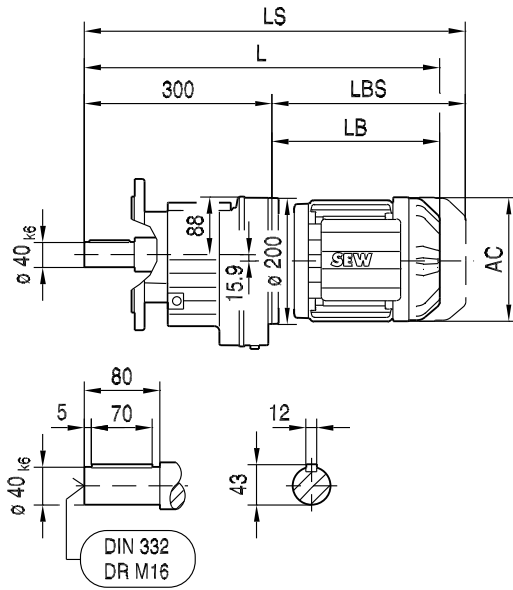
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	132	139	139	156	179	179	197	197	221	221	270
AD	105	119	119	128	140	140	157	157	170	170	228
ADS	105	129	129	139	150	150	158	158	172	172	228
L	478	489	514	554	556	576	606	636	679	729	770
LS	533	557	582	635	649	669	699	729	791	841	907
LB	178	189	214	254	256	276	306	336	379	429	470
LBS	233	257	282	335	349	369	399	429	491	541	607

kVA	n
f	
i	P Hz

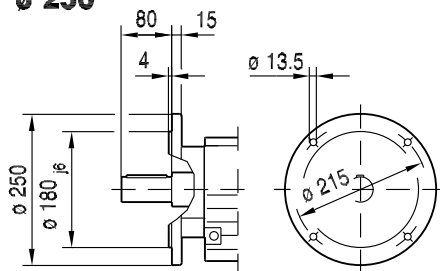
R..DRE/DRS  
R..DR.. [mm]

01 116 00 06

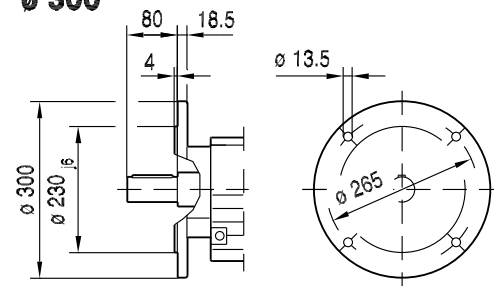
**RF77..**



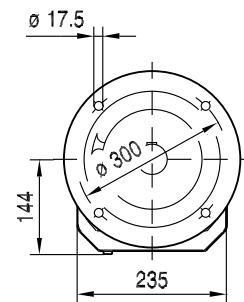
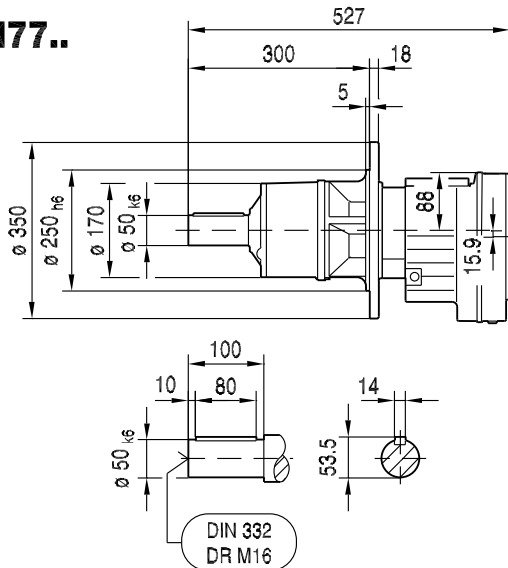
**∅ 250**



**∅ 300**



**RM77..**

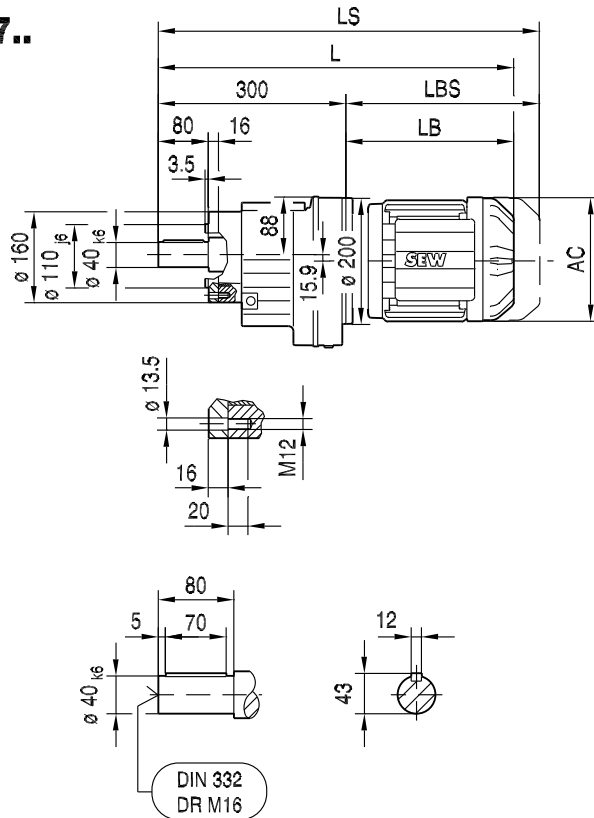


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	132	139	139	156	179	179	197	197	221	221	270
AD	105	119	119	128	140	140	157	157	170	170	228
ADS	105	129	129	139	150	150	158	158	172	172	228
L	478	489	514	554	556	576	606	636	679	729	770
LS	533	557	582	635	649	669	699	729	791	841	907
LB	178	189	214	254	256	276	306	336	379	429	470
LBS	233	257	282	335	349	369	399	429	491	541	607



01 117 00 06

RZ77..



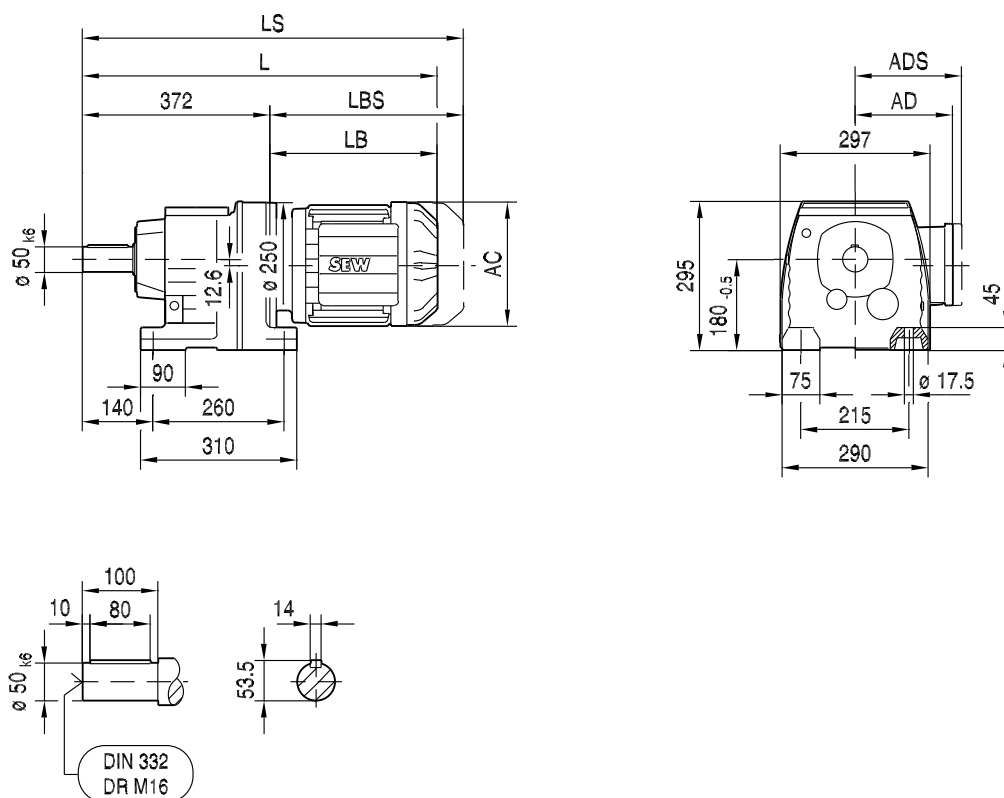
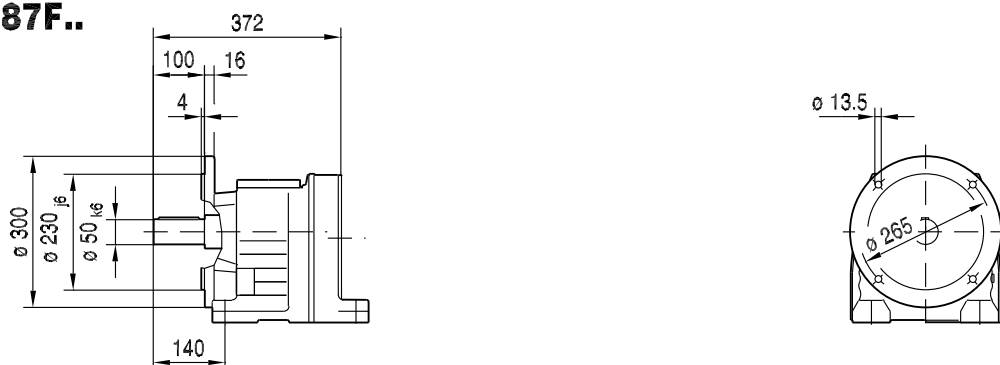
8

(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	132	139	139	156	179	179	197	197	221	221	270
AD	105	119	119	128	140	140	157	157	170	170	228
ADS	105	129	129	139	150	150	158	158	172	172	228
L	478	489	514	554	556	576	606	636	679	729	770
LS	533	557	582	635	649	669	699	729	791	841	907
LB	178	189	214	254	256	276	306	336	379	429	470
LBS	233	257	282	335	349	369	399	429	491	541	607

kVA	n
i	f
P	H <sub>z</sub>

R..DRE/DRS  
R..DR.. [mm]

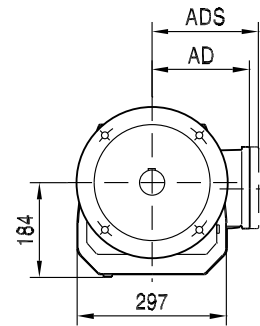
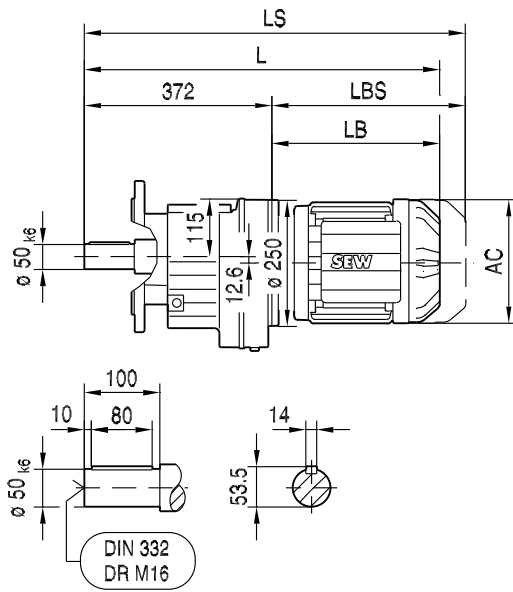
01 118 00 06

**R87..****R87F..**

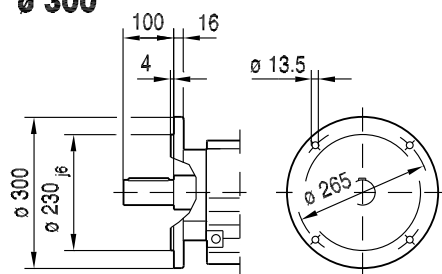
(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	581	590	621	623	643	673	703	746	796	837	906	966
LS	649	671	702	716	736	766	796	858	908	974	1095	1155
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783

01 119 01 06

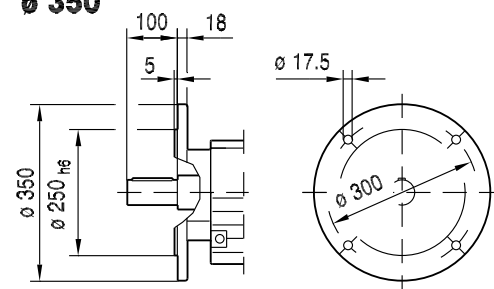
**RF87..**



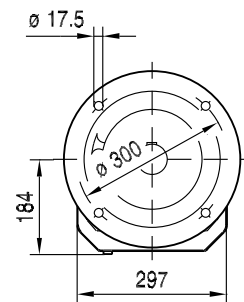
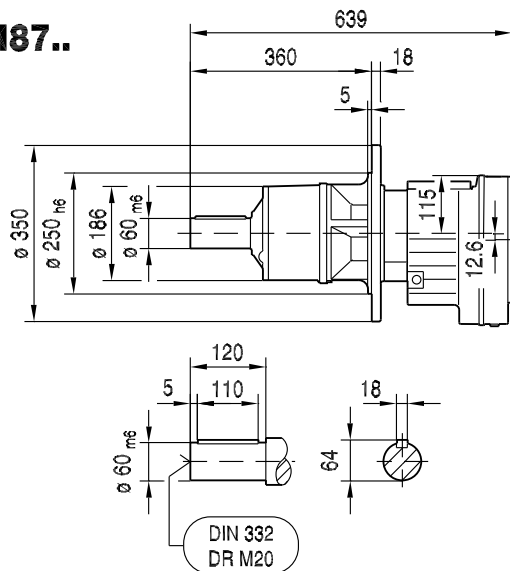
**ø 300**



**ø 350**



**RM87..**



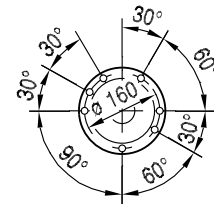
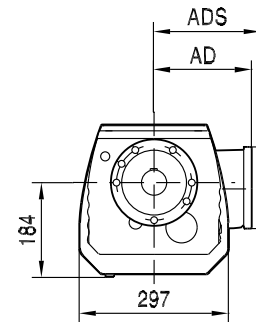
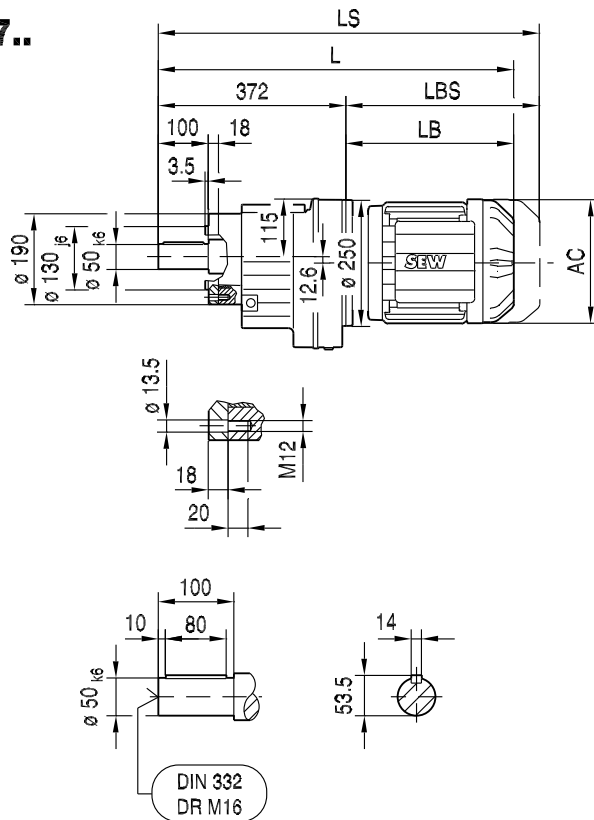
(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	581	590	621	623	643	673	703	746	796	837	906	966
LS	649	671	702	716	736	766	796	858	908	974	1095	1155
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783

kVA	n
i	f
P	H <sub>Z</sub>

R..DRE/DRS  
R..DR.. [mm]

01 120 00 06

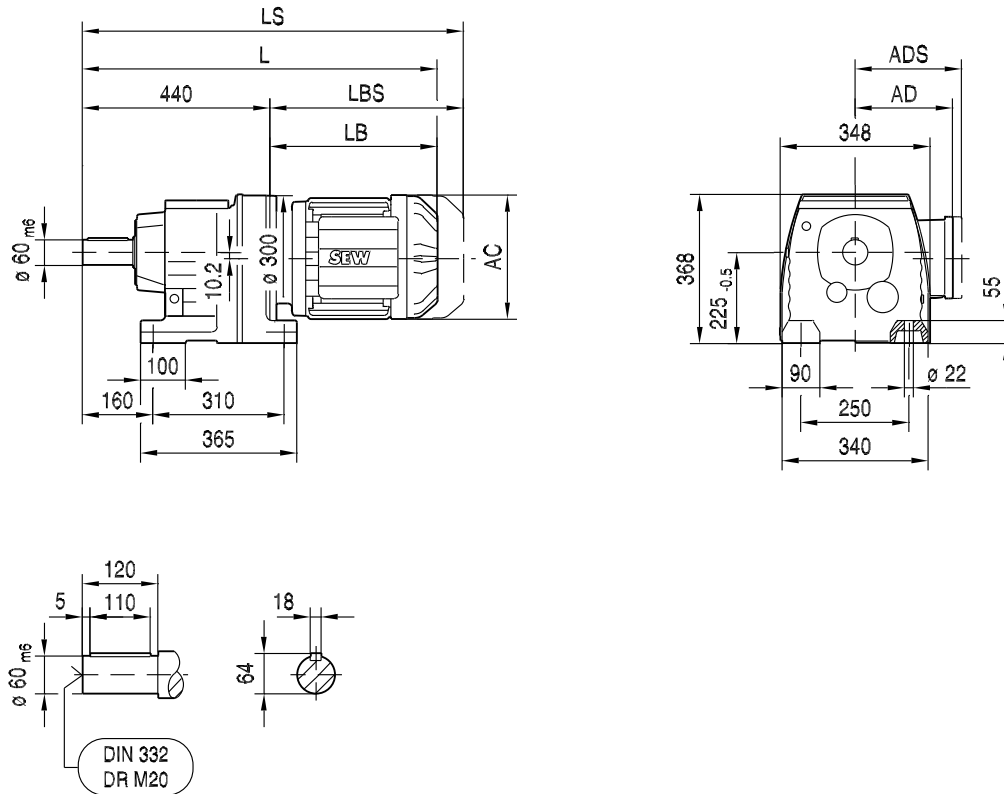
RZ87..



(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	581	590	621	623	643	673	703	746	796	837	906	966
LS	649	671	702	716	736	766	796	858	908	974	1095	1155
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783

01 121 00 06

R97..



8

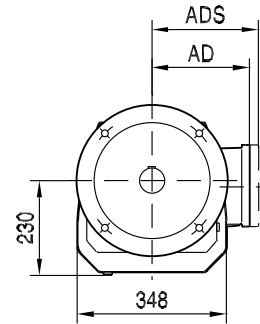
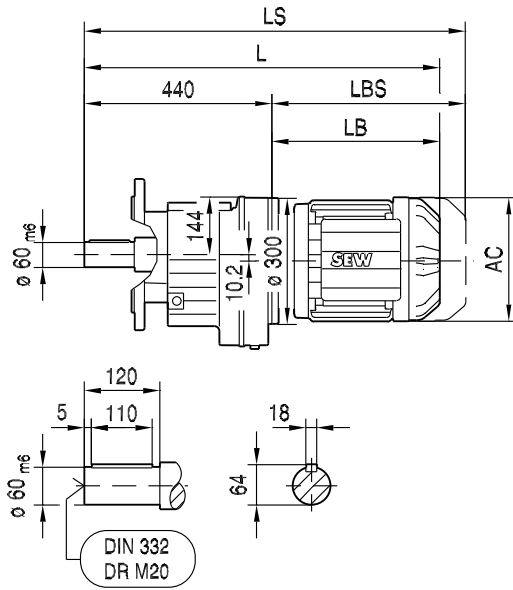
(→ 136)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	156	156	179	179	197	197	221	221	270	316	316	394
AD	128	128	140	140	157	157	170	170	228	253	253	283
ADS	139	139	150	150	158	158	172	172	228	253	253	283
L	653	684	686	706	736	766	809	859	900	969	1029	1102
LS	734	765	779	799	829	859	921	971	1037	1158	1218	1307
LB	213	244	246	266	296	326	369	419	460	529	589	662
LBS	294	325	339	359	389	419	481	531	597	718	778	867

kVA	n
f	
i	
P	H <sub>Z</sub>

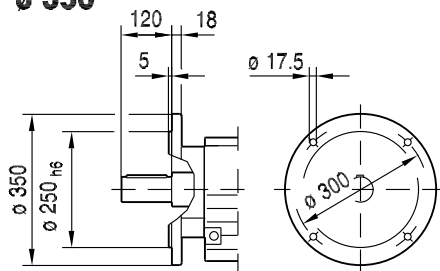
R..DRE/DRS  
R..DR.. [mm]

01 122 00 06

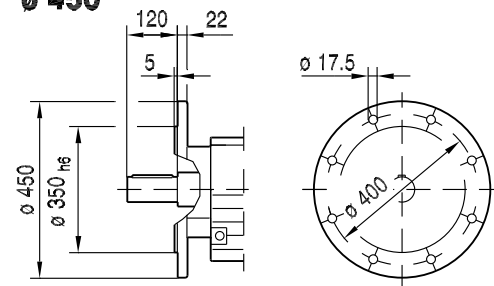
**RF97..**



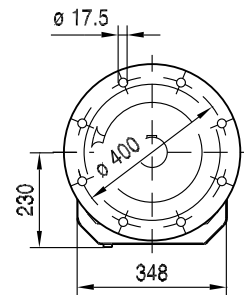
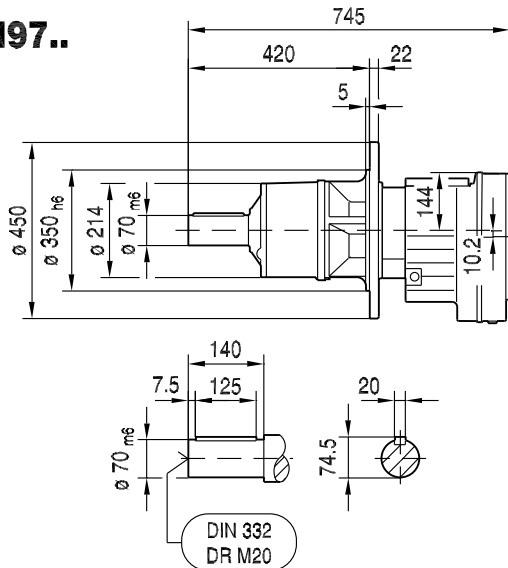
**ø 350**



**ø 450**



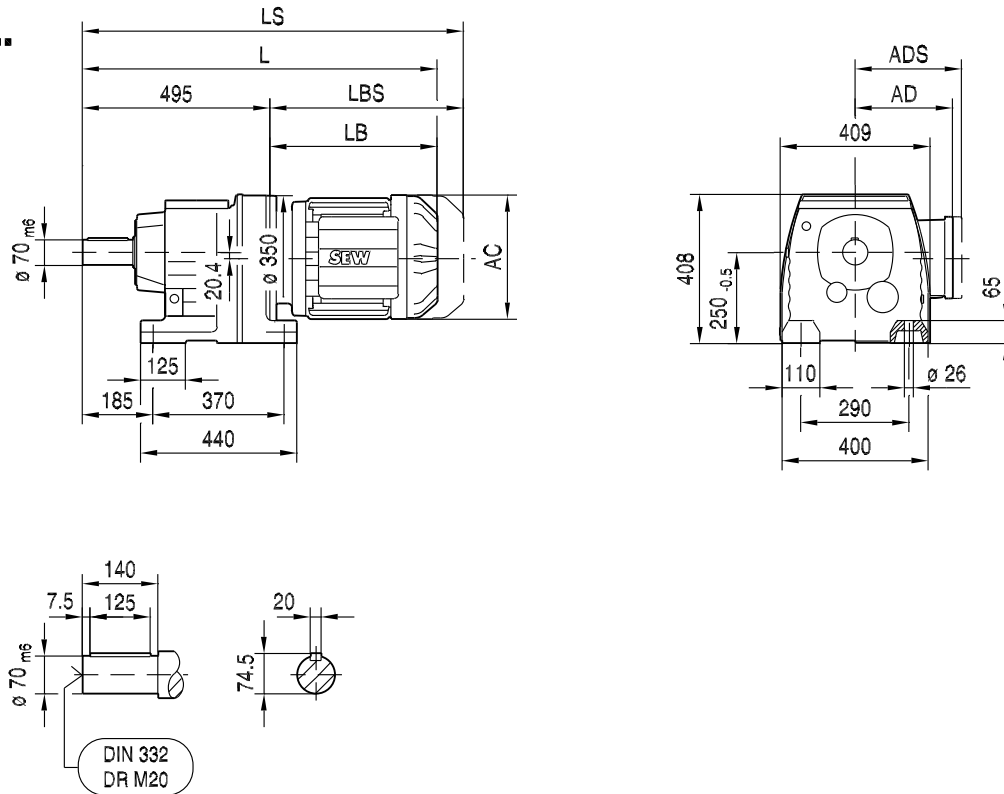
**RM97..**



(→ 136)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	156	156	179	179	197	197	221	221	270	316	316	394
AD	128	128	140	140	157	157	170	170	228	253	253	283
ADS	139	139	150	150	158	158	172	172	228	253	253	283
L	653	684	686	706	736	766	809	859	900	969	1029	1102
LS	734	765	779	799	829	859	921	971	1037	1158	1218	1307
LB	213	244	246	266	296	326	369	419	460	529	589	662
LBS	294	325	339	359	389	419	481	531	597	718	778	867

01 123 00 06

R107..



8

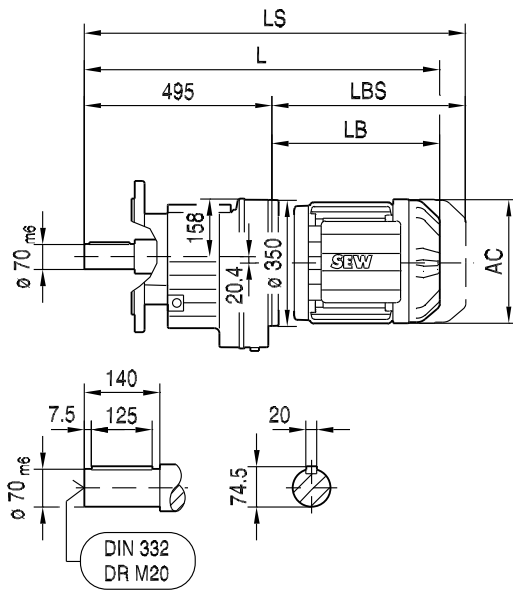
(→ 136)	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	197	197	221	221	221	270	316	316	394	394	394
AD	157	157	170	170	170	228	253	253	283	283	283
ADS	158	158	172	172	172	228	253	253	283	283	283
L	785	815	823	858	908	949	1018	1078	1151	1151	1201
LS	878	908	935	970	1020	1086	1207	1267	1356	1356	1406
LB	290	320	328	363	413	454	523	583	656	656	706
LBS	383	413	440	475	525	591	712	772	861	861	911

kVA	n
f	
i	
P	H <sub>Z</sub>

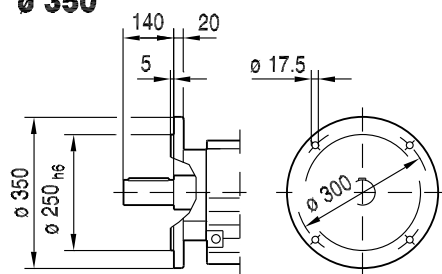
R..DRE/DRS  
R..DR.. [mm]

01 124 00 06

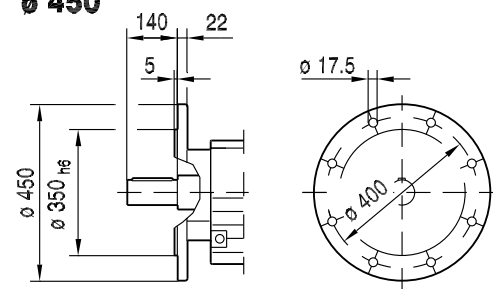
RF107..



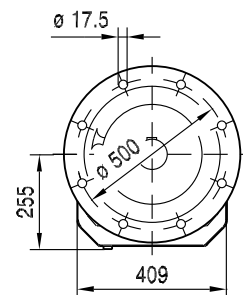
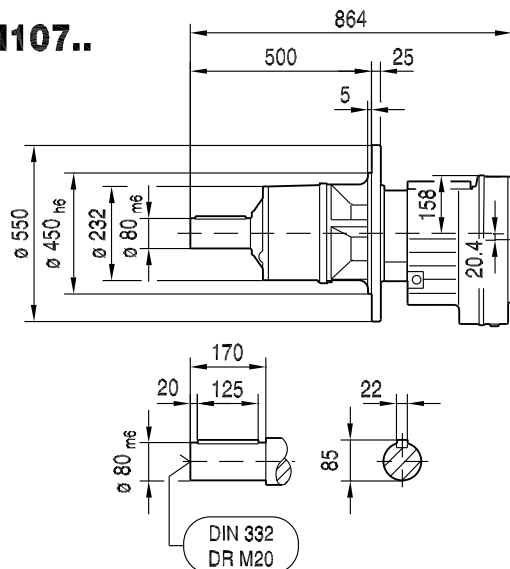
ø 350



ø 450



RM107..

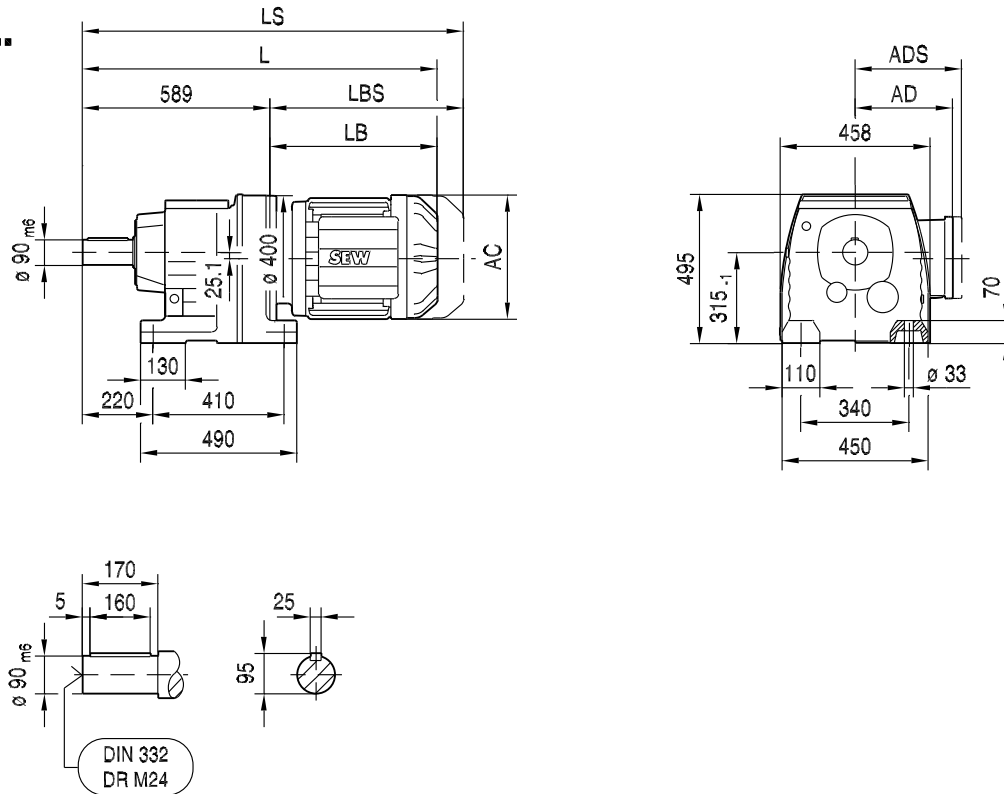


(→ 136)	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	197	197	221	221	221	270	316	316	394	394	394
AD	157	157	170	170	170	228	253	253	283	283	283
ADS	158	158	172	172	172	228	253	253	283	283	283
L	785	815	823	858	908	949	1018	1078	1151	1151	1201
LS	878	908	935	970	1020	1086	1207	1267	1356	1356	1406
LB	290	320	328	363	413	454	523	583	656	656	706
LBS	383	413	440	475	525	591	712	772	861	861	911



01 125 00 06

**R137..**

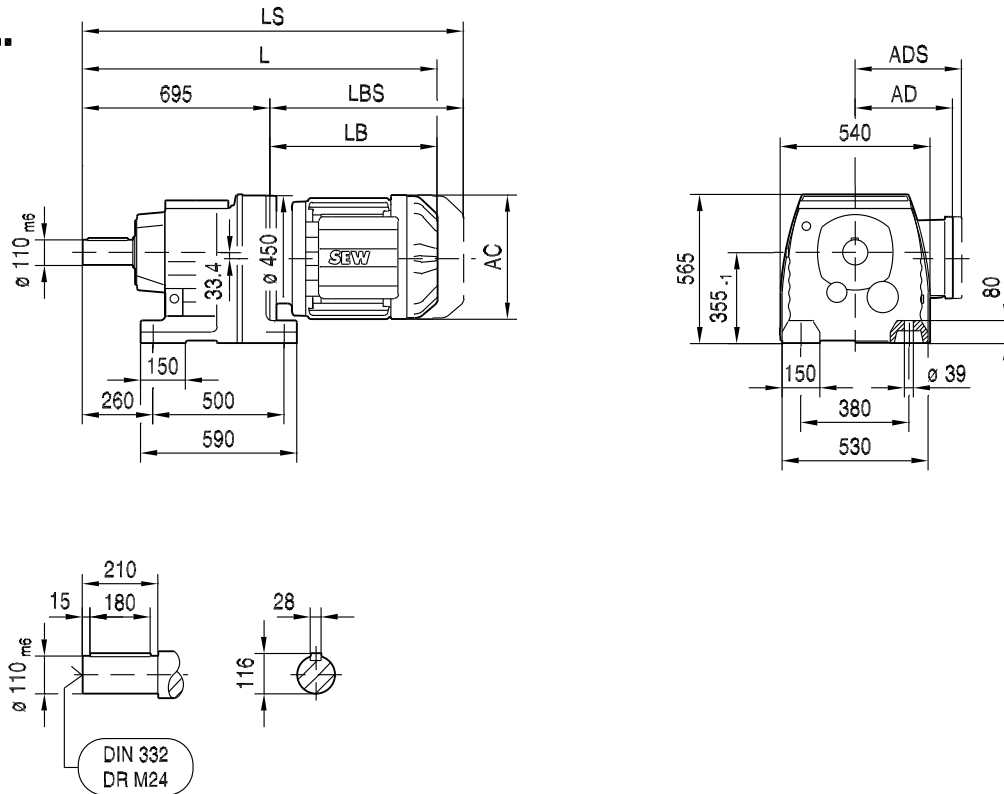


(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250
AC	221	270	316	316	394	394	394	495
AD	170	228	253	253	283	283	283	394
ADS	172	228	253	253	283	283	283	394
L	995	1036	1105	1165	1238	1238	1288	1349
LS	1107	1173	1294	1354	1443	1443	1493	1589
LB	406	447	516	576	649	649	699	760
LBS	518	584	705	765	854	854	904	1000



01 127 00 06

**R147..**



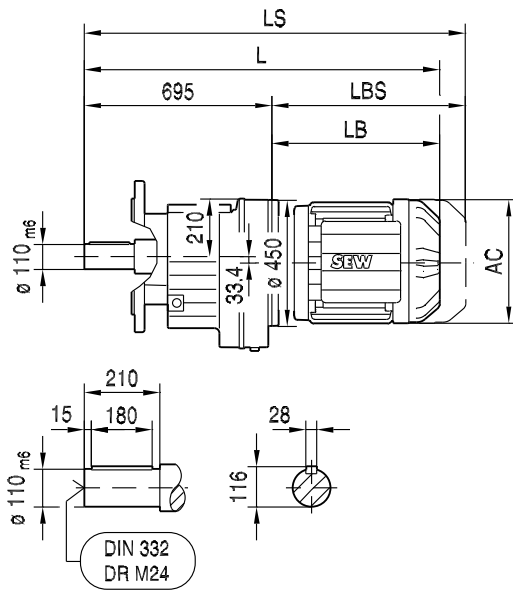
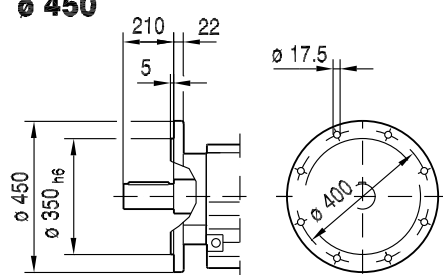
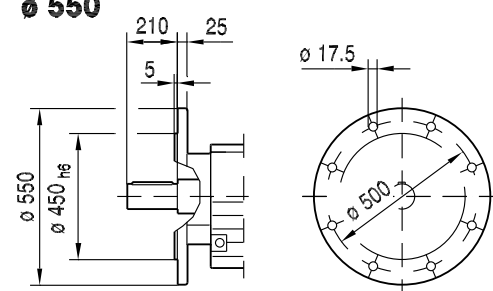
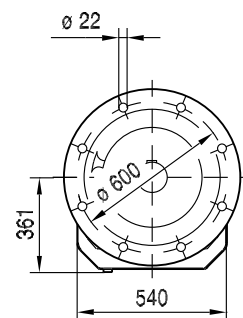
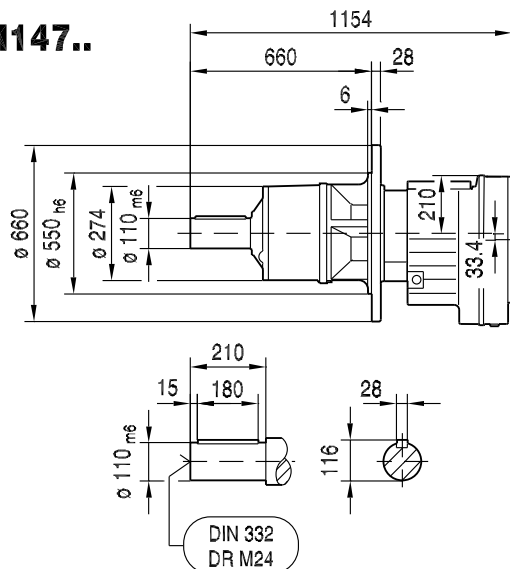
8

(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	270	316	316	394	394	394	495	495
AD	228	253	253	283	283	283	394	394
ADS	228	253	253	283	283	283	394	394
L	1134	1203	1263	1336	1336	1386	1447	1447
LS	1271	1392	1452	1541	1541	1591	1687	1687
LB	439	508	568	641	641	691	752	752
LBS	576	697	757	846	846	896	992	992

kVA	n
f	
i	
P	H <sub>z</sub>

R..DRE/DRS  
R..DR.. [mm]

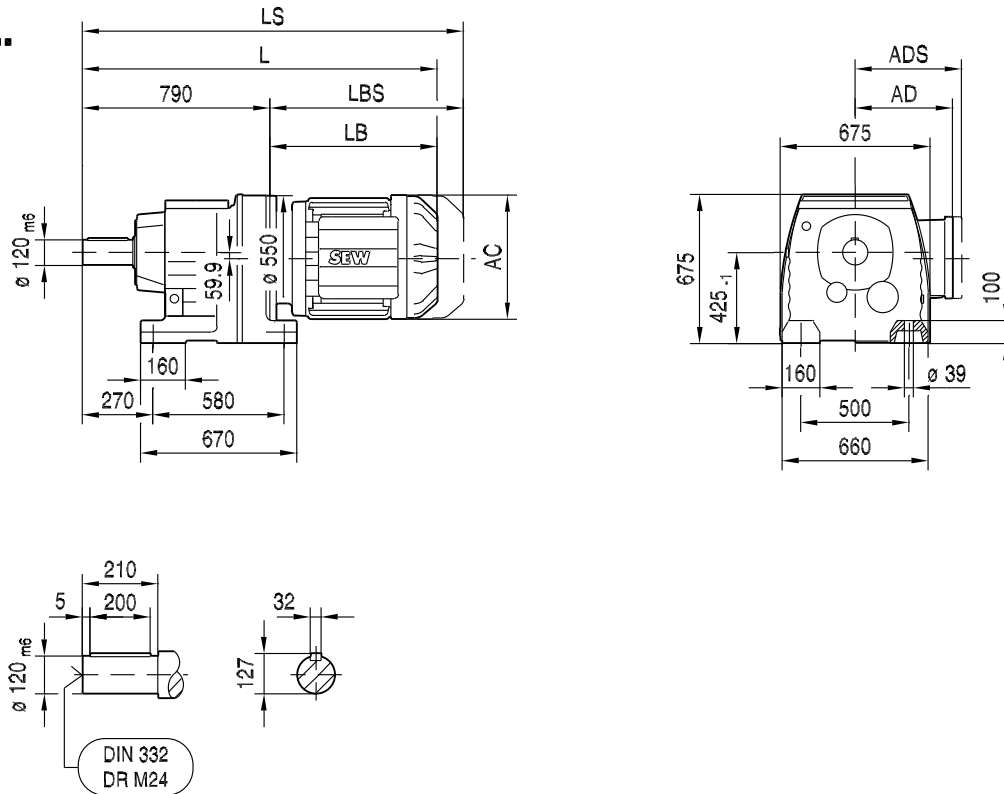
01 128 00 06

**RF147..****∅ 450****∅ 550****RM147..**

(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	270	316	316	394	394	394	495	495
AD	228	253	253	283	283	283	394	394
ADS	228	253	253	283	283	283	394	394
L	1134	1203	1263	1336	1336	1386	1447	1447
LS	1271	1392	1452	1541	1541	1591	1687	1687
LB	439	508	568	641	641	691	752	752
LBS	576	697	757	846	846	896	992	992

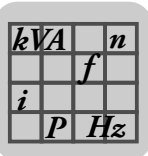
01 129 01 06

R167..



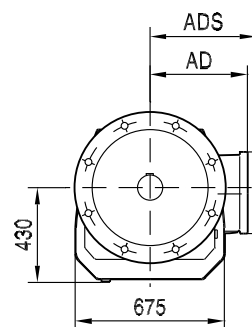
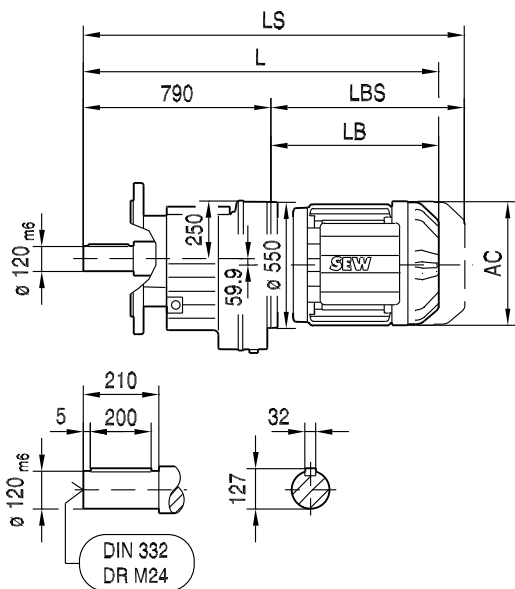
8

(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	1221	1290	1350	1423	1423	1473	1534	1534	1731	1903
LS	1358	1479	1539	1628	1628	1678	1774	1774	1982	2155
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365

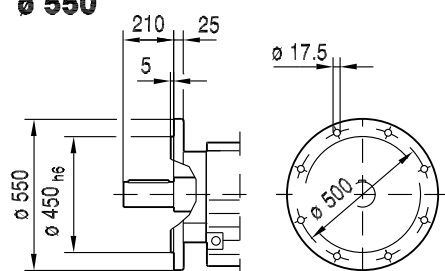


01 130 01 06

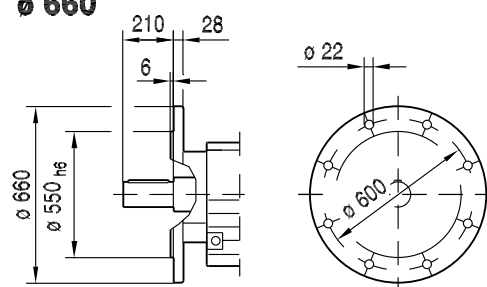
**RF167..**



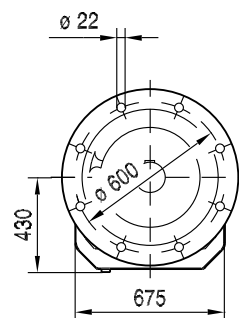
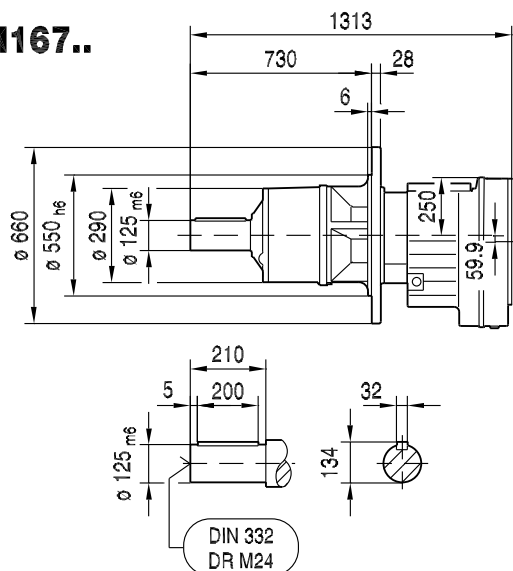
**ø 550**



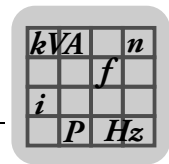
**ø 660**



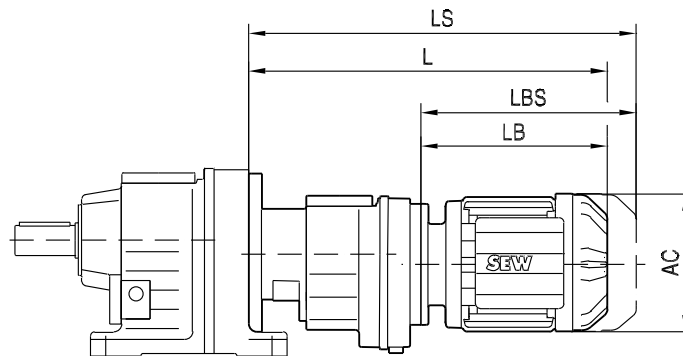
**RM167..**



(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	1221	1290	1350	1423	1423	1473	1534	1534	1731	1903
LS	1358	1479	1539	1628	1628	1678	1774	1774	1982	2155
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365



01 131 00 06



(→ 136)		AC	L	LS	LB	LBS
R..27R17	DR63..	132	324	379	149	204
R..37R17	DR63..	132	324	379	149	204
	DR71S..	139	335	403	160	228
R..47R37 R..57R37	DR63..	132	356	411	191	246
	DR71S..	139	367	435	202	270
R..67R37	DR71M	139	392	460	227	295
	DR63..	132	356	411	191	246
	DR71S..	139	367	435	202	270
	DR71M	139	392	460	227	295
R..77R37	DR80S..	156	401	482	236	317
	DR63..	132	348	403	191	246
	DR71S..	139	359	427	202	270
	DR71M..	139	384	452	227	295
	DR80S..	156	393	474	236	317
R..87R57	DR80M..	156	424	505	267	348
	DR63..	132	401	456	185	240
	DR71S..	139	412	479	196	263
	DR71M..	139	437	504	221	288
	DR80S..	156	446	527	230	311
	DR80M..	156	477	558	261	342
R..97R57	DR90M..	179	478	572	262	356
	DR63..	132	396	451	185	240
	DR71S..	139	407	474	196	263
	DR71M..	139	432	499	221	288
	DR80S..	156	441	522	230	311
	DR80M..	156	472	553	261	342
	DR90M..	179	473	567	262	356
	DR90L..	179	493	587	282	376
R..107R77	DR100M..	197	523	617	312	406
	DR63..	132	426	481	179	234
	DR71S..	139	437	504	190	257
	DR71M..	139	462	529	215	282
	DR80S..	156	470	551	223	304
	DR80M..	156	501	582	254	335
	DR90M..	179	501	595	254	348
	DR90L..	179	521	615	274	368
	DR100M..	197	551	645	304	398
	DR100LC..	197	581	675	334	428
R..137R77	DR63..	132	419	474	179	234
	DR71S..	139	430	497	190	257
	DR71M..	139	455	522	215	282
	DR80S..	156	463	544	223	304
	DR80M..	156	494	575	254	335
	DR90M..	179	494	588	254	348
	DR90L..	179	514	608	274	368

(→ 136)		AC	L	LS	LB	LBS
R..137R77	DR100M..	197	544	638	304	398
	DR100LC..	197	574	668	334	428
	DR132S..	221	619	731	379	491
	DR132M..	221	669	789	429	541
R..147R77	DR63..	132	411	466	179	234
	DR71S..	139	422	489	190	257
	DR71M..	139	447	514	215	282
	DR80S..	156	455	536	223	304
	DR80M..	156	486	567	254	335
	DR90M..	179	486	580	254	348
	DR90L..	179	506	600	274	368
	DR100M..	197	536	630	304	398
	DR100LC..	197	566	660	334	428
	DR132S..	221	611	723	379	491
R..147R87	DR90M..	179	530	624	250	344
	DR90L..	179	550	644	270	364
	DR100M..	197	580	674	300	394
	DR100LC..	197	610	704	330	424
	DR132S..	221	654	766	374	486
	DR132M/MC..	221	704	816	424	536
	DR160..	272	745	882	465	602
R..167R97	DR71M..	139	529	596	204	271
	DR80S..	156	538	619	213	294
	DR80M..	156	569	650	244	325
	DR90M..	179	569	663	244	338
	DR90L..	179	589	683	264	358
	DR100M..	197	619	713	294	388
	DR100LC..	197	649	743	324	418
	DR132S..	221	694	806	369	481
	DR132M/MC..	221	744	856	419	531
	DR160..	272	785	922	460	597
R..167R107	DR90L..	179	649	734	258	352
	DR100M..	197	670	764	288	382
	DR100LC..	197	700	794	318	412
	DR132S..	221	745	857	363	475
	DR132M/MC..	221	795	907	413	525
	DR160..	272	836	973	454	591
	DR180M..	317	922	1121	540	739

8

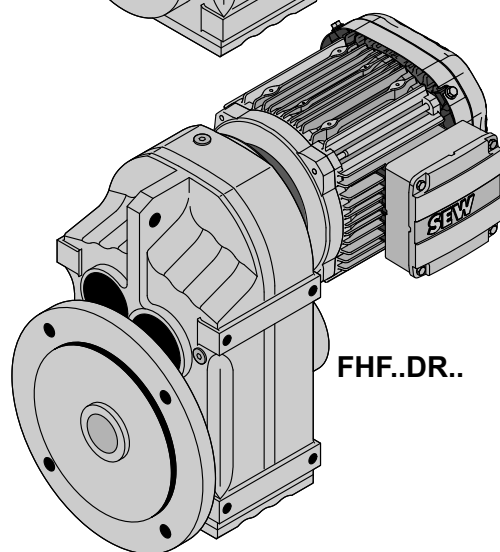
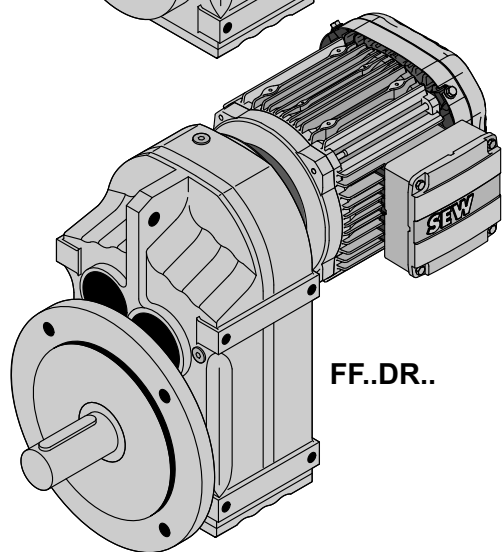
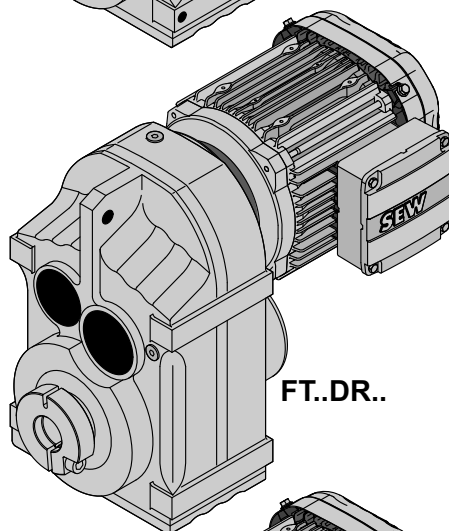
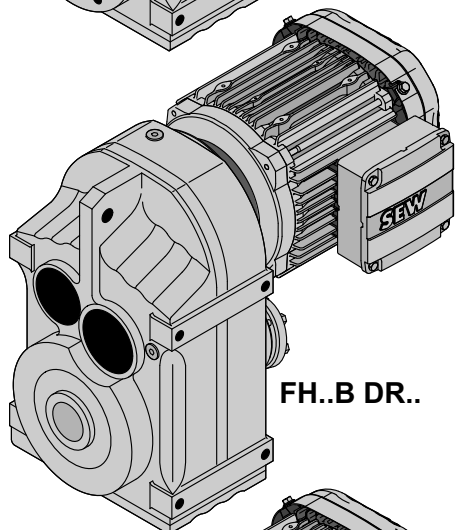
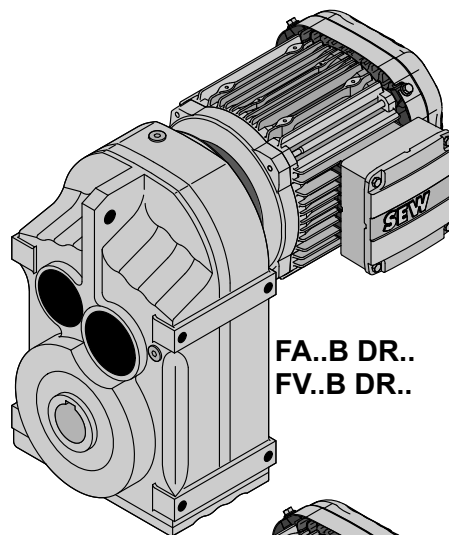
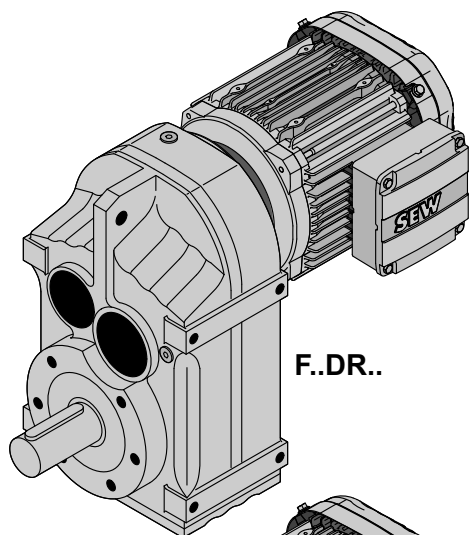
kVA	n
	f
i	
P	H <sub>z</sub>

**F..DRE/DRS**

F, FA..(B), FV..(B), FH..(B), FT, FF, FAF, FVF, FHF,FA, FV, FH, FAZ, FVZ,

**9 F..DRE/DRS**

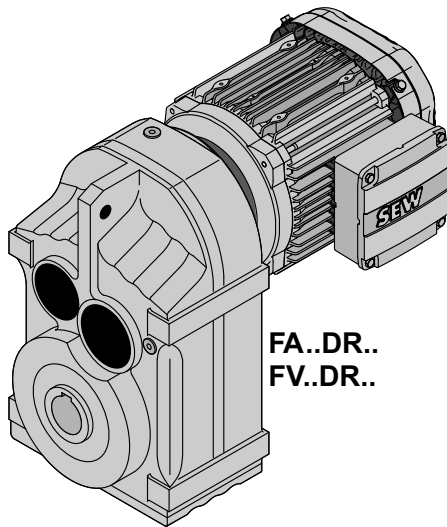
**9.1 F, FA..(B), FV..(B), FH..(B), FT, FF, FAF, FVF, FHF,FA, FV, FH, FAZ, FVZ, FHZ..DR..**



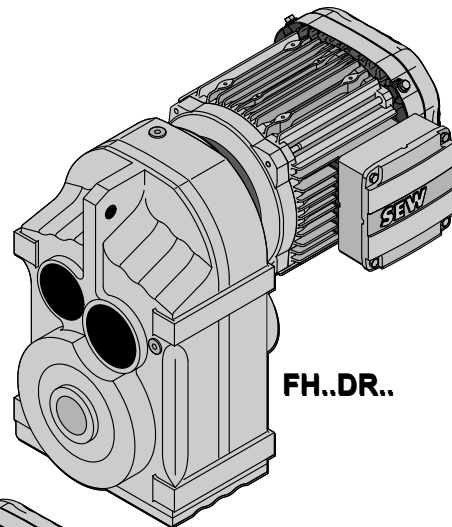
8656737419



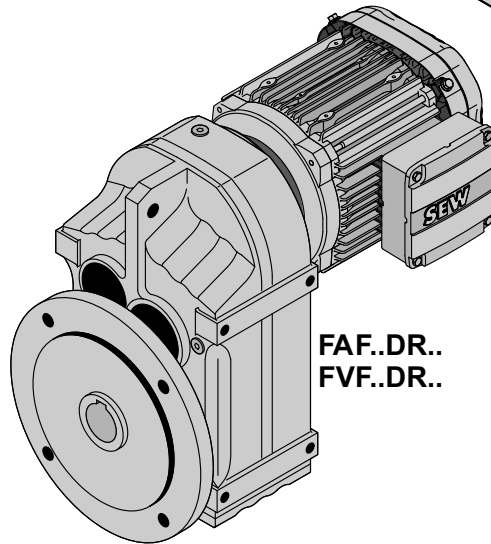
$kVA$	$n$
	$f$
$i$	
$P$	$Hz$



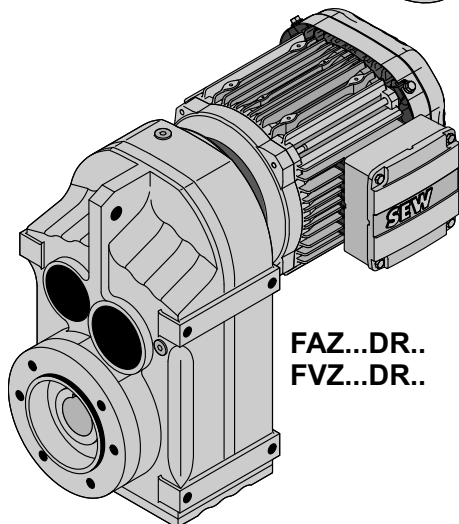
FA..DR..  
FV..DR..



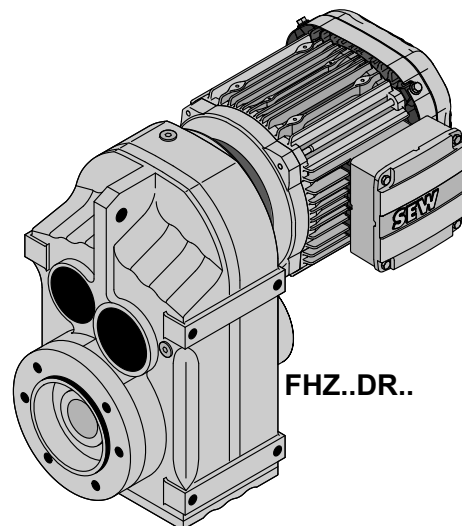
FH..DR..



FAF..DR..  
FVF..DR..

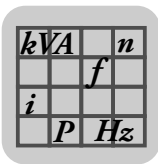


FAZ...DR..  
FVZ...DR..



FHZ..DR..

8656748555



F..DRE/DRS  
F.. → DRE/DRS

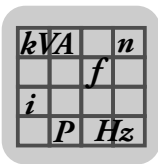
## 9.2 F.. → DRE/DRS

F27, $n_e=1400$ 1/min					130 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
3								
9.9	130	4500	-	140.74				
11	130	4500	-	129.09				
13	130	4500	-	109.90				
15	130	4500	-	94.76				
16	130	4500	-	88.32				
18	130	4500	-	77.21				
19	130	4500	-	72.37				
22	130	4400	-	63.86				
25	130	4180	-	56.62				
28	130	3980	-	50.19				
30	130	3860	-	46.78				
34	130	3640	-	40.89				
37	130	3530	-	38.33				
41	130	3340	-	33.83				
2								
47	130	3140	-	29.56				
52	130	3030	-	27.18				
60	130	2820	-	23.25				
69	130	2630	-	20.15				
74	130	2550	-	18.84				
86	130	2370	-	16.28				
101	130	2180	-	13.84				
113	130	2060	-	12.35				
133	130	1900	-	10.55				
142	130	1830	-	9.88				
149	130	1660	-	9.40				
172	123	1580	-	8.13				
203	114	1530	-	6.91				
227	109	1480	-	6.17				
266	100	1440	-	5.27				
284	96	1420	-	4.93				
337	87	1380	-	4.16				

F27R17, $n_e=1400$ 1/min					130 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M		
3  3								
0.16	130	4500	-	8972				
0.18	130	4500	-	7736				
0.19	130	4500	-	7211				
0.22	130	4500	-	6303				
0.26	130	4500	-	5435				
0.29	130	4500	-	4855				
0.33	130	4500	-	4243				
0.38	130	4500	-	3715				
0.43	130	4500	-	3247				
0.49	130	4500	-	2878				
0.56	130	4500	-	2515				
0.63	130	4500	-	2217				



F27R17, n <sub>e</sub> =1400 1/min					130 Nm	
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
2  3						
0.74	130	4500	-	1898		
0.85	130	4500	-	1645		
0.92	130	4500	-	1525		
1.1	130	4500	-	1322		
1.2	130	4500	-	1146		
1.4	130	4500	-	1013		
1.6	130	4500	-	890		
1.8	130	4500	-	778		
2.1	130	4500	-	682		
2.3	130	4500	-	602		
2.7	130	4500	-	520		
3  2						
0.72	130	4500	-	1948		
0.77	130	4500	-	1826		
0.87	130	4500	-	1610		
1.0	130	4500	-	1399		
1.1	130	4500	-	1230		
1.5	130	4500	-	948		
1.7	130	4500	-	829		
1.9	130	4500	-	731		
2.2	130	4500	-	633		
2.5	130	4500	-	551*		
2.9	130	4500	-	489		
3.3	130	4500	-	427		
3.7	130	4500	-	379		
4.3	130	4500	-	326		
4.9	130	4500	-	288		
5.6	130	4500	-	251		
6.3	130	4500	-	221		
8.1	130	4500	-	172		
9.2	130	4500	-	153		
11	130	4500	-	130		
2  2						
3.1	130	4500	-	458		
3.5	130	4500	-	397		
4.1	130	4500	-	342		
4.6	130	4500	-	302		
5.3	130	4500	-	266		
5.9	130	4500	-	236		
6.6	130	4500	-	211		
7.5	130	4500	-	186		
9.9	130	4500	-	142		
11	130	4500	-	124		
13	130	4500	-	109		
15	130	4500	-	96		



F37, $n_e=1400$ 1/min					200 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
3								
11	200	4290	6.8	128.51				
12	200	4290	6.8	117.88				
14	200	4290	6.8	100.36				
16	200	4290	6.8	86.53				
17	200	4290	6.8	80.65				
20	200	4290	6.9	70.50				
21	200	4290	6.9	66.09				
24	200	4290	6.9	58.32				
26	200	4290	7.5	54.54				
27	200	4290	6.9	51.70				
30	200	4290	7.6	47.02				
32	200	4290	7.6	43.83				
37	200	4290	7.7	38.31				
39	200	4290	7.7	35.91				
44	200	4290	7.7	31.69				
50	200	4060	7.8	28.09				
59	200	3760	7.8	23.88				
2								
59	200	3740	6.1	23.63				
68	200	3500	6.2	20.57				
73	200	3390	6.2	19.27				
82	200	3180	6.4	17.03				
89	200	3070	6.4	15.81				
98	200	2910	6.5	14.33				
109	200	2750	6.6	12.87				
126	190	2620	6.7	11.08				
134	185	2580	6.8	10.42				
156	175	2460	6.9	8.97				
175	170	2360	7.4	8.01				
188	145	2350	9.9	7.44				
208	140	2270	10	6.74				
231	135	2190	10.2	6.05				
269	125	2120	10.5	5.21				
286	120	2100	10.6	4.90				
332	110	2030	10.9	4.22				
371	105	1970	11.9	3.77				

F37R17, $n_e=1400$ 1/min					200 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M		
3  3								
0.17	200	4290	-	8193				
0.20	200	4290	-	7064				
0.21	200	4290	-	6585				
0.24	200	4290	-	5756				
0.28	200	4290	-	4963				
0.32	200	4290	-	4434				
0.36	200	4290	-	3875				



F37R17, n <sub>e</sub> =1400 1/min					200 Nm	
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
0.41	200	4290	-	3392		
0.47	200	4290	-	2965		
0.54	200	4290	-	2587		
0.61	200	4290	-	2284		
0.70	200	4290	-	1997		
0.80	200	4290	-	1742		
0.91	200	4290	-	1545		
2						
0.73	200	4290	-	1929		
0.83	200	4290	-	1679		
0.90	200	4290	-	1550		
1.0	200	4290	-	1356		
1.2	200	4290	-	1180		
1.3	200	4290	-	1044		
1.5	200	4290	-	914		
1.7	200	4290	-	808		
2.0	200	4290	-	698		
2.3	200	4290	-	616		
2.6	200	4290	-	544		
3.0	200	4290	-	466		
3.4	200	4290	-	411		
3.8	200	4290	-	364		
3						
1.0	200	4290	-	1370		
1.2	200	4290	-	1198		
1.3	200	4290	-	1047		
1.5	200	4290	-	915		
1.7	200	4290	-	807		
2.0	200	4290	-	707		
2.3	200	4290	-	617		
2.6	200	4290	-	538		
2.9	200	4290	-	477		
3.4	200	4290	-	412		
3.8	200	4290	-	365		
4.3	200	4290	-	322		
5.0	200	4290	-	278		
5.8	200	4290	-	242		
6.3	200	4290	-	221		
7.2	200	4290	-	195		
8.3	200	4290	-	168		
9.5	200	4290	-	147		
11	200	4290	-	127		
12	200	4290	-	121		
13	200	4290	-	108		
15	200	4290	-	91		
2						
4.3	200	4290	-	326		
4.9	200	4290	-	285		
5.6	200	4290	-	250		
6.4	200	4290	-	219		
7.5	200	4290	-	186		
8.4	200	4290	-	167		
9.7	200	4290	-	145		
11	200	4290	-	129		



F..DRE/DRS  
F.. → DRE/DRS

F37R17, $n_e=1400$ 1/min					200 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
12	200	4290	-	118		
14	200	4290	-	98		
16	200	4290	-	87		

F47, $n_e=1400$ 1/min					400 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC

3								
7.3	400	5920	6.1	190.76				
8.0	400	5920	6.2	175.38				
9.3	400	5920	6.2	150.06				
11	400	5920	6.2	130.07				
12	400	5920	6.2	121.57				
13	400	5920	6.2	105.09				
16	400	5920	6.2	89.29				
18	400	5920	6.2	79.72				
21	400	5920	6.3	68.09				
21	400	5920	6.7	65.36				
25	400	5920	6.8	56.49				
29	400	5920	6.8	48.00*				
33	400	5920	6.8	42.86				
38	400	5920	6.9	36.61				
41	400	5920	6.9	34.29				
48	400	5790	7	28.88				

2								
45	400	5920	5.7	30.86				
48	400	5830	5.7	29.32				
54	400	5460	5.8	25.72				
64	400	5030	5.9	21.82				
71	400	4770	5.9	19.70				
81	400	4450	6	17.33				
86	400	4320	6	16.36				
101	400	3950	6.1	13.93				
111	400	3740	6.4	12.66				
128	400	3440	6.5	10.97				
156	330	3250	8	8.96				
178	380	2630	8.1	7.88				
188	380	2530	8.2	7.44*				
221	350	2470	8.4	6.34				
243	340	2390	9	5.76				
281	320	2310	9.2	4.99				

F47R17, $n_e=1400$ 1/min					400 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M

3  3						
0.11	400	5920	-	12251		
0.13	400	5920	-	10619		
0.14	400	5920	-	9846		
0.16	400	5920	-	8534		





F47R17, n <sub>e</sub> =1400 1/min					400 Nm	
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ(/R) [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
0.19	400	5920	-	7460		
0.21	400	5920	-	6536		
0.24	400	5920	-	5746		
0.28	400	5920	-	5022		
0.32	400	5920	-	4401		
0.36	400	5920	-	3883		
0.41	400	5920	-	3443		
0.47	400	5920	-	2976		
0.53	400	5920	-	2629		
0.61	400	5920	-	2304		
0.69	400	5920	-	2033		
2  3						
0.56	400	5920	-	2519		
0.58	400	5920	-	2394		
0.64	400	5920	-	2172		
0.69	400	5920	-	2025		
0.79	400	5920	-	1770		
0.89	400	5920	-	1576		
1.0	400	5920	-	1363		
1.2	400	5920	-	1192		
1.3	400	5920	-	1061		
1.5	400	5920	-	931		
1.7	400	5920	-	822		
2.0	400	5920	-	706		
2.3	400	5920	-	619		
3  2						
0.78	400	5920	-	1785		
0.89	400	5920	-	1578		
1.0	400	5920	-	1364		
1.2	400	5920	-	1203		
1.3	400	5920	-	1049		
1.5	400	5920	-	918		
1.7	400	5920	-	809		
2.0	400	5920	-	700		
2.3	400	5920	-	622		
2.6	400	5920	-	543		
2.9	400	5920	-	475		
3.3	400	5920	-	419		
3.8	400	5920	-	370		
4.3	400	5920	-	324		
4.9	400	5920	-	288		
5.6	400	5920	-	249		
6.4	400	5920	-	218		
7.3	400	5920	-	193		
8.0	400	5920	-	175		
9.5	400	5920	-	147		
11	400	5920	-	130		
2  2						
2.7	400	5920	-	524		
2.9	400	5920	-	489		
3.3	400	5920	-	427		
3.7	400	5920	-	381		
4.2	400	5920	-	334		
4.7	400	5920	-	295		



F..DRE/DRS  
F.. → DRE/DRS

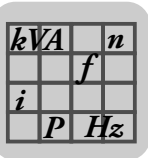
F47R17, $n_e=1400$ 1/min					400 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
5.5	400	5920	-	253		
6.5	400	5920	-	217		
7.4	400	5920	-	190		
7.9	400	5920	-	178		
9.4	400	5920	-	149		
11	400	5920	-	131		

F57, $n_e=1400$ 1/min					600 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
 3										
7.0	600	9200	6	199.70						
7.6	600	9200	6.1	183.60						
8.9	600	9200	6.1	157.09						
10	600	9200	6.1	136.16						
11	600	9200	6.1	127.27						
13	600	9200	6.1	110.01						
15	600	9200	6.1	93.47						
17	600	9200	6.1	83.46						
19	600	9200	6.5	72.98						
21	600	9200	6.5	68.22						
24	600	9200	6.5	58.97						
28	600	9200	6.6	50.10						
31	600	9160	6.6	44.73						
37	600	8510	6.6	38.21						
39	600	8250	6.6	35.79						
46	590	7650	6.7	30.15						
 2										
35	290	10500	5.7	40.13						
41	500	8670	5.7	34.24						
47	545	7890	5.6	29.94						
49	535	7760	5.7	28.45						
56	575	7060	5.8	24.96						
66	600	6350	5.8	21.17						
73	600	6020	5.9	19.11						
83	600	5620	5.9	16.81						
88	600	5450	6	15.88						
104	600	4980	6.1	13.52						
114	600	4710	6.3	12.29						
132	600	4320	6.4	10.64						
150	420	4760	7.6	9.31						
171	420	4450	7.8	8.19						
181	420	4310	7.8	7.73						
213	420	3940	8	6.58						
234	420	3730	8.6	5.98						
270	415	3460	8.8	5.18						





F57R37, n <sub>e</sub> =1400 1/min					600 Nm			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
3  3								
0.09	600	9200	-	14832				
0.10	600	9200	-	13604				
0.11	600	9200	-	12602				
0.12	600	9200	-	11252				
0.14	600	9200	-	9986				
0.16	600	9200	-	8787				
0.18	600	9200	-	7908				
0.20	600	9200	-	6913				
0.23	600	9200	-	6030				
0.26	600	9200	-	5289				
0.30	600	9200	-	4654				
0.34	600	9200	-	4060				
0.39	600	9200	-	3564				
0.44	600	9200	-	3161				
0.51	600	9200	-	2737				
0.58	600	9200	-	2409				
0.66	600	9200	-	2131				
0.76	600	9200	-	1840				
0.86	600	9200	-	1623				
0.97	600	9200	-	1439				
1.1	600	9200	-	1238				
2  3								
0.49	600	9200	-	2854				
0.54	600	9200	-	2576				
0.62	600	9200	-	2266				
0.70	600	9200	-	2012				
0.78	600	9200	-	1791				
0.87	600	9200	-	1617				
0.98	600	9200	-	1422				
1.1	600	9200	-	1243				
1.3	600	9200	-	1066				
1.5	600	9200	-	949				
1.6	600	9200	-	856				
1.9	600	9200	-	749				
2.1	600	9200	-	658				
2.6	600	9200	-	549				
2.9	600	9200	-	483				
3  2								
1.3	600	9200	-	1106				
1.4	600	9200	-	967				
1.6	600	9200	-	851				
1.9	600	9200	-	738				
2.2	600	9200	-	646				
2.5	600	9200	-	558				
2.8	600	9200	-	506				
3.1	600	9200	-	452				
3.6	600	9200	-	386				
4.1	600	9200	-	338				
5.5	600	9200	-	255				
7.0	600	9200	-	201				
7.7	600	9200	-	181				
9.0	600	9200	-	155				



<b>F57R37, n<sub>e</sub>=1400 1/min</b>					<b>600 Nm</b>			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
2  2								
3.3	600	9200	-	426				
3.7	600	9200	-	382				
4.2	600	9200	-	330				
4.7	600	9200	-	298				
5.3	600	9200	-	262				
6.2	600	9200	-	226				
7.0	600	9200	-	200				
8.2	600	9200	-	170				
9.2	600	9200	-	152				
10	600	9200	-	134				

<b>F67, n<sub>e</sub>=1400 1/min</b>					<b>820 Nm</b>					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
3										
6.1	820	10300	5.7	228.99						
7.2	820	10300	5.8	195.39						
8.2	820	10300	5.7	170.85						
8.6	820	10300	5.7	162.31						
9.8	820	10300	5.8	142.40						
12	820	10300	5.8	120.79						
13	820	10300	5.8	109.04						
15	820	10300	5.8	95.94						
15	820	10300	5.8	90.59						
18	820	10300	6.3	79.76						
21	820	10300	6.3	67.65						
23	820	10300	6.3	61.07						
26	820	10300	6.3	53.73						
28	820	10300	6.3	50.74						
32	820	10300	6.3	43.20						
36	780	10700	6.4	39.26						
41	740	11000	6.5	34.01						
2										
39	820	10300	5.3	36.30						
44	820	10300	5.4	32.08						
51	820	10300	5.4	27.41						
56	820	10300	5.4	25.13						
63	820	10300	5.5	22.05						
67	820	10300	5.5	20.90*						
77	820	10300	5.6	18.29						
85	820	10300	5.8	16.48						
97	820	10300	5.7	14.46						
110	820	10300	5.8	12.76						
124	820	10300	6	11.31						
145	820	10300	6.1	9.66						
154	530	11400	8	9.08						
163	570	10900	8.1	8.60						
186	610	10100	8.2	7.53						
206	620	9660	8.7	6.78						
235	610	9200	8.6	5.95						
267	590	8850	8.8	5.25						



F67, n <sub>e</sub> =1400 1/min						820 Nm				
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
300	560	8590	9.3	4.66						
353	500	8390	9.6	3.97						

F67R37, n <sub>e</sub> =1400 1/min						820 Nm			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC	



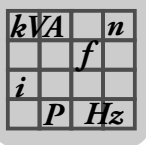
0.07	820	10300	-	19199				
0.08	820	10300	-	17610				
0.09	820	10300	-	14992				
0.11	820	10300	-	12926				
0.12	820	10300	-	11480				
0.14	820	10300	-	10220				
0.16	820	10300	-	8933				
0.18	820	10300	-	7940				
0.20	820	10300	-	7096				
0.23	820	10300	-	6080				
0.26	820	10300	-	5341				
0.30	820	10300	-	4690				
0.34	820	10300	-	4091				
0.39	820	10300	-	3574				
0.45	820	10300	-	3133				
0.51	820	10300	-	2756				
0.57	820	10300	-	2439				



0.41	820	10300	-	3377				
0.48	820	10300	-	2912				
0.52	820	10300	-	2714				
0.59	820	10300	-	2372				
0.66	820	10300	-	2126				
0.75	820	10300	-	1859				
0.86	820	10300	-	1631				
0.97	820	10300	-	1437				
1.1	820	10300	-	1256				
1.2	820	10300	-	1126				
1.4	820	10300	-	984				
1.6	820	10300	-	864				
1.9	820	10300	-	722				
2.2	820	10300	-	634				
2.6	820	10300	-	539				



0.66	820	10300	-	2106				
0.74	820	10300	-	1884				
0.86	820	10300	-	1635				
0.98	820	10300	-	1429				
1.1	820	10300	-	1271				
1.3	820	10300	-	1102				
1.4	820	10300	-	970				
1.6	820	10300	-	858				
1.9	820	10300	-	755				
2.2	820	10300	-	641				
2.4	820	10300	-	572				

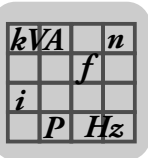


F67R37, $n_e=1400$ 1/min					820 Nm						
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC			
2.8	820	10300	-	509							
3.2	820	10300	-	437							
3.6	820	10300	-	384							
4.1	820	10300	-	338							
4.6	820	10300	-	305							
5.4	820	10300	-	257							
6.1	820	10300	-	231							
6.8	820	10300	-	205							
8.0	820	10300	-	175							
2  2											
2.8	820	10300	-	500							
3.1	820	10300	-	454							
3.6	820	10300	-	392							
4.2	820	10300	-	333							
4.7	820	10300	-	297							
5.4	820	10300	-	261							
5.9	820	10300	-	238							
7.0	820	10300	-	200							
8.0	820	10300	-	176							
F77, $n_e=1400$ 1/min					1500 Nm						
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
3											
5.0	1500	15700	5.4	281.71							
5.3	1500	15700	5.4	262.93							
6.2	1500	15700	5.4	225.79							
7.1	1500	15700	5.4	198.31							
7.4	1500	15700	5.4	188.40							
8.4	1500	15700	5.5	166.47							
9.8	1500	15700	5.5	142.27							
11	1500	15700	5.5	130.42							
12	1500	15700	5.5	114.45							
13	1500	15700	5.5	108.46*							
15	1500	15700	5.5	94.93							
16	1500	15700	5.5	85.52							
19	1500	15700	5.5	75.02							
19	1500	15700	5.9	72.50							
21	1500	15700	5.9	66.46							
24	1500	15700	6	58.32							
25	1500	15700	6	55.27							
29	1500	15700	6	48.37							
32	1500	15700	6.1	43.58							
37	1500	15700	6	38.23							
41	1500	15700	6.1	33.74							
47	1500	15700	6.1	29.91							
55	1450	16100	6.2	25.54							
2											
38	1110	17900	4.9	36.58							
44	1380	16500	4.9	31.51							
49	1430	16200	4.9	28.75							
55	1500	15700	4.9	25.50*							



F77, $n_e=1400$ 1/min						1500 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
65	1500	15700	5	21.43							
71	1500	15700	5.1	19.70							
80	1500	15700	5.2	17.49							
90	1500	15700	5.2	15.64*							
100	1500	15700	5.4	14.06							
115	1500	14900	5.4	12.20							
128	1500	14200	5.5	10.93							
151	1080	13800	7.1	9.30							
169	1080	13100	7.1	8.26							
189	1080	12500	7.2	7.39							
211	1080	12000	7.5	6.64							
243	1080	11300	7.7	5.76							
271	1080	10700	7.8	5.16							
327	1010	10200	8.1	4.28							

F77R37, $n_e=1400$ 1/min						1500 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC			
3  3											
0.07	1500	15700	-	19180							
0.08	1500	15700	-	17593							
0.09	1500	15700	-	16128							
0.09	1500	15700	-	14978							
0.10	1500	15700	-	13731							
0.12	1500	15700	-	12049							
0.13	1500	15700	-	11035							
0.14	1500	15700	-	9683							
0.17	1500	15700	-	8464							
0.19	1500	15700	-	7520							
0.21	1500	15700	-	6580							
0.24	1500	15700	-	5808							
0.28	1500	15700	-	5026							
0.32	1500	15700	-	4435							
0.37	1500	15700	-	3832							
0.41	1500	15700	-	3381							
0.47	1500	15700	-	2978							
0.54	1500	15700	-	2613							
0.61	1500	15700	-	2284							
0.69	1500	15700	-	2029							
2  3											
0.28	1110	17900	-	4931							
0.31	1110	17900	-	4523							
0.36	1110	17900	-	3851							
0.42	1110	17900	-	3320							
0.45	1110	17900	-	3095							
0.52	1110	17900	-	2705							
0.55	1110	17900	-	2536							
0.63	1110	17900	-	2238							
0.69	1110	17900	-	2039							
0.80	1110	17900	-	1759							
0.85	1110	17900	-	1639							
0.98	1110	17900	-	1433							
1.0	1110	17900	-	1343							



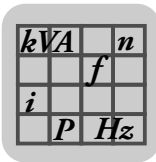
F..DRE/DRS  
F.. → DRE/DRS

F77R37, $n_e=1400$ 1/min					1500 Nm							
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC				
1.2	1110	17900	-	1185								
1.3	1110	17900	-	1051								
1.6	1110	17900	-	893								
3  2												
0.81	1500	15700	-	1728								
0.91	1500	15700	-	1544								
1.0	1500	15700	-	1354								
1.2	1500	15700	-	1200								
1.3	1500	15700	-	1053								
1.5	1500	15700	-	910								
1.7	1500	15700	-	810								
2.0	1500	15700	-	710								
2.3	1500	15700	-	615*								
2.6	1500	15700	-	538								
2.9	1500	15700	-	480								
3.4	1500	15700	-	413								
3.8	1500	15700	-	367								
4.3	1500	15700	-	323								
5.0	1500	15700	-	280								
5.7	1500	15700	-	247								
6.3	1500	15700	-	221								
7.0	1500	15700	-	199								
2  2												
1.7	1110	17900	-	815								
2.0	1110	17900	-	706								
2.1	1110	17900	-	660								
2.5	1110	17900	-	571								
2.9	1110	17900	-	485								
3.2	1110	17900	-	433								
3.8	1110	17900	-	370								
4.0	1110	17900	-	346								
4.8	1110	17900	-	292								
F87, $n_e=1400$ 1/min					3000 Nm							
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC
3												
5.2	3000	19800	7	270.68								
5.5	3000	19800	7	255.37								
6.1	3000	19800	7	228.93								
7.1	3000	19800	7	197.20								
7.8	3000	19800	7	179.97								
8.8	3000	19800	7	159.61								
10	3000	19800	7	134.16								
11	3000	19800	7	123.29								
13	3000	19800	7.1	109.49								
14	3000	19800	7.1	97.89								
16	3000	19800	7.1	88.01								
18	3000	19800	7.1	76.39								
20	3000	19600	7.1	68.40								
25	3000	17700	7.1	56.75								
28	2940	16800	7.5	50.36								
31	2820	16200	7.5	45.28								



F87, n <sub>e</sub> =1400 1/min						3000 Nm						
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC
36	2720	15400	7.5	39.30								
40	2610	14900	7.6	35.19								
48	2510	13800	7.6	29.20								
2												
41	2610	14600	6.6	33.92								
49	2450	13900	6.6	28.78								
53	3000	11100	6.8	26.50								
59	3000	10300	6.8	23.68								
66	3000	9520	6.8	21.32*								
73	3000	8840	6.9	19.31								
82	3000	8040	6.9	17.12								
90	3000	7390	7	15.48								
107	3000	6370	7	13.12*								
122	3000	5580	7.1	11.46								
146	2880	5050	7.2	9.58								
169	1530	8890	6.7	8.29								
190	1530	8280	6.8	7.35								
211	1530	7790	6.8	6.65								
249	1530	7020	7	5.63								
285	1530	6430	7.1	4.92								
340	1460	5980	7.4	4.12								

F87R57, n <sub>e</sub> =1400 1/min						3000 Nm					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	
3  3											
0.06	3000	19800	-	23042							
0.07	3000	19800	-	20462							
0.08	3000	19800	-	18238							
0.09	3000	19800	-	15877							
0.10	3000	19800	-	14099							
0.11	3000	19800	-	12205							
0.13	3000	19800	-	10433							
0.15	3000	19800	-	9381							
0.17	3000	19800	-	8142							
0.20	3000	19800	-	7100							
0.22	3000	19800	-	6273							
0.25	3000	19800	-	5510							
0.28	3000	19800	-	4954							
0.33	3000	19800	-	4245							
0.38	3000	19800	-	3721							
2  3											
0.28	3000	19800	-	4952							
0.31	3000	19800	-	4562							
0.36	3000	19800	-	3919							
0.40	3000	19800	-	3503							
0.44	3000	19800	-	3196							
0.49	3000	19800	-	2857							
0.55	3000	19800	-	2524							
0.66	3000	19800	-	2134							
0.73	3000	19800	-	1913*							
0.82	3000	19800	-	1717							
0.95	3000	19800	-	1476							



F87R57, $n_e=1400$ 1/min						3000 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
1.1	3000	19800	-	1278						
1.2	3000	19800	-	1142						
1.4	3000	19800	-	988						
1.6	3000	19800	-	883						
1.9	3000	19800	-	748						
3  2										
0.43	3000	19800	-	3244						
0.49	3000	19800	-	2881						
0.54	3000	19800	-	2576						
0.64	3000	19800	-	2199						
0.73	3000	19800	-	1930						
0.82	3000	19800	-	1709						
0.94	3000	19800	-	1493						
1.1	3000	19800	-	1300						
1.2	3000	19800	-	1148						
1.4	3000	19800	-	1010						
1.6	3000	19800	-	887						
1.8	3000	19800	-	780						
2.1	3000	19800	-	674						
2.3	3000	19800	-	609						
2.7	3000	19800	-	515						
3.1	3000	19800	-	452						
4.1	3000	19800	-	345						
4.7	3000	19800	-	300						
5.6	3000	19800	-	249						
2  3										
2.1	3000	19800	-	662						
2.4	3000	19800	-	592						
2.7	3000	19800	-	519						
3.0	3000	19800	-	468						
3.5	3000	19800	-	398						
4.0	3000	19800	-	350						
4.4	3000	19800	-	315*						
5.0	3000	19800	-	281						
5.8	3000	19800	-	240						
6.6	3000	19800	-	211						
7.3	3000	19800	-	193						

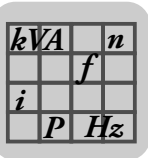
F97, $n_e=1400$ 1/min						4300 Nm						
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
3												
5.1	4300	29900	6	276.77								
5.5	4300	29900	6	253.41								
6.3	4300	29900	6	223.88								
7.4	4300	29900	6	189.92								
8.0	4300	29900	6	174.87								
9.0	4300	29900	6	156.30								
9.9	4300	29900	6	140.71								
11	4300	29900	6	127.42								
12	4300	29900	6	112.99								











F97, n <sub>e</sub> =1400 1/min					4300 Nm							
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
14	4300	29900	6	102.16								
14	4300	29900	6.2	97.58								
16	4300	29900	6.3	89.85								
16	4300	29900	6	86.59								
17	4300	29900	6.3	80.31								
19	4300	29900	6	75.63								
19	4300	29900	6.3	72.29								
21	4300	29000	6.3	65.47								
24	4300	27200	6.3	58.06								
27	4300	25800	6.3	52.49								
31	4300	23600	6.4	44.49								
36	4300	21900	6.4	38.86								
43	4300	19800	6.4	32.50								
2												
32	3070	27600	5.6	43.28								
38	3070	25500	5.6	36.64								
41	4300	20300	5.7	33.91								
46	4300	19000	5.8	30.39								
51	4300	17900	5.8	27.44*								
56	4300	16800	5.8	24.92								
63	4300	15600	5.9	22.11								
70	4300	14600	5.8	20.07								
81	4300	13200	5.9	17.25*								
93	4300	11900	5.9	15.06								
110	4300	10500	6	12.77								
125	4100	10000	6	11.16								
155	2360	13400	8.6	9.06								
170	2360	12600	8.5	8.22								
198	2360	11500	8.6	7.07								
227	2250	11100	8.7	6.17								
268	2150	10400	8.8	5.23								
306	2050	9950	9	4.57								
362	1800	9960	9	3.87								

F97R57, n <sub>e</sub> =1400 1/min					4300 Nm					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
3  3										
0.05	4300	29900	-	29211						
0.05	4300	29900	-	26911						
0.06	4300	29900	-	23814						
0.07	4300	29900	-	20813						
0.08	4300	29900	-	18119*						
0.09	4300	29900	-	15472						
0.10	4300	29900	-	14022						
0.11	4300	29900	-	12324						
0.13	4300	29900	-	10838						
0.15	4300	29900	-	9576						
0.17	4300	29900	-	8318						
0.19	4300	29900	-	7328						
0.22	4300	29900	-	6469						
0.25	4300	29900	-	5615						
0.28	4300	29900	-	4961*						
0.32	4300	29900	-	4333*						



F..DRE/DRS  
F.. → DRE/DRS

F97R57, $n_e=1400$ 1/min					4300 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
 2  3										
0.22	4300	29900	-	6338						
0.25	4300	29900	-	5680						
0.28	4300	29900	-	5016						
0.32	4300	29900	-	4367						
0.36	4300	29900	-	3914						
0.42	4300	29900	-	3357						
0.47	4300	29900	-	3009						
0.57	4300	29900	-	2448						
0.64	4300	29900	-	2199						
0.71	4300	29900	-	1971						
0.80	4300	29900	-	1741*						
0.95	4300	29900	-	1468						
1.1	4300	29900	-	1316						
1.2	4300	29900	-	1189*						
1.4	4300	29900	-	1023						
 3  2										
0.36	4300	29900	-	3906						
0.42	4300	29900	-	3352						
0.48	4300	29900	-	2907						
0.55	4300	29900	-	2553						
0.62	4300	29900	-	2245						
0.71	4300	29900	-	1970						
0.81	4300	29900	-	1722						
0.92	4300	29900	-	1527						
1.1	4300	29900	-	1327						
1.2	4300	29900	-	1171*						
1.4	4300	29900	-	1022						
1.6	4300	29900	-	898						
1.8	4300	29900	-	784						
2.0	4300	29900	-	690						
2.3	4300	29900	-	605						
2.6	4300	29900	-	529						
3.0	4300	29900	-	467						
3.4	4300	29900	-	406						
3.9	4300	29900	-	363						
4.9	4300	29900	-	285						
5.7	4300	29900	-	245						
6.7	4300	29900	-	208						
7.2	4300	29900	-	195						
 2  2										
1.6	4300	29900	-	892						
1.8	4300	29900	-	760						
2.1	4300	29900	-	667						
2.5	4300	29900	-	569						
2.7	4300	29900	-	510						
3.0	4300	29900	-	473*						
3.5	4300	29900	-	403						
3.9	4300	29900	-	361						
4.4	4300	29900	-	317						
5.1	4300	29900	-	275						
5.8	4300	29900	-	242						



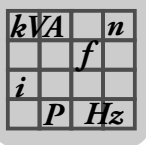
F107, n <sub>e</sub> =1400 1/min					7840 Nm					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M

3										
5.5	7680	49800	5.4	254.40*						
6.5	7680	49800	5.4	215.37						
7.0	7680	49800	5.4	199.31						
7.8	7680	49800	5.4	178.64						
8.7	7680	49800	5.4	161.28*						
9.6	7680	49800	5.4	146.49						
11	7680	49800	5.4	129.97						
12	7680	49800	5.4	117.94						
14	7680	49800	5.4	101.38*						
15	7680	49800	5.6	92.47*						
16	7680	49800	5.4	88.49						
17	7680	49800	5.7	83.99						
19	7680	49800	5.7	74.52						
21	7680	49800	5.7	67.62						
24	7680	47800	5.7	58.12*						
28	7680	45100	5.7	50.73						
33	7680	42000	5.7	43.03						
37	7680	39500	5.7	37.61						
44	7680	36500	5.8	31.80						

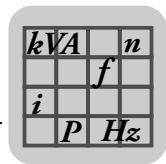
2										
41	7400	38300	5.1	33.79*						
51	7840	33300	5.2	27.57						
56	7840	31500	5.2	25.14						
64	7840	28800	5.2	21.76*						
73	7840	26500	5.2	19.20*						
84	7840	23900	5.3	16.58						
95	7680	22400	5.3	14.67						
114	7000	22600	5.4	12.33						
141	6500	21500	5.4	9.96						
144	4910	23500	6.7	9.69						
167	4800	22000	6.7	8.37						
189	4600	21300	6.8	7.40						
225	4600	19000	7	6.22						
278	4600	16400	7	5.03						

F107R77, n <sub>e</sub> =1400 1/min					7840 Nm						
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC

3  3											
0.06	7680	49800	-	25375*							
0.06	7680	49800	-	21652							
0.07	7680	49800	-	18933							
0.08	7680	49800	-	16888							
0.09	7680	49800	-	14767							
0.12	7680	49800	-	11348*							
0.14	7680	49800	-	10039							
0.16	7680	49800	-	8548							
0.18	7680	49800	-	7674							
0.21	7680	49800	-	6767							
0.24	7680	49800	-	5954							
0.27	7680	49800	-	5223							
0.31	7680	49800	-	4567							



F107R77, $n_e=1400$ 1/min										7840 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
0.35	7680	49800	-	3948							
0.40	7680	49800	-	3521							
2  3											
0.26	7840	49400	-	5383*							
0.30	7840	49400	-	4593							
0.35	7840	49400	-	4016							
0.37	7840	49400	-	3815							
0.42	7840	49400	-	3347							
0.49	7840	49400	-	2839							
0.55	7840	49400	-	2563*							
0.62	7840	49400	-	2255							
0.66	7840	49400	-	2129							
0.77	7840	49400	-	1813							
0.88	7840	49400	-	1590							
0.97	7840	49400	-	1436							
1.1	7840	49400	-	1263							
1.2	7840	49400	-	1193							
1.4	7840	49400	-	1015							
1.5	7840	49400	-	923							
1.8	7840	49400	-	800							
2.0	7840	49400	-	696							
3  2											
0.46	7680	49800	-	3037							
0.51	7680	49800	-	2756							
0.59	7680	49800	-	2369							
0.68	7680	49800	-	2068							
0.77	7680	49800	-	1826							
0.88	7680	49800	-	1597							
1.00	7680	49800	-	1401							
1.1	7680	49800	-	1243							
1.3	7680	49800	-	1087							
1.5	7680	49800	-	950							
1.7	7680	49800	-	834							
1.9	7680	49800	-	736							
2.2	7680	49800	-	640							
2.5	7680	49800	-	560							
2.9	7680	49800	-	489							
3.2	7680	49800	-	436							
3.8	7680	49800	-	370							
4.2	7680	49800	-	333							
4.8	7680	49800	-	291							
5.5	7680	49800	-	255							
6.2	7680	49800	-	225*							
7.4	7680	49800	-	190							
2  2											
2.2	7840	49400	-	644							
2.4	7840	49400	-	591							
2.7	7840	49400	-	518*							
2.9	7840	49400	-	491							
3.3	7840	49400	-	430							
3.6	7840	49400	-	387							
4.1	7840	49400	-	340							
4.7	7840	49400	-	300							
5.3	7840	49400	-	266							



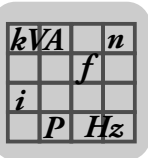
F127, n <sub>e</sub> =1400 1/min					12000 Nm				
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M

3									
8.2	12000	90000	4.9	170.83					
9.1	12000	90000	4.9	153.67*					
11	12000	90000	4.9	125.37					
12	12000	88000	4.9	114.34					
14	12000	83000	4.9	98.95					
16	12000	79000	4.9	87.31*					
19	12000	74300	4.9	75.41*					
20	12000	72100	5.2	70.07					
22	12000	69400	5.2	63.91					
25	12000	65200	5.2	55.31					
29	12000	61300	5.2	48.80					
33	12000	56800	5.2	42.15					
38	12000	53200	5.2	37.28					
45	12000	48300	5.3	31.33					
55	12000	42400	5.3	25.30					

2									
52	8500	55300	4.6	26.86					
57	8500	53300	4.6	24.57					
65	12000	38000	4.7	21.38					
74	11000	38800	4.7	18.87					
86	11000	35400	4.7	16.36					
96	11000	32600	4.7	14.55					
112	10000	33300	4.8	12.54					
137	9500	30900	4.9	10.19					
158	7000	36400	6.3	8.86					
178	6000	37000	6.4	7.88					
206	7000	32200	6.5	6.80					
254	6000	31700	6.7	5.52					
299	6000	29500	6.8	4.68					

F127R77, n <sub>e</sub> =1400 1/min					12000 Nm						
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC

3  3											
0.06	12000	90000	-	24478*							
0.06	12000	90000	-	22323							
0.07	12000	90000	-	19048							
0.08	12000	90000	-	16656							
0.10	12000	90000	-	14722*							
0.11	12000	90000	-	12912							
0.12	12000	90000	-	11656*							
0.14	12000	90000	-	10191							
0.16	12000	90000	-	8831							
0.18	12000	90000	-	7643							
0.21	12000	90000	-	6715							
0.24	12000	90000	-	5925							
0.27	12000	90000	-	5153							
0.31	12000	90000	-	4533							
0.36	12000	90000	-	3926							
0.41	12000	90000	-	3454							
0.46	12000	90000	-	3031							



F..DRE/DRS  
F.. → DRE/DRS

F127R77, $n_e=1400$ 1/min					12000 Nm							
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC	
3  32												
0.52	12000	90000	-	2672								
0.59	12000	90000	-	2357*								
0.69	12000	90000	-	2038								
0.78	12000	90000	-	1784								
0.87	12000	90000	-	1606								
1.0	12000	90000	-	1390								
1.1	12000	90000	-	1220								
1.3	12000	90000	-	1077								
1.5	12000	90000	-	930								
1.7	12000	90000	-	820								
1.9	12000	90000	-	727								
2.2	12000	90000	-	648								
2.6	12000	90000	-	549								
2.8	12000	90000	-	495								
3.3	12000	90000	-	428								
3.7	12000	90000	-	376								

F127R87, $n_e=1400$ 1/min					12000 Nm							
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC
2.9	12000	90000	-	483								
3.3	12000	90000	-	418								
3.7	12000	90000	-	374								
4.5	12000	90000	-	312								
4.8	12000	90000	-	293								
5.4	12000	90000	-	259								
6.3	12000	90000	-	223								
7.1	12000	90000	-	198								
8.4	12000	90000	-	166								

F157, $n_e=1400$ 1/min					18000 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M	DRE315S DRE315K	DRE315M DRE315L
3										
5.2	18000	100300	4.5	267.43						
6.4	18000	100300	4.5	217.62*						
7.9	18000	100300	4.5	178.20*						
8.6	18000	100300	4.5	162.96						
9.9	18000	100300	4.5	141.80*						
11	18000	100300	4.5	125.14						
13	18000	100300	4.5	108.49						
15	18000	100300	4.5	96.53*						
16	18000	95800	4.8	85.80*						
18	18000	92300	4.8	78.46						
21	18000	87000	4.8	68.28*						
23	18000	82500	4.8	60.25						
27	18000	77500	4.8	52.24						
30	18000	73600	4.8	46.48*						
35	18000	68900	4.9	40.06						
43	18000	62500	4.9	32.55						
51	18000	57800	4.9	27.60						



F157, $n_e=1400$ 1/min						18000 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M	DRE315S DRE315K	DRE315M DRE315L
2										
26	8000	98300	4.3	53.55						
32	10000	87800	4.3	43.94*						
39	11000	79300	4.4	35.75*						
49	17000	60800	4.4	28.60*						
55	15000	61500	4.4	25.43						
63	18000	51800	4.4	22.16						
71	17000	50900	4.4	19.77						
83	18000	44900	4.5	16.85						
100	17000	42500	4.6	13.96						
117	16000	40900	4.6	11.92						

F157R97, $n_e=1400$ 1/min						18000 Nm							
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
3  3													
0.04	18000	100300	-	31434									
0.05	18000	100300	-	26173									
0.06	18000	100300	-	23464									
0.07	18000	100300	-	20212									
0.08	18000	100300	-	17984*									
0.09	18000	100300	-	16358									
0.10	18000	100300	-	13751									
0.11	18000	100300	-	12235									
0.14	18000	100300	-	10033									
0.16	18000	100300	-	9021									
0.17	18000	100300	-	8026									
0.20	18000	100300	-	7075									
0.22	18000	100300	-	6295									
0.26	18000	100300	-	5404									
0.29	18000	100300	-	4831									
0.34	18000	100300	-	4130*									
0.39	18000	100300	-	3607									
0.44	18000	100300	-	3210									
0.50	18000	100300	-	2780									
0.97	18000	100300	-	1441									
3  2													
0.58	18000	100300	-	2427									
0.64	18000	100300	-	2185									
0.72	18000	100300	-	1944*									
0.84	18000	100300	-	1674									
1.1	18000	100300	-	1308									
1.2	18000	100300	-	1169									
1.5	18000	100300	-	953									
1.7	18000	100300	-	845									
1.8	18000	100300	-	764									
2.1	18000	100300	-	680									
2.4	18000	100300	-	576									
2.8	18000	100300	-	503									
3.1	18000	100300	-	446									
4.0	18000	100300	-	353									
4.6	18000	100300	-	302									
5.1	18000	100300	-	273									
6.0	18000	100300	-	232									



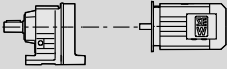

F..DRE/DRS  
F.. → DRE/DRS

F157R97, $n_e=1400$ 1/min										18000 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
6.9	18000	100300	-	202									
7.1	18000	100300	-	197									



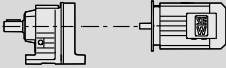



9.3 F..DRE/DRS [kW]

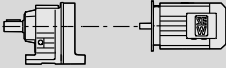

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]	
0.12	0.06	13900	22323	86700	0.85			
	0.07	11800	19048	90000	1.00			
	0.08	10300	16656	90000	1.15	FA 127R77	DR 63S4	425 410
	0.09	9180	14722	90000	1.30	FAF 127R77	DR 63S4	465 410
	0.11	7990	12912	90000	1.50	F 127R77	DR 63S4	460 410
	0.12	7040	11656	90000	1.70	FF 127R77	DR 63S4	510 410
	0.14	6310	10191	90000	1.90			
	0.09	9200	14767	45500	0.85			
	0.12	7070	11348	51400	1.10			
	0.14	5740	10039	54600	1.35			
	0.16	4670	8548	57000	1.65	FA 107R77	DR 63S4	275 410
	0.18	4750	7674	56800	1.60	FAF 107R77	DR 63S4	295 410
	0.20	4090	6767	58200	1.90	F 107R77	DR 63S4	290 410
	0.23	3460	5954	59500	2.2	FF 107R77	DR 63S4	320 410
0.26	2990	5223	60400	2.6				
0.30	2840	4567	60700	2.7				
0.39	2120	3521	62000	3.6				
0.21	4140	6469	30400	1.05	FA 97R57	DR 63S4	185 410	
0.25	3820	5615	31300	1.15	FAF 97R57	DR 63S4	205 410	
0.28	3320	4961	32500	1.30	F 97R57	DR 63S4	190 410	
0.32	2900	4333	33500	1.50	FF 97R57	DR 63S4	225 410	
0.35	2690	3906	34000	1.60	FA 97R57	DR 63S4	180 410	
0.41	2320	3352	34800	1.85	FAF 97R57	DR 63S4	205 410	
0.47	1910	2907	35500	2.2	F 97R57	DR 63S4	190 410	
0.54	1750	2553	35800	2.4	FF 97R57	DR 63S4	225 410	
0.33	2760	4245	23800	1.10	FA 87R57	DR 63S4	120 410	
0.37	2210	3721	25800	1.35	FAF 87R57	DR 63S4	130 410	
					F 87R57	DR 63S4	125 410	
					FF 87R57	DR 63S4	140 410	
0.43	2240	3244	25700	1.35				
0.48	1990	2881	26500	1.50				
0.54	1780	2576	27100	1.70	FA 87R57	DR 63S4	115 410	
0.63	1510	2199	27800	2.00	FAF 87R57	DR 63S4	130 410	
0.72	1300	1930	28300	2.3	F 87R57	DR 63S4	125 410	
0.81	1170	1709	28600	2.6	FF 87R57	DR 63S4	140 410	
0.92	1030	1493	28900	2.9				
1.1	820	1300	29300	3.7				
1.2	745	1148	29500	4.0				
0.53	1820	2613	13000	0.80	FA 77R37	DR 63S4	65 410	
0.60	1570	2284	15200	0.95	FAF 77R37	DR 63S4	72 410	
0.68	1380	2029	16400	1.10	F 77R37	DR 63S4	69 410	
					FF 77R37	DR 63S4	80 410	
0.80	1180	1728	17500	1.25				
0.89	1090	1544	17900	1.40				
1.0	950	1354	18500	1.55	FA 77R37	DR 63S4	65 410	
1.2	840	1200	18800	1.75	FAF 77R37	DR 63S4	72 410	
1.3	740	1053	19100	2.0	F 77R37	DR 63S4	69 410	
1.5	630	910	19400	2.4	FF 77R37	DR 63S4	80 410	
1.7	525	810	19600	2.8				
1.9	460	710	19800	3.2				
0.97	960	1429	7070	0.85				
1.1	860	1271	9840	0.95				
1.2	725	1102	11100	1.15				
1.4	635	970	11700	1.30	FA 67R37	DR 63S4	43 410	
1.6	560	858	12100	1.45	FAF 67R37	DR 63S4	49 410	
1.8	490	755	12400	1.65	F 67R37	DR 63S4	46 410	
2.2	415	641	12700	1.95	FF 67R37	DR 63S4	52 410	
2.4	390	572	12800	2.1				
2.7	330	509	13000	2.5				
3.2	285	437	13000	2.8				
1.6	610	851	9100	1.00				
1.9	520	738	9750	1.15	FA 57R37	DR 63S4	39 410	
2.1	455	646	10200	1.30	FAF 57R37	DR 63S4	45 410	
2.5	385	558	10600	1.55	F 57R37	DR 63S4	39 410	
2.7	345	506	10900	1.75	FF 57R37	DR 63S4	46 410	
3.0	295	452	11100	2.0				

kVA	n
f	
i	
P	H <sub>Z</sub>

F..DRE/DRS  
F..DRE/DRS [kW]

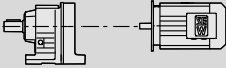

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
						FA	FAF	F	FF			DR
0.12	3.2	310	426	11100	1.95							
	3.6	270	382	11300	2.2	FA	57R37	DR	63S4	38	410	
	4.2	230	330	11500	2.6	FAF	57R37	DR	63S4	44	410	
	4.6	210	298	11500	2.8	F	57R37	DR	63S4	39	410	
	5.3	185	262	11500	3.2	FF	57R37	DR	63S4	45	410	
	2.5	385	543	6100	1.05	FA	47R17	DR	63S4	24	410	
	2.9	330	475	6740	1.20	FAF	47R17	DR	63S4	26	410	
	3.3	290	419	7150	1.40	F	47R17	DR	63S4	25	410	
						FF	47R17	DR	63S4	28	410	
	2.6	380	524	6190	1.05							
2.8	350	489	6530	1.15	FA	47R17	DR	63S4	23	410		
3.2	300	427	7020	1.30	FAF	47R17	DR	63S4	26	410		
3.6	265	381	7310	1.50	F	47R17	DR	63S4	24	410		
4.1	235	334	7550	1.70	FF	47R17	DR	63S4	27	410		
4.7	205	295	7740	1.95								
5.4	172	253	7910	2.3								
4.3	215	322	3990	0.90	FA	37R17	DR	63S4	19	410		
5.0	192	278	4400	1.05	FAF	37R17	DR	63S4	20	410		
5.7	162	242	4750	1.25	F	37R17	DR	63S4	19	410		
6.2	156	221	4820	1.30	FF	37R17	DR	63S4	21	410		
4.2	235	326	3710	0.85								
4.8	200	285	4250	1.00	FA	37R17	DR	63S4	19	410		
5.5	177	250	4590	1.15	FAF	37R17	DR	63S4	20	410		
6.3	156	219	4820	1.30	F	37R17	DR	63S4	19	410		
7.4	132	186	5040	1.50	FF	37R17	DR	63S4	21	410		
8.3	118	167	5140	1.70								
6.2	155	221	4500	0.85	FA	27R17	DR	63S4	13	410		
8.0	119	172	4500	1.10	FAF	27R17	DR	63S4	14	410		
9.0	104	153	4500	1.25	F	27R17	DR	63S4	13	410		
11	87	130	4500	1.50	FF	27R17	DR	63S4	14	410		
6.5	150	211	4500	0.85								
7.4	131	186	4500	1.00	FA	27R17	DR	63S4	13	410		
9.7	102	142	4500	1.25	FAF	27R17	DR	63S4	13	410		
11	88	124	4500	1.45	F	27R17	DR	63S4	13	410		
13	77	109	4500	1.70	FF	27R17	DR	63S4	14	410		
14	67	96	4500	1.95								
3.9	290	228.99	13000	2.8	FA	67	DR	63M6	32	377		
4.6	245	195.39	13000	3.3	FAF	67	DR	63M6	38	376		
5.3	215	170.85	13000	3.8	F	67	DR	63M6	35	375		
5.6	205	162.31	13000	4.0	FF	67	DR	63M6	41	376		
6.3	181	142.40	13000	4.5								
4.5	250	199.70	11400	2.4	FA	57	DR	63M6	28	372		
4.9	230	183.60	11500	2.6	FAF	57	DR	63M6	34	371		
5.7	200	157.09	11500	3.0	F	57	DR	63M6	28	370		
6.6	173	136.16	11500	3.5	FF	57	DR	63M6	35	371		
7.1	162	127.27	11500	3.7								
6.9	166	199.70	11500	3.6	FA	57	DR	63S4	28	372		
7.5	152	183.60	11500	3.9	FAF	57	DR	63S4	34	371		
8.8	130	157.09	11500	4.6	F	57	DR	63S4	28	370		
10	113	136.16	11500	5.3	FF	57	DR	63S4	35	371		
4.7	240	190.76	7510	1.65								
5.1	220	175.38	7640	1.80								
6.0	191	150.06	7820	2.1	FA	47	DR	63M6	21	367		
6.9	166	130.07	7940	2.4	FAF	47	DR	63M6	24	366		
7.4	155	121.57	7990	2.6	F	47	DR	63M6	22	365		
8.6	134	105.09	8060	3.0	FF	47	DR	63M6	25	366		
10	114	89.29	8130	3.5								
11	102	79.72	8160	3.9								
7.2	158	190.76	7970	2.5	FA	47	DR	63S4	21	367		
7.9	146	175.38	8020	2.8	FAF	47	DR	63S4	24	366		
9.2	125	150.06	8100	3.2	F	47	DR	63S4	22	365		
11	108	130.07	8150	3.7	FF	47	DR	63S4	25	366		
7.0	164	128.51	4740	1.20	FA	37	DR	63M6	16	362		
7.6	150	117.88	4880	1.35	FAF	37	DR	63M6	18	361		
9.0	128	100.36	5070	1.55	F	37	DR	63M6	16	360		
10	110	86.53	5190	1.80	FF	37	DR	63M6	18	361		
11	103	80.65	5240	1.95								



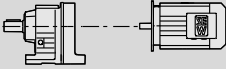

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						FA	FAF	DR	63S4		
0.12	11	107	128.51	5220	1.85						
	12	98	117.88	5270	2.0	FA	37	DR	63S4	16	362
	14	83	100.36	5340	2.4	FAF	37	DR	63S4	18	361
	16	72	86.53	5400	2.8	F	37	DR	63S4	16	360
	17	67	80.65	5410	3.0	FF	37	DR	63S4	18	361
	8.2	140	109.90	4500	0.95	FA	27	DR	63M6	9.9	358
	9.5	121	94.76	4500	1.10	FAF	27	DR	63M6	11	357
	10	112	88.32	4500	1.15	F	27	DR	63M6	10	356
	12	98	77.21	4500	1.30	FF	27	DR	63M6	11	357
	9.8	117	140.74	4500	1.10						
	11	107	129.09	4500	1.20						
	13	91	109.90	4500	1.40						
	15	79	94.76	4500	1.65						
	16	73	88.32	4500	1.75						
	18	64	77.21	4500	2.0	FA	27	DR	63S4	9.9	358
	19	60	72.37	4500	2.2	FAF	27	DR	63S4	11	357
	22	53	63.86	4500	2.4	F	27	DR	63S4	10	356
	24	47	56.62	4500	2.8	FF	27	DR	63S4	11	357
	28	42	50.19	4500	3.1						
	30	39	46.78	4500	3.4						
	34	34	40.89	4500	3.8						
	36	32	38.33	4430	4.1						
	41	28	33.83	4270	4.6						
	47	24	29.56	4100	5.3						
	51	23	27.18	4000	5.8						
	59	19	23.25	3820	6.7						
	68	17	20.15	3650	7.8						
	73	16	18.84	3580	8.3						
	85	14	16.28	3420	9.6						
	100	12	13.84	3250	11						
	112	10	12.35	3140	13	FA	27	DR	63S4	9.6	358
	131	8.8	10.55	2990	15	FAF	27	DR	63S4	10	357
	140	8.2	9.88	2920	16	F	27	DR	63S4	10	356
147	7.8	9.40	2870	17	FF	27	DR	63S4	11	357	
170	6.7	8.13	2740	18							
200	5.7	6.91	2600	20							
224	5.1	6.17	2510	21							
262	4.4	5.27	2390	23							
280	4.1	4.93	2340	23							
332	3.5	4.16	2210	25							
0.18	0.10	13600	12912	87200	0.90						
	0.11	12100	11656	90000	1.00	FA	127R77	DR	63M4	425	410
	0.13	10700	10191	90000	1.10	FAF	127R77	DR	63M4	465	410
	0.15	8940	8831	90000	1.35	F	127R77	DR	63M4	460	410
	0.17	7740	7643	90000	1.55	FF	127R77	DR	63M4	510	410
	0.20	7130	6715	90000	1.70						
	0.15	8440	8548	47700	0.90						
	0.17	8130	7674	48600	0.95						
	0.20	7070	6767	51400	1.10	FA	107R77	DR	63M4	275	410
	0.22	6080	5954	53800	1.25	FAF	107R77	DR	63M4	295	410
	0.25	5290	5223	55700	1.45	F	107R77	DR	63M4	290	410
	0.29	4850	4567	56600	1.60	FF	107R77	DR	63M4	320	410
	0.37	3670	3521	59100	2.1						
	0.43	3250	3037	59900	2.4	FA	107R77	DR	63M4	275	410
	0.48	2950	2756	60500	2.6	FAF	107R77	DR	63M4	295	410
	0.56	2540	2369	61200	3.0	F	107R77	DR	63M4	290	410
	0.64	2210	2068	61800	3.5	FF	107R77	DR	63M4	315	410
	0.30	4800	4333	22800	0.90	FA	97R57	DR	63M4	185	410
						FAF	97R57	DR	63M4	205	410
						F	97R57	DR	63M4	190	410
						FF	97R57	DR	63M4	225	410

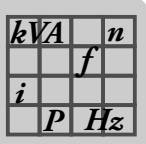
$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

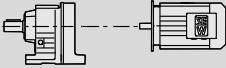

**F..DRE/DRS**  
F..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.18</b>	0.34	4420	3906	29500	0.95				
	0.39	3800	3352	31300	1.15				
	0.45	3210	2907	32800	1.35				
	0.52	2890	2553	33600	1.50	FA 97R57	DR 63M4	180	410
	0.59	2540	2245	34300	1.70	FAF 97R57	DR 63M4	205	410
	0.67	2210	1970	35000	1.95	F 97R57	DR 63M4	190	410
	0.77	1950	1722	35500	2.2	FF 97R57	DR 63M4	225	410
	0.86	1730	1527	35900	2.5				
	0.99	1420	1327	36400	3.0				
	1.1	1330	1171	36500	3.2				
	0.51	2920	2576	22300	1.00				
	0.60	2490	2199	24800	1.20				
	0.68	2160	1930	25900	1.40				
	0.77	1930	1709	26600	1.55	FA 87R57	DR 63M4	115	410
	0.88	1690	1493	27300	1.75	FAF 87R57	DR 63M4	130	410
	1.0	1390	1300	28100	2.1	F 87R57	DR 63M4	125	410
	1.2	1250	1148	28400	2.4	FF 87R57	DR 63M4	140	410
	1.3	1080	1010	28800	2.8				
	1.5	970	887	29000	3.1				
	1.7	830	780	29300	3.6				
0.86	1770	1544	13500	0.85					
0.98	1550	1354	15300	0.95					
1.1	1380	1200	16500	1.10	FA 77R37	DR 63M4	65	410	
1.2	1210	1053	17400	1.25	FAF 77R37	DR 63M4	72	410	
1.4	1030	910	18200	1.45	F 77R37	DR 63M4	69	410	
1.6	880	810	18700	1.70	FF 77R37	DR 63M4	80	410	
1.9	780	710	19000	1.90					
2.2	690	615	19300	2.2					
1.5	940	858	8660	0.85					
1.8	820	755	10200	1.00	FA 67R37	DR 63M4	43	410	
2.1	700	641	11200	1.15	FAF 67R37	DR 63M4	49	410	
2.3	645	572	11600	1.25	F 67R37	DR 63M4	46	410	
2.6	555	509	12100	1.45	FF 67R37	DR 63M4	52	410	
3.0	480	437	12500	1.70					
3.4	430	384	12700	1.90					
2.6	575	500	12000	1.40					
2.9	525	454	12300	1.55					
3.4	450	392	12600	1.80	FA 67R37	DR 63M4	42	410	
4.0	380	333	12900	2.2	FAF 67R37	DR 63M4	48	410	
4.4	335	297	13000	2.4	F 67R37	DR 63M4	45	410	
5.1	295	261	13000	2.8	FF 67R37	DR 63M4	51	410	
5.6	260	238	13000	3.1					
6.6	215	200	13000	3.7					
2.4	635	558	7570	0.95	FA 57R37	DR 63M4	39	410	
2.6	570	506	9420	1.05	FAF 57R37	DR 63M4	45	410	
2.9	495	452	9930	1.20	F 57R37	DR 63M4	39	410	
3.4	425	386	10400	1.40	FF 57R37	DR 63M4	46	410	
3.9	370	338	10700	1.60					
3.1	500	426	9910	1.20					
3.5	445	382	10300	1.35	FA 57R37	DR 63M4	38	410	
4.0	380	330	10700	1.55	FAF 57R37	DR 63M4	44	410	
4.4	340	298	10900	1.75	F 57R37	DR 63M4	39	410	
5.0	300	262	11100	2.00	FF 57R37	DR 63M4	45	410	
5.8	255	226	11400	2.3					
6.6	220	200	11500	2.7					
3.6	410	370	5210	0.95	FA 47R17	DR 63M4	24	410	
4.1	375	324	6250	1.05	FAF 47R17	DR 63M4	26	410	
4.6	325	288	6810	1.20	F 47R17	DR 63M4	25	410	
5.3	275	249	7250	1.45	FF 47R17	DR 63M4	28	410	
4.0	385	334	6100	1.05					
4.5	335	295	6680	1.20	FA 47R17	DR 63M4	23	410	
5.2	285	253	7190	1.40	FAF 47R17	DR 63M4	26	410	
6.1	250	217	7430	1.55	F 47R17	DR 63M4	24	410	
7.0	220	190	7650	1.80	FF 47R17	DR 63M4	27	410	
7.4	205	178	7740	1.95					
7.1	215	186	4060	0.95	FA 37R17	DR 63M4	19	410	
7.9	194	167	4380	1.05	FAF 37R17	DR 63M4	20	410	
9.1	171	145	4660	1.15	F 37R17	DR 63M4	19	410	
10	151	129	4870	1.30	FF 37R17	DR 63M4	21	410	



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						FA	DR	63M4	63L6		
0.18	9.3	166	142	4500	0.80	FA	27R17	DR	63M4	13	410
	11	144	124	4500	0.90	FAF	27R17	DR	63M4	13	410
	12	126	109	4500	1.05	F	27R17	DR	63M4	13	410
	14	110	96	4500	1.20	FF	27R17	DR	63M4	14	410
	3.1	555	281.71	19600	2.7	FA	77	DR	63L6	57	382
	3.3	515	262.93	19700	2.9	FAF	77	DR	63L6	63	381
	3.8	445	225.79	19800	3.4	F	77	DR	63L6	60	380
						FF	77	DR	63L6	71	381
	3.8	450	228.99	12600	1.80	FA	67	DR	63L6	33	377
	4.4	385	195.39	12900	2.1	FAF	67	DR	63L6	39	376
5.1	335	170.85	13000	2.4	F	67	DR	63L6	36	375	
					FF	67	DR	63L6	42	376	
5.8	295	228.99	13000	2.8	FA	67	DR	63M4	32	377	
6.8	250	195.39	13000	3.2	FAF	67	DR	63M4	38	376	
7.7	220	170.85	13000	3.7	F	67	DR	63M4	35	375	
					FF	67	DR	63M4	41	376	
4.4	390	199.70	10600	1.50							
4.7	360	183.60	10800	1.65	FA	57	DR	63L6	29	372	
5.5	310	157.09	11100	1.95	FAF	57	DR	63L6	34	371	
6.4	265	136.16	11300	2.2	F	57	DR	63L6	29	370	
6.8	250	127.27	11400	2.4	FF	57	DR	63L6	35	371	
7.9	215	110.01	11500	2.8							
6.6	260	199.70	11300	2.3	FA	57	DR	63M4	28	372	
7.2	235	183.60	11500	2.5	FAF	57	DR	63M4	34	371	
8.4	200	157.09	11500	2.9	F	57	DR	63M4	28	370	
9.7	177	136.16	11500	3.4	FF	57	DR	63M4	35	371	
10	166	127.27	11500	3.6							
4.6	375	190.76	6240	1.05	FA	47	DR	63L6	22	367	
5.0	345	175.38	6600	1.15	FAF	47	DR	63L6	24	366	
5.8	295	150.06	7090	1.35	F	47	DR	63L6	22	365	
6.7	255	130.07	7410	1.55	FF	47	DR	63L6	25	366	
7.2	240	121.57	7530	1.65							
6.9	245	190.76	7470	1.60	FA	47	DR	63M4	21	367	
7.5	225	175.38	7600	1.75	FAF	47	DR	63M4	24	366	
8.8	195	150.06	7800	2.0	F	47	DR	63M4	22	365	
10	169	130.07	7920	2.4	FF	47	DR	63M4	25	366	
11	158	121.57	7970	2.5							
7.4	230	117.88	3750	0.85	FA	37	DR	63L6	17	362	
8.7	198	100.36	4320	1.00	FAF	37	DR	63L6	18	361	
10	171	86.53	4660	1.15	F	37	DR	63L6	17	360	
11	159	80.65	4790	1.25	FF	37	DR	63L6	19	361	
12	139	70.50	4970	1.45							
10	167	128.51	4700	1.20							
11	154	117.88	4840	1.30	FA	37	DR	63M4	16	362	
13	131	100.36	5040	1.55	FAF	37	DR	63M4	18	361	
15	113	86.53	5180	1.75	F	37	DR	63M4	16	360	
16	105	80.65	5230	1.90	FF	37	DR	63M4	18	361	
19	92	70.50	5300	2.2							
20	86	66.09	5330	2.3							
23	76	58.32	5380	2.6							
12	143	109.90	4500	0.90							
14	123	94.76	4500	1.05	FA	27	DR	63M4	9.9	358	
15	115	88.32	4500	1.15	FAF	27	DR	63M4	11	357	
17	100	77.21	4500	1.30	F	27	DR	63M4	10	356	
18	94	72.37	4500	1.40	FF	27	DR	63M4	11	357	
21	83	63.86	4500	1.55							
23	74	56.62	4500	1.75							
26	65	50.19	4500	2.00							
28	61	46.78	4500	2.1							
32	53	40.89	4410	2.4							
34	50	38.33	4340	2.6							
39	44	33.83	4200	3.0							


**F..DRE/DRS**  
**F..DRE/DRS [kW]**

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]				
<b>0.18</b>	45	38	29.56	4040	3.4						
	49	35	27.18	3950	3.7						
	57	30	23.25	3780	4.3						
	65	26	20.15	3630	5.0						
	70	24	18.84	3560	5.3						
	81	21	16.28	3410	6.1						
	95	18	13.84	3240	7.2						
	107	16	12.35	3140	8.1	FA 27	DR 63M4	9.6	358		
	125	14	10.55	2990	9.5	FAF 27	DR 63M4	10	357		
	134	13	9.88	2930	10	F 27	DR 63M4	10	356		
	140	12	9.40	2870	11	FF 27	DR 63M4	11	357		
	162	11	8.13	2750	12						
	191	9.0	6.91	2610	13						
	214	8.0	6.17	2520	14						
	251	6.9	5.27	2400	14						
	268	6.4	4.93	2350	15						
	318	5.4	4.16	2230	16						
	<b>0.25</b>	335	5.1	8.13	2190	24					
		394	4.4	6.91	2080	26	FA 27	DR 63S2	9.6	358	
		441	3.9	6.17	2000	28	FAF 27	DR 63S2	10	357	
516		3.3	5.27	1910	30	F 27	DR 63S2	10	356		
551		3.1	4.93	1870	31	FF 27	DR 63S2	11	357		
655		2.6	4.16	1770	33						
<b>0.25</b>		0.15	13300	8831	87900	0.90					
		0.17	11500	7643	90000	1.05	FA 127R77	DR 63L4	425	410	
		0.19	10400	6715	90000	1.15	FAF 127R77	DR 63L4	465	410	
		0.22	9230	5925	90000	1.30	F 127R77	DR 63L4	465	410	
		0.25	7940	5153	90000	1.50	FF 127R77	DR 63L4	510	410	
		0.29	6890	4533	90000	1.75					
		<b>0.25</b>	0.22	9050	5954	46000	0.85	FA 107R77	DR 63L4	275	410
			0.25	7890	5223	49300	0.95	FAF 107R77	DR 63L4	295	410
			0.28	7120	4567	51300	1.10	F 107R77	DR 63L4	290	410
			0.37	5430	3521	55300	1.40	FF 107R77	DR 63L4	320	410
		<b>0.25</b>	0.43	4780	3037	56800	1.60				
			0.47	4340	2756	57700	1.75	FA 107R77	DR 63L4	275	410
			0.55	3730	2369	59000	2.1	FAF 107R77	DR 63L4	295	410
	0.63		3250	2068	59900	2.4	F 107R77	DR 63L4	290	410	
	0.81		2490	1597	61300	3.1	FF 107R77	DR 63L4	320	410	
	<b>0.25</b>	0.93	2150	1401	61900	3.6					
		0.45	4670	2907	27500	0.90					
		0.51	4180	2553	30300	1.05					
		0.58	3670	2245	31600	1.15	FA 97R57	DR 63L4	185	410	
0.66		3200	1970	32800	1.35	FAF 97R57	DR 63L4	205	410		
0.75		2820	1722	33700	1.50	F 97R57	DR 63L4	190	410		
0.85		2500	1527	34400	1.70	FF 97R57	DR 63L4	225	410		
0.98		2090	1327	35200	2.0						
1.1		1910	1171	35500	2.2						
1.3		1670	1022	36000	2.6						
<b>0.25</b>	0.67	3130	1930	13500	0.95						
	0.76	2790	1709	23700	1.05						
	0.87	2440	1493	25000	1.25	FA 87R57	DR 63L4	120	410		
	1.0	2050	1300	26300	1.45	FAF 87R57	DR 63L4	130	410		
	1.1	1830	1148	26900	1.65	F 87R57	DR 63L4	125	410		
	1.3	1590	1010	27600	1.90	FF 87R57	DR 63L4	140	410		
	1.5	1410	887	28000	2.1						
	1.7	1230	780	28500	2.4						
	1.9	1040	674	28900	2.9						
<b>0.25</b>	1.2	1740	1053	13900	0.85						
	1.4	1490	910	15700	1.00						
	1.6	1290	810	16900	1.15	FA 77R37	DR 63L4	66	410		
	1.8	1130	710	17700	1.30	FAF 77R37	DR 63L4	72	410		
	2.1	1000	615	18300	1.50	F 77R37	DR 63L4	70	410		
	2.4	870	538	18700	1.70	FF 77R37	DR 63L4	80	410		
	2.7	775	480	19000	1.95						
	3.2	660	413	19400	2.3						
	2.3	930	572	9150	0.90	FA 67R37	DR 63L4	44	410		
	2.6	810	509	10400	1.00	FAF 67R37	DR 63L4	50	410		
3.0	700	437	11200	1.15	F 67R37	DR 63L4	46	410			
					FF 67R37	DR 63L4	53	410			

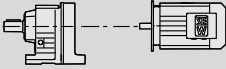



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
												FA
0.25	2.6	830	500	10200	1.00							
	2.9	755	454	10800	1.10							
	3.3	650	392	11600	1.25	FA	67R37	DR	63L4	42	410	
	3.9	550	333	12200	1.50	FAF	67R37	DR	63L4	49	410	
	4.4	485	297	12500	1.70	F	67R37	DR	63L4	45	410	
	5.0	425	261	12700	1.90	FF	67R37	DR	63L4	51	410	
	5.5	385	238	12900	2.1							
	3.4	620	386	8830	0.95	FA	57R37	DR	63L4	40	410	
	3.8	540	338	9640	1.10	FAF	57R37	DR	63L4	45	410	
	5.1	405	255	10500	1.45	F	57R37	DR	63L4	40	410	
					FF	57R37	DR	63L4	46	410		
3.4	635	382	7390	0.95								
3.9	550	330	9570	1.10	FA	57R37	DR	63L4	39	410		
4.4	495	298	9950	1.20	FAF	57R37	DR	63L4	45	410		
5.0	435	262	10300	1.35	F	57R37	DR	63L4	39	410		
5.8	370	226	10700	1.60	FF	57R37	DR	63L4	46	410		
6.5	320	200	11000	1.85								
7.6	275	170	11300	2.2								
5.2	400	249	5880	1.00	FA	47R17	DR	63L4	24	410		
6.0	355	218	6470	1.10	FAF	47R17	DR	63L4	27	410		
6.7	315	193	6920	1.25	F	47R17	DR	63L4	25	410		
7.4	285	175	7180	1.40	FF	47R17	DR	63L4	28	410		
5.1	410	253	4980	0.95								
6.0	365	217	6380	1.10	FA	47R17	DR	63L4	24	410		
6.8	315	190	6900	1.25	FAF	47R17	DR	63L4	26	410		
7.3	295	178	7090	1.35	F	47R17	DR	63L4	25	410		
8.7	245	149	7480	1.60	FF	47R17	DR	63L4	28	410		
9.9	215	131	7670	1.85								
8.9	245	145	3420	0.80	FA	37R17	DR	63L4	20	410		
10	215	129	4040	0.90	FAF	37R17	DR	63L4	21	410		
11	198	118	4320	1.00	F	37R17	DR	63L4	20	410		
13	164	98	4740	1.20	FF	37R17	DR	63L4	22	410		
15	144	87	4940	1.40								
3.2	750	281.71	19100	2.0	FA	77	DRS	71S6	58	382		
3.4	700	262.93	19300	2.1	FAF	77	DRS	71S6	65	381		
4.0	600	225.79	19500	2.5	F	77	DRS	71S6	62	380		
4.5	525	198.31	19600	2.8	FF	77	DRS	71S6	73	381		
4.8	500	188.40	19700	3.0								
3.9	610	228.99	11800	1.35	FA	67	DRS	71S6	34	377		
4.6	520	195.39	12300	1.55	FAF	67	DRS	71S6	41	376		
5.2	455	170.85	12600	1.80	F	67	DRS	71S6	37	375		
5.5	430	162.31	12700	1.90	FF	67	DRS	71S6	43	376		
6.3	375	142.40	12900	2.2								
5.7	420	228.99	12700	1.95	FA	67	DR	63L4	33	377		
6.6	355	195.39	13000	2.3	FAF	67	DR	63L4	39	376		
7.6	310	170.85	13000	2.6	F	67	DR	63L4	36	375		
8.0	295	162.31	13000	2.8	FF	67	DR	63L4	42	376		
9.1	260	142.40	13000	3.1								
4.5	530	199.70	9700	1.15	FA	57	DRS	71S6	31	372		
4.9	485	183.60	9990	1.25	FAF	57	DRS	71S6	36	371		
5.7	415	157.09	10500	1.45	F	57	DRS	71S6	31	370		
6.6	360	136.16	10800	1.65	FF	57	DRS	71S6	37	371		
7.0	335	127.27	10900	1.75								
8.1	290	110.01	11200	2.0								
6.5	365	199.70	10800	1.65								
7.1	335	183.60	10900	1.80	FA	57	DR	63L4	29	372		
8.3	285	157.09	11200	2.1	FAF	57	DR	63L4	34	371		
9.6	250	136.16	11400	2.4	F	57	DR	63L4	29	370		
10	230	127.27	11500	2.6	FF	57	DR	63L4	35	371		
12	200	110.01	11500	3.0								
6.0	400	150.06	5920	1.00	FA	47	DRS	71S6	24	367		
6.9	345	130.07	6590	1.15	FAF	47	DRS	71S6	26	366		
7.4	320	121.57	6830	1.25	F	47	DRS	71S6	24	365		
8.5	280	105.09	7230	1.45	FF	47	DRS	71S6	27	366		

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## F..DRE/DRS

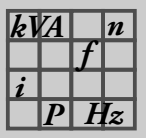
### F..DRE/DRS [kW]

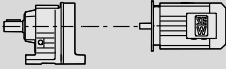

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>0.25</b>	6.8	350	190.76	6550	1.15						
	7.4	320	175.38	6850	1.25	FA	47	DR	63L4	22	367
	8.7	275	150.06	7270	1.45	FAF	47	DR	63L4	24	366
	10.0	235	130.07	7540	1.65	F	47	DR	63L4	22	365
	11	220	121.57	7640	1.80	FF	47	DR	63L4	25	366
	12	193	105.09	7810	2.1						
	15	164	89.29	7950	2.4						
	10	235	128.51	3690	0.85						
	11	215	117.88	4040	0.90						
	13	184	100.36	4500	1.10						
	15	159	86.53	4790	1.25						
	16	148	80.65	4900	1.35						
	18	130	70.50	5060	1.55	FA	37	DR	63L4	17	362
	20	121	66.09	5120	1.65	FAF	37	DR	63L4	18	361
	22	107	58.32	5210	1.85	F	37	DR	63L4	17	360
	24	100	54.54	5260	2.0	FF	37	DR	63L4	19	361
	25	95	51.70	5280	2.1						
	28	86	47.02	5330	2.3						
	30	80	43.83	5360	2.5						
	34	70	38.31	5400	2.8						
	36	66	35.91	5420	3.0						
	41	58	31.69	5440	3.4						
	17	142	77.21	4500	0.90						
	18	133	72.37	4500	1.00						
	20	117	63.86	4500	1.10	FA	27	DR	63L4	11	358
	23	104	56.62	4500	1.25	FAF	27	DR	63L4	11	357
	26	92	50.19	4440	1.40	F	27	DR	63L4	11	356
	28	86	46.78	4370	1.50	FF	27	DR	63L4	12	357
	32	75	40.89	4240	1.75						
	34	70	38.33	4180	1.85						
	38	62	33.83	4060	2.1						
	44	54	29.56	3920	2.4						
	48	50	27.18	3840	2.6						
	56	43	23.25	3690	3.0						
	64	37	20.15	3550	3.5						
	69	35	18.84	3480	3.8						
	80	30	16.28	3350	4.4						
	94	25	13.84	3200	5.1	FA	27	DR	63L4	10	358
	105	23	12.35	3090	5.7	FAF	27	DR	63L4	11	357
	123	19	10.55	2950	6.7	F	27	DR	63L4	11	356
	132	18	9.88	2900	7.2	FF	27	DR	63L4	12	357
	138	17	9.40	2840	7.5						
	160	15	8.13	2720	8.3						
	188	13	6.91	2590	9.0						
	211	11	6.17	2500	9.6						
	247	9.7	5.27	2380	10						
	264	9.1	4.93	2340	11						
	313	7.6	4.16	2220	11						
	327	7.3	8.13	2180	17						
	385	6.2	6.91	2080	18	FA	27	DR	63M2	9.6	358
	431	5.5	6.17	2000	20	FAF	27	DR	63M2	10	357
	505	4.7	5.27	1910	21	F	27	DR	63M2	10	356
	539	4.4	4.93	1870	22	FF	27	DR	63M2	11	357
	640	3.7	4.16	1770	24						
<b>0.37</b>	0.21	14900	6715	84600	0.80						
	0.23	13200	5925	88100	0.90	FA	127R77	DRS	71S4	430	410
	0.27	11400	5153	90000	1.05	FAF	127R77	DRS	71S4	465	410
	0.30	9930	4533	90000	1.20	F	127R77	DRS	71S4	465	410
	0.35	8690	3926	90000	1.40	FF	127R77	DRS	71S4	510	410
	0.40	7560	3454	90000	1.60						
	0.46	6610	3031	90000	1.80						
	0.45	6850	3037	52000	1.10	FA	107R77	DRS	71S4	275	410
	0.50	6210	2756	53500	1.25	FAF	107R77	DRS	71S4	295	410
	0.58	5340	2369	55500	1.45	F	107R77	DRS	71S4	290	410
	0.67	4660	2068	57000	1.65	FF	107R77	DRS	71S4	320	410
	0.86	3570	1597	59300	2.2						



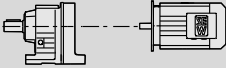



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]			
												FA	FAF
0.37	0.70	4540	1970	29200	0.95								
	0.80	3990	1722	30800	1.10								
	0.90	3540	1527	32000	1.20								
	1.0	2990	1327	33300	1.45								
	1.2	2710	1171	33900	1.60								
	1.4	2370	1022	34700	1.80								
	1.5	2000	898	35400	2.1								
	1.1	2930	1300	22000	1.00								
	1.2	2610	1148	24400	1.15								
	1.4	2280	1010	25600	1.30								
	1.6	2010	887	26400	1.50	FA	87R57	DRS	71S4		120	410	
	1.8	1760	780	27100	1.70	FAF	87R57	DRS	71S4		130	410	
	2.0	1500	674	27800	2.00	F	87R57	DRS	71S4		125	410	
	2.3	1370	609	28100	2.2	FF	87R57	DRS	71S4		140	410	
2.7	1150	515	28600	2.6									
3.0	1020	452	28900	2.9									
1.7	1840	810	11300	0.80									
1.9	1620	710	14900	0.95									
2.2	1420	615	16200	1.05	FA	77R37	DRS	71S4		68	410		
2.6	1240	538	17200	1.20	FAF	77R37	DRS	71S4		74	410		
2.9	1100	480	17900	1.35	F	77R37	DRS	71S4		72	410		
3.4	940	413	18500	1.60	FF	77R37	DRS	71S4		82	410		
3.8	840	367	18900	1.80									
4.3	750	323	19100	2.0									
3.6	880	384	9670	0.95	FA	67R37	DRS	71S4		46	410		
4.1	785	338	10600	1.05	FAF	67R37	DRS	71S4		52	410		
4.5	700	305	11200	1.15	F	67R37	DRS	71S4		48	410		
5.4	590	257	11900	1.40	FF	67R37	DRS	71S4		55	410		
6.0	520	231	12300	1.55									
5.4	580	255	9330	1.05	FA	57R37	DRS	71S4		42	410		
6.9	455	201	10200	1.30	FAF	57R37	DRS	71S4		47	410		
7.6	410	181	10500	1.45	F	57R37	DRS	71S4		42	410		
					FF	57R37	DRS	71S4		48	410		
5.3	615	262	9070	0.95	FA	57R37	DRS	71S4		41	410		
6.1	525	226	9740	1.15	FAF	57R37	DRS	71S4		47	410		
6.9	460	200	10200	1.30	F	57R37	DRS	71S4		41	410		
8.1	390	170	10600	1.50	FF	57R37	DRS	71S4		48	410		
9.0	345	152	10900	1.70									
10	305	134	11100	1.95									
7.9	400	175	5860	1.00	FA	47R17	DRS	71S4		26	410		
9.4	340	147	6660	1.15	FAF	47R17	DRS	71S4		29	410		
11	300	130	7050	1.35	F	47R17	DRS	71S4		27	410		
					FF	47R17	DRS	71S4		30	410		
3.3	1050	270.68	28900	2.8	FA	87	DRS	71M6		99	387		
3.5	990	255.37	29000	3.0	FAF	87	DRS	71M6		110	386		
4.0	890	228.93	29200	3.4	F	87	DRS	71M6		105	385		
					FF	87	DRS	71M6		120	386		
4.0	880	225.79	18700	1.70	FA	77	DRS	71M6		60	382		
4.6	770	198.31	19100	1.95	FAF	77	DRS	71M6		66	381		
4.8	735	188.40	19200	2.0	F	77	DRS	71M6		64	380		
5.4	645	166.47	19400	2.3	FF	77	DRS	71M6		74	381		
6.4	555	142.27	19600	2.7									
4.9	720	281.71	19200	2.1	FA	77	DRS	71S4		58	382		
5.2	670	262.93	19300	2.2	FAF	77	DRS	71S4		65	381		
6.1	575	225.79	19500	2.6	F	77	DRS	71S4		62	380		
7.0	505	198.31	19700	3.0	FF	77	DRS	71S4		73	381		
4.6	760	195.39	10800	1.05	FA	67	DRS	71M6		36	377		
5.3	665	170.85	11500	1.25	FAF	67	DRS	71M6		42	376		
5.6	630	162.31	11700	1.30	F	67	DRS	71M6		39	375		
6.4	555	142.40	12100	1.45	FF	67	DRS	71M6		45	376		
7.5	470	120.79	12500	1.75									
6.0	585	228.99	12000	1.40	FA	67	DRS	71S4		34	377		
7.1	500	195.39	12400	1.65	FAF	67	DRS	71S4		41	376		
8.1	435	170.85	12700	1.85	F	67	DRS	71S4		37	375		
8.5	415	162.31	12800	1.95	FF	67	DRS	71S4		43	376		
9.7	360	142.40	12900	2.2									
11	305	120.79	13000	2.6									


**F..DRE/DRS**  
**F..DRE/DRS [kW]**

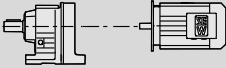

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	i	$F_{Ra}^{1)}$ [N]	SEW $f_B$					m [kg]	
<b>0.37</b>	5.8	610	157.09	9100	1.00	FA	57	DRS	71M6	32	372
	6.6	530	136.16	9700	1.15	FAF	57	DRS	71M6	37	371
	7.1	495	127.27	9940	1.20	F	57	DRS	71M6	32	370
	8.2	425	110.01	10400	1.40	FF	57	DRS	71M6	38	371
	6.9	510	199.70	9850	1.15						
	7.5	470	183.60	10100	1.30						
	8.8	400	157.09	10600	1.50	FA	57	DRS	71S4	31	372
	10	345	136.16	10900	1.70	FAF	57	DRS	71S4	36	371
	11	325	127.27	11000	1.85	F	57	DRS	71S4	31	370
	13	280	110.01	11200	2.1	FF	57	DRS	71S4	37	371
	15	235	93.47	11500	2.5						
	17	210	83.46	11500	2.8						
	9.2	380	150.06	6140	1.05						
	11	330	130.07	6740	1.20						
	13	265	105.09	7320	1.50	FA	47	DRS	71S4	24	367
	15	225	89.29	7600	1.75	FAF	47	DRS	71S4	26	366
	17	200	79.72	7750	1.95	F	47	DRS	71S4	24	365
	20	174	68.09	7900	2.3	FF	47	DRS	71S4	27	366
	21	167	65.36	7930	2.4						
	16	220	86.53	3960	0.90						
	17	205	80.65	4200	0.95						
	20	180	70.50	4550	1.10						
	21	169	66.09	4680	1.20						
	24	149	58.32	4880	1.35						
	25	140	54.54	4970	1.45	FA	37	DRS	71S4	19	362
	27	132	51.70	5030	1.50	FAF	37	DRS	71S4	20	361
	29	120	47.02	5120	1.65	F	37	DRS	71S4	19	360
	31	112	43.83	5180	1.80	FF	37	DRS	71S4	21	361
	36	98	38.31	5270	2.0						
	38	92	35.91	5300	2.2						
	44	81	31.69	5300	2.5						
	49	72	28.09	5140	2.8						
	58	61	23.88	4930	3.3						
	24	145	56.62	4080	0.90						
	28	128	50.19	4010	1.00	FA	27	DRS	71S4	13	358
	30	120	46.78	3970	1.10	FAF	27	DRS	71S4	13	357
	34	105	40.89	3880	1.25	F	27	DRS	71S4	13	356
	36	98	38.33	3840	1.35	FF	27	DRS	71S4	14	357
	41	87	33.83	3750	1.50						
	47	76	29.56	3650	1.70						
	51	70	27.18	3580	1.85						
	59	60	23.25	3460	2.2						
	68	52	20.15	3340	2.5						
	73	48	18.84	3290	2.7						
	85	42	16.28	3170	3.1						
	100	35	13.84	3040	3.7	FA	27	DRS	71S4	12	358
	112	32	12.35	2950	4.1	FAF	27	DRS	71S4	13	357
	131	27	10.55	2820	4.8	F	27	DRS	71S4	13	356
	140	25	9.88	2770	5.1	FF	27	DRS	71S4	14	357
	147	24	9.40	2710	5.4						
	170	21	8.13	2600	5.9						
	200	18	6.91	2490	6.4						
	224	16	6.17	2410	6.9						
	262	14	5.27	2300	7.4						
	280	13	4.93	2250	7.6						
	332	11	4.16	2140	8.2						
	326	11	8.13	2150	11						
	384	9.2	6.91	2050	12	FA	27	DR	63L2	10	358
	430	8.2	6.17	1980	13	FAF	27	DR	63L2	11	357
	503	7.0	5.27	1890	14	F	27	DR	63L2	11	356
	537	6.6	4.93	1850	15	FF	27	DR	63L2	12	357
	638	5.5	4.16	1750	16						
<b>0.55</b>	0.22	20100	6295	93100	0.90	FA	157R97	DRS	71M4	770	410
	0.26	16800	5404	103500	1.05	FAF	157R97	DRS	71M4	830	410
	0.50	8660	2780	119000	2.1	F	157R97	DRS	71M4	790	410
						FF	157R97	DRS	71M4	900	410



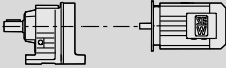

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						FA	FAF	F	FF		
0.55	0.57	7660	2427	120000	2.4	FA	157R97	DRS	71M4	760	410
	0.82	5440	1674	120000	3.3	FAF	157R97	DRS	71M4	820	410
	1.1	4200	1308	120000	4.3	F	157R97	DRS	71M4	790	410
	1.2	3680	1169	120000	4.9	FF	157R97	DRS	71M4	890	410
	0.35	13200	3926	88100	0.90	FA	127R77	DRS	71M4	430	410
	0.40	11500	3454	90000	1.05	FAF	127R77	DRS	71M4	465	410
	0.46	10100	3031	90000	1.20	F	127R77	DRS	71M4	465	410
						FF	127R77	DRS	71M4	510	410
	0.58	8120	2369	48600	0.95						
	0.67	7090	2068	51400	1.10						
	0.76	6090	1826	53800	1.25						
	0.86	5450	1597	55300	1.40	FA	107R77	DRS	71M4	275	410
	0.98	4750	1401	56900	1.60	FAF	107R77	DRS	71M4	300	410
	1.1	4140	1243	58100	1.85	F	107R77	DRS	71M4	295	410
	1.3	3710	1087	59000	2.1	FF	107R77	DRS	71M4	320	410
	1.4	3170	950	60100	2.4						
1.7	2750	834	60800	2.8							
2.2	2140	640	61900	3.6							
1.0	4550	1327	29100	0.95							
1.2	4080	1171	30500	1.05							
1.4	3570	1022	31900	1.20							
1.5	3050	898	33200	1.40							
1.8	2700	784	34000	1.60	FA	97R57	DRS	71M4	185	410	
2.0	2340	690	34700	1.85	FAF	97R57	DRS	71M4	210	410	
2.3	2070	605	35300	2.1	F	97R57	DRS	71M4	195	410	
2.6	1790	529	35800	2.4	FF	97R57	DRS	71M4	225	410	
3.0	1580	467	36100	2.7							
3.4	1360	406	36500	3.2							
3.8	1220	363	36700	3.5							
1.6	3050	887	17400	1.00							
1.8	2670	780	24200	1.10	FA	87R57	DRS	71M4	120	410	
2.0	2290	674	25500	1.30	FAF	87R57	DRS	71M4	135	410	
2.3	2080	609	26200	1.45	F	87R57	DRS	71M4	125	410	
2.7	1760	515	27100	1.70	FF	87R57	DRS	71M4	140	410	
3.0	1550	452	27700	1.95							
4.0	1160	345	28600	2.6							
2.9	1660	480	14500	0.90	FA	77R37	DRS	71M4	69	410	
3.4	1420	413	16200	1.05	FAF	77R37	DRS	71M4	76	410	
3.8	1270	367	17100	1.20	F	77R37	DRS	71M4	73	410	
4.3	1120	323	17800	1.35	FF	77R37	DRS	71M4	83	410	
5.4	890	257	9610	0.90	FA	67R37	DRS	71M4	47	410	
6.0	790	231	10500	1.05	FAF	67R37	DRS	71M4	53	410	
6.7	705	205	11200	1.15	F	67R37	DRS	71M4	50	410	
7.9	600	175	11900	1.35	FF	67R37	DRS	71M4	56	410	
3.4	1550	270.68	27700	1.95							
3.6	1460	255.37	27900	2.0	FA	87	DRS	80S6	100	387	
4.0	1310	228.93	28300	2.3	FAF	87	DRS	80S6	115	386	
4.6	1130	197.20	28700	2.6	F	87	DRS	80S6	105	385	
5.1	1030	179.97	28900	2.9	FF	87	DRS	80S6	120	386	
4.0	1290	225.79	17000	1.15	FA	77	DRS	80S6	62	382	
4.6	1130	198.31	17700	1.30	FAF	77	DRS	80S6	69	381	
4.9	1080	188.40	18000	1.40	F	77	DRS	80S6	66	380	
					FF	77	DRS	80S6	77	381	
5.5	950	166.47	18500	1.55	FA	77	DRS	80S6	62	382	
6.4	810	142.27	18900	1.85	FAF	77	DRS	80S6	69	381	
7.0	745	130.42	19100	2.0	F	77	DRS	80S6	66	380	
					FF	77	DRS	80S6	77	381	
6.1	850	225.79	18800	1.75							
7.0	750	198.31	19100	2.00							
7.3	715	188.40	19200	2.1							
8.3	630	166.47	19400	2.4	FA	77	DRS	71M4	60	382	
9.7	540	142.27	19600	2.8	FAF	77	DRS	71M4	66	381	
11	495	130.42	19700	3.0	F	77	DRS	71M4	64	380	
12	435	114.45	19800	3.4	FF	77	DRS	71M4	74	381	
13	410	108.46*	19800	3.6							
15	360	94.93	19900	4.2							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**F..DRE/DRS**  
F..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]	
<b>0.55</b>	7.1	740	195.39	10900	1.10			
	8.1	650	170.85	11600	1.25			
	8.5	615	162.31	11800	1.35			
	9.7	540	142.40	12200	1.50	FA 67	DRS 71M4	36 377
	11	455	120.79	12600	1.80	FAF 67	DRS 71M4	42 376
	13	415	109.04	12800	2.00	F 67	DRS 71M4	39 375
	14	365	95.94	12900	2.2	FF 67	DRS 71M4	45 376
	15	340	90.59	13000	2.4			
	17	300	79.76	13000	2.7			
	8.8	595	157.09	9220	1.00			
	10	515	136.16	9800	1.15			
	11	480	127.27	10000	1.25			
	13	415	110.01	10500	1.45	FA 57	DRS 71M4	32 372
	15	355	93.47	10800	1.70	FAF 57	DRS 71M4	37 371
	17	315	83.46	11000	1.90	F 57	DRS 71M4	32 370
	19	275	72.98	11300	2.2	FF 57	DRS 71M4	38 371
	20	255	68.22	11400	2.3			
	23	220	58.97	11500	2.7			
	13	395	105.09	5920	1.00			
15	335	89.29	6670	1.20				
17	300	79.72	7030	1.30	FA 47	DRS 71M4	25 367	
20	255	68.09	7390	1.55	FAF 47	DRS 71M4	27 366	
21	245	65.36	7470	1.60	F 47	DRS 71M4	25 365	
24	215	56.49	7690	1.85	FF 47	DRS 71M4	29 366	
29	183	48.00*	7860	2.2				
32	163	42.86	7950	2.4				
24	220	58.32	3950	0.90				
25	205	54.54	4180	0.95				
27	197	51.70	4340	1.00				
29	179	47.02	4570	1.10	FA 37	DRS 71M4	20 362	
31	167	43.83	4710	1.20	FAF 37	DRS 71M4	21 361	
36	146	38.31	4920	1.35	F 37	DRS 71M4	20 360	
38	137	35.91	5000	1.45	FF 37	DRS 71M4	22 361	
44	121	31.69	4980	1.65				
49	107	28.09	4860	1.85				
58	91	23.88	4680	2.2				
58	90	23.63	4670	2.2	FA 37	DRS 71M4	20 362	
67	78	20.57	4520	2.6	FAF 37	DRS 71M4	21 361	
72	73	19.27	4450	2.7	F 37	DRS 71M4	20 360	
81	65	17.03	4320	3.1	FF 37	DRS 71M4	22 361	
96	54	14.33	4130	3.7				
36	144	77.21	3410	0.90				
39	135	72.37	3390	0.95	FA 27	DRS 71M2	14 358	
44	119	63.86	3350	1.10	FAF 27	DRS 71M2	14 357	
50	106	56.62	3290	1.25	F 27	DRS 71M2	14 356	
56	94	50.19	3230	1.40	FF 27	DRS 71M2	15 357	
59	88	23.25	3200	1.45				
68	77	20.15	3120	1.70				
73	72	18.84	3080	1.80				
85	62	16.28	2990	2.1				
100	53	13.84	2890	2.5				
112	47	12.35	2810	2.8				
131	40	10.55	2710	3.2	FA 27	DRS 71M4	13 358	
140	38	9.88	2660	3.5	FAF 27	DRS 71M4	14 357	
147	36	9.40	2600	3.6	F 27	DRS 71M4	14 356	
170	31	8.13	2500	4.0	FF 27	DRS 71M4	15 357	
200	26	6.91	2400	4.3				
224	24	6.17	2330	4.6				
262	20	5.27	2230	5.0				
280	19	4.93	2190	5.1				
332	16	4.16	2090	5.5				
346	15	8.13	2070	8.1				
407	13	6.91	1970	8.8	FA 27	DRS 71M2	13 358	
456	12	6.17	1910	9.5	FAF 27	DRS 71M2	14 357	
533	9.8	5.27	1820	10	F 27	DRS 71M2	14 356	
570	9.2	4.93	1790	10	FF 27	DRS 71M2	15 357	
676	7.8	4.16	1700	11				

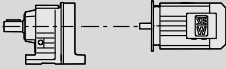



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>0.75</b>	<b>0.52</b>	11700	2780	114600	1.55	FA 157R97	DRE 80M4	770	410		
						FAF 157R97	DRE 80M4	830	410		
						F 157R97	DRE 80M4	790	410		
						FF 157R97	DRE 80M4	900	410		
<b>0.59</b>	10300	2427	116800	1.75	FA 157R97	DRE 80M4	770	410			
<b>0.86</b>	7310	1674	120000	2.5	FAF 157R97	DRE 80M4	830	410			
<b>1.1</b>	5640	1308	120000	3.2	F 157R97	DRE 80M4	790	410			
<b>1.2</b>	4980	1169	120000	3.6	FF 157R97	DRE 80M4	900	410			
<b>0.47</b>	13400	3031	87600	0.90	FA 127R77	DRE 80M4	435	410			
					FAF 127R77	DRE 80M4	470	410			
					F 127R77	DRE 80M4	470	410			
					FF 127R77	DRE 80M4	520	410			
<b>0.54</b>	12100	2672	90000	1.00	FA 127R77	DRE 80M4	435	410			
<b>0.61</b>	10600	2357	90000	1.15	FAF 127R77	DRE 80M4	470	410			
<b>0.70</b>	9150	2038	90000	1.30	F 127R77	DRE 80M4	470	410			
<b>0.80</b>	7960	1784	90000	1.50	FF 127R77	DRE 80M4	510	410			
<b>0.89</b>	7150	1606	90000	1.70							
<b>0.79</b>	8120	1826	48600	0.95							
<b>0.90</b>	7220	1597	51000	1.05							
<b>1.0</b>	6310	1401	53300	1.20	FA 107R77	DRE 80M4	280	410			
<b>1.2</b>	5530	1243	55100	1.40	FAF 107R77	DRE 80M4	305	410			
<b>1.3</b>	4920	1087	56500	1.55	F 107R77	DRE 80M4	300	410			
<b>1.5</b>	4220	950	58000	1.80	FF 107R77	DRE 80M4	325	410			
<b>1.7</b>	3680	834	59100	2.1							
<b>2.2</b>	2860	640	60600	2.7							
<b>3.3</b>	1940	436	62300	3.9							
<b>1.4</b>	4710	1022	26300	0.90							
<b>1.6</b>	4050	898	30600	1.05	FA 97R57	DRE 80M4	190	410			
<b>1.8</b>	3580	784	31900	1.20	FAF 97R57	DRE 80M4	215	410			
<b>2.1</b>	3110	690	33000	1.40	F 97R57	DRE 80M4	200	410			
<b>2.4</b>	2740	605	33900	1.55	FF 97R57	DRE 80M4	230	410			
<b>2.7</b>	2380	529	34600	1.80							
<b>3.1</b>	2100	467	35200	2.0							
<b>3.5</b>	1810	406	35700	2.4							
<b>4.0</b>	1620	363	36100	2.6							
<b>2.1</b>	3040	674	18000	1.00	FA 87R57	DRE 80M4	125	410			
<b>2.4</b>	2760	609	23800	1.10	FAF 87R57	DRE 80M4	140	410			
<b>2.8</b>	2330	515	25400	1.30	F 87R57	DRE 80M4	130	410			
<b>3.2</b>	2050	452	26300	1.45	FF 87R57	DRE 80M4	145	410			
<b>4.2</b>	1540	345	27700	1.95							
<b>3.9</b>	1680	367	14400	0.90	FA 77R37	DRE 80M4	74	410			
<b>4.4</b>	1480	323	15800	1.00	FAF 77R37	DRE 80M4	80	410			
<b>5.1</b>	1280	280	17000	1.15	F 77R37	DRE 80M4	78	410			
					FF 77R37	DRE 80M4	88	410			
<b>3.4</b>	2100	276.77	35200	2.0	FA 97	DRE 90L6	175	392			
<b>3.7</b>	1930	253.41	35500	2.2	FAF 97	DRE 90L6	195	391			
<b>4.2</b>	1700	223.88	35900	2.5	F 97	DRE 90L6	180	390			
					FF 97	DRE 90L6	215	391			
<b>3.5</b>	2060	270.68	26200	1.45	FA 87	DRE 90L6	110	387			
<b>3.7</b>	1940	255.37	26600	1.55	FAF 87	DRE 90L6	125	386			
<b>4.1</b>	1740	228.93	27200	1.70	F 87	DRE 90L6	115	385			
<b>4.8</b>	1500	197.20	27800	2.0	FF 87	DRE 90L6	130	386			
<b>5.2</b>	1370	179.97	28100	2.2	FA 87	DRE 90L6	110	387			
<b>5.9</b>	1210	159.61	28500	2.5	FAF 87	DRE 90L6	125	386			
					F 87	DRE 90L6	115	385			
					FF 87	DRE 90L6	130	386			
<b>5.3</b>	1350	270.68	28200	2.2	FA 87	DRE 80M4	105	387			
<b>5.6</b>	1270	255.37	28400	2.4	FAF 87	DRE 80M4	115	386			
<b>6.3</b>	1140	228.93	28700	2.6	F 87	DRE 80M4	110	385			
					FF 87	DRE 80M4	125	386			
<b>4.7</b>	1510	198.31	15700	1.00	FA 77	DRE 90L6	71	382			
<b>5.0</b>	1430	188.40	16100	1.05	FAF 77	DRE 90L6	78	381			
<b>5.6</b>	1260	166.47	17100	1.20	F 77	DRE 90L6	75	380			
<b>6.6</b>	1080	142.27	18000	1.40	FF 77	DRE 90L6	85	381			
<b>7.2</b>	990	130.42	18300	1.50	FA 77	DRE 90L6	71	382			
					FAF 77	DRE 90L6	78	381			
					F 77	DRE 90L6	75	380			
					FF 77	DRE 90L6	85	381			

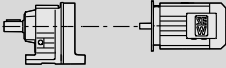

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## F..DRE/DRS

### F..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
0.75	6.4	1120	225.79	17800	1.35	FA	77	DRE	80M4	65	382
	7.2	980	198.31	18300	1.50	FAF	77	DRE	80M4	71	381
	7.6	940	188.40	18500	1.60	F	77	DRE	80M4	69	380
						FF	77	DRE	80M4	79	381
	8.6	830	166.47	18900	1.80	FA	77	DRE	80M4	65	382
	10	710	142.27	19200	2.1	FAF	77	DRE	80M4	71	381
	11	650	130.42	19400	2.3	F	77	DRE	80M4	69	380
	13	570	114.45	19600	2.6	FF	77	DRE	80M4	79	381
	13	540	108.46*	19600	2.8						
	8.4	850	170.85	10000	0.95	FA	67	DRE	80M4	41	377
	8.8	810	162.31	10400	1.00	FAF	67	DRE	80M4	47	376
	10	710	142.40	11200	1.15	F	67	DRE	80M4	44	375
	12	600	120.79	11900	1.35	FF	67	DRE	80M4	50	376
	13	540	109.04	12200	1.50						
	15	475	95.94	12500	1.70	FA	67	DRE	80M4	41	377
	16	450	90.59	12600	1.80	FAF	67	DRE	80M4	47	376
	18	395	79.76	12800	2.1	F	67	DRE	80M4	44	375
	21	335	67.65	13000	2.4	FF	67	DRE	80M4	50	376
	24	300	61.07	13000	2.7						
	11	635	127.27	7770	0.95						
	13	545	110.01	9580	1.10						
	15	465	93.47	10100	1.30						
	17	415	83.46	10500	1.45	FA	57	DRE	80M4	37	372
	20	360	72.98	10800	1.65	FAF	57	DRE	80M4	42	371
	21	340	68.22	10900	1.75	F	57	DRE	80M4	37	370
	24	290	58.97	11200	2.0	FF	57	DRE	80M4	43	371
	29	250	50.10	11400	2.4						
	32	220	44.73	11300	2.7						
	18	395	79.72	5950	1.00	FA	47	DRE	80M4	30	367
	21	335	68.09	6670	1.20	FAF	47	DRE	80M4	32	366
	22	325	65.36	6810	1.25	F	47	DRE	80M4	30	365
						FF	47	DRE	80M4	33	366
	25	280	56.49	7220	1.40						
	30	235	48.00*	7530	1.65	FA	47	DRE	80M4	30	367
	33	210	42.86	7690	1.85	FAF	47	DRE	80M4	32	366
	39	183	36.61	7860	2.2	F	47	DRE	80M4	30	365
	42	171	34.29	7780	2.3	FF	47	DRE	80M4	33	366
	50	144	28.88	7460	2.8						
	31	230	47.02	3720	0.85						
	33	215	43.83	4000	0.90	FA	37	DRE	80M4	25	362
	37	191	38.31	4420	1.05	FAF	37	DRE	80M4	26	361
	40	179	35.91	4570	1.10	F	37	DRE	80M4	25	360
	45	158	31.69	4590	1.25	FF	37	DRE	80M4	27	361
	51	140	28.09	4510	1.45						
	61	118	23.63	4370	1.70						
	70	103	20.57	4260	1.95	FA	37	DRE	80M4	25	362
	74	96	19.27	4200	2.1	FAF	37	DRE	80M4	26	361
	84	85	17.03	4090	2.4	F	37	DRE	80M4	25	360
	100	72	14.33	3930	2.8	FF	37	DRE	80M4	27	361
	112	64	12.87	3840	3.1						
	62	116	23.25	2910	1.10						
	71	101	20.15	2860	1.30						
	76	94	18.84	2840	1.40						
	88	81	16.28	2770	1.60						
	104	69	13.84	2700	1.90						
	116	62	12.35	2640	2.1	FA	27	DRE	80M4	18	358
	136	53	10.55	2560	2.5	FAF	27	DRE	80M4	19	357
	145	49	9.88	2520	2.6	F	27	DRE	80M4	19	356
	153	47	9.40	2450	2.8	FF	27	DRE	80M4	20	357
	177	41	8.13	2370	3.0						
	208	34	6.91	2290	3.3						
	233	31	6.17	2230	3.5						
	272	26	5.27	2140	3.8						
	291	25	4.93	2100	3.9						
	345	21	4.16	2010	4.2						

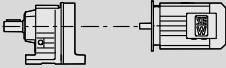



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]	
<b>0.75</b>	<b>356</b>	20	8.13	2000	6.1			
	<b>418</b>	17	6.91	1910	6.7	<b>FA 27</b>	<b>DRE 80M2</b>	18 358
	<b>469</b>	15	6.17	1850	7.1	<b>FAF 27</b>	<b>DRE 80M2</b>	19 357
	<b>549</b>	13	5.27	1770	7.6	<b>F 27</b>	<b>DRE 80M2</b>	19 356
	<b>586</b>	12	4.93	1740	7.9	<b>FF 27</b>	<b>DRE 80M2</b>	20 357
	<b>695</b>	10	4.16	1650	8.4			
<b>1.1</b>	<b>0.51</b>	17900	2780	100500	1.00	<b>FA 157R97</b>	<b>DRE 90M4</b>	780 410
						<b>FAF 157R97</b>	<b>DRE 90M4</b>	830 410
						<b>F 157R97</b>	<b>DRE 90M4</b>	800 410
						<b>FF 157R97</b>	<b>DRE 90M4</b>	900 410
	<b>0.58</b>	15800	2427	106100	1.15			
	<b>0.65</b>	14100	2185	110000	1.25			
	<b>0.73</b>	12500	1944	113100	1.45			
	<b>0.85</b>	11100	1674	115600	1.60	<b>FA 157R97</b>	<b>DRE 90M4</b>	770 410
	<b>1.1</b>	8610	1308	119100	2.1	<b>FAF 157R97</b>	<b>DRE 90M4</b>	830 410
	<b>1.2</b>	7630	1169	120000	2.4	<b>F 157R97</b>	<b>DRE 90M4</b>	790 410
	<b>1.5</b>	6100	953	120000	3.0	<b>FF 157R97</b>	<b>DRE 90M4</b>	900 410
	<b>1.7</b>	5330	845	120000	3.4			
	<b>3.2</b>	2810	446	120000	6.4			
	<b>4.7</b>	1900	302	120000	9.4			
	<b>0.70</b>	13700	2038	87000	0.85			
	<b>0.80</b>	12000	1784	90000	1.00	<b>FA 127R77</b>	<b>DRE 90M4</b>	435 410
	<b>0.88</b>	10700	1606	90000	1.10	<b>FAF 127R77</b>	<b>DRE 90M4</b>	475 410
	<b>1.0</b>	9330	1390	90000	1.30	<b>F 127R77</b>	<b>DRE 90M4</b>	475 410
	<b>1.2</b>	8150	1220	90000	1.45	<b>FF 127R77</b>	<b>DRE 90M4</b>	520 410
	<b>1.3</b>	7250	1077	90000	1.65			
	<b>1.1</b>	8350	1243	48000	0.90			
	<b>1.3</b>	7380	1087	50600	1.05	<b>FA 107R77</b>	<b>DRE 90M4</b>	285 410
	<b>1.5</b>	6380	950	53100	1.20	<b>FAF 107R77</b>	<b>DRE 90M4</b>	305 410
	<b>1.7</b>	5570	834	55000	1.40	<b>F 107R77</b>	<b>DRE 90M4</b>	305 410
	<b>1.9</b>	4890	736	56500	1.55	<b>FF 107R77</b>	<b>DRE 90M4</b>	330 410
	<b>2.2</b>	4310	640	57800	1.80			
	<b>2.1</b>	4670	690	27400	0.90			
	<b>2.4</b>	4110	605	30400	1.05	<b>FA 97R57</b>	<b>DRE 90M4</b>	195 410
	<b>2.7</b>	3580	529	31900	1.20	<b>FAF 97R57</b>	<b>DRE 90M4</b>	220 410
	<b>3.0</b>	3160	467	32900	1.35	<b>F 97R57</b>	<b>DRE 90M4</b>	205 410
	<b>3.5</b>	2730	406	33900	1.55	<b>FF 97R57</b>	<b>DRE 90M4</b>	235 410
	<b>3.9</b>	2450	363	34500	1.75			
	<b>3.1</b>	3080	452	16400	0.95	<b>FA 87R57</b>	<b>DRE 90M4</b>	130 410
	<b>4.1</b>	2320	345	25400	1.30	<b>FAF 87R57</b>	<b>DRE 90M4</b>	145 410
	<b>4.7</b>	2010	300	26400	1.50	<b>F 87R57</b>	<b>DRE 90M4</b>	135 410
	<b>5.7</b>	1670	249	27400	1.80	<b>FF 87R57</b>	<b>DRE 90M4</b>	150 410
	<b>3.4</b>	3090	276.77	33100	1.40	<b>FA 97</b>	<b>DRE 100M6</b>	180 392
	<b>3.7</b>	2830	253.41	33700	1.50	<b>FAF 97</b>	<b>DRE 100M6</b>	200 391
	<b>4.2</b>	2500	223.88	34400	1.70	<b>F 97</b>	<b>DRE 100M6</b>	185 390
	<b>5.0</b>	2120	189.92	35200	2.0	<b>FF 97</b>	<b>DRE 100M6</b>	220 391
	<b>5.4</b>	1950	174.87	35500	2.2			
	<b>5.1</b>	2040	276.77	35300	2.1	<b>FA 97</b>	<b>DRE 90M4</b>	170 392
	<b>5.6</b>	1870	253.41	35600	2.3	<b>FAF 97</b>	<b>DRE 90M4</b>	195 391
	<b>6.3</b>	1650	223.88	36000	2.6	<b>F 97</b>	<b>DRE 90M4</b>	180 390
						<b>FF 97</b>	<b>DRE 90M4</b>	210 391
	<b>4.1</b>	2550	228.93	24600	1.15	<b>FA 87</b>	<b>DRE 100M6</b>	115 387
	<b>4.8</b>	2200	197.20	25800	1.35	<b>FAF 87</b>	<b>DRE 100M6</b>	130 386
	<b>5.2</b>	2010	179.97	26400	1.50	<b>F 87</b>	<b>DRE 100M6</b>	120 385
	<b>5.9</b>	1780	159.61	27100	1.70	<b>FF 87</b>	<b>DRE 100M6</b>	135 386
	<b>5.2</b>	2000	270.68	26400	1.50	<b>FA 87</b>	<b>DRE 90M4</b>	110 387
	<b>5.6</b>	1880	255.37	26800	1.60	<b>FAF 87</b>	<b>DRE 90M4</b>	120 386
	<b>6.2</b>	1690	228.93	27300	1.75	<b>F 87</b>	<b>DRE 90M4</b>	115 385
	<b>7.2</b>	1450	197.20	27900	2.1	<b>FF 87</b>	<b>DRE 90M4</b>	130 386
	<b>7.9</b>	1330	179.97	28200	2.2	<b>FA 87</b>	<b>DRE 90M4</b>	110 387
	<b>8.9</b>	1180	159.61	28600	2.5	<b>FAF 87</b>	<b>DRE 90M4</b>	120 386
	<b>11</b>	990	134.16	29000	3.0	<b>F 87</b>	<b>DRE 90M4</b>	115 385
	<b>12</b>	910	123.29	29200	3.3	<b>FF 87</b>	<b>DRE 90M4</b>	130 386
	<b>7.2</b>	1460	198.31	15900	1.00	<b>FA 77</b>	<b>DRE 90M4</b>	69 382
	<b>7.5</b>	1390	188.40	16400	1.10	<b>FAF 77</b>	<b>DRE 90M4</b>	75 381
	<b>8.5</b>	1230	166.47	17300	1.20	<b>F 77</b>	<b>DRE 90M4</b>	72 380
	<b>10.0</b>	1050	142.27	18100	1.45	<b>FF 77</b>	<b>DRE 90M4</b>	83 381

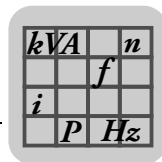
$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## F..DRE/DRS

### F..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
1.1	11	960	130.42	18400	1.55						
	12	840	114.45	18800	1.75	FA	77	DRE	90M4	69	382
	13	800	108.46*	19000	1.85	FAF	77	DRE	90M4	75	381
	15	700	94.93	19300	2.1	F	77	DRE	90M4	72	380
	17	630	85.52	19400	2.4	FF	77	DRE	90M4	83	381
	19	555	75.02	19600	2.7						
	12	890	120.79	9600	0.90	FA	67	DRE	90M4	46	377
						FAF	67	DRE	90M4	52	376
						F	67	DRE	90M4	48	375
						FF	67	DRE	90M4	55	376
	13	800	109.04	10400	1.00						
	15	705	95.94	11200	1.15						
	16	670	90.59	11500	1.20						
	18	590	79.76	12000	1.40						
	21	500	67.65	12400	1.65	FA	67	DRE	90M4	46	377
	23	450	61.07	12600	1.80	FAF	67	DRE	90M4	52	376
	26	395	53.73	12800	2.1	F	67	DRE	90M4	48	375
	28	375	50.74	12900	2.2	FF	67	DRE	90M4	55	376
	33	315	43.20	13000	2.6						
	36	290	39.26	13000	2.7						
	42	250	34.01	13000	2.9						
	17	615	83.46	9070	0.95						
	19	535	72.98	9640	1.10						
	21	500	68.22	9890	1.20	FA	57	DRE	90M4	42	372
	24	435	58.97	10300	1.40	FAF	57	DRE	90M4	47	371
	28	370	50.10	10700	1.60	F	57	DRE	90M4	42	370
	32	330	44.73	10700	1.80	FF	57	DRE	90M4	48	371
	37	280	38.21	10300	2.1						
	40	260	35.79	10200	2.3						
	47	220	30.15	9780	2.6						
	25	415	56.49	4570	0.95	FA	47	DRE	90M4	34	367
	30	355	48.00*	6500	1.15	FAF	47	DRE	90M4	37	366
						F	47	DRE	90M4	35	365
						FF	47	DRE	90M4	38	366
33	315	42.86	6900	1.25	FA	47	DRE	90M4	34	367	
39	270	36.61	7300	1.50	FAF	47	DRE	90M4	37	366	
41	250	34.29	7240	1.60	F	47	DRE	90M4	35	365	
49	210	28.88	7020	1.85	FF	47	DRE	90M4	38	366	
46	225	30.86	7110	1.75	FA	47	DRE	90M4	33	367	
48	215	29.32	7040	1.85	FAF	47	DRE	90M4	36	366	
55	190	25.72	6860	2.1	F	47	DRE	90M4	34	365	
65	161	21.82	6620	2.5	FF	47	DRE	90M4	37	366	
72	146	19.70	6470	2.8							
45	230	31.69	3720	0.85	FA	37	DRE	90M4	29	362	
51	205	28.09	3970	0.95	FAF	37	DRE	90M4	31	361	
59	177	23.88	3930	1.15	F	37	DRE	90M4	30	360	
					FF	37	DRE	90M4	31	361	
69	152	20.57	3870	1.30							
74	143	19.27	3840	1.40							
83	126	17.03	3770	1.60	FA	37	DRE	90M4	29	362	
99	106	14.33	3670	1.90	FAF	37	DRE	90M4	30	361	
110	95	12.87	3600	2.1	F	37	DRE	90M4	29	360	
128	82	11.08	3490	2.3	FF	37	DRE	90M4	31	361	
136	77	10.42	3450	2.4							
158	66	8.97	3340	2.6							
70	149	20.15	2440	0.85							
75	139	18.84	2440	0.95							
87	120	16.28	2440	1.10							
103	102	13.84	2410	1.25							
115	91	12.35	2390	1.40							
135	78	10.55	2340	1.65	FA	27	DRE	90M4	23	358	
144	73	9.88	2320	1.80	FAF	27	DRE	90M4	23	357	
151	70	9.40	2240	1.85	F	27	DRE	90M4	23	356	
175	60	8.13	2190	2.0	FF	27	DRE	90M4	24	357	
206	51	6.91	2130	2.2							
230	46	6.17	2090	2.4							
270	39	5.27	2020	2.6							
288	36	4.93	2000	2.6							
342	31	4.16	1920	2.8							

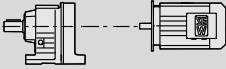





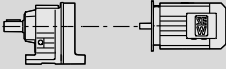

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
<b>1.1</b>	<b>353</b>	30	8.13	1910	4.1						
	<b>416</b>	25	6.91	1840	4.5	<b>FA</b>	<b>27</b>	<b>DRE</b>	<b>90M2</b>	23	358
	<b>465</b>	23	6.17	1780	4.8	<b>FAF</b>	<b>27</b>	<b>DRE</b>	<b>90M2</b>	23	357
	<b>545</b>	19	5.27	1720	5.2	<b>F</b>	<b>27</b>	<b>DRE</b>	<b>90M2</b>	23	356
	<b>582</b>	18	4.93	1680	5.3	<b>FF</b>	<b>27</b>	<b>DRE</b>	<b>90M2</b>	24	357
	<b>691</b>	15	4.16	1610	5.7						
<b>1.5</b>	<b>0.59</b>	21800	2427	86800	0.80						
	<b>0.65</b>	19500	2185	95400	0.90						
	<b>0.74</b>	17300	1944	102100	1.05						
	<b>0.85</b>	15200	1674	107600	1.20	<b>FA</b>	<b>157R97</b>	<b>DRE</b>	<b>90L4</b>	780	410
	<b>1.1</b>	11800	1308	114400	1.50	<b>FAF</b>	<b>157R97</b>	<b>DRE</b>	<b>90L4</b>	830	410
	<b>1.2</b>	10500	1169	116500	1.70	<b>F</b>	<b>157R97</b>	<b>DRE</b>	<b>90L4</b>	800	410
	<b>1.5</b>	8450	953	119300	2.1	<b>FF</b>	<b>157R97</b>	<b>DRE</b>	<b>90L4</b>	900	410
	<b>1.7</b>	7410	845	120000	2.4						
	<b>3.2</b>	3910	446	120000	4.6						
	<b>4.7</b>	2650	302	120000	6.8						
	<b>0.89</b>	14700	1606	85100	0.80						
	<b>1.0</b>	12700	1390	89000	0.95						
	<b>1.2</b>	11100	1220	90000	1.05	<b>FA</b>	<b>127R77</b>	<b>DRE</b>	<b>90L4</b>	440	410
	<b>1.3</b>	9910	1077	90000	1.20	<b>FAF</b>	<b>127R77</b>	<b>DRE</b>	<b>90L4</b>	475	410
	<b>1.5</b>	8500	930	90000	1.40	<b>F</b>	<b>127R77</b>	<b>DRE</b>	<b>90L4</b>	475	410
<b>1.7</b>	7480	820	90000	1.60	<b>FF</b>	<b>127R77</b>	<b>DRE</b>	<b>90L4</b>	520	410	
<b>2.0</b>	6610	727	90000	1.80							
<b>2.2</b>	5960	648	90000	2.0							
<b>1.5</b>	8720	950	46900	0.90							
<b>1.7</b>	7630	834	49900	1.00							
<b>1.9</b>	6710	736	52300	1.15	<b>FA</b>	<b>107R77</b>	<b>DRE</b>	<b>90L4</b>	290	410	
<b>2.2</b>	5890	640	54300	1.30	<b>FAF</b>	<b>107R77</b>	<b>DRE</b>	<b>90L4</b>	310	410	
<b>2.6</b>	5090	560	56100	1.50	<b>F</b>	<b>107R77</b>	<b>DRE</b>	<b>90L4</b>	305	410	
<b>2.9</b>	4440	489	57500	1.75	<b>FF</b>	<b>107R77</b>	<b>DRE</b>	<b>90L4</b>	330	410	
<b>3.3</b>	4010	436	58400	1.90							
<b>3.9</b>	3400	370	59600	2.3							
<b>2.7</b>	4880	529	19300	0.90	<b>FA</b>	<b>97R57</b>	<b>DRE</b>	<b>90L4</b>	200	410	
<b>3.1</b>	4320	467	29800	1.00	<b>FAF</b>	<b>97R57</b>	<b>DRE</b>	<b>90L4</b>	220	410	
<b>3.5</b>	3730	406	31500	1.15	<b>F</b>	<b>97R57</b>	<b>DRE</b>	<b>90L4</b>	205	410	
<b>3.9</b>	3340	363	32500	1.30	<b>FF</b>	<b>97R57</b>	<b>DRE</b>	<b>90L4</b>	240	410	
<b>4.8</b>	2760	300	23900	1.10	<b>FA</b>	<b>87R57</b>	<b>DRE</b>	<b>90L4</b>	135	410	
<b>5.7</b>	2290	249	25500	1.30	<b>FAF</b>	<b>87R57</b>	<b>DRE</b>	<b>90L4</b>	145	410	
					<b>F</b>	<b>87R57</b>	<b>DRE</b>	<b>90L4</b>	140	410	
					<b>FF</b>	<b>87R57</b>	<b>DRE</b>	<b>90L4</b>	155	410	
<b>3.7</b>	3870	254.40*	58700	2.00	<b>FA</b>	<b>107</b>	<b>DRE</b>	<b>100L6</b>	260	397	
<b>4.4</b>	3280	215.37	59800	2.3	<b>FAF</b>	<b>107</b>	<b>DRE</b>	<b>100L6</b>	280	396	
<b>4.7</b>	3030	199.31	60300	2.5	<b>F</b>	<b>107</b>	<b>DRE</b>	<b>100L6</b>	275	395	
<b>5.3</b>	2720	178.64	60900	2.8	<b>FF</b>	<b>107</b>	<b>DRE</b>	<b>100L6</b>	305	396	
<b>3.4</b>	4210	276.77	30100	1.00							
<b>3.7</b>	3860	253.41	31100	1.10	<b>FA</b>	<b>97</b>	<b>DRE</b>	<b>100L6</b>	180	392	
<b>4.2</b>	3410	223.88	32300	1.25	<b>FAF</b>	<b>97</b>	<b>DRE</b>	<b>100L6</b>	205	391	
<b>5.0</b>	2890	189.92	33600	1.50	<b>F</b>	<b>97</b>	<b>DRE</b>	<b>100L6</b>	190	390	
<b>5.4</b>	2660	174.87	34100	1.60	<b>FF</b>	<b>97</b>	<b>DRE</b>	<b>100L6</b>	225	391	
<b>5.2</b>	2770	276.77	33800	1.55							
<b>5.6</b>	2530	253.41	34300	1.70	<b>FA</b>	<b>97</b>	<b>DRE</b>	<b>90L4</b>	175	392	
<b>6.4</b>	2240	223.88	34900	1.90	<b>FAF</b>	<b>97</b>	<b>DRE</b>	<b>90L4</b>	195	391	
<b>7.5</b>	1900	189.92	35600	2.3	<b>F</b>	<b>97</b>	<b>DRE</b>	<b>90L4</b>	180	390	
<b>8.2</b>	1750	174.87	35800	2.4	<b>FF</b>	<b>97</b>	<b>DRE</b>	<b>90L4</b>	215	391	
<b>5.3</b>	2710	270.68	24000	1.10	<b>FA</b>	<b>87</b>	<b>DRE</b>	<b>90L4</b>	110	387	
<b>5.6</b>	2550	255.37	24600	1.15	<b>FAF</b>	<b>87</b>	<b>DRE</b>	<b>90L4</b>	125	386	
<b>6.2</b>	2290	228.93	25500	1.30	<b>F</b>	<b>87</b>	<b>DRE</b>	<b>90L4</b>	115	385	
<b>7.2</b>	1970	197.20	26500	1.50	<b>FF</b>	<b>87</b>	<b>DRE</b>	<b>90L4</b>	130	386	
<b>8.0</b>	1800	179.97	27000	1.65							
<b>9.0</b>	1590	159.61	27600	1.90	<b>FA</b>	<b>87</b>	<b>DRE</b>	<b>90L4</b>	110	387	
<b>11</b>	1340	134.16	28200	2.2	<b>FAF</b>	<b>87</b>	<b>DRE</b>	<b>90L4</b>	125	386	
<b>13</b>	1090	109.49	28800	2.7	<b>F</b>	<b>87</b>	<b>DRE</b>	<b>90L4</b>	115	385	
<b>15</b>	980	97.89	29000	3.1	<b>FF</b>	<b>87</b>	<b>DRE</b>	<b>90L4</b>	130	386	
<b>8.6</b>	1660	166.47	14500	0.90	<b>FA</b>	<b>77</b>	<b>DRE</b>	<b>90L4</b>	71	382	
<b>10</b>	1420	142.27	16200	1.05	<b>FAF</b>	<b>77</b>	<b>DRE</b>	<b>90L4</b>	78	381	
<b>11</b>	1300	130.42	16900	1.15	<b>F</b>	<b>77</b>	<b>DRE</b>	<b>90L4</b>	75	380	
<b>12</b>	1140	114.45	17700	1.30	<b>FF</b>	<b>77</b>	<b>DRE</b>	<b>90L4</b>	85	381	

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**F..DRE/DRS**  
F..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
1.5	13	1080	108.46*	18000	1.40						
	15	950	94.93	18500	1.60						
	17	850	85.52	18800	1.75						
	19	750	75.02	19100	2.0						
	20	725	72.50	19200	2.1	FA	77	DRE	90L4	71	382
	22	665	66.46	19300	2.2	FAF	77	DRE	90L4	78	381
	25	580	58.32	19500	2.6	F	77	DRE	90L4	75	380
	26	550	55.27	19600	2.7	FF	77	DRE	90L4	85	381
	30	480	48.37	19700	3.1						
	33	435	43.58	19800	3.4						
	37	380	38.23	19900	3.9						
	39	365	36.58	19900	3.0	FA	77	DRE	90L4	70	382
	45	315	31.51	20000	4.4	FAF	77	DRE	90L4	76	381
						F	77	DRE	90L4	73	380
						FF	77	DRE	90L4	84	381
	16	900	90.59	9450	0.90						
	18	795	79.76	10500	1.05						
	21	675	67.65	11400	1.20	FA	67	DRE	90L4	48	377
	23	610	61.07	11800	1.35	FAF	67	DRE	90L4	54	376
	27	535	53.73	12200	1.50	F	67	DRE	90L4	51	375
	28	505	50.74	12400	1.60	FF	67	DRE	90L4	57	376
	33	430	43.20	12700	1.90						
	36	390	39.26	12800	2.00						
	39	360	36.30	12900	2.3	FA	67	DRE	90L4	47	377
	45	320	32.08	13000	2.6	FAF	67	DRE	90L4	53	376
	52	270	27.41	13000	3.0	F	67	DRE	90L4	50	375
	57	250	25.13	13000	3.3	FF	67	DRE	90L4	56	376
	24	590	58.97	9270	1.00						
	29	500	50.10	9910	1.20	FA	57	DRE	90L4	44	372
	32	445	44.73	9970	1.35	FAF	57	DRE	90L4	50	371
	37	380	38.21	9710	1.55	F	57	DRE	90L4	44	370
	40	355	35.79	9600	1.65	FF	57	DRE	90L4	51	371
	47	300	30.15	9280	1.95						
	39	365	36.61	6360	1.10	FA	47	DRE	90L4	36	367
42	340	34.29	6610	1.15	FAF	47	DRE	90L4	39	366	
50	285	28.88	6480	1.40	F	47	DRE	90L4	37	365	
					FF	47	DRE	90L4	40	366	
46	305	30.86	6540	1.30							
49	290	29.32	6500	1.35							
56	255	25.72	6380	1.55	FA	47	DRE	90L4	36	367	
66	215	21.82	6210	1.85	FAF	47	DRE	90L4	38	366	
73	197	19.70	6100	2.0	F	47	DRE	90L4	36	365	
83	174	17.33	5950	2.3	FF	47	DRE	90L4	40	366	
87	164	16.36	5880	2.4							
103	140	13.93	5680	2.9							
70	205	20.57	3410	0.95							
74	193	19.27	3410	1.05							
84	170	17.03	3390	1.15							
100	144	14.33	3350	1.40	FA	37	DRE	90L4	31	362	
111	129	12.87	3310	1.55	FAF	37	DRE	90L4	33	361	
129	111	11.08	3240	1.70	F	37	DRE	90L4	32	360	
137	104	10.42	3210	1.75	FF	37	DRE	90L4	34	361	
159	90	8.97	3130	1.95							
178	80	8.01	3070	2.1							
103	139	13.84	2080	0.95							
116	124	12.35	2090	1.05							
136	106	10.55	2090	1.25							
145	99	9.88	2080	1.30							
152	94	9.40	1990	1.40	FA	27	DRE	90L4	25	358	
176	81	8.13	1970	1.50	FAF	27	DRE	90L4	26	357	
207	69	6.91	1950	1.65	F	27	DRE	90L4	26	356	
232	62	6.17	1920	1.75	FF	27	DRE	90L4	26	357	
271	53	5.27	1880	1.90							
290	49	4.93	1860	1.95							
344	42	4.16	1810	2.1							

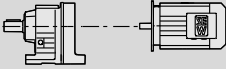



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]	
<b>1.5</b>	348	41	8.13	1810	3.0			
	410	35	6.91	1750	3.3	FA 27	DRE 90M2	23 358
	459	31	6.17	1710	3.5	FAF 27	DRE 90M2	23 357
	537	27	5.27	1650	3.8	F 27	DRE 90M2	23 356
	574	25	4.93	1630	3.8	FF 27	DRE 90M2	24 357
681	21	4.16	1560	4.1				
<b>2.2</b>	<b>0.99</b>	18500	1441	98700	0.95	FA 157R97	DRE 100M4	780 410
						FAF 157R97	DRE 100M4	840 410
						F 157R97	DRE 100M4	800 410
						FF 157R97	DRE 100M4	910 410
	1.1	17600	1308	101300	1.00			
	1.2	15700	1169	106400	1.15			
	1.5	12600	953	112900	1.40			
	1.7	11100	845	115500	1.60			
	1.9	10000	764	117200	1.80	FA 157R97	DRE 100M4	780 410
	2.1	8930	680	118700	2.0	FAF 157R97	DRE 100M4	840 410
	2.5	7490	576	120000	2.4	F 157R97	DRE 100M4	800 410
	3.2	5900	446	120000	3.0	FF 157R97	DRE 100M4	910 410
	4.7	3990	302	120000	4.5			
	5.2	3590	273	120000	5.0			
6.2	3010	232	120000	6.0				
7.3	2550	197	120000	7.0				
<b>3.0</b>	1.3	14700	1077	85200	0.80			
	1.5	12600	930	89200	0.95			
	1.7	11100	820	90000	1.10	FA 127R77	DRE 100M4	445 410
	2.0	9840	727	90000	1.20	FAF 127R77	DRE 100M4	480 410
	2.2	8840	648	90000	1.35	F 127R77	DRE 100M4	480 410
	2.6	7490	549	90000	1.60	FF 127R77	DRE 100M4	530 410
	2.9	6740	495	90000	1.80			
	3.3	5830	428	90000	2.1			
	2.2	8730	640	46900	0.90			
	2.5	7590	560	50000	1.00	FA 107R77	DRE 100M4	295 410
2.9	6620	489	52500	1.15	FAF 107R77	DRE 100M4	315 410	
3.3	5950	436	54100	1.30	F 107R77	DRE 100M4	310 410	
3.8	5040	370	56200	1.50	FF 107R77	DRE 100M4	335 410	
4.3	4540	333	57300	1.70				
<b>4.0</b>	5.0	3900	285	31000	1.10	FA 97R57	DRE 100M4	205 410
	5.8	3350	245	32500	1.30	FAF 97R57	DRE 100M4	225 410
						F 97R57	DRE 100M4	210 410
						FF 97R57	DRE 100M4	245 410
<b>5.0</b>	3.8	5590	254.40*	55000	1.35	FA 107	DRE 112M6	270 397
	4.4	4730	215.37	56900	1.60	FAF 107	DRE 112M6	290 396
	4.8	4380	199.31	57600	1.75	F 107	DRE 112M6	285 395
	5.4	3920	178.64	58600	1.95	FF 107	DRE 112M6	310 396
<b>6.0</b>	5.6	3750	254.40*	58900	2.0	FA 107	DRE 100M4	255 397
	6.6	3170	215.37	60100	2.4	FAF 107	DRE 100M4	275 396
	7.2	2930	199.31	60500	2.6	F 107	DRE 100M4	270 395
	8.0	2630	178.64	61100	2.9	FF 107	DRE 100M4	300 396
<b>7.0</b>	4.3	4920	223.88	17400	0.85	FA 97	DRE 112M6	195 392
	5.0	4170	189.92	30300	1.05	FAF 97	DRE 112M6	215 391
	5.5	3840	174.87	31200	1.10	F 97	DRE 112M6	200 390
	6.1	3430	156.30	32300	1.25	FF 97	DRE 112M6	235 391
<b>8.0</b>	5.2	4080	276.77	30500	1.05			
	5.6	3730	253.41	31500	1.15			
	6.4	3300	223.88	32600	1.30	FA 97	DRE 100M4	180 392
	7.5	2790	189.92	33800	1.55	FAF 97	DRE 100M4	200 391
	8.2	2570	174.87	34200	1.65	F 97	DRE 100M4	185 390
	9.1	2300	156.30	34800	1.85	FF 97	DRE 100M4	220 391
	10	2070	140.71	35300	2.1			
	11	1870	127.42	35600	2.3			
	7.2	2900	197.20	23000	1.05	FA 87	DRE 100M4	115 387
	7.9	2650	179.97	24300	1.15	FAF 87	DRE 100M4	130 386
8.9	2350	159.61	25300	1.25	F 87	DRE 100M4	120 385	
11	1970	134.16	26500	1.50	FF 87	DRE 100M4	135 386	

$kVA$	$n$
$f$	
$i$	$P$
$H_z$	

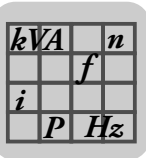
## F..DRE/DRS

### F..DRE/DRS [kW]

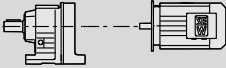

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
2.2	12	1810	123.29	27000	1.65				
	13	1610	109.49	27500	1.85				
	15	1440	97.89	28000	2.1				
	16	1290	88.01	28300	2.3	FA 87	DRE 100M4	115	387
	19	1120	76.39	27800	2.7	FAF 87	DRE 100M4	130	386
	21	1000	68.40	27100	3.0	F 87	DRE 100M4	120	385
	25	830	56.75	25900	3.6	FF 87	DRE 100M4	135	386
	28	740	50.36	25100	4.0				
	31	665	45.28	24400	4.2				
	12	1680	114.45	14300	0.90	FA 77	DRE 100M4	76	382
	13	1590	108.46*	15000	0.95	FAF 77	DRE 100M4	82	381
	15	1390	94.93	16400	1.05	F 77	DRE 100M4	80	380
	17	1260	85.52	17100	1.20	FF 77	DRE 100M4	90	381
	19	1100	75.02	17900	1.35				
	21	970	66.46	18400	1.55	FA 77	DRE 100M4	76	382
	24	850	58.32	18800	1.75	FAF 77	DRE 100M4	82	381
	26	810	55.27	18900	1.85	F 77	DRE 100M4	80	380
	29	710	48.37	19200	2.1	FF 77	DRE 100M4	90	381
	33	640	43.58	19400	2.3				
	39	535	36.58	19600	2.1	FA 77	DRE 100M4	75	382
	45	460	31.51	19800	3.0	FAF 77	DRE 100M4	81	381
	50	420	28.75	19800	3.4	F 77	DRE 100M4	78	380
	56	375	25.50*	19900	4.0	FF 77	DRE 100M4	89	381
	23	900	61.07	9520	0.90				
	27	790	53.73	10600	1.05	FA 67	DRE 100M4	53	377
	28	745	50.74	10900	1.10	FAF 67	DRE 100M4	59	376
	33	635	43.20	11700	1.30	F 67	DRE 100M4	56	375
	36	575	39.26	12000	1.35	FF 67	DRE 100M4	62	376
	42	500	34.01	12400	1.50				
	44	470	32.08	12500	1.75				
	52	400	27.41	12800	2.0	FA 67	DRE 100M4	52	377
57	370	25.13	12900	2.2	FAF 67	DRE 100M4	58	376	
65	325	22.05	13000	2.5	F 67	DRE 100M4	55	375	
68	305	20.90*	13000	2.7	FF 67	DRE 100M4	61	376	
78	265	18.29	13000	3.0					
32	655	44.73	5420	0.90	FA 57	DRE 100M4	49	372	
37	560	38.21	8660	1.05	FAF 57	DRE 100M4	55	371	
40	525	35.79	8610	1.15	F 57	DRE 100M4	49	370	
47	440	30.15	8450	1.35	FF 57	DRE 100M4	56	371	
57	365	24.96	8230	1.55					
67	310	21.17	8000	1.90	FA 57	DRE 100M4	48	372	
75	280	19.11	7850	2.1	FAF 57	DRE 100M4	54	371	
85	245	16.81	7650	2.4	F 57	DRE 100M4	49	370	
90	230	15.88	7560	2.6	FF 57	DRE 100M4	55	371	
55	375	25.72	5560	1.05					
65	320	21.82	5520	1.25					
72	290	19.70	5470	1.40	FA 47	DRE 100M4	41	367	
82	255	17.33	5400	1.55	FAF 47	DRE 100M4	43	366	
87	240	16.36	5360	1.65	F 47	DRE 100M4	42	365	
102	205	13.93	5240	1.95	FF 47	DRE 100M4	45	366	
113	187	12.66	5160	2.1					
130	162	10.97	5030	2.5					
159	132	8.96	4730	2.5					
99	210	14.33	2800	0.95					
111	190	12.87	2810	1.05					
129	163	11.08	2820	1.15					
137	154	10.42	2810	1.20					
159	132	8.97	2790	1.30	FA 37	DRE 100M4	36	362	
178	118	8.01	2760	1.45	FAF 37	DRE 100M4	38	361	
211	99	6.74	2620	1.40	F 37	DRE 100M4	37	360	
236	89	6.05	2590	1.50	FF 37	DRE 100M4	39	361	
273	77	5.21	2540	1.65					
291	72	4.90	2510	1.65					
338	62	4.22	2450	1.75					
378	56	3.77	2400	1.90					

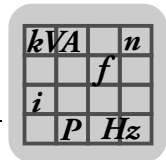


P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
2.2	177	119	16.28	1720	1.10						
	208	101	13.84	1730	1.30						
	233	90	12.35	1730	1.45						
	273	77	10.55	1720	1.70						
	291	72	9.88	1710	1.80	FA	27	DRE	100M2	30	358
	354	59	8.13	1610	2.1	FAF	27	DRE	100M2	31	357
	417	50	6.91	1590	2.3	F	27	DRE	100M2	31	356
	467	45	6.17	1560	2.4	FF	27	DRE	100M2	32	357
	547	38	5.27	1520	2.6						
	584	36	4.93	1510	2.7						
693	30	4.16	1460	2.9							
3.0	1.2	21100	1169	89500	0.85						
	1.5	17100	953	102800	1.05						
	1.7	15100	845	107900	1.20						
	1.9	13500	764	111100	1.30						
	2.1	12000	680	114000	1.50	FA	157R97	DRE	100LC4	790	410
	2.5	10100	576	117000	1.75	FAF	157R97	DRE	100LC4	840	410
	3.3	7980	446	119800	2.2	F	157R97	DRE	100LC4	810	410
	4.8	5400	302	120000	3.3	FF	157R97	DRE	100LC4	910	410
	5.3	4860	273	120000	3.7						
	6.3	4080	232	120000	4.4						
7.4	3460	197	120000	5.2							
2.0	13200	727	88100	0.90	FA	127R77	DRE	100LC4	450	410	
2.2	11800	648	90000	1.00	FAF	127R77	DRE	100LC4	485	410	
2.6	10000	549	90000	1.20	F	127R77	DRE	100LC4	485	410	
2.9	9040	495	90000	1.35	FF	127R77	DRE	100LC4	530	410	
3.3	7970	436	49000	0.95	FA	107R77	DRE	100LC4	300	410	
3.9	6760	370	52200	1.15	FAF	107R77	DRE	100LC4	320	410	
4.4	6090	333	53800	1.25	F	107R77	DRE	100LC4	315	410	
5.0	5320	291	55600	1.45	FF	107R77	DRE	100LC4	340	410	
3.8	7630	254.40*	49900	1.00	FA	107	DRE	132S6	275	397	
4.4	6460	215.37	52900	1.20	FAF	107	DRE	132S6	295	396	
4.8	5970	199.31	54100	1.30	F	107	DRE	132S6	290	395	
5.4	5350	178.64	55500	1.45	FF	107	DRE	132S6	315	396	
5.7	5000	254.40*	56300	1.55	FA	107	DRE	100LC4	260	397	
6.8	4240	215.37	57900	1.80	FAF	107	DRE	100LC4	280	396	
7.3	3920	199.31	58600	1.95	F	107	DRE	100LC4	275	395	
8.1	3510	178.64	59400	2.2	FF	107	DRE	100LC4	305	396	
9.0	3170	161.28*	60100	2.4							
6.5	4400	223.88	29600	1.00	FA	97	DRE	100LC4	185	392	
7.7	3730	189.92	31500	1.15	FAF	97	DRE	100LC4	205	391	
8.3	3440	174.87	32200	1.25	F	97	DRE	100LC4	190	390	
					FF	97	DRE	100LC4	225	391	
9.3	3070	156.30	33100	1.40							
10	2770	140.71	33800	1.55	FA	97	DRE	100LC4	185	392	
11	2500	127.42	34400	1.70	FAF	97	DRE	100LC4	205	391	
13	2220	112.99	35000	1.95	F	97	DRE	100LC4	190	390	
14	2010	102.16	35400	2.1	FF	97	DRE	100LC4	225	391	
16	1760	89.85	35800	2.4							
11	2640	134.16	24300	1.15	FA	87	DRE	100LC4	120	387	
12	2420	123.29	25100	1.25	FAF	87	DRE	100LC4	135	386	
13	2150	109.49	26000	1.40	F	87	DRE	100LC4	125	385	
					FF	87	DRE	100LC4	140	386	
15	1920	97.89	26700	1.55							
17	1730	88.01	26700	1.75	FA	87	DRE	100LC4	120	387	
19	1500	76.39	26100	2.00	FAF	87	DRE	100LC4	135	386	
21	1340	68.40	25500	2.2	F	87	DRE	100LC4	125	385	
26	1110	56.75	24600	2.7	FF	87	DRE	100LC4	140	386	
29	990	50.36	23900	3.0							
17	1680	85.52	14400	0.90	FA	77	DRE	100LC4	81	382	
19	1470	75.02	15900	1.00	FAF	77	DRE	100LC4	88	381	
22	1300	66.46	16900	1.15	F	77	DRE	100LC4	85	380	
					FF	77	DRE	100LC4	95	381	
25	1140	58.32	17700	1.30							
26	1080	55.27	18000	1.40	FA	77	DRE	100LC4	81	382	
30	950	48.37	18500	1.55	FAF	77	DRE	100LC4	88	381	
33	850	43.58	18800	1.75	F	77	DRE	100LC4	85	380	
38	750	38.23	19100	2.00	FF	77	DRE	100LC4	95	381	



**F..DRE/DRS**  
F..DRE/DRS [kW]

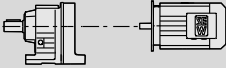

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
3.0	40	720	36.58	19200	1.55						
	46	620	31.51	19500	2.2	FA	77	DRE	100LC4	80	382
	51	565	28.75	19600	2.5	FAF	77	DRE	100LC4	86	381
	57	500	25.50*	19700	3.0	F	77	DRE	100LC4	83	380
	68	420	21.43	19800	3.6	FF	77	DRE	100LC4	94	381
	34	850	43.20	10000	0.95	FA	67	DRE	100LC4	58	377
	37	770	39.26	10700	1.00	FAF	67	DRE	100LC4	64	376
	43	665	34.01	11500	1.10	F	67	DRE	100LC4	61	375
						FF	67	DRE	100LC4	67	376
	45	630	32.08	11700	1.30						
	53	535	27.41	12200	1.50						
	58	490	25.13	12400	1.65	FA	67	DRE	100LC4	57	377
	66	430	22.05	12700	1.90	FAF	67	DRE	100LC4	63	376
	70	410	20.90*	12800	2.00	F	67	DRE	100LC4	60	375
	80	360	18.29	12900	2.3	FF	67	DRE	100LC4	66	376
	88	320	16.48	13000	2.5						
	101	280	14.46	13000	2.9						
	58	490	24.96	7420	1.15						
	69	415	21.17	7310	1.45						
	76	375	19.11	7220	1.60	FA	57	DRE	100LC4	54	372
	87	330	16.81	7100	1.80	FAF	57	DRE	100LC4	59	371
	92	310	15.88	7040	1.90	F	57	DRE	100LC4	54	370
	108	265	13.52	6850	2.2	FF	57	DRE	100LC4	60	371
	118	240	12.29	6730	2.5						
	137	205	10.64	6540	2.9						
	74	385	19.70	4760	1.05						
	84	340	17.33	4760	1.15						
	89	320	16.36	4760	1.25	FA	47	DRE	100LC4	46	367
	104	270	13.93	4720	1.45	FAF	47	DRE	100LC4	48	366
	115	245	12.66	4690	1.60	F	47	DRE	100LC4	47	365
	133	215	10.97	4620	1.85	FF	47	DRE	100LC4	50	366
	162	176	8.96	4350	1.85						
	131	215	11.08	2340	0.85						
	140	205	10.42	2360	0.90						
	162	177	8.97	2400	1.00						
	182	158	8.01	2410	1.10	FA	37	DRE	100LC4	41	362
	216	133	6.74	2290	1.05	FAF	37	DRE	100LC4	43	361
	240	119	6.05	2290	1.15	F	37	DRE	100LC4	42	360
	279	103	5.21	2280	1.20	FF	37	DRE	100LC4	44	361
	297	96	4.90	2270	1.25						
345	83	4.22	2240	1.35							
386	74	3.77	2210	1.40							
4.0	1.7	20200	845	92900	0.90						
	1.9	18200	764	99500	1.00						
	2.2	16200	680	105100	1.10	FA	157R97	DRE	132S4	800	410
	2.5	13600	576	111000	1.30	FAF	157R97	DRE	132S4	860	410
	3.3	10700	446	116200	1.70	F	157R97	DRE	132S4	820	410
	4.8	7240	302	120000	2.5	FF	157R97	DRE	132S4	930	410
	5.3	6520	273	120000	2.8						
	6.3	5500	232	120000	3.3						
	7.4	4660	197	120000	3.9						
	2.7	13300	549	87800	0.90	FA	127R77	DRE	132S4	465	410
	3.0	12000	495	90000	1.00	FAF	127R77	DRE	132S4	500	410
	3.4	10400	428	90000	1.15	F	127R77	DRE	132S4	500	410
	3.9	9140	376	90000	1.30	FF	127R77	DRE	132S4	540	410
	4.4	8120	333	48600	0.95	FA	107R77	DRE	132S4	315	410
	5.0	7090	291	51300	1.10	FAF	107R77	DRE	132S4	335	410
	5.7	6210	255	53500	1.25	F	107R77	DRE	132S4	330	410
						FF	107R77	DRE	132S4	355	410
	5.7	6650	254.40*	52400	1.15						
	6.8	5630	215.37	54900	1.35						
	7.3	5210	199.31	55800	1.45						
	8.2	4670	178.64	57000	1.65	FA	107	DRE	132S4	275	397
	9.0	4210	161.28*	58000	1.80	FAF	107	DRE	132S4	295	396
	10.0	3830	146.49	58800	2.0	F	107	DRE	132S4	290	395
	11	3400	129.97	59600	2.3	FF	107	DRE	132S4	315	396
	12	3080	117.94	60200	2.5						
	14	2650	101.38*	61000	2.9						



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
4.0	8.4	4570	174.87	29100	0.95	FA	97	DRE	132S4	200	392
	9.3	4080	156.30	30500	1.05	FAF	97	DRE	132S4	220	391
	10	3680	140.71	31600	1.15	F	97	DRE	132S4	205	390
	11	3330	127.42	32500	1.30	FF	97	DRE	132S4	240	391
	13	2950	112.99	33400	1.45						
	14	2670	102.16	34000	1.60						
	15	2550	97.58	34300	1.70	FA	97	DRE	132S4	200	392
	16	2350	89.85	34700	1.85	FAF	97	DRE	132S4	220	391
	18	2100	80.31	35200	2.0	F	97	DRE	132S4	205	390
	20	1890	72.29	35600	2.3	FF	97	DRE	132S4	240	391
	22	1710	65.47	35900	2.5						
	13	2860	109.49	23500	1.05	FA	87	DRE	132S4	135	387
	15	2560	97.89	24600	1.15	FAF	87	DRE	132S4	145	386
	17	2300	88.01	24500	1.30	F	87	DRE	132S4	140	385
						FF	87	DRE	132S4	155	386
	19	1990	76.39	24100	1.50	FA	87	DRE	132S4	135	387
	21	1780	68.40	23800	1.70	FAF	87	DRE	132S4	145	386
	26	1480	56.75	23100	2.0	F	87	DRE	132S4	140	385
	29	1310	50.36	22600	2.2	FF	87	DRE	132S4	155	386
	32	1180	45.28	22200	2.4						
	22	1730	66.46	13900	0.85	FA	77	DRE	132S4	95	382
	25	1520	58.32	15600	1.00	FAF	77	DRE	132S4	100	381
	26	1440	55.27	16100	1.05	F	77	DRE	132S4	99	380
	30	1260	48.37	17100	1.20	FF	77	DRE	132S4	110	381
	34	1140	43.58	17700	1.30	FA	77	DRE	132S4	95	382
	38	1000	38.23	18300	1.50	FAF	77	DRE	132S4	100	381
	43	880	33.74	18700	1.70	F	77	DRE	132S4	99	380
	49	780	29.91	19000	1.90	FF	77	DRE	132S4	110	381
	57	665	25.54	19300	2.2						
	46	820	31.51	18900	1.65	FA	77	DRE	132S4	94	382
	51	750	28.75	19100	1.90	FAF	77	DRE	132S4	100	381
	57	665	25.50*	19300	2.2	F	77	DRE	132S4	98	380
	68	560	21.43	19600	2.7	FF	77	DRE	132S4	110	381
	74	515	19.70	19700	2.9						
	53	715	27.41	11100	1.15						
	58	655	25.13	11600	1.25						
66	575	22.05	12000	1.40							
70	545	20.90*	12200	1.50							
80	475	18.29	12500	1.70							
89	430	16.48	12700	1.90							
101	375	14.46	12900	2.2							
114	330	12.76	13000	2.5	FA	67	DRE	132S4	71	377	
129	295	11.31	13000	2.8	FAF	67	DRE	132S4	77	376	
151	250	9.66	13000	3.2	F	67	DRE	132S4	74	375	
161	235	9.08	12900	2.2	FF	67	DRE	132S4	80	376	
170	225	8.60	12700	2.5							
194	197	7.53	12300	3.1							
215	178	6.78	12000	3.5							
245	156	5.95	11700	3.9							
278	137	5.25	11300	4.3							
314	122	4.66	11000	4.6							
367	104	3.97	10500	4.8							
69	550	21.17	6490	1.10							
76	500	19.11	6480	1.20							
87	435	16.81	6440	1.35							
92	415	15.88	6420	1.45							
108	350	13.52	6320	1.70	FA	57	DRE	132S4	68	372	
119	320	12.29	6250	1.85	FAF	57	DRE	132S4	73	371	
137	275	10.64	6120	2.2	F	57	DRE	132S4	68	370	
157	240	9.31	5820	1.70	FF	57	DRE	132S4	74	371	
178	210	8.19	5710	1.95							
189	200	7.73	5650	2.1							
222	172	6.58	5480	2.4							
244	157	5.98	5380	2.7							
282	136	5.18	5220	3.1							

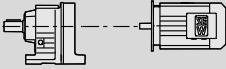

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**F..DRE/DRS**  
F..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
5.5	2.5	19000	576	96900	0.95				
	2.9	16500	503	104200	1.10				
	3.3	14800	446	108400	1.20				
	4.1	11600	353	114800	1.55	FA 157R97	DRE 132M4	810	410
	4.8	10000	302	117200	1.80	FAF 157R97	DRE 132M4	870	410
	5.3	9080	273	118500	2.00	F 157R97	DRE 132M4	830	410
	6.3	7660	232	120000	2.4	FF 157R97	DRE 132M4	940	410
	7.2	6660	202	120000	2.7				
	7.4	6500	197	120000	2.8				
	3.5	13900	418	86600	0.85				
3.9	12500	374	89500	0.95	FA 127R87	DRE 132M4	495	410	
4.7	10400	312	90000	1.15	FAF 127R87	DRE 132M4	530	410	
5.0	9770	293	90000	1.25	F 127R87	DRE 132M4	530	410	
5.6	8620	259	90000	1.40	FF 127R87	DRE 132M4	580	410	
6.5	7450	223	90000	1.60					
3.4	14400	428	85700	0.85	FA 127R77	DRE 132M4	475	410	
3.9	12600	376	89200	0.95	FAF 127R77	DRE 132M4	510	410	
					F 127R77	DRE 132M4	510	410	
					FF 127R77	DRE 132M4	560	410	
6.8	7770	215.37	49600	1.00	FA 107	DRE 132M4	285	397	
7.3	7190	199.31	51100	1.05	FAF 107	DRE 132M4	305	396	
8.1	6440	178.64	53000	1.20	F 107	DRE 132M4	300	395	
9.0	5820	161.28*	54400	1.30	FF 107	DRE 132M4	330	396	
9.9	5280	146.49	55700	1.45					
11	4690	129.97	57000	1.65	FA 107	DRE 132M4	285	397	
12	4250	117.94	57900	1.80	FAF 107	DRE 132M4	305	396	
14	3650	101.38*	59100	2.1	F 107	DRE 132M4	300	395	
16	3330	92.47*	59700	2.3	FF 107	DRE 132M4	330	396	
16	3190	88.49	60000	2.4					
17	3030	83.99	60300	2.5					
11	4590	127.42	29000	0.95	FA 97	DRE 132M4	210	392	
13	4070	112.99	30500	1.05	FAF 97	DRE 132M4	230	391	
14	3680	102.16	31600	1.15	F 97	DRE 132M4	220	390	
					FF 97	DRE 132M4	250	391	
15	3520	97.58	32000	1.20					
16	3240	89.85	32700	1.35					
17	3120	86.59	33000	1.40					
18	2890	80.31	33500	1.50	FA 97	DRE 132M4	210	392	
19	2730	75.63	33900	1.60	FAF 97	DRE 132M4	230	391	
20	2600	72.29	34200	1.65	F 97	DRE 132M4	220	390	
22	2360	65.47	34700	1.80	FF 97	DRE 132M4	250	391	
25	2090	58.06	34400	2.0					
28	1890	52.49	33800	2.3					
17	3170	88.01	11000	0.95	FA 87	DRE 132M4	145	387	
19	2750	76.39	21200	1.10	FAF 87	DRE 132M4	160	386	
21	2460	68.40	21200	1.20	F 87	DRE 132M4	150	385	
26	2040	56.75	21000	1.45	FF 87	DRE 132M4	170	386	
29	1810	50.36	20700	1.60					
32	1630	45.28	20500	1.75	FA 87	DRE 132M4	145	387	
37	1410	39.30	20100	1.90	FAF 87	DRE 132M4	160	386	
41	1270	35.19	19700	2.0	F 87	DRE 132M4	150	385	
50	1050	29.20	19100	2.4	FF 87	DRE 132M4	170	386	
43	1220	33.92	19600	2.1	FA 87	DRE 132M4	145	387	
51	1030	28.78	19000	2.4	FAF 87	DRE 132M4	155	386	
55	950	26.50	18700	3.1	F 87	DRE 132M4	150	385	
61	850	23.68	18300	3.5	FF 87	DRE 132M4	165	386	
30	1740	48.37	13800	0.85					
33	1570	43.58	15200	0.95	FA 77	DRE 132M4	105	382	
38	1380	38.23	16500	1.10	FAF 77	DRE 132M4	115	381	
43	1210	33.74	17400	1.25	F 77	DRE 132M4	110	380	
49	1070	29.91	18000	1.40	FF 77	DRE 132M4	120	381	
57	920	25.54	18600	1.55					
57	920	25.50*	18600	1.65					
68	770	21.43	19100	1.95					
74	710	19.70	19200	2.1	FA 77	DRE 132M4	105	382	
83	630	17.49	19400	2.4	FAF 77	DRE 132M4	110	381	
93	560	15.64*	19600	2.7	F 77	DRE 132M4	110	380	
103	505	14.06	19200	3.0	FF 77	DRE 132M4	120	381	
119	440	12.20	18600	3.4					



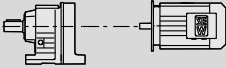



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
5.5	66	795	22.05	10500	1.05				
	70	750	20.90*	10900	1.10				
	80	660	18.29	11500	1.25				
	88	590	16.48	11900	1.40				
	101	520	14.46	12300	1.55				
	114	460	12.76	12600	1.80				
	129	405	11.31	12800	2.0	FA 67	DRE 132M4	83	377
	151	345	9.66	12900	2.4	FAF 67	DRE 132M4	90	376
	160	325	9.08	12400	1.60	F 67	DRE 132M4	86	375
	169	310	8.60	12200	1.85	FF 67	DRE 132M4	92	376
	193	270	7.53	11900	2.2				
	214	240	6.78	11700	2.5				
	245	210	5.95	11300	2.8				
	277	190	5.25	11000	3.1				
	313	168	4.66	10700	3.3				
	366	144	3.97	10300	3.5				
	5.5	87	605	16.81	5460	1.00			
		92	570	15.88	5490	1.05			
		108	485	13.52	5530	1.25			
		118	440	12.29	5530	1.35	FA 57	DRE 132M4	80
137		380	10.64	5500	1.55	FAF 57	DRE 132M4	85	371
178		295	8.19	5180	1.40	F 57	DRE 132M4	80	370
188		275	7.73	5150	1.50	FF 57	DRE 132M4	87	371
221		235	6.58	5060	1.75				
243		215	5.98	5000	1.95				
281		187	5.18	4890	2.2				
7.5		2.9	22500	503	74700	0.80			
		3.3	20100	446	93200	0.90			
		4.2	15700	353	106200	1.15	FA 157R97	DRE 132MC4	810
	4.9	13600	302	111000	1.30	FAF 157R97	DRE 132MC4	870	410
	5.4	12300	273	113500	1.45	F 157R97	DRE 132MC4	840	410
	6.4	10400	232	116700	1.75	FF 157R97	DRE 132MC4	940	410
	7.3	9060	202	118500	2.00				
	7.5	8830	197	118800	2.0				
	4.7	14100	312	86300	0.85	FA 127R87	DRE 132MC4	500	410
	5.0	13200	293	88000	0.90	FAF 127R87	DRE 132MC4	540	410
	5.7	11700	259	90000	1.05	F 127R87	DRE 132MC4	540	410
	6.6	10100	223	90000	1.20	FF 127R87	DRE 132MC4	580	410
	7.4	8930	198	90000	1.35				
	8.6	8320	170.83	90000	1.45	FA 127	DRE 132MC4	440	402
	9.6	7480	153.67*	90000	1.60	FAF 127	DRE 132MC4	475	401
	12	6100	125.37	90000	1.95	F 127	DRE 132MC4	475	400
						FF 127	DRE 132MC4	520	401
	8.2	8700	178.64	47000	0.90	FA 107	DRE 132MC4	290	397
	9.1	7850	161.28*	49300	1.00	FAF 107	DRE 132MC4	310	396
	10	7130	146.49	51200	1.10	F 107	DRE 132MC4	305	395
11	6330	129.97	53200	1.20	FF 107	DRE 132MC4	330	396	
12	5740	117.94	54600	1.35					
14	4930	101.38*	56400	1.55	FA 107	DRE 132MC4	290	397	
16	4500	92.47*	57400	1.70	FAF 107	DRE 132MC4	310	396	
17	4310	88.49	57800	1.80	F 107	DRE 132MC4	305	395	
18	4090	83.99	58200	1.90	FF 107	DRE 132MC4	330	396	
20	3630	74.52	59200	2.1					
22	3290	67.62	59800	2.3					
15	4750	97.58	24800	0.90					
16	4370	89.85	29700	1.00	FA 97	DRE 132MC4	215	392	
17	4210	86.59	30100	1.00	FAF 97	DRE 132MC4	235	391	
18	3910	80.31	31000	1.10	F 97	DRE 132MC4	220	390	
19	3680	75.63	31600	1.15	FF 97	DRE 132MC4	255	391	
20	3520	72.29	32000	1.20					
22	3180	65.47	32200	1.35					
25	2820	58.06	31700	1.50	FA 97	DRE 132MC4	215	392	
28	2550	52.49	31300	1.70	FAF 97	DRE 132MC4	235	391	
33	2160	44.49	30500	2.00	F 97	DRE 132MC4	220	390	
38	1890	38.86	29800	2.3	FF 97	DRE 132MC4	255	391	
45	1580	32.50	28800	2.7					

$kVA$	$n$
$f$	
$i$	$P$
$H_z$	

## F..DRE/DRS

### F..DRE/DRS [kW]

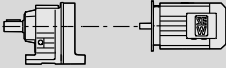

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
7.5	34	2100	43.28	30400	1.45	FA	97	DRE	132MC4	210	392
	40	1780	36.64	29400	1.70	FAF	97	DRE	132MC4	230	391
	43	1650	33.91	29000	2.6	F	97	DRE	132MC4	215	390
	48	1480	30.39	28400	2.9	FF	97	DRE	132MC4	250	391
	26	2760	56.75	18100	1.10						
	29	2450	50.36	18200	1.20	FA	87	DRE	132MC4	150	387
	32	2200	45.28	18200	1.30	FAF	87	DRE	132MC4	160	386
	37	1910	39.30	18100	1.40	F	87	DRE	132MC4	155	385
	42	1710	35.19	17900	1.50	FF	87	DRE	132MC4	170	386
	50	1420	29.20	17600	1.75						
	51	1400	28.78	17500	1.75						
	55	1290	26.50	17300	2.3	FA	87	DRE	132MC4	145	387
	62	1150	23.68	17100	2.6	FAF	87	DRE	132MC4	160	386
	69	1030	21.32*	16800	2.9	F	87	DRE	132MC4	155	385
	76	940	19.31	16500	3.2	FF	87	DRE	132MC4	170	386
	86	830	17.12	16100	3.6						
	95	750	15.48	15800	4.0						
	44	1640	33.74	14700	0.90	FA	77	DRE	132MC4	110	382
	49	1450	29.91	16000	1.05	FAF	77	DRE	132MC4	115	381
	58	1240	25.54	17200	1.15	F	77	DRE	132MC4	115	380
						FF	77	DRE	132MC4	125	381
	58	1240	25.50*	17200	1.20						
	69	1040	21.43	18100	1.45						
	75	950	19.70	18500	1.55						
	84	850	17.49	18800	1.75						
	94	760	15.64*	18900	1.95						
	105	685	14.06	18500	2.2	FA	77	DRE	132MC4	110	382
	120	590	12.20	17900	2.5	FAF	77	DRE	132MC4	115	381
	135	530	10.93	17500	2.8	F	77	DRE	132MC4	115	380
	158	450	9.30	16400	2.4	FF	77	DRE	132MC4	125	381
	178	400	8.26	16000	2.7						
	199	355	7.39	15600	3.0						
	221	320	6.64	15200	3.3						
	255	280	5.76	14700	3.8						
285	250	5.16	14400	4.3							
343	205	4.28	13700	4.8							
9.2	4.2	19500	353	95400	0.90						
	4.8	16800	302	103500	1.05	FA	157R97	DRE	160M4	840	410
	5.4	15200	273	107600	1.20	FAF	157R97	DRE	160M4	890	410
	6.3	12800	232	112500	1.40	F	157R97	DRE	160M4	860	410
	7.2	11200	202	115400	1.60	FF	157R97	DRE	160M4	960	410
	7.5	10900	197	115900	1.65						
	5.7	14400	259	85700	0.85	FA	127R87	DRE	160M4	520	410
	6.6	12400	223	89500	0.95	FAF	127R87	DRE	160M4	560	410
	7.4	11000	198	90000	1.10	F	127R87	DRE	160M4	560	410
						FF	127R87	DRE	160M4	600	410
	8.6	10200	170.83	90000	1.15	FA	127	DRE	160M4	455	402
	9.5	9210	153.67*	90000	1.30	FAF	127	DRE	160M4	490	401
	12	7510	125.37	90000	1.60	F	127	DRE	160M4	490	400
	13	6850	114.34	90000	1.75	FF	127	DRE	160M4	540	401
	15	5930	98.95	90000	2.0						
	10	8780	146.49	46800	0.85	FA	107	DRE	160M4	310	397
	11	7790	129.97	49500	1.00	FAF	107	DRE	160M4	330	396
	12	7070	117.94	51400	1.10	F	107	DRE	160M4	325	395
	14	6070	101.38*	53800	1.25	FF	107	DRE	160M4	355	396
	16	5540	92.47*	55100	1.40						
	17	5030	83.99	56200	1.50	FA	107	DRE	160M4	310	397
	20	4460	74.52	57500	1.70	FAF	107	DRE	160M4	330	396
	22	4050	67.62	58300	1.90	F	107	DRE	160M4	325	395
	25	3480	58.12*	58100	2.2	FF	107	DRE	160M4	355	396
	29	3040	50.73	56600	2.5						
	18	4810	80.31	22500	0.90	FA	97	DRE	160M4	235	392
	19	4530	75.63	29200	0.95	FAF	97	DRE	160M4	255	391
	20	4330	72.29	29600	1.00	F	97	DRE	160M4	240	390
	22	3920	65.47	29600	1.10	FF	97	DRE	160M4	275	391
	25	3480	58.06	29500	1.25						



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
9.2	28	3140	52.49	29300	1.35	FA	97	DRE	160M4	235	392
	33	2660	44.49	28800	1.60	FAF	97	DRE	160M4	255	391
	38	2330	38.86	28300	1.85	F	97	DRE	160M4	240	390
	45	1940	32.50	27500	2.2	FF	97	DRE	160M4	275	391
	43	2030	33.91	27700	2.1	FA	97	DRE	160M4	230	392
	48	1820	30.39	27200	2.4	FAF	97	DRE	160M4	250	391
	53	1640	27.44*	26700	2.6	F	97	DRE	160M4	235	390
	59	1490	24.92	26200	2.9	FF	97	DRE	160M4	270	391
	29	3020	50.36	16000	0.95	FA	87	DRE	160M4	170	387
	32	2710	45.28	16200	1.05	FAF	87	DRE	160M4	185	386
	37	2350	39.30	16400	1.15	F	87	DRE	160M4	175	385
	42	2110	35.19	16400	1.25	FF	87	DRE	160M4	190	386
	50	1750	29.20	16300	1.45						
	55	1580	26.50	16200	1.90						
	62	1420	23.68	16100	2.1	FA	87	DRE	160M4	170	387
	69	1270	21.32*	15900	2.4	FAF	87	DRE	160M4	180	386
	76	1150	19.31	15600	2.6	F	87	DRE	160M4	175	385
	86	1020	17.12	15400	2.9	FF	87	DRE	160M4	190	386
	95	920	15.48	15100	3.2						
	112	785	13.12*	14700	3.8						
	74	1180	19.70	17500	1.25						
	84	1040	17.49	18100	1.45						
	94	930	15.64*	18200	1.60						
	104	840	14.06	17900	1.80						
	120	730	12.20	17400	2.0	FA	77	DRE	160M4	130	382
	134	655	10.93	17100	2.3	FAF	77	DRE	160M4	135	381
	158	555	9.30	16000	1.95	F	77	DRE	160M4	135	380
	177	495	8.26	15600	2.2	FF	77	DRE	160M4	145	381
	198	440	7.39	15200	2.4						
	221	395	6.64	14900	2.7						
	254	345	5.76	14500	3.1						
	284	305	5.16	14100	3.5						
342	255	4.28	13500	3.9							
11.0	4.9	20000	302	93600	0.90	FA	157R97	DRE	160MC4	840	410
	5.4	18100	273	99900	1.00	FAF	157R97	DRE	160MC4	900	410
	6.4	15300	232	107400	1.15	F	157R97	DRE	160MC4	860	410
	7.3	13300	202	111600	1.35	FF	157R97	DRE	160MC4	970	410
	7.5	12900	197	112300	1.40						
	6.6	14800	223	84900	0.80	FA	127R87	DRE	160MC4	530	410
	7.5	13100	198	88300	0.90	FAF	127R87	DRE	160MC4	560	410
	8.9	11000	166	90000	1.10	F	127R87	DRE	160MC4	560	410
						FF	127R87	DRE	160MC4	610	410
	5.5	19000	267.43	97000	0.95						
	6.8	15400	217.62*	106900	1.15						
	8.3	12600	178.20*	112900	1.40						
	9.0	11600	162.96	114800	1.55	FA	157	DRE	160MC4	710	407
	10	10000	141.80*	117100	1.80	FAF	157	DRE	160MC4	770	406
	12	8910	125.14	118700	2.0	F	157	DRE	160MC4	740	405
	14	7720	108.49	120000	2.3	FF	157	DRE	160MC4	840	406
	15	6870	96.53*	120000	2.6						
	17	6110	85.80*	117400	3.0						
	19	5580	78.46	115000	3.2						
	22	4860	68.28*	111300	3.7						
	8.6	12100	170.83	90000	1.00						
	9.6	10900	153.67*	90000	1.10	FA	127	DRE	160MC4	460	402
	12	8920	125.37	90000	1.35	FAF	127	DRE	160MC4	495	401
	13	8140	114.34	90000	1.45	F	127	DRE	160MC4	495	400
	15	7040	98.95	90000	1.70	FF	127	DRE	160MC4	540	401
	17	6210	87.31*	90000	1.95						
	20	5370	75.41*	88200	2.2						
	13	8390	117.94	47900	0.90	FA	107	DRE	160MC4	315	397
	15	7210	101.38*	51000	1.05	FAF	107	DRE	160MC4	335	396
	16	6580	92.47*	52600	1.15	F	107	DRE	160MC4	330	395
						FF	107	DRE	160MC4	360	396

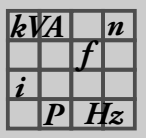
kVA	n
f	
i	
P	H <sub>Z</sub>

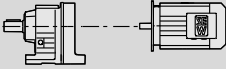

**F..DRE/DRS**  
F..DRE/DRS [kW]

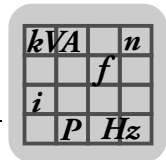
P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>		m [kg]	
<b>11.0</b>	18	5980	83.99	54100	1.30			
	20	5300	74.52	55600	1.45	FA 107	DRE 160MC4	315 397
	22	4810	67.62	56700	1.60	FAF 107	DRE 160MC4	335 396
	25	4130	58.12*	56200	1.85	F 107	DRE 160MC4	330 395
	29	3610	50.73	54900	2.1	FF 107	DRE 160MC4	360 396
	34	3060	43.03	53300	2.5			
	44	2400	33.79*	50700	3.1	FA 107	DRE 160MC4	305 397
	54	1960	27.57	48500	4.0	FAF 107	DRE 160MC4	325 396
	59	1790	25.14	47500	4.4	F 107	DRE 160MC4	320 395
						FF 107	DRE 160MC4	350 396
	23	4660	65.47	26900	0.90	FA 97	DRE 160MC4	240 392
	25	4130	58.06	27100	1.05	FAF 97	DRE 160MC4	260 391
	28	3730	52.49	27100	1.15	F 97	DRE 160MC4	245 390
						FF 97	DRE 160MC4	280 391
	33	3160	44.49	26900	1.35	FA 97	DRE 160MC4	240 392
	38	2760	38.86	26700	1.55	FAF 97	DRE 160MC4	260 391
	45	2310	32.50	26200	1.85	F 97	DRE 160MC4	245 390
						FF 97	DRE 160MC4	280 391
	44	2410	33.91	26300	1.80	FA 97	DRE 160MC4	235 392
	49	2160	30.39	25900	2.00	FAF 97	DRE 160MC4	255 391
	54	1950	27.44*	25500	2.2	F 97	DRE 160MC4	240 390
	59	1770	24.92	25100	2.4	FF 97	DRE 160MC4	275 391
	67	1570	22.11	24600	2.7			
	38	2790	39.30	14600	0.95	FA 87	DRE 160MC4	175 387
	42	2500	35.19	14800	1.05	FAF 87	DRE 160MC4	190 386
	51	2070	29.20	15000	1.20	F 87	DRE 160MC4	180 385
						FF 87	DRE 160MC4	195 386
	56	1880	26.50	15000	1.60			
	62	1680	23.68	15000	1.80	FA 87	DRE 160MC4	175 387
	69	1510	21.32*	14900	2.00	FAF 87	DRE 160MC4	185 386
	76	1370	19.31	14800	2.2	F 87	DRE 160MC4	180 385
	86	1210	17.12	14600	2.5	FF 87	DRE 160MC4	195 386
	95	1100	15.48	14400	2.7			
	112	930	13.12*	14000	3.2			
	75	1400	19.70	16300	1.05			
	84	1240	17.49	17200	1.20			
	94	1110	15.64*	17600	1.35			
	105	1000	14.06	17300	1.50			
	121	860	12.20	16900	1.75	FA 77	DRE 160MC4	135 382
	135	775	10.93	16600	1.95	FAF 77	DRE 160MC4	140 381
	159	660	9.30	15400	1.65	F 77	DRE 160MC4	140 380
	179	585	8.26	15100	1.85	FF 77	DRE 160MC4	150 381
	200	525	7.39	14800	2.0			
	222	470	6.64	14500	2.3			
	256	410	5.76	14100	2.6			
286	365	5.16	13800	2.9				
345	300	4.28	13300	3.3				
<b>15.0</b>	6.3	21100	232	89700	0.85	FA 157R97	DRE 180M4	880 410
	7.2	18400	202	99000	1.00	FAF 157R97	DRE 180M4	940 410
	7.5	17900	197	100500	1.00	F 157R97	DRE 180M4	910 410
						FF 157R97	DRE 180M4	1010 410
	6.7	21200	217.62*	89000	0.85			
	8.2	17400	178.20*	101900	1.05			
	9.0	15900	162.96	105900	1.15			
	10	13800	141.80*	110600	1.30			
	12	12200	125.14	113700	1.45	FA 157	DRE 180M4	760 407
	14	10600	108.49	116400	1.70	FAF 157	DRE 180M4	820 406
	15	9430	96.53*	115700	1.90	F 157	DRE 180M4	780 405
	17	8380	85.80*	113200	2.2	FF 157	DRE 180M4	880 406
	19	7670	78.46	111100	2.4			
	21	6670	68.28*	108000	2.7			
	24	5890	60.25	105100	3.1			
	12	12200	125.37	89000	1.00			
	13	11100	114.34	88300	1.05	FA 127	DRE 180M4	500 402
	15	9670	98.95	87000	1.25	FAF 127	DRE 180M4	540 401
	17	8530	87.31*	85600	1.40	F 127	DRE 180M4	540 400
	19	7370	75.41*	83800	1.65	FF 127	DRE 180M4	580 401
	21	6850	70.07	82800	1.75			

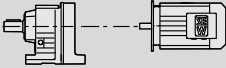



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
15.0	16	9040	92.47*	46000	0.85						
	17	8650	88.49	47100	0.90	FA	107	DRE	180M4	360	397
	17	8210	83.99	48400	0.95	FAF	107	DRE	180M4	380	396
	20	7280	74.52	50800	1.05	F	107	DRE	180M4	375	395
	22	6610	67.62	52600	1.15	FF	107	DRE	180M4	405	396
	25	5680	58.12*	52200	1.35	FA	107	DRE	180M4	360	397
	29	4960	50.73	51500	1.55	FAF	107	DRE	180M4	380	396
	34	4200	43.03	50300	1.85	F	107	DRE	180M4	375	395
	39	3670	37.61	49300	2.1	FF	107	DRE	180M4	405	396
	46	3100	31.80	47900	2.5						
	43	3300	33.79*	48400	2.2	FA	107	DRE	180M4	350	397
	53	2690	27.57	46700	2.9	FAF	107	DRE	180M4	370	396
	58	2450	25.14	45800	3.2	F	107	DRE	180M4	365	395
	67	2120	21.76*	44500	3.7	FF	107	DRE	180M4	395	396
	33	4340	44.49	22900	1.00	FA	97	DRE	180M4	285	392
	38	3790	38.86	23100	1.15	FAF	97	DRE	180M4	305	391
	45	3170	32.50	23200	1.35	F	97	DRE	180M4	290	390
						FF	97	DRE	180M4	325	391
	43	3310	33.91	23200	1.30						
	48	2970	30.39	23200	1.45						
	53	2680	27.44*	23100	1.60	FA	97	DRE	180M4	280	392
	59	2430	24.92	22900	1.75	FAF	97	DRE	180M4	300	391
	66	2160	22.11	22600	2.00	F	97	DRE	180M4	285	390
	73	1960	20.07	22400	2.2	FF	97	DRE	180M4	320	391
	85	1680	17.25*	21900	2.6						
	97	1470	15.06	21400	2.9						
	115	1240	12.77	20800	3.4						
	131	1090	11.16	20200	3.8						
	55	2590	26.50	12400	1.15						
	62	2310	23.68	12600	1.30						
	69	2080	21.32*	12700	1.45	FA	87	DRE	180M4	215	387
	76	1880	19.31	12800	1.60	FAF	87	DRE	180M4	230	386
	86	1670	17.12	12900	1.80	F	87	DRE	180M4	225	385
	95	1510	15.48	12800	2.00	FF	87	DRE	180M4	240	386
	112	1280	13.12*	12700	2.3						
	128	1120	11.46	12600	2.7						
	153	930	9.58	12300	3.1						
	177	810	8.29	11700	1.90						
	199	715	7.35	11500	2.1						
	220	645	6.65	11300	2.4						
260	550	5.63	11000	2.8							
298	480	4.92	10700	3.2							
356	400	4.12	10300	3.6							
18.5	7.2	22700	202	70200	0.80	FA	157R97	DRE	180L4	900	410
	7.5	22100	197	83800	0.80	FAF	157R97	DRE	180L4	960	410
						F	157R97	DRE	180L4	930	410
						FF	157R97	DRE	180L4	1030	410
	8.2	21400	178.20*	88200	0.85						
	9.0	19600	162.96	95000	0.90						
	10	17000	141.80*	102800	1.05						
	12	15000	125.14	107900	1.20	FA	157	DRE	180L4	780	407
	14	13000	108.49	112100	1.40	FAF	157	DRE	180L4	840	406
	15	11600	96.53*	111300	1.55	F	157	DRE	180L4	800	405
	17	10300	85.80*	109300	1.75	FF	157	DRE	180L4	900	406
	19	9460	78.46	107600	1.90						
	21	8230	68.28*	104900	2.2						
	24	7260	60.25	102300	2.5						
	28	6290	52.24	99400	2.9						
	13	13700	114.34	82200	0.85						
	15	11900	98.95	81700	1.00						
	17	10500	87.31*	80900	1.15	FA	127	DRE	180L4	520	402
	19	9090	75.41*	79700	1.30	FAF	127	DRE	180L4	560	401
	21	8450	70.07	79000	1.40	F	127	DRE	180L4	560	400
	23	7700	63.91	78100	1.55	FF	127	DRE	180L4	600	401
	26	6660	55.31	76400	1.80						
	30	5880	48.80	74900	2.0						


**F..DRE/DRS**  
**F..DRE/DRS [kW]**

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	i	$F_{Ra}^{1)}$ [N]	SEW $f_B$					m [kg]		
<b>18.5</b>	20	8980	74.52	46200	0.85	FA	107	DRE	180L4	380	397	
	22	8150	67.62	48500	0.95	FAF	107	DRE	180L4	400	396	
	25	7000	58.12*	48700	1.10	F	107	DRE	180L4	395	395	
	29	6110	50.73	48400	1.25	FF	107	DRE	180L4	425	396	
	34	5180	43.03	47700	1.50	FA	107	DRE	180L4	380	397	
	39	4530	37.61	47000	1.70	FAF	107	DRE	180L4	400	396	
	46	3830	31.80	46000	2.0	F	107	DRE	180L4	395	395	
							FF	107	DRE	180L4	425	396
	43	4070	33.79*	46400	1.80	FA	107	DRE	180L4	370	397	
	53	3320	27.57	45000	2.4	FAF	107	DRE	180L4	390	396	
	58	3030	25.14	44300	2.6	F	107	DRE	180L4	385	395	
	67	2620	21.76*	43200	3.0	FF	107	DRE	180L4	415	396	
	38	4680	38.86	20000	0.90	FA	97	DRE	180L4	305	392	
	45	3910	32.50	20600	1.10	FAF	97	DRE	180L4	325	391	
							F	97	DRE	180L4	310	390
							FF	97	DRE	180L4	345	391
	53	3300	27.44*	20900	1.30							
	59	3000	24.92	20900	1.45							
	66	2660	22.11	20900	1.60	FA	97	DRE	180L4	300	392	
	73	2410	20.07	20800	1.80	FAF	97	DRE	180L4	320	391	
	85	2070	17.25*	20500	2.1	F	97	DRE	180L4	305	390	
	97	1810	15.06	20200	2.4	FF	97	DRE	180L4	340	391	
	115	1530	12.77	19800	2.8							
	131	1340	11.16	19300	3.0							
	69	2570	21.32*	10900	1.15							
	76	2320	19.31	11100	1.30							
	86	2060	17.12	11400	1.45							
	95	1860	15.48	11500	1.60							
	112	1580	13.12*	11600	1.90	FA	87	DRE	180L4	235	387	
	128	1380	11.46	11600	2.2	FAF	87	DRE	180L4	250	386	
	153	1150	9.58	11500	2.5	F	87	DRE	180L4	240	385	
	177	990	8.29	10900	1.55	FF	87	DRE	180L4	255	386	
	199	880	7.35	10800	1.75							
	220	800	6.65	10700	1.90							
	260	675	5.63	10400	2.2							
	298	590	4.92	10200	2.6							
356	495	4.12	9900	2.9								
<b>22</b>	10	20100	141.80*	93100	0.90							
	12	17800	125.14	100800	1.00							
	14	15400	108.49	107000	1.15							
	15	13700	96.53*	106900	1.30							
	17	12200	85.80*	105200	1.45	FA	157	DRE	180LC4	790	407	
	19	11100	78.46	103900	1.60	FAF	157	DRE	180LC4	850	406	
	22	9720	68.28*	101600	1.85	F	157	DRE	180LC4	810	405	
	24	8580	60.25	99500	2.1	FF	157	DRE	180LC4	920	406	
	28	7440	52.24	96800	2.4							
	32	6610	46.48*	94600	2.7							
	37	5700	40.06	91800	3.2							
	45	4630	32.55	87700	3.9							
	15	14000	98.95	76300	0.85							
	17	12400	87.31*	76300	0.95							
	20	10700	75.41*	75700	1.10	FA	127	DRE	180LC4	530	402	
	21	9980	70.07	75300	1.20	FAF	127	DRE	180LC4	570	401	
	23	9100	63.91	74600	1.30	F	127	DRE	180LC4	570	400	
	27	7870	55.31	73400	1.50	FF	127	DRE	180LC4	620	401	
	30	6950	48.80	72200	1.75							
	35	6000	42.15	70600	2.0							
	25	8270	58.12*	45200	0.95	FA	107	DRE	180LC4	390	397	
	29	7220	50.73	45300	1.05	FAF	107	DRE	180LC4	410	396	
	34	6120	43.03	45100	1.25	F	107	DRE	180LC4	405	395	
						FF	107	DRE	180LC4	435	396	
	39	5350	37.61	44700	1.45	FA	107	DRE	180LC4	390	397	
	46	4520	31.80	44000	1.70	FAF	107	DRE	180LC4	410	396	
						F	107	DRE	180LC4	405	395	
						FF	107	DRE	180LC4	435	396	

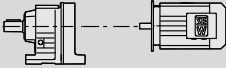



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]			
						FA	FAF	F	FF			DRE	180LC4
22	44	4810	33.79*	44300	1.55								
	54	3920	27.57	43300	2.0	FA	107		DRE	180LC4	380	397	
	59	3580	25.14	42700	2.2	FAF	107		DRE	180LC4	400	396	
	68	3090	21.76*	41800	2.5	F	107		DRE	180LC4	395	395	
	77	2730	19.20*	40900	2.9	FF	107		DRE	180LC4	425	396	
	54	3900	27.44*	18700	1.10								
	59	3540	24.92	18900	1.20								
	67	3140	22.11	19100	1.35	FA	97		DRE	180LC4	310	392	
	74	2850	20.07	19200	1.50	FAF	97		DRE	180LC4	330	391	
	86	2450	17.25*	19100	1.75	F	97		DRE	180LC4	315	390	
	98	2140	15.06	19000	2.0	FF	97		DRE	180LC4	350	391	
	116	1810	12.77	18700	2.4								
	132	1580	11.16	18400	2.6								
	69	3030	21.32*	9020	1.00								
	76	2740	19.31	9450	1.10								
86	2430	17.12	9870	1.25									
95	2200	15.48	10100	1.35									
112	1860	13.12*	10400	1.60	FA	87		DRE	180LC4	245	387		
129	1630	11.46	10600	1.85	FAF	87		DRE	180LC4	260	386		
154	1360	9.58	10600	2.1	F	87		DRE	180LC4	255	385		
178	1180	8.29	10100	1.30	FF	87		DRE	180LC4	270	386		
201	1040	7.35	10100	1.45									
222	940	6.65	10000	1.60									
262	800	5.63	9890	1.90									
300	700	4.92	9740	2.2									
358	585	4.12	9490	2.5									
30	14	21000	108.49	89800	0.85								
	15	18700	96.53*	96900	0.95								
	17	16600	85.80*	96400	1.10	FA	157		DRE	200L4	880	407	
	19	15200	78.46	95800	1.20	FAF	157		DRE	200L4	940	406	
	22	13200	68.28*	94600	1.35	F	157		DRE	200L4	900	405	
	24	11700	60.25	93200	1.55	FF	157		DRE	200L4	1000	406	
	28	10100	52.24	91400	1.75								
	32	9020	46.48*	89800	2.00								
	37	7780	40.06	87600	2.3								
	20	14600	75.41*	64500	0.80								
	21	13600	70.07	65700	0.90								
	23	12400	63.91	66800	0.95	FA	127		DRE	200L4	620	402	
	27	10700	55.31	66700	1.10	FAF	127		DRE	200L4	660	401	
	30	9470	48.80	66300	1.25	F	127		DRE	200L4	660	400	
	35	8180	42.15	65500	1.45	FF	127		DRE	200L4	700	401	
	40	7240	37.28	64700	1.65								
	47	6080	31.33	63200	1.95								
	58	4910	25.30	61100	2.4								
	55	5210	26.86	61800	1.65	FA	127		DRE	200L4	610	402	
	60	4770	24.57	60800	1.80	FAF	127		DRE	200L4	650	401	
	69	4150	21.38	59300	2.9	F	127		DRE	200L4	650	400	
	78	3660	18.87	57900	3.0	FF	127		DRE	200L4	690	401	
	34	8350	43.03	39200	0.90	FA	107		DRE	200L4	480	397	
	39	7300	37.61	39600	1.05	FAF	107		DRE	200L4	500	396	
	46	6170	31.80	39700	1.25	F	107		DRE	200L4	495	395	
						FF	107		DRE	200L4	520	396	
	54	5350	27.57	39500	1.45								
	59	4880	25.14	39300	1.60	FA	107		DRE	200L4	470	397	
	68	4220	21.76*	38800	1.85	FAF	107		DRE	200L4	490	396	
	77	3720	19.20*	38300	2.1	F	107		DRE	200L4	485	395	
89	3220	16.58	37600	2.4	FF	107		DRE	200L4	510	396		
101	2840	14.67	36900	2.7									
120	2390	12.33	35800	2.9									
148	1930	9.96	34400	3.4									

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## F..DRE/DRS

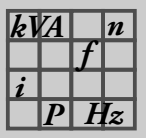
### F..DRE/DRS [kW]

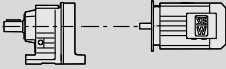

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
30	67	4290	22.11	15100	1.00				
	74	3890	20.07	15500	1.10				
	86	3350	17.25*	16000	1.30				
	98	2920	15.06	16300	1.45				
	116	2480	12.77	16400	1.75	FA 97	DRE 200L4	395	392
	132	2160	11.16	16400	1.90	FAF 97	DRE 200L4	420	391
	163	1760	9.06	15400	1.35	F 97	DRE 200L4	405	390
	179	1590	8.22	15300	1.50	FF 97	DRE 200L4	435	391
	209	1370	7.07	15100	1.70				
	239	1190	6.17	14900	1.90				
	282	1010	5.23	14600	2.1				
	322	880	4.57	14300	2.3				
	37	17	20500	85.80*	88600	0.90			
19		18700	78.46	88700	0.95				
22		16300	68.28*	88400	1.10				
25		14400	60.25	87800	1.25	FA 157	DRE 225S4	910	407
28		12400	52.24	86700	1.45	FAF 157	DRE 225S4	970	406
32		11100	46.48*	85600	1.60	F 157	DRE 225S4	930	405
37		9580	40.06	84000	1.90	FF 157	DRE 225S4	1030	406
45		7780	32.55	81300	2.3				
54		6600	27.60	79000	2.7				
27		13200	55.31	59200	0.90				
30		11600	48.80	60800	1.05	FA 127	DRE 225S4	650	402
35		10000	42.15	61100	1.20	FAF 127	DRE 225S4	690	401
40		8910	37.28	60700	1.35	F 127	DRE 225S4	690	400
47		7490	31.33	59900	1.60	FF 127	DRE 225S4	730	401
58		6050	25.30	58500	2.00				
55		6420	26.86	58900	1.30				
60		5870	24.57	58200	1.45				
69		5110	21.38	57100	2.4				
78		4510	18.87	55900	2.4	FA 127	DRE 225S4	640	402
90		3910	16.36	54500	2.8	FAF 127	DRE 225S4	680	401
102		3480	14.55	53400	3.2	F 127	DRE 225S4	680	400
118		3000	12.54	51800	3.3	FF 127	DRE 225S4	720	401
145		2430	10.19	49600	3.9				
167		2110	8.86	47700	3.3				
187		1880	7.88	46400	3.2				
54		6590	27.57	36200	1.20				
59		6010	25.14	36300	1.30				
68		5200	21.76*	36200	1.50				
77		4590	19.20*	36000	1.70				
89		3960	16.58	35600	2.00	FA 107	DRE 225S4	500	397
101		3500	14.67	35100	2.2	FAF 107	DRE 225S4	520	396
120		2940	12.33	34300	2.4	F 107	DRE 225S4	510	395
148		2380	9.96	33200	2.7	FF 107	DRE 225S4	540	396
152	2310	9.69	32400	2.1					
176	2000	8.37	31700	2.4					
199	1770	7.40	31000	2.6					
237	1480	6.22	30000	3.1					
45	22	19800	68.28*	81400	0.90				
	25	17500	60.25	81600	1.05				
	28	15100	52.24	81300	1.20	FA 157	DRE 225M4	930	407
	32	13500	46.48*	80800	1.35	FAF 157	DRE 225M4	990	406
	37	11600	40.06	79800	1.55	F 157	DRE 225M4	950	405
	45	9460	32.55	78000	1.90	FF 157	DRE 225M4	1060	406
	54	8020	27.60	76200	2.2				
	30	14100	48.80	51600	0.85				
	35	12200	42.15	54300	1.00	FA 127	DRE 225M4	670	402
	40	10800	37.28	55800	1.10	FAF 127	DRE 225M4	710	401
	47	9100	31.33	56100	1.30	F 127	DRE 225M4	710	400
	58	7350	25.30	55400	1.65	FF 127	DRE 225M4	750	401

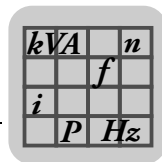




P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
<b>45</b>	<b>55</b>	7810	26.86	55700	1.10						
	<b>60</b>	7140	24.57	55300	1.20						
	<b>69</b>	6210	21.38	54500	1.95						
	<b>78</b>	5480	18.87	53600	2.0						
	<b>90</b>	4750	16.36	52600	2.3	<b>FA</b>	<b>127</b>	<b>DRE</b>	<b>225M4</b>	660	402
	<b>102</b>	4230	14.55	51600	2.6	<b>FAF</b>	<b>127</b>	<b>DRE</b>	<b>225M4</b>	700	401
	<b>118</b>	3640	12.54	50300	2.7	<b>F</b>	<b>127</b>	<b>DRE</b>	<b>225M4</b>	700	400
	<b>145</b>	2960	10.19	48300	3.2	<b>FF</b>	<b>127</b>	<b>DRE</b>	<b>225M4</b>	740	401
	<b>167</b>	2570	8.86	46500	2.7						
	<b>187</b>	2290	7.88	45400	2.6						
	<b>218</b>	1970	6.80	44000	3.5						
	<b>268</b>	1600	5.52	42000	3.7						
	<b>54</b>	8010	27.57	31500	1.00						
	<b>59</b>	7310	25.14	32600	1.05						
	<b>68</b>	6320	21.76*	33200	1.25						
	<b>77</b>	5580	19.20*	33300	1.40						
	<b>89</b>	4820	16.58	33300	1.65	<b>FA</b>	<b>107</b>	<b>DRE</b>	<b>225M4</b>	520	397
	<b>101</b>	4260	14.67	33100	1.80	<b>FAF</b>	<b>107</b>	<b>DRE</b>	<b>225M4</b>	540	396
	<b>120</b>	3580	12.33	32600	1.95	<b>F</b>	<b>107</b>	<b>DRE</b>	<b>225M4</b>	540	395
	<b>148</b>	2890	9.96	31900	2.2	<b>FF</b>	<b>107</b>	<b>DRE</b>	<b>225M4</b>	560	396
<b>152</b>	2810	9.69	30900	1.75							
<b>177</b>	2430	8.37	30400	1.95							
<b>200</b>	2150	7.40	29900	2.1							
<b>238</b>	1800	6.22	29000	2.5							
<b>55</b>	<b>24</b>	21400	60.25	73800	0.85						
	<b>28</b>	18600	52.24	74600	0.95	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>250M4</b>	1060	407
	<b>32</b>	16500	46.48*	74800	1.10	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>250M4</b>	1120	406
	<b>37</b>	14200	40.06	74700	1.25	<b>F</b>	<b>157</b>	<b>DRE</b>	<b>250M4</b>	1080	405
	<b>45</b>	11500	32.55	73800	1.55	<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>250M4</b>	1190	406
	<b>53</b>	9820	27.60	72600	1.85						
	<b>52</b>	10100	28.60*	72900	1.65	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>250M4</b>	1060	407
	<b>58</b>	9050	25.43	71900	1.65	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>250M4</b>	1120	406
	<b>67</b>	7890	22.16	70600	2.3	<b>F</b>	<b>157</b>	<b>DRE</b>	<b>250M4</b>	1080	405
	<b>75</b>	7030	19.77	69400	2.4	<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>250M4</b>	1180	406
	<b>88</b>	6000	16.85	67600	3.0						
	<b>40</b>	13200	37.28	46900	0.90	<b>FA</b>	<b>127</b>	<b>DRE</b>	<b>250M4</b>	810	402
	<b>47</b>	11100	31.33	49900	1.10	<b>FAF</b>	<b>127</b>	<b>DRE</b>	<b>250M4</b>	840	401
	<b>58</b>	9010	25.30	51600	1.35	<b>F</b>	<b>127</b>	<b>DRE</b>	<b>250M4</b>	840	400
						<b>FF</b>	<b>127</b>	<b>DRE</b>	<b>250M4</b>	890	401
	<b>69</b>	7610	21.38	51300	1.60						
	<b>78</b>	6710	18.87	50800	1.65						
	<b>90</b>	5820	16.36	50100	1.90						
	<b>101</b>	5180	14.55	49400	2.1	<b>FA</b>	<b>127</b>	<b>DRE</b>	<b>250M4</b>	800	402
	<b>118</b>	4460	12.54	48400	2.2	<b>FAF</b>	<b>127</b>	<b>DRE</b>	<b>250M4</b>	830	401
<b>145</b>	3620	10.19	46800	2.6	<b>F</b>	<b>127</b>	<b>DRE</b>	<b>250M4</b>	830	400	
<b>166</b>	3150	8.86	45100	2.2	<b>FF</b>	<b>127</b>	<b>DRE</b>	<b>250M4</b>	880	401	
<b>187</b>	2800	7.88	44200	2.1							
<b>217</b>	2410	6.80	42900	2.9							
<b>267</b>	1960	5.52	41100	3.0							
<b>315</b>	1660	4.68	39600	3.6							
<b>75</b>	<b>32</b>	22400	46.48*	62900	0.80	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>280S4</b>	1140	407
	<b>37</b>	19300	40.06	64400	0.95	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>280S4</b>	1200	406
	<b>45</b>	15700	32.55	65400	1.15	<b>F</b>	<b>157</b>	<b>DRE</b>	<b>280S4</b>	1160	405
	<b>54</b>	13300	27.60	65500	1.35	<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>280S4</b>	1270	406
	<b>52</b>	13800	28.60*	65500	1.25						
	<b>58</b>	12300	25.43	65400	1.20	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>280S4</b>	1130	407
	<b>67</b>	10700	22.16	64900	1.70	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>280S4</b>	1190	406
	<b>75</b>	9560	19.77	64300	1.80	<b>F</b>	<b>157</b>	<b>DRE</b>	<b>280S4</b>	1150	405
	<b>88</b>	8150	16.85	63200	2.2	<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>280S4</b>	1260	406
	<b>106</b>	6750	13.96	61600	2.5						
	<b>124</b>	5760	11.92	60100	2.8						
	<b>58</b>	12200	25.30	40000	1.00	<b>FA</b>	<b>127</b>	<b>DRE</b>	<b>280S4</b>	880	402
						<b>FAF</b>	<b>127</b>	<b>DRE</b>	<b>280S4</b>	920	401
						<b>F</b>	<b>127</b>	<b>DRE</b>	<b>280S4</b>	920	400
						<b>FF</b>	<b>127</b>	<b>DRE</b>	<b>280S4</b>	960	401

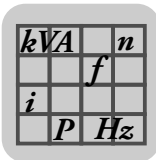

**F..DRE/DRS**  
**F..DRE/DRS [kW]**

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]		
<b>75</b>	<b>69</b>	10300	21.38	43000	1.15							
	<b>78</b>	9120	18.87	44400	1.20							
	<b>90</b>	7910	16.36	45200	1.40							
	<b>102</b>	7040	14.55	45000	1.55							
	<b>118</b>	6060	12.54	44600	1.65	<b>FA</b>	<b>127</b>	<b>DRE</b>	<b>280S4</b>	870	402	
	<b>145</b>	4930	10.19	43700	1.95	<b>FAF</b>	<b>127</b>	<b>DRE</b>	<b>280S4</b>	910	401	
	<b>167</b>	4280	8.86	42200	1.65	<b>F</b>	<b>127</b>	<b>DRE</b>	<b>280S4</b>	910	400	
	<b>188</b>	3810	7.88	41600	1.55	<b>FF</b>	<b>127</b>	<b>DRE</b>	<b>280S4</b>	950	401	
	<b>218</b>	3280	6.80	40700	2.1							
	<b>268</b>	2670	5.52	39300	2.2							
	<b>316</b>	2260	4.68	38100	2.6							
<b>90</b>	<b>45</b>	18900	32.55	59100	0.95	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>280M4</b>	1140	407	
	<b>54</b>	16000	27.60	60200	1.10	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>280M4</b>	1200	406	
						<b>F</b>	<b>157</b>	<b>DRE</b>	<b>280M4</b>	1160	405	
						<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>280M4</b>	1270	406	
	<b>67</b>	12800	22.16	60600	1.40	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>280M4</b>	1130	407	
	<b>75</b>	11400	19.77	60500	1.50	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>280M4</b>	1190	406	
	<b>88</b>	9780	16.85	59900	1.85	<b>F</b>	<b>157</b>	<b>DRE</b>	<b>280M4</b>	1150	405	
	<b>106</b>	8100	13.96	58900	2.1	<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>280M4</b>	1260	406	
	<b>124</b>	6920	11.92	57800	2.3							
	<b>58</b>	14600	25.30	29600	0.80	<b>FA</b>	<b>127</b>	<b>DRE</b>	<b>280M4</b>	880	402	
						<b>FAF</b>	<b>127</b>	<b>DRE</b>	<b>280M4</b>	920	401	
						<b>F</b>	<b>127</b>	<b>DRE</b>	<b>280M4</b>	920	400	
						<b>FF</b>	<b>127</b>	<b>DRE</b>	<b>280M4</b>	960	401	
	<b>90</b>	9490	16.36	39800	1.15							
	<b>102</b>	8450	14.55	41100	1.30							
	<b>118</b>	7280	12.54	41800	1.35	<b>FA</b>	<b>127</b>	<b>DRE</b>	<b>280M4</b>	870	402	
	<b>145</b>	5910	10.19	41400	1.60	<b>FAF</b>	<b>127</b>	<b>DRE</b>	<b>280M4</b>	910	401	
	<b>167</b>	5140	8.86	40100	1.35	<b>F</b>	<b>127</b>	<b>DRE</b>	<b>280M4</b>	910	400	
	<b>188</b>	4570	7.88	39700	1.30	<b>FF</b>	<b>127</b>	<b>DRE</b>	<b>280M4</b>	950	401	
<b>218</b>	3940	6.80	39000	1.75								
<b>268</b>	3200	5.52	37900	1.85								
<b>316</b>	2710	4.68	36900	2.2								
<b>110</b>	<b>54</b>	19500	27.60	53100	0.90	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>315K4</b>	1450	407	
						<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>315K4</b>	1510	406	
						<b>F</b>	<b>157</b>	<b>DRE</b>	<b>315K4</b>	1470	405	
						<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>315K4</b>	1580	406	
	<b>67</b>	15600	22.16	54900	1.15	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>315K4/ERF/NS</b>	1440	407	
						<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>315K4/ERF/NS</b>	1500	406	
						<b>F</b>	<b>157</b>	<b>DRE</b>	<b>315K4/ERF/NS</b>	1470	405	
						<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>315K4/ERF/NS</b>	1570	406	
	<b>75</b>	14000	19.77	55400	1.20	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>315K4</b>	1440	407	
	<b>88</b>	11900	16.85	55600	1.50	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>315K4</b>	1500	406	
	<b>106</b>	9890	13.96	55300	1.70	<b>F</b>	<b>157</b>	<b>DRE</b>	<b>315K4</b>	1470	405	
	<b>124</b>	8440	11.92	54700	1.90	<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>315K4</b>	1570	406	
	<b>132</b>	<b>67</b>	18800	22.16	48700	0.95	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>315S4/ERF/NS</b>	1520	407
		<b>75</b>	16700	19.77	49800	1.00	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>315S4/ERF/NS</b>	1580	406
							<b>F</b>	<b>157</b>	<b>DRE</b>	<b>315S4/ERF/NS</b>	1550	405
						<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>315S4/ERF/NS</b>	1650	406	
<b>88</b>		14300	16.85	50900	1.25	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>315S4</b>	1520	407	
<b>106</b>		11800	13.96	51400	1.45	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>315S4</b>	1580	406	
<b>125</b>		10100	11.92	51400	1.60	<b>F</b>	<b>157</b>	<b>DRE</b>	<b>315S4</b>	1550	405	
						<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>315S4</b>	1650	406	
<b>160</b>		17300	16.85	44800	1.05	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>315M4</b>	1680	407	
<b>106</b>	14300	13.96	46400	1.20	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>315M4</b>	1740	406		
<b>125</b>	12200	11.92	47100	1.30	<b>F</b>	<b>157</b>	<b>DRE</b>	<b>315M4</b>	1700	405		
					<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>315M4</b>	1810	406		
<b>200</b>	<b>88</b>	21700	16.85	36100	0.85	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>315L4/ERF/NS</b>	1760	407	
						<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>315L4/ERF/NS</b>	1820	406	
						<b>F</b>	<b>157</b>	<b>DRE</b>	<b>315L4/ERF/NS</b>	1780	405	
						<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>315L4/ERF/NS</b>	1890	406	
	<b>106</b>	17900	13.96	39200	0.95	<b>FA</b>	<b>157</b>	<b>DRE</b>	<b>315L4</b>	1760	407	
	<b>124</b>	15300	11.92	41000	1.05	<b>FAF</b>	<b>157</b>	<b>DRE</b>	<b>315L4</b>	1820	406	
						<b>F</b>	<b>157</b>	<b>DRE</b>	<b>315L4</b>	1780	405	
					<b>FF</b>	<b>157</b>	<b>DRE</b>	<b>315L4</b>	1890	406		

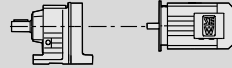



9.4 F..R..DRE/DRS [Nm]

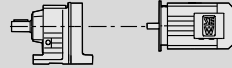

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
130	0.15	8972	4500						
	0.18	7736	4500						
	0.19	7211	4500						
	0.22	6303	4500						
	0.25	5435	4500	FA	27R17	DR	63S4	13	410
	0.28	4855	4500	FAF	27R17	DR	63S4	14	410
	0.33	4243	4500	F	27R17	DR	63S4	14	410
	0.37	3715	4500	FF	27R17	DR	63S4	14	410
	0.43	3247	4500						
	0.48	2878	4500						
	0.55	2515	4500						
	0.62	2217	4500						
	0.73	1898	4500						
	0.84	1645	4500						
	0.90	1525	4500						
	1.0	1322	4500	FA	27R17	DR	63S4	13	410
	1.2	1146	4500	FAF	27R17	DR	63S4	14	410
	1.4	1013	4500	F	27R17	DR	63S4	13	410
	1.6	890	4500	FF	27R17	DR	63S4	14	410
	1.8	778	4500						
	2.0	682	4500						
	2.3	602	4500						
	2.6	520	4500						
	3.0	458	4500						
	3.5	397	4500						
	4.0	342	4500	FA	27R17	DR	63S4	13	410
	4.6	302	4500	FAF	27R17	DR	63S4	13	410
	5.2	266	4500	F	27R17	DR	63S4	13	410
	5.8	236	4500	FF	27R17	DR	63S4	14	410
	6.5	211	4500						
	7.4	186	4500						
	9.3	142	4500	FA	27R17	DR	63M4	13	410
11	124	4500	FAF	27R17	DR	63M4	13	410	
			F	27R17	DR	63M4	13	410	
			FF	27R17	DR	63M4	14	410	
12	109	4500	FA	27R17	DR	63L4	13	410	
14	96	4500	FAF	27R17	DR	63L4	14	410	
			F	27R17	DR	63L4	14	410	
			FF	27R17	DR	63L4	15	410	
200	0.17	8193	4290						
	0.20	7064	4290						
	0.21	6585	4290						
	0.24	5756	4290						
	0.28	4963	4290	FA	37R17	DR	63S4	19	410
	0.31	4434	4290	FAF	37R17	DR	63S4	21	410
	0.36	3875	4290	F	37R17	DR	63S4	20	410
	0.41	3392	4290	FF	37R17	DR	63S4	22	410
	0.47	2965	4290						
	0.53	2587	4290						
	0.60	2284	4290						
	0.69	1997	4290						
	0.72	1929	4290						
	0.82	1679	4290						
	0.89	1550	4290						
	1.0	1356	4290						
	1.2	1180	4290						
	1.3	1044	4290	FA	37R17	DR	63S4	19	410
	1.5	914	4290	FAF	37R17	DR	63S4	21	410
	1.7	808	4290	F	37R17	DR	63S4	20	410
	2.0	698	4290	FF	37R17	DR	63S4	21	410
	2.2	616	4290						
	2.5	544	4290						
	3.0	466	4290						
	3.4	411	4290						
	3.8	364	4290						



**F..DRE/DRS**  
**F..R..DRE/DRS [Nm]**

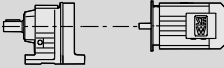

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]		$m$ [kg]																									
200	4.2 4.8	326	4290	FA 37R17 DR 63S4	19	410																								
				FAF 37R17 DR 63S4	20	410																								
				F 37R17 DR 63S4	19	410																								
				FF 37R17 DR 63S4	21	410																								
	5.3 6.0 7.1	250	4290	FA 37R17 DR 63M4	19	410																								
				FAF 37R17 DR 63M4	20	410																								
				F 37R17 DR 63M4	19	410																								
				FF 37R17 DR 63M4	21	410																								
	7.8 8.9 10	167	4290	FA 37R17 DR 63L4	20	410																								
				FAF 37R17 DR 63L4	21	410																								
				F 37R17 DR 63L4	20	410																								
				FF 37R17 DR 63L4	22	410																								
	400	0.11 0.13 0.14 0.16 0.19 0.21 0.24 0.27 0.31 0.36 0.40 0.46 0.52	12251 10619 9846 8534 7460 6536 5746 5022 4401 3883 3443 2976 2629	5920 5920 5920 5920 5920 5920 5920 5920 5920 5920 5920 5920 5920	FA 47R17 DR 63S4 FAF 47R17 DR 63S4 F 47R17 DR 63S4 FF 47R17 DR 63S4	24 27 25 28	410 410 410 410																							
								0.55 0.58 0.64 0.68 0.78 0.88 1.0 1.2 1.3 1.5 1.7 2.0 2.2	2519 2394 2172 2025 1770 1576 1363 1192 1061 931 822 706 619	5920 5920 5920 5920 5920 5920 5920 5920 5920 5920 5920 5920 5920	FA 47R17 DR 63S4 FAF 47R17 DR 63S4 F 47R17 DR 63S4 FF 47R17 DR 63S4	23 26 24 27	410 410 410 410																	
														2.5 2.7 3.1 3.5	524 489 427 381	5920 5920 5920 5920	FA 47R17 DR 63M4 FAF 47R17 DR 63M4 F 47R17 DR 63M4 FF 47R17 DR 63M4	23 26 24 27	410 410 410 410											
																				3.9 4.4 5.1	334 295 253	5920 5920 5920	FA 47R17 DR 63L4 FAF 47R17 DR 63L4 F 47R17 DR 63L4 FF 47R17 DR 63L4	24 26 25 28	410 410 410 410					
6.4 7.3 7.8																										217 190 178	5920 5920 5920	FA 47R17 DRS 71S4 FAF 47R17 DRS 71S4 F 47R17 DRS 71S4 FF 47R17 DRS 71S4	26 28 26 30	410 410 410 410
														600	0.09 0.10 0.11 0.12 0.14 0.16 0.17 0.20 0.23 0.26 0.30 0.34 0.39 0.44	14832 13604 12602 11252 9986 8787 7908 6913 6030 5289 4654 4060 3564 3161	9200 9200 9200 9200 9200 9200 9200 9200 9200 9200 9200 9200 9200 9200 9200	FA 57R37 DR 63S4 FAF 57R37 DR 63S4 F 57R37 DR 63S4 FF 57R37 DR 63S4	39 45 39 46	410 410 410 410										



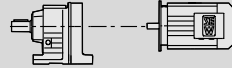

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
600	0.48	2854	9200						
	0.54	2576	9200						
	0.61	2266	9200						
	0.69	2012	9200						
	0.77	1791	9200	FA	57R37	DR	63S4	39	410
	0.85	1617	9200	FAF	57R37	DR	63S4	44	410
	0.97	1422	9200	F	57R37	DR	63S4	39	410
	1.1	1243	9200	FF	57R37	DR	63S4	45	410
	1.3	1066	9200						
	1.4	949	9200						
	1.6	856	9200						
	1.8	749	9200	FA	57R37	DR	63M4	39	410
	2.0	658	9200	FAF	57R37	DR	63M4	44	410
	2.4	549	9200	F	57R37	DR	63M4	39	410
				FF	57R37	DR	63M4	45	410
	2.7	483	9200	FA	57R37	DR	63L4	39	410
				FAF	57R37	DR	63L4	45	410
				F	57R37	DR	63L4	40	410
				FF	57R37	DR	63L4	46	410
	3.0	426	9200	FA	57R37	DR	63L4	39	410
	3.4	382	9200	FAF	57R37	DR	63L4	45	410
				F	57R37	DR	63L4	39	410
				FF	57R37	DR	63L4	46	410
	4.2	330	9200	FA	57R37	DRS	71S4	41	410
	4.6	298	9200	FAF	57R37	DRS	71S4	47	410
	5.3	262	9200	F	57R37	DRS	71S4	41	410
				FF	57R37	DRS	71S4	48	410
	6.1	226	9200	FA	57R37	DRS	71M4	42	410
	6.9	200	9200	FAF	57R37	DRS	71M4	48	410
				F	57R37	DRS	71M4	42	410
				FF	57R37	DRS	71M4	49	410
	8.4	170	9200	FA	57R37	DRE	80M4	47	410
9.4	152	9200	FAF	57R37	DRE	80M4	53	410	
11	134	9200	F	57R37	DRE	80M4	47	410	
			FF	57R37	DRE	80M4	54	410	
820	0.07	19199	10300						
	0.08	17610	10300						
	0.09	14992	10300						
	0.11	12926	10300						
	0.12	11480	10300						
	0.14	10220	10300						
	0.15	8933	10300						
	0.17	7940	10300	FA	67R37	DR	63S4	43	410
	0.19	7096	10300	FAF	67R37	DR	63S4	49	410
	0.23	6080	10300	F	67R37	DR	63S4	46	410
	0.26	5341	10300	FF	67R37	DR	63S4	52	410
	0.29	4690	10300						
	0.34	4091	10300						
	0.39	3574	10300						
	0.44	3133	10300						
	0.50	2756	10300						
	0.57	2439	10300						
	0.41	3377	10300						
	0.47	2912	10300						
	0.51	2714	10300	FA	67R37	DR	63S4	42	410
	0.58	2372	10300	FAF	67R37	DR	63S4	48	410
	0.65	2126	10300	F	67R37	DR	63S4	45	410
	0.85	1631	10300	FF	67R37	DR	63S4	51	410
	0.96	1437	10300						
	1.1	1256	10300						
	1.2	1126	10300	FA	67R37	DR	63M4	42	410
	1.3	984	10300	FAF	67R37	DR	63M4	48	410
	1.5	864	10300	F	67R37	DR	63M4	45	410
				FF	67R37	DR	63M4	51	410
	1.8	722	10300	FA	67R37	DR	63L4	43	410
	2.0	634	10300	FAF	67R37	DR	63L4	49	410
	2.4	539	10300	F	67R37	DR	63L4	46	410
			FF	67R37	DR	63L4	52	410	

$kVA$	$n$
$f$	
$i$	
$P$	$Hz$

**F..DRE/DRS**  
**F..R..DRE/DRS [Nm]**

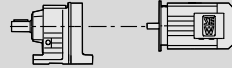

$M_{a\ max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]		$m$ [kg]	
<b>820</b>	0.73	1884	10300	FA 67R37 DR 63S4	43	410
				FAF 67R37 DR 63S4	49	410
				F 67R37 DR 63S4	46	410
				FF 67R37 DR 63S4	52	410
	2.6	500	10300	FA 67R37 DR 63L4	42	410
				FAF 67R37 DR 63L4	49	410
				F 67R37 DR 63L4	45	410
				FF 67R37 DR 63L4	51	410
	3.0	454	10300	FA 67R37 DRS 71S4	44	410
				FAF 67R37 DRS 71S4	51	410
	3.5	392	10300	F 67R37 DRS 71S4	47	410
				FF 67R37 DRS 71S4	53	410
	4.1	333	10300	FA 67R37 DRS 71M4	46	410
				FAF 67R37 DRS 71M4	52	410
				F 67R37 DRS 71M4	48	410
				FF 67R37 DRS 71M4	54	410
	4.6	297	10300	FA 67R37 DRE 80M4	50	410
				FAF 67R37 DRE 80M4	57	410
				F 67R37 DRE 80M4	53	410
				FF 67R37 DRE 80M4	59	410
	5.3	261	10300	FA 67R37 DRE 80M4	50	410
				FAF 67R37 DRE 80M4	57	410
				F 67R37 DRE 80M4	53	410
				FF 67R37 DRE 80M4	59	410
5.8	238	10300	FA 67R37 DRE 80M4	50	410	
			FAF 67R37 DRE 80M4	57	410	
			F 67R37 DRE 80M4	53	410	
			FF 67R37 DRE 80M4	59	410	
7.2	200	10300	FA 67R37 DRE 80M4	50	410	
			FAF 67R37 DRE 80M4	57	410	
			F 67R37 DRE 80M4	53	410	
			FF 67R37 DRE 80M4	59	410	
<b>1500</b>	0.07	19180	15700			
	0.08	17593	15700			
	0.09	16128	15700			
	0.09	14978	15700			
	0.10	13731	15700			
	0.11	12049	15700			
	0.13	11035	15700			
	0.14	9683	15700	FA 77R37 DR 63S4	65	410
	0.16	8464	15700	FAF 77R37 DR 63S4	72	410
	0.18	7520	15700	F 77R37 DR 63S4	69	410
	0.21	6580	15700	FF 77R37 DR 63S4	80	410
	0.24	5808	15700			
	0.27	5026	15700			
	0.31	4435	15700			
	0.36	3832	15700			
	0.46	2978	15700			
	0.53	2613	15700			
	0.60	2284	15700			
	0.65	2029	15700	FA 77R37 DR 63M4	65	410
				FAF 77R37 DR 63M4	72	410
				F 77R37 DR 63M4	69	410
				FF 77R37 DR 63M4	80	410
	0.76	1728	15700	FA 77R37 DR 63M4	65	410
				FAF 77R37 DR 63M4	72	410
				F 77R37 DR 63M4	69	410
	0.86	1544	15700	FF 77R37 DR 63M4	80	410
				FA 77R37 DR 63L4	66	410
				FAF 77R37 DR 63L4	72	410
	1.1	1200	15700	F 77R37 DR 63L4	70	410
				FF 77R37 DR 63L4	80	410
				FA 77R37 DRS 71S4	68	410
	1.5	910	15700	FAF 77R37 DRS 71S4	74	410
				F 77R37 DRS 71S4	72	410
				FF 77R37 DRS 71S4	82	410
	1.7	810	15700	FA 77R37 DRS 71M4	69	410
				FAF 77R37 DRS 71M4	76	410
				F 77R37 DRS 71M4	73	410
				FF 77R37 DRS 71M4	83	410
	2.2	615	15700	FA 77R37 DRE 80M4	74	410
				FAF 77R37 DRE 80M4	80	410
				F 77R37 DRE 80M4	78	410
				FF 77R37 DRE 80M4	88	410
	2.6	538	15700	FA 77R37 DRE 90M4	78	410
				FAF 77R37 DRE 90M4	85	410
				F 77R37 DRE 90M4	82	410
				FF 77R37 DRE 90M4	93	410
	2.9	480	15700	FA 77R37 DRE 90M4	78	410
				FAF 77R37 DRE 90M4	85	410
				F 77R37 DRE 90M4	82	410
				FF 77R37 DRE 90M4	93	410
	3.5	413	15700	FA 77R37 DRE 90M4	78	410
				FAF 77R37 DRE 90M4	85	410
F 77R37 DRE 90M4				82	410	
FF 77R37 DRE 90M4				93	410	
3.9	367	15700	FA 77R37 DRE 90M4	78	410	
			FAF 77R37 DRE 90M4	85	410	
			F 77R37 DRE 90M4	82	410	
			FF 77R37 DRE 90M4	93	410	
4.4	323	15700	FA 77R37 DRE 90M4	78	410	
			FAF 77R37 DRE 90M4	85	410	
			F 77R37 DRE 90M4	82	410	
			FF 77R37 DRE 90M4	93	410	



$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]		
<b>3000</b>	0.06	23042	19800							
	0.07	20462	19800							
	0.08	18238	19800							
	0.09	15877	19800							
	0.10	14099	19800							
	0.11	12205	19800	FA	87R57	DR	63S4	120	410	
	0.13	10433	19800	FAF	87R57	DR	63S4	130	410	
	0.15	9381	19800	F	87R57	DR	63S4	125	410	
	0.17	8142	19800	FF	87R57	DR	63S4	140	410	
	0.19	7100	19800							
	0.22	6273	19800							
	0.25	5510	19800							
	0.28	4954	19800							
		0.31	4245	19800	FA	87R57	DR	63M4	120	410
		0.35	3721	19800	FAF	87R57	DR	63M4	130	410
					F	87R57	DR	63M4	125	410
					FF	87R57	DR	63M4	140	410
		0.41	3244	19800	FA	87R57	DR	63M4	115	410
		0.46	2881	19800	FAF	87R57	DR	63M4	130	410
					F	87R57	DR	63M4	125	410
					FF	87R57	DR	63M4	140	410
		0.50	2576	19800	FA	87R57	DR	63L4	120	410
		0.59	2199	19800	FAF	87R57	DR	63L4	130	410
		0.67	1930	19800	F	87R57	DR	63L4	125	410
					FF	87R57	DR	63L4	140	410
		0.81	1709	19800	FA	87R57	DRS	71S4	120	410
		0.92	1493	19800	FAF	87R57	DRS	71S4	130	410
					F	87R57	DRS	71S4	125	410
					FF	87R57	DRS	71S4	140	410
		1.1	1300	19800	FA	87R57	DRS	71M4	120	410
		1.2	1148	19800	FAF	87R57	DRS	71M4	135	410
		1.4	1010	19800	F	87R57	DRS	71M4	125	410
		1.6	887	19800	FF	87R57	DRS	71M4	140	410
		1.8	780	19800	FA	87R57	DRE	80M4	125	410
		2.1	674	19800	FAF	87R57	DRE	80M4	140	410
					F	87R57	DRE	80M4	130	410
					FF	87R57	DRE	80M4	145	410
		2.3	609	19800	FA	87R57	DRE	90M4	130	410
		2.8	515	19800	FAF	87R57	DRE	90M4	145	410
		3.1	452	19800	F	87R57	DRE	90M4	135	410
					FF	87R57	DRE	90M4	150	410
		4.1	345	19800	FA	87R57	DRE	90L4	135	410
					FAF	87R57	DRE	90L4	145	410
					F	87R57	DRE	90L4	140	410
					FF	87R57	DRE	90L4	155	410
	<b>4300</b>	0.07	20813	29900						
		0.08	18119	29900						
		0.09	15472	29900						
0.10		14022	29900							
0.11		12324	29900	FA	97R57	DR	63S4	185	410	
0.13		10838	29900	FAF	97R57	DR	63S4	205	410	
0.14		9576	29900	F	97R57	DR	63S4	190	410	
0.17		8318	29900	FF	97R57	DR	63S4	225	410	
0.19		7328	29900							
0.20		6469	29900	FA	97R57	DR	63M4	185	410	
0.24		5615	29900	FAF	97R57	DR	63M4	205	410	
0.27		4961	29900	F	97R57	DR	63M4	190	410	
0.30		4333	29900	FF	97R57	DR	63M4	225	410	
		0.34	3906	29900	FA	97R57	DR	63M4	180	410
					FAF	97R57	DR	63M4	205	410
					F	97R57	DR	63M4	190	410
					FF	97R57	DR	63M4	225	410
		0.39	3352	29900	FA	97R57	DR	63L4	185	410
		0.45	2907	29900	FAF	97R57	DR	63L4	205	410
					F	97R57	DR	63L4	190	410
				FF	97R57	DR	63L4	225	410	

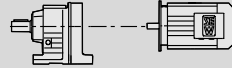

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

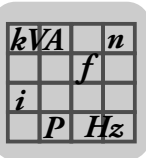
**F..DRE/DRS**  
**F..R..DRE/DRS [Nm]**

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]		
<b>4300</b>	<b>0.54</b>	2553	29900	FA	97R57	DRS	71S4	185	410	
	<b>0.61</b>	2245	29900	FAF	97R57	DRS	71S4	205	410	
	<b>0.70</b>	1970	29900	F	97R57	DRS	71S4	190	410	
					FF	97R57	DRS	71S4	225	410
		<b>0.80</b>	1722	29900	FA	97R57	DRS	71M4	185	410
		<b>0.90</b>	1527	29900	FAF	97R57	DRS	71M4	210	410
		<b>1.0</b>	1327	29900	F	97R57	DRS	71M4	195	410
					FF	97R57	DRS	71M4	225	410
		<b>1.2</b>	1171	29900	FA	97R57	DRE	80M4	190	410
		<b>1.4</b>	1022	29900	FAF	97R57	DRE	80M4	215	410
					F	97R57	DRE	80M4	200	410
					FF	97R57	DRE	80M4	230	410
		<b>1.6</b>	898	29900	FA	97R57	DRE	90M4	195	410
		<b>1.8</b>	784	29900	FAF	97R57	DRE	90M4	220	410
		<b>2.1</b>	690	29900	F	97R57	DRE	90M4	205	410
					FF	97R57	DRE	90M4	235	410
		<b>2.4</b>	605	29900	FA	97R57	DRE	90L4	200	410
		<b>2.7</b>	529	29900	FAF	97R57	DRE	90L4	220	410
		<b>3.1</b>	467	29900	F	97R57	DRE	90L4	205	410
					FF	97R57	DRE	90L4	240	410
		<b>3.5</b>	406	29900	FA	97R57	DRE	100M4	205	410
		<b>3.9</b>	363	29900	FAF	97R57	DRE	100M4	225	410
					F	97R57	DRE	100M4	210	410
					FF	97R57	DRE	100M4	245	410
		<b>5.1</b>	285	29900	FA	97R57	DRE	100LC4	210	410
		<b>6.0</b>	245	29900	FAF	97R57	DRE	100LC4	230	410
					F	97R57	DRE	100LC4	215	410
					FF	97R57	DRE	100LC4	250	410
	<b>7680</b>	<b>0.05</b>	25375	49800	FA	107R77	DR	63S4	275	410
		<b>0.06</b>	21652	49800	FAF	107R77	DR	63S4	295	410
		<b>0.07</b>	18933	49800	F	107R77	DR	63S4	290	410
		<b>0.08</b>	16888	49800	FF	107R77	DR	63S4	320	410
<b>0.09</b>		14767	49800							
		<b>0.12</b>	11348	49800	FA	107R77	DR	63M4	275	410
		<b>0.13</b>	10039	49800	FAF	107R77	DR	63M4	295	410
		<b>0.15</b>	8548	49800	F	107R77	DR	63M4	290	410
		<b>0.17</b>	7674	49800	FF	107R77	DR	63M4	320	410
		<b>0.19</b>	6767	49800	FA	107R77	DR	63L4	275	410
		<b>0.22</b>	5954	49800	FAF	107R77	DR	63L4	295	410
		<b>0.25</b>	5223	49800	F	107R77	DR	63L4	290	410
					FF	107R77	DR	63L4	320	410
		<b>0.30</b>	4567	49800	FA	107R77	DRS	71S4	275	410
		<b>0.39</b>	3521	49800	FAF	107R77	DRS	71S4	300	410
					F	107R77	DRS	71S4	295	410
					FF	107R77	DRS	71S4	320	410
		<b>0.45</b>	3037	49800	FA	107R77	DRS	71M4	275	410
		<b>0.50</b>	2756	49800	FAF	107R77	DRS	71M4	300	410
		<b>0.58</b>	2369	49800	F	107R77	DRS	71M4	295	410
					FF	107R77	DRS	71M4	320	410
		<b>0.69</b>	2068	49800	FA	107R77	DRE	80M4	280	410
		<b>0.79</b>	1826	49800	FAF	107R77	DRE	80M4	305	410
					F	107R77	DRE	80M4	300	410
					FF	107R77	DRE	80M4	325	410
		<b>0.89</b>	1597	49800	FA	107R77	DRE	90M4	285	410
		<b>1.0</b>	1401	49800	FAF	107R77	DRE	90M4	305	410
		<b>1.1</b>	1243	49800	F	107R77	DRE	90M4	305	410
					FF	107R77	DRE	90M4	330	410
		<b>1.3</b>	1087	49800	FA	107R77	DRE	90L4	290	410
		<b>1.5</b>	950	49800	FAF	107R77	DRE	90L4	310	410
					F	107R77	DRE	90L4	305	410
				FF	107R77	DRE	90L4	330	410	
	<b>1.7</b>	834	49800	FA	107R77	DRE	100M4	295	410	
	<b>1.9</b>	736	49800	FAF	107R77	DRE	100M4	315	410	
	<b>2.2</b>	640	49800	F	107R77	DRE	100M4	310	410	
				FF	107R77	DRE	100M4	335	410	

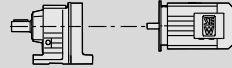





M <sub>a max</sub> [Nm]	n <sub>a</sub> [1/min]	i	F <sub>Ra</sub> <sup>1)</sup> [N]					m [kg]	
				FA	FAF	F	FF		
<b>7680</b>	2.6 3.0 3.3	560	49800	FA	107R77	DRE	100LC4	300	410
				FAF	107R77	DRE	100LC4	320	410
				F	107R77	DRE	100LC4	315	410
				FF	107R77	DRE	100LC4	340	410
	4.0 4.4	370	49800	FA	107R77	DRE	132S4	315	410
				FAF	107R77	DRE	132S4	335	410
				F	107R77	DRE	132S4	330	410
				FF	107R77	DRE	132S4	355	410
<b>12000</b>	0.06 0.06	24478	90000	FA	127R77	DR	63S4	425	410
				FAF	127R77	DR	63S4	465	410
				F	127R77	DR	63S4	460	410
				FF	127R77	DR	63S4	510	410
	0.07 0.08 0.09 0.10 0.11	19048	90000	FA	127R77	DR	63M4	425	410
				FAF	127R77	DR	63M4	465	410
				F	127R77	DR	63M4	460	410
				FF	127R77	DR	63M4	510	410
	0.13 0.15	10191	90000	FA	127R77	DR	63L4	425	410
				FAF	127R77	DR	63L4	465	410
				F	127R77	DR	63L4	465	410
				FF	127R77	DR	63L4	510	410
	0.18 0.21 0.23	7643	90000	FA	127R77	DRS	71S4	430	410
				FAF	127R77	DRS	71S4	465	410
				F	127R77	DRS	71S4	465	410
				FF	127R77	DRS	71S4	510	410
	0.27 0.30 0.35	5153	90000	FA	127R77	DRS	71M4	430	410
				FAF	127R77	DRS	71M4	465	410
				F	127R77	DRS	71M4	465	410
				FF	127R77	DRS	71M4	510	410
	0.42 0.47	3454	90000	FA	127R77	DRE	80M4	435	410
				FAF	127R77	DRE	80M4	470	410
				F	127R77	DRE	80M4	470	410
				FF	127R77	DRE	80M4	520	410
	0.54	2672	90000	FA	127R77	DRE	80M4	435	410
				FAF	127R77	DRE	80M4	470	410
				F	127R77	DRE	80M4	470	410
				FF	127R77	DRE	80M4	510	410
	0.60 0.70 0.80	2357	90000	FA	127R77	DRE	90M4	435	410
				FAF	127R77	DRE	90M4	475	410
				F	127R77	DRE	90M4	475	410
				FF	127R77	DRE	90M4	520	410
	0.89 1.0	1606	90000	FA	127R77	DRE	90L4	440	410
				FAF	127R77	DRE	90L4	475	410
				F	127R77	DRE	90L4	475	410
				FF	127R77	DRE	90L4	520	410
	1.2 1.3 1.5	1220	90000	FA	127R77	DRE	100M4	445	410
				FAF	127R77	DRE	100M4	480	410
				F	127R77	DRE	100M4	480	410
				FF	127R77	DRE	100M4	530	410
	1.8 2.0	820	90000	FA	127R77	DRE	100LC4	450	410
				FAF	127R77	DRE	100LC4	485	410
				F	127R77	DRE	100LC4	485	410
				FF	127R77	DRE	100LC4	530	410
	2.2 2.7 3.0	648	90000	FA	127R77	DRE	132S4	465	410
				FAF	127R77	DRE	132S4	500	410
				F	127R77	DRE	132S4	500	410
				FF	127R77	DRE	132S4	540	410
3.4 3.9	428	90000	FA	127R77	DRE	132M4	475	410	
			FAF	127R77	DRE	132M4	510	410	
			F	127R77	DRE	132M4	510	410	
			FF	127R77	DRE	132M4	560	410	
3.0 3.5 3.9	483	90000	FA	127R87	DRE	132M4	495	410	
			FAF	127R87	DRE	132M4	530	410	
			F	127R87	DRE	132M4	530	410	
			FF	127R87	DRE	132M4	580	410	

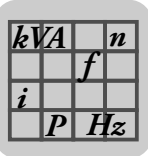


**F..DRE/DRS**  
**F..R..DRE/DRS [Nm]**

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
<b>12000</b>	4.7 5.0	312	90000	FA	127R87	DRE	132MC4	500	410
				FAF	127R87	DRE	132MC4	540	410
				F	127R87	DRE	132MC4	540	410
				FF	127R87	DRE	132MC4	580	410
	5.7 6.6	259	90000	FA	127R87	DRE	160M4	520	410
				FAF	127R87	DRE	160M4	560	410
				F	127R87	DRE	160M4	560	410
				FF	127R87	DRE	160M4	600	410
	7.5	198	90000	FA	127R87	DRE	160MC4	530	410
				FAF	127R87	DRE	160MC4	560	410
				F	127R87	DRE	160MC4	560	410
				FF	127R87	DRE	160MC4	610	410
<b>18000</b>	0.04 0.05 0.06 0.07 0.08 0.08 0.10 0.11	31434 26173 23464 20212 17984 16358 13751 12235	100300						
				FA	157R97	DRS	71M4	770	410
				FAF	157R97	DRS	71M4	830	410
				F	157R97	DRS	71M4	790	410
				FF	157R97	DRS	71M4	900	410
				FA	157R97	DRE	80M4	770	410
				FAF	157R97	DRE	80M4	830	410
				F	157R97	DRE	80M4	790	410
	FF	157R97	DRE	80M4	900	410			
	0.14 0.16 0.18	10033 9021 8026	100300	FA	157R97	DRS	71M4	770	410
				FAF	157R97	DRS	71M4	830	410
				F	157R97	DRS	71M4	790	410
				FF	157R97	DRS	71M4	900	410
	0.20 0.22	7075 6295	100300	FA	157R97	DRE	80M4	770	410
				FAF	157R97	DRE	80M4	830	410
				F	157R97	DRE	80M4	790	410
				FF	157R97	DRE	80M4	900	410
	0.27 0.30	5404 4831	100300	FA	157R97	DRE	80M4	770	410
				FAF	157R97	DRE	80M4	830	410
				F	157R97	DRE	80M4	790	410
				FF	157R97	DRE	80M4	900	410
	0.34	4130	100300	FA	157R97	DRE	90M4	780	410
				FAF	157R97	DRE	90M4	830	410
				F	157R97	DRE	90M4	800	410
				FF	157R97	DRE	90M4	900	410
	0.40 0.44	3607 3210	100300	FA	157R97	DRE	100M4	780	410
				FAF	157R97	DRE	100M4	840	410
				F	157R97	DRE	100M4	800	410
				FF	157R97	DRE	100M4	910	410
	0.51	2780	100300	FA	157R97	DRE	90L4	780	410
				FAF	157R97	DRE	90L4	840	410
				F	157R97	DRE	90L4	800	410
				FF	157R97	DRE	90L4	910	410
	0.99	1441	100300	FA	157R97	DRE	100M4	780	410
				FAF	157R97	DRE	100M4	840	410
				F	157R97	DRE	100M4	800	410
				FF	157R97	DRE	100M4	910	410
	0.59 0.65	2427 2185	100300	FA	157R97	DRE	90L4	780	410
				FAF	157R97	DRE	90L4	830	410
				F	157R97	DRE	90L4	800	410
				FF	157R97	DRE	90L4	900	410
	0.73 0.85	1944 1674	100300	FA	157R97	DRE	100M4	780	410
				FAF	157R97	DRE	100M4	840	410
				F	157R97	DRE	100M4	800	410
				FF	157R97	DRE	100M4	910	410
	1.1 1.2	1308 1169	100300	FA	157R97	DRE	100LC4	790	410
				FAF	157R97	DRE	100LC4	840	410
				F	157R97	DRE	100LC4	810	410
FF				157R97	DRE	100LC4	910	410	
1.5 1.7 1.9	953 845 764	100300	FA	157R97	DRE	132S4	800	410	
			FAF	157R97	DRE	132S4	860	410	
			F	157R97	DRE	132S4	820	410	
			FF	157R97	DRE	132S4	930	410	
2.1 2.5	680 576	100300	FA	157R97	DRE	132M4	810	410	
			FAF	157R97	DRE	132M4	870	410	
			F	157R97	DRE	132M4	830	410	
			FF	157R97	DRE	132M4	940	410	



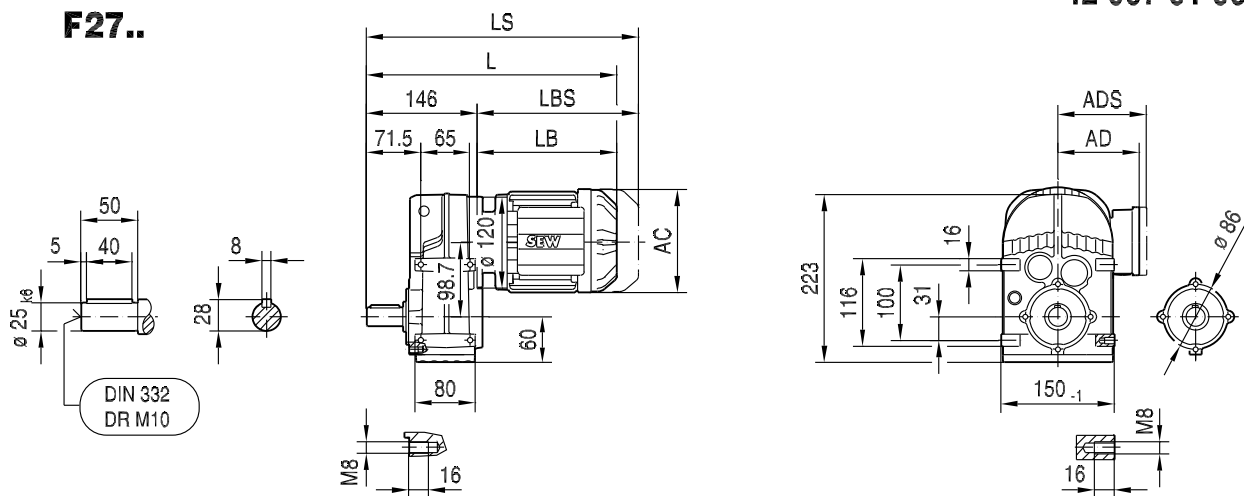
$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
<b>18000</b>	<b>2.9</b> <b>3.3</b>	503	100300	<b>FA</b>	<b>157R97</b>	<b>DRE</b>	<b>132MC4</b>	810	410
				<b>FAF</b>	<b>157R97</b>	<b>DRE</b>	<b>132MC4</b>	870	410
				<b>F</b>	<b>157R97</b>	<b>DRE</b>	<b>132MC4</b>	840	410
				<b>FF</b>	<b>157R97</b>	<b>DRE</b>	<b>132MC4</b>	940	410
	<b>4.2</b>	353	100300	<b>FA</b>	<b>157R97</b>	<b>DRE</b>	<b>160M4</b>	840	410
				<b>FAF</b>	<b>157R97</b>	<b>DRE</b>	<b>160M4</b>	890	410
				<b>F</b>	<b>157R97</b>	<b>DRE</b>	<b>160M4</b>	860	410
				<b>FF</b>	<b>157R97</b>	<b>DRE</b>	<b>160M4</b>	960	410
	<b>4.9</b> <b>5.4</b>	302 273	100300 100300	<b>FA</b>	<b>157R97</b>	<b>DRE</b>	<b>160MC4</b>	840	410
				<b>FAF</b>	<b>157R97</b>	<b>DRE</b>	<b>160MC4</b>	900	410
				<b>F</b>	<b>157R97</b>	<b>DRE</b>	<b>160MC4</b>	860	410
				<b>FF</b>	<b>157R97</b>	<b>DRE</b>	<b>160MC4</b>	970	410
	<b>6.3</b> <b>7.2</b>	232 202	100300 100300	<b>FA</b>	<b>157R97</b>	<b>DRE</b>	<b>180M4</b>	880	410
				<b>FAF</b>	<b>157R97</b>	<b>DRE</b>	<b>180M4</b>	940	410
				<b>F</b>	<b>157R97</b>	<b>DRE</b>	<b>180M4</b>	910	410
				<b>FF</b>	<b>157R97</b>	<b>DRE</b>	<b>180M4</b>	1010	410
	<b>7.5</b>	197	100300	<b>FA</b>	<b>157R97</b>	<b>DRE</b>	<b>180L4</b>	900	410
				<b>FAF</b>	<b>157R97</b>	<b>DRE</b>	<b>180L4</b>	960	410
				<b>F</b>	<b>157R97</b>	<b>DRE</b>	<b>180L4</b>	930	410
				<b>FF</b>	<b>157R97</b>	<b>DRE</b>	<b>180L4</b>	1030	410



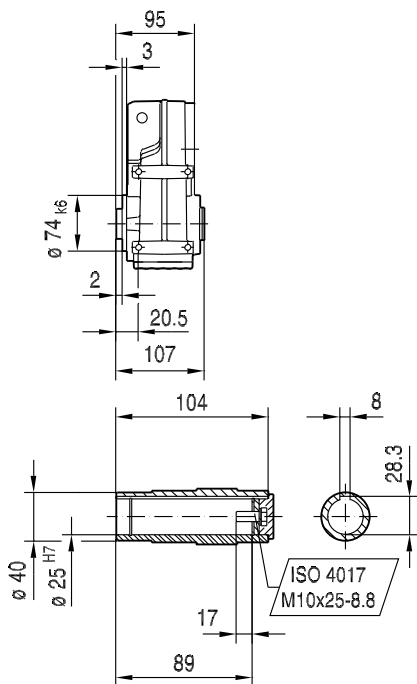
9.5 F..DR.. [mm]

42 067 01 06

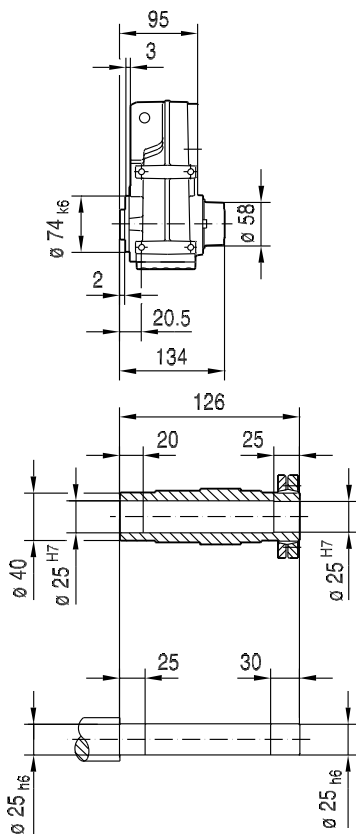
F27..



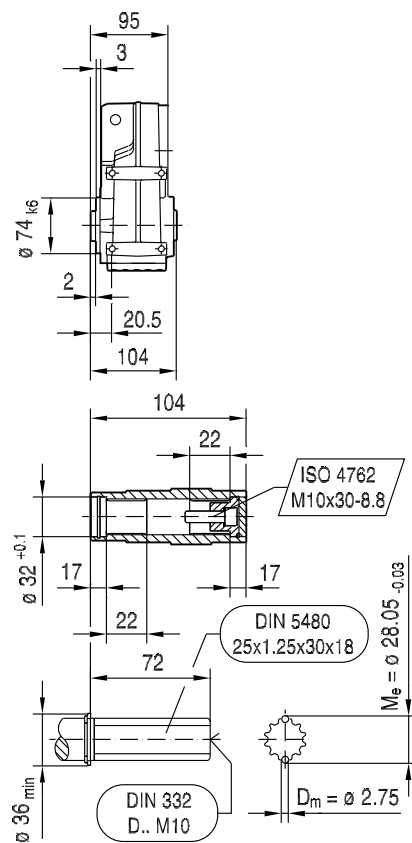
FA27B..



FH27B..  
max. DR71..



FV27B..

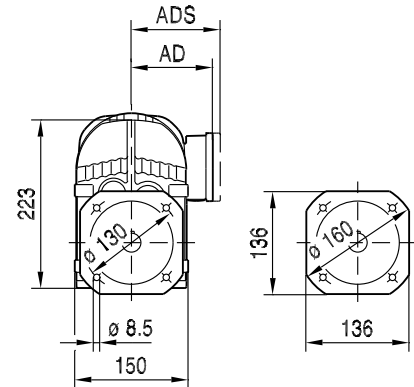
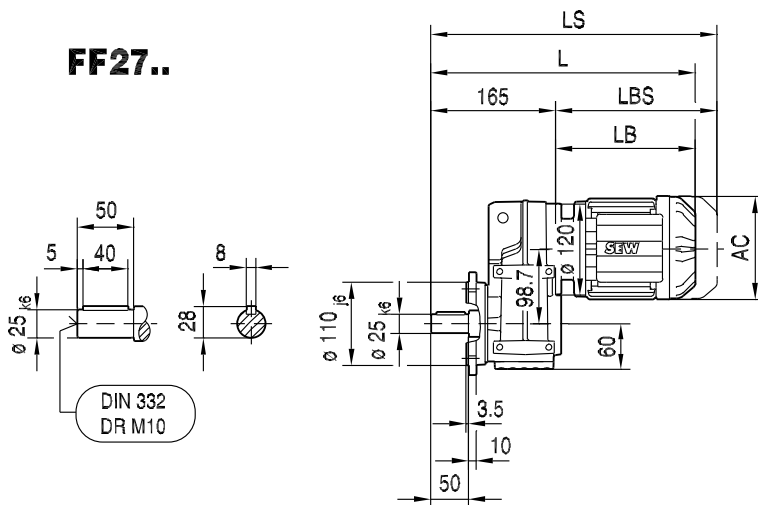


(→) 136	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	179	179	197
AD	105	119	119	128	140	140	157
ADS	105	129	129	139	150	150	158
L	337	348	373	414	418	438	468
LS	392	416	441	495	511	531	561
LB	191	202	227	268	272	292	322
LBS	246	270	295	349	365	385	415

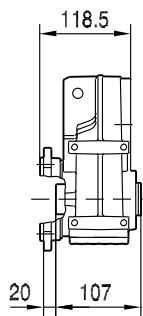


42 068 01 06

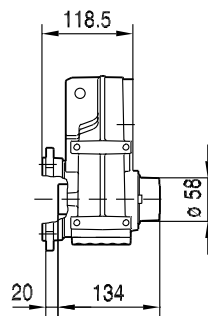
**FF27..**



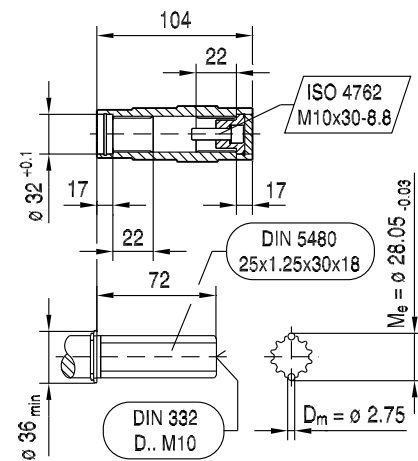
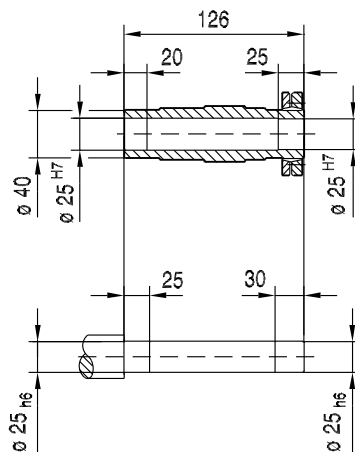
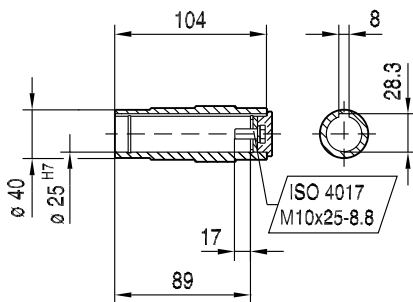
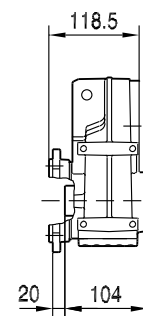
**FAF27..**



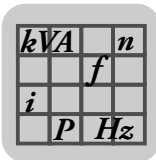
**FHF27..**  
max. DR71..



**FVF27..**

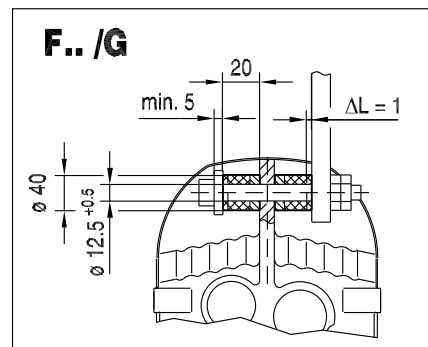
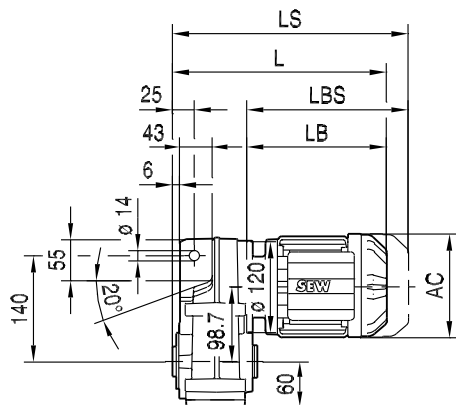


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	179	179	197
AD	105	119	119	128	140	140	157
ADS	105	129	129	139	150	150	158
L	356	367	392	433	437	457	487
LS	411	435	460	514	530	550	580
LB	191	202	227	268	272	292	322
LBS	246	270	295	349	365	385	415



**FA27..**

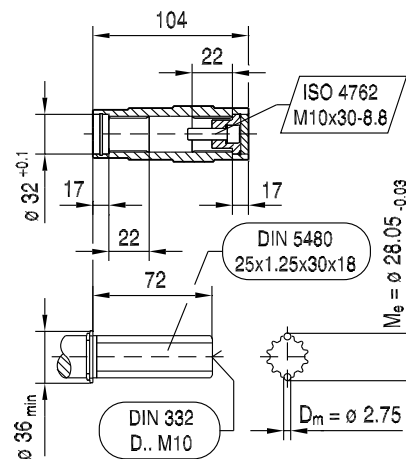
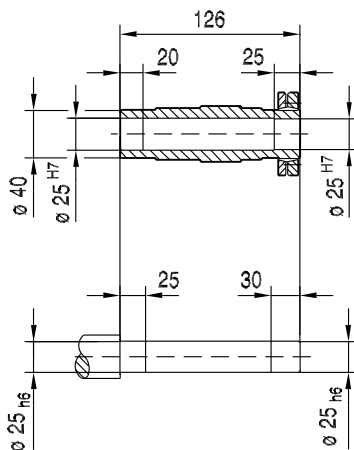
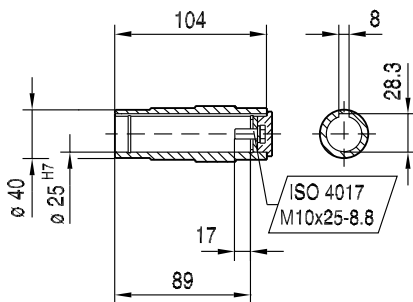
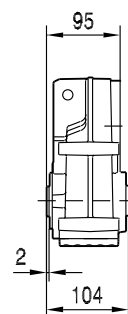
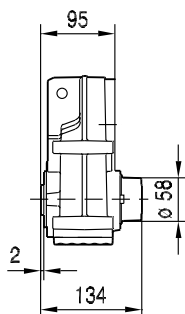
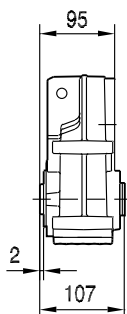
42 069 01 06



**FA27..**

**FH27..**  
max. DR71..

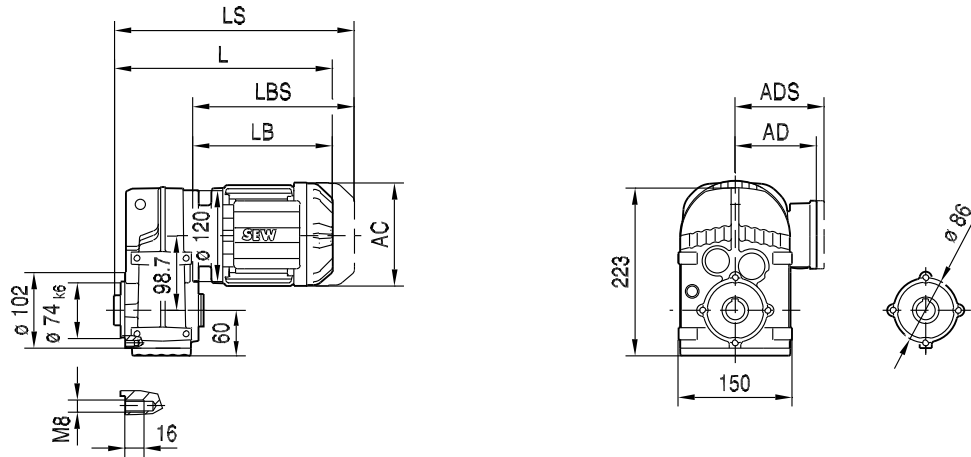
**FV27..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	179	179	197
AD	105	119	119	128	140	140	157
ADS	105	129	129	139	150	150	158
L	286	297	322	363	367	387	417
LS	341	365	390	444	460	480	510
LB	191	202	227	268	272	292	322
LBS	246	270	295	349	365	385	415

**FAZ27..**

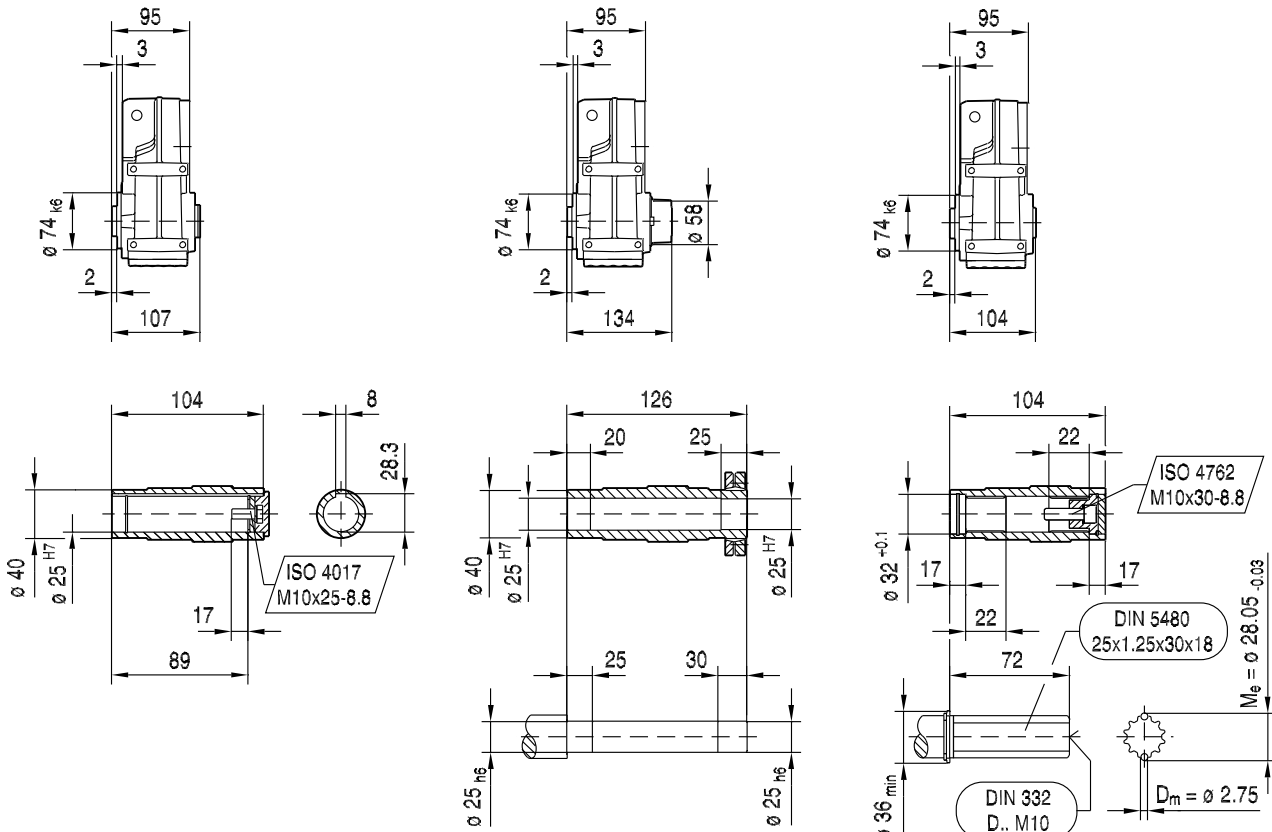
42 070 01 06



**FAZ27..**

**FHZ27..**  
max. DR71..

**FVZ27..**



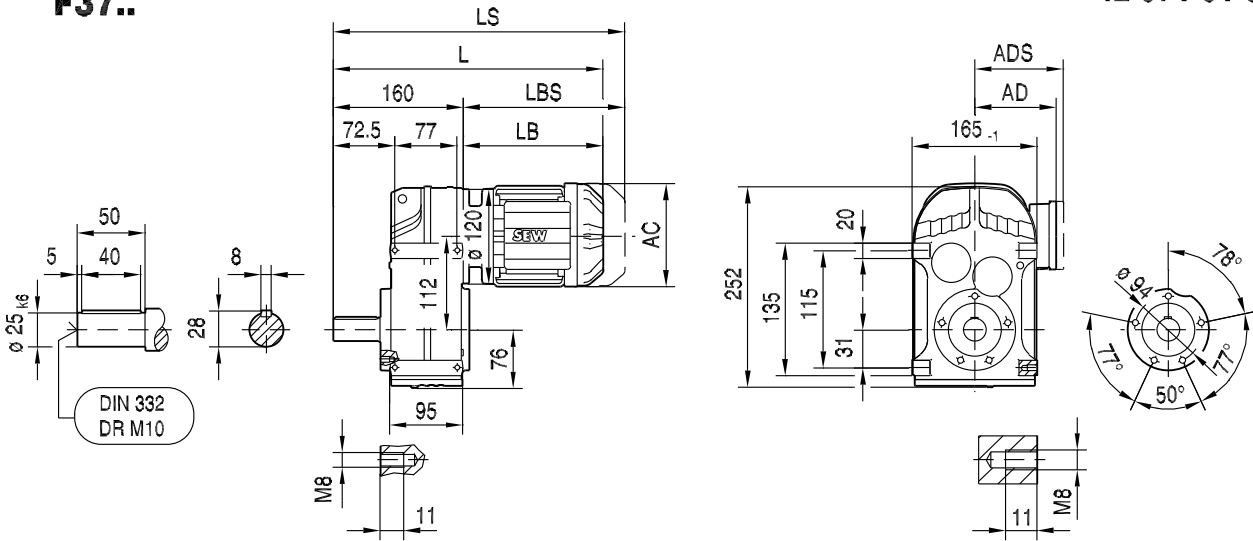
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	179	179	197
AD	105	119	119	128	140	140	157
ADS	105	129	129	139	150	150	158
L	286	297	322	363	367	387	417
LS	341	365	390	444	460	480	510
LB	191	202	227	268	272	292	322
LBS	246	270	295	349	365	385	415

kVA	n
f	
i	P
	H <sub>Z</sub>

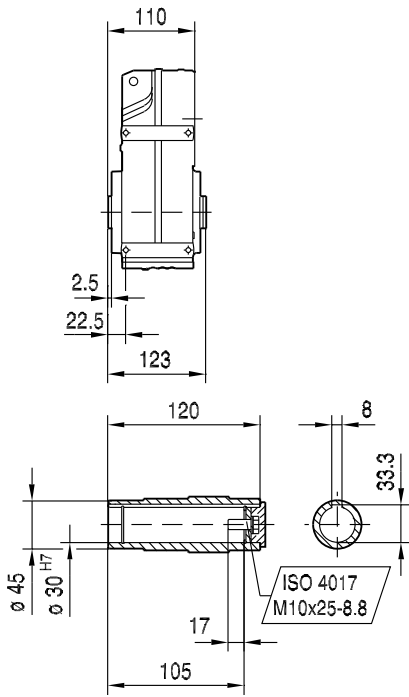
F..DRE/DRS  
F..DR.. [mm]

42 071 01 06

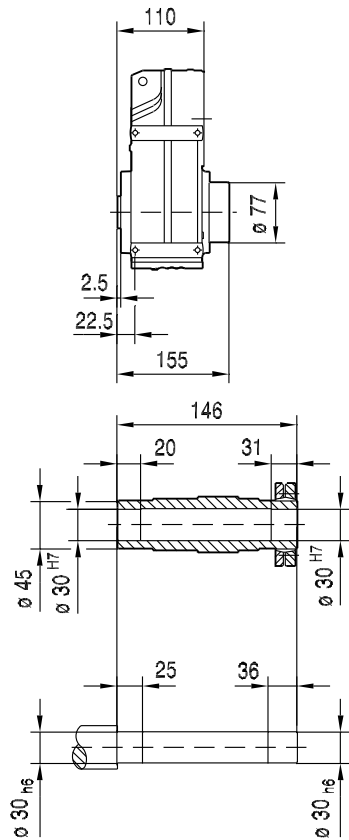
**F37..**



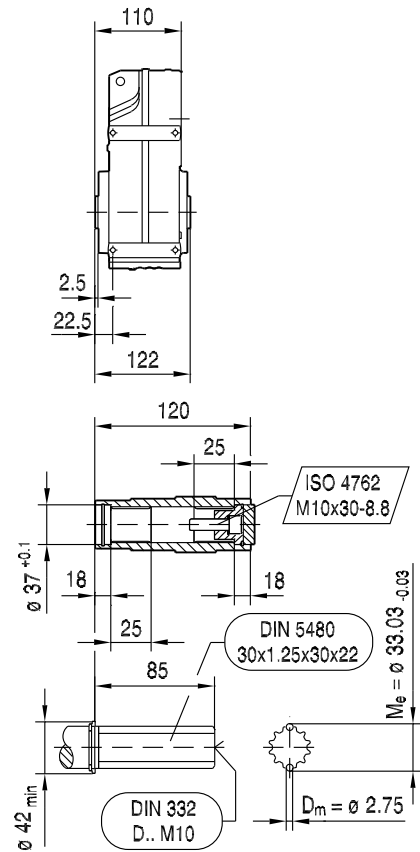
**FA37B..**



**FH37B..**



**FV37B..**

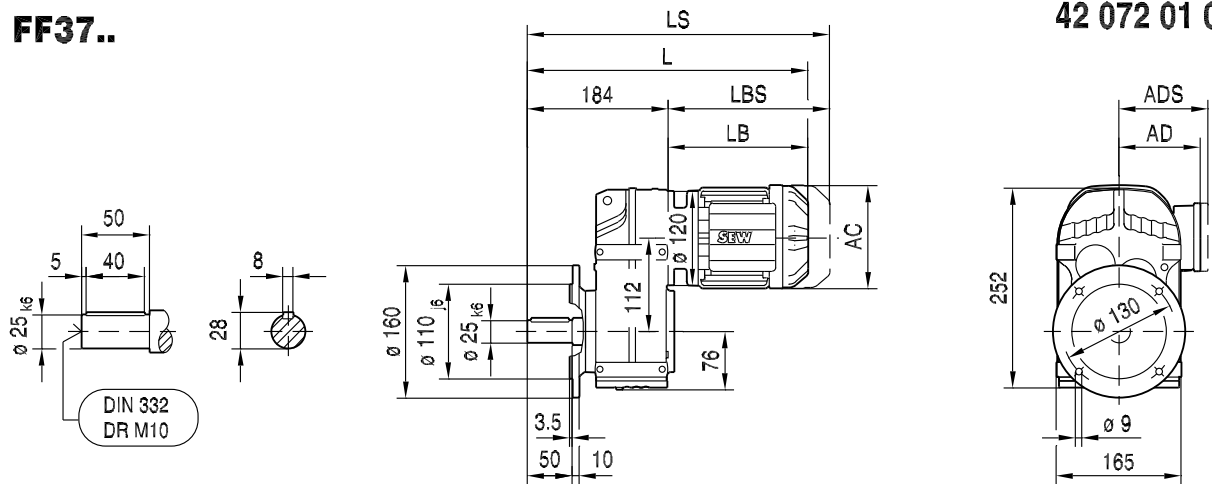


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	351	362	387	428	432	452	482	512
LS	406	430	455	509	525	545	575	605
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445



**FF37..**

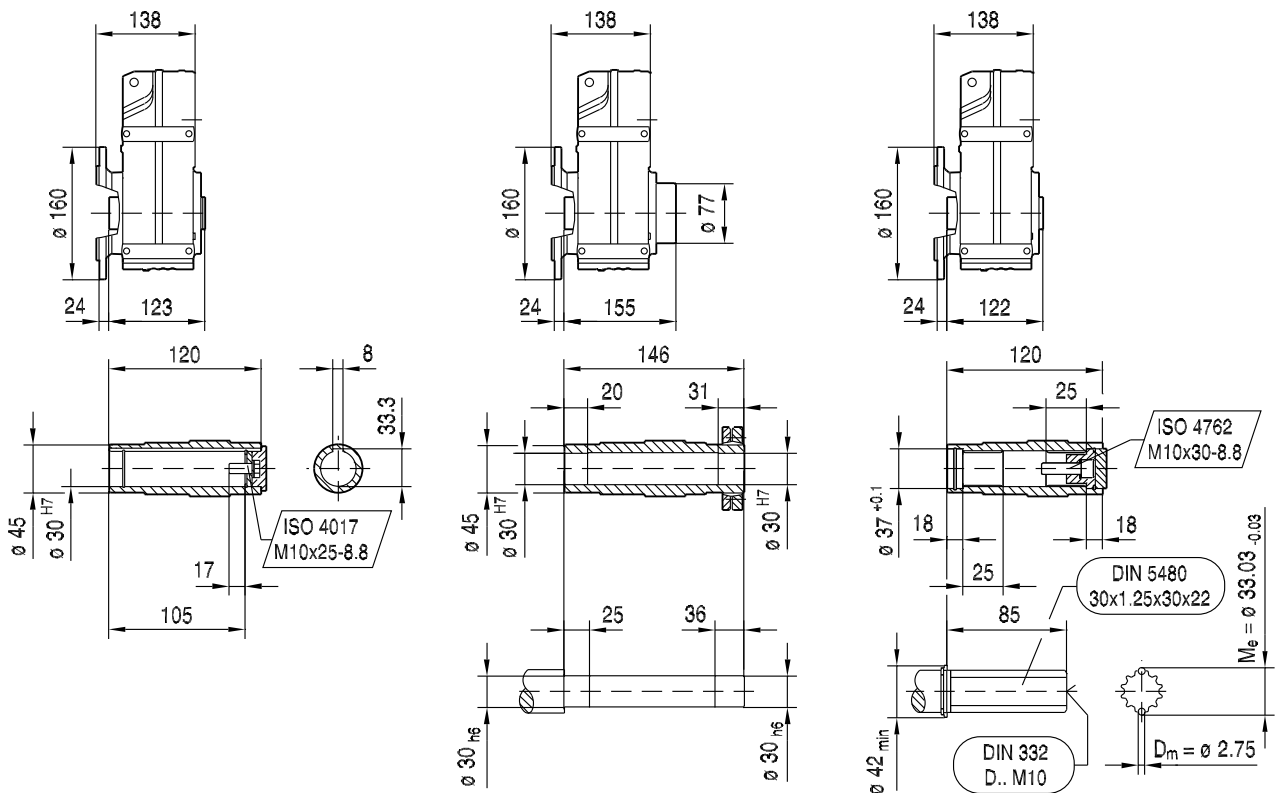
42 072 01 06



**FAF37..**

**FHF37..**

**FVF37..**



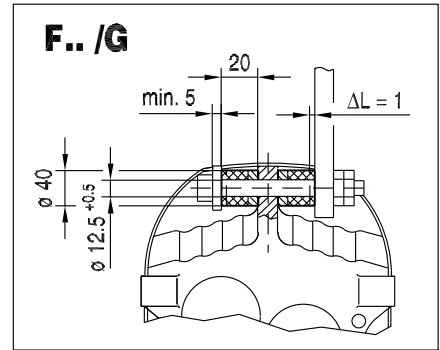
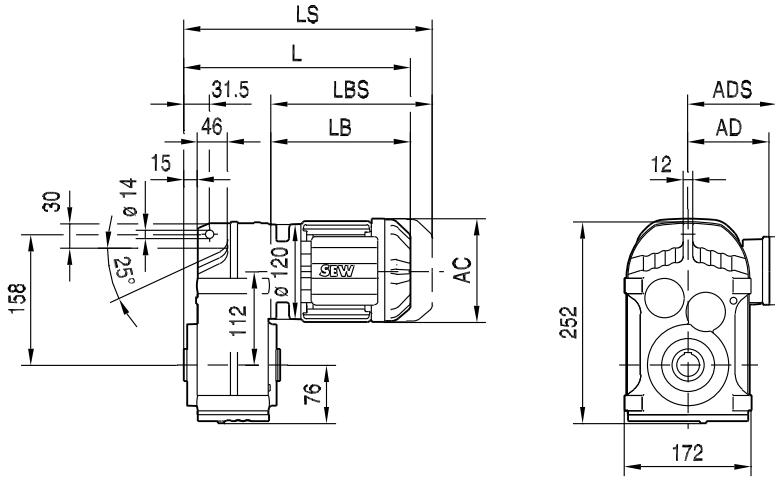
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	375	386	411	452	456	476	506	536
LS	430	454	479	533	549	569	599	629
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445

kVA	n
f	
i	P Hz

F..DRE/DRS  
F..DR.. [mm]

**FA37..**

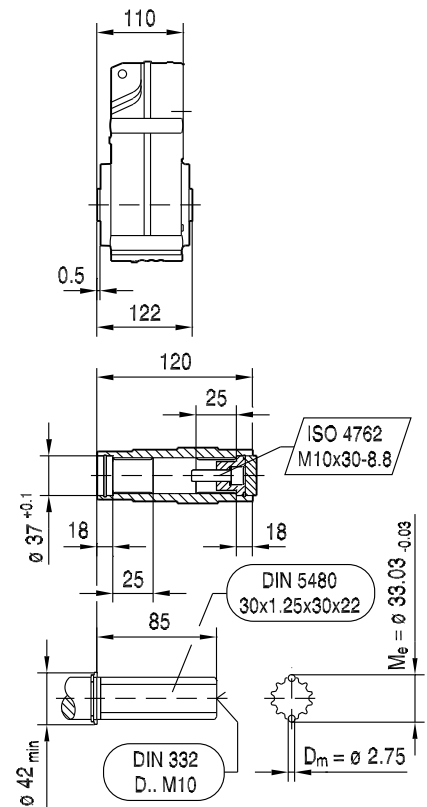
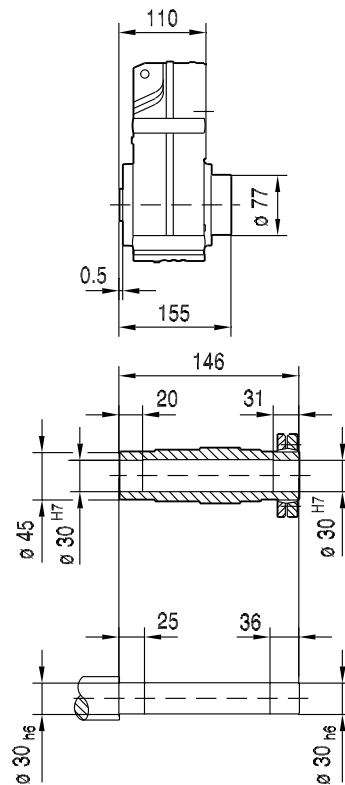
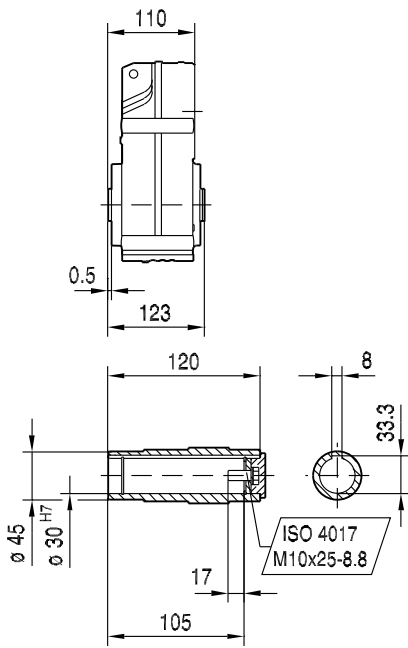
42 073 01 06



**FA37..**

**FH37..**

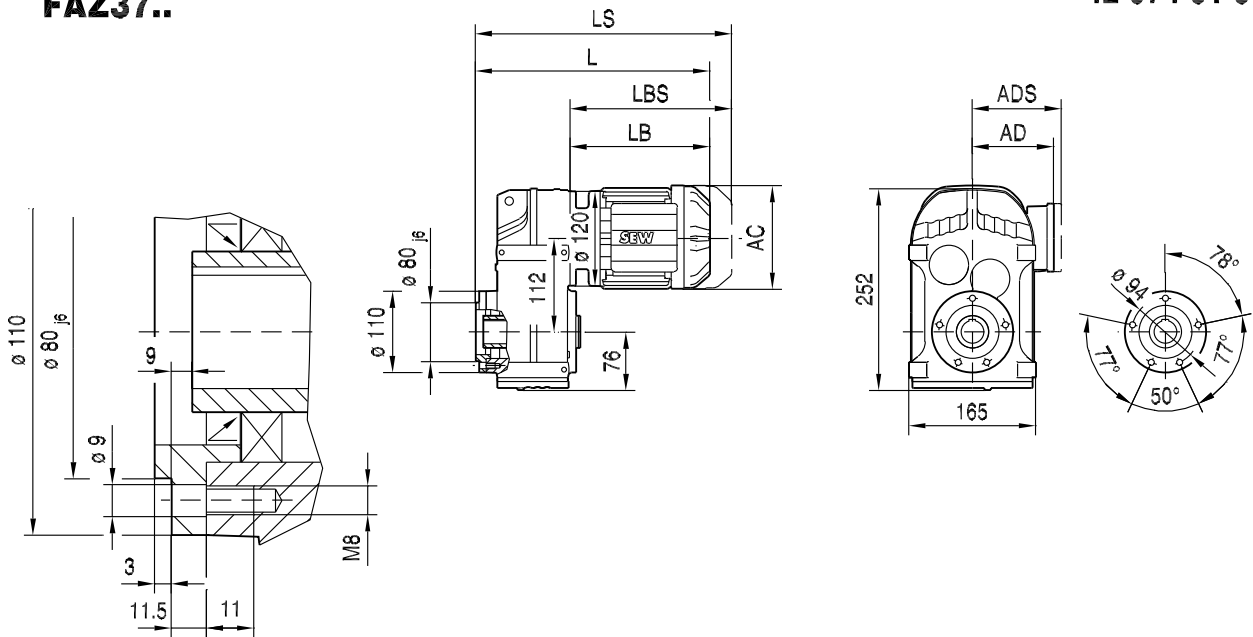
**FV37..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	301	312	337	378	382	402	432	462
LS	356	380	405	459	475	495	525	555
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445

**FAZ37..**

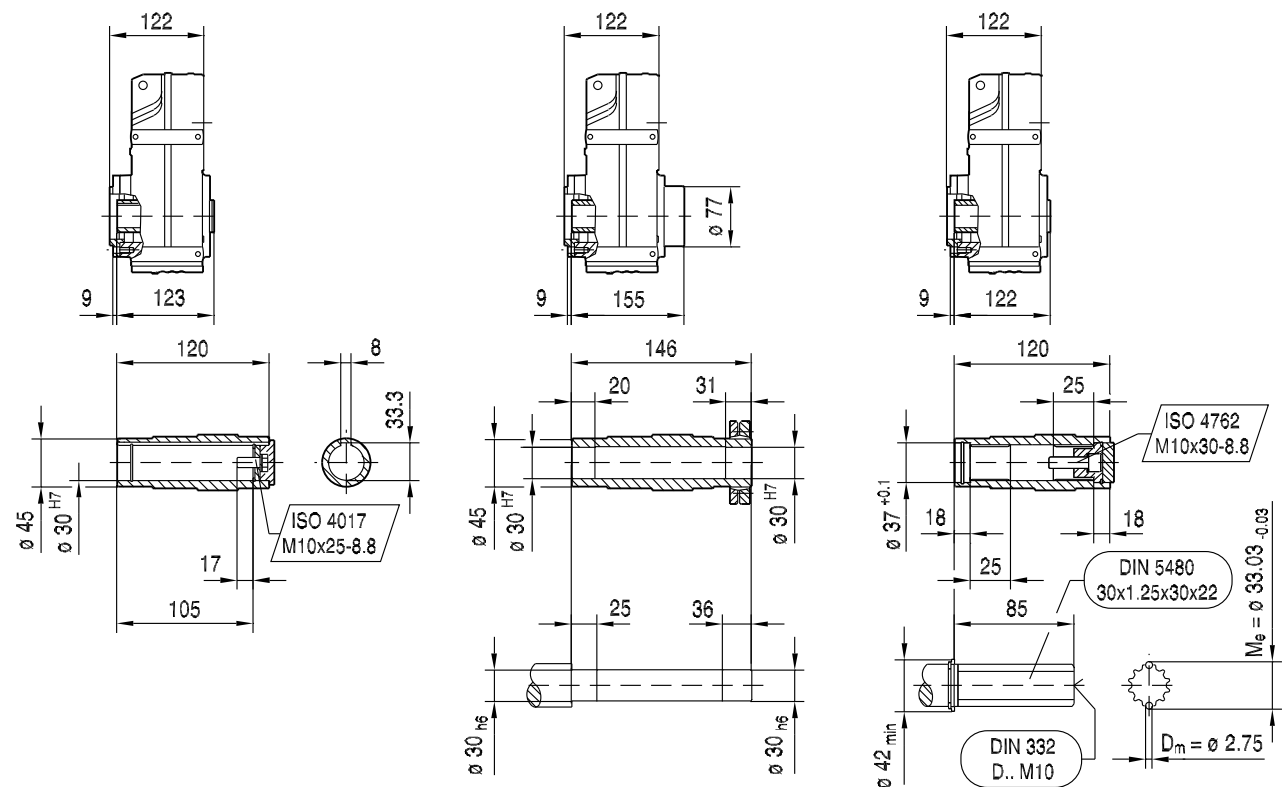
42 074 01 06



**FAZ37..**

**FHZ37..**

**FVZ37..**



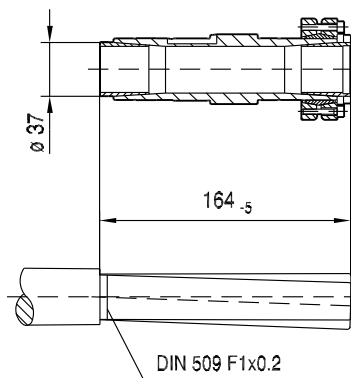
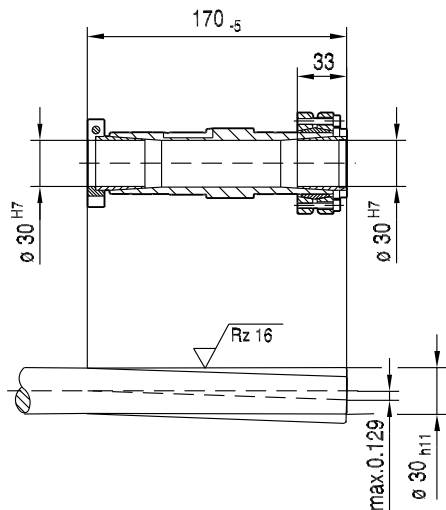
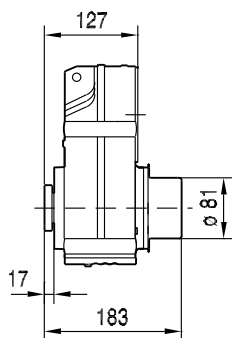
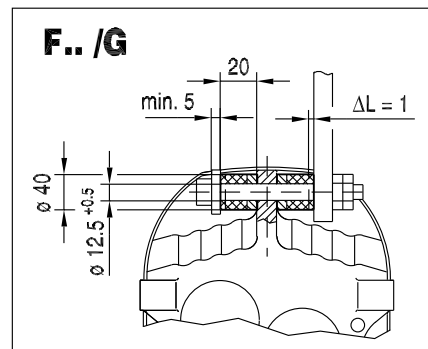
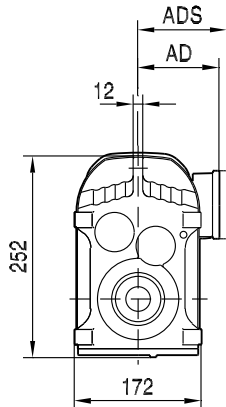
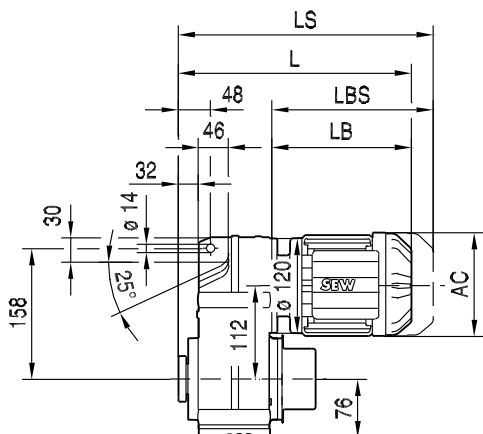
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	313	324	349	390	394	414	444	474
LS	368	392	417	471	487	507	537	567
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445

kVA	n
f	
i	
P	H <sub>Z</sub>

F..DRE/DRS  
F..DR.. [mm]

**FT37..**

42 075 01 06



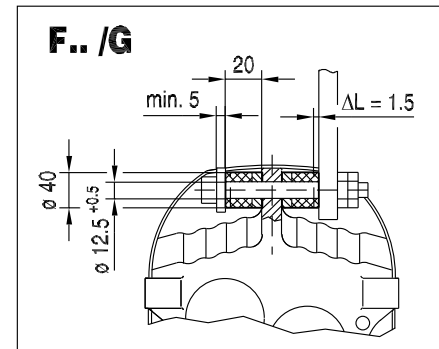
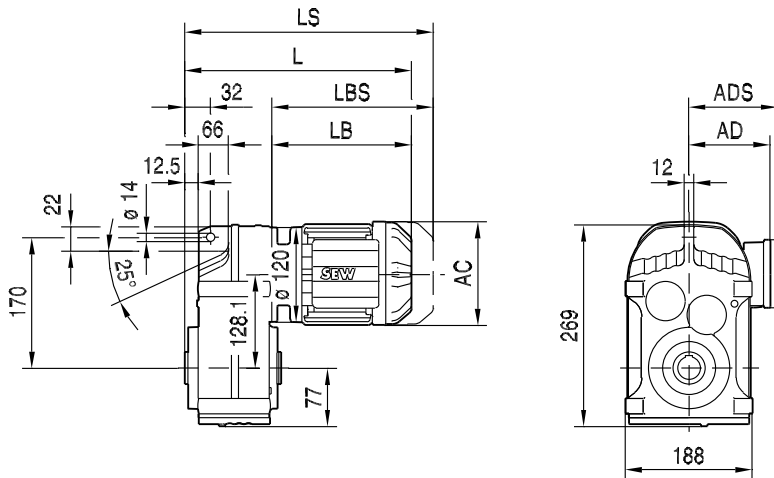
(→ 136)	DR63..	DR71S	DR71M				
AC	132	139	139				
AD	105	119	119				
ADS	105	129	129				
L	318	329	354				
LS	373	397	422				
LB	191	202	227				
LBS	246	270	295				





**FA47..**

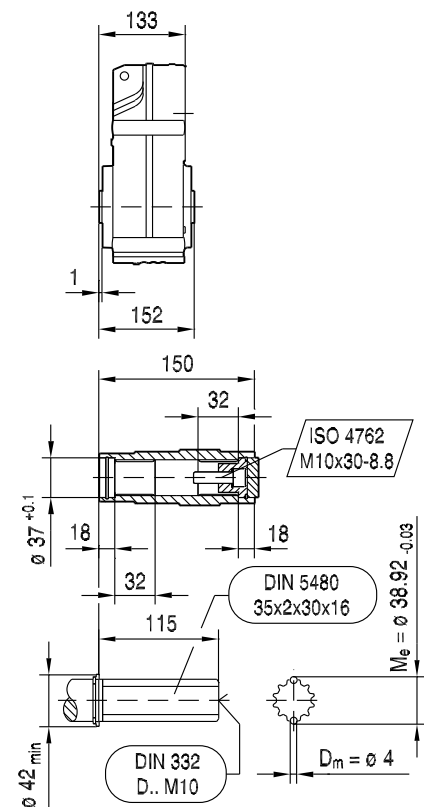
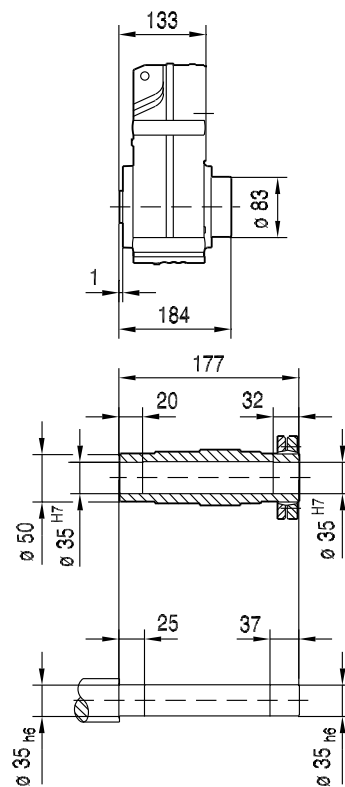
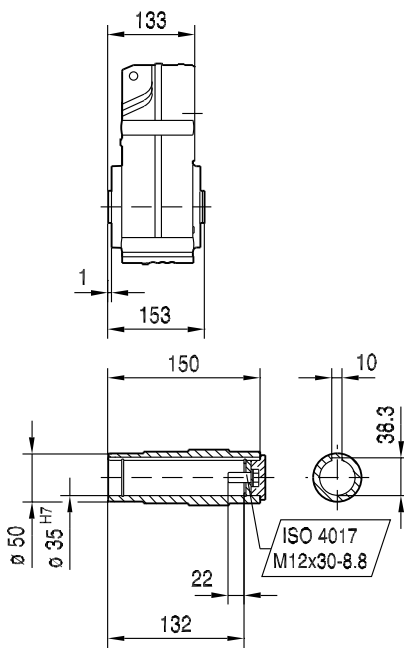
42 078 01 06



**FA47..**

**FH47..**

**FV47..**



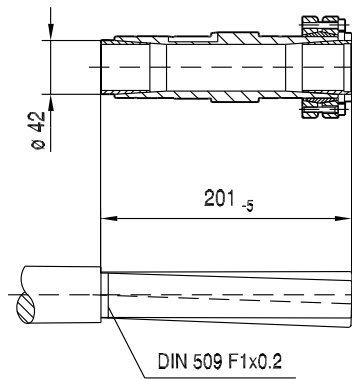
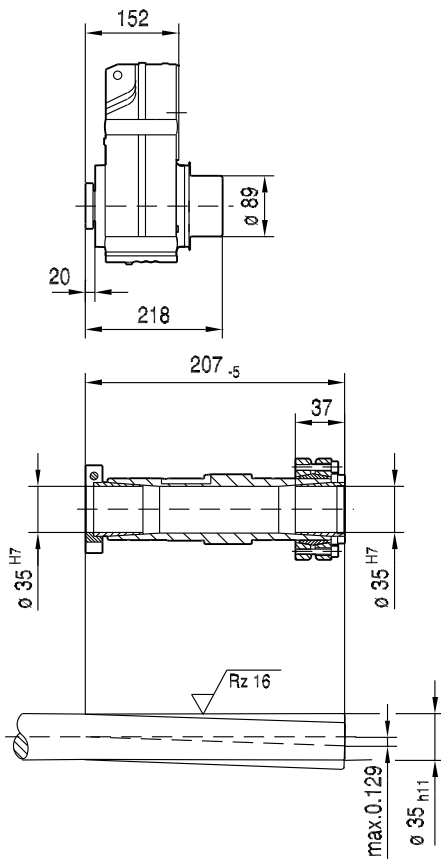
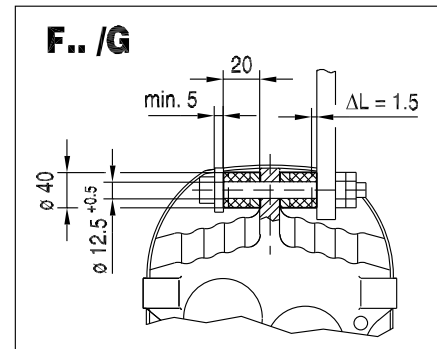
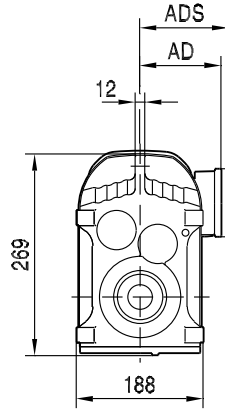
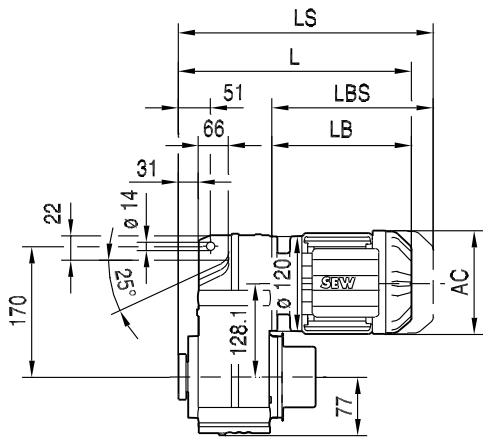
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	324	335	360	401	405	425	455	485
LS	379	403	428	482	498	518	548	578
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445





**FT47..**

42 080 00 06

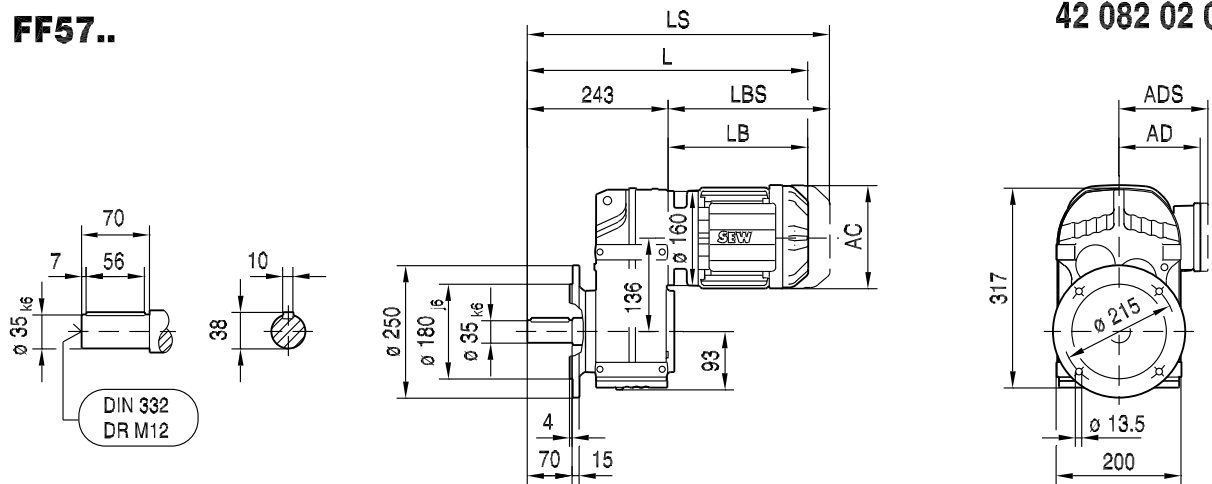


(→ 136)	DR63..	DR71S	DR71M					
AC	132	139	139					
AD	105	119	119					
ADS	105	129	129					
L	343	354	379					
LS	398	422	447					
LB	191	202	227					
LBS	246	270	295					



**FF57..**

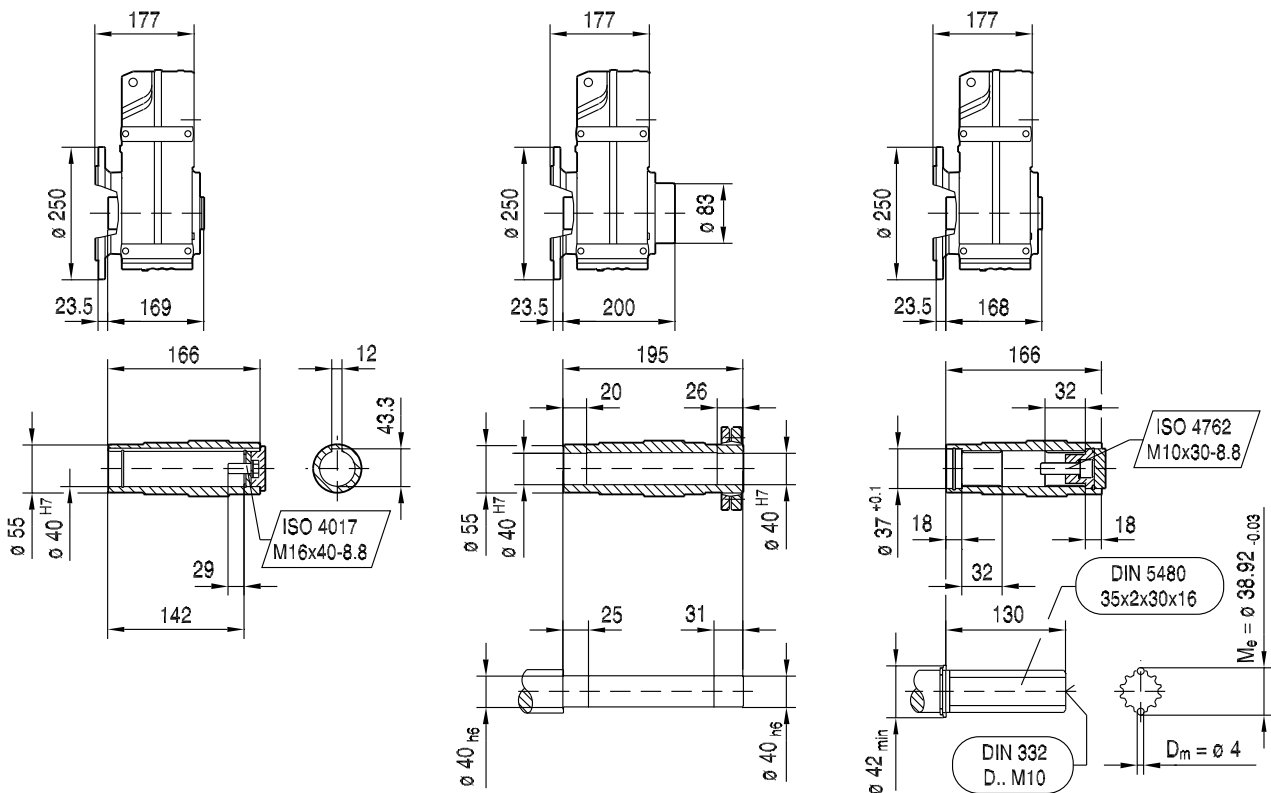
42 082 02 06



**FAF57..**

**FHF57..**  
max. DR100LC

**FVF57..**



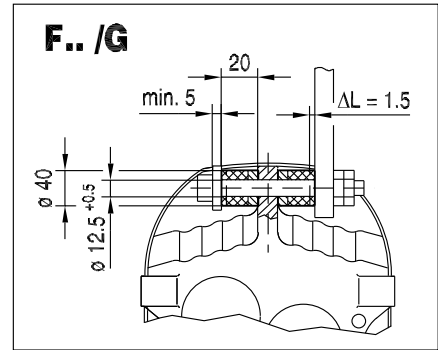
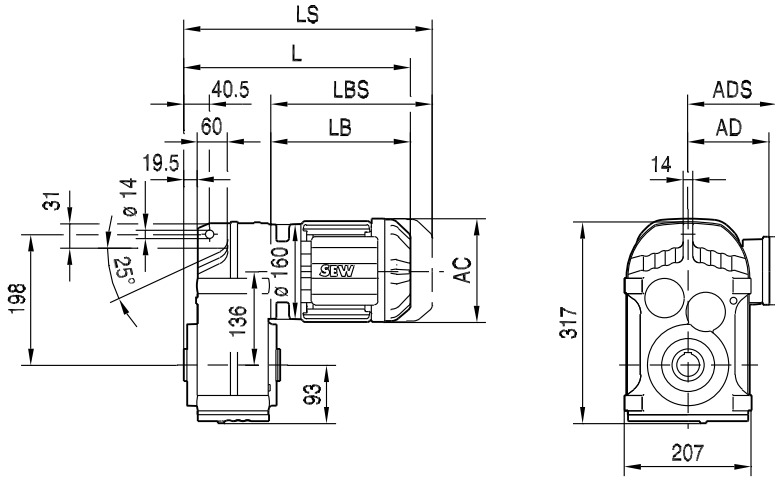
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	428	439	464	504	506	526	556	586	633	683
LS	483	507	532	585	599	619	649	679	745	795
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

kVA	n
f	
i	P Hz

F..DRE/DRS  
F..DR.. [mm]

**FA57..**

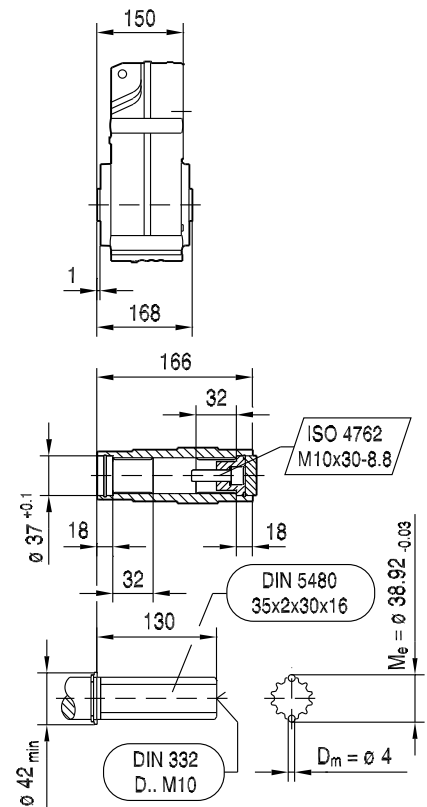
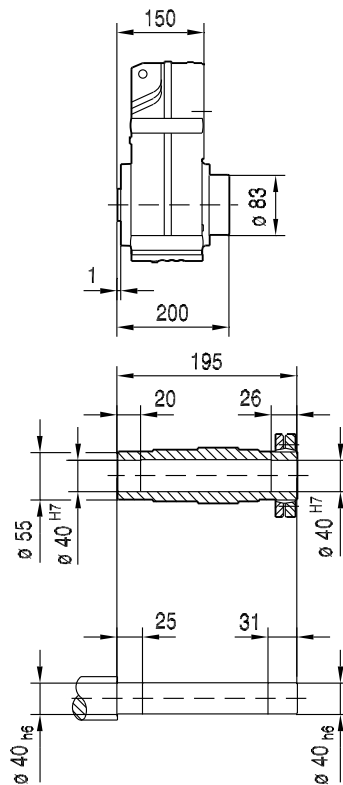
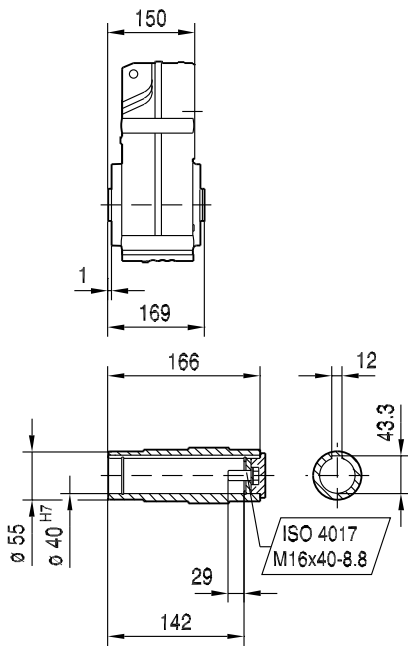
42 083 02 06



**FA57..**

**FH57..**  
max. DR100LC

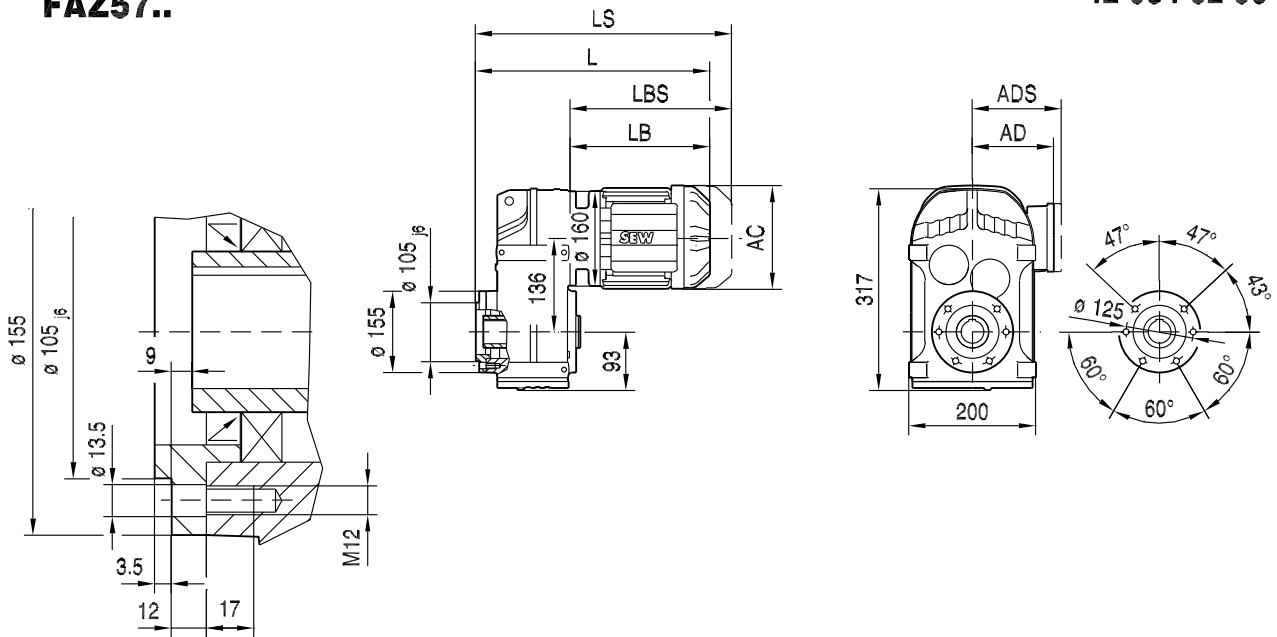
**FV57..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	335	346	371	411	413	433	463	493	540	590
LS	390	414	439	492	506	526	556	586	652	702
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

**FAZ57..**

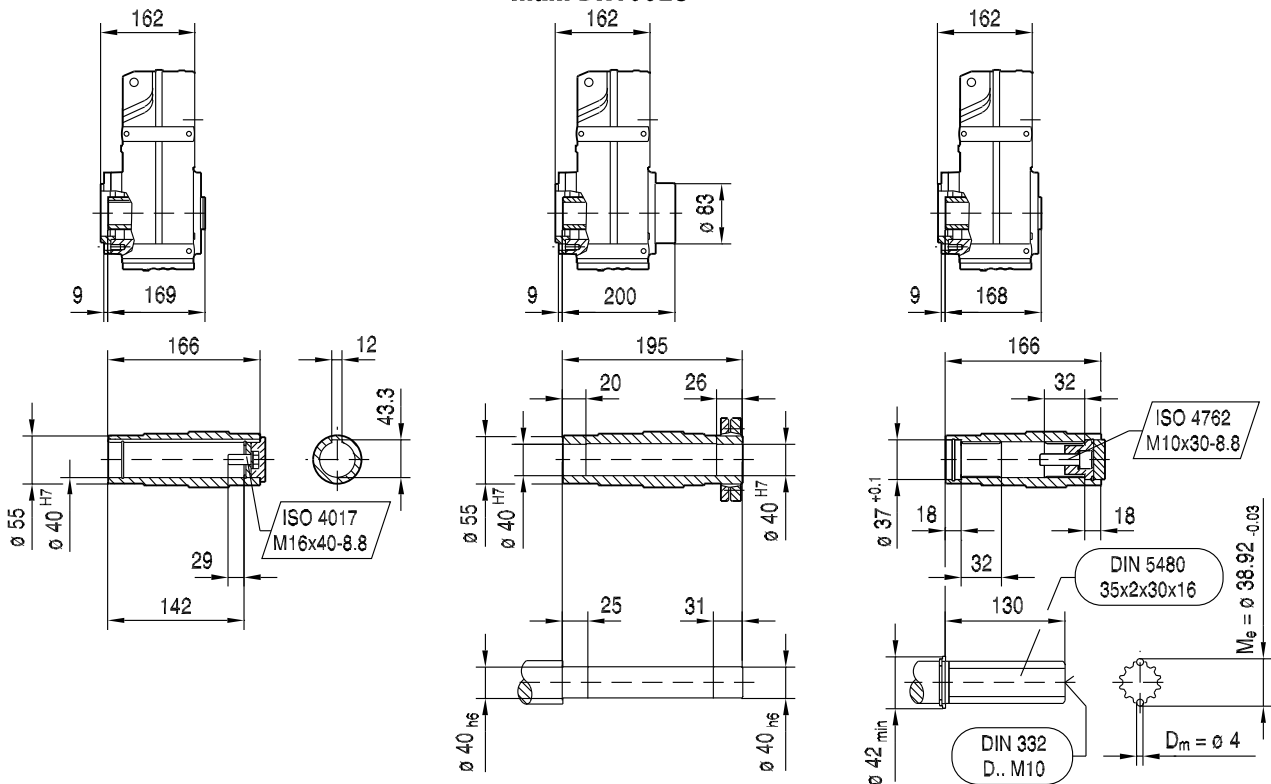
42 084 02 06



**FAZ57..**

**FHZ57..**  
max. DR100LC

**FVZ57..**



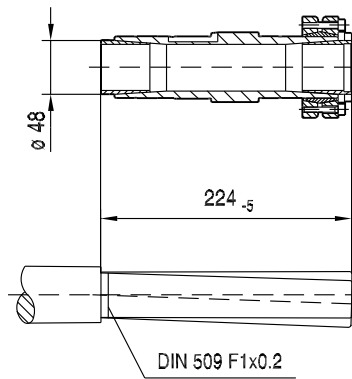
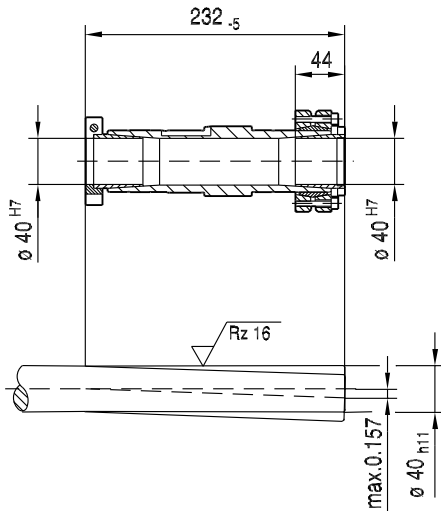
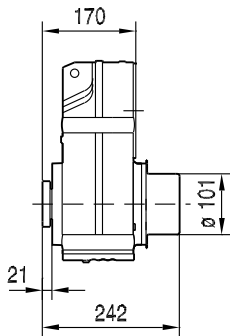
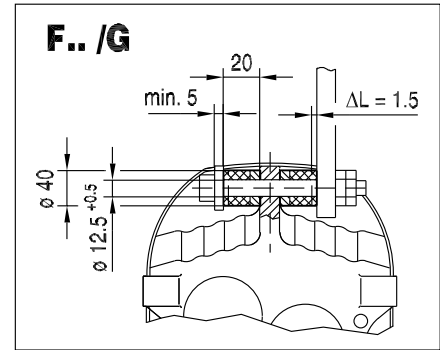
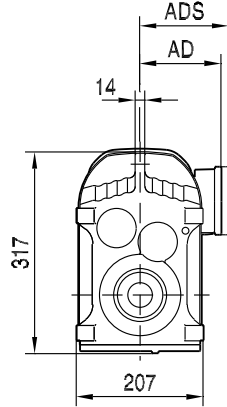
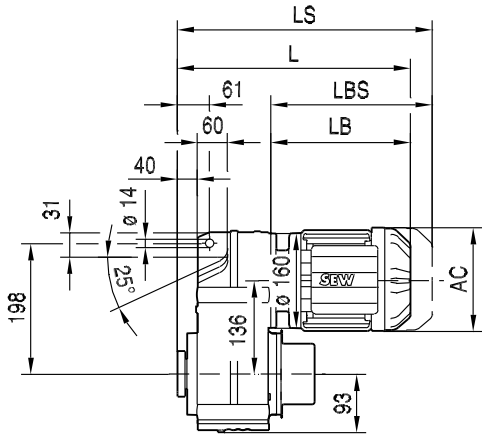
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	347	358	383	423	425	445	475	505	552	602
LS	402	426	451	504	518	538	568	598	664	714
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

kVA	n
i	f
P	H <sub>Z</sub>

F..DRE/DRS  
F..DR.. [mm]

**FT57..**

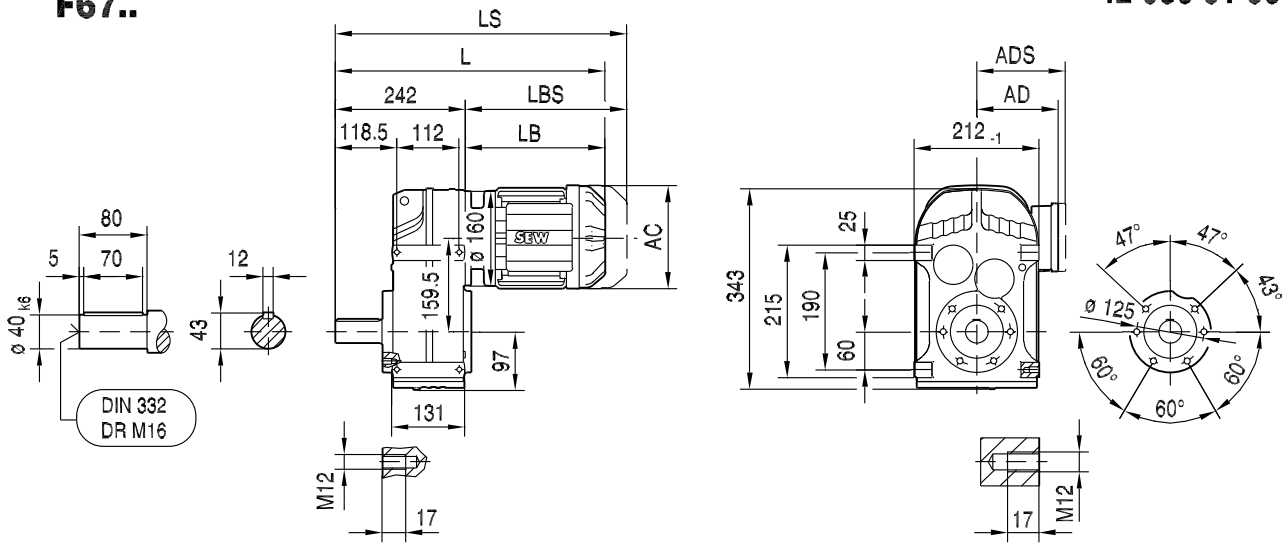
42 085 01 06



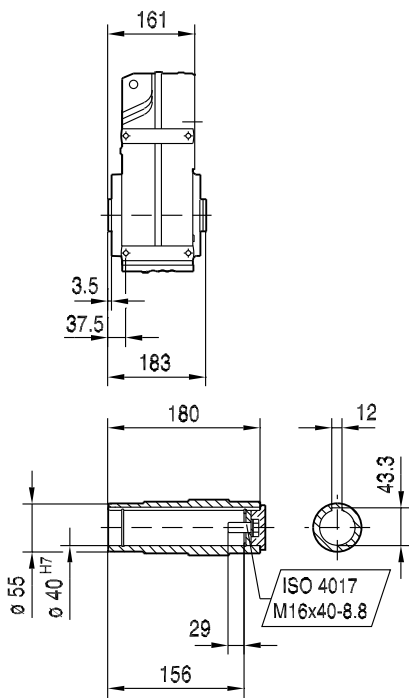
(→  136)	DR63..	DR71S	DR71M	DR80M				
AC	132	139	139	156				
AD	105	119	119	128				
ADS	105	129	129	139				
L	355	366	391	431				
LS	410	434	459	512				
LB	185	196	221	261				
LBS	240	264	289	342				

42 086 01 06

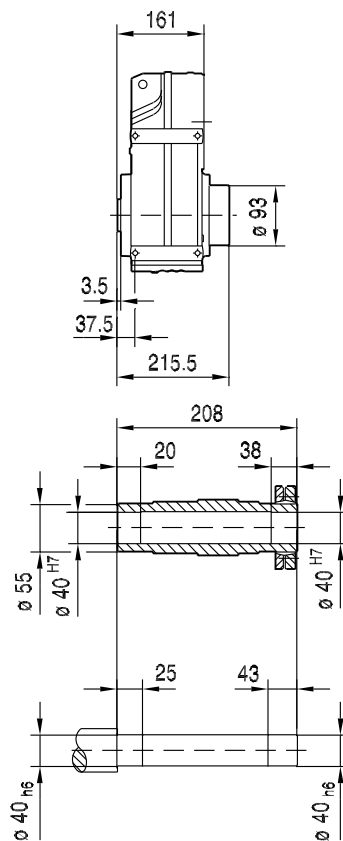
**F67..**



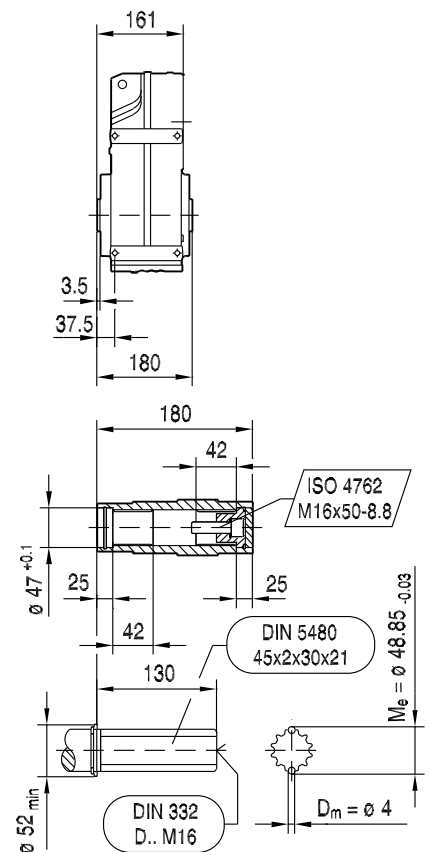
**FA67B..**



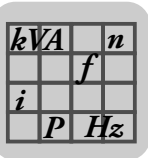
**FH67B..**  
max. DR132S



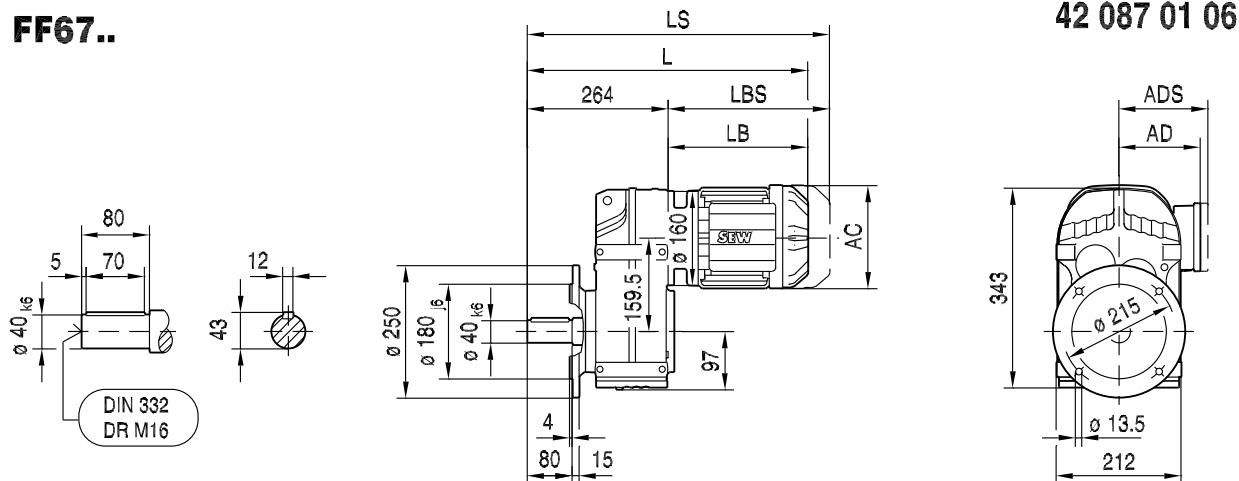
**FV67B..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	427	438	463	503	505	525	555	585	632	682
LS	482	506	531	584	598	618	648	678	744	794
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

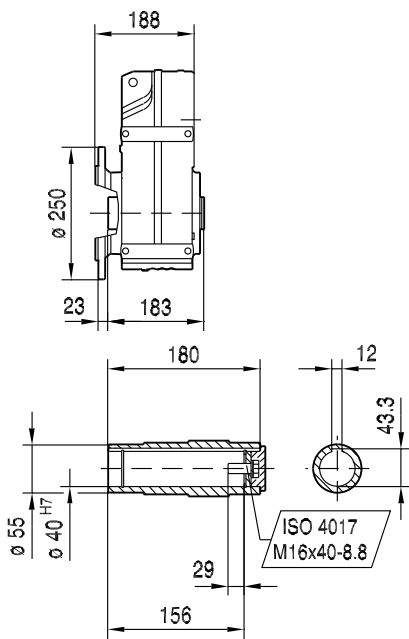


**FF67..**

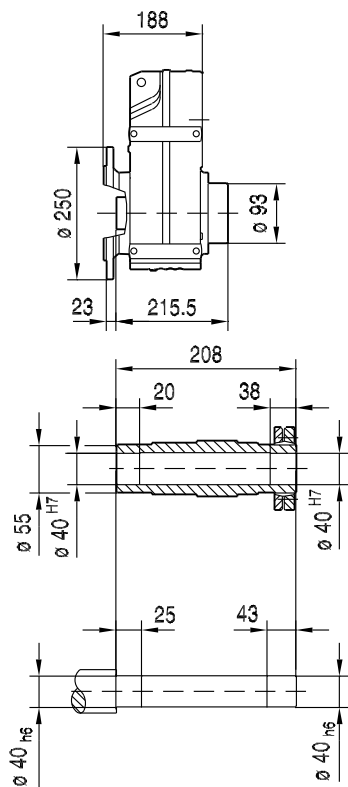


42 087 01 06

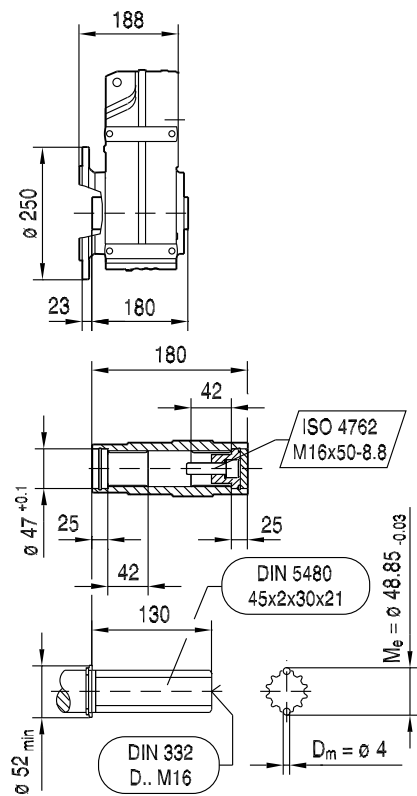
**FAF67..**



**FHF67..**  
max. DR132S



**FVF67..**

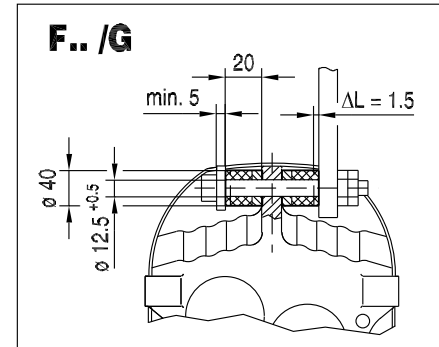
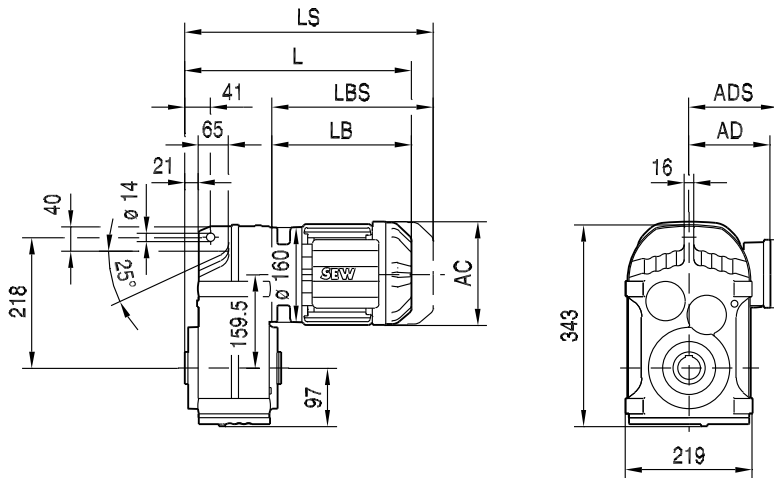


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	449	460	485	525	527	547	577	607	654	704
LS	504	528	553	606	620	640	670	700	766	816
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552



**FA67..**

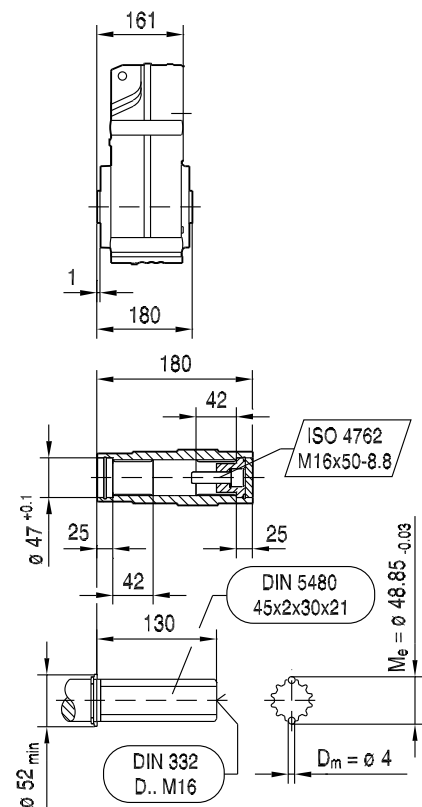
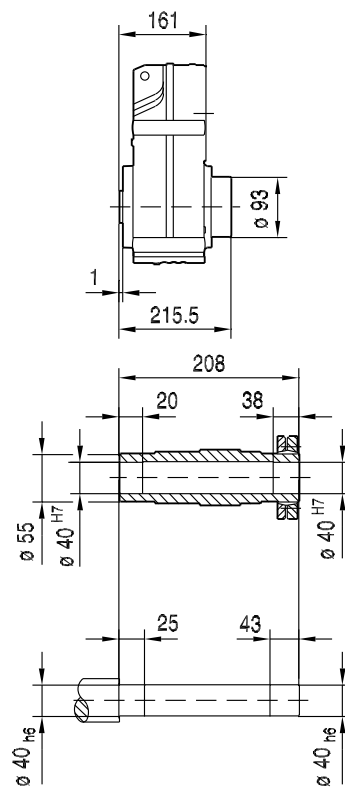
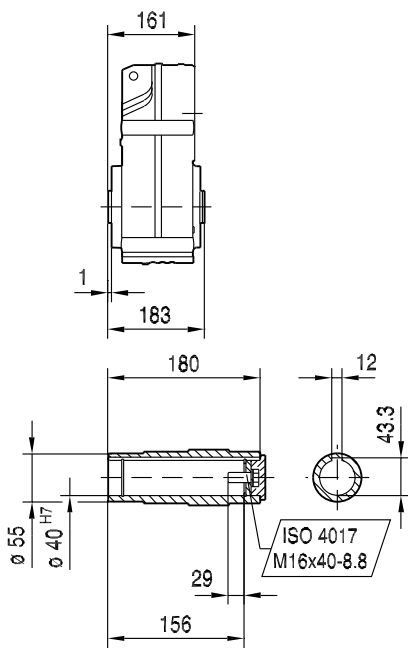
42 088 01 06



**FA67..**

**FH67..**  
max. DR132S

**FV67..**

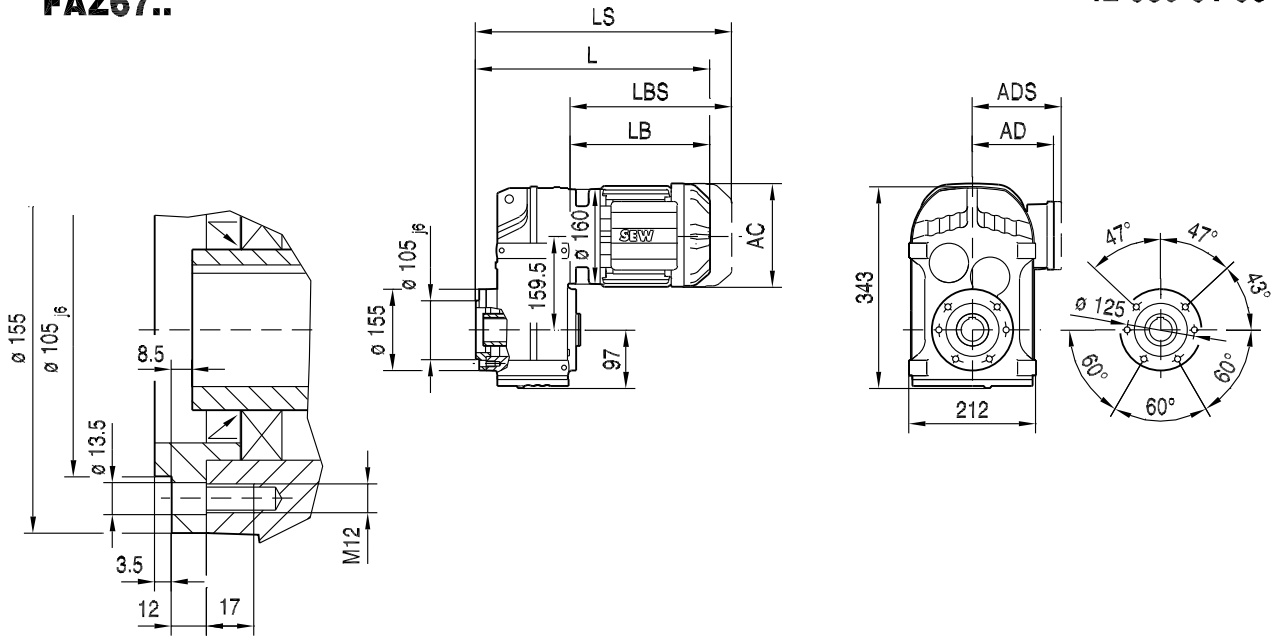


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	346	357	382	422	424	444	474	504	551	601
LS	401	425	450	503	517	537	567	597	663	713
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

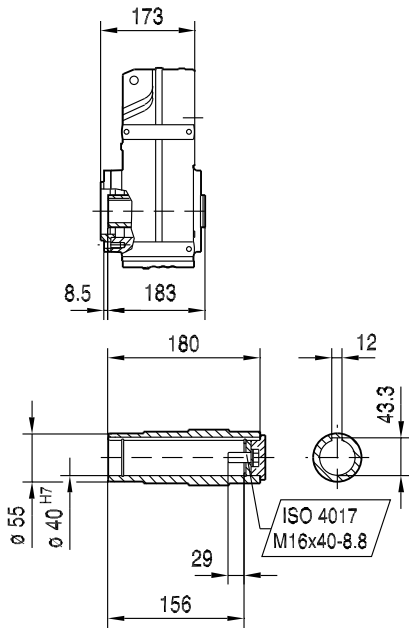


42 089 01 06

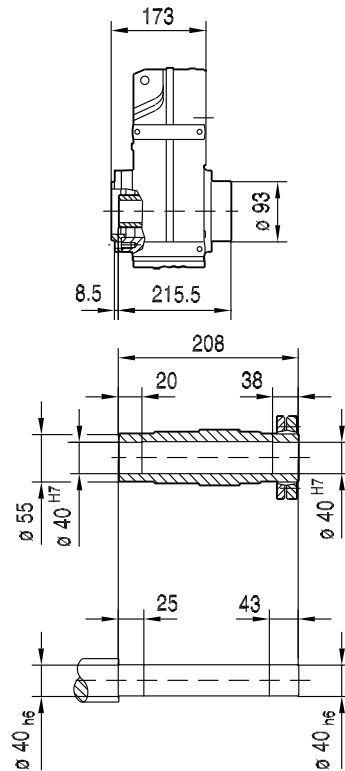
**FAZ67..**



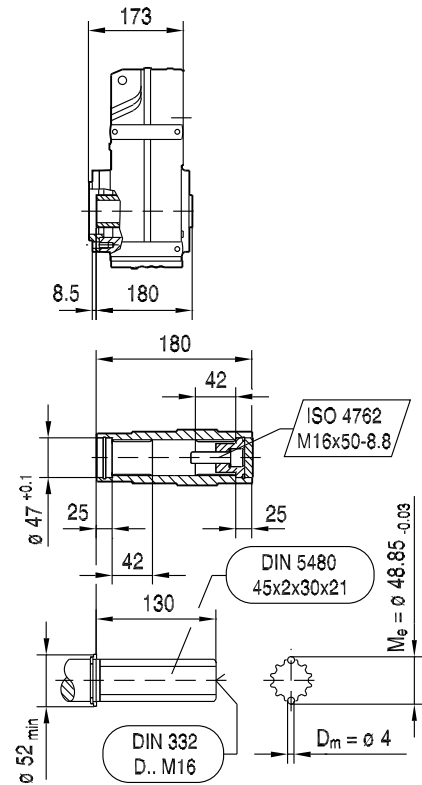
**FAZ67..**



**FHZ67..**  
max. DR132S



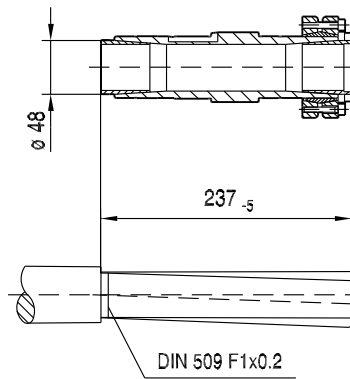
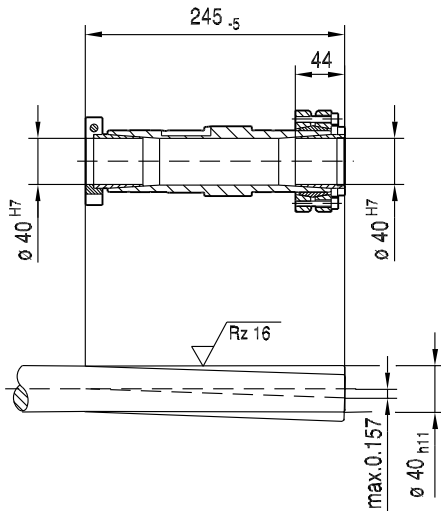
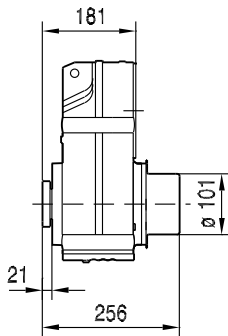
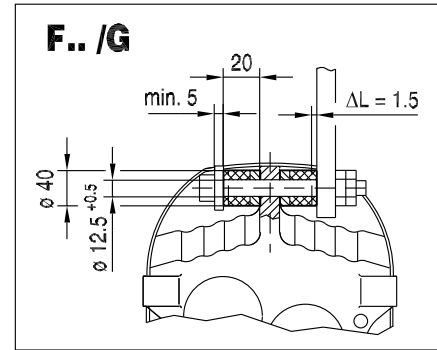
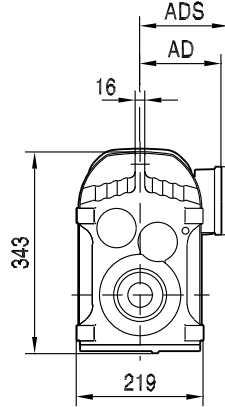
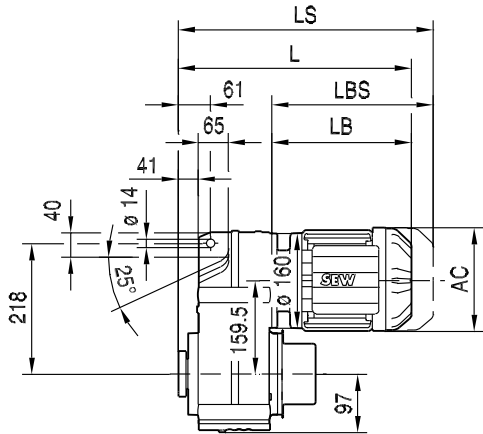
**FVZ67..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	358	369	394	434	436	456	486	516	563	613
LS	413	437	462	515	529	549	579	609	675	725
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

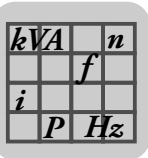
**FT67..**

42 090 01 06



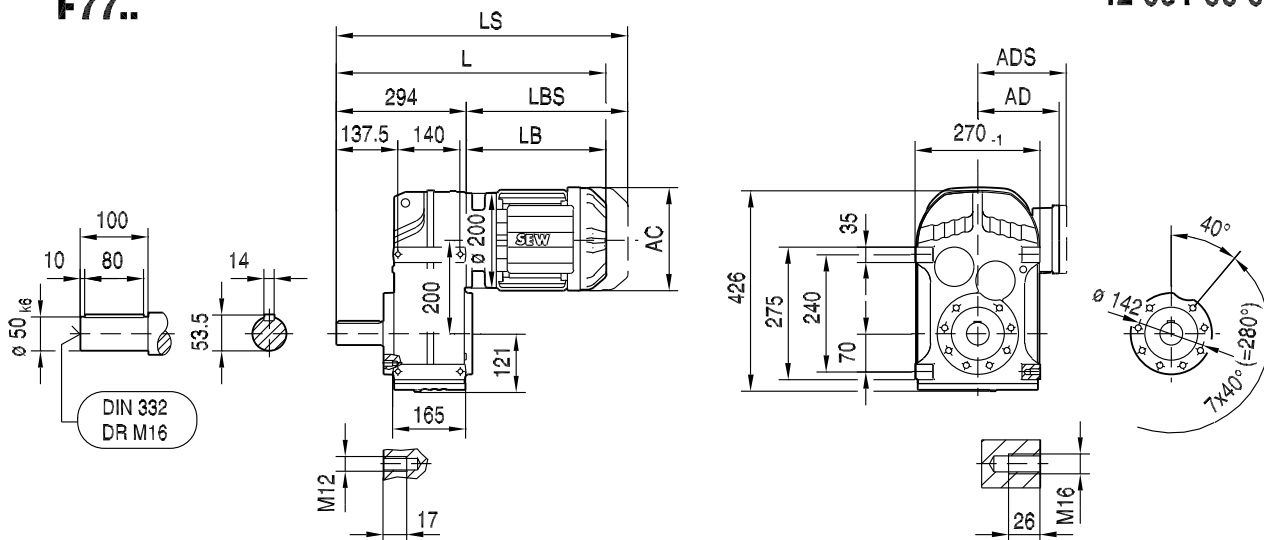
9

(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	366	377	402	442	444	464	494	524
LS	421	445	470	523	537	557	587	617
LB	185	196	221	261	263	283	313	343
LBS	240	264	289	342	356	376	406	436



42 091 00 06

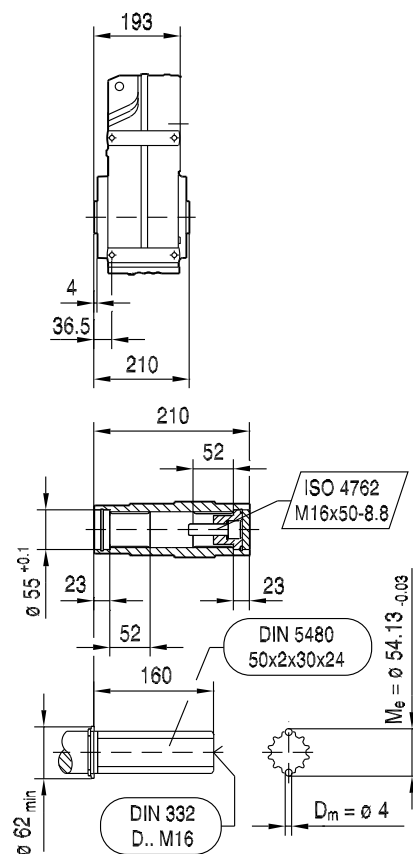
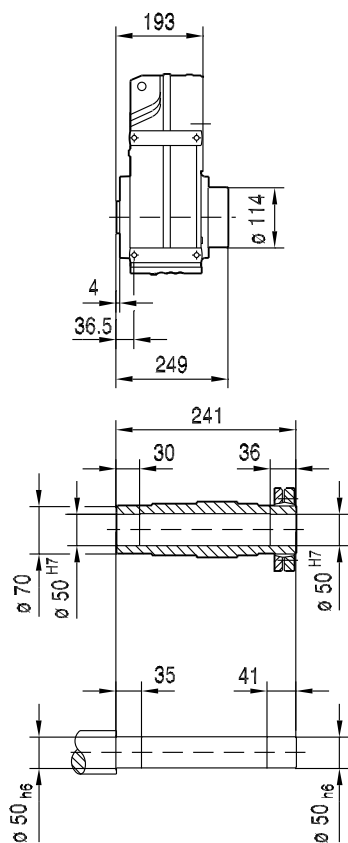
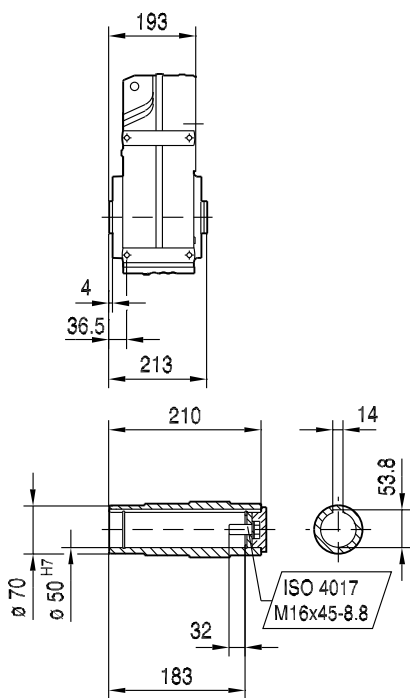
**F77..**



**FA77B..**

**FH77B..**

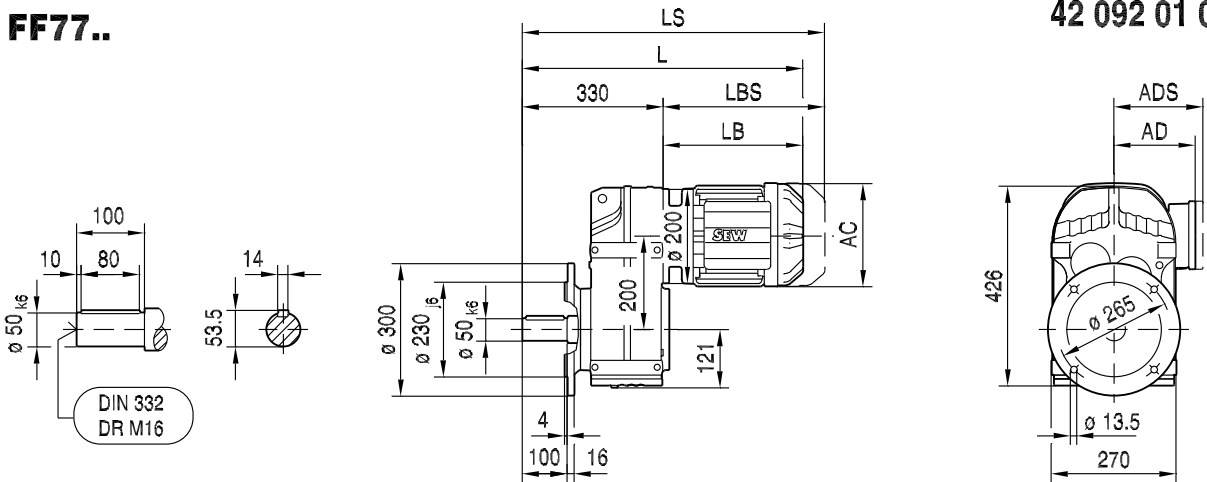
**FV77B..**



(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	132	139	139	156	156	179	179	197	197	221	221	270
AD	105	119	119	128	128	140	140	157	157	170	170	228
ADS	105	129	129	139	139	150	150	158	158	172	172	228
L	472	483	508	517	548	550	570	600	630	673	723	764
LS	527	551	576	598	629	643	663	693	723	785	835	901
LB	178	189	214	223	254	256	276	306	336	379	429	470
LBS	233	257	282	304	335	349	369	399	429	491	541	607

**FF77..**

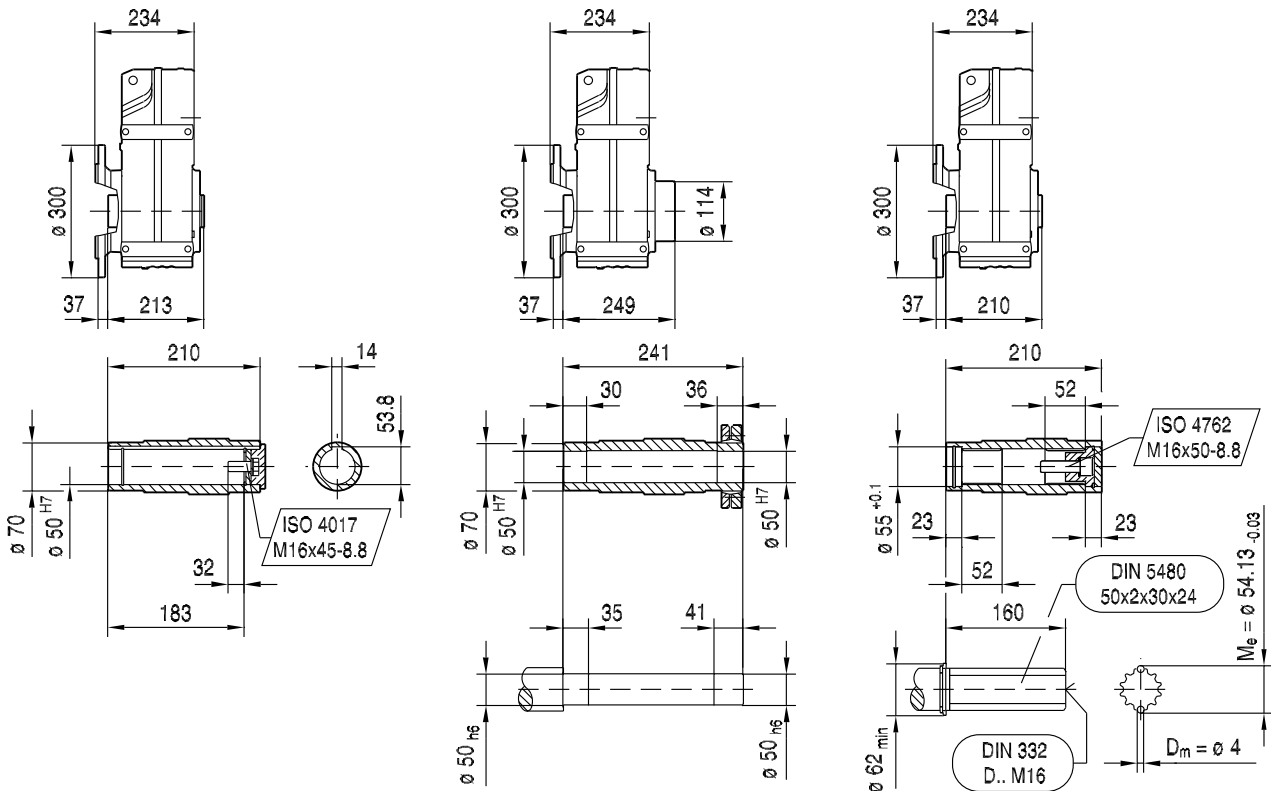
42 092 01 06



**FAF77..**

**FHF77..**

**FVF77..**



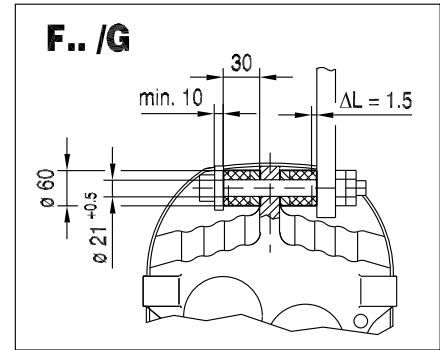
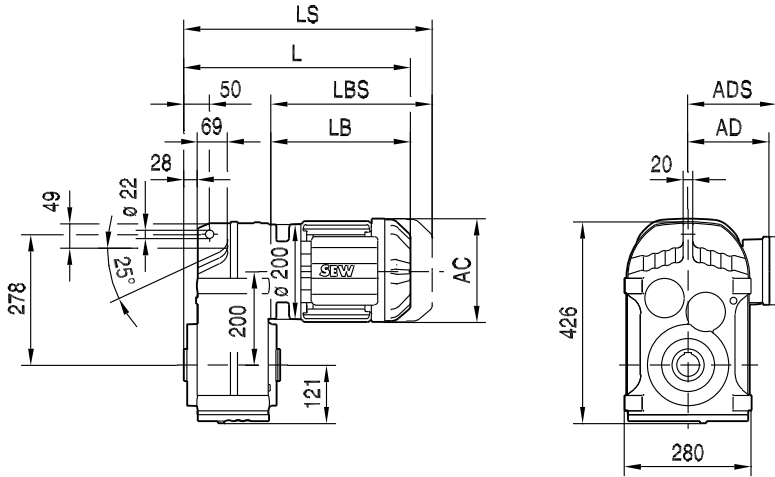
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	132	139	139	156	156	179	179	197	197	221	221	270
AD	105	119	119	128	128	140	140	157	157	170	170	228
ADS	105	129	129	139	139	150	150	158	158	172	172	228
L	508	519	544	553	584	586	606	636	666	709	759	800
LS	563	587	612	634	665	679	699	729	759	821	871	937
LB	178	189	214	223	254	256	276	306	336	379	429	470
LBS	233	257	282	304	335	349	369	399	429	491	541	607



F..DRE/DRS  
F..DR.. [mm]

**FA77..**

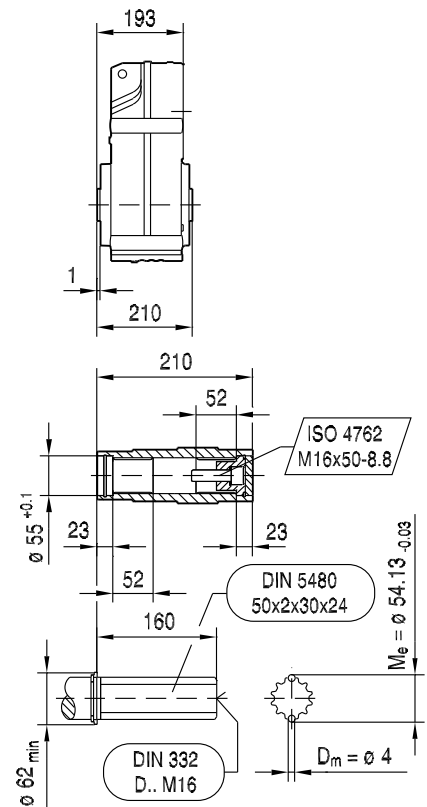
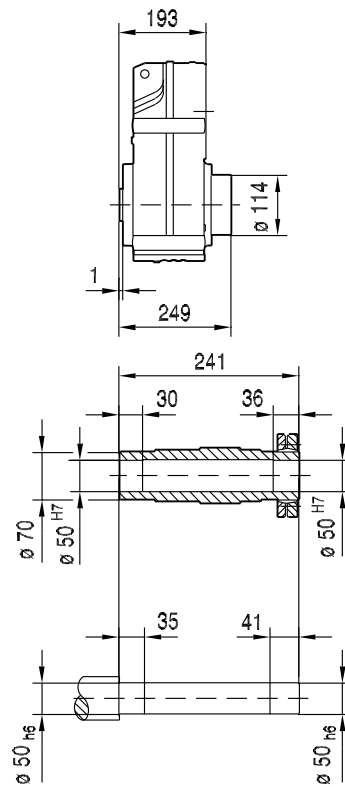
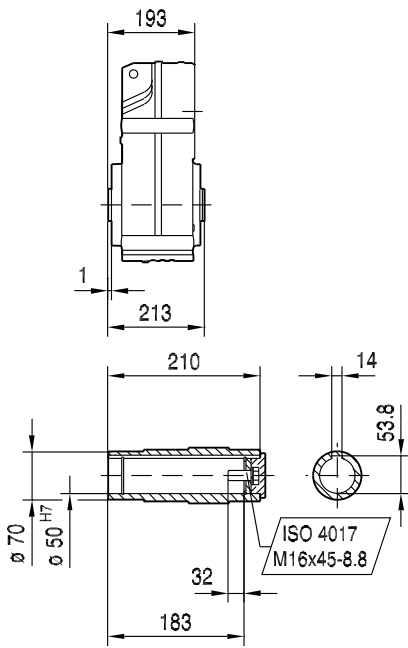
42 093 00 06



**FA77..**

**FH77..**

**FV77..**

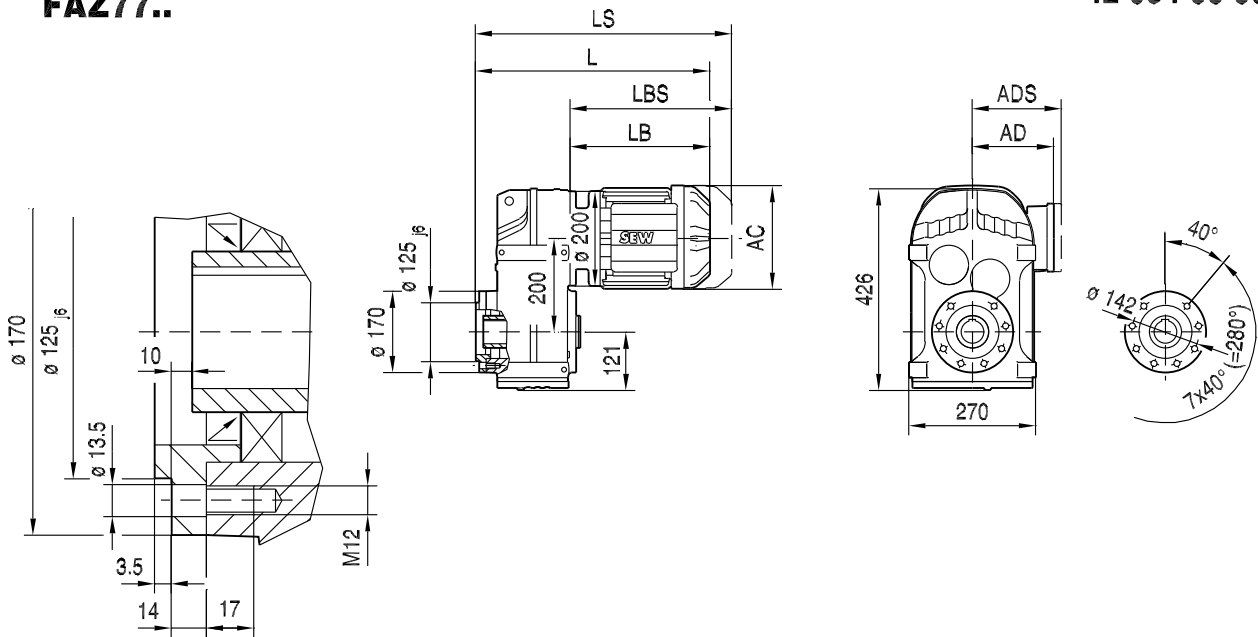


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	132	139	139	156	156	179	179	197	197	221	221	270
AD	105	119	119	128	128	140	140	157	157	170	170	228
ADS	105	129	129	139	139	150	150	158	158	172	172	228
L	371	382	407	416	447	449	469	499	529	572	622	663
LS	426	450	475	497	528	542	562	592	622	684	734	800
LB	178	189	214	223	254	256	276	306	336	379	429	470
LBS	233	257	282	304	335	349	369	399	429	491	541	607



**FAZ77..**

42 094 00 06

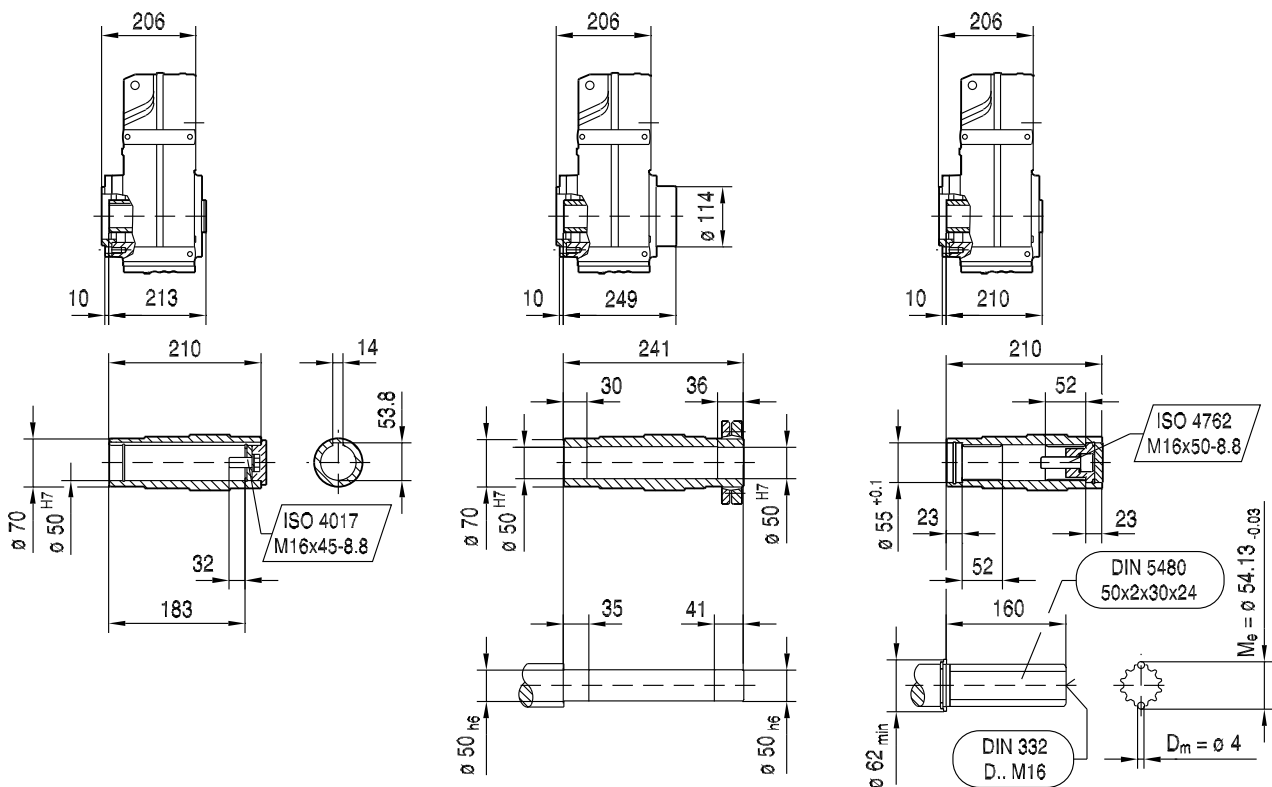


**FAZ77..**

**FHZ77..**

**FVZ77..**

9



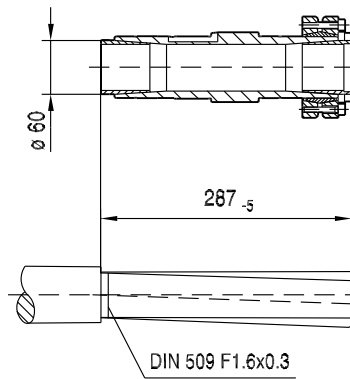
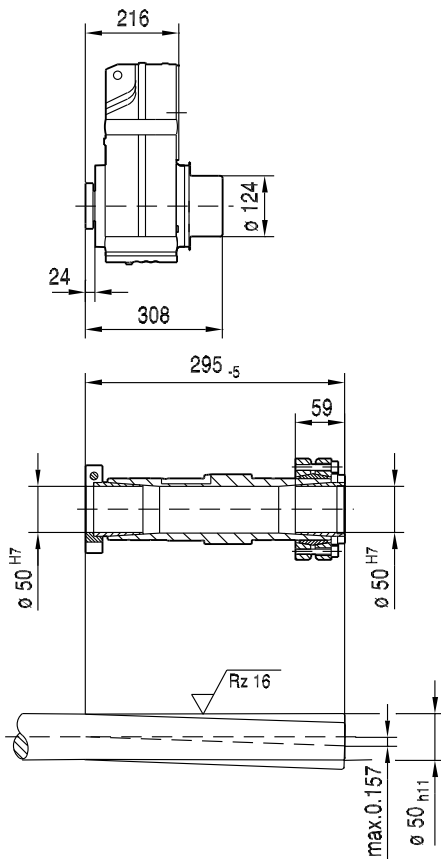
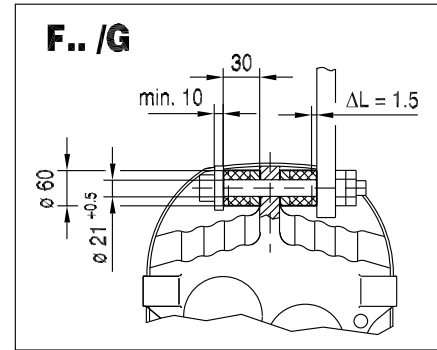
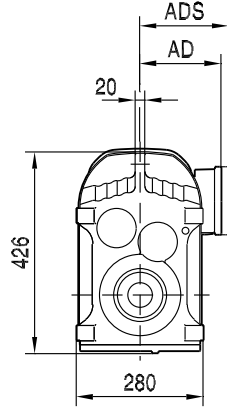
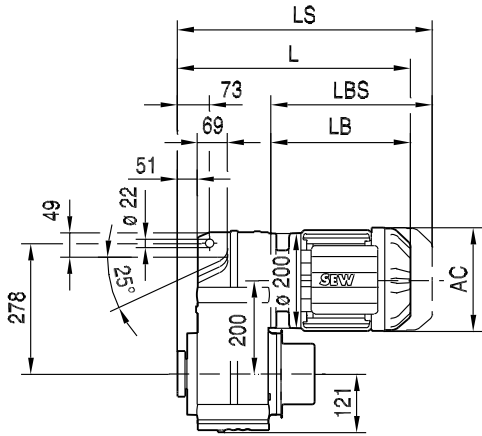
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	132	139	139	156	156	179	179	197	197	221	221	270
AD	105	119	119	128	128	140	140	157	157	170	170	228
ADS	105	129	129	139	139	150	150	158	158	172	172	228
L	384	395	420	429	460	462	482	512	542	585	635	676
LS	439	463	488	510	541	555	575	605	635	697	747	813
LB	178	189	214	223	254	256	276	306	336	379	429	470
LBS	233	257	282	304	335	349	369	399	429	491	541	607

kVA	n
i	f
P	H <sub>Z</sub>

F..DRE/DRS  
F..DR.. [mm]

42 095 01 06

FT77..

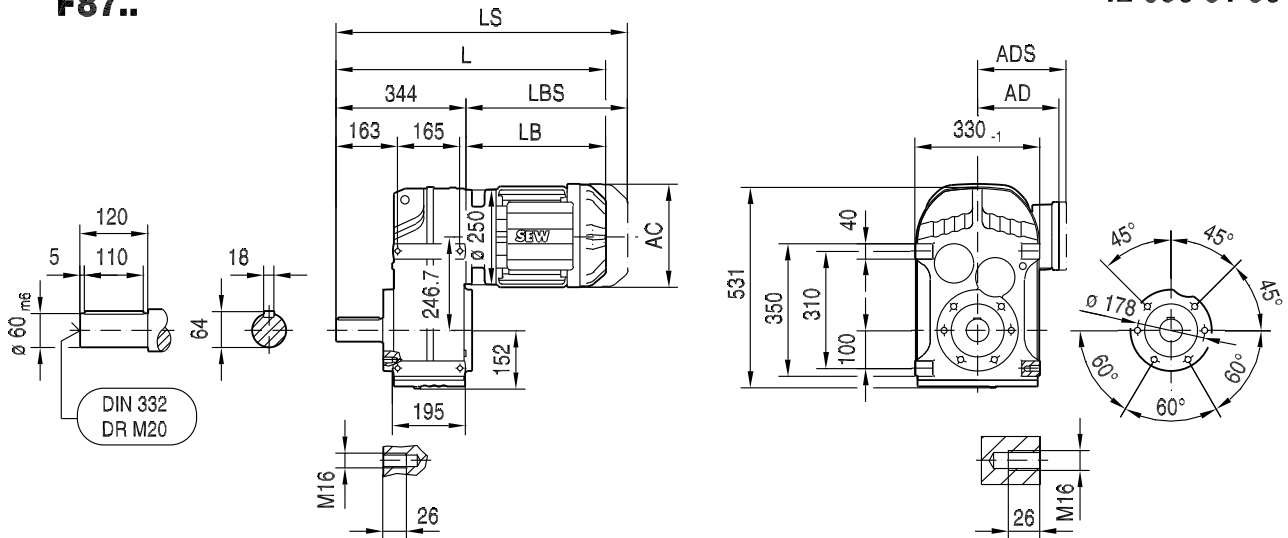


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	156	179	179	197	197	221	221
AD	105	119	119	128	128	140	140	157	157	170	170
ADS	105	129	129	139	139	150	150	158	158	172	172
L	394	405	430	439	470	472	492	522	552	595	645
LS	449	473	498	520	551	565	585	615	645	707	757
LB	178	189	214	223	254	256	276	306	336	379	429
LBS	233	257	282	304	335	349	369	399	429	491	541



**F87..**

42 096 01 06

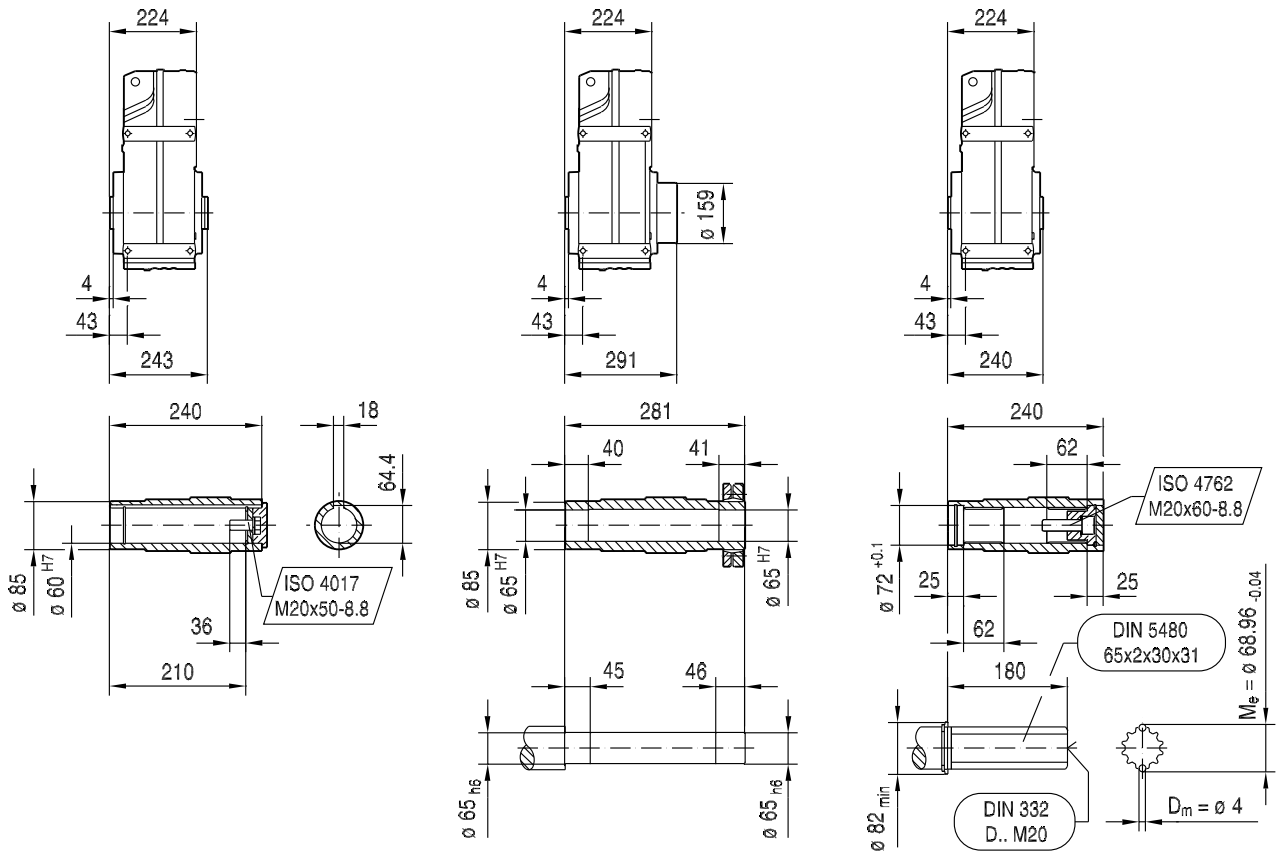


**FA87B..**

**FH87B..**  
FH87B/R.. → 99

**FV87B..**

9

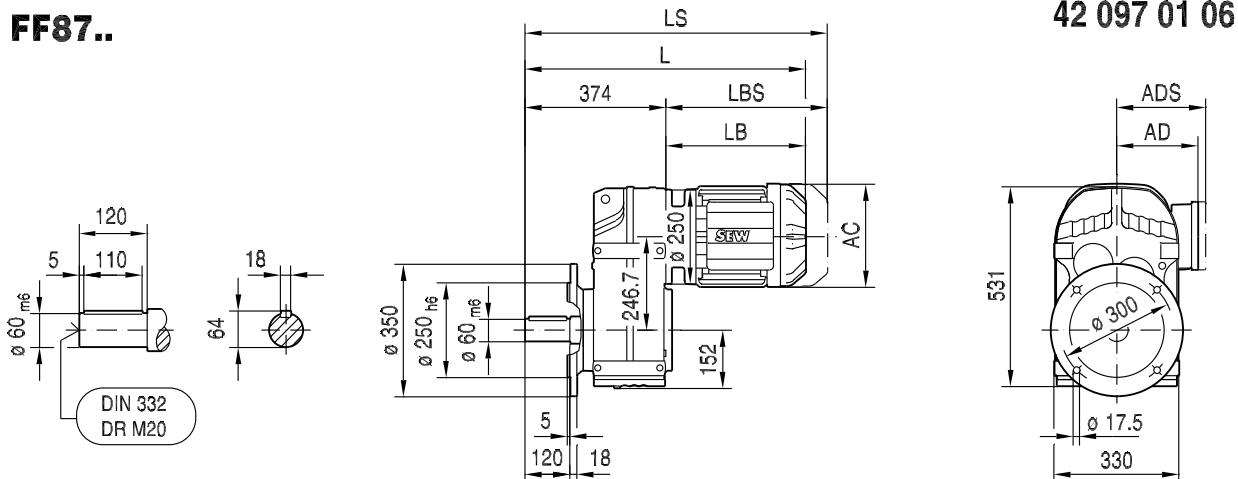


(→  136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	553	562	593	595	615	645	675	718	768	809	878	938
LS	621	643	674	688	708	738	768	830	880	946	1067	1127
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783

kVA	n
f	
i	P
H <sub>z</sub>	

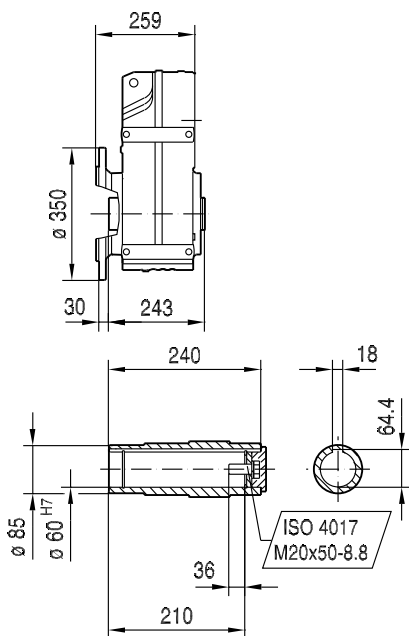
F..DRE/DRS  
F..DR.. [mm]

**FF87..**

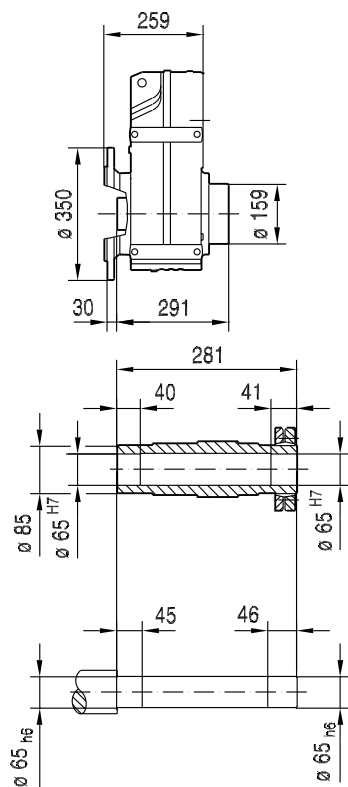


42 097 01 06

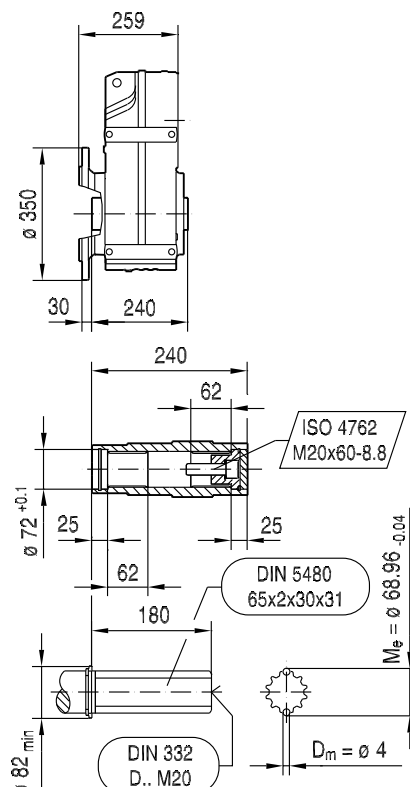
**FAF87..**



**FHF87..**  
FHF87/R.. → 99



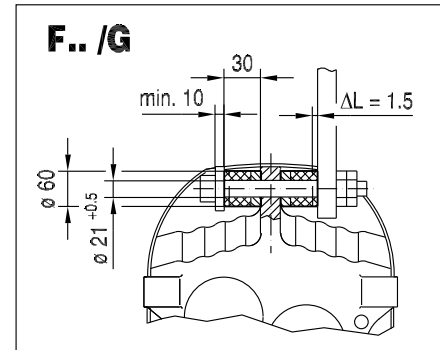
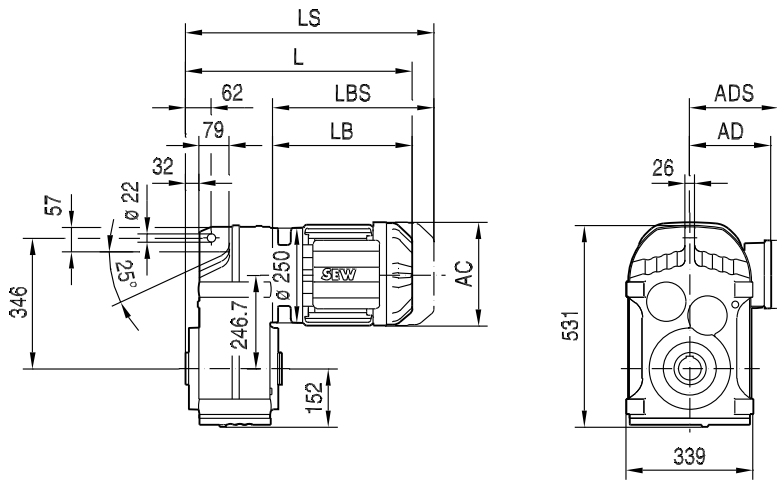
**FVF87..**



(→  136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	583	592	623	625	645	675	705	748	798	839	908	968
LS	651	673	704	718	738	768	798	860	910	976	1097	1157
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783

**FA87..**

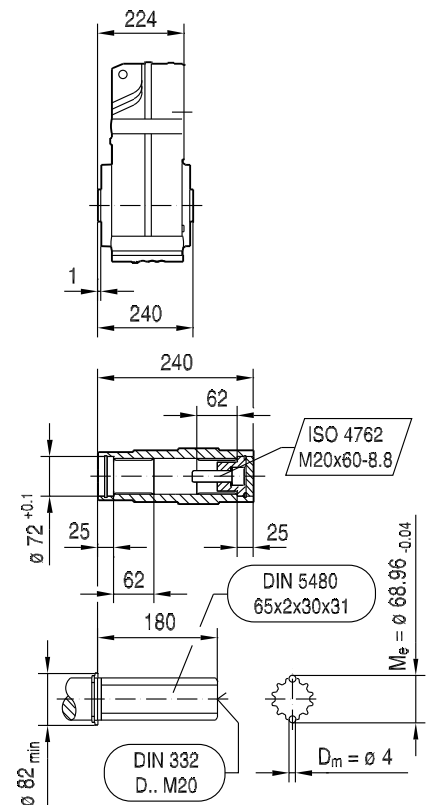
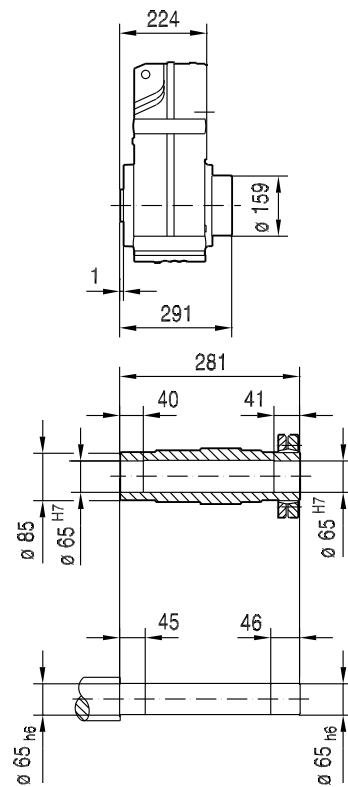
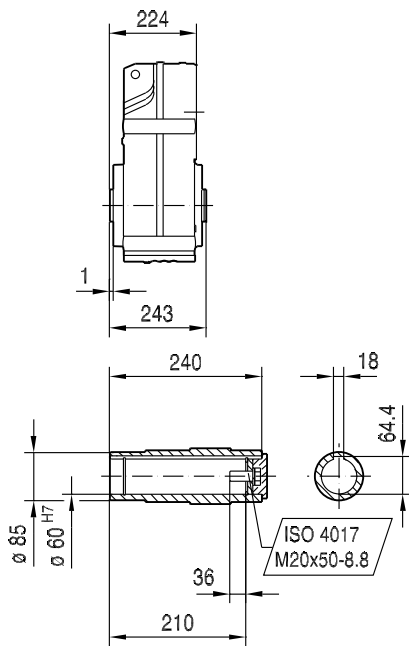
42 098 01 06



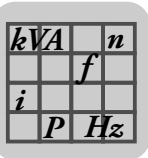
**FA87..**

**FH87..**  
**FH87/R..** → 99

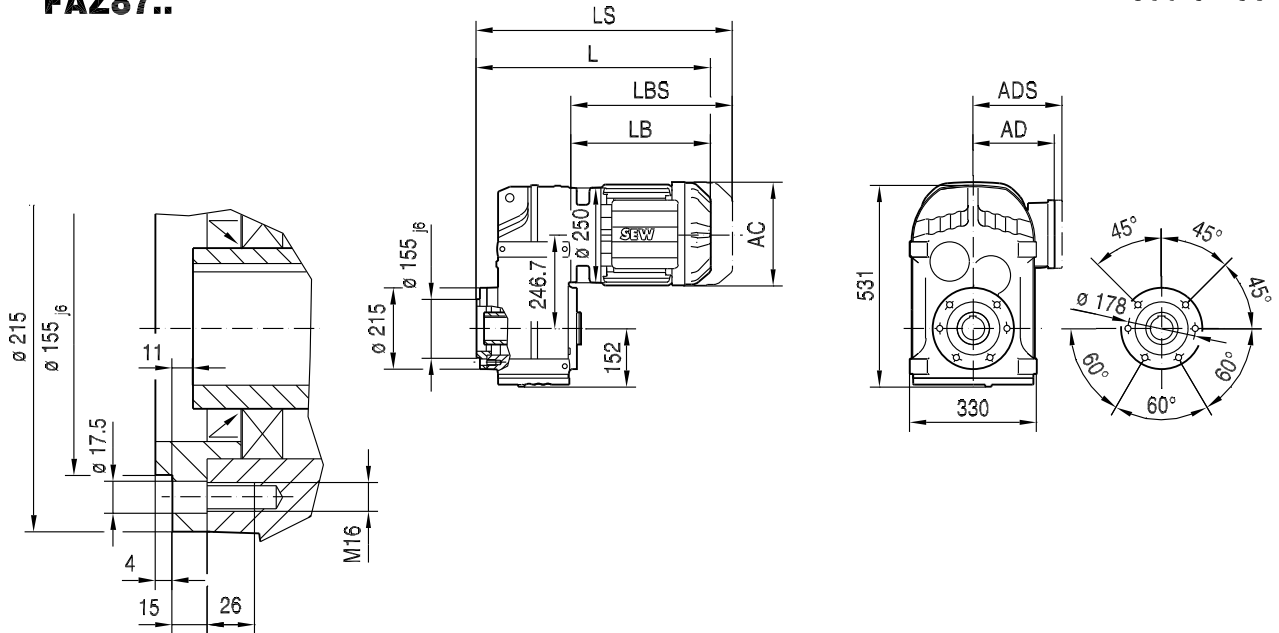
**FV87..**



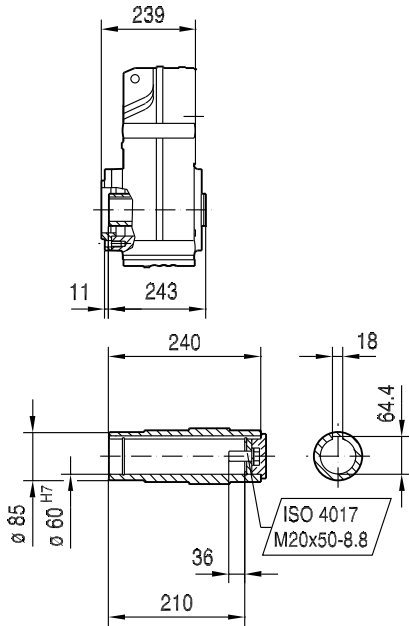
(→  136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	433	442	473	475	495	525	555	598	648	689	758	818
LS	501	523	554	568	588	618	648	710	760	826	947	1007
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783



**FAZ87..**

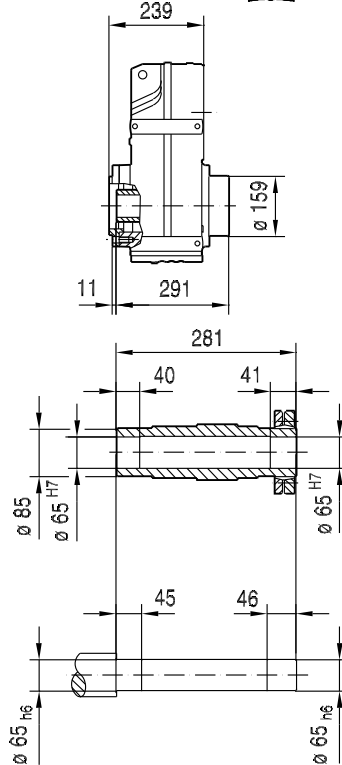


**FAZ87..**

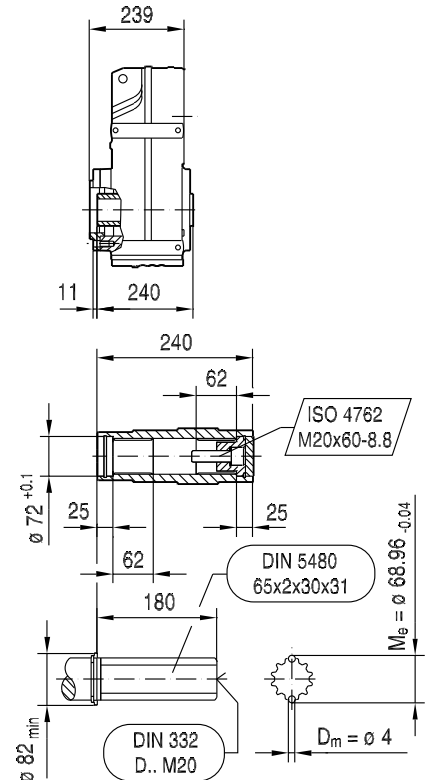


**FHZ87..**

FHZ87/R.. → 99



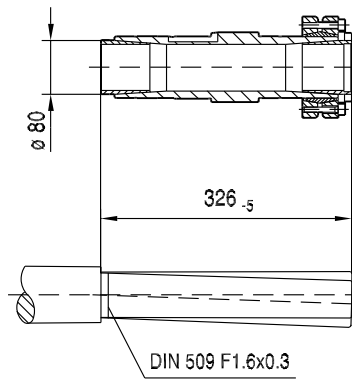
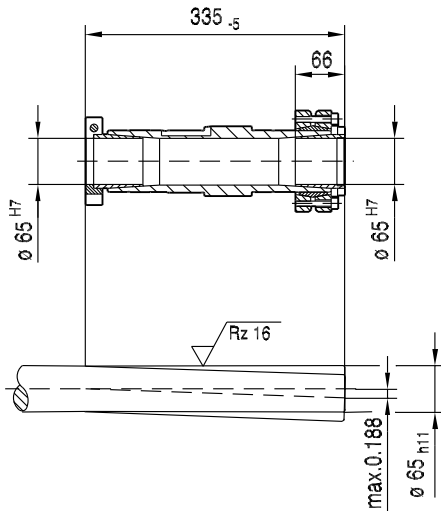
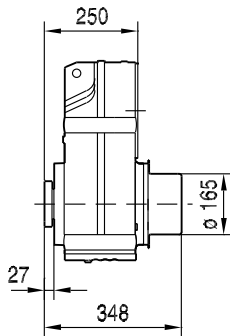
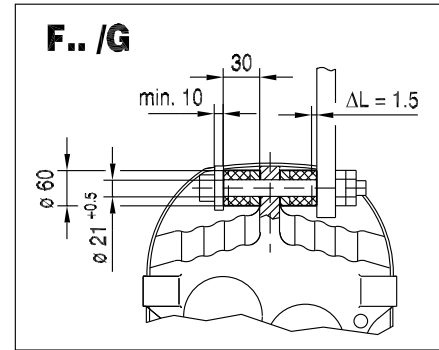
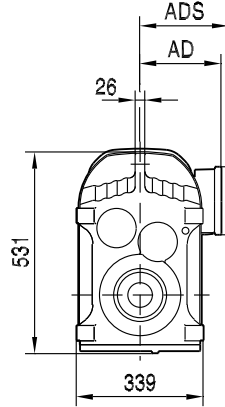
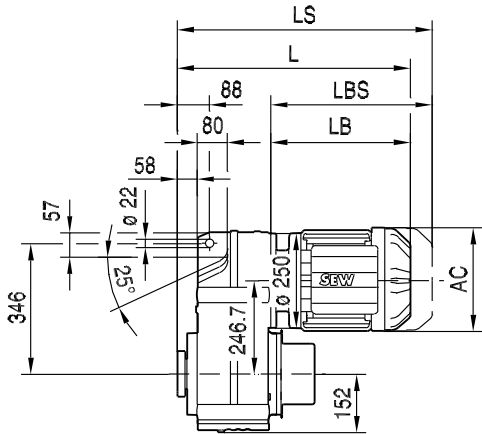
**FVZ87..**



(→  136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	448	457	488	490	510	540	570	613	663	704	773	833
LS	516	538	569	583	603	633	663	725	775	841	962	1022
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783

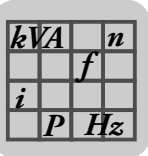
**FT87..**

42 100 01 06



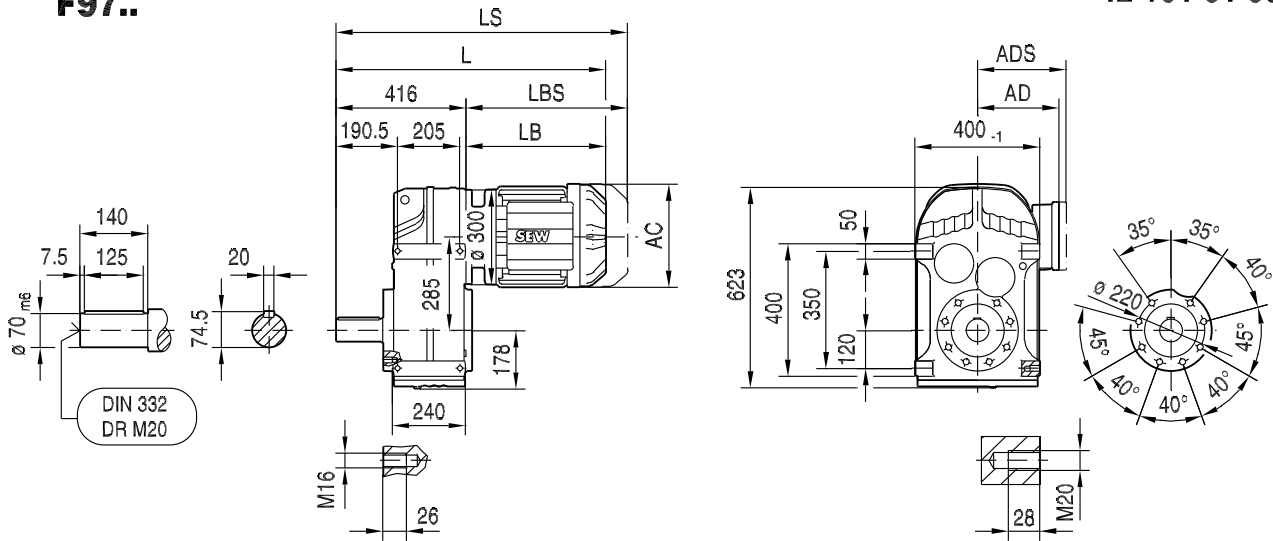
9

(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	459	468	499	501	521	551	581	624	674	715	784	844
LS	527	549	580	594	614	644	674	736	786	852	973	1033
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783

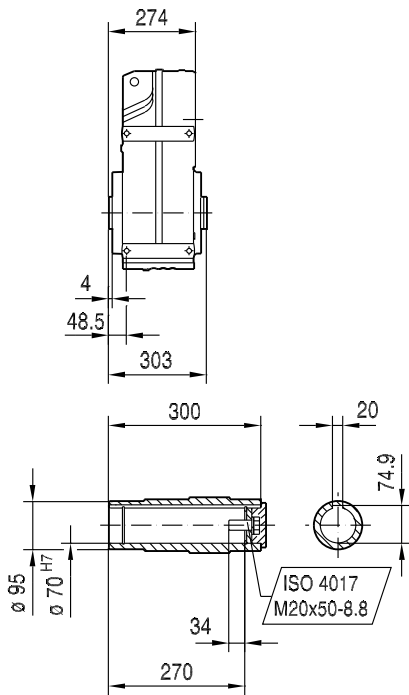


42 101 01 06

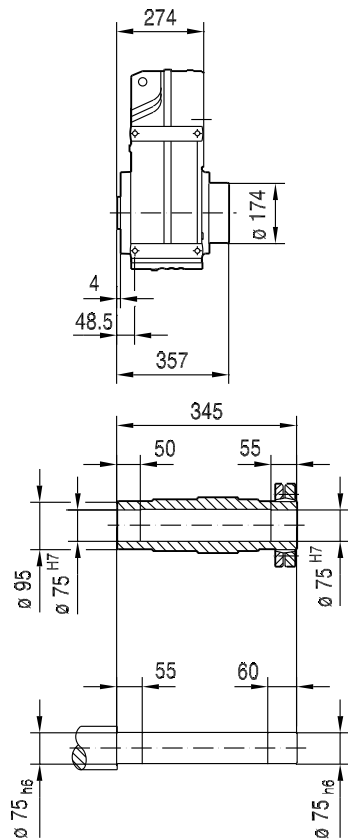
**F97..**



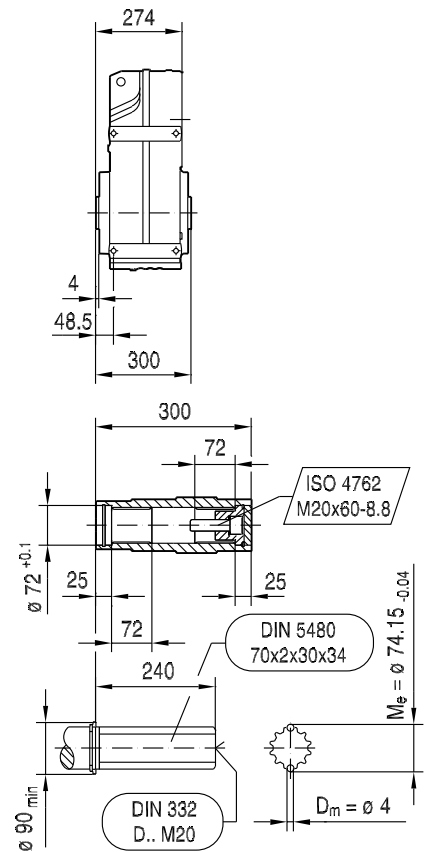
**FA97B..**



**FH97B..**  
FH97B/R.. → 99



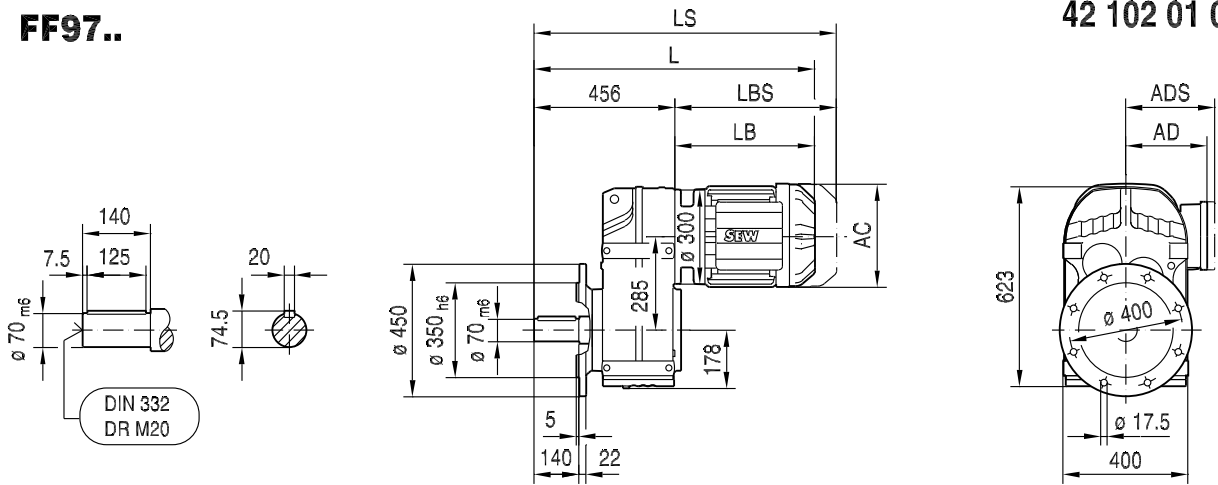
**FV97B..**



(→  136)	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	179	179	197	197	221	221	221	270	316	316	394
AD	140	140	157	157	170	170	170	228	253	253	283
ADS	150	150	158	158	172	172	172	228	253	253	283
L	662	682	712	742	750	785	835	876	945	1005	1078
LS	755	775	805	835	862	897	947	1013	1134	1194	1283
LB	246	266	296	326	334	369	419	460	529	589	662
LBS	339	359	389	419	446	481	531	597	718	778	867

**FF97..**

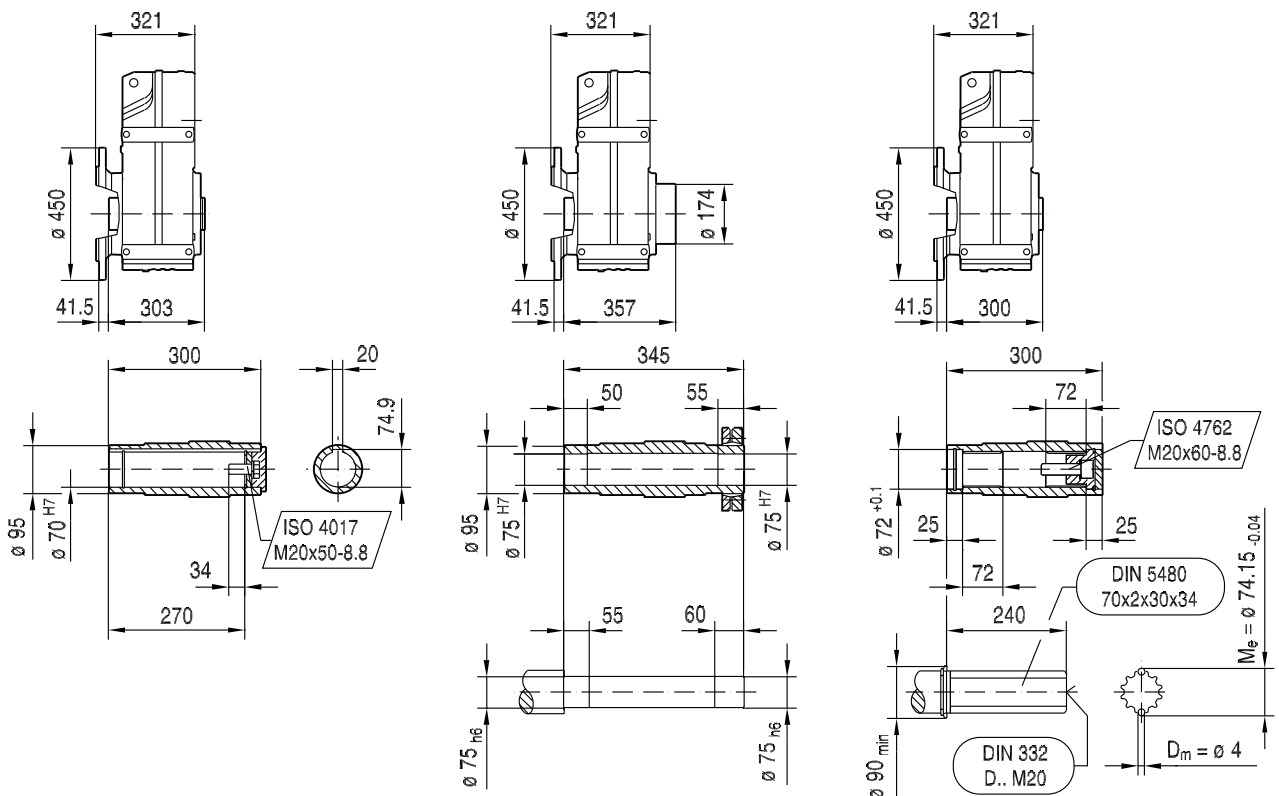
42 102 01 06



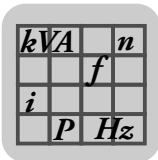
**FAF97..**

**FHF97..**  
**FHF97/R..** → 99

**FVF97..**

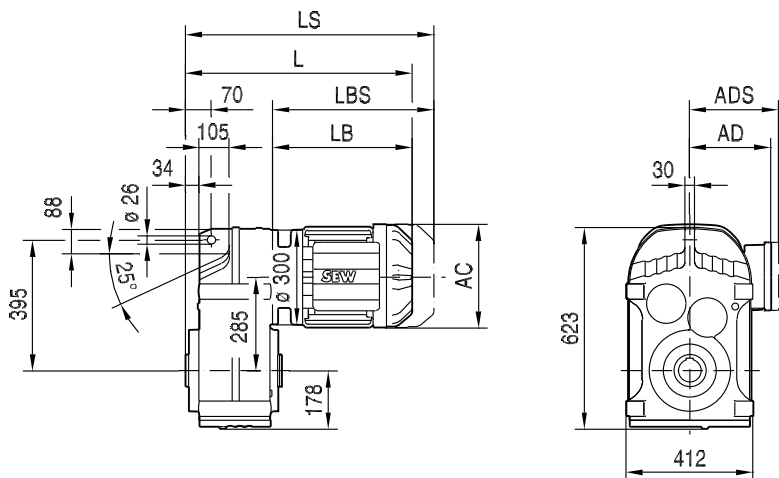


(→  136)	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	179	179	197	197	221	221	221	270	316	316	394
AD	140	140	157	157	170	170	170	228	253	253	283
ADS	150	150	158	158	172	172	172	228	253	253	283
L	702	722	752	782	790	825	875	916	985	1045	1118
LS	795	815	845	875	902	937	987	1053	1174	1234	1323
LB	246	266	296	326	334	369	419	460	529	589	662
LBS	339	359	389	419	446	481	531	597	718	778	867



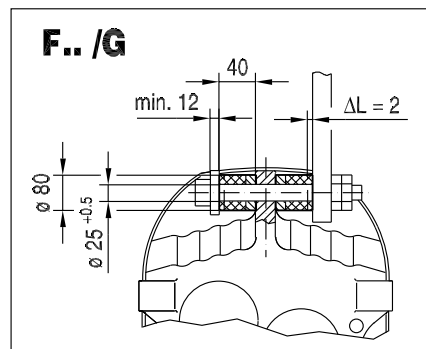
F..DRE/DRS  
F..DR.. [mm]

**FA97..**

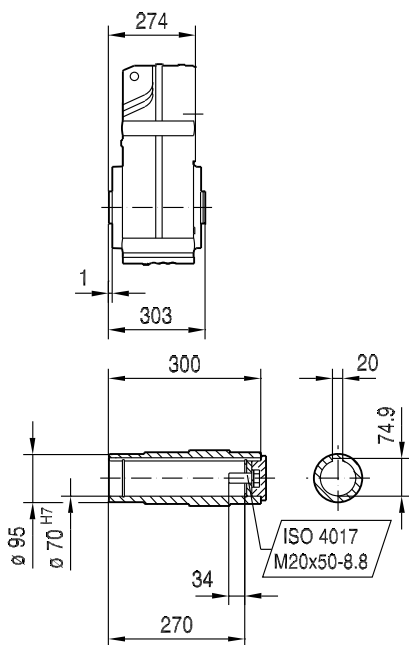


42 103 01 06

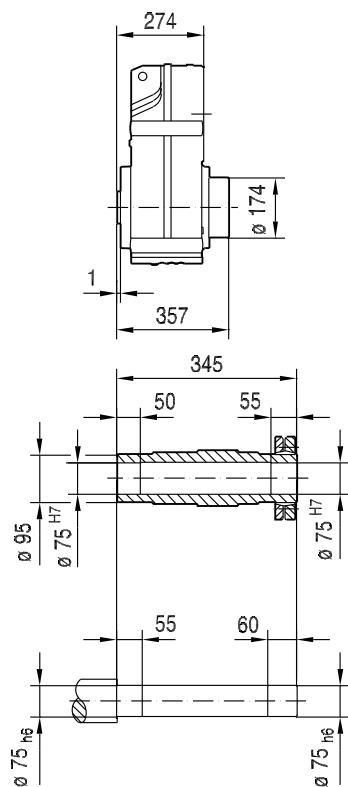
**F.. /G**



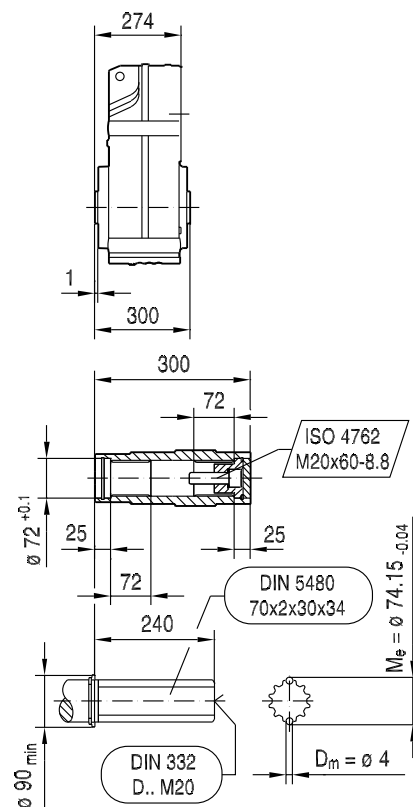
**FA97..**



**FH97..**  
**FH97/R..**



**FV97..**

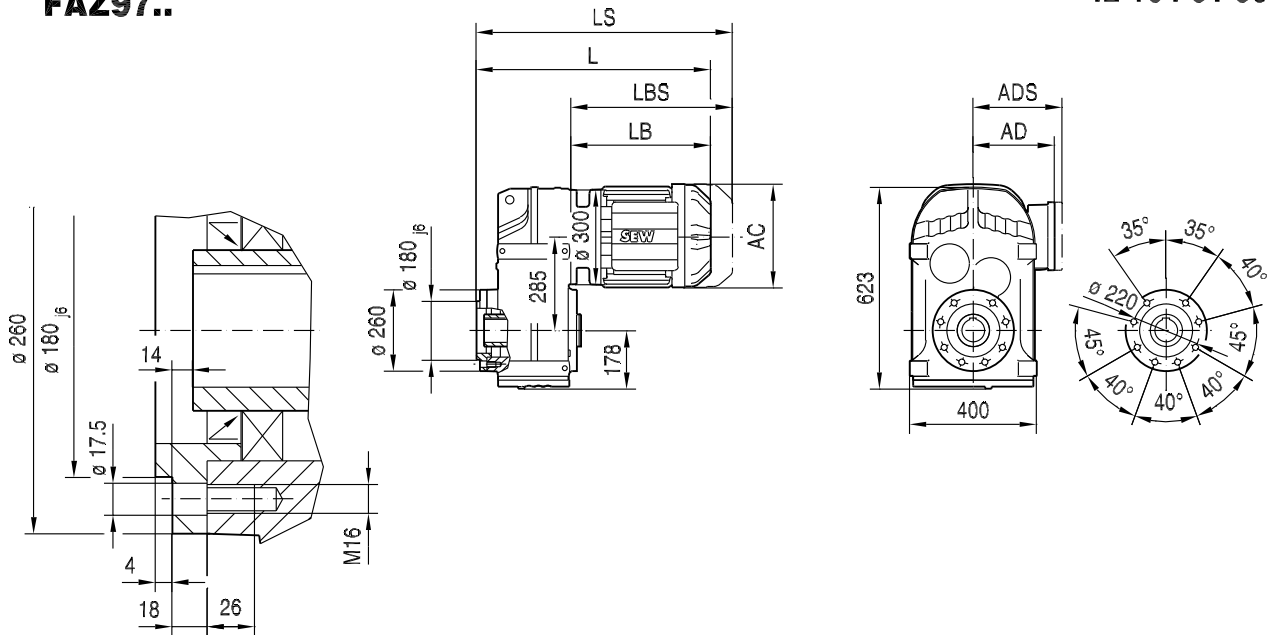


(→ 136)	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	179	179	197	197	221	221	221	270	316	316	394
AD	140	140	157	157	170	170	170	228	253	253	283
ADS	150	150	158	158	172	172	172	228	253	253	283
L	520	540	570	600	608	643	693	734	803	863	936
LS	613	633	663	693	720	755	805	871	992	1052	1141
LB	246	266	296	326	334	369	419	460	529	589	662
LBS	339	359	389	419	446	481	531	597	718	778	867



**FAZ97..**

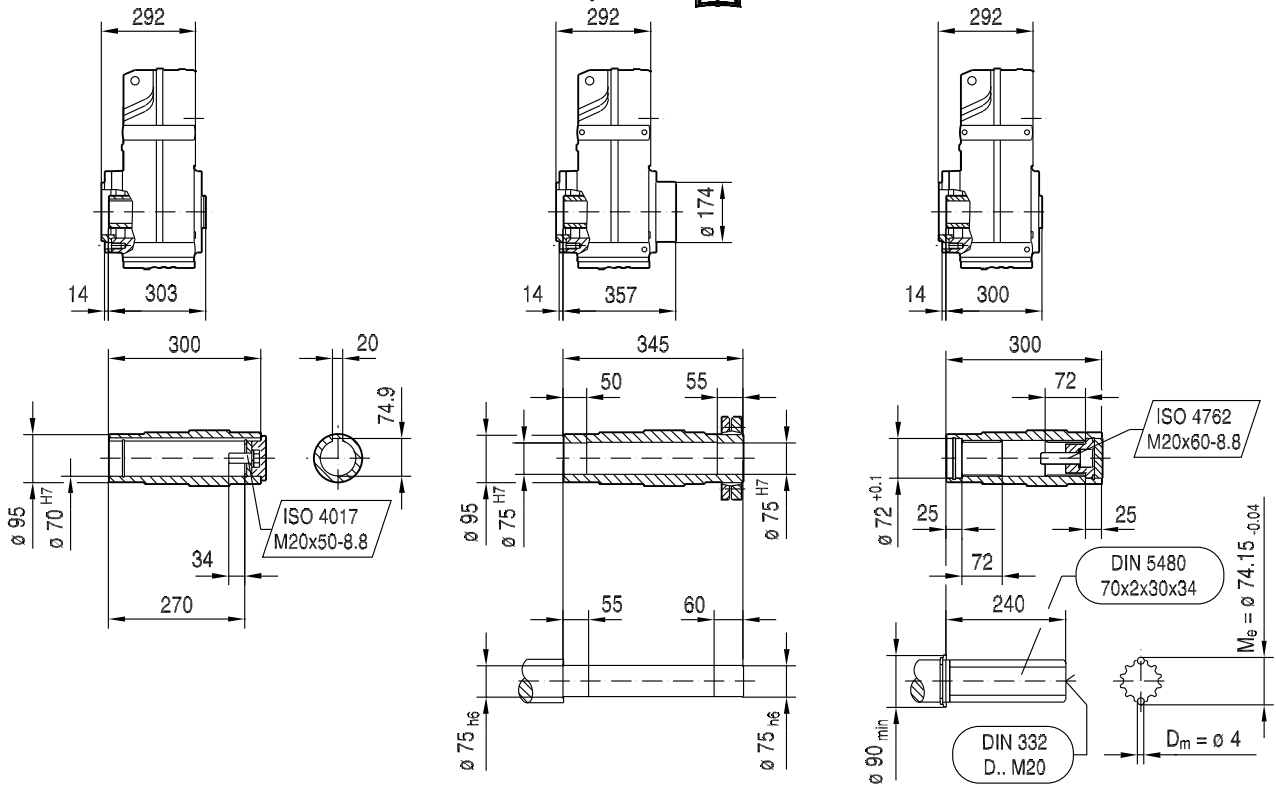
42 104 01 06



**FAZ97..**

**FHZ97..**  
FHZ97/R.. → 99

**FVZ97..**



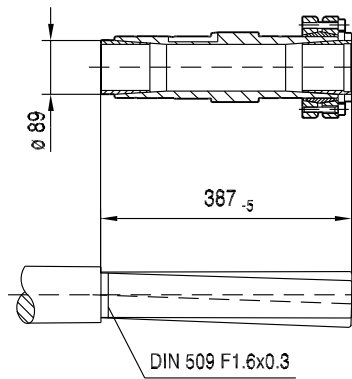
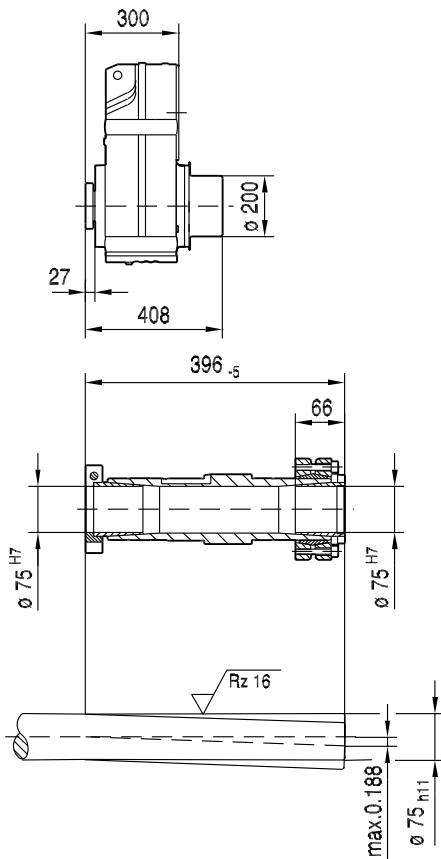
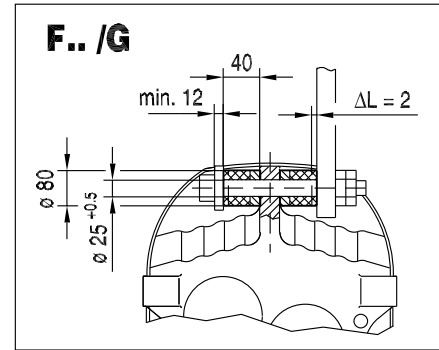
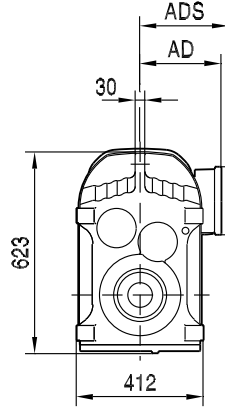
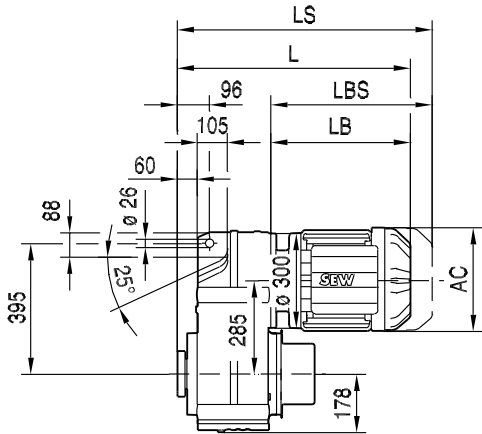
(→  136)	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	179	179	197	197	221	221	221	270	316	316	394
AD	140	140	157	157	170	170	170	228	253	253	283
ADS	150	150	158	158	172	172	172	228	253	253	283
L	538	558	588	618	626	661	711	752	821	881	954
LS	631	651	681	711	738	773	823	889	1010	1070	1159
LB	246	266	296	326	334	369	419	460	529	589	662
LBS	339	359	389	419	446	481	531	597	718	778	867



F..DRE/DRS  
F..DR.. [mm]

**FT97..**

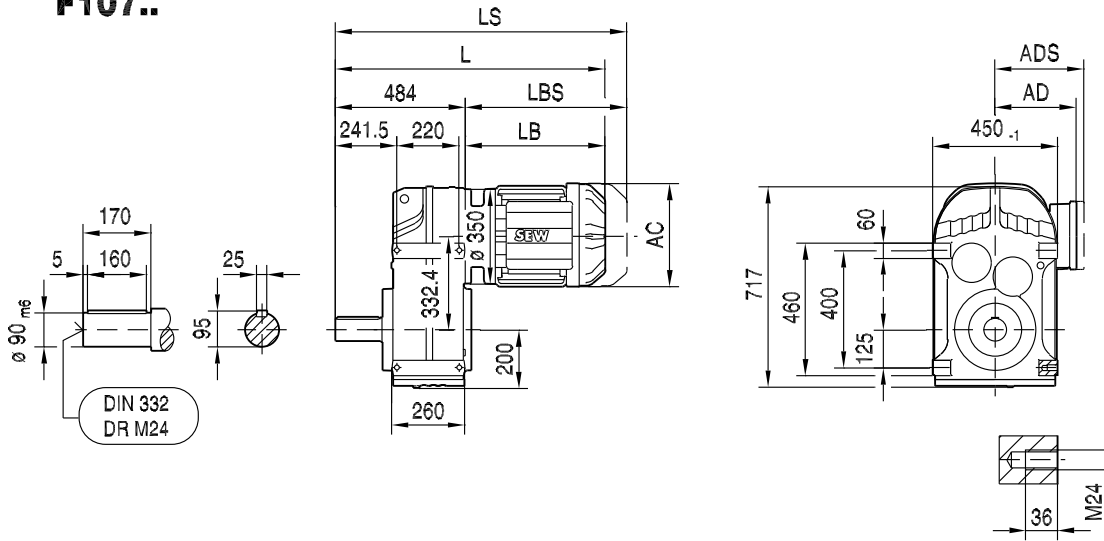
42 105 01 06



(→ 136)	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	179	179	197	197	221	221	221	270	316	316
AD	140	140	157	157	170	170	170	228	253	253
ADS	150	150	158	158	172	172	172	228	253	253
L	546	566	596	626	634	669	719	760	829	889
LS	639	659	689	719	746	781	831	897	1018	1078
LB	246	266	296	326	334	369	419	460	529	589
LBS	339	359	389	419	446	481	531	597	718	778

**F107..**

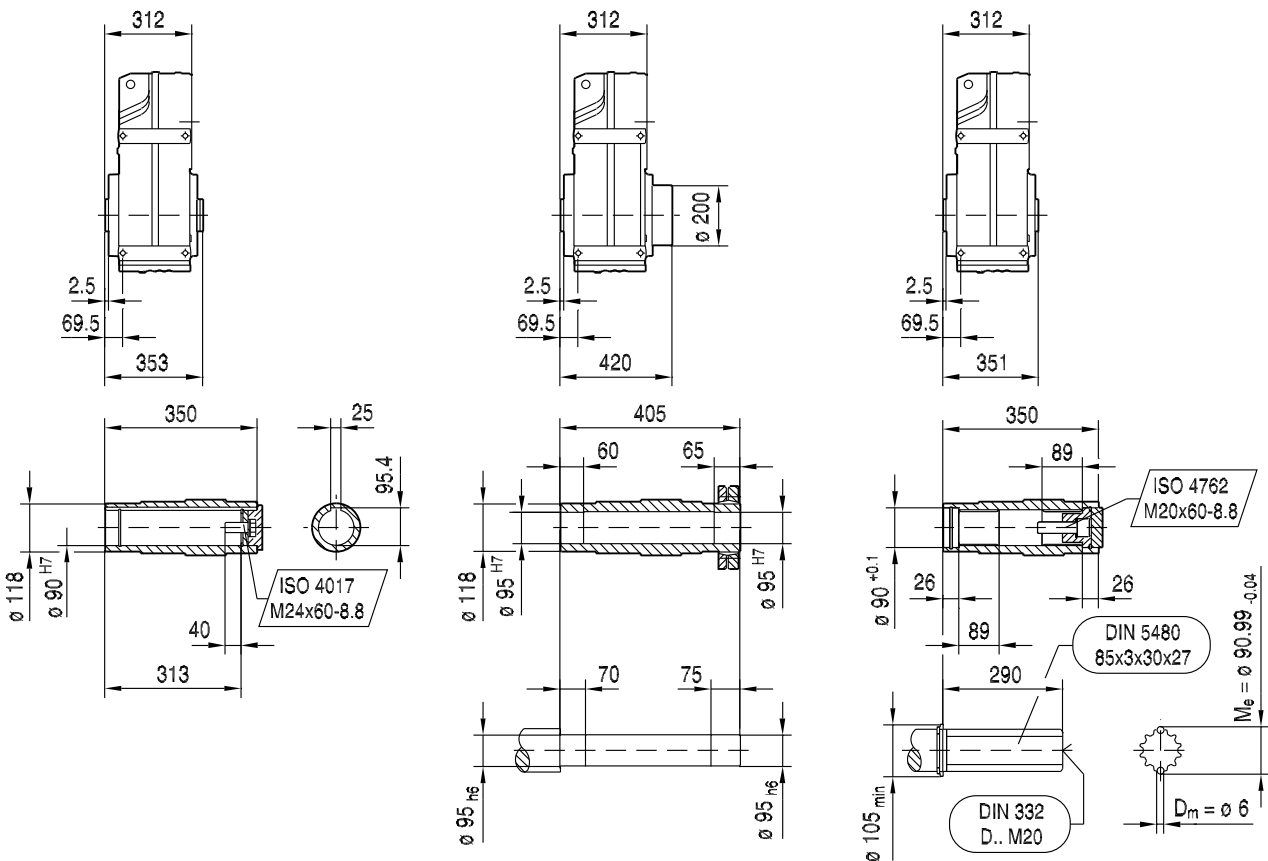
42 106 00 06



**FA107B..**

**FH107B..**

**FV107B..**

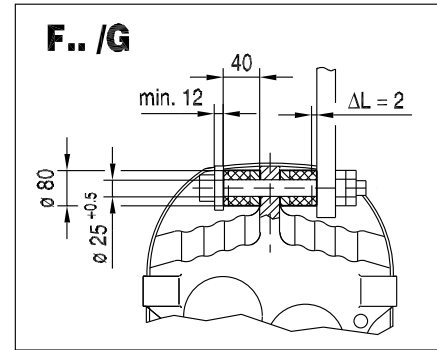
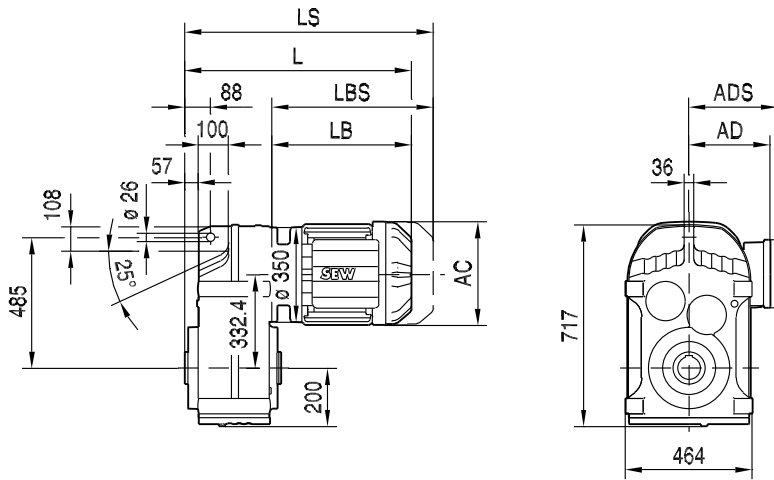


(→ 136)	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	197	197	221	221	221	270	316	316	394	394	394
AD	157	157	170	170	170	228	253	253	283	283	283
ADS	158	158	172	172	172	228	253	253	283	283	283
L	774	804	812	847	897	938	1007	1067	1140	1140	1190
LS	867	897	924	959	1009	1075	1196	1256	1345	1345	1395
LB	290	320	328	363	413	454	523	583	656	656	706
LBS	383	413	440	475	525	591	712	772	861	861	911



**FA107..**

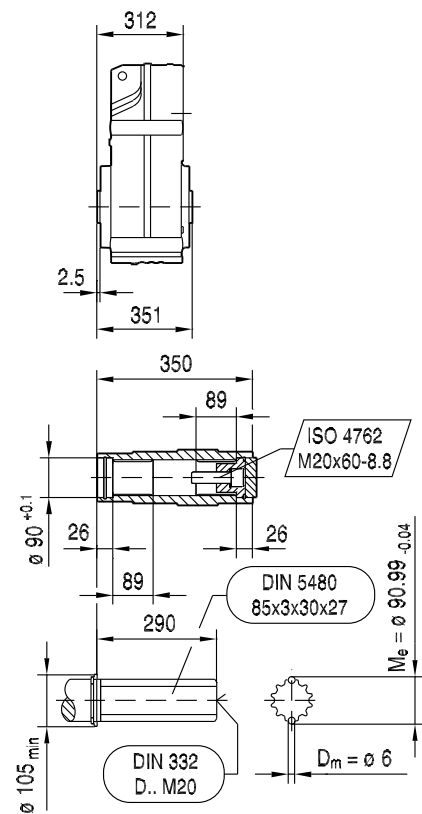
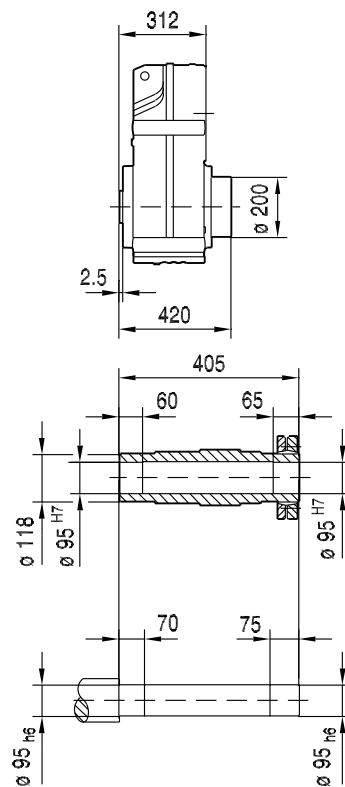
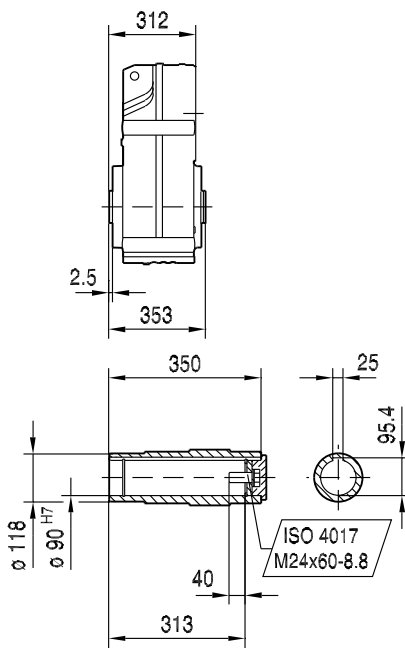
42 108 00 06



**FA107..**

**FH107..**

**FV107..**

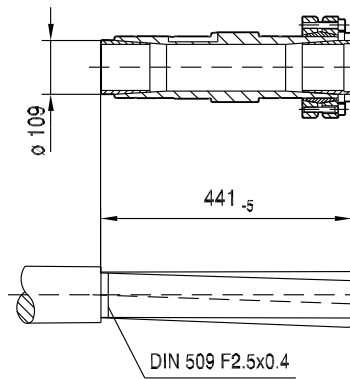
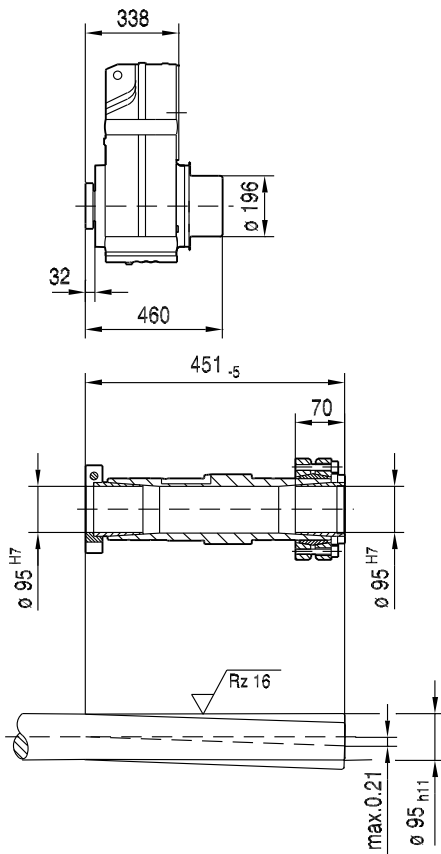
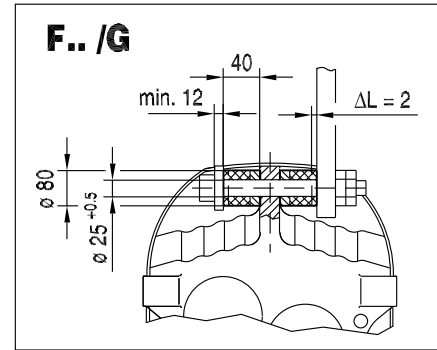
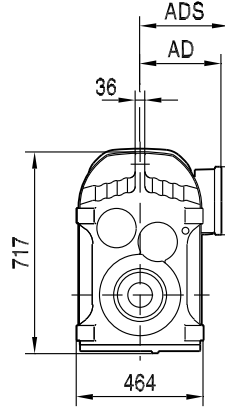
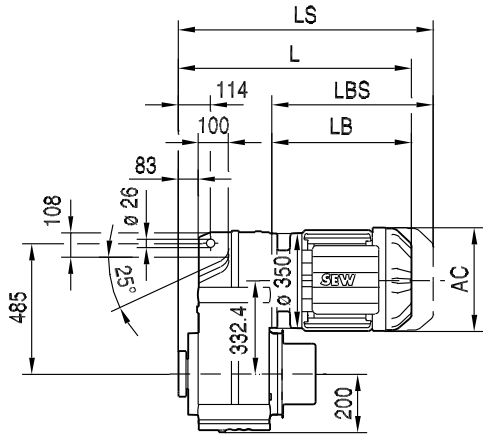


(→ 136)	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	197	197	221	221	221	270	316	316	394	394	394
AD	157	157	170	170	170	228	253	253	283	283	283
ADS	158	158	172	172	172	228	253	253	283	283	283
L	602	632	640	675	725	766	835	895	968	968	1018
LS	695	725	752	787	837	903	1024	1084	1173	1173	1223
LB	290	320	328	363	413	454	523	583	656	656	706
LBS	383	413	440	475	525	591	712	772	861	861	911



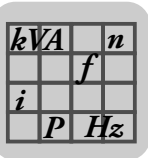
**FT107..**

42 110 01 06



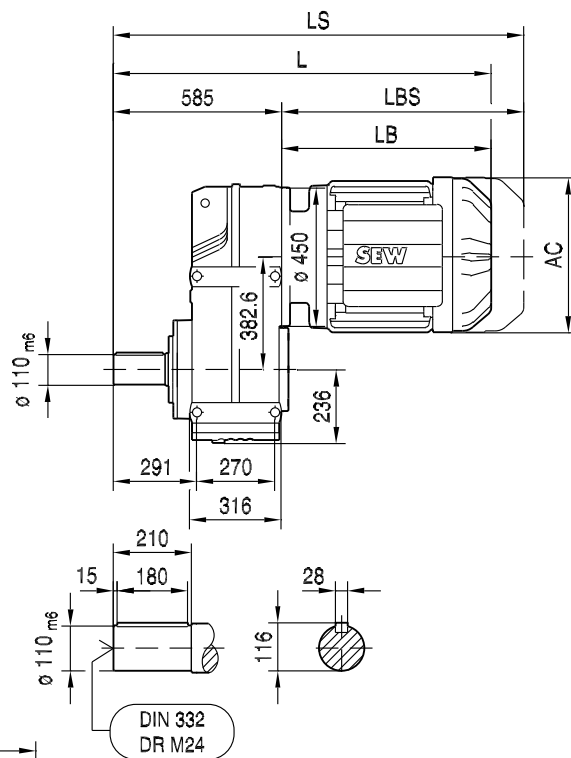
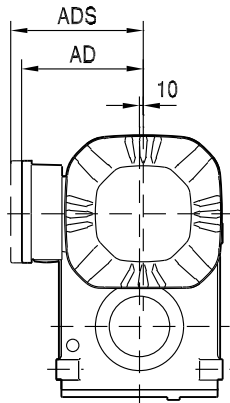
9

(→ 136)	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	197	197	221	221	221	270	316	316	394	394	394
AD	157	157	170	170	170	228	253	253	283	283	283
ADS	158	158	172	172	172	228	253	253	283	283	283
L	628	658	666	701	751	792	861	921	994	994	1044
LS	721	751	778	813	863	929	1050	1110	1199	1199	1249
LB	290	320	328	363	413	454	523	583	656	656	706
LBS	383	413	440	475	525	591	712	772	861	861	911

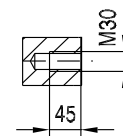
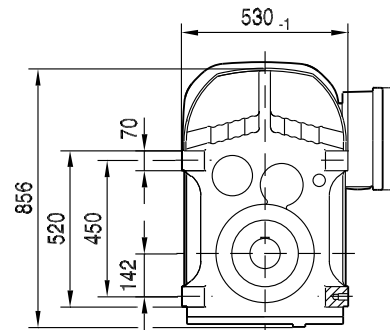


F..DRE/DRS  
F..DR.. [mm]

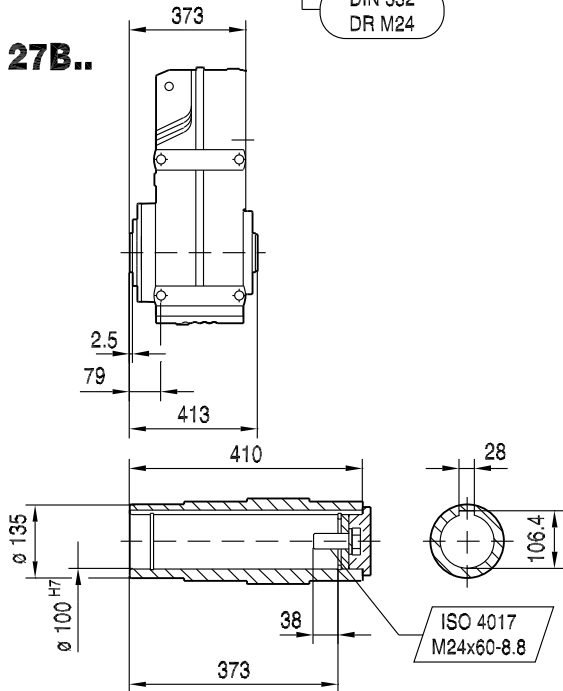
**F127..**



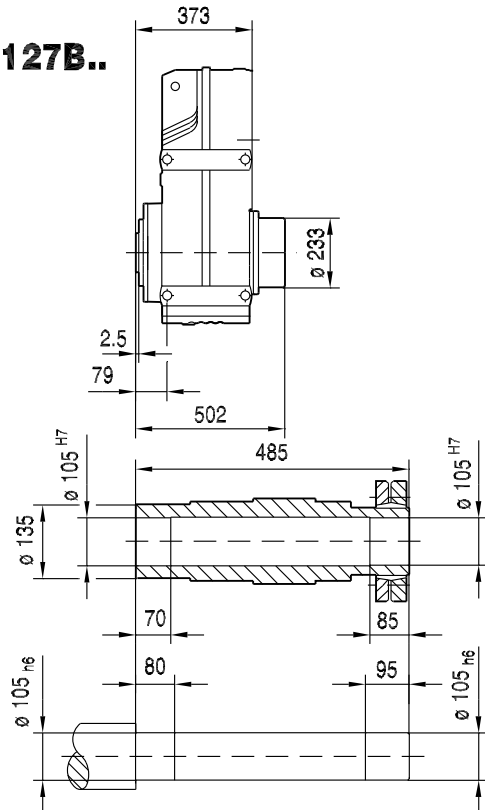
42 111 00 06



**FA127B..**

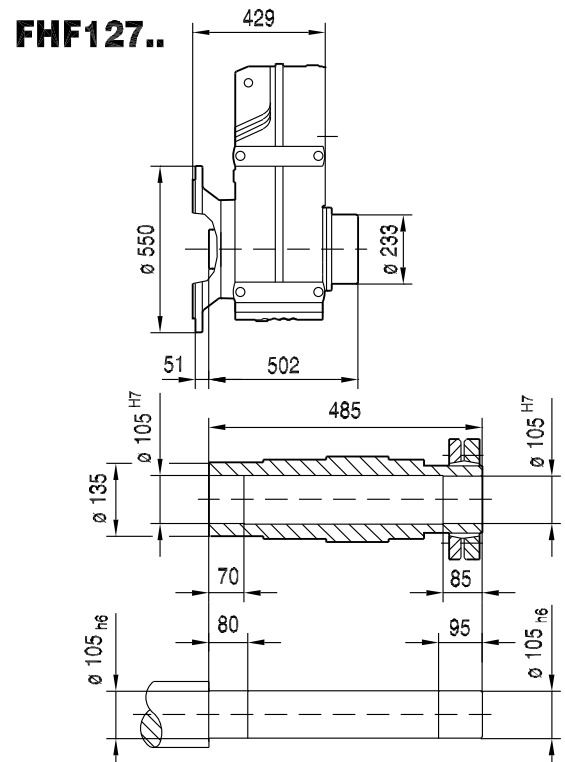
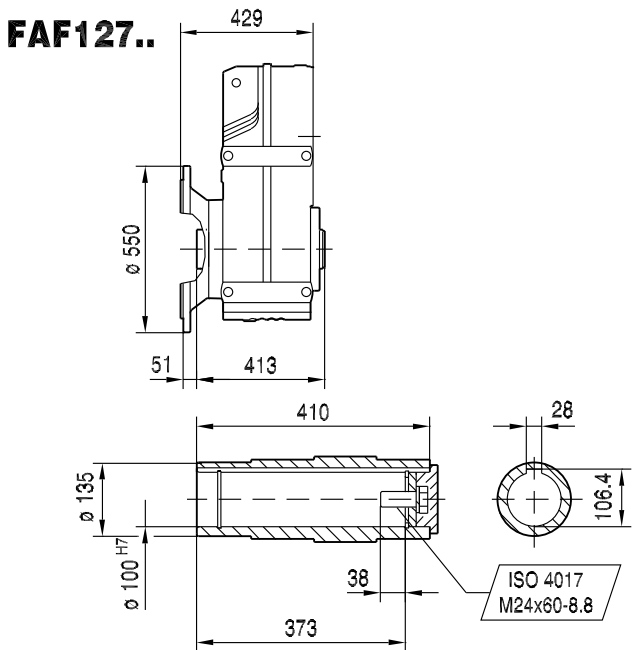
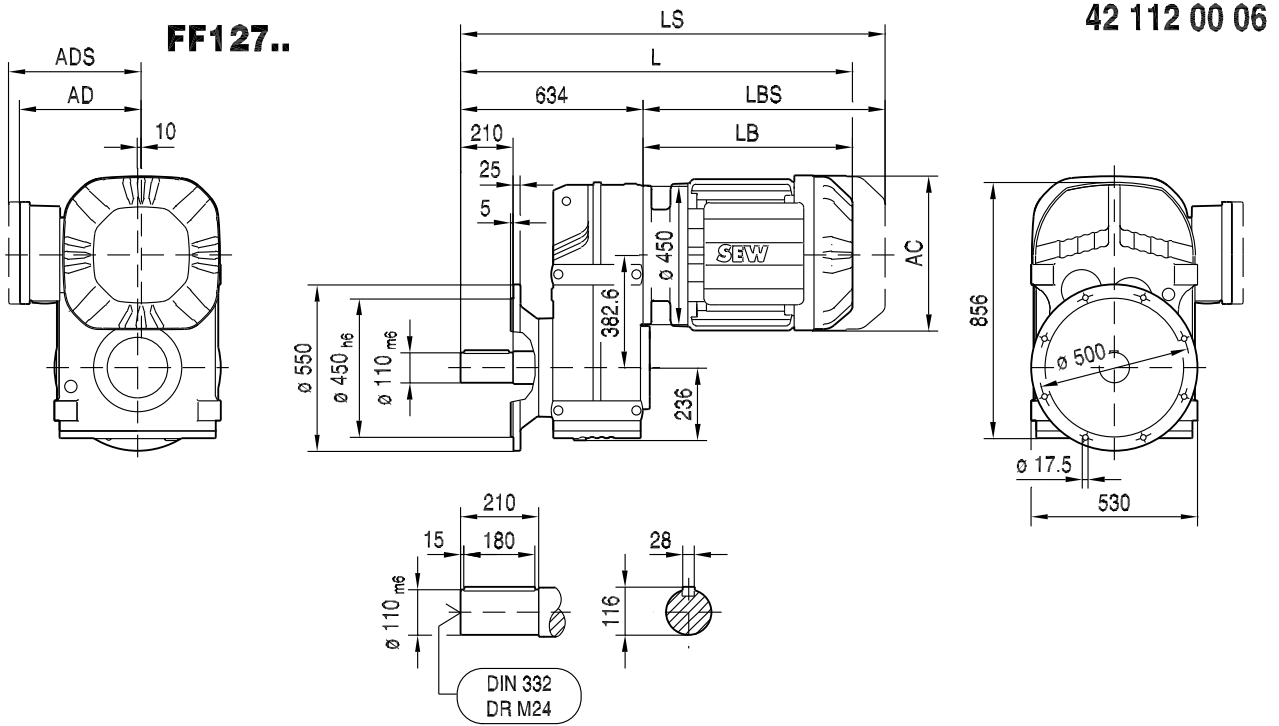


**FH127B..**

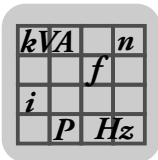


(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	221	270	316	316	394	394	394	495	495
AD	170	228	253	253	283	283	283	394	394
ADS	172	228	253	253	283	283	283	394	394
L	983	1024	1093	1153	1226	1226	1276	1337	1337
LS	1095	1161	1282	1342	1431	1431	1481	1577	1577
LB	398	439	508	568	641	641	691	752	752
LBS	510	576	697	757	846	846	896	992	992



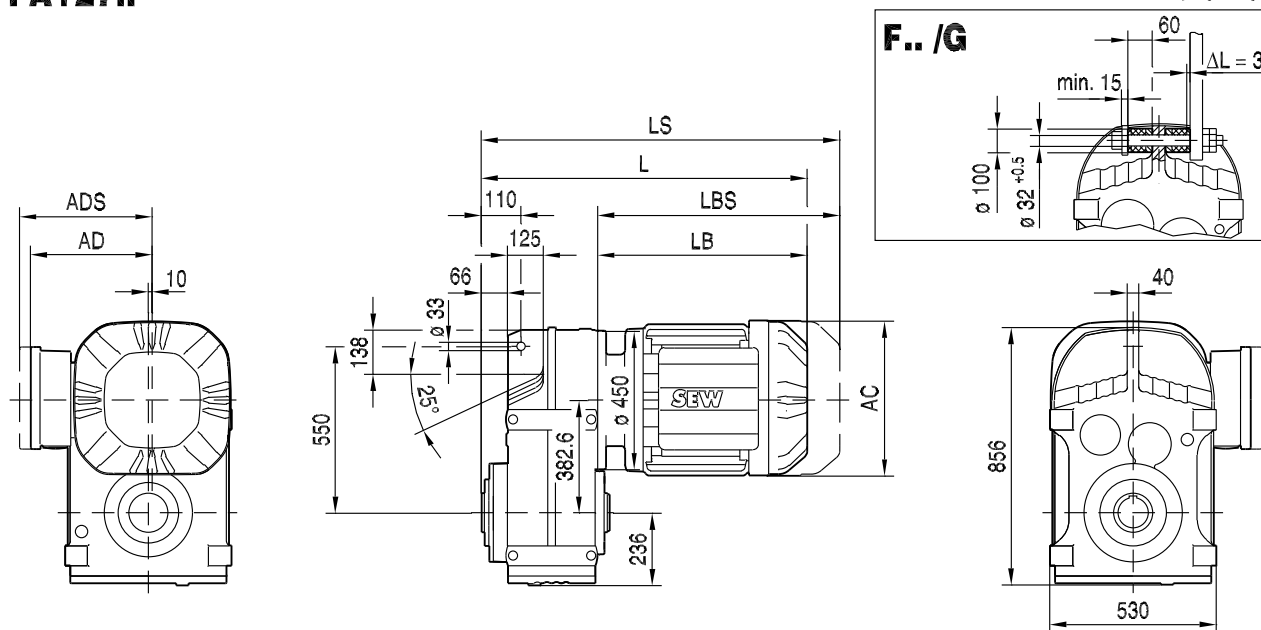


(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	221	270	316	316	394	394	394	495	495
AD	170	228	253	253	283	283	283	394	394
ADS	172	228	253	253	283	283	283	394	394
L	1032	1073	1142	1202	1275	1275	1325	1386	1386
LS	1144	1210	1331	1391	1480	1480	1530	1626	1626
LB	398	439	508	568	641	641	691	752	752
LBS	510	576	697	757	846	846	896	992	992



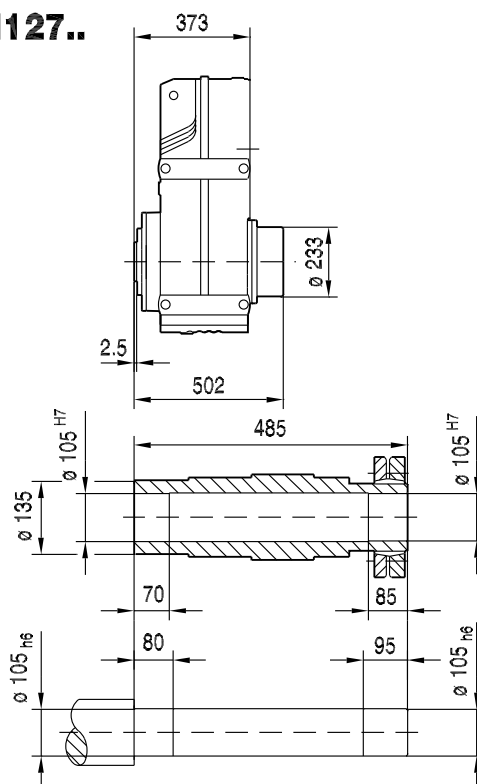
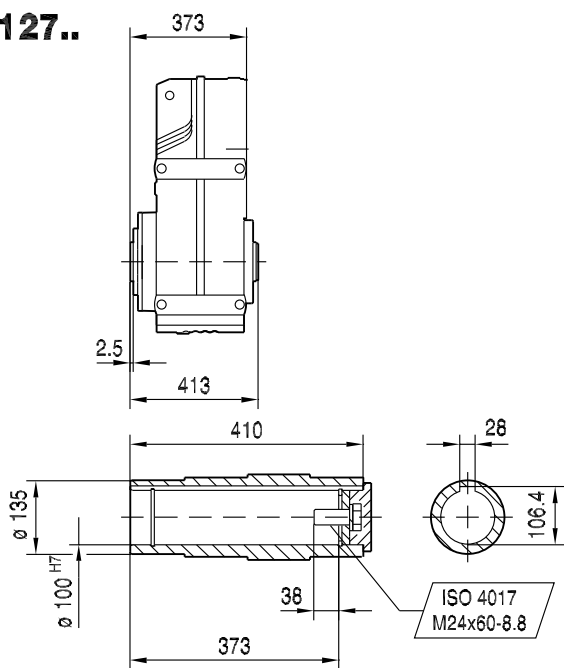
**FA127..**

42 113 01 06



**FA127..**

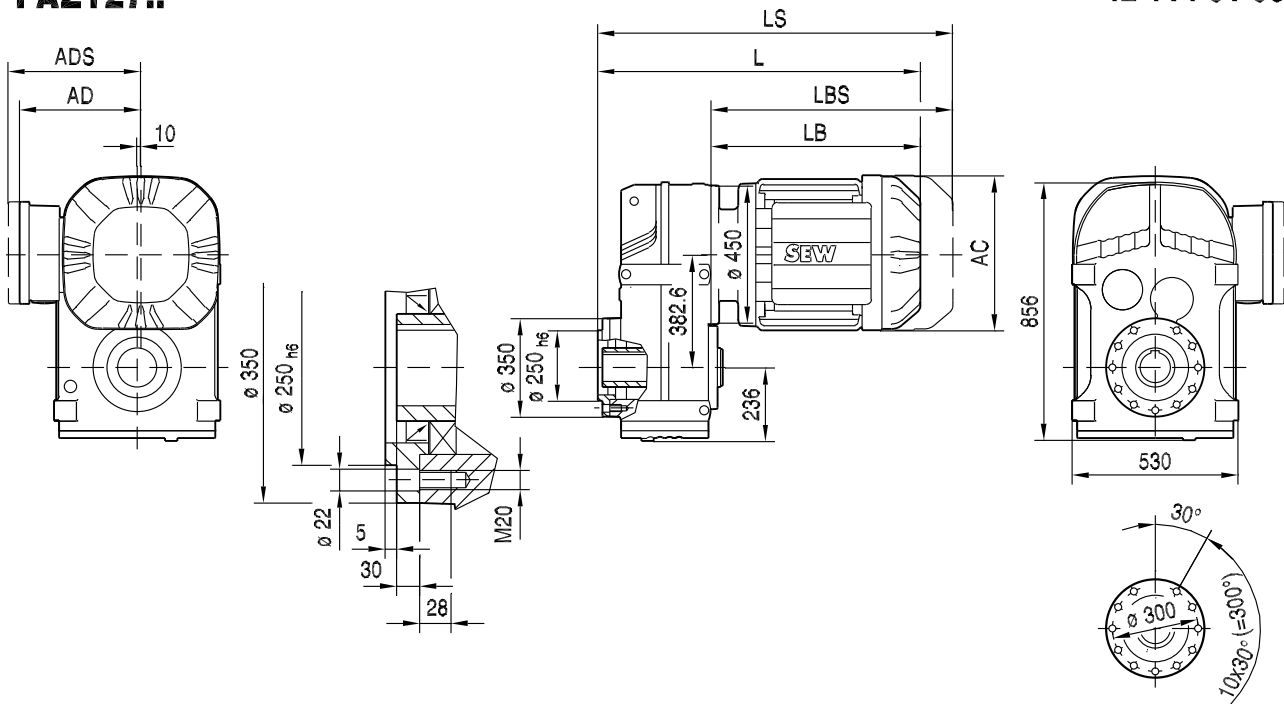
**FH127..**



(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	221	270	316	316	394	394	394	495	495
AD	170	228	253	253	283	283	283	394	394
ADS	172	228	253	253	283	283	283	394	394
L	771	812	881	941	1014	1014	1064	1125	1125
LS	883	949	1070	1130	1219	1219	1269	1365	1365
LB	398	439	508	568	641	641	691	752	752
LBS	510	576	697	757	846	846	896	992	992

**FAZ127..**

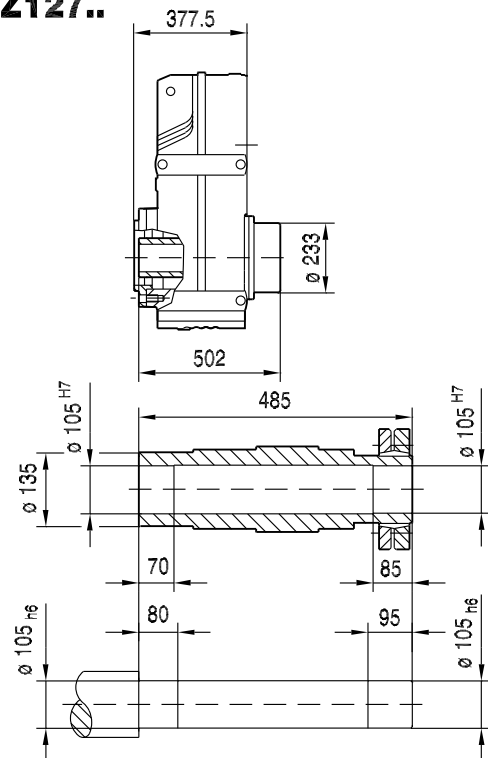
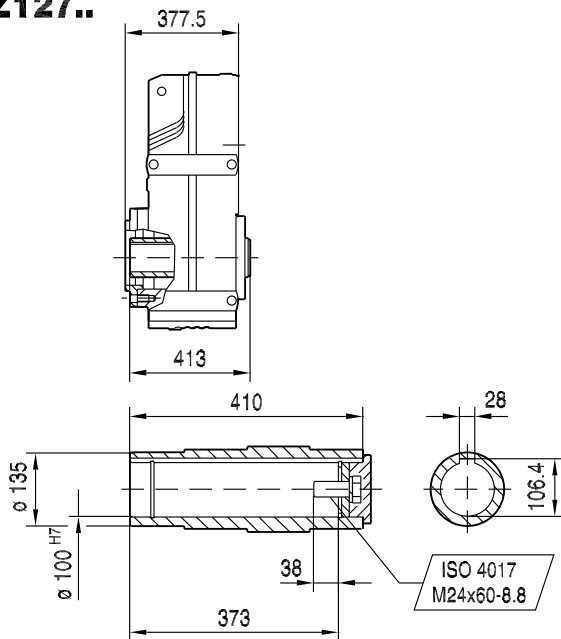
42 114 01 06



9

**FAZ127..**

**FHZ127..**



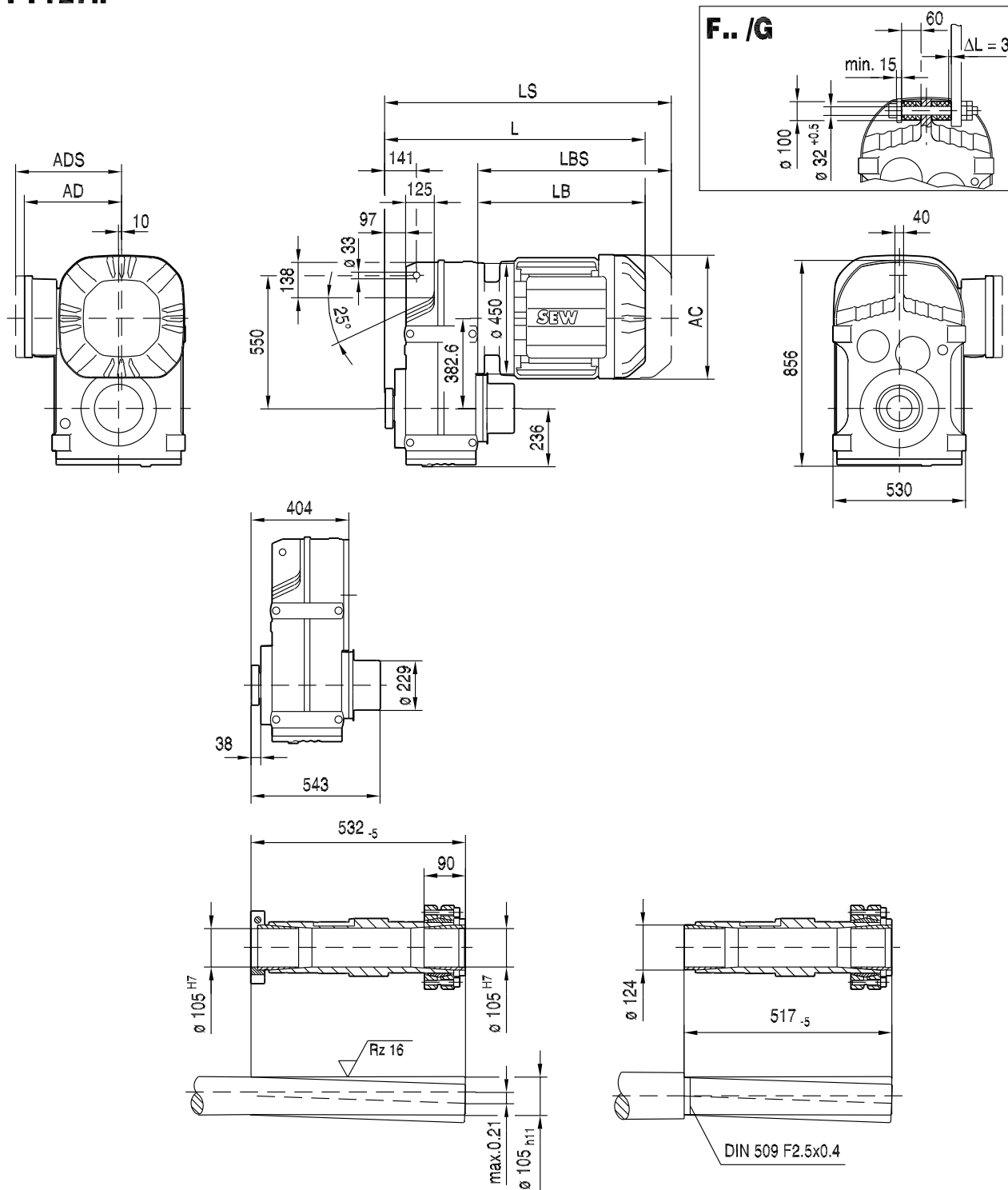
(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	221	270	316	316	394	394	394	495	495
AD	170	228	253	253	283	283	283	394	394
ADS	172	228	253	253	283	283	283	394	394
L	776	817	886	946	1019	1019	1069	1130	1130
LS	888	954	1075	1135	1224	1224	1274	1370	1370
LB	398	439	508	568	641	641	691	752	752
LBS	510	576	697	757	846	846	896	992	992

kVA	n
f	
i	P Hz

F..DRE/DRS  
F..DR.. [mm]

FT127..

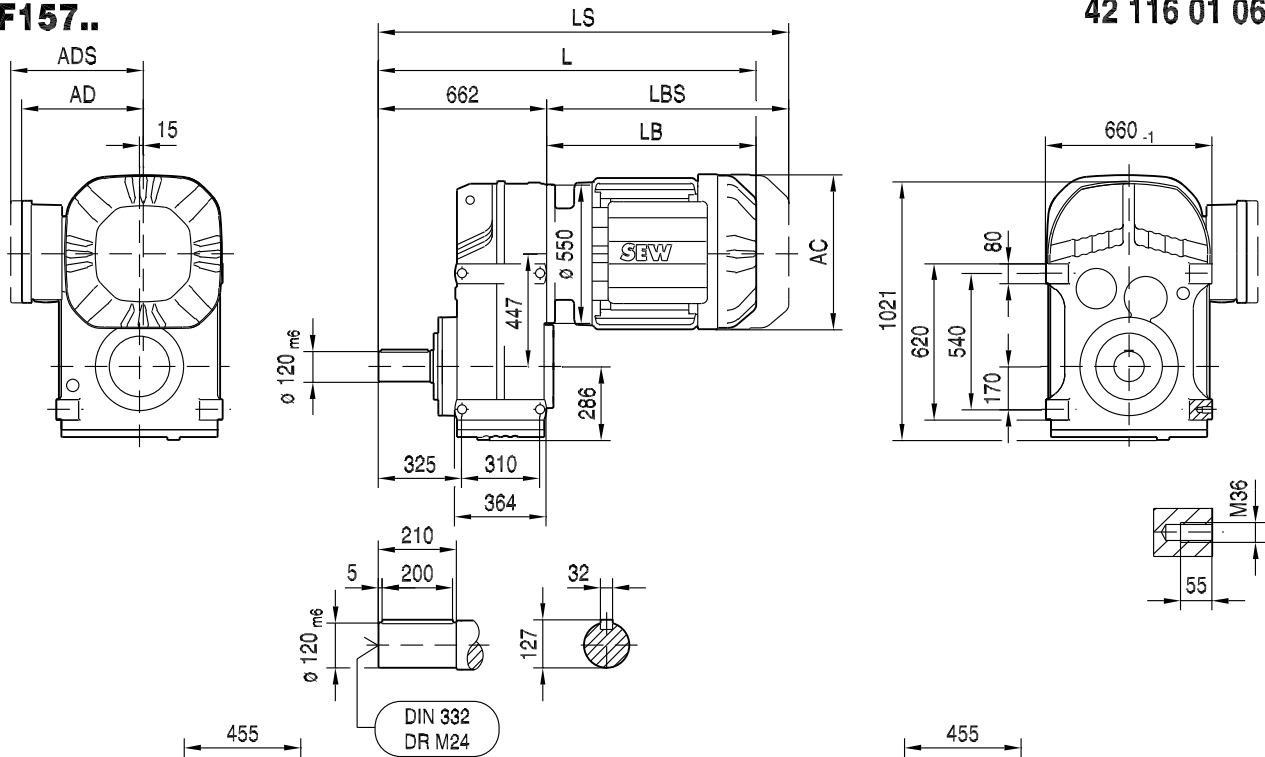
42 115 01 06



(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	221	270	316	316	394	394	394	495	495
AD	170	228	253	253	283	283	283	394	394
ADS	172	228	253	253	283	283	283	394	394
L	802	843	912	972	1045	1045	1095	1156	1156
LS	914	980	1101	1161	1250	1250	1300	1396	1396
LB	398	439	508	568	641	641	691	752	752
LBS	510	576	697	757	846	846	896	992	992

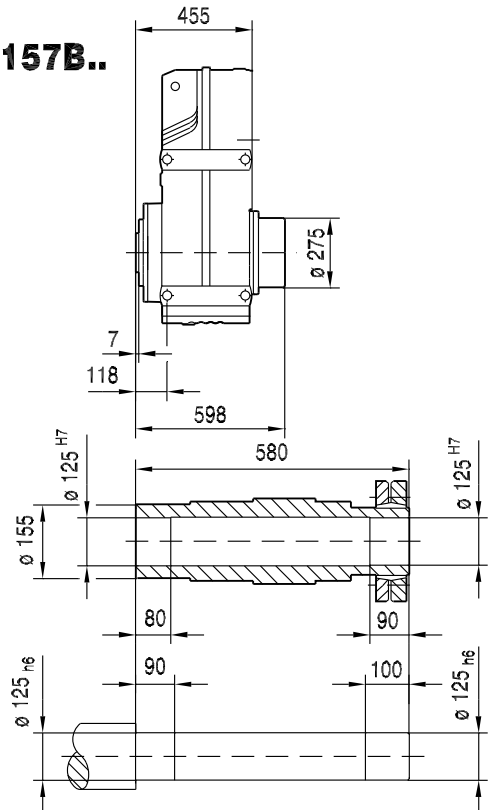
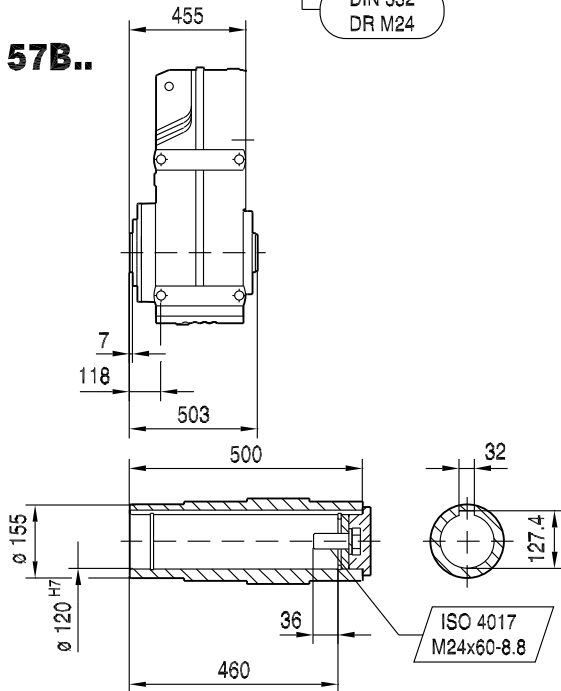
**F157..**

42 116 01 06



**FA157B..**

**FH157B..**

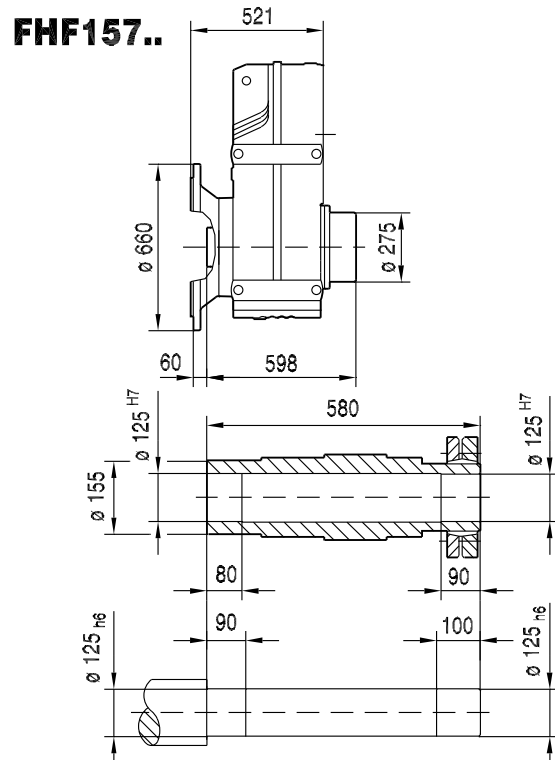
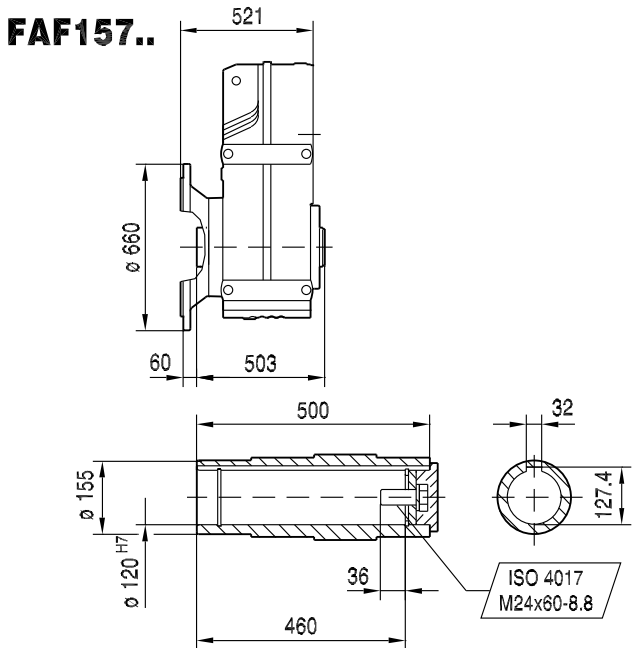
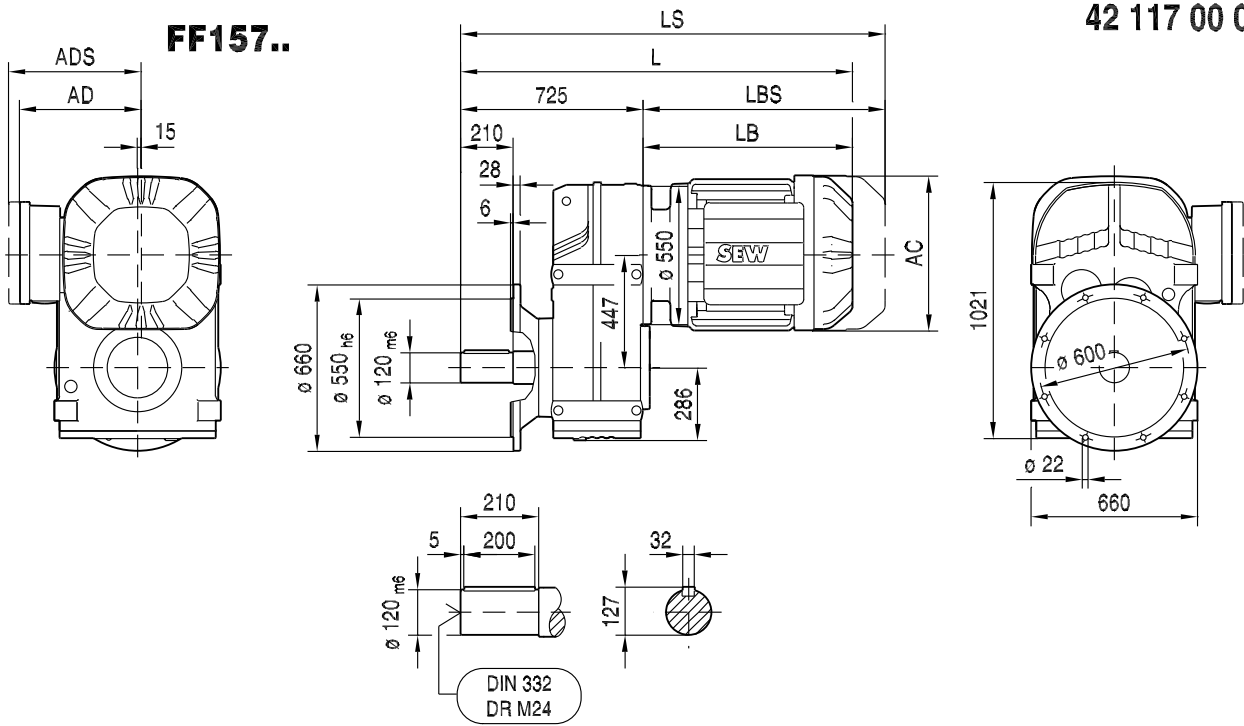


(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	1093	1162	1222	1295	1295	1345	1406	1406	1603	1775
LS	1230	1351	1411	1500	1500	1550	1646	1646	1854	2027
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365



F..DRE/DRS  
F..DR.. [mm]

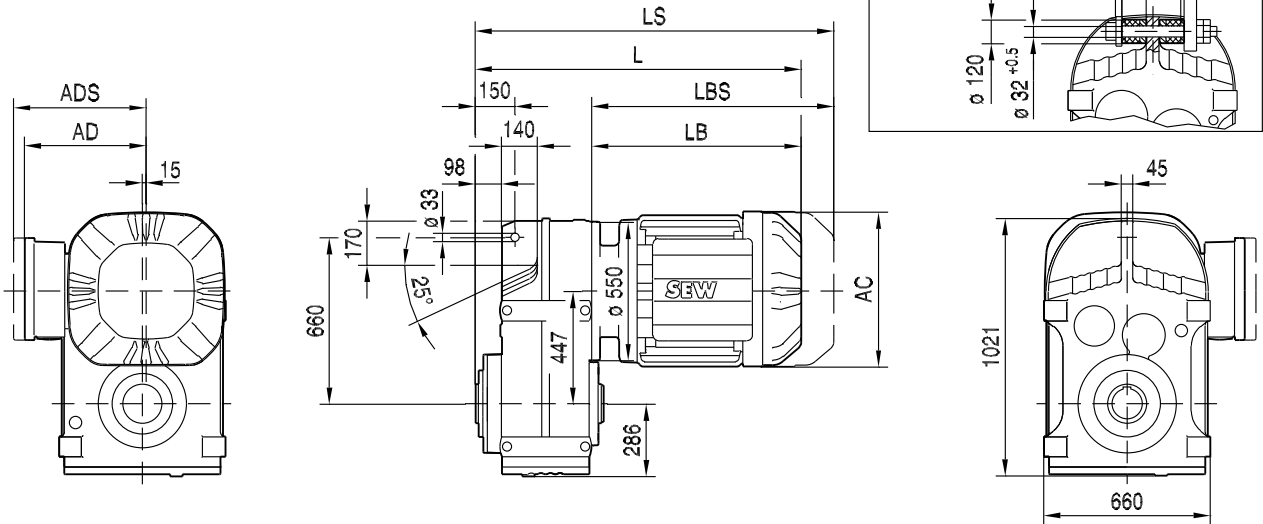
42 117 00 06



(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	1156	1225	1285	1358	1358	1408	1469	1469	1666	1838
LS	1293	1414	1474	1563	1563	1613	1709	1709	1917	2090
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365

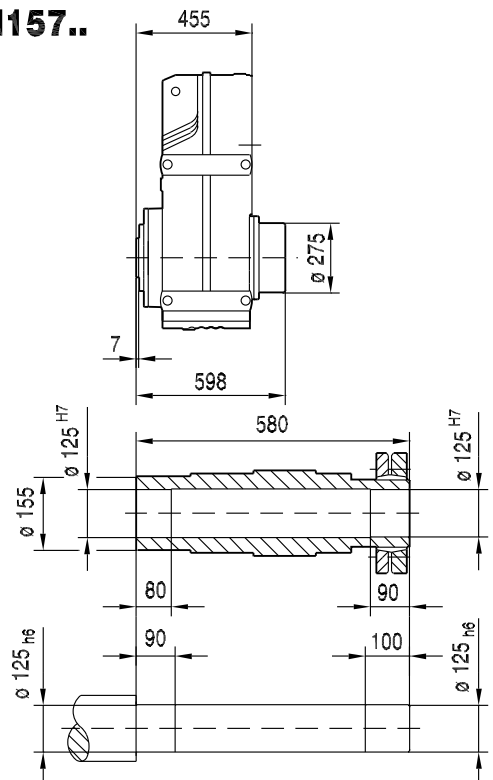
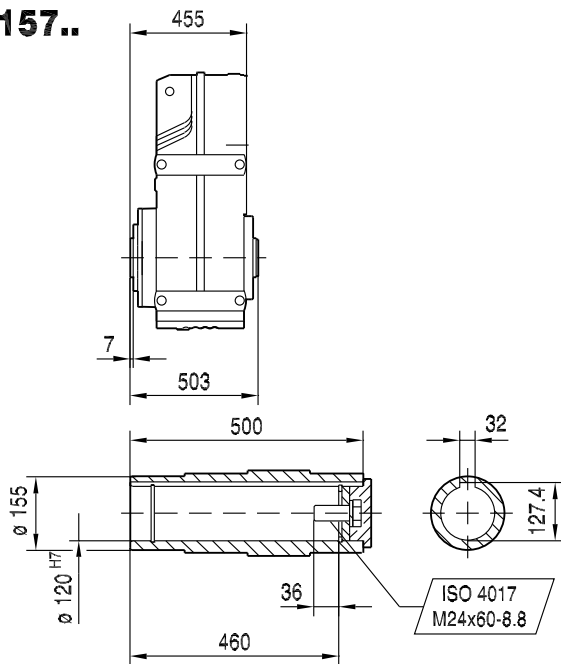
**FA157..**

42 118 01 06



**FA157..**

**FH157..**



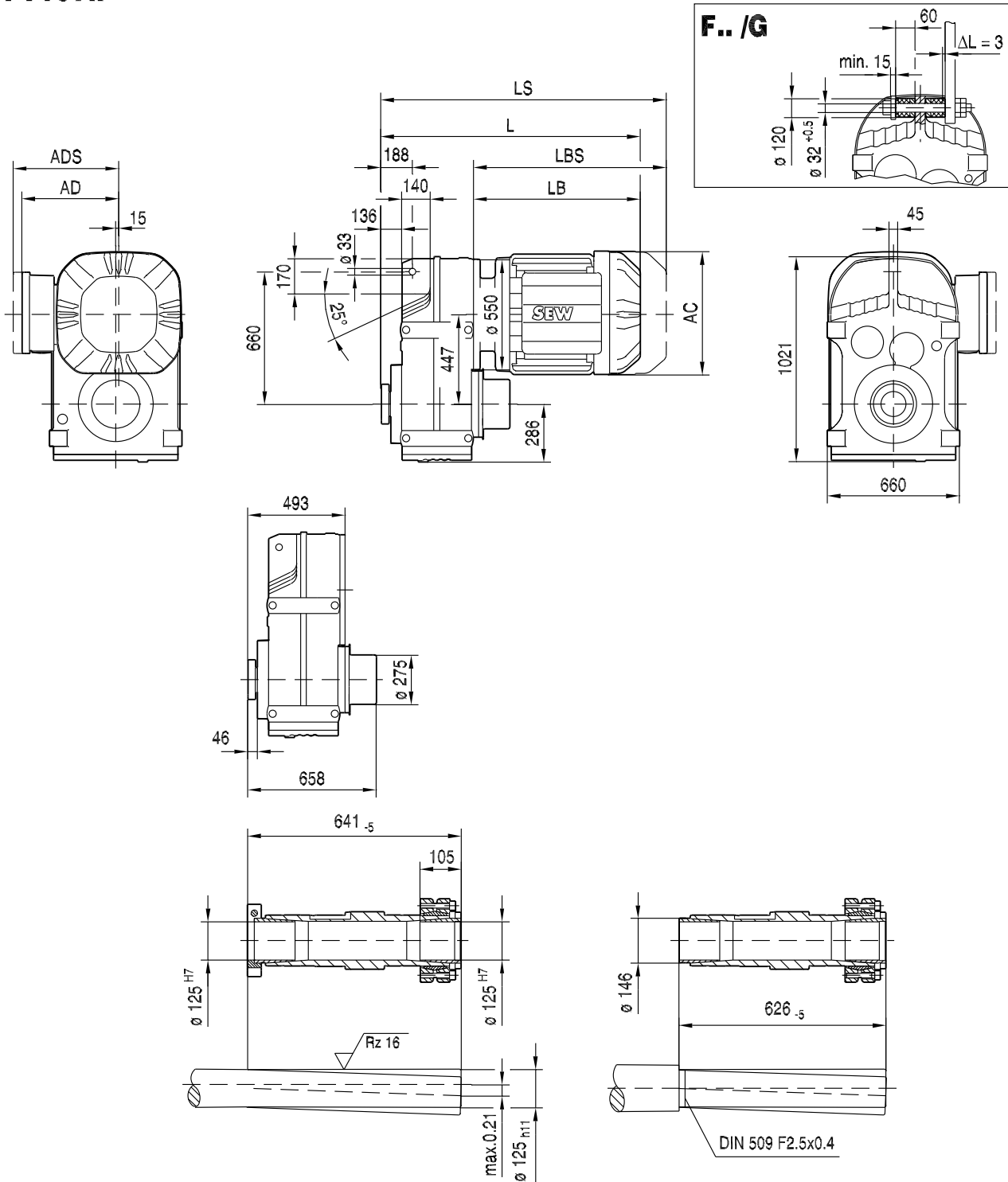
(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	886	955	1015	1088	1088	1138	1199	1199	1396	1568
LS	1023	1144	1204	1293	1293	1343	1439	1439	1647	1820
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365



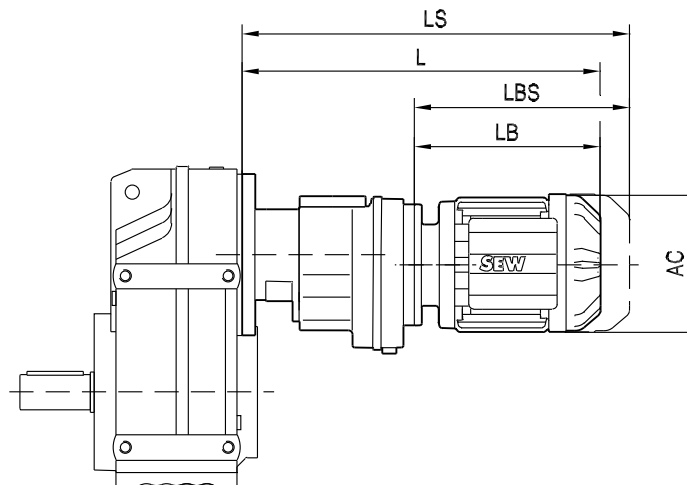


FT157..

42 120 01 06



(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	924	993	1053	1126	1126	1176	1237	1237	1434	1606
LS	1061	1182	1242	1331	1331	1381	1477	1477	1685	1858
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365



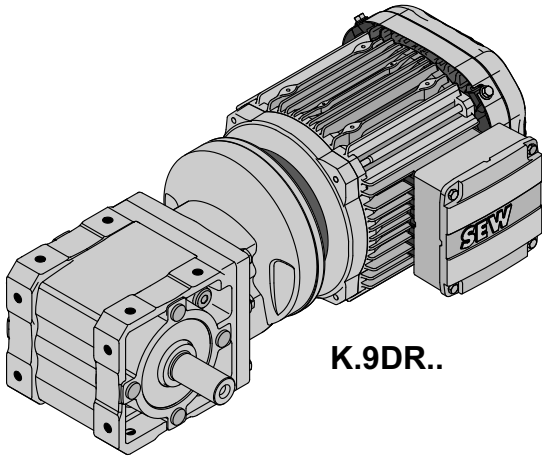
(→ 136)		AC	L	LS	LB	LBS
F..27R17	DR63..	132	324	379	149	204
F..37R17	DR63..	132	324	379	149	204
	DR71S..	139	335	403	160	228
F..47R17	DR63..	132	324	379	149	204
	DR71S..	139	335	403	160	228
	DR71M..	139	360	428	185	253
F..57R37	DR63..	132	356	411	191	246
	DR71S..	139	367	435	202	270
	DR71M..	139	392	460	227	295
	DR80S..	156	401	482	236	317
F..67R37	DR63..	132	356	411	191	246
	DR71S..	139	367	435	202	270
	DR71M..	139	392	460	227	295
	DR80S..	156	401	482	236	317
F..77R37	DR63..	132	348	403	191	246
	DR71S..	139	359	427	202	270
	DR71M..	139	384	452	227	295
	DR80S..	156	393	474	236	317
	DR80M..	156	424	505	267	348
	DR90M..	179	426	519	269	362
F..87R57	DR63..	132	401	456	185	240
	DR71S..	139	412	479	196	263
	DR71M..	139	437	504	221	288
	DR80S..	156	446	527	230	311
	DR80M..	156	477	558	261	342
	DR90M..	179	478	572	262	356
	DR90L..	179	498	592	282	376
	DR100M..	197	528	622	312	406
F..97R57	DR63..	132	396	451	185	240
	DR71S..	139	407	474	196	263
	DR71M..	139	432	499	221	288
	DR80S..	156	441	522	230	311
	DR80M..	156	472	553	261	342
	DR90M..	179	473	567	262	356
	DR90L..	179	493	587	282	376
	DR100M..	197	523	617	312	406
	DR100LC..	197	553	647	342	436

(→ 136)		AC	L	LS	LB	LBS
F..107R77	DR63..	132	426	481	179	234
	DR71S..	139	437	504	190	257
	DR71M..	139	462	529	215	282
	DR80S..	156	470	551	223	304
	DR80M..	156	501	582	254	335
	DR90M..	179	501	595	254	348
	DR90L..	179	521	615	274	368
	DR100M..	197	551	645	304	398
	DR100LC..	197	581	675	334	428
	DR132S..	221	626	738	379	491
	DR132M..	221	676	788	429	541
F..127R77	DR63..	132	411	466	179	234
	DR71S..	139	422	489	190	257
	DR71M..	139	447	514	215	282
	DR80S..	156	455	536	223	304
	DR80M..	156	486	567	254	335
	DR90M..	179	486	580	254	348
	DR90L..	179	506	600	274	368
	DR100M..	197	536	630	304	398
F..127R87	DR100LC..	197	566	660	334	428
	DR132S..	221	611	723	379	491
	DR132S..	221	654	766	374	486
	DR132M/MC..	221	704	816	424	536
	DR160..	272	745	882	465	602
F..157R97	DR71M..	139	529	596	204	271
	DR80S..	156	538	619	213	294
	DR80M..	156	569	650	244	325
	DR90M..	179	569	663	244	338
	DR90L..	179	589	683	264	358
	DR100M..	197	619	713	294	388
	DR100LC..	197	649	743	324	418
	DR132S..	221	694	806	369	481
	DR132M/MC..	221	744	856	419	531
	DR160..	272	785	922	460	597
DR180M..	317	871	1070	546	745	

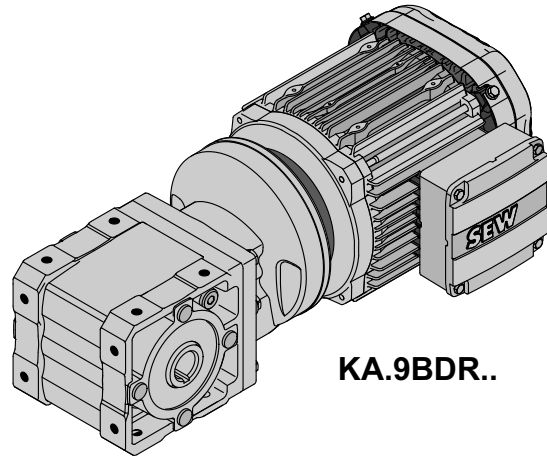
kVA	n
	f
i	
P	Hz

10 K..DRE/DRS

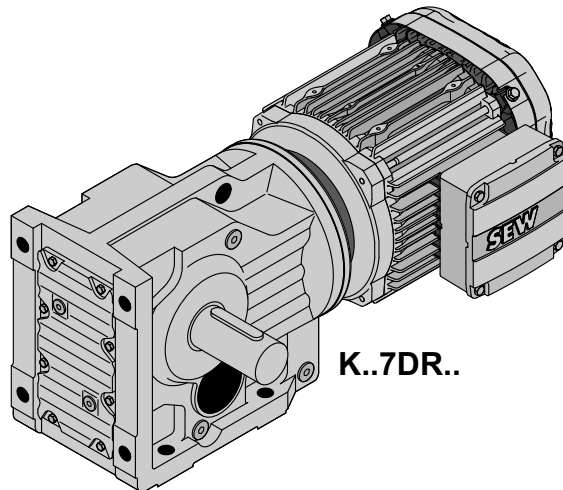
10.1 K, KA..(B), KV..(B), KH..(B), KT, KF, KAF, KVF, KHf, KAZ, KVZ, KHZ..DR..



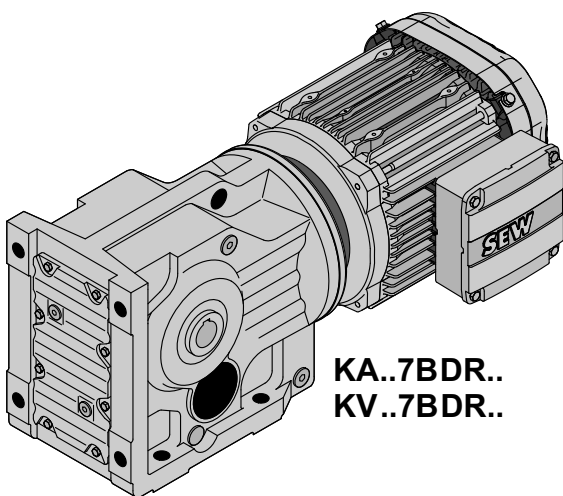
K.9DR..



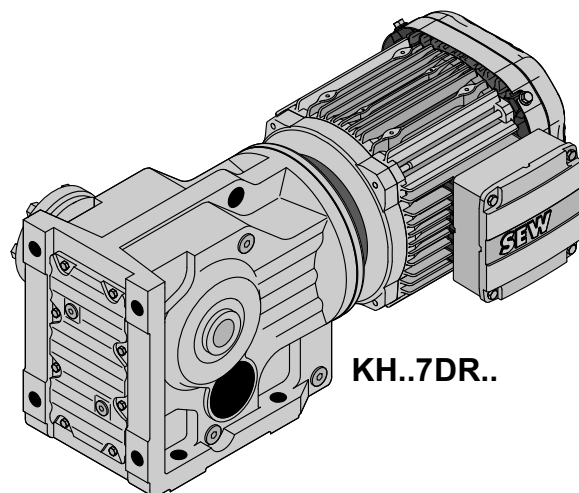
KA.9BDR..



K..7DR..



KA..7BDR..  
KV..7BDR..



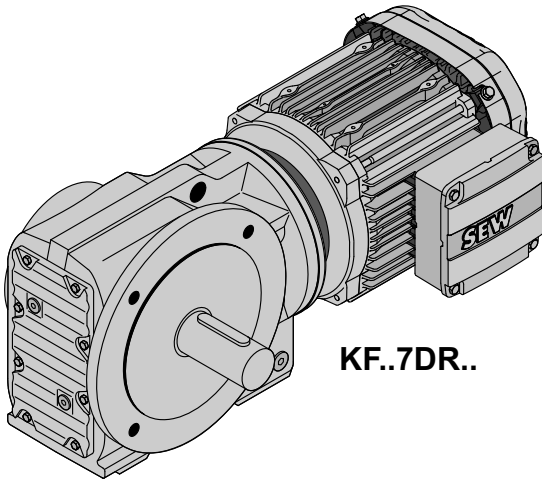
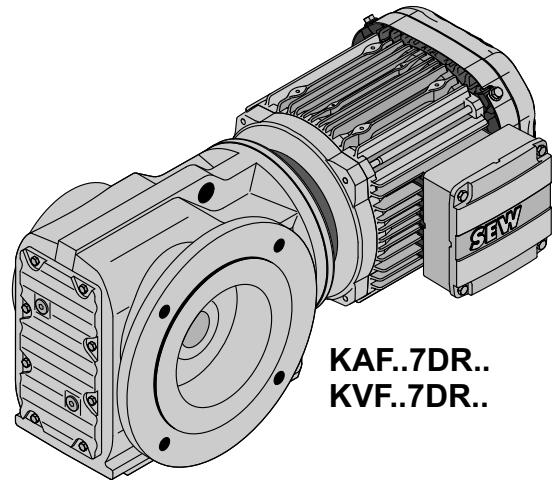
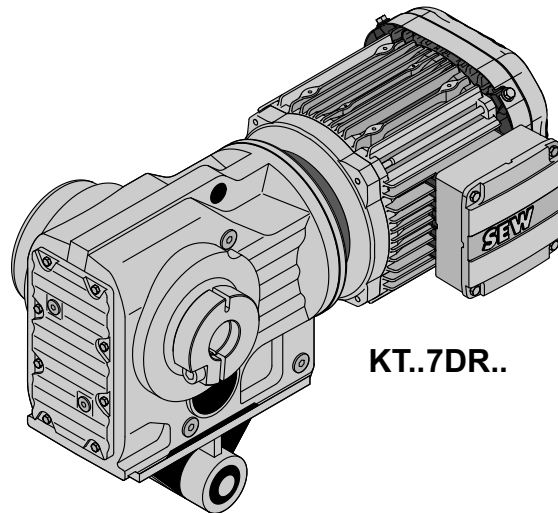
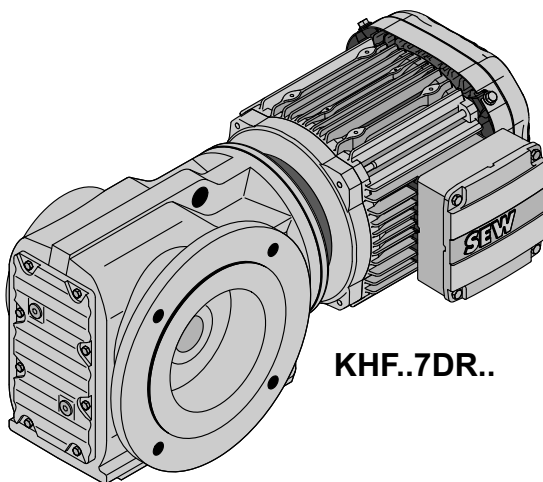
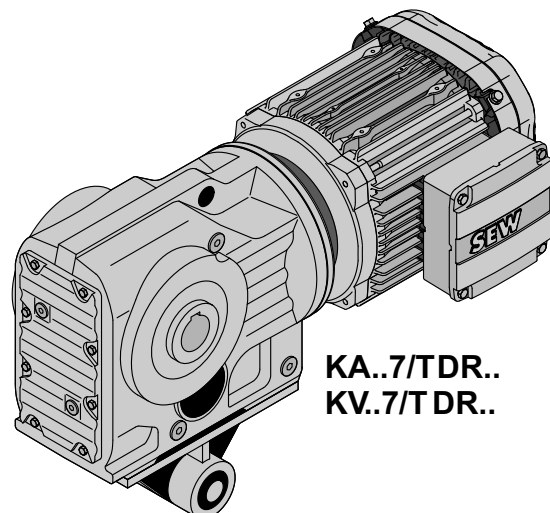
KH..7DR..

8664754315

kVA	n
	f
i	
P	Hz

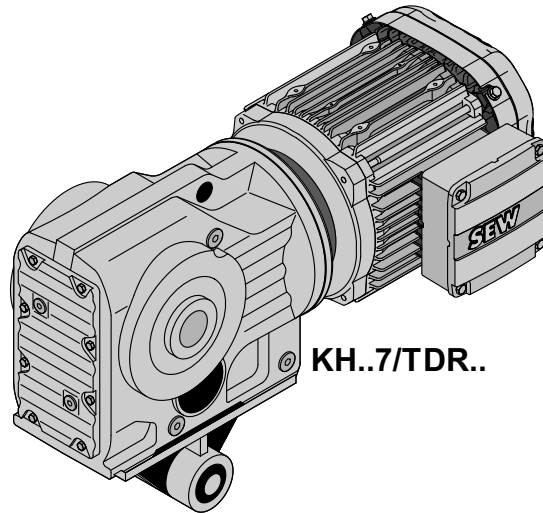
**K..DRE/DRS**

K, KA..(B), KV..(B), KH..(B), KT, KF, KAF, KVF, KHF, KAZ, KVZ, KHZ..DR..

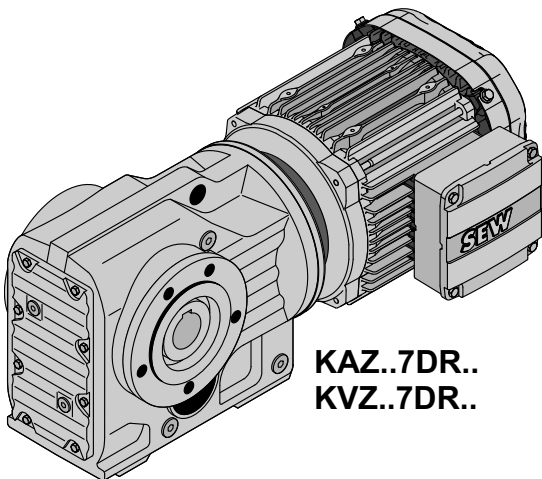
**KF..7DR..****KAF..7DR..  
KVF..7DR..****KT..7DR..****KHF..7DR..****KA..7/TDR..  
KV..7/TDR..**

8664756235

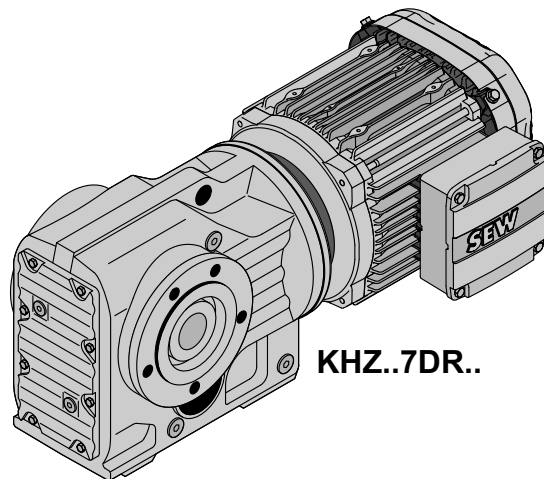
$kVA$	$n$
	$f$
$i$	
$P$	$Hz$



KH..7/TDR..

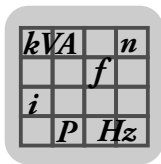


KAZ..7DR..  
KVZ..7DR..



KHZ..7DR..

9117955979


**10.2 K.. → DRE/DRS**

<b>K19, n<sub>e</sub>=1400 1/min</b>					<b>80 Nm</b>		
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M
24	70	4330	-	58.68			
26	70	4330	-	53.88			
28	70	4330	-	49.69			
31	69	4340	-	44.48			
34	67	4350	-	40.63			
41	64	4370	-	34.29			
44	80	4260	-	31.74			
48	61	4200	-	29.29			
48	80	4120	-	29.14			
52	60	4090	-	27.16			
52	80	3990	-	26.88			
58	80	3820	-	24.06			
64	80	3680	-	21.98			
75	80	3430	-	18.55			
88	80	3210	-	15.84			
95	80	3110	-	14.69			
110	80	2930	-	12.70			
118	79	2850	-	11.84			
136	76	2720	-	10.32			
146	63	2910	-	9.58			
173	80	2590	-	8.09			
203	80	2420	-	6.91			
218	80	2340	-	6.41			
253	80	2200	-	5.54			
271	80	2140	-	5.16			
311	80	2010	-	4.50			

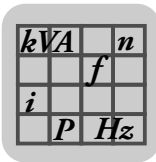
<b>K29, n<sub>e</sub>=1400 1/min</b>					<b>130 Nm</b>				
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M
19	130	5020	-	71.93					
21	130	5020	-	66.25					
23	130	5020	-	61.28					
26	130	5020	-	54.89					
28	130	5020	-	50.35					
33	128	4790	-	42.87					
36	130	4720	-	38.90					
38	122	4560	-	36.96					
39	130	4560	-	35.83					
42	130	4410	-	33.15					
46	115	4250	-	30.11					
47	130	4210	-	29.69					
51	130	4060	-	27.23					
56	109	3980	-	24.91					
60	130	3790	-	23.19					
63	105	3820	-	22.08					
70	130	3550	-	19.99					
86	130	3240	-	16.29					
104	130	2970	-	13.47					
117	130	2810	-	11.94					
141	110	3000	-	9.90					
153	130	2470	-	9.17					





K29, $n_e=1400$ 1/min					130 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M
164	122	2740	-	8.53					
187	123	2300	-	7.48					
201	112	2580	-	6.95					
243	112	2370	-	5.75					
275	110	2260	-	5.10					
357	126	1910	-	3.92					
439	110	1830	-	3.19					

K37, $n_e=1400$ 1/min					200 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC	
13	200	5640	6.8	106.38					
14	200	5640	6.8	97.81					
17	200	5640	6.9	83.69					
19	200	5520	6.9	72.54					
21	200	5360	6.9	67.80					
24	200	5020	6.9	58.60					
28	200	4660	7	49.79					
31	200	4420	7	44.46					
37	200	4100	7	37.97					
39	200	3970	7.1	35.57					
47	200	3650	7.1	29.96					
49	200	3580	8.1	28.83					
56	200	3330	8.1	24.99					
60	195	3260	8.2	23.36					
69	185	3110	8.3	20.19					
82	180	2900	8.4	17.15					
91	175	2780	8.5	15.31					
107	165	2650	8.6	13.08					
115	160	2600	11.9	12.14					
133	160	2410	12.2	10.49					
157	160	2200	12.4	8.91					
176	155	2110	12.5	7.96					
206	150	1980	12.8	6.80					
220	145	1950	12.9	6.37					
261	140	1810	13.2	5.36					
352	125	1660	13	3.98					

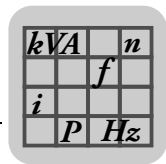
K37R17, $n_e=1400$ 1/min					200 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M			
3 3									
0.20	200	5640	-	6832					
0.24	200	5640	-	5922					
0.25	200	5640	-	5491					
0.29	200	5640	-	4759					
0.34	200	5640	-	4160					
0.38	200	5640	-	3645					
0.44	200	5640	-	3205					
0.50	200	5640	-	2801					
0.57	200	5640	-	2454					



<b>K37R17, n<sub>e</sub>=1400 1/min</b>					<b>200 Nm</b>	
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
0.65	200	5640	-	2166		
0.74	200	5640	-	1891		
0.84	200	5640	-	1660		
0.95	200	5640	-	1466		
1.1	200	5640	-	1288		
1.2	200	5640	-	1136		
 3  2						
1.4	200	5640	-	996		
1.6	200	5640	-	876		
1.8	200	5640	-	761		
2.1	200	5640	-	671		
2.4	200	5640	-	585		
2.7	200	5640	-	512		
3.1	200	5640	-	451		
3.5	200	5640	-	396		
4.0	200	5640	-	346		
4.6	200	5640	-	304		
5.2	200	5640	-	267		
6.0	200	5640	-	234		
6.8	200	5640	-	205		
7.7	200	5640	-	181		
8.8	200	5640	-	160		
10	200	5640	-	136		
11	200	5640	-	127		
13	200	5640	-	110		
15	200	5640	-	96		

<b>K47, n<sub>e</sub>=1400 1/min</b>					<b>400 Nm</b>			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
11	400	5920	6.4	131.87*				
12	400	5920	6.4	121.48*				
13	400	5920	6.4	104.37				
15	400	5920	6.4	90.86				
16	400	5920	6.4	85.12*				
19	400	5920	6.5	75.20*				
20	400	5920	6.5	69.84				
22	400	5920	6.5	63.30*				
25	400	5920	6.5	56.83				
29	400	5920	6.6	48.95*				
30	400	5920	6.6	46.03*				
35	400	5920	6.6	39.61				
40	400	5920	6.7	35.39				
45	400	5700	7.5	31.30				
48	400	5520	7.5	29.32				
54	400	5170	7.6	25.91				
58	400	4970	7.7	24.06				
64	400	4710	7.7	21.81				
72	400	4440	7.7	19.58				
83	380	4220	7.8	16.86				
88	380	4080	7.9	15.86				
103	360	3890	8	13.65				
115	350	3720	8.3	12.19				




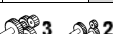



K47, n <sub>e</sub> =1400 1/min					400 Nm			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
119	280	4060	10.5	11.77				
133	280	3830	10.6	10.56				
154	280	3540	10.7	9.10				
164	270	3500	10.8	8.56				
190	250	3380	11	7.36				
213	240	3270	11.5	6.58				
241	230	3140	11.8	5.81				
302	205	2980	12	4.64				

K47R37, n <sub>e</sub> =1400 1/min					400 Nm			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
3  3								
0.14	400	5920	-	10138				
0.16	400	5920	-	8534				
0.18	400	5920	-	7662				
0.21	400	5920	-	6826				
0.23	400	5920	-	5983				
0.27	400	5920	-	5159				
0.30	400	5920	-	4601*				
0.36	400	5920	-	3940				
0.40	400	5920	-	3477				
0.46	400	5920	-	3043				
0.51	400	5920	-	2733				
0.59	400	5920	-	2354				
0.68	400	5920	-	2063				
0.77	400	5920	-	1819				
0.88	400	5920	-	1586				
1.0	400	5920	-	1388				
3  2								
1.1	400	5920	-	1222				
1.3	400	5920	-	1097				
1.5	400	5920	-	945				
1.7	400	5920	-	831*				
1.9	400	5920	-	718*				
2.2	400	5920	-	639				
2.5	400	5920	-	552				
2.8	400	5920	-	495				
3.3	400	5920	-	426				
3.7	400	5920	-	375				
4.3	400	5920	-	327				
4.8	400	5920	-	289				
5.5	400	5920	-	256				
6.2	400	5920	-	225				
7.1	400	5920	-	198				
8.2	400	5920	-	171				
9.2	400	5920	-	153				
11	400	5920	-	131				
12	400	5920	-	112				
14	400	5920	-	99				
15	400	5920	-	94				



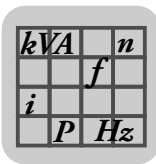
K57, $n_e=1400$ 1/min					600 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M
9.6	600	7630	5.9	145.14*				
11	600	7630	5.9	123.85				
13	600	7630	5.9	108.29				
14	600	7630	5.9	102.88*				
16	600	7630	5.9	90.26*				
18	600	7630	5.9	76.56*				
20	600	7630	6	69.12				
23	600	7630	6	60.81*				
24	600	7630	6	57.42*				
29	600	7630	6	48.89				
32	600	7630	6.1	44.43				
36	600	7630	6.1	38.49				
39	600	7630	6.8	35.70				
46	600	7300	6.9	30.28				
51	600	6930	6.9	27.34				
58	600	6480	6.9	24.05				
62	600	6280	6.9	22.71				
72	575	5910	7	19.34				
80	555	5740	7.2	17.57				
92	535	5430	7.3	15.22				
106	510	5190	7.4	13.25				
117	415	5150	9.4	11.92				
124	415	4990	9.5	11.26				
146	405	4650	9.6	9.59				
161	390	4520	10	8.71				
185	365	4360	10.2	7.55				
213	345	4180	10.4	6.57				
299	300	3800	11	4.69				





K57R37, $n_e=1400$ 1/min					600 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
 3								
0.12	600	7630	-	12169				
0.13	600	7630	-	11162*				
0.15	600	7630	-	9503				
0.16	600	7630	-	8547				
0.19	600	7630	-	7277				
0.22	600	7630	-	6478*				
0.25	600	7630	-	5662*				
0.28	600	7630	-	5033				
0.32	600	7630	-	4340				
0.36	600	7630	-	3854				
0.41	600	7630	-	3390				
0.48	600	7630	-	2924				
0.54	600	7630	-	2593				
0.62	600	7630	-	2249				
0.70	600	7630	-	1986				
 3  2								
0.80	600	7630	-	1743				
0.91	600	7630	-	1539				
1.0	600	7630	-	1354				
1.2	600	7630	-	1174				



K57R37, n <sub>e</sub> =1400 1/min					600 Nm			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
1.4	600	7630	-	1036*				
1.5	600	7630	-	906*				
1.7	600	7630	-	806				
2.0	600	7630	-	699				
2.3	600	7630	-	615				
2.6	600	7630	-	544*				
3.0	600	7630	-	473				
3.3	600	7630	-	421				
3.9	600	7630	-	362				
4.4	600	7630	-	319				
5.0	600	7630	-	280				
5.7	600	7630	-	246				
6.5	600	7630	-	215				
7.3	600	7630	-	192				
8.4	600	7630	-	166				
9.7	600	7630	-	145				
11	600	7630	-	129				
13	600	7630	-	111				
14	600	7630	-	97				

K67, n <sub>e</sub> =1400 1/min					820 Nm					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
9.7	820	10300	6.2	144.79*						
11	820	10300	6.2	123.54						
13	820	10300	6.1	108.03						
14	820	10300	6.1	102.62						
16	820	10300	6.2	90.04						
18	820	10300	6.2	76.37						
20	820	10300	6.2	68.95						
23	820	10300	6.2	60.66						
24	820	10300	6.2	57.28						
29	820	10300	6.3	48.77						
32	820	10300	6.3	44.32						
36	800	10500	6.4	38.39						
39	820	10300	7.1	35.62						
46	820	10300	7.1	30.22						
51	820	10300	7.1	27.28						
58	800	10500	7.2	24.00						
62	780	10700	7.2	22.66						
73	760	10800	7.3	19.30						
80	740	11000	7.5	17.54						
92	700	11300	7.5	15.19						
106	670	11500	7.6	13.22						
112	530	12300	8.6	12.48						
132	500	11800	8.8	10.63						
145	480	11500	9.1	9.66						
167	440	11100	9.3	8.37						
192	420	10700	9.4	7.28						
269	350	9860	10	5.20						



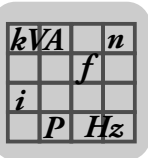
<b>K67R37, n<sub>e</sub>=1400 1/min</b>					<b>820 Nm</b>			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
 3 								
0.12	820	10300	-	12139				
0.13	820	10300	-	11134				
0.15	820	10300	-	9479				
0.17	820	10300	-	8173				
0.19	820	10300	-	7259				
0.22	820	10300	-	6462				
0.25	820	10300	-	5648				
0.29	820	10300	-	4846				
0.32	820	10300	-	4329				
0.37	820	10300	-	3750				
0.42	820	10300	-	3315				
0.48	820	10300	-	2917				
0.55	820	10300	-	2532				
0.62	820	10300	-	2244				
0.71	820	10300	-	1981				
 3 								
0.81	820	10300	-	1739				
0.91	820	10300	-	1535				
1.0	820	10300	-	1351				
1.2	820	10300	-	1171				
1.4	820	10300	-	1034				
1.6	820	10300	-	903				
1.8	820	10300	-	793				
2.0	820	10300	-	697				
2.3	820	10300	-	613				
2.6	820	10300	-	542				
3.0	820	10300	-	471				
3.3	820	10300	-	420				
3.9	820	10300	-	361				
4.3	820	10300	-	323				
5.0	820	10300	-	279				
5.7	820	10300	-	246				
6.5	820	10300	-	217				
7.3	820	10300	-	191				
8.4	820	10300	-	166				
9.7	820	10300	-	144				
11	820	10300	-	122				

<b>K77, n<sub>e</sub>=1400 1/min</b>					<b>1550 Nm</b>						
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
7.3	1450	16100	5.4	192.18							
7.8	1450	16100	5.4	179.37							
9.1	1550	15400	5.4	154.02							
10	1550	15400	5.4	135.28							
11	1550	15400	5.4	128.52							
12	1550	15400	5.4	113.56							
14	1550	15400	5.4	97.05							
16	1550	15400	5.4	88.97							
18	1550	15400	5.4	78.07							



K77, n <sub>e</sub> =1400 1/min											1550 Nm
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
19	1550	15400	5.4	73.99							
22	1550	15400	5.5	64.75							
24	1550	15400	5.5	58.34							
27	1550	15400	5.5	51.18							
31	1550	15400	5.5	45.16							
35	1550	15400	5.6	40.04							
36	1500	15700	6	38.39							
40	1550	15400	6	35.20							
45	1550	15400	6.1	30.89							
48	1550	15400	6.1	29.27							
55	1550	15400	6.1	25.62							
61	1550	15400	6.3	23.08							
69	1500	15700	6.3	20.25							
78	1450	16100	6.3	17.87							
88	1400	15500	6.4	15.84							
104	1340	14800	6.5	13.52							
113	1000	15100	7.9	12.36							
129	990	14400	7.8	10.84							
146	940	13900	7.9	9.56							
165	890	13500	8.2	8.48							
193	820	13100	8.3	7.24							

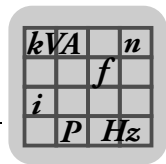
K77R37, n <sub>e</sub> =1400 1/min											1550 Nm
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC			
3  3											
0.09	1550	15400	-	15310							
0.10	1550	15400	-	14043							
0.12	1550	15400	-	11955							
0.14	1550	15400	-	10217							
0.16	1550	15400	-	8809							
0.19	1550	15400	-	7528							
0.21	1550	15400	-	6606							
0.24	1550	15400	-	5774							
0.28	1550	15400	-	5089							
0.31	1550	15400	-	4489							
0.35	1550	15400	-	3961							
0.40	1550	15400	-	3485							
0.48	1550	15400	-	2901							
0.52	1550	15400	-	2717							
0.59	1550	15400	-	2370							
3  2											
0.68	1550	15400	-	2050							
0.79	1550	15400	-	1772							
0.92	1550	15400	-	1514							
1.0	1550	15400	-	1388							
1.1	1550	15400	-	1218							
1.3	1550	15400	-	1053							
1.5	1550	15400	-	924							
1.7	1550	15400	-	815							
2.0	1550	15400	-	709							
2.3	1550	15400	-	622							
2.5	1550	15400	-	552							



<b>K77R37, n<sub>e</sub>=1400 1/min</b>					<b>1550 Nm</b>			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
2.9	1550	15400	-	485				
3.3	1550	15400	-	428				
3.8	1550	15400	-	367				
4.3	1550	15400	-	328				
4.8	1550	15400	-	290				
5.6	1550	15400	-	252				
6.3	1550	15400	-	221				
7.2	1550	15400	-	195				
8.0	1550	15400	-	175				
9.1	1550	15400	-	154				

<b>K87, n<sub>e</sub>=1400 1/min</b>					<b>2700 Nm</b>							
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC
7.1	2700	27300	5.3	197.37								
8.0	2700	27300	5.3	174.19								
8.5	2700	27300	5.3	164.34*								
9.5	2700	27300	5.4	147.32*								
11	2700	27300	5.4	126.91*								
12	2700	27300	5.4	115.82								
14	2700	27300	5.4	102.71*								
16	2700	27300	5.4	86.34								
18	2700	27300	5.4	79.34								
20	2700	27300	5.4	70.46								
22	2700	26200	5.4	63.00*								
25	2700	25000	5.5	56.64								
28	2700	23500	5.5	49.16								
32	2600	22800	5.5	44.02								
38	2500	21400	5.5	36.52*								
45	2700	19200	6.1	31.39								
50	2600	18500	6.1	27.88								
56	2500	18000	6.1	24.92								
62	2300	17900	6.2	22.41								
72	2300	16800	6.3	19.45								
80	2200	16300	6.3	17.42								
88	1800	16000	6.5	16.00								
97	2100	15300	6.4	14.45								
111	2000	14800	6.5	12.56								
125	1500	14900	6.7	11.17								
140	1500	14200	6.8	10.00								
169	1400	13500	7	8.29								
194	1300	13200	7.1	7.21								

<b>K87R57, n<sub>e</sub>=1400 1/min</b>					<b>2700 Nm</b>					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
3 3										
0.09	2700	27300	-	14829						
0.11	2700	27300	-	13168						
0.12	2700	27300	-	11737						
0.14	2700	27300	-	10217						

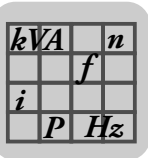


K87R57, n <sub>e</sub> =1400 1/min					2700 Nm					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
0.15	2700	27300	-	9073						
0.18	2700	27300	-	7854						
0.20	2700	27300	-	6832						
0.24	2700	27300	-	5930						
0.27	2700	27300	-	5240						
0.31	2700	27300	-	4562						
0.35	2700	27300	-	4037						
0.39	2700	27300	-	3609						
0.45	2700	27300	-	3107						
0.51	2700	27300	-	2728						
0.59	2700	27300	-	2371						

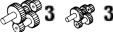
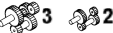


0.67	2700	27300	-	2088						
0.76	2700	27300	-	1854						
0.84	2700	27300	-	1657						
0.99	2700	27300	-	1415						
1.1	2700	27300	-	1229						
1.3	2700	27300	-	1078						
1.5	2700	27300	-	951						
1.7	2700	27300	-	837						
1.9	2700	27300	-	726						
2.2	2700	27300	-	638						
2.5	2700	27300	-	562*						
3.0	2700	27300	-	474*						
3.3	2700	27300	-	426						
3.8	2700	27300	-	373						
4.2	2700	27300	-	330						
4.8	2700	27300	-	294						
5.6	2700	27300	-	250						
5.9	2700	27300	-	236						
7.0	2700	27300	-	201						
7.7	2700	27300	-	183						
8.8	2700	27300	-	159						
9.9	2600	27400	-	141						

K97, n <sub>e</sub> =1400 1/min					4300 Nm							
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
8.0	4300	40000	6.8	176.05*								
9.1	4300	40000	6.8	153.21*								
10.0	4300	40000	6.8	140.28								
11	4300	40000	6.8	123.93*								
13	4300	40000	6.8	105.13								
14	4300	40000	6.8	96.80								
16	4300	38800	6.8	86.52								
18	4300	37100	6.8	77.89*								
20	4300	35600	6.9	70.54								
22	4300	33800	6.9	62.55								
25	4300	32300	6.9	56.55								
29	4300	30000	6.9	47.93*								
33	4300	28300	6.9	41.87								
37	4300	27100	7.4	38.30								
41	4300	25700	7.5	34.23								
45	4300	24500	7.5	30.82								



K97, $n_e=1400$ 1/min											4300 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
50	4300	23300	7.5	27.91								
57	4300	22000	7.6	24.75								
63	4300	20900	7.6	22.37								
74	4300	19100	7.6	18.96								
85	4300	17800	7.7	16.56								
101	4300	16100	7.7	13.85								
117	3890	16200	7.8	11.99								
134	2870	16400	9.7	10.41								
161	2660	15800	9.8	8.71								
186	2400	15700	10	7.54								

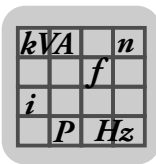
K97R57, $n_e=1400$ 1/min											4300 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S		
 3												
0.08	4300	40000	-	18091								
0.08	4300	40000	-	16666								
0.09	4300	40000	-	14897								
0.11	4300	40000	-	13182								
0.12	4300	40000	-	11677								
0.14	4300	40000	-	10317								
0.15	4300	40000	-	9083								
0.17	4300	40000	-	8054								
0.20	4300	40000	-	6970								
0.23	4300	40000	-	6027								
0.26	4300	40000	-	5391								
0.30	4300	40000	-	4669								
0.34	4300	40000	-	4082								
0.39	4300	40000	-	3583								
0.45	4300	40000	-	3108*								
0.51	4300	40000	-	2757								
 3												
0.58	4300	40000	-	2419								
0.66	4300	40000	-	2123								
0.75	4300	40000	-	1856								
0.86	4300	40000	-	1625								
0.98	4300	40000	-	1430								
1.1	4300	40000	-	1261								
1.3	4300	40000	-	1102								
1.5	4300	40000	-	957								
1.6	4300	40000	-	855								
1.9	4300	40000	-	743								
2.1	4300	40000	-	652*								
2.4	4300	40000	-	573								
2.8	4300	40000	-	504								
3.2	4300	40000	-	437								
3.7	4300	40000	-	382*								
4.1	4300	40000	-	342*								
4.6	4300	40000	-	305								
5.4	4300	40000	-	258								
6.0	4300	40000	-	232								
7.0	4300	40000	-	199								





K107, n <sub>e</sub> =1400 1/min						8000 Nm				
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
9.8	8000	65000	5.7	143.47*						
12	8000	61500	5.7	121.46						
12	8000	59300	5.8	112.41*						
14	8000	56200	5.8	100.75						
15	8000	53500	5.8	90.96*						
17	8000	50900	5.8	82.61						
19	8000	47900	5.8	73.30						
21	8000	45400	5.8	66.52*						
24	8000	41700	5.8	57.17*						
28	7840	39300	5.8	49.90						
33	7360	37900	5.8	42.33*						
38	7200	35800	5.8	37.00*						
43	7200	33200	6.4	32.69						
45	6800	34200	5.9	31.28*						
48	7200	30700	6.5	29.00						
53	7200	28800	6.4	26.32						
62	7200	25800	6.5	22.62						
71	7200	23200	6.5	19.74						
84	7050	21000	6.5	16.75						
96	6890	19500	6.6	14.64						
104	4300	29200	8.8	13.43						
119	4300	27500	8.8	11.73						
141	4190	25800	8.9	9.94						
161	4070	24600	9	8.69						
190	3600	24400	9	7.35						

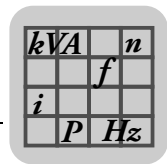
K107R77, n <sub>e</sub> =1400 1/min						8000 Nm					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRE63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
3  3											
0.10	8000	65000	-	14311*							
0.11	8000	65000	-	12211							
0.13	8000	65000	-	10677							
0.15	8000	65000	-	9524							
0.17	8000	65000	-	8328							
0.19	8000	65000	-	7270							
0.23	8000	65000	-	6184							
0.25	8000	65000	-	5662							
0.27	8000	65000	-	5138							
0.32	8000	65000	-	4359*							
0.37	8000	65000	-	3810*							
0.42	8000	65000	-	3358							
0.47	8000	65000	-	2977*							
0.54	8000	65000	-	2599							
0.61	8000	65000	-	2286							
0.72	8000	65000	-	1939							
3  2											
0.82	8000	65000	-	1713							
0.90	8000	65000	-	1554							
1.0	8000	65000	-	1336*							
1.2	8000	65000	-	1166							
1.4	8000	65000	-	1030							



<b>K107R77, <math>n_e=1400</math> 1/min</b>						<b>8000 Nm</b>					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
1.5	8000	65000	-	904							
1.8	8000	65000	-	793*							
2.0	8000	65000	-	696*							
2.3	8000	65000	-	615							
2.7	8000	65000	-	522							
3.0	8000	65000	-	461*							
3.4	8000	65000	-	408*							
3.8	8000	65000	-	364							
4.4	8000	65000	-	318							
4.9	8000	65000	-	286*							
5.6	8000	65000	-	251							
6.3	8000	65000	-	222*							
7.1	8000	65000	-	196*							
8.0	7200	65000	-	174							
9.1	7200	65000	-	154							
10	7200	65000	-	140							

<b>K127, <math>n_e=1400</math> 1/min</b>						<b>13000 Nm</b>				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M	
9.6	13000	79200	5.2	146.07						
10	13000	79200	5.2	136.14						
11	13000	79200	5.2	122.48						
13	13000	79200	5.2	110.18						
16	13000	75100	5.2	89.89						
17	13000	72100	5.3	81.98						
20	13000	67700	5.3	70.95*						
22	13000	64000	5.3	62.60						
26	13000	59800	5.3	54.07						
29	13000	56500	5.3	47.82						
35	13000	52000	5.3	40.19						
39	13000	49400	5.6	36.25						
45	13000	45900	5.6	31.37						
51	13000	43000	5.7	27.68						
59	13000	39800	5.7	23.91						
66	13000	37200	5.7	21.15						
79	13000	32600	5.8	17.77						
98	12100	31000	5.8	14.35						
109	8530	35400	8	12.79						
130	8000	33900	8.1	10.74						
161	7230	32500	8.1	8.68						

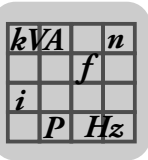
<b>K127R77, <math>n_e=1400</math> 1/min</b>						<b>13000 Nm</b>					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
3  3											
0.08	13000	79200	-	17550							
0.09	13000	79200	-	16006							
0.09	13000	79200	-	14975							
0.11	13000	79200	-	12440							
0.13	13000	79200	-	10915							
0.14	13000	79200	-	9819							



K127R77, $n_e=1400$ 1/min					13000 Nm						
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
0.17	13000	79200	-	8443							
0.19	13000	79200	-	7482							
0.21	13000	79200	-	6565							
0.24	13000	79200	-	5804							
0.28	13000	79200	-	5027							
0.32	13000	79200	-	4423							
0.36	13000	79200	-	3889							
0.42	13000	79200	-	3311							
0.47	13000	79200	-	3009							
0.54	13000	79200	-	2607							
0.62	13000	79200	-	2268							
3  2											
0.73	13000	79200	-	1926							
0.80	13000	79200	-	1757							
0.91	13000	79200	-	1541							
1.0	13000	79200	-	1342							
1.2	13000	79200	-	1177							
1.4	13000	79200	-	1025							
1.6	13000	79200	-	899							
1.8	13000	79200	-	790							
2.0	13000	79200	-	704							
2.3	13000	79200	-	610							
2.6	13000	79200	-	549							
2.9	13000	79200	-	477							
3.3	13000	79200	-	418							

K127R87, $n_e=1400$ 1/min					13000 Nm							
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC
2.6	13000	79200	-	536								
3.0	13000	79200	-	473								
3.3	13000	79200	-	418								
3.8	13000	79200	-	367								
4.2	13000	79200	-	330								
4.9	13000	79200	-	287								
5.5	13000	79200	-	253								
6.6	13000	79200	-	213								
7.0	12000	79700	-	200								
8.4	12000	79700	-	166								
9.5	12000	79700	-	147								

K157, $n_e=1400$ 1/min					18000 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M	DRE315S DRE315K	DRE315M DRE315L
9.3	18000	112200	5.2	150.41						
11	18000	106500	5.2	122.39						
14	18000	98000	5.2	100.22						
15	18000	94400	5.2	91.65						
18	18000	88900	5.2	79.75						
20	18000	84200	5.2	70.38						
23	18000	79000	5.2	61.02						
26	18000	74900	5.2	54.29						
30	18000	70000	5.2	46.79						



<b>K157, n<sub>e</sub>=1400 1/min</b>						<b>18000 Nm</b>				
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M	DRE315S DRE315K	DRE315M DRE315L
37	18000	63400	5.3	38.02						
45	18000	57500	5.6	31.30						
51	18000	54000	5.6	27.62						
58	18000	50000	5.6	23.95						
66	18000	47000	5.6	21.31						
76	18000	43200	5.7	18.37						
94	18000	38200	5.8	14.92						
111	17000	36600	5.8	12.65						

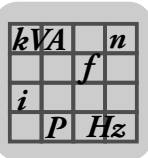
<b>K157R97, n<sub>e</sub>=1400 1/min</b>						<b>18000 Nm</b>							
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
3  3													
0.08	18000	112200	-	17679									
0.09	18000	112200	-	15729									
0.10	18000	112200	-	14721									
0.11	18000	112200	-	13097									
0.12	18000	112200	-	11368									
0.14	18000	112200	-	10114									
0.16	18000	112200	-	8718									
0.18	18000	112200	-	7734									
0.20	18000	112200	-	6881									
0.24	18000	112200	-	5931									
0.28	18000	112200	-	5074									
0.31	18000	112200	-	4514									
0.35	18000	112200	-	3979									
0.40	18000	112200	-	3516									
0.46	18000	112200	-	3051									
0.54	18000	112200	-	2610									
0.60	18000	112200	-	2322									
0.69	18000	112200	-	2029									
0.78	18000	112200	-	1805									
3  2													
0.84	18000	112200	-	1659									
1.0	18000	112200	-	1365									
1.1	18000	112200	-	1229*									
1.3	18000	112200	-	1093*									
1.5	18000	112200	-	942									
1.6	18000	112200	-	854									
1.9	18000	112200	-	756*									
2.1	18000	112200	-	661									
2.5	18000	112200	-	567									
2.8	18000	112200	-	504									
3.2	18000	112200	-	434*									
3.7	18000	112200	-	379									
4.2	18000	112200	-	333									
4.8	18000	112200	-	291									



K157R107, $n_e=1400$ 1/min						18000 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
3.6	18000	112200	-	385						
4.3	18000	112200	-	325						
4.7	18000	112200	-	299						
5.5	18000	112200	-	253						
6.1	18000	112200	-	230						
6.6	18000	112200	-	213						
7.5	18000	112200	-	187						
8.9	18000	112200	-	157						
11	18000	106500	-	122						
13	18000	100700	-	107						

K167, $n_e=1400$ 1/min						32000 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M	DRE315S DRE315K	DRE315M DRE315L
8.5	32000	150000	4.5	164.50						
10	32000	150000	4.5	134.99						
13	32000	150000	4.5	109.83						
16	32000	147200	4.5	87.86						
18	32000	140100	4.5	78.14						
21	32000	132000	4.5	68.07						
23	32000	125600	4.5	60.74						
27	32000	117000	4.6	51.77						
33	32000	107400	4.6	42.89						
38	32000	99700	4.6	36.61						
43	32000	93700	4.8	32.25						
49	32000	88600	4.8	28.77						
57	32000	81700	4.9	24.52						
69	32000	74000	4.9	20.32						
81	32000	67900	5	17.34						

K167R97, $n_e=1400$ 1/min						32000 Nm							
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
3  3													
0.07	32000	150000	-	19723									
0.08	32000	150000	-	17406									
0.09	32000	150000	-	15000									
0.11	32000	150000	-	13238									
0.12	32000	150000	-	11573									
0.14	32000	150000	-	10264									
0.16	32000	150000	-	8628									
0.21	32000	150000	-	6562									
0.26	32000	150000	-	5355									
0.29	32000	150000	-	4788									
0.34	32000	150000	-	4079									
0.41	32000	150000	-	3376									
0.51	32000	150000	-	2755									
0.62	32000	150000	-	2263									
3  2													
0.64	32000	150000	-	2182									
0.82	32000	150000	-	1704									
0.99	32000	150000	-	1408									
1.1	32000	150000	-	1296									




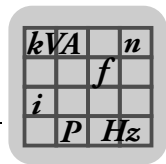
K..DRE/DRS  
K.. → DRE/DRS

K167R97, $n_e=1400$ 1/min											32000 Nm		
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
1.3	32000	150000	-	1101									
1.5	32000	150000	-	944									
1.7	32000	150000	-	843									
1.8	32000	150000	-	757									
2.2	32000	150000	-	632									
2.5	32000	150000	-	561									
2.9	32000	150000	-	481									
3.3	32000	150000	-	423									
3.8	32000	150000	-	369									

K167R107, $n_e=1400$ 1/min											32000 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M		
4.4	32000	150000	-	318								
5.0	32000	150000	-	278								
5.7	32000	150000	-	244								
6.6	32000	150000	-	213								
6.8	32000	150000	-	206								
7.8	32000	150000	-	180								
8.8	32000	150000	-	160								
10	32000	150000	-	135								
12	32000	150000	-	118								

K187, $n_e=1400$ 1/min											50000 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M	DRE250M DRE280S DRE280M	DRE315S DRE315K	DRE315M DRE315L		
7.8	50000	190000	3.8	179.86								
8.5	50000	190000	3.8	165.21								
9.7	50000	186200	3.8	144.59								
11	50000	177700	3.8	129.69								
12	50000	167100	3.8	112.60								
14	50000	160100	3.8	102.16								
16	50000	149700	3.8	88.00								
19	50000	138100	3.8	73.96								
22	50000	129000	3.8	64.04								
26	50000	118100	3.9	53.36								
31	50000	108900	3.9	45.50*								
33	50000	105200	4.1	42.51								
36	50000	99900	4.1	38.57								
42	50000	92200	4.2	33.23								
50	50000	83500	4.2	27.92								
58	47600	80500	4.2	24.18								
69	43900	78000	4.3	20.15								
81	41400	75000	4.3	17.18								

K187R97, $n_e=1400$ 1/min											50000 Nm		
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\Phi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
 3													
0.04	50000	190000	-	32625									
0.05	50000	190000	-	27165									
0.06	50000	190000	-	24353									
0.07	50000	190000	-	19144									



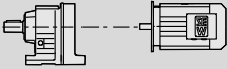

**K187R97, n<sub>e</sub>=1400 1/min** **50000 Nm**

n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
0.08	50000	190000	-	16978									
0.10	50000	190000	-	14272									
0.11	50000	190000	-	13116									
0.12	50000	190000	-	11647									
0.13	50000	190000	-	10413									
0.15	50000	190000	-	9363									
0.17	50000	190000	-	8126									
0.19	50000	190000	-	7343									
0.21	50000	190000	-	6747									
0.23	50000	190000	-	5991									
0.26	50000	190000	-	5358									
0.29	50000	190000	-	4817									
0.32	50000	190000	-	4370									
0.50	50000	190000	-	2818*									
3  2													
0.39	50000	190000	-	3609									
0.46	50000	190000	-	3062									
0.56	50000	190000	-	2519									
0.62	50000	190000	-	2268									
0.68	50000	190000	-	2054									
0.77	50000	190000	-	1821									
0.87	50000	190000	-	1605									
1.0	50000	190000	-	1395									
1.2	50000	190000	-	1196									
1.3	50000	190000	-	1046									
1.5	50000	190000	-	945									
1.9	50000	190000	-	738									
2.3	50000	190000	-	621									
2.7	50000	190000	-	527									

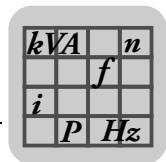
**K187R107, n<sub>e</sub>=1400 1/min** **50000 Nm**

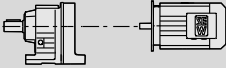

n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
1.7	50000	190000	-	835						
1.9	50000	190000	-	729						
2.3	50000	190000	-	622						
2.7	50000	190000	-	520						
3.1	50000	190000	-	454						
3.9	50000	190000	-	355						
5.4	50000	190000	-	261						
6.3	50000	190000	-	221						
7.3	50000	190000	-	193						
8.6	50000	190000	-	163						


**10.3 K..DRE/DRS [kW]**

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]				
<b>0.12</b>	0.08	10800	17550	80300	1.20						
	0.09	9890	16006	80700	1.30						
	0.09	9260	14975	81000	1.40	<b>K</b>	<b>127R77</b>	<b>DR</b>	<b>63S4</b>	470	545
	0.11	7690	12440	81600	1.70	<b>KF</b>	<b>127R77</b>	<b>DR</b>	<b>63S4</b>	510	545
	0.13	6750	10915	81900	1.95	<b>KA</b>	<b>127R77</b>	<b>DR</b>	<b>63S4</b>	440	545
	0.14	6070	9819	82000	2.1	<b>KAF</b>	<b>127R77</b>	<b>DR</b>	<b>63S4</b>	480	545
	0.16	5180	8443	82300	2.5						
	0.18	4620	7482	82400	2.8						
	0.10	8850	14311	65000	0.90						
	0.11	7550	12211	65000	1.05						
	0.13	6600	10677	65000	1.20						
	0.14	5890	9524	65000	1.35	<b>K</b>	<b>107R77</b>	<b>DR</b>	<b>63S4</b>	310	545
	0.17	5150	8328	65000	1.55	<b>KF</b>	<b>107R77</b>	<b>DR</b>	<b>63S4</b>	320	545
	0.19	4490	7270	65000	1.80	<b>KA</b>	<b>107R77</b>	<b>DR</b>	<b>63S4</b>	280	545
	0.22	3700	6184	65000	2.2	<b>KAF</b>	<b>107R77</b>	<b>DR</b>	<b>63S4</b>	305	545
	0.24	3210	5662	65000	2.5						
	0.27	2910	5138	65000	2.7						
	0.32	2670	4359	65000	3.0						
0.17	5460	8054	39400	0.80							
0.20	4420	6970	40000	0.95							
0.23	4000	6027	40000	1.05	<b>K</b>	<b>97R57</b>	<b>DR</b>	<b>63S4</b>	180	545	
0.26	3650	5391	40000	1.20	<b>KF</b>	<b>97R57</b>	<b>DR</b>	<b>63S4</b>	200	545	
0.30	3020	4669	40000	1.40	<b>KA</b>	<b>97R57</b>	<b>DR</b>	<b>63S4</b>	160	545	
0.34	2730	4082	40000	1.55	<b>KAF</b>	<b>97R57</b>	<b>DR</b>	<b>63S4</b>	185	545	
0.39	2370	3583	40000	1.80							
0.44	2090	3108	40000	2.0							
0.50	1770	2757	40000	2.4							
0.57	1650	2419	40000	2.6							
0.65	1420	2123	40000	3.0	<b>K</b>	<b>97R57</b>	<b>DR</b>	<b>63S4</b>	180	545	
0.74	1270	1856	40000	3.4	<b>KF</b>	<b>97R57</b>	<b>DR</b>	<b>63S4</b>	200	545	
0.85	1040	1625	40000	4.1	<b>KA</b>	<b>97R57</b>	<b>DR</b>	<b>63S4</b>	160	545	
0.96	890	1430	40000	4.8	<b>KAF</b>	<b>97R57</b>	<b>DR</b>	<b>63S4</b>	185	545	
1.1	860	1261	40000	5.0							
1.2	755	1102	40000	5.7							
0.26	3470	5240	26200	0.80							
0.30	2890	4562	27000	0.95	<b>K</b>	<b>87R57</b>	<b>DR</b>	<b>63S4</b>	120	545	
0.34	2680	4037	27300	1.00	<b>KF</b>	<b>87R57</b>	<b>DR</b>	<b>63S4</b>	130	545	
0.38	2390	3609	27600	1.15	<b>KA</b>	<b>87R57</b>	<b>DR</b>	<b>63S4</b>	105	545	
0.44	2060	3107	28000	1.30	<b>KAF</b>	<b>87R57</b>	<b>DR</b>	<b>63S4</b>	120	545	
0.51	1730	2728	28300	1.55							
0.58	1530	2371	28400	1.75							
0.66	1430	2088	28500	1.90							
0.74	1270	1854	28600	2.1	<b>K</b>	<b>87R57</b>	<b>DR</b>	<b>63S4</b>	120	545	
0.83	1130	1657	28700	2.4	<b>KF</b>	<b>87R57</b>	<b>DR</b>	<b>63S4</b>	125	545	
0.97	960	1415	28800	2.8	<b>KA</b>	<b>87R57</b>	<b>DR</b>	<b>63S4</b>	105	545	
1.1	830	1229	28900	3.2	<b>KAF</b>	<b>87R57</b>	<b>DR</b>	<b>63S4</b>	120	545	
1.3	720	1078	28900	3.7							
1.4	610	951	29000	4.4							
1.6	520	837	29000	5.2							
1.9	450	726	29000	5.9							
0.51	1840	2717	11500	0.85	<b>K</b>	<b>77R37</b>	<b>DR</b>	<b>63S4</b>	69	545	
0.58	1530	2370	15500	1.00	<b>KF</b>	<b>77R37</b>	<b>DR</b>	<b>63S4</b>	78	545	
					<b>KA</b>	<b>77R37</b>	<b>DR</b>	<b>63S4</b>	62	545	
					<b>KAF</b>	<b>77R37</b>	<b>DR</b>	<b>63S4</b>	70	545	
0.67	1430	2050	16100	1.10							
0.78	1220	1772	17300	1.25							
0.91	1040	1514	18100	1.50	<b>K</b>	<b>77R37</b>	<b>DR</b>	<b>63S4</b>	69	545	
0.99	960	1388	18500	1.60	<b>KF</b>	<b>77R37</b>	<b>DR</b>	<b>63S4</b>	77	545	
1.1	840	1218	18900	1.85	<b>KA</b>	<b>77R37</b>	<b>DR</b>	<b>63S4</b>	62	545	
1.3	735	1053	19200	2.1	<b>KAF</b>	<b>77R37</b>	<b>DR</b>	<b>63S4</b>	70	545	
1.5	645	924	19400	2.4							
1.7	570	815	19600	2.7							
2.0	445	709	19800	3.5							
2.2	390	622	19900	3.9							



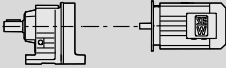



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
0.12	1.0	960	1351	6940	0.85				
	1.2	820	1171	10300	1.00				
	1.3	720	1034	11100	1.15				
	1.5	600	903	11900	1.35				
	1.7	570	793	12100	1.45				
	2.0	455	697	12600	1.80				
	2.2	400	613	12800	2.0	K 67R37	DR 63S4	45	545
	2.6	350	542	13000	2.3	KF 67R37	DR 63S4	51	545
	2.9	325	471	13000	2.5	KA 67R37	DR 63S4	42	545
	3.3	270	420	13000	3.0	KAF 67R37	DR 63S4	48	545
	3.8	245	361	13000	3.3				
	4.3	215	323	13000	3.8				
	5.0	181	279	13000	4.5				
	5.6	159	246	13000	5.2				
	6.4	139	217	13000	5.9				
1.5	605	906	7580	1.00					
1.7	545	806	8060	1.10					
2.0	455	699	8620	1.30					
2.2	400	615	8870	1.50					
2.5	350	544	9080	1.70					
2.9	320	473	9190	1.85	K 57R37	DR 63S4	39	545	
3.3	270	421	9390	2.2	KF 57R37	DR 63S4	44	545	
3.8	245	362	9470	2.4	KA 57R37	DR 63S4	37	545	
4.3	215	319	9570	2.8	KAF 57R37	DR 63S4	43	545	
4.9	181	280	9690	3.3					
5.6	160	246	9760	3.8					
6.4	141	215	9810	4.3					
7.2	126	192	9850	4.8					
2.5	380	552	6170	1.05					
2.8	320	495	6840	1.25	K 47R37	DR 63S4	33	545	
3.2	285	426	7160	1.40	KF 47R37	DR 63S4	36	545	
3.7	240	375	7510	1.65	KA 47R37	DR 63S4	32	545	
4.2	225	327	7620	1.75	KAF 47R37	DR 63S4	35	545	
4.8	198	289	7780	2.0					
4.0	240	346	3540	0.80					
4.5	205	304	5570	0.95					
5.2	189	267	5760	1.05	K 37R17	DR 63S4	19	545	
5.9	163	234	6010	1.20	KF 37R17	DR 63S4	21	545	
6.7	142	205	6180	1.40	KA 37R17	DR 63S4	19	545	
7.6	124	181	6300	1.60	KAF 37R17	DR 63S4	20	545	
8.6	109	160	6400	1.85					
10	91	136	6490	2.2					
6.2	184	144.79*	13000	4.4	K 67	DR 63M6	34	506	
					KF 67	DR 63M6	40	507	
					KA 67	DR 63M6	31	508	
					KAF 67	DR 63M6	37	507	
6.2	185	145.14*	9680	3.2					
7.3	158	123.85	9760	3.8	K 57	DR 63M6	28	501	
8.3	138	108.29	9820	4.4	KF 57	DR 63M6	33	502	
8.8	131	102.88*	9840	4.6	KA 57	DR 63M6	26	503	
10.0	115	90.26*	9880	5.2	KAF 57	DR 63M6	32	502	
12	98	76.56*	9930	6.2					
9.5	120	145.14*	9870	5.0					
11	103	123.85	9920	5.8	K 57	DR 63S4	28	501	
13	90	108.29	9950	6.7	KF 57	DR 63S4	33	502	
13	85	102.88*	9960	7.0	KA 57	DR 63S4	26	503	
15	75	90.26*	9990	8.0	KAF 57	DR 63S4	32	502	
6.8	168	131.87*	7930	2.4	K 47	DR 63M6	22	496	
7.4	155	121.48*	7990	2.6	KF 47	DR 63M6	26	497	
8.6	133	104.37	8070	3.0	KA 47	DR 63M6	22	498	
					KAF 47	DR 63M6	24	497	
10	110	131.87*	8140	3.6	K 47	DR 63S4	22	496	
11	101	121.48*	8170	4.0	KF 47	DR 63S4	26	497	
					KA 47	DR 63S4	22	498	
					KAF 47	DR 63S4	24	497	
8.5	136	106.38	6230	1.50	K 37	DR 63M6	16	491	
9.2	124	97.81	6300	1.60	KF 37	DR 63M6	18	492	
11	107	83.69	6410	1.90	KA 37	DR 63M6	16	493	
12	92	72.54	6480	2.2	KAF 37	DR 63M6	17	492	

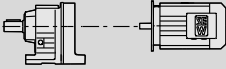

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
0.12	13	88	106.38	6500	2.3						
	14	81	97.81	6530	2.5	K	37	DR	63S4	16	491
	16	70	83.69	6570	2.9	KF	37	DR	63S4	18	492
	19	60	72.54	6600	3.3	KA	37	DR	63S4	16	493
	20	56	67.80	6610	3.6	KAF	37	DR	63S4	17	492
	19	54	71.93	5310	2.4						
	21	50	66.25	5330	2.6	K	29	DR	63S4	9.7	487
	23	46	61.28	5340	2.8	KF	29	DR	63S4	11	488
	25	41	54.89	5360	3.1	KA	29	DR	63S4	9.6	490
	27	38	50.35	5370	3.4	KAF	29	DR	63S4	11	488
	32	32	42.87	5390	4.0						
	24	44	58.68	4480	1.60						
	26	41	53.88	4500	1.70						
	28	38	49.69	4500	1.85						
	31	34	44.48	4500	2.1						
	34	31	40.63	4500	2.2						
	40	26	34.29	4500	2.5						
	43	24	31.74	4500	3.3						
	47	22	29.29	4500	2.8						
	47	22	29.14	4500	3.6	K	19	DR	63S4	8.3	483
	51	20	27.16	4500	2.9	KF	19	DR	63S4	8.8	484
	51	21	26.88	4500	3.9	KA	19	DR	63S4	8.0	486
	57	19	24.06	4470	4.3	KAF	19	DR	63S4	8.4	484
	63	17	21.98	4350	4.7						
	74	14	18.55	4130	5.6						
	87	12	15.84	3930	6.6						
	94	11	14.69	3840	7.1						
	109	9.8	12.70	3670	8.2						
	117	9.1	11.84	3590	8.6						
	134	8.0	10.32	3430	9.6						
	144	7.6	9.58	3370	8.4						
	0.18	0.09	15700	14975	74400	0.80					
0.11		13100	12440	79100	1.00						
0.12		11500	10915	80000	1.15						
0.13		10300	9819	80500	1.25						
0.16		8870	8443	81100	1.45	K	127R77	DR	63M4	470	545
0.18		7880	7482	81500	1.65	KF	127R77	DR	63M4	510	545
0.20		6910	6565	81800	1.90	KA	127R77	DR	63M4	440	545
0.23		5880	5804	82100	2.2	KAF	127R77	DR	63M4	480	545
0.26		5210	5027	82300	2.5						
0.30		4480	4423	82400	2.9						
0.34		3900	3889	82500	3.3						
0.40		3240	3311	82600	4.0						
0.16		8770	8328	65000	0.90						
0.18		7660	7270	65000	1.05						
0.21		6410	6184	65000	1.25						
0.23		5690	5662	65000	1.40	K	107R77	DR	63M4	310	545
0.26		5160	5138	65000	1.55	KF	107R77	DR	63M4	320	545
0.30		4580	4359	65000	1.75	KA	107R77	DR	63M4	280	545
0.35		4000	3810	65000	2.0	KAF	107R77	DR	63M4	305	545
0.39		3400	3358	65000	2.4						
0.44		3080	2977	65000	2.6						
0.51		2690	2599	65000	3.0						
0.58		2310	2286	65000	3.4						
0.28		5050	4669	39800	0.85	K	97R57	DR	63M4	180	545
0.32		4530	4082	40000	0.95	KF	97R57	DR	63M4	200	545
0.37		3940	3583	40000	1.10	KA	97R57	DR	63M4	160	545
0.42		3450	3108	40000	1.25	KAF	97R57	DR	63M4	185	545
0.48		2980	2757	40000	1.45						
0.55		2720	2419	40000	1.60						
0.62		2360	2123	40000	1.80						
0.71		2090	1856	40000	2.1						
0.81		1760	1625	40000	2.4	K	97R57	DR	63M4	180	545
0.92	1520	1430	40000	2.8	KF	97R57	DR	63M4	200	545	
1.0	1420	1261	40000	3.0	KA	97R57	DR	63M4	160	545	
1.2	1240	1102	40000	3.5	KAF	97R57	DR	63M4	185	545	
1.4	1080	957	40000	4.0							
1.5	970	855	40000	4.4							
1.8	770	743	40000	5.6							
2.0	690	652	40000	6.2							

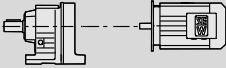



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
0.18	0.42	3430	3107	26200	0.80	K	87R57	DR	63M4	120	545
	0.48	2920	2728	27000	0.90	KF	87R57	DR	63M4	130	545
	0.56	2560	2371	27400	1.05	KA	87R57	DR	63M4	105	545
						KAF	87R57	DR	63M4	120	545
	0.63	2350	2088	27700	1.15						
	0.71	2080	1854	28000	1.30						
	0.80	1860	1657	28200	1.45	K	87R57	DR	63M4	120	545
	0.93	1590	1415	28400	1.70	KF	87R57	DR	63M4	125	545
	1.1	1380	1229	28600	1.95	KA	87R57	DR	63M4	105	545
	1.2	1200	1078	28700	2.2	KAF	87R57	DR	63M4	120	545
	1.4	1030	951	28800	2.6						
	1.6	890	837	28800	3.0						
	1.8	775	726	28900	3.5						
	0.87	1710	1514	14100	0.90						
	0.95	1570	1388	15200	1.00						
	1.1	1380	1218	16500	1.10						
	1.2	1200	1053	17400	1.30						
	1.4	1050	924	18100	1.45	K	77R37	DR	63M4	69	545
	1.6	930	815	18600	1.65	KF	77R37	DR	63M4	77	545
	1.9	760	709	19100	2.0	KA	77R37	DR	63M4	62	545
	2.1	665	622	19300	2.3	KAF	77R37	DR	63M4	70	545
	2.4	600	552	19500	2.6						
	2.7	525	485	19600	2.9						
	3.1	465	428	19800	3.3						
	3.6	410	367	19800	3.8						
	1.7	920	793	9240	0.90						
	1.9	760	697	10800	1.05						
	2.2	670	613	11500	1.20	K	67R37	DR	63M4	45	545
	2.4	590	542	12000	1.40	KF	67R37	DR	63M4	51	545
	2.8	535	471	12200	1.50	KA	67R37	DR	63M4	42	545
	3.2	455	420	12600	1.80	KAF	67R37	DR	63M4	48	545
	3.6	405	361	12800	2.0						
	4.1	360	323	12900	2.3						
	4.7	300	279	13000	2.7						
	2.4	590	544	7690	1.00						
	2.8	535	473	8150	1.10						
	3.1	455	421	8620	1.30						
	3.6	405	362	8840	1.45	K	57R37	DR	63M4	39	545
	4.1	360	319	9050	1.65	KF	57R37	DR	63M4	44	545
	4.7	300	280	9270	1.95	KA	57R37	DR	63M4	37	545
	5.4	265	246	9400	2.2	KAF	57R37	DR	63M4	43	545
	6.1	235	215	9510	2.5						
	6.9	210	192	9600	2.8						
	7.9	182	166	9690	3.3						
	3.5	405	375	5600	1.00						
	4.0	365	327	6320	1.10						
	4.6	325	289	6800	1.20	K	47R37	DR	63M4	33	545
	5.2	275	256	7240	1.45	KF	47R37	DR	63M4	36	545
	5.9	250	225	7450	1.60	KA	47R37	DR	63M4	32	545
	6.7	215	198	7680	1.85	KAF	47R37	DR	63M4	35	545
	7.7	188	171	7840	2.1						
	8.6	168	153	7930	2.4						
	10	147	131	8020	2.7						
	6.4	230	205	4860	0.85	K	37R17	DR	63M4	19	545
	7.3	200	181	5590	1.00	KF	37R17	DR	63M4	21	545
	8.2	180	160	5860	1.10	KA	37R17	DR	63M4	19	545
	9.7	151	136	6110	1.35	KAF	37R17	DR	63M4	20	545
	10	145	127	6160	1.40						
	6.0	285	144.79*	13000	2.9	K	67	DR	63L6	35	506
	7.0	240	123.54	13000	3.4	KF	67	DR	63L6	40	507
	8.0	210	108.03	13000	3.8	KA	67	DR	63L6	32	508
	8.5	200	102.62	13000	4.0	KAF	67	DR	63L6	38	507
	9.1	188	144.79*	13000	4.4	K	67	DR	63M4	34	506
	11	161	123.54	13000	5.1	KF	67	DR	63M4	40	507
	12	141	108.03	13000	5.8	KA	67	DR	63M4	31	508
						KAF	67	DR	63M4	37	507

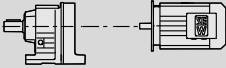

kVA	n
f	
i	P
	H <sub>Z</sub>

## K..DRE/DRS

### K..DRE/DRS [kW]

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
						K	KF	KA	KAF			DR
0.18	6.0	285	145.14*	9340	2.1							
	7.0	240	123.85	9480	2.4	K	57		DR	63L6	29	501
	8.0	210	108.29	9590	2.8	KF	57		DR	63L6	34	502
	8.5	200	102.88*	9620	3.0	KA	57		DR	63L6	27	503
	9.6	178	90.26*	9700	3.4	KAF	57		DR	63L6	32	502
	9.1	189	145.14*	9670	3.2							
	11	161	123.85	9750	3.7	K	57		DR	63M4	28	501
	12	141	108.29	9810	4.3	KF	57		DR	63M4	33	502
	13	134	102.88*	9830	4.5	KA	57		DR	63M4	26	503
	15	118	90.26*	9880	5.1	KAF	57		DR	63M4	32	502
	17	100	76.56*	9920	6.0							
	6.6	260	131.87*	7380	1.55	K	47		DR	63L6	23	496
	7.2	240	121.48*	7530	1.65	KF	47		DR	63L6	26	497
	8.3	205	104.37	7740	1.95	KA	47		DR	63L6	22	498
	9.6	180	90.86	7880	2.2	KAF	47		DR	63L6	25	497
	10	168	85.12*	7930	2.4							
	10	172	131.87*	7910	2.3	K	47		DR	63M4	22	496
	11	158	121.48*	7970	2.5	KF	47		DR	63M4	26	497
	13	136	104.37	8060	2.9	KA	47		DR	63M4	22	498
	15	118	90.86	8120	3.4	KAF	47		DR	63M4	24	497
	16	111	85.12*	8140	3.6							
	8.2	210	106.38	5520	0.95	K	37		DR	63L6	17	491
	8.9	193	97.81	5710	1.05	KF	37		DR	63L6	19	492
	10	165	83.69	5990	1.20	KA	37		DR	63L6	16	493
	12	143	72.54	6170	1.40	KAF	37		DR	63L6	18	492
	12	138	106.38	6210	1.45							
	14	127	97.81	6280	1.55							
	16	109	83.69	6400	1.85	K	37		DR	63M4	16	491
	18	94	72.54	6470	2.1	KF	37		DR	63M4	18	492
	19	88	67.80	6500	2.3	KA	37		DR	63M4	16	493
	23	76	58.60	6280	2.6	KAF	37		DR	63M4	17	492
	27	65	49.79	6010	3.1							
	30	58	44.46	5830	3.4							
	35	49	37.97	5580	4.0							
	18	85	71.93	5200	1.55							
	20	78	66.25	5220	1.65							
	22	73	61.28	5240	1.80							
	24	65	54.89	5270	2.0							
	26	60	50.35	5290	2.2							
	31	51	42.87	5320	2.5	K	29		DR	63M4	9.7	487
	34	47	38.90	5350	2.8	KF	29		DR	63M4	11	488
	36	44	36.96	5350	2.8	KA	29		DR	63M4	9.6	490
	37	43	35.83	5360	3.0	KAF	29		DR	63M4	11	488
	40	40	33.15	5320	3.2							
	44	36	30.11	5150	3.2							
	44	36	29.69	5160	3.6							
	48	33	27.23	5030	4.0							
	53	29	24.91	4870	3.7							
	22	69	58.68	4330	1.00							
	24	64	53.88	4370	1.10							
	27	59	49.69	4400	1.20							
	30	53	44.48	4440	1.30							
	32	48	40.63	4460	1.40							
	38	41	34.29	4500	1.60							
	42	38	31.74	4500	2.1							
	45	35	29.29	4500	1.75							
	45	35	29.14	4500	2.3							
	49	32	27.16	4500	1.85	K	19		DR	63M4	8.3	483
	49	32	26.88	4500	2.5	KF	19		DR	63M4	8.8	484
	55	29	24.06	4430	2.8	KA	19		DR	63M4	8.0	486
	60	27	21.98	4320	3.0	KAF	19		DR	63M4	8.4	484
	71	22	18.55	4110	3.6							
	83	19	15.84	3920	4.2							
	90	18	14.69	3830	4.5							
	104	15	12.70	3660	5.2							
	111	14	11.84	3590	5.5							
	128	12	10.32	3440	6.1							
	138	12	9.58	3390	5.3							
	163	10.0	8.09	3210	8.0							
	191	8.5	6.91	3050	9.4							

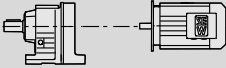



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]	
<b>0.25</b>	0.13	15100	9819	75600	0.85			
	0.15	13000	8443	79200	1.00			
	0.17	11500	7482	79900	1.10			
	0.20	10100	6565	80600	1.30	K 127R77	DR 63L4	470 545
	0.22	8750	5804	81200	1.50	KF 127R77	DR 63L4	510 545
	0.26	7690	5027	81600	1.70	KA 127R77	DR 63L4	440 545
	0.29	6660	4423	81900	1.95	KAF 127R77	DR 63L4	480 545
	0.33	5820	3889	82100	2.2			
	0.39	4870	3311	82300	2.7			
	0.21	9460	6184	65000	0.85			
	0.23	8480	5662	65000	0.95			
	0.25	7690	5138	65000	1.05			
	0.30	6730	4359	65000	1.20	K 107R77	DR 63L4	310 545
	0.34	5880	3810	65000	1.35	KF 107R77	DR 63L4	320 545
	0.39	5060	3358	65000	1.60	KA 107R77	DR 63L4	285 545
0.44	4550	2977	65000	1.75	KAF 107R77	DR 63L4	305 545	
0.50	3970	2599	65000	2.0				
0.57	3440	2286	65000	2.3				
0.67	2920	1939	65000	2.7				
0.76	2670	1713	65000	3.0	K 107R77	DR 63L4	310 545	
0.84	2430	1554	65000	3.3	KF 107R77	DR 63L4	320 545	
0.97	2080	1336	65000	3.8	KA 107R77	DR 63L4	280 545	
					KAF 107R77	DR 63L4	305 545	
0.42	4980	3108	39900	0.85	K 97R57	DR 63L4	180 545	
0.47	4350	2757	40000	1.00	KF 97R57	DR 63L4	200 545	
					KA 97R57	DR 63L4	160 545	
					KAF 97R57	DR 63L4	185 545	
0.54	3920	2419	40000	1.10				
0.61	3420	2123	40000	1.25				
0.70	3010	1856	40000	1.40				
0.80	2570	1625	40000	1.65	K 97R57	DR 63L4	180 545	
0.91	2240	1430	40000	1.90	KF 97R57	DR 63L4	200 545	
1.0	2050	1261	40000	2.1	KA 97R57	DR 63L4	160 545	
1.2	1790	1102	40000	2.4	KAF 97R57	DR 63L4	185 545	
1.4	1560	957	40000	2.7				
1.5	1400	855	40000	3.1				
0.62	3390	2088	26300	0.80				
0.70	3010	1854	26900	0.90				
0.78	2690	1657	27300	1.00				
0.92	2290	1415	27800	1.15	K 87R57	DR 63L4	120 545	
1.1	1990	1229	28100	1.35	KF 87R57	DR 63L4	125 545	
1.2	1730	1078	28300	1.55	KA 87R57	DR 63L4	105 545	
1.4	1500	951	28500	1.80	KAF 87R57	DR 63L4	120 545	
1.6	1310	837	28600	2.1				
1.8	1130	726	28700	2.4				
2.0	1010	638	28800	2.7				
1.2	1720	1053	14000	0.90				
1.4	1510	924	15600	1.00				
1.6	1330	815	16700	1.15				
1.8	1110	709	17800	1.40				
2.1	970	622	18400	1.60				
2.4	870	552	18700	1.75				
2.7	765	485	19100	2.0	K 77R37	DR 63L4	70 545	
3.0	675	428	19300	2.3	KF 77R37	DR 63L4	78 545	
3.5	590	367	19500	2.6	KA 77R37	DR 63L4	62 545	
4.0	525	328	19600	2.9	KAF 77R37	DR 63L4	70 545	
4.5	465	290	19700	3.3				
5.2	400	252	19900	3.8				
5.9	350	221	19900	4.4				
6.7	310	195	20000	5.0				
7.4	270	175	20000	5.6				
2.1	970	613	5680	0.85				
2.4	860	542	9920	0.95				
2.8	775	471	10700	1.05				
3.1	665	420	11500	1.25	K 67R37	DR 63L4	46 545	
3.6	590	361	11900	1.40	KF 67R37	DR 63L4	51 545	
4.0	520	323	12300	1.55	KA 67R37	DR 63L4	43 545	
4.7	440	279	12600	1.85	KAF 67R37	DR 63L4	49 545	
5.3	390	246	12800	2.1				
6.0	345	217	13000	2.4				

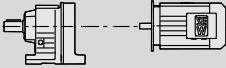

kVA	n
f	
i	P
	H <sub>Z</sub>

## K..DRE/DRS

### K..DRE/DRS [kW]

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>		m [kg]		
<b>0.25</b>	3.1	665	421	4200	0.90				
	3.6	590	362	7690	1.00				
	4.1	520	319	8260	1.15				
	4.6	440	280	8680	1.35				
	5.3	390	246	8920	1.55	<b>K 57R37</b>	<b>DR 63L4</b>	40	545
	6.0	345	215	9110	1.75	<b>KF 57R37</b>	<b>DR 63L4</b>	45	545
	6.8	305	192	9260	1.95	<b>KA 57R37</b>	<b>DR 63L4</b>	38	545
	7.8	265	166	9410	2.3	<b>KAF 57R37</b>	<b>DR 63L4</b>	43	545
	9.0	230	145	9530	2.6				
	10	210	129	9600	2.8				
12	178	111	9700	3.4					
13	156	97	9770	3.8					
4.7	510	192.18	19700	2.8	<b>K 77</b>	<b>DRS 71S6</b>	62	511	
5.0	475	179.37	19700	3.0	<b>KF 77</b>	<b>DRS 71S6</b>	71	512	
5.8	410	154.02	19800	3.8	<b>KA 77</b>	<b>DRS 71S6</b>	55	513	
6.6	360	135.28	19900	4.3	<b>KAF 77</b>	<b>DRS 71S6</b>	63	512	
6.2	385	144.79*	12900	2.1	<b>K 67</b>	<b>DRS 71S6</b>	36	506	
7.2	325	123.54	13000	2.5	<b>KF 67</b>	<b>DRS 71S6</b>	42	507	
8.3	285	108.03	13000	2.8	<b>KA 67</b>	<b>DRS 71S6</b>	34	508	
8.7	270	102.62	13000	3.0	<b>KAF 67</b>	<b>DRS 71S6</b>	39	507	
9.0	265	144.79*	13000	3.1	<b>K 67</b>	<b>DR 63L4</b>	35	506	
11	225	123.54	13000	3.6	<b>KF 67</b>	<b>DR 63L4</b>	40	507	
12	198	108.03	13000	4.1	<b>KA 67</b>	<b>DR 63L4</b>	32	508	
13	188	102.62	13000	4.4	<b>KAF 67</b>	<b>DR 63L4</b>	38	507	
6.2	385	145.14*	8940	1.55					
7.2	330	123.85	9170	1.80	<b>K 57</b>	<b>DRS 71S6</b>	31	501	
8.3	285	108.29	9330	2.1	<b>KF 57</b>	<b>DRS 71S6</b>	35	502	
8.7	270	102.88*	9380	2.2	<b>KA 57</b>	<b>DRS 71S6</b>	28	503	
9.9	240	90.26*	9500	2.5	<b>KAF 57</b>	<b>DRS 71S6</b>	34	502	
12	200	76.56*	9620	2.9					
9.0	265	145.14*	9410	2.2					
10	225	123.85	9540	2.6	<b>K 57</b>	<b>DR 63L4</b>	29	501	
12	199	108.29	9640	3.0	<b>KF 57</b>	<b>DR 63L4</b>	34	502	
13	189	102.88*	9670	3.2	<b>KA 57</b>	<b>DR 63L4</b>	27	503	
14	166	90.26*	9740	3.6	<b>KAF 57</b>	<b>DR 63L4</b>	32	502	
17	141	76.56*	9810	4.3					
6.8	350	131.87*	6540	1.15	<b>K 47</b>	<b>DRS 71S6</b>	25	496	
7.4	320	121.48*	6830	1.25	<b>KF 47</b>	<b>DRS 71S6</b>	28	497	
8.6	275	104.37	7240	1.45	<b>KA 47</b>	<b>DRS 71S6</b>	24	498	
					<b>KAF 47</b>	<b>DRS 71S6</b>	27	497	
9.8	240	90.86	7510	1.65	<b>K 47</b>	<b>DRS 71S6</b>	25	496	
11	225	85.12*	7610	1.75	<b>KF 47</b>	<b>DRS 71S6</b>	28	497	
					<b>KA 47</b>	<b>DRS 71S6</b>	24	498	
					<b>KAF 47</b>	<b>DRS 71S6</b>	27	497	
9.9	240	131.87*	7510	1.65					
11	220	121.48*	7640	1.80	<b>K 47</b>	<b>DR 63L4</b>	23	496	
12	192	104.37	7820	2.1	<b>KF 47</b>	<b>DR 63L4</b>	26	497	
14	167	90.86	7930	2.4	<b>KA 47</b>	<b>DR 63L4</b>	22	498	
15	156	85.12*	7980	2.6	<b>KAF 47</b>	<b>DR 63L4</b>	25	497	
11	220	83.69	5350	0.90					
12	194	72.54	5710	1.05	<b>K 37</b>	<b>DRS 71S6</b>	19	491	
13	181	67.80	5840	1.10	<b>KF 37</b>	<b>DRS 71S6</b>	21	492	
15	156	58.60	6070	1.30	<b>KA 37</b>	<b>DRS 71S6</b>	18	493	
18	133	49.79	6250	1.50	<b>KAF 37</b>	<b>DRS 71S6</b>	20	492	
12	195	106.38	5690	1.00					
13	180	97.81	5860	1.10					
16	154	83.69	6090	1.30					
18	133	72.54	6240	1.50					
19	124	67.80	6220	1.60	<b>K 37</b>	<b>DR 63L4</b>	17	491	
22	108	58.60	6030	1.85	<b>KF 37</b>	<b>DR 63L4</b>	19	492	
26	91	49.79	5810	2.2	<b>KA 37</b>	<b>DR 63L4</b>	16	493	
29	82	44.46	5650	2.4	<b>KAF 37</b>	<b>DR 63L4</b>	18	492	
34	70	37.97	5430	2.9					
37	65	35.57	5340	3.1					
43	55	29.96	5100	3.6					
45	53	28.83	5050	3.8					

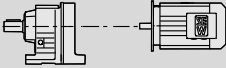



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.25</b>	18	120	71.93	5060	1.10				
	20	111	66.25	5100	1.20				
	21	102	61.28	5130	1.25				
	24	92	54.89	5170	1.40				
	26	84	50.35	5200	1.55				
	30	72	42.87	5250	1.80				
	33	66	38.90	5280	1.95				
	35	62	36.96	5280	2.00				
	36	61	35.83	5300	2.1				
	39	57	33.15	5210	2.3				
	43	50	30.11	5030	2.3				
	44	51	29.69	5050	2.6				
	48	46	27.23	4940	2.8				
	52	42	24.91	4780	2.6				
	56	40	23.19	4720	3.3				
	59	37	22.08	4620	2.8				
	65	34	19.99	4520	3.8				
		26	83	49.69	4230	0.85			
		29	74	44.48	4300	0.95			
		32	68	40.63	4340	1.00			
	38	57	34.29	4410	1.10				
	41	54	31.74	4430	1.50				
	44	49	29.29	4460	1.25				
	45	50	29.14	4460	1.60				
	48	45	27.16	4390	1.30				
	48	46	26.88	4460	1.75				
	54	41	24.06	4330	1.95				
	59	37	21.98	4230	2.1				
	70	32	18.55	4030	2.5				
	82	27	15.84	3860	3.0				
	88	25	14.69	3780	3.2				
	102	22	12.70	3620	3.7				
	110	20	11.84	3550	3.9				
	126	18	10.32	3400	4.3				
	136	17	9.58	3360	3.8				
	161	14	8.09	3190	5.7				
	188	12	6.91	3040	6.6				
	203	11	6.41	2970	7.2				
	235	9.6	5.54	2840	8.3				
	252	9.0	5.16	2780	8.9				
<b>0.37</b>	0.18	16500	7482	72700	0.80				
	0.21	14500	6565	76900	0.90				
	0.24	12600	5804	79400	1.05	K 127R77	DRS 71S4	470	545
	0.27	11000	5027	80200	1.20	KF 127R77	DRS 71S4	510	545
	0.31	9610	4423	80800	1.35	KA 127R77	DRS 71S4	445	545
	0.35	8410	3889	81300	1.55	KAF 127R77	DRS 71S4	480	545
	0.42	7080	3311	81800	1.85				
	0.72	4280	1926	82400	3.0	K 127R77	DRS 71S4	470	545
	0.79	3900	1757	82500	3.3	KF 127R77	DRS 71S4	510	545
	0.90	3390	1541	82600	3.8	KA 127R77	DRS 71S4	445	545
						KAF 127R77	DRS 71S4	480	545
	0.36	8420	3810	65000	0.95				
	0.41	7290	3358	65000	1.10	K 107R77	DRS 71S4	310	545
	0.46	6530	2977	65000	1.20	KF 107R77	DRS 71S4	325	545
	0.53	5700	2599	65000	1.40	KA 107R77	DRS 71S4	285	545
	0.60	4960	2286	65000	1.60	KAF 107R77	DRS 71S4	310	545
	0.71	4210	1939	65000	1.90				
	0.81	3830	1713	65000	2.1	K 107R77	DRS 71S4	310	545
	0.89	3470	1554	65000	2.3	KF 107R77	DRS 71S4	325	545
	1.0	2990	1336	65000	2.7	KA 107R77	DRS 71S4	285	545
1.2	2600	1166	65000	3.1	KAF 107R77	DRS 71S4	305	545	

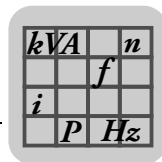
$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

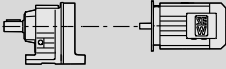

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
0.37	0.65	4850	2123	40000	0.90				
	0.74	4270	1856	40000	1.00				
	0.85	3670	1625	40000	1.15				
	0.96	3200	1430	40000	1.35				
	1.1	2900	1261	40000	1.50	K 97R57	DRS 71S4	180	545
	1.2	2530	1102	40000	1.70	KF 97R57	DRS 71S4	200	545
	1.4	2220	957	40000	1.95	KA 97R57	DRS 71S4	160	545
	1.6	1980	855	40000	2.2	KAF 97R57	DRS 71S4	185	545
	1.9	1640	743	40000	2.6				
	2.1	1450	652	40000	3.0				
2.4	1310	573	40000	3.3					
0.97	0.97	3250	1415	26500	0.85				
	1.1	2820	1229	27100	0.95				
	1.3	2460	1078	27600	1.10				
	1.4	2140	951	27900	1.25				
	1.6	1870	837	28200	1.45	K 87R57	DRS 71S4	120	545
	1.9	1620	726	28400	1.65	KF 87R57	DRS 71S4	130	545
	2.2	1440	638	28500	1.85	KA 87R57	DRS 71S4	110	545
	2.5	1250	562	28600	2.2	KAF 87R57	DRS 71S4	120	545
	2.9	1050	474	28800	2.6				
	3.2	950	426	28800	2.8				
3.7	830	373	28900	3.2					
1.7	1.7	1880	815	7450	0.80				
	2.0	1590	709	15100	0.95				
	2.2	1390	622	16400	1.10				
	2.5	1250	552	17200	1.25				
	2.8	1090	485	17900	1.40				
	3.2	960	428	18400	1.60	K 77R37	DRS 71S4	72	545
	3.8	840	367	18900	1.85	KF 77R37	DRS 71S4	80	545
	4.2	745	328	19100	2.1	KA 77R37	DRS 71S4	64	545
	4.8	665	290	19400	2.3	KAF 77R37	DRS 71S4	72	545
	5.5	570	252	19600	2.7				
6.2	500	221	19700	3.1					
7.1	440	195	19800	3.5					
7.9	390	175	19900	4.0					
9.0	345	154	19900	4.5					
3.3	3.3	940	420	8130	0.85				
	3.8	830	361	10200	1.00				
	4.3	740	323	10900	1.10				
	5.0	630	279	11700	1.30	K 67R37	DRS 71S4	48	545
	5.6	555	246	12100	1.50	KF 67R37	DRS 71S4	53	545
	6.4	490	217	12400	1.65	KA 67R37	DRS 71S4	45	545
	7.2	430	191	12700	1.90	KAF 67R37	DRS 71S4	51	545
	8.3	370	166	12900	2.2				
	9.6	325	144	13000	2.5				
	11	275	122	13000	2.9				
4.9	4.9	630	280	7350	0.95				
	5.6	555	246	7980	1.10				
	6.4	490	215	8460	1.20				
	7.2	435	192	8720	1.40	K 57R37	DRS 71S4	42	545
	8.3	375	166	8980	1.60	KF 57R37	DRS 71S4	47	545
	9.6	330	145	9170	1.80	KA 57R37	DRS 71S4	40	545
	11	295	129	9290	2.0	KAF 57R37	DRS 71S4	45	545
	12	250	111	9460	2.4				
	14	220	97	9560	2.7				
	4.6	4.6	770	197.37	28900	3.5	K 87	DRS 71M6	99
5.2		680	174.19	28900	4.0	KF 87	DRS 71M6	110	517
						KA 87	DRS 71M6	87	518
						KAF 87	DRS 71M6	100	517
5.9		600	154.02	19500	2.6	K 77	DRS 71M6	64	511
6.7		525	135.28	19600	2.9	KF 77	DRS 71M6	72	512
7.0		500	128.52	19700	3.1	KA 77	DRS 71M6	56	513
8.0		440	113.56	19800	3.5	KAF 77	DRS 71M6	64	512
7.2		490	192.18	19700	3.0	K 77	DRS 71S4	62	511
7.7		455	179.37	19800	3.2	KF 77	DRS 71S4	71	512
9.0	390	154.02	19900	3.9	KA 77	DRS 71S4	55	513	
					KAF 77	DRS 71S4	63	512	



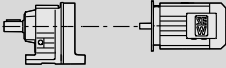



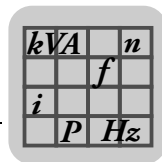
P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
						K	KF	KA	KAF			DRS
0.37	7.3	480	123.54	12500	1.70	K	67		DRS	71M6	38	506
	8.4	420	108.03	12700	1.95	KF	67		DRS	71M6	43	507
	8.8	400	102.62	12800	2.0	KA	67		DRS	71M6	35	508
	10	350	90.04	13000	2.3	KAF	67		DRS	71M6	41	507
	9.5	370	144.79*	12900	2.2	K	67		DRS	71S4	36	506
	11	315	123.54	13000	2.6	KF	67		DRS	71S4	42	507
	13	275	108.03	13000	3.0	KA	67		DRS	71S4	34	508
	15	230	90.04	13000	3.6	KAF	67		DRS	71S4	39	507
	18	196	76.37	13000	4.2							
	7.3	480	123.85	8500	1.25				DRS	71M6	32	501
8.4	420	108.29	8780	1.40	K	57		DRS	71M6	37	502	
8.8	400	102.88*	8880	1.50	KF	57		DRS	71M6	30	503	
10	350	90.26*	9080	1.70	KA	57		DRS	71M6	35	502	
12	295	76.56*	9290	2.0	KAF	57		DRS	71M6	28	503	
13	265	69.12	9400	2.2				DRS	71S4	34	502	
9.5	370	145.14*	9000	1.60								
11	315	123.85	9220	1.90	K	57		DRS	71S4	31	501	
13	275	108.29	9370	2.2	KF	57		DRS	71S4	35	502	
13	260	102.88*	9420	2.3	KA	57		DRS	71S4	28	503	
15	230	90.26*	9530	2.6	KAF	57		DRS	71S4	34	502	
18	196	76.56*	9640	3.1								
20	177	69.12	9700	3.4								
8.7	405	104.37	5720	1.00	K	47		DRS	71M6	26	496	
10.0	350	90.86	6500	1.15	KF	47		DRS	71M6	29	497	
11	330	85.12*	6750	1.20	KA	47		DRS	71M6	25	498	
12	290	75.20*	7120	1.35	KAF	47		DRS	71M6	28	497	
10	335	131.87*	6690	1.20	K	47		DRS	71S4	25	496	
11	310	121.48*	6960	1.30	KF	47		DRS	71S4	28	497	
13	265	104.37	7330	1.50	KA	47		DRS	71S4	24	498	
					KAF	47		DRS	71S4	27	497	
15	230	90.86	7580	1.70	K	47		DRS	71S4	25	496	
16	215	85.12*	7670	1.85	KF	47		DRS	71S4	28	497	
18	192	75.20*	7810	2.1	KA	47		DRS	71S4	24	498	
20	179	69.84	7880	2.2	KAF	47		DRS	71S4	27	497	
22	162	63.30*	7960	2.5								
14	250	97.81	2520	0.80								
16	210	83.69	5470	0.95								
19	186	72.54	5690	1.10								
20	174	67.80	5630	1.15								
24	150	58.60	5500	1.35								
28	128	49.79	5350	1.55								
31	114	44.46	5230	1.75	K	37		DRS	71S4	19	491	
36	97	37.97	5060	2.1	KF	37		DRS	71S4	21	492	
39	91	35.57	4990	2.2	KA	37		DRS	71S4	18	493	
46	77	29.96	4800	2.6	KAF	37		DRS	71S4	20	492	
48	74	28.83	4750	2.7								
55	64	24.99	4590	3.1								
59	60	23.36	4510	3.3								
68	52	20.19	4350	3.6								
80	44	17.15	4160	4.1								
25	128	54.89	5030	1.00								
27	117	50.35	5070	1.10								
32	100	42.87	5100	1.30								
37	86	36.96	4950	1.40								
46	70	30.11	4720	1.65	K	29		DRS	71S4	12	487	
46	71	29.69	4770	1.85	KF	29		DRS	71S4	14	488	
51	65	27.23	4670	2.0	KA	29		DRS	71S4	12	490	
55	58	24.91	4510	1.90	KAF	29		DRS	71S4	13	488	
60	55	23.19	4480	2.4								
62	51	22.08	4380	2.0								
69	48	19.99	4310	2.7								
85	39	16.29	4070	3.4								

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.37</b>	40	80	34.29	4260	0.80				
	47	68	29.29	4130	0.90				
	51	63	27.16	4070	0.95				
	57	57	24.06	4070	1.40				
	63	52	21.98	3980	1.55				
	74	44	18.55	3820	1.80				
	87	38	15.84	3670	2.1				
	94	35	14.69	3600	2.3	K 19	DRS 71S4	11	483
	109	30	12.70	3460	2.6	KF 19	DRS 71S4	11	484
	117	28	11.84	3390	2.8	KA 19	DRS 71S4	11	486
	134	25	10.32	3260	3.1	KAF 19	DRS 71S4	11	484
	144	23	9.58	3240	2.7				
	171	20	8.09	3080	4.1				
	200	17	6.91	2940	4.8				
	215	16	6.41	2870	5.1				
	249	13	5.54	2750	6.0				
267	13	5.16	2690	6.4					
307	11	4.50	2580	7.3					
<b>0.55</b>	0.08	54100	16978	190000	0.90				
	0.10	45400	14272	190000	1.10				
	0.11	41300	13116	190000	1.20	K 187R97	DRS 71M4	1770	545
	0.12	36000	11647	190000	1.40	KH 187R97	DRS 71M4	1700	545
	0.19	23300	7343	190000	2.1				
	0.12	36900	11573	150000	0.85				
	0.13	32700	10264	150000	1.00				
	0.16	27400	8628	150000	1.15	K 167R97	DRS 71M4	1180	545
	0.21	20800	6562	150000	1.55	KH 167R97	DRS 71M4	1150	545
	0.26	16500	5355	150000	1.95				
	0.34	12800	4079	150000	2.5				
	0.20	21900	6881	110000	0.80	K 157R97	DRS 71M4	790	545
	0.23	18800	5931	111700	0.95	KF 157R97	DRS 71M4	870	545
	0.35	12600	3979	114500	1.40	KA 157R97	DRS 71M4	750	545
	0.45	9710	3051	115400	1.85	KAF 157R97	DRS 71M4	810	545
	0.31	14600	4423	76600	0.90	K 127R77	DRS 71M4	475	545
	0.35	12800	3889	79200	1.00	KF 127R77	DRS 71M4	520	545
	0.42	10800	3311	80300	1.20	KA 127R77	DRS 71M4	445	545
	0.46	9840	3009	80700	1.30	KAF 127R77	DRS 71M4	485	545
	0.53	8450	2607	81300	1.55				
	0.72	6520	1926	81900	2.00				
	0.79	5940	1757	82100	2.2	K 127R77	DRS 71M4	470	545
	0.90	5180	1541	82300	2.5	KF 127R77	DRS 71M4	510	545
	1.0	4540	1342	82400	2.9	KA 127R77	DRS 71M4	445	545
	1.2	3950	1177	82500	3.3	KAF 127R77	DRS 71M4	480	545
	1.4	3460	1025	82600	3.8				
	0.46	9950	2977	65000	0.80	K 107R77	DRS 71M4	315	545
	0.53	8690	2599	65000	0.90	KF 107R77	DRS 71M4	325	545
	0.60	7590	2286	65000	1.05	KA 107R77	DRS 71M4	285	545
	0.71	6440	1939	65000	1.25	KAF 107R77	DRS 71M4	310	545
	0.81	5820	1713	65000	1.35				
	0.89	5280	1554	65000	1.50				
	1.0	4540	1336	65000	1.75	K 107R77	DRS 71M4	310	545
	1.2	3960	1166	65000	2.0	KF 107R77	DRS 71M4	325	545
1.3	3400	1030	65000	2.4	KA 107R77	DRS 71M4	285	545	
1.5	2960	904	65000	2.7	KAF 107R77	DRS 71M4	310	545	
1.7	2680	793	65000	3.0					
2.0	2330	696	65000	3.4					
2.2	2010	615	65000	4.0					
0.96	4860	1430	40000	0.90					
1.1	4360	1261	40000	1.00					
1.2	3810	1102	40000	1.15					
1.4	3340	957	40000	1.30					
1.6	2990	855	40000	1.45	K 97R57	DRS 71M4	180	545	
1.9	2500	743	40000	1.70	KF 97R57	DRS 71M4	200	545	
2.1	2210	652	40000	1.95	KA 97R57	DRS 71M4	165	545	
2.4	1980	573	40000	2.2	KAF 97R57	DRS 71M4	190	545	
2.7	1690	504	40000	2.5					
3.2	1450	437	40000	3.0					
3.6	1300	382	40000	3.3					
4.5	1040	305	40000	4.1					

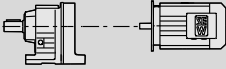



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
0.55	1.4	3250	951	26500	0.85						
	1.6	2840	837	27100	0.95						
	1.9	2470	726	27600	1.10						
	2.2	2180	638	27900	1.25						
	2.5	1910	562	28100	1.40						
	2.9	1610	474	28400	1.70	K	87R57	DRS	71M4	120	545
	3.2	1440	426	28500	1.85	KF	87R57	DRS	71M4	130	545
	3.7	1270	373	28600	2.1	KA	87R57	DRS	71M4	110	545
	4.2	1100	330	28700	2.4	KAF	87R57	DRS	71M4	120	545
	4.7	990	294	28800	2.7						
5.5	860	250	28900	3.1							
5.8	810	236	28900	3.3							
6.9	685	201	28900	3.9							
2.8	1660	485	14600	0.95							
3.2	1460	428	16000	1.05							
3.8	1260	367	17100	1.20							
4.2	1120	328	17800	1.35	K	77R37	DRS	71M4	73	545	
4.8	1000	290	18300	1.55	KF	77R37	DRS	71M4	81	545	
5.5	860	252	18800	1.80	KA	77R37	DRS	71M4	65	545	
6.2	755	221	19100	2.0	KAF	77R37	DRS	71M4	73	545	
7.1	665	195	19300	2.3							
7.9	595	175	19500	2.6							
9.0	525	154	19600	3.0							
5.0	950	279	7650	0.85							
5.6	840	246	10100	0.95							
6.4	745	217	10900	1.10	K	67R37	DRS	71M4	49	545	
7.2	655	191	11600	1.25	KF	67R37	DRS	71M4	54	545	
8.3	565	166	12100	1.45	KA	67R37	DRS	71M4	46	545	
9.6	495	144	12400	1.65	KAF	67R37	DRS	71M4	52	545	
11	420	122	12700	1.95							
7.2	655	192	5460	0.90							
8.3	570	166	7870	1.05	K	57R37	DRS	71M4	43	545	
9.6	500	145	8420	1.20	KF	57R37	DRS	71M4	48	545	
11	445	129	8660	1.35	KA	57R37	DRS	71M4	41	545	
12	380	111	8960	1.55	KAF	57R37	DRS	71M4	47	545	
14	335	97	9140	1.80							
4.6	1130	197.37	28700	2.4	K	87	DRS	80S6	100	516	
5.2	990	174.19	28800	2.7	KF	87	DRS	80S6	110	517	
5.6	940	164.34*	28800	2.9	KA	87	DRS	80S6	90	518	
6.2	840	147.32*	28900	3.2	KAF	87	DRS	80S6	105	517	
5.9	880	154.02	18700	1.75	K	77	DRS	80S6	66	511	
6.8	775	135.28	19100	2.0	KF	77	DRS	80S6	74	512	
7.1	735	128.52	19200	2.1	KA	77	DRS	80S6	59	513	
8.1	650	113.56	19400	2.4	KAF	77	DRS	80S6	66	512	
9.0	585	154.02	19500	2.6							
10	510	135.28	19700	3.0	K	77	DRS	71M4	64	511	
11	485	128.52	19700	3.2	KF	77	DRS	71M4	72	512	
12	430	113.56	19800	3.6	KA	77	DRS	71M4	56	513	
14	365	97.05	19900	4.2	KAF	77	DRS	71M4	64	512	
7.4	705	123.54	11200	1.15	K	67	DRS	80S6	40	506	
8.5	620	108.03	11800	1.30	KF	67	DRS	80S6	46	507	
8.9	585	102.62	12000	1.40	KA	67	DRS	80S6	37	508	
10	515	90.04	12300	1.60	KAF	67	DRS	80S6	43	507	
12	435	76.37	12700	1.85							
					K	67	DRS	80S6	40	506	
					KF	67	DRS	80S6	46	507	
					KA	67	DRS	80S6	37	508	
					KAF	67	DRS	80S6	43	507	
11	470	123.54	12500	1.75							
13	410	108.03	12800	2.00	K	67	DRS	71M4	38	506	
15	340	90.04	13000	2.4	KF	67	DRS	71M4	43	507	
18	290	76.37	13000	2.8	KA	67	DRS	71M4	35	508	
					KAF	67	DRS	71M4	41	507	
8.4	620	108.29	7450	0.95							
8.9	590	102.88*	7710	1.00							
10	515	90.26*	8280	1.15	K	57	DRS	80S6	34	501	
12	435	76.56*	8710	1.35	KF	57	DRS	80S6	39	502	
13	395	69.12	8900	1.50	KA	57	DRS	80S6	32	503	
15	345	60.81*	9100	1.70	KAF	57	DRS	80S6	38	502	
16	325	57.42*	9170	1.80							

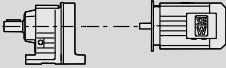

kVA	n
f	
i	P
	H <sub>Z</sub>

## K..DRE/DRS

### K..DRE/DRS [kW]

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
<b>0.55</b>	11	470	123.85	8560	1.25						
	13	410	108.29	8830	1.45						
	13	390	102.88*	8920	1.55	K	57	DRS	71M4	32	501
	15	340	90.26*	9120	1.75	KF	57	DRS	71M4	37	502
	18	290	76.56*	9320	2.1	KA	57	DRS	71M4	30	503
	20	260	69.12	9420	2.3	KAF	57	DRS	71M4	35	502
	23	230	60.81*	9530	2.6						
	24	215	57.42*	9570	2.8						
	13	395	104.37	5960	1.00						
	15	345	90.86	6600	1.15	K	47	DRS	71M4	26	496
16	320	85.12*	6830	1.25	KF	47	DRS	71M4	29	497	
18	285	75.20*	7180	1.40	KA	47	DRS	71M4	25	498	
20	265	69.84	7340	1.50	KAF	47	DRS	71M4	28	497	
22	240	63.30*	7520	1.65	K	47	DRS	71M4	26	496	
24	215	56.83	7680	1.85	KF	47	DRS	71M4	29	497	
28	186	48.95*	7840	2.2	KA	47	DRS	71M4	25	498	
30	175	46.03*	7900	2.3	KAF	47	DRS	71M4	28	497	
24	220	58.60	4840	0.90							
28	190	49.79	4780	1.05							
31	169	44.46	4730	1.20							
36	144	37.97	4630	1.40							
39	135	35.57	4580	1.50							
46	114	29.96	4460	1.75							
48	110	28.83	4420	1.80	K	37	DRS	71M4	20	491	
55	95	24.99	4310	2.1	KF	37	DRS	71M4	22	492	
59	89	23.36	4250	2.2	KA	37	DRS	71M4	20	493	
68	77	20.19	4120	2.4	KAF	37	DRS	71M4	21	492	
80	65	17.15	3970	2.8							
90	58	15.31	3860	3.0							
105	50	13.08	3720	3.3							
114	46	12.14	3650	3.5							
132	40	10.49	3510	4.0							
32	148	42.87	4620	0.85							
37	128	36.96	4530	0.95							
46	104	30.11	4380	1.10							
46	105	29.69	4460	1.25							
51	96	27.23	4390	1.35							
55	86	24.91	4230	1.25	K	29	DRS	71M4	14	487	
60	82	23.19	4240	1.60	KF	29	DRS	71M4	15	488	
62	76	22.08	4130	1.35	KA	29	DRS	71M4	13	490	
69	71	19.99	4100	1.85	KAF	29	DRS	71M4	14	488	
85	58	16.29	3900	2.3							
102	48	13.47	3720	2.7							
116	42	11.94	3610	3.1							
139	36	9.90	3510	3.1							
162	31	8.53	3360	4.0							
57	85	24.06	3790	0.95							
63	78	21.98	3720	1.05							
74	66	18.55	3600	1.20							
87	56	15.84	3480	1.45							
94	52	14.69	3420	1.55							
109	45	12.70	3300	1.80							
117	42	11.84	3250	1.90	K	19	DRS	71M4	12	483	
134	36	10.32	3140	2.1	KF	19	DRS	71M4	13	484	
144	35	9.58	3150	1.80	KA	19	DRS	71M4	12	486	
171	29	8.09	3010	2.7	KAF	19	DRS	71M4	12	484	
200	25	6.91	2880	3.2							
215	23	6.41	2810	3.5							
249	20	5.54	2700	4.0							
267	19	5.16	2640	4.3							
307	16	4.50	2540	4.9							
<b>0.75</b>	0.11	55500	13116	190000	0.90						
	0.12	48600	11647	190000	1.05						
	0.20	31300	7343	190000	1.60	K	187R97	DRE	80M4	1770	545
	0.21	28500	6747	190000	1.75	KH	187R97	DRE	80M4	1700	545
	0.24	25000	5991	190000	2.0						

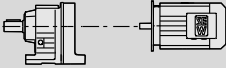



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>0.75</b>	0.17	36800	8628	150000	0.85						
	0.22	28000	6562	150000	1.15	K	167R97	DRE	80M4	1190	545
	0.27	22300	5355	150000	1.45	KH	167R97	DRE	80M4	1150	545
	0.35	17200	4079	150000	1.85						
	0.43	14400	3376	150000	2.2						
	0.36	16900	3979	112700	1.05	K	157R97	DRE	80M4	800	545
	0.47	13000	3051	114300	1.40	KF	157R97	DRE	80M4	870	545
						KA	157R97	DRE	80M4	760	545
						KAF	157R97	DRE	80M4	820	545
0.87	7160	1659	116000	2.5	K	157R97	DRE	80M4	790	545	
1.0	5770	1365	116200	3.1	KF	157R97	DRE	80M4	870	545	
					KA	157R97	DRE	80M4	760	545	
					KAF	157R97	DRE	80M4	810	545	
0.43	14500	3311	77000	0.90	K	127R77	DRE	80M4	480	545	
0.48	13100	3009	79100	1.00	KF	127R77	DRE	80M4	520	545	
0.55	11200	2607	80100	1.15	KA	127R77	DRE	80M4	450	545	
					KAF	127R77	DRE	80M4	490	545	
0.74	8650	1926	81200	1.50							
0.82	7880	1757	81500	1.65							
0.93	6880	1541	81800	1.90	K	127R77	DRE	80M4	480	545	
1.1	6020	1342	82100	2.2	KF	127R77	DRE	80M4	520	545	
1.2	5250	1177	82200	2.5	KA	127R77	DRE	80M4	450	545	
1.4	4600	1025	82400	2.8	KAF	127R77	DRE	80M4	485	545	
1.6	4010	899	82500	3.2							
0.84	7710	1713	65000	1.05							
0.92	7000	1554	65000	1.15							
1.1	6020	1336	65000	1.35	K	107R77	DRE	80M4	315	545	
1.2	5250	1166	65000	1.50	KF	107R77	DRE	80M4	330	545	
1.4	4540	1030	65000	1.75	KA	107R77	DRE	80M4	290	545	
1.6	3960	904	65000	2.0	KAF	107R77	DRE	80M4	315	545	
1.8	3560	793	65000	2.2							
2.1	3100	696	65000	2.6							
2.3	2690	615	65000	3.0							
1.3	5030	1102	39900	0.85							
1.5	4410	957	40000	0.95							
1.7	3940	855	40000	1.10							
1.9	3320	743	40000	1.30							
2.2	2930	652	40000	1.45	K	97R57	DRE	80M4	185	545	
2.5	2620	573	40000	1.65	KF	97R57	DRE	80M4	205	545	
2.8	2250	504	40000	1.90	KA	97R57	DRE	80M4	170	545	
3.3	1940	437	40000	2.2	KAF	97R57	DRE	80M4	195	545	
3.8	1720	382	40000	2.5							
4.7	1390	305	40000	3.1							
5.6	1170	258	40000	3.7							
6.2	1050	232	40000	4.1							
7.2	890	199	40000	4.8							
2.0	3270	726	26500	0.80							
2.2	2890	638	27000	0.95							
2.6	2530	562	27500	1.05							
3.0	2130	474	27900	1.25	K	87R57	DRE	80M4	125	545	
3.4	1910	426	28100	1.40	KF	87R57	DRE	80M4	135	545	
3.8	1680	373	28300	1.60	KA	87R57	DRE	80M4	115	545	
4.4	1470	330	28500	1.85	KAF	87R57	DRE	80M4	125	545	
4.9	1310	294	28600	2.0							
5.7	1130	250	28700	2.4							
6.1	1070	236	28700	2.5							
7.1	910	201	28800	3.0							
3.9	1670	367	14400	0.95	K	77R37	DRE	80M4	78	545	
4.4	1490	328	15800	1.05	KF	77R37	DRE	80M4	86	545	
5.0	1320	290	16800	1.15	KA	77R37	DRE	80M4	70	545	
5.7	1140	252	17700	1.35	KAF	77R37	DRE	80M4	78	545	
6.5	1000	221	18300	1.55							
5.4	1320	174.19	28600	2.0	K	87	DRE	90L6	110	516	
5.7	1250	164.34*	28600	2.2	KF	87	DRE	90L6	120	517	
6.4	1120	147.32*	28700	2.4	KA	87	DRE	90L6	99	518	
7.4	960	126.91*	28800	2.8	KAF	87	DRE	90L6	110	517	

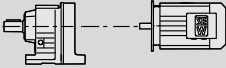

kVA	n
f	
i	
P	H <sub>Z</sub>

## K..DRE/DRS

### K..DRE/DRS [kW]

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
						K	KF	KA	KAF			DRE
0.75	7.3	980	197.37	28800	2.7	K	87		DRE	80M4	105	516
	8.2	860	174.19	28800	3.1	KF	87		DRE	80M4	115	517
	8.7	820	164.34*	28900	3.3	KA	87		DRE	80M4	92	518
	9.7	735	147.32*	28900	3.7	KAF	87		DRE	80M4	105	517
	7.0	1030	135.28	18200	1.50	K	77		DRE	90L6	75	511
	7.3	970	128.52	18400	1.60	KF	77		DRE	90L6	83	512
	8.3	860	113.56	18800	1.80	KA	77		DRE	90L6	68	513
						KAF	77		DRE	90L6	75	512
	9.7	735	97.05	19200	2.1	K	77		DRE	90L6	75	511
	11	675	88.97	19300	2.3	KF	77		DRE	90L6	83	512
					KA	77		DRE	90L6	68	513	
					KAF	77		DRE	90L6	75	512	
9.3	765	154.02	19100	2.0	K	77		DRE	80M4	69	511	
11	675	135.28	19300	2.3	KF	77		DRE	80M4	77	512	
11	640	128.52	19400	2.4	KA	77		DRE	80M4	61	513	
13	565	113.56	19600	2.7	KAF	77		DRE	80M4	69	512	
15	480	97.05	19700	3.2								
12	615	123.54	11800	1.35	K	67		DRE	80M4	43	506	
13	535	108.03	12200	1.50	KF	67		DRE	80M4	48	507	
16	445	90.04	12600	1.80	KA	67		DRE	80M4	40	508	
					KAF	67		DRE	80M4	46	507	
19	380	76.37	12900	2.2	K	67		DRE	80M4	43	506	
21	340	68.95	13000	2.4	KF	67		DRE	80M4	48	507	
24	300	60.66	13000	2.7	KA	67		DRE	80M4	40	508	
25	285	57.28	13000	2.9	KAF	67		DRE	80M4	46	507	
12	615	123.85	7480	0.95								
13	540	108.29	8110	1.10								
14	510	102.88*	8320	1.15								
16	450	90.26*	8660	1.35	K	57		DRE	80M4	37	501	
19	380	76.56*	8960	1.55	KF	57		DRE	80M4	42	502	
21	345	69.12	9110	1.75	KA	57		DRE	80M4	35	503	
24	300	60.81*	9270	2.00	KAF	57		DRE	80M4	40	502	
25	285	57.42*	9340	2.1								
29	240	48.89	9490	2.5								
32	220	44.43	9560	2.7								
19	375	75.20*	6260	1.05	K	47		DRE	80M4	31	496	
21	345	69.84	6570	1.15	KF	47		DRE	80M4	34	497	
23	315	63.30*	6910	1.25	KA	47		DRE	80M4	30	498	
					KAF	47		DRE	80M4	33	497	
25	280	56.83	7200	1.40								
29	240	48.95*	7500	1.65	K	47		DRE	80M4	31	496	
31	225	46.03*	7600	1.75	KF	47		DRE	80M4	34	497	
36	198	39.61	7780	2.0	KA	47		DRE	80M4	30	498	
41	177	35.39	7700	2.3	KAF	47		DRE	80M4	33	497	
46	156	31.30	7490	2.6								
32	220	44.46	4170	0.90								
38	190	37.97	4140	1.05								
40	178	35.57	4130	1.15								
48	150	29.96	4060	1.35								
50	144	28.83	4040	1.40								
57	125	24.99	3970	1.60								
61	117	23.36	3930	1.65	K	37		DRE	80M4	25	491	
71	101	20.19	3840	1.85	KF	37		DRE	80M4	27	492	
84	86	17.15	3720	2.1	KA	37		DRE	80M4	24	493	
94	76	15.31	3640	2.3	KAF	37		DRE	80M4	26	492	
110	65	13.08	3520	2.5								
118	61	12.14	3460	2.6								
137	52	10.49	3350	3.0								
161	44	8.91	3220	3.6								
180	40	7.96	3130	3.9								

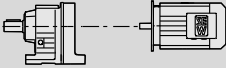



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.75</b>	48	137	30.11	3990	0.85				
	58	113	24.91	3900	0.95				
	62	107	23.19	3950	1.20				
	65	100	22.08	3830	1.05				
	72	93	19.99	3840	1.40				
	88	76	16.29	3690	1.70	<b>K 29</b>	<b>DRE 80M4</b>	18	487
	107	62	13.47	3540	2.1	<b>KF 29</b>	<b>DRE 80M4</b>	20	488
	120	55	11.94	3440	2.4	<b>KA 29</b>	<b>DRE 80M4</b>	18	490
	145	47	9.90	3390	2.4	<b>KAF 29</b>	<b>DRE 80M4</b>	19	488
	156	43	9.17	3220	3.1				
	168	40	8.53	3250	3.0				
	192	35	7.48	3060	3.6				
	206	33	6.95	3070	3.4				
	46	140	30.11	4000	0.80				
	56	116	24.91	3910	0.95				
	60	110	23.19	3960	1.20				
	63	103	22.08	3840	1.00				
	70	95	19.99	3860	1.35				
	86	77	16.29	3710	1.70	<b>K 29</b>	<b>DRS 80S4</b>	16	487
	104	64	13.47	3560	2.0	<b>KF 29</b>	<b>DRS 80S4</b>	17	488
117	57	11.94	3460	2.3	<b>KA 29</b>	<b>DRS 80S4</b>	16	490	
141	48	9.90	3410	2.3	<b>KAF 29</b>	<b>DRS 80S4</b>	17	488	
153	44	9.17	3240	3.0					
164	41	8.53	3270	3.0					
187	36	7.48	3080	3.5					
201	34	6.95	3090	3.3					
77	86	18.55	3340	0.95					
91	73	15.84	3250	1.10					
98	68	14.69	3200	1.15					
113	59	12.70	3110	1.35					
121	55	11.84	3070	1.45	<b>K 19</b>	<b>DRE 80M4</b>	17	483	
139	48	10.32	2980	1.60	<b>KF 19</b>	<b>DRE 80M4</b>	17	484	
177	38	8.09	2890	2.1	<b>KA 19</b>	<b>DRE 80M4</b>	17	486	
208	33	6.91	2770	2.4	<b>KAF 19</b>	<b>DRE 80M4</b>	17	484	
224	30	6.41	2720	2.6					
259	26	5.54	2610	3.0					
278	24	5.16	2560	3.3					
319	21	4.50	2460	3.8					
75	88	18.55	3350	0.90					
88	75	15.84	3260	1.05					
95	70	14.69	3220	1.15					
110	60	12.70	3130	1.35					
118	56	11.84	3080	1.40	<b>K 19</b>	<b>DRS 80S4</b>	14	483	
136	49	10.32	2990	1.55	<b>KF 19</b>	<b>DRS 80S4</b>	15	484	
173	39	8.09	2910	2.0	<b>KA 19</b>	<b>DRS 80S4</b>	14	486	
203	34	6.91	2790	2.4	<b>KAF 19</b>	<b>DRS 80S4</b>	14	484	
219	31	6.41	2740	2.6					
253	27	5.54	2630	3.0					
271	25	5.16	2580	3.2					
311	22	4.50	2480	3.7					
<b>1.1</b>	0.15	58700	9363	190000	0.85				
	0.17	50200	8126	190000	1.00				
	0.19	47600	7343	190000	1.05				
	0.21	43500	6747	190000	1.15				
	0.24	38300	5991	190000	1.30	<b>K 187R97</b>	<b>DRE 90M4</b>	1770	545
	0.27	33900	5358	190000	1.45	<b>KH 187R97</b>	<b>DRE 90M4</b>	1710	545
	0.29	30200	4817	190000	1.65				
	0.32	27400	4370	190000	1.80				
	0.27	34200	5355	150000	0.95				
	0.30	30300	4788	150000	1.05				
	0.35	26300	4079	150000	1.20	<b>K 167R97</b>	<b>DRE 90M4</b>	1190	545
	0.42	21900	3376	150000	1.45	<b>KH 167R97</b>	<b>DRE 90M4</b>	1150	545
	0.52	17600	2755	150000	1.80				
	0.65	14300	2182	150000	2.2				
	0.83	11100	1704	150000	2.9	<b>K 167R97</b>	<b>DRE 90M4</b>	1190	545
	1.0	9240	1408	150000	3.5	<b>KH 167R97</b>	<b>DRE 90M4</b>	1150	545
	1.1	8460	1296	150000	3.8				

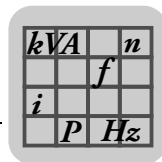
$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## K..DRE/DRS

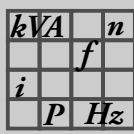
### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
1.1	0.40	22200	3516	109700	0.80	K	157R97	DRE	90M4	800	545
	0.47	19800	3051	111200	0.90	KF	157R97	DRE	90M4	880	545
	0.54	16300	2610	113000	1.10	KA	157R97	DRE	90M4	760	545
	0.61	14500	2322	113700	1.25	KAF	157R97	DRE	90M4	820	545
	0.86	10800	1659	115000	1.65						
	1.0	8840	1365	115600	2.0	K	157R97	DRE	90M4	800	545
	1.2	7880	1229	115800	2.3	KF	157R97	DRE	90M4	870	545
	1.3	7010	1093	116000	2.6	KA	157R97	DRE	90M4	760	545
	1.5	6040	942	116200	3.0	KAF	157R97	DRE	90M4	820	545
	1.7	5420	854	116300	3.3						
	0.74	12900	1926	79200	1.00						
	0.81	11800	1757	79800	1.10						
	0.92	10300	1541	80500	1.25						
	1.1	9030	1342	81100	1.45						
	1.2	7900	1177	81500	1.65	K	127R77	DRE	90M4	480	545
	1.4	6900	1025	81800	1.90	KF	127R77	DRE	90M4	520	545
1.6	6030	899	82000	2.2	KA	127R77	DRE	90M4	455	545	
1.8	5190	790	82300	2.5	KAF	127R77	DRE	90M4	490	545	
2.0	4700	704	82400	2.8							
2.3	4040	610	82500	3.2							
2.6	3650	549	82600	3.6							
3.0	3140	477	82600	4.1							
1.2	7870	1166	65000	1.00							
1.4	6860	1030	65000	1.15							
1.6	5990	904	65000	1.35							
1.8	5340	793	65000	1.50							
2.0	4670	696	65000	1.70	K	107R77	DRE	90M4	320	545	
2.3	4080	615	65000	1.95	KF	107R77	DRE	90M4	335	545	
2.7	3460	522	65000	2.3	KA	107R77	DRE	90M4	295	545	
3.1	3040	461	65000	2.6	KAF	107R77	DRE	90M4	320	545	
3.5	2680	408	65000	3.0							
3.9	2420	364	65000	3.3							
4.5	2120	318	65000	3.8							
1.9	4990	743	39900	0.85							
2.2	4390	652	40000	1.00	K	97R57	DRE	90M4	190	545	
2.5	3920	573	40000	1.10	KF	97R57	DRE	90M4	210	545	
2.8	3380	504	40000	1.25	KA	97R57	DRE	90M4	175	545	
3.2	2920	437	40000	1.45	KAF	97R57	DRE	90M4	200	545	
3.7	2580	382	40000	1.65							
4.2	2280	342	40000	1.90							
3.0	3200	474	26600	0.85							
3.3	2870	426	27100	0.95							
3.8	2530	373	27500	1.05	K	87R57	DRE	90M4	130	545	
4.3	2210	330	27800	1.20	KF	87R57	DRE	90M4	140	545	
4.8	1980	294	28100	1.35	KA	87R57	DRE	90M4	120	545	
5.7	1700	250	28300	1.60	KAF	87R57	DRE	90M4	130	545	
6.0	1610	236	28400	1.70							
7.1	1360	201	28600	1.95							
5.3	1960	176.05*	40000	2.2	K	97	DRE	100M6	175	521	
6.1	1710	153.21*	40000	2.5	KF	97	DRE	100M6	195	522	
6.7	1560	140.28	40000	2.7	KA	97	DRE	100M6	155	523	
7.6	1380	123.93*	40000	3.1	KAF	97	DRE	100M6	180	522	
8.1	1300	176.05*	40000	3.3	K	97	DRE	90M4	170	521	
9.3	1130	153.21*	40000	3.8	KF	97	DRE	90M4	190	522	
10	1030	140.28	40000	4.1	KA	97	DRE	90M4	150	523	
					KAF	97	DRE	90M4	175	522	
6.4	1640	147.32*	28400	1.65	K	87	DRE	100M6	115	516	
7.4	1410	126.91*	28500	1.90	KF	87	DRE	100M6	125	517	
					KA	87	DRE	100M6	105	518	
					KAF	87	DRE	100M6	115	517	
8.2	1280	174.19	28600	2.1	K	87	DRE	90M4	110	516	
8.6	1210	164.34*	28700	2.2	KF	87	DRE	90M4	120	517	
9.6	1080	147.32*	28700	2.5	KA	87	DRE	90M4	96	518	
11	930	126.91*	28800	2.9	KAF	87	DRE	90M4	110	517	
12	850	115.82	28900	3.2							
8.3	1260	113.56	17100	1.20	K	77	DRE	100M6	80	511	
9.7	1080	97.05	18000	1.45	KF	77	DRE	100M6	88	512	
					KA	77	DRE	100M6	72	513	
					KAF	77	DRE	100M6	80	512	

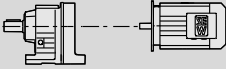





P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
1.1	10	1000	135.28	18300	1.55	K	77	DRE	90M4	72	511
	11	950	128.52	18500	1.65	KF	77	DRE	90M4	81	512
	12	840	113.56	18900	1.85	KA	77	DRE	90M4	65	513
						KAF	77	DRE	90M4	73	512
	15	715	97.05	19200	2.2	K	77	DRE	90M4	72	511
	16	655	88.97	19400	2.4	KF	77	DRE	90M4	81	512
	18	575	78.07	19500	2.7	KA	77	DRE	90M4	65	513
	19	545	73.99	19600	2.8	KAF	77	DRE	90M4	73	512
	13	795	108.03	10500	1.05	K	67	DRE	90M4	48	506
	14	755	102.62	10800	1.10	KF	67	DRE	90M4	53	507
16	665	90.04	11500	1.25	KA	67	DRE	90M4	45	508	
19	560	76.37	12100	1.45	KAF	67	DRE	90M4	51	507	
21	510	68.95	12400	1.60							
23	445	60.66	12600	1.85	K	67	DRE	90M4	48	506	
25	420	57.28	12700	1.95	KF	67	DRE	90M4	53	507	
29	360	48.77	12900	2.3	KA	67	DRE	90M4	45	508	
32	325	44.32	13000	2.5	KAF	67	DRE	90M4	51	507	
37	280	38.39	13000	2.8							
16	665	90.26*	4300	0.90							
19	565	76.56*	7900	1.05	K	57	DRE	90M4	42	501	
21	510	69.12	8330	1.15	KF	57	DRE	90M4	47	502	
23	445	60.81*	8660	1.35	KA	57	DRE	90M4	40	503	
25	420	57.42*	8770	1.40	KAF	57	DRE	90M4	45	502	
29	360	48.89	9040	1.65							
32	325	44.43	9180	1.85							
37	280	38.49	9340	2.1							
40	260	35.70	9420	2.3							
47	220	30.28	9550	2.7							
52	200	27.34	9480	3.0							
59	178	24.05	9190	3.4							
63	168	22.71	9060	3.6							
73	143	19.34	8690	4.0	K	57	DRE	90M4	42	501	
81	130	17.57	8470	4.3	KF	57	DRE	90M4	47	502	
93	113	15.22	8150	4.8	KA	57	DRE	90M4	40	503	
107	98	13.25	7850	5.2	KAF	57	DRE	90M4	45	502	
119	88	11.92	7540	4.7							
126	83	11.26	7420	5.0							
148	71	9.59	7090	5.7							
163	64	8.71	6900	6.1							
188	56	7.55	6620	6.5							
216	49	6.57	6360	7.1							
303	35	4.69	5750	8.6							
25	420	56.83	4240	0.95	K	47	DRE	90M4	36	496	
29	360	48.95*	6420	1.10	KF	47	DRE	90M4	39	497	
31	340	46.03*	6660	1.15	KA	47	DRE	90M4	35	498	
					KAF	47	DRE	90M4	38	497	
36	290	39.61	7120	1.35	K	47	DRE	90M4	36	496	
40	260	35.39	7080	1.55	KF	47	DRE	90M4	39	497	
45	230	31.30	6940	1.75	KA	47	DRE	90M4	35	498	
48	215	29.32	6870	1.85	KAF	47	DRE	90M4	38	497	
55	192	25.91	6720	2.1							
65	161	21.81	6490	2.5							
73	145	19.58	6340	2.8							
47	220	29.96	3430	0.90							
57	185	24.99	3440	1.10							
61	173	23.36	3440	1.15							
70	149	20.19	3410	1.25							
83	127	17.15	3360	1.40							
93	113	15.31	3320	1.55	K	37	DRE	90M4	29	491	
109	97	13.08	3250	1.70	KF	37	DRE	90M4	31	492	
117	90	12.14	3210	1.80	KA	37	DRE	90M4	29	493	
135	78	10.49	3130	2.1	KAF	37	DRE	90M4	30	492	
159	66	8.91	3040	2.4							
178	59	7.96	2960	2.6							
209	50	6.80	2860	3.0							
223	47	6.37	2820	3.1							
265	40	5.36	2710	3.5							
357	29	3.98	2510	4.2							



**K..DRE/DRS**  
K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>1.1</b>	61	159	23.19	3500	0.80				
	71	137	19.99	3460	0.95				
	87	112	16.29	3380	1.15				
	105	93	13.47	3280	1.40				
	119	82	11.94	3220	1.60	<b>K 29</b>	<b>DRE 90M4</b>	23	487
	143	69	9.90	3250	1.60	<b>KF 29</b>	<b>DRE 90M4</b>	24	488
	155	63	9.17	3050	2.1	<b>KA 29</b>	<b>DRE 90M4</b>	23	490
	166	60	8.53	3140	2.0	<b>KAF 29</b>	<b>DRE 90M4</b>	24	488
	190	51	7.48	2920	2.4				
	204	49	6.95	2980	2.3				
	247	40	5.75	2830	2.8				
	279	36	5.10	2740	3.1				
	112	87	12.70	2830	0.90				
	120	81	11.84	2810	0.95				
	138	71	10.32	2750	1.05	<b>K 19</b>	<b>DRE 90M4</b>	21	483
	176	57	8.09	2760	1.40	<b>KF 19</b>	<b>DRE 90M4</b>	22	484
	206	48	6.91	2660	1.65	<b>KA 19</b>	<b>DRE 90M4</b>	21	486
	222	45	6.41	2610	1.80	<b>KAF 19</b>	<b>DRE 90M4</b>	21	484
	256	39	5.54	2520	2.1				
	275	36	5.16	2480	2.2				
316	32	4.50	2390	2.5					
<b>1.5</b>	0.21	59800	6747	190000	0.85				
	0.24	52800	5991	190000	0.95	<b>K 187R97</b>	<b>DRE 90L4</b>	1780	545
	0.27	46900	5358	190000	1.05	<b>KH 187R97</b>	<b>DRE 90L4</b>	1710	545
	0.30	41800	4817	190000	1.20				
	0.33	37900	4370	190000	1.30				
	0.40	32500	3609	190000	1.55				
	0.47	27500	3062	190000	1.80	<b>K 187R97</b>	<b>DRE 90L4</b>	1770	545
	0.57	22400	2519	190000	2.2	<b>KH 187R97</b>	<b>DRE 90L4</b>	1710	545
	0.63	20000	2268	190000	2.5				
	0.35	36100	4079	150000	0.90				
	0.42	30000	3376	150000	1.05	<b>K 167R97</b>	<b>DRE 90L4</b>	1190	545
	0.52	24200	2755	150000	1.30	<b>KH 167R97</b>	<b>DRE 90L4</b>	1160	545
	0.66	19600	2182	150000	1.60				
	0.84	15300	1704	150000	2.1	<b>K 167R97</b>	<b>DRE 90L4</b>	1190	545
	1.0	12600	1408	150000	2.5	<b>KH 167R97</b>	<b>DRE 90L4</b>	1150	545
	1.1	11600	1296	150000	2.8				
	0.62	20100	2322	111000	0.90	<b>K 157R97</b>	<b>DRE 90L4</b>	800	545
						<b>KF 157R97</b>	<b>DRE 90L4</b>	880	545
						<b>KA 157R97</b>	<b>DRE 90L4</b>	760	545
						<b>KAF 157R97</b>	<b>DRE 90L4</b>	820	545
	0.86	14900	1659	113600	1.20				
	1.0	12100	1365	114600	1.50				
	1.2	10800	1229	115000	1.65	<b>K 157R97</b>	<b>DRE 90L4</b>	800	545
	1.3	9680	1093	115400	1.85	<b>KF 157R97</b>	<b>DRE 90L4</b>	880	545
	1.5	8350	942	115700	2.2	<b>KA 157R97</b>	<b>DRE 90L4</b>	760	545
	1.7	7500	854	115900	2.4	<b>KAF 157R97</b>	<b>DRE 90L4</b>	820	545
	2.5	4930	567	116300	3.6				
	2.8	4380	504	116400	4.1				
	2.7	4750	536	82400	2.7	<b>K 127R87</b>	<b>DRE 90L4</b>	500	545
	3.4	3740	418	82500	3.5	<b>KF 127R87</b>	<b>DRE 90L4</b>	550	545
	3.9	3290	367	82600	3.9	<b>KA 127R87</b>	<b>DRE 90L4</b>	475	545
						<b>KAF 127R87</b>	<b>DRE 90L4</b>	510	545
0.81	16100	1757	73600	0.80					
0.93	14100	1541	77700	0.90					
1.1	12300	1342	79600	1.05					
1.2	10700	1177	80300	1.20					
1.4	9410	1025	80900	1.40	<b>K 127R77</b>	<b>DRE 90L4</b>	485	545	
1.6	8230	899	81400	1.60	<b>KF 127R77</b>	<b>DRE 90L4</b>	530	545	
1.8	7130	790	81700	1.80	<b>KA 127R77</b>	<b>DRE 90L4</b>	455	545	
2.0	6420	704	81900	2.0	<b>KAF 127R77</b>	<b>DRE 90L4</b>	495	545	
2.3	5540	610	82200	2.4					
2.6	5000	549	82300	2.6					
3.0	4300	477	82400	3.0					
3.4	3810	418	82500	3.4					

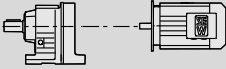



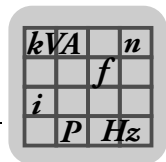
P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
1.5	1.4	9380	1030	65000	0.85						
	1.6	8200	904	65000	1.00						
	1.8	7280	793	65000	1.10						
	2.1	6370	696	65000	1.25	K	107R77	DRE	90L4	325	545
	2.3	5580	615	65000	1.45	KF	107R77	DRE	90L4	335	545
	2.7	4730	522	65000	1.70	KA	107R77	DRE	90L4	295	545
	3.1	4160	461	65000	1.90	KAF	107R77	DRE	90L4	320	545
	3.5	3680	408	65000	2.2						
	3.9	3310	364	65000	2.4						
	4.5	2900	318	65000	2.8						
	2.5	5340	573	39500	0.80						
	2.8	4610	504	40000	0.95						
	3.3	3980	437	40000	1.10						
	3.7	3510	382	40000	1.20	K	97R57	DRE	90L4	195	545
	4.2	3110	342	40000	1.40	KF	97R57	DRE	90L4	215	545
	4.7	2830	305	40000	1.50	KA	97R57	DRE	90L4	175	545
5.6	2390	258	40000	1.80	KAF	97R57	DRE	90L4	200	545	
6.2	2150	232	40000	2.0							
7.2	1840	199	40000	2.3							
4.3	3020	330	26900	0.90							
4.9	2700	294	27300	1.00	K	87R57	DRE	90L4	135	545	
5.7	2320	250	27700	1.15	KF	87R57	DRE	90L4	145	545	
6.0	2190	236	27900	1.25	KA	87R57	DRE	90L4	120	545	
7.1	1860	201	28200	1.45	KAF	87R57	DRE	90L4	135	545	
7.8	1690	183	28300	1.60							
5.3	2680	176.05*	40000	1.60	K	97	DRE	100L6	180	521	
6.1	2330	153.21*	40000	1.85	KF	97	DRE	100L6	200	522	
6.7	2130	140.28	40000	2.0	KA	97	DRE	100L6	160	523	
7.6	1880	123.93*	40000	2.3	KAF	97	DRE	100L6	185	522	
8.1	1760	176.05*	40000	2.4	K	97	DRE	90L4	170	521	
9.3	1530	153.21*	40000	2.8	KF	97	DRE	90L4	190	522	
10	1400	140.28	40000	3.1	KA	97	DRE	90L4	150	523	
12	1240	123.93*	40000	3.5	KAF	97	DRE	90L4	175	522	
6.4	2240	147.32*	27800	1.20	K	87	DRE	100L6	120	516	
7.4	1930	126.91*	28100	1.40	KF	87	DRE	100L6	130	517	
8.1	1760	115.82	28300	1.55	KA	87	DRE	100L6	105	518	
9.2	1560	102.71*	28400	1.75	KAF	87	DRE	100L6	120	517	
8.2	1740	174.19	28300	1.55							
8.7	1640	164.34*	28400	1.65							
9.7	1470	147.32*	28500	1.85	K	87	DRE	90L4	110	516	
11	1270	126.91*	28600	2.1	KF	87	DRE	90L4	120	517	
12	1160	115.82	28700	2.3	KA	87	DRE	90L4	99	518	
14	1020	102.71*	28800	2.6	KAF	87	DRE	90L4	110	517	
17	860	86.34	28900	3.1							
8.3	1730	113.56	14000	0.90	K	77	DRE	100L6	83	511	
9.7	1470	97.05	15900	1.05	KF	77	DRE	100L6	91	512	
11	1350	88.97	16600	1.15	KA	77	DRE	100L6	75	513	
12	1180	78.07	17500	1.30	KAF	77	DRE	100L6	83	512	
11	1350	135.28	16600	1.15							
11	1280	128.52	17000	1.20	K	77	DRE	90L4	75	511	
13	1130	113.56	17700	1.35	KF	77	DRE	90L4	83	512	
15	970	97.05	18400	1.60	KA	77	DRE	90L4	68	513	
16	890	88.97	18700	1.75	KAF	77	DRE	90L4	75	512	
18	780	78.07	19000	2.00							
19	740	73.99	19200	2.1							
22	645	64.75	19400	2.4	K	77	DRE	90L4	75	511	
25	580	58.34	19500	2.6	KF	77	DRE	90L4	83	512	
28	510	51.18	19700	3.0	KA	77	DRE	90L4	68	513	
32	450	45.16	19800	3.4	KAF	77	DRE	90L4	75	512	
36	400	40.04	19900	3.9							
16	900	90.04	9500	0.90							
19	765	76.37	10800	1.05	K	67	DRE	90L4	50	506	
21	690	68.95	11300	1.20	KF	67	DRE	90L4	56	507	
24	605	60.66	11900	1.35	KA	67	DRE	90L4	47	508	
25	570	57.28	12000	1.45	KAF	67	DRE	90L4	53	507	
29	485	48.77	12500	1.70							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]	
1.5	32	440	44.32	12600	1.85			
	37	380	38.39	12900	2.1	K 67	DRE 90L4	50 506
	40	355	35.62	13000	2.3	KF 67	DRE 90L4	56 507
	47	300	30.22	13000	2.7	KA 67	DRE 90L4	47 508
	52	270	27.28	13000	3.0	KAF 67	DRE 90L4	53 507
	60	240	24.00	13000	3.3			
	24	605	60.81*	7560	1.00	K 57	DRE 90L4	44 501
	25	575	57.42*	7830	1.05	KF 57	DRE 90L4	49 502
	29	485	48.89	8470	1.25	KA 57	DRE 90L4	42 503
	32	445	44.43	8680	1.35	KAF 57	DRE 90L4	48 502
	37	385	38.49	8940	1.55			
	40	355	35.70	9060	1.70	K 57	DRE 90L4	44 501
	47	300	30.28	9170	2.00	KF 57	DRE 90L4	49 502
	52	270	27.34	8990	2.2	KA 57	DRE 90L4	42 503
	59	240	24.05	8750	2.5	KAF 57	DRE 90L4	48 502
	63	225	22.71	8640	2.6			
	74	194	19.34	8340	3.0			
	36	395	39.61	5970	1.00	K 47	DRE 90L4	38 496
	40	350	35.39	6350	1.15	KF 47	DRE 90L4	42 497
	46	310	31.30	6300	1.30	KA 47	DRE 90L4	38 498
						KAF 47	DRE 90L4	40 497
	49	290	29.32	6260	1.35			
	55	255	25.91	6180	1.55			
	66	215	21.81	6040	1.85	K 47	DRE 90L4	38 496
	73	196	19.58	5940	2.0	KF 47	DRE 90L4	42 497
	85	169	16.86	5780	2.2	KA 47	DRE 90L4	38 498
	90	159	15.86	5720	2.4	KAF 47	DRE 90L4	40 497
	105	137	13.65	5550	2.6			
	117	122	12.19	5420	2.9			
	122	118	11.77	5320	2.4			
	61	230	23.36	2870	0.85			
	71	200	20.19	2920	0.90			
	83	172	17.15	2940	1.05			
	93	153	15.31	2940	1.15			
	109	131	13.08	2930	1.25	K 37	DRE 90L4	31 491
	118	122	12.14	2920	1.30	KF 37	DRE 90L4	34 492
	136	105	10.49	2880	1.50	KA 37	DRE 90L4	31 493
	160	89	8.91	2820	1.80	KAF 37	DRE 90L4	33 492
	180	80	7.96	2770	1.95			
	210	68	6.80	2700	2.2			
	225	64	6.37	2660	2.3			
	267	54	5.36	2570	2.6			
	359	40	3.98	2410	3.1			
	88	152	16.29	3020	0.85			
	106	125	13.47	2980	1.05			
	120	111	11.94	2950	1.15			
	156	85	9.17	2840	1.50	K 29	DRE 90L4	26 487
168	81	8.53	2990	1.50	KF 29	DRE 90L4	27 488	
191	70	7.48	2750	1.75	KA 29	DRE 90L4	25 490	
206	66	6.95	2850	1.70	KAF 29	DRE 90L4	26 488	
249	55	5.75	2730	2.0				
280	48	5.10	2650	2.3				
365	37	3.92	2470	3.4				
448	30	3.19	2340	3.6				
2.2	0.33	57000	4370	190000	0.90	K 187R97	DRE 100M4	1780 545
	0.51	35900	2818	190000	1.40	KH 187R97	DRE 100M4	1710 545
	0.39	48400	3609	190000	1.05			
	0.47	41100	3062	190000	1.20			
	0.57	33500	2519	190000	1.50			
	0.63	30100	2268	190000	1.65	K 187R97	DRE 100M4	1780 545
	0.69	27100	2054	190000	1.85	KH 187R97	DRE 100M4	1710 545
	0.78	23800	1821	190000	2.1			
	0.89	21200	1605	190000	2.4			
	0.52	36200	2755	150000	0.90	K 167R97	DRE 100M4	1200 545
	0.63	29100	2263	150000	1.10	KH 167R97	DRE 100M4	1160 545

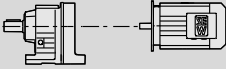



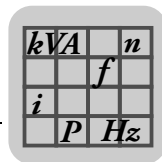
P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>							
												m
2.2	0.65	29300	2182	150000	1.10							
	0.84	22800	1704	150000	1.40							
	1.0	18800	1408	150000	1.70	KH	167R97	DRE	100M4	1200	545	
	1.1	17300	1296	150000	1.85	KH	167R97	DRE	100M4	1160	545	
	1.3	14400	1101	150000	2.2							
	1.5	12400	944	150000	2.6							
	0.86	22200	1659	109700	0.80							
	1.0	18200	1365	112100	1.00	K	157R97	DRE	100M4	800	545	
	1.2	16300	1229	113000	1.10	KF	157R97	DRE	100M4	880	545	
	1.3	14500	1093	113800	1.25	KA	157R97	DRE	100M4	770	545	
	1.5	12500	942	114500	1.45	KAF	157R97	DRE	100M4	830	545	
	1.7	11200	854	114900	1.60							
	1.9	9760	756	115400	1.85							
	2.7	7110	536	81700	1.85	K	127R87	DRE	100M4	510	545	
	3.0	6220	473	82000	2.1	KF	127R87	DRE	100M4	550	545	
3.4	5610	418	82200	2.3	KA	127R87	DRE	100M4	480	545		
3.9	4910	367	82300	2.6	KAF	127R87	DRE	100M4	520	545		
4.3	4400	330	82400	3.0								
1.4	13900	1025	78100	0.95								
1.6	12200	899	79600	1.05								
1.8	10600	790	80400	1.20	K	127R77	DRE	100M4	490	545		
2.0	9530	704	80900	1.35	KF	127R77	DRE	100M4	530	545		
2.3	8230	610	81400	1.60	KA	127R77	DRE	100M4	460	545		
2.6	7420	549	81600	1.75	KAF	127R77	DRE	100M4	500	545		
3.0	6410	477	81900	2.0								
3.4	5650	418	82100	2.3								
2.3	8300	615	65000	0.95								
2.7	7040	522	65000	1.15								
3.1	6190	461	65000	1.30	K	107R77	DRE	100M4	330	545		
3.5	5480	408	65000	1.45	KF	107R77	DRE	100M4	340	545		
3.9	4920	364	65000	1.60	KA	107R77	DRE	100M4	300	545		
4.5	4300	318	65000	1.85	KAF	107R77	DRE	100M4	325	545		
5.0	3870	286	65000	2.1								
5.7	3390	251	65000	2.4								
3.7	5200	382	39700	0.85								
4.2	4620	342	40000	0.95	K	97R57	DRE	100M4	200	545		
4.7	4190	305	40000	1.00	KF	97R57	DRE	100M4	220	545		
5.5	3540	258	40000	1.20	KA	97R57	DRE	100M4	180	545		
6.1	3180	232	40000	1.35	KAF	97R57	DRE	100M4	205	545		
7.2	2730	199	40000	1.55								
6.2	3370	153.21*	40000	1.30	K	97	DRE	112M6	190	521		
6.8	3080	140.28	40000	1.40	KF	97	DRE	112M6	210	522		
7.7	2720	123.93*	40000	1.60	KA	97	DRE	112M6	170	523		
					KAF	97	DRE	112M6	195	522		
9.1	2310	105.13	40000	1.85	K	97	DRE	112M6	190	521		
					KF	97	DRE	112M6	210	522		
					KA	97	DRE	112M6	170	523		
					KAF	97	DRE	112M6	195	522		
8.1	2590	176.05*	40000	1.65	K	97	DRE	100M4	175	521		
9.3	2250	153.21*	40000	1.90	KF	97	DRE	100M4	195	522		
10	2060	140.28	40000	2.1	KA	97	DRE	100M4	155	523		
12	1820	123.93*	40000	2.4	KAF	97	DRE	100M4	180	522		
14	1540	105.13	40000	2.8	K	97	DRE	100M4	175	521		
15	1420	96.80	40000	3.0	KF	97	DRE	100M4	195	522		
					KA	97	DRE	100M4	155	523		
					KAF	97	DRE	100M4	180	522		
9.7	2170	147.32*	27900	1.25	K	87	DRE	100M4	115	516		
11	1870	126.91*	28200	1.45	KF	87	DRE	100M4	125	517		
12	1700	115.82	28300	1.60	KA	87	DRE	100M4	105	518		
					KAF	87	DRE	100M4	115	517		
14	1510	102.71*	28500	1.80	K	87	DRE	100M4	115	516		
16	1270	86.34	28600	2.1	KF	87	DRE	100M4	125	517		
18	1160	79.34	28700	2.3	KA	87	DRE	100M4	105	518		
20	1030	70.46	28800	2.6	KAF	87	DRE	100M4	115	517		
23	920	63.00*	28800	2.9								

kVA	n
f	
i	
P	H <sub>Z</sub>

## K..DRE/DRS

### K..DRE/DRS [kW]

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
2.2	13	1670	113.56	14400	0.95						
	15	1430	97.05	16200	1.10	K	77	DRE	100M4	80	511
	16	1310	88.97	16900	1.20	KF	77	DRE	100M4	88	512
	18	1150	78.07	17700	1.35	KA	77	DRE	100M4	72	513
	19	1090	73.99	17900	1.40	KAF	77	DRE	100M4	80	512
	22	950	64.75	18500	1.60						
	24	860	58.34	18800	1.80						
	28	750	51.18	19100	2.0						
	32	665	45.16	19300	2.3	K	77	DRE	100M4	80	511
	36	590	40.04	19500	2.6	KF	77	DRE	100M4	88	512
	40	515	35.20	19700	3.0	KA	77	DRE	100M4	72	513
	46	455	30.89	19800	3.4	KAF	77	DRE	100M4	80	512
	49	430	29.27	19800	3.6						
	56	375	25.62	19900	4.1						
	23	890	60.66	9590	0.90						
	25	840	57.28	10100	0.95	K	67	DRE	100M4	55	506
	29	715	48.77	11100	1.15	KF	67	DRE	100M4	61	507
	32	650	44.32	11600	1.25	KA	67	DRE	100M4	52	508
	37	565	38.39	12100	1.40	KAF	67	DRE	100M4	58	507
	40	525	35.62	12300	1.55						
47	445	30.22	12600	1.85							
52	400	27.28	12800	2.0							
59	350	24.00	13000	2.3							
63	330	22.66	13000	2.3							
74	280	19.30	13000	2.7							
81	255	17.54	13000	2.9							
94	220	15.19	13000	3.1	K	67	DRE	100M4	55	506	
108	195	13.22	13000	3.4	KF	67	DRE	100M4	61	507	
114	184	12.48	13000	2.9	KA	67	DRE	100M4	52	508	
134	157	10.63	13000	3.2	KAF	67	DRE	100M4	58	507	
148	142	9.66	13000	3.4							
170	123	8.37	13000	3.6							
196	107	7.28	12700	3.9							
274	77	5.20	11600	4.6							
32	655	44.43	5920	0.90	K	57	DRE	100M4	49	501	
37	565	38.49	7900	1.05	KF	57	DRE	100M4	54	502	
40	525	35.70	8220	1.15	KA	57	DRE	100M4	47	503	
47	445	30.28	8240	1.35	KAF	57	DRE	100M4	53	502	
52	400	27.34	8150	1.50							
59	350	24.05	8020	1.70							
63	330	22.71	7950	1.80	K	57	DRE	100M4	49	501	
74	285	19.34	7750	2.0	KF	57	DRE	100M4	54	502	
81	255	17.57	7620	2.1	KA	57	DRE	100M4	47	503	
94	220	15.22	7410	2.4	KAF	57	DRE	100M4	53	502	
108	195	13.25	7200	2.6							
120	176	11.92	6880	2.4							
127	166	11.26	6800	2.5							
55	380	25.91	5260	1.05	K	47	DRE	100M4	43	496	
65	320	21.81	5260	1.25	KF	47	DRE	100M4	47	497	
73	285	19.58	5240	1.40	KA	47	DRE	100M4	42	498	
					KAF	47	DRE	100M4	45	497	
84	245	16.86	5180	1.55							
90	230	15.86	5150	1.65							
104	200	13.65	5060	1.80	K	47	DRE	100M4	43	496	
117	180	12.19	4980	1.95	KF	47	DRE	100M4	47	497	
121	174	11.77	4880	1.60	KA	47	DRE	100M4	42	498	
135	156	10.56	4800	1.80	KAF	47	DRE	100M4	45	497	
157	134	9.10	4680	2.1							
109	193	13.08	2370	0.85							
136	155	10.49	2430	1.05							
160	131	8.91	2440	1.20	K	37	DRE	100M4	37	491	
179	117	7.96	2430	1.30	KF	37	DRE	100M4	39	492	
210	100	6.80	2410	1.50	KA	37	DRE	100M4	36	493	
224	94	6.37	2390	1.55	KAF	37	DRE	100M4	38	492	
266	79	5.36	2350	1.75							
358	59	3.98	2240	2.1							

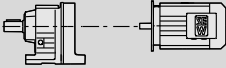



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>2.2</b>	155	126	9.17	2490	1.05						
	191	102	7.48	2460	1.20	K	29	DRE	100M4	30	487
	205	97	6.95	2650	1.15	KF	29	DRE	100M4	32	488
	248	80	5.75	2560	1.40	KA	29	DRE	100M4	30	490
	280	71	5.10	2500	1.55	KAF	29	DRE	100M4	31	488
	364	55	3.92	2360	2.3						
	446	45	3.19	2250	2.5						
<b>3.0</b>	0.52	48700	2818	190000	1.05	K	187R97	DRE	100LC4	1790	545
						KH	187R97	DRE	100LC4	1720	545
	0.48	55200	3062	190000	0.90						
	0.58	45200	2519	190000	1.10						
	0.64	40500	2268	190000	1.25						
	0.71	36600	2054	190000	1.35	K	187R97	DRE	100LC4	1780	545
	0.80	32200	1821	190000	1.55	KH	187R97	DRE	100LC4	1720	545
	0.91	28600	1605	190000	1.75						
	1.0	24400	1395	190000	2.0						
	1.2	21200	1196	190000	2.4						
	0.85	30600	1704	150000	1.05						
	1.0	25300	1408	150000	1.25						
	1.1	23300	1296	150000	1.35						
	1.3	19500	1101	150000	1.65	K	167R97	DRE	100LC4	1200	545
	1.5	16800	944	150000	1.90	KH	167R97	DRE	100LC4	1160	545
	1.7	14700	843	150000	2.2						
	1.9	13300	757	150000	2.4						
	1.2	21900	1229	109900	0.80						
	1.3	19500	1093	111400	0.90						
	1.5	16800	942	112700	1.05	K	157R97	DRE	100LC4	810	545
	1.7	15200	854	113500	1.20	KF	157R97	DRE	100LC4	890	545
	1.9	13200	756	114300	1.35	KA	157R97	DRE	100LC4	770	545
	2.6	10000	567	115300	1.80	KAF	157R97	DRE	100LC4	830	545
	2.9	8930	504	115600	2.0						
	2.7	9580	536	80900	1.35						
	3.1	8410	473	81300	1.55	K	127R87	DRE	100LC4	510	545
	3.5	7560	418	81600	1.70	KF	127R87	DRE	100LC4	560	545
	4.0	6610	367	81900	1.95	KA	127R87	DRE	100LC4	485	545
	4.4	5930	330	82100	2.2	KAF	127R87	DRE	100LC4	520	545
	5.1	5090	287	82300	2.6						
	1.8	14200	790	77400	0.90						
	2.1	12700	704	79300	1.00	K	127R77	DRE	100LC4	495	545
	2.4	11000	610	80200	1.20	KF	127R77	DRE	100LC4	540	545
	2.6	9960	549	80700	1.30	KA	127R77	DRE	100LC4	465	545
	3.0	8620	477	81200	1.50	KAF	127R77	DRE	100LC4	500	545
	3.5	7590	418	81600	1.70						
	3.2	8320	461	65000	0.95						
	3.6	7360	408	65000	1.10						
	4.0	6600	364	65000	1.20						
	4.6	5770	318	65000	1.40						
	5.1	5190	286	65000	1.55	K	107R77	DRE	100LC4	335	545
	5.8	4550	251	65000	1.75	KF	107R77	DRE	100LC4	345	545
	6.6	4000	222	65000	2.0	KA	107R77	DRE	100LC4	305	545
	7.4	3540	196	65000	2.2	KAF	107R77	DRE	100LC4	330	545
	8.4	3170	174	65000	2.3						
	9.4	2800	154	65000	2.6						
	10	2540	140	65000	2.8						
	5.6	4740	258	40000	0.90	K	97R57	DRE	100LC4	205	545
	6.3	4270	232	40000	1.00	KF	97R57	DRE	100LC4	225	545
	7.3	3660	199	40000	1.15	KA	97R57	DRE	100LC4	185	545
						KAF	97R57	DRE	100LC4	210	545
	6.7	4300	143.47*	65000	1.85	K	107	DRE	132S6	310	526
	7.9	3640	121.46	65000	2.2	KF	107	DRE	132S6	320	527
	8.5	3370	112.41*	65000	2.4	KA	107	DRE	132S6	280	528
	9.5	3020	100.75	65000	2.6	KAF	107	DRE	132S6	305	527
	10	2820	143.47*	65000	2.8	K	107	DRE	100LC4	295	526
	12	2390	121.46	65000	3.4	KF	107	DRE	100LC4	310	527
						KA	107	DRE	100LC4	270	528
						KAF	107	DRE	100LC4	290	527

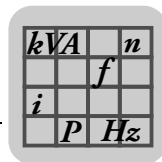
$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

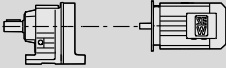

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
3.0	7.7	3710	123.93*	40000	1.15	K	97	DRE	132S6	195	521
						KF	97	DRE	132S6	215	522
						KA	97	DRE	132S6	175	523
						KAF	97	DRE	132S6	200	522
	9.1	3150	105.13	40000	1.35	K	97	DRE	132S6	195	521
	9.9	2900	96.80	40000	1.50	KF	97	DRE	132S6	215	522
	11	2590	86.52	40000	1.65	KA	97	DRE	132S6	175	523
						KAF	97	DRE	132S6	200	522
	8.3	3460	176.05*	40000	1.25	K	97	DRE	100LC4	180	521
	9.5	3010	153.21*	40000	1.45	KF	97	DRE	100LC4	200	522
10	2760	140.28	40000	1.55	KA	97	DRE	100LC4	160	523	
12	2440	123.93*	40000	1.75	KAF	97	DRE	100LC4	185	522	
14	2070	105.13	40000	2.1	K	97	DRE	100LC4	180	521	
15	1900	96.80	40000	2.3							
17	1700	86.52	40000	2.5							
19	1530	77.89*	40000	2.8							
21	1380	70.54	40000	3.1							
23	1230	62.55	40000	3.5							
26	1110	56.55	40000	3.9							
9.9	2900	147.32*	27000	0.95	K	87	DRE	100LC4	120	516	
11	2490	126.91*	27500	1.10	KF	87	DRE	100LC4	130	517	
13	2280	115.82	27800	1.20	KA	87	DRE	100LC4	110	518	
14	2020	102.71*	28000	1.35	KAF	87	DRE	100LC4	120	517	
17	1690	86.34	28300	1.60	K	87	DRE	100LC4	120	516	
18	1560	79.34	28400	1.75							
21	1380	70.46	28600	1.95							
23	1240	63.00*	28600	2.2							
26	1110	56.64	28700	2.4							
30	960	49.16	28800	2.8							
33	860	44.02	28800	3.0							
40	715	36.52*	28200	3.5							
16	1750	88.97	13800	0.90	K	77	DRE	100LC4	85	511	
19	1530	78.07	15500	1.00							
20	1450	73.99	16000	1.05							
22	1270	64.75	17100	1.20							
25	1140	58.34	17700	1.35							
28	1000	51.18	18300	1.55							
32	880	45.16	18700	1.75							
36	785	40.04	19000	1.95	KF	77	DRE	100LC4	93	512	
41	690	35.20	19300	2.2	KA	77	DRE	100LC4	77	513	
47	605	30.89	19500	2.6	KAF	77	DRE	100LC4	85	512	
33	870	44.32	9810	0.95	K	67	DRE	100LC4	60	506	
38	755	38.39	10800	1.05							
41	700	35.62	11300	1.15							
48	590	30.22	11900	1.40							
53	535	27.28	12200	1.55							
61	470	24.00	12500	1.70							
64	445	22.66	12600	1.75							
75	375	19.30	12900	2.0							
83	345	17.54	13000	2.1	K	67	DRE	100LC4	60	506	
96	295	15.19	13000	2.3	KF	67	DRE	100LC4	66	507	
110	260	13.22	13000	2.6	KA	67	DRE	100LC4	57	508	
117	245	12.48	13000	2.2	KAF	67	DRE	100LC4	63	507	
137	205	10.63	13000	2.4	K	57	DRE	100LC4	54	501	
151	190	9.66	13000	2.5							
48	595	30.28	7190	1.00							
53	535	27.34	7190	1.10							
60	470	24.05	7170	1.25	KF	57	DRE	100LC4	59	502	
					KA	57	DRE	100LC4	52	503	
					KAF	57	DRE	100LC4	58	502	



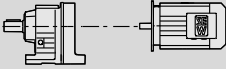



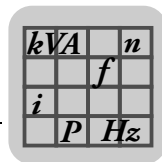
$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>3.0</b>	64	445	22.71	7150	1.35				
	75	380	19.34	7060	1.50				
	83	345	17.57	6980	1.60				
	96	295	15.22	6860	1.80				
	110	260	13.25	6710	1.95	K 57	DRE 100LC4	54	501
	122	230	11.92	6380	1.75	KF 57	DRE 100LC4	59	502
	129	220	11.26	6330	1.85	KA 57	DRE 100LC4	52	503
	152	189	9.59	6160	2.2	KAF 57	DRE 100LC4	58	502
	167	172	8.71	6050	2.3				
	193	149	7.55	5870	2.5				
	222	129	6.57	5700	2.7				
	310	92	4.69	5270	3.2				
	74	385	19.58	4450	1.05	K 47	DRE 100LC4	48	496
	86	330	16.86	4500	1.15	KF 47	DRE 100LC4	52	497
	92	310	15.86	4510	1.20	KA 47	DRE 100LC4	47	498
						KAF 47	DRE 100LC4	50	497
	107	265	13.65	4500	1.35				
	119	240	12.19	4480	1.45				
	124	230	11.77	4360	1.20				
	138	205	10.56	4340	1.35	K 47	DRE 100LC4	48	496
	160	179	9.10	4280	1.55	KF 47	DRE 100LC4	52	497
	170	168	8.56	4250	1.60	KA 47	DRE 100LC4	47	498
	198	145	7.36	4160	1.70	KAF 47	DRE 100LC4	50	497
	221	130	6.58	4090	1.85				
	250	114	5.81	4000	2.0				
	314	91	4.64	3830	2.2				
	163	176	8.91	2020	0.90				
	183	157	7.96	2050	1.00	K 37	DRE 100LC4	42	491
	214	134	6.80	2080	1.10	KF 37	DRE 100LC4	44	492
	229	125	6.37	2090	1.15	KA 37	DRE 100LC4	41	493
271	106	5.36	2090	1.35	KAF 37	DRE 100LC4	43	492	
366	78	3.98	2040	1.60					
<b>4.0</b>	1.8	19500	835	190000	2.6	K 187R107	DRE 132S4	1840	545
	2.8	12200	520	190000	4.1	KH 187R107	DRE 132S4	1780	545
	0.58	60400	2519	190000	0.85				
	0.64	54200	2268	190000	0.90				
	0.71	49000	2054	190000	1.00				
	0.80	43300	1821	190000	1.15	K 187R97	DRE 132S4	1800	545
	0.91	38300	1605	190000	1.30	KH 187R97	DRE 132S4	1730	545
	1.0	32800	1395	190000	1.50				
	1.2	28400	1196	190000	1.75				
	1.4	24800	1046	190000	2.0				
	1.5	22400	945	190000	2.2				
	1.0	33900	1408	150000	0.95				
	1.1	31100	1296	150000	1.05				
	1.3	26100	1101	150000	1.20	K 167R97	DRE 132S4	1220	545
	1.6	22500	944	150000	1.40	KH 167R97	DRE 132S4	1180	545
	1.7	19800	843	150000	1.60				
	1.9	17900	757	150000	1.80				
	2.3	15000	632	150000	2.1				
	1.7	20300	854	110900	0.90	K 157R97	DRE 132S4	820	545
	1.9	17800	756	112300	1.00	KF 157R97	DRE 132S4	900	545
	2.6	13400	567	114200	1.35	KA 157R97	DRE 132S4	790	545
	2.9	11900	504	114700	1.50	KAF 157R97	DRE 132S4	840	545
	3.4	10200	434	115200	1.75				
	2.7	12800	536	79300	1.00				
	3.1	11200	473	80100	1.15	K 127R87	DRE 132S4	530	545
	3.5	10100	418	80600	1.30	KF 127R87	DRE 132S4	570	545
	4.0	8830	367	81200	1.45	KA 127R87	DRE 132S4	500	545
	4.4	7930	330	81500	1.65	KAF 127R87	DRE 132S4	540	545
	5.1	6820	287	81800	1.90				
	5.8	6030	253	82100	2.2				
	2.4	14700	610	76500	0.90	K 127R77	DRE 132S4	510	545
	2.7	13200	549	79000	1.00	KF 127R77	DRE 132S4	550	545
	3.1	11500	477	80000	1.15	KA 127R77	DRE 132S4	480	545
	3.5	10100	418	80600	1.30	KAF 127R77	DRE 132S4	520	545

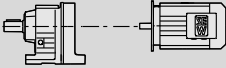

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>4.0</b>	4.0	8800	364	65000	0.90						
	4.6	7690	318	65000	1.05						
	5.1	6920	286	65000	1.15						
	5.8	6060	251	65000	1.30	<b>K</b>	<b>107R77</b>	<b>DRE</b>	<b>132S4</b>	345	545
	6.6	5340	222	65000	1.50	<b>KF</b>	<b>107R77</b>	<b>DRE</b>	<b>132S4</b>	360	545
	7.4	4730	196	65000	1.70	<b>KA</b>	<b>107R77</b>	<b>DRE</b>	<b>132S4</b>	320	545
	8.4	4230	174	65000	1.70	<b>KAF</b>	<b>107R77</b>	<b>DRE</b>	<b>132S4</b>	345	545
	9.5	3740	154	65000	1.90						
	10	3400	140	65000	2.1						
	7.3	4880	199	40000	0.90	<b>K</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	220	545
						<b>KF</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	240	545
						<b>KA</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	200	545
						<b>KAF</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	225	545
	6.6	5810	146.07	82100	2.2	<b>K</b>	<b>127</b>	<b>DRE</b>	<b>132M6</b>	480	531
	7.0	5410	136.14	82200	2.4	<b>KF</b>	<b>127</b>	<b>DRE</b>	<b>132M6</b>	520	532
	7.8	4870	122.48	82300	2.7	<b>KA</b>	<b>127</b>	<b>DRE</b>	<b>132M6</b>	455	533
	8.7	4380	110.18	82400	3.0	<b>KAF</b>	<b>127</b>	<b>DRE</b>	<b>132M6</b>	490	532
	6.7	5700	143.47*	65000	1.40	<b>K</b>	<b>107</b>	<b>DRE</b>	<b>132M6</b>	320	526
	7.9	4830	121.46	65000	1.65	<b>KF</b>	<b>107</b>	<b>DRE</b>	<b>132M6</b>	330	527
	8.5	4470	112.41*	65000	1.80	<b>KA</b>	<b>107</b>	<b>DRE</b>	<b>132M6</b>	295	528
	9.5	4000	100.75	65000	2.0	<b>KAF</b>	<b>107</b>	<b>DRE</b>	<b>132M6</b>	315	527
	11	3610	90.96*	65000	2.2						
	10	3750	143.47*	65000	2.1						
	12	3170	121.46	65000	2.5	<b>K</b>	<b>107</b>	<b>DRE</b>	<b>132S4</b>	310	526
	13	2940	112.41*	65000	2.7	<b>KF</b>	<b>107</b>	<b>DRE</b>	<b>132S4</b>	320	527
	14	2630	100.75	65000	3.0	<b>KA</b>	<b>107</b>	<b>DRE</b>	<b>132S4</b>	280	528
	16	2370	90.96*	65000	3.4	<b>KAF</b>	<b>107</b>	<b>DRE</b>	<b>132S4</b>	305	527
	18	2160	82.61	65000	3.7						
	20	1910	73.30	65000	4.2						
	9.5	4000	153.21*	40000	1.05	<b>K</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	195	521
	10	3670	140.28	40000	1.15	<b>KF</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	215	522
	12	3240	123.93*	40000	1.35	<b>KA</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	175	523
						<b>KAF</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	200	522
	14	2750	105.13	40000	1.55	<b>K</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	195	521
	15	2530	96.80	40000	1.70	<b>KF</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	215	522
	17	2260	86.52	40000	1.90	<b>KA</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	175	523
	19	2030	77.89*	40000	2.1	<b>KAF</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	200	522
	21	1840	70.54	40000	2.3						
	13	3030	115.82	26800	0.90	<b>K</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	135	516
	14	2680	102.71*	27300	1.00	<b>KF</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	145	517
	17	2250	86.34	27800	1.20	<b>KA</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	125	518
	18	2070	79.34	28000	1.30	<b>KAF</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	135	517
	21	1840	70.46	28200	1.45						
	23	1640	63.00*	28400	1.65	<b>K</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	135	516
	26	1480	56.64	28500	1.80	<b>KF</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	145	517
	30	1280	49.16	28600	2.1	<b>KA</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	125	518
	33	1150	44.02	28200	2.3	<b>KAF</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	135	517
	40	950	36.52*	27200	2.6						
	23	1690	64.75	14300	0.90						
	25	1520	58.34	15500	1.00	<b>K</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	99	511
	29	1330	51.18	16700	1.15	<b>KF</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	105	512
	32	1180	45.16	17500	1.30	<b>KA</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	92	513
	36	1040	40.04	18100	1.50	<b>KAF</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	99	512
	38	1000	38.39	18300	1.50						
	41	920	35.20	18600	1.70						
	47	800	30.89	19000	1.90	<b>K</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	99	511
	50	765	29.27	19100	2.0	<b>KF</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	105	512
	57	670	25.62	19300	2.3	<b>KA</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	92	513
	63	600	23.08	19500	2.6	<b>KAF</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	99	512
	72	525	20.25	19600	2.8						
	48	790	30.22	10600	1.05	<b>K</b>	<b>67</b>	<b>DRE</b>	<b>132S4</b>	74	506
	54	710	27.28	11200	1.15	<b>KF</b>	<b>67</b>	<b>DRE</b>	<b>132S4</b>	80	507
	61	625	24.00	11700	1.25	<b>KA</b>	<b>67</b>	<b>DRE</b>	<b>132S4</b>	72	508
	64	590	22.66	11900	1.30	<b>KAF</b>	<b>67</b>	<b>DRE</b>	<b>132S4</b>	77	507

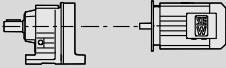



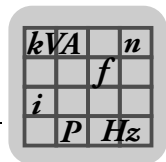
$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>4.0</b>	76	500	19.30	12400	1.50						
	83	455	17.54	12600	1.60						
	96	395	15.19	12800	1.75						
	110	345	13.22	13000	1.95	<b>K 67</b>	<b>DRE 132S4</b>		74	506	
	117	325	12.48	13000	1.60	<b>KF 67</b>	<b>DRE 132S4</b>		80	507	
	137	275	10.63	13000	1.80	<b>KA 67</b>	<b>DRE 132S4</b>		72	508	
	151	250	9.66	12800	1.90	<b>KAF 67</b>	<b>DRE 132S4</b>		77	507	
	175	215	8.37	12400	2.0						
	201	190	7.28	12100	2.2						
	281	136	5.20	11100	2.6						
	61	625	24.05	6140	0.95						
	64	590	22.71	6170	1.00						
	76	505	19.34	6230	1.15						
	83	455	17.57	6230	1.20						
	96	395	15.22	6200	1.35	<b>K 57</b>	<b>DRE 132S4</b>		68	501	
	110	345	13.25	6140	1.45	<b>KF 57</b>	<b>DRE 132S4</b>		73	502	
	122	310	11.92	5800	1.35	<b>KA 57</b>	<b>DRE 132S4</b>		66	503	
	130	290	11.26	5780	1.40	<b>KAF 57</b>	<b>DRE 132S4</b>		72	502	
	152	250	9.59	5690	1.60						
	168	225	8.71	5620	1.70						
193	197	7.55	5500	1.85							
222	172	6.57	5380	2.0							
311	123	4.69	5040	2.4							
<b>5.5</b>	0.80	60200	1821	190000	0.85						
	0.91	53200	1605	190000	0.95						
	1.0	45800	1395	190000	1.10						
	1.2	39500	1196	190000	1.25	<b>K 187R97</b>	<b>DRE 132M4</b>		1810	545	
	1.4	34500	1046	190000	1.45	<b>KH 187R97</b>	<b>DRE 132M4</b>		1740	545	
	1.5	31100	945	190000	1.60						
	2.0	24300	738	190000	2.0						
	2.3	20400	621	190000	2.4						
	1.3	36300	1101	150000	0.90						
	1.5	31200	944	150000	1.00						
	1.7	27700	843	150000	1.15						
	1.9	24900	757	150000	1.30	<b>K 167R97</b>	<b>DRE 132M4</b>		1230	545	
	2.3	20800	632	150000	1.55	<b>KH 167R97</b>	<b>DRE 132M4</b>		1190	545	
	2.6	18300	561	150000	1.75						
	3.0	15800	481	150000	2.0						
	3.4	13800	423	150000	2.3						
	2.2	21500	661	110200	0.85						
	2.6	18700	567	111800	0.95	<b>K 157R97</b>	<b>DRE 132M4</b>		830	545	
	2.9	16600	504	112800	1.10	<b>KF 157R97</b>	<b>DRE 132M4</b>		910	545	
	3.4	14200	434	113900	1.25	<b>KA 157R97</b>	<b>DRE 132M4</b>		800	545	
3.8	12300	379	114600	1.45	<b>KAF 157R97</b>	<b>DRE 132M4</b>		860	545		
4.4	10900	333	115000	1.65							
3.5	14000	418	77900	0.95							
4.0	12200	367	79600	1.05							
4.4	10900	330	80200	1.20							
5.1	9480	287	80900	1.35	<b>K 127R87</b>	<b>DRE 132M4</b>		540	545		
5.7	8380	253	81300	1.55	<b>KF 127R87</b>	<b>DRE 132M4</b>		580	545		
6.8	7040	213	81800	1.85	<b>KA 127R87</b>	<b>DRE 132M4</b>		510	545		
7.3	6710	200	81900	1.80	<b>KAF 127R87</b>	<b>DRE 132M4</b>		550	545		
8.8	5550	166	82200	2.2							
9.9	4900	147	82300	2.4							
6.6	7400	222	65000	1.10							
7.4	6550	196	65000	1.20	<b>K 107R77</b>	<b>DRE 132M4</b>		360	545		
8.4	5860	174	65000	1.25	<b>KF 107R77</b>	<b>DRE 132M4</b>		370	545		
9.4	5190	154	65000	1.40	<b>KA 107R77</b>	<b>DRE 132M4</b>		330	545		
10	4710	140	65000	1.55	<b>KAF 107R77</b>	<b>DRE 132M4</b>		355	545		
7.1	7400	136.14	81700	1.75	<b>K 127</b>	<b>DRE 160M6</b>		500	531		
7.9	6660	122.48	81900	1.95	<b>KF 127</b>	<b>DRE 160M6</b>		540	532		
8.8	5990	110.18	82100	2.2	<b>KA 127</b>	<b>DRE 160M6</b>		470	533		
11	4890	89.89	82300	2.7	<b>KAF 127</b>	<b>DRE 160M6</b>		510	532		
8.6	6110	112.41*	65000	1.30	<b>K 107</b>	<b>DRE 160M6</b>		345	526		
9.6	5480	100.75	65000	1.45	<b>KF 107</b>	<b>DRE 160M6</b>		355	527		
11	4950	90.96*	65000	1.60	<b>KA 107</b>	<b>DRE 160M6</b>		315	528		
					<b>KAF 107</b>	<b>DRE 160M6</b>		340	527		

kVA	n
f	
i	P Hz

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	i	$F_{Ra}^{1)}$ [N]	SEW $f_B$					m [kg]	
5.5	12	4490	82.61	65000	1.80	K	107	DRE	160M6	345	526
						KF	107	DRE	160M6	355	527
						KA	107	DRE	160M6	315	528
						KAF	107	DRE	160M6	340	527
	10	5170	143.47*	65000	1.55						
	12	4380	121.46	65000	1.80	K	107	DRE	132M4	320	526
	13	4050	112.41*	65000	1.95	KF	107	DRE	132M4	330	527
	14	3630	100.75	65000	2.2	KA	107	DRE	132M4	295	528
	16	3280	90.96*	65000	2.4	KAF	107	DRE	132M4	315	527
	18	2980	82.61	65000	2.7						
	12	4470	123.93*	40000	0.95	K	97	DRE	132M4	205	521
	14	3790	105.13	40000	1.15	KF	97	DRE	132M4	225	522
	15	3490	96.80	40000	1.25	KA	97	DRE	132M4	190	523
	17	3120	86.52	40000	1.40	KAF	97	DRE	132M4	215	522
	19	2810	77.89*	40000	1.55	K	97	DRE	132M4	205	521
	21	2540	70.54	40000	1.70	KF	97	DRE	132M4	225	522
	23	2250	62.55	40000	1.90	KA	97	DRE	132M4	190	523
	26	2040	56.55	39600	2.1	KAF	97	DRE	132M4	215	522
	30	1730	47.93*	38400	2.5						
	17	3110	86.34	26700	0.85	K	87	DRE	132M4	145	516
	18	2860	79.34	27100	0.95	KF	87	DRE	132M4	155	517
	21	2540	70.46	27500	1.05	KA	87	DRE	132M4	135	518
	23	2270	63.00*	27400	1.20	KAF	87	DRE	132M4	150	517
	26	2040	56.64	27200	1.30						
	30	1770	49.16	26800	1.50	K	87	DRE	132M4	145	516
	33	1580	44.02	26500	1.65	KF	87	DRE	132M4	155	517
	40	1310	36.52*	25800	1.90	KA	87	DRE	132M4	135	518
	46	1130	31.39	25100	2.4	KAF	87	DRE	132M4	150	517
	52	1000	27.88	24600	2.6						
	32	1630	45.16	14800	0.95	K	77	DRE	132M4	110	511
	36	1440	40.04	16100	1.05	KF	77	DRE	132M4	120	512
	47	1110	30.89	17800	1.40	KA	77	DRE	132M4	105	513
	50	1050	29.27	18100	1.45	KAF	77	DRE	132M4	110	512
	57	920	25.62	18600	1.70						
	63	830	23.08	18900	1.85						
	72	730	20.25	19200	2.0	K	77	DRE	132M4	110	511
	81	640	17.87	19400	2.2	KF	77	DRE	132M4	120	512
	92	570	15.84	19100	2.4	KA	77	DRE	132M4	105	513
	108	485	13.52	18500	2.8	KAF	77	DRE	132M4	110	512
	118	445	12.36	17900	2.2						
	134	390	10.84	17400	2.5						
	61	860	24.00	9880	0.90						
	64	810	22.66	10300	0.95	K	67	DRE	132M4	86	506
	75	695	19.30	11300	1.10	KF	67	DRE	132M4	92	507
	83	630	17.54	11700	1.15	KA	67	DRE	132M4	84	508
	96	545	15.19	12200	1.30	KAF	67	DRE	132M4	89	507
	110	475	13.22	12500	1.40						
	117	450	12.48	12600	1.20						
	137	380	10.63	12400	1.30	K	67	DRE	132M4	86	506
	151	345	9.66	12200	1.40	KF	67	DRE	132M4	92	507
	174	300	8.37	11900	1.45	KA	67	DRE	132M4	84	508
	200	260	7.28	11600	1.60	KAF	67	DRE	132M4	89	507
280	188	5.20	10800	1.85							
7.5	1.8	37100	835	190000	1.35	K	187R107	DRE	132MC4	1860	545
	2.0	32200	729	190000	1.55	KH	187R107	DRE	132MC4	1790	545
	2.4	27400	622	190000	1.80						
	1.2	53600	1196	190000	0.95						
	1.4	46800	1046	190000	1.05						
	1.6	42300	945	190000	1.20	K	187R97	DRE	132MC4	1810	545
	2.0	33000	738	190000	1.50	KH	187R97	DRE	132MC4	1750	545
	2.4	27700	621	190000	1.80						
	2.8	23400	527	190000	2.1						
	1.7	37600	843	150000	0.85						
	1.9	33800	757	150000	0.95						
	2.3	28300	632	150000	1.15						
	2.6	24900	561	150000	1.30	K	167R97	DRE	132MC4	1230	545
	3.1	21500	481	150000	1.50	KH	167R97	DRE	132MC4	1190	545
	3.5	18800	423	150000	1.70						
	4.0	16400	369	150000	1.95						

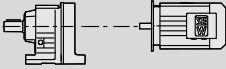



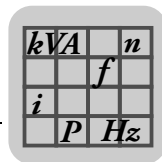
P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
7.5	3.4	19300	434	111500	0.95	K	157R97	DRE	132MC4	840	545
	3.9	16800	379	112700	1.05	KF	157R97	DRE	132MC4	920	545
	4.4	14800	333	113600	1.20	KA	157R97	DRE	132MC4	800	545
	5.0	12900	291	114400	1.40	KAF	157R97	DRE	132MC4	860	545
	4.4	14800	330	76200	0.85						
	5.1	12800	287	79300	1.00	K	127R87	DRE	132MC4	540	545
	5.8	11300	253	80000	1.15	KF	127R87	DRE	132MC4	590	545
	6.9	9550	213	80900	1.35	KA	127R87	DRE	132MC4	520	545
	7.3	9100	200	81100	1.30	KAF	127R87	DRE	132MC4	550	545
	8.8	7530	166	81600	1.60						
	10	6640	147	81900	1.80						
	10	7110	146.07	81700	1.85						
	11	6630	136.14	81900	1.95	K	127	DRE	132MC4	485	531
	12	5960	122.48	82100	2.2	KF	127	DRE	132MC4	530	532
	13	5360	110.18	82200	2.4	KA	127	DRE	132MC4	455	533
	16	4370	89.89	82400	3.0	KAF	127	DRE	132MC4	495	532
	18	3990	81.98	82500	3.2						
	21	3450	70.95*	82600	3.8						
	10	6990	143.47*	65000	1.15	K	107	DRE	132MC4	325	526
	12	5910	121.46	65000	1.35	KF	107	DRE	132MC4	335	527
13	5470	112.41*	65000	1.45	KA	107	DRE	132MC4	295	528	
					KAF	107	DRE	132MC4	320	527	
15	4900	100.75	64900	1.65							
16	4430	90.96*	63900	1.80							
18	4020	82.61	62900	2.00	K	107	DRE	132MC4	325	526	
20	3570	73.30	61600	2.2	KF	107	DRE	132MC4	335	527	
22	3240	66.52*	60500	2.5	KA	107	DRE	132MC4	295	528	
26	2780	57.17*	58800	2.9	KAF	107	DRE	132MC4	320	527	
29	2430	49.90	57100	3.2							
35	2060	42.33*	55100	3.6							
40	1800	37.00*	53500	4.0							
15	4710	96.80	38300	0.90	K	97	DRE	132MC4	210	521	
17	4210	86.52	38300	1.00	KF	97	DRE	132MC4	230	522	
19	3790	77.89*	38100	1.15	KA	97	DRE	132MC4	190	523	
21	3430	70.54	37800	1.25	KAF	97	DRE	132MC4	215	522	
24	3040	62.55	37400	1.40							
26	2750	56.55	37000	1.55	K	97	DRE	132MC4	210	521	
31	2330	47.93*	36200	1.85	KF	97	DRE	132MC4	230	522	
35	2030	41.87	35500	2.1	KA	97	DRE	132MC4	190	523	
38	1860	38.30	35000	2.3	KAF	97	DRE	132MC4	215	522	
43	1660	34.23	34300	2.6							
23	3060	63.00*	24100	0.90	K	87	DRE	132MC4	150	516	
26	2750	56.64	24200	1.00	KF	87	DRE	132MC4	160	517	
30	2390	49.16	24200	1.15	KA	87	DRE	132MC4	140	518	
33	2140	44.02	24100	1.20	KAF	87	DRE	132MC4	150	517	
40	1770	36.52*	23800	1.40							
47	1520	31.39	23400	1.75							
53	1350	27.88	23100	1.90							
59	1210	24.92	22700	2.1	K	87	DRE	132MC4	150	516	
66	1090	22.41	22400	2.1	KF	87	DRE	132MC4	160	517	
76	940	19.45	21800	2.4	KA	87	DRE	132MC4	140	518	
84	840	17.42	21400	2.6	KAF	87	DRE	132MC4	150	517	
92	775	16.00	20500	2.3							
102	700	14.45	20600	3.0							
48	1500	30.89	15700	1.05	K	77	DRE	132MC4	115	511	
50	1420	29.27	16200	1.10	KF	77	DRE	132MC4	120	512	
57	1240	25.62	17200	1.25	KA	77	DRE	132MC4	105	513	
64	1120	23.08	17800	1.40	KAF	77	DRE	132MC4	115	512	
73	980	20.25	18400	1.50							
82	870	17.87	18500	1.65							
93	770	15.84	18100	1.80							
109	655	13.52	17700	2.0	K	77	DRE	132MC4	115	511	
119	600	12.36	17000	1.65	KF	77	DRE	132MC4	120	512	
136	525	10.84	16600	1.90	KA	77	DRE	132MC4	105	513	
154	465	9.56	16200	2.0	KAF	77	DRE	132MC4	115	512	
173	410	8.48	15800	2.2							
203	350	7.24	15300	2.3							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
9.2	1.8	45800	835	190000	1.10						
	2.0	39900	729	190000	1.25	K	187R107	DRE	160M4	1880	545
	2.4	34000	622	190000	1.45	KH	187R107	DRE	160M4	1810	545
	2.8	28800	520	190000	1.75						
	3.2	25000	454	190000	2.00						
	1.4	57800	1046	190000	0.85						
	1.6	52200	945	190000	0.95	K	187R97	DRE	160M4	1830	545
	2.0	40800	738	190000	1.20	KH	187R97	DRE	160M4	1770	545
	2.4	34300	621	190000	1.45						
	2.8	29000	527	190000	1.70						
	4.6	17600	318	150000	1.80						
	5.3	15300	278	150000	2.1	K	167R107	DRE	160M4	1300	545
	6.0	13200	244	150000	2.4	KH	167R107	DRE	160M4	1260	545
	6.9	11500	213	150000	2.8						
	7.1	11200	206	150000	2.8						
	2.3	34900	632	150000	0.90						
	2.6	30800	561	150000	1.05	K	167R97	DRE	160M4	1250	545
	3.0	26600	481	150000	1.20	KH	167R97	DRE	160M4	1210	545
	3.5	23200	423	150000	1.40						
	4.0	20300	369	150000	1.60						
3.8	20800	385	110600	0.85	K	157R107	DRE	160M4	910	545	
4.5	17500	325	112400	1.05	KF	157R107	DRE	160M4	980	545	
4.9	16300	299	113000	1.10	KA	157R107	DRE	160M4	870	545	
5.8	13800	253	114000	1.30	KAF	157R107	DRE	160M4	930	545	
6.4	12400	230	114600	1.45							
3.9	20800	379	110600	0.85	K	157R97	DRE	160M4	860	545	
4.4	18300	333	112000	1.00	KF	157R97	DRE	160M4	940	545	
5.0	15900	291	113100	1.15	KA	157R97	DRE	160M4	820	545	
					KAF	157R97	DRE	160M4	880	545	
5.8	14000	253	77900	0.95	K	127R87	DRE	160M4	560	545	
6.9	11700	213	79800	1.10	KF	127R87	DRE	160M4	610	545	
7.3	11200	200	80100	1.05	KA	127R87	DRE	160M4	540	545	
8.8	9290	166	81000	1.30	KAF	127R87	DRE	160M4	570	545	
10.0	8200	147	81400	1.45							
11	8160	136.14	81400	1.60	K	127	DRE	160M4	500	531	
12	7340	122.48	81700	1.75	KF	127	DRE	160M4	540	532	
13	6600	110.18	81900	1.95	KA	127	DRE	160M4	470	533	
16	5390	89.89	82200	2.4	KAF	127	DRE	160M4	510	532	
18	4910	81.98	82300	2.6							
13	6740	112.41*	62300	1.20	K	107	DRE	160M4	345	526	
15	6040	100.75	61700	1.30	KF	107	DRE	160M4	355	527	
16	5450	90.96*	61000	1.45	KA	107	DRE	160M4	315	528	
					KAF	107	DRE	160M4	340	527	
18	4950	82.61	60300	1.60							
20	4390	73.30	59300	1.80	K	107	DRE	160M4	345	526	
22	3980	66.52*	58400	2.0	KF	107	DRE	160M4	355	527	
26	3420	57.17*	57000	2.3	KA	107	DRE	160M4	315	528	
29	2990	49.90	55500	2.6	KAF	107	DRE	160M4	340	527	
35	2530	42.33*	53800	2.9							
19	4670	77.89*	35100	0.90	K	97	DRE	160M4	230	521	
21	4220	70.54	35100	1.00	KF	97	DRE	160M4	250	522	
23	3750	62.55	35000	1.15	KA	97	DRE	160M4	210	523	
26	3390	56.55	34800	1.25	KAF	97	DRE	160M4	235	522	
31	2870	47.93*	34400	1.50							
35	2510	41.87	33900	1.70	K	97	DRE	160M4	230	521	
38	2290	38.30	33500	1.85	KF	97	DRE	160M4	250	522	
43	2050	34.23	33000	2.1	KA	97	DRE	160M4	210	523	
48	1840	30.82	32400	2.3	KAF	97	DRE	160M4	235	522	
53	1670	27.91	31900	2.6							
59	1480	24.75	31200	2.9							
30	2940	49.16	22000	0.90	K	87	DRE	160M4	170	516	
33	2630	44.02	22200	1.00	KF	87	DRE	160M4	180	517	
40	2190	36.52*	22200	1.15	KA	87	DRE	160M4	160	518	
47	1880	31.39	22100	1.45	KAF	87	DRE	160M4	170	517	

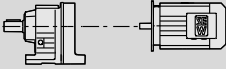



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
<b>9.2</b>	<b>53</b>	1670	27.88	21900	1.55						
	<b>59</b>	1490	24.92	21600	1.65						
	<b>65</b>	1340	22.41	21400	1.70						
	<b>75</b>	1160	19.45	21000	1.95	<b>K 87</b>	<b>DRE 160M4</b>		170	516	
	<b>84</b>	1040	17.42	20600	2.1	<b>KF 87</b>	<b>DRE 160M4</b>		180	517	
	<b>92</b>	950	16.00	19700	1.90	<b>KA 87</b>	<b>DRE 160M4</b>		160	518	
	<b>101</b>	860	14.45	20000	2.4	<b>KAF 87</b>	<b>DRE 160M4</b>		170	517	
	<b>117</b>	750	12.56	19500	2.7						
	<b>131</b>	665	11.17	18600	2.2						
	<b>147</b>	595	10.00	18200	2.5						
	<b>63</b>	1380	23.08	16500	1.10	<b>K 77</b>	<b>DRE 160M4</b>		135	511	
	<b>72</b>	1210	20.25	17400	1.25	<b>KF 77</b>	<b>DRE 160M4</b>		145	512	
	<b>82</b>	1070	17.87	17600	1.35	<b>KA 77</b>	<b>DRE 160M4</b>		130	513	
	<b>93</b>	940	15.84	17300	1.45	<b>KAF 77</b>	<b>DRE 160M4</b>		135	512	
	<b>108</b>	810	13.52	17000	1.65	<b>K 77</b>	<b>DRE 160M4</b>		135	511	
	<b>119</b>	740	12.36	16200	1.35	<b>KF 77</b>	<b>DRE 160M4</b>		145	512	
	<b>135</b>	645	10.84	16000	1.50	<b>KA 77</b>	<b>DRE 160M4</b>		130	513	
	<b>153</b>	570	9.56	15600	1.65	<b>KAF 77</b>	<b>DRE 160M4</b>		135	512	
<b>173</b>	505	8.48	15300	1.75							
<b>202</b>	430	7.24	14900	1.90							
<b>11.0</b>	<b>1.8</b>	54600	835	190000	0.90						
	<b>2.0</b>	47500	729	190000	1.05						
	<b>2.4</b>	40500	622	190000	1.25	<b>K 187R107</b>	<b>DRE 160MC4</b>		1890	545	
	<b>2.8</b>	34300	520	190000	1.45	<b>KH 187R107</b>	<b>DRE 160MC4</b>		1820	545	
	<b>3.2</b>	29900	454	190000	1.65						
	<b>4.2</b>	23100	355	190000	2.2						
	<b>2.0</b>	48500	738	190000	1.05	<b>K 187R97</b>	<b>DRE 160MC4</b>		1840	545	
	<b>2.4</b>	40800	621	190000	1.20	<b>KH 187R97</b>	<b>DRE 160MC4</b>		1770	545	
	<b>2.8</b>	34500	527	190000	1.45						
	<b>4.6</b>	21000	318	150000	1.50						
	<b>5.3</b>	18200	278	150000	1.75	<b>K 167R107</b>	<b>DRE 160MC4</b>		1300	545	
	<b>6.0</b>	15800	244	150000	2.0	<b>KH 167R107</b>	<b>DRE 160MC4</b>		1270	545	
	<b>6.9</b>	13800	213	150000	2.3						
	<b>7.2</b>	13400	206	150000	2.4						
	<b>2.6</b>	36600	561	150000	0.85						
	<b>3.1</b>	31600	481	150000	1.00	<b>K 167R97</b>	<b>DRE 160MC4</b>		1260	545	
	<b>3.5</b>	27700	423	150000	1.15	<b>KH 167R97</b>	<b>DRE 160MC4</b>		1220	545	
	<b>4.0</b>	24100	369	150000	1.30						
	<b>4.4</b>	21800	333	110000	0.80	<b>K 157R97</b>	<b>DRE 160MC4</b>		860	545	
	<b>5.1</b>	19000	291	111600	0.95	<b>KF 157R97</b>	<b>DRE 160MC4</b>		940	545	
						<b>KA 157R97</b>	<b>DRE 160MC4</b>		830	545	
						<b>KAF 157R97</b>	<b>DRE 160MC4</b>		890	545	
	<b>6.9</b>	14000	213	77900	0.95	<b>K 127R87</b>	<b>DRE 160MC4</b>		570	545	
	<b>7.4</b>	13300	200	79000	0.90	<b>KF 127R87</b>	<b>DRE 160MC4</b>		610	545	
	<b>8.9</b>	11000	166	80200	1.10	<b>KA 127R87</b>	<b>DRE 160MC4</b>		540	545	
	<b>10</b>	9760	147	80800	1.25	<b>KAF 127R87</b>	<b>DRE 160MC4</b>		580	545	
	<b>9.0</b>	11700	164.50	150000	2.7	<b>K 167</b>	<b>DRE 160MC4</b>		1130	541	
	<b>11</b>	9610	134.99	150000	3.3	<b>KH 167</b>	<b>DRE 160MC4</b>		1090	542	
	<b>9.8</b>	10700	150.41	115100	1.70	<b>K 157</b>	<b>DRE 160MC4</b>		740	536	
	<b>12</b>	8710	122.39	115600	2.1	<b>KF 157</b>	<b>DRE 160MC4</b>		820	537	
	<b>15</b>	7130	100.22	116000	2.5	<b>KA 157</b>	<b>DRE 160MC4</b>		700	538	
	<b>16</b>	6520	91.65	116100	2.8	<b>KAF 157</b>	<b>DRE 160MC4</b>		760	537	
	<b>11</b>	9690	136.14	80800	1.35						
	<b>12</b>	8720	122.48	81200	1.50	<b>K 127</b>	<b>DRE 160MC4</b>		500	531	
	<b>13</b>	7840	110.18	81500	1.65	<b>KF 127</b>	<b>DRE 160MC4</b>		550	532	
	<b>16</b>	6400	89.89	82000	2.0	<b>KA 127</b>	<b>DRE 160MC4</b>		475	533	
	<b>18</b>	5830	81.98	82100	2.2	<b>KAF 127</b>	<b>DRE 160MC4</b>		510	532	
	<b>21</b>	5050	70.95*	82300	2.6						
	<b>13</b>	8000	112.41*	57800	1.00	<b>K 107</b>	<b>DRE 160MC4</b>		350	526	
	<b>15</b>	7170	100.75	58200	1.10	<b>KF 107</b>	<b>DRE 160MC4</b>		360	527	
	<b>16</b>	6470	90.96*	57900	1.25	<b>KA 107</b>	<b>DRE 160MC4</b>		320	528	
	<b>18</b>	5880	82.61	57400	1.35	<b>KAF 107</b>	<b>DRE 160MC4</b>		345	527	
<b>20</b>	5210	73.30	56700	1.55							
<b>22</b>	4730	66.52*	56100	1.70	<b>K 107</b>	<b>DRE 160MC4</b>		350	526		
<b>26</b>	4070	57.17*	54900	1.95	<b>KF 107</b>	<b>DRE 160MC4</b>		360	527		
<b>30</b>	3550	49.90	53800	2.2	<b>KA 107</b>	<b>DRE 160MC4</b>		320	528		
<b>35</b>	3010	42.33*	52300	2.4	<b>KAF 107</b>	<b>DRE 160MC4</b>		345	527		
<b>40</b>	2630	37.00*	51000	2.7							

kVA	n
f	
i	P Hz

## K..DRE/DRS

### K..DRE/DRS [kW]

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
11.0	21	5020	70.54	32300	0.85	K	97	DRE	160MC4	235	521
	24	4450	62.55	32500	0.95	KF	97	DRE	160MC4	255	522
	26	4020	56.55	32500	1.05	KA	97	DRE	160MC4	215	523
	31	3410	47.93*	32400	1.25	KAF	97	DRE	160MC4	240	522
	35	2980	41.87	32200	1.45						
	39	2720	38.30	31900	1.60						
	43	2430	34.23	31600	1.75	K	97	DRE	160MC4	235	521
	48	2190	30.82	31200	1.95	KF	97	DRE	160MC4	255	522
	53	1980	27.91	30700	2.2	KA	97	DRE	160MC4	215	523
	60	1760	24.75	30200	2.4	KAF	97	DRE	160MC4	240	522
	66	1590	22.37	29700	2.7						
	34	3130	44.02	20100	0.85	K	87	DRE	160MC4	175	516
	40	2600	36.52*	20500	0.95	KF	87	DRE	160MC4	185	517
	47	2230	31.39	20600	1.20	KA	87	DRE	160MC4	165	518
	53	1980	27.88	20500	1.30	KAF	87	DRE	160MC4	175	517
	59	1770	24.92	20400	1.40						
	66	1590	22.41	20300	1.45						
	76	1380	19.45	20000	1.65						
	85	1230	17.42	19800	1.75						
	92	1130	16.00	18800	1.60	K	87	DRE	160MC4	175	516
102	1020	14.45	19300	2.0	KF	87	DRE	160MC4	185	517	
117	890	12.56	18900	2.2	KA	87	DRE	160MC4	165	518	
132	790	11.17	17900	1.90	KAF	87	DRE	160MC4	175	517	
148	710	10.00	17600	2.1							
178	590	8.29	17000	2.4							
205	510	7.21	16600	2.5							
64	1640	23.08	14700	0.95							
73	1440	20.25	16100	1.05							
83	1270	17.87	16600	1.15							
93	1120	15.84	16500	1.25	K	77	DRE	160MC4	140	511	
109	960	13.52	16200	1.40	KF	77	DRE	160MC4	150	512	
119	870	12.36	15500	1.15	KA	77	DRE	160MC4	135	513	
136	770	10.84	15300	1.30	KAF	77	DRE	160MC4	140	512	
154	680	9.56	15000	1.40							
174	600	8.48	14800	1.45							
204	515	7.24	14400	1.60							
15.0	2.4	55900	622	190000	0.90						
	2.8	47400	520	190000	1.05	K	187R107	DRE	180M4	1930	545
	3.2	41200	454	190000	1.20	KH	187R107	DRE	180M4	1860	545
	4.1	31900	355	190000	1.55						
	5.6	23700	261	190000	2.1						
	4.6	28900	318	150000	1.10						
	5.3	25200	278	150000	1.25						
	6.0	21800	244	150000	1.45						
	6.9	19000	213	150000	1.70	K	167R107	DRE	180M4	1350	545
	7.1	18600	206	150000	1.70	KH	167R107	DRE	180M4	1310	545
	8.1	16000	180	150000	2.00						
	9.2	14500	160	150000	2.2						
	6.4	20500	230	110800	0.90						
	6.9	19300	213	111500	0.95	K	157R107	DRE	180M4	960	545
	7.8	16600	187	112800	1.10	KF	157R107	DRE	180M4	1030	545
	9.3	14100	157	113900	1.25	KA	157R107	DRE	180M4	920	545
	12	11000	122	115000	1.60	KAF	157R107	DRE	180M4	980	545
	14	9670	107	115400	1.85						
	8.9	16000	164.50	150000	2.00	K	167	DRE	180M4	1170	541
	11	13100	134.99	150000	2.4	KH	167	DRE	180M4	1140	542
	9.7	14700	150.41	113700	1.20						
	12	11900	122.39	114700	1.50	K	157	DRE	180M4	780	536
	15	9790	100.22	114100	1.85	KF	157	DRE	180M4	860	537
	16	8960	91.65	112400	2.0	KA	157	DRE	180M4	740	538
	18	7790	79.75	109500	2.3	KAF	157	DRE	180M4	800	537
	11	13300	136.14	79000	1.00	K	127	DRE	180M4	550	531
	12	11900	122.48	79700	1.10	KF	127	DRE	180M4	590	532
	13	10700	110.18	80300	1.20	KA	127	DRE	180M4	520	533
						KAF	127	DRE	180M4	560	532



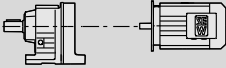



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
<b>15.0</b>	16	8780	89.89	81200	1.50						
	18	8010	81.98	81500	1.60	K	127	DRE	180M4	550	531
	21	6930	70.95*	81500	1.85	KF	127	DRE	180M4	590	532
	23	6120	62.60	79900	2.1	KA	127	DRE	180M4	520	533
	27	5280	54.07	77900	2.5	KAF	127	DRE	180M4	560	532
	31	4670	47.82	76200	2.8						
	16	8890	90.96*	48200	0.90	K	107	DRE	180M4	395	526
	18	8070	82.61	49400	1.00	KF	107	DRE	180M4	405	527
	20	7160	73.30	50500	1.10	KA	107	DRE	180M4	365	528
	22	6500	66.52*	51000	1.25	KAF	107	DRE	180M4	390	527
	26	5590	57.17*	50600	1.45						
	29	4870	49.90	50000	1.60	K	107	DRE	180M4	395	526
	35	4130	42.33*	49100	1.80	KF	107	DRE	180M4	405	527
	40	3610	37.00*	48200	2.00	KA	107	DRE	180M4	365	528
	45	3190	32.69	47300	2.2	KAF	107	DRE	180M4	390	527
	47	3050	31.28*	46900	2.2						
	51	2830	29.00	46300	2.5						
	31	4680	47.93*	28100	0.90	K	97	DRE	180M4	280	521
	35	4090	41.87	28400	1.05	KF	97	DRE	180M4	300	522
	38	3740	38.30	28500	1.15	KA	97	DRE	180M4	260	523
43	3340	34.23	28500	1.30	KAF	97	DRE	180M4	285	522	
48	3010	30.82	28400	1.45							
53	2720	27.91	28200	1.60	K	97	DRE	180M4	280	521	
59	2410	24.75	28000	1.80	KF	97	DRE	180M4	300	522	
65	2180	22.37	27700	1.95	KA	97	DRE	180M4	260	523	
77	1850	18.96	27200	2.3	KAF	97	DRE	180M4	285	522	
88	1610	16.56	26600	2.7							
47	3060	31.39	17300	0.90	K	87	DRE	180M4	220	516	
53	2720	27.88	17600	0.95	KF	87	DRE	180M4	230	517	
59	2430	24.92	17800	1.05	KA	87	DRE	180M4	210	518	
65	2190	22.41	18000	1.05	KAF	87	DRE	180M4	220	517	
75	1900	19.45	18000	1.20							
84	1700	17.42	18000	1.30							
92	1560	16.00	16800	1.15	K	87	DRE	180M4	220	516	
101	1410	14.45	17800	1.50	KF	87	DRE	180M4	230	517	
117	1220	12.56	17600	1.65	KA	87	DRE	180M4	210	518	
131	1090	11.17	16600	1.35	KAF	87	DRE	180M4	220	517	
147	970	10.00	16400	1.55							
177	810	8.29	16000	1.75							
203	705	7.21	15700	1.85							
<b>18.5</b>	2.8	58500	520	190000	0.85						
	3.2	51000	454	190000	1.00	K	187R107	DRE	180L4	1950	545
	4.1	39400	355	190000	1.25	KH	187R107	DRE	180L4	1880	545
	5.6	29300	261	190000	1.70						
	6.6	24800	221	190000	2.0						
	4.6	35800	318	150000	0.90						
	5.3	31200	278	150000	1.00						
	6.0	27000	244	150000	1.20						
	6.9	23600	213	150000	1.35						
	7.1	23000	206	150000	1.40	K	167R107	DRE	180L4	1370	545
	8.1	19900	180	150000	1.60	KH	167R107	DRE	180L4	1330	545
	9.2	17900	160	150000	1.80						
	11	15100	135	150000	2.1						
	12	13200	118	150000	2.4						
	7.8	20600	187	110700	0.85	K	157R107	DRE	180L4	970	545
	9.3	17500	157	112400	1.05	KF	157R107	DRE	180L4	1050	545
	12	13700	122	113900	1.30	KA	157R107	DRE	180L4	940	545
	14	11900	107	112000	1.50	KAF	157R107	DRE	180L4	1000	545
	8.2	21600	179.86	190000	2.3						
	8.9	19900	165.21	190000	2.5	K	187	DRE	180L4	1780	543
10	17400	144.59	190000	2.9	KH	187	DRE	180L4	1710	544	
11	15600	129.69	190000	3.2							
11	16200	134.99	150000	1.95							
13	13200	109.83	150000	2.4	K	167	DRE	180L4	1190	541	
17	10500	87.86	150000	3.0	KH	167	DRE	180L4	1160	542	

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>18.5</b>	12	14700	122.39	111600	1.20				
	15	12000	100.22	109100	1.50				
	16	11000	91.65	107800	1.65				
	18	9610	79.75	105600	1.85	K 157	DRE 180L4	800	536
	21	8480	70.38	103400	2.1	KF 157	DRE 180L4	880	537
	24	7350	61.02	100700	2.4	KA 157	DRE 180L4	760	538
	27	6540	54.29	98500	2.8	KAF 157	DRE 180L4	820	537
	31	5640	46.79	95500	3.2				
	39	4580	38.02	91300	3.9				
	13	13200	110.18	79000	1.00	K 127	DRE 180L4	570	531
16	10800	89.89	79000	1.20	KF 127	DRE 180L4	610	532	
18	9880	81.98	78500	1.30	KA 127	DRE 180L4	540	533	
					KAF 127	DRE 180L4	580	532	
21	8550	70.95*	77500	1.50					
23	7540	62.60	76400	1.70					
27	6510	54.07	74800	2.00	K 127	DRE 180L4	570	531	
31	5760	47.82	73400	2.2	KF 127	DRE 180L4	610	532	
36	4840	40.19	71300	2.7	KA 127	DRE 180L4	540	533	
40	4370	36.25	69900	3.0	KAF 127	DRE 180L4	580	532	
47	3780	31.37	68000	3.4					
53	3330	27.68	66200	3.9					
20	8830	73.30	42700	0.90	K 107	DRE 180L4	415	526	
22	8020	66.52*	44200	1.00	KF 107	DRE 180L4	425	527	
26	6890	57.17*	45800	1.15	KA 107	DRE 180L4	385	528	
29	6010	49.90	46600	1.30	KAF 107	DRE 180L4	410	527	
35	5100	42.33*	46300	1.45					
40	4460	37.00*	45700	1.60					
45	3940	32.69	45100	1.85	K 107	DRE 180L4	415	526	
47	3770	31.28*	44800	1.80	KF 107	DRE 180L4	425	527	
51	3490	29.00	44400	2.1	KA 107	DRE 180L4	385	528	
56	3170	26.32	43800	2.3	KAF 107	DRE 180L4	410	527	
65	2720	22.62	42700	2.6					
74	2380	19.74	41700	3.0					
88	2010	16.75	40400	3.5					
35	5040	41.87	25100	0.85	K 97	DRE 180L4	300	521	
48	3710	30.82	26000	1.15	KF 97	DRE 180L4	320	522	
53	3360	27.91	26000	1.30	KA 97	DRE 180L4	280	523	
59	2980	24.75	26000	1.45	KAF 97	DRE 180L4	305	522	
65	2690	22.37	25900	1.60					
77	2280	18.96	25700	1.90	K 97	DRE 180L4	300	521	
88	1990	16.56	25300	2.2	KF 97	DRE 180L4	320	522	
106	1670	13.85	24800	2.6	KA 97	DRE 180L4	280	523	
122	1440	11.99	24300	2.7	KAF 97	DRE 180L4	305	522	
59	3000	24.92	15600	0.85					
65	2700	22.41	15900	0.85					
75	2340	19.45	16200	1.00					
84	2090	17.42	16400	1.05	K 87	DRE 180L4	240	516	
101	1740	14.45	16500	1.20	KF 87	DRE 180L4	250	517	
117	1510	12.56	16400	1.30	KA 87	DRE 180L4	225	518	
131	1340	11.17	15400	1.10	KAF 87	DRE 180L4	240	517	
147	1200	10.00	15300	1.25					
177	1000	8.29	15100	1.40					
203	860	7.21	14900	1.50					
<b>22</b>	3.2	60400	454	190000	0.85				
	4.2	46700	355	190000	1.05				
	5.6	34700	261	190000	1.45	K 187R107	DRE 180LC4	1960	545
	6.7	29400	221	190000	1.70	KH 187R107	DRE 180LC4	1890	545
	7.6	25600	193	190000	1.95				
	9.0	21600	163	190000	2.3				
	5.3	36900	278	150000	0.85				
	6.0	32000	244	150000	1.00				
	6.9	27900	213	150000	1.15				
	7.2	27200	206	150000	1.15	K 167R107	DRE 180LC4	1380	545
8.2	23500	180	150000	1.35	KH 167R107	DRE 180LC4	1340	545	
9.2	21200	160	150000	1.50					
11	17900	135	150000	1.80					
12	15600	118	150000	2.0					

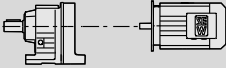



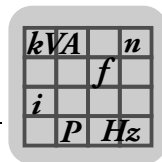
P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
22	9.4	20700	157	109400	0.85	K	157R107	DRE	180LC4	990	545
	12	16200	122	108100	1.10	KF	157R107	DRE	180LC4	1060	545
	14	14100	107	106900	1.25	KA	157R107	DRE	180LC4	950	545
						KAF	157R107	DRE	180LC4	1010	545
	8.2	25600	179.86	190000	1.95						
	8.9	23500	165.21	190000	2.1	K	187	DRE	180LC4	1790	543
	10	20500	144.59	190000	2.4	KH	187	DRE	180LC4	1720	544
	11	18400	129.69	190000	2.7						
	11	19200	134.99	150000	1.65						
	13	15600	109.83	150000	2.0	K	167	DRE	180LC4	1200	541
	17	12500	87.86	150000	2.6	KH	167	DRE	180LC4	1170	542
	19	11100	78.14	150000	2.9						
	12	17400	122.39	105500	1.05						
	15	14200	100.22	104000	1.25						
	16	13000	91.65	103200	1.40						
	18	11300	79.75	101500	1.60	K	157	DRE	180LC4	810	536
	21	10000	70.38	99700	1.80	KF	157	DRE	180LC4	890	537
	24	8690	61.02	97600	2.1	KA	157	DRE	180LC4	770	538
	27	7730	54.29	95700	2.3	KAF	157	DRE	180LC4	830	537
	32	6660	46.79	93100	2.7						
	39	5410	38.02	89300	3.3						
	16	12800	89.89	73900	1.00	K	127	DRE	180LC4	580	531
18	11600	81.98	73800	1.10	KF	127	DRE	180LC4	620	532	
21	10100	70.95*	73400	1.30	KA	127	DRE	180LC4	550	533	
24	8910	62.60	72700	1.45	KAF	127	DRE	180LC4	590	532	
27	7700	54.07	71700	1.70							
31	6810	47.82	70600	1.90							
37	5720	40.19	68900	2.3	K	127	DRE	180LC4	580	531	
41	5160	36.25	67800	2.5	KF	127	DRE	180LC4	620	532	
47	4460	31.37	66100	2.9	KA	127	DRE	180LC4	550	533	
53	3940	27.68	64500	3.3	KAF	127	DRE	180LC4	590	532	
62	3400	23.91	62700	3.8							
70	3010	21.15	61100	4.3							
26	8140	57.17*	39800	1.00	K	107	DRE	180LC4	425	526	
30	7100	49.90	41600	1.10	KF	107	DRE	180LC4	435	527	
35	6020	42.33*	42900	1.20	KA	107	DRE	180LC4	395	528	
					KAF	107	DRE	180LC4	420	527	
40	5260	37.00*	43200	1.35							
45	4650	32.69	42900	1.55							
47	4450	31.28*	42700	1.55							
51	4120	29.00	42400	1.75							
56	3740	26.32	42000	1.90	K	107	DRE	180LC4	425	526	
65	3220	22.62	41200	2.2	KF	107	DRE	180LC4	435	527	
75	2810	19.74	40400	2.6	KA	107	DRE	180LC4	395	528	
88	2380	16.75	39300	3.0	KAF	107	DRE	180LC4	420	527	
101	2080	14.64	38300	3.3							
110	1910	13.43	36700	2.2							
126	1660	11.73	35800	2.6							
148	1410	9.94	34700	3.0							
48	4380	30.82	23500	1.00	K	97	DRE	180LC4	310	521	
53	3970	27.91	23800	1.10	KF	97	DRE	180LC4	330	522	
60	3520	24.75	24100	1.20	KA	97	DRE	180LC4	290	523	
66	3180	22.37	24200	1.35	KAF	97	DRE	180LC4	315	522	
78	2700	18.96	24100	1.60							
89	2350	16.56	24000	1.80	K	97	DRE	180LC4	310	521	
106	1970	13.85	23700	2.2	KF	97	DRE	180LC4	330	522	
123	1700	11.99	23300	2.3	KA	97	DRE	180LC4	290	523	
142	1480	10.41	21800	1.95	KAF	97	DRE	180LC4	315	522	
169	1240	8.71	21300	2.2							
76	2760	19.45	14500	0.85							
85	2470	17.42	14800	0.90							
102	2050	14.45	15200	1.00	K	87	DRE	180LC4	250	516	
117	1780	12.56	15300	1.10	KF	87	DRE	180LC4	260	517	
132	1580	11.17	14200	0.95	KA	87	DRE	180LC4	240	518	
148	1420	10.00	14200	1.05	KAF	87	DRE	180LC4	250	517	
178	1180	8.29	14300	1.20							
205	1020	7.21	14200	1.25							

kVA	n
f	
i	P Hz

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	i	$F_{Ra}^{1)}$ [N]	SEW $f_B$					m [kg]		
30	5.6	47400	261	190000	1.05							
	6.7	40200	221	190000	1.25	K	187R107	DRE	200L4	2050	545	
	7.6	35100	193	190000	1.40	KH	187R107	DRE	200L4	1980	545	
	9.0	29600	163	190000	1.70							
	6.9	38200	213	150000	0.85							
	7.2	37300	206	150000	0.85							
	8.2	32300	180	150000	1.00	K	167R107	DRE	200L4	1470	545	
	9.2	29000	160	150000	1.10	KH	167R107	DRE	200L4	1430	545	
	11	24500	135	150000	1.30							
	12	21400	118	150000	1.50							
	8.2	34900	179.86	190000	1.45							
	8.9	32000	165.21	190000	1.55							
	10	28000	144.59	190000	1.80							
	11	25100	129.69	190000	2.00	K	187	DRE	200L4	1880	543	
	13	21800	112.60	190000	2.3	KH	187	DRE	200L4	1810	544	
	14	19800	102.16	190000	2.5							
	17	17000	88.00	190000	2.9							
	13	21300	109.83	150000	1.50							
	17	17000	87.86	150000	1.90							
	19	15100	78.14	150000	2.1	K	167	DRE	200L4	1290	541	
22	13200	68.07	150000	2.4	KH	167	DRE	200L4	1260	542		
24	11700	60.74	150000	2.7								
	15	19400	100.22	92700	0.90							
	16	17800	91.65	92800	1.00							
	18	15400	79.75	92400	1.15							
	21	13600	70.38	91800	1.30	K	157	DRE	200L4	900	536	
	24	11800	61.02	90700	1.50	KF	157	DRE	200L4	980	537	
	27	10500	54.29	89500	1.70	KA	157	DRE	200L4	860	538	
	32	9080	46.79	87800	2.00	KAF	157	DRE	200L4	920	537	
	39	7380	38.02	85000	2.4							
	47	6070	31.30	82100	3.0							
		21	13700	70.95*	64200	0.95						
24		12100	62.60	64600	1.05							
27		10500	54.07	64700	1.25							
31		9280	47.82	64400	1.40	K	127	DRE	200L4	670	531	
37		7800	40.19	63700	1.65	KF	127	DRE	200L4	710	532	
41		7030	36.25	63100	1.85	KA	127	DRE	200L4	640	533	
47		6090	31.37	62000	2.1	KAF	127	DRE	200L4	680	532	
53		5370	27.68	61000	2.4							
62		4640	23.91	59600	2.8							
		35	8220	42.33*	32500	0.90	K	107	DRE	200L4	510	526
	40	7180	37.00*	34700	1.00	KF	107	DRE	200L4	530	527	
	47	6070	31.28*	36600	1.10	KA	107	DRE	200L4	485	528	
						KAF	107	DRE	200L4	510	527	
	51	5630	29.00	37200	1.30							
	56	5100	26.32	37700	1.40							
	65	4390	22.62	37700	1.65							
	75	3830	19.74	37400	1.90	K	107	DRE	200L4	510	526	
	88	3250	16.75	36700	2.2	KF	107	DRE	200L4	530	527	
	101	2840	14.64	36100	2.4	KA	107	DRE	200L4	485	528	
	110	2600	13.43	34400	1.65	KAF	107	DRE	200L4	510	527	
	126	2270	11.73	33800	1.90							
	148	1930	9.94	32900	2.2							
	170	1680	8.69	32200	2.4							
	60	4800	24.75	19600	0.90							
	66	4340	22.37	20100	1.00							
	78	3680	18.96	20700	1.15	K	97	DRE	200L4	400	521	
	89	3210	16.56	21000	1.35	KF	97	DRE	200L4	420	522	
	106	2690	13.85	21200	1.60	KA	97	DRE	200L4	380	523	
	123	2320	11.99	21100	1.65	KAF	97	DRE	200L4	405	522	
	142	2020	10.41	19500	1.40							
	169	1690	8.71	19400	1.55							
	37	5.7	58500	261	190000	0.85						
		6.7	49600	221	190000	1.00	K	187R107	DRE	225S4	2080	545
7.6		43300	193	190000	1.15	KH	187R107	DRE	225S4	2010	545	
9.0		36500	163	190000	1.35							

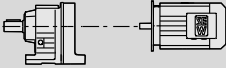



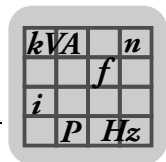
P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
						K	KH	DRE	225S4		
<b>37</b>	8.2	39800	180	150000	0.80						
	9.2	35800	160	150000	0.90	K	167R107	DRE	225S4	1500	545
	11	30300	135	150000	1.05	KH	167R107	DRE	225S4	1460	545
	12	26400	118	150000	1.20						
	8.2	43000	179.86	190000	1.15						
	8.9	39500	165.21	190000	1.25						
	10	34500	144.59	190000	1.45	K	187	DRE	225S4	1910	543
	11	31000	129.69	190000	1.60	KH	187	DRE	225S4	1840	544
	13	26900	112.60	190000	1.85						
	14	24400	102.16	190000	2.0						
	17	21000	88.00	190000	2.4						
	13	26200	109.83	150000	1.20						
	17	21000	87.86	150000	1.50						
	19	18600	78.14	150000	1.70	K	167	DRE	225S4	1320	541
	22	16200	68.07	150000	1.95	KH	167	DRE	225S4	1290	542
	24	14500	60.74	150000	2.2						
	29	12300	51.77	150000	2.6						
	16	21900	91.65	83700	0.80	K	157	DRE	225S4	930	536
	19	19000	79.75	84500	0.95	KF	157	DRE	225S4	1010	537
						KA	157	DRE	225S4	890	538
						KAF	157	DRE	225S4	950	537
	21	16800	70.38	84800	1.05						
	24	14500	61.02	84600	1.25	K	157	DRE	225S4	930	536
	27	12900	54.29	84100	1.40	KF	157	DRE	225S4	1010	537
	32	11100	46.79	83100	1.60	KA	157	DRE	225S4	890	538
	39	9090	38.02	81200	2.00	KAF	157	DRE	225S4	950	537
	47	7480	31.30	79000	2.4						
	24	14900	62.60	57500	0.85	K	127	DRE	225S4	700	531
	27	12900	54.07	58500	1.00	KF	127	DRE	225S4	740	532
	31	11400	47.82	59000	1.15	KA	127	DRE	225S4	670	533
	37	9610	40.19	59100	1.35	KAF	127	DRE	225S4	710	532
	41	8660	36.25	58900	1.50						
	47	7500	31.37	58400	1.75						
	53	6620	27.68	57800	1.95						
	62	5710	23.91	56900	2.3	K	127	DRE	225S4	700	531
	70	5050	21.15	55900	2.6	KF	127	DRE	225S4	740	532
	83	4250	17.77	54500	3.1	KA	127	DRE	225S4	670	533
	103	3430	14.35	52500	3.5	KAF	127	DRE	225S4	710	532
	116	3050	12.79	50200	2.8						
	137	2560	10.74	48600	3.1						
	170	2070	8.68	46500	3.5						
	40	8850	37.00*	25900	0.80						
	47	7480	31.28*	29700	0.90						
	51	6930	29.00	31000	1.05						
	56	6290	26.32	32300	1.15						
	65	5400	22.62	33700	1.35	K	107	DRE	225S4	540	526
	75	4720	19.74	34400	1.50	KF	107	DRE	225S4	550	527
	88	4000	16.75	34500	1.75	KA	107	DRE	225S4	520	528
	101	3500	14.64	34100	1.95	KAF	107	DRE	225S4	540	527
	110	3210	13.43	32300	1.35						
	126	2800	11.73	31900	1.55						
	149	2370	9.94	31400	1.75						
	170	2070	8.69	30900	1.95						
<b>45</b>	6.7	60300	221	190000	0.85	K	187R107	DRE	225M4	2100	545
	7.6	52700	193	190000	0.95	KH	187R107	DRE	225M4	2030	545
	9.0	44500	163	190000	1.10						
	11	36900	135	150000	0.85	K	167R107	DRE	225M4	1520	545
	12	32200	118	150000	1.00	KH	167R107	DRE	225M4	1480	545
	8.2	52200	179.86	190000	0.95						
	9.0	48000	165.21	190000	1.05						
	10	42000	144.59	190000	1.20						
	11	37700	129.69	190000	1.35	K	187	DRE	225M4	1930	543
	13	32700	112.60	190000	1.55	KH	187	DRE	225M4	1860	544
	14	29700	102.16	190000	1.70						
	17	25500	88.00	190000	1.95						
	20	21500	73.96	187500	2.3						

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

## K..DRE/DRS

### K..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]					
45	13	31900	109.83	150000	1.00							
	17	25500	87.86	150000	1.25							
	19	22700	78.14	150000	1.40							
	22	19700	68.07	150000	1.60	K	167	DRE	225M4	1340	541	
	24	17600	60.74	148900	1.80	KH	167	DRE	225M4	1310	542	
	29	15000	51.77	145200	2.1							
	34	12400	42.89	140500	2.6							
	21	20400	70.38	76800	0.90							
	24	17700	61.02	77700	1.00							
	27	15700	54.29	77900	1.15							
	32	13600	46.79	77800	1.30	K	157	DRE	225M4	950	536	
	39	11000	38.02	76900	1.65	KF	157	DRE	225M4	1030	537	
	47	9100	31.30	75500	2.00	KA	157	DRE	225M4	910	538	
	54	8030	27.62	74300	2.2	KAF	157	DRE	225M4	970	537	
	62	6960	23.95	72800	2.6							
	69	6190	21.31	71400	2.9							
	80	5330	18.37	69600	3.4							
	31	13900	47.82	52800	0.95	K	127	DRE	225M4	720	531	
	37	11600	40.19	53900	1.10	KF	127	DRE	225M4	760	532	
	41	10500	36.25	54200	1.25	KA	127	DRE	225M4	690	533	
						KAF	127	DRE	225M4	730	532	
	47	9110	31.37	54400	1.45							
	53	8040	27.68	54200	1.60							
	62	6940	23.91	53800	1.85	K	127	DRE	225M4	720	531	
	70	6140	21.15	53200	2.1	KF	127	DRE	225M4	760	532	
	83	5160	17.77	52200	2.5	KA	127	DRE	225M4	690	533	
	103	4170	14.35	50600	2.9	KAF	127	DRE	225M4	730	532	
	116	3710	12.79	48300	2.3							
	138	3120	10.74	47000	2.6							
	170	2520	8.68	45200	2.9							
	51	8420	29.00	22900	0.85	K	107	DRE	225M4	560	526	
	56	7640	26.32	25300	0.95	KF	107	DRE	225M4	580	527	
	65	6570	22.62	28100	1.10	KA	107	DRE	225M4	540	528	
	75	5730	19.74	29800	1.25	KAF	107	DRE	225M4	560	527	
	88	4860	16.75	31100	1.45							
	101	4250	14.64	31700	1.60	K	107	DRE	225M4	560	526	
	110	3900	13.43	29900	1.10	KF	107	DRE	225M4	580	527	
	126	3400	11.73	29900	1.25	KA	107	DRE	225M4	540	528	
	149	2890	9.94	29600	1.45	KAF	107	DRE	225M4	560	527	
	170	2520	8.69	29300	1.60							
	55	10	51400	144.59	179800	0.95						
		11	46100	129.69	179700	1.10						
		13	40000	112.60	178600	1.25						
		14	36300	102.16	177400	1.35	K	187	DRE	250M4	2060	543
		17	31300	88.00	175000	1.60	KH	187	DRE	250M4	2000	544
20		26300	73.96	171400	1.90							
23		22800	64.04	167900	2.2							
17		31200	87.86	145300	1.00							
19		27800	78.14	144600	1.15							
22		24200	68.07	143300	1.30							
24		21600	60.74	141700	1.50	K	167	DRE	250M4	1480	541	
28		18400	51.77	139100	1.75	KH	167	DRE	250M4	1440	542	
34		15200	42.89	135400	2.1							
40		13000	36.61	131900	2.4							
24		21700	61.02	69000	0.85							
27		19300	54.29	70200	0.95							
32		16600	46.79	71200	1.10							
39		13500	38.02	71500	1.35							
47		11100	31.30	71000	1.60	K	157	DRE	250M4	1090	536	
53		9830	27.62	70400	1.85	KF	157	DRE	250M4	1160	537	
62		8520	23.95	69400	2.1	KA	157	DRE	250M4	1050	538	
69		7580	21.31	68400	2.4	KAF	157	DRE	250M4	1110	537	
80		6530	18.37	67000	2.8							
99		5310	14.92	64800	3.4							
117		4500	12.65	62900	3.8							
37		14300	40.19	47400	0.90	K	127	DRE	250M4	850	531	
47		11100	31.37	49300	1.15	KF	127	DRE	250M4	890	532	
53		9850	27.68	49700	1.30	KA	127	DRE	250M4	820	533	
						KAF	127	DRE	250M4	860	532	

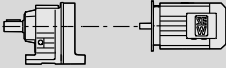



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
<b>55</b>	62	8510	23.91	49900	1.55						
	70	7520	21.15	49800	1.75						
	83	6320	17.77	49300	2.0	K	127	DRE	250M4	850	531
	103	5100	14.35	48300	2.4	KF	127	DRE	250M4	890	532
	115	4550	12.79	45900	1.85	KA	127	DRE	250M4	820	533
	137	3820	10.74	45000	2.1	KAF	127	DRE	250M4	860	532
	170	3080	8.68	43600	2.3						
<b>75</b>	11	62700	129.69	153800	0.80						
	13	54400	112.60	156100	0.90						
	14	49400	102.16	157000	1.00						
	17	42500	88.00	157400	1.15	KH	187	DRE	280S4	2140	543
	20	35700	73.96	156600	1.40	KH	187	DRE	280S4	2070	544
	23	30900	64.04	155000	1.60						
	28	25800	53.36	152200	1.95						
	33	22000	45.50*	149100	2.3						
	19	37800	78.14	126100	0.85						
	22	32900	68.07	127200	0.95						
	24	29300	60.74	127300	1.10						
	29	25000	51.77	126800	1.30						
	34	20700	42.89	125200	1.55	K	167	DRE	280S4	1560	541
	40	17700	36.61	123200	1.80	KH	167	DRE	280S4	1520	542
	46	15600	32.25	121300	2.0						
	51	13900	28.77	119300	2.3						
	60	11800	24.52	116300	2.7						
	39	18300	38.02	60800	1.00						
	47	15100	31.30	62200	1.20						
	54	13300	27.62	62600	1.35	K	157	DRE	280S4	1160	536
	62	11500	23.95	62600	1.55	KF	157	DRE	280S4	1240	537
	69	10300	21.31	62400	1.75	KA	157	DRE	280S4	1120	538
	81	8880	18.37	61800	2.0	KAF	157	DRE	280S4	1180	537
	99	7220	14.92	60500	2.5						
	117	6120	12.65	59300	2.8						
	47	15100	31.37	37900	0.85						
	53	13300	27.68	40800	0.95						
	62	11500	23.91	42200	1.10						
	70	10200	21.15	42900	1.25	K	127	DRE	280S4	930	531
	83	8590	17.77	43600	1.50	KF	127	DRE	280S4	970	532
	103	6940	14.35	43700	1.75	KA	127	DRE	280S4	900	533
	116	6180	12.79	41100	1.40	KAF	127	DRE	280S4	940	532
	138	5190	10.74	41000	1.55						
171	4190	8.68	40400	1.70							
<b>90</b>	14	59300	102.16	141700	0.85						
	17	51100	88.00	144200	1.00						
	20	42900	73.96	145500	1.15						
	23	37100	64.04	145400	1.35	K	187	DRE	280M4	2140	543
	28	30900	53.36	144200	1.60	KH	187	DRE	280M4	2070	544
	33	26400	45.50*	142300	1.90						
	35	24600	42.51	141300	2.0						
	38	22300	38.57	139700	2.2						
	22	39500	68.07	115100	0.80						
	24	35200	60.74	116600	0.90						
	29	30000	51.77	117600	1.05						
	34	24900	42.89	117600	1.30						
	40	21200	36.61	116700	1.50	KH	167	DRE	280M4	1560	541
	46	18700	32.25	115500	1.70	KH	167	DRE	280M4	1520	542
	51	16700	28.77	114200	1.90						
	60	14200	24.52	111900	2.2						
	73	11700	20.32	108800	2.7						
	85	10000	17.34	106000	3.2						
	39	22000	38.02	52700	0.80						
	62	13900	23.95	57500	1.30	K	157	DRE	280M4	1160	536
	69	12300	21.31	57900	1.45	KF	157	DRE	280M4	1240	537
	81	10600	18.37	57900	1.70	KA	157	DRE	280M4	1120	538
	99	8660	14.92	57400	2.1	KAF	157	DRE	280M4	1180	537
	117	7340	12.65	56600	2.3						

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

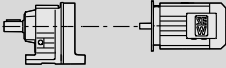

## K..DRE/DRS

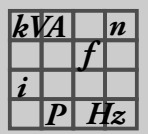
### K..DRE/DRS [kW]



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$			$m$ [kg]		
<b>90</b>	62	13800	23.91	35400	0.95					
	70	12200	21.15	37800	1.05	K	127	DRE 280M4	930	531
	83	10300	17.77	39200	1.25	KF	127	DRE 280M4	970	532
	103	8330	14.35	40200	1.45	KA	127	DRE 280M4	900	533
	116	7420	12.79	37600	1.15	KAF	127	DRE 280M4	940	532
	138	6230	10.74	38000	1.30					
	171	5030	8.68	38000	1.45					
<b>110</b>	17	62300	88.00	135900	0.80					
	20	52300	73.96	139500	0.95					
	23	45300	64.04	141000	1.10	KH	187	DRE 315K4	2450	543
	28	37700	53.36	141500	1.30	KH	187	DRE 315K4	2380	544
	33	32200	45.50*	140800	1.55					
	35	30100	42.51	140200	1.65	K	187	DRE 315K4/ERF/NS	2450	543
						KH	187	DRE 315K4/ERF/NS	2380	544
	38	27300	38.57	139100	1.85	K	187	DRE 315K4	2450	543
	45	23500	33.23	137100	2.1	KH	187	DRE 315K4	2380	544
	53	19700	27.92	134100	2.5					
	29	36600	51.77	105400	0.85	K	167	DRE 315K4	1870	541
	35	30300	42.89	107500	1.05	KH	167	DRE 315K4	1830	542
	41	25900	36.61	108100	1.25					
	46	22800	32.25	107900	1.40	K	167	DRE 315K4/ERF/NS	1870	541
						KH	167	DRE 315K4/ERF/NS	1830	542
	52	20300	28.77	107400	1.55					
	60	17300	24.52	106100	1.85	K	167	DRE 315K4	1870	541
	73	14300	20.32	104000	2.2	KH	167	DRE 315K4	1830	542
	86	12200	17.34	101800	2.6					
	62	16900	23.95	50800	1.05	K	157	DRE 315K4/ERF/NS	1470	536
						KF	157	DRE 315K4/ERF/NS	1550	537
					KA	157	DRE 315K4/ERF/NS	1440	538	
					KAF	157	DRE 315K4/ERF/NS	1500	537	
70	15000	21.31	51800	1.20	K	157	DRE 315K4	1470	536	
81	13000	18.37	52700	1.40	KF	157	DRE 315K4	1550	537	
99	10500	14.92	53100	1.70	KA	157	DRE 315K4	1440	538	
117	8960	12.65	53000	1.90	KAF	157	DRE 315K4	1500	537	
<b>132</b>	20	62700	73.96	123300	0.80					
	23	54300	64.04	127000	0.90					
	28	45200	53.36	129800	1.10	KH	187	DRE 315S4	2530	543
	33	38600	45.50*	130800	1.30					
	35	36000	42.51	130900	1.40	K	187	DRE 315S4/ERF/NS	2530	543
	38	32700	38.57	130700	1.55	KH	187	DRE 315S4/ERF/NS	2460	544
	45	28200	33.23	129800	1.75					
	53	23700	27.92	127900	2.1					
	61	20500	24.18	125900	2.3	K	187	DRE 315S4	2530	543
	74	17100	20.15	122800	2.6	KH	187	DRE 315S4	2460	544
	86	14500	17.18	119700	2.8					
	35	36400	42.89	96400	0.90	K	167	DRE 315S4	1950	541
	41	31000	36.61	98600	1.05	KH	167	DRE 315S4	1910	542
	46	27300	32.25	99600	1.15	K	167	DRE 315S4/ERF/NS	1950	541
	52	24400	28.77	99900	1.30	KH	167	DRE 315S4/ERF/NS	1910	542
	61	20800	24.52	99800	1.55					
	73	17200	20.32	98700	1.85	K	167	DRE 315S4	1950	541
	86	14700	17.34	97300	2.2	KH	167	DRE 315S4	1910	542
	62	20300	23.95	43400	0.90	K	157	DRE 315S4/ERF/NS	1550	536
	70	18000	21.31	45300	1.00	KF	157	DRE 315S4/ERF/NS	1630	537
						KA	157	DRE 315S4/ERF/NS	1520	538
					KAF	157	DRE 315S4/ERF/NS	1580	537	
81	15500	18.37	47000	1.15	K	157	DRE 315S4	1550	536	
100	12600	14.92	48500	1.40	KF	157	DRE 315S4	1630	537	
117	10700	12.65	49100	1.60	KA	157	DRE 315S4	1520	538	
					KAF	157	DRE 315S4	1580	537	
<b>160</b>	28	54900	53.36	114900	0.90					
	33	46800	45.50*	118100	1.05					
	45	34200	33.23	120500	1.45					
	53	28700	27.92	120100	1.75	KH	187	DRE 315M4	2690	543
	61	24800	24.18	119100	1.90	KH	187	DRE 315M4	2620	544
	74	20700	20.15	117200	2.1					
	86	17600	17.18	114900	2.3					

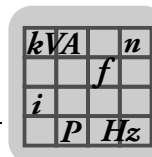




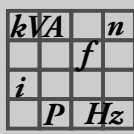
P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
<b>160</b>	<b>41</b>	37600	36.61	86500	0.85						
	<b>61</b>	25200	24.52	91700	1.25	<b>K</b>	<b>167</b>	<b>DRE</b>	<b>315M4</b>	2110	541
	<b>73</b>	20900	20.32	92000	1.55	<b>KH</b>	<b>167</b>	<b>DRE</b>	<b>315M4</b>	2070	542
	<b>86</b>	17800	17.34	91600	1.80						
	<b>81</b>	18900	18.37	39800	0.95	<b>K</b>	<b>157</b>	<b>DRE</b>	<b>315M4</b>	1710	536
	<b>99</b>	15300	14.92	42600	1.15	<b>KF</b>	<b>157</b>	<b>DRE</b>	<b>315M4</b>	1790	537
	<b>117</b>	13000	12.65	44100	1.30	<b>KA</b>	<b>157</b>	<b>DRE</b>	<b>315M4</b>	1680	538
						<b>KAF</b>	<b>157</b>	<b>DRE</b>	<b>315M4</b>	1730	537
<b>200</b>	<b>33</b>	58600	45.50*	100000	0.85	<b>K</b>	<b>187</b>	<b>DRE</b>	<b>315L4</b>	2770	543
						<b>KH</b>	<b>187</b>	<b>DRE</b>	<b>315L4</b>	2700	544
	<b>45</b>	42800	33.23	107300	1.15	<b>K</b>	<b>187</b>	<b>DRE</b>	<b>315L4/ERF/NS</b>	2770	543
						<b>KH</b>	<b>187</b>	<b>DRE</b>	<b>315L4/ERF/NS</b>	2700	544
	<b>53</b>	35900	27.92	109000	1.40						
	<b>61</b>	31100	24.18	109500	1.55	<b>K</b>	<b>187</b>	<b>DRE</b>	<b>315L4</b>	2770	543
	<b>74</b>	25900	20.15	109200	1.70	<b>KH</b>	<b>187</b>	<b>DRE</b>	<b>315L4</b>	2700	544
	<b>86</b>	22100	17.18	108100	1.85						
	<b>60</b>	31600	24.52	80100	1.00	<b>K</b>	<b>167</b>	<b>DRE</b>	<b>315L4/ERF/NS</b>	2190	541
						<b>KH</b>	<b>167</b>	<b>DRE</b>	<b>315L4/ERF/NS</b>	2150	542
	<b>73</b>	26100	20.32	82400	1.20	<b>K</b>	<b>167</b>	<b>DRE</b>	<b>315L4</b>	2190	541
	<b>85</b>	22300	17.34	83400	1.45	<b>KH</b>	<b>167</b>	<b>DRE</b>	<b>315L4</b>	2150	542
	<b>99</b>	19200	14.92	34200	0.95	<b>K</b>	<b>157</b>	<b>DRE</b>	<b>315L4</b>	1790	536
	<b>117</b>	16300	12.65	36900	1.05	<b>KF</b>	<b>157</b>	<b>DRE</b>	<b>315L4</b>	1870	537
					<b>KA</b>	<b>157</b>	<b>DRE</b>	<b>315L4</b>	1760	538	
					<b>KAF</b>	<b>157</b>	<b>DRE</b>	<b>315L4</b>	1810	537	


**10.4 K..R..DRE/DRS [Nm]**

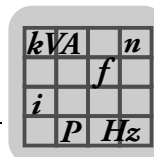
$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]		$m$ [kg]				
200	0.20	6832	5640						
	0.23	5922	5640						
	0.25	5491	5640						
	0.29	4759	5640						
	0.33	4160	5640						
	0.38	3645	5640						
	0.43	3205	5640	K	37R17	DR	63S4	19	545
	0.49	2801	5640	KF	37R17	DR	63S4	22	545
	0.56	2454	5640	KA	37R17	DR	63S4	19	545
	0.64	2166	5640	KAF	37R17	DR	63S4	21	545
	0.73	1891	5640						
	0.83	1660	5640						
	0.94	1466	5640						
	1.1	1288	5640						
	1.2	1136	5640						
	1.4	996	5640						
	1.6	876	5640						
	1.8	761	5640						
	2.1	671	5640	K	37R17	DR	63S4	19	545
	2.4	585	5640	KF	37R17	DR	63S4	21	545
	2.7	512	5640	KA	37R17	DR	63S4	19	545
	3.1	451	5640	KAF	37R17	DR	63S4	20	545
	3.5	396	5640						
	4.0	346	5640						
	4.5	304	5640						
	4.9	267	5640	K	37R17	DR	63M4	19	545
	5.6	234	5640	KF	37R17	DR	63M4	21	545
	6.4	205	5640	KA	37R17	DR	63M4	19	545
	7.3	181	5640	KAF	37R17	DR	63M4	20	545
	8.1	160	5640	K	37R17	DR	63L4	20	545
	9.5	136	5640	KF	37R17	DR	63L4	22	545
	10	127	5640	KA	37R17	DR	63L4	19	545
				KAF	37R17	DR	63L4	21	545
	12	110	5640	K	37R17	DRS	71S4	21	545
	14	96	5640	KF	37R17	DRS	71S4	24	545
				KA	37R17	DRS	71S4	21	545
				KAF	37R17	DRS	71S4	23	545
	400	0.14	10138	5920					
		0.16	8534	5920					
		0.18	7662	5920					
0.20		6826	5920						
0.23		5983	5920						
0.27		5159	5920						
0.30		4601	5920	K	47R37	DR	63S4	34	545
0.35		3940	5920	KF	47R37	DR	63S4	37	545
0.40		3477	5920	KA	47R37	DR	63S4	33	545
0.45		3043	5920	KAF	47R37	DR	63S4	36	545
0.51		2733	5920						
0.59		2354	5920						
0.67		2063	5920						
0.76		1819	5920						
0.87		1586	5920						
0.99		1388	5920						
1.1		1222	5920						
1.3		1097	5920	K	47R37	DR	63S4	33	545
1.5		945	5920	KF	47R37	DR	63S4	36	545
1.7		831	5920	KA	47R37	DR	63S4	32	545
1.9		718	5920	KAF	47R37	DR	63S4	35	545
2.2		639	5920						
2.4		552	5920	K	47R37	DR	63M4	33	545
2.7		495	5920	KF	47R37	DR	63M4	36	545
3.1		426	5920	KA	47R37	DR	63M4	32	545
3.5		375	5920	KAF	47R37	DR	63M4	35	545
4.0		327	5920	K	47R37	DR	63L4	34	545
4.5		289	5920	KF	47R37	DR	63L4	37	545
5.1		256	5920	KA	47R37	DR	63L4	33	545
				KAF	47R37	DR	63L4	36	545

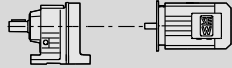



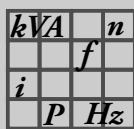
$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]		
400	6.2	225	5920	K	47R37	DRS	71S4	36	545	
	7.0	198	5920	KF	47R37	DRS	71S4	39	545	
				KA	47R37	DRS	71S4	35	545	
				KAF	47R37	DRS	71S4	38	545	
	8.1	171	5920	K	47R37	DRS	71M4	37	545	
	9.0	153	5920	KF	47R37	DRS	71M4	40	545	
	11	131	5920	KA	47R37	DRS	71M4	36	545	
				KAF	47R37	DRS	71M4	39	545	
	600	0.11	12169	7630						
		0.12	11162	7630						
0.15		9503	7630							
0.16		8547	7630							
0.19		7277	7630							
0.21		6478	7630							
0.24		5662	7630	K	57R37	DR	63S4	39	545	
0.27		5033	7630	KF	57R37	DR	63S4	44	545	
0.32		4340	7630	KA	57R37	DR	63S4	37	545	
0.36		3854	7630	KAF	57R37	DR	63S4	43	545	
0.41		3390	7630							
0.47		2924	7630							
0.53		2593	7630							
0.61		2249	7630							
0.70		1986	7630							
0.79		1743	7630							
0.90		1539	7630	K	57R37	DR	63S4	39	545	
1.0		1354	7630	KF	57R37	DR	63S4	44	545	
1.2		1174	7630	KA	57R37	DR	63S4	37	545	
1.3		1036	7630	KAF	57R37	DR	63S4	43	545	
1.5		906	7630							
1.6		806	7630	K	57R37	DR	63M4	39	545	
1.9		699	7630	KF	57R37	DR	63M4	44	545	
2.2		615	7630	KA	57R37	DR	63M4	37	545	
				KAF	57R37	DR	63M4	43	545	
2.4		544	7630	K	57R37	DR	63L4	40	545	
2.8		473	7630	KF	57R37	DR	63L4	45	545	
3.1		421	7630	KA	57R37	DR	63L4	38	545	
				KAF	57R37	DR	63L4	43	545	
3.8		362	7630	K	57R37	DRS	71S4	42	545	
4.3		319	7630	KF	57R37	DRS	71S4	47	545	
4.9		280	7630	KA	57R37	DRS	71S4	40	545	
				KAF	57R37	DRS	71S4	45	545	
5.6		246	7630	K	57R37	DRS	71M4	43	545	
6.4		215	7630	KF	57R37	DRS	71M4	48	545	
7.2		192	7630	KA	57R37	DRS	71M4	41	545	
				KAF	57R37	DRS	71M4	47	545	
8.6		166	7630	K	57R37	DRE	80M4	48	545	
9.9		145	7630	KF	57R37	DRE	80M4	53	545	
				KA	57R37	DRE	80M4	46	545	
			KAF	57R37	DRE	80M4	51	545		
11	129	7630	K	57R37	DRE	90M4	52	545		
13	111	7630	KF	57R37	DRE	90M4	57	545		
15	97	7630	KA	57R37	DRE	90M4	50	545		
			KAF	57R37	DRE	90M4	56	545		
820	0.11	12139	10300							
	0.12	11134	10300							
	0.15	9479	10300							
	0.17	8173	10300							
	0.19	7259	10300							
	0.21	6462	10300							
	0.24	5648	10300	K	67R37	DR	63S4	45	545	
	0.28	4846	10300	KF	67R37	DR	63S4	51	545	
	0.32	4329	10300	KA	67R37	DR	63S4	43	545	
	0.37	3750	10300	KAF	67R37	DR	63S4	48	545	
	0.42	3315	10300							
	0.47	2917	10300							
	0.55	2532	10300							
	0.62	2244	10300							
	0.70	1981	10300							


**K..DRE/DRS**  
**K..R..DRE/DRS [Nm]**

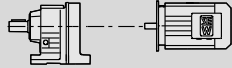

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
<b>820</b>	0.79	1739	10300	K	67R37	DR	63S4	45	545
	0.90	1535	10300	KF	67R37	DR	63S4	51	545
	1.0	1351	10300	KA	67R37	DR	63S4	42	545
	1.2	1171	10300	KAF	67R37	DR	63S4	48	545
	1.3	1034	10300	K	67R37	DR	63M4	45	545
	1.5	903	10300	KF	67R37	DR	63M4	51	545
	1.7	793	10300	KA	67R37	DR	63M4	42	545
				KAF	67R37	DR	63M4	48	545
	1.9	697	10300	K	67R37	DR	63L4	46	545
	2.1	613	10300	KF	67R37	DR	63L4	51	545
	2.4	542	10300	KA	67R37	DR	63L4	43	545
				KAF	67R37	DR	63L4	49	545
	2.9	471	10300	K	67R37	DRS	71S4	48	545
	3.3	420	10300	KF	67R37	DRS	71S4	53	545
	3.8	361	10300	KA	67R37	DRS	71S4	45	545
				KAF	67R37	DRS	71S4	51	545
	4.3	323	10300	K	67R37	DRS	71M4	49	545
	5.0	279	10300	KF	67R37	DRS	71M4	54	545
	5.6	246	10300	KA	67R37	DRS	71M4	46	545
				KAF	67R37	DRS	71M4	52	545
	6.6	217	10300	K	67R37	DRE	80M4	54	545
	7.5	191	10300	KF	67R37	DRE	80M4	59	545
				KA	67R37	DRE	80M4	51	545
				KAF	67R37	DRE	80M4	57	545
<b>1550</b>	0.09	15310	15400						
	0.10	14043	15400						
	0.12	11955	15400						
	0.14	10217	15400						
	0.16	8809	15400						
	0.18	7528	15400	K	77R37	DR	63S4	69	545
	0.21	6606	15400	KF	77R37	DR	63S4	78	545
	0.24	5774	15400	KA	77R37	DR	63S4	62	545
	0.27	5089	15400	KAF	77R37	DR	63S4	70	545
	0.31	4489	15400						
	0.35	3961	15400						
	0.40	3485	15400						
	0.48	2901	15400						
	0.51	2717	15400						
	0.56	2370	15400	K	77R37	DR	63M4	69	545
				KF	77R37	DR	63M4	78	545
				KA	77R37	DR	63M4	62	545
				KAF	77R37	DR	63M4	70	545
	0.64	2050	15400	K	77R37	DR	63M4	69	545
	0.75	1772	15400	KF	77R37	DR	63M4	77	545
	0.87	1514	15400	KA	77R37	DR	63M4	62	545
	0.95	1388	15400	KAF	77R37	DR	63M4	70	545
	1.1	1218	15400	K	77R37	DR	63L4	70	545
	1.2	1053	15400	KF	77R37	DR	63L4	78	545
				KA	77R37	DR	63L4	62	545
				KAF	77R37	DR	63L4	70	545
	1.5	924	15400	K	77R37	DRS	71S4	72	545
	1.7	815	15400	KF	77R37	DRS	71S4	80	545
	2.0	709	15400	KA	77R37	DRS	71S4	64	545
				KAF	77R37	DRS	71S4	72	545
	2.2	622	15400	K	77R37	DRS	71M4	73	545
	2.5	552	15400	KF	77R37	DRS	71M4	81	545
2.8	485	15400	KA	77R37	DRS	71M4	65	545	
			KAF	77R37	DRS	71M4	73	545	
3.4	428	15400	K	77R37	DRE	80M4	78	545	
3.9	367	15400	KF	77R37	DRE	80M4	86	545	
			KA	77R37	DRE	80M4	70	545	
			KAF	77R37	DRE	80M4	78	545	
4.3	328	15400	K	77R37	DRE	90M4	82	545	
4.9	290	15400	KF	77R37	DRE	90M4	90	545	
5.6	252	15400	KA	77R37	DRE	90M4	75	545	
			KAF	77R37	DRE	90M4	83	545	

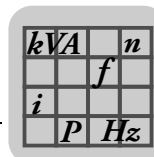


$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]				$m$ [kg]		
<b>2700</b>	0.09	14829	27300						
	0.10	13168	27300						
	0.12	11737	27300						
	0.14	10217	27300	K	87R57	DR	63S4	120	545
	0.15	9073	27300	KF	87R57	DR	63S4	130	545
	0.18	7854	27300	KA	87R57	DR	63S4	105	545
	0.20	6832	27300	KAF	87R57	DR	63S4	120	545
	0.23	5930	27300						
	0.26	5240	27300						
	0.30	4562	27300						
	0.33	4037	27300	K	87R57	DR	63M4	120	545
	0.37	3609	27300	KF	87R57	DR	63M4	130	545
	0.42	3107	27300	KA	87R57	DR	63M4	105	545
	0.48	2728	27300	KAF	87R57	DR	63M4	120	545
	0.55	2371	27300	K	87R57	DR	63L4	120	545
				KF	87R57	DR	63L4	130	545
				KA	87R57	DR	63L4	105	545
				KAF	87R57	DR	63L4	120	545
	0.62	2088	27300	K	87R57	DR	63L4	120	545
	0.70	1854	27300	KF	87R57	DR	63L4	125	545
				KA	87R57	DR	63L4	105	545
				KAF	87R57	DR	63L4	120	545
	0.83	1657	27300	K	87R57	DRS	71S4	120	545
	0.97	1415	27300	KF	87R57	DRS	71S4	130	545
	1.1	1229	27300	KA	87R57	DRS	71S4	110	545
				KAF	87R57	DRS	71S4	120	545
	1.3	1078	27300	K	87R57	DRS	71M4	120	545
	1.4	951	27300	KF	87R57	DRS	71M4	130	545
	1.6	837	27300	KA	87R57	DRS	71M4	110	545
				KAF	87R57	DRS	71M4	120	545
	2.0	726	27300	K	87R57	DRE	80M4	125	545
	2.2	638	27300	KF	87R57	DRE	80M4	135	545
				KA	87R57	DRE	80M4	115	545
				KAF	87R57	DRE	80M4	125	545
	2.5	562	27300	K	87R57	DRE	90M4	130	545
	3.0	474	27300	KF	87R57	DRE	90M4	140	545
3.3	426	27300	KA	87R57	DRE	90M4	120	545	
			KAF	87R57	DRE	90M4	130	545	
3.8	373	27300	K	87R57	DRE	90L4	135	545	
4.3	330	27300	KF	87R57	DRE	90L4	145	545	
4.9	294	27300	KA	87R57	DRE	90L4	120	545	
			KAF	87R57	DRE	90L4	135	545	
5.7	250	27300	K	87R57	DRE	100M4	140	545	
6.0	236	27300	KF	87R57	DRE	100M4	150	545	
7.1	201	27300	KA	87R57	DRE	100M4	125	545	
			KAF	87R57	DRE	100M4	140	545	
<b>4300</b>	0.08	18091	40000						
	0.08	16666	40000						
	0.09	14897	40000						
	0.10	13182	40000	K	97R57	DR	63S4	180	545
	0.12	11677	40000	KF	97R57	DR	63S4	200	545
	0.13	10317	40000	KA	97R57	DR	63S4	160	545
	0.15	9083	40000	KAF	97R57	DR	63S4	185	545
	0.17	8054	40000						
	0.20	6970	40000						
	0.22	6027	40000	K	97R57	DR	63M4	180	545
	0.24	5391	40000	KF	97R57	DR	63M4	200	545
	0.28	4669	40000	KA	97R57	DR	63M4	160	545
	0.32	4082	40000	KAF	97R57	DR	63M4	185	545
	0.36	3583	40000	K	97R57	DR	63L4	180	545
	0.42	3108	40000	KF	97R57	DR	63L4	200	545
	0.47	2757	40000	KA	97R57	DR	63L4	160	545
				KAF	97R57	DR	63L4	185	545
	0.57	2419	40000	K	97R57	DRS	71S4	180	545
	0.65	2123	40000	KF	97R57	DRS	71S4	200	545
				KA	97R57	DRS	71S4	160	545
				KAF	97R57	DRS	71S4	185	545

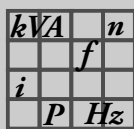


## K..DRE/DRS K..R..DRE/DRS [Nm]

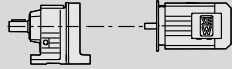

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
4300	0.74	1856	40000	K	97R57	DRS	71M4	180	545
	0.85	1625	40000	KF	97R57	DRS	71M4	200	545
	0.96	1430	40000	KA	97R57	DRS	71M4	165	545
	1.1	1261	40000	KAF	97R57	DRS	71M4	190	545
	1.3	1102	40000	K	97R57	DRE	80M4	185	545
	1.5	957	40000	KF	97R57	DRE	80M4	205	545
				KA	97R57	DRE	80M4	170	545
				KAF	97R57	DRE	80M4	195	545
	1.7	855	40000	K	97R57	DRE	90M4	190	545
	1.9	743	40000	KF	97R57	DRE	90M4	210	545
	2.2	652	40000	KA	97R57	DRE	90M4	175	545
				KAF	97R57	DRE	90M4	200	545
	2.5	573	40000	K	97R57	DRE	90L4	195	545
	2.8	504	40000	KF	97R57	DRE	90L4	215	545
				KA	97R57	DRE	90L4	175	545
				KAF	97R57	DRE	90L4	200	545
	3.3	437	40000	K	97R57	DRE	100M4	200	545
	3.7	382	40000	KF	97R57	DRE	100M4	220	545
	4.2	342	40000	KA	97R57	DRE	100M4	180	545
				KAF	97R57	DRE	100M4	205	545
	4.8	305	40000	K	97R57	DRE	100LC4	205	545
	5.6	258	40000	KF	97R57	DRE	100LC4	225	545
				KA	97R57	DRE	100LC4	185	545
				KAF	97R57	DRE	100LC4	210	545
	6.3	232	40000	K	97R57	DRE	132S4	220	545
	7.3	199	40000	KF	97R57	DRE	132S4	240	545
				KA	97R57	DRE	132S4	200	545
				KAF	97R57	DRE	132S4	225	545
8000	0.10	14311	65000	K	107R77	DR	63S4	310	545
				KF	107R77	DR	63S4	320	545
				KA	107R77	DR	63S4	280	545
				KAF	107R77	DR	63S4	305	545
	0.11	12211	65000	K	107R77	DR	63M4	310	545
	0.12	10677	65000	KF	107R77	DR	63M4	320	545
	0.14	9524	65000	KA	107R77	DR	63M4	280	545
	0.16	8328	65000	KAF	107R77	DR	63M4	305	545
	0.18	7270	65000	K	107R77	DR	63L4	310	545
	0.21	6184	65000	KF	107R77	DR	63L4	320	545
	0.23	5662	65000	KA	107R77	DR	63L4	285	545
				KAF	107R77	DR	63L4	305	545
	0.27	5138	65000	K	107R77	DRS	71S4	310	545
	0.32	4359	65000	KF	107R77	DRS	71S4	325	545
	0.36	3810	65000	KA	107R77	DRS	71S4	285	545
				KAF	107R77	DRS	71S4	310	545
	0.41	3358	65000	K	107R77	DRS	71M4	315	545
	0.46	2977	65000	KF	107R77	DRS	71M4	325	545
	0.53	2599	65000	KA	107R77	DRS	71M4	285	545
				KAF	107R77	DRS	71M4	310	545
	0.63	2286	65000	K	107R77	DRE	80M4	320	545
	0.74	1939	65000	KF	107R77	DRE	80M4	330	545
				KA	107R77	DRE	80M4	290	545
				KAF	107R77	DRE	80M4	315	545
	0.83	1713	65000	K	107R77	DRE	90M4	320	545
	0.91	1554	65000	KF	107R77	DRE	90M4	335	545
	1.1	1336	65000	KA	107R77	DRE	90M4	295	545
				KAF	107R77	DRE	90M4	320	545
	1.2	1166	65000	K	107R77	DRE	90L4	325	545
	1.4	1030	65000	KF	107R77	DRE	90L4	335	545
	1.6	904	65000	KA	107R77	DRE	90L4	295	545
				KAF	107R77	DRE	90L4	320	545
1.8	793	65000	K	107R77	DRE	100M4	330	545	
2.0	696	65000	KF	107R77	DRE	100M4	340	545	
2.3	615	65000	KA	107R77	DRE	100M4	300	545	
			KAF	107R77	DRE	100M4	325	545	
2.8	522	65000	K	107R77	DRE	100LC4	335	545	
3.2	461	65000	KF	107R77	DRE	100LC4	345	545	
			KA	107R77	DRE	100LC4	305	545	
			KAF	107R77	DRE	100LC4	330	545	



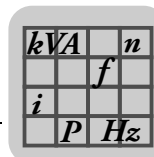
$M_{a\ max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]		
<b>8000</b>	3.6 4.0	408	65000	K	107R77	DRE	132S4	345	545	
		364	65000	KF	107R77	DRE	132S4	360	545	
				KA	107R77	DRE	132S4	320	545	
				KAF	107R77	DRE	132S4	345	545	
	4.6 5.1 5.8	318 286 251	65000 65000 65000	K	107R77	DRE	132M4	360	545	
				KF	107R77	DRE	132M4	370	545	
				KA	107R77	DRE	132M4	330	545	
				KAF	107R77	DRE	132M4	355	545	
	<b>13000</b>	0.08 0.08 0.09 0.11	17550	79200	K	127R77	DR	63M4	470	545
			16006	79200	KF	127R77	DR	63M4	510	545
			14975	79200	KA	127R77	DR	63M4	440	545
			12440	79200	KAF	127R77	DR	63M4	480	545
0.12 0.13 0.15		10915 9819 8443	79200 79200 79200	K	127R77	DR	63L4	470	545	
				KF	127R77	DR	63L4	510	545	
				KA	127R77	DR	63L4	440	545	
				KAF	127R77	DR	63L4	480	545	
0.18 0.21		7482 6565	79200 79200	K	127R77	DRS	71S4	470	545	
				KF	127R77	DRS	71S4	510	545	
				KA	127R77	DRS	71S4	445	545	
				KAF	127R77	DRS	71S4	480	545	
0.24 0.27 0.31		5804 5027 4423	79200 79200 79200	K	127R77	DRS	71M4	475	545	
				KF	127R77	DRS	71M4	520	545	
				KA	127R77	DRS	71M4	445	545	
				KAF	127R77	DRS	71M4	485	545	
0.37 0.43 0.48		3889 3311 3009	79200 79200 79200	K	127R77	DRE	80M4	480	545	
				KF	127R77	DRE	80M4	520	545	
				KA	127R77	DRE	80M4	450	545	
				KAF	127R77	DRE	80M4	490	545	
0.54 0.63		2607 2268	79200 79200	K	127R77	DRE	90M4	480	545	
				KF	127R77	DRE	90M4	520	545	
				KA	127R77	DRE	90M4	455	545	
				KAF	127R77	DRE	90M4	490	545	
0.74 0.81 0.93		1926 1757 1541	79200 79200 79200	K	127R77	DRE	90L4	485	545	
				KF	127R77	DRE	90L4	530	545	
				KA	127R77	DRE	90L4	455	545	
				KAF	127R77	DRE	90L4	495	545	
1.1 1.2 1.4		1342 1177 1025	79200 79200 79200	K	127R77	DRE	100M4	490	545	
				KF	127R77	DRE	100M4	530	545	
				KA	127R77	DRE	100M4	460	545	
				KAF	127R77	DRE	100M4	500	545	
1.6 1.8		899 790	79200 79200	K	127R77	DRE	100LC4	495	545	
				KF	127R77	DRE	100LC4	540	545	
				KA	127R77	DRE	100LC4	465	545	
				KAF	127R77	DRE	100LC4	500	545	
2.1 2.4 2.7		704 610 549	79200 79200 79200	K	127R77	DRE	132S4	510	545	
				KF	127R77	DRE	132S4	550	545	
				KA	127R77	DRE	132S4	480	545	
				KAF	127R77	DRE	132S4	520	545	
3.0 3.5		477 418	79200 79200	K	127R77	DRE	132M4	520	545	
				KF	127R77	DRE	132M4	560	545	
				KA	127R77	DRE	132M4	490	545	
				KAF	127R77	DRE	132M4	530	545	
2.7 3.1 3.5		536 473 418	79200 79200 79200	K	127R87	DRE	132M4	540	545	
				KF	127R87	DRE	132M4	580	545	
				KA	127R87	DRE	132M4	510	545	
				KAF	127R87	DRE	132M4	550	545	
4.0 4.4	367 330	79200 79200	K	127R87	DRE	132MC4	540	545		
			KF	127R87	DRE	132MC4	590	545		
			KA	127R87	DRE	132MC4	520	545		
			KAF	127R87	DRE	132MC4	550	545		
5.1 5.8	287 253	79200 79200	K	127R87	DRE	160M4	560	545		
			KF	127R87	DRE	160M4	610	545		
			KA	127R87	DRE	160M4	540	545		
			KAF	127R87	DRE	160M4	570	545		

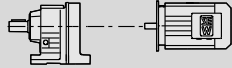



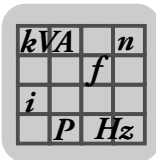
## K..DRE/DRS K..R..DRE/DRS [Nm]

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
<b>18000</b>	0.08	17679	112200						
	0.09	15729	112200						
	0.09	14721	112200	K	157R97	DRS	71M4	790	545
	0.11	13097	112200	KF	157R97	DRS	71M4	870	545
	0.12	11368	112200	KA	157R97	DRS	71M4	750	545
	0.14	10114	112200	KAF	157R97	DRS	71M4	810	545
	0.16	8718	112200						
	0.18	7734	112200						
	0.28	5074	112200						
	0.32	4514	112200	K	157R97	DRE	80M4	800	545
				KF	157R97	DRE	80M4	870	545
				KA	157R97	DRE	80M4	760	545
				KAF	157R97	DRE	80M4	820	545
	0.36	3979	112200						
	0.40	3516	112200						
	0.47	3051	112200	K	157R97	DRE	90M4	800	545
				KF	157R97	DRE	90M4	880	545
				KA	157R97	DRE	90M4	760	545
				KAF	157R97	DRE	90M4	820	545
	0.55	2610	112200						
	0.62	2322	112200	K	157R97	DRE	90L4	800	545
				KF	157R97	DRE	90L4	880	545
				KA	157R97	DRE	90L4	760	545
				KAF	157R97	DRE	90L4	820	545
	0.70	2029	112200						
	0.79	1805	112200	K	157R97	DRE	100M4	810	545
				KF	157R97	DRE	100M4	880	545
				KA	157R97	DRE	100M4	770	545
				KAF	157R97	DRE	100M4	830	545
	0.86	1659	112200						
	1.0	1365	112200	K	157R97	DRE	100M4	800	545
				KF	157R97	DRE	100M4	880	545
				KA	157R97	DRE	100M4	770	545
				KAF	157R97	DRE	100M4	830	545
	1.2	1229	112200						
	1.3	1093	112200	K	157R97	DRE	100LC4	810	545
				KF	157R97	DRE	100LC4	890	545
				KA	157R97	DRE	100LC4	770	545
				KAF	157R97	DRE	100LC4	830	545
	1.6	942	112200						
	1.7	854	112200	K	157R97	DRE	132S4	820	545
				KF	157R97	DRE	132S4	900	545
				KA	157R97	DRE	132S4	790	545
				KAF	157R97	DRE	132S4	840	545
	1.9	756	112200						
	2.2	661	112200						
	2.6	567	112200	K	157R97	DRE	132M4	830	545
			KF	157R97	DRE	132M4	910	545	
			KA	157R97	DRE	132M4	800	545	
			KAF	157R97	DRE	132M4	860	545	
2.9	504	112200							
3.4	434	112200	K	157R97	DRE	132MC4	840	545	
			KF	157R97	DRE	132MC4	920	545	
			KA	157R97	DRE	132MC4	800	545	
			KAF	157R97	DRE	132MC4	860	545	
3.9	379	112200							
4.4	333	112200	K	157R97	DRE	160M4	860	545	
			KF	157R97	DRE	160M4	940	545	
			KA	157R97	DRE	160M4	820	545	
			KAF	157R97	DRE	160M4	880	545	
5.1	291	112200							
			K	157R97	DRE	160MC4	860	545	
			KF	157R97	DRE	160MC4	940	545	
			KA	157R97	DRE	160MC4	830	545	
			KAF	157R97	DRE	160MC4	890	545	
3.8	385	112200							
			K	157R107	DRE	160M4	910	545	
			KF	157R107	DRE	160M4	980	545	
			KA	157R107	DRE	160M4	870	545	
			KAF	157R107	DRE	160M4	930	545	
4.5	325	112200							
4.9	299	112200	K	157R107	DRE	160MC4	910	545	
			KF	157R107	DRE	160MC4	990	545	
			KA	157R107	DRE	160MC4	870	545	
			KAF	157R107	DRE	160MC4	930	545	
5.8	253	112200							
6.4	230	112200							
6.9	213	112200	K	157R107	DRE	180M4	960	545	
			KF	157R107	DRE	180M4	1030	545	
			KA	157R107	DRE	180M4	920	545	
			KAF	157R107	DRE	180M4	980	545	

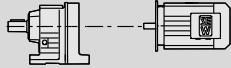





$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
<b>32000</b>	0.07	19723	150000						
	0.08	17406	150000						
	0.09	15000	150000	K	167R97	DRS	71M4	1180	545
	0.10	13238	150000	KH	167R97	DRS	71M4	1150	545
	0.12	11573	150000						
	0.13	10264	150000						
	0.17	8628	150000	K	167R97	DRE	80M4	1190	545
				KH	167R97	DRE	80M4	1150	545
	0.22	6562	150000	K	167R97	DRE	90M4	1190	545
	0.27	5355	150000	KH	167R97	DRE	90M4	1150	545
	0.30	4788	150000	K	167R97	DRE	90L4	1190	545
	0.35	4079	150000	KH	167R97	DRE	90L4	1160	545
	0.42	3376	150000	K	167R97	DRE	100M4	1200	545
	0.52	2755	150000	KH	167R97	DRE	100M4	1160	545
	0.64	2263	150000	K	167R97	DRE	100LC4	1200	545
				KH	167R97	DRE	100LC4	1170	545
	0.67	2182	150000	K	167R97	DRE	100LC4	1200	545
				KH	167R97	DRE	100LC4	1160	545
	0.86	1704	150000	K	167R97	DRE	132S4	1220	545
	1.0	1408	150000	KH	167R97	DRE	132S4	1180	545
	1.1	1296	150000	K	167R97	DRE	132M4	1230	545
	1.3	1101	150000	KH	167R97	DRE	132M4	1190	545
	1.6	944	150000						
	1.7	843	150000	K	167R97	DRE	132MC4	1230	545
	1.9	757	150000	KH	167R97	DRE	132MC4	1190	545
	2.3	632	150000	K	167R97	DRE	160M4	1250	545
				KH	167R97	DRE	160M4	1210	545
	2.6	561	150000	K	167R97	DRE	160MC4	1260	545
				KH	167R97	DRE	160MC4	1220	545
	3.0	481	150000	K	167R97	DRE	180M4	1300	545
	3.5	423	150000	KH	167R97	DRE	180M4	1260	545
	4.0	369	150000						
4.6	318	150000	K	167R107	DRE	180L4	1370	545	
			KH	167R107	DRE	180L4	1330	545	
5.3	278	150000	K	167R107	DRE	180LC4	1380	545	
6.0	244	150000	KH	167R107	DRE	180LC4	1340	545	
6.9	213	150000	K	167R107	DRE	200L4	1470	545	
7.2	206	150000	KH	167R107	DRE	200L4	1430	545	
8.2	180	150000							
9.2	160	150000	K	167R107	DRE	225S4	1500	545	
			KH	167R107	DRE	225S4	1460	545	
11	135	150000	K	167R107	DRE	225M4	1520	545	
12	118	150000	KH	167R107	DRE	225M4	1480	545	
<b>50000</b>	0.04	32625	190000						
	0.05	27165	190000						
	0.06	24353	190000	K	187R97	DRS	71M4	1770	545
	0.07	19144	190000	KH	187R97	DRS	71M4	1700	545
	0.08	16978	190000						
	0.10	14272	190000	K	187R97	DRE	80M4	1770	545
	0.11	13116	190000	KH	187R97	DRE	80M4	1700	545
	0.12	11647	190000						
	0.14	10413	190000	K	187R97	DRE	90M4	1770	545
	0.15	9363	190000	KH	187R97	DRE	90M4	1710	545
	0.17	8126	190000						
	0.19	7343	190000	K	187R97	DRE	90L4	1780	545
	0.21	6747	190000	KH	187R97	DRE	90L4	1710	545
	0.24	5991	190000						
	0.27	5358	190000	K	187R97	DRE	100M4	1780	545
	0.30	4817	190000	KH	187R97	DRE	100M4	1710	545
	0.33	4370	190000						
	0.40	3609	190000	K	187R97	DRE	100LC4	1780	545
0.48	3062	190000	KH	187R97	DRE	100LC4	1720	545	
0.58	2519	190000	K	187R97	DRE	132S4	1800	545	
0.64	2268	190000	KH	187R97	DRE	132S4	1730	545	



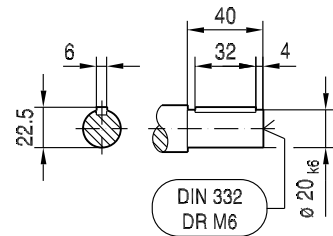
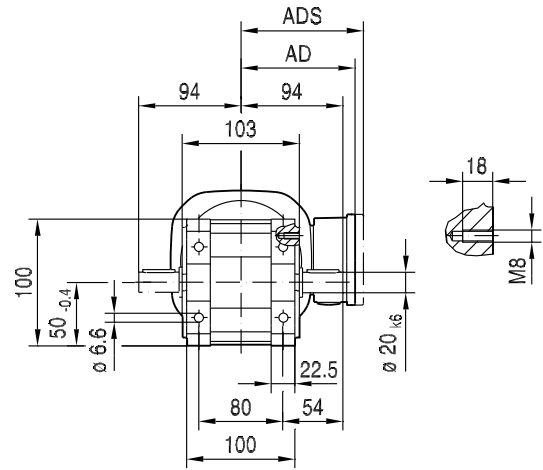
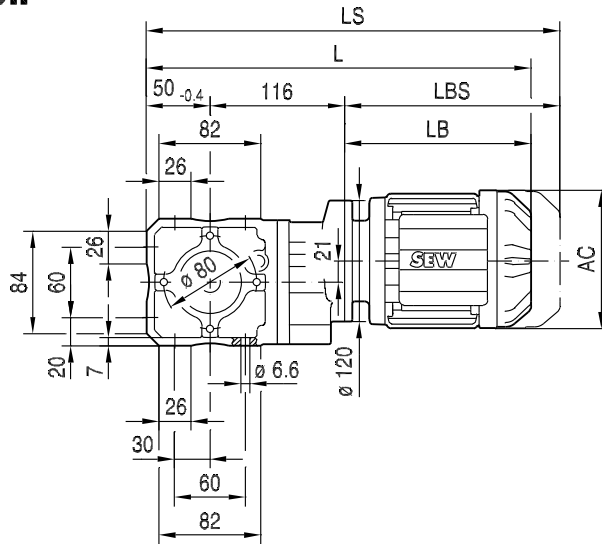
**K..DRE/DRS**  
K..R..DRE/DRS [Nm]

$M_{a \max}$ [Nm]	$n_a$ [1/min]	i	$F_{Ra}^{1)}$ [N]					m [kg]	
<b>50000</b>	0.71	2054	190000						
	0.80	1821	190000	K	187R97	DRE	132M4	1810	545
	0.91	1605	190000	KH	187R97	DRE	132M4	1740	545
	1.0	1395	190000	K	187R97	DRE	132MC4	1810	545
	1.2	1196	190000	KH	187R97	DRE	132MC4	1750	545
	1.4	1046	190000	K	187R97	DRE	160M4	1830	545
	1.6	945	190000	KH	187R97	DRE	160M4	1770	545
	2.0	738	190000	K	187R97	DRE	180M4	1880	545
	2.4	621	190000	KH	187R97	DRE	180M4	1820	545
	2.8	527	190000	K	187R97	DRE	180L4	1900	545
				KH	187R97	DRE	180L4	1840	545
	1.8	835	190000	K	187R107	DRE	160MC4	1890	545
				KH	187R107	DRE	160MC4	1820	545
	2.0	729	190000	K	187R107	DRE	180M4	1930	545
	2.4	622	190000	KH	187R107	DRE	180M4	1860	545
	2.8	520	190000	K	187R107	DRE	180L4	1950	545
	3.2	454	190000	KH	187R107	DRE	180L4	1880	545
	4.2	355	190000	K	187R107	DRE	200L4	2050	545
				KH	187R107	DRE	200L4	1980	545
	5.7	261	190000	K	187R107	DRE	225S4	2080	545
				KH	187R107	DRE	225S4	2010	545
	6.7	221	190000	K	187R107	DRE	225M4	2100	545
	7.6	193	190000	KH	187R107	DRE	225M4	2030	545

10.5 K..DR.. [mm]

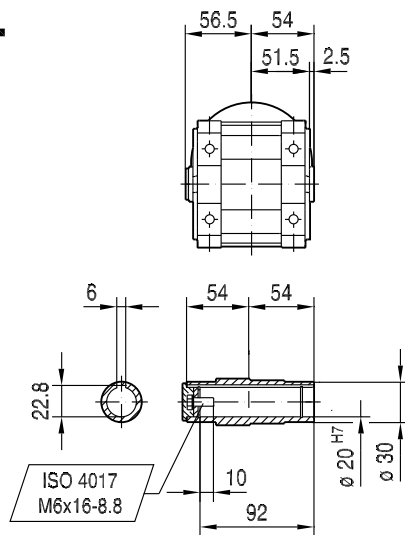
**K19..**

33 071 00 12

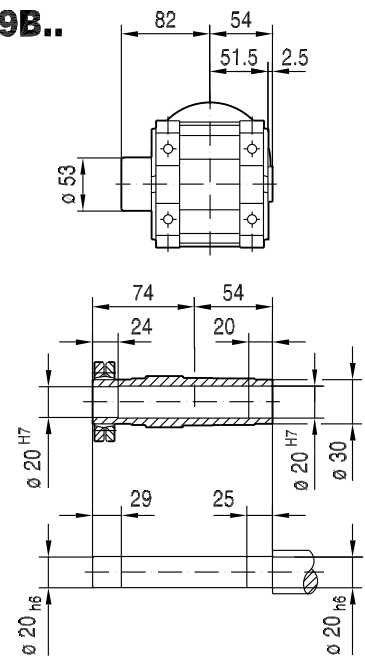


10

**KA19B..**



**KH19B..**



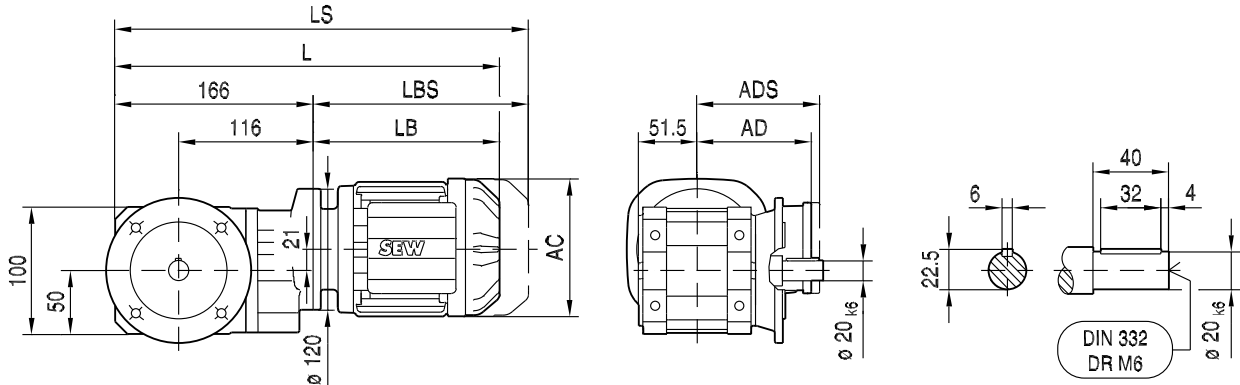
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M		
AC	132	139	139	156	156	179		
AD	105	119	119	128	128	140		
ADS	105	129	129	139	139	150		
L	357	368	393	403	434	438		
LS	412	436	461	484	515	531		
LB	191	202	227	237	268	272		
LBS	246	270	295	318	349	365		



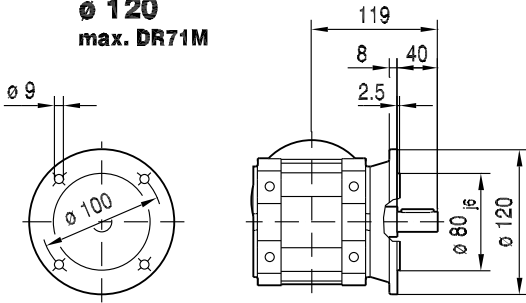
K..DRE/DRS  
K..DR.. [mm]

33 072 01 12

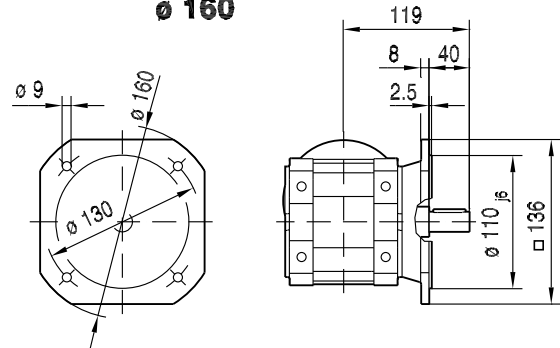
**KF19B..**



**∅ 120**  
max. DR71M

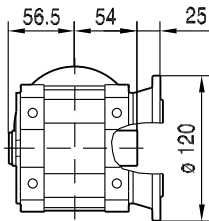


**∅ 160**

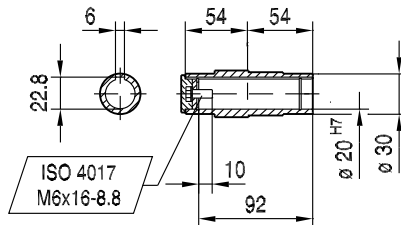
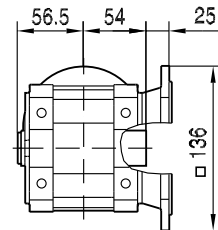


**KAF19B..**

**∅ 120**  
max. DR71M



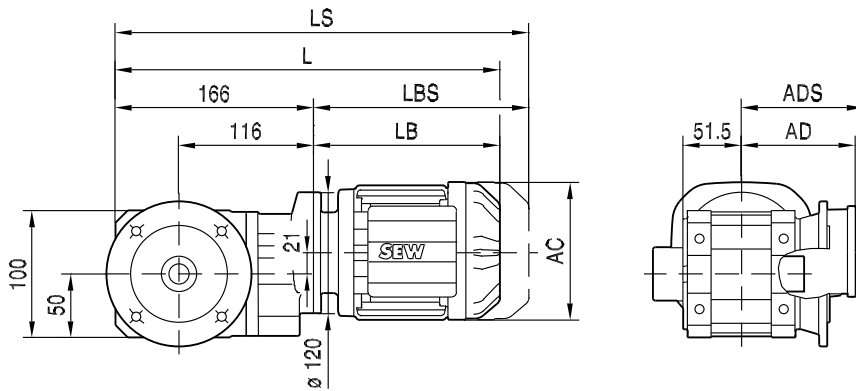
**∅ 160**



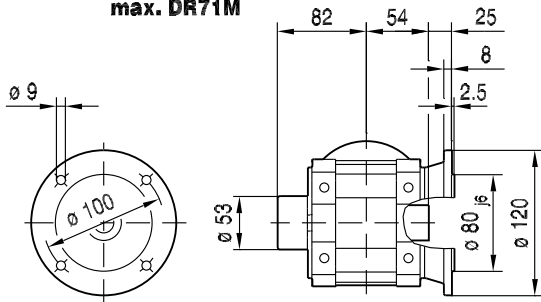
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M		
AC	132	139	139	156	156	179		
AD	105	119	119	128	128	140		
ADS	105	129	129	139	139	150		
L	357	368	393	403	434	438		
LS	412	436	461	484	515	531		
LB	191	202	227	237	268	272		
LBS	246	270	295	318	349	365		

**KHF19B..**

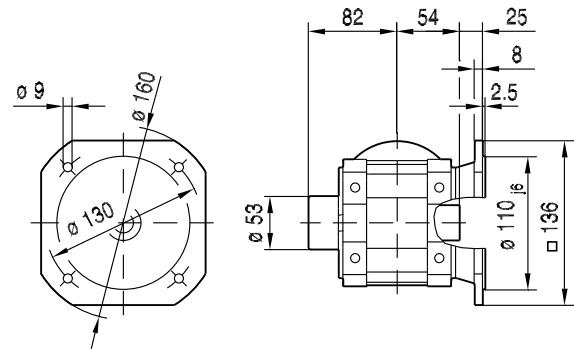
33 073 01 12



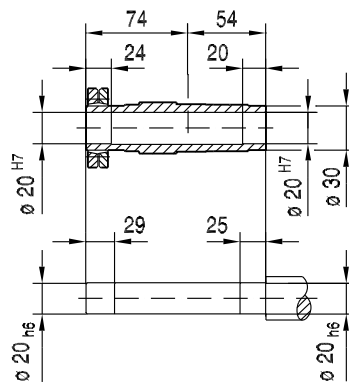
**∅ 120**  
max. DR71M



**∅ 160**



10

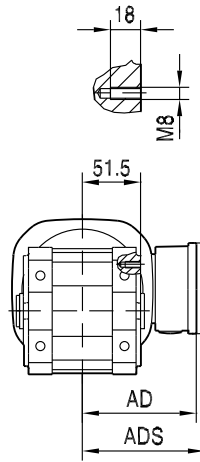
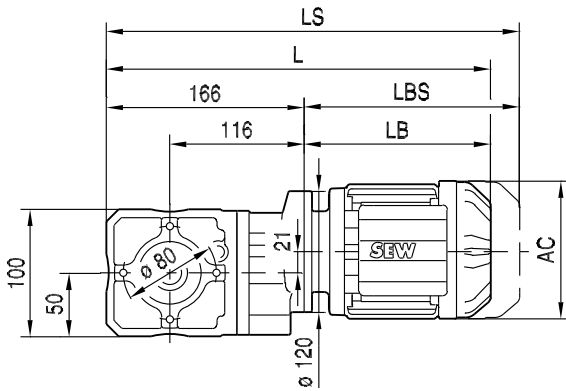


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M		
AC	132	139	139	156	156	179		
AD	105	119	119	128	128	140		
ADS	105	129	129	139	139	150		
L	357	368	393	403	434	438		
LS	412	436	461	484	515	531		
LB	191	202	227	237	268	272		
LBS	246	270	295	318	349	365		

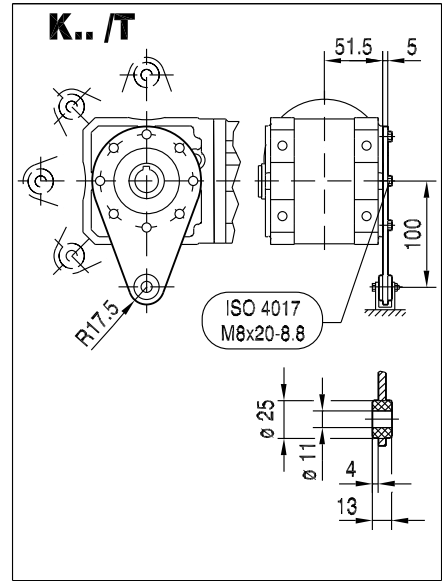


K..DRE/DRS  
K..DR.. [mm]

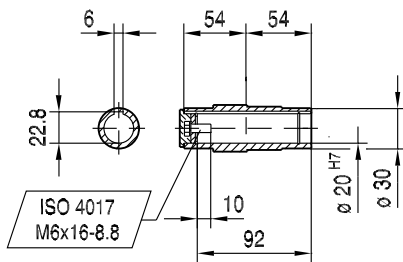
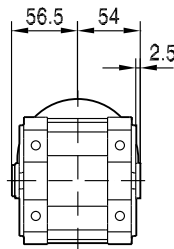
**KA19B..**



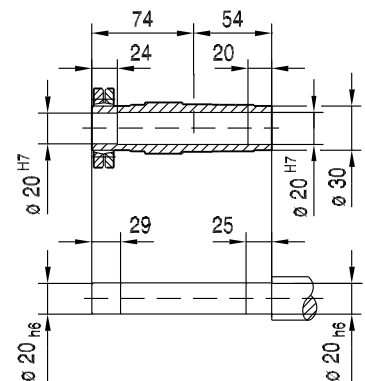
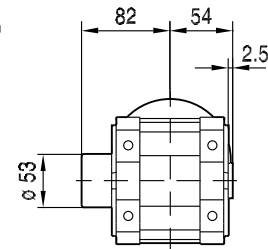
33 074 01 12



**KA19B..**



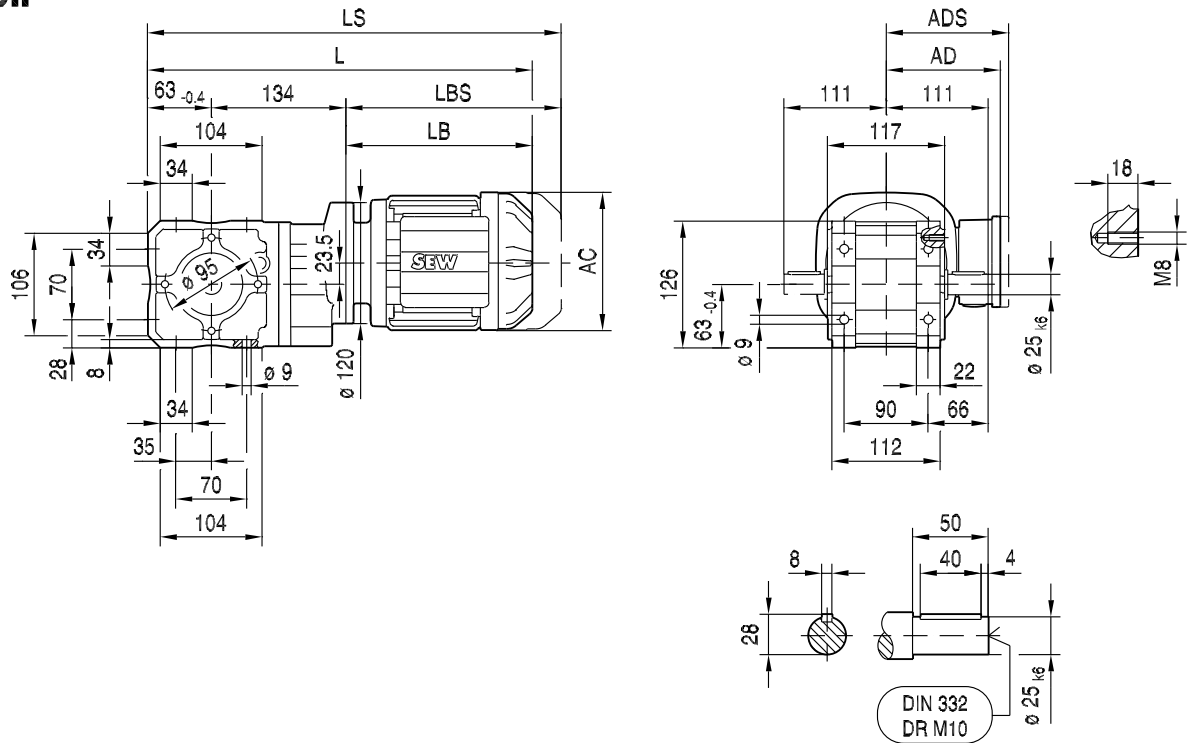
**KH19B..**



(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M		
AC	132	139	139	156	156	179		
AD	105	119	119	128	128	140		
ADS	105	129	129	139	139	150		
L	357	368	393	403	434	438		
LS	412	436	461	484	515	531		
LB	191	202	227	237	268	272		
LBS	246	270	295	318	349	365		

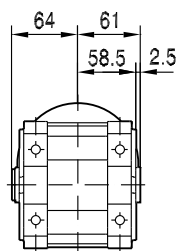
33 075 00 12

**K29..**

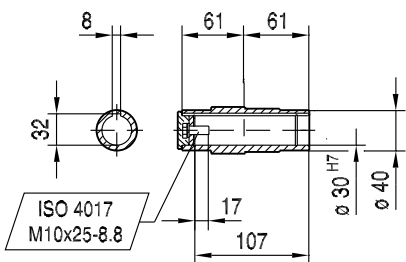


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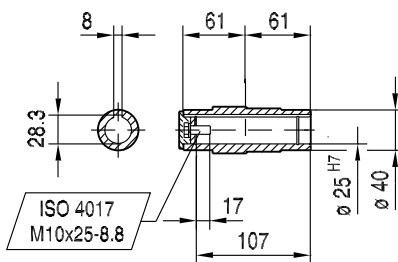
**KA29B..**



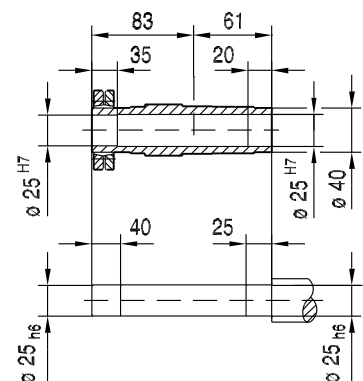
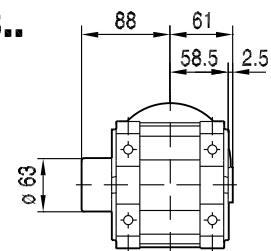
Ø 30 H7  
DIN 6985-3



Ø 25 H7



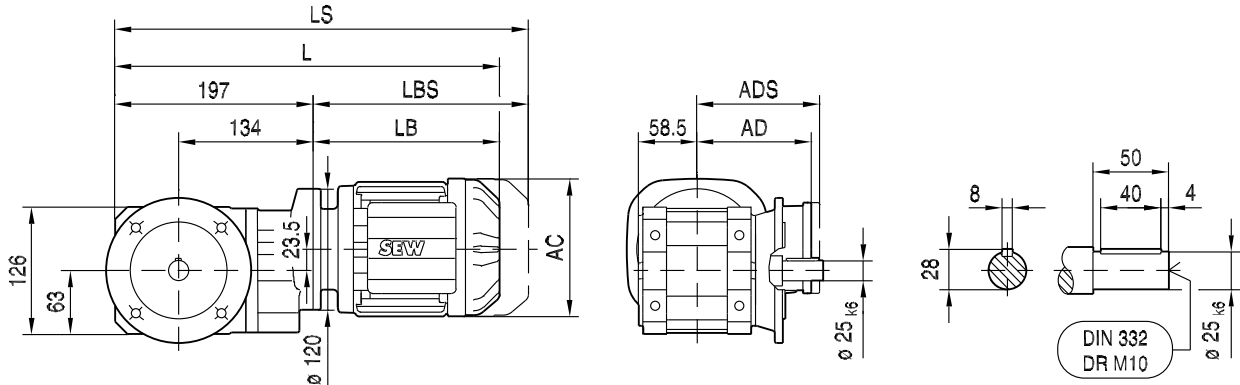
**KH29B..**



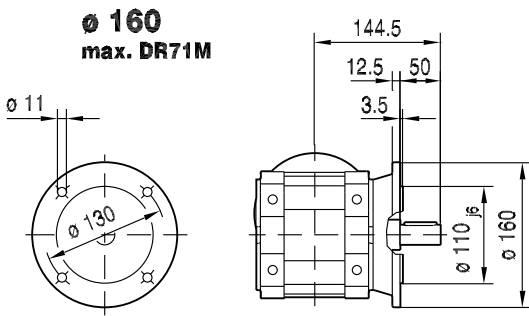
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	156	179	179	197
AD	105	119	119	128	128	140	140	157
ADS	105	129	129	139	139	150	150	158
L	388	399	424	434	465	469	489	519
LS	443	467	492	515	546	562	582	612
LB	191	202	227	237	268	272	292	322
LBS	246	270	295	318	349	365	385	415



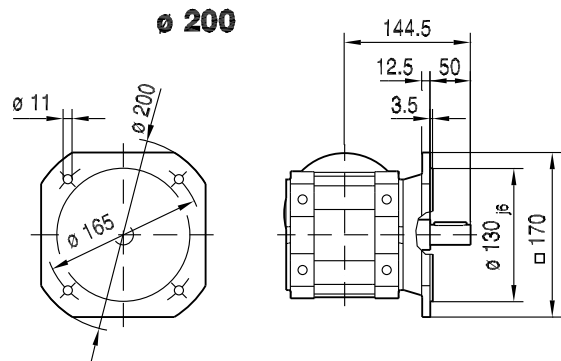
**KF29B..**



**∅ 160**  
max. DR71M

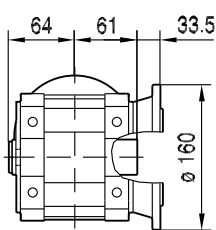


**∅ 200**

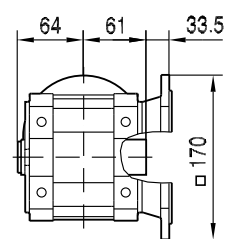


**KAF29B..**

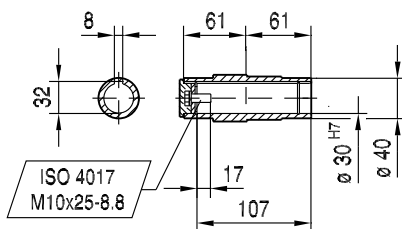
**∅ 160**  
max. DR71M



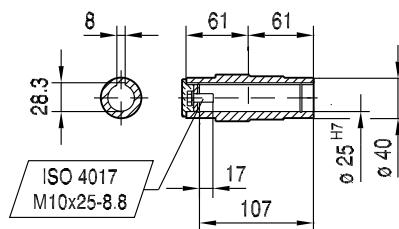
**∅ 200**



**∅ 30 H7**  
DIN 6885-3



**∅ 25 H7**

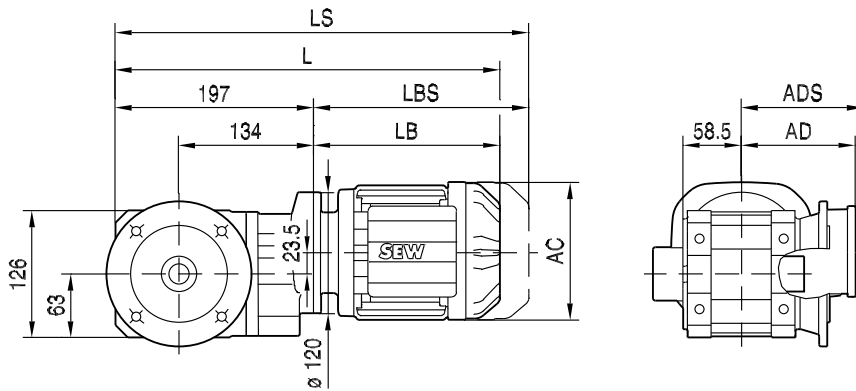


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	156	179	179	197
AD	105	119	119	128	128	140	140	157
ADS	105	129	129	139	139	150	150	158
L	388	399	424	434	465	469	489	519
LS	443	467	492	515	546	562	582	612
LB	191	202	227	237	268	272	292	322
LBS	246	270	295	318	349	365	385	415



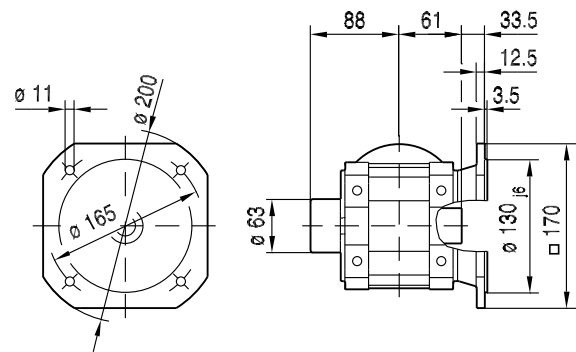
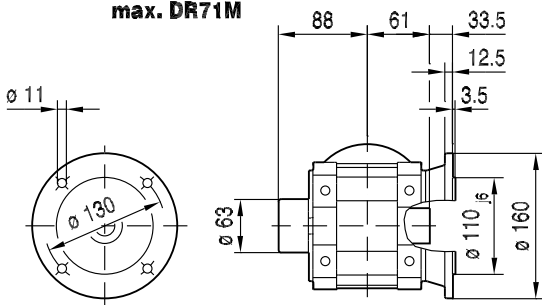
**KHF29B..**

33 077 01 12

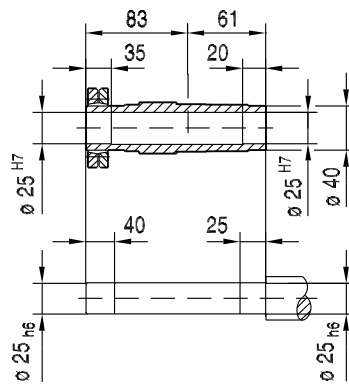


**∅ 160**  
max. DR71M

**∅ 200**



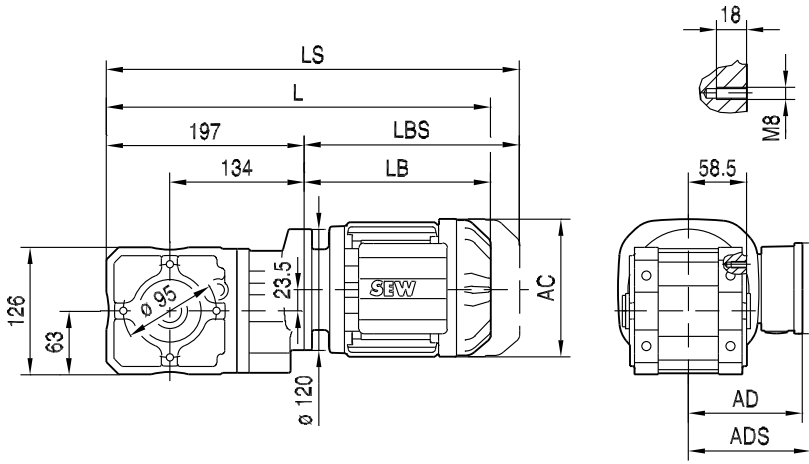
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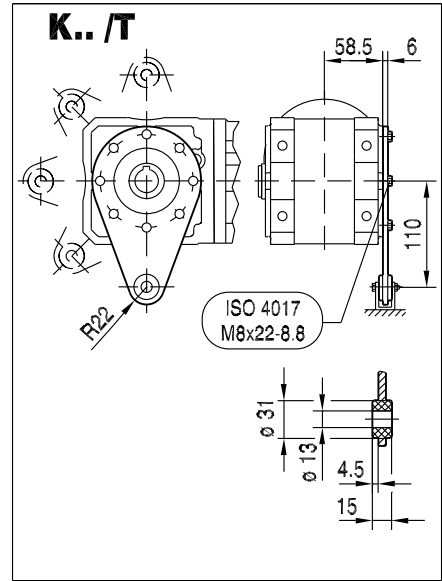
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	156	179	179	197
AD	105	119	119	128	128	140	140	157
ADS	105	129	129	139	139	150	150	158
L	388	399	424	434	465	469	489	519
LS	443	467	492	515	546	562	582	612
LB	191	202	227	237	268	272	292	322
LBS	246	270	295	318	349	365	385	415



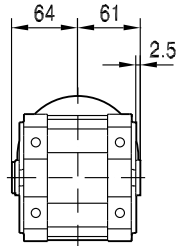
**KA29B..**



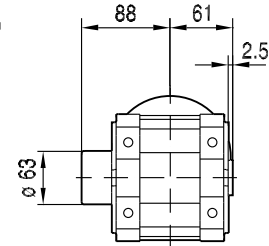
33 078 01 12



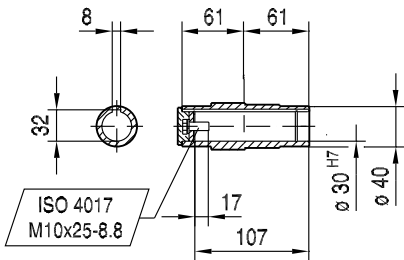
**KA29B..**



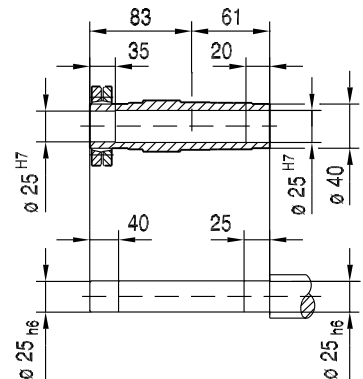
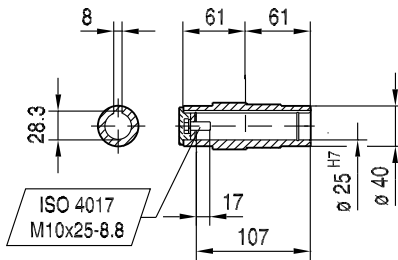
**KH29B..**



Ø 30 H7  
DIN 6985-3



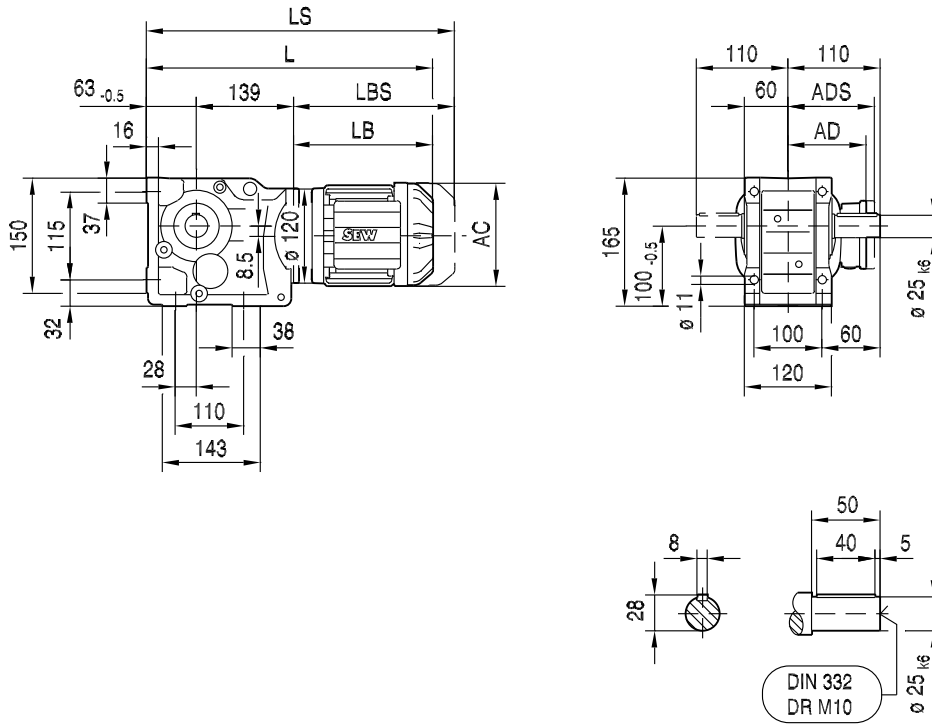
Ø 25 H7



(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	156	179	179	197
AD	105	119	119	128	128	140	140	157
ADS	105	129	129	139	139	150	150	158
L	388	399	424	434	465	469	489	519
LS	443	467	492	515	546	562	582	612
LB	191	202	227	237	268	272	292	322
LBS	246	270	295	318	349	365	385	415

33 078 00 06

**K37..**



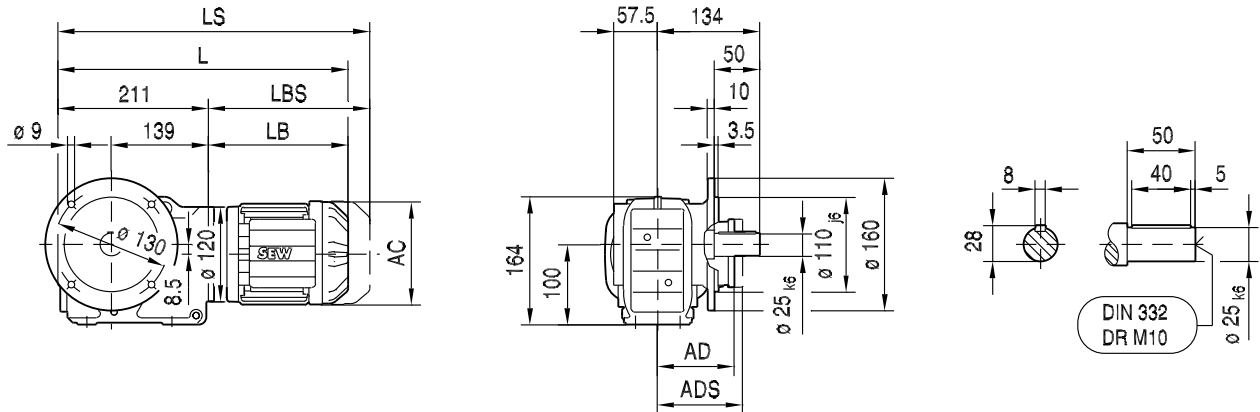
10

(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	393	404	429	470	474	494	524	554
LS	448	472	497	551	567	587	617	647
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445

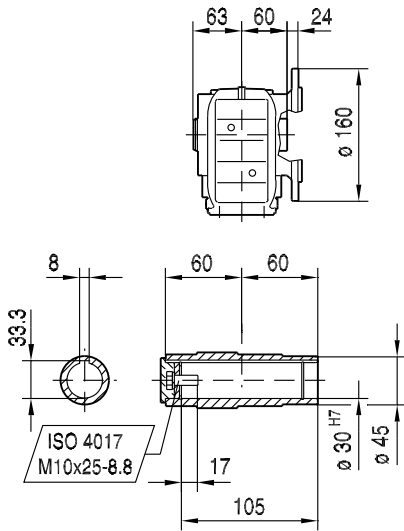


33 079 01 06

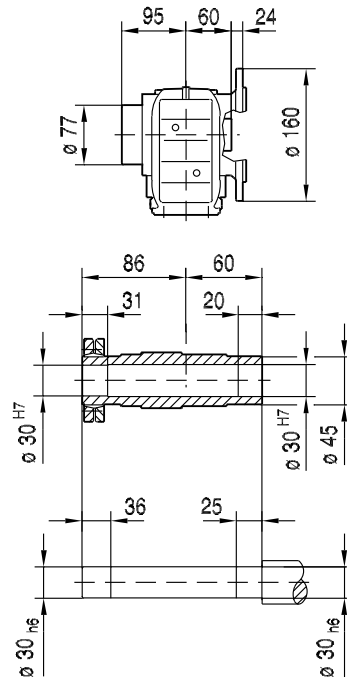
**KF37..**



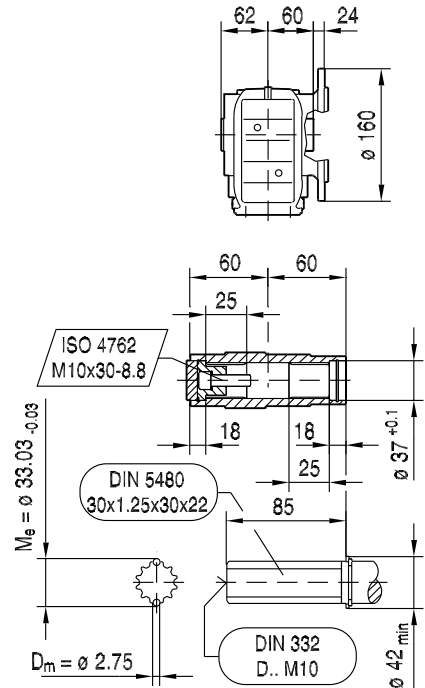
**KAF37..**



**KHF37..**



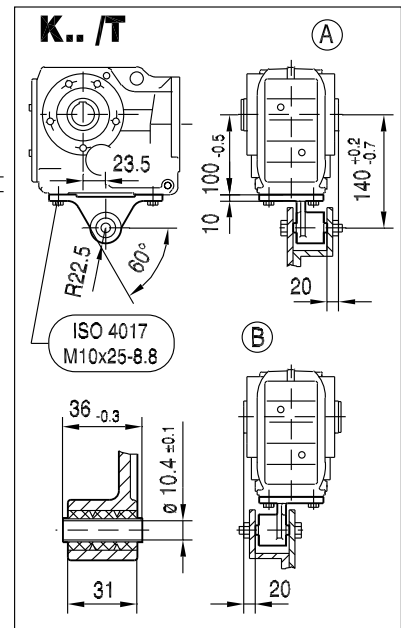
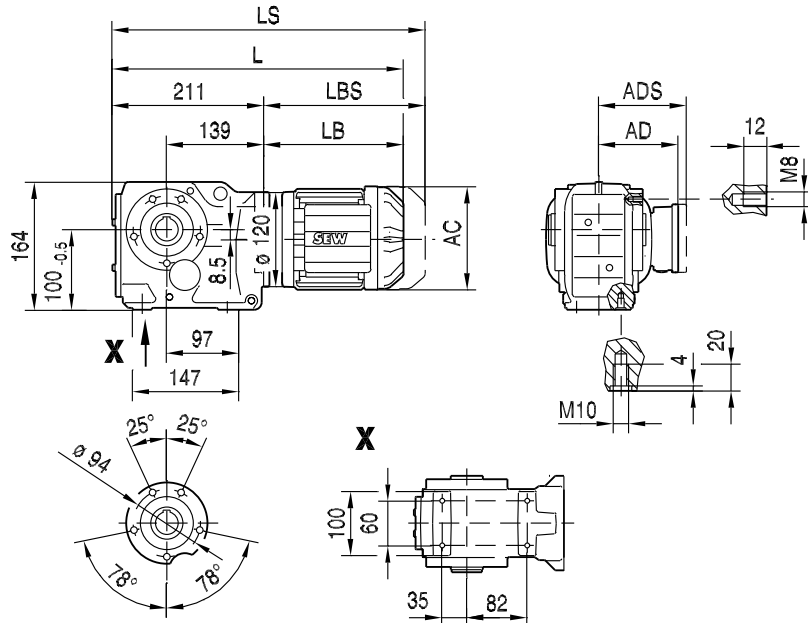
**KVF37..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	402	413	438	479	483	503	533	563
LS	457	481	506	560	576	596	626	656
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445

**KA37..**

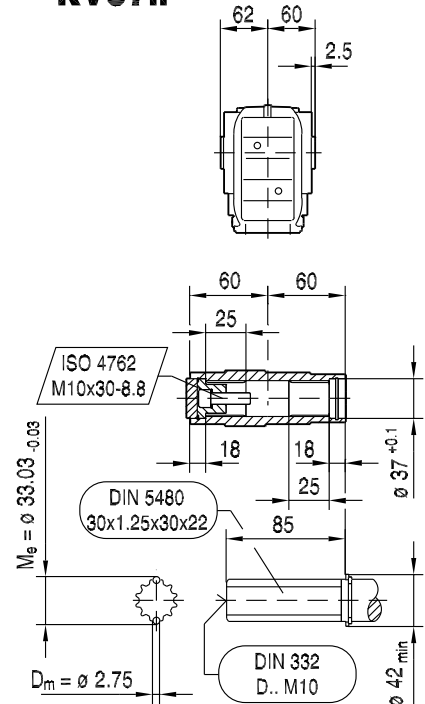
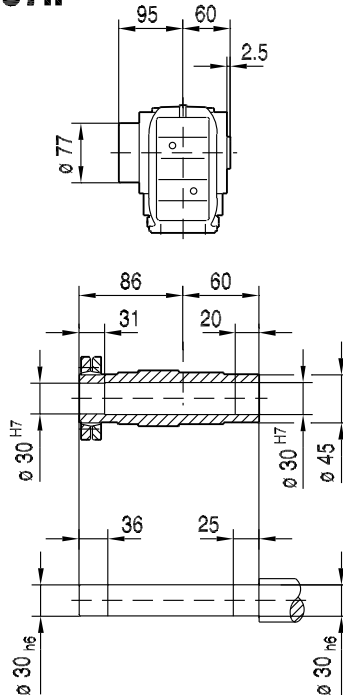
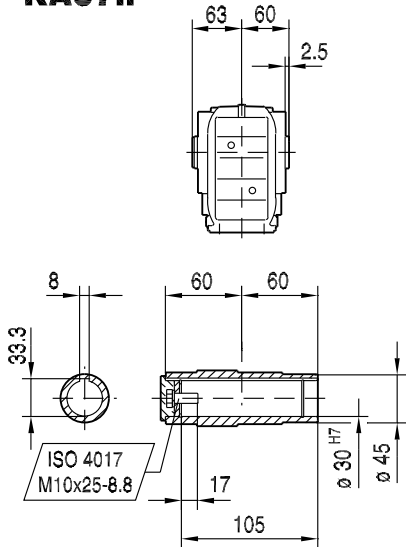
33 080 01 06



**KA37..**

**KH37..**

**KV37..**



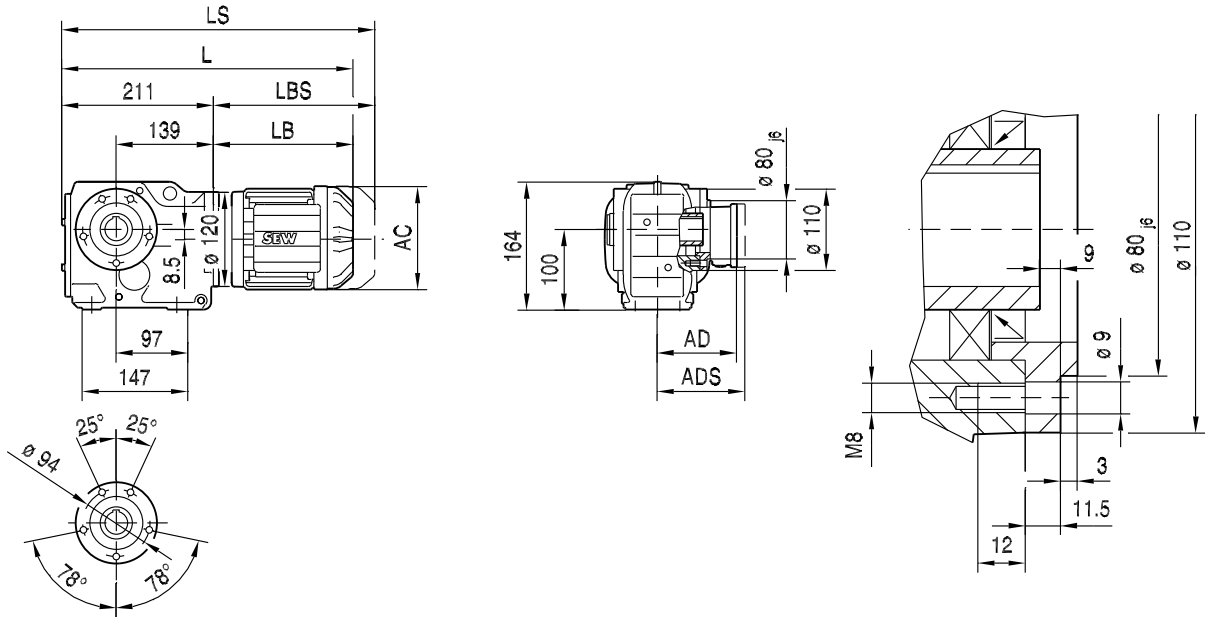
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	402	413	438	479	483	503	533	563
LS	457	481	506	560	576	596	626	656
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445



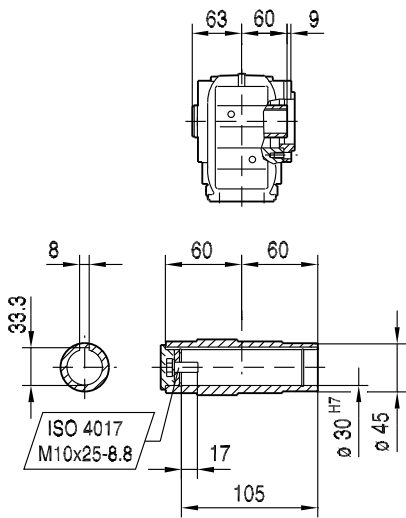
K..DRE/DRS  
K..DR.. [mm]

33 081 01 06

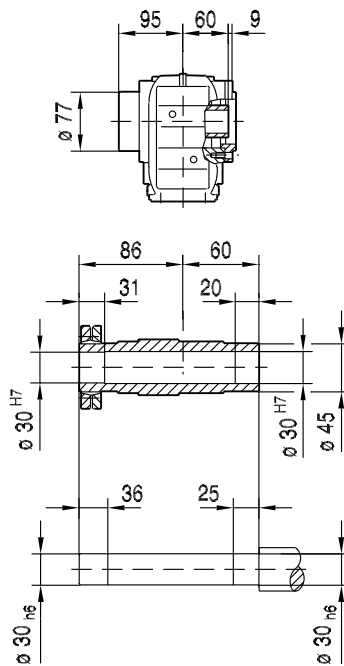
**KAZ37..**



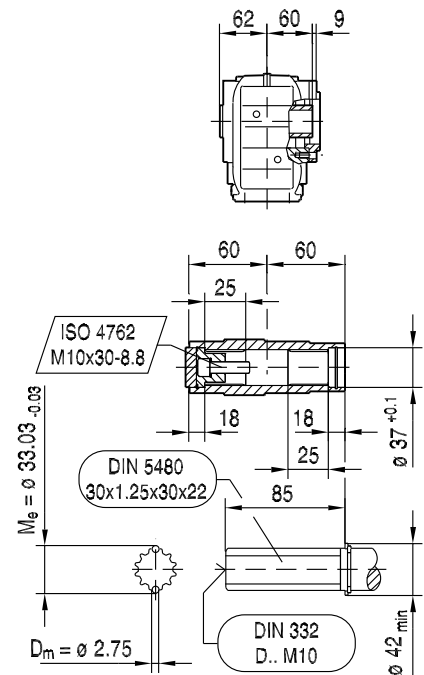
**KAZ37..**



**KHZ37..**



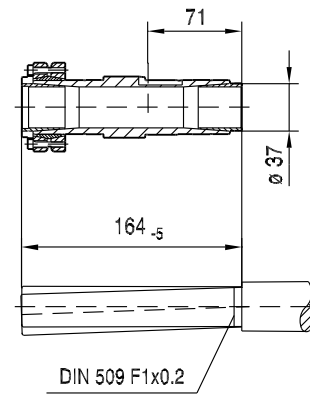
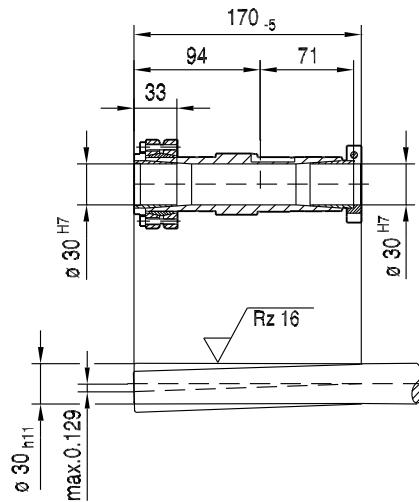
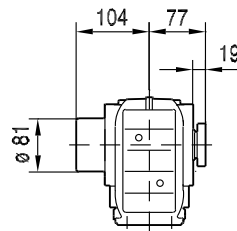
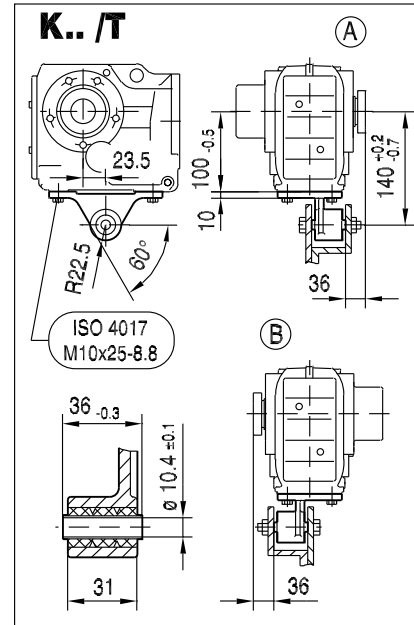
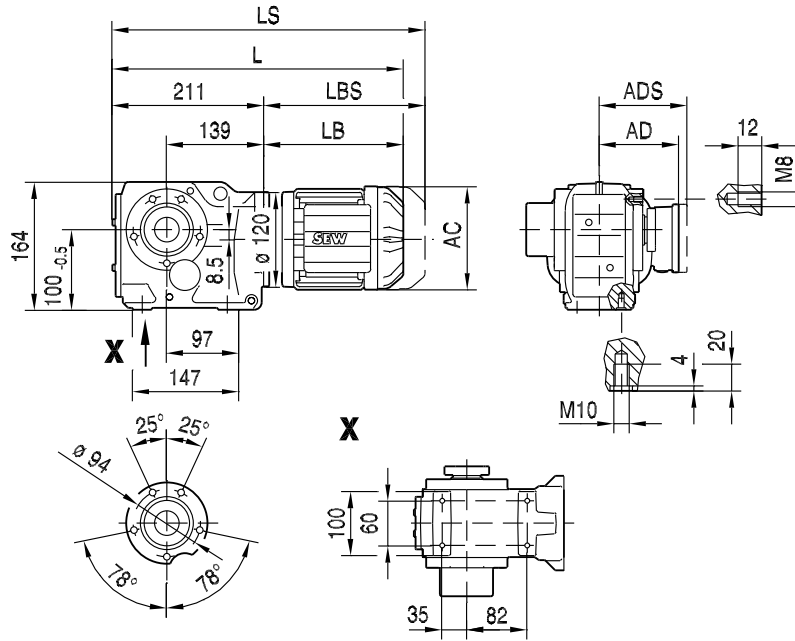
**KVZ37..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	402	413	438	479	483	503	533	563
LS	457	481	506	560	576	596	626	656
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445

**KT37..**

33 082 01 06



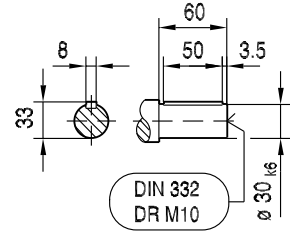
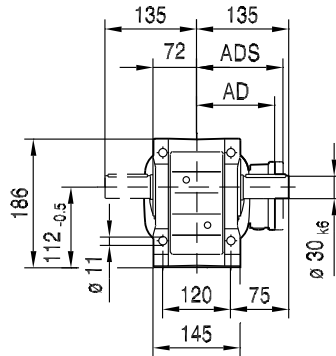
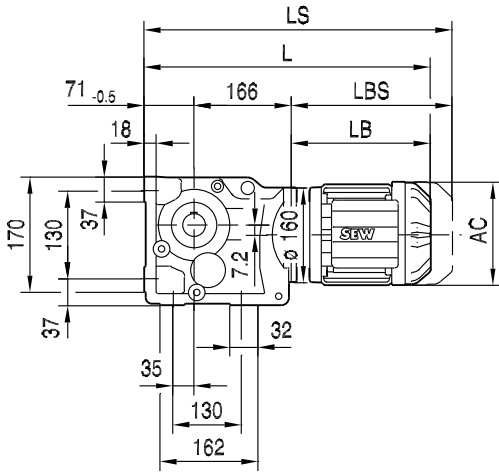
10

(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	402	413	438	479	483	503	533	563
LS	457	481	506	560	576	596	626	656
LB	191	202	227	268	272	292	322	352
LBS	246	270	295	349	365	385	415	445

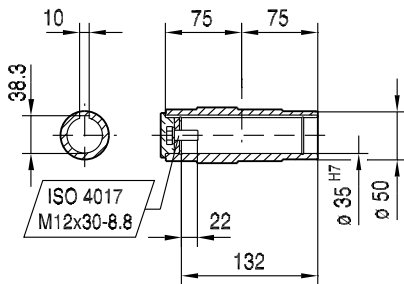
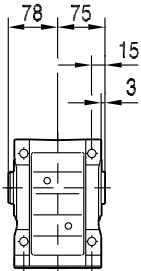


33 083 00 06

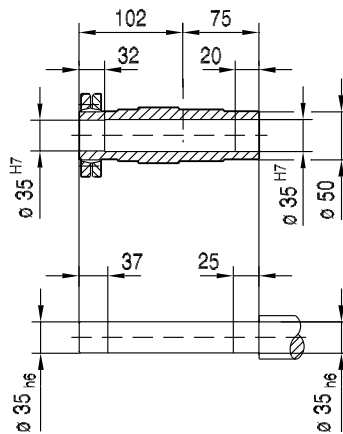
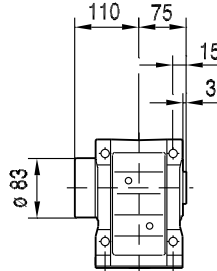
**K47..**



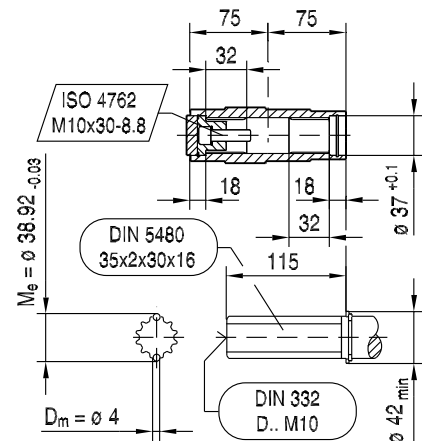
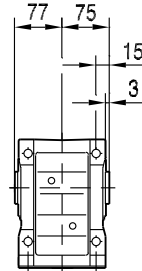
**KA47B..**



**KH47B..**



**KV47B..**

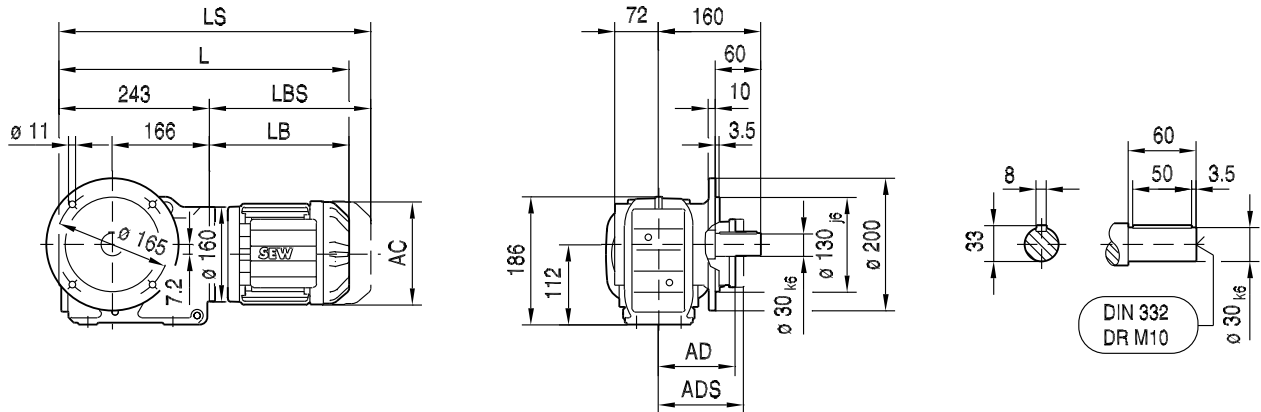


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	422	433	458	498	500	520	550	580
LS	477	501	526	579	593	613	643	673
LB	185	196	221	261	263	283	313	343
LBS	240	264	289	342	356	376	406	436

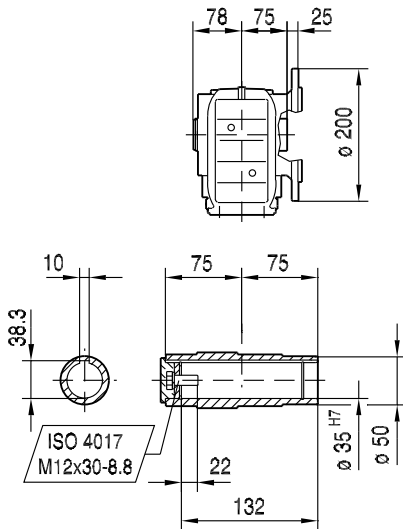


33 084 01 06

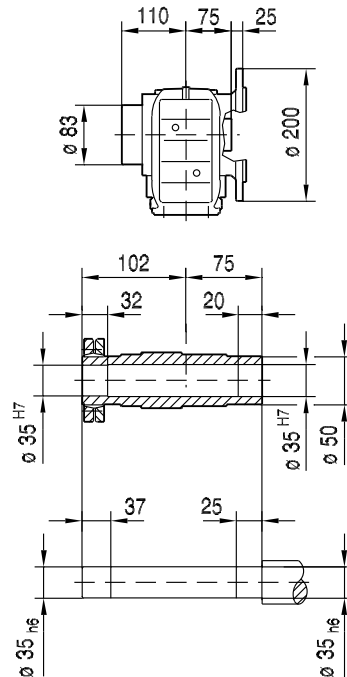
**KF47..**



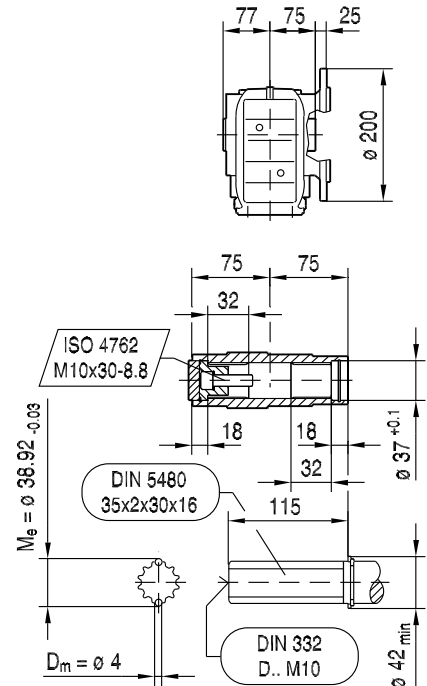
**KAF47..**



**KHF47..**



**KVF47..**

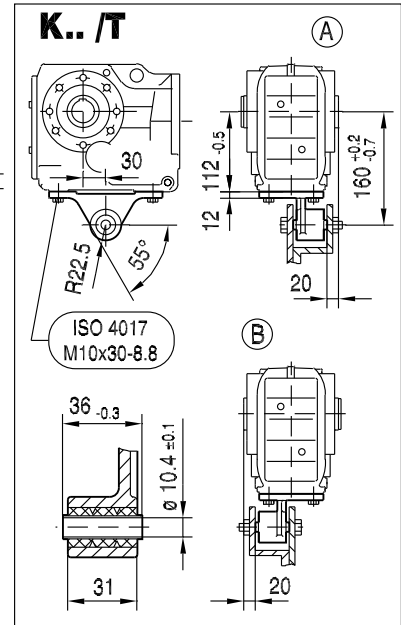
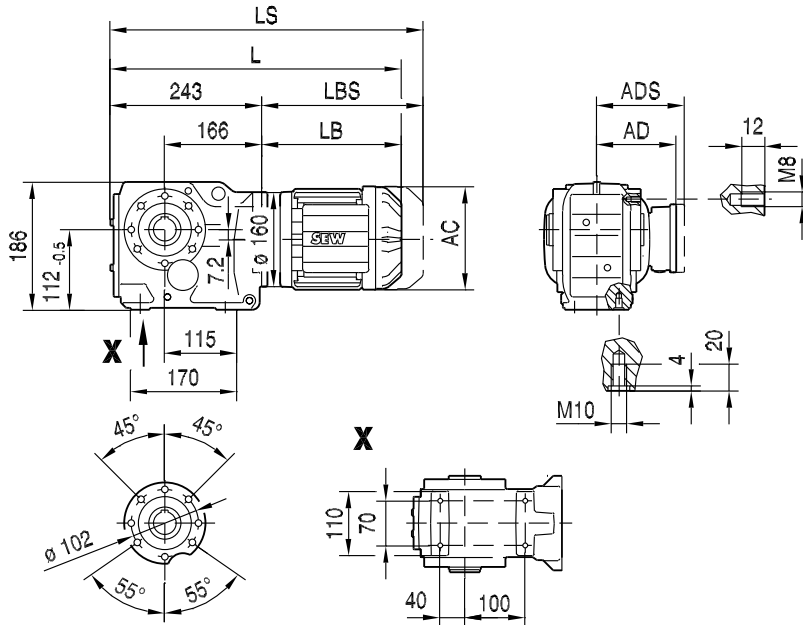


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	428	439	464	504	506	526	556	586
LS	483	507	532	585	599	619	649	679
LB	185	196	221	261	263	283	313	343
LBS	240	264	289	342	356	376	406	436

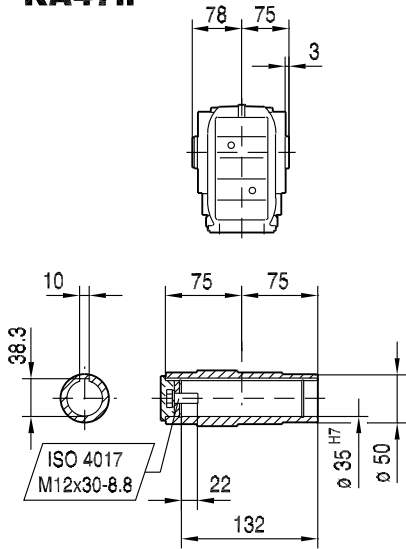


33 085 01 06

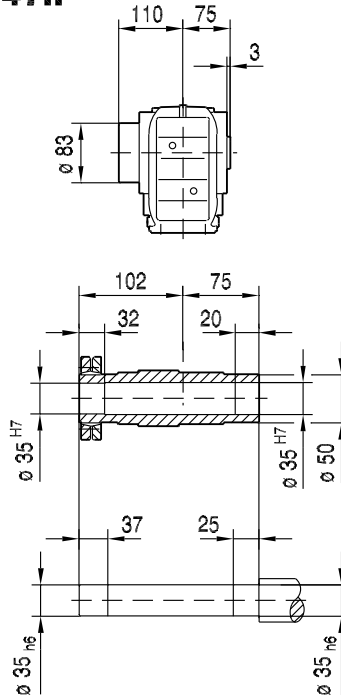
**KA47..**



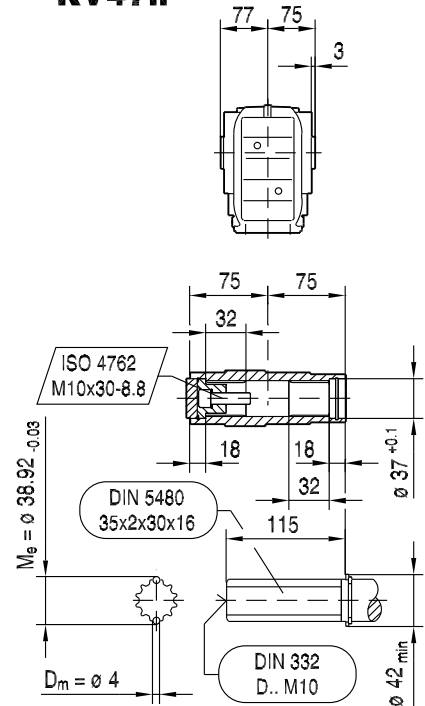
**KA47..**



**KH47..**



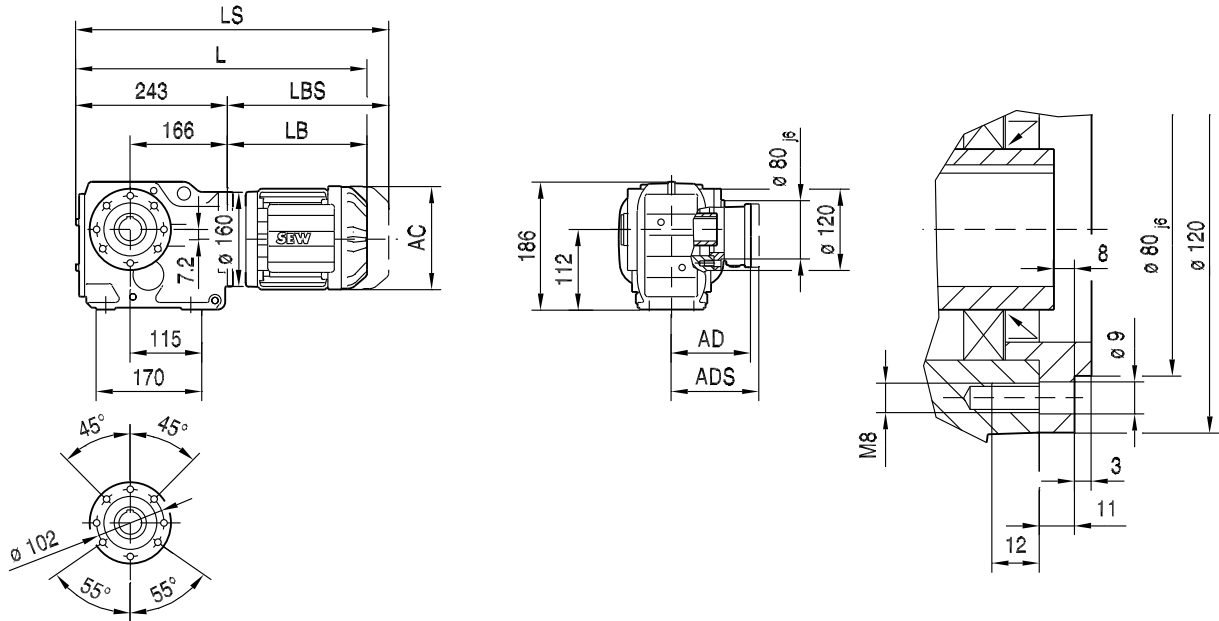
**KV47..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	428	439	464	504	506	526	556	586
LS	483	507	532	585	599	619	649	679
LB	185	196	221	261	263	283	313	343
LBS	240	264	289	342	356	376	406	436

**KAZ47..**

33 086 01 06

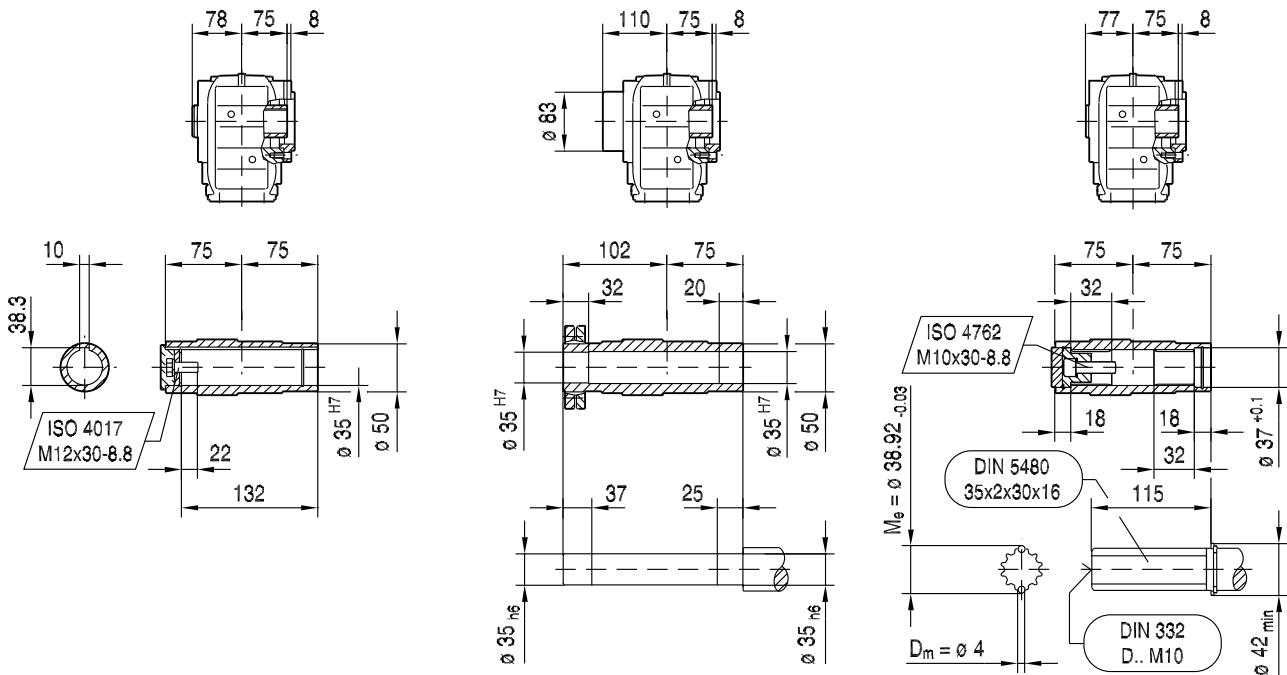


10

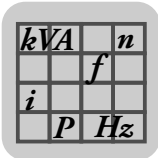
**KAZ47..**

**KHZ47..**

**KVZ47..**



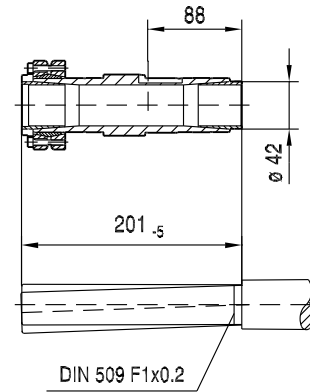
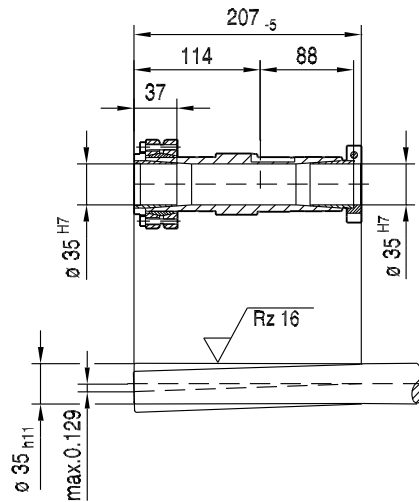
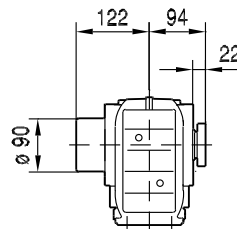
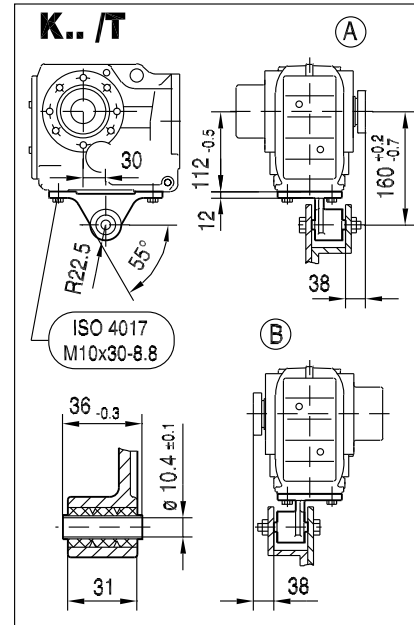
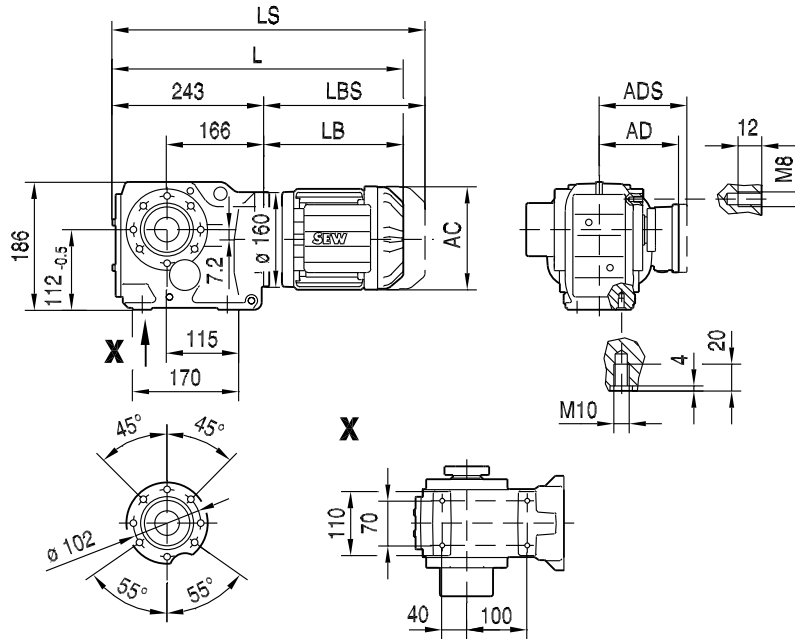
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	428	439	464	504	506	526	556	586
LS	483	507	532	585	599	619	649	679
LB	185	196	221	261	263	283	313	343
LBS	240	264	289	342	356	376	406	436



K..DRE/DRS  
K..DR.. [mm]

33 087 01 06

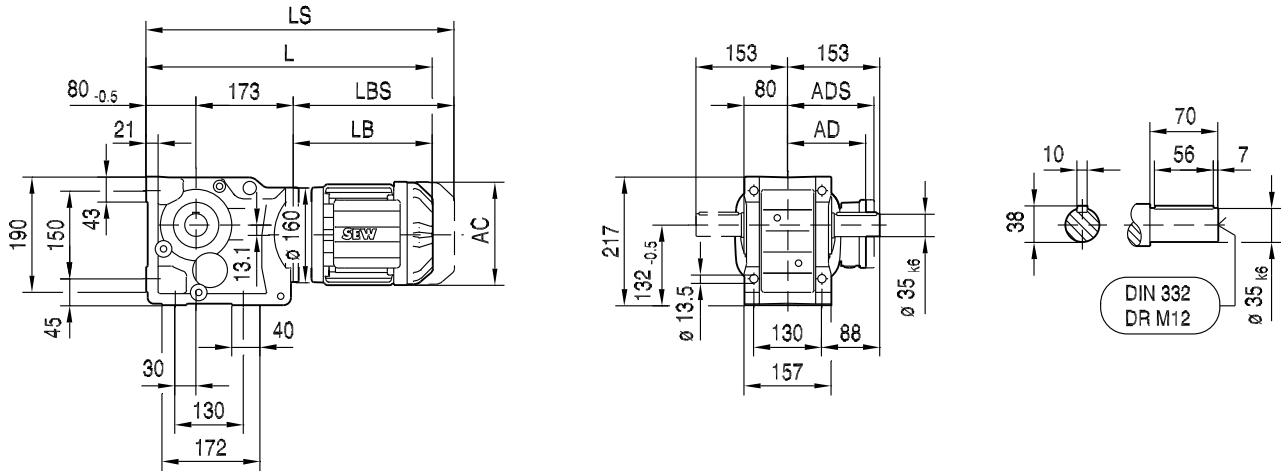
KT47..



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	179	179	197	197
AD	105	119	119	128	140	140	157	157
ADS	105	129	129	139	150	150	158	158
L	428	439	464	504	506	526	556	586
LS	483	507	532	585	599	619	649	679
LB	185	196	221	261	263	283	313	343
LBS	240	264	289	342	356	376	406	436

33 088 00 06

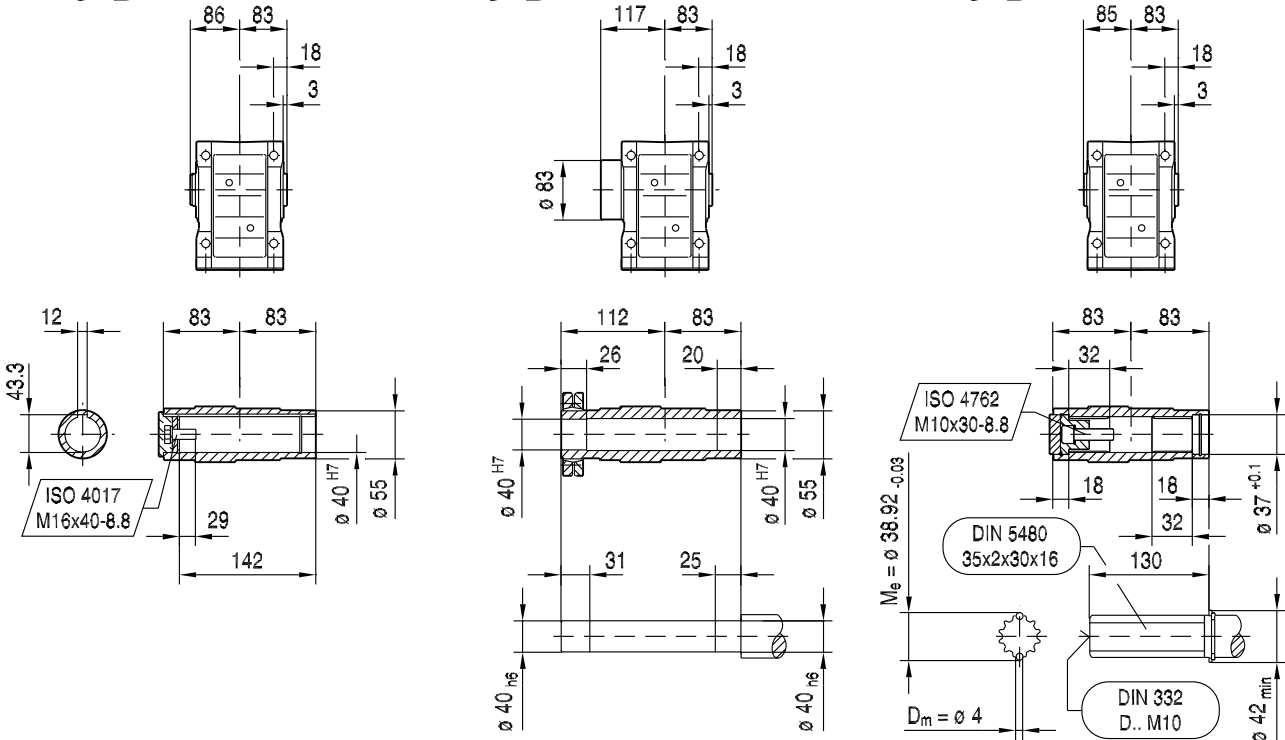
**K57..**



**KA57B..**

**KH57B..**

**KV57B..**

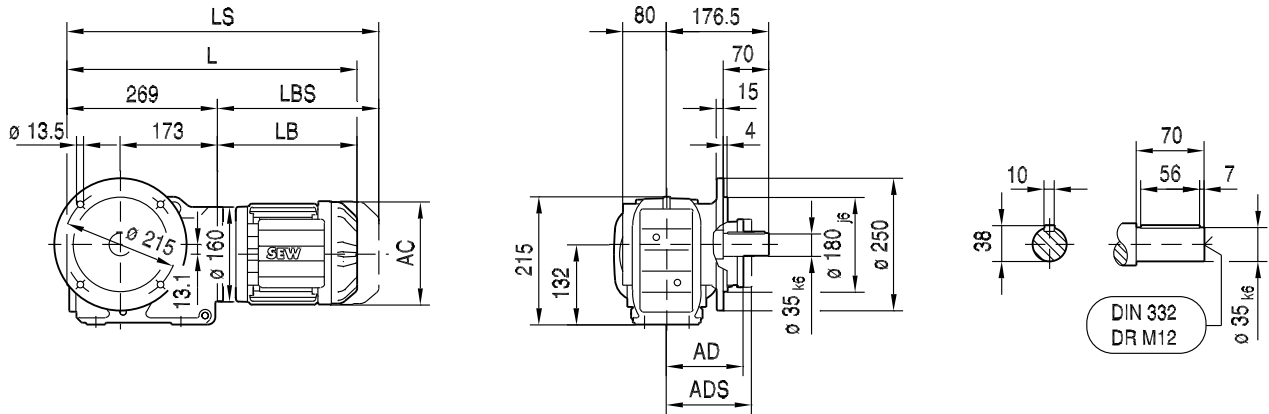


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S
AC	132	139	139	156	156	179	179	197	197	221
AD	105	119	119	128	128	140	140	157	157	170
ADS	105	129	129	139	139	150	150	158	158	172
L	438	449	474	483	514	516	536	566	596	643
LS	493	517	542	564	595	609	629	659	689	755
LB	185	196	221	230	261	263	283	313	343	390
LBS	240	264	289	311	342	356	376	406	436	502

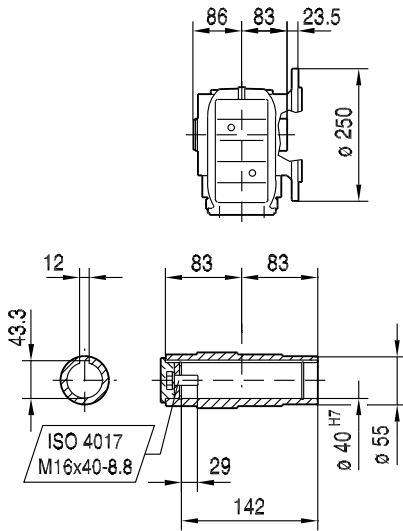


33 089 00 06

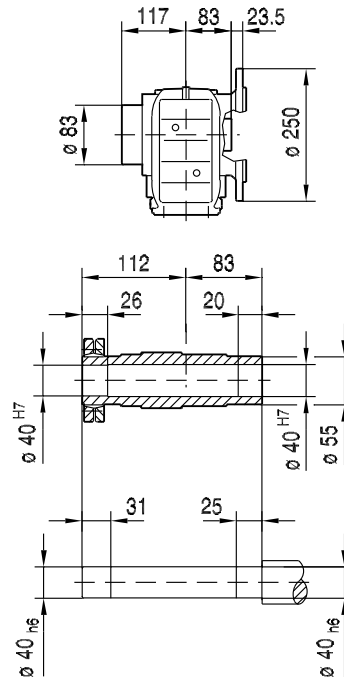
**KF57..**



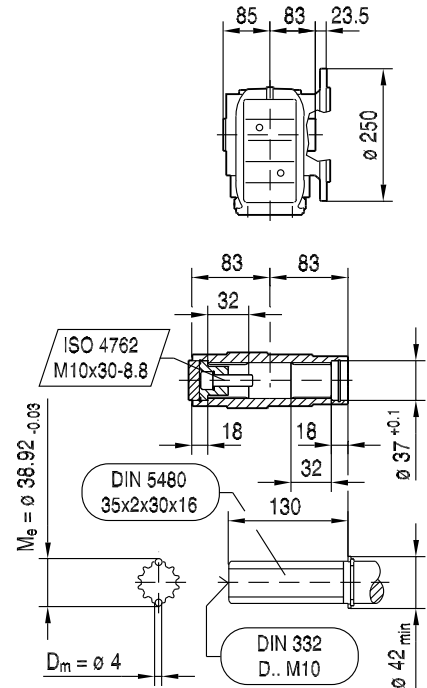
**KAF57..**



**KHF57..**



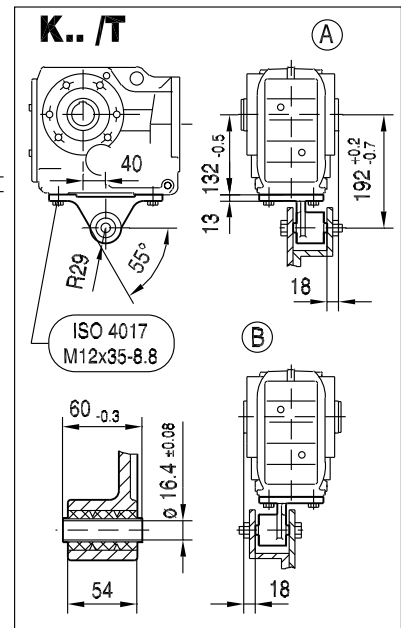
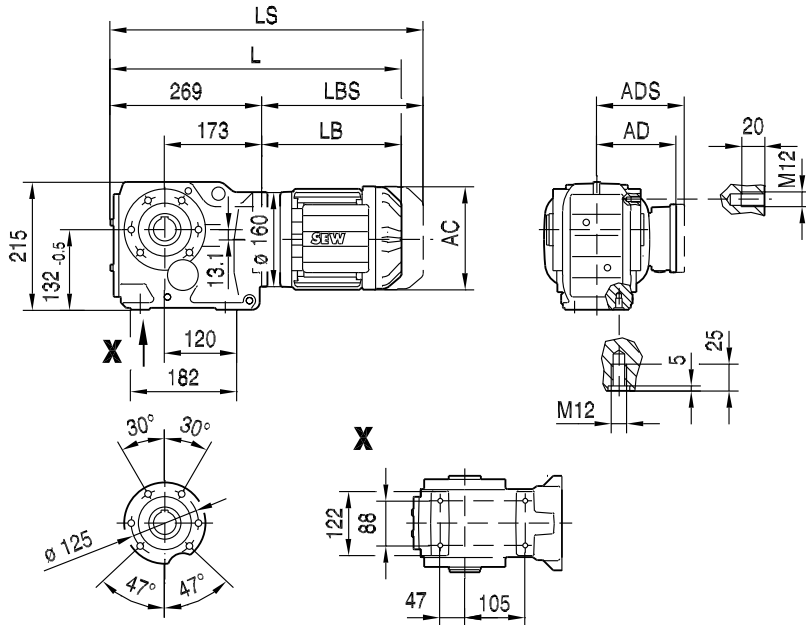
**KVF57..**



(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S
AC	132	139	139	156	156	179	179	197	197	221
AD	105	119	119	128	128	140	140	157	157	170
ADS	105	129	129	139	139	150	150	158	158	172
L	454	465	490	499	530	532	552	582	612	659
LS	509	533	558	580	611	625	645	675	705	771
LB	185	196	221	230	261	263	283	313	343	390
LBS	240	264	289	311	342	356	376	406	436	502

**KA57..**

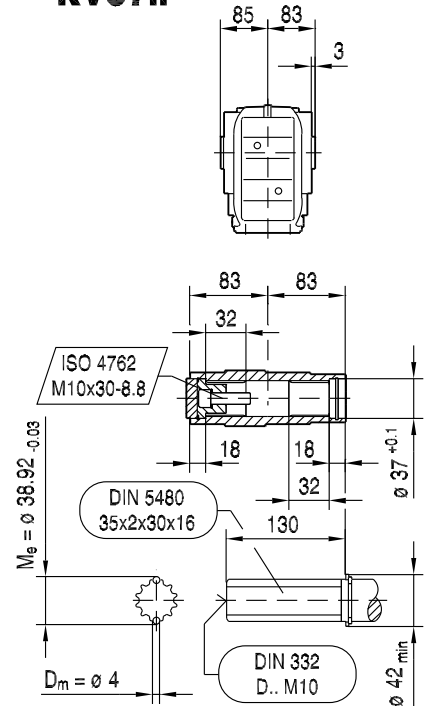
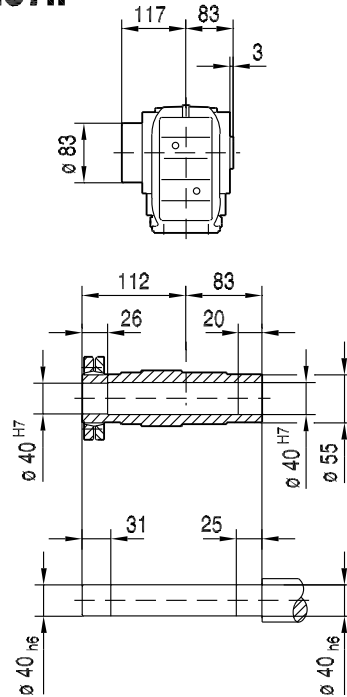
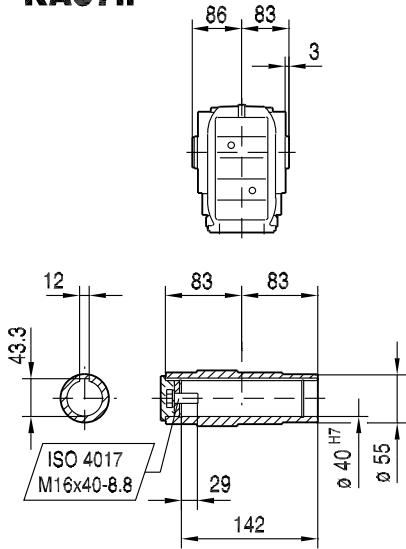
33 090 01 06



**KA57..**

**KH57..**

**KV57..**

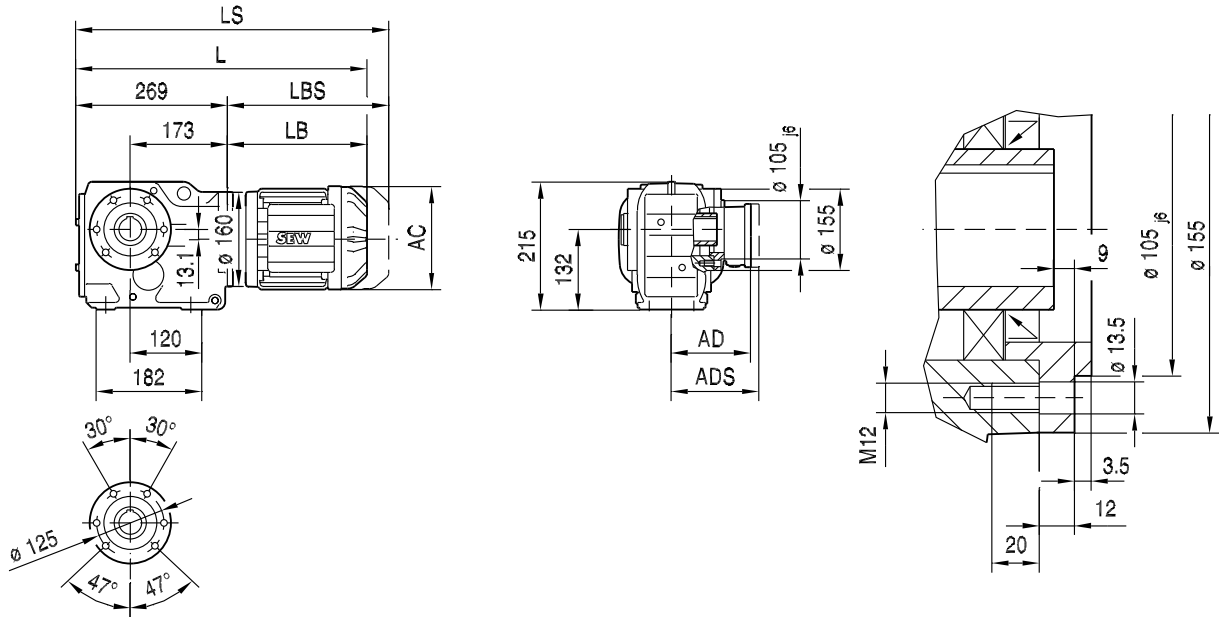


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S
AC	132	139	139	156	156	179	179	197	197	221
AD	105	119	119	128	128	140	140	157	157	170
ADS	105	129	129	139	139	150	150	158	158	172
L	454	465	490	499	530	532	552	582	612	659
LS	509	533	558	580	611	625	645	675	705	771
LB	185	196	221	230	261	263	283	313	343	390
LBS	240	264	289	311	342	356	376	406	436	502



33 091 00 06

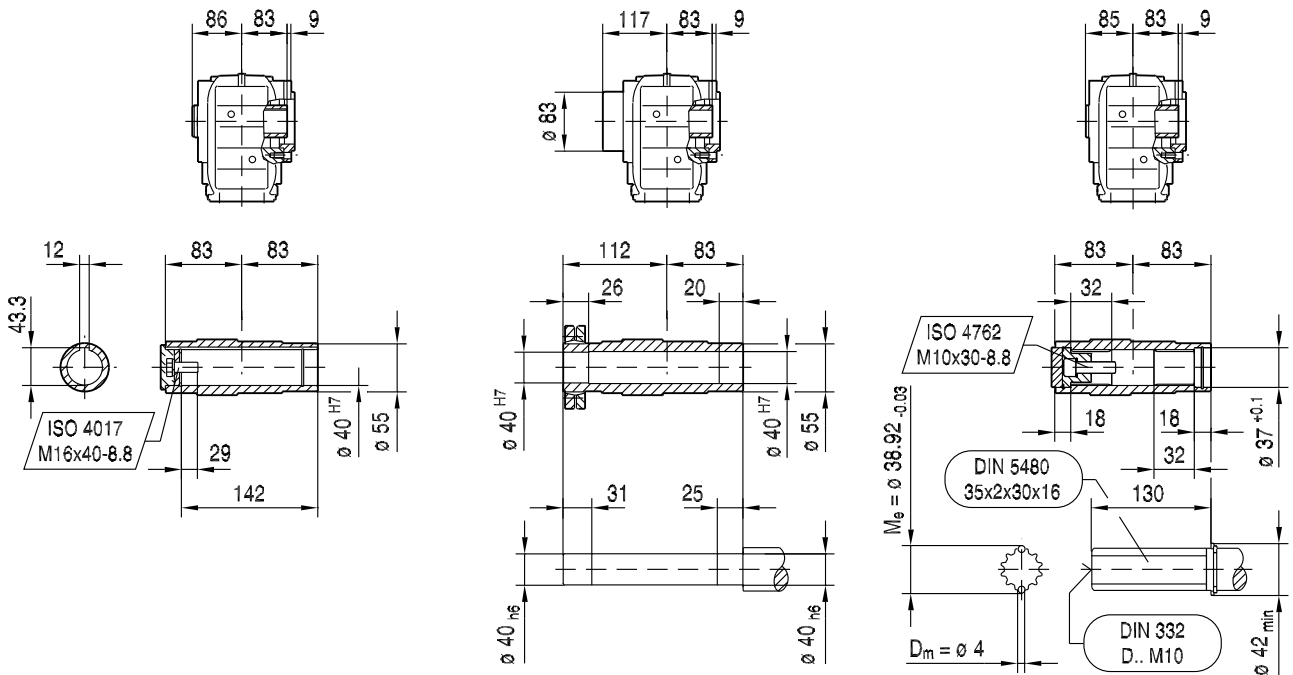
**KAZ57..**



**KAZ57..**

**KHZ57..**

**KVZ57..**

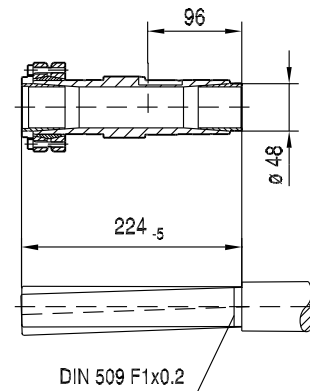
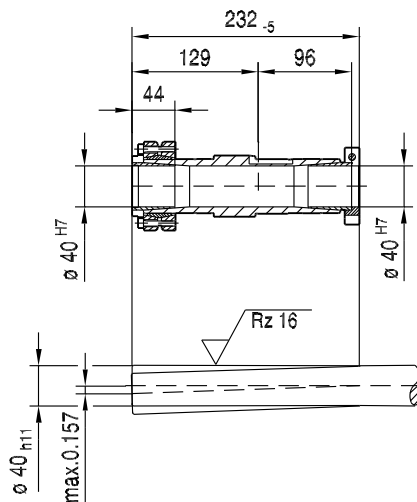
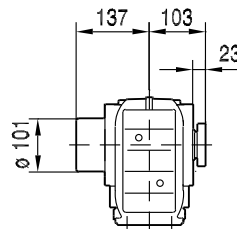
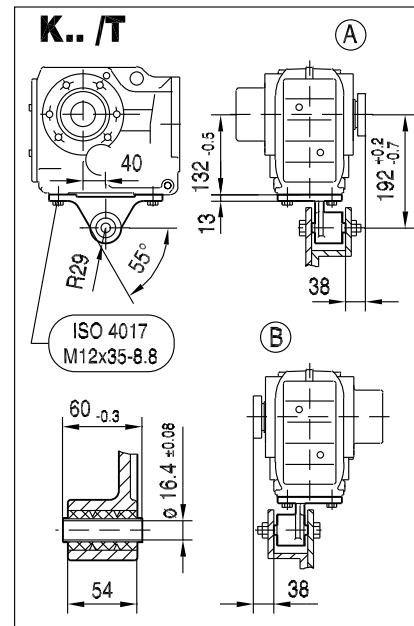
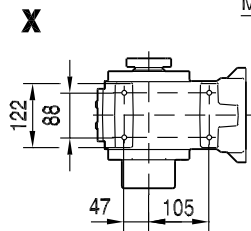
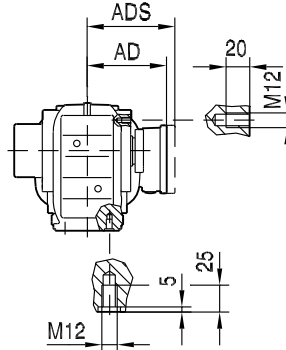
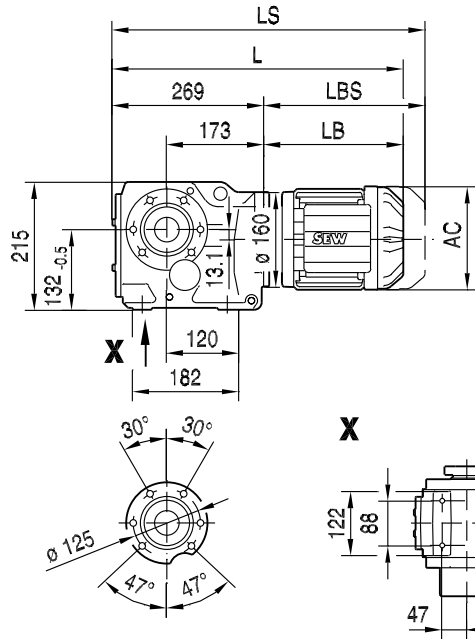


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S
AC	132	139	139	156	156	179	179	197	197	221
AD	105	119	119	128	128	140	140	157	157	170
ADS	105	129	129	139	139	150	150	158	158	172
L	454	465	490	499	530	532	552	582	612	659
LS	509	533	558	580	611	625	645	675	705	771
LB	185	196	221	230	261	263	283	313	343	390
LBS	240	264	289	311	342	356	376	406	436	502



**KT57..**

33 092 01 06

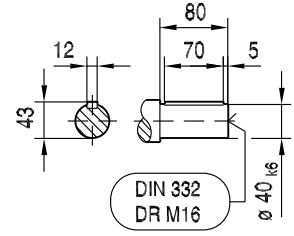
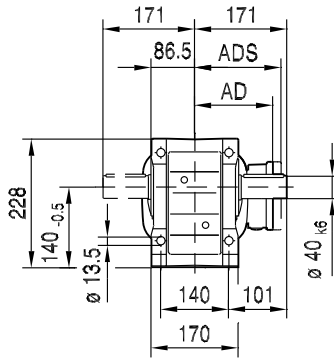
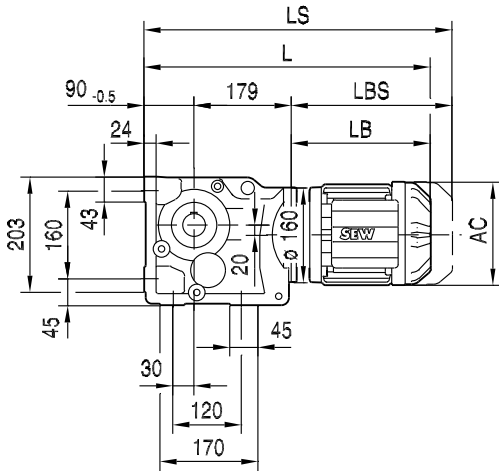


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S
AC	132	139	139	156	156	179	179	197	197	221
AD	105	119	119	128	128	140	140	157	157	170
ADS	105	129	129	139	139	150	150	158	158	172
L	454	465	490	499	530	532	552	582	612	659
LS	509	533	558	580	611	625	645	675	705	771
LB	185	196	221	230	261	263	283	313	343	390
LBS	240	264	289	311	342	356	376	406	436	502

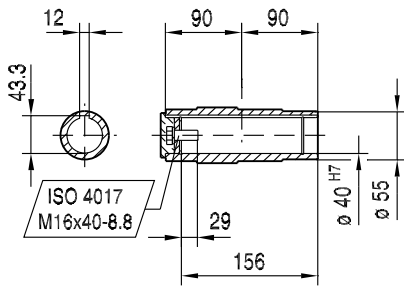
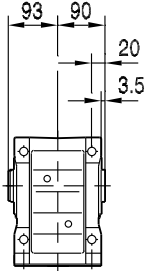


33 093 00 06

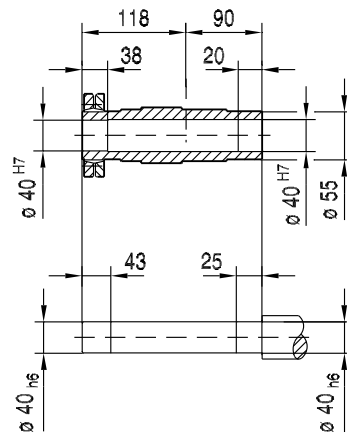
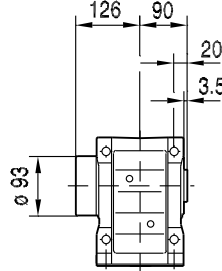
**K67..**



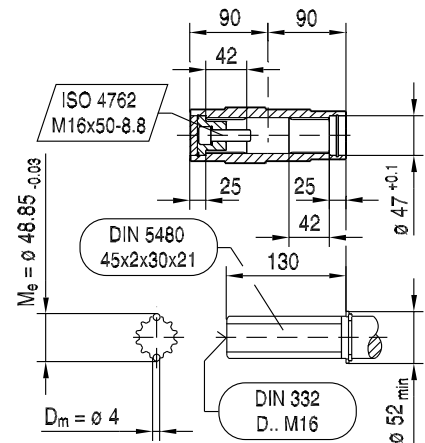
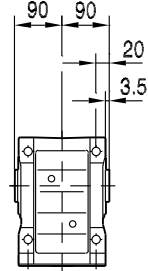
**KA67B..**



**KH67B..**



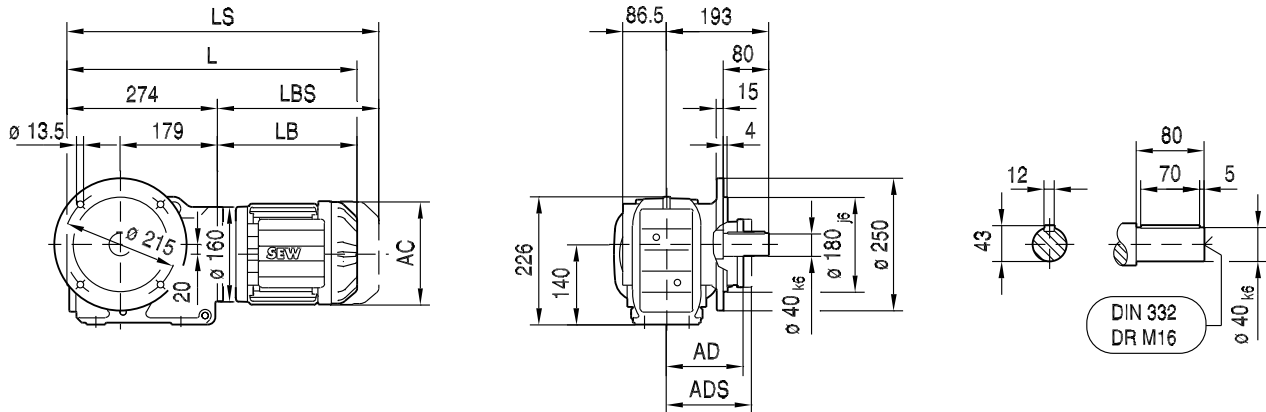
**KV67B..**



(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	156	179	179	197	197	221	221
AD	105	119	119	128	128	140	140	157	157	170	170
ADS	105	129	129	139	139	150	150	158	158	172	172
L	454	465	490	499	530	532	552	582	612	659	709
LS	509	533	558	580	611	625	645	675	705	771	821
LB	185	196	221	230	261	263	283	313	343	390	440
LBS	240	264	289	311	342	356	376	406	436	502	552

**KF67..**

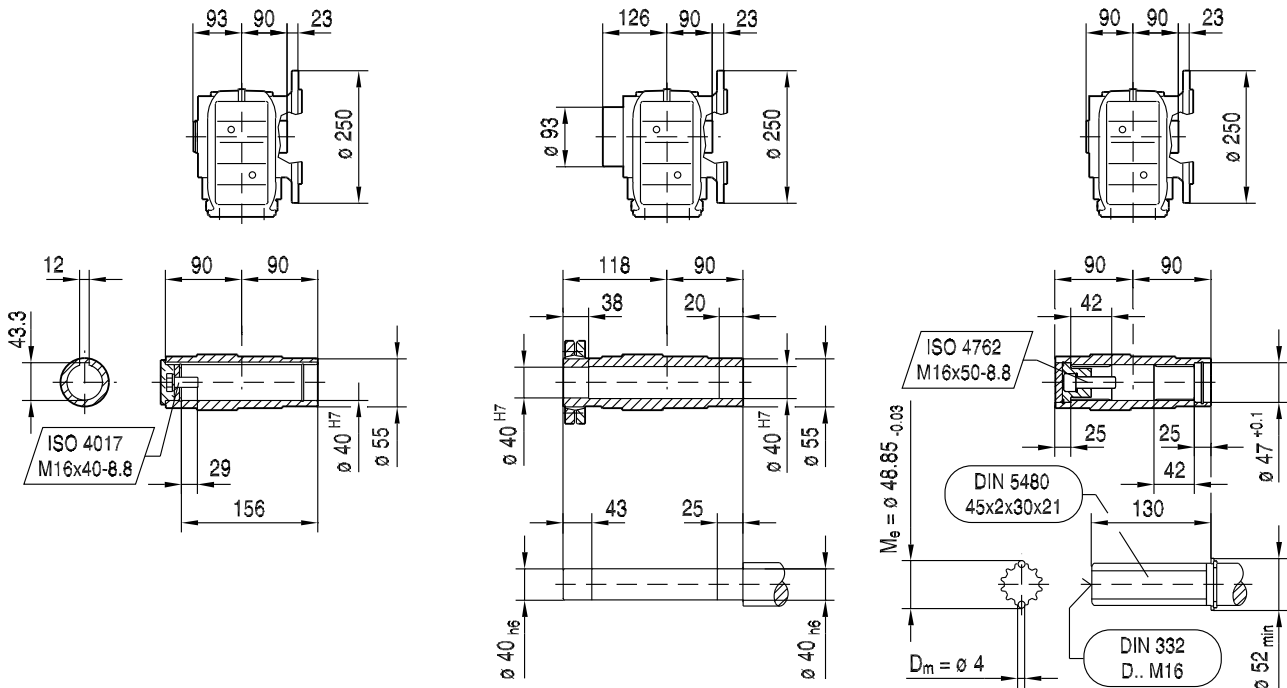
33 094 00 06



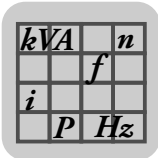
**KAF67..**

**KHF67..**

**KVF67..**

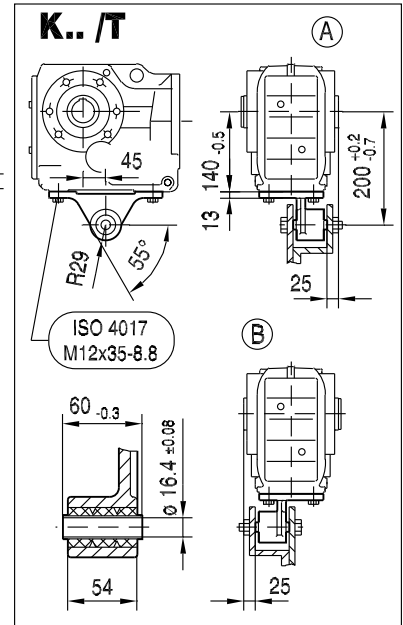
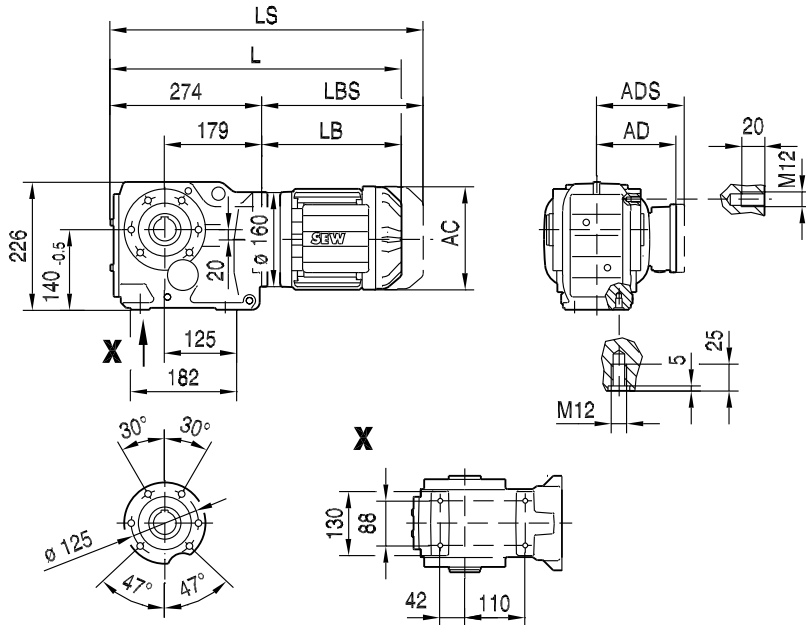


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	156	179	179	197	197	221	221
AD	105	119	119	128	128	140	140	157	157	170	170
ADS	105	129	129	139	139	150	150	158	158	172	172
L	459	470	495	504	535	537	557	587	617	664	714
LS	514	538	563	585	616	630	650	680	710	776	826
LB	185	196	221	230	261	263	283	313	343	390	440
LBS	240	264	289	311	342	356	376	406	436	502	552

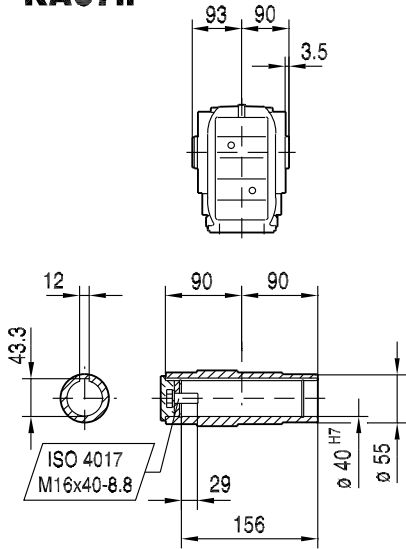


33 095 01 06

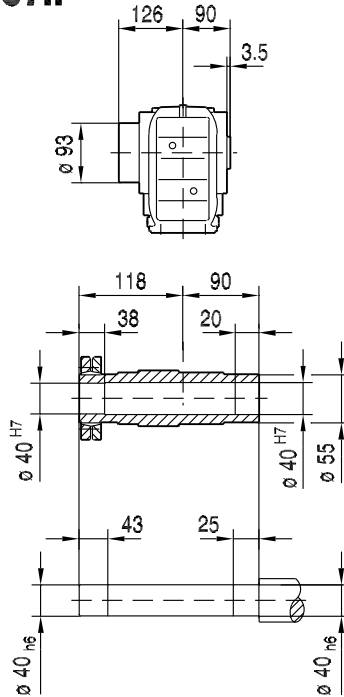
KA67..



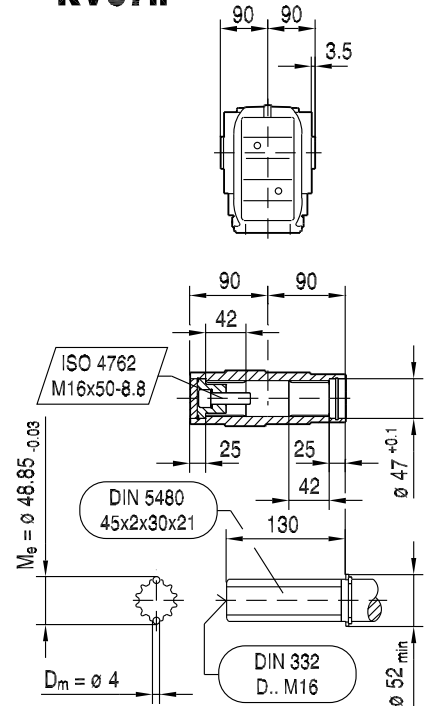
KA67..



KH67..



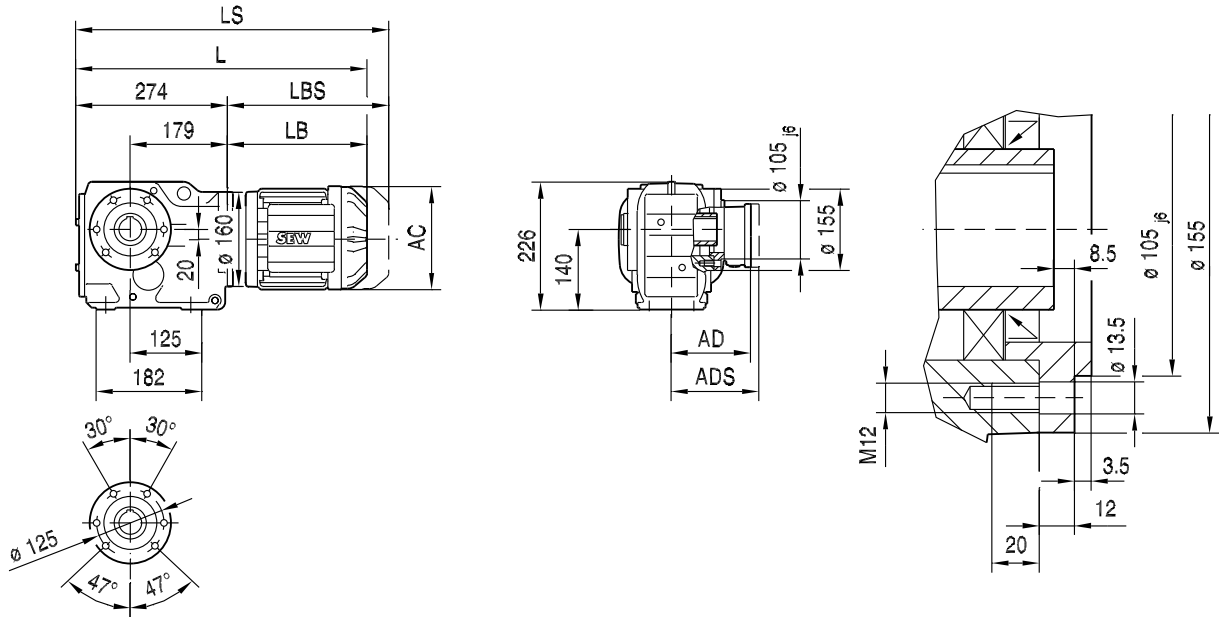
KV67..



(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	156	179	179	197	197	221	221
AD	105	119	119	128	128	140	140	157	157	170	170
ADS	105	129	129	139	139	150	150	158	158	172	172
L	459	470	495	504	535	537	557	587	617	664	714
LS	514	538	563	585	616	630	650	680	710	776	826
LB	185	196	221	230	261	263	283	313	343	390	440
LBS	240	264	289	311	342	356	376	406	436	502	552

**KAZ67..**

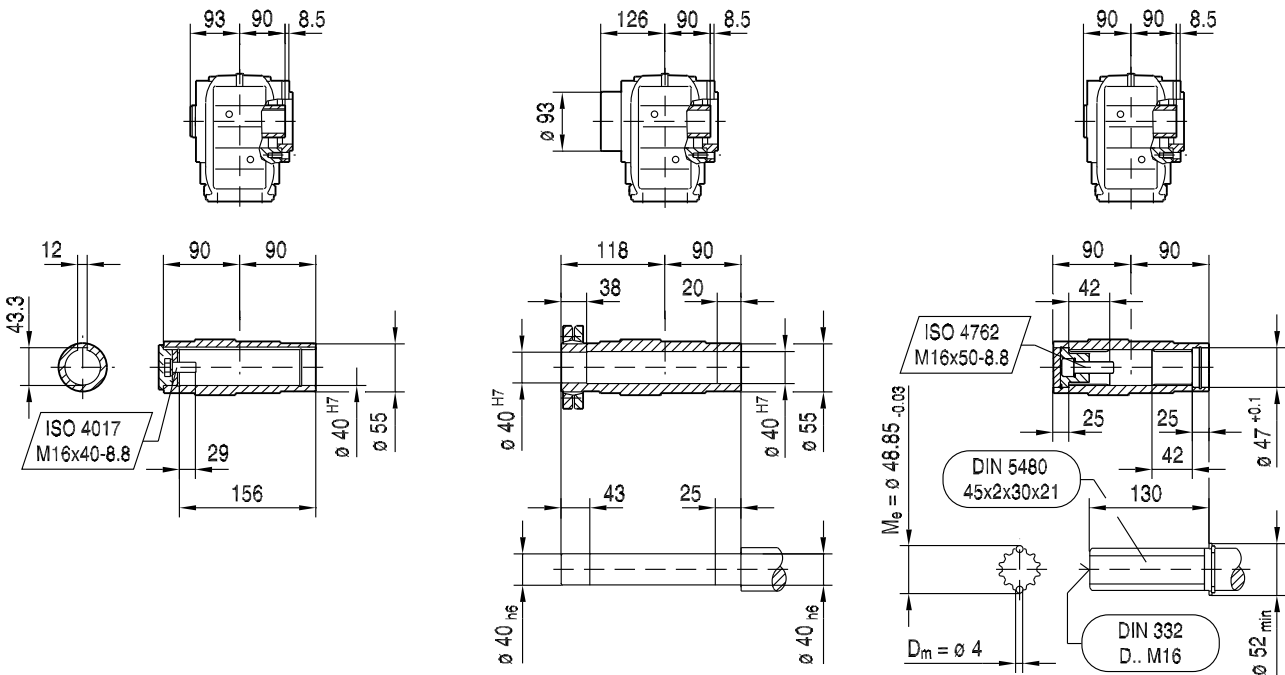
33 096 00 06



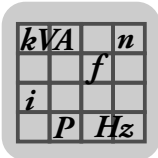
**KAZ67..**

**KHZ67..**

**KVZ67..**



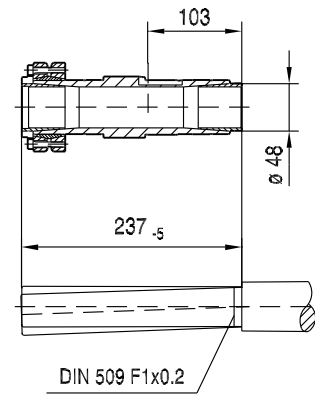
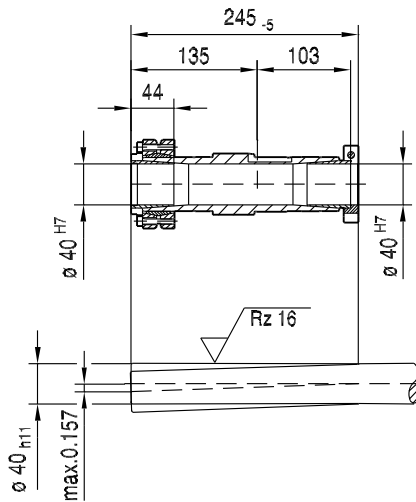
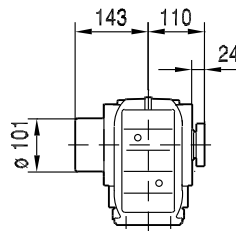
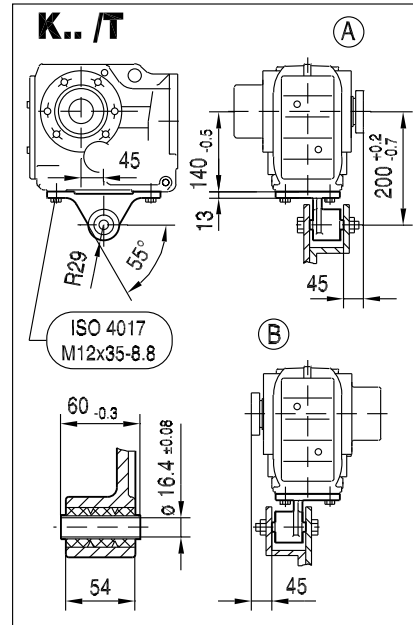
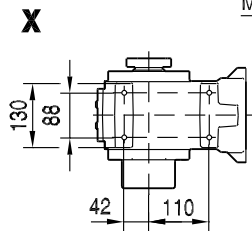
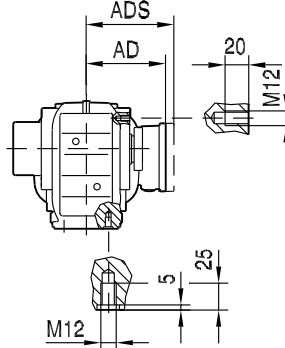
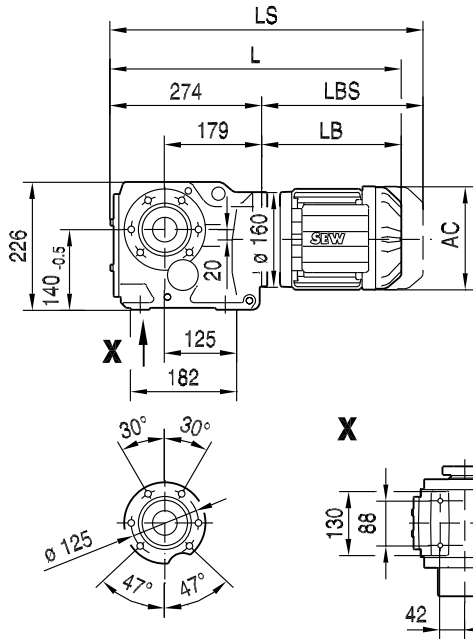
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	156	179	179	197	197	221	221
AD	105	119	119	128	128	140	140	157	157	170	170
ADS	105	129	129	139	139	150	150	158	158	172	172
L	459	470	495	504	535	537	557	587	617	664	714
LS	514	538	563	585	616	630	650	680	710	776	826
LB	185	196	221	230	261	263	283	313	343	390	440
LBS	240	264	289	311	342	356	376	406	436	502	552



K..DRE/DRS  
K..DR.. [mm]

KT67..

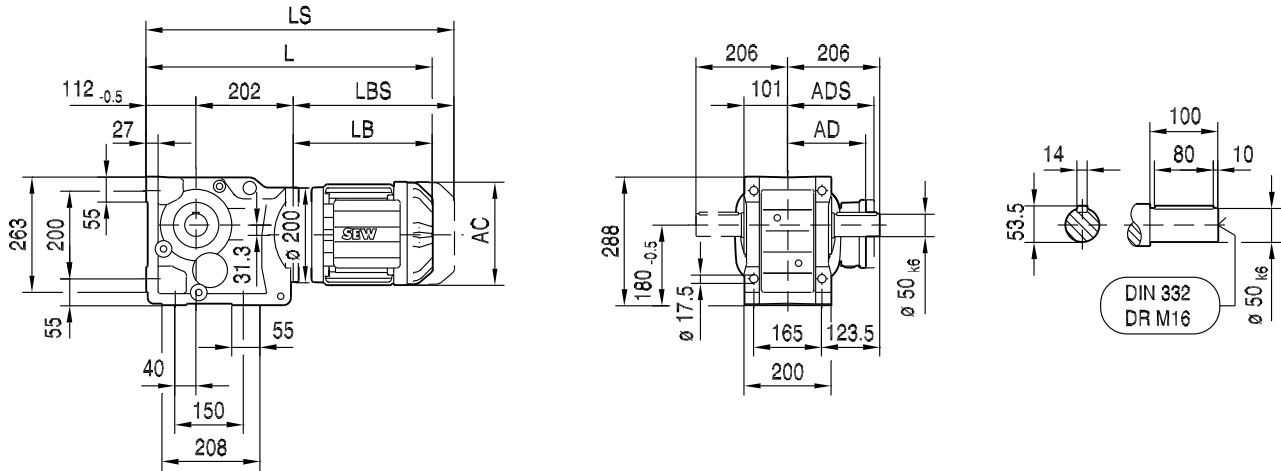
33 097 01 06



(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	156	179	179	197	197	221	221
AD	105	119	119	128	128	140	140	157	157	170	170
ADS	105	129	129	139	139	150	150	158	158	172	172
L	459	470	495	504	535	537	557	587	617	664	714
LS	514	538	563	585	616	630	650	680	710	776	826
LB	185	196	221	230	261	263	283	313	343	390	440
LBS	240	264	289	311	342	356	376	406	436	502	552

33 098 00 06

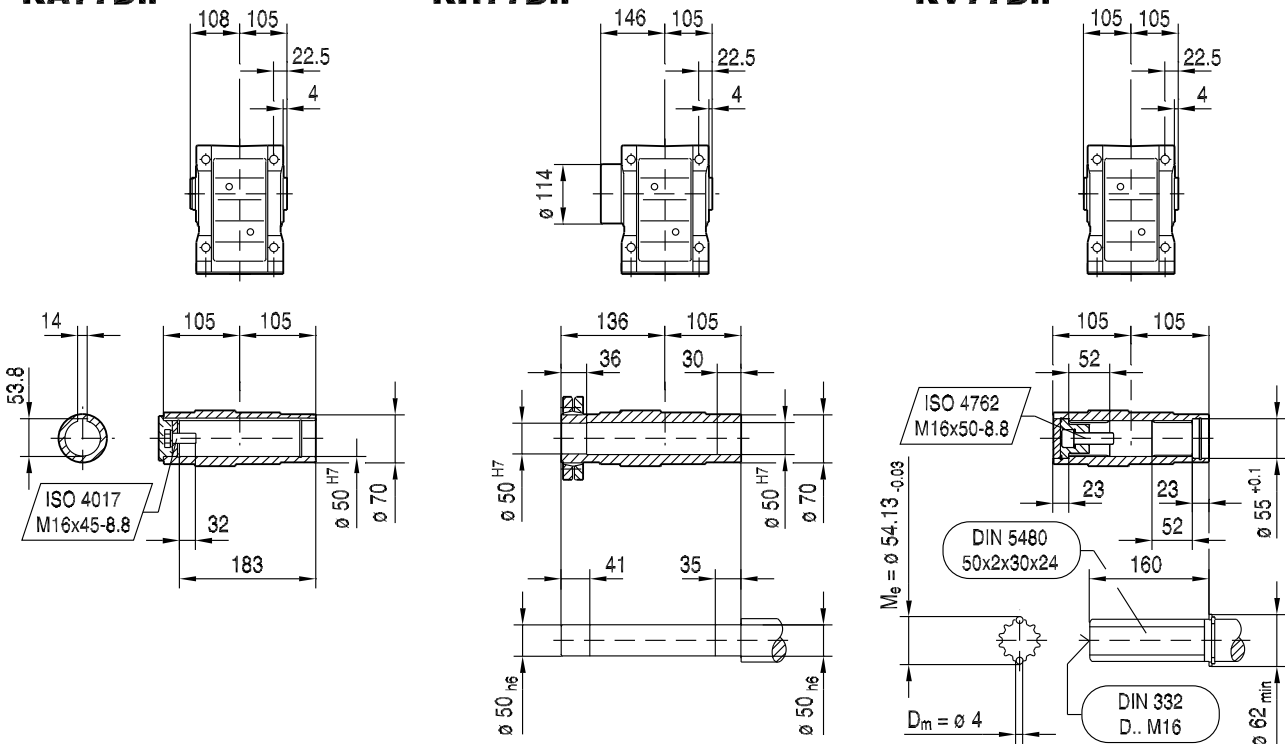
**K77..**



**KA77B..**

**KH77B..**

**KV77B..**

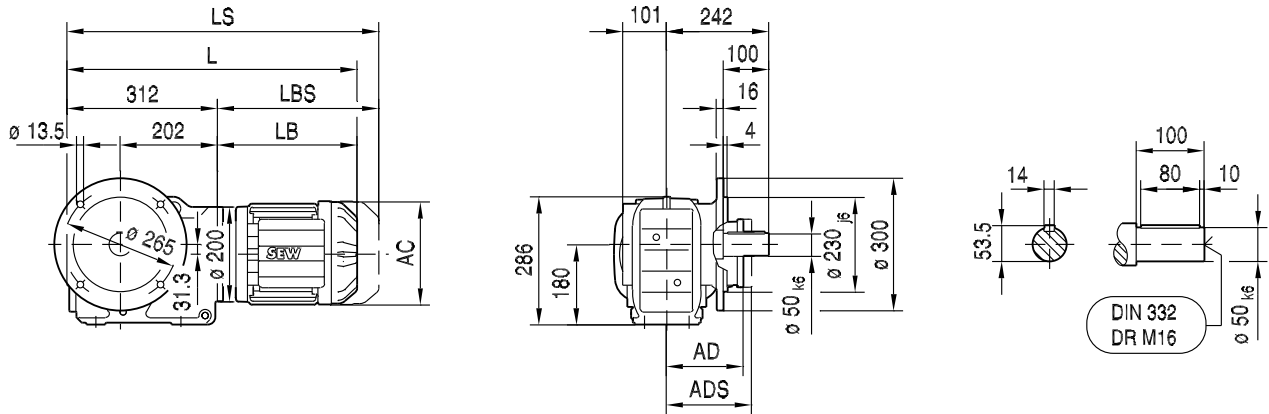


(→ 136)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	139	139	156	156	179	179	197	197	221	221	270
AD	119	119	128	128	140	140	157	157	170	170	228
ADS	129	129	139	139	150	150	158	158	172	172	228
L	503	528	537	568	570	590	620	650	693	743	784
LS	571	596	618	649	663	683	713	743	805	855	921
LB	189	214	223	254	256	276	306	336	379	429	470
LBS	257	282	304	335	349	369	399	429	491	541	607

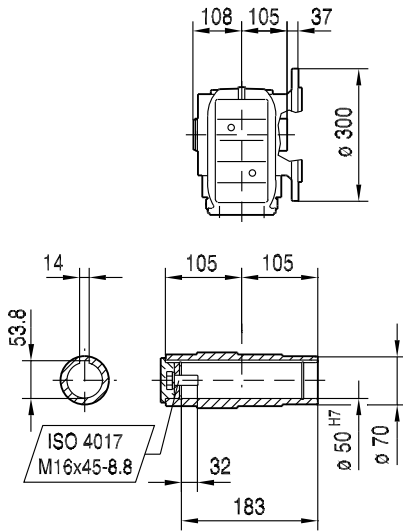


33 099 00 06

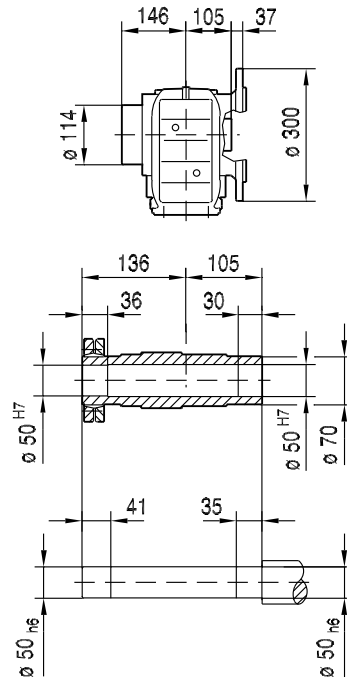
**KF77..**



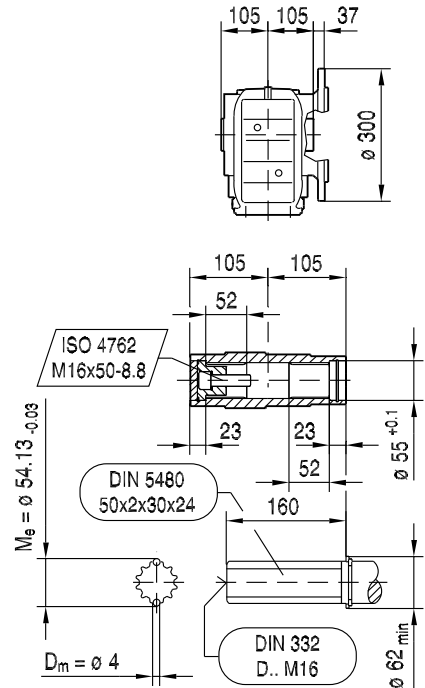
**KAF77..**



**KHF77..**



**KVF77..**

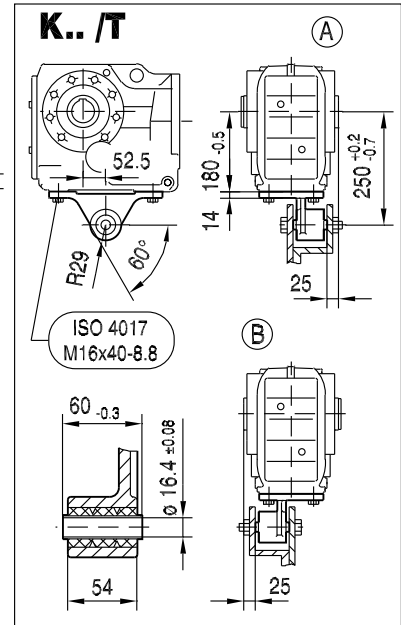
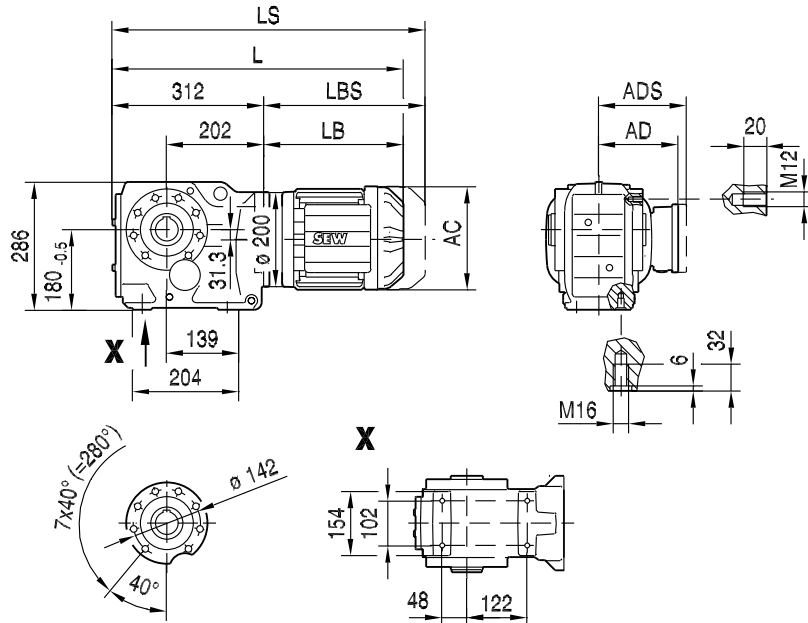


(→ 136)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	139	139	156	156	179	179	197	197	221	221	270
AD	119	119	128	128	140	140	157	157	170	170	228
ADS	129	129	139	139	150	150	158	158	172	172	228
L	501	526	535	566	568	588	618	648	691	741	782
LS	569	594	616	647	661	681	711	741	803	853	919
LB	189	214	223	254	256	276	306	336	379	429	470
LBS	257	282	304	335	349	369	399	429	491	541	607



**KA77..**

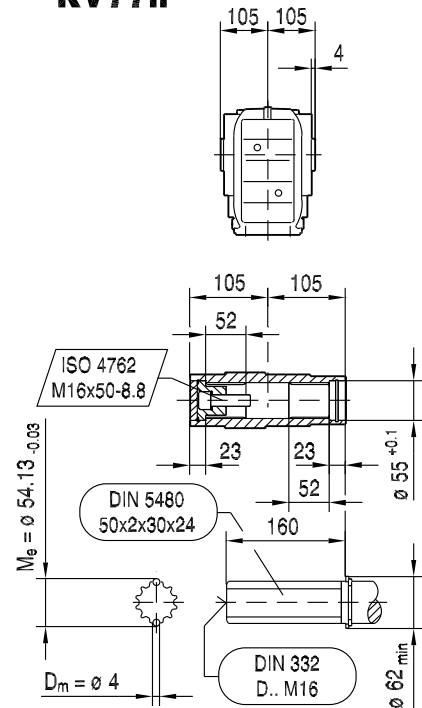
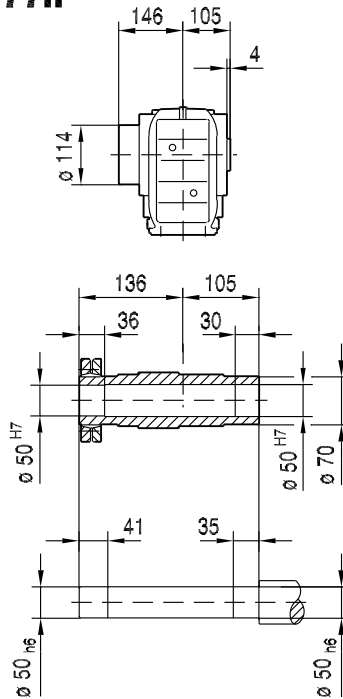
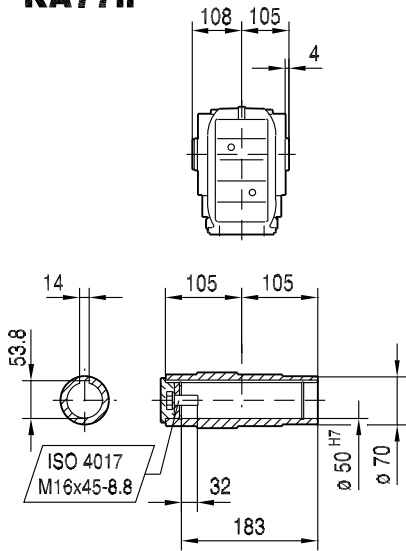
33 100 01 06



**KA77..**

**KH77..**

**KV77..**



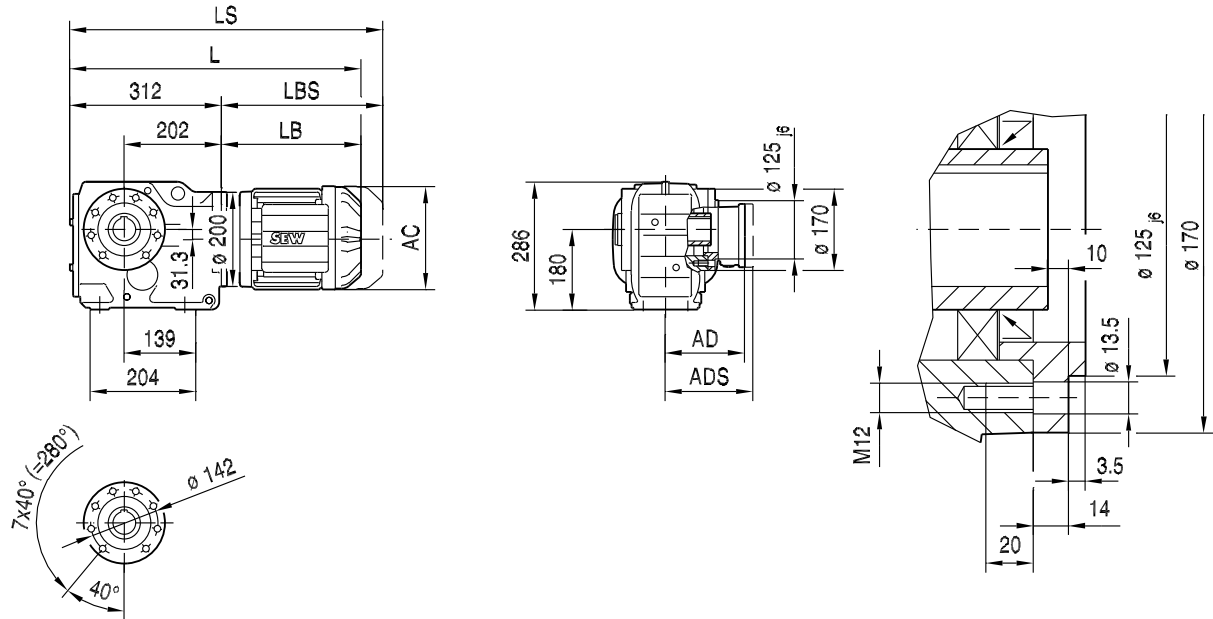
(→ 136)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	139	139	156	156	179	179	197	197	221	221	270
AD	119	119	128	128	140	140	157	157	170	170	228
ADS	129	129	139	139	150	150	158	158	172	172	228
L	501	526	535	566	568	588	618	648	691	741	782
LS	569	594	616	647	661	681	711	741	803	853	919
LB	189	214	223	254	256	276	306	336	379	429	470
LBS	257	282	304	335	349	369	399	429	491	541	607



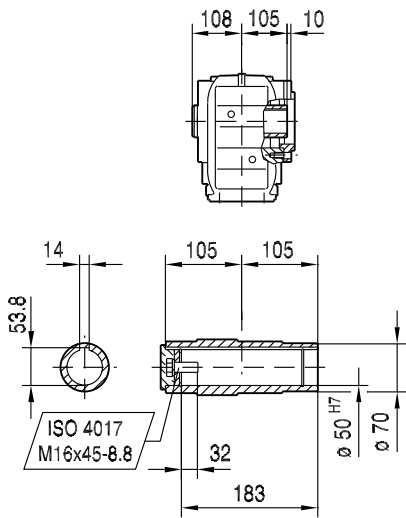
**K..DRE/DRS**  
K..DR.. [mm]

33 101 00 06

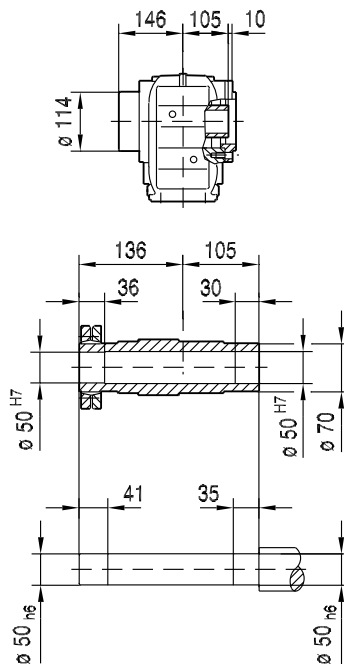
**KAZ77..**



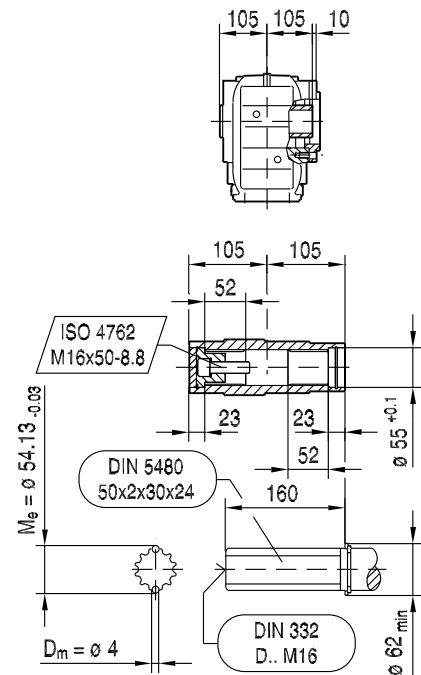
**KAZ77..**



**KHZ77..**



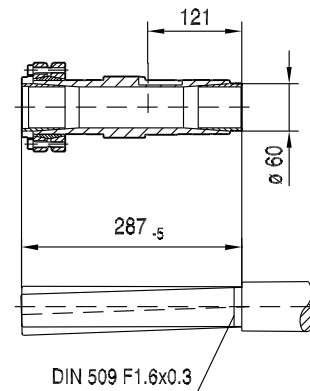
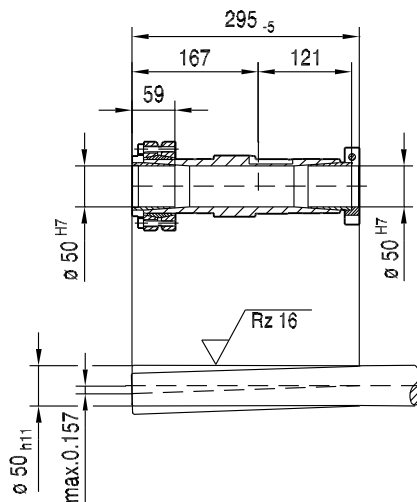
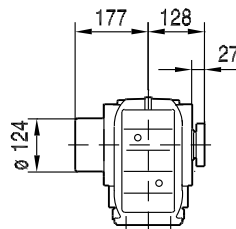
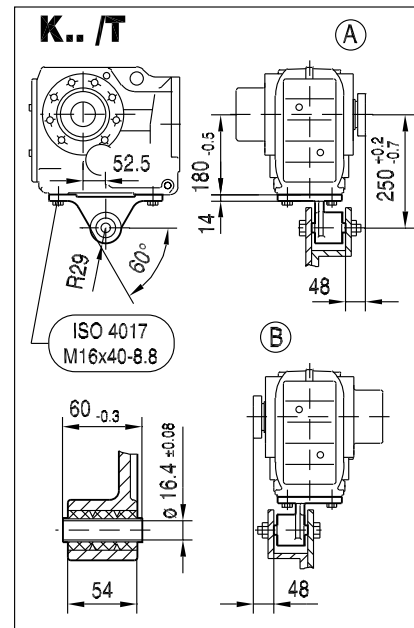
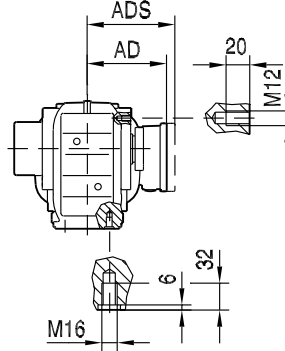
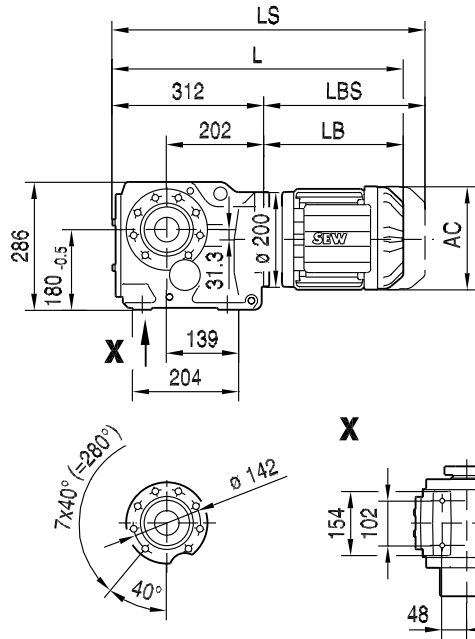
**KVZ77..**



(→ 136)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	139	139	156	156	179	179	197	197	221	221	270
AD	119	119	128	128	140	140	157	157	170	170	228
ADS	129	129	139	139	150	150	158	158	172	172	228
L	501	526	535	566	568	588	618	648	691	741	782
LS	569	594	616	647	661	681	711	741	803	853	919
LB	189	214	223	254	256	276	306	336	379	429	470
LBS	257	282	304	335	349	369	399	429	491	541	607

**KT77..**

33 102 01 06

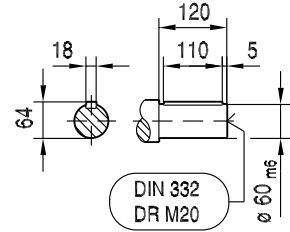
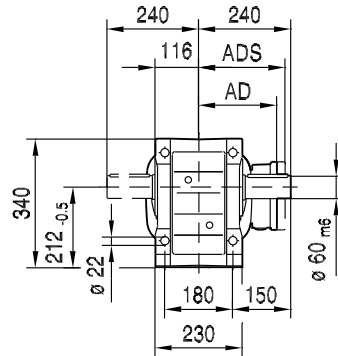
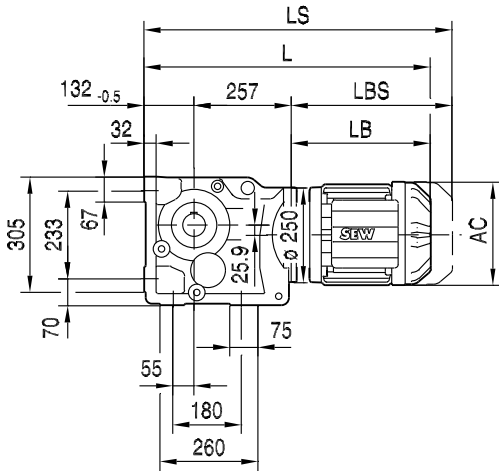


(→ 136)	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	139	139	156	156	179	179	197	197	221	221	270
AD	119	119	128	128	140	140	157	157	170	170	228
ADS	129	129	139	139	150	150	158	158	172	172	228
L	501	526	535	566	568	588	618	648	691	741	782
LS	569	594	616	647	661	681	711	741	803	853	919
LB	189	214	223	254	256	276	306	336	379	429	470
LBS	257	282	304	335	349	369	399	429	491	541	607

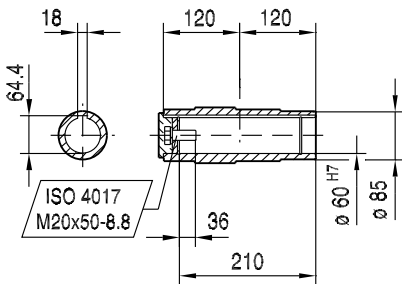
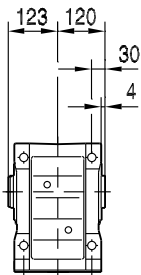


33 103 00 06

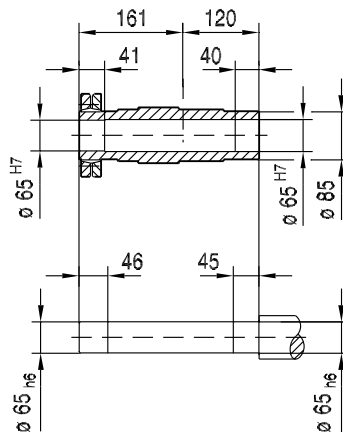
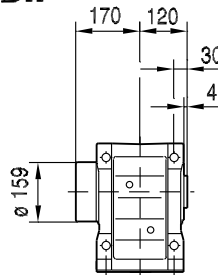
**K87..**



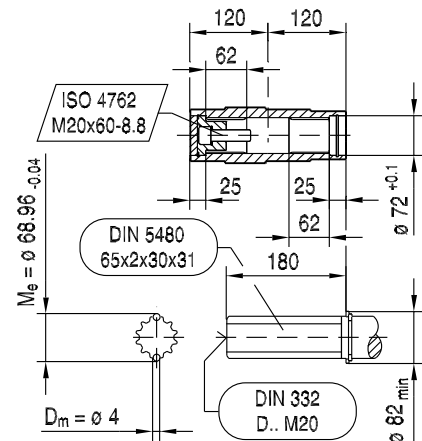
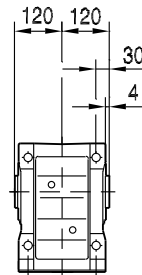
**KA87B..**



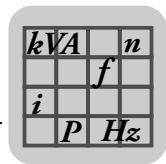
**KH87B..**



**KV87B..**

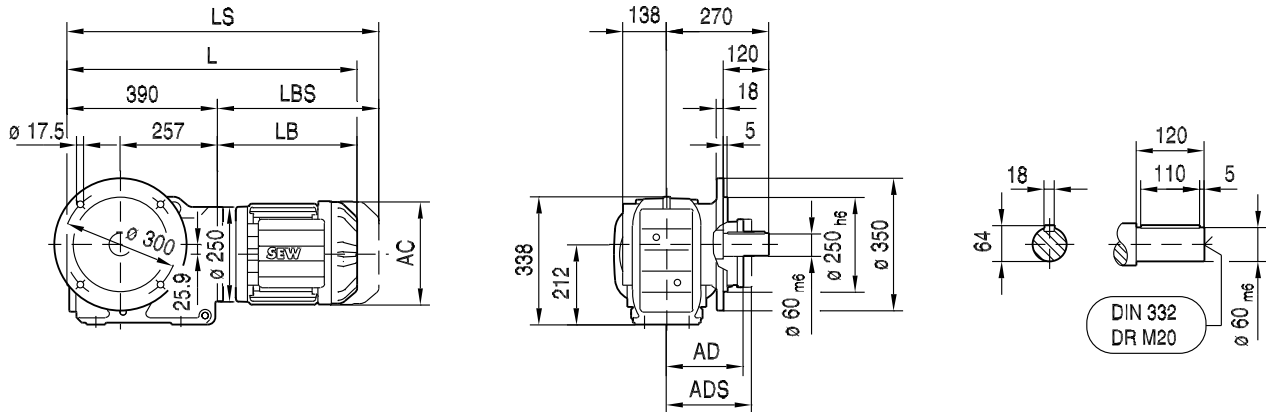


(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	598	607	638	640	660	690	720	763	813	854	923	983
LS	666	688	719	733	753	783	813	875	925	991	1112	1172
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783



**KF87..**

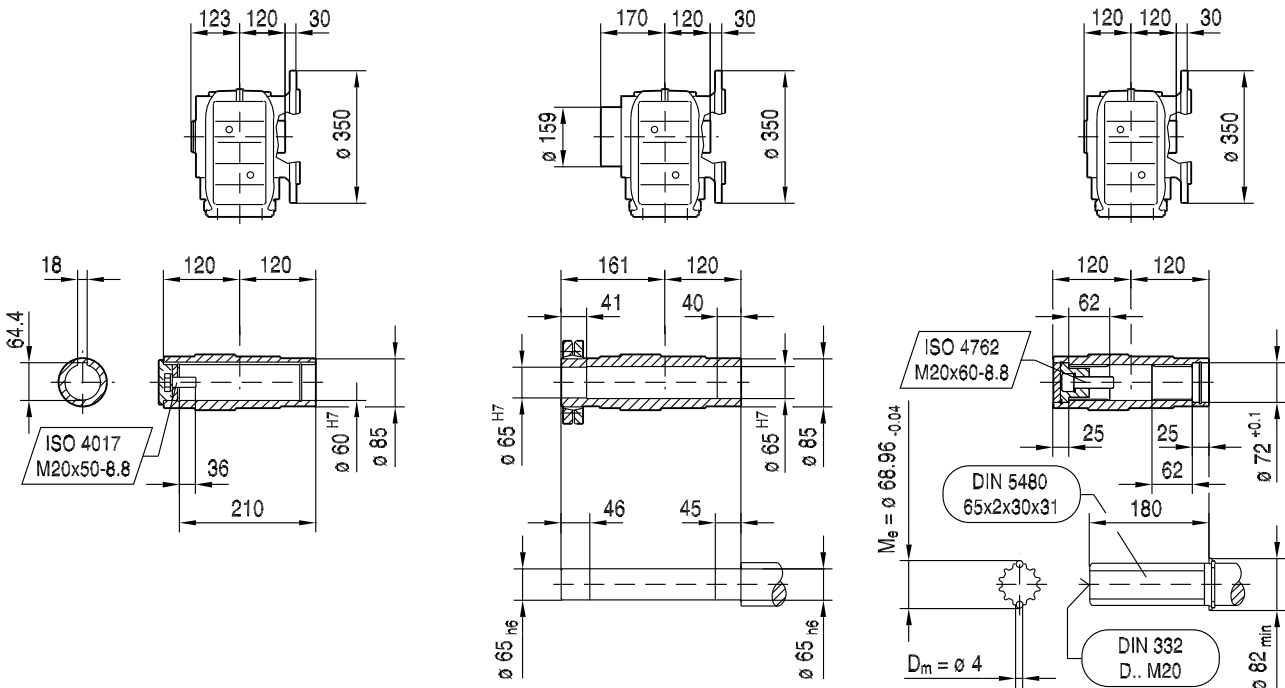
33 104 00 06



**KAF87..**

**KHF87..**

**KVF87..**

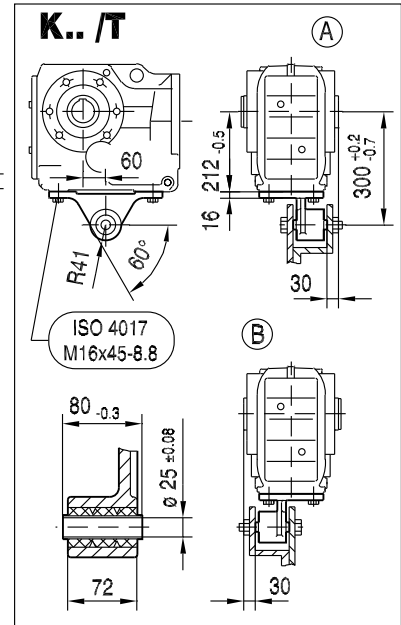
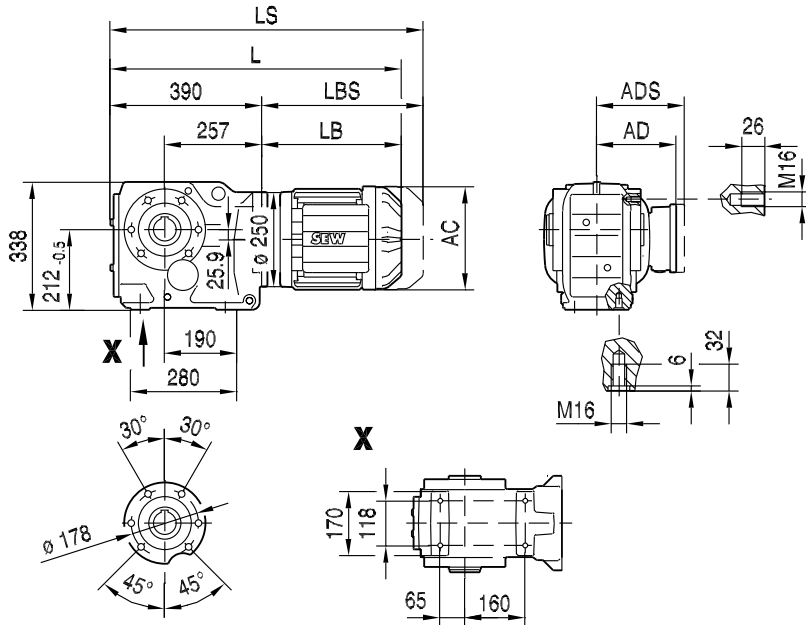


(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	599	608	639	641	661	691	721	764	814	855	924	984
LS	667	689	720	734	754	784	814	876	926	992	1113	1173
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783

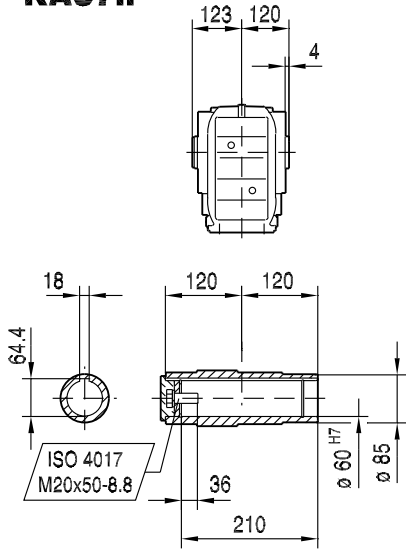


33 105 01 06

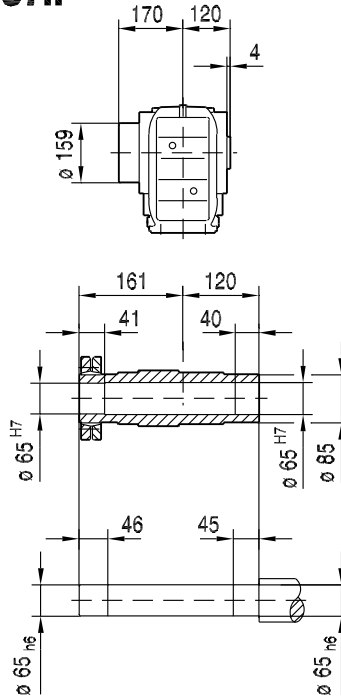
KA87..



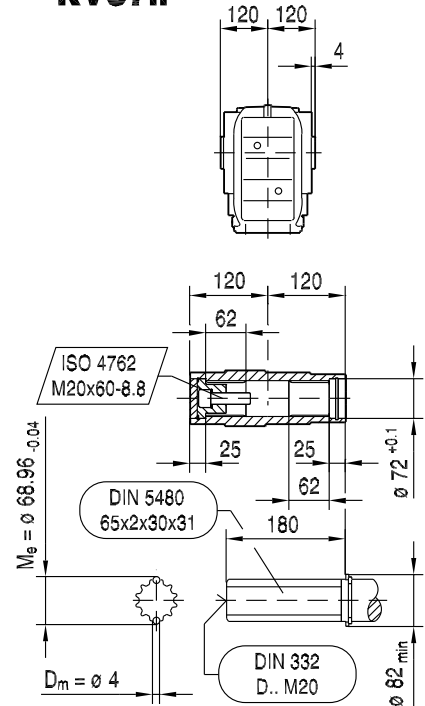
KA87..



KH87..

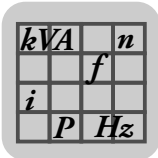


KV87..



(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	599	608	639	641	661	691	721	764	814	855	924	984
LS	667	689	720	734	754	784	814	876	926	992	1113	1173
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783

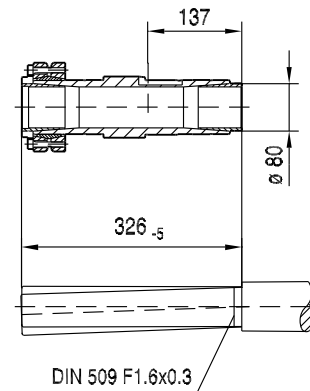
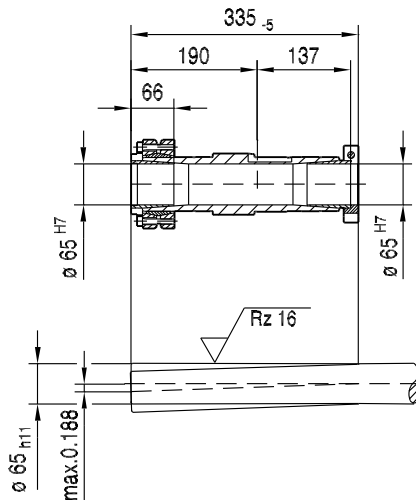
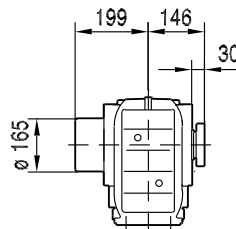
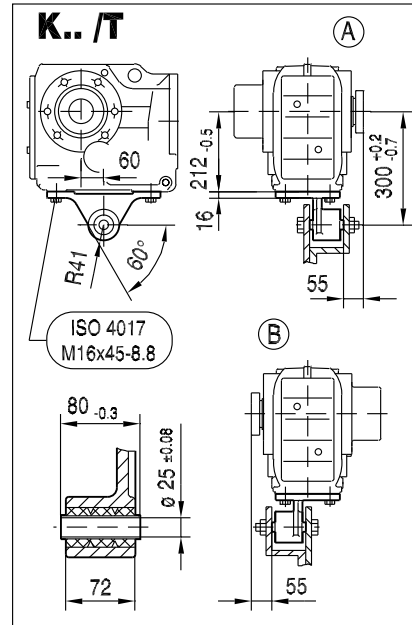
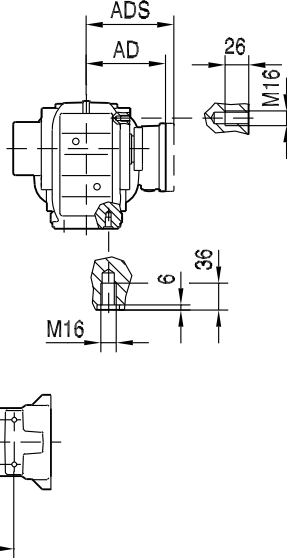
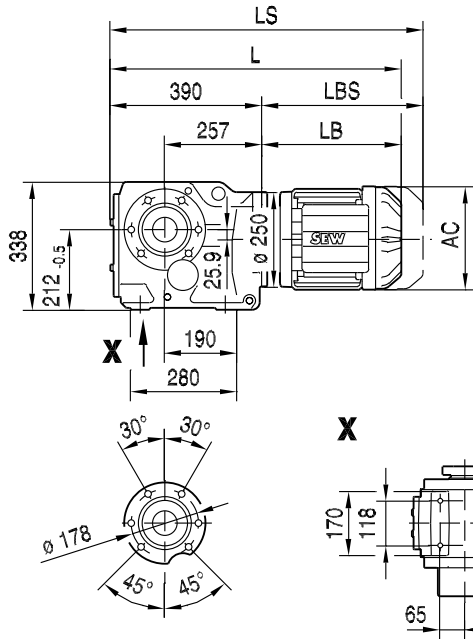




K..DRE/DRS  
K..DR.. [mm]

KT87..

33 107 01 06



(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	139	156	156	179	179	197	197	221	221	270	316	316
AD	119	128	128	140	140	157	157	170	170	228	253	253
ADS	129	139	139	150	150	158	158	172	172	228	253	253
L	599	608	639	641	661	691	721	764	814	855	924	984
LS	667	689	720	734	754	784	814	876	926	992	1113	1173
LB	209	218	249	251	271	301	331	374	424	465	534	594
LBS	277	299	330	344	364	394	424	486	536	602	723	783

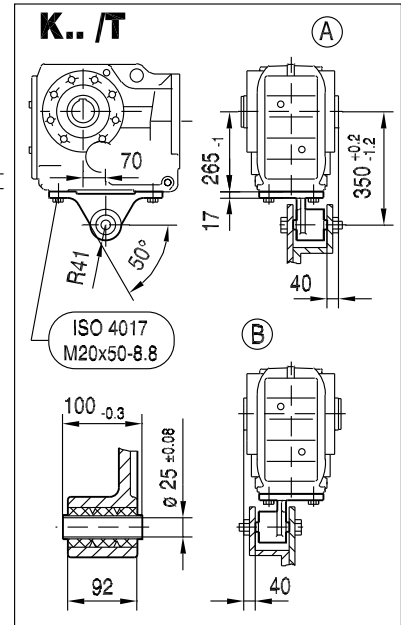
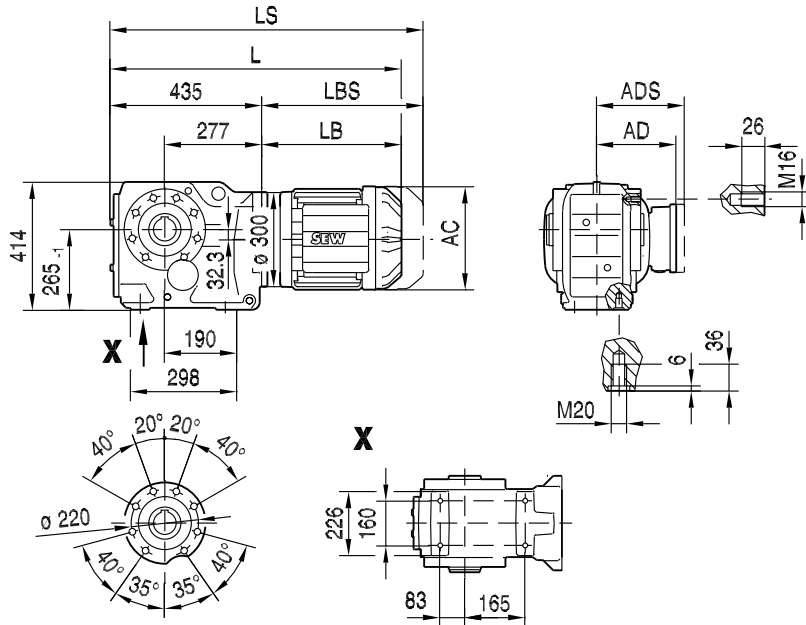






**KA97..**

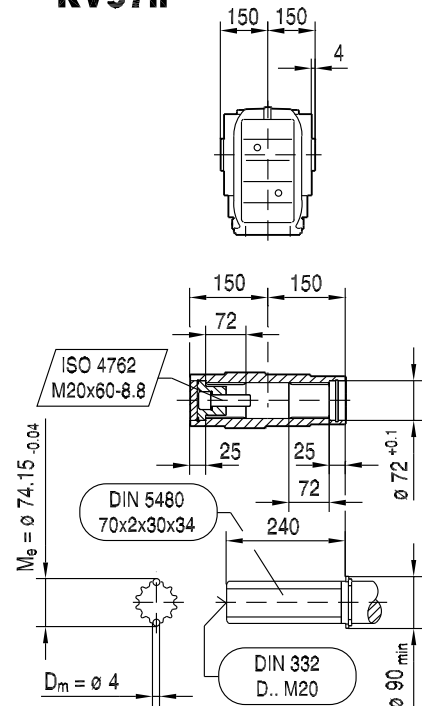
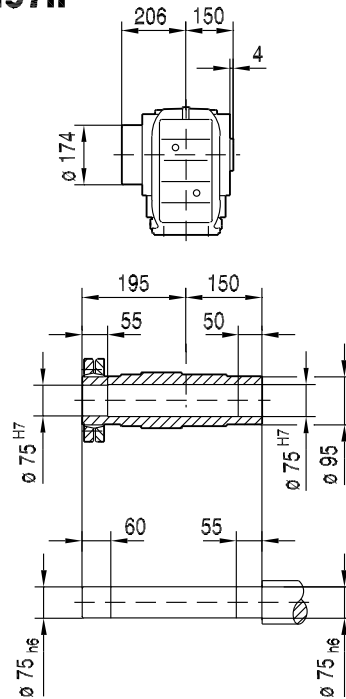
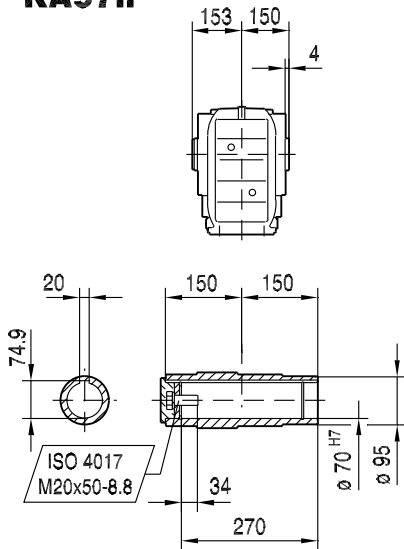
33 110 01 06



**KA97..**

**KH97..**

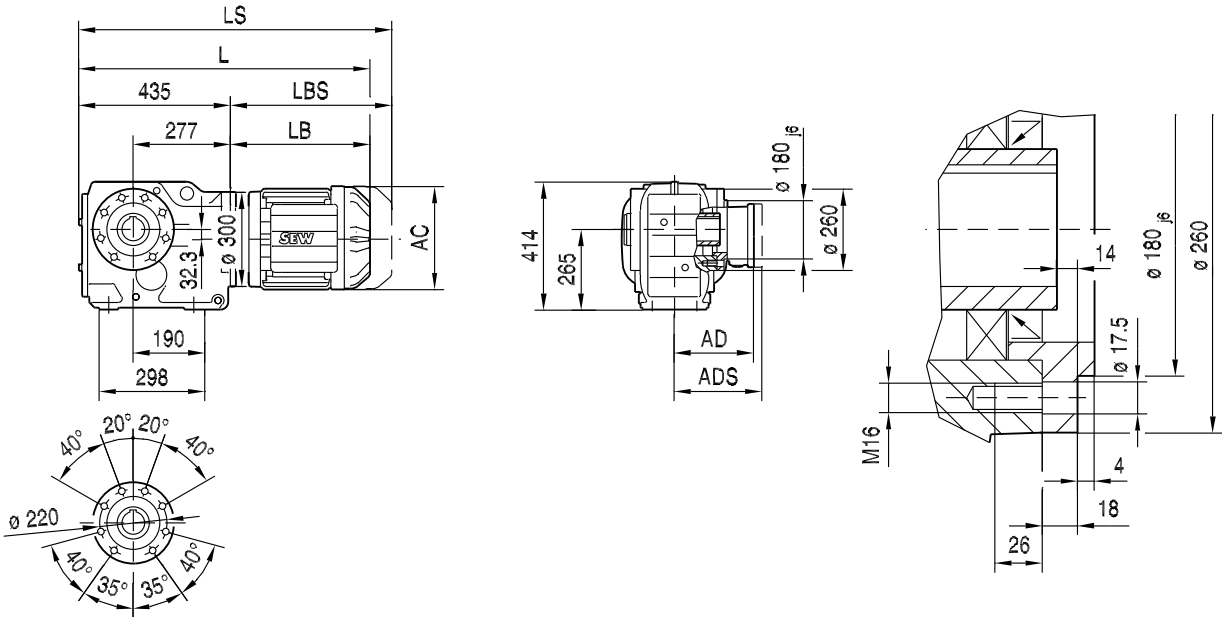
**KV97..**



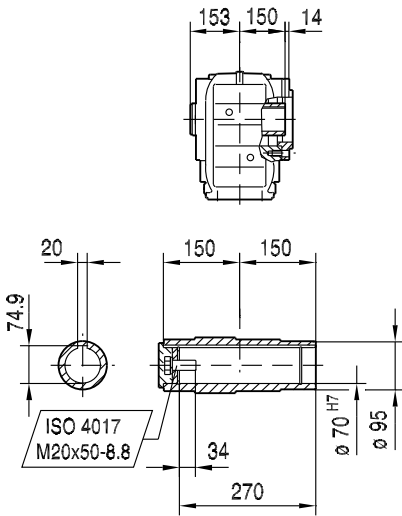
(→ 136)	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	179	179	197	197	221	221	221	270	316	316	394
AD	140	140	157	157	170	170	170	228	253	253	283
ADS	150	150	158	158	172	172	172	228	253	253	283
L	681	701	731	761	769	804	854	895	964	1024	1097
LS	774	794	824	854	881	916	966	1032	1153	1213	1302
LB	246	266	296	326	334	369	419	460	529	589	662
LBS	339	359	389	419	446	481	531	597	718	778	867



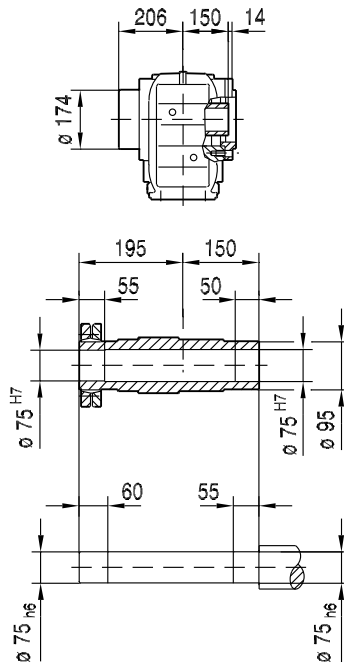
**KAZ97..**



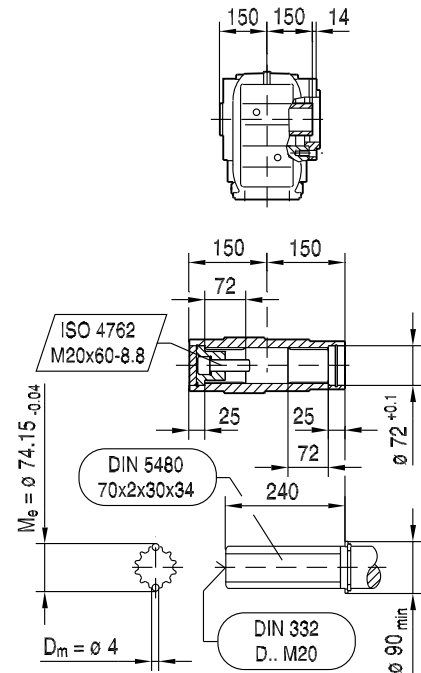
**KAZ97..**



**KHZ97..**



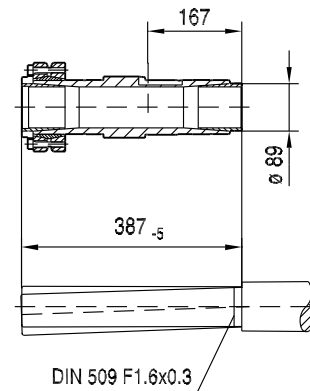
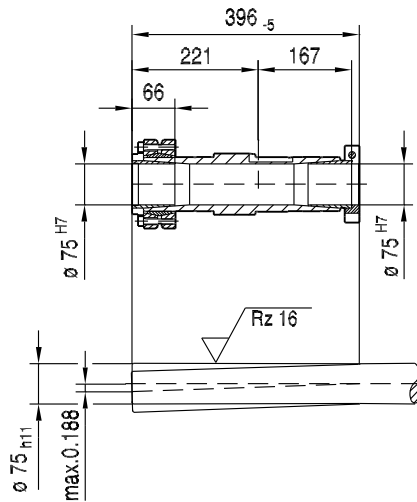
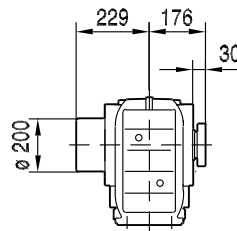
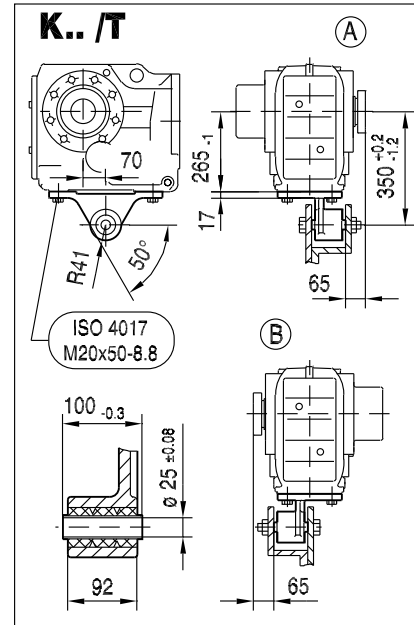
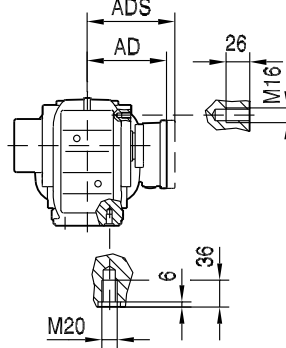
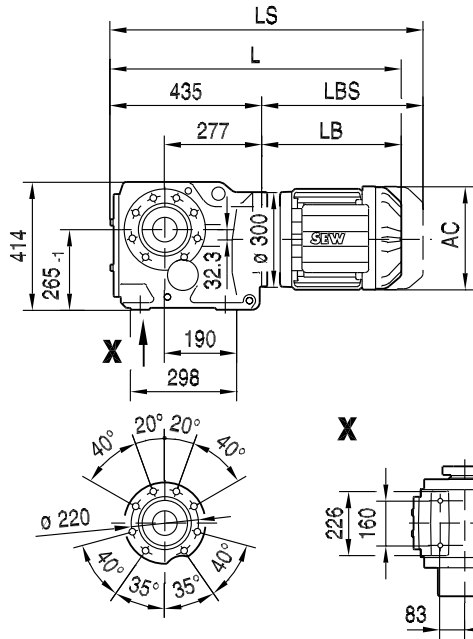
**KVZ97..**



(→ 136)	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	179	179	197	197	221	221	221	270	316	316	394
AD	140	140	157	157	170	170	170	228	253	253	283
ADS	150	150	158	158	172	172	172	228	253	253	283
L	681	701	731	761	769	804	854	895	964	1024	1097
LS	774	794	824	854	881	916	966	1032	1153	1213	1302
LB	246	266	296	326	334	369	419	460	529	589	662
LBS	339	359	389	419	446	481	531	597	718	778	867

KT97..

33 112 01 06

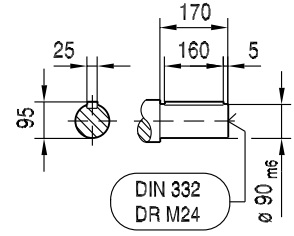
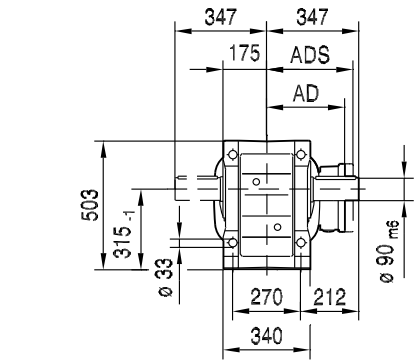
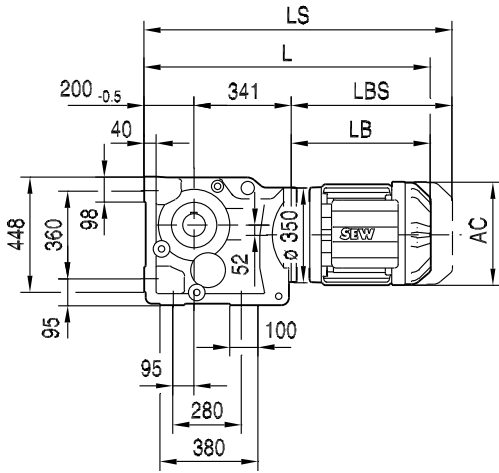


(→ 136)	DR90M	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200
AC	179	179	197	197	221	221	221	270	316	316	394
AD	140	140	157	157	170	170	170	228	253	253	283
ADS	150	150	158	158	172	172	172	228	253	253	283
L	681	701	731	761	769	804	854	895	964	1024	1097
LS	774	794	824	854	881	916	966	1032	1153	1213	1302
LB	246	266	296	326	334	369	419	460	529	589	662
LBS	339	359	389	419	446	481	531	597	718	778	867

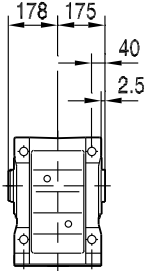


33 113 00 06

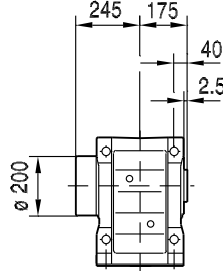
**K107..**



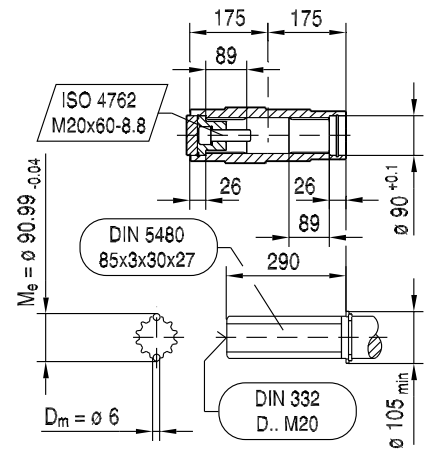
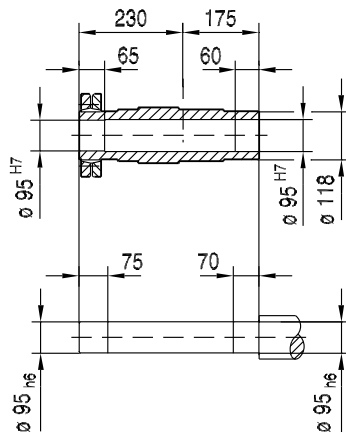
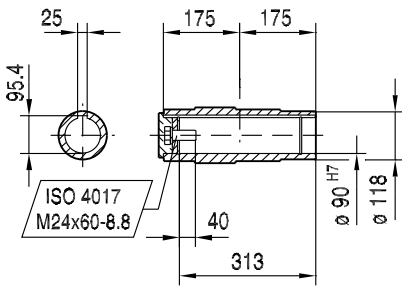
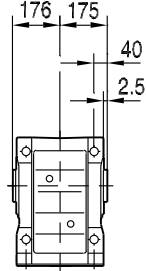
**KA107B..**



**KH107B..**



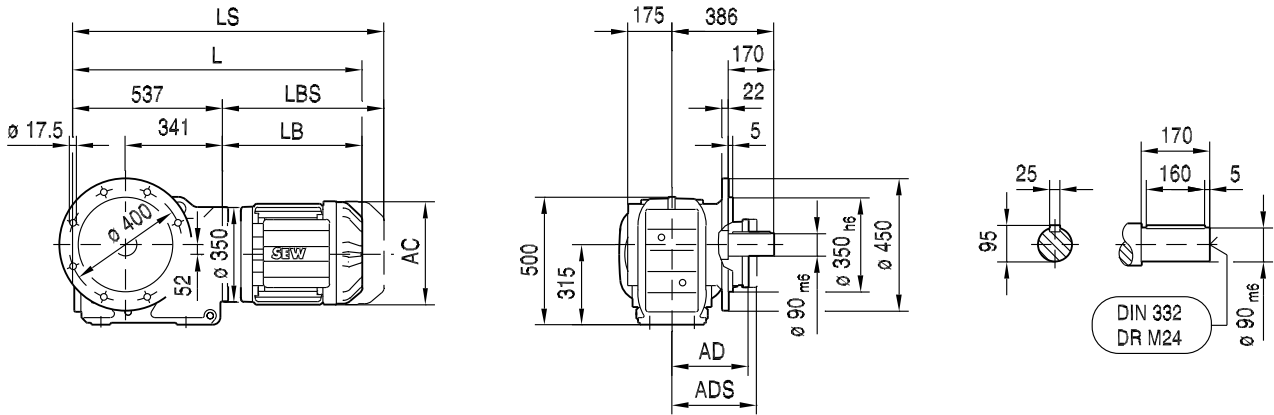
**KV107B..**



(→ 136)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	197	221	221	270	316	316	394	394	394
AD	157	170	170	228	253	253	283	283	283
ADS	158	172	172	228	253	253	283	283	283
L	861	904	954	995	1064	1124	1197	1197	1247
LS	954	1016	1066	1132	1253	1313	1402	1402	1452
LB	320	363	413	454	523	583	656	656	706
LBS	413	475	525	591	712	772	861	861	911

**KF107..**

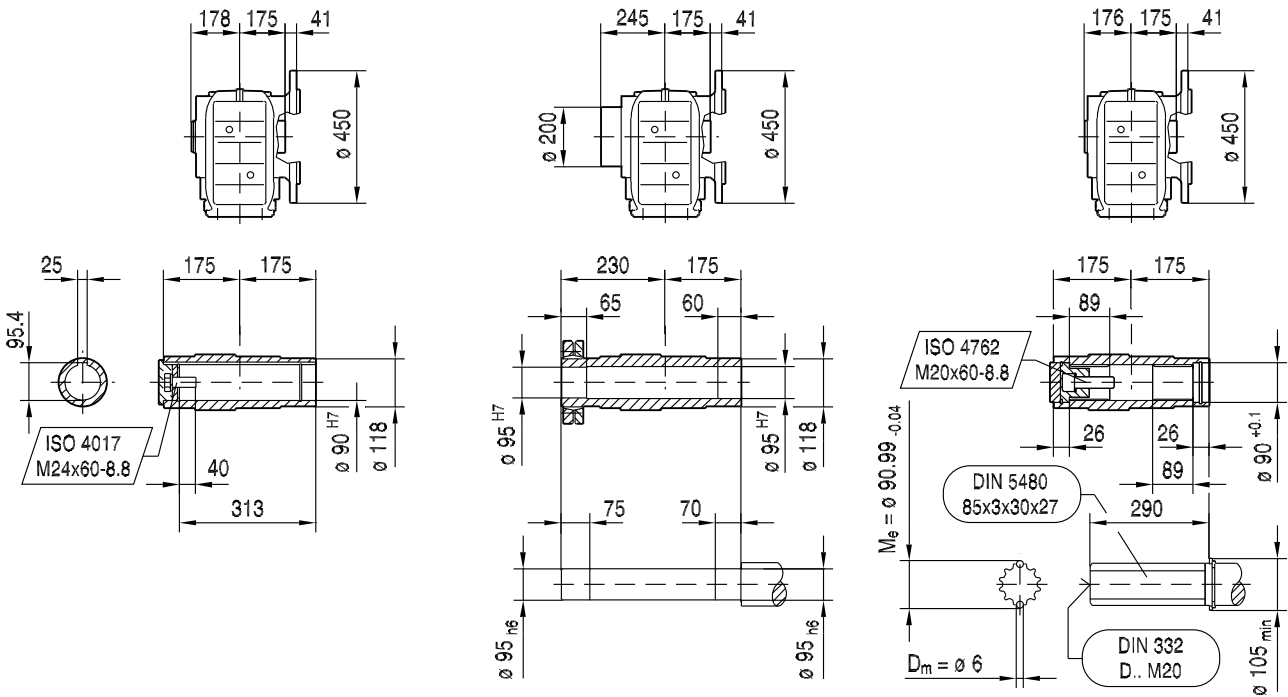
33 114 00 06



**KAF107..**

**KHF107..**

**KVF107..**



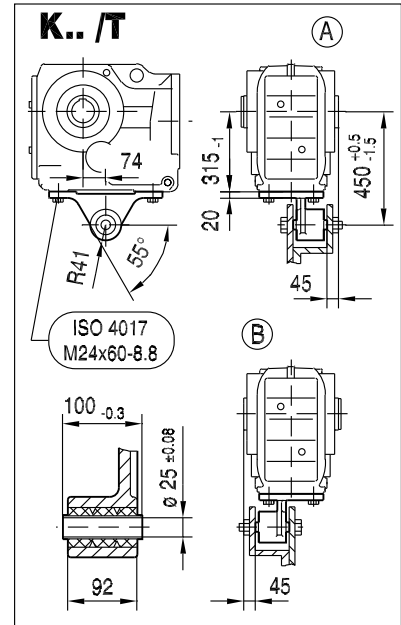
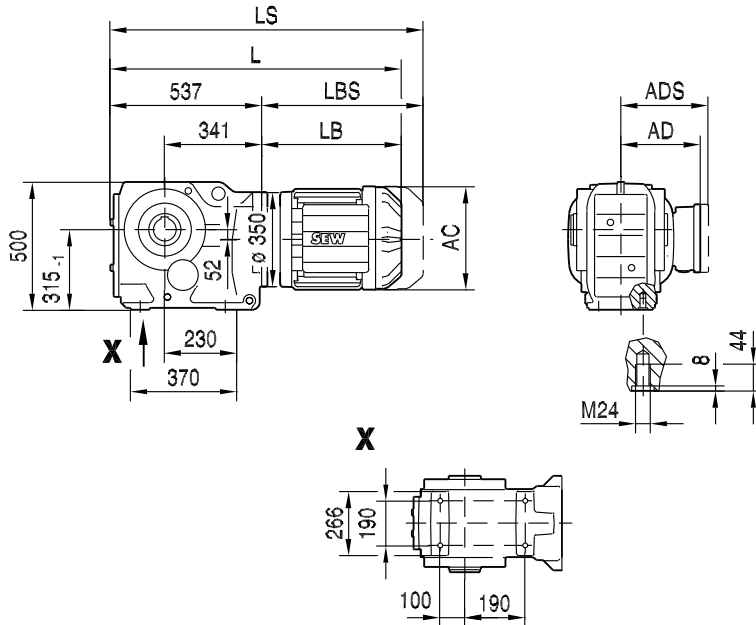
(→ 136)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	197	221	221	270	316	316	394	394	394
AD	157	170	170	228	253	253	283	283	283
ADS	158	172	172	228	253	253	283	283	283
L	857	900	950	991	1060	1120	1193	1193	1243
LS	950	1012	1062	1128	1249	1309	1398	1398	1448
LB	320	363	413	454	523	583	656	656	706
LBS	413	475	525	591	712	772	861	861	911



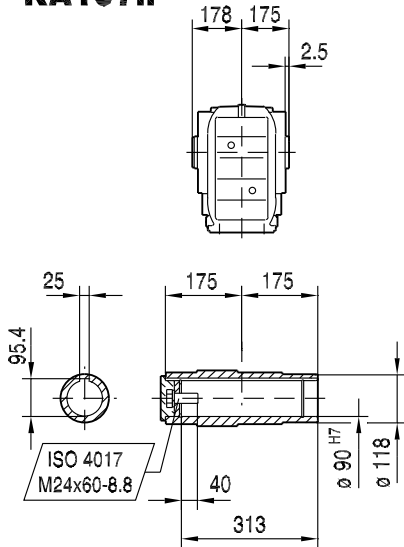
K..DRE/DRS  
K..DR.. [mm]

33 115 01 06

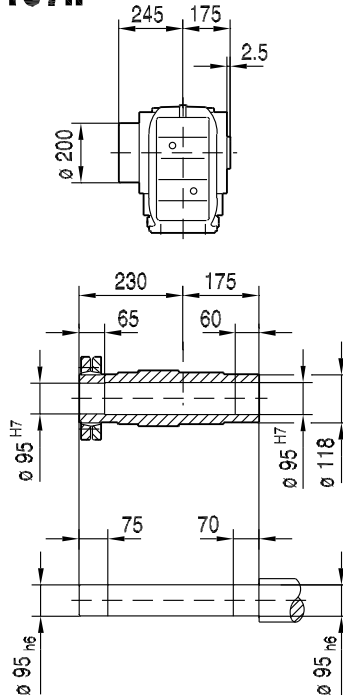
KA107..



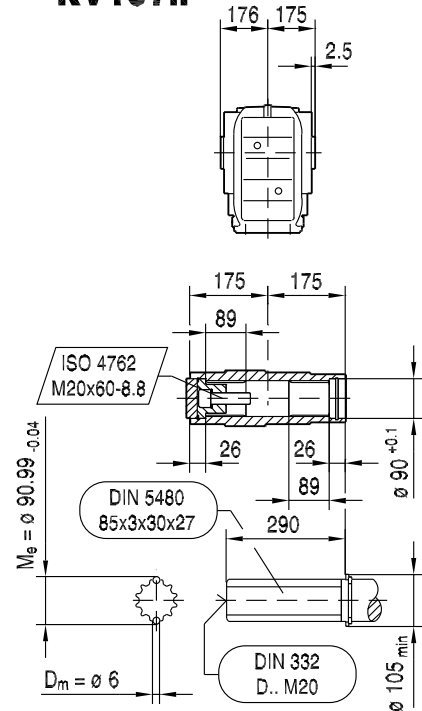
KA107..



KH107..



KV107..



(→ 136)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	197	221	221	270	316	316	394	394	394
AD	157	170	170	228	253	253	283	283	283
ADS	158	172	172	228	253	253	283	283	283
L	857	900	950	991	1060	1120	1193	1193	1243
LS	950	1012	1062	1128	1249	1309	1398	1398	1448
LB	320	363	413	454	523	583	656	656	706
LBS	413	475	525	591	712	772	861	861	911

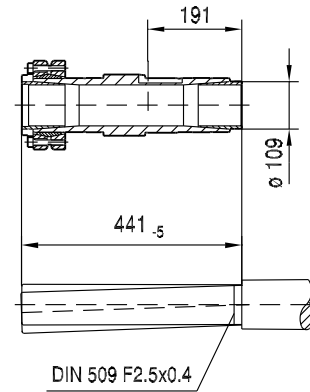
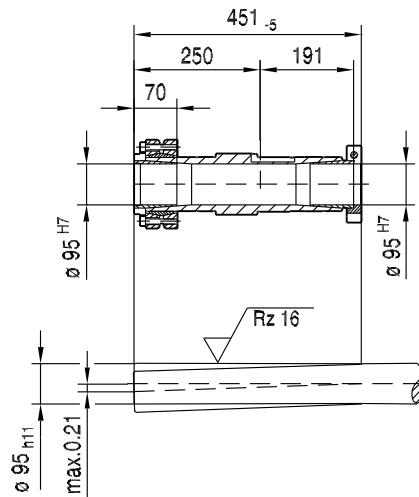
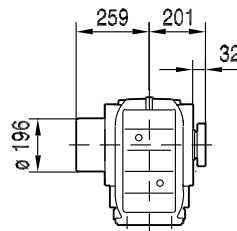
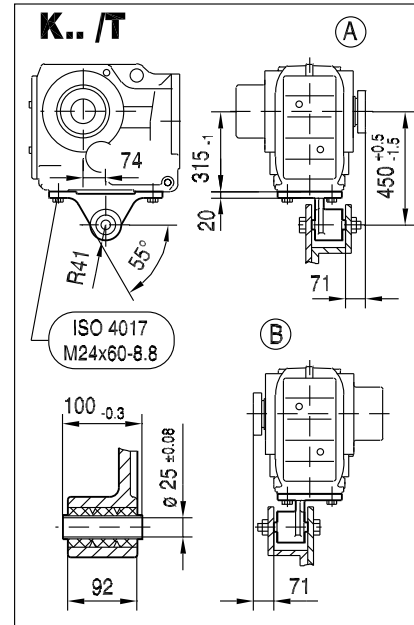
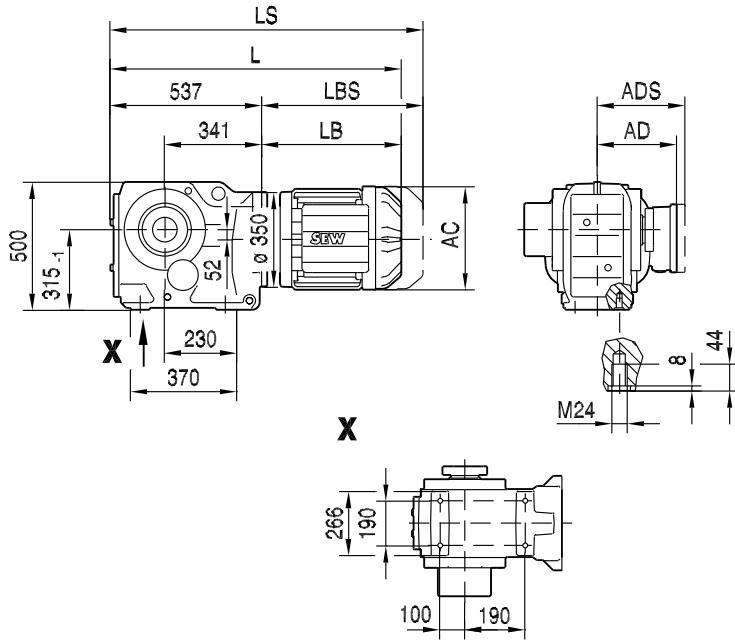






KT107..

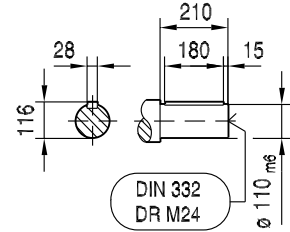
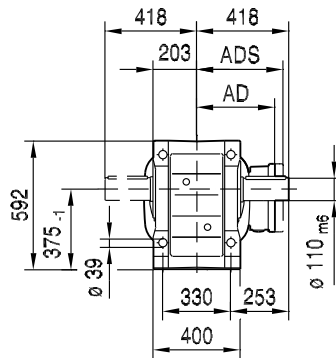
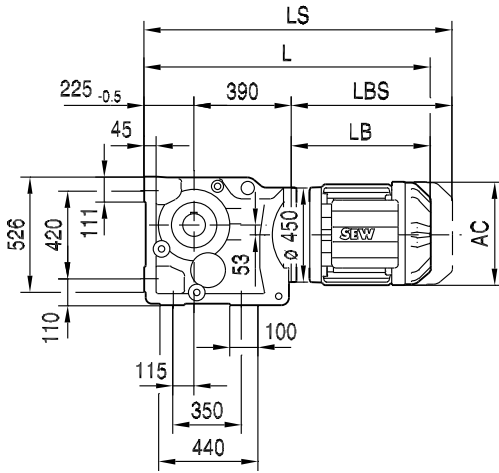
33 117 01 06



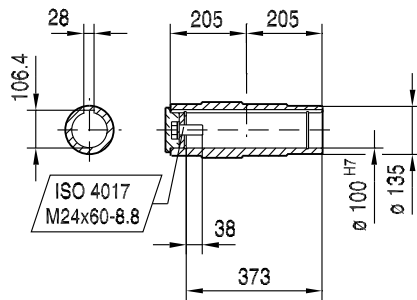
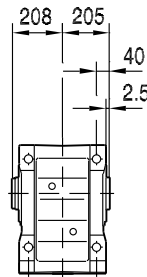
(→ 136)	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC
AC	197	221	221	270	316	316	394	394	394
AD	157	170	170	228	253	253	283	283	283
ADS	158	172	172	228	253	253	283	283	283
L	857	900	950	991	1060	1120	1193	1193	1243
LS	950	1012	1062	1128	1249	1309	1398	1398	1448
LB	320	363	413	454	523	583	656	656	706
LBS	413	475	525	591	712	772	861	861	911

**K127..**

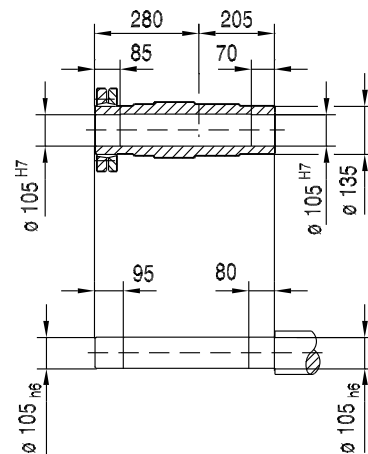
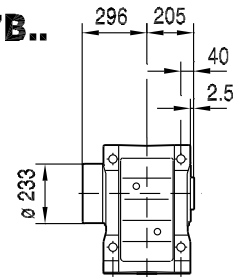
33 118 01 06



**KA127B..**



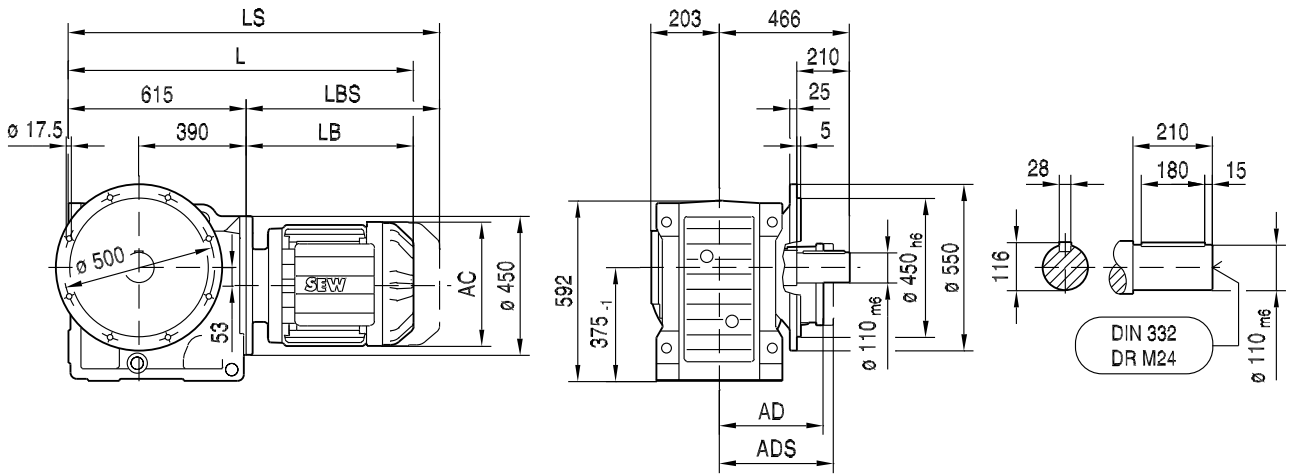
**KH127B..**



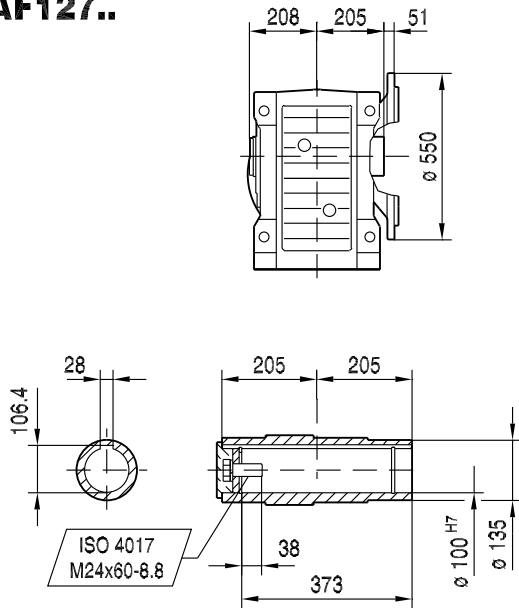
(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	221	270	316	316	394	394	394	495	495
AD	170	228	253	253	283	283	283	394	394
ADS	172	228	253	253	283	283	283	394	394
L	1013	1054	1123	1183	1256	1256	1306	1367	1367
LS	1125	1191	1312	1372	1461	1461	1511	1607	1607
LB	398	439	508	568	641	641	691	752	752
LBS	510	576	697	757	846	846	896	992	992



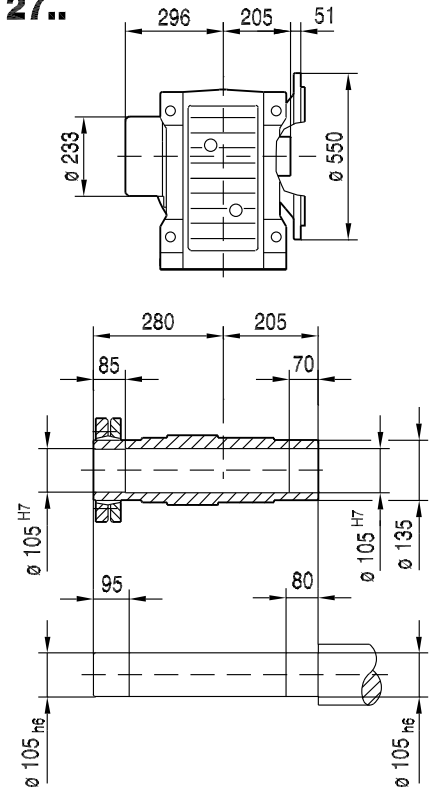
**KF127..**



**KAF127..**

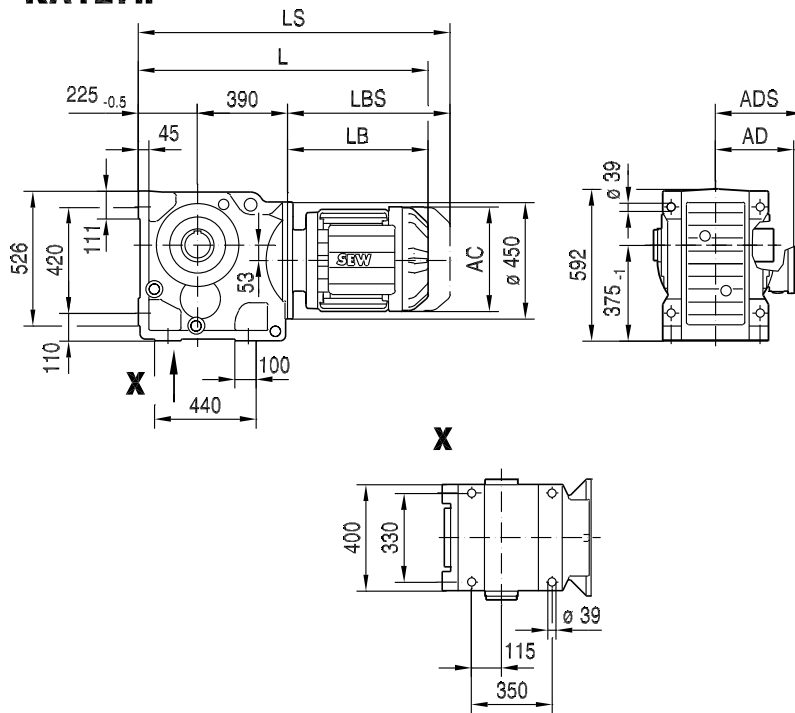


**KHF127..**

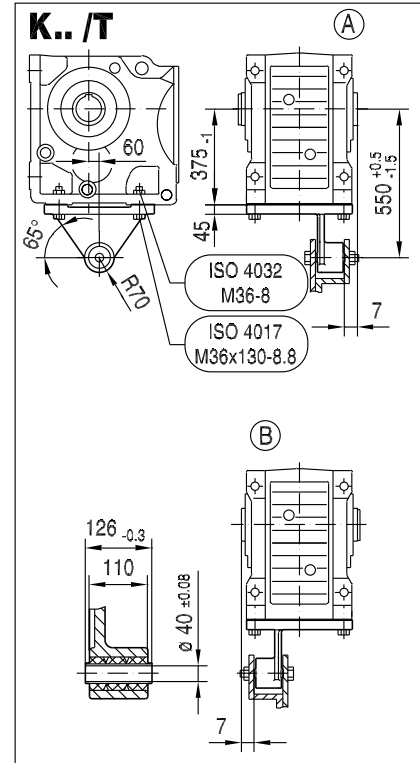


(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	221	270	316	316	394	394	394	495	495
AD	170	228	253	253	283	283	283	394	394
ADS	172	228	253	253	283	283	283	394	394
L	1013	1054	1123	1183	1256	1256	1306	1367	1367
LS	1125	1191	1312	1372	1461	1461	1511	1607	1607
LB	398	439	508	568	641	641	691	752	752
LBS	510	576	697	757	846	846	896	992	992

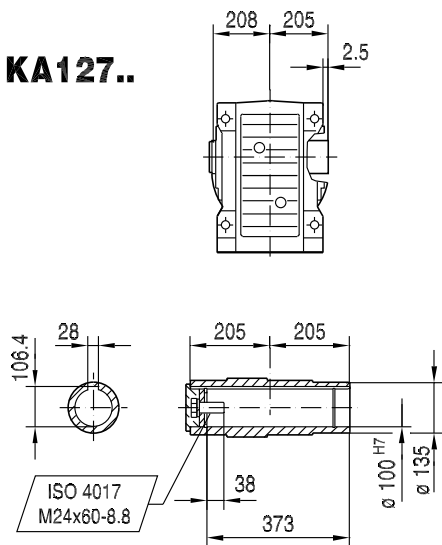
**KA127..**



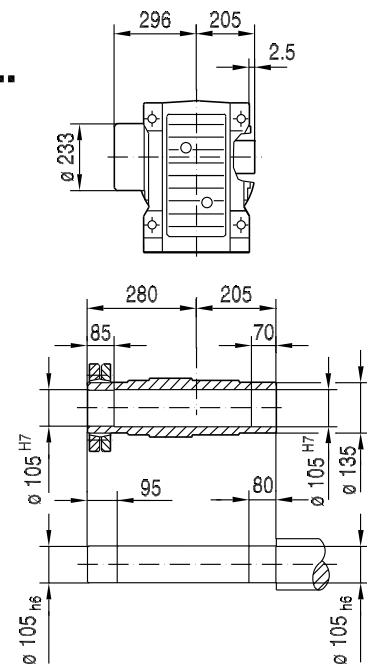
**33 120 01 06**



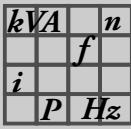
**KA127..**



**KH127..**

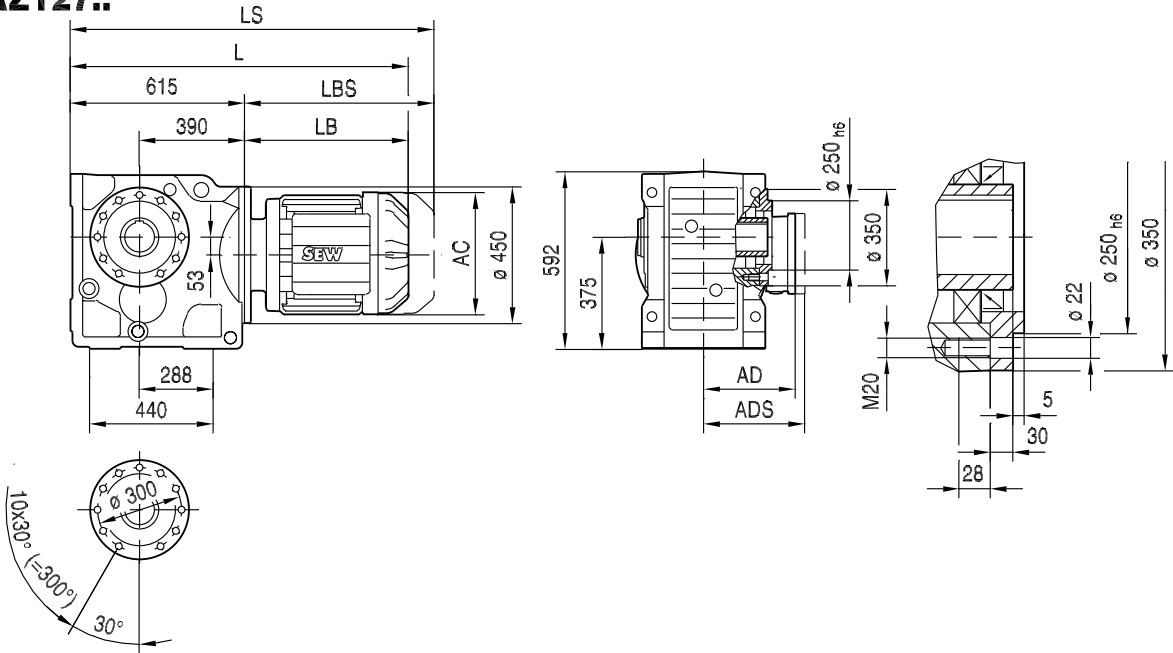


(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	221	270	316	316	394	394	394	495	495
AD	170	228	253	253	283	283	283	394	394
ADS	172	228	253	253	283	283	283	394	394
L	1013	1054	1123	1183	1256	1256	1306	1367	1367
LS	1125	1191	1312	1372	1461	1461	1511	1607	1607
LB	398	439	508	568	641	641	691	752	752
LBS	510	576	697	757	846	846	896	992	992

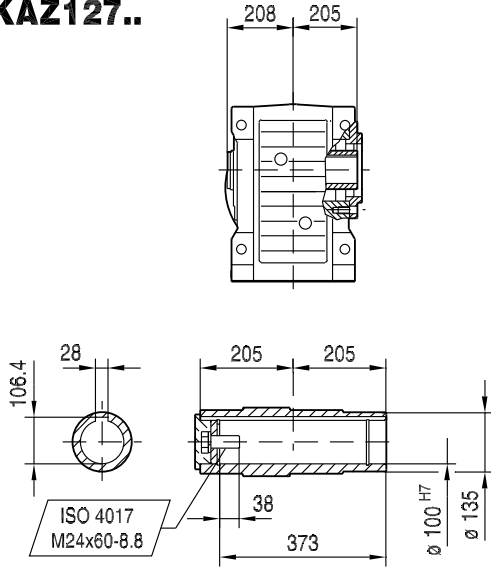


33 121 00 06

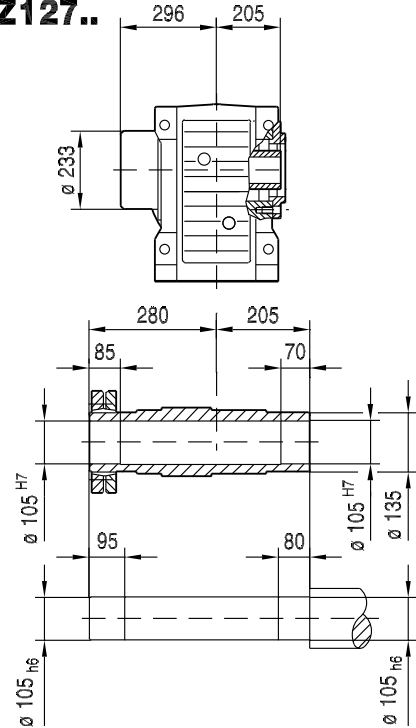
**KAZ127..**



**KAZ127..**

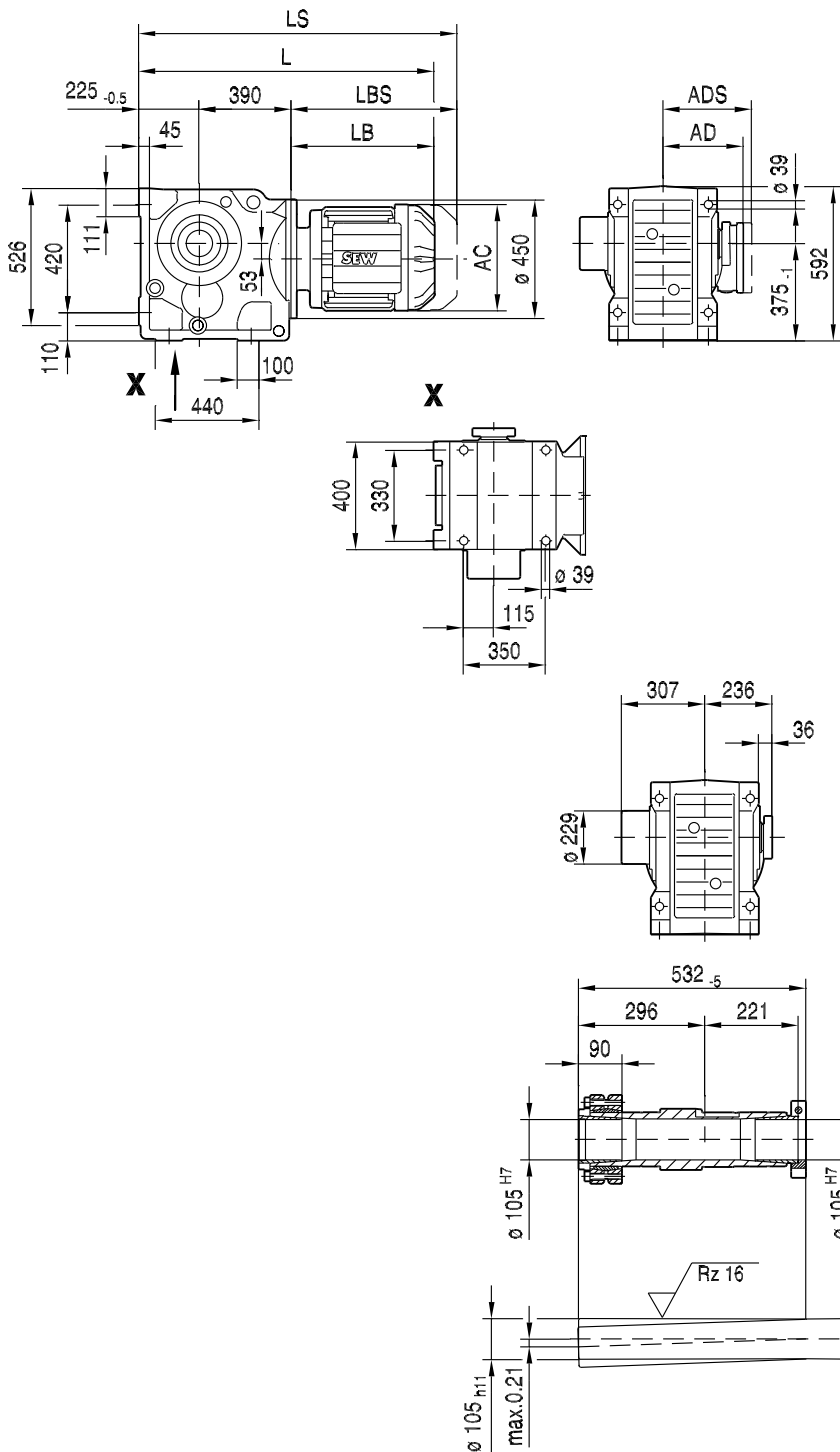


**KHZ127..**

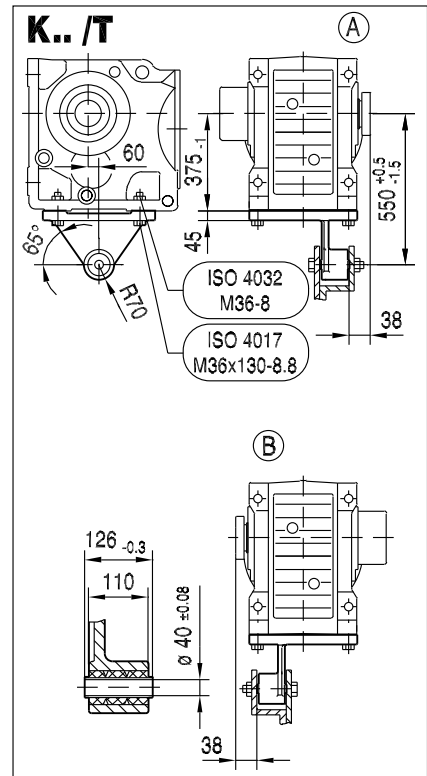


(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	221	270	316	316	394	394	394	495	495
AD	170	228	253	253	283	283	283	394	394
ADS	172	228	253	253	283	283	283	394	394
L	1013	1054	1123	1183	1256	1256	1306	1367	1367
LS	1125	1191	1312	1372	1461	1461	1511	1607	1607
LB	398	439	508	568	641	641	691	752	752
LBS	510	576	697	757	846	846	896	992	992

**KT127..**



**33 122 01 06**



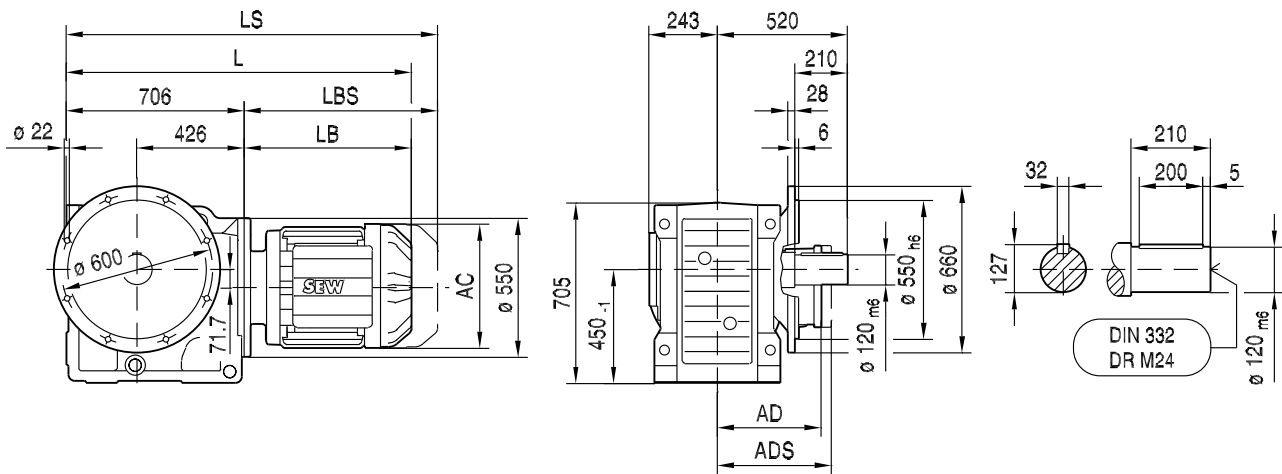
(→ 136)	DR132M/MC	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280
AC	221	270	316	316	394	394	394	495	495
AD	170	228	253	253	283	283	283	394	394
ADS	172	228	253	253	283	283	283	394	394
L	1013	1054	1123	1183	1256	1256	1306	1367	1367
LS	1125	1191	1312	1372	1461	1461	1511	1607	1607
LB	398	439	508	568	641	641	691	752	752
LBS	510	576	697	757	846	846	896	992	992



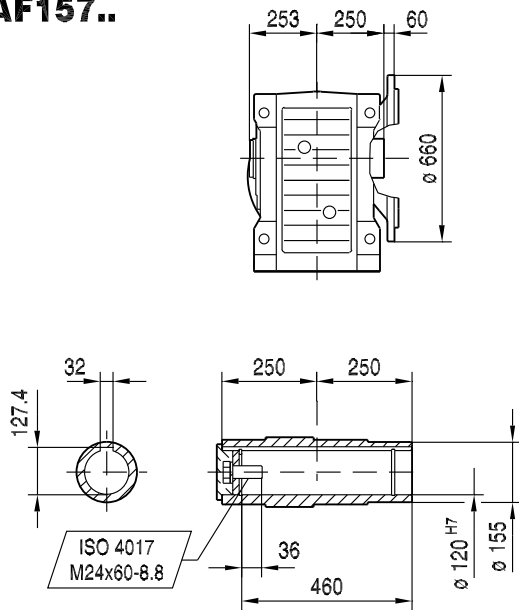


33 124 00 06

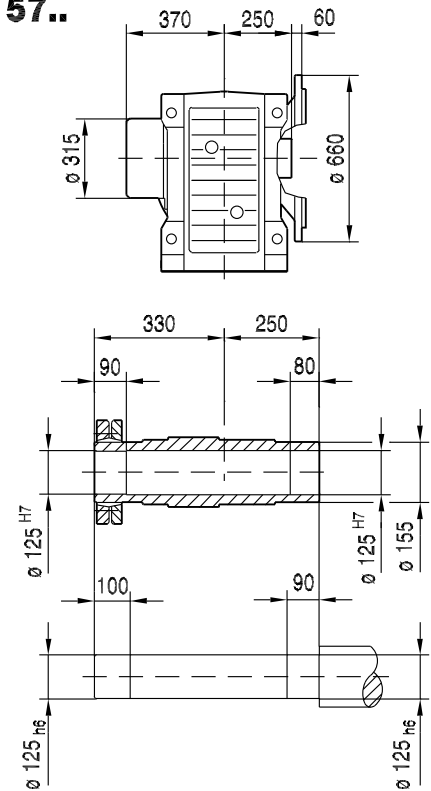
**KF157..**



**KAF157..**



**KHF157..**

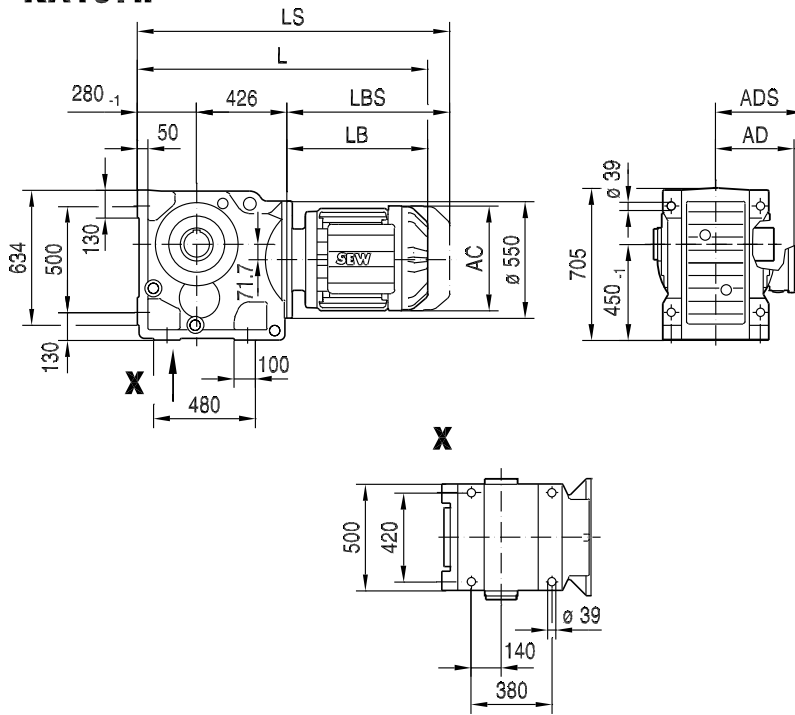


(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	1137	1206	1266	1339	1339	1389	1450	1450	1647	1819
LS	1274	1395	1455	1544	1544	1594	1690	1690	1898	2071
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365

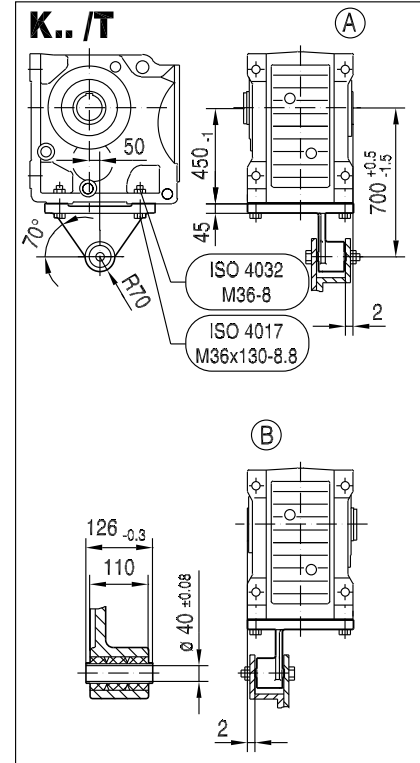
kVA	n
f	
i	
P	H <sub>Z</sub>

K..DRE/DRS  
K..DR.. [mm]

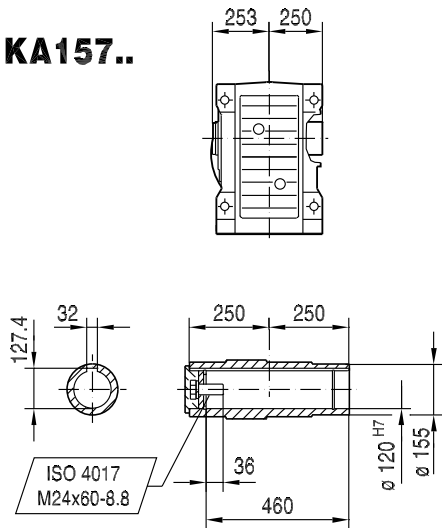
**KA157..**



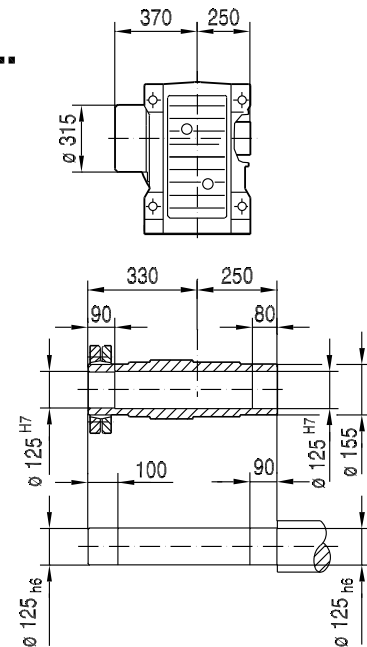
**33 125 01 06**



**KA157..**

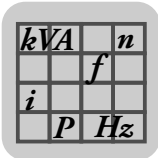


**KH157..**



(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	1137	1206	1266	1339	1339	1389	1450	1450	1647	1819
LS	1274	1395	1455	1544	1544	1594	1690	1690	1898	2071
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365

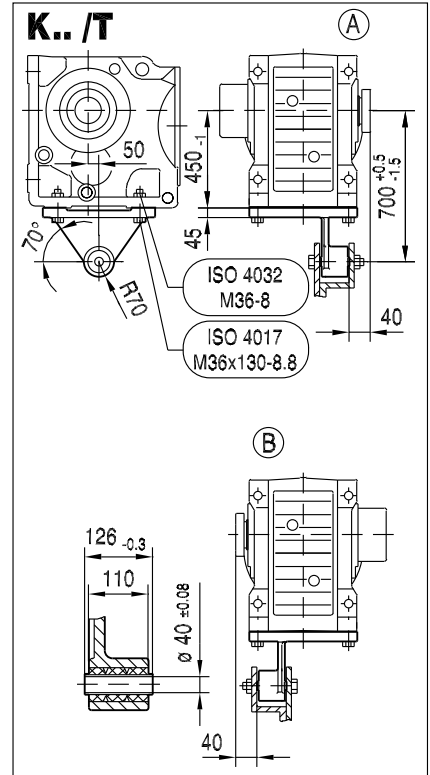
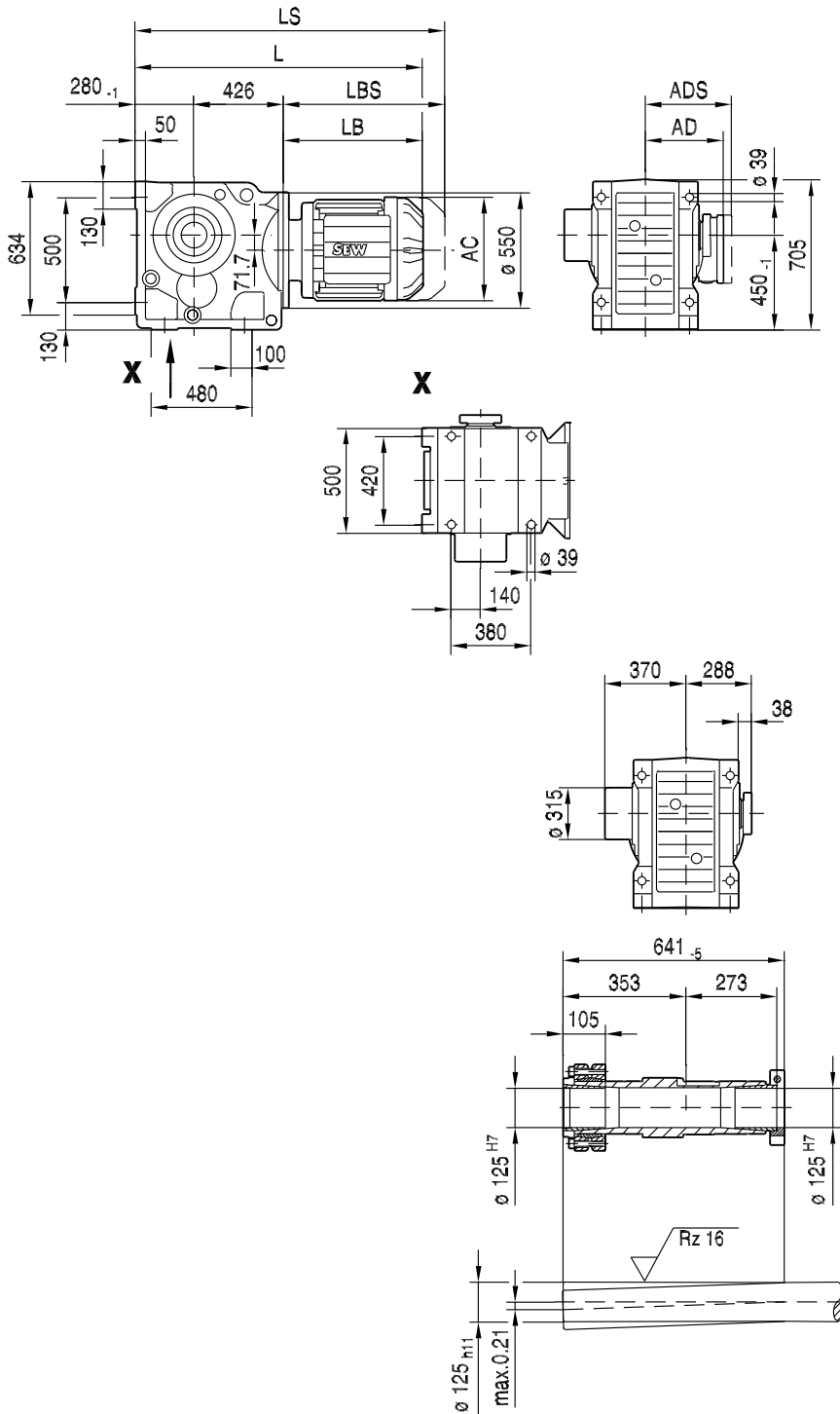




K..DRE/DRS  
K..DR.. [mm]

33 127 01 06

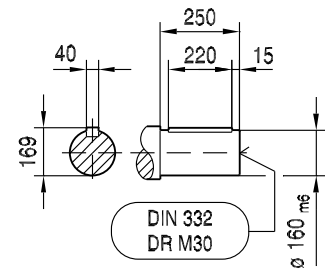
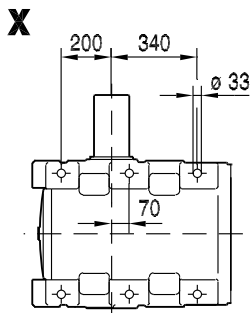
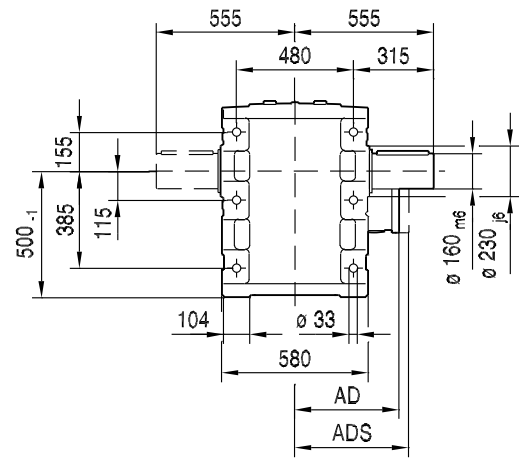
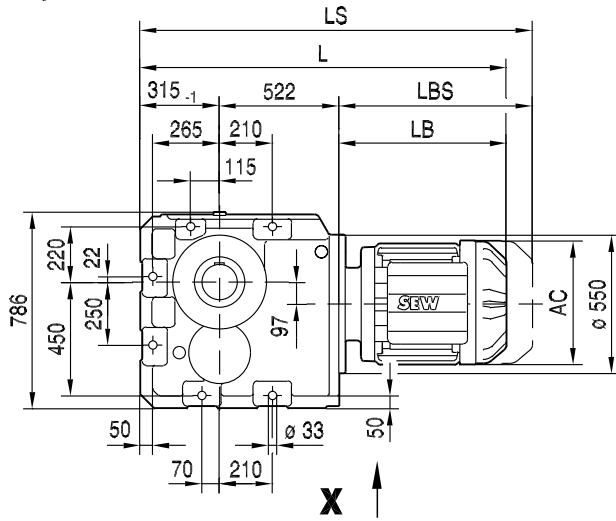
KT157..



(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	1137	1206	1266	1339	1339	1389	1450	1450	1647	1819
LS	1274	1395	1455	1544	1544	1594	1690	1690	1898	2071
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365

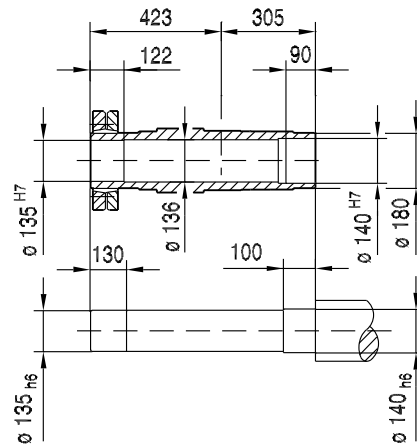
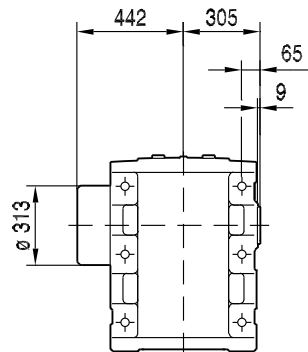
33 128 01 06

**K167..**



10

**KH167B..**



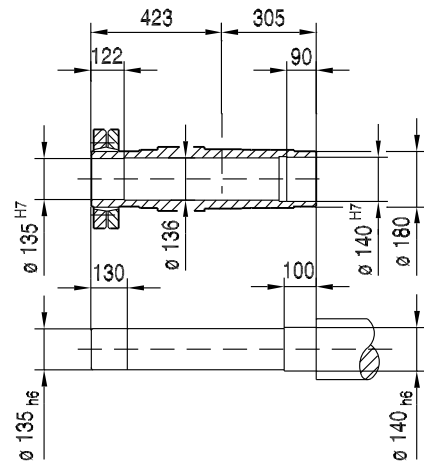
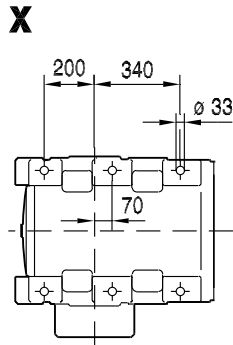
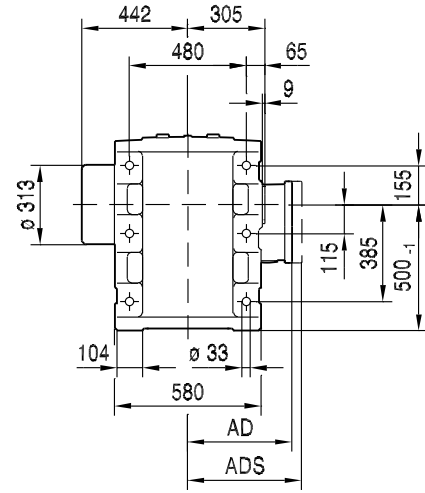
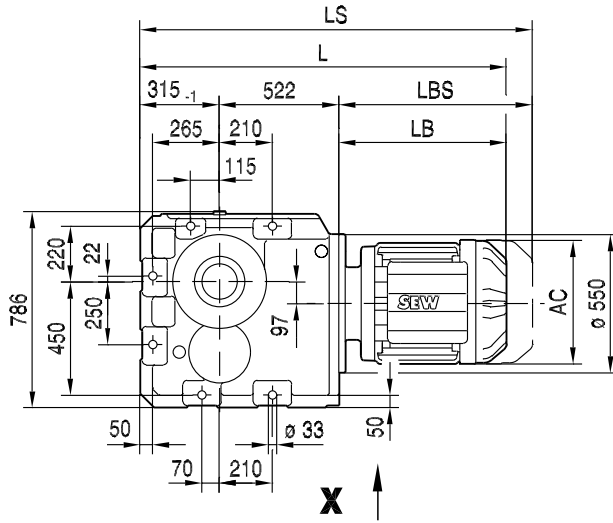
(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	1268	1337	1397	1470	1470	1520	1581	1581	1778	1950
LS	1405	1526	1586	1675	1675	1725	1821	1821	2029	2202
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365



K..DRE/DRS  
K..DR.. [mm]

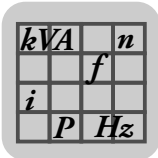
33 129 00 06

**KH167..**



(→ 136)	DR160..	DR180S/M	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	270	316	316	394	394	394	495	495	624	624
AD	228	253	253	283	283	283	394	394	506	521
ADS	228	253	253	283	283	283	394	394	506	521
L	1268	1337	1397	1470	1470	1520	1581	1581	1778	1950
LS	1405	1526	1586	1675	1675	1725	1821	1821	2029	2202
LB	431	500	560	633	633	683	744	744	941	1113
LBS	568	689	749	838	838	888	984	984	1192	1365

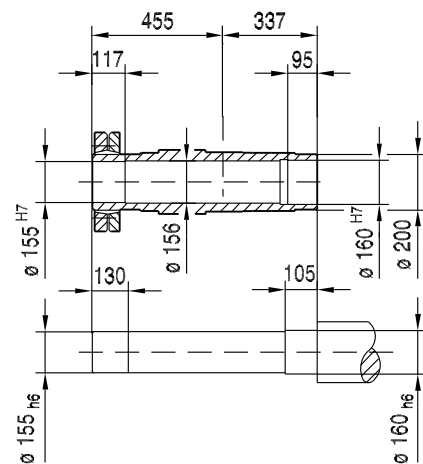
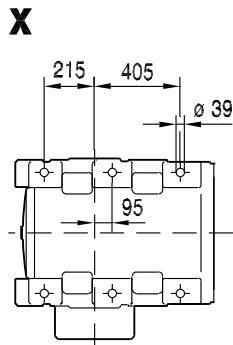
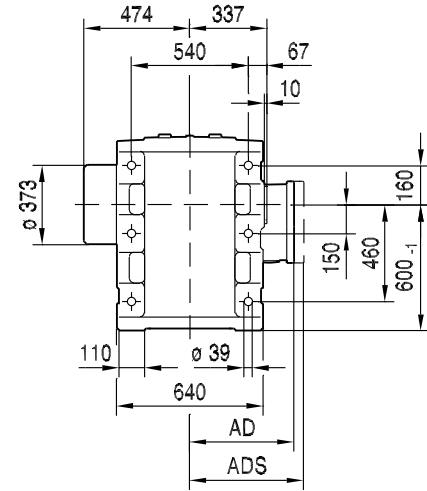
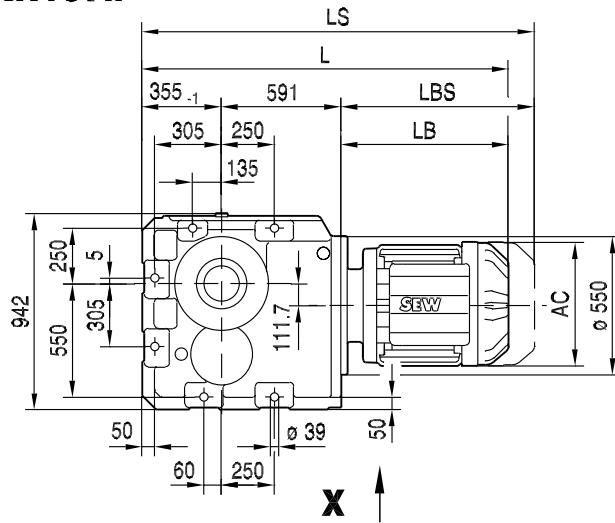




K..DRE/DRS  
K..DR.. [mm]

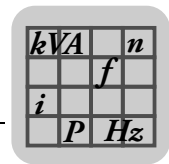
33 131 00 06

## KH187..

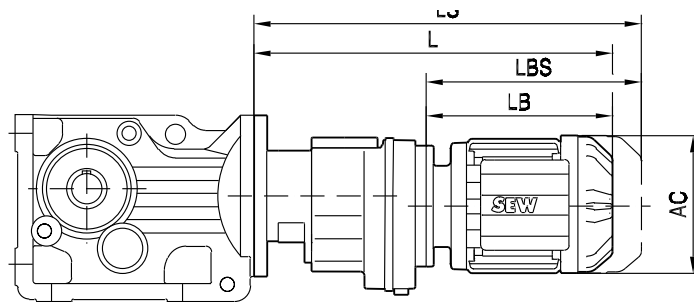


(→ 136)	DR180L/LC	DR200	DR225S	DR225M/MC	DR250	DR280	DR315K/S	DR315M/L
AC	316	394	394	394	495	495	624	624
AD	253	283	283	283	394	394	506	521
ADS	253	283	283	283	394	394	506	521
L	1506	1579	1579	1629	1690	1690	1887	2059
LS	1695	1784	1784	1834	1930	1930	2138	2311
LB	560	633	633	683	744	744	941	1113
LBS	749	838	838	888	984	984	1192	1365





33 133 00 06



(→ 136)		AC	L	LS	LB	LBS
K..37R17	DR63..	132	324	379	149	204
	DR71S..	139	335	403	160	228
K..47R37	DR63..	132	356	411	191	246
	DR71S..	139	367	435	202	270
	DR71M..	139	392	460	227	295
	DR80S..	156	401	482	236	317
K..57R37 K..67R37	DR63..	132	356	411	191	246
	DR71S..	139	367	435	202	270
	DR71M..	139	392	460	227	295
	DR80S..	156	401	482	236	317
DR80M..	156	432	513	267	348	
	K..77R37	DR63..	132	348	403	191
DR71S..		139	359	427	202	270
DR71M..		139	384	452	227	295
DR80S..		156	393	474	236	317
DR80M..		156	424	505	267	348
DR90M..		179	426	519	269	362
DR90L..	179	446	539	289	382	
	K..87R57	DR63..	132	401	456	185
DR71S..		139	412	479	196	263
DR71M..		139	437	504	221	288
DR80S..		156	446	527	230	311
DR80M..		156	477	558	261	342
DR90M..		179	478	572	262	356
DR90L..		179	498	592	282	376
DR100M..		197	528	622	312	406
K..97R57	DR63..	132	396	451	185	240
	DR71S..	139	407	474	196	263
	DR71M..	139	432	499	221	288
	DR80S..	156	441	522	230	311
	DR80M..	156	472	553	261	342
	DR90M..	179	473	567	262	356
	DR90L..	179	493	587	282	376
	DR100M..	197	523	617	312	406
DR100LC..	197	553	647	342	436	
	K..107R77	DR63..	132	426	481	179
DR71S..		139	437	504	190	257
DR71M..		139	462	529	215	282
DR80S..		156	470	551	223	304
DR80M..		156	501	582	254	335
DR90M..		179	501	595	254	348
DR90L..		179	521	615	274	368
DR100M..		197	551	645	304	398
DR100LC..		197	581	675	334	428
DR132S..		221	626	738	379	491
DR132M/MC..	221	676	788	429	541	
K..127R77	DR63..	132	411	466	179	234

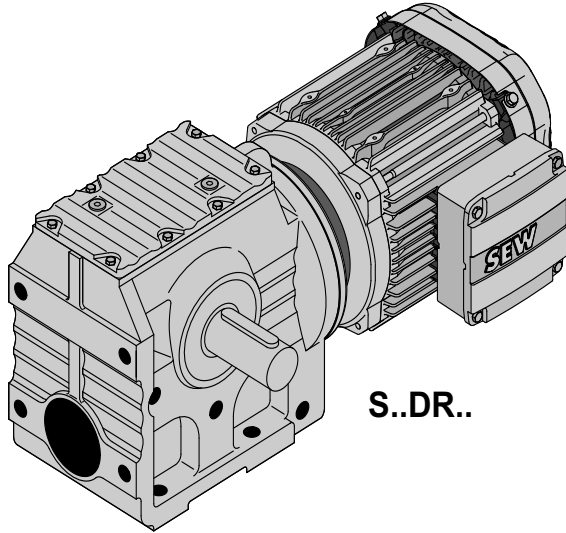
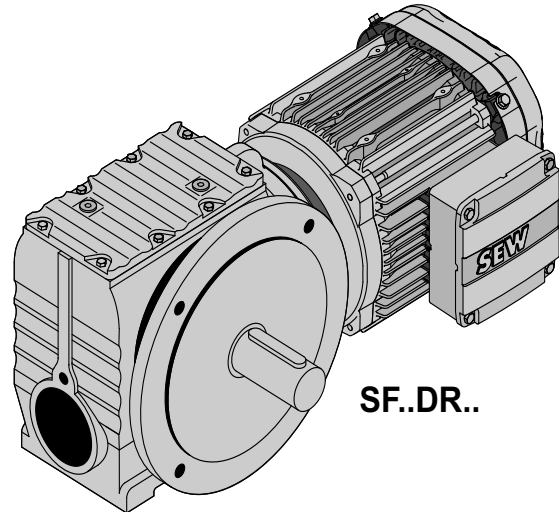
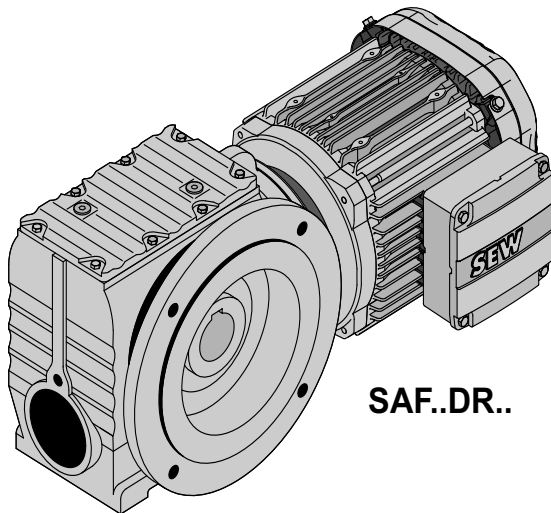
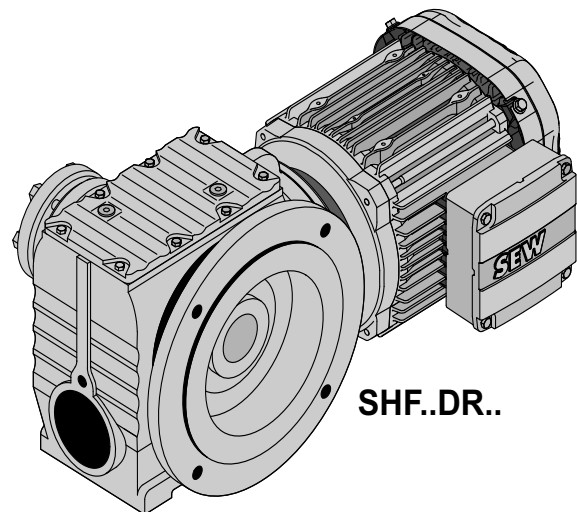
(→ 136)		AC	L	LS	LB	LBS	
K..127R77	DR71S..	139	422	489	190	257	
	DR71M..	139	447	514	215	282	
	DR80S..	156	455	536	223	304	
	DR80M..	156	486	567	254	335	
	DR90M..	179	486	580	254	348	
	DR90L..	179	506	600	274	368	
	DR100M..	197	536	630	304	398	
	DR100LC..	197	566	660	334	428	
	DR132S..	221	611	723	379	491	
	K..127R87	DR90M..	179	530	624	250	344
		DR90L..	179	550	644	270	364
		DR100M..	197	580	674	300	394
DR100LC..		197	610	704	330	424	
DR132S..		221	654	766	374	486	
DR132M/MC..		221	704	816	424	536	
DR160..	272	745	882	465	602		
	K..157R97 K..167R97	DR71M..	139	529	596	204	271
DR80S..		156	538	619	213	294	
DR80M..		156	569	650	244	325	
DR90M..		179	569	663	244	338	
DR90L..		179	589	683	264	358	
DR100M..		197	619	713	294	388	
DR100LC..		197	649	743	324	418	
DR132S..		221	694	806	369	481	
DR132M/MC..	221	744	856	419	531		
	DR160..	272	785	922	460	597	
K..187R97	DR71M..	139	529	596	204	271	
	DR80S..	156	538	619	213	294	
	DR80M..	156	569	650	244	325	
	DR90M..	179	569	663	244	338	
	DR90L..	179	589	683	264	358	
	DR100M..	197	619	713	294	388	
	DR100LC..	197	649	743	324	418	
	DR132S..	221	694	806	369	481	
	DR132M/MC..	221	744	856	419	531	
		DR160..	272	785	922	460	597
	K..157R107	DR180M..	317	871	1070	546	745
		DR132MC..	221	795	907	413	525
DR160..		272	836	973	454	591	
DR180M		317	922	1121	540	739	
DR180L/HC..		317	982	1181	600	799	
K..167R107 K..187R107		DR132M/MC..	221	795	907	413	525
	DR160..	272	836	973	454	591	
	DR180M..	317	922	1121	540	739	
	DR180L/HC..	317	982	1181	600	799	
	DR225S..	394	1023	1243	641	861	
	DR225M/MC..	394	1088	1308	706	926	

10

kVA	n
	f
i	
P	Hz

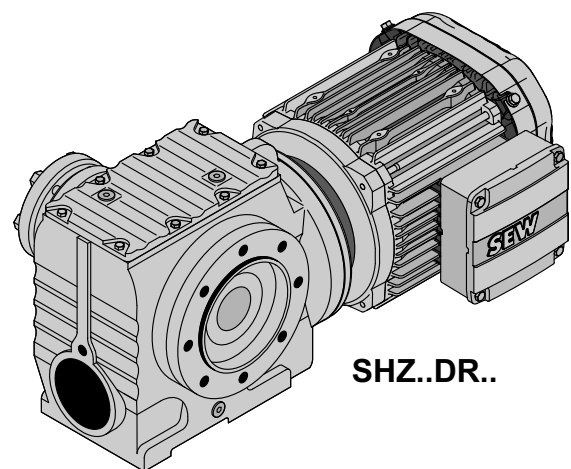
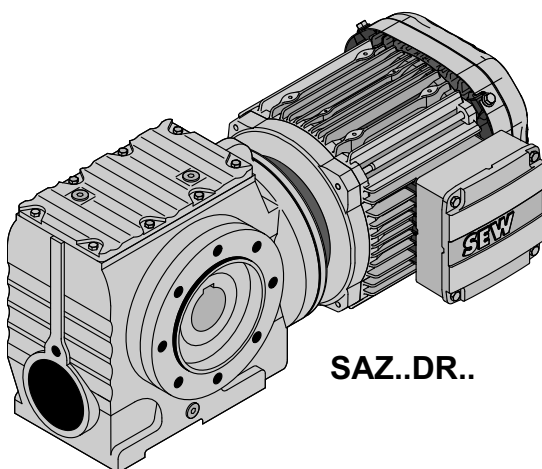
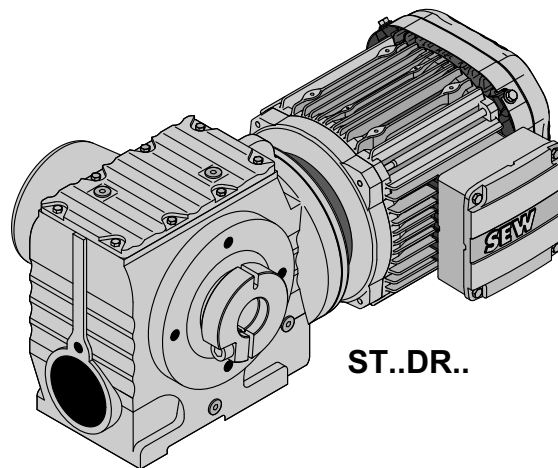
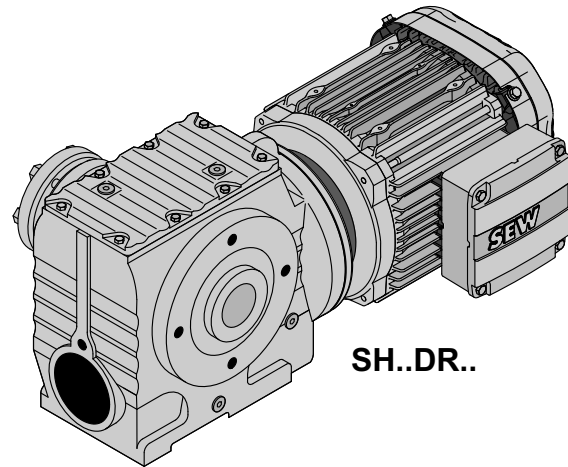
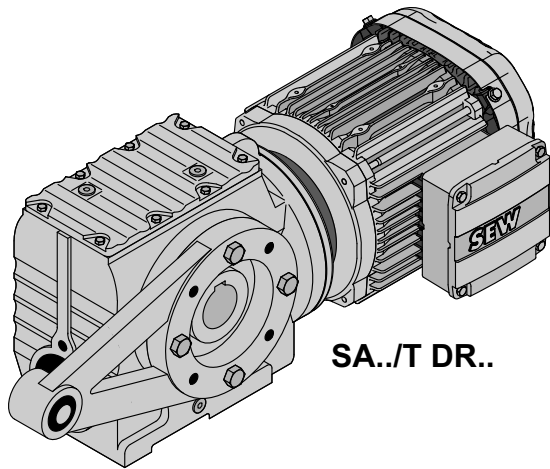
**S..DRE/DRS**

S, SF, SAF, SHF, SA, SH, ST, SAZ, SHZ..DR..

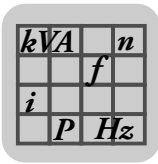
**11 S..DRE/DRS****11.1 S, SF, SAF, SHF, SA, SH, ST, SAZ, SHZ..DR..****S..DR..****SF..DR..****SAF..DR..****SHF..DR..**

8664873611

$kVA$	$n$
	$f$
$i$	
$P$	$Hz$



8664875531


**11.2 S.. → DRE/DRS**

<b>S37, n<sub>e</sub>=1400 1/min</b>					<b>92 Nm</b>		
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L
8.9	92	3000	-	157.43			
9.7	92	3000	-	144.40*			
11	91	3000	-	122.94			
13	88	3000	-	106.00*			
14	87	3000	-	98.80*			
16	86	3000	-	86.36			
17	85	3000	-	80.96			
20	84	3000	-	71.44*			
22	82	3000	-	63.33			
25	81	3000	-	55.93			
26	80	3000	-	53.83			
27	81	3000	-	51.30*			
32	81	3000	-	43.68			
37	79	3000	-	37.66			
40	78	3000	-	35.10*			
46	76	2860	-	30.68			
49	75	2800	-	28.76			
55	74	2660	-	25.38*			
62	73	2530	-	22.50*			
70	52	2470	-	19.89			
73	71	2380	-	19.13*			
77	52	2380	-	18.24*			
90	50	2240	-	15.53			
105	49	2110	-	13.39			
112	48	2060	-	12.48*			
128	48	1940	-	10.91			
137	47	1900	-	10.23			
155	46	1810	-	9.02*			
175	45	1730	-	8.00*			
206	43	1630	-	6.80*			
221	35	1670	-	6.33			
260	34	1570	-	5.38			
288	33	1520	-	4.86*			
353	32	1400	-	3.97			

<b>S37R17, n<sub>e</sub>=1400 1/min</b>					<b>92 Nm</b>		
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M	
2  3							
0.14	92	3000	-	10037			
0.16	92	3000	-	8654			
0.17	92	3000	-	8066			
0.20	92	3000	-	7051			
0.23	92	3000	-	6079			
0.26	92	3000	-	5431			
0.29	92	3000	-	4747			
0.34	92	3000	-	4155			
0.39	92	3000	-	3632			
0.49	92	3000	-	2866			
0.57	92	3000	-	2471			
0.65	92	3000	-	2160			
0.74	92	3000	-	1887			



S37R17, $n_e=1400$ 1/min					92 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
0.84	92	3000	-	1665		
0.96	92	3000	-	1456		
1.1	92	3000	-	1271		
1.2	92	3000	-	1121		
1.4	92	3000	-	994		
1.6	92	3000	-	869		
2 32						
1.8	92	3000	-	774		
2.1	92	3000	-	666		
2.3	92	3000	-	596		
2.7	92	3000	-	521		
3.1	92	3000	-	456		
3.5	92	3000	-	398		
4.0	92	3000	-	351		
4.6	92	3000	-	303		
5.3	92	3000	-	265		
6.0	92	3000	-	232		
6.9	92	3000	-	202		
7.8	92	3000	-	179		
8.9	92	3000	-	158		
9.7	92	3000	-	144		
12	92	3000	-	118		
13	92	3000	-	110*		

S47, $n_e=1400$ 1/min					170 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
7.0	170	5340	-	201.00*				
7.6	170	5340	-	184.80*				
8.9	170	5340	-	158.12				
10	168	5350	-	137.05				
11	168	5350	-	128.10*				
13	168	5350	-	110.73				
15	168	5350	-	94.08*				
17	167	5360	-	84.00*				
20	167	5360	-	71.75*				
20	155	5370	-	69.39				
21	167	5360	-	67.20*				
22	155	5370	-	63.80*				
25	165	5320	-	56.61				
26	155	5150	-	54.59				
30	155	4850	-	47.32				
32	155	4710	-	44.22*				
37	155	4420	-	38.23				
43	155	4120	-	32.48*				
48	155	3920	-	29.00*				
57	155	3650	-	24.77				
60	152	3570	-	23.20*				
69	110	3370	-	20.33				
72	144	3370	-	19.54				
79	110	3160	-	17.62				
85	110	3060	-	16.47*				
98	110	2850	-	14.24				



S47, $n_e=1400$ 1/min					170 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
116	109	2650	-	12.10*				
130	109	2500	-	10.80*				
152	109	2310	-	9.23*				
162	109	2230	-	8.64*				
192	103	2110	-	7.28				
205	78	2300	-	6.83				
219	76	2260	-	6.40*				
260	74	2110	-	5.39				
294	72	2010	-	4.76				
350	61	1980	-	4.00*				

S47R17, $n_e=1400$ 1/min					185 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M		
2								
0.11	185	5250	-	12909				
0.13	185	5250	-	11189				
0.13	185	5250	-	10374				
0.16	185	5250	-	8992				
0.18	185	5250	-	7860				
0.20	185	5250	-	6887				
0.23	185	5250	-	6055				
0.26	185	5250	-	5292				
0.30	185	5250	-	4637				
0.34	185	5250	-	4092				
0.39	185	5200	-	3582				
0.45	185	5200	-	3131				
0.52	185	5200	-	2714				
0.58	185	5200	-	2412				
0.66	185	5200	-	2131				
0.75	185	5200	-	1863				
0.84	185	5200	-	1663				
0.98	185	5200	-	1435				
1.1	185	5200	-	1254				
1.2	185	5200	-	1120				
1.3	185	5200	-	1083				
1.5	183	5210	-	956				
2								
1.5	185	5200	-	965				
1.6	185	5200	-	865				
1.9	185	5200	-	750				
2.1	185	5200	-	655				
2.4	185	5200	-	574				
2.8	185	5200	-	506				
3.2	185	5200	-	438				
3.6	185	5200	-	388				
4.2	185	5200	-	336				
4.8	185	5200	-	294				
5.4	185	5260	-	257*				
6.1	185	5200	-	229				
7.0	185	5200	-	200				
7.5	185	5200	-	187				
8.5	185	5200	-	165				

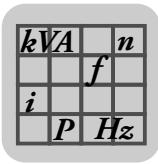


<b>S47R17, n<sub>e</sub>=1400 1/min</b>					<b>185 Nm</b>	
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
9.5	185	5200	-	148		
11	185	5200	-	131		

<b>S57, n<sub>e</sub>=1400 1/min</b>					<b>295 Nm</b>			
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
7.0	295	7130	-	201.00*				
7.6	295	7130	-	184.80*				
8.9	295	7130	-	158.12				
10	295	7130	-	137.05				
11	295	7130	-	128.10*				
13	295	7130	-	110.73				
15	295	7130	-	94.08*				
17	295	7130	-	84.00*				
20	290	7170	-	71.75*				
20	245	7520	-	69.39				
21	285	7220	-	67.20*				
22	245	7520	-	63.80*				
25	265	7370	-	56.61				
26	245	7520	-	54.59				
30	245	7520	-	47.32				
32	245	7520	-	44.22*				
37	245	7320	-	38.23				
43	245	6840	-	32.48*				
48	245	6520	-	29.00*				
57	245	6100	-	24.77				
60	245	5930	-	23.20*				
69	168	5690	-	20.33				
72	215	5720	-	19.54				
79	168	5350	-	17.62				
85	168	5200	-	16.47*				
98	169	4860	-	14.24				
116	169	4520	-	12.10*				
130	169	4290	-	10.80*				
152	169	3990	-	9.23*				
162	166	3900	-	8.64*				
192	146	3790	-	7.28				
205	100	4100	-	6.83				
219	98	4010	-	6.40*				
260	95	3760	-	5.39				
294	93	3590	-	4.76				
350	88	3380	-	4.00*				

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<b>S57R17, n<sub>e</sub>=1400 1/min</b>					<b>330 Nm</b>	
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
2 3						
0.11	330	6800	-	12909		
0.13	330	6800	-	11189		
0.13	330	6800	-	10374		
0.16	330	6800	-	8992		



S..DRE/DRS  
S.. → DRE/DRS

S57R17, $n_e=1400$ 1/min					330 Nm	
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
0.18	330	6800	-	7860		
0.20	330	6800	-	6887		
0.23	330	6800	-	6055		
0.26	330	6800	-	5292		
0.30	330	6800	-	4637		
0.34	330	6800	-	4092		
0.39	330	6800	-	3628		
0.45	300	7080	-	3131		
0.52	300	7080	-	2714		
0.58	300	7080	-	2412		
0.66	300	7080	-	2131		
0.75	300	7080	-	1863		
0.84	300	7080	-	1663		
0.98	300	7080	-	1435		
1.1	300	7080	-	1254		
1.3	300	7080	-	1083		
2 2						
1.5	300	7080	-	965		
1.6	300	7080	-	865		
1.9	300	7080	-	750		
2.1	300	7080	-	655		
2.4	300	7080	-	574		
2.8	300	7080	-	506		
3.2	300	7080	-	438		
3.6	300	7080	-	388		
4.2	300	7080	-	336		
4.8	300	7080	-	294		
5.2	300	7080	-	269		
6.1	300	7080	-	229		
6.9	300	7080	-	204		
7.5	300	7080	-	187		
8.5	300	7080	-	165		
11	300	7080	-	131		

S67, $n_e=1400$ 1/min					520 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
6.4	520	8680	-	217.41						
7.4	520	8680	-	190.11						
7.8	520	8680	-	180.60*						
8.8	520	8680	-	158.45						
10	520	8680	-	134.40*						
12	520	8680	-	121.33						
13	520	8680	-	106.75*						
14	520	8680	-	100.80*						
16	520	8680	-	85.83						
18	520	8680	-	78.00*						
19	480	9020	-	75.06						
21	520	8680	-	67.57						
21	480	9020	-	65.63						
22	480	9020	-	62.35*						
24	500	8850	-	58.80*						
26	480	8670	-	54.70						





S67, $n_e=1400$ 1/min					520 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
30	480	8060	-	46.40*						
33	480	7690	-	41.89						
38	480	7250	-	36.85						
40	480	7060	-	34.80*						
47	480	6540	-	29.63						
52	480	6240	-	26.93						
57	340	6040	-	24.44						
60	480	5810	-	23.33						
60	340	5890	-	23.22*						
69	340	5520	-	20.37						
69	425	5760	-	20.30*						
81	340	5080	-	17.28*						
90	340	4820	-	15.60*						
102	340	4510	-	13.73*						
108	340	4310	-	12.96*						
127	340	3660	-	11.03						
140	340	3290	-	10.03						
161	335	2860	-	8.69						
185	295	3220	-	7.56*						

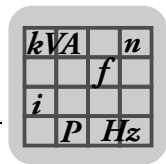
S67R37, $n_e=1400$ 1/min					570 Nm					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC		
2  3										
0.07	570	8190	-	21362*						
0.07	570	8190	-	19594*						
0.08	570	8190	-	18120*						
0.08	570	8190	-	16682						
0.10	570	8190	-	14383						
0.11	570	8190	-	12774						
0.13	570	8190	-	11013						
0.14	570	8190	-	9694*						
0.16	570	8190	-	8529*						
0.19	570	8190	-	7455*						
0.21	570	8190	-	6531						
0.24	570	8190	-	5759						
0.28	570	8190	-	4965						
0.32	570	8190	-	4410						
0.36	570	8190	-	3880						
0.41	570	8190	-	3432						
0.48	570	8190	-	2944*						
0.53	570	8190	-	2630						
0.61	570	8190	-	2279						
0.70	570	8190	-	2014						
0.79	570	8190	-	1772						
0.90	570	8190	-	1559						
1.0	570	8190	-	1363						
1.2	570	8190	-	1194						
1.3	570	8190	-	1045						
1.5	570	8190	-	914						
2  2										
1.7	570	8190	-	809						
2.0	570	8190	-	712						



S..DRE/DRS  
S.. → DRE/DRS

S67R37, $n_e=1400$ 1/min					570 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC
2.3	570	8190	-	615				
2.6	570	8190	-	543				
3.0	570	8190	-	469				
3.3	570	8190	-	424				
3.8	570	8190	-	365				
4.4	570	8190	-	319				
5.0	570	8190	-	281				
5.7	570	8190	-	246				
6.3	570	8190	-	221				
7.1	570	8190	-	198				
8.3	570	8190	-	168				
9.0	570	8190	-	156				

S77, $n_e=1400$ 1/min					1270 Nm						
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC
5.5	1270	11700	-	256.47							
6.2	1270	11700	-	225.26							
6.5	1270	11700	-	214.00*							
7.4	1270	11700	-	189.09							
8.7	1260	11800	-	161.60*							
9.4	1240	12000	-	148.15							
11	1210	12200	-	130.00*							
11	1200	12300	-	123.20*							
13	1170	12600	-	107.83							
14	1140	12800	-	97.14							
16	1100	13100	-	85.22							
19	1070	12800	-	75.20*							
19	1100	11900	-	75.09							
20	1100	11600	-	71.33							
21	1040	12300	-	66.67							
22	1100	10900	-	63.03							
25	990	11600	-	56.92							
26	1100	10100	-	53.87							
28	1100	9650	-	49.38							
32	1100	9010	-	43.33							
34	1100	8750	-	41.07							
39	1100	8140	-	35.94							
43	1090	7720	-	32.38							
49	1050	7370	-	28.41							
56	1020	7010	-	25.07							
61	705	5960	-	22.89							
63	980	6740	-	22.22							
67	705	5380	-	20.99							
74	930	6390	-	18.97							
76	705	4550	-	18.42							
80	710	4120	-	17.45							
92	710	3320	-	15.28							
102	710	2710	-	13.76							
116	720	1800	-	12.07							
131	720	1130	-	10.65							
148	725	415	-	9.44							
174	680	440	-	8.06							



S77R37, $n_e=1400$ 1/min					1270 Nm			
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC



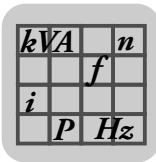
0.05	1270	11700	-	25493				
0.06	1270	11700	-	21787				
0.07	1270	11700	-	19907				
0.08	1270	11700	-	17013				
0.10	1270	11700	-	14668				
0.11	1270	11700	-	13110				
0.12	1270	11700	-	11569				
0.14	1270	11700	-	9887				
0.16	1270	11700	-	8817				
0.18	1270	11700	-	7735				
0.21	1270	11700	-	6735				
0.24	1270	11700	-	5943				
0.27	1270	11700	-	5214				
0.30	1270	11700	-	4618				
0.35	1270	11700	-	3992				
0.40	1270	11700	-	3540				
0.45	1270	11700	-	3098				
0.51	1240	12000	-	2753				
0.59	1240	12000	-	2374				
0.67	1240	12000	-	2083				
0.77	1240	12000	-	1813				
0.80	1240	12000	-	1745				
0.88	1240	12000	-	1600				
1.00	1240	12000	-	1404				
1.1	1240	12000	-	1245				



1.3	1240	12000	-	1100				
1.5	1240	12000	-	954				
1.7	1240	12000	-	837				
2.0	1240	12000	-	714				
2.2	1240	12000	-	637				
2.4	1240	12000	-	574				
2.8	1240	12000	-	499				
3.2	1240	12000	-	438				
3.6	1240	12000	-	389				
4.3	1240	12000	-	327				
4.8	1240	12000	-	289				
5.6	1240	12000	-	250				
6.4	1240	12000	-	219				

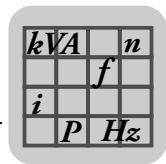
S87, $n_e=1400$ 1/min					2280 Nm							
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$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC
4.9	2280	27900	-	288.00*								
5.4	2280	27900	-	258.18								
6.3	2280	27900	-	222.40*								
6.9	2260	28000	-	202.96								
7.8	2210	28100	-	180.00*								
9.3	2150	28200	-	151.30								
10	2100	28300	-	139.05								
11	2060	28300	-	123.48								
13	2000	28400	-	110.40*								
14	1960	28500	-	99.26								



<b>S87, <math>n_e=1400</math> 1/min</b>						<b>2280 Nm</b>						
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC
15	1510	29100	-	91.20*								
16	1880	28600	-	86.15								
17	1600	29000	-	81.76								
18	1820	28700	-	77.14								
20	1600	29000	-	70.43								
22	1600	29000	-	64.27								
22	1700	28900	-	64.00*								
25	1600	29000	-	57.00*								
29	1600	29000	-	47.91								
32	1600	29000	-	44.03								
36	1600	28200	-	39.10								
40	1600	27100	-	34.96*								
45	1600	26000	-	31.43								
51	1600	24700	-	27.28								
55	1240	23400	-	25.50*								
57	1600	23700	-	24.43								
65	1240	21800	-	21.43								
69	1600	22100	-	20.27								
71	1240	21100	-	19.70								
80	1240	20200	-	17.49								
90	1240	19300	-	15.64*								
100	1240	18500	-	14.06								
115	1240	17400	-	12.21								
128	1240	16400	-	10.93								
154	1140	15900	-	9.07								
178	1010	15700	-	7.88								

<b>S87R57, <math>n_e=1400</math> 1/min</b>						<b>2500 Nm</b>					
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	
2											
0.05	2500	27500	-	25987							
0.06	2500	27500	-	23940							
0.07	2500	27500	-	20568							
0.08	2500	27500	-	18265							
0.08	2500	27500	-	16774							
0.09	2500	27500	-	14820							
0.11	2500	27500	-	13160							
0.12	2500	27500	-	11200							
0.14	2500	27500	-	9904							
0.16	2500	27500	-	8549							
0.18	2500	27500	-	7643							
0.21	2500	27500	-	6706							
0.24	2500	27500	-	5875							
0.27	2500	27500	-	5187							
0.30	2500	27500	-	4606							
0.36	2500	27500	-	3872							
2											
0.40	2500	27500	-	3475							
0.48	2500	27500	-	2905							
0.54	2500	27500	-	2586							
0.60	2500	27500	-	2335							
0.68	2500	27500	-	2054							
0.77	2500	27500	-	1824							



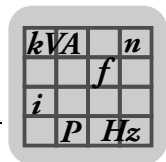
S87R57, n <sub>e</sub> =1400 1/min					2500 Nm					
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
0.86	2500	27500	-	1631*						
1.1	2500	27500	-	1332						
1.2	2500	27500	-	1191						
1.4	2500	27500	-	1032*						
1.5	2500	27500	-	930						
1.7	2500	27500	-	831						
1.9	2500	27500	-	719						
2.2	2500	27500	-	624						
2.5	2500	27500	-	558						
2.9	2500	27500	-	485						
3.2	2450	27600	-	435						
3.7	2450	27600	-	378						
4.3	2400	27700	-	323						
5.0	2400	27700	-	281						
5.5	1980	28400	-	255						
6.3	1980	28400	-	222						
6.8	1980	28400	-	205						

S97, n <sub>e</sub> =1400 1/min					4000 Nm								
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S	DRE160M DRE160MC DRE180S DRE180M	DRE180L DRE180LC	DRE200L DRE225S DRE225M
4.9	4000	33200	-	286.40*									
5.3	4000	33200	-	262.22									
6.0	4000	33200	-	231.67									
7.1	4000	33200	-	196.52									
7.7	3920	33400	-	180.95									
8.7	3840	33500	-	161.74									
9.6	3730	33700	-	145.60*									
11	3650	33900	-	131.85									
12	3510	34100	-	116.92									
13	3440	34300	-	105.71									
16	3240	34600	-	89.60*									
17	3230	34600	-	80.85									
18	3080	34800	-	78.26									
20	3300	34500	-	71.43									
21	2900	35100	-	65.45									
23	3300	34500	-	60.59									
25	3300	34500	-	55.79									
28	3300	34500	-	49.87									
31	3300	34100	-	44.89									
34	3300	32800	-	40.65									
39	3300	31300	-	36.05									
43	3200	30400	-	32.60									
51	3010	29000	-	27.63									
53	2600	26100	-	26.39									
58	2870	28000	-	24.13									
59	2600	24500	-	23.59									
66	2600	22800	-	21.23									
73	2600	21200	-	19.23									
82	2570	19700	-	17.05									
91	2470	19400	-	15.42									
107	2330	18800	-	13.07									
123	2210	18400	-	11.41									
147	2040	18200	-	9.55									
169	1770	18800	-	8.26									

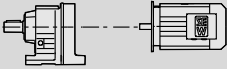



S..DRE/DRS  
S.. → DRE/DRS

S97R57, $n_e=1400$ 1/min						4200 Nm				
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S	DRE132M DRE132MC DRE160S
2  3										
0.04	4200	32800	-	33818						
0.04	4200	32800	-	31154						
0.05	4200	32800	-	27847						
0.06	4200	32800	-	24641						
0.07	4200	32800	-	21537						
0.07	4200	32800	-	18749*						
0.09	4200	32800	-	16233						
0.10	4200	32800	-	14576						
0.11	4200	32800	-	12752						
0.12	4200	32800	-	11267						
0.14	4200	32800	-	10078						
0.16	4200	32800	-	8608						
0.19	4200	32800	-	7554						
0.21	4200	31300	-	6640						
0.24	4200	31300	-	5780*						
0.28	4200	31300	-	4937						
0.32	4200	31300	-	4444						
0.35	4200	31300	-	4017						
0.41	4200	31300	-	3453						
0.45	4200	31300	-	3108						
0.53	4200	31300	-	2654						
0.60	4200	31300	-	2329						
0.67	4200	31300	-	2081						
0.75	4200	31300	-	1860						
0.89	4200	31300	-	1574*						
2  2										
1.0	4200	31300	-	1394						
1.1	4200	31300	-	1223						
1.3	4200	31300	-	1070						
1.5	4200	31300	-	928						
1.7	4200	31300	-	824						
2.0	4200	32800	-	714						
2.2	4200	31300	-	626*						
2.6	4200	31300	-	538						
2.9	4200	31400	-	484*						
3.3	4200	31400	-	420						
3.7	4200	31400	-	376						
4.3	4200	31500	-	327						
4.9	4200	31500	-	287						
5.6	4200	31500	-	252						
6.4	4200	31600	-	219						
6.8	4200	31600	-	205						

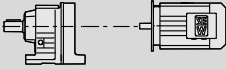



11.3 S..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$				$m$ [kg]		
<b>0.12</b>	0.12	4740	11267	25100	0.90	S	97R57	DR	63S4	170	619
	0.14	4330	10078	32500	0.95	SF	97R57	DR	63S4	200	619
	0.16	3590	8608	34000	1.15	SA	97R57	DR	63S4	160	619
	0.18	3180	7554	34700	1.30	SAF	97R57	DR	63S4	190	619
	0.21	2690	6706	27100	0.95	S	87R57	DR	63S4	110	619
	0.23	2400	5875	27700	1.05	SF	87R57	DR	63S4	130	619
	0.27	1980	5187	28500	1.25	SA	87R57	DR	63S4	105	619
	0.30	1760	4606	28800	1.40	SAF	87R57	DR	63S4	120	619
	0.36	1460	3872	29200	1.70						
	0.39	1370	3540	7240	0.90						
	0.45	1200	3098	12300	1.05						
	0.58	1320	2374	10600	0.95						
	0.66	1160	2083	12600	1.05	S	77R37	DR	63S4	59	619
	0.76	980	1813	13900	1.25	SF	77R37	DR	63S4	68	619
	0.79	930	1745	14200	1.30	SA	77R37	DR	63S4	58	619
	0.86	860	1600	14600	1.45	SAF	77R37	DR	63S4	65	619
	0.98	755	1404	15100	1.65						
	1.1	660	1245	15500	1.90						
	1.2	585	1194	7990	0.95	S	67R37	DR	63S4	39	619
1.3	530	1045	8560	1.05	SF	67R37	DR	63S4	46	619	
	455	914	9180	1.25	SA	67R37	DR	63S4	40	619	
1.5					SAF	67R37	DR	63S4	45	619	
1.7	415	809	9460	1.35							
	365	712	9780	1.55							
2.2	305	615	10100	1.85	S	67R37	DR	63S4	39	619	
	275	543	10200	2.1	SF	67R37	DR	63S4	46	619	
2.9	225	469	10400	2.5	SA	67R37	DR	63S4	40	619	
	200	424	10500	2.8	SAF	67R37	DR	63S4	45	619	
3.8	187	365	10500	3.0							
2.1	325	655	6800	0.90							
	285	574	7200	1.05							
2.7	250	506	7480	1.20	S	57R17	DR	63S4	20	619	
	215	438	7700	1.40	SF	57R17	DR	63S4	24	619	
3.6	189	388	7850	1.60	SA	57R17	DR	63S4	20	619	
	169	336	7950	1.80	SAF	57R17	DR	63S4	23	619	
4.7	145	294	8050	2.1							
	139	269	8070	2.2							
3.2	215	438	5010	0.85							
	189	388	5170	1.00							
4.1	168	336	5290	1.10	S	47R17	DR	63S4	17	619	
	143	294	5420	1.30	SF	47R17	DR	63S4	20	619	
5.4	98	257	5660	1.90	SA	47R17	DR	63S4	18	619	
	118	229	5550	1.55	SAF	47R17	DR	63S4	19	619	
6.9	102	200	5610	1.80							
	96	187	5640	1.95							
6.8	103	202	3000	0.90							
	91	179	3000	1.00	S	37R17	DR	63S4	14	619	
8.7	82	158	3000	1.15	SF	37R17	DR	63S4	15	619	
	75	144	3000	1.20	SA	37R17	DR	63S4	13	619	
12	61	118	3000	1.50	SAF	37R17	DR	63S4	15	619	
	57	110	3000	1.60							
4.5	143	201.00*	8050	2.1	S	57	DR	63M6	17	594	
	133	184.80*	8090	2.2	SF	57	DR	63M6	21	595	
5.7	116	158.12	8140	2.5	SA	57	DR	63M6	17	596	
	103	137.05	8180	2.9	SAF	57	DR	63M6	20	595	
4.5	138	201.00*	5490	1.30	S	47	DR	63M6	14	589	
	129	184.80*	5540	1.40	SF	47	DR	63M6	17	590	
5.7	112	158.12	5610	1.55	SA	47	DR	63M6	15	591	
	99	137.05	5660	1.75	SAF	47	DR	63M6	16	590	
7.0	93	128.10*	5680	1.85							
6.9	95	201.00*	5680	1.80							
	89	184.80*	5700	1.90	S	47	DR	63S4	14	589	
8.7	77	158.12	5740	2.2	SF	47	DR	63S4	17	590	
	68	137.05	5780	2.5	SA	47	DR	63S4	15	591	
11	64	128.10*	5790	2.6	SAF	47	DR	63S4	16	590	
	57	110.73	5810	3.0							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**S..DRE/DRS**  
S..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>0.12</b>	5.7	107	157.43	3000	0.85						
	6.2	99	144.40*	3000	0.95	<b>S</b>	<b>37</b>	<b>DR</b>	<b>63M6</b>	11	585
	7.3	86	122.94	3000	1.05	<b>SF</b>	<b>37</b>	<b>DR</b>	<b>63M6</b>	12	586
	8.5	76	106.00*	3000	1.20	<b>SA</b>	<b>37</b>	<b>DR</b>	<b>63M6</b>	10	587
	9.1	71	98.80*	3000	1.30	<b>SAF</b>	<b>37</b>	<b>DR</b>	<b>63M6</b>	12	586
	10	64	86.36	3000	1.45						
	8.8	74	157.43	3000	1.25						
	9.6	68	144.40*	3000	1.35						
	11	60	122.94	3000	1.55						
	13	52	106.00*	3000	1.70						
	14	49	98.80*	3000	1.75						
	16	44	86.36	3000	1.95						
	17	41	80.96	3000	2.1						
	19	37	71.44*	3000	2.3						
	22	33	63.33	3000	2.5	<b>S</b>	<b>37</b>	<b>DR</b>	<b>63S4</b>	11	585
	25	35	55.93	3000	2.3	<b>SF</b>	<b>37</b>	<b>DR</b>	<b>63S4</b>	12	586
	27	33	51.30*	3000	2.5	<b>SA</b>	<b>37</b>	<b>DR</b>	<b>63S4</b>	10	587
	32	28	43.68	3000	2.9	<b>SAF</b>	<b>37</b>	<b>DR</b>	<b>63S4</b>	12	586
	37	24	37.66	3000	3.2						
	39	23	35.10*	3000	3.4						
	45	20	30.68	3000	3.7						
	48	19	28.76	3000	3.9						
	54	17	25.38*	3000	4.4						
	61	15	22.50*	3000	4.8						
	69	14	19.89	3000	3.6						
	76	13	18.24*	3000	3.9						
	89	11	15.53	2870	4.4						
	<b>0.18</b>	0.29	3010	4606	19200	0.85	<b>S</b>	<b>87R57</b>	<b>DR</b>	<b>63M4</b>	110
0.34		2510	3872	27500	1.00	<b>SF</b>	<b>87R57</b>	<b>DR</b>	<b>63M4</b>	130	619
						<b>SA</b>	<b>87R57</b>	<b>DR</b>	<b>63M4</b>	105	619
						<b>SAF</b>	<b>87R57</b>	<b>DR</b>	<b>63M4</b>	120	619
0.38		2420	3475	27700	1.05						
0.45		2030	2905	28400	1.25	<b>S</b>	<b>87R57</b>	<b>DR</b>	<b>63M4</b>	105	619
0.51		1760	2586	28800	1.40	<b>SF</b>	<b>87R57</b>	<b>DR</b>	<b>63M4</b>	130	619
0.57		1570	2335	29100	1.60	<b>SA</b>	<b>87R57</b>	<b>DR</b>	<b>63M4</b>	105	619
0.64		1360	2054	29300	1.85	<b>SAF</b>	<b>87R57</b>	<b>DR</b>	<b>63M4</b>	120	619
0.72		1200	1824	29500	2.1						
0.81		1080	1631	29600	2.3						
0.94		1240	1404	11900	1.00	<b>S</b>	<b>77R37</b>	<b>DR</b>	<b>63M4</b>	59	619
1.1		1090	1245	13200	1.15	<b>SF</b>	<b>77R37</b>	<b>DR</b>	<b>63M4</b>	68	619
						<b>SA</b>	<b>77R37</b>	<b>DR</b>	<b>63M4</b>	58	619
						<b>SAF</b>	<b>77R37</b>	<b>DR</b>	<b>63M4</b>	65	619
1.2		1020	1100	13700	1.20						
1.4		870	954	14500	1.40	<b>S</b>	<b>77R37</b>	<b>DR</b>	<b>63M4</b>	58	619
1.6		770	837	15000	1.60	<b>SF</b>	<b>77R37</b>	<b>DR</b>	<b>63M4</b>	68	619
1.8		640	714	15600	1.95	<b>SA</b>	<b>77R37</b>	<b>DR</b>	<b>63M4</b>	58	619
2.1		565	637	15800	2.2	<b>SAF</b>	<b>77R37</b>	<b>DR</b>	<b>63M4</b>	65	619
2.3		515	574	16000	2.4						
1.9		600	712	7860	0.95	<b>S</b>	<b>67R37</b>	<b>DR</b>	<b>63M4</b>	39	619
2.2		505	615	8800	1.15	<b>SF</b>	<b>67R37</b>	<b>DR</b>	<b>63M4</b>	46	619
2.4		450	543	9230	1.25	<b>SA</b>	<b>67R37</b>	<b>DR</b>	<b>63M4</b>	40	619
2.8		375	469	9720	1.50	<b>SAF</b>	<b>67R37</b>	<b>DR</b>	<b>63M4</b>	45	619
3.1		340	424	9930	1.65						
3.6		305	365	10100	1.85						
3.0		355	438	6520	0.85						
3.4		310	388	6970	0.95						
3.9		275	336	7290	1.10	<b>S</b>	<b>57R17</b>	<b>DR</b>	<b>63M4</b>	20	619
4.5		235	294	7560	1.25	<b>SF</b>	<b>57R17</b>	<b>DR</b>	<b>63M4</b>	24	619
4.9		225	269	7650	1.35	<b>SA</b>	<b>57R17</b>	<b>DR</b>	<b>63M4</b>	20	619
5.8	193	229	7830	1.55	<b>SAF</b>	<b>57R17</b>	<b>DR</b>	<b>63M4</b>	23	619	
6.5	174	204	7920	1.75							
7.0	159	187	7990	1.90							

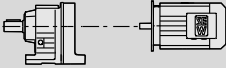



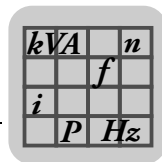


P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
												S
0.18	4.5	235	294	4480	0.80							
	5.1	162	257	5380	1.15							
	5.8	190	229	5170	0.95	S	47R17	DR	63M4	17	619	
	6.6	167	200	5300	1.10	SF	47R17	DR	63M4	20	619	
	7.0	156	187	5360	1.20	SA	47R17	DR	63M4	18	619	
	8.0	138	165	5450	1.35	SAF	47R17	DR	63M4	19	619	
	9.0	124	148	5520	1.50							
	10	110	131	5580	1.70							
	4.0	250	217.41	10300	2.2	S	67	DR	63L6	29	599	
	4.6	220	190.11	10400	2.5	SF	67	DR	63L6	35	600	
4.8	210	180.60*	10400	2.6	SA	67	DR	63L6	30	601		
					SAF	67	DR	63L6	34	600		
4.3	220	201.00*	7670	1.35	S	57	DR	63L6	18	594		
4.7	205	184.80*	7760	1.45	SF	57	DR	63L6	22	595		
5.5	180	158.12	7900	1.65	SA	57	DR	63L6	18	596		
6.4	158	137.05	7990	1.85	SAF	57	DR	63L6	21	595		
6.6	154	201.00*	8010	1.90	S	57	DR	63M4	17	594		
7.1	143	184.80*	8050	2.1	SF	57	DR	63M4	21	595		
8.4	125	158.12	8120	2.4	SA	57	DR	63M4	17	596		
9.6	110	137.05	8160	2.7	SAF	57	DR	63M4	20	595		
4.3	210	201.00*	5090	0.85	S	47	DR	63L6	14	589		
4.7	199	184.80*	5180	0.90	SF	47	DR	63L6	18	590		
5.5	173	158.12	5320	1.00	SA	47	DR	63L6	15	591		
6.4	153	137.05	5420	1.10	SAF	47	DR	63L6	17	590		
6.8	144	128.10*	5460	1.20								
6.6	149	201.00*	5440	1.15								
7.1	138	184.80*	5490	1.25								
8.4	121	158.12	5570	1.40								
9.6	106	137.05	5630	1.60	S	47	DR	63M4	14	589		
10	100	128.10*	5660	1.65	SF	47	DR	63M4	17	590		
12	88	110.73	5700	1.90	SA	47	DR	63M4	15	591		
14	77	94.08*	5750	2.2	SAF	47	DR	63M4	16	590		
16	69	84.00*	5770	2.4								
18	60	71.75*	5800	2.8								
19	69	69.39	5750	2.2								
8.4	115	157.43	3000	0.80								
9.1	107	144.40*	3000	0.85								
11	93	122.94	3000	1.00								
12	82	106.00*	3000	1.10								
13	77	98.80*	3000	1.15								
15	68	86.36	3000	1.25								
16	64	80.96	3000	1.30								
18	58	71.44*	3000	1.45								
21	52	63.33	3000	1.60								
24	55	55.93	3000	1.45								
26	51	51.30*	3000	1.60	S	37	DR	63M4	11	585		
30	44	43.68	3000	1.85	SF	37	DR	63M4	12	586		
35	38	37.66	3000	2.1	SA	37	DR	63M4	10	587		
38	36	35.10*	3000	2.2	SAF	37	DR	63M4	12	586		
43	32	30.68	3000	2.4								
46	30	28.76	3000	2.5								
52	26	25.38*	3000	2.8								
59	24	22.50*	3000	3.1								
66	22	19.89	3000	2.3								
72	21	18.24*	2940	2.5								
85	18	15.53	2810	2.8								
99	15	13.39	2700	3.2								
106	14	12.48*	2650	3.4								
121	13	10.91	2550	3.8								
129	12	10.23	2500	4.0								
0.25	0.45	2930	2905	22200	0.85							
	0.50	2560	2586	27400	1.00							
	0.56	2290	2335	27900	1.10	S	87R57	DR	63L4	110	619	
	0.63	1990	2054	28400	1.25	SF	87R57	DR	63L4	130	619	
	0.71	1770	1824	28800	1.40	SA	87R57	DR	63L4	105	619	
	0.80	1580	1631	29100	1.60	SAF	87R57	DR	63L4	120	619	
	1.4	930	930	29700	2.7							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**S..DRE/DRS**  
S..DRE/DRS [kW]

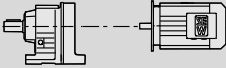

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]	
<b>0.25</b>	1.4	1250	954	11800	1.00			
	1.6	1100	837	13100	1.10	<b>S 77R37</b>	<b>DR 63L4</b>	59 619
	1.8	920	714	14200	1.35	<b>SF 77R37</b>	<b>DR 63L4</b>	69 619
	2.0	820	637	14800	1.50	<b>SA 77R37</b>	<b>DR 63L4</b>	59 619
	2.3	745	574	15200	1.65	<b>SAF 77R37</b>	<b>DR 63L4</b>	65 619
	2.6	635	499	15600	1.95			
	2.4	650	543	6280	0.85			
	2.8	550	469	8390	1.05	<b>S 67R37</b>	<b>DR 63L4</b>	40 619
	3.1	495	424	8880	1.15	<b>SF 67R37</b>	<b>DR 63L4</b>	46 619
	3.6	440	365	9320	1.30	<b>SA 67R37</b>	<b>DR 63L4</b>	41 619
4.1	380	319	9700	1.50	<b>SAF 67R37</b>	<b>DR 63L4</b>	45 619	
4.6	335	281	9960	1.70				
4.4	340	294	6640	0.85				
4.8	320	269	6870	0.95	<b>S 57R17</b>	<b>DR 63L4</b>	21 619	
5.7	275	229	7280	1.10	<b>SF 57R17</b>	<b>DR 63L4</b>	25 619	
6.4	245	204	7490	1.20	<b>SA 57R17</b>	<b>DR 63L4</b>	21 619	
6.9	225	187	7630	1.30	<b>SAF 57R17</b>	<b>DR 63L4</b>	24 619	
7.9	200	165	7780	1.50				
9.9	162	131	7980	1.85				
4.1	340	217.41	9920	1.65	<b>S 67</b>	<b>DRS 71S6</b>	31 599	
4.7	300	190.11	10100	1.85	<b>SF 67</b>	<b>DRS 71S6</b>	37 600	
5.0	290	180.60*	10200	1.90	<b>SA 67</b>	<b>DRS 71S6</b>	32 601	
5.6	255	158.45	10300	2.1	<b>SAF 67</b>	<b>DRS 71S6</b>	36 600	
6.0	245	217.41	10300	2.1				
6.8	215	190.11	10400	2.4	<b>S 67</b>	<b>DR 63L4</b>	29 599	
7.2	205	180.60*	10500	2.5	<b>SF 67</b>	<b>DR 63L4</b>	35 600	
8.2	187	158.45	10500	2.8	<b>SA 67</b>	<b>DR 63L4</b>	30 601	
9.7	161	134.40*	10600	3.2	<b>SAF 67</b>	<b>DR 63L4</b>	34 600	
11	147	121.33	10600	3.5				
12	131	106.75*	10700	4.0				
4.4	300	201.00*	7080	1.00	<b>S 57</b>	<b>DRS 71S6</b>	20 594	
4.8	275	184.80*	7270	1.10	<b>SF 57</b>	<b>DRS 71S6</b>	24 595	
5.7	240	158.12	7530	1.20	<b>SA 57</b>	<b>DRS 71S6</b>	20 596	
6.5	210	137.05	7710	1.35	<b>SAF 57</b>	<b>DRS 71S6</b>	23 595	
7.0	200	128.10*	7780	1.45				
6.5	215	201.00*	7700	1.35				
7.0	200	184.80*	7790	1.45				
8.2	176	158.12	7920	1.70	<b>S 57</b>	<b>DR 63L4</b>	18 594	
9.5	155	137.05	8010	1.90	<b>SF 57</b>	<b>DR 63L4</b>	22 595	
10	146	128.10*	8040	2.0	<b>SA 57</b>	<b>DR 63L4</b>	18 596	
12	128	110.73	8110	2.3	<b>SAF 57</b>	<b>DR 63L4</b>	21 595	
14	111	94.08*	8160	2.6				
15	100	84.00*	8190	2.9				
6.5	205	201.00*	5120	0.80				
7.0	194	184.80*	5210	0.85				
8.2	170	158.12	5340	1.00				
9.5	150	137.05	5440	1.10				
10	141	128.10*	5480	1.20				
12	124	110.73	5560	1.35	<b>S 47</b>	<b>DR 63L4</b>	14 589	
14	108	94.08*	5630	1.55	<b>SF 47</b>	<b>DR 63L4</b>	18 590	
15	98	84.00*	5670	1.70	<b>SA 47</b>	<b>DR 63L4</b>	15 591	
18	85	71.75*	5720	1.95	<b>SAF 47</b>	<b>DR 63L4</b>	17 590	
19	97	69.39	5640	1.60				
19	80	67.20*	5740	2.1				
20	90	63.80*	5670	1.70				
24	78	54.59	5720	2.00				
27	68	47.32	5760	2.3				

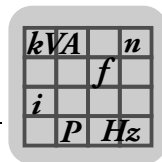


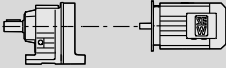

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
0.25	13	108	98.80*	3000	0.80							
	15	96	86.36	3000	0.90							
	16	91	80.96	3000	0.95							
	18	81	71.44*	3000	1.05							
	21	73	63.33	3000	1.10							
	23	78	55.93	3000	1.05							
	25	72	51.30*	3000	1.15							
	30	62	43.68	3000	1.30							
	35	54	37.66	3000	1.45							
	37	51	35.10*	3000	1.55							
	42	45	30.68	3000	1.70							
	45	42	28.76	3000	1.80							
	51	37	25.38*	3000	2.00	S 37	DR 63L4			11	585	
	58	33	22.50*	3000	2.2	SF 37	DR 63L4			13	586	
	65	32	19.89	2870	1.65	SA 37	DR 63L4			11	587	
	71	29	18.24*	2820	1.80	SAF 37	DR 63L4			13	586	
	84	25	15.53	2710	2.0							
	97	22	13.39	2620	2.3							
	104	20	12.48*	2570	2.4							
	119	18	10.91	2480	2.7							
	127	17	10.23	2440	2.8							
	144	15	9.02*	2360	3.1							
	162	13	8.00*	2280	3.4							
	191	11	6.80*	2180	3.8							
	205	10	6.33	2130	3.3							
	241	9.0	5.38	2030	3.8							
	267	8.1	4.86*	1980	4.1							
	328	6.7	3.97	1860	4.8							
	0.25	92	21	28.76	2740	3.0						
		105	19	25.38*	2650	3.3						
		118	17	22.50*	2560	3.4	S 37	DR 63M2		11	585	
		134	16	19.89	2410	2.8	SF 37	DR 63M2		12	586	
146		15	18.24*	2350	3.0	SA 37	DR 63M2		10	587		
171		12	15.53	2250	3.4	SAF 37	DR 63M2		12	586		
199		11	13.39	2160	3.8							
213		10	12.48*	2120	4.0							
0.37		0.67	2850	2054	24500	0.90	S 87R57	DRS 71S4		110	619	
		0.76	2530	1824	27400	1.00	SF 87R57	DRS 71S4		130	619	
	0.85	2260	1631	28000	1.10	SA 87R57	DRS 71S4		105	619		
	1.5	1340	930	29400	1.85	SAF 87R57	DRS 71S4		125	619		
	1.7	1210	831	29500	2.1							
	1.9	1310	714	11300	0.95							
	2.2	1160	637	12600	1.05	S 77R37	DRS 71S4		61	619		
	2.4	1050	574	13400	1.15	SF 77R37	DRS 71S4		71	619		
	2.8	900	499	14300	1.35	SA 77R37	DRS 71S4		61	619		
	3.2	795	438	14900	1.55	SAF 77R37	DRS 71S4		67	619		
	3.6	705	389	15300	1.75							
	3.8	620	365	7560	0.90	S 67R37	DRS 71S4		42	619		
	4.3	540	319	8450	1.05	SF 67R37	DRS 71S4		48	619		
	4.9	475	281	9030	1.20	SA 67R37	DRS 71S4		43	619		
	5.6	430	246	9380	1.30	SAF 67R37	DRS 71S4		47	619		
	3.5	635	256.47	15600	2.00	S 77	DRS 71M6		53	604		
	4.0	565	225.26	15800	2.2	SF 77	DRS 71M6		63	605		
	4.2	540	214.00*	15900	2.3	SA 77	DRS 71M6		52	606		
						SAF 77	DRS 71M6		59	605		
	4.2	500	217.41	8830	1.10	S 67	DRS 71M6		32	599		
	4.8	445	190.11	9280	1.25	SF 67	DRS 71M6		38	600		
	5.0	425	180.60*	9410	1.30	SA 67	DRS 71M6		33	601		
	5.7	380	158.45	9710	1.45	SAF 67	DRS 71M6		37	600		
	6.4	345	217.41	9900	1.50							
	7.3	305	190.11	10100	1.70	S 67	DRS 71S4		31	599		
	7.6	290	180.60*	10200	1.75	SF 67	DRS 71S4		37	600		
	8.7	260	158.45	10300	2.00	SA 67	DRS 71S4		32	601		
	10	225	134.40*	10400	2.3	SAF 67	DRS 71S4		36	600		
	11	205	121.33	10500	2.5							

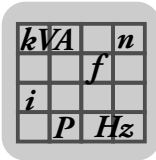
$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**S..DRE/DRS**  
S..DRE/DRS [kW]

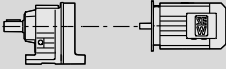

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.37</b>	5.7	355	158.12	6510	0.85				
	6.6	310	137.05	6950	0.95	<b>S 57</b>	<b>DRS 71M6</b>	21 594	
	7.1	295	128.10*	7110	1.00	<b>SF 57</b>	<b>DRS 71M6</b>	25 595	
	8.2	260	110.73	7400	1.15	<b>SA 57</b>	<b>DRS 71M6</b>	21 596	
	9.6	225	94.08*	7640	1.30	<b>SAF 57</b>	<b>DRS 71M6</b>	24 595	
	11	205	84.00*	7770	1.45				
	6.9	300	201.00*	7050	0.95				
	7.5	280	184.80*	7230	1.05				
	8.7	245	158.12	7510	1.20				
	10	215	137.05	7690	1.35				
	11	205	128.10*	7770	1.45	<b>S 57</b>	<b>DRS 71S4</b>	20 594	
	12	180	110.73	7900	1.65	<b>SF 57</b>	<b>DRS 71S4</b>	24 595	
	15	156	94.08*	8000	1.90	<b>SA 57</b>	<b>DRS 71S4</b>	20 596	
	16	141	84.00*	8060	2.1	<b>SAF 57</b>	<b>DRS 71S4</b>	23 595	
	19	122	71.75*	8130	2.4				
	20	139	69.39	8070	1.75				
	21	115	67.20*	8150	2.5				
	22	128	63.80*	8110	1.90				
	10	210	137.05	5110	0.80				
	11	198	128.10*	5180	0.85				
	12	175	110.73	5320	0.95				
	15	151	94.08*	5430	1.10				
	16	137	84.00*	5500	1.20				
	19	119	71.75*	5580	1.40				
	20	136	69.39	5460	1.15				
	21	112	67.20*	5610	1.50				
	22	126	63.80*	5510	1.25	<b>S 47</b>	<b>DRS 71S4</b>	16 589	
	25	109	54.59	5590	1.40	<b>SF 47</b>	<b>DRS 71S4</b>	20 590	
	29	96	47.32	5410	1.60	<b>SA 47</b>	<b>DRS 71S4</b>	17 591	
	31	90	44.22*	5330	1.75	<b>SAF 47</b>	<b>DRS 71S4</b>	19 590	
	36	78	38.23	5140	2.00				
	42	67	32.48*	4930	2.3				
	48	60	29.00*	4790	2.6				
	56	52	24.77	4590	3.0				
	59	49	23.20*	4510	3.1				
	68	46	20.33	4180	2.4				
	78	40	17.62	4030	2.8				
	84	37	16.47*	3960	3.0				
	22	103	63.33	3000	0.80				
	27	101	51.30*	3000	0.80				
	32	87	43.68	3000	0.95				
	37	76	37.66	3000	1.05				
	39	71	35.10*	3000	1.10				
	45	62	30.68	3000	1.20				
	48	59	28.76	3000	1.30				
54	52	25.38*	2940	1.40					
61	47	22.50*	2870	1.55					
69	44	19.89	2610	1.20	<b>S 37</b>	<b>DRS 71S4</b>	13 585		
76	41	18.24*	2570	1.30	<b>SF 37</b>	<b>DRS 71S4</b>	15 586		
89	35	15.53	2500	1.45	<b>SA 37</b>	<b>DRS 71S4</b>	13 587		
103	30	13.39	2420	1.60	<b>SAF 37</b>	<b>DRS 71S4</b>	15 586		
111	28	12.48*	2390	1.70					
126	25	10.91	2320	1.95					
135	23	10.23	2280	2.0					
153	21	9.02*	2220	2.2					
172	18	8.00*	2150	2.4					
203	16	6.80*	2070	2.7					
218	15	6.33	2020	2.4					
256	12	5.38	1930	2.7					
284	11	4.86*	1880	2.9					
348	9.3	3.97	1780	3.4					

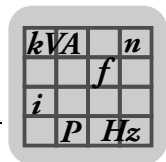


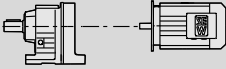

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]	
<b>0.37</b>	104	28	25.38*	2540	2.2			
	118	25	22.50*	2460	2.3			
	133	24	19.89	2290	1.85			
	145	22	18.24*	2240	2.0	S 37	DR 63L2	11 585
	171	19	15.53	2160	2.3	SF 37	DR 63L2	13 586
	198	16	13.39	2080	2.6	SA 37	DR 63L2	11 587
	212	15	12.48*	2040	2.7	SAF 37	DR 63L2	13 586
	243	13	10.91	1970	3.0			
	259	12	10.23	1940	3.1			
	294	11	9.02*	1870	3.3			
<b>0.55</b>	1.0	2800	1332	25400	0.90			
	1.2	2530	1191	27400	1.00			
	1.3	2200	1032	28100	1.15			
	1.5	2030	930	28400	1.25	S 87R57	DRS 71M4	110 619
	1.7	1840	831	28700	1.35	SF 87R57	DRS 71M4	130 619
	1.9	1600	719	29000	1.55	SA 87R57	DRS 71M4	110 619
	2.2	1390	624	29300	1.80	SAF 87R57	DRS 71M4	125 619
	2.5	1260	558	29400	2.00			
	3.2	1010	435	29700	2.4			
	3.2	1200	438	12300	1.05	S 77R37	DRS 71M4	62 619
	3.6	1070	389	13300	1.15	SF 77R37	DRS 71M4	72 619
	4.2	900	327	14400	1.35	SA 77R37	DRS 71M4	62 619
	4.8	810	289	14800	1.50	SAF 77R37	DRS 71M4	68 619
	5.5	705	250	15300	1.75			
	5.6	645	246	6520	0.90	S 67R37	DRS 71M4	43 619
	6.2	580	221	8080	1.00	SF 67R37	DRS 71M4	49 619
	7.0	525	198	8590	1.10	SA 67R37	DRS 71M4	44 619
	8.2	450	168	9220	1.25	SAF 67R37	DRS 71M4	48 619
	3.2	1110	288.00*	29600	2.2	S 87	DRS 80S6	91 609
	3.5	1000	258.18	29700	2.4	SF 87	DRS 80S6	115 610
	4.1	880	222.40*	29800	2.7	SA 87	DRS 80S6	89 611
	4.5	810	202.96	29800	2.9	SAF 87	DRS 80S6	105 610
	3.6	940	256.47	14200	1.35	S 77	DRS 80S6	55 604
	4.1	830	225.26	14700	1.50	SF 77	DRS 80S6	65 605
	4.3	800	214.00*	14900	1.60	SA 77	DRS 80S6	55 606
	4.8	715	189.09	15300	1.75	SAF 77	DRS 80S6	61 605
	5.7	620	161.60*	15600	2.0			
	5.4	650	256.47	15500	1.95	S 77	DRS 71M4	53 604
	6.1	580	225.26	15800	2.2	SF 77	DRS 71M4	63 605
	6.4	550	214.00*	15900	2.3	SA 77	DRS 71M4	52 606
	7.3	495	189.09	16000	2.6	SAF 77	DRS 71M4	59 605
	6.4	515	217.41	8720	1.00			
	7.3	455	190.11	9190	1.15			
	7.6	435	180.60*	9340	1.20			
	8.7	385	158.45	9650	1.35			
	10	335	134.40*	9950	1.55	S 67	DRS 71M4	32 599
	11	305	121.33	10100	1.70	SF 67	DRS 71M4	38 600
	13	270	106.75*	10200	1.90	SA 67	DRS 71M4	33 601
	14	255	100.80*	10300	2.0	SAF 67	DRS 71M4	37 600
	16	220	85.83	10400	2.3			
	18	225	75.06	10400	2.1			
	21	200	65.63	10500	2.4			
	9.7	330	94.08*	6760	0.90			
	11	300	84.00*	7070	1.00			
	13	260	71.75*	7390	1.10	S 57	DRS 80S6	23 594
14	245	67.20*	7500	1.20	SF 57	DRS 80S6	27 595	
17	240	54.59	7540	1.10	SA 57	DRS 80S6	23 596	
19	210	47.32	7730	1.30	SAF 57	DRS 80S6	26 595	
21	199	44.22*	7800	1.35				
24	173	38.23	7930	1.55				



**S..DRE/DRS**  
S..DRE/DRS [kW]

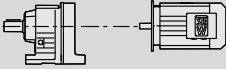

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.55</b>	8.7	365	158.12	6390	0.80				
	10	320	137.05	6860	0.90				
	11	300	128.10*	7040	0.95				
	12	265	110.73	7350	1.10				
	15	230	94.08*	7600	1.25				
	16	205	84.00*	7740	1.40				
	19	182	71.75*	7890	1.60				
	21	172	67.20*	7940	1.65	<b>S 57</b>	<b>DRS 71M4</b>	21	594
	25	165	54.59	7970	1.50	<b>SF 57</b>	<b>DRS 71M4</b>	25	595
	29	144	47.32	8050	1.70	<b>SA 57</b>	<b>DRS 71M4</b>	21	596
	31	135	44.22*	8080	1.80	<b>SAF 57</b>	<b>DRS 71M4</b>	24	595
	36	118	38.23	8140	2.1				
	42	101	32.48*	7940	2.4				
	48	91	29.00*	7690	2.7				
	56	78	24.77	7360	3.1				
	59	74	23.20*	7220	3.3				
	68	68	20.33	6740	2.5				
	16	200	84.00*	5160	0.80				
	19	177	71.75*	5310	0.95				
	21	167	67.20*	5360	1.00				
25	162	54.59	5120	0.95					
29	142	47.32	5000	1.10					
31	133	44.22*	4940	1.15					
36	116	38.23	4800	1.35					
42	100	32.48*	4640	1.55	<b>S 47</b>	<b>DRS 71M4</b>	17	589	
48	90	29.00*	4530	1.75	<b>SF 47</b>	<b>DRS 71M4</b>	21	590	
56	77	24.77	4360	2.0	<b>SA 47</b>	<b>DRS 71M4</b>	18	591	
59	73	23.20*	4300	2.1	<b>SAF 47</b>	<b>DRS 71M4</b>	20	590	
68	68	20.33	3910	1.60					
78	59	17.62	3790	1.85					
84	56	16.47*	3740	2.00					
97	48	14.24	3620	2.3					
114	41	12.10*	3480	2.6					
128	37	10.80*	3390	3.0					
150	32	9.23*	3260	3.4					
45	93	30.68	2680	0.80					
48	87	28.76	2660	0.85					
54	78	25.38*	2630	0.95					
61	69	22.50*	2590	1.05					
72	60	19.13*	2530	1.20					
89	52	15.53	2230	0.95					
103	45	13.39	2190	1.10					
111	42	12.48*	2170	1.15	<b>S 37</b>	<b>DRS 71M4</b>	14	585	
126	37	10.91	2130	1.30	<b>SF 37</b>	<b>DRS 71M4</b>	16	586	
135	35	10.23	2110	1.35	<b>SA 37</b>	<b>DRS 71M4</b>	14	587	
153	31	9.02*	2060	1.50	<b>SAF 37</b>	<b>DRS 71M4</b>	16	586	
172	27	8.00*	2010	1.65					
203	23	6.80*	1950	1.85					
218	22	6.33	1900	1.60					
256	19	5.38	1830	1.85					
284	17	4.86*	1790	1.95					
348	14	3.97	1700	2.3					
98	45	28.76	2400	1.45					
111	40	25.38*	2340	1.55					
125	35	22.50*	2290	1.60					
141	33	19.89	2090	1.35					
154	30	18.24*	2060	1.45					
181	26	15.53	2000	1.60	<b>S 37</b>	<b>DRS 71M2</b>	14	585	
210	23	13.39	1930	1.80	<b>SF 37</b>	<b>DRS 71M2</b>	16	586	
225	21	12.48*	1900	1.90	<b>SA 37</b>	<b>DRS 71M2</b>	14	587	
258	18	10.91	1850	2.1	<b>SAF 37</b>	<b>DRS 71M2</b>	16	586	
275	17	10.23	1820	2.2					
311	15	9.02*	1770	2.3					
351	14	8.00*	1710	2.6					
413	12	6.80*	1640	2.5					



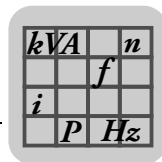
P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]		
												S
0.75	1.2	4710	1223	23400	0.90							
	1.3	4130	1070	32200	1.00							
	1.6	3550	928	34000	1.20	S	97R57	DRE	80M4	175	619	
	1.7	3140	824	34700	1.35	SF	97R57	DRE	80M4	210	619	
	2.0	2240	714	35900	1.85	SA	97R57	DRE	80M4	170	619	
	2.3	2380	626	35800	1.75	SAF	97R57	DRE	80M4	195	619	
	2.7	2040	538	36100	2.0							
	3.0	1850	484	36300	2.3							
	1.4	2940	1032	21700	0.85							
	1.5	2710	930	27000	0.90							
	1.7	2450	831	27600	1.00	S	87R57	DRE	80M4	115	619	
	2.0	2130	719	28200	1.15	SF	87R57	DRE	80M4	135	619	
	2.3	1860	624	28700	1.35	SA	87R57	DRE	80M4	115	619	
	2.6	1680	558	28900	1.50	SAF	87R57	DRE	80M4	130	619	
	3.3	1340	435	29300	1.80							
	4.4	1030	323	29700	2.3							
	4.4	1200	327	12300	1.05	S	77R37	DRE	80M4	67	619	
	5.0	1080	289	13200	1.15	SF	77R37	DRE	80M4	77	619	
	5.7	930	250	14200	1.30	SA	77R37	DRE	80M4	67	619	
	6.6	820	219	14800	1.50	SAF	77R37	DRE	80M4	73	619	
	3.3	1480	288.00*	29200	1.65	S	87	DRE	90L6	100	609	
	3.6	1340	258.18	29400	1.80	SF	87	DRE	90L6	120	610	
	4.2	1170	222.40*	29500	2.0	SA	87	DRE	90L6	98	611	
	4.6	1080	202.96	29600	2.2	SAF	87	DRE	90L6	115	610	
	5.0	1010	288.00*	29700	2.2	S	87	DRE	80M4	94	609	
	5.6	910	258.18	29800	2.5	SF	87	DRE	80M4	115	610	
	6.4	800	222.40*	29800	2.8	SA	87	DRE	80M4	91	611	
	7.1	735	202.96	29900	3.1	SAF	87	DRE	80M4	110	610	
	4.2	1110	225.26	13000	1.15	S	77	DRE	90L6	64	604	
	4.4	1060	214.00*	13400	1.20	SF	77	DRE	90L6	74	605	
	5.0	950	189.09	14100	1.35	SA	77	DRE	90L6	64	606	
	5.8	820	161.60*	14800	1.55	SAF	77	DRE	90L6	70	605	
	5.6	850	256.47	14600	1.50							
	6.4	760	225.26	15100	1.65							
	6.7	730	214.00*	15200	1.75							
	7.6	650	189.09	15500	1.95	S	77	DRE	80M4	58	604	
8.9	565	161.60*	15800	2.2	SF	77	DRE	80M4	68	605		
9.7	520	148.15	16000	2.4	SA	77	DRE	80M4	57	606		
11	460	130.00*	16000	2.6	SAF	77	DRE	80M4	64	605		
12	440	123.20*	16000	2.7								
13	390	107.83	16000	3.0								
7.6	600	190.11	7820	0.85								
8.0	575	180.60*	8120	0.90								
9.1	510	158.45	8740	1.00								
11	440	134.40*	9300	1.15								
12	400	121.33	9560	1.30								
13	360	106.75*	9820	1.45	S	67	DRE	80M4	37	599		
14	340	100.80*	9920	1.50	SF	67	DRE	80M4	43	600		
17	295	85.83	10100	1.75	SA	67	DRE	80M4	38	601		
19	300	75.06	10100	1.60	SAF	67	DRE	80M4	42	600		
22	260	65.63	10300	1.80								
23	250	62.35*	10300	1.90								
26	220	54.70	10200	2.2								
31	191	46.40*	9740	2.5								
13	345	71.75*	6590	0.85	S	57	DRE	90L6	33	594		
14	330	67.20*	6800	0.90	SF	57	DRE	90L6	37	595		
17	280	56.61	7230	1.05	SA	57	DRE	90L6	33	596		
20	280	47.32	7250	0.95	SAF	57	DRE	90L6	35	595		
21	260	44.22*	7380	1.00	S	57	DRE	90L6	33	594		
					SF	57	DRE	90L6	37	595		
					SA	57	DRE	90L6	33	596		
					SAF	57	DRE	90L6	35	595		

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**S..DRE/DRS**  
S..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
0.75	13	350	110.73	6550	0.85				
	15	305	94.08*	7040	0.95				
	17	275	84.00*	7290	1.05				
	20	235	71.75*	7560	1.20				
	21	225	67.20*	7640	1.25				
	26	215	54.59	7700	1.15				
	30	190	47.32	7850	1.30				
	32	178	44.22*	7910	1.40	S 57	DRE 80M4	26	594
	38	155	38.23	7910	1.60	SF 57	DRE 80M4	30	595
	44	133	32.48*	7590	1.85	SA 57	DRE 80M4	26	596
	49	119	29.00*	7380	2.0	SAF 57	DRE 80M4	29	595
	58	103	24.77	7080	2.4				
	62	96	23.20*	6950	2.5				
	71	90	20.33	6420	1.90				
	81	78	17.62	6200	2.2				
	87	73	16.47*	6100	2.3				
	101	64	14.24	5870	2.7				
	30	187	47.32	4510	0.85				
	32	175	44.22*	4480	0.90	S 47	DRE 80M4	22	589
	38	153	38.23	4400	1.00	SF 47	DRE 80M4	26	590
	44	131	32.48*	4290	1.20	SA 47	DRE 80M4	23	591
	49	118	29.00*	4200	1.30	SAF 47	DRE 80M4	25	590
	58	102	24.77	4080	1.55				
	62	96	23.20*	4030	1.60				
	71	89	20.33	3590	1.25				
	81	78	17.62	3510	1.40				
	87	73	16.47*	3470	1.50				
	101	63	14.24	3380	1.75				
	119	54	12.10*	3280	2.0	S 47	DRE 80M4	22	589
	133	48	10.80*	3200	2.2	SF 47	DRE 80M4	26	590
	156	42	9.23*	3090	2.6	SA 47	DRE 80M4	23	591
	166	39	8.64*	3040	2.8	SAF 47	DRE 80M4	25	590
	197	33	7.28	2920	3.1				
	224	29	6.40*	2810	2.6				
	266	25	5.39	2690	3.0				
301	22	4.76	2610	3.3					
359	18	4.00*	2490	3.3					
75	78	19.13*	2260	0.90					
115	55	12.48*	1930	0.85					
132	48	10.91	1910	1.00					
140	46	10.23	1900	1.05					
159	40	9.02*	1880	1.15	S 37	DRE 80M4	19	585	
179	36	8.00*	1850	1.25	SF 37	DRE 80M4	21	586	
211	31	6.80*	1800	1.40	SA 37	DRE 80M4	19	587	
227	29	6.33	1760	1.20	SAF 37	DRE 80M4	21	586	
267	24	5.38	1710	1.40					
295	22	4.86*	1680	1.50					
362	18	3.97	1610	1.75					
151	40	19.13*	2060	1.10					
186	35	15.53	1840	1.20					
216	30	13.39	1800	1.35					
232	28	12.48*	1780	1.45	S 37	DRE 80M2	19	585	
265	24	10.91	1730	1.60	SF 37	DRE 80M2	21	586	
283	23	10.23	1710	1.65	SA 37	DRE 80M2	19	587	
320	20	9.02*	1670	1.75	SAF 37	DRE 80M2	21	586	
361	18	8.00*	1630	1.95					
425	16	6.80*	1570	1.85					
1.1	1.7	4700	824	23500	0.90				
	2.0	3360	714	34400	1.25	S 97R57	DRE 90M4	180	619
	2.3	3570	626	34000	1.15	SF 97R57	DRE 90M4	215	619
	2.6	3070	538	34800	1.35	SA 97R57	DRE 90M4	175	619
	2.9	2780	484	35300	1.50	SAF 97R57	DRE 90M4	200	619
	3.4	2410	420	35700	1.75				

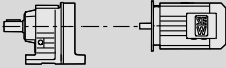



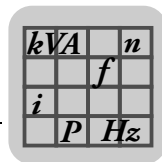


P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
1.1	2.3	2800	624	25500	0.90						
	2.6	2530	558	27400	1.00						
	2.9	2230	485	28000	1.10						
	3.3	2030	435	28400	1.20	S	87R57	DRE	90M4	120	619
	3.8	1780	378	28800	1.35	SF	87R57	DRE	90M4	140	619
	4.4	1550	323	29100	1.55	SA	87R57	DRE	90M4	120	619
	5.0	1360	281	29300	1.75	SAF	87R57	DRE	90M4	135	619
	5.6	1450	255	29200	1.35						
	6.4	1270	222	29400	1.55						
	6.9	1190	205	29500	1.65						
6.5	1230	219	12000	1.00	S	77R37	DRE	90M4	71	619	
					SF	77R37	DRE	90M4	81	619	
					SA	77R37	DRE	90M4	71	619	
					SAF	77R37	DRE	90M4	78	619	
3.3	2260	286.40*	35900	1.85	S	97	DRE	100M6	165	614	
3.6	2080	262.22	36100	2.0	SF	97	DRE	100M6	195	615	
4.1	1860	231.67	36300	2.2	SA	97	DRE	100M6	160	616	
					SAF	97	DRE	100M6	185	615	
3.6	1970	258.18	28500	1.25	S	87	DRE	100M6	105	609	
4.2	1720	222.40*	28900	1.40	SF	87	DRE	100M6	125	610	
4.6	1580	202.96	29100	1.50	SA	87	DRE	100M6	105	611	
					SAF	87	DRE	100M6	120	610	
4.9	1490	288.00*	29200	1.50							
5.5	1350	258.18	29300	1.70	S	87	DRE	90M4	98	609	
6.4	1180	222.40*	29500	1.90	SF	87	DRE	90M4	120	610	
7.0	1080	202.96	29600	2.1	SA	87	DRE	90M4	95	611	
7.9	970	180.00*	29700	2.3	SAF	87	DRE	90M4	110	610	
9.4	830	151.30	29800	2.6							
6.3	1130	225.26	12900	1.10							
6.6	1080	214.00*	13300	1.15							
7.5	960	189.09	14000	1.30							
8.8	830	161.60*	14700	1.50	S	77	DRE	90M4	62	604	
9.6	775	148.15	15000	1.60	SF	77	DRE	90M4	71	605	
11	685	130.00*	15400	1.75	SA	77	DRE	90M4	61	606	
12	655	123.20*	15500	1.85	SAF	77	DRE	90M4	68	605	
13	575	107.83	15800	2.0							
15	525	97.14	15900	2.2							
17	465	85.22	16000	2.4							
12	595	121.33	7880	0.85							
13	530	106.75*	8550	0.95							
14	505	100.80*	8800	1.05							
17	435	85.83	9340	1.20							
18	400	78.00*	9580	1.30							
22	390	65.63	9640	1.20	S	67	DRE	90M4	42	599	
23	370	62.35*	9750	1.30	SF	67	DRE	90M4	48	600	
26	330	54.70	9540	1.45	SA	67	DRE	90M4	43	601	
31	280	46.40*	9210	1.70	SAF	67	DRE	90M4	47	600	
34	255	41.89	9010	1.85							
39	225	36.85	8750	2.1							
41	215	34.80*	8630	2.2							
48	185	29.63	8300	2.6							
20	350	71.75*	6530	0.80	S	57	DRE	90M4	30	594	
21	330	67.20*	6750	0.85	SF	57	DRE	90M4	34	595	
25	285	56.61	7210	0.95	SA	57	DRE	90M4	30	596	
30	280	47.32	7250	0.85	SAF	57	DRE	90M4	33	595	
32	260	44.22*	7390	0.95							
37	225	38.23	7390	1.05							
44	197	32.48*	7150	1.25							
49	177	29.00*	6980	1.40							
57	152	24.77	6740	1.60							
61	143	23.20*	6640	1.70	S	57	DRE	90M4	30	594	
73	121	19.54	6370	1.75	SF	57	DRE	90M4	34	595	
81	116	17.62	5850	1.45	SA	57	DRE	90M4	30	596	
86	108	16.47*	5770	1.55	SAF	57	DRE	90M4	33	595	
100	94	14.24	5590	1.80							
117	80	12.10*	5380	2.1							
131	72	10.80*	5240	2.4							
154	62	9.23*	5040	2.7							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**S..DRE/DRS**  
S..DRE/DRS [kW]

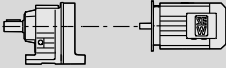

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>1.1</b>	49	175	29.00*	3720	0.90				
	57	151	24.77	3660	1.05	<b>S 47</b>	<b>DRE 90M4</b>	27 589	
	61	142	23.20*	3640	1.05	<b>SF 47</b>	<b>DRE 90M4</b>	30 590	
	73	120	19.54	3560	1.20	<b>SA 47</b>	<b>DRE 90M4</b>	28 591	
	81	115	17.62	3070	0.95	<b>SAF 47</b>	<b>DRE 90M4</b>	29 590	
	86	108	16.47*	3060	1.00				
	100	94	14.24	3030	1.15				
	117	80	12.10*	2980	1.35				
	131	72	10.80*	2930	1.50				
	154	62	9.23*	2860	1.75	<b>S 47</b>	<b>DRE 90M4</b>	27 589	
	164	58	8.64*	2830	1.90	<b>SF 47</b>	<b>DRE 90M4</b>	30 590	
	195	49	7.28	2740	2.1	<b>SA 47</b>	<b>DRE 90M4</b>	28 591	
	222	44	6.40*	2650	1.75	<b>SAF 47</b>	<b>DRE 90M4</b>	29 590	
	263	37	5.39	2560	2.0				
	298	32	4.76	2490	2.2				
	355	27	4.00*	2390	2.2				
	178	53	8.00*	1580	0.85				
	209	45	6.80*	1580	0.95	<b>S 37</b>	<b>DRE 90M4</b>	24 585	
	224	42	6.33	1540	0.80	<b>SF 37</b>	<b>DRE 90M4</b>	25 586	
	264	36	5.38	1520	0.95	<b>SA 37</b>	<b>DRE 90M4</b>	23 587	
	292	33	4.86*	1510	1.00	<b>SAF 37</b>	<b>DRE 90M4</b>	25 586	
	358	27	3.97	1470	1.20				
	214	44	13.39	1580	0.95				
	230	41	12.48*	1570	0.95	<b>S 37</b>	<b>DRE 90M2</b>	24 585	
	263	36	10.91	1560	1.10	<b>SF 37</b>	<b>DRE 90M2</b>	25 586	
	281	34	10.23	1550	1.10	<b>SA 37</b>	<b>DRE 90M2</b>	23 587	
	318	30	9.02*	1520	1.20	<b>SAF 37</b>	<b>DRE 90M2</b>	25 586	
	359	27	8.00*	1500	1.30				
	422	23	6.80*	1460	1.25				
	<b>1.5</b>	2.0	4580	714	29300	0.90			
		2.3	4870	626	19700	0.85	<b>S 97R57</b>	<b>DRE 90L4</b>	185 619
		2.7	4200	538	31300	1.00	<b>SF 97R57</b>	<b>DRE 90L4</b>	215 619
		3.0	3790	484	33600	1.10	<b>SA 97R57</b>	<b>DRE 90L4</b>	180 619
		3.4	3300	420	34500	1.25	<b>SAF 97R57</b>	<b>DRE 90L4</b>	205 619
		3.8	2980	376	35000	1.40			
		4.4	2610	327	35500	1.60			
		3.0	3050	485	17700	0.80			
		3.3	2770	435	26100	0.90			
		3.8	2440	378	27600	1.00	<b>S 87R57</b>	<b>DRE 90L4</b>	125 619
		4.4	2120	323	28200	1.15	<b>SF 87R57</b>	<b>DRE 90L4</b>	145 619
		5.1	1860	281	28700	1.30	<b>SA 87R57</b>	<b>DRE 90L4</b>	120 619
		5.6	1990	255	28400	1.00	<b>SAF 87R57</b>	<b>DRE 90L4</b>	135 619
		6.4	1740	222	28800	1.15			
		7.0	1620	205	29000	1.20			
		3.3	3080	286.40*	34800	1.35	<b>S 97</b>	<b>DRE 100L6</b>	165 614
3.6		2840	262.22	35200	1.45	<b>SF 97</b>	<b>DRE 100L6</b>	200 615	
4.1		2540	231.67	35600	1.65	<b>SA 97</b>	<b>DRE 100L6</b>	160 616	
4.8		2190	196.52	36000	1.90	<b>SAF 97</b>	<b>DRE 100L6</b>	185 615	
5.0		2100	286.40*	36100	1.90	<b>S 97</b>	<b>DRE 90L4</b>	160 614	
5.4		1940	262.22	36200	2.1	<b>SF 97</b>	<b>DRE 90L4</b>	190 615	
6.2		1730	231.67	36400	2.3	<b>SA 97</b>	<b>DRE 90L4</b>	155 616	
7.3		1480	196.52	36600	2.7	<b>SAF 97</b>	<b>DRE 90L4</b>	180 615	
3.6		2680	258.18	27100	0.90	<b>S 87</b>	<b>DRE 100L6</b>	110 609	
4.2		2340	222.40*	27800	1.00	<b>SF 87</b>	<b>DRE 100L6</b>	130 610	
4.6		2160	202.96	28200	1.10	<b>SA 87</b>	<b>DRE 100L6</b>	105 611	
5.2		1930	180.00*	28500	1.20	<b>SAF 87</b>	<b>DRE 100L6</b>	120 610	
5.0		2030	288.00*	28400	1.10				
5.5		1830	258.18	28700	1.25				
6.4		1600	222.40*	29000	1.40				
7.0		1470	202.96	29200	1.55	<b>S 87</b>	<b>DRE 90L4</b>	100 609	
7.9		1320	180.00*	29400	1.65	<b>SF 87</b>	<b>DRE 90L4</b>	120 610	
9.4		1120	151.30	29600	1.90	<b>SA 87</b>	<b>DRE 90L4</b>	98 611	
10		1040	139.05	29700	2.0	<b>SAF 87</b>	<b>DRE 90L4</b>	115 610	
12		930	123.48	29700	2.2				
13		840	110.40*	29800	2.4				
14		760	99.26	29900	2.6				



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
1.5	7.6	1310	189.09	11300	0.95						
	8.8	1130	161.60*	12800	1.10						
	9.6	1050	148.15	13500	1.20						
	11	930	130.00*	14200	1.30						
	12	880	123.20*	14500	1.35						
	13	785	107.83	15000	1.50						
	15	710	97.14	15300	1.60	S 77	DRE 90L4		64	604	
	17	630	85.22	15400	1.75	SF 77	DRE 90L4		74	605	
	19	635	75.09	14100	1.70	SA 77	DRE 90L4		64	606	
	20	605	71.33	14000	1.80	SAF 77	DRE 90L4		70	605	
	21	500	66.67	14500	2.1						
	23	540	63.03	13600	2.0						
	25	430	56.92	14000	2.3						
	27	465	53.87	13200	2.4						
	29	425	49.38	12900	2.6						
	33	375	43.33	12500	2.9						
	17	590	85.83	7940	0.90	S 67	DRE 90L4		44	599	
	18	540	78.00*	8460	0.95	SF 67	DRE 90L4		51	600	
	22	530	65.63	8570	0.90	SA 67	DRE 90L4		45	601	
						SAF 67	DRE 90L4		50	600	
	23	505	62.35*	8800	0.95						
	26	445	54.70	8790	1.05						
	31	380	46.40*	8570	1.25						
	34	345	41.89	8420	1.40						
	39	305	36.85	8230	1.55						
	41	290	34.80*	8140	1.65	S 67	DRE 90L4		44	599	
	48	250	29.63	7880	1.90	SF 67	DRE 90L4		51	600	
	53	225	26.93	7720	2.1	SA 67	DRE 90L4		45	601	
	59	215	24.44	6990	1.55	SAF 67	DRE 90L4		50	600	
	62	205	23.22*	6930	1.65						
	70	184	20.37	6770	1.85						
	83	157	17.28*	6560	2.2						
	92	142	15.60*	6420	2.4						
104	125	13.73*	6240	2.7							
44	265	32.48*	6620	0.90							
49	235	29.00*	6500	1.00							
58	205	24.77	6330	1.20							
62	194	23.20*	6250	1.25							
73	164	19.54	6040	1.30	S 57	DRE 90L4		33	594		
81	157	17.62	5420	1.05	SF 57	DRE 90L4		37	595		
87	147	16.47*	5360	1.15	SA 57	DRE 90L4		33	596		
100	128	14.24	5240	1.35	SAF 57	DRE 90L4		35	595		
118	109	12.10*	5080	1.55							
132	98	10.80*	4970	1.75							
155	84	9.23*	4800	2.0							
100	127	14.24	2620	0.85	S 47	DRE 90L4		29	589		
118	108	12.10*	2620	1.00	SF 47	DRE 90L4		33	590		
132	97	10.80*	2620	1.10	SA 47	DRE 90L4		30	591		
					SAF 47	DRE 90L4		32	590		
155	83	9.23*	2590	1.30							
166	78	8.64*	2580	1.40							
196	66	7.28	2530	1.55	S 47	DRE 90L4		29	589		
223	59	6.40*	2450	1.30	SF 47	DRE 90L4		33	590		
265	50	5.39	2390	1.50	SA 47	DRE 90L4		30	591		
300	44	4.76	2340	1.65	SAF 47	DRE 90L4		32	590		
358	37	4.00*	2260	1.65							
314	42	9.02*	1350	0.85	S 37	DRE 90M2		24	585		
354	37	8.00*	1350	0.95	SF 37	DRE 90M2		25	586		
416	32	6.80*	1330	0.90	SA 37	DRE 90M2		23	587		
					SAF 37	DRE 90M2		25	586		
2.2	3.4	4890	420	19000	0.85						
	3.8	4410	376	28300	0.95	S 97R57	DRE 100M4	190	619		
	4.4	3870	327	33400	1.10	SF 97R57	DRE 100M4	220	619		
	5.0	3420	287	34300	1.25	SA 97R57	DRE 100M4	180	619		
	5.7	2990	252	35000	1.40	SAF 97R57	DRE 100M4	210	619		
	3.3	4460	286.40*	31100	0.95	S 97	DRE 112M6	180	614		
	3.6	4110	262.22	32900	1.00	SF 97	DRE 112M6	210	615		
	4.1	3670	231.67	33800	1.15	SA 97	DRE 112M6	175	616		
	4.9	3160	196.52	34700	1.35	SAF 97	DRE 112M6	200	615		

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**S..DRE/DRS**  
S..DRE/DRS [kW]

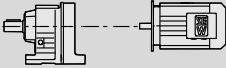

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>2.2</b>	5.0	3090	286.40*	34800	1.30				
	5.4	2850	262.22	35200	1.40				
	6.2	2540	231.67	35600	1.55				
	7.2	2180	196.52	36000	1.85				
	7.9	2020	180.95	36100	1.95	<b>S 97</b>	<b>DRE 100M4</b>	165	614
	8.8	1820	161.74	36300	2.1	<b>SF 97</b>	<b>DRE 100M4</b>	195	615
	9.8	1650	145.60*	36500	2.2	<b>SA 97</b>	<b>DRE 100M4</b>	160	616
	11	1500	131.85	36600	2.4	<b>SAF 97</b>	<b>DRE 100M4</b>	185	615
	12	1340	116.92	36700	2.6				
	13	1220	105.71	36800	2.8				
	16	1040	89.60*	36900	3.1				
	5.5	2700	258.18	27000	0.85				
	6.4	2360	222.40*	27800	0.95				
	7.0	2170	202.96	28100	1.05				
	7.9	1940	180.00*	28500	1.15				
	9.4	1650	151.30	29000	1.30				
10	1530	139.05	29100	1.35					
12	1370	123.48	29300	1.50	<b>S 87</b>	<b>DRE 100M4</b>	105	609	
13	1230	110.40*	29500	1.60	<b>SF 87</b>	<b>DRE 100M4</b>	125	610	
14	1120	99.26	29600	1.75	<b>SA 87</b>	<b>DRE 100M4</b>	105	611	
17	980	86.15	29700	1.90	<b>SAF 87</b>	<b>DRE 100M4</b>	120	610	
17	1050	81.76	29600	1.50					
18	880	77.14	29800	2.1					
20	910	70.43	29800	1.75					
22	830	64.27	29800	1.90					
25	740	57.00*	29900	2.2					
11	1370	130.00*	7440	0.90					
12	1300	123.20*	11300	0.90					
13	1150	107.83	12700	1.00					
15	1040	97.14	13500	1.10					
17	920	85.22	14100	1.20					
19	820	75.20*	13800	1.30					
21	735	66.67	13500	1.40					
23	795	63.03	12400	1.40					
25	635	56.92	13100	1.55	<b>S 77</b>	<b>DRE 100M4</b>	69	604	
26	685	53.87	12100	1.60	<b>SF 77</b>	<b>DRE 100M4</b>	79	605	
29	630	49.38	11900	1.75	<b>SA 77</b>	<b>DRE 100M4</b>	69	606	
33	555	43.33	11700	2.00	<b>SAF 77</b>	<b>DRE 100M4</b>	75	605	
35	525	41.07	11500	2.1					
40	460	35.94	11300	2.4					
44	420	32.38	11000	2.6					
50	370	28.41	10700	2.8					
57	325	25.07	10400	3.1					
62	305	22.89	9470	2.3					
68	280	20.99	9320	2.5					
31	560	46.40*	7470	0.85					
34	510	41.89	7430	0.95					
39	450	36.85	7350	1.05					
41	425	34.80*	7310	1.10					
48	365	29.63	7170	1.30					
53	335	26.93	7070	1.45					
61	290	23.33	6910	1.65	<b>S 67</b>	<b>DRE 100M4</b>	49	599	
70	270	20.37	6060	1.25	<b>SF 67</b>	<b>DRE 100M4</b>	56	600	
82	230	17.28*	5950	1.50	<b>SA 67</b>	<b>DRE 100M4</b>	50	601	
91	205	15.60*	5870	1.65	<b>SAF 67</b>	<b>DRE 100M4</b>	55	600	
104	184	13.73*	5760	1.85					
110	174	12.96*	5700	1.95					
129	149	11.03	5540	2.3					
142	136	10.03	5440	2.5					
164	118	8.69	5280	2.8					
100	188	14.24	4640	0.90					
118	160	12.10*	4570	1.05					
132	144	10.80*	4520	1.20					
154	123	9.23*	4420	1.35	<b>S 57</b>	<b>DRE 100M4</b>	38	594	
165	116	8.64*	4370	1.45	<b>SF 57</b>	<b>DRE 100M4</b>	42	595	
196	98	7.28	4240	1.50	<b>SA 57</b>	<b>DRE 100M4</b>	38	596	
223	87	6.40*	4090	1.15	<b>SAF 57</b>	<b>DRE 100M4</b>	41	595	
264	73	5.39	3960	1.30					
299	65	4.76	3850	1.45					
356	55	4.00*	3710	1.60					

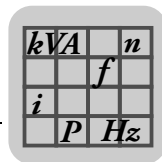


P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
3.0	5.1	4580	287	25700	0.90	S	97R57	DRE	100LC4	195	619
	5.8	4020	252	33100	1.05	SF	97R57	DRE	100LC4	225	619
	6.6	3510	219	34100	1.20	SA	97R57	DRE	100LC4	185	619
	7.1	3300	205	34500	1.25	SAF	97R57	DRE	100LC4	215	619
	5.1	4140	286.40*	32900	0.95						
	5.6	3820	262.22	33600	1.05						
	6.3	3410	231.67	34300	1.15						
	7.4	2920	196.52	35100	1.35						
	8.0	2710	180.95	35400	1.45	S	97	DRE	100LC4	170	614
	9.0	2440	161.74	35700	1.55	SF	97	DRE	100LC4	200	615
	10.0	2210	145.60*	36000	1.70	SA	97	DRE	100LC4	165	616
	11	2010	131.85	36200	1.80	SAF	97	DRE	100LC4	190	615
	12	1800	116.92	36300	1.95						
	14	1630	105.71	36500	2.1						
	16	1390	89.60*	36700	2.3						
	18	1410	80.85	36600	2.3						
	8.1	2600	180.00*	27300	0.85						
	9.6	2210	151.30	28100	0.95						
	10	2050	139.05	28400	1.00						
12	1830	123.48	28700	1.10							
13	1650	110.40*	29000	1.20							
15	1490	99.26	29200	1.30							
17	1310	86.15	29400	1.45	S	87	DRE	100LC4	110	609	
18	1400	81.76	29300	1.15	SF	87	DRE	100LC4	130	610	
19	1180	77.14	29500	1.55	SA	87	DRE	100LC4	110	611	
21	1210	70.43	29500	1.30	SAF	87	DRE	100LC4	125	610	
23	1110	64.27	29600	1.45							
26	990	57.00*	29700	1.60							
30	830	47.91	29800	1.90							
33	770	44.03	29900	2.1							
37	685	39.10	29900	2.3							
42	615	34.96*	29900	2.6							
17	1240	85.22	11900	0.90	S	77	DRE	100LC4	74	604	
19	1100	75.20*	12500	0.95	SF	77	DRE	100LC4	84	605	
22	980	66.67	12300	1.05	SA	77	DRE	100LC4	74	606	
23	1060	63.03	10900	1.05	SAF	77	DRE	100LC4	80	605	
26	850	56.92	12000	1.15							
27	910	53.87	10800	1.20							
29	840	49.38	10800	1.30							
34	740	43.33	10600	1.50							
35	705	41.07	10600	1.55							
40	620	35.94	10400	1.75							
45	560	32.38	10200	1.95							
51	490	28.41	10000	2.1	S	77	DRE	100LC4	74	604	
58	435	25.07	9770	2.3	SF	77	DRE	100LC4	84	605	
64	410	22.89	8640	1.70	SA	77	DRE	100LC4	74	606	
69	375	20.99	8550	1.85	SAF	77	DRE	100LC4	80	605	
79	330	18.42	8400	2.1							
83	315	17.45	8340	2.2							
95	275	15.28	8160	2.6							
106	250	13.76	8010	2.8							
121	220	12.07	7810	3.3							
137	195	10.65	7610	3.7							
42	570	34.80*	6350	0.85	S	67	DRE	100LC4	54	599	
49	490	29.63	6340	1.00	SF	67	DRE	100LC4	61	600	
54	445	26.93	6320	1.05	SA	67	DRE	100LC4	55	601	
					SAF	67	DRE	100LC4	60	600	
62	390	23.33	6250	1.25							
71	360	20.37	5240	0.95							
84	305	17.28*	5250	1.10							
93	275	15.60*	5230	1.20	S	67	DRE	100LC4	54	599	
106	245	13.73*	5190	1.40	SF	67	DRE	100LC4	61	600	
112	230	12.96*	5170	1.45	SA	67	DRE	100LC4	55	601	
132	199	11.03	5080	1.70	SAF	67	DRE	100LC4	60	600	
145	181	10.03	5020	1.90							
167	157	8.69	4910	2.1							
192	137	7.56*	4800	2.2							

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**S..DRE/DRS**  
S..DRE/DRS [kW]

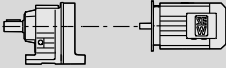

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$					$m$ [kg]	
<b>3.0</b>	135	192	10.80*	3990	0.90						
	158	164	9.23*	3960	1.05						
	168	154	8.64*	3950	1.10	<b>S</b>	<b>57</b>	<b>DRE</b>	<b>100LC4</b>	43	594
	200	130	7.28	3880	1.10	<b>SF</b>	<b>57</b>	<b>DRE</b>	<b>100LC4</b>	47	595
	227	116	6.40*	3760	0.85	<b>SA</b>	<b>57</b>	<b>DRE</b>	<b>100LC4</b>	43	596
	270	98	5.39	3670	0.95	<b>SAF</b>	<b>57</b>	<b>DRE</b>	<b>100LC4</b>	46	595
	306	87	4.76	3600	1.05						
	364	73	4.00*	3480	1.20						
<b>4.0</b>	6.7	4690	219	24100	0.90	<b>S</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	205	619
	7.1	4410	205	28500	0.95	<b>SF</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	240	619
						<b>SA</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	200	619
						<b>SAF</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	230	619
	6.3	4530	231.67	30200	0.90						
	7.4	3890	196.52	33400	1.05						
	8.1	3600	180.95	34000	1.10						
	9.0	3240	161.74	34600	1.20						
	10	2940	145.60*	35000	1.25						
	11	2680	131.85	35400	1.35	<b>S</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	185	614
	12	2390	116.92	35800	1.45	<b>SF</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	215	615
	14	2170	105.71	36000	1.60	<b>SA</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	175	616
	16	1850	89.60*	36300	1.75	<b>SAF</b>	<b>97</b>	<b>DRE</b>	<b>132S4</b>	205	615
	18	1880	80.85	36300	1.70						
	20	1670	71.43	36400	1.95						
	24	1420	60.59	36600	2.3						
	26	1310	55.79	36700	2.5						
	12	2440	123.48	27600	0.85						
	13	2200	110.40*	28100	0.90						
	15	1990	99.26	28500	1.00						
	17	1740	86.15	28800	1.10						
	19	1570	77.14	29100	1.15						
	21	1610	70.43	29000	1.00	<b>S</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	125	609
	23	1480	64.27	29200	1.10	<b>SF</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	145	610
	26	1310	57.00*	29400	1.20	<b>SA</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	120	611
	30	1110	47.91	29600	1.45	<b>SAF</b>	<b>87</b>	<b>DRE</b>	<b>132S4</b>	140	610
	33	1020	44.03	29700	1.55						
	37	910	39.10	29700	1.75						
	42	820	34.96*	29700	1.95						
	46	740	31.43	28900	2.2						
	54	645	27.28	28000	2.5						
	57	615	25.50*	26400	2.0						
	26	1130	56.92	10800	0.85	<b>S</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	88	604
	27	1210	53.87	9280	0.90	<b>SF</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	98	605
	30	1120	49.38	9330	1.00	<b>SA</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	88	606
	34	980	43.33	9370	1.10	<b>SAF</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	94	605
	36	930	41.07	9370	1.15						
	41	820	35.94	9330	1.35						
	45	745	32.38	9270	1.45						
	51	655	28.41	9160	1.60						
	58	580	25.07	9040	1.75						
	64	545	22.89	7650	1.30	<b>S</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	88	604
	70	500	20.99	7640	1.40	<b>SF</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	98	605
	79	440	18.42	7600	1.60	<b>SA</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	88	606
	84	420	17.45	7580	1.70	<b>SAF</b>	<b>77</b>	<b>DRE</b>	<b>132S4</b>	94	605
	96	365	15.28	7490	1.90						
	106	330	13.76	7400	2.1						
	121	290	12.07	7280	2.4						
	137	255	10.65	7140	2.8						
	155	230	9.44	6990	3.2						
	181	197	8.06	6790	3.4						
	84	405	17.28*	3910	0.85						
	94	370	15.60*	4270	0.90						
	106	325	13.73*	4510	1.05	<b>S</b>	<b>67</b>	<b>DRE</b>	<b>132S4</b>	68	599
	113	305	12.96*	4520	1.10	<b>SF</b>	<b>67</b>	<b>DRE</b>	<b>132S4</b>	75	600
	132	260	11.03	4530	1.30	<b>SA</b>	<b>67</b>	<b>DRE</b>	<b>132S4</b>	70	601
	146	240	10.03	4520	1.40	<b>SAF</b>	<b>67</b>	<b>DRE</b>	<b>132S4</b>	74	600
	168	205	8.69	4480	1.60						
	193	182	7.56*	4420	1.60						



P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
5.5	9.0	4470	161.74	31000	0.85						
	10.0	4050	145.60*	33100	0.90						
	11	3690	131.85	33800	1.00						
	12	3300	116.92	34500	1.05						
	14	3000	105.71	35000	1.15						
	16	2560	89.60*	35500	1.25	S	97	DRE	132M4	195	614
	19	2250	78.26	35900	1.35	SF	97	DRE	132M4	230	615
	20	2300	71.43	35800	1.45	SA	97	DRE	132M4	190	616
	22	1900	65.45	36300	1.55	SAF	97	DRE	132M4	215	615
	24	1960	60.59	36200	1.70						
	26	1810	55.79	36300	1.80						
	29	1620	49.87	36500	2.0						
	32	1470	44.89	36600	2.2						
	36	1330	40.65	36700	2.5						
	19	2160	77.14	28200	0.85	S	87	DRE	132M4	135	609
	23	1810	64.00*	28700	0.95	SF	87	DRE	132M4	160	610
	26	1810	57.00*	28700	0.90	SA	87	DRE	132M4	135	611
	30	1530	47.91	29100	1.05	SAF	87	DRE	132M4	150	610
	33	1410	44.03	29200	1.15						
	37	1260	39.10	29100	1.25						
	42	1130	34.96*	28500	1.40						
	46	1020	31.43	27900	1.55						
	53	890	27.28	27100	1.80	S	87	DRE	132M4	135	609
	57	850	25.50*	25200	1.45	SF	87	DRE	132M4	160	610
	68	715	21.43	24400	1.70	SA	87	DRE	132M4	135	611
	74	660	19.70	24000	1.85	SAF	87	DRE	132M4	150	610
	83	585	17.49	23400	2.1						
	93	525	15.64*	22900	2.4						
	103	475	14.06	22400	2.6						
	119	410	12.21	21700	3.0						
	133	370	10.93	21100	3.3						
	35	1290	41.07	7590	0.85	S	77	DRE	132M4	100	604
	40	1130	35.94	7770	0.95	SF	77	DRE	132M4	110	605
	45	1020	32.38	7860	1.05	SA	77	DRE	132M4	100	606
						SAF	77	DRE	132M4	105	605
	51	900	28.41	7920	1.15						
	58	800	25.07	7940	1.25						
	65	710	22.22	7920	1.35						
	79	610	18.42	6000	1.15	S	77	DRE	132M4	100	604
	83	580	17.45	6240	1.20	SF	77	DRE	132M4	110	605
	95	505	15.28	6500	1.40	SA	77	DRE	132M4	100	606
	106	460	13.76	6510	1.55	SAF	77	DRE	132M4	105	605
	121	400	12.07	6490	1.80						
	137	355	10.65	6440	2.0						
	154	315	9.44	6380	2.3						
180	270	8.06	6260	2.5							
132	360	11.03	2990	0.95	S	67	DRE	132M4	81	599	
145	330	10.03	3310	1.00	SF	67	DRE	132M4	87	600	
167	285	8.69	3720	1.15	SA	67	DRE	132M4	82	601	
192	250	7.56*	3850	1.15	SAF	67	DRE	132M4	86	600	
7.5	14	4050	105.71	33100	0.85						
	16	3460	89.60*	34200	0.95						
	19	3040	78.26	34900	1.00						
	21	3110	71.43	34800	1.05						
	22	2560	65.45	35500	1.15						
	24	2650	60.59	35400	1.25						
	26	2450	55.79	35700	1.35	S	97	DRE	132MC4	200	614
	29	2190	49.87	36000	1.50	SF	97	DRE	132MC4	230	615
	33	1980	44.89	36200	1.65	SA	97	DRE	132MC4	190	616
	36	1800	40.65	36300	1.85	SAF	97	DRE	132MC4	220	615
	41	1600	36.05	36000	2.1						
	45	1450	32.60	35300	2.2						
	56	1200	26.39	31900	2.2						
	62	1080	23.59	31200	2.4						
	69	970	21.23	30600	2.7						
	76	880	19.23	30000	2.9						
	33	1910	44.03	27700	0.85	S	87	DRE	132MC4	140	609
	38	1700	39.10	27300	0.95	SF	87	DRE	132MC4	160	610
	42	1520	34.96*	26900	1.05	SA	87	DRE	132MC4	135	611
						SAF	87	DRE	132MC4	155	610

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

**S..DRE/DRS**  
S..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
7.5	47	1370	31.43	26400	1.15				
	54	1200	27.28	25800	1.35				
	58	1150	25.50*	23400	1.10				
	69	970	21.43	22900	1.30				
	75	890	19.70	22600	1.40	S 87	DRE 132MC4	140	609
	84	795	17.49	22200	1.55	SF 87	DRE 132MC4	160	610
	94	710	15.64*	21800	1.75	SA 87	DRE 132MC4	135	611
	105	640	14.06	21400	1.95	SAF 87	DRE 132MC4	155	610
	120	555	12.21	20800	2.2				
	135	500	10.93	20400	2.5				
	162	415	9.07	19600	2.7				
	186	360	7.88	19000	2.8				
	52	1220	28.41	6290	0.85	S 77	DRE 132MC4	105	604
	59	1080	25.07	6490	0.95	SF 77	DRE 132MC4	115	605
	66	960	22.22	6620	1.00	SA 77	DRE 132MC4	105	606
	80	820	18.42	2080	0.85	SAF 77	DRE 132MC4	110	605
	84	780	17.45	2500	0.90				
	96	685	15.28	3420	1.05	S 77	DRE 132MC4	105	604
	107	620	13.76	4040	1.15	SF 77	DRE 132MC4	115	605
	122	545	12.07	4690	1.30	SA 77	DRE 132MC4	105	606
138	480	10.65	5210	1.50	SAF 77	DRE 132MC4	110	605	
156	425	9.44	5560	1.70					
182	365	8.06	5560	1.85					
9.2	19	3740	78.26	33700	0.80	S 97	DRE 160M4	220	614
	22	3150	65.45	34700	0.90	SF 97	DRE 160M4	250	615
	26	3010	55.79	34900	1.10	SA 97	DRE 160M4	215	616
						SAF 97	DRE 160M4	240	615
	29	2700	49.87	35400	1.20				
	33	2440	44.89	35700	1.35				
	36	2210	40.65	35600	1.50				
	41	1970	36.05	34900	1.65				
	45	1780	32.60	34300	1.80	S 97	DRE 160M4	220	614
	56	1480	26.39	30600	1.75	SF 97	DRE 160M4	250	615
	62	1330	23.59	30100	1.95	SA 97	DRE 160M4	215	616
	69	1200	21.23	29600	2.2	SAF 97	DRE 160M4	240	615
	76	1080	19.23	29100	2.4				
	86	960	17.05	28400	2.7				
	95	870	15.42	27900	2.8				
	112	740	13.07	26900	3.1				
	128	650	11.41	26100	3.4				
	42	1880	34.96*	25500	0.85	S 87	DRE 160M4	160	609
	47	1690	31.43	25200	0.95	SF 87	DRE 160M4	180	610
	54	1470	27.28	24700	1.10	SA 87	DRE 160M4	160	611
	60	1320	24.43	24300	1.20	SAF 87	DRE 160M4	175	610
	72	1100	20.27	23600	1.45				
	74	1100	19.70	21500	1.15				
	84	970	17.49	21200	1.25				
	94	870	15.64*	20900	1.40	S 87	DRE 160M4	160	609
	104	790	14.06	20600	1.55	SF 87	DRE 160M4	180	610
	120	685	12.21	20100	1.80	SA 87	DRE 160M4	160	611
	134	615	10.93	19700	2.0	SAF 87	DRE 160M4	175	610
	162	510	9.07	19100	2.2				
	186	445	7.88	18500	2.3				
	77	1010	18.97	5790	0.90	S 77	DRE 160M4	125	604
	106	760	13.76	1480	0.95	SF 77	DRE 160M4	135	605
121	670	12.07	2400	1.05	SA 77	DRE 160M4	125	606	
138	590	10.65	3150	1.20	SAF 77	DRE 160M4	130	605	
155	525	9.44	3760	1.35					
182	450	8.06	4420	1.50					

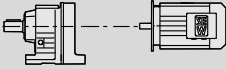



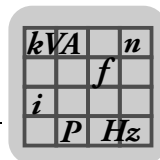


P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m	
										[kg]	
11.0	26	3580	55.79	34000	0.90						
	30	3210	49.87	34600	1.05						
	33	2900	44.89	34700	1.15						
	36	2630	40.65	34200	1.25						
	41	2340	36.05	33700	1.40						
	45	2120	32.60	33100	1.50	S	97	DRE	160MC4	225	614
	56	1760	26.39	29300	1.45	SF	97	DRE	160MC4	255	615
	63	1580	23.59	28900	1.65	SA	97	DRE	160MC4	220	616
	69	1420	21.23	28500	1.80	SAF	97	DRE	160MC4	245	615
	77	1290	19.23	28100	2.0						
	86	1140	17.05	27500	2.2						
	96	1040	15.42	27100	2.4						
	113	880	13.07	26200	2.6						
	129	770	11.41	25500	2.9						
	54	1750	27.28	23600	0.90	S	87	DRE	160MC4	165	609
	60	1570	24.43	23300	1.00	SF	87	DRE	160MC4	185	610
	73	1310	20.27	22700	1.20	SA	87	DRE	160MC4	165	611
						SAF	87	DRE	160MC4	180	610
	75	1300	19.70	20300	0.95						
84	1160	17.49	20200	1.05							
94	1040	15.64*	20000	1.20	S	87	DRE	160MC4	165	609	
105	930	14.06	19700	1.30	SF	87	DRE	160MC4	185	610	
121	810	12.21	19400	1.50	SA	87	DRE	160MC4	165	611	
135	730	10.93	19100	1.70	SAF	87	DRE	160MC4	180	610	
163	605	9.07	18500	1.85							
187	530	7.88	18000	1.90							
15.0	33	3980	44.89	31400	0.85	S	97	DRE	180M4	270	614
	36	3610	40.65	31300	0.90	SF	97	DRE	180M4	300	615
	41	3210	36.05	31000	1.05	SA	97	DRE	180M4	265	616
						SAF	97	DRE	180M4	290	615
	45	2910	32.60	30700	1.10						
	56	2420	26.39	26400	1.05						
	62	2170	23.59	26300	1.20						
	69	1950	21.23	26200	1.35						
	76	1770	19.23	26000	1.45	S	97	DRE	180M4	270	614
	86	1570	17.05	25700	1.65	SF	97	DRE	180M4	300	615
	95	1420	15.42	25400	1.75	SA	97	DRE	180M4	265	616
	112	1210	13.07	24800	1.90	SAF	97	DRE	180M4	290	615
	128	1060	11.41	24300	2.1						
	153	880	9.55	23600	2.3						
	177	770	8.26	22900	2.3						
	94	1430	15.64*	16800	0.85	S	87	DRE	180M4	210	609
	104	1280	14.06	17900	0.95	SF	87	DRE	180M4	230	610
	120	1120	12.21	17800	1.10	SA	87	DRE	180M4	210	611
						SAF	87	DRE	180M4	225	610
134	1000	10.93	17600	1.25	S	87	DRE	180M4	210	609	
162	830	9.07	17300	1.35	SF	87	DRE	180M4	230	610	
186	725	7.88	17000	1.40	SA	87	DRE	180M4	210	611	
					SAF	87	DRE	180M4	225	610	
18.5	41	3960	36.05	28700	0.85						
	45	3590	32.60	28600	0.90						
	53	3050	27.63	28400	1.00						
	61	2670	24.13	28100	1.05						
	69	2410	21.23	24100	1.10	S	97	DRE	180L4	290	614
	76	2190	19.23	24100	1.20	SF	97	DRE	180L4	320	615
	86	1940	17.05	24000	1.30	SA	97	DRE	180L4	285	616
	95	1760	15.42	23900	1.40	SAF	97	DRE	180L4	310	615
	112	1490	13.07	23500	1.55						
	128	1300	11.41	23200	1.70						
	153	1090	9.55	22600	1.85						
177	950	8.26	22100	1.85							
22	53	3610	27.63	26600	0.85	S	97	DRE	180LC4	300	614
	61	3160	24.13	26500	0.90	SF	97	DRE	180LC4	330	615
	69	2850	21.23	18600	0.90	SA	97	DRE	180LC4	295	616
	77	2580	19.23	20500	1.00	SAF	97	DRE	180LC4	320	615
	86	2290	17.05	22300	1.10						





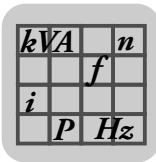
**S..DRE/DRS**  
S..DRE/DRS [kW]

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$			$m$ [kg]		
22	96	2080	15.42	22400	1.20	<b>S</b>	<b>97</b>	<b>DRE 180LC4</b>	300	614
	113	1760	13.07	22300	1.30	<b>SF</b>	<b>97</b>	<b>DRE 180LC4</b>	330	615
	129	1540	11.41	22100	1.45	<b>SA</b>	<b>97</b>	<b>DRE 180LC4</b>	295	616
	155	1290	9.55	21700	1.60	<b>SAF</b>	<b>97</b>	<b>DRE 180LC4</b>	320	615
	178	1120	8.26	21300	1.60					

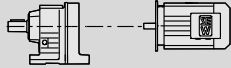



11.4 S..R..DRE/DRS [Nm]

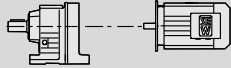

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]		$m$ [kg]	
92	0.14	10037	3000			
	0.16	8654	3000			
	0.17	8066	3000			
	0.20	7051	3000			
	0.23	6079	3000			
	0.25	5431	3000			
	0.29	4747	3000			
	0.33	4155	3000			
	0.38	3632	3000			
	0.48	2866	3000			
	0.56	2471	3000			
	0.64	2160	3000			
	0.73	1887	3000			
	0.83	1665	3000			
	0.95	1456	3000			
	1.1	1271	3000			
1.2	1121	3000				
1.4	994	3000				
1.6	869	3000				
92	1.8	774	3000			
	2.1	666	3000			
	2.3	596	3000			
	2.6	521	3000			
	3.0	456	3000	S 37R17	DR 63S4	14 619
	3.5	398	3000	SF 37R17	DR 63S4	15 619
	3.9	351	3000	SA 37R17	DR 63S4	13 619
	4.6	303	3000	SAF 37R17	DR 63S4	15 619
	5.2	265	3000			
	6.0	232	3000			
6.8	202	3000				
92	7.4	179	3000			
	8.3	158	3000	S 37R17	DR 63M4	14 619
	9.1	144	3000	SF 37R17	DR 63M4	15 619
	11	118	3000	SA 37R17	DR 63M4	13 619
	12	110	3000	SAF 37R17	DR 63M4	15 619
185	0.11	12909	5250			
	0.12	11189	5250			
	0.13	10374	5250			
	0.15	8992	5250			
	0.18	7860	5250			
	0.20	6887	5250			
	0.23	6055	5250			
	0.26	5292	5250			
	0.30	4637	5250			
	0.34	4092	5250			
	0.39	3582	5200			
	0.44	3131	5200			
	0.51	2714	5200			
	0.57	2412	5200			
	0.65	2131	5200			
	0.74	1863	5200			
	0.83	1663	5200			
0.96	1435	5200				
1.1	1254	5200				
1.2	1120	5200				
1.3	1083	5200				
185	1.4	965	5200			
	1.6	865	5200			
	1.8	750	5200			
	2.1	655	5200	S 47R17	DR 63S4	17 619
	2.4	574	5200	SF 47R17	DR 63S4	20 619
	2.7	506	5200	SA 47R17	DR 63S4	18 619
	3.2	438	5200	SAF 47R17	DR 63S4	19 619
3.6	388	5200				
185	3.9	336	5200	S 47R17	DR 63M4	17 619
	4.5	294	5200	SF 47R17	DR 63M4	20 619
				SA 47R17	DR 63M4	18 619
			SAF 47R17	DR 63M4	19 619	

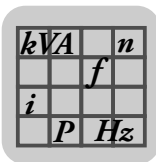


**S..DRE/DRS**  
S..R..DRE/DRS [Nm]

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]				$m$ [kg]					
185	5.0	257	5260	S 47R17	DR	63L4	17	619				
				SF 47R17	DR	63L4	21	619				
				SA 47R17	DR	63L4	18	619				
				SAF 47R17	DR	63L4	20	619				
185	5.8	229	5200	S 47R17	DR	63M4	17	619				
				SF 47R17	DR	63M4	20	619				
				SA 47R17	DR	63M4	18	619				
				SAF 47R17	DR	63M4	19	619				
185	6.5	200	5200	S 47R17	DR	63L4	17	619				
	6.9	187	5200	SF 47R17	DR	63L4	21	619				
	7.9	165	5200	SA 47R17	DR	63L4	18	619				
185	9.4	148	5200	SAF 47R17	DR	63L4	20	619				
		11	131	5200	S 47R17	DRS	71S4	19	619			
					SF 47R17	DRS	71S4	23	619			
185	11	131	5200	SA 47R17	DRS	71S4	20	619				
				SAF 47R17	DRS	71S4	22	619				
				330	0.11	12909	6800	S 57R17	DR	63S4	21	619
					0.12	11189	6800					
0.13	10374	6800										
0.15	8992	6800										
0.18	7860	6800										
0.20	6887	6800										
0.23	6055	6800										
0.26	5292	6800										
0.30	4637	6800										
0.34	4092	6800										
0.38	3628	6800										
300	0.44	3131	7080	SF 57R17	DR	63S4	24	619				
	0.51	2714	7080									
	0.57	2412	7080									
	0.65	2131	7080									
	0.74	1863	7080									
	0.83	1663	7080									
	0.96	1435	7080									
	1.1	1254	7080									
	1.3	1083	7080									
	300	1.4	965						7080	SA 57R17	DR	63S4
1.6		865	7080									
1.8		750	7080									
2.1		655	7080									
300	2.3	574	7080	SAF 57R17	DR	63S4	23	619				
	2.6	506	7080									
	3.0	438	7080									
	3.4	388	7080									
300	3.9	336	7080	S 57R17	DR	63L4	21	619				
	4.4	294	7080	SF 57R17	DR	63L4	25	619				
	4.8	269	7080	SA 57R17	DR	63L4	21	619				
300	6.0	229	7080	SAF 57R17	DR	63L4	24	619				
		204	7080	S 57R17	DRS	71S4	23	619				
		187	7080	SF 57R17	DRS	71S4	27	619				
300	6.8	187	7080	SA 57R17	DRS	71S4	23	619				
				SAF 57R17	DRS	71S4	25	619				
				300	8.4	165	7080	S 57R17	DRS	71M4	24	619
11	131	7080	SF 57R17			DRS	71M4	28	619			
			SA 57R17			DRS	71M4	24	619			
			SAF 57R17			DRS	71M4	27	619			

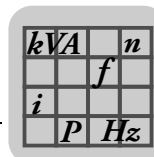


$M_{a\ max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]		$m$ [kg]	
570	0.06	21362	8190			
	0.07	19594	8190			
	0.08	18120	8190			
	0.08	16682	8190			
	0.10	14383	8190			
	0.11	12774	8190			
	0.13	11013	8190			
	0.14	9694	8190			
	0.16	8529	8190			
	0.19	7455	8190			
	0.21	6531	8190	S 67R37	DR 63S4	39 619
	0.24	5759	8190	SF 67R37	DR 63S4	46 619
	0.28	4965	8190	SA 67R37	DR 63S4	40 619
	0.31	4410	8190	SAF 67R37	DR 63S4	45 619
	0.36	3880	8190			
	0.40	3432	8190			
	0.47	2944	8190			
	0.52	2630	8190			
	0.61	2279	8190			
	0.69	2014	8190			
0.78	1772	8190				
0.88	1559	8190				
1.0	1363	8190				
1.2	1194	8190				
570	1.3	1045	8190	S 67R37	DR 63M4	39 619
	1.4	914	8190	SF 67R37	DR 63M4	46 619
				SA 67R37	DR 63M4	40 619
				SAF 67R37	DR 63M4	45 619
570	1.6	809	8190	S 67R37	DR 63M4	39 619
	1.9	712	8190	SF 67R37	DR 63M4	46 619
				SA 67R37	DR 63M4	40 619
				SAF 67R37	DR 63M4	45 619
570	2.1	615	8190	S 67R37	DR 63L4	40 619
	2.4	543	8190	SF 67R37	DR 63L4	46 619
				SA 67R37	DR 63L4	41 619
				SAF 67R37	DR 63L4	45 619
570	2.9	469	8190	S 67R37	DRS 71S4	42 619
	3.3	424	8190	SF 67R37	DRS 71S4	48 619
	3.8	365	8190	SA 67R37	DRS 71S4	43 619
				SAF 67R37	DRS 71S4	47 619
570	4.3	319	8190	S 67R37	DRS 71M4	43 619
	4.9	281	8190	SF 67R37	DRS 71M4	49 619
	5.6	246	8190	SA 67R37	DRS 71M4	44 619
	6.2	221	8190	SAF 67R37	DRS 71M4	48 619
570	7.3	198	8190	S 67R37	DRE 80M4	48 619
				SF 67R37	DRE 80M4	54 619
				SA 67R37	DRE 80M4	49 619
				SAF 67R37	DRE 80M4	53 619
1270	0.05	25493	11700			
	0.06	21787	11700			
	0.07	19907	11700			
	0.08	17013	11700			
	0.09	14668	11700			
	0.11	13110	11700			
	0.12	11569	11700	S 77R37	DR 63S4	59 619
	0.14	9887	11700	SF 77R37	DR 63S4	68 619
	0.16	8817	11700	SA 77R37	DR 63S4	58 619
	0.18	7735	11700	SAF 77R37	DR 63S4	65 619
	0.20	6735	11700			
	0.23	5943	11700			
	0.26	5214	11700			
	0.30	4618	11700			
	0.35	3992	11700			
	0.39	3540	11700			
1270	0.43	3098	11700	S 77R37	DR 63M4	59 619
				SF 77R37	DR 63M4	68 619
				SA 77R37	DR 63M4	58 619
				SAF 77R37	DR 63M4	65 619



**S..DRE/DRS**  
S..R..DRE/DRS [Nm]

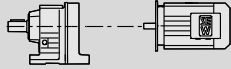

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]				$m$ [kg]		
1240	0.50	2753	12000	S	77R37	DR	63S4	59	619
	0.58	2374	12000	SF	77R37	DR	63S4	68	619
				SA	77R37	DR	63S4	58	619
				SAF	77R37	DR	63S4	65	619
1240	0.63	2083	12000	S	77R37	DR	63M4	59	619
	0.73	1813	12000	SF	77R37	DR	63M4	68	619
	0.76	1745	12000	SA	77R37	DR	63M4	58	619
	0.82	1600	12000	SAF	77R37	DR	63M4	65	619
	0.94	1404	12000						
1240	1.0	1245	12000	S	77R37	DR	63L4	59	619
				SF	77R37	DR	63L4	69	619
				SA	77R37	DR	63L4	59	619
				SAF	77R37	DR	63L4	65	619
1240	1.2	1100	12000	S	77R37	DR	63L4	59	619
	1.4	954	12000	SF	77R37	DR	63L4	69	619
				SA	77R37	DR	63L4	59	619
				SAF	77R37	DR	63L4	65	619
1240	1.6	837	12000	S	77R37	DRS	71S4	61	619
	1.9	714	12000	SF	77R37	DRS	71S4	71	619
				SA	77R37	DRS	71S4	61	619
				SAF	77R37	DRS	71S4	67	619
1240	2.2	637	12000	S	77R37	DRS	71M4	62	619
	2.4	574	12000	SF	77R37	DRS	71M4	72	619
	2.8	499	12000	SA	77R37	DRS	71M4	62	619
				SAF	77R37	DRS	71M4	68	619
1240	3.3	438	12000	S	77R37	DRE	80M4	67	619
	3.7	389	12000	SF	77R37	DRE	80M4	77	619
				SA	77R37	DRE	80M4	67	619
				SAF	77R37	DRE	80M4	73	619
1240	4.3	327	12000	S	77R37	DRE	90M4	71	619
	4.9	289	12000	SF	77R37	DRE	90M4	81	619
	5.7	250	12000	SA	77R37	DRE	90M4	71	619
				SAF	77R37	DRE	90M4	78	619
1240	6.5	219	12000	S	77R37	DRE	90L4	74	619
				SF	77R37	DRE	90L4	84	619
				SA	77R37	DRE	90L4	73	619
				SAF	77R37	DRE	90L4	80	619
2500	0.05	25987	27500						
	0.06	23940	27500						
	0.07	20568	27500						
	0.08	18265	27500						
	0.08	16774	27500	S	87R57	DR	63S4	110	619
	0.09	14820	27500	SF	87R57	DR	63S4	130	619
	0.10	13160	27500	SA	87R57	DR	63S4	105	619
	0.12	11200	27500	SAF	87R57	DR	63S4	120	619
	0.14	9904	27500						
	0.16	8549	27500						
	0.18	7643	27500						
0.21	6706	27500							
2500	0.22	5875	27500	S	87R57	DR	63M4	110	619
	0.25	5187	27500	SF	87R57	DR	63M4	130	619
	0.29	4606	27500	SA	87R57	DR	63M4	105	619
	0.34	3872	27500	SAF	87R57	DR	63M4	120	619
2500	0.37	3475	27500	S	87R57	DR	63L4	110	619
	0.45	2905	27500	SF	87R57	DR	63L4	130	619
	0.50	2586	27500	SA	87R57	DR	63L4	105	619
				SAF	87R57	DR	63L4	120	619
2500	0.59	2335	27500	S	87R57	DRS	71S4	110	619
	0.67	2054	27500	SF	87R57	DRS	71S4	130	619
	0.76	1824	27500	SA	87R57	DRS	71S4	105	619
				SAF	87R57	DRS	71S4	125	619
2500	0.85	1631	27500	S	87R57	DRS	71M4	110	619
	1.0	1332	27500	SF	87R57	DRS	71M4	130	619
	1.2	1191	27500	SA	87R57	DRS	71M4	110	619
				SAF	87R57	DRS	71M4	125	619



$M_{a\ max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
2500	1.4	1032	27500	S	87R57	DRE	80M4	115	619
	1.5	930	27500	SF	87R57	DRE	80M4	135	619
				SA	87R57	DRE	80M4	115	619
				SAF	87R57	DRE	80M4	130	619
2500	1.7	831	27500	S	87R57	DRE	90M4	120	619
	2.0	719	27500	SF	87R57	DRE	90M4	140	619
	2.3	624	27500	SA	87R57	DRE	90M4	120	619
	2.6	558	27500	SAF	87R57	DRE	90M4	135	619
2500	3.0	485	27500	S	87R57	DRE	90L4	125	619
				SF	87R57	DRE	90L4	145	619
				SA	87R57	DRE	90L4	120	619
				SAF	87R57	DRE	90L4	135	619
2450	3.3	435	27600	S	87R57	DRE	90L4	125	619
				SF	87R57	DRE	90L4	145	619
				SA	87R57	DRE	90L4	120	619
				SAF	87R57	DRE	90L4	135	619
2450	3.8	378	27600	S	87R57	DRE	100M4	130	619
				SF	87R57	DRE	100M4	150	619
				SA	87R57	DRE	100M4	125	619
				SAF	87R57	DRE	100M4	140	619
2400	4.4	323	27700	S	87R57	DRE	100M4	130	619
	5.1	281	27700	SF	87R57	DRE	100M4	150	619
				SA	87R57	DRE	100M4	125	619
				SAF	87R57	DRE	100M4	140	619
4200	0.04	33818	32800						
	0.04	31154	32800						
	0.05	27847	32800						
	0.06	24641	32800						
	0.06	21537	32800	S	97R57	DR	63S4	170	619
	0.07	18749	32800	SF	97R57	DR	63S4	200	619
	0.09	16233	32800	SA	97R57	DR	63S4	160	619
	0.09	14576	32800	SAF	97R57	DR	63S4	190	619
	0.11	12752	32800						
	0.12	11267	32800						
0.14	10078	32800							
4200	0.15	8608	32800	S	97R57	DR	63M4	170	619
	0.17	7554	32800	SF	97R57	DR	63M4	200	619
	0.20	6640	31300	SA	97R57	DR	63M4	160	619
	0.23	5780	31300	SAF	97R57	DR	63M4	190	619
	0.27	4937	31300						
4200	0.29	4444	31300	S	97R57	DR	63L4	170	619
	0.32	4017	31300	SF	97R57	DR	63L4	200	619
	0.38	3453	31300	SA	97R57	DR	63L4	165	619
	0.42	3108	31300	SAF	97R57	DR	63L4	190	619
4200	0.52	2654	31300	S	97R57	DRS	71S4	170	619
	0.59	2329	31300	SF	97R57	DRS	71S4	205	619
				SA	97R57	DRS	71S4	165	619
				SAF	97R57	DRS	71S4	190	619
4200	0.66	2081	31300	S	97R57	DRS	71M4	170	619
	0.74	1860	31300	SF	97R57	DRS	71M4	205	619
	0.88	1574	31300	SA	97R57	DRS	71M4	165	619
	SAF	97R57	DRS	71M4	190	619			
4200	1.0	1394	31300	S	97R57	DRE	80M4	175	619
	1.2	1223	31300	SF	97R57	DRE	80M4	210	619
				SA	97R57	DRE	80M4	170	619
				SAF	97R57	DRE	80M4	195	619
4200	1.3	1070	31300	S	97R57	DRE	90M4	180	619
	1.5	928	31300	SF	97R57	DRE	90M4	215	619
	1.7	824	31300	SA	97R57	DRE	90M4	175	619
	SAF	97R57	DRE	90M4	200	619			
4200	2.0	714	32800	S	97R57	DRE	90L4	185	619
	2.3	626	31300	SF	97R57	DRE	90L4	215	619
	2.7	538	31300	SA	97R57	DRE	90L4	180	619
	SAF	97R57	DRE	90L4	205	619			
4200	2.9	484	31400	S	97R57	DRE	100M4	190	619
	3.4	420	31400	SF	97R57	DRE	100M4	220	619
	3.8	376	31400	SA	97R57	DRE	100M4	180	619
	SAF	97R57	DRE	100M4	210	619			



**S..DRE/DRS**  
S..R..DRE/DRS [Nm]

$M_{a\ max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]				$m$ [kg]		
4200	4.4	327	31500	<b>S</b>	<b>97R57</b>	<b>DRE</b>	<b>100LC4</b>	195	619
	5.1	287	31500	<b>SF</b>	<b>97R57</b>	<b>DRE</b>	<b>100LC4</b>	225	619
				<b>SA</b>	<b>97R57</b>	<b>DRE</b>	<b>100LC4</b>	185	619
				<b>SAF</b>	<b>97R57</b>	<b>DRE</b>	<b>100LC4</b>	215	619
4200	5.8	252	31500	<b>S</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	205	619
	6.7	219	31600	<b>SF</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	240	619
				<b>SA</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	200	619
				<b>SAF</b>	<b>97R57</b>	<b>DRE</b>	<b>132S4</b>	230	619



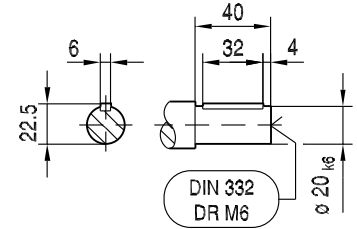
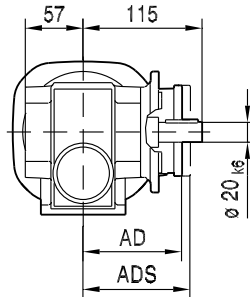
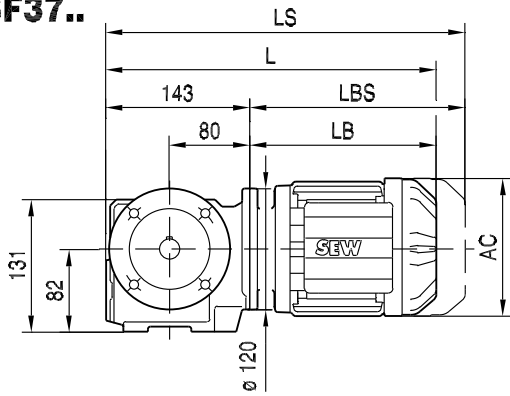




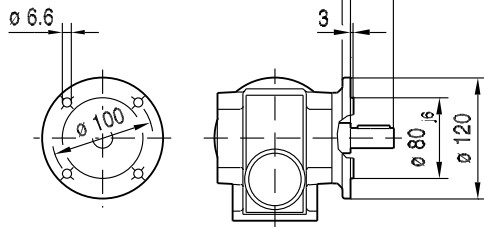
S..DRE/DRS  
S..DR.. [mm]

02 047 00 06

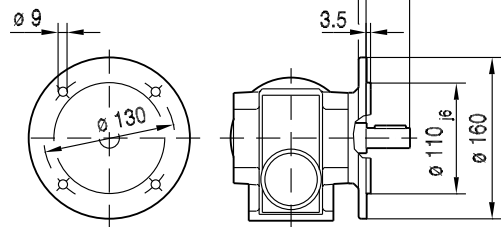
**SF37..**



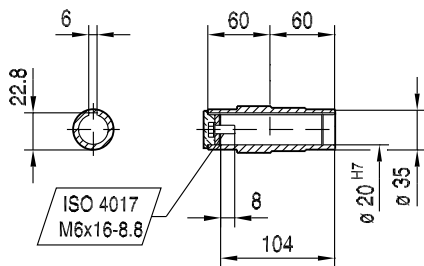
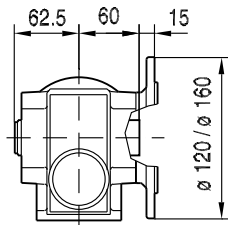
**ø 120**



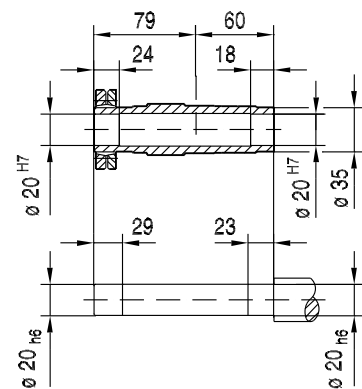
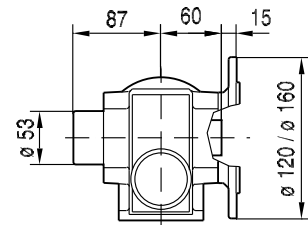
**ø 160**



**SAF37..**

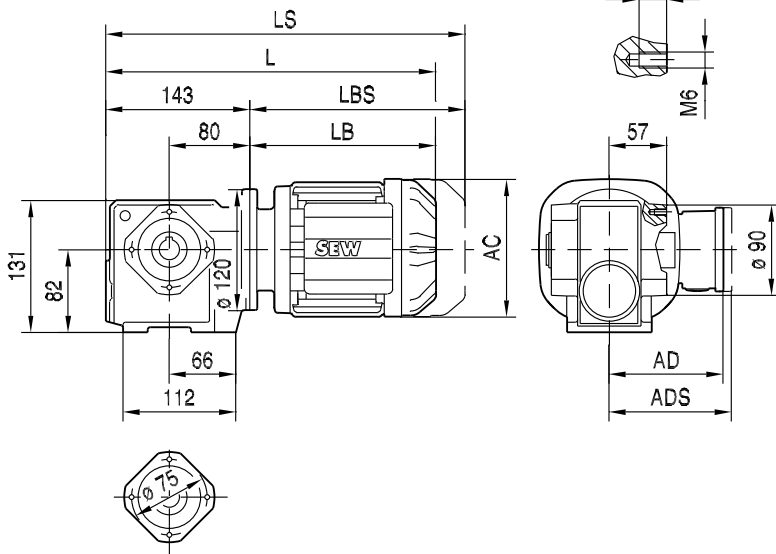


**SHF37..**

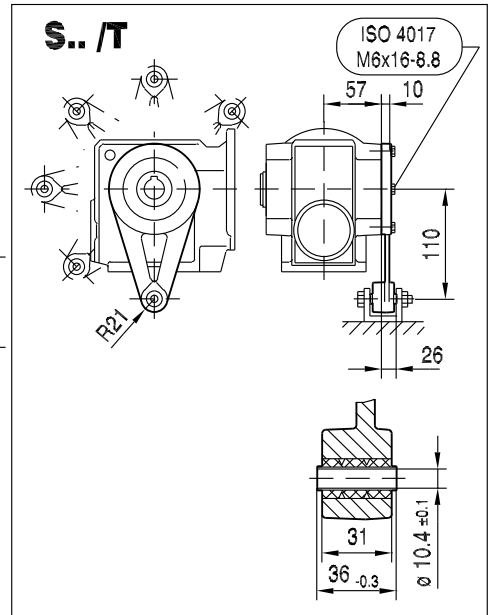


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M			
AC	132	139	139	156	179			
AD	105	119	119	128	140			
ADS	105	129	129	139	150			
L	334	345	370	411	415			
LS	389	413	438	492	508			
LB	191	202	227	268	272			
LBS	246	270	295	349	365			

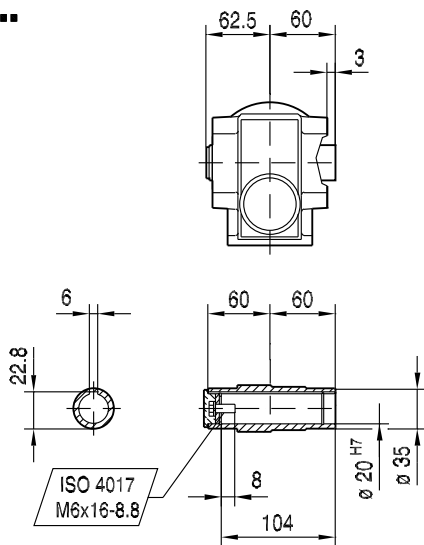
**SA37..**



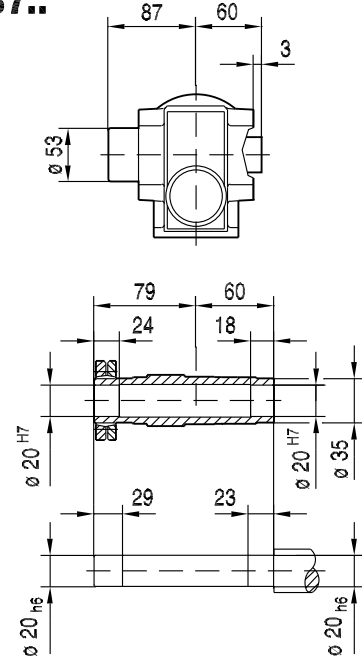
**02 048 01 06**



**SA37..**



**SH37..**



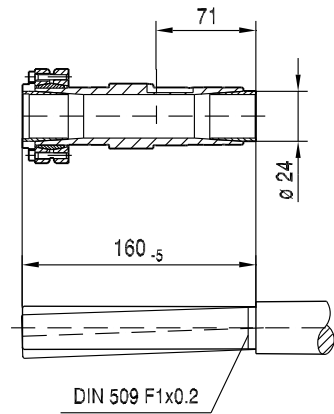
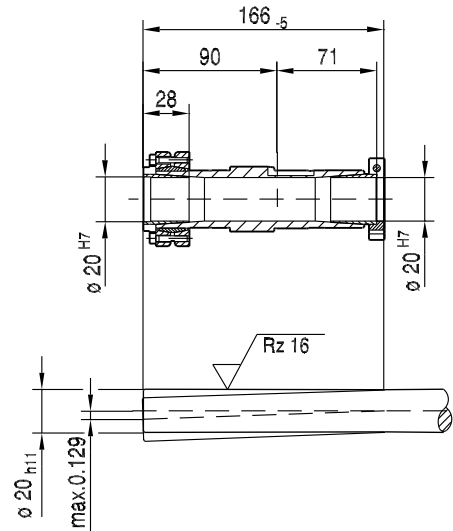
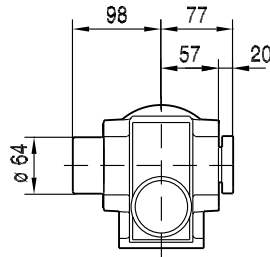
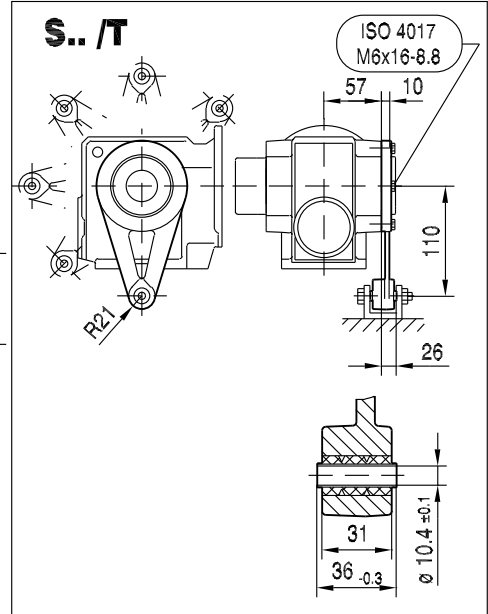
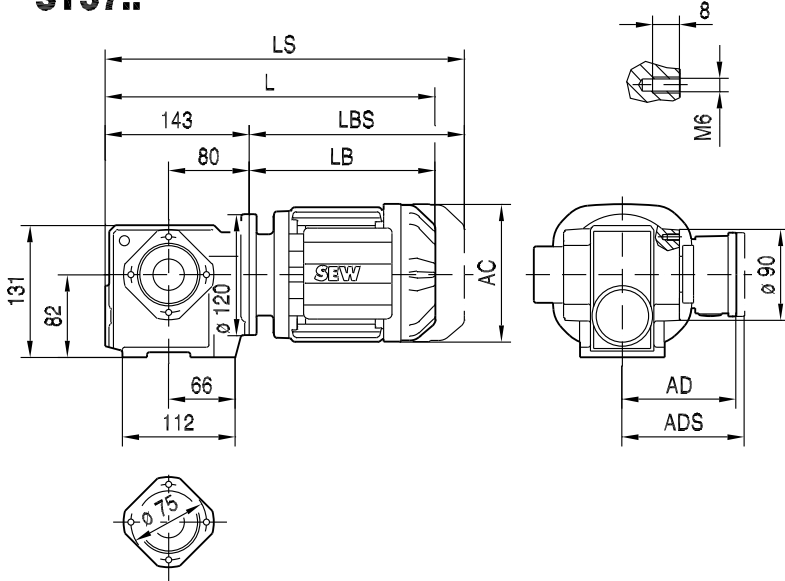
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M			
AC	132	139	139	156	179			
AD	105	119	119	128	140			
ADS	105	129	129	139	150			
L	334	345	370	411	415			
LS	389	413	438	492	508			
LB	191	202	227	268	272			
LBS	246	270	295	349	365			



S..DRE/DRS  
S..DR.. [mm]

02 049 01 06

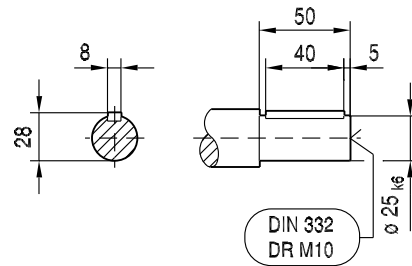
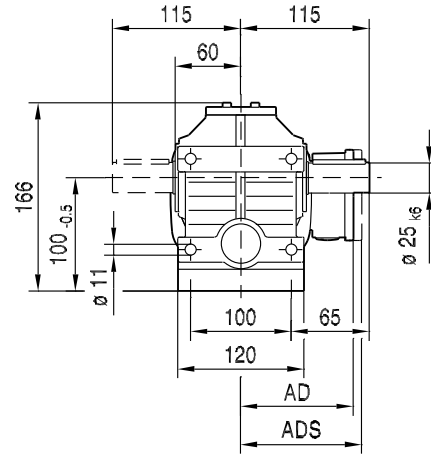
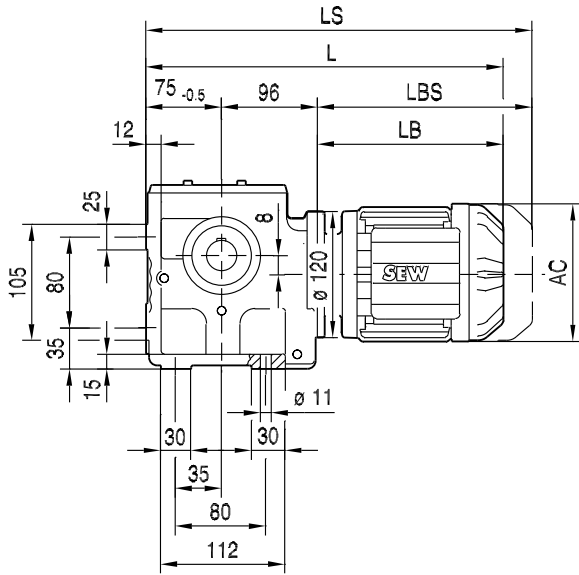
ST37..



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M			
AC	132	139	139	156	179			
AD	105	119	119	128	140			
ADS	105	129	129	139	150			
L	334	345	370	411	415			
LS	389	413	438	492	508			
LB	191	202	227	268	272			
LBS	246	270	295	349	365			

02 050 01 06

S47..



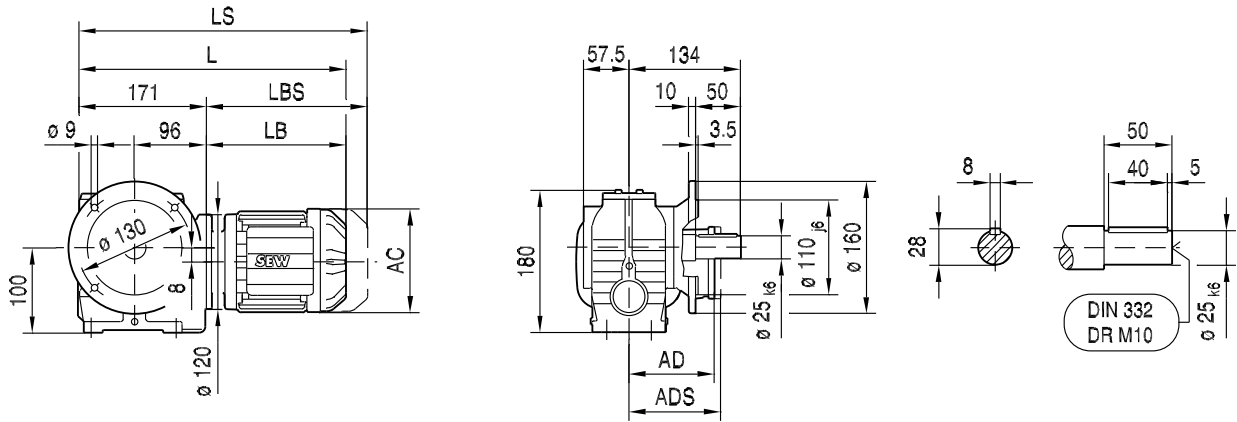
11

(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L		
AC	132	139	139	156	179	179		
AD	105	119	119	128	140	140		
ADS	105	129	129	139	150	150		
L	362	373	398	439	443	463		
LS	417	441	466	520	536	556		
LB	191	202	227	268	272	292		
LBS	246	270	295	349	365	385		

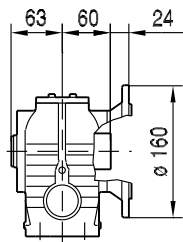


02 051 02 06

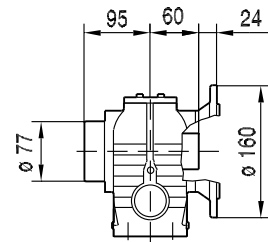
SF47..



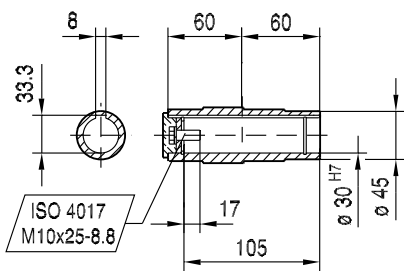
SAF47..



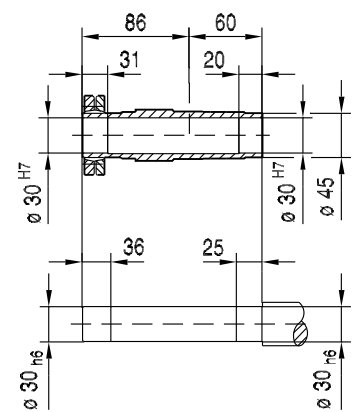
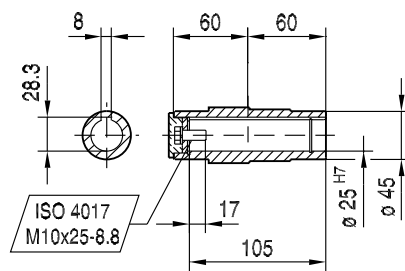
SHF47..



Ø 30 H7



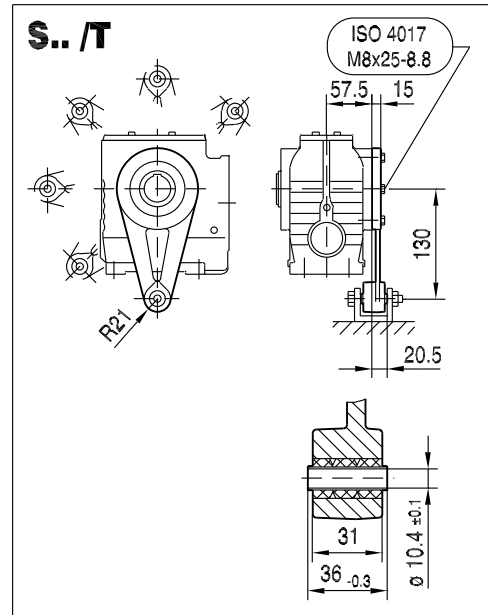
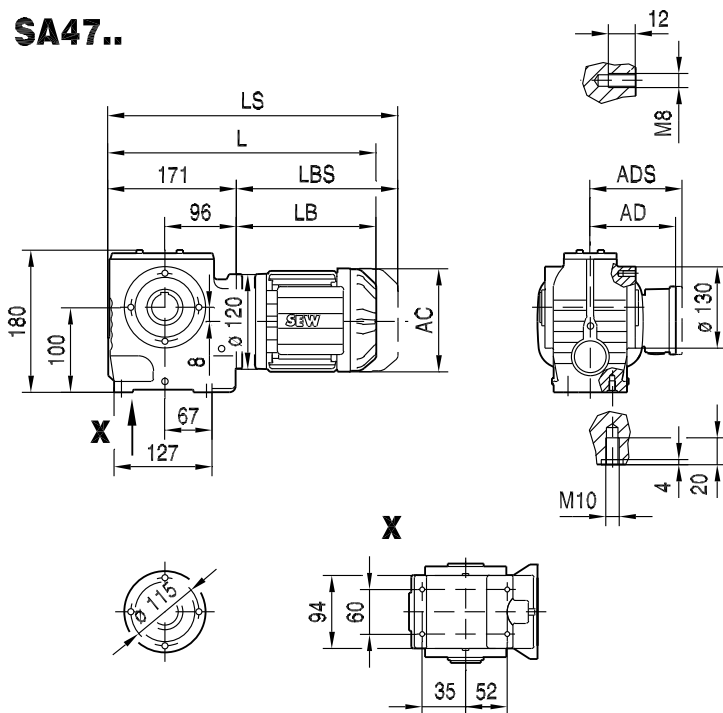
Ø 25 H7



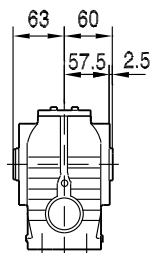
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L		
AC	132	139	139	156	179	179		
AD	105	119	119	128	140	140		
ADS	105	129	129	139	150	150		
L	362	373	398	439	443	463		
LS	417	441	466	520	536	556		
LB	191	202	227	268	272	292		
LBS	246	270	295	349	365	385		

02 052 02 06

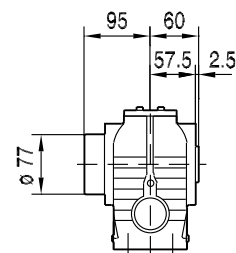
**SA47..**



**SA47..**

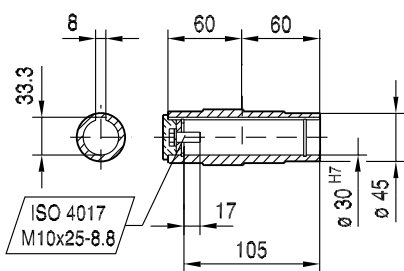


**SH47..**

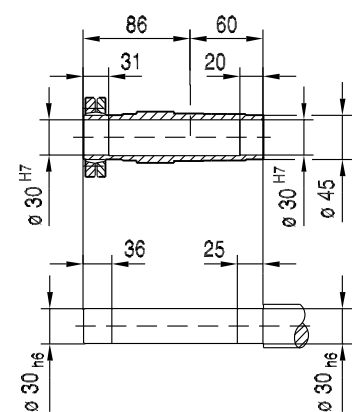
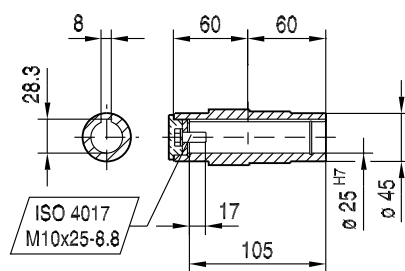


11

**ø 30 H7**



**ø 25 H7**

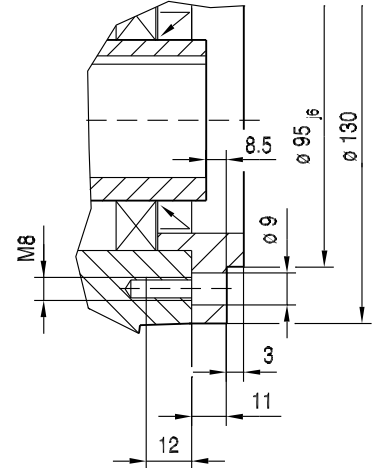
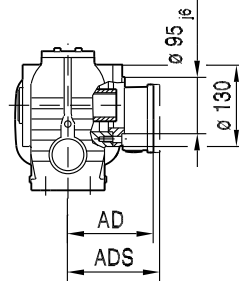
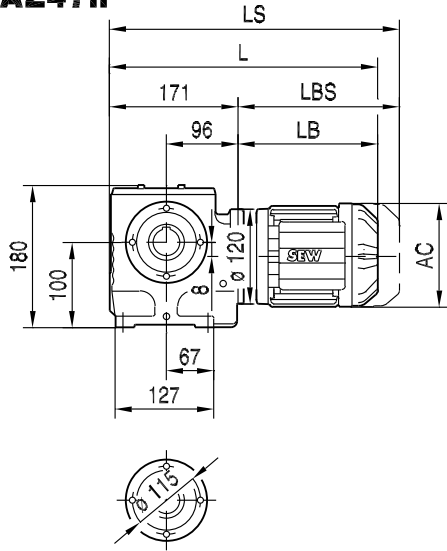


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L		
AC	132	139	139	156	179	179		
AD	105	119	119	128	140	140		
ADS	105	129	129	139	150	150		
L	362	373	398	439	443	463		
LS	417	441	466	520	536	556		
LB	191	202	227	268	272	292		
LBS	246	270	295	349	365	385		

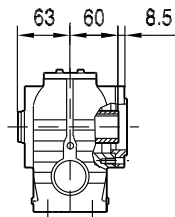


02 053 02 06

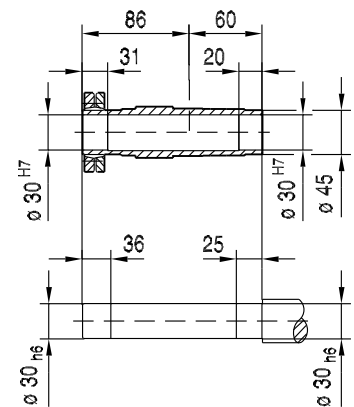
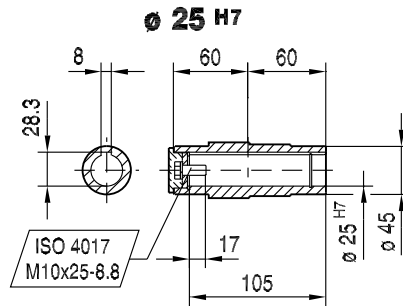
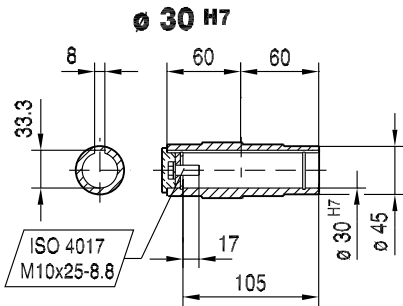
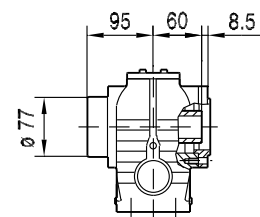
**SAZ47..**



**SAZ47..**



**SHZ47..**



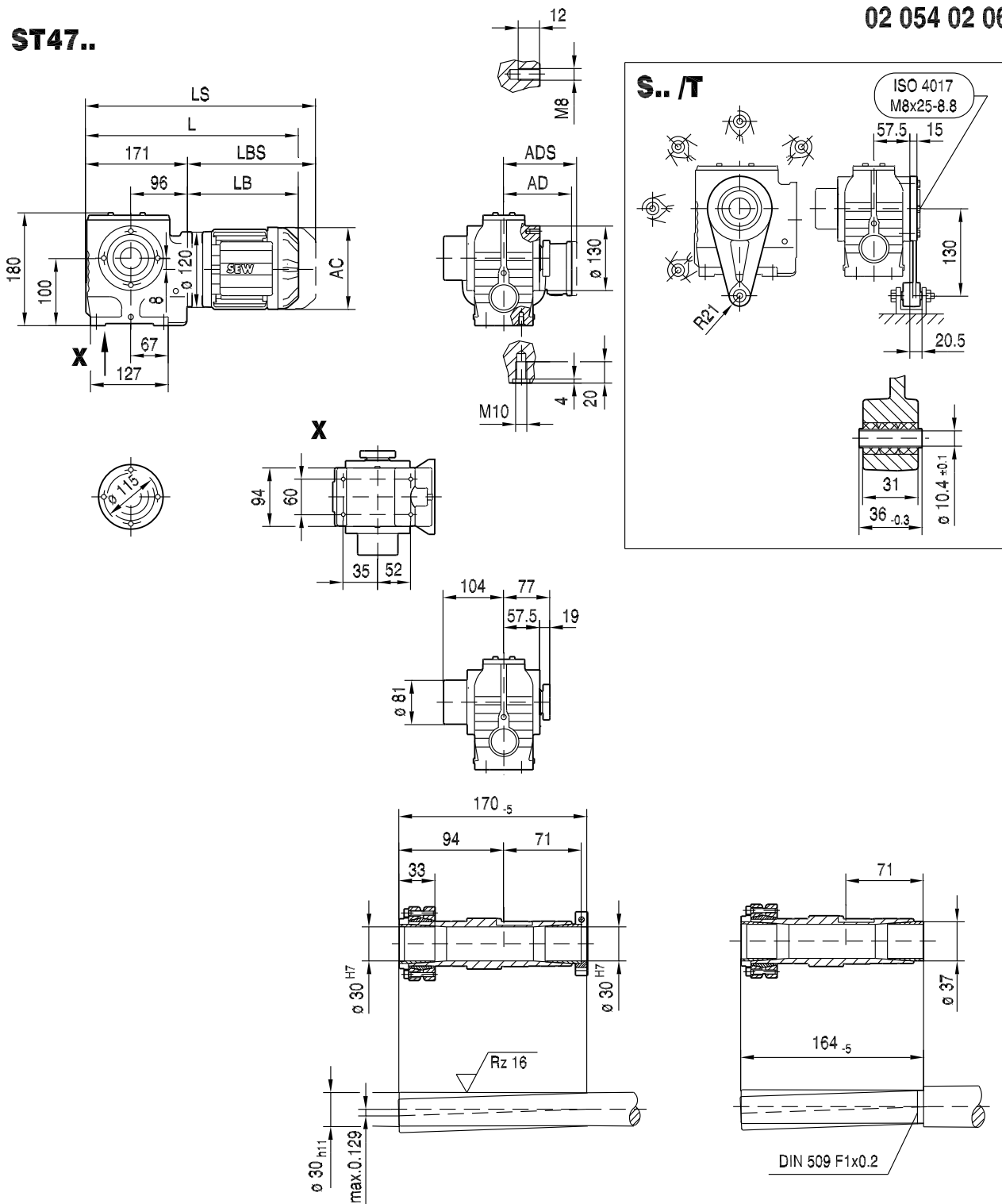
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L		
AC	132	139	139	156	179	179		
AD	105	119	119	128	140	140		
ADS	105	129	129	139	150	150		
L	362	373	398	439	443	463		
LS	417	441	466	520	536	556		
LB	191	202	227	268	272	292		
LBS	246	270	295	349	365	385		



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f	
i	
P	H <sub>Z</sub>

ST47..

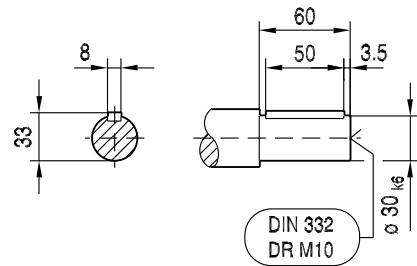
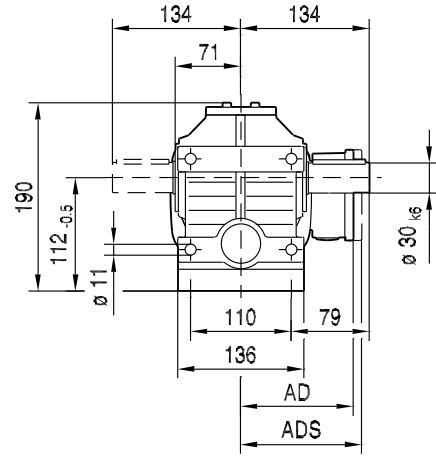
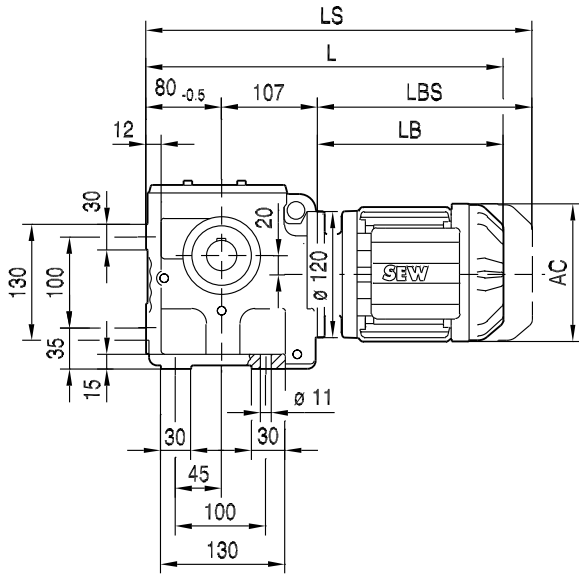
02 054 02 06



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L		
AC	132	139	139	156	179	179		
AD	105	119	119	128	140	140		
ADS	105	129	129	139	150	150		
L	362	373	398	439	443	463		
LS	417	441	466	520	536	556		
LB	191	202	227	268	272	292		
LBS	246	270	295	349	365	385		



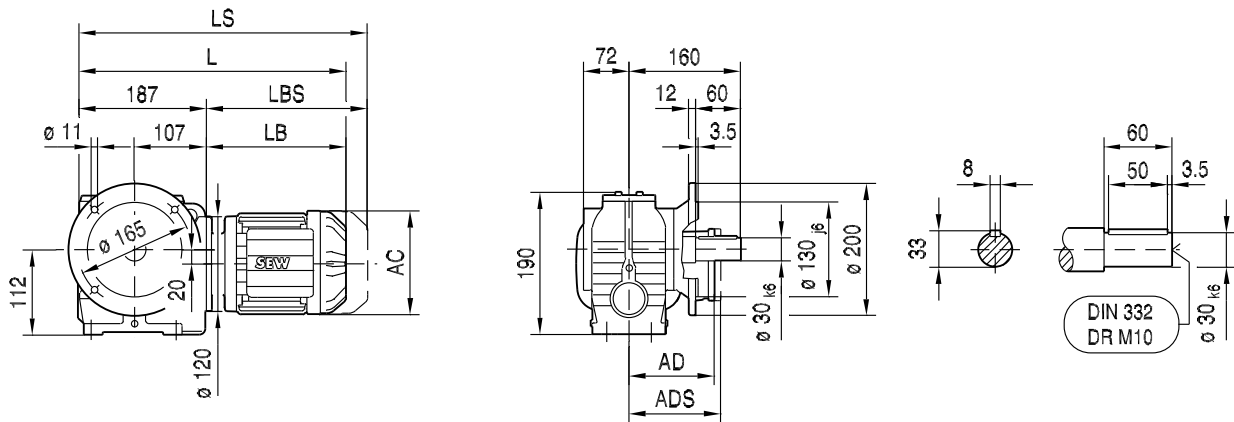
S57..



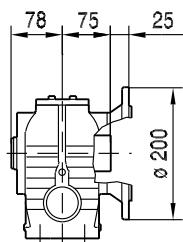
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	156	179	179	197	197
AD	105	119	119	128	128	140	140	157	157
ADS	105	129	129	139	139	150	150	158	158
L	378	389	414	424	455	459	479	509	539
LS	433	457	482	505	536	552	572	602	632
LB	191	202	227	237	268	272	292	322	352
LBS	246	270	295	318	349	365	385	415	445

02 056 01 06

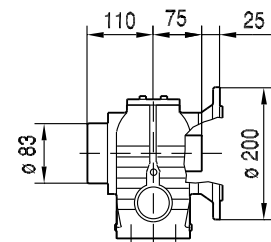
**SF57..**



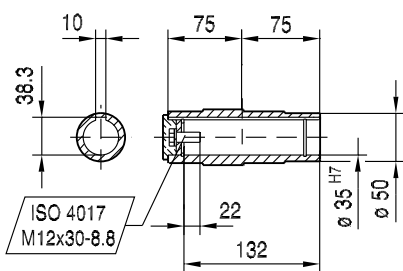
**SAF57..**



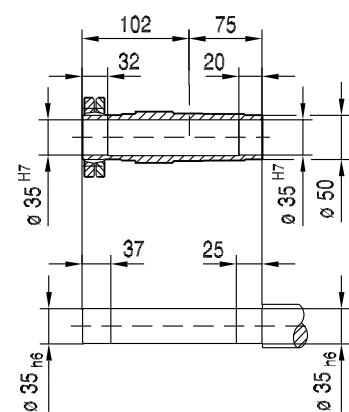
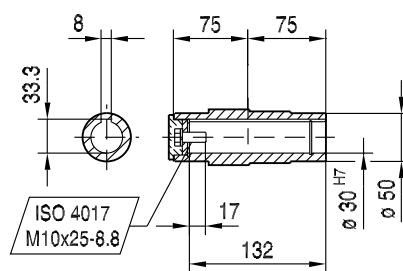
**SHF57..**



**Ø 35 H7**



**Ø 30 H7**

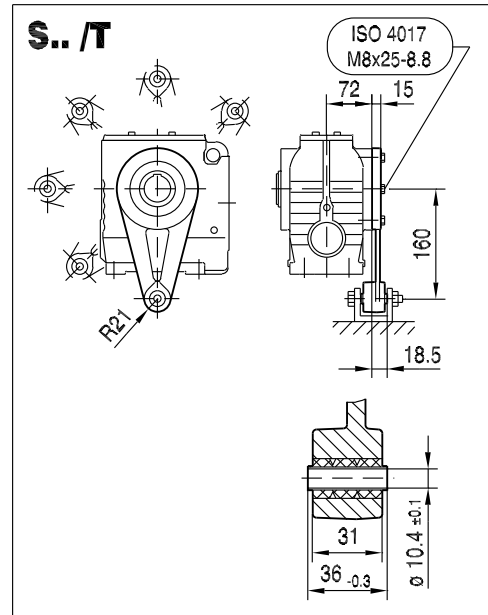
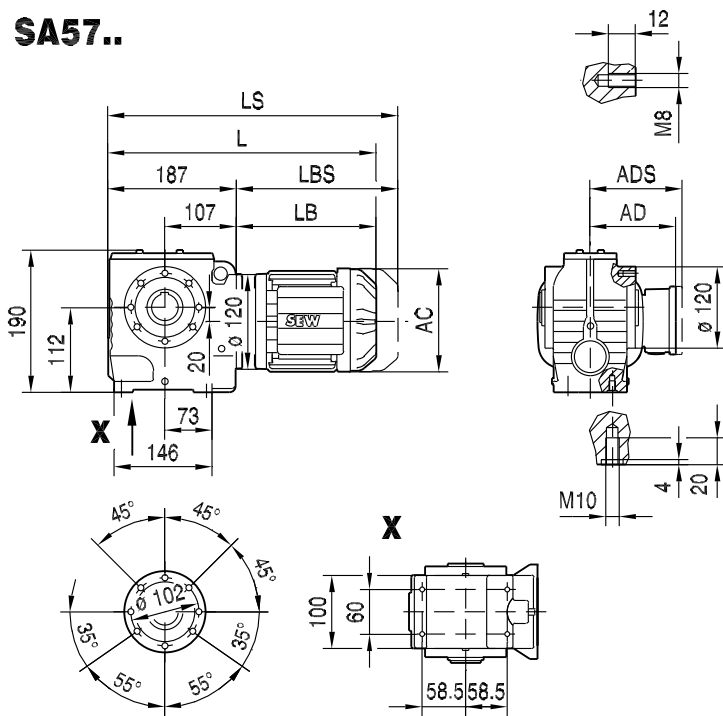


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	156	179	179	197	197
AD	105	119	119	128	128	140	140	157	157
ADS	105	129	129	139	139	150	150	158	158
L	378	389	414	424	455	459	479	509	539
LS	433	457	482	505	536	552	572	602	632
LB	191	202	227	237	268	272	292	322	352
LBS	246	270	295	318	349	365	385	415	445

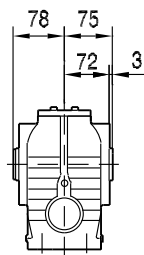


02 057 02 06

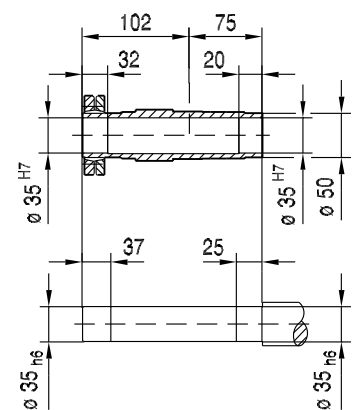
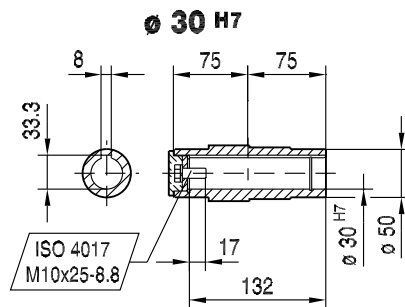
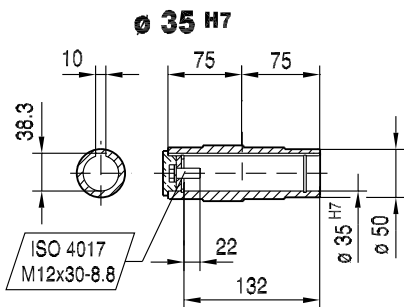
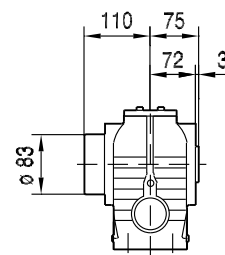
SA57..



SA57..



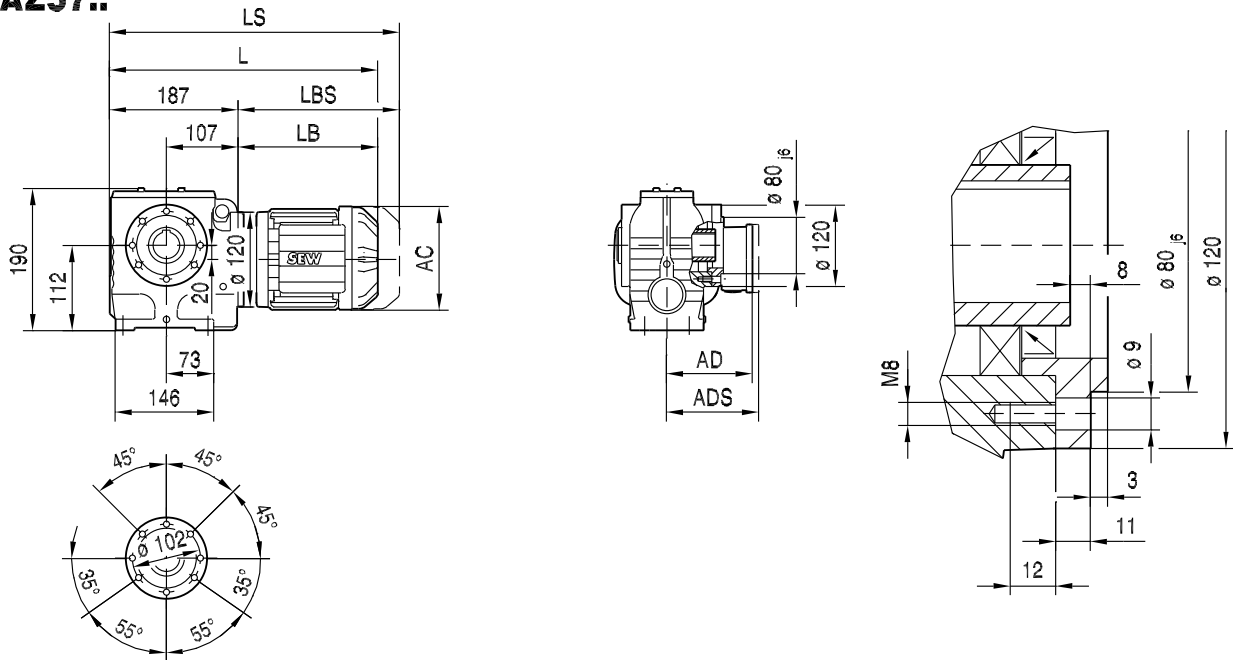
SH57..



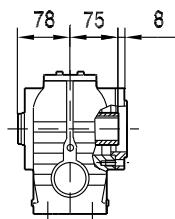
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	156	179	179	197	197
AD	105	119	119	128	128	140	140	157	157
ADS	105	129	129	139	139	150	150	158	158
L	378	389	414	424	455	459	479	509	539
LS	433	457	482	505	536	552	572	602	632
LB	191	202	227	237	268	272	292	322	352
LBS	246	270	295	318	349	365	385	415	445

02 058 01 06

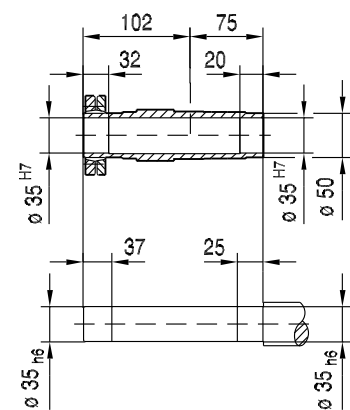
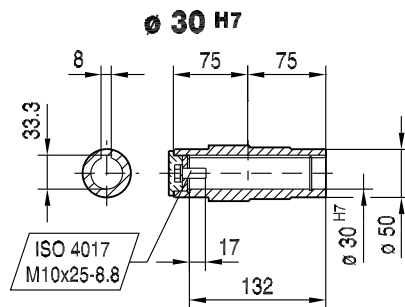
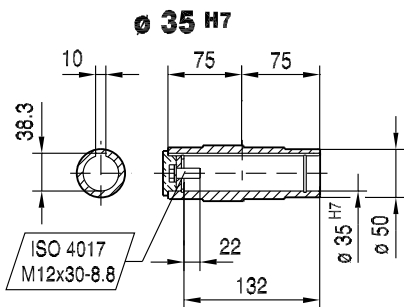
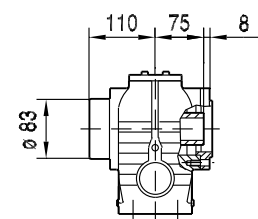
**SAZ57..**



**SAZ57..**



**SHZ57..**



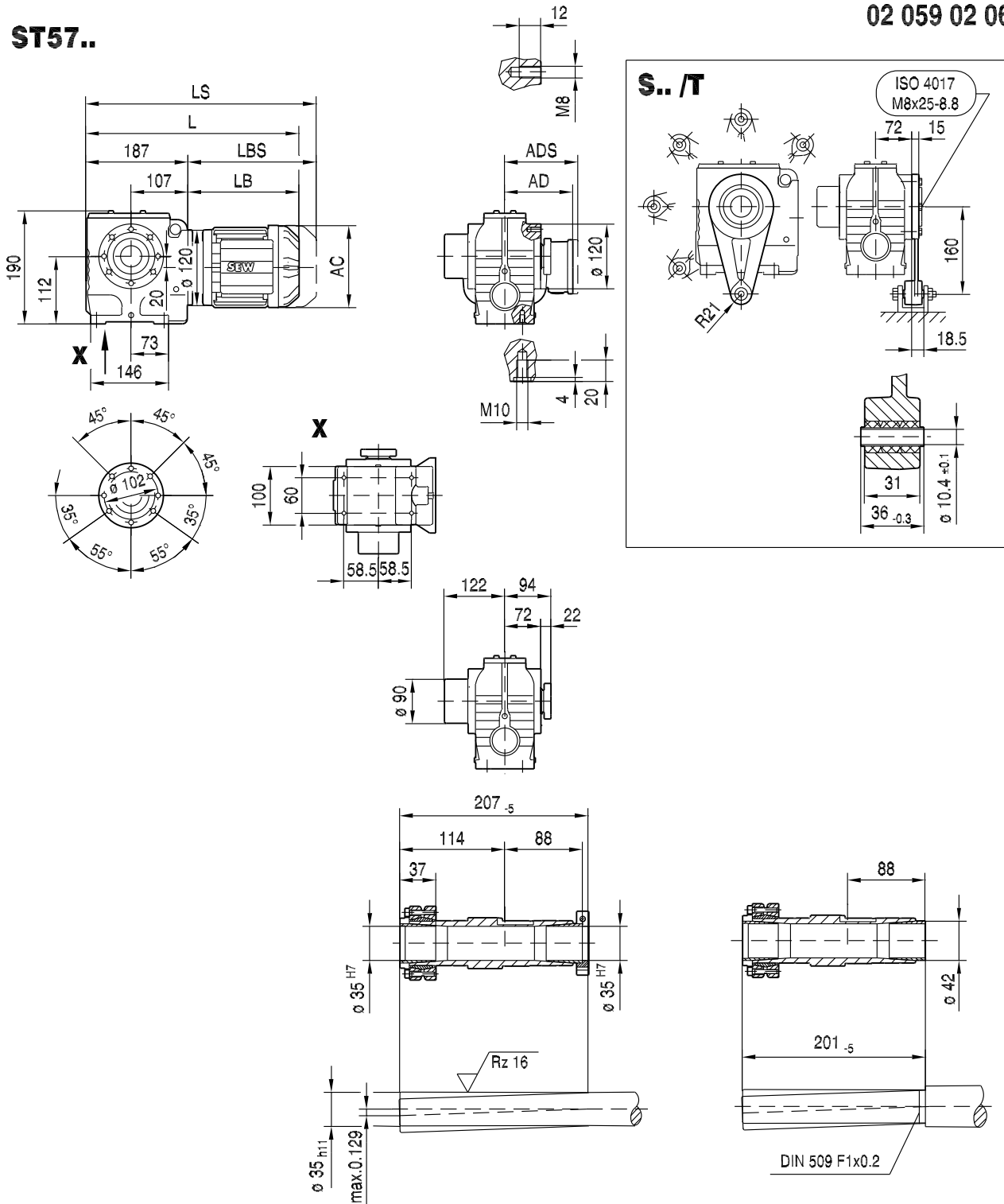
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	156	179	179	197	197
AD	105	119	119	128	128	140	140	157	157
ADS	105	129	129	139	139	150	150	158	158
L	378	389	414	424	455	459	479	509	539
LS	433	457	482	505	536	552	572	602	632
LB	191	202	227	237	268	272	292	322	352
LBS	246	270	295	318	349	365	385	415	445



S..DRE/DRS  
S..DR.. [mm]

02 059 02 06

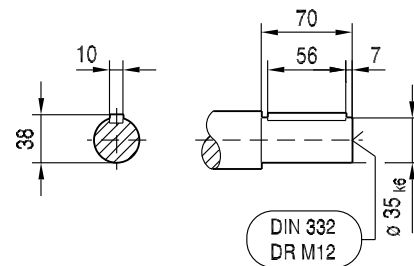
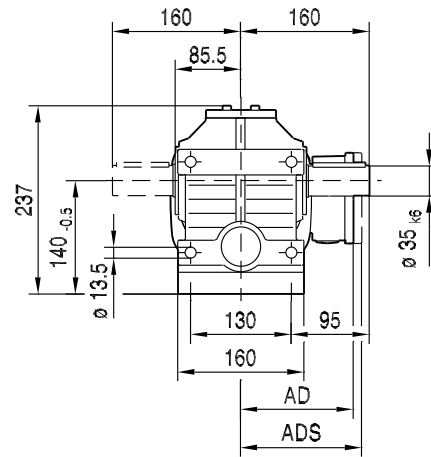
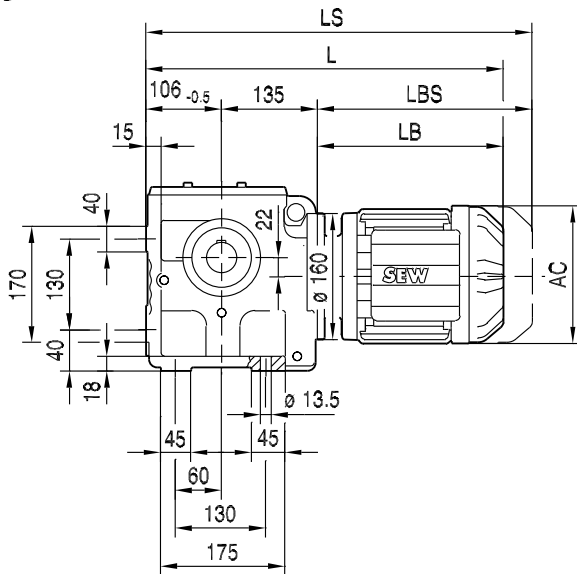
ST57..



(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	156	179	179	197	197
AD	105	119	119	128	128	140	140	157	157
ADS	105	129	129	139	139	150	150	158	158
L	378	389	414	424	455	459	479	509	539
LS	433	457	482	505	536	552	572	602	632
LB	191	202	227	237	268	272	292	322	352
LBS	246	270	295	318	349	365	385	415	445

02 060 01 06

S67..



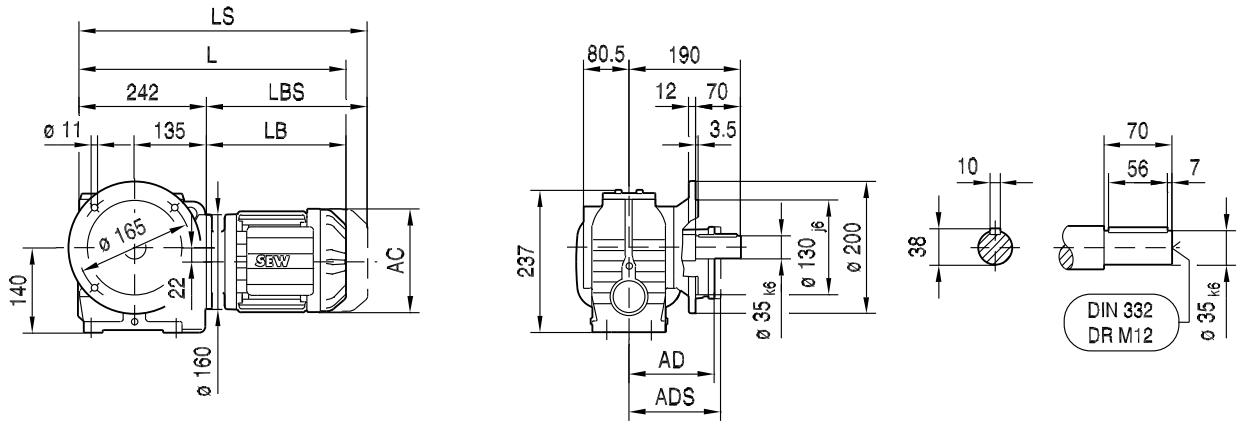
11

(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	426	437	462	502	504	524	554	584	631	681
LS	481	505	530	583	597	617	647	677	743	793
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

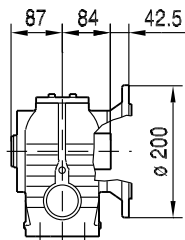


02 061 01 06

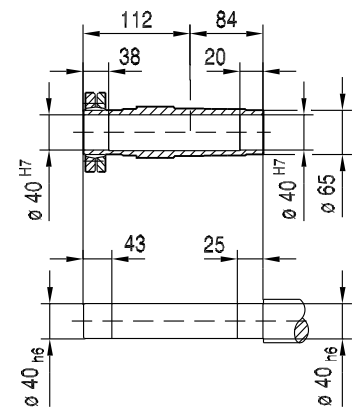
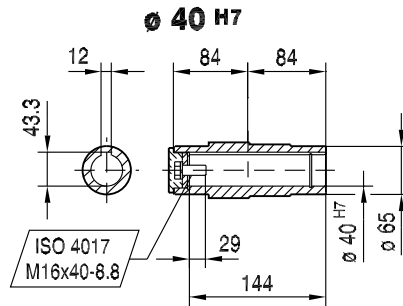
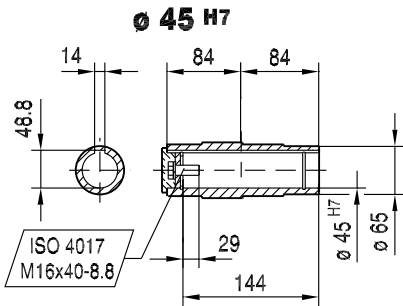
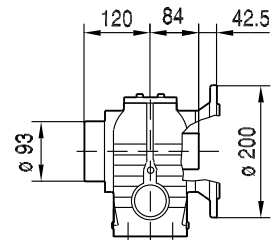
SF67..



SAF67..

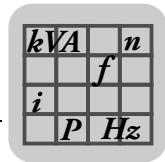


SHF67..



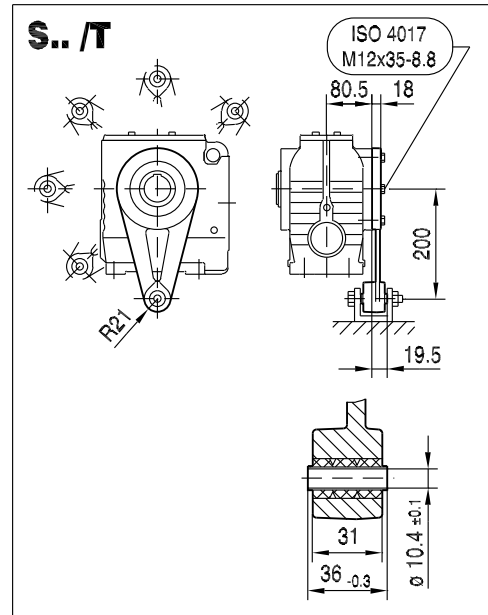
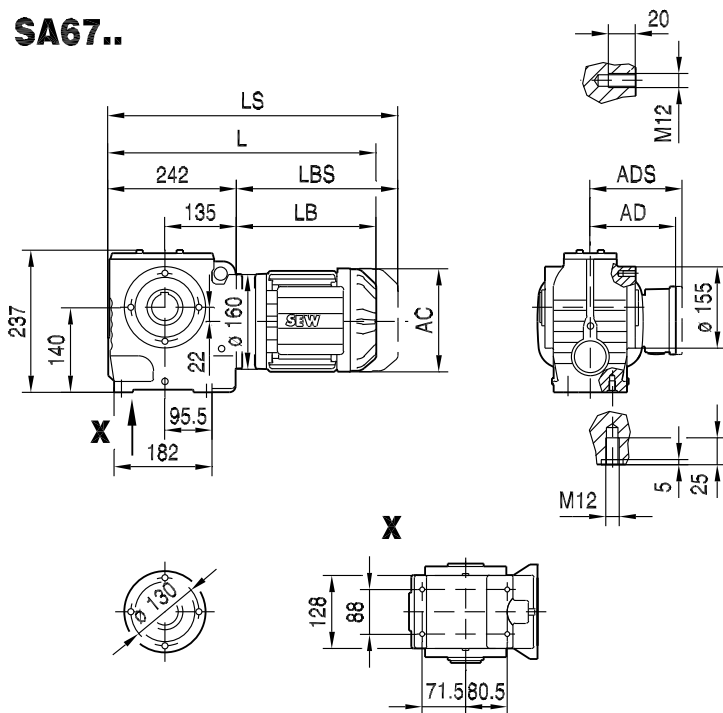
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	427	438	463	503	505	525	555	585	632	682
LS	482	506	531	584	598	618	648	678	744	794
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552



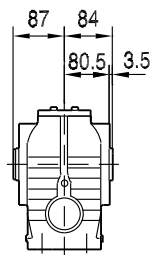


02 062 02 06

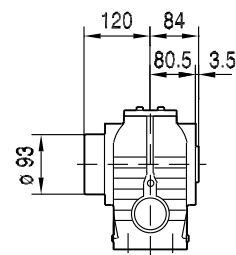
SA67..



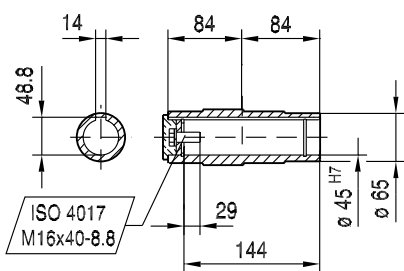
SA67..



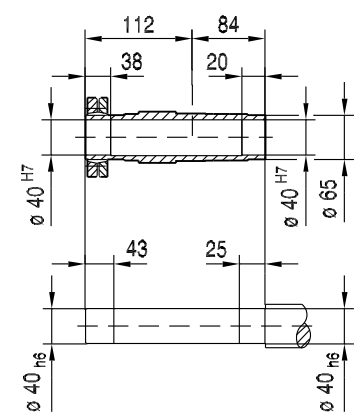
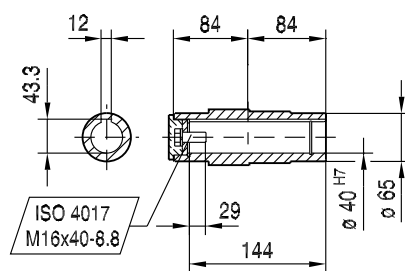
SH67..



ø 45 H7



ø 40 H7

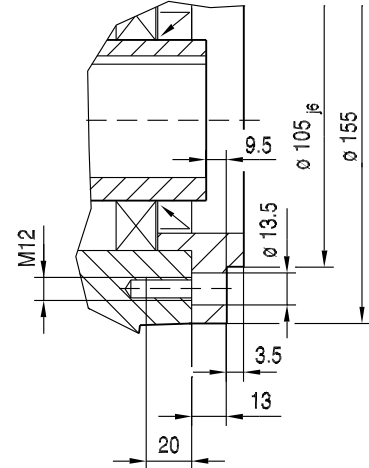
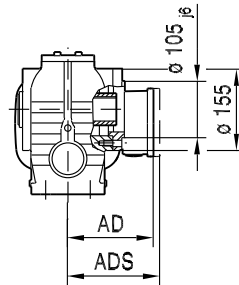
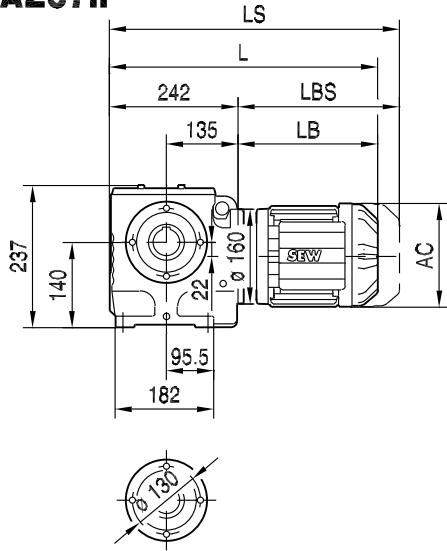


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	427	438	463	503	505	525	555	585	632	682
LS	482	506	531	584	598	618	648	678	744	794
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

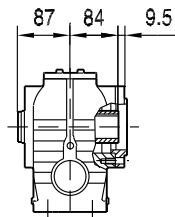


02 063 01 06

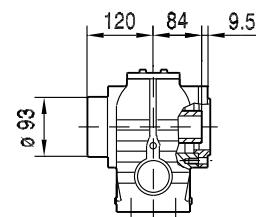
**SAZ67..**



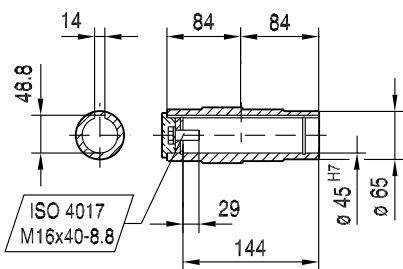
**SAZ67..**



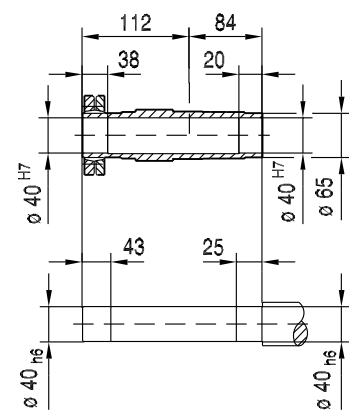
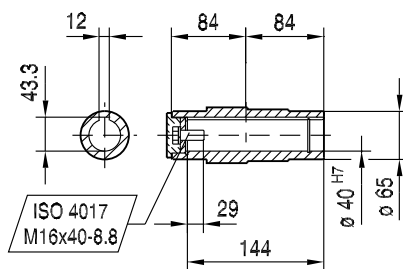
**SHZ67..**



Ø 45 H7



Ø 40 H7

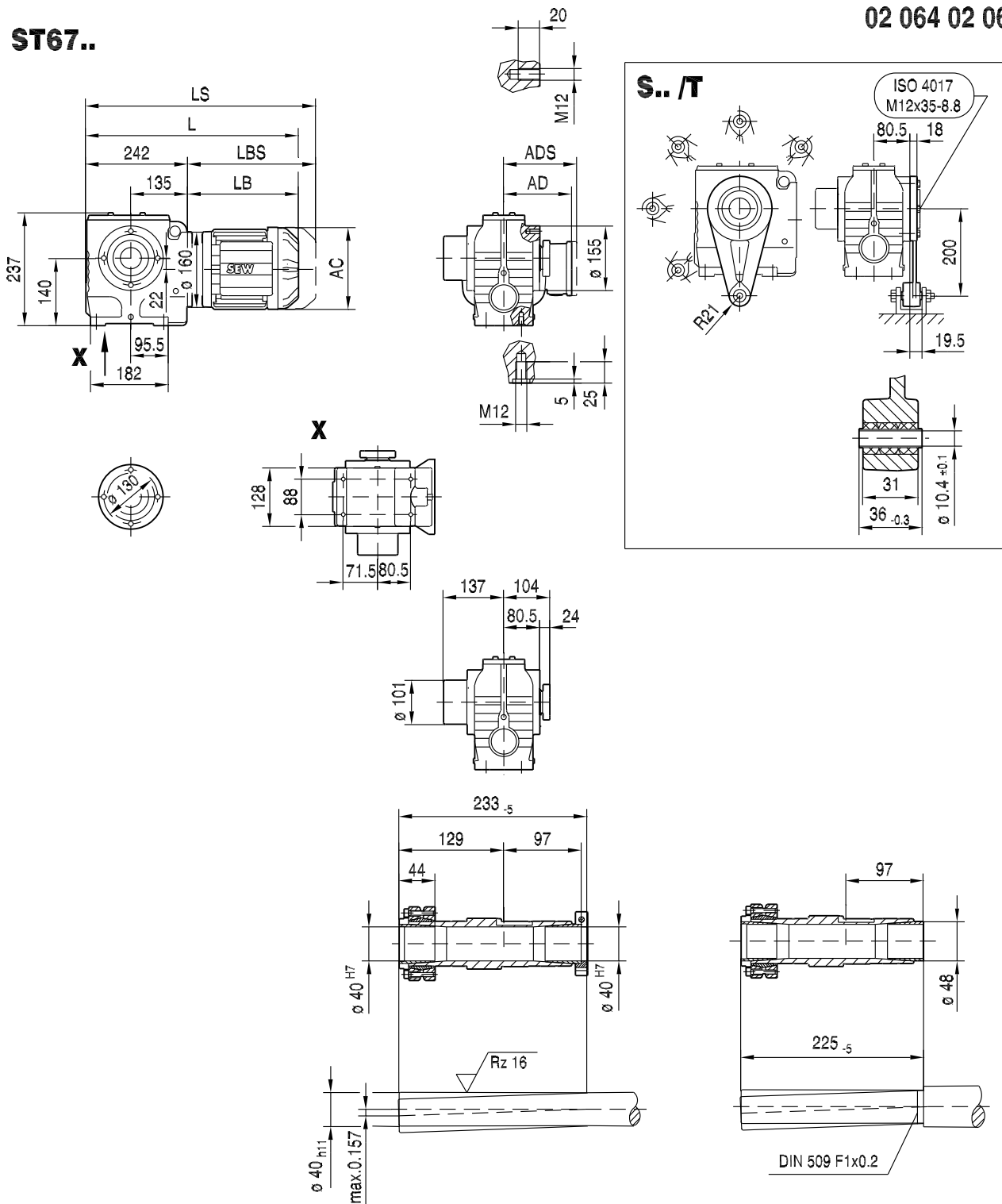


(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	427	438	463	503	505	525	555	585	632	682
LS	482	506	531	584	598	618	648	678	744	794
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552

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02 064 02 06

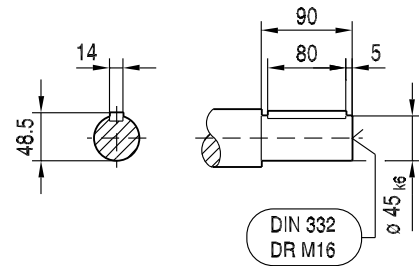
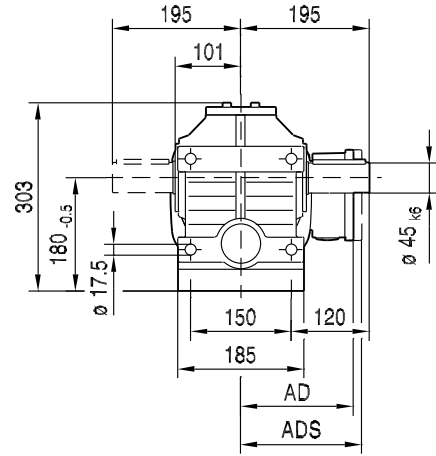
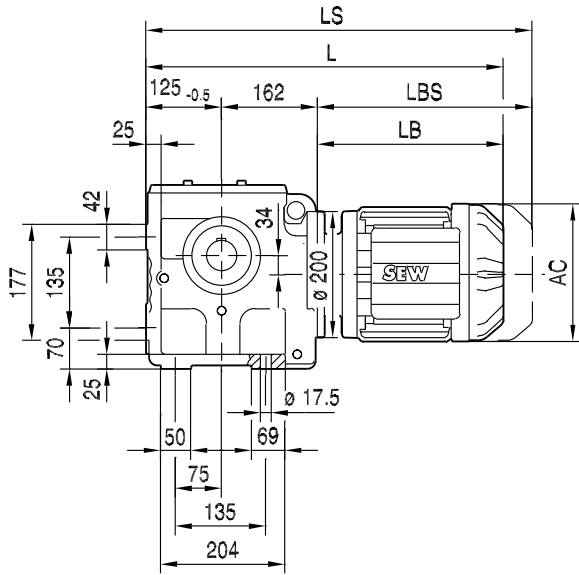


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(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC
AC	132	139	139	156	179	179	197	197	221	221
AD	105	119	119	128	140	140	157	157	170	170
ADS	105	129	129	139	150	150	158	158	172	172
L	427	438	463	503	505	525	555	585	632	682
LS	482	506	531	584	598	618	648	678	744	794
LB	185	196	221	261	263	283	313	343	390	440
LBS	240	264	289	342	356	376	406	436	502	552



S77..

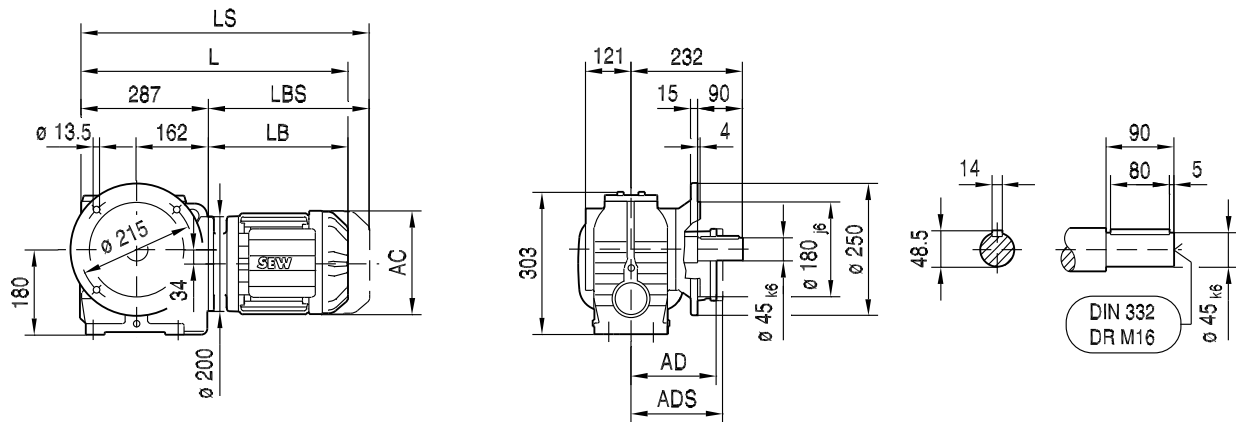


(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	139	156	156	179	179	197	197	221	221	270
AD	119	128	128	140	140	157	157	170	170	228
ADS	129	139	139	150	150	158	158	172	172	228
L	501	510	541	543	563	593	623	666	716	757
LS	569	591	622	636	656	686	716	778	828	894
LB	214	223	254	256	276	306	336	379	429	470
LBS	282	304	335	349	369	399	429	491	541	607

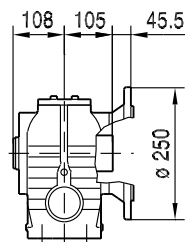


02 066 01 06

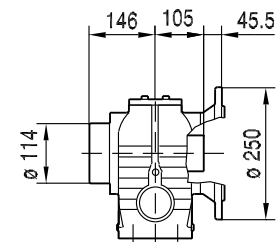
**SF77..**



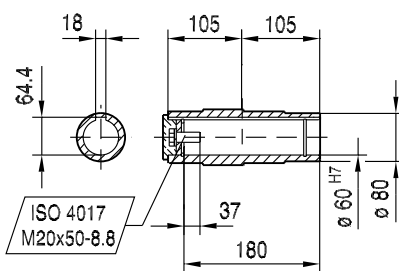
**SAF77..**



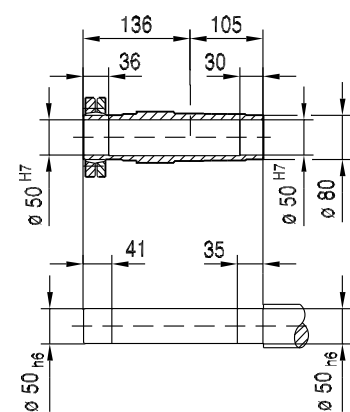
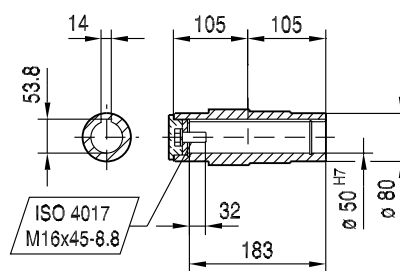
**SHF77..**



**Ø 60 H7**



**Ø 50 H7**

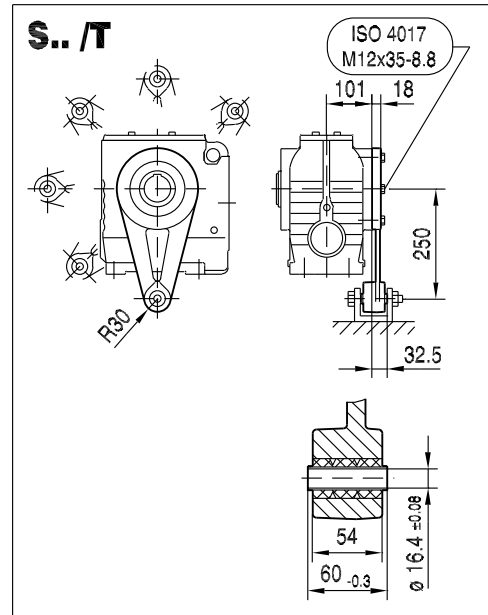
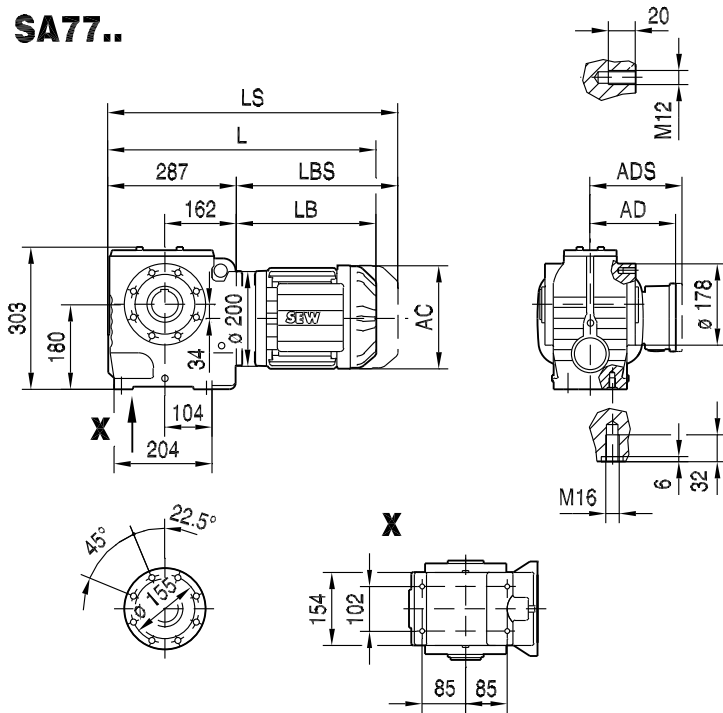


(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	139	156	156	179	179	197	197	221	221	270
AD	119	128	128	140	140	157	157	170	170	228
ADS	129	139	139	150	150	158	158	172	172	228
L	501	510	541	543	563	593	623	666	716	757
LS	569	591	622	636	656	686	716	778	828	894
LB	214	223	254	256	276	306	336	379	429	470
LBS	282	304	335	349	369	399	429	491	541	607

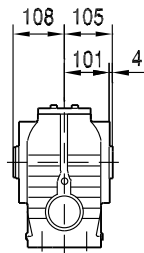


02 067 02 06

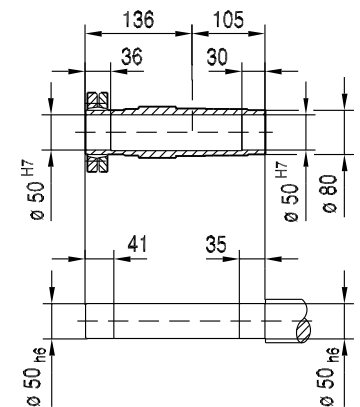
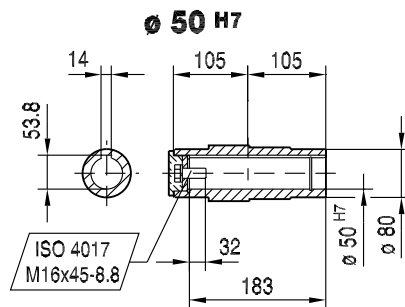
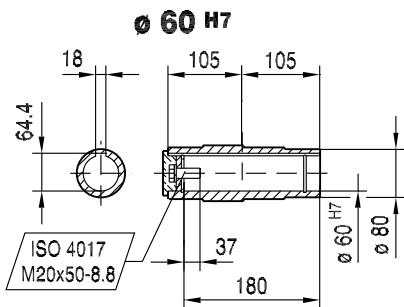
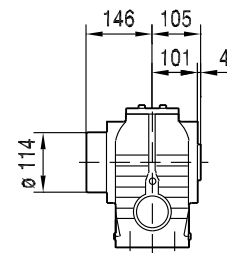
SA77..



SA77..



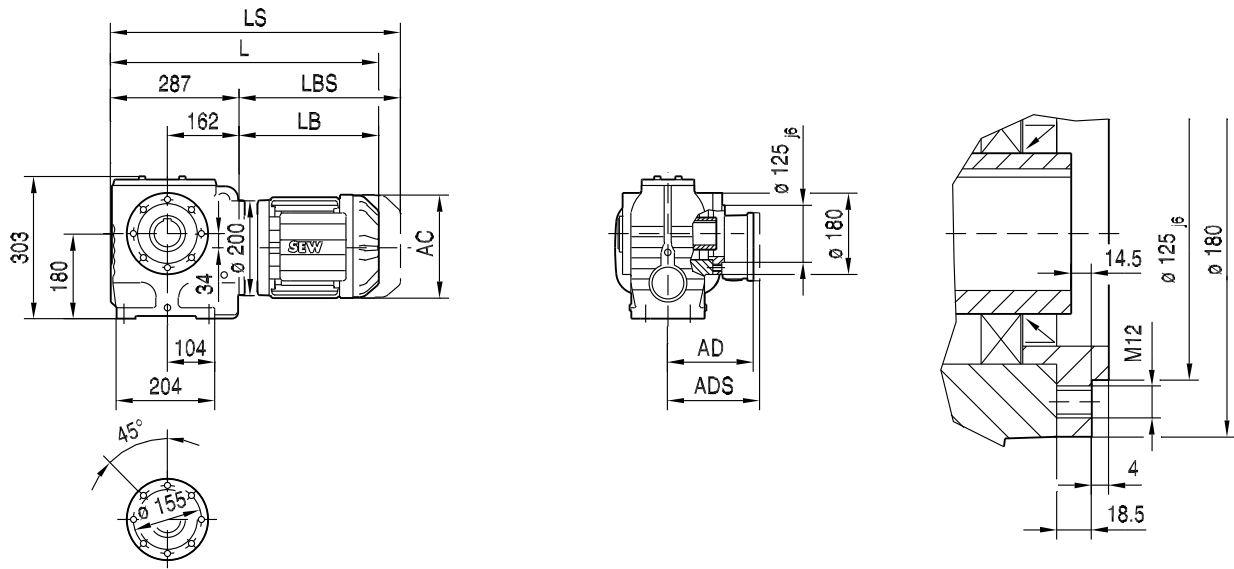
SH77..



(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	139	156	156	179	179	197	197	221	221	270
AD	119	128	128	140	140	157	157	170	170	228
ADS	129	139	139	150	150	158	158	172	172	228
L	501	510	541	543	563	593	623	666	716	757
LS	569	591	622	636	656	686	716	778	828	894
LB	214	223	254	256	276	306	336	379	429	470
LBS	282	304	335	349	369	399	429	491	541	607

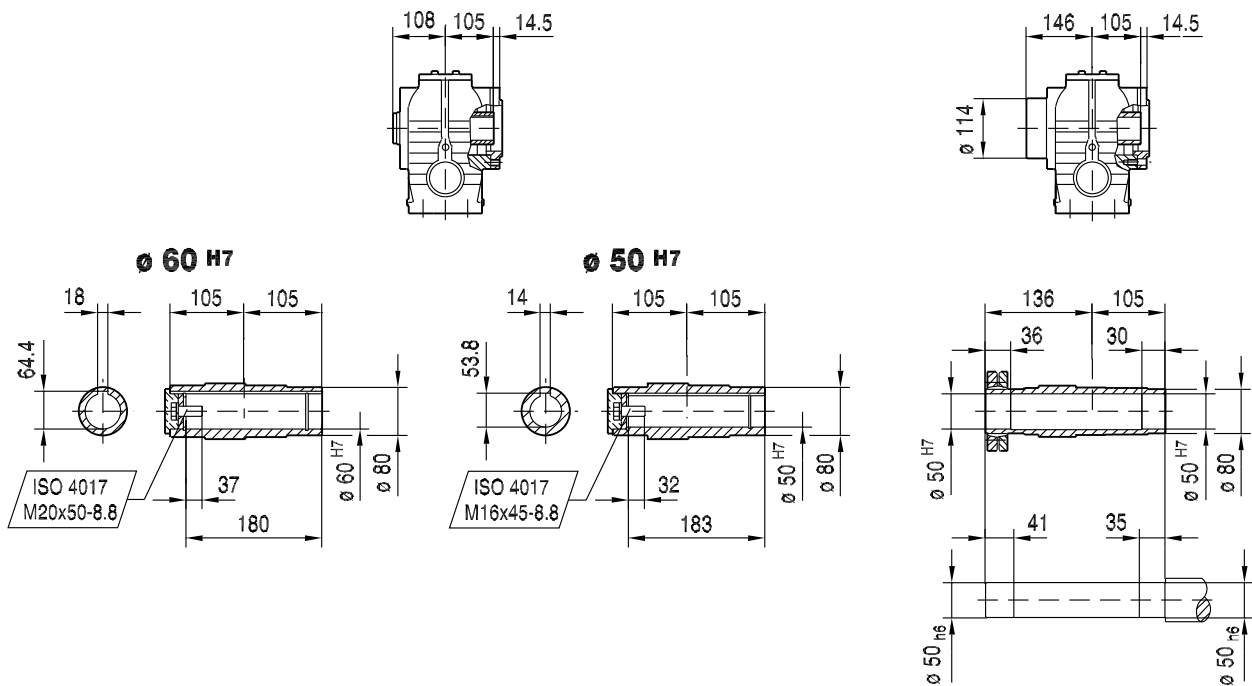
02 068 01 06

**SAZ77..**



**SAZ77..**

**SHZ77..**



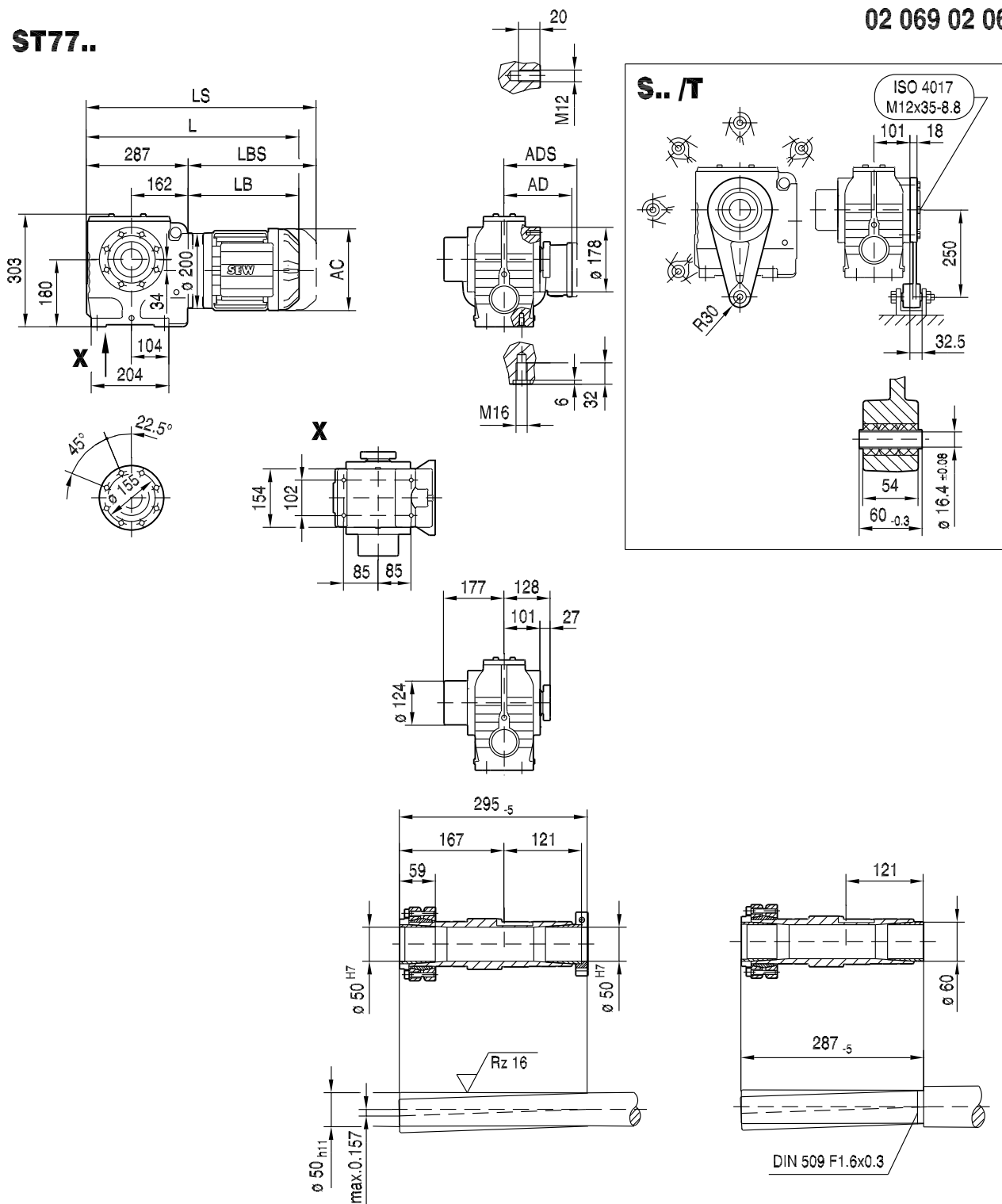
(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	139	156	156	179	179	197	197	221	221	270
AD	119	128	128	140	140	157	157	170	170	228
ADS	129	139	139	150	150	158	158	172	172	228
L	501	510	541	543	563	593	623	666	716	757
LS	569	591	622	636	656	686	716	778	828	894
LB	214	223	254	256	276	306	336	379	429	470
LBS	282	304	335	349	369	399	429	491	541	607



S..DRE/DRS  
S..DR.. [mm]

02 069 02 06

ST77..

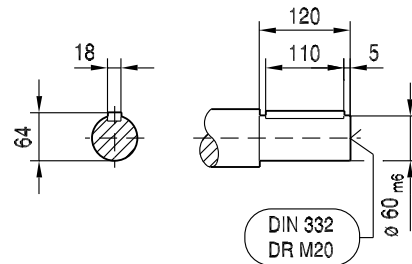
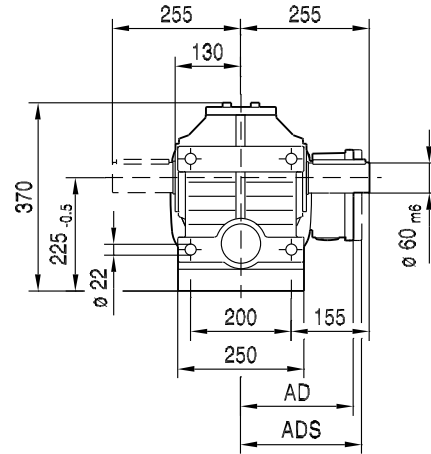
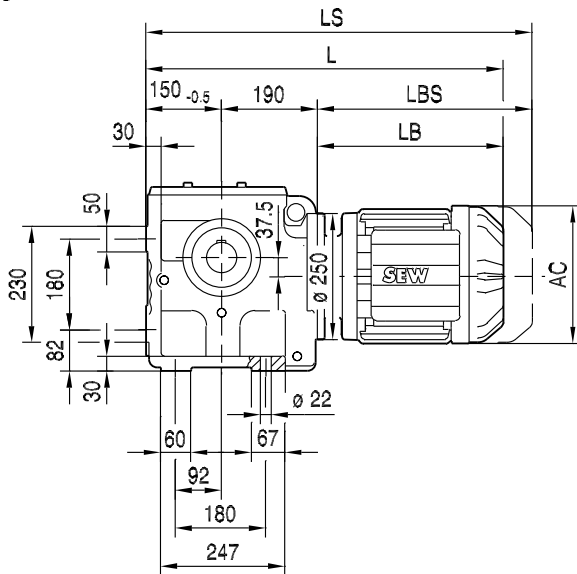


(→ 136)	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..
AC	139	156	156	179	179	197	197	221	221	270
AD	119	128	128	140	140	157	157	170	170	228
ADS	129	139	139	150	150	158	158	172	172	228
L	501	510	541	543	563	593	623	666	716	757
LS	569	591	622	636	656	686	716	778	828	894
LB	214	223	254	256	276	306	336	379	429	470
LBS	282	304	335	349	369	399	429	491	541	607



02 070 01 06

S87..



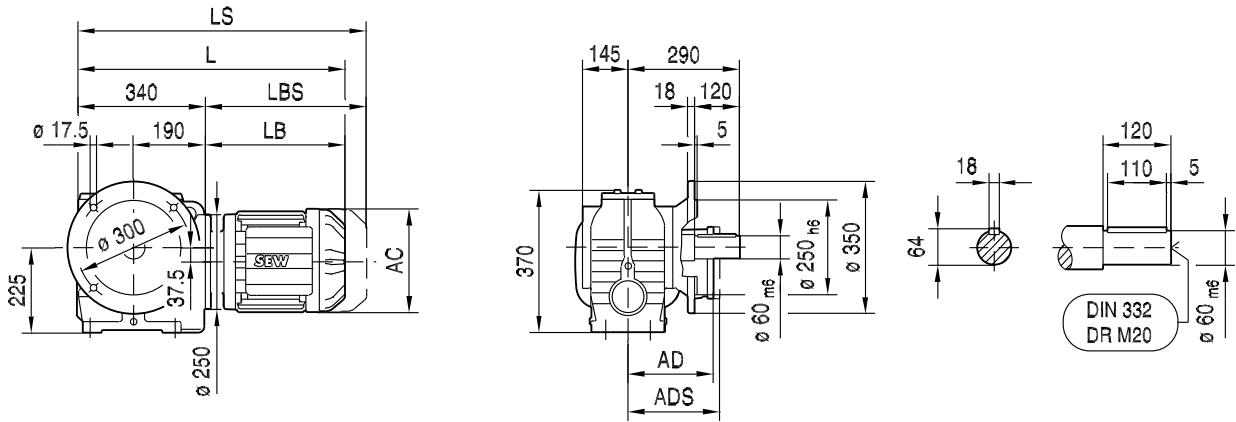
11

(→ 136)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M
AC	156	156	179	179	197	197	221	221	270	316
AD	128	128	140	140	157	157	170	170	228	253
ADS	139	139	150	150	158	158	172	172	228	253
L	558	589	591	611	641	671	714	764	805	874
LS	639	670	684	704	734	764	826	876	942	1063
LB	218	249	251	271	301	331	374	424	465	534
LBS	299	330	344	364	394	424	486	536	602	723

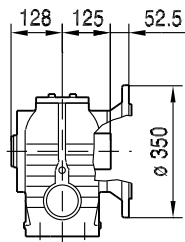


02 071 01 06

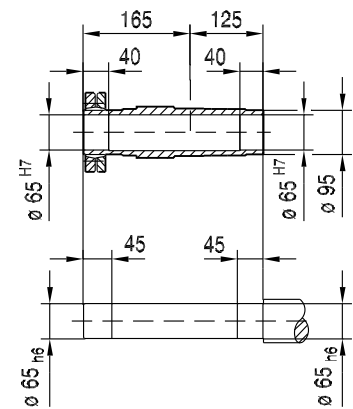
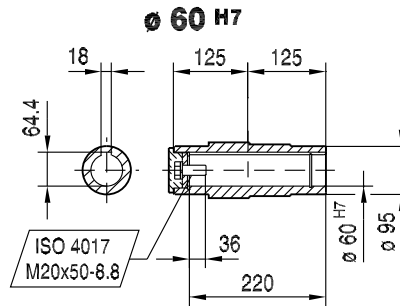
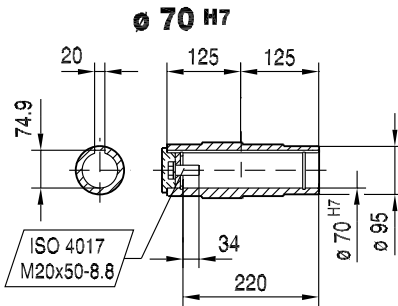
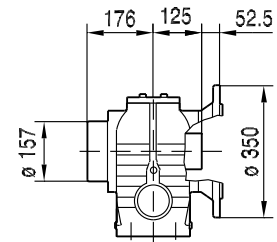
SF87..



SAF87..



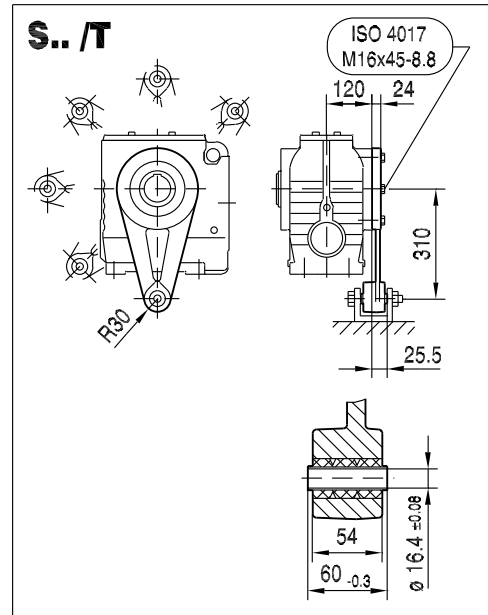
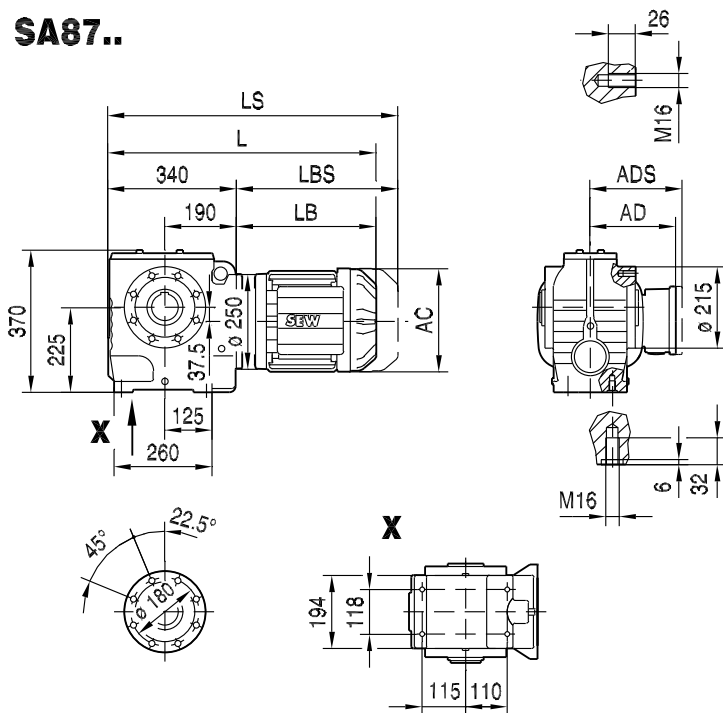
SHF87..



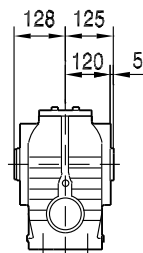
(→ 136)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M
AC	156	156	179	179	197	197	221	221	270	316
AD	128	128	140	140	157	157	170	170	228	253
ADS	139	139	150	150	158	158	172	172	228	253
L	558	589	591	611	641	671	714	764	805	874
LS	639	670	684	704	734	764	826	876	942	1063
LB	218	249	251	271	301	331	374	424	465	534
LBS	299	330	344	364	394	424	486	536	602	723

02 072 02 06

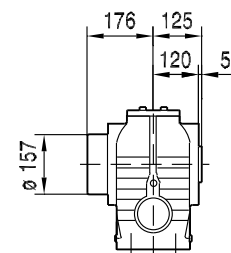
SA87..



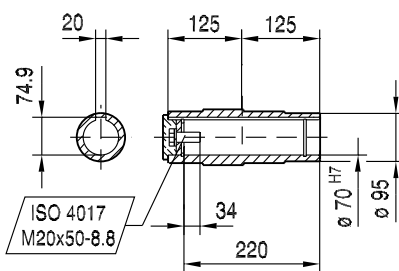
SA87..



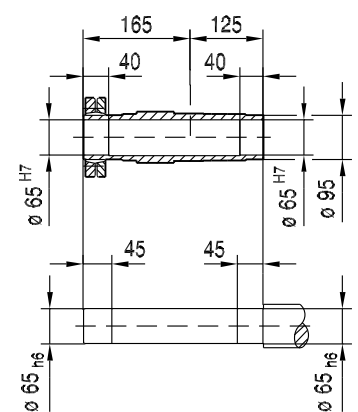
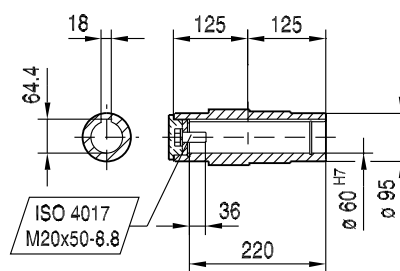
SH87..



∅ 70 H7



∅ 60 H7

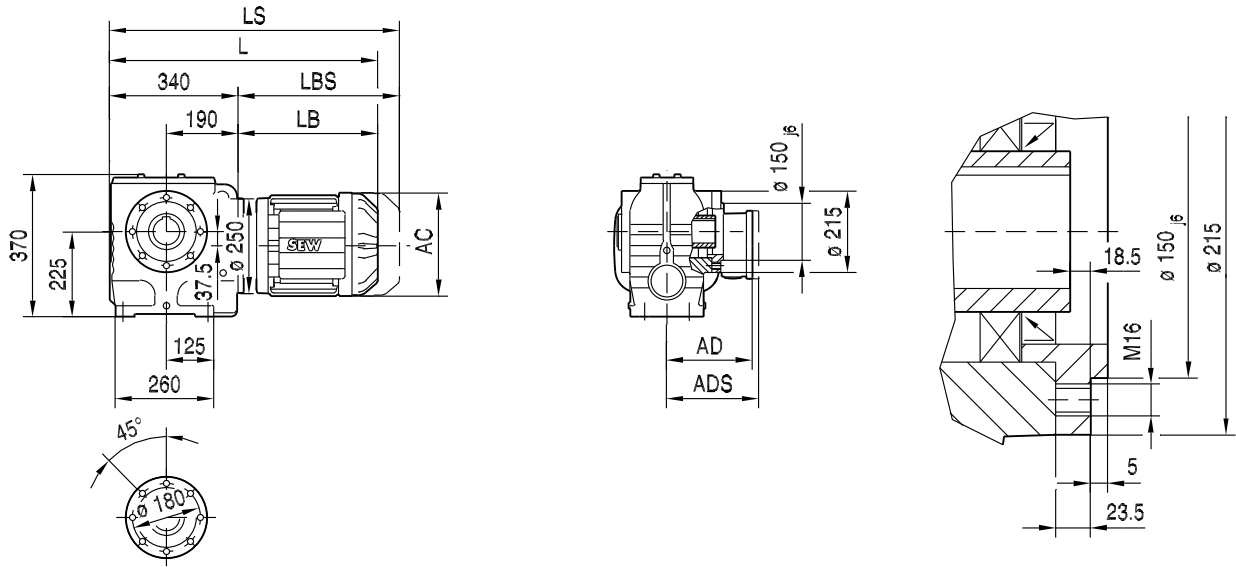


(→ 136)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M
AC	156	156	179	179	197	197	221	221	270	316
AD	128	128	140	140	157	157	170	170	228	253
ADS	139	139	150	150	158	158	172	172	228	253
L	558	589	591	611	641	671	714	764	805	874
LS	639	670	684	704	734	764	826	876	942	1063
LB	218	249	251	271	301	331	374	424	465	534
LBS	299	330	344	364	394	424	486	536	602	723



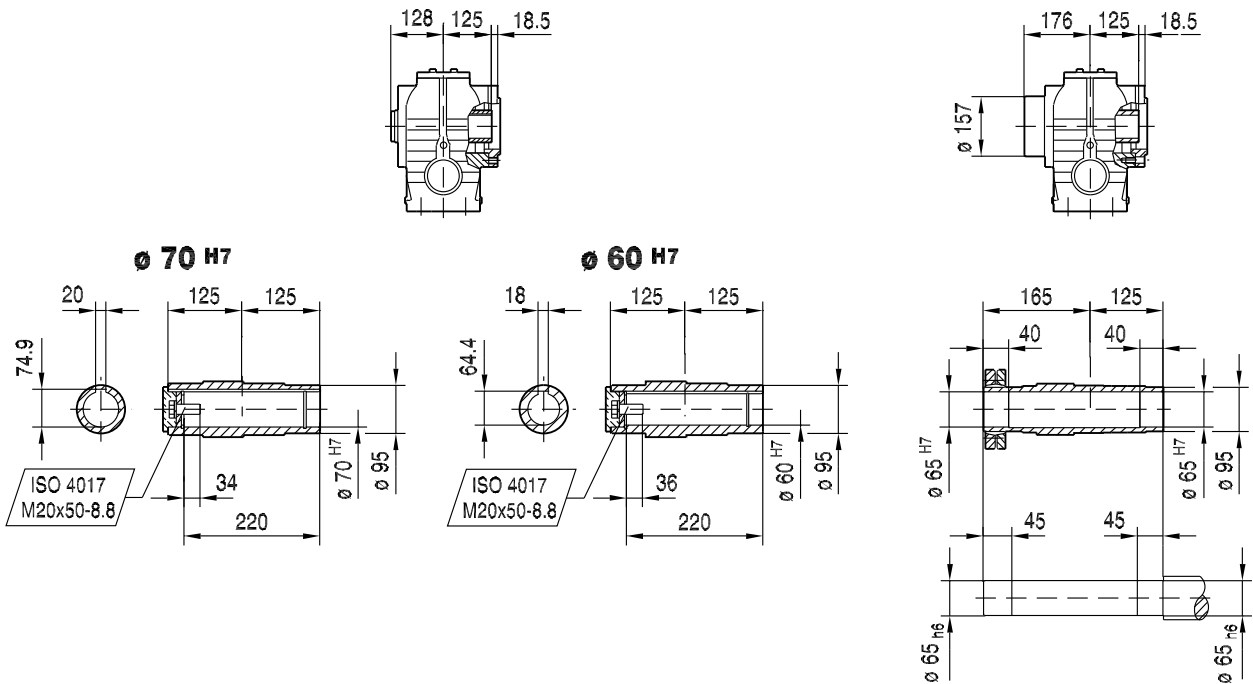
02 073 01 06

SAZ87..



SAZ87..

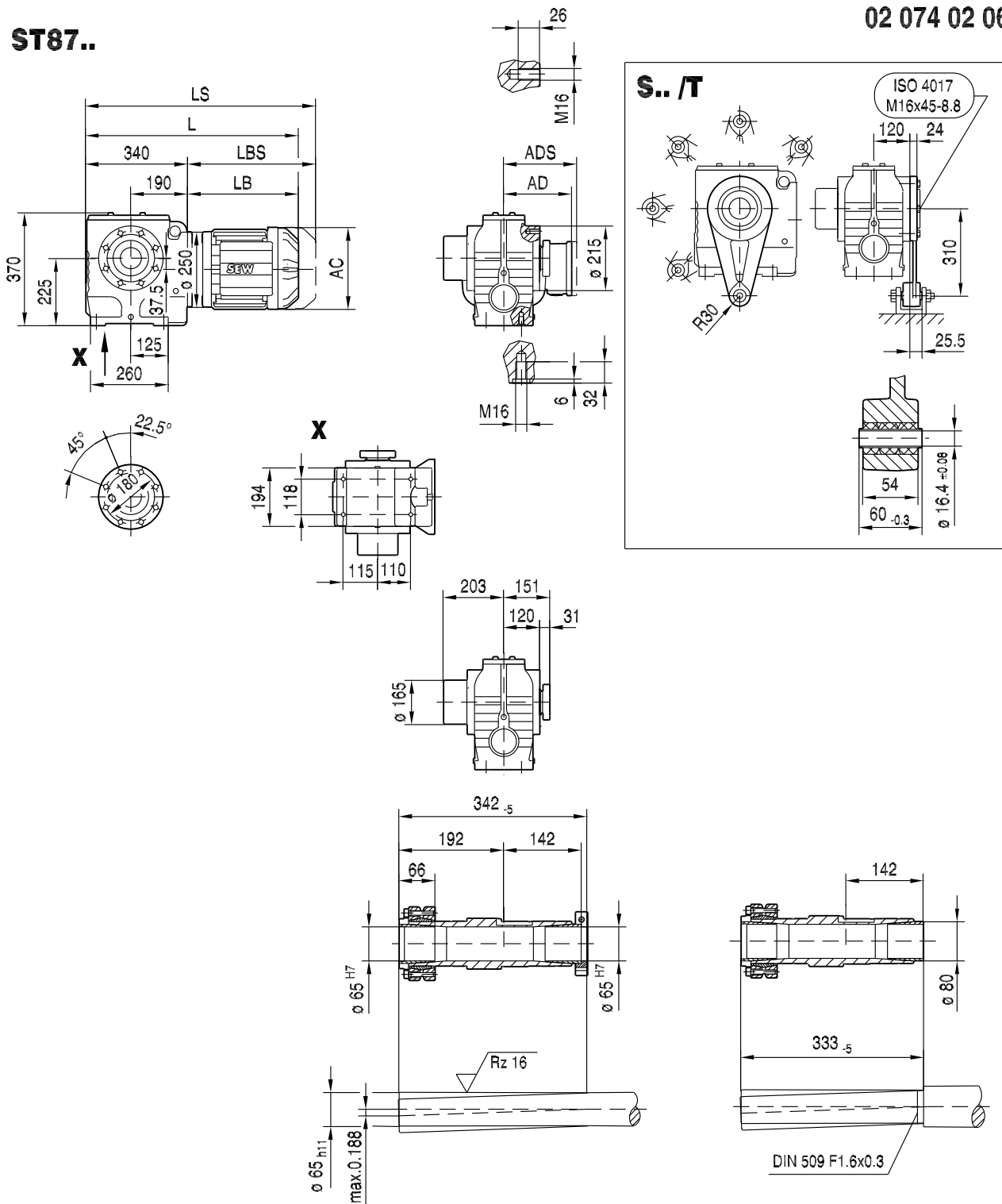
SHZ87..



(→ 136)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M
AC	156	156	179	179	197	197	221	221	270	316
AD	128	128	140	140	157	157	170	170	228	253
ADS	139	139	150	150	158	158	172	172	228	253
L	558	589	591	611	641	671	714	764	805	874
LS	639	670	684	704	734	764	826	876	942	1063
LB	218	249	251	271	301	331	374	424	465	534
LBS	299	330	344	364	394	424	486	536	602	723

**ST87..**

02 074 02 06



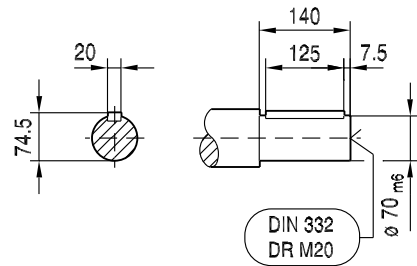
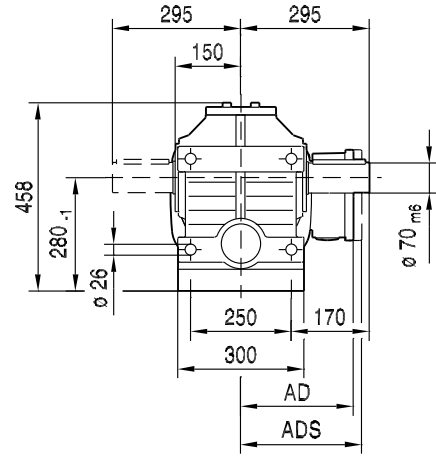
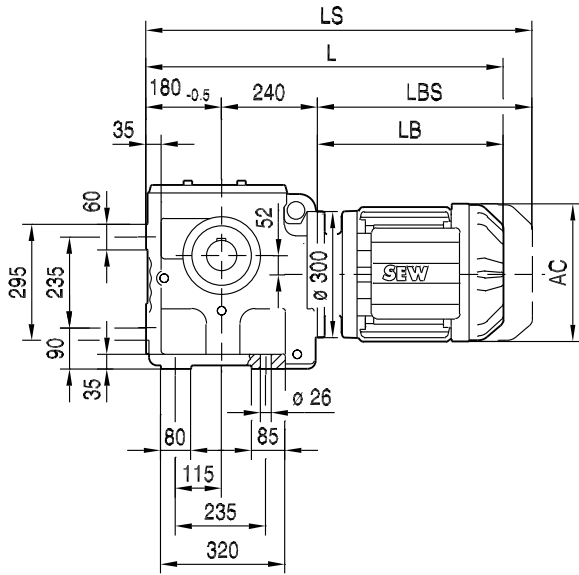
11

(→ 136)	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC	DR132S	DR132M/MC	DR160..	DR180S/M
AC	156	156	179	179	197	197	221	221	270	316
AD	128	128	140	140	157	157	170	170	228	253
ADS	139	139	150	150	158	158	172	172	228	253
L	558	589	591	611	641	671	714	764	805	874
LS	639	670	684	704	734	764	826	876	942	1063
LB	218	249	251	271	301	331	374	424	465	534
LBS	299	330	344	364	394	424	486	536	602	723



02 075 01 06

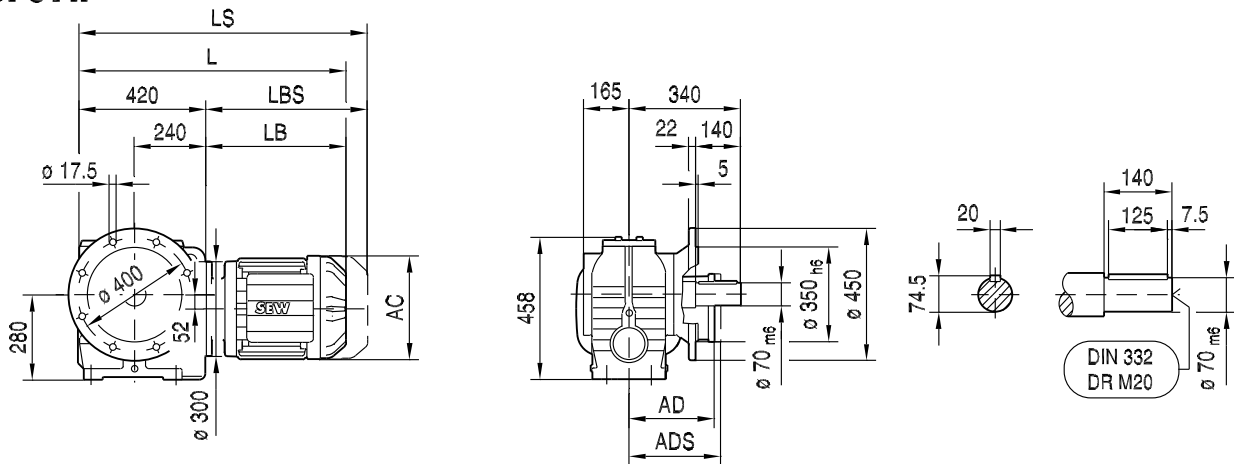
S97..



(→ 136)	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	179	197	197	221	221	221	270	316	316
AD	140	157	157	170	170	170	228	253	253
ADS	150	158	158	172	172	172	228	253	253
L	686	716	746	754	789	839	880	949	1009
LS	779	809	839	866	901	951	1017	1138	1198
LB	266	296	326	334	369	419	460	529	589
LBS	359	389	419	446	481	531	597	718	778

**SF97..**

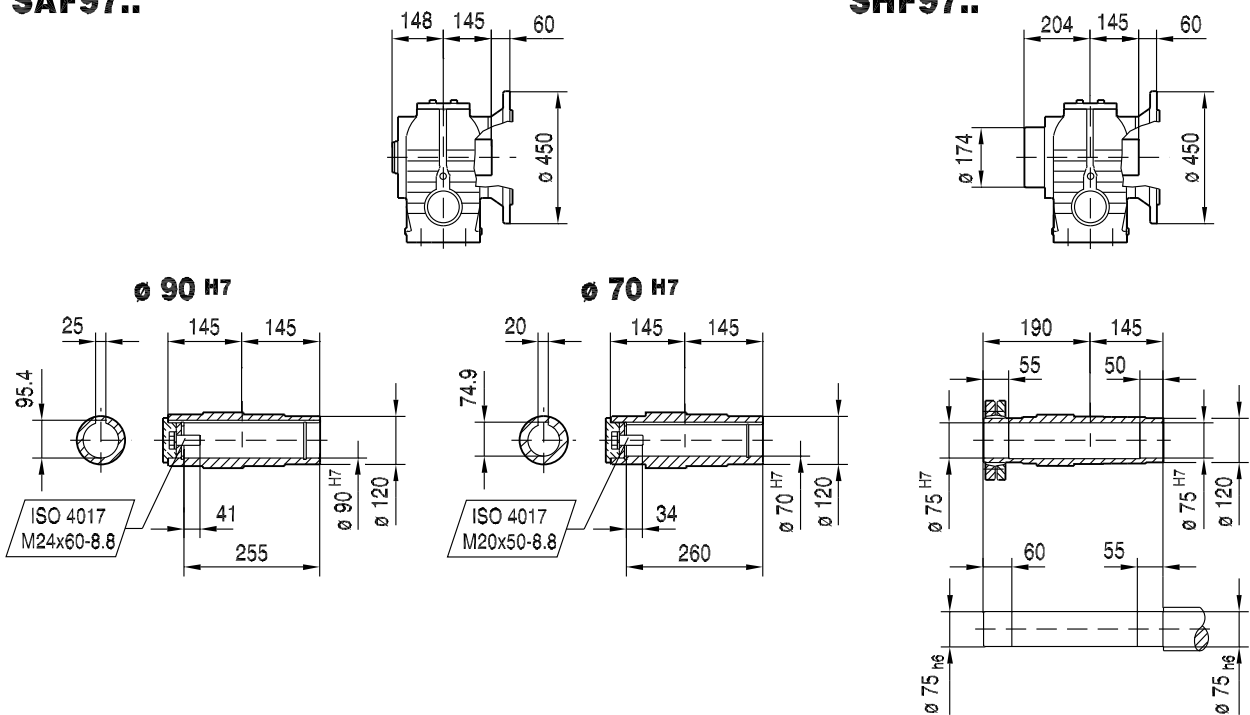
02 076 02 06



**SAF97..**

**SHF97..**

11

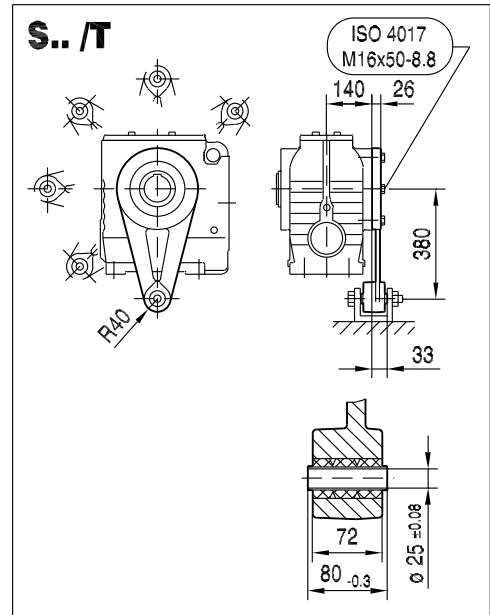
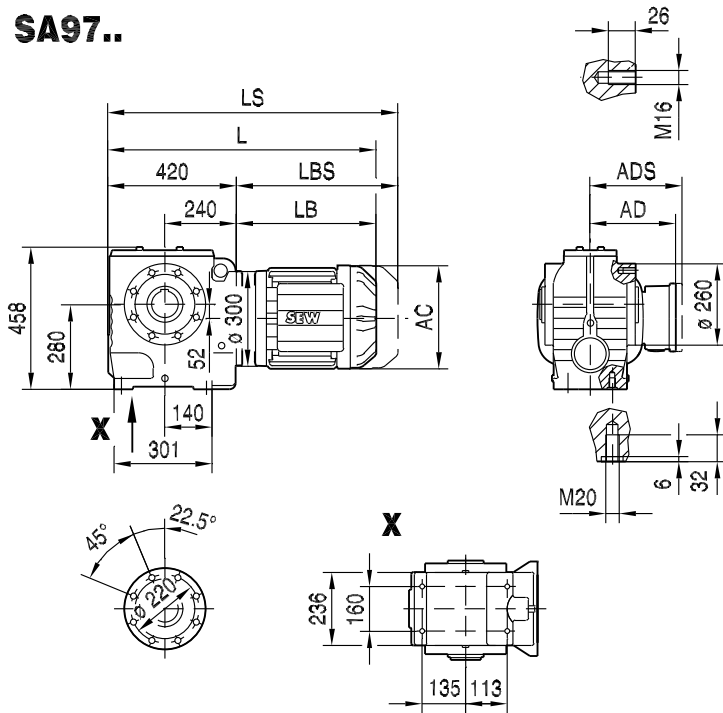


(→ 136)	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	179	197	197	221	221	221	270	316	316
AD	140	157	157	170	170	170	228	253	253
ADS	150	158	158	172	172	172	228	253	253
L	686	716	746	754	789	839	880	949	1009
LS	779	809	839	866	901	951	1017	1138	1198
LB	266	296	326	334	369	419	460	529	589
LBS	359	389	419	446	481	531	597	718	778

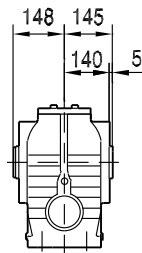


02 077 02 06

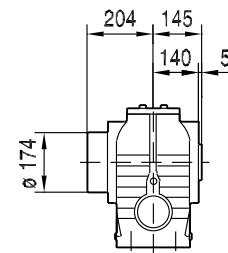
SA97..



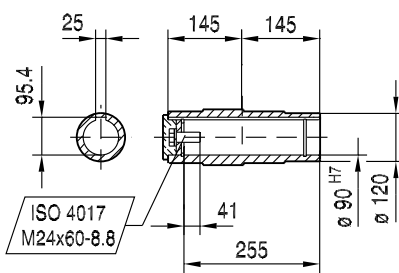
SA97..



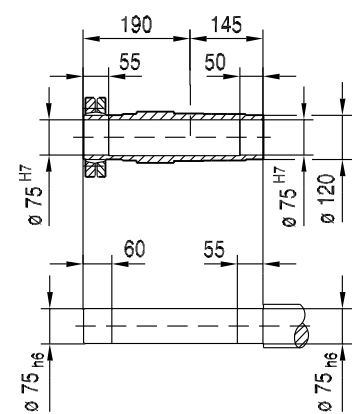
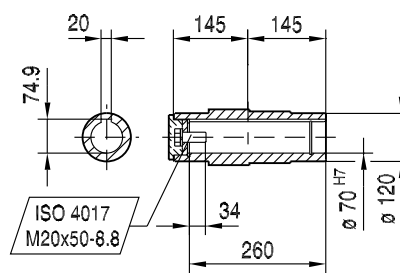
SH97..



∅ 90 H7



∅ 70 H7

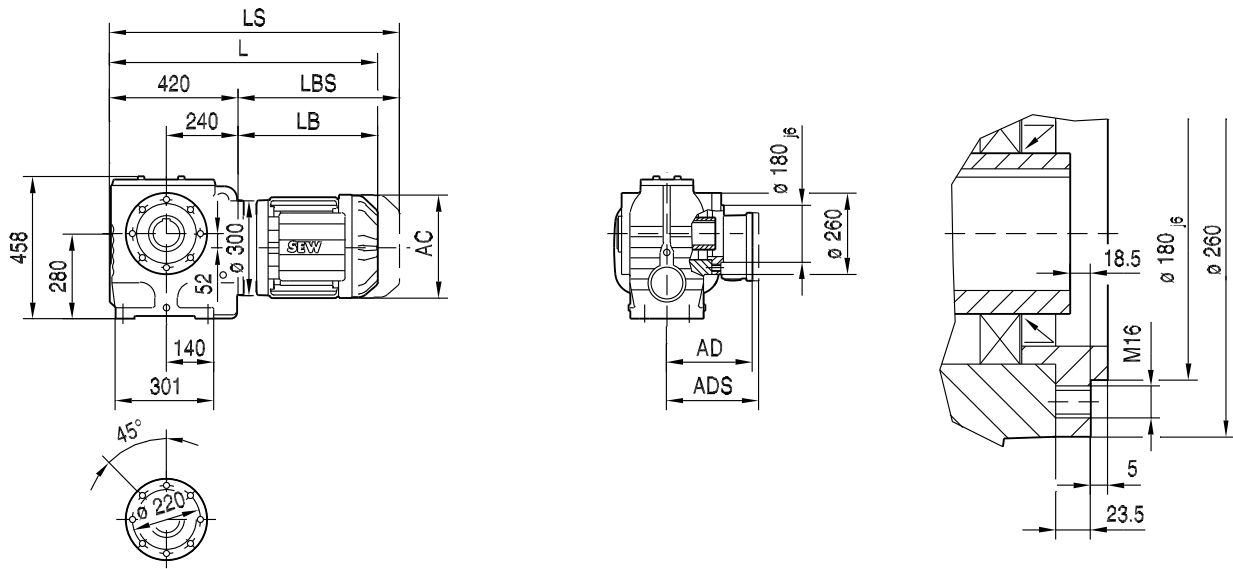


(→ 136)	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	179	197	197	221	221	221	270	316	316
AD	140	157	157	170	170	170	228	253	253
ADS	150	158	158	172	172	172	228	253	253
L	686	716	746	754	789	839	880	949	1009
LS	779	809	839	866	901	951	1017	1138	1198
LB	266	296	326	334	369	419	460	529	589
LBS	359	389	419	446	481	531	597	718	778



02 078 02 06

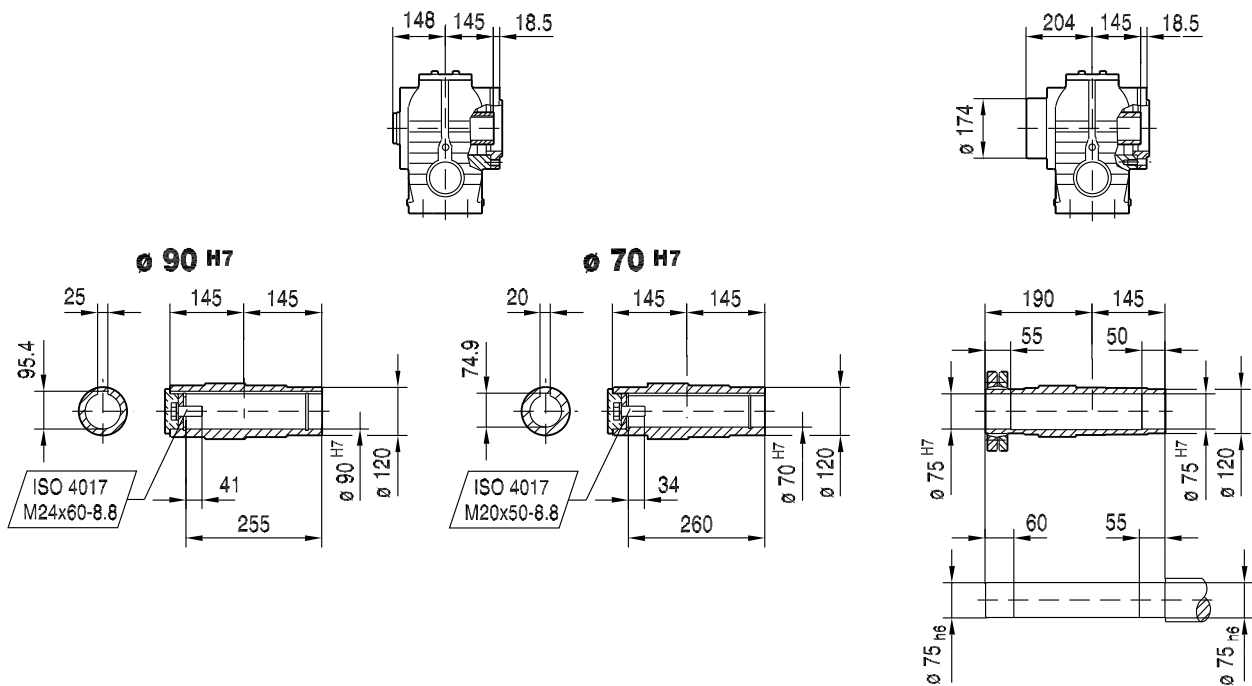
**SAZ97..**



**SAZ97..**

**SHZ97..**

11



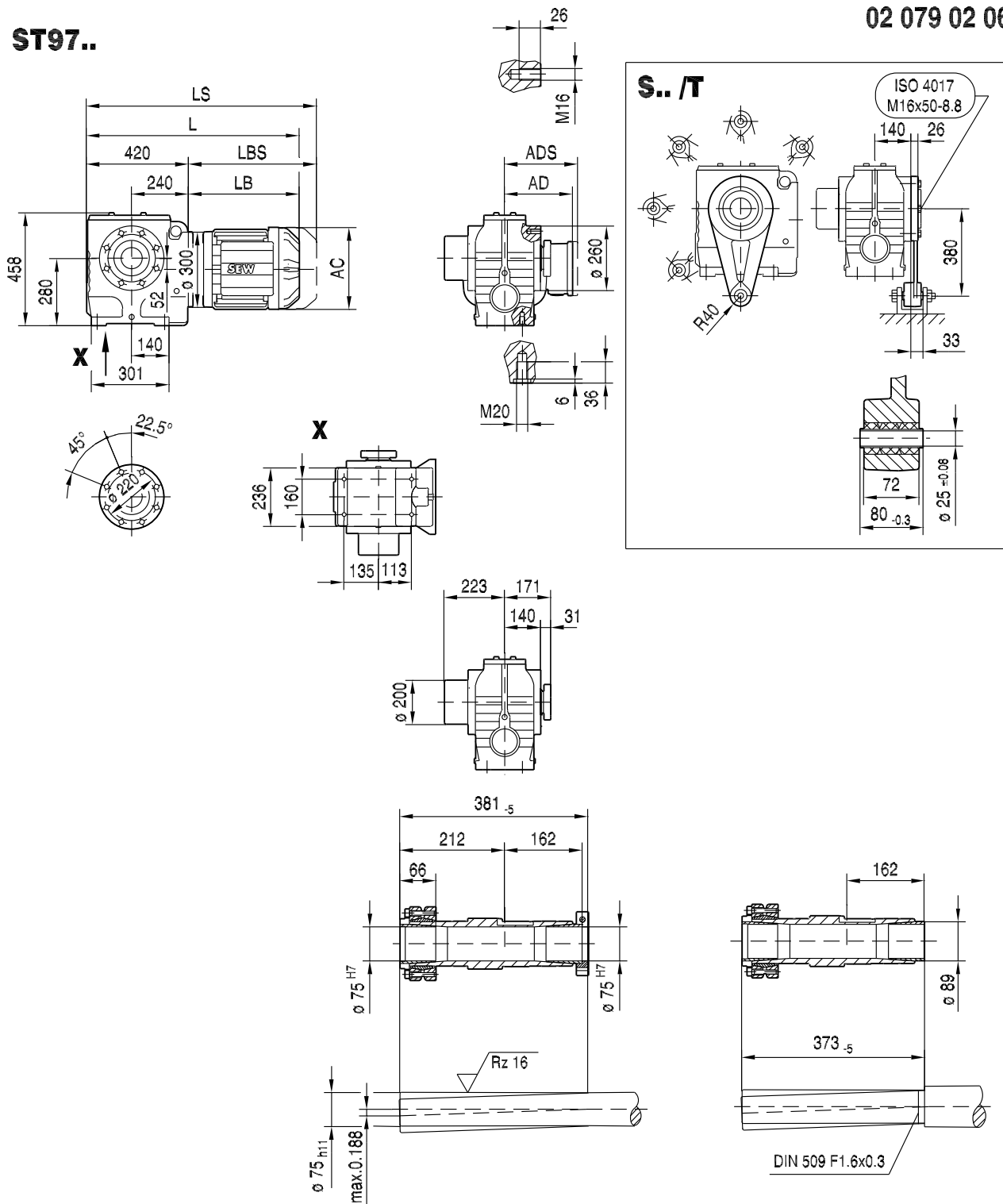
(→ 136)	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	179	197	197	221	221	221	270	316	316
AD	140	157	157	170	170	170	228	253	253
ADS	150	158	158	172	172	172	228	253	253
L	686	716	746	754	789	839	880	949	1009
LS	779	809	839	866	901	951	1017	1138	1198
LB	266	296	326	334	369	419	460	529	589
LBS	359	389	419	446	481	531	597	718	778



S..DRE/DRS  
S..DR.. [mm]

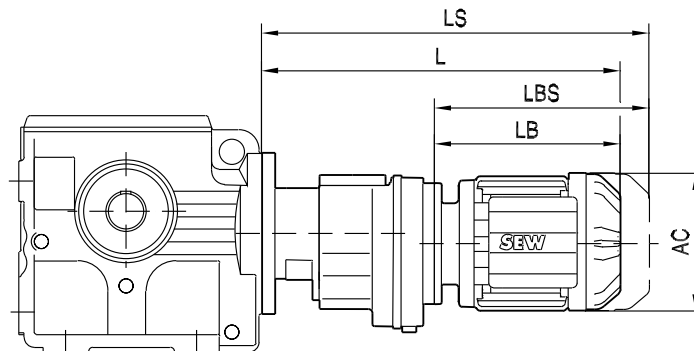
02 079 02 06

ST97..

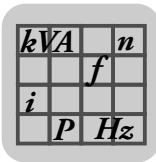


(→ 136)	DR90L	DR100M	DR100L/LC	DR112M	DR132S	DR132M/MC	DR160..	DR180S/M	DR180L/LC
AC	179	197	197	221	221	221	270	316	316
AD	140	157	157	170	170	170	228	253	253
ADS	150	158	158	172	172	172	228	253	253
L	686	716	746	754	789	839	880	949	1009
LS	779	809	839	866	901	951	1017	1138	1198
LB	266	296	326	334	369	419	460	529	589
LBS	359	389	419	446	481	531	597	718	778

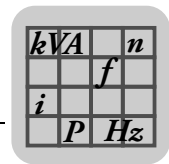
02 080 00 06



(→ 136)		AC	L	LS	LB	LBS
S..37R17	DR63..	132	324	379	149	204
S..47R17	DR63..	132	324	379	149	204
	DR71S..	139	335	403	160	228
S..57R17	DR63..	132	324	379	149	204
	DR71S..	139	335	403	160	228
	DR71M..	139	360	428	185	253
S..67R37	DR63..	132	356	411	191	246
	DR71S..	139	367	435	202	270
	DR71M..	139	392	460	227	295
	DR80S..	156	401	482	236	317
S..77R37	DR63..	132	348	403	191	246
	DR71S..	139	359	427	202	270
	DR71M..	139	384	452	227	295
	DR80S..	156	393	474	236	317
	DR80M..	156	424	505	267	348
S..87R57	DR63	132	401	456	185	240
	DR71S..	139	412	479	196	263
	DR71M..	139	437	504	221	288
	DR80S..	156	446	527	230	311
	DR80M..	156	477	558	261	342
	DR90M..	179	478	572	262	356
S..97R57	DR90L..	179	498	592	282	376
	DR63	132	396	451	185	240
	DR71S..	139	407	474	196	263
	DR71M..	139	432	499	221	288
	DR80S..	156	441	522	230	311
	DR80M..	156	472	553	261	342
	DR90M..	179	473	567	262	356
	DR90L..	179	493	587	282	376
	DR100M..	197	523	617	312	406
DR100LC..	197	553	647	342	436	


**11.6 S. SF. SA. SAF 37**
**3400 - 2800 1/min**

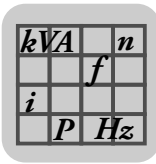
$i_{ges}$	$i_{sch}$	$n_e = 3400 \text{ 1/min}$				$n_e = 3200 \text{ 1/min}$				$n_e = 2800 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
157.43	38/1	22	78	0.31	57	20	80	0.30	57	18	82	0.27	57
144.40		24	76	0.33	58	22	78	0.31	58	19	80	0.28	57
122.94		28	74	0.37	58	26	75	0.35	58	23	78	0.32	58
106.00		32	71	0.41	59	30	72	0.39	59	26	76	0.36	59
98.80		34	70	0.43	59	32	72	0.41	59	28	75	0.38	59
86.36		39	68	0.47	60	37	69	0.45	60	32	72	0.41	60
80.96		42	66	0.49	60	40	68	0.47	60	35	72	0.43	60
71.44		48	55	0.47	58	45	64	0.50	60	39	70	0.47	61
63.33		54	37	0.41	51	51	51	0.47	57	44	67	0.51	61
53.83		63	29	0.39	49	59	32	0.40	50	52	53	0.49	59
55.93	27/2	61	70	0.58	77	57	71	0.56	76	50	72	0.50	76
51.30		66	68	0.61	77	62	70	0.60	77	55	72	0.54	76
43.68		78	66	0.70	77	73	67	0.67	77	64	70	0.61	77
37.66		90	64	0.78	78	85	65	0.74	78	74	68	0.68	78
35.10		97	62	0.81	78	91	64	0.78	78	80	66	0.71	78
30.68		111	61	0.90	78	104	62	0.87	78	91	64	0.78	78
28.76		118	58	0.92	78	111	61	0.91	78	97	64	0.83	78
25.38		134	47	0.86	77	126	53	0.90	78	110	62	0.91	79
22.50		151	31	0.69	71	142	43	0.84	76	124	57	0.94	79
19.13		178	24	0.65	69	167	27	0.67	70	146	44	0.87	77
19.89	24/5	171	42	0.88	86	161	43	0.85	86	141	44	0.76	86
18.24		186	41	0.93	86	175	42	0.90	86	154	44	0.83	86
15.53		219	39	1.0	86	206	40	1.0	86	180	42	0.92	86
13.39		254	37	1.1	86	239	39	1.1	86	209	41	1.0	86
12.48		272	37	1.2 *	86	256	38	1.2 *	86	224	40	1.1	86
10.91		312	35	1.3 *	86	293	36	1.3 *	86	257	39	1.2 *	87
10.23		332	35	1.4 *	87	313	36	1.4 *	87	274	38	1.3 *	87
9.02		377	31	1.4 *	86	355	34	1.5 *	87	310	36	1.3 *	87
8.00		425	20	1.1	82	400	29	1.4 *	86	350	35	1.5 *	87
6.80		500	16	1.0	81	471	18	1.1	82	412	29	1.4 *	86
6.33	19/5	537	24	1.5	87	506	27	1.6	0.88	442	32	1.7	0.88
5.38		632	20	1.5	87	595	22	1.6	0.87	520	26	1.6	0.88
4.86		700	18	1.5	87	658	19	1.5	0.87	576	24	1.6	0.88
3.97		856	14	1.5	86	806	15	1.5	0.87	705	19	1.6	0.88



2200 - 1400 1/min

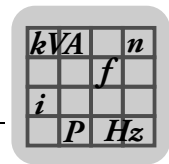
i <sub>ges</sub>	i <sub>sch</sub>	n <sub>e</sub> = 2200 1/min				n <sub>e</sub> = 1700 1/min				n <sub>e</sub> = 1400 1/min			
		n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]
157.43	38/1	14	87	0.23	56	11	91	0.19	54	8.9	92	0.16	53
144.40		15	86	0.24	56	12	90	0.20	55	9.7	92	0.17	54
122.94		18	83	0.27	57	14	87	0.22	56	11	91	0.20	55
106.00		21	81	0.30	58	16	86	0.25	57	13	88	0.22	56
98.80		22	80	0.32	58	17	85	0.27	57	14	87	0.23	56
86.36		25	78	0.35	59	20	82	0.29	58	16	86	0.25	57
80.96		27	77	0.37	60	21	82	0.31	59	17	85	0.27	58
71.44		31	75	0.40	60	24	80	0.33	60	20	84	0.29	59
63.33		35	73	0.44	61	27	79	0.37	60	22	82	0.32	60
53.83		41	69	0.48	62	32	76	0.41	61	26	80	0.36	61
55.93		39	77	0.42	75	30	81	0.35	74	25	81	0.29	73
51.30		43	76	0.45	76	33	80	0.37	75	27	81	0.31	74
43.68		50	74	0.51	76	39	78	0.42	76	32	81	0.36	75
37.66		58	72	0.57	77	45	76	0.47	76	37	79	0.41	76
35.10	27/2	63	71	0.60	77	48	75	0.50	77	40	78	0.43	76
30.68		72	70	0.67	78	55	73	0.55	77	46	76	0.47	76
28.76		76	68	0.70	78	59	73	0.58	77	49	75	0.50	77
25.38		87	67	0.77	79	67	71	0.64	78	55	74	0.55	77
22.50		98	66	0.85	79	76	70	0.70	79	62	73	0.61	78
19.13		115	63	0.95	80	89	68	0.80	79	73	71	0.69	79
19.89		111	48	0.65	85	85	50	0.53	85	70	52	0.46	84
18.24		121	47	0.70	85	93	49	0.56	85	77	52	0.50	84
15.53		142	45	0.78	86	109	48	0.64	85	90	50	0.56	85
13.39		164	44	0.88	86	127	47	0.73	86	105	49	0.63	85
12.48	24/5	176	43	0.92	86	136	46	0.76	86	112	48	0.66	86
10.91		202	42	1.0	87	156	45	0.85	86	128	48	0.75	86
10.23		215	41	1.1	87	166	45	0.90	87	137	47	0.78	86
9.02		244	40	1.2 *	87	188	43	0.98	87	155	46	0.86	87
8.00		275	39	1.3 *	87	213	43	1.1	87	175	45	0.95	87
6.80		324	37	1.4 *	88	250	41	1.2 *	88	206	43	1.1	87
6.33		348	35	1.4	88	269	35	1.1	88	221	35	0.93	87
5.38		19/5	409	34	1.6	88	316	34	1.3	88	260	34	1.1
4.86	453		32	1.7	89	350	33	1.4	88	288	33	1.1	88
3.97	554		26	1.7	88	428	32	1.6	89	353	32	1.3	88

\* P<sub>emax</sub> = 1.1 kW



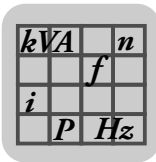
## 1100 - 700 1/min

$i_{ges}$	$i_{sch}$	$n_e = 1100 \text{ 1/min}$				$n_e = 900 \text{ 1/min}$				$n_e = 700 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
157.43	38/1	7.0	92	0.13	52	5.7	92	0.11	50	4.4	92	0.09	49
144.40		7.6	92	0.14	52	6.2	92	0.12	51	4.8	92	0.09	50
122.94		8.9	92	0.16	54	7.3	92	0.14	52	5.7	92	0.11	51
106.00		10	92	0.18	55	8.5	92	0.15	53	6.6	92	0.12	52
98.80		11	92	0.19	55	9.1	92	0.16	54	7.1	92	0.13	52
86.36		13	90	0.21	56	10	92	0.18	55	8.1	92	0.15	53
80.96		14	89	0.22	57	11	92	0.19	55	8.6	92	0.16	54
71.44		15	87	0.24	57	13	91	0.21	56	9.8	92	0.17	55
63.33		17	86	0.27	58	14	89	0.23	57	11	92	0.19	56
53.83		20	84	0.30	60	17	87	0.26	58	13	91	0.22	57
55.93	27/2	20	87	0.25	72	16	91	0.21	71	13	92	0.17	70
51.30		21	87	0.27	73	18	90	0.23	72	14	92	0.19	71
43.68		25	84	0.30	74	21	87	0.26	73	16	92	0.22	71
37.66		29	82	0.34	75	24	86	0.29	74	19	89	0.24	72
35.10		31	82	0.36	75	26	84	0.31	74	20	88	0.25	73
30.68		36	80	0.40	76	29	82	0.34	75	23	87	0.28	74
28.76		38	79	0.42	76	31	82	0.36	75	24	86	0.30	74
25.38		43	78	0.46	77	35	81	0.40	76	28	84	0.33	75
22.50		49	77	0.51	77	40	79	0.43	76	31	82	0.36	75
19.13		58	75	0.58	78	47	78	0.50	77	37	81	0.41	76
19.89	24/5	55	55	0.38	83	45	58	0.33	83	35	60	0.27	82
18.24		60	54	0.41	84	49	56	0.35	83	38	60	0.29	82
15.53		71	53	0.47	84	58	55	0.40	84	45	58	0.33	83
13.39		82	52	0.53	85	67	54	0.45	84	52	56	0.37	83
12.48		88	51	0.55	85	72	53	0.47	84	56	55	0.39	84
10.91		101	50	0.62	86	82	52	0.53	85	64	54	0.43	84
10.23		108	49	0.64	86	88	51	0.55	85	68	54	0.46	84
9.02		122	48	0.71	86	100	50	0.61	86	78	53	0.51	85
8.00		138	47	0.78	87	113	49	0.67	86	88	52	0.56	85
6.80		162	46	0.90	87	132	48	0.77	87	103	51	0.64	86
6.33	19/5	174	45	0.94	87	142	45	0.77	87	111	45	0.61	86
5.38		204	43	1.1	88	167	43	0.86	87	130	43	0.68	87
4.86		226	42	1.1	88	185	42	0.93	88	144	42	0.73	87
3.97		277	40	1.3	88	227	40	1.1	88	176	40	0.84	88



500 - 10 1/min

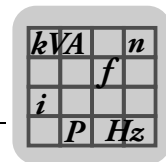
i <sub>ges</sub>	i <sub>sch</sub>	n <sub>e</sub> = 500 1/min				n <sub>e</sub> = 250 1/min				n <sub>e</sub> = 10 1/min			
		n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]
157.43	38/1	3.2	92	0.06	47	1.6	92	0.033	46	0.06	92	< 0.05	26
144.40		3.5	92	0.07	48	1.7	92	0.036	46	0.07	92	< 0.05	27
122.94		4.1	92	0.08	49	2.0	92	0.042	46	0.08	92	< 0.05	29
106.00		4.7	92	0.09	50	2.4	92	0.049	47	0.09	92	< 0.05	30
98.80		5.1	92	0.10	50	2.5	92	0.05	47	0.10	92	< 0.05	31
86.36		5.8	92	0.11	51	2.9	92	0.06	47	0.12	92	< 0.05	32
80.96		6.2	92	0.12	51	3.1	92	0.06	47	0.12	92	< 0.05	33
71.44		7.0	92	0.13	52	3.5	92	0.07	48	0.14	92	< 0.05	35
63.33		7.9	92	0.14	53	3.9	92	0.08	49	0.16	92	< 0.05	37
53.83		9.3	92	0.16	55	4.6	92	0.09	50	0.19	92	< 0.05	39
55.93		8.9	92	0.13	69	4.5	92	0.06	67	0.18	92	< 0.05	48
51.30		9.7	92	0.14	69	4.9	92	0.07	67	0.19	92	< 0.05	49
43.68		11	92	0.16	70	5.7	92	0.08	67	0.23	92	< 0.05	51
37.66		13	92	0.18	71	6.6	92	0.10	67	0.27	92	< 0.05	53
35.10	27/2	14	92	0.19	71	7.1	92	0.10	68	0.28	92	< 0.05	54
30.68		16	92	0.22	72	8.1	92	0.11	68	0.33	92	< 0.05	56
28.76		17	91	0.23	72	8.7	92	0.12	69	0.35	92	< 0.05	57
25.38		20	89	0.25	73	9.9	92	0.14	69	0.39	92	< 0.05	59
22.50		22	87	0.28	74	11	92	0.15	70	0.44	92	< 0.05	61
19.13		26	85	0.31	75	13	92	0.18	71	0.52	92	< 0.05	62
19.89		25	68	0.22	81	13	72	0.12	79	0.50	72	< 0.05	65
18.24		27	66	0.23	81	14	72	0.13	79	0.55	72	< 0.05	66
15.53		32	63	0.26	82	16	72	0.15	79	0.64	72	< 0.05	68
13.39		37	61	0.29	82	19	72	0.18	80	0.75	72	< 0.05	71
12.48	24/5	40	59	0.30	82	20	72	0.19	80	0.80	72	< 0.05	72
10.91		46	58	0.34	83	23	71	0.21	81	0.92	71	< 0.05	73
10.23		49	57	0.35	83	24	70	0.22	81	0.98	70	< 0.05	73
9.02		55	56	0.39	84	28	66	0.24	81	1.1	66	< 0.05	74
8.00		63	55	0.43	84	31	63	0.25	82	1.2	63	< 0.05	74
6.80		74	54	0.49	85	37	61	0.29	82	1.5	61	< 0.05	75
6.33		79	45	0.44	85	39	45	0.23	83	1.6	45	< 0.05	80
5.38		19/5	93	43	0.49	86	46	43	0.25	83	1.9	43	< 0.05
4.86	103		42	0.53	86	51	42	0.27	84	2.1	42	< 0.05	80
3.97		126	40	0.61	87	63	40	0.31	84	2.5	40	< 0.05	80


**11.7 S. SF. SA. SAF 47**
**3400 - 2800 1/min**

$i_{ges}$	$i_{sch}$	$n_e = 3400 \text{ 1/min}$				$n_e = 3200 \text{ 1/min}$				$n_e = 2800 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
201.00		17	150	0.44	60	16	150	0.42	60	14	150	0.37	59
184.80		18	150	0.48	60	17	150	0.45	60	15	150	0.40	59
158.12		22	150	0.55	61	20	150	0.52	61	18	150	0.46	60
137.05		25	150	0.63	62	23	150	0.59	62	20	150	0.52	61
128.10		27	150	0.67	63	25	150	0.63	62	22	150	0.56	62
110.73	42/1	31	138	0.70	63	29	148	0.71	63	25	150	0.63	63
94.08		36	113	0.69	62	34	123	0.70	63	30	146	0.72	63
84.00		40	95	0.66	61	38	107	0.69	62	33	130	0.71	63
71.75		47	58	0.55	53	45	82	0.64	60	39	107	0.70	63
67.20		51	53	0.54	52	48	68	0.60	57	42	99	0.69	62
56.61		60	40	0.51	49	57	46	0.53	51	49	75	0.65	60
69.39		49	140	0.91	79	46	140	0.86	78	40	140	0.76	78
63.80		53	140	0.99	79	50	140	0.93	79	44	140	0.82	78
54.59		62	140	1.1	80	59	140	1.1	79	51	140	0.95	79
47.32		72	139	1.3	80	68	140	1.2	80	59	140	1.1	80
44.22		77	129	1.3	80	72	139	1.3	80	63	140	1.2	80
38.23	29/2	89	112	1.3	80	84	120	1.3	80	73	139	1.3	80
32.48		105	91	1.3	79	99	100	1.3	80	86	117	1.3	80
29.00		117	76	1.2	78	110	86	1.3	79	97	104	1.3	80
24.77		137	47	0.94	72	129	66	1.2	77	113	87	1.3	80
23.20		147	42	0.90	71	138	54	1.0	75	121	79	1.3	79
19.54		174	32	0.84	69	164	37	0.89	71	143	59	1.1	77
20.33		167	100	2.0 *	88	157	100	1.9 *	88	138	100	1.6 *	88
17.62		193	97	2.2 *	88	182	100	2.2 *	88	159	100	1.9 *	88
16.47		206	90	2.2 *	88	194	97	2.2 *	88	170	100	2.0 *	88
14.24		239	78	2.2 *	88	225	83	2.2 *	88	197	97	2.3 *	88
12.10	27/5	281	63	2.1 *	88	264	69	2.2 *	88	231	82	2.2 *	88
10.80		315	53	2.0 *	87	296	60	2.1 *	88	259	72	2.2 *	88
9.23		368	32	1.5	83	347	45	1.9 *	86	303	60	2.2 *	88
8.64		394	29	1.5	82	370	37	1.7 *	85	324	55	2.1 *	88
7.28		467	22	1.3	81	440	25	1.4	82	385	41	1.9 *	86
6.83		498	34	2.0	87	469	37	2.1	88	410	45	2.2	88
6.4		531	31	2.0	87	500	34	2.0	87	438	42	2.2	88
5.39	20/5	631	24	1.8	86	594	27	1.9	87	519	34	2.1	88
4.76		714	20	1.8	85	672	23	1.9	86	588	29	2.0	87
4		850	16	1.7	85	800	18	1.8	85	700	23	1.9	87

 \*  $P_{emax} = 1.5 \text{ kW}$

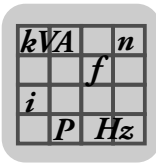




2200 - 1400 1/min

$i_{ges}$	$i_{sch}$	$n_e = 2200 \text{ 1/min}$				$n_e = 1700 \text{ 1/min}$				$n_e = 1400 \text{ 1/min}$				
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	
201.00	42/1	11	167	0.33	58	8.5	170	0.27	56	7.0	170	0.23	55	
184.80		12	167	0.36	58	9.2	168	0.29	57	7.6	170	0.24	56	
158.12		14	167	0.41	60	11	168	0.33	58	8.9	170	0.28	57	
137.05		16	165	0.46	60	12	167	0.37	59	10	168	0.31	58	
128.10		17	165	0.49	61	13	167	0.39	59	11	168	0.33	58	
110.73		20	165	0.55	62	15	167	0.44	61	13	168	0.38	59	
94.08		23	165	0.64	63	18	167	0.51	62	15	168	0.43	60	
84.00		26	162	0.70	64	20	167	0.57	62	17	167	0.48	61	
71.75		31	145	0.73	64	24	167	0.65	63	20	167	0.55	62	
67.20		33	137	0.73	64	25	164	0.68	64	21	167	0.58	63	
56.61		39	115	0.73	64	30	152	0.74	65	25	165	0.67	64	
69.39		32	155	0.67	77	24	155	0.52	76	20	155	0.44	75	
63.80		34	155	0.72	77	27	155	0.57	76	22	155	0.47	75	
54.59		40	155	0.84	78	31	155	0.66	77	26	155	0.55	76	
47.32		46	155	0.96	79	36	155	0.75	78	30	155	0.63	77	
44.22		50	155	1.0	79	38	155	0.80	78	32	155	0.67	77	
38.23		29/2	58	154	1.2	80	44	155	0.92	79	37	155	0.76	78
32.48			68	146	1.3	80	52	155	1.1	80	43	155	0.89	79
29.00			76	137	1.3	81	59	154	1.2	80	48	155	0.99	79
24.77	89		117	1.3	81	69	145	1.3	81	57	155	1.1	80	
23.20	95		111	1.4	81	73	142	1.3	81	60	152	1.2	80	
19.54	113		92	1.3	81	87	123	1.4	81	72	144	1.3	81	
20.33	108		109	1.4	87	84	110	1.1	87	69	110	0.92	86	
17.62	125	108	1.6 *	88	96	109	1.3	87	79	110	1.1	86		
16.47	134	108	1.7 *	88	103	109	1.4	87	85	110	1.1	87		
14.24	154	108	2.0 *	88	119	109	1.6 *	88	98	110	1.3	87		
12.10	27/5	182	105	2.3 *	89	140	109	1.8 *	88	116	109	1.5	88	
10.80		204	95	2.3 *	89	157	108	2.0 *	88	130	109	1.7 *	88	
9.23		238	82	2.3 *	89	184	105	2.3 *	89	152	109	2.0 *	88	
8.64		255	77	2.3 *	89	197	100	2.3 *	89	162	109	2.1 *	88	
7.28		302	64	2.3 *	89	234	86	2.4 *	89	192	103	2.3 *	89	
6.83		322	62	2.4	89	249	78	2.3	89	205	78	1.9	89	
6.4		344	58	2.3	89	266	76	2.4	89	219	76	2.0	89	
5.39	20/5	408	48	2.3	89	315	65	2.4	89	260	74	2.3	89	
4.76		462	42	2.3	89	357	58	2.4	89	294	72	2.5	90	
4		550	34	2.2	88	425	48	2.4	89	350	61	2.5	90	

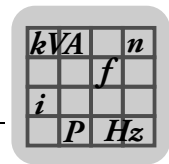
\*  $P_{emax} = 1.5 \text{ kW}$



## 1100 - 700 1/min

$i_{ges}$	$i_{sch}$	$n_e = 1100 \text{ 1/min}$				$n_e = 900 \text{ 1/min}$				$n_e = 700 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
201.00	42/1	5.5	176	0.19	53	4.5	180	0.16	52	3.5	185	0.13	51
184.80		6.0	174	0.20	54	4.9	178	0.17	53	3.8	183	0.14	51
158.12		7.0	172	0.23	55	5.7	176	0.20	54	4.4	180	0.16	52
137.05		8.0	171	0.26	56	6.6	172	0.22	55	5.1	178	0.18	53
128.10		8.6	171	0.27	57	7.0	172	0.23	55	5.5	176	0.19	54
110.73		9.9	169	0.30	58	8.1	171	0.26	56	6.3	174	0.21	55
94.08		12	169	0.35	59	9.6	171	0.30	57	7.4	172	0.24	56
84.00		13	169	0.39	60	11	169	0.32	58	8.3	171	0.26	57
71.75		15	169	0.45	61	13	169	0.37	60	9.8	171	0.30	58
67.20		16	169	0.47	61	13	169	0.40	60	10	171	0.32	58
56.61		19	169	0.55	63	16	169	0.46	61	12	171	0.37	60
69.39		16	173	0.39	74	13	176	0.33	73	10	180	0.27	71
63.80		17	173	0.42	74	14	175	0.35	73	11	180	0.29	72
54.59		20	171	0.48	75	16	173	0.40	74	13	176	0.33	73
47.32	23	171	0.55	76	19	173	0.46	75	15	175	0.37	73	
44.22	29/2	25	171	0.58	76	20	171	0.49	75	16	175	0.39	74
38.23		29	169	0.66	77	24	171	0.56	76	18	173	0.44	75
32.48		34	169	0.77	78	28	171	0.65	77	22	171	0.51	75
29.00		38	170	0.86	78	31	171	0.72	77	24	171	0.57	76
24.77		44	169	0.99	79	36	170	0.83	78	28	171	0.66	77
23.20		47	164	1.0	79	39	170	0.88	79	30	171	0.70	77
19.54		56	154	1.1	80	46	165	1.0	79	36	170	0.81	78
20.33		54	112	0.75	85	44	114	0.63	84	34	116	0.50	83
17.62		62	112	0.86	86	51	113	0.71	85	40	115	0.57	84
16.47		67	112	0.91	86	55	113	0.76	85	43	114	0.60	84
14.24	77	111	1.0	86	63	112	0.86	86	49	113	0.69	85	
12.10	27/5	91	111	1.2	87	74	111	1.0	86	58	113	0.80	85
10.80		102	111	1.4	87	83	111	1.1	87	65	112	0.88	86
9.23		119	110	1.6 *	88	98	111	1.3	87	76	112	1.0	86
8.64		127	109	1.7 *	88	104	111	1.4	87	81	112	1.1	87
7.28		151	109	2.0 *	88	124	111	1.6 *	88	96	111	1.3	87
6.83		161	95	1.8	89	132	95	1.5	88	102	95	1.2	88
6.4	20/5	172	93	1.9	89	141	93	1.6	88	109	93	1.2	88
5.39		204	89	2.1	89	167	89	1.8	89	130	89	1.4	88
4.76		231	87	2.4	89	189	87	1.9	89	147	87	1.5	89
4		275	78	2.5	90	225	84	2.2	89	175	84	1.7	89

\*  $P_{emax} = 1.5 \text{ kW}$



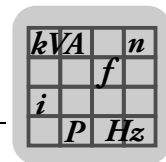
500 - 10 1/min

$i_{ges}$	$i_{sch}$	$n_e = 500 \text{ 1/min}$				$n_e = 250 \text{ 1/min}$				$n_e = 10 \text{ 1/min}$				
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	
201.00	42/1	2.5	185	0.10	49	1.2	185	0.05	48	0.05	185	< 0.05	32	
184.80		2.7	185	0.11	49	1.4	185	0.05	48	0.05	185	< 0.05	32	
158.12		3.2	185	0.12	50	1.6	185	0.06	48	0.06	185	< 0.05	35	
137.05		3.6	185	0.14	51	1.8	185	0.07	48	0.07	185	< 0.05	37	
128.10		3.9	183	0.15	51	2.0	185	0.08	48	0.08	185	< 0.05	38	
110.73		4.5	181	0.16	52	2.3	185	0.09	49	0.09	185	< 0.05	40	
94.08		5.3	178	0.19	54	2.7	185	0.10	49	0.11	185	< 0.05	42	
84.00		6.0	176	0.20	54	3.0	185	0.12	50	0.12	185	< 0.05	43	
71.75		7.0	174	0.23	56	3.5	185	0.13	51	0.14	185	< 0.05	44	
67.20		7.4	172	0.24	56	3.7	185	0.14	51	0.15	185	< 0.05	44	
56.61		8.8	172	0.28	57	4.4	181	0.16	53	0.18	181	< 0.05	45	
69.39		7.2	185	0.20	70	3.6	185	0.10	68	0.14	185	< 0.05	56	
63.80		7.8	185	0.22	70	3.9	185	0.11	68	0.16	185	< 0.05	57	
54.59		9.2	185	0.25	71	4.6	185	0.13	68	0.18	185	< 0.05	60	
47.32	29/2	11	181	0.28	72	5.3	185	0.15	68	0.21	185	< 0.05	61	
44.22		11	180	0.30	72	5.7	185	0.16	69	0.23	185	< 0.05	62	
38.23		13	178	0.33	73	6.5	185	0.18	69	0.26	185	< 0.05	63	
32.48		15	174	0.38	74	7.7	185	0.21	70	0.31	185	< 0.05	64	
29.00		17	174	0.42	74	8.6	185	0.24	71	0.34	185	< 0.05	65	
24.77		20	172	0.48	75	10	183	0.27	71	0.40	183	< 0.05	66	
23.20		22	172	0.51	76	11	181	0.28	72	0.43	181	< 0.05	66	
19.54		26	172	0.60	77	13	178	0.33	73	0.51	178	< 0.05	67	
20.33		25	124	0.39	82	12	157	0.25	80	0.49	157	< 0.05	75	
17.62		28	120	0.43	83	14	149	0.28	80	0.57	149	< 0.05	76	
16.47		30	118	0.45	83	15	145	0.29	81	0.61	145	< 0.05	76	
14.24		35	116	0.51	84	18	138	0.31	81	0.70	138	< 0.05	77	
12.10		27/5	41	115	0.59	84	21	131	0.35	82	0.83	131	< 0.05	77
10.80			46	114	0.65	85	23	127	0.37	82	0.93	127	< 0.05	77
9.23	54		113	0.75	85	27	121	0.41	83	1.1	121	< 0.05	78	
8.64	58		113	0.80	86	29	120	0.44	83	1.2	120	< 0.05	78	
7.28	69		112	0.93	86	34	117	0.50	84	1.4	117	< 0.05	78	
6.83	73		95	0.84	87	7	95	0.43	84	1.5	95	< 0.05	81	
6.4	20/5	78	93	0.88	87	39	93	0.45	85	1.6	93	< 0.05	81	
5.39		93	89	0.99	87	46	89	0.51	85	1.9	89	< 0.05	81	
4.76		105	87	1.1	88	53	87	0.56	86	2.1	87	< 0.05	81	
4		125	84	1.2	88	63	84	0.64	86	2.5	84	< 0.05	81	


**11.8 S. SF. SA. SAF 57**
**3400 - 2800 1/min**

$i_{ges}$	$i_{sch}$	$n_e = 3400 \text{ 1/min}$				$n_e = 3200 \text{ 1/min}$				$n_e = 2800 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
201.00		17	270	0.75	64	16	270	0.71	63	14	270	0.63	62
184.80		18	270	0.81	64	17	270	0.77	64	15	270	0.68	63
158.12		22	270	0.93	65	20	270	0.88	65	18	270	0.78	64
137.05		25	255	1.0	66	23	270	1.0	66	20	270	0.89	65
128.10		27	245	1.0	66	25	255	1.0	66	22	270	0.94	65
110.73	42/1	31	215	1.0	67	29	230	1.0	67	25	255	1.0	66
94.08		36	184	1.0	67	34	196	1.0	67	30	225	1.1	67
84.00		40	165	1.0	67	38	175	1.0	67	33	200	1.0	67
71.75		47	139	1.0	67	45	149	1.0	67	39	174	1.1	67
67.20		51	128	1.0	66	48	139	1.0	67	42	164	1.1	67
56.61		60	103	1.0	65	57	114	1.0	66	49	138	1.1	67
69.39		49	220	1.4	81	46	220	1.3	80	40	220	1.2	80
63.80		53	220	1.5	81	50	220	1.4	81	44	220	1.3	80
54.59		62	220	1.8	81	59	220	1.7	81	51	220	1.5	81
47.32		72	210	1.9	82	68	220	1.9	82	59	220	1.7	81
44.22		77	197	1.9	82	72	205	1.9	82	63	220	1.8	81
38.23	29/2	89	174	2.0	82	84	184	2.0	82	73	205	1.9	82
32.48		105	148	2.0	82	99	157	2.0	82	86	180	2.0	82
29.00		117	131	2.0	82	110	141	2.0	82	97	162	2.0	82
24.77		137	111	1.9	82	129	120	2.0	82	113	139	2.0	82
23.20		147	102	1.9	82	138	111	2.0	82	121	131	2.0	82
19.54		174	81	1.8	81	164	90	1.9	82	143	109	2.0	82
20.33		167	160	3.2 *	89	157	160	3.0	89	138	160	2.6	88
17.62		193	140	3.2 *	89	182	149	3.2 *	89	159	160	3.0	89
16.47		206	132	3.2 *	89	194	140	3.2 *	89	170	158	3.2 *	89
14.24		239	116	3.2 *	89	225	123	3.2 *	89	197	139	3.2 *	89
12.10	27/5	281	99	3.3 *	89	264	105	3.3 *	89	231	121	3.3 *	89
10.80		315	88	3.3 *	89	296	94	3.3 *	89	259	108	3.3 *	89
9.23		368	73	3.2 *	89	347	79	3.2 *	89	303	93	3.3 *	89
8.64		394	68	3.2 *	89	370	74	3.2 *	89	324	87	3.3 *	89
7.28		467	54	3.0	88	440	60	3.1 *	89	385	72	3.2 *	89
6.8		498	54	3.2	89	469	58	3.2	89	410	69	3.3	90
6.4		531	50	3.1	89	500	54	3.2	89	438	64	3.3	89
5.4	20/5	631	41	3.1	89	594	44	3.1	89	519	53	3.2	89
4.8		714	35	3.0	88	672	38	3.0	89	588	46	3.2	89
4		850	28	2.8	88	800	31	2.9	88	700	38	3.1	89

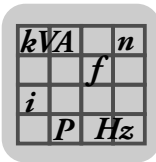
 \*  $P_{emax} = 3.0 \text{ kW}$



2200 - 1400 1/min

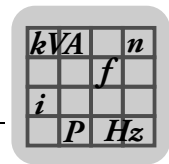
$i_{ges}$	$i_{sch}$	$n_e = 2200 \text{ 1/min}$				$n_e = 1700 \text{ 1/min}$				$n_e = 1400 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
201.00	42/1	11	295	0.55	61	8.5	295	0.44	59	7.0	295	0.37	58
184.80		12	295	0.60	62	9.2	295	0.48	60	7.6	295	0.40	58
158.12		14	295	0.69	63	11	295	0.55	61	8.9	295	0.46	60
137.05		16	295	0.78	64	12	295	0.62	62	10	295	0.52	61
128.10		17	295	0.83	64	13	295	0.66	62	11	295	0.55	61
110.73		20	290	0.93	65	15	295	0.75	63	13	295	0.63	62
94.08		23	275	1.0	66	18	300	0.88	65	15	295	0.73	63
84.00		26	250	1.0	67	20	285	0.93	65	17	295	0.80	64
71.75		31	220	1.1	67	24	275	1.0	66	20	290	0.91	65
67.20		33	210	1.1	67	25	260	1.0	67	21	285	0.95	65
56.61		39	179	1.1	68	30	225	1.1	67	25	265	1.0	67
69.39		32	245	1.0	79	24	245	0.81	77	20	245	0.68	76
63.80		34	245	1.1	79	27	245	0.88	78	22	245	0.73	77
54.59		40	245	1.3	80	31	245	1.0	79	26	245	0.85	78
47.32	46	245	1.5	81	36	245	1.2	79	30	245	0.97	79	
44.22	29/2	50	245	1.6	81	38	245	1.2	80	32	245	1.0	79
38.23		58	245	1.8	81	44	245	1.4	80	37	245	1.2	80
32.48		68	225	1.9	82	52	245	1.7	81	43	245	1.4	80
29.00		76	200	1.9	82	59	245	1.8	81	48	245	1.5	81
24.77		89	177	2.0	82	69	220	1.9	82	57	245	1.8	81
23.20		95	167	2.0	83	73	210	2.0	82	60	245	1.9	82
19.54		113	143	2.0	83	87	183	2.0	83	72	215	2.0	82
20.33		108	168	2.2	88	84	168	1.7	87	69	168	1.4	87
17.62		125	168	2.5	88	96	168	1.9	88	79	168	1.6	87
16.47		134	169	2.7	88	103	168	2.1	88	85	168	1.7	87
14.24	154	169	3.1 *	89	119	169	2.4	88	98	169	2.0	88	
12.10	27/5	182	150	3.2 *	89	140	169	2.8	89	116	169	2.3	88
10.80		204	136	3.2 *	89	157	169	3.1 *	89	130	169	2.6	88
9.23		238	119	3.3 *	89	184	149	3.2 *	89	152	169	3.0	89
8.64		255	112	3.3 *	89	197	141	3.3 *	89	162	166	3.2 *	89
7.28		302	96	3.4 *	90	234	122	3.3 *	90	192	146	3.3 *	89
6.8		322	91	3.4	90	249	100	2.9	90	205	100	2.4	89
6.4		344	85	3.4	90	266	98	3.0	90	219	98	2.5	89
5.4		20/5	408	72	3.4	90	315	95	3.5	90	260	95	2.9
4.8	462		63	3.4	90	357	84	3.5	90	294	93	3.2	90
4	550		53	3.4	90	425	71	3.5	90	350	88	3.6	90

\*  $P_{emax} = 3.0 \text{ kW}$



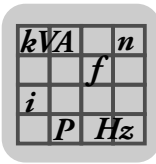
## 1100 - 700 1/min

$i_{ges}$	$i_{sch}$	$n_e = 1100 \text{ 1/min}$				$n_e = 900 \text{ 1/min}$				$n_e = 700 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
201.00	42/1	5.5	295	0.30	56	4.5	300	0.26	55	3.5	310	0.21	53
184.80		6.0	295	0.32	57	4.9	300	0.28	55	3.8	305	0.23	54
158.12		7.0	295	0.37	58	5.7	295	0.31	56	4.4	300	0.25	55
137.05		8.0	295	0.42	59	6.6	295	0.35	57	5.1	300	0.29	56
128.10		8.6	295	0.45	59	7.0	295	0.37	58	5.5	295	0.30	56
110.73		9.9	295	0.51	61	8.1	295	0.43	59	6.3	295	0.34	57
94.08		12	295	0.59	62	9.6	295	0.49	60	7.4	295	0.39	58
84.00		13	295	0.65	63	11	295	0.54	61	8.3	295	0.43	59
71.75		15	295	0.74	64	13	295	0.62	62	9.8	295	0.50	61
67.20		16	300	0.80	64	13	295	0.66	63	10	295	0.53	61
56.61		19	290	0.91	65	16	300	0.78	64	12	295	0.61	62
69.39		16	270	0.60	75	13	270	0.49	74	10	270	0.39	73
63.80		17	270	0.64	76	14	270	0.53	75	11	270	0.42	73
54.59		20	270	0.74	77	16	270	0.62	75	13	270	0.49	74
47.32		23	270	0.85	77	19	270	0.70	76	15	270	0.56	75
44.22	29/2	25	270	0.91	78	20	270	0.75	77	16	270	0.59	75
38.23		29	270	1.0	79	24	270	0.86	77	18	270	0.68	76
32.48		34	270	1.2	79	28	270	1.0	78	22	270	0.79	77
29.00		38	270	1.3	80	31	270	1.1	79	24	270	0.88	78
24.77		44	270	1.6	81	36	270	1.3	80	28	270	1.0	78
23.20		47	270	1.7	81	39	270	1.4	80	30	270	1.1	79
19.54		56	250	1.8	81	46	270	1.6	81	36	270	1.3	80
20.33		54	168	1.1	86	44	170	0.93	85	34	172	0.74	84
17.62		62	169	1.3	86	51	169	1.1	86	40	170	0.83	85
16.47		67	168	1.4	87	55	168	1.1	86	43	170	0.89	85
14.24	77	168	1.6	87	63	168	1.3	86	49	170	1.0	86	
12.10	27/5	91	169	1.8	88	74	169	1.5	87	58	169	1.2	86
10.80		102	169	2.1	88	83	169	1.7	87	65	169	1.3	87
9.23		119	170	2.4	88	98	168	2.0	88	76	168	1.5	87
8.64		127	170	2.6	88	104	169	2.1	88	81	168	1.6	87
7.28		151	170	3.0	89	124	170	2.5	88	96	170	1.9	88
6.8		161	120	2.3	89	132	120	1.9	89	102	120	1.5	88
6.4	20/5	172	117	2.4	89	141	117	1.9	89	109	117	1.5	88
5.4		204	111	2.6	90	167	111	2.2	89	130	111	1.7	89
4.8		231	108	2.9	90	189	108	2.4	90	147	108	1.9	89
4		275	103	3.3	90	225	103	2.7	90	175	103	2.1	89



500 - 10 1/min

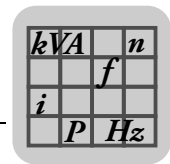
$i_{ges}$	$i_{sch}$	$n_e = 500 \text{ 1/min}$				$n_e = 250 \text{ 1/min}$				$n_e = 10 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
201.00	42/1	2.5	330	0.17	51	1.2	330	0.09	49	0.05	330	< 0.05	42
184.80		2.7	330	0.18	51	1.4	330	0.10	49	0.05	330	< 0.05	43
158.12		3.2	315	0.20	52	1.6	330	0.11	49	0.06	330	< 0.05	44
137.05		3.6	310	0.22	53	1.8	330	0.13	50	0.07	330	< 0.05	45
128.10		3.9	305	0.23	54	2.0	330	0.14	50	0.08	330	< 0.05	46
110.73		4.5	300	0.26	55	2.3	330	0.15	51	0.09	330	< 0.05	46
94.08		5.3	300	0.30	56	2.7	330	0.18	51	0.11	330	< 0.05	47
84.00		6.0	295	0.32	57	3.0	325	0.19	52	0.12	325	< 0.05	47
71.75		7.0	295	0.37	58	3.5	310	0.21	53	0.14	310	< 0.05	48
67.20		7.4	295	0.39	58	3.7	310	0.23	54	0.15	310	< 0.05	48
56.61		8.8	295	0.46	60	4.4	300	0.25	55	0.18	300	< 0.05	48
69.39		7.2	300	0.32	71	3.6	300	0.17	68	0.14	300	< 0.05	63
63.80		7.8	300	0.34	71	3.9	300	0.18	68	0.16	300	< 0.05	64
54.59		9.2	300	0.40	72	4.6	300	0.21	69	0.18	300	< 0.05	65
47.32		11	300	0.45	73	5.3	300	0.24	70	0.21	300	< 0.05	66
44.22		29/2	11	300	0.48	74	5.7	300	0.25	70	0.23	300	< 0.05
38.23	13		295	0.54	74	6.5	300	0.29	71	0.26	300	< 0.05	67
32.48	15		295	0.63	75	7.7	300	0.34	71	0.31	300	< 0.05	67
29.00	17		295	0.70	76	8.6	300	0.38	72	0.34	300	< 0.05	67
24.77	20		295	0.81	77	10	300	0.43	73	0.40	300	< 0.05	68
23.20	22		295	0.86	77	11	300	0.46	73	0.43	300	< 0.05	68
19.54	26		295	1.0	78	13	295	0.53	74	0.51	295	< 0.05	68
20.33	25		181	0.56	83	12	215	0.35	80	0.49	215	< 0.05	77
17.62	28		175	0.62	83	14	210	0.39	81	0.57	210	< 0.05	77
16.47	30		174	0.66	84	15	205	0.40	81	0.61	205	< 0.05	78
14.24	27/5	35	172	0.75	84	18	198	0.45	81	0.70	198	< 0.05	78
12.10		41	170	0.87	85	21	188	0.49	82	0.83	188	< 0.05	78
10.80		46	170	0.97	85	23	184	0.54	83	0.93	184	< 0.05	78
9.23		54	170	1.1	86	27	177	0.60	83	1.1	177	< 0.05	79
8.64		58	170	1.2	86	29	175	0.64	83	1.2	175	< 0.05	79
7.28		69	170	1.4	87	34	172	0.73	84	1.4	172	< 0.05	79
6.8		73	120	1.1	87	37	120	0.54	85	1.5	120	< 0.05	81
6.4		20/5	78	117	1.1	87	39	117	0.56	85	1.6	117	< 0.05
5.4	93		111	1.2	88	46	111	0.63	86	1.9	111	< 0.05	81
4.8	105		108	1.3	88	53	108	0.69	86	2.1	108	< 0.05	81
4	125		103	1.5	89	63	103	0.78	87	2.5	103	< 0.05	81


**11.9 S. SF. SA. SAF 67**
**3400 - 2800 1/min**

$i_{ges}$	$i_{sch}$	$n_e = 3400 \text{ 1/min}$				$n_e = 3200 \text{ 1/min}$				$n_e = 2800 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
217.41	42/1	16	465	1.2	66	15	465	1.1	66	13	465	0.96	65
190.11		18	465	1.3	67	17	465	1.2	67	15	465	1.1	66
180.60		19	465	1.4	67	18	465	1.3	67	16	465	1.1	66
158.45		21	465	1.5	68	20	465	1.5	68	18	465	1.3	67
134.40		25	465	1.8	69	24	465	1.7	68	21	465	1.5	68
121.33		28	455	1.9	69	26	465	1.9	69	23	465	1.6	68
106.75		32	405	2.0	69	30	430	2.0	69	26	465	1.9	69
100.80		34	380	1.9	69	32	410	2.0	69	28	465	2.0	69
85.83		40	320	1.9	69	37	345	1.9	69	33	400	2.0	70
78.00		44	285	1.9	69	41	310	1.9	69	36	365	2.0	70
67.57		50	235	1.8	67	47	260	1.9	68	41	315	2.0	69
58.80		58	184	1.7	65	54	215	1.8	67	48	270	1.9	69
75.06		45	435	2.5	82	43	435	2.4	82	37	435	2.1	81
65.63		52	435	2.9	82	49	435	2.7	82	43	435	2.4	82
62.35	55	435	3.0	83	51	435	2.8	82	45	435	2.5	82	
54.70	62	435	3.4	83	59	435	3.2	83	51	435	2.8	83	
46.40	73	395	3.6	83	69	415	3.6	83	60	435	3.3	83	
41.89	81	355	3.6	83	76	380	3.6	83	67	430	3.6	83	
36.85	92	310	3.6	83	87	335	3.6	84	76	380	3.6	84	
34.80	98	295	3.6	83	92	315	3.6	84	80	365	3.7	84	
29.63	115	250	3.6	83	108	270	3.7	83	94	310	3.7	84	
26.93	126	220	3.5	83	119	240	3.6	83	104	280	3.6	84	
23.33	146	182	3.4	82	137	200	3.5	83	120	245	3.7	84	
20.30	167	141	3.1	81	158	164	3.3	82	138	205	3.6	83	
24.44	139	315	5.1	90	131	315	4.8	90	115	315	4.2	89	
23.22	146	315	5.4	90	138	315	5.1	90	121	315	4.4	90	
20.37	167	315	6.1 *	90	157	315	5.8 *	90	137	315	5.0	90	
17.28	197	270	6.2 *	90	185	290	6.2 *	90	162	315	5.9 *	90	
15.60	218	245	6.2 *	90	205	260	6.2 *	90	179	295	6.1 *	90	
13.73	248	215	6.2 *	90	233	230	6.2 *	90	204	265	6.3 *	90	
12.96	262	200	6.1 *	90	247	215	6.1 *	90	216	250	6.3 *	90	
11.03	308	169	6.1 *	90	290	183	6.2 *	90	254	215	6.3 *	90	
10.03	339	151	6.0 *	90	319	164	6.1 *	90	279	194	6.3 *	90	
8.69	391	124	5.7 *	89	368	137	5.9 *	90	322	166	6.2 *	90	
7.56	450	95	5.1 *	88	423	112	5.6 *	89	370	141	6.1 *	90	

 \*  $P_{emax} = 5.5 \text{ kW}$

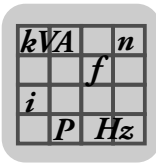




2200 - 1400 1/min

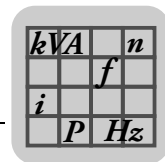
$i_{ges}$	$i_{sch}$	$n_e = 2200 \text{ 1/min}$				$n_e = 1700 \text{ 1/min}$				$n_e = 1400 \text{ 1/min}$				
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	
217.41	42/1	10	520	0.86	64	7.8	520	0.69	62	6.4	520	0.58	61	
190.11		12	520	0.97	65	8.9	520	0.77	63	7.4	520	0.65	62	
180.60		12	520	1.0	65	9.4	520	0.81	63	7.8	520	0.68	62	
158.45		14	520	1.1	66	11	520	0.91	64	8.8	520	0.76	63	
134.40		16	520	1.3	67	13	520	1.1	65	10	520	0.88	64	
121.33		18	520	1.5	68	14	520	1.2	66	12	520	0.97	65	
106.75		21	520	1.6	68	16	520	1.3	67	13	520	1.1	66	
100.80		22	510	1.7	69	17	520	1.4	67	14	520	1.1	66	
85.83		26	490	1.9	69	20	520	1.6	68	16	520	1.3	67	
78.00		28	465	2.0	70	22	510	1.7	69	18	520	1.4	68	
67.57		33	410	2.0	70	25	495	1.9	69	21	520	1.6	69	
58.80		37	360	2.0	70	29	460	2.0	70	24	500	1.8	69	
75.06		29/2	29	480	1.8	81	23	480	1.4	79	19	480	1.2	79
65.63			34	480	2.1	81	26	480	1.6	80	21	480	1.4	79
62.35	35		480	2.2	81	27	480	1.7	80	22	480	1.4	79	
54.70	40		480	2.5	82	31	480	1.9	81	26	480	1.6	80	
46.40	47		480	2.9	82	37	480	2.3	82	30	480	1.9	81	
41.89	53		480	3.2	83	41	480	2.5	82	33	480	2.1	81	
36.85	60		475	3.6	83	46	480	2.8	82	38	480	2.3	82	
34.80	63		450	3.6	83	49	480	3.0	83	40	480	2.5	82	
29.63	74		395	3.7	84	57	480	3.5	83	47	480	2.9	83	
26.93	82		360	3.7	84	63	455	3.6	83	52	480	3.2	83	
23.33	94		320	3.8	84	73	405	3.7	84	60	480	3.6	83	
20.30	108		280	3.8	84	84	360	3.8	84	69	425	3.7	84	
24.44	27/5		90	340	3.6	89	70	340	2.8	88	57	340	2.3	88
23.22			95	340	3.8	89	73	340	2.9	89	60	340	2.4	88
20.37		108	340	4.3	89	83	340	3.3	89	69	340	2.8	88	
17.28		127	340	5.0	90	98	340	3.9	89	81	340	3.2	89	
15.60		141	340	5.6 *	90	109	340	4.3	89	90	340	3.6	89	
13.73		160	330	6.1 *	90	124	340	4.9	90	102	340	4.1	89	
12.96		170	315	6.2 *	90	131	340	5.2	90	108	340	4.3	89	
11.03		199	275	6.3 *	90	154	340	6.1 *	90	127	340	5.0	90	
10.03		219	250	6.3 *	91	169	315	6.2 *	90	140	340	5.5	90	
8.69		253	220	6.4 *	91	196	280	6.3 *	91	161	335	6.3 *	90	
7.56		291	192	6.5 *	91	225	250	6.5 *	91	185	295	6.3 *	91	

\*  $P_{emax} = 5.5 \text{ kW}$



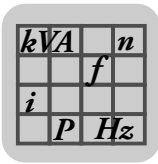
## 1100 - 700 1/min

$i_{ges}$	$i_{sch}$	$n_e = 1100 \text{ 1/min}$				$n_e = 900 \text{ 1/min}$				$n_e = 700 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
217.41	42/1	5.1	555	0.50	59	4.1	560	0.42	58	3.2	570	0.34	56
190.11		5.8	555	0.56	60	4.7	560	0.47	59	3.7	565	0.38	57
180.60		6.1	555	0.59	61	5.0	555	0.49	59	3.9	565	0.40	57
158.45		6.9	550	0.65	62	5.7	555	0.55	60	4.4	560	0.44	58
134.40		8.2	550	0.75	63	6.7	550	0.63	61	5.2	555	0.51	60
121.33		9.1	550	0.82	63	7.4	550	0.69	62	5.8	555	0.56	60
106.75		10	550	0.92	64	8.4	550	0.77	63	6.6	555	0.62	61
100.80		11	550	0.97	65	8.9	550	0.81	63	6.9	555	0.66	62
85.83		13	550	1.1	66	10	550	0.94	64	8.2	550	0.75	63
78.00		14	550	1.2	66	12	550	1.0	65	9.0	550	0.82	63
67.57		16	550	1.4	67	13	550	1.2	66	10	550	0.93	64
58.80		19	530	1.5	68	15	550	1.3	67	12	550	1.0	65
75.06		15	525	1.0	77	12	525	0.86	76	9.3	525	0.68	75
65.63		17	525	1.2	78	14	525	0.98	77	11	525	0.77	76
62.35		18	525	1.2	78	14	525	1.0	77	11	525	0.81	76
54.70		20	525	1.4	79	16	525	1.2	78	13	525	0.92	77
46.40	24	525	1.6	80	19	525	1.4	79	15	525	1.1	78	
41.89	29/2	26	525	1.8	80	21	525	1.5	79	17	525	1.2	78
36.85		30	525	2.0	81	24	525	1.7	80	19	525	1.3	79
34.80		32	525	2.1	81	26	525	1.8	80	20	525	1.4	79
29.63		37	525	2.5	82	30	525	2.1	81	24	525	1.6	80
26.93		41	525	2.7	82	33	525	2.3	81	26	525	1.8	80
23.33		47	525	3.1	83	39	525	2.6	82	30	525	2.0	81
20.30		54	520	3.5	83	44	525	3.0	82	34	525	2.3	81
24.44		45	355	1.9	87	37	360	1.6	87	29	365	1.3	86
23.22		47	355	2.0	87	39	360	1.7	87	30	365	1.3	86
20.37		54	355	2.3	88	44	355	1.9	87	34	365	1.5	86
17.28	27/5	64	355	2.7	88	52	355	2.2	88	41	360	1.8	87
15.60		71	350	2.9	88	58	355	2.4	88	45	355	1.9	87
13.73		80	350	3.3	89	66	355	2.8	88	51	355	2.2	88
12.96		85	350	3.5	89	69	350	2.9	88	54	355	2.3	88
11.03		100	350	4.1	89	82	350	3.4	89	63	355	2.7	88
10.03		110	345	4.4	90	90	350	3.7	89	70	355	2.9	88
8.69		127	345	5.1	90	104	350	4.2	89	81	350	3.3	89
7.56		146	345	5.8*	90	119	345	4.8	90	93	350	3.8	89



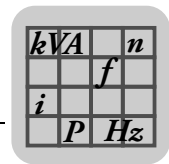
500 - 10 1/min

i <sub>ges</sub>	i <sub>sch</sub>	n <sub>e</sub> = 500 1/min				n <sub>e</sub> = 250 1/min				n <sub>e</sub> = 10 1/min				
		n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	
217.41	42/1	2.3	570	0.25	54	1.1	570	0.13	51	0.05	570	< 0.05	47	
190.11		2.6	570	0.29	55	1.3	570	0.15	51	0.05	570	< 0.05	48	
180.60		2.8	570	0.30	55	1.4	570	0.16	51	0.06	570	< 0.05	48	
158.45		3.2	570	0.34	56	1.6	570	0.18	52	0.06	570	< 0.05	49	
134.40		3.7	565	0.38	57	1.9	570	0.21	53	0.07	570	< 0.05	50	
121.33		4.1	560	0.42	58	2.1	570	0.23	53	0.08	570	< 0.05	50	
106.75		4.7	560	0.47	59	2.3	570	0.26	54	0.09	570	< 0.05	50	
100.80		5.0	560	0.49	59	2.5	570	0.27	55	0.10	570	< 0.05	50	
85.83		5.8	555	0.56	60	2.9	570	0.31	56	0.12	570	< 0.05	51	
78.00		6.4	555	0.61	61	3.2	570	0.34	56	0.13	570	< 0.05	51	
67.57		7.4	555	0.69	62	3.7	565	0.38	57	0.15	565	< 0.05	51	
58.80		8.5	550	0.78	63	4.3	560	0.43	58	0.17	560	< 0.05	51	
75.06		29/2	6.7	570	0.54	73	3.3	570	0.28	70	0.13	570	< 0.05	68
65.63			7.6	570	0.61	74	3.8	570	0.32	71	0.15	570	< 0.05	68
62.35			8.0	570	0.64	74	4.0	570	0.34	71	0.16	570	< 0.05	69
54.70	9.1		570	0.73	75	4.6	570	0.38	71	0.18	570	< 0.05	69	
46.40	11		570	0.85	76	5.4	570	0.44	72	0.22	570	< 0.05	69	
41.89	12		570	0.93	76	6.0	570	0.49	73	0.24	570	< 0.05	69	
36.85	14		570	1.1	77	6.8	570	0.55	73	0.27	570	< 0.05	69	
34.80	14		570	1.1	77	7.2	570	0.58	74	0.29	570	< 0.05	69	
29.63	17		565	1.3	78	8.4	570	0.68	75	0.34	570	< 0.05	70	
26.93	19		565	1.4	79	9.3	570	0.74	75	0.37	570	< 0.05	70	
23.33	21		565	1.6	79	11	570	0.84	76	0.43	570	< 0.05	70	
20.30	25		565	1.8	80	12	570	0.96	77	0.49	570	< 0.05	70	
24.44	27/5		20	365	0.93	85	10	355	0.46	82	0.41	355	0.019	80
23.22			22	365	0.97	85	11	355	0.49	82	0.43	355	< 0.05	80
20.37			25	380	1.1	85	12	365	0.57	83	0.49	365	< 0.05	80
17.28		29	365	1.3	86	14	435	0.79	83	0.58	435	< 0.05	81	
15.60		32	365	1.4	86	16	430	0.86	84	0.64	430	< 0.05	81	
13.73		36	365	1.6	87	18	415	0.94	84	0.73	415	< 0.05	81	
12.96		39	360	1.7	87	19	410	0.98	84	0.77	410	< 0.05	81	
11.03		45	355	1.9	87	23	390	1.1	85	0.91	390	< 0.05	81	
10.03		50	355	2.1	88	25	380	1.2	85	1.0	380	< 0.05	81	
8.69		58	355	2.4	88	29	370	1.3	86	1.2	370	0.06	81	
7.56		66	355	2.8	88	33	365	1.5	86	1.3	365	0.06	81	


**11.10 S. SF. SA. SAF 77**
**3400 - 2800 1/min**

$i_{ges}$	$i_{sch}$	$n_e = 3400 \text{ 1/min}$				$n_e = 3200 \text{ 1/min}$				$n_e = 2800 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
256.47		13	1160	2.3	71	12	1160	2.1	71	11	1160	1.9	70
225.26		15	1130	2.5	72	14	1150	2.4	71	12	1160	2.1	71
214.00		16	1110	2.6	72	15	1140	2.5	71	13	1160	2.2	71
189.09		18	1080	2.8	72	17	1100	2.7	72	15	1140	2.5	71
161.60		21	1040	3.1	73	20	1050	3.0	73	17	1090	2.7	72
148.15		23	1010	3.3	73	22	1030	3.2	73	19	1070	2.9	73
130.00		26	970	3.6	74	25	990	3.5	74	22	1030	3.2	73
123.20	40/1	28	950	3.7	74	26	970	3.6	74	23	1010	3.3	73
107.83		32	900	4.0	74	30	920	3.9	74	26	970	3.6	74
97.14		35	860	4.2	75	33	880	4.1	74	29	930	3.8	74
85.22		40	770	4.3	75	38	820	4.3	75	33	880	4.1	75
75.20		45	675	4.3	74	43	725	4.3	75	37	830	4.3	75
66.67		51	585	4.2	74	48	635	4.3	75	42	745	4.4	75
56.92		60	485	4.1	73	56	530	4.2	74	49	635	4.4	75
75.09		45	1020	5.6	86	43	1020	5.3	86	37	1020	4.6	86
71.33		48	1020	5.9	87	45	1020	5.5	86	39	1020	4.9	86
63.03		54	1020	6.6	87	51	1020	6.2	87	44	1020	5.5	86
53.87		63	980	7.4	87	59	1000	7.1	87	52	1020	6.4	87
49.38		69	950	7.8	87	65	970	7.5	87	57	1010	6.9	87
43.33		78	910	8.5	88	74	930	8.2	88	65	970	7.5	87
41.07	40/3	83	900	8.9	88	78	910	8.5	88	68	950	7.8	87
35.94		95	800	9.0	88	89	850	9.0	88	78	910	8.5	88
32.38		105	725	9.1	88	99	770	9.1	88	86	880	9.1	88
28.41		120	635	9.1	88	113	680	9.1	88	99	780	9.1	88
25.07		136	560	9.1	88	128	600	9.1	88	112	695	9.2	88
22.22		153	485	8.9	88	144	525	9.0	88	126	615	9.2	88
18.97		179	395	8.5	87	169	440	8.9	88	148	520	9.1	88
22.89		149	590	10.0 *	91	140	590	9.5	91	122	590	8.3	91
20.99		162	590	10.9 *	92	152	590	10.3 *	92	133	590	9.0	91
18.42		185	590	12.4 *	92	174	590	11.7 *	92	152	590	10.3 *	92
17.45		195	590	13.1 *	92	183	590	12.4 *	92	160	590	10.8 *	92
15.28		223	530	13.5 *	92	209	560	13.4 *	92	183	590	12.3 *	92
13.76	34/6	247	480	13.5 *	92	233	505	13.4 *	92	203	585	13.6 *	92
12.07		282	415	13.3 *	92	265	445	13.4 *	92	232	515	13.6 *	92
10.65		319	365	13.3 *	92	300	390	13.4 *	92	263	455	13.6 *	92
9.44		360	315	13.0 *	92	339	345	13.3 *	92	297	405	13.7 *	92
8.06		422	260	12.6 *	91	397	285	12.9 *	92	347	340	13.5 *	92

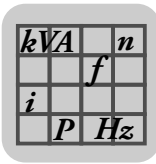
 \*  $P_{emax} = 9.2 \text{ kW}$



2200 - 1400 1/min

$i_{ges}$	$i_{sch}$	$n_e = 2200$ 1/min				$n_e = 1700$ 1/min				$n_e = 1400$ 1/min				
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	
256.47	40/1	8.6	1260	1.6	69	6.6	1270	1.3	67	5.5	1270	1.1	66	
225.26		9.8	1230	1.8	69	7.5	1270	1.5	68	6.2	1270	1.2	67	
214.00		10	1220	1.9	70	7.9	1270	1.6	68	6.5	1270	1.3	67	
189.09		12	1200	2.1	70	9.0	1240	1.7	69	7.4	1270	1.5	68	
161.60		14	1160	2.3	71	11	1220	1.9	70	8.7	1260	1.7	69	
148.15		15	1140	2.5	72	11	1200	2.1	70	9.4	1240	1.8	69	
130.00		17	1100	2.7	72	13	1170	2.3	71	11	1210	1.9	70	
123.20		18	1080	2.8	73	14	1150	2.3	71	11	1200	2.0	70	
107.83		20	1040	3.0	73	16	1110	2.5	72	13	1170	2.2	71	
97.14		23	1010	3.3	74	18	1090	2.8	73	14	1140	2.4	72	
85.22		26	970	3.5	74	20	1050	3.0	73	16	1100	2.6	72	
75.20		29	920	3.8	74	23	1010	3.2	74	19	1070	2.9	73	
66.67		33	880	4.1	75	25	970	3.5	74	21	1040	3.1	73	
56.92		39	830	4.5	75	30	920	3.9	75	25	990	3.4	74	
75.09		40/3	29	1100	4.0	85	23	1100	3.1	84	19	1100	2.6	83
71.33			31	1100	4.2	85	24	1100	3.2	85	20	1100	2.7	84
63.03			35	1100	4.7	86	27	1100	3.7	85	22	1100	3.0	84
53.87			41	1100	5.5	86	32	1100	4.3	86	26	1100	3.5	85
49.38	45		1080	5.8	87	34	1100	4.6	86	28	1100	3.8	85	
43.33	51		1050	6.4	87	39	1100	5.2	86	32	1100	4.3	86	
41.07	54		1030	6.6	87	41	1100	5.5	86	34	1100	4.6	86	
35.94	61		980	7.2	87	47	1060	6.1	87	39	1100	5.2	86	
32.38	68		960	7.8	88	53	1040	6.6	87	43	1090	5.7	87	
28.41	77		920	8.5	88	60	990	7.1	87	49	1050	6.2	87	
25.07	88		870	9.1	88	68	960	7.8	88	56	1020	6.8	87	
22.22	99		790	9.3	88	77	920	8.4	88	63	980	7.4	87	
18.97	116		680	9.4	88	90	860	9.2	88	74	930	8.2	88	
22.89	34/6		96	710	7.9	91	74	705	6.1	90	61	705	5.0	90
20.99			105	710	8.6	91	81	705	6.6	91	67	705	5.5	90
18.42			119	720	9.9	91	92	710	7.6	91	76	705	6.2	90
17.45			126	720	10.4 *	91	97	710	8.0	91	80	710	6.6	91
15.28			144	720	11.9 *	92	111	720	9.2	91	92	710	7.5	91
13.76		160	725	13.2 *	92	124	720	10.2 *	91	102	710	8.3	91	
12.07		182	650	13.5 *	92	141	725	11.7 *	92	116	720	9.6 *	91	
10.65		207	580	13.6 *	92	160	725	13.2 *	92	131	720	10.8 *	92	
9.44		233	520	13.8 *	92	180	655	13.4 *	92	148	725	12.3 *	92	
8.06		273	445	13.8 *	92	211	575	13.8 *	92	174	680	13.5 *	92	

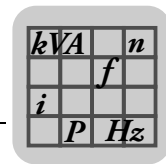
\*  $P_{emax} = 9.2$  kW



## 1100 - 700 1/min

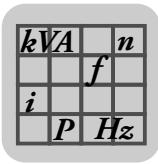
$i_{ges}$	$i_{sch}$	$n_e = 1100 \text{ 1/min}$				$n_e = 900 \text{ 1/min}$				$n_e = 700 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
256.47	40/1	4.3	1270	0.89	64	3.5	1270	0.75	63	2.7	1270	0.60	61
225.26		4.9	1270	1.0	65	4.0	1270	0.84	63	3.1	1270	0.67	62
214.00		5.1	1270	1.0	65	4.2	1270	0.88	64	3.3	1270	0.70	62
189.09		5.8	1270	1.2	66	4.8	1270	0.98	65	3.7	1270	0.78	63
161.60		6.8	1270	1.3	67	5.6	1270	1.1	66	4.3	1270	0.90	64
148.15		7.4	1270	1.5	68	6.1	1270	1.2	66	4.7	1270	0.97	65
130.00		8.5	1260	1.6	69	6.9	1270	1.4	67	5.4	1270	1.1	66
123.20		8.9	1250	1.7	69	7.3	1270	1.4	68	5.7	1270	1.1	66
107.83		10	1220	1.9	70	8.3	1260	1.6	69	6.5	1270	1.3	67
97.14		11	1200	2.0	70	9.3	1250	1.8	69	7.2	1270	1.4	68
85.22		13	1170	2.2	71	11	1220	1.9	70	8.2	1270	1.6	69
75.20		15	1140	2.4	72	12	1190	2.1	71	9.3	1250	1.8	69
66.67		16	1110	2.6	72	13	1160	2.3	71	10	1220	1.9	70
56.92		19	1060	2.9	73	16	1120	2.6	72	12	1190	2.2	71
75.09		15	1120	2.1	83	12	1130	1.7	82	9.3	1170	1.4	81
71.33		15	1120	2.2	83	13	1130	1.8	82	9.8	1120	1.4	81
63.03		17	1120	2.5	83	14	1120	2.0	82	11	1130	1.6	81
53.87		20	1120	2.9	84	17	1120	2.4	83	13	1120	1.9	82
49.38		22	1120	3.1	84	18	1120	2.6	83	14	1120	2.0	82
43.33		25	1130	3.5	85	21	1120	2.9	84	16	1120	2.3	83
41.07	40/3	27	1130	3.7	85	22	1120	3.1	84	17	1120	2.4	83
35.94		31	1150	4.3	85	25	1130	3.5	85	19	1120	2.7	84
32.38		34	1130	4.7	86	28	1130	3.9	85	22	1120	3.0	84
28.41		39	1110	5.2	86	32	1150	4.5	86	25	1130	3.4	85
25.07		44	1080	5.7	87	36	1120	4.9	86	28	1130	3.9	85
22.22		50	1050	6.3	87	41	1100	5.4	86	32	1150	4.4	86
18.97		58	1010	7.0	87	47	1060	6.1	87	37	1120	5.0	86
22.89		48	695	3.9	89	39	695	3.2	89	31	705	2.6	88
20.99		52	705	4.3	90	43	695	3.5	89	33	705	2.8	88
18.42		60	700	4.9	90	49	700	4.0	89	38	700	3.1	89
17.45	63	700	5.1	90	52	700	4.2	90	40	700	3.3	89	
15.28	34/6	72	710	5.9	90	59	700	4.8	90	46	700	3.8	89
13.76		80	710	6.6	91	65	700	5.3	90	51	700	4.2	90
12.07		91	710	7.5	91	75	710	6.1	90	58	700	4.7	90
10.65		103	715	8.5	91	85	710	6.9	91	66	710	5.4	90
9.44		117	720	9.6 *	91	95	715	7.8	91	74	710	6.1	90
8.06		136	725	11.3 *	92	112	720	9.2	91	87	710	7.1	91

\*  $P_{emax} = 9.2 \text{ kW}$



500 - 10 1/min

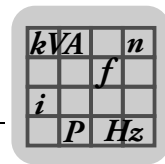
i <sub>ges</sub>	i <sub>sch</sub>	n <sub>e</sub> = 500 1/min				n <sub>e</sub> = 250 1/min				n <sub>e</sub> = 10 1/min			
		n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]
256.47	40/1	1.9	1270	0.44	59	0.97	1270	0.23	56	0.04	1270	< 0.05	54
225.26		2.2	1270	0.49	60	1.1	1270	0.26	56	0.04	1270	< 0.05	55
214.00		2.3	1270	0.52	60	1.2	1270	0.28	56	0.05	1270	< 0.05	55
189.09		2.6	1270	0.58	61	1.3	1270	0.31	57	0.05	1270	< 0.05	55
161.60		3.1	1270	0.67	62	1.5	1270	0.36	58	0.06	1270	< 0.05	55
148.15		3.4	1270	0.72	62	1.7	1270	0.39	58	0.07	1270	< 0.05	55
130.00		3.8	1270	0.81	63	1.9	1270	0.43	59	0.08	1270	< 0.05	55
123.20		4.1	1270	0.85	64	2.0	1270	0.46	59	0.08	1270	< 0.05	55
107.83		4.6	1270	0.95	65	2.3	1270	0.51	60	0.09	1270	< 0.05	56
97.14		5.1	1270	1.0	65	2.6	1270	0.56	61	0.10	1270	< 0.05	56
85.22		5.9	1270	1.2	66	2.9	1270	0.63	62	0.12	1270	< 0.05	56
75.20		6.6	1270	1.3	67	3.3	1270	0.71	62	0.13	1270	< 0.05	56
66.67		7.5	1270	1.5	68	3.7	1270	0.79	63	0.15	1270	< 0.05	56
56.92		8.8	1260	1.7	69	4.4	1270	0.91	64	0.18	1270	< 0.05	56
75.09		6.7	1160	1.0	79	3.3	1120	0.51	76	0.13	1120	< 0.05	75
71.33		7.0	1110	1.0	79	3.5	1060	0.51	77	0.14	1060	< 0.05	75
63.03		7.9	1230	1.3	80	4.0	1200	0.65	77	0.16	1200	< 0.05	76
53.87		9.3	1180	1.4	81	4.6	1240	0.77	78	0.19	1240	< 0.05	76
49.38		10	1160	1.5	81	5.1	1240	0.84	78	0.20	1240	< 0.05	76
43.33		12	1120	1.7	82	5.8	1240	0.95	79	0.23	1240	< 0.05	76
41.07	40/3	12	1120	1.7	82	6.1	1240	1.0	79	0.24	1240	< 0.05	76
35.94		14	1120	2.0	82	7.0	1240	1.1	79	0.28	1240	< 0.05	76
32.38		15	1120	2.2	83	7.7	1240	1.3	80	0.31	1240	0.05	76
28.41		18	1120	2.5	83	8.8	1190	1.4	80	0.35	1190	0.06	76
25.07		20	1120	2.8	84	10	1170	1.5	81	0.40	1170	0.06	76
22.22		23	1130	3.2	84	11	1130	1.6	81	0.45	1130	0.07	76
18.97		26	1130	3.7	85	13	1120	1.9	82	0.53	1120	0.08	76
22.89		22	690	1.8	87	11	675	0.91	85	0.44	675	< 0.05	83
20.99		24	725	2.1	87	12	740	1.1	85	0.48	740	< 0.05	83
18.42		27	705	2.3	88	14	830	1.4	86	0.54	830	0.06	83
17.45	29	705	2.4	88	14	810	1.4	86	0.57	810	0.06	83	
15.28	34/6	33	705	2.7	88	16	785	1.6	86	0.65	785	0.06	83
13.76		36	695	3.0	89	18	770	1.7	87	0.73	770	0.07	83
12.07		41	695	3.4	89	21	750	1.9	87	0.83	750	0.08	83
10.65		47	695	3.8	89	23	725	2.0	87	0.94	725	0.09	83
9.44		53	705	4.4	90	26	705	2.2	88	1.1	705	0.09	83
8.06		62	705	5.1	90	31	705	2.6	88	1.2	705	0.11	83


**11.11 S. SF. SA. SAF 87**
**3400 - 2800 1/min**

$i_{ges}$	$i_{sch}$	$n_e = 3400 \text{ 1/min}$				$n_e = 3200 \text{ 1/min}$				$n_e = 2800 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
288.00		12	2030	3.4	74	11	2070	3.3	73	9.7	2070	2.9	73
258.18		13	1990	3.7	74	12	2010	3.5	74	11	2070	3.2	73
222.40		15	1910	4.1	75	14	1950	4.0	74	13	2010	3.6	74
202.96		17	1850	4.3	75	16	1890	4.2	75	14	1970	3.8	74
180.00		19	1800	4.7	75	18	1830	4.5	75	16	1910	4.2	75
151.30		22	1690	5.3	75	21	1730	5.1	75	19	1800	4.6	75
139.05	40/1	24	1630	5.5	76	23	1680	5.4	76	20	1760	4.9	75
123.48		28	1570	6.0	76	26	1600	5.7	76	23	1690	5.3	76
110.40		31	1430	6.1	76	29	1540	6.2	76	25	1620	5.7	76
99.26		34	1260	6.0	75	32	1380	6.2	76	28	1550	6.0	76
86.15		39	1030	5.8	74	37	1150	6.0	75	33	1390	6.2	76
77.14		44	830	5.3	72	41	970	5.7	74	36	1220	6.1	76
64.00		53	500	4.3	65	50	620	4.7	68	44	960	5.9	75
91.20		37	1470	6.6	88	35	1470	6.2	87	31	1470	5.4	87
81.76		42	1470	7.3	88	39	1470	6.9	88	34	1470	6.0	87
70.43		48	1470	8.4	88	45	1470	7.9	88	40	1470	7.0	88
64.27		53	1470	9.2	88	50	1470	8.7	88	44	1470	7.6	88
57.00		60	1470	10.4	88	56	1470	9.8	88	49	1470	8.6	88
47.91		71	1470	12.3	89	67	1470	11.6	89	58	1470	10.2	88
44.03	38/3	77	1470	13.4	89	73	1470	12.6	89	64	1470	11.0	89
39.10		87	1300	13.3	89	82	1400	13.5	89	72	1470	12.4	89
34.96		97	1140	13.1	89	92	1240	13.4	89	80	1440	13.6	89
31.43		108	1000	12.8	88	102	1090	13.1	89	89	1290	13.5	89
27.28		125	810	12.1	88	117	910	12.7	88	103	1110	13.4	89
24.43		139	660	11.1	87	131	775	12.1	88	115	960	13.0	89
20.27		168	395	8.4	82	158	490	9.6	84	138	755	12.4	88
25.50		133	990	15.0	92	125	990	14.1	92	110	990	12.4	92
21.43		159	990	17.8 *	92	149	990	16.8 *	92	131	990	14.7	92
19.70		173	990	19 *	92	162	990	18.3 *	92	142	990	16.0 *	92
17.49		194	870	19 *	92	183	930	19 *	92	160	990	18.0 *	92
15.64		217	760	19 *	92	205	830	19 *	92	179	960	19 *	92
14.06	34/6	242	660	18.2 *	92	228	725	19 *	92	199	860	19 *	92
12.21		278	540	17.2 *	91	262	605	18.1 *	92	229	730	19 *	92
10.93		311	440	15. *8	90	293	510	17.1 *	91	256	645	19 *	92
9.07		375	255	11.5	87	353	325	13.5	89	309	500	17.7 *	92
7.88		431	200	10.5	86	406	230	11.3	87	355	375	15.5 *	90

 \*  $P_{emax} = 15 \text{ kW}$

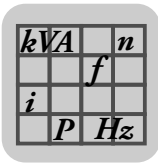




2200 - 1400 1/min

i <sub>ges</sub>	i <sub>sch</sub>	n <sub>e</sub> = 2200 1/min				n <sub>e</sub> = 1700 1/min				n <sub>e</sub> = 1400 1/min				
		n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	P <sub>e</sub> [kW]	η [%]	
288.00	40/1	7.6	2210	2.5	71	5.9	2280	2.0	70	4.9	2280	1.7	69	
258.18		8.5	2170	2.7	72	6.6	2260	2.2	71	5.4	2280	1.9	69	
222.40		9.9	2130	3.0	73	7.6	2210	2.5	71	6.3	2280	2.1	70	
202.96		11	2080	3.2	73	8.4	2190	2.7	72	6.9	2260	2.3	71	
180.00		12	2020	3.5	74	9.4	2130	2.9	73	7.8	2210	2.5	72	
151.30		15	1940	4.0	75	11	2060	3.3	74	9.3	2150	2.9	73	
139.05		16	1880	4.2	75	12	2020	3.5	74	10	2100	3.0	73	
123.48		18	1820	4.5	75	14	1960	3.8	74	11	2060	3.3	74	
110.40		20	1770	4.9	76	15	1900	4.1	75	13	2000	3.6	74	
99.26		22	1700	5.2	76	17	1840	4.4	75	14	1960	3.9	75	
86.15		26	1620	5.7	76	20	1770	4.8	76	16	1880	4.3	75	
77.14		29	1540	6.0	76	22	1700	5.2	76	18	1820	4.6	76	
64.00		34	1360	6.4	77	27	1580	5.7	77	22	1700	5.1	76	
91.20		38/3	24	1540	4.5	87	19	1520	3.5	86	15	1510	2.9	85
81.76			27	1600	5.2	87	21	1600	4.0	86	17	1600	3.4	86
70.43			31	1600	6.0	87	24	1600	4.7	87	20	1600	3.9	86
64.27	34		1600	6.6	88	26	1600	5.1	87	22	1600	4.2	86	
57.00	39		1600	7.4	88	30	1600	5.7	87	25	1600	4.8	87	
47.91	46		1600	8.7	88	35	1600	6.8	88	29	1600	5.6	87	
44.03	50		1600	9.5	88	39	1600	7.4	88	32	1600	6.1	87	
39.10	56		1600	10.6	89	43	1600	8.3	88	36	1600	6.8	88	
34.96	63		1600	11.9	89	49	1600	9.2	88	40	1600	7.6	88	
31.43	70		1600	13.2	89	54	1600	10.2	89	45	1600	8.5	88	
27.28	81		1450	13.7	89	62	1600	11.7	89	51	1600	9.7	89	
24.43	90		1310	13.8	89	70	1600	13.1	89	57	1600	10.8	89	
20.27	109		1080	13.8	89	84	1420	14.0	89	69	1600	13.0	89	
25.50	34/6		86	1240	12.2	92	67	1240	9.5	91	55	1240	7.8	91
21.43			103	1240	14.5	92	79	1240	11.2	92	65	1240	9.3	91
19.70			112	1240	15.7 *	92	86	1240	12.2	92	71	1240	10.1	91
17.49		126	1240	17.7 *	92	97	1240	13.7	92	80	1240	11.3	92	
15.64		141	1230	20 *	92	109	1240	15.3 *	92	90	1240	12.7	92	
14.06		156	1110	20 *	92	121	1240	17.0 *	92	100	1240	14.1	92	
12.21		180	970	20 *	93	139	1240	20 *	92	115	1240	16.1 *	92	
10.93		201	870	20 *	93	156	1130	20 *	93	128	1240	18.0 *	92	
9.07		243	720	20 *	92	187	950	20 *	93	154	1140	20 *	93	
7.88		279	605	19 *	92	216	830	20 *	93	178	1010	20 *	93	

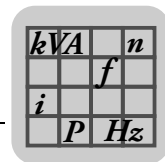
\* P<sub>emax</sub> = 15 kW



## 1100 - 700 1/min

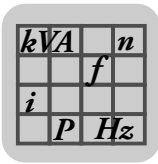
$i_{ges}$	$i_{sch}$	$n_e = 1100 \text{ 1/min}$				$n_e = 900 \text{ 1/min}$				$n_e = 700 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
288.00	40/1	3.8	2400	1.4	67	3.1	2450	1.2	66	2.4	2480	0.98	64
258.18		4.3	2380	1.6	68	3.5	2430	1.3	67	2.7	2470	1.1	65
222.40		4.9	2350	1.8	69	4.0	2400	1.5	68	3.1	2450	1.2	66
202.96		5.4	2330	1.9	70	4.4	2380	1.6	68	3.4	2430	1.3	67
180.00		6.1	2280	2.1	70	5.0	2350	1.8	69	3.9	2400	1.4	68
151.30		7.3	2240	2.4	71	5.9	2310	2.0	70	4.6	2350	1.7	69
139.05		7.9	2190	2.5	72	6.5	2260	2.2	71	5.0	2330	1.8	69
123.48		8.9	2150	2.8	73	7.3	2240	2.4	71	5.7	2310	2.0	70
110.40		10	2110	3.0	73	8.2	2190	2.6	72	6.3	2280	2.1	71
99.26		11	2070	3.3	74	9.1	2150	2.8	73	7.1	2240	2.3	71
86.15	38/3	13	2000	3.6	74	10	2090	3.1	73	8.1	2190	2.6	72
77.14		14	1940	3.9	75	12	2040	3.4	74	9.1	2150	2.8	73
64.00		17	1840	4.4	76	14	1960	3.9	75	11	2070	3.2	74
91.20		12	1490	2.2	84	9.9	1480	1.8	83	7.7	1460	1.4	82
81.76		13	1760	2.9	85	11	1760	2.4	84	8.6	1760	1.9	83
70.43		16	1760	3.4	85	13	1760	2.8	85	9.9	1760	2.2	83
64.27		17	1760	3.7	86	14	1760	3.0	85	11	1760	2.4	84
57.00		19	1760	4.1	86	16	1760	3.4	85	12	1760	2.7	84
47.91		23	1760	4.9	87	19	1760	4.0	86	15	1760	3.2	85
44.03		25	1760	5.3	87	20	1760	4.4	86	16	1760	3.4	85
39.10	34/6	28	1760	6.0	87	23	1760	4.9	87	18	1760	3.9	86
34.96		31	1760	6.6	88	26	1760	5.5	87	20	1760	4.3	86
31.43		35	1760	7.4	88	29	1760	6.1	87	22	1760	4.7	87
27.28		40	1760	8.4	88	33	1760	6.9	88	26	1760	5.4	87
24.43		45	1760	9.4	88	37	1760	7.7	88	29	1760	6.0	87
20.27		54	1760	11.3	89	44	1760	9.3	88	35	1760	7.2	88
25.50		43	1340	6.7	90	35	1340	5.5	90	27	1340	4.3	89
21.43		51	1340	7.9	91	42	1340	6.5	90	33	1340	5.1	90
19.70		56	1340	8.6	91	46	1340	7.1	91	36	1340	5.5	90
17.49		63	1340	9.7	91	51	1340	7.9	91	40	1340	6.2	90
15.64	34/6	70	1340	10.8	92	58	1340	8.9	91	45	1340	6.9	91
14.06		78	1340	12.0	92	64	1340	9.8	91	50	1340	7.7	91
12.21		90	1340	13.8	92	74	1340	11.3	92	57	1340	8.8	91
10.93		101	1340	15.3 *	92	82	1340	12.6	92	64	1340	9.8	91
9.07	34/6	121	1340	18.4 *	92	99	1340	15.1 *	92	77	1340	11.8	92
7.88		140	1260	20 *	93	114	1340	17.4 *	92	89	1340	13.6	92

\*  $P_{emax} = 15 \text{ kW}$



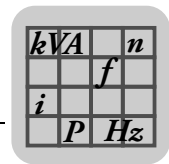
500 - 10 1/min

$i_{ges}$	$i_{sch}$	$n_e = 500 \text{ 1/min}$				$n_e = 250 \text{ 1/min}$				$n_e = 10 \text{ 1/min}$				
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	
288.00	40/1	1.7	2500	0.73	62	0.87	2500	0.38	59	0.03	2500	< 0.05	58	
258.18		1.9	2500	0.80	63	0.97	2500	0.43	59	0.04	2500	< 0.05	58	
222.40		2.2	2500	0.92	64	1.1	2500	0.49	60	0.04	2500	< 0.05	59	
202.96		2.5	2480	0.99	64	1.2	2500	0.53	61	0.05	2500	< 0.05	59	
180.00		2.8	2480	1.1	65	1.4	2500	0.60	61	0.06	2500	< 0.05	59	
151.30		3.3	2430	1.3	67	1.7	2500	0.70	62	0.07	2500	< 0.05	59	
139.05		3.6	2430	1.4	67	1.8	2500	0.75	63	0.07	2500	< 0.05	59	
123.48		4.0	2400	1.5	68	2.0	2500	0.84	63	0.08	2500	< 0.05	59	
110.40		4.5	2380	1.6	69	2.3	2500	0.93	64	0.09	2500	< 0.05	59	
99.26		5.0	2330	1.8	69	2.5	2470	1.0	65	0.10	2470	< 0.05	59	
86.15		5.8	2310	2.0	70	2.9	2450	1.1	66	0.12	2450	0.05	59	
77.14		6.5	2260	2.2	71	3.2	2430	1.2	66	0.13	2430	0.06	59	
64.00		7.8	2220	2.5	72	3.9	2400	1.5	68	0.16	2400	0.07	59	
91.20		38/3	5.5	1450	1.0	81	2.7	1390	0.51	79	0.11	1390	< 0.05	78
81.76			6.1	1960	1.5	82	3.1	1880	0.76	79	0.12	1880	< 0.05	78
70.43			7.1	1980	1.8	82	3.5	1980	0.92	80	0.14	1980	< 0.05	79
64.27	7.8		1980	2.0	83	3.9	1980	1.0	80	0.16	1980	< 0.05	79	
57.00	8.8		1980	2.2	83	4.4	1980	1.1	80	0.18	1980	< 0.05	79	
47.91	10		1980	2.6	84	5.2	1980	1.3	81	0.21	1980	0.06	79	
44.03	11		1980	2.8	84	5.7	1980	1.4	81	0.23	1980	0.06	79	
39.10	13		1980	3.1	85	6.4	1980	1.6	82	0.26	1980	0.07	79	
34.96	14		1980	3.5	85	7.2	1980	1.8	82	0.29	1980	0.08	79	
31.43	16		1980	3.9	85	8.0	1980	2.0	83	0.32	1980	0.08	79	
27.28	18		1980	4.4	86	9.2	1980	2.3	83	0.37	1980	0.10	79	
24.43	20		1980	4.9	86	10	1980	2.5	84	0.41	1980	0.11	79	
20.27	25		1980	5.9	87	12	1980	3.0	85	0.49	1980	0.13	79	
25.50	34/6		20	1430	3.3	88	9.8	1390	1.6	87	0.39	1390	0.07	85
21.43			23	1420	3.9	89	12	1510	2.1	87	0.47	1510	0.09	85
19.70			25	1410	4.2	89	13	1570	2.4	87	0.51	1570	0.10	85
17.49		29	1390	4.6	89	14	1570	2.7	88	0.57	1570	0.11	85	
15.64		32	1390	5.2	90	16	1540	2.9	88	0.64	1540	0.12	85	
14.06		36	1390	5.7	90	18	1510	3.2	88	0.71	1510	0.13	85	
12.21		41	1390	6.6	90	20	1460	3.5	89	0.82	1460	0.15	85	
10.93		46	1390	7.3	91	23	1430	3.9	89	0.91	1430	0.16	85	
9.07		55	1410	8.9	91	28	1390	4.5	89	1.1	1390	0.19	85	
7.88		63	1410	10.3	91	32	1390	5.1	90	1.3	1390	0.22	85	


**11.12 S. SF. SA. SAF 97**
**3400 - 2800 1/min**

$i_{ges}$	$i_{sch}$	$n_e = 3400 \text{ 1/min}$				$n_e = 3200 \text{ 1/min}$				$n_e = 2800 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
286.40		12	3520	5.8	76	11	3590	5.6	76	9.8	3700	5.0	75
262.22		13	3450	6.2	76	12	3520	5.9	76	11	3630	5.4	75
231.67		15	3310	6.7	76	14	3380	6.4	76	12	3520	5.9	76
196.52		17	3120	7.4	77	16	3210	7.2	76	14	3350	6.6	76
180.95		19	3030	7.8	77	18	3120	7.5	77	15	3250	6.9	76
161.74		21	2910	8.3	77	20	2970	8.0	77	17	3120	7.4	77
145.60	40/1	23	2760	8.8	77	22	2850	8.5	77	19	3000	7.9	77
131.85		26	2660	9.4	77	24	2740	9.1	77	21	2880	8.3	77
116.92		29	2320	9.3	76	27	2550	9.5	77	24	2740	8.9	77
105.71		32	1980	8.9	75	30	2210	9.2	76	26	2630	9.5	77
89.60		38	1280	7.3	70	36	1670	8.5	74	31	2210	9.4	77
78.26		43	920	6.4	65	41	1040	6.7	67	36	1770	8.8	75
65.45		52	675	5.9	63	49	775	6.2	64	43	1030	6.8	68
80.85		42	3150	15.5	89	40	3150	14.6	89	35	3150	12.8	89
71.43		48	3090	17.2	90	45	3150	16.5	89	39	3150	14.5	89
60.59		56	2910	19	90	53	2970	18.3	90	46	3120	16.9	90
55.79		61	2820	20	90	57	2880	19	90	50	3030	17.8	90
49.87		68	2710	22	90	64	2760	21	90	56	2910	19	90
44.89	37/3	76	2430	21	90	71	2630	22	90	62	2790	20	90
40.65		84	2170	21	90	79	2350	22	90	69	2680	21	90
36.05		94	1830	20	89	89	2020	21	89	78	2400	22	90
32.60		104	1560	19	89	98	1760	20	89	86	2150	22	90
27.63		123	1010	15.2	86	116	1320	18.2	88	101	1740	21	89
24.13		141	725	12.9	83	133	820	13.6	84	116	1390	19	88
26.39		129	1750	25 *	93	121	1750	24 *	93	106	1750	21	93
23.59		144	1750	28 *	93	136	1750	27 *	93	119	1750	23 *	93
21.23		160	1750	32 *	93	151	1750	30 *	93	132	1750	26 *	93
19.23		177	1550	31 *	93	166	1680	31 *	93	146	1750	29 *	93
17.05	35/6	199	1320	30 *	93	188	1450	31 *	93	164	1730	32 *	93
15.42		220	1110	28 *	92	208	1260	30 *	93	182	1540	31 *	93
13.07		260	725	22	90	245	940	26 *	92	214	1240	30 *	93
11.41		298	515	18.3	88	280	585	19	89	245	1000	28 *	92
9.55		356	375	16.2	87	335	435	17.5	87	293	580	20	89
8.26		412	290	14.7	85	387	335	15.8	86	339	455	18.4	88

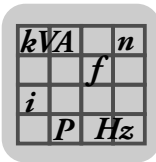
 \*  $P_{emax} = 22 \text{ kW}$



2200 - 1400 1/min

$i_{ges}$	$i_{sch}$	$n_e = 2200 \text{ 1/min}$				$n_e = 1700 \text{ 1/min}$				$n_e = 1400 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
286.40	40/1	7.7	3920	4.2	74	5.9	4000	3.4	73	4.9	4000	2.9	72
262.22		8.4	3840	4.5	75	6.5	4000	3.7	73	5.3	4000	3.1	72
231.67		9.5	3770	5.0	75	7.3	3960	4.1	74	6.0	4000	3.5	73
196.52		11	3580	5.5	76	8.7	3840	4.7	75	7.1	4000	4.0	74
180.95		12	3510	5.9	76	9.4	3770	4.9	75	7.7	3920	4.3	74
161.74		14	3410	6.4	76	11	3650	5.3	76	8.7	3840	4.7	75
145.60		15	3270	6.8	77	12	3550	5.7	76	9.6	3730	5.0	75
131.85		17	3170	7.2	77	13	3440	6.1	76	11	3650	5.4	76
116.92		19	3020	7.7	77	15	3340	6.6	77	12	3510	5.8	76
105.71		21	2930	8.3	77	16	3210	7.0	77	13	3440	6.2	76
89.60		25	2730	9.1	77	19	3020	7.8	77	16	3240	6.9	77
78.26		28	2540	9.6	78	22	2870	8.4	78	18	3080	7.5	77
65.45		34	2120	9.7	77	26	2650	9.2	78	21	2900	8.3	78
80.85		27	3300	10.6	89	21	3270	8.2	88	17	3230	6.7	88
71.43		31	3300	12.0	89	24	3300	9.3	88	20	3300	7.7	88
60.59	36	3300	14.1	89	28	3300	10.9	89	23	3300	9.0	88	
55.79	39	3270	15.1	89	30	3300	11.8	89	25	3300	9.8	88	
49.87	37/3	44	3170	16.3	90	34	3300	13.2	89	28	3300	10.9	89
44.89		49	3050	17.5	90	38	3300	14.6	89	31	3300	12.1	89
40.65		54	2950	19	90	42	3230	15.8	90	34	3300	13.3	89
36.05		61	2810	20	90	47	3110	17.1	90	39	3300	15.0	89
32.60		67	2700	21	90	52	2980	18.1	90	43	3200	16.0	90
27.63		80	2390	22	90	62	2810	20	90	51	3010	17.8	90
24.13		91	2060	22	90	70	2670	22	90	58	2870	19	90
26.39		83	2550	24 *	93	64	2600	19	93	53	2600	15.6	92
23.59		93	2450	26 *	93	72	2600	21	93	59	2600	17.5	93
21.23		104	2380	28 *	93	80	2570	23 *	93	66	2600	19	93
19.23	114	2280	29 *	93	88	2500	25 *	93	73	2600	21	93	
17.05	35/6	129	2170	31 *	93	100	2400	27 *	93	82	2570	24 *	93
15.42		143	2040	33 *	93	110	2300	28 *	93	91	2470	25 *	93
13.07		168	1720	32 *	93	130	2170	32 *	93	107	2330	28 *	93
11.41		193	1480	32 *	93	149	2000	33 *	93	123	2210	30 *	93
9.55		230	1200	31 *	93	178	1670	33 *	93	147	2040	33 *	94
8.26		266	980	30 *	93	206	1440	33 *	93	169	1770	34 *	94

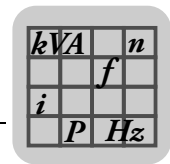
\*  $P_{emax} = 22 \text{ kW}$



## 1100 - 700 1/min

$i_{ges}$	$i_{sch}$	$n_e = 1100 \text{ 1/min}$				$n_e = 900 \text{ 1/min}$				$n_e = 700 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
286.40		3.8	4200	2.4	70	3.1	4200	2.0	69	2.4	4200	1.6	68
262.22		4.2	4200	2.6	71	3.4	4200	2.2	70	2.7	4200	1.7	68
231.67		4.7	4200	2.9	72	3.9	4200	2.4	70	3.0	4200	1.9	69
196.52		5.6	4160	3.4	73	4.6	4200	2.8	71	3.6	4200	2.2	70
180.95		6.1	4120	3.6	73	5.0	4200	3.0	72	3.9	4200	2.4	70
161.74		6.8	4030	3.9	74	5.6	4160	3.3	73	4.3	4200	2.7	71
145.60	40/1	7.6	3950	4.2	74	6.2	4080	3.6	73	4.8	4200	2.9	72
131.85		8.3	3880	4.5	75	6.8	4030	3.9	74	5.3	4200	3.2	72
116.92		9.4	3760	4.9	75	7.7	3910	4.2	74	6.0	4120	3.5	73
105.71		10	3650	5.3	76	8.5	3840	4.6	75	6.6	4030	3.8	74
89.60		12	3500	5.9	76	10	3690	5.1	76	7.8	3910	4.3	75
78.26		14	3370	6.5	77	12	3580	5.7	76	8.9	3800	4.7	75
65.45		17	3170	7.2	77	14	3400	6.4	77	11	3650	5.4	76
80.85		14	3230	5.3	87	11	3200	4.3	86	8.7	3170	3.4	85
71.43		15	3600	6.7	87	13	3600	5.5	87	9.8	3600	4.3	86
60.59		18	3600	7.8	88	15	3600	6.4	87	12	3600	5.0	86
55.79		20	3600	8.5	88	16	3600	7.0	87	13	3600	5.5	87
49.87		22	3600	9.4	88	18	3600	7.8	88	14	3600	6.1	87
44.89	37/3	25	3600	10.4	88	20	3600	8.6	88	16	3600	6.7	87
40.65		27	3600	11.5	89	22	3600	9.5	88	17	3600	7.4	88
36.05		31	3530	12.7	89	25	3600	10.6	89	19	3600	8.3	88
32.60		34	3420	13.5	89	28	3600	11.7	89	21	3600	9.2	88
27.63		40	3260	15.2	90	33	3460	13.2	89	25	3600	10.8	89
24.13		46	3130	16.6	90	37	3320	14.5	89	29	3560	12.2	89
26.39		42	2650	12.6	92	34	2620	10.2	92	27	2620	8.0	91
23.59		47	2650	14.0	92	38	2650	11.5	92	30	2620	8.9	91
21.23		52	2650	15.6	92	42	2650	12.8	92	33	2620	9.9	92
19.23		57	2650	17.2	93	47	2650	14.1	92	36	2620	10.9	92
17.05		65	2670	19	93	53	2650	15.9	92	41	2650	12.4	92
15.42	35/6	71	2670	21	93	58	2650	17.5	93	45	2650	13.7	92
13.07		84	2540	24 *	93	69	2670	21	93	54	2650	16.1	92
11.41		96	2420	26 *	93	79	2590	23 *	93	61	2650	18.4	93
9.55		115	2280	29 *	93	94	2440	26 *	93	73	2650	22	93
8.26		133	2140	32 *	94	109	2320	28 *	93	85	2540	24 *	93

\*  $P_{emax} = 22 \text{ kW}$



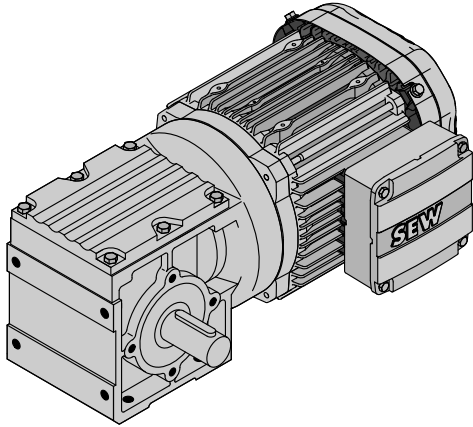
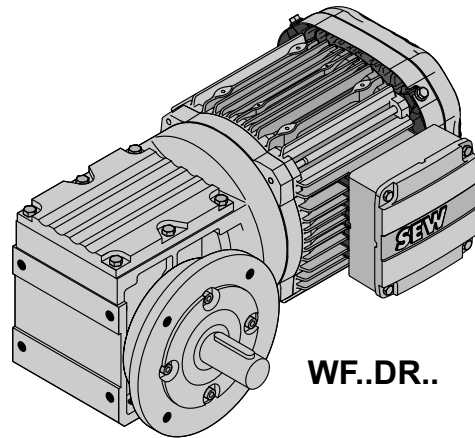
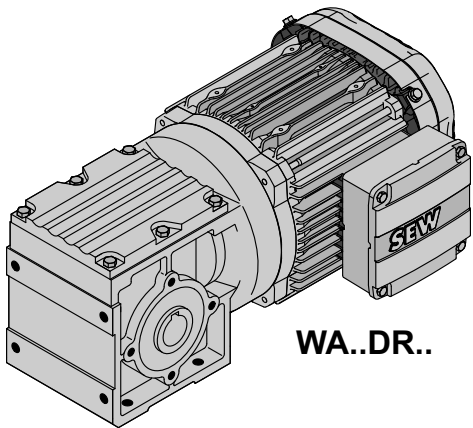
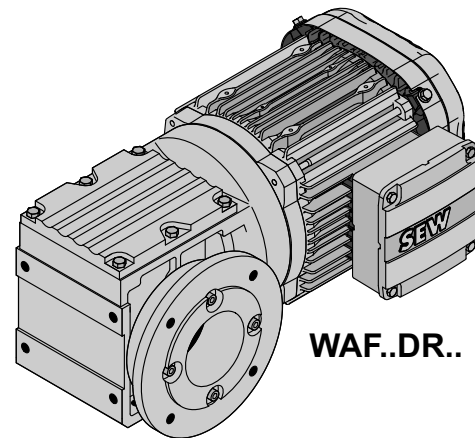
500 - 10 1/min

$i_{ges}$	$i_{sch}$	$n_e = 500 \text{ 1/min}$				$n_e = 250 \text{ 1/min}$				$n_e = 10 \text{ 1/min}$			
		$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]	$n_a$ [1/min]	$M_{amax}$ [Nm]	$P_e$ [kW]	$\eta$ [%]
286.40	40/1	1.7	4200	1.2	65	0.87	4200	0.62	62	0.03	4200	< 0.05	60
262.22		1.9	4200	1.3	66	0.95	4200	0.68	62	0.04	4200	< 0.05	60
231.67		2.2	4200	1.4	67	1.1	4200	0.76	63	0.04	4200	< 0.05	60
196.52		2.5	4200	1.6	68	1.3	4200	0.88	64	0.05	4200	< 0.05	60
180.95		2.8	4200	1.8	68	1.4	4200	0.95	64	0.06	4200	< 0.05	60
161.74		3.1	4200	2.0	69	1.5	4200	1.1	65	0.06	4200	< 0.05	60
145.60		3.4	4200	2.2	70	1.7	4200	1.2	65	0.07	4200	0.05	60
131.85		3.8	4200	2.4	70	1.9	4200	1.3	66	0.08	4200	0.06	60
116.92		4.3	4200	2.6	71	2.1	4200	1.4	67	0.09	4200	0.06	60
105.71		4.7	4200	2.9	72	2.4	4200	1.5	67	0.09	4200	0.07	60
89.60		5.6	4160	3.3	73	2.8	4200	1.8	69	0.11	4200	0.08	60
78.26		6.4	4080	3.7	74	3.2	4200	2.0	69	0.13	4200	0.09	60
65.45		7.6	3910	4.2	75	3.8	4200	2.4	70	0.15	4200	0.11	60
80.85		6.2	3110	2.4	84	3.1	3010	1.2	82	0.12	3010	< 0.05	80
71.43		7.0	4200	3.6	85	3.5	4160	1.9	82	0.14	4160	0.08	81
60.59		8.3	4200	4.3	85	4.1	4080	2.1	83	0.17	4080	0.09	81
55.79	9.0	4200	4.6	86	4.5	4200	2.4	83	0.18	4200	0.10	81	
49.87	37/3	10	4200	5.1	86	5.0	4200	2.6	83	0.20	4200	0.11	81
44.89		11	4160	5.6	86	5.6	4200	2.9	84	0.22	4200	0.12	81
40.65		12	4120	6.1	87	6.2	4200	3.2	84	0.25	4200	0.13	81
36.05		14	4080	6.8	87	6.9	4200	3.6	85	0.28	4200	0.15	81
32.60		15	3990	7.3	87	7.7	4200	4.0	85	0.31	4200	0.17	81
27.63	35/6	18	3910	8.4	88	9.0	4200	4.7	86	0.36	4200	0.20	81
24.13		21	3800	9.3	88	10	4200	5.3	86	0.41	4200	0.23	81
26.39		19	2590	5.7	90	9.5	2540	2.8	89	0.38	2540	0.12	87
23.59		21	2590	6.3	91	11	2540	3.2	89	0.42	2540	0.13	87
21.23		24	2590	7.0	91	12	2570	3.6	89	0.47	2570	0.15	87
19.23		26	2620	7.8	91	13	2570	3.9	89	0.52	2570	0.16	87
17.05		29	2620	8.8	91	15	2570	4.4	90	0.59	2570	0.18	87
15.42		32	2620	9.7	92	16	2570	4.8	90	0.65	2570	0.20	87
13.07		38	2650	11.6	92	19	2590	5.7	90	0.77	2590	0.24	87
11.41		44	2650	13.2	92	22	2590	6.6	91	0.88	2590	0.27	87
9.55		52	2650	15.7	92	26	2620	7.9	91	1.0	2620	0.33	87
8.26		61	2650	18.1	93	30	2620	9.1	91	1.2	2620	0.38	87

kVA	n
	f
i	
P	Hz

**W..DRE/DRS**

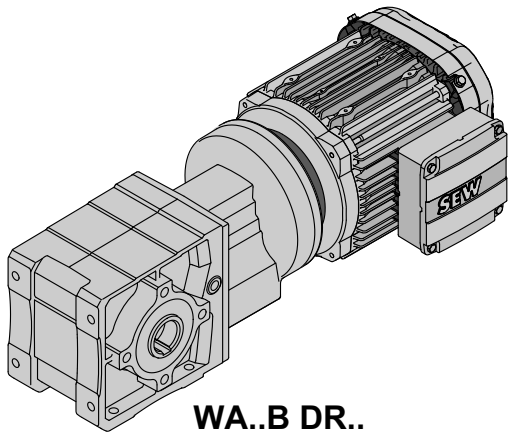
W, WF, WA, WAF, WA..B, WH..B, WHF, WH, WT..DR..

**12 W..DRE/DRS****12.1 W, WF, WA, WAF, WA..B, WH..B, WHF, WH, WT..DR..****W..DR..****WF..DR..****WA..DR..****WAF..DR..**

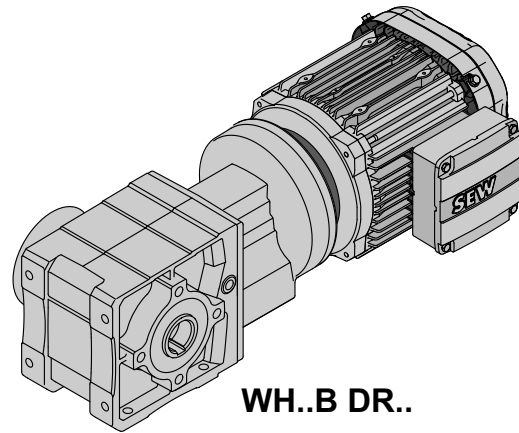
8665099019



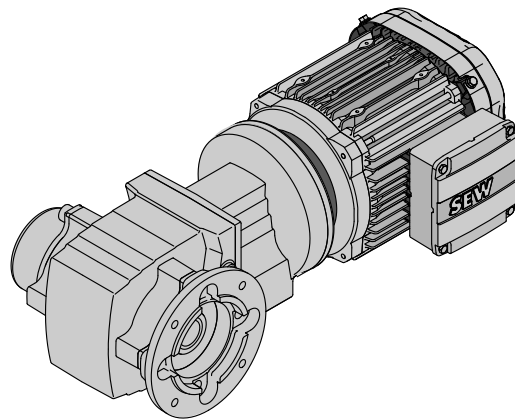
kVA	n
	f
i	
P	Hz



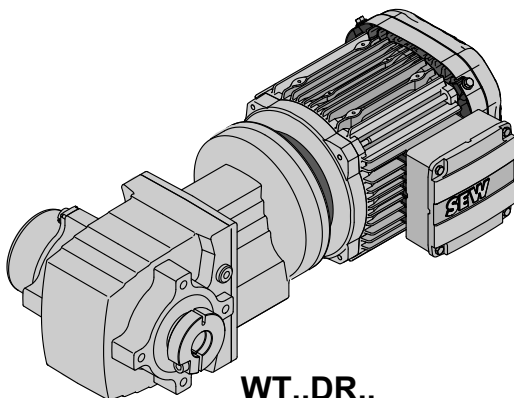
WA..B DR..



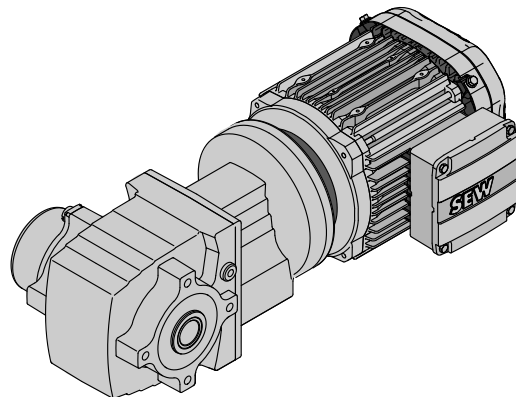
WH..B DR..



WHF..DR..

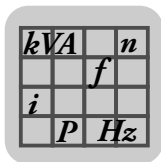


WT..DR..



WH..DR..

8665100939



## 12.2 W.. → DRE/DRS

<b>W10, n<sub>e</sub>=1400 1/min</b>					<b>25 Nm</b>
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DT56M DT56L
19	25	1960	-	75.00*	
23	25	1960	-	60.00*	
29	25	1960	-	48.00*	
36	25	1960	-	39.00*	
43	25	1960	-	32.50*	
51	24	1970	-	27.50*	
57	25	1960	-	24.50*	
72	25	1960	-	19.50*	
85	20	1990	-	16.50*	
98	22	1980	-	14.33	
137	13	1990	-	10.25*	
171	12	1850	-	8.20*	
213	12	1740	-	6.57	

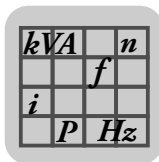
<b>W20, n<sub>e</sub>=1400 1/min</b>					<b>40 Nm</b>
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M
19	40	2200	-	75.00*	
23	40	2200	-	60.00*	
29	40	2200	-	48.00*	
36	40	2200	-	39.00*	
43	40	2200	-	32.50*	
51	40	2200	-	27.50*	
57	40	2200	-	24.50*	
72	35	2200	-	19.50*	
85	30	2200	-	16.50*	
98	30	2110	-	14.33	
137	25	1920	-	10.25*	
171	20	1830	-	8.20*	
213	20	1740	-	6.57	

<b>W30, n<sub>e</sub>=1400 1/min</b>					<b>70 Nm</b>	
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	Φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
19	70	3000	-	75.00*		
23	70	3000	-	60.00*		
29	70	3000	-	48.00*		
36	70	3000	-	39.00*		
43	70	3000	-	32.50*		
51	70	3000	-	27.50*		
57	70	3000	-	24.50*		
72	70	3000	-	19.50*		
86	60	3000	-	16.33		
98	60	3000	-	14.33		
137	50	2970	-	10.25*		
171	40	2810	-	8.20*		
213	40	2640	-	6.57		



W37, $n_e=1400$ 1/min					110 Nm		
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L
20	110	3320	-	69.05			
22	110	3320	-	63.33			
26	110	3320	-	53.92			
30	110	3320	-	46.49			
37	110	3320	-	37.88			
41	90	3610	-	34.52			
44	90	3610	-	31.67			
45	110	3320	-	31.33			
50	110	3320	-	27.78			
52	90	3610	-	26.96			
60	90	3610	-	23.25			
66	110	3320	-	21.33			
74	90	3610	-	18.94			
89	90	3430	-	15.67			
101	90	3250	-	13.89			
110	70	3800	-	12.70			
120	70	3680	-	11.65			
131	90	2880	-	10.67			
141	70	3460	-	9.92			
164	70	3270	-	8.55			
201	70	3020	-	6.97			
243	70	2810	-	5.77			
274	70	2680	-	5.11			
356	70	2410	-	3.93			
438	70	2220	-	3.20*			

W37R17, $n_e=1400$ 1/min					110 Nm		
$n_a$ [1/min]	$M_{amax}$ [Nm]	$F_{Ra}$ [N]	$\varphi_{(R)}$ [ ' ]	$i$	DR63S DR63M DR63L DRS71S DRS71M		
2							
0.32	110	3320	-	4402			
0.37	110	3320	-	3795			
0.43	110	3320	-	3272			
0.48	110	3320	-	2899			
0.55	110	3320	-	2558			
0.59	110	3320	-	2382			
0.64	110	3320	-	2172			
0.72	110	3320	-	1952			
0.78	110	3320	-	1795			
0.88	110	3320	-	1593			
0.96	110	3320	-	1463			
1.1	110	3320	-	1298			
1.9	110	3320	-	754			
2.1	110	3320	-	669			
2							
1.2	110	3320	-	1173			
1.3	110	3320	-	1063			
1.5	110	3320	-	956			
1.6	110	3320	-	854			
2.3	110	3320	-	600			
2.6	110	3320	-	532			
3.0	110	3320	-	472			
3.2	110	3320	-	434			



<b>W37R17, n<sub>e</sub>=1400 1/min</b>					<b>110 Nm</b>
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M
3.6	110	3320	-	384	
3.9	110	3320	-	359	
4.3	110	3320	-	327	
4.9	110	3320	-	286	
5.2	110	3320	-	267	
6.0	110	3320	-	233	
6.8	110	3320	-	207	
7.6	110	3320	-	184	
8.8	110	3320	-	160	
9.9	110	3320	-	141	
11	110	3320	-	125	
13	110	3320	-	109	
15	110	3320	-	96	
17	110	3320	-	82	
19	90	3610	-	73	
22	90	3610	-	63	
26	90	3610	-	53	
29	90	3610	-	48	

<b>W47, n<sub>e</sub>=1400 1/min</b>					<b>180 Nm</b>				
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ <sub>(/R)</sub> [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M DRE90M	DRE90L	DRE100M DRE100LC DRE112M	DRE132S
19	180	6400	-	74.98					
20	180	6400	-	68.93					
24	180	6400	-	58.98					
27	180	6230	-	51.12					
29	180	6040	-	47.78					
34	180	5650	-	41.30					
40	180	5230	-	35.09					
44	160	5560	-	31.62					
45	180	4950	-	31.33					
51	160	5220	-	27.41					
52	180	4580	-	26.76					
55	160	5070	-	25.62					
56	180	4430	-	25.07					
63	160	4750	-	22.15					
74	160	4410	-	18.82					
83	160	4180	-	16.80					
98	160	3880	-	14.35					
104	160	3760	-	13.44					
114	110	4550	-	12.30					
124	160	3460	-	11.32					
131	110	4300	-	10.66					
141	110	4190	-	9.96					
163	110	3960	-	8.61					
191	110	3710	-	7.32					
214	110	3540	-	6.53					
251	110	3320	-	5.58					
268	110	3240	-	5.23					
318	110	3020	-	4.40					
360	110	2860	-	3.89					
428	110	2660	-	3.27					



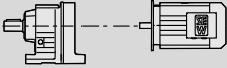

W47R17, n <sub>e</sub> =1400 1/min					180 Nm	
n <sub>a</sub> [1/min]	M <sub>amax</sub> [Nm]	F <sub>Ra</sub> [N]	φ(/R) [ ' ]	i	DR63S DR63M DR63L DRS71S DRS71M	DRS80S DRE80M
2  3						
0.29	180	6400	-	4815		
0.34	180	6400	-	4173		
0.36	180	6400	-	3870		
0.39	180	6400	-	3598		
0.42	180	6400	-	3354		
0.44	180	6400	-	3171		
0.51	180	6400	-	2748		
0.58	180	6400	-	2425		
0.62	180	6400	-	2258		
0.66	180	6400	-	2111		
0.71	180	6400	-	1959		
0.78	180	6400	-	1797		
0.88	180	6400	-	1595		
0.94	180	6400	-	1486		
0.97	180	6400	-	1448		
1.2	180	6400	-	1170		
1.9	180	6400	-	754		
2  2						
1.1	180	6400	-	1290		
1.2	180	6400	-	1183		
1.3	180	6400	-	1042		
1.5	180	6400	-	956		
1.6	180	6400	-	869		
2.1	180	6400	-	661		
2.3	180	6400	-	596		
2.6	180	6400	-	536		
3.0	180	6400	-	473		
3.2	180	6400	-	434		
3.6	180	6400	-	386		
3.9	180	6400	-	359		
4.4	180	6400	-	318		
4.8	180	6400	-	291		
5.2	180	6400	-	270		
5.3	180	6400	-	265		
5.9	180	6400	-	237		
6.7	180	6400	-	210		
7.7	180	6400	-	183		
8.8	180	6400	-	159		
9.9	180	6400	-	141		
11	160	6650	-	124		
12	180	6400	-	120		
13	160	6650	-	105		
15	160	6650	-	95		
16	160	6650	-	85		
18	160	6650	-	77		
19	160	6650	-	72		

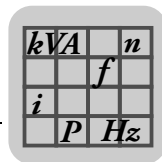
$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

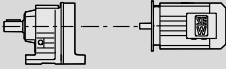

## W..DRE/DRS

### W..DRE/DRS [kW]

### 12.3 W..DRE/DRS [kW]

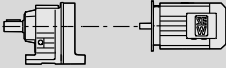

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
0.09	17	20	75.00*	1800	1.25				
	22	17	60.00*	1800	1.45				
	27	16	48.00*	1800	1.55				
	33	15	39.00*	1800	1.70				
	40	13	32.50*	1800	1.90				
	47	12	27.50*	1800	2.0	W 10	DT	56M4	5.3 664
	53	11	24.50*	1800	2.3	WF 10	DT	56M4	5.5 665
	67	9.4	19.50*	1800	2.6	WA 10	DT	56M4	5.3 666
	79	8.4	16.50*	1800	2.4	WAF 10	DT	56M4	5.5 665
	91	7.6	14.33	1800	2.9				
	127	5.8	10.25*	1800	2.2				
	159	4.8	8.20*	1800	2.5				
	198	4.0	6.57	1800	3.0				
0.12	3.8	135	359	0	0.80				
	4.2	128	327	1780	0.85				
	4.8	112	286	3280	1.00				
	5.2	107	267	3370	1.05				
	5.9	94	233	3560	1.15				
	6.7	81	207	3720	1.35				
	7.5	73	184	3800	1.50				
	8.6	68	160	3850	1.60	W 37R17	DR	63S4	13 683
	9.8	60	141	3910	1.80	WF 37R17	DR	63S4	13 683
	11	54	125	3960	2.0	WA 37R17	DR	63S4	13 683
	13	48	109	4000	2.3	WAF 37R17	DR	63S4	13 683
	14	43	96	4030	2.6				
	17	37	82	4060	3.0				
	19	38	73	4050	2.3				
	22	34	63	4070	2.6				
	26	29	53	4090	3.1				
	29	27	48	4100	3.3				
	20	39	69.05	4050	2.8				
	22	36	63.33	4060	3.1				
	26	31	53.92	4080	3.5	W 37	DR	63S4	10 674
	30	27	46.49	4100	4.0	WF 37	DR	63S4	10 675
	36	23	37.88	4110	4.8	WA 37	DR	63S4	10 677
	40	24	34.52	4110	3.8	WAF 37	DR	63S4	10 675
	44	22	31.67	4120	4.1				
	12	40	75.00*	3000	1.75	W 30	DR	63M6	9.0 670
	15	38	60.00*	3000	1.85	WF 30	DR	63M6	9.4 671
	28	25	32.50*	3000	2.8	WA 30	DR	63M6	8.8 673
	33	24	27.50*	3000	3.0	WAF 30	DR	63M6	9.1 672
	18	28	75.00*	3000	2.5	W 30	DR	63S4	9.0 670
	23	26	60.00*	3000	2.7	WF 30	DR	63S4	9.4 671
	29	23	48.00*	3000	3.1	WA 30	DR	63S4	8.8 673
	35	20	39.00*	3000	3.4	WAF 30	DR	63S4	9.1 672
	42	17	32.50*	3000	4.1				
	12	36	75.00*	2200	1.10	W 20	DR	63M6	6.6 667
	15	32	60.00*	2200	1.25	WF 20	DR	63M6	6.8 668
	28	27	32.50*	2200	1.50	WA 20	DR	63M6	6.3 669
	33	22	27.50*	2200	1.80	WAF 20	DR	63M6	6.3 668
	18	25	75.00*	2200	1.60				
	23	22	60.00*	2200	1.80				
	29	20	48.00*	2200	1.95				
	35	19	39.00*	2200	2.2				
	42	18	32.50*	2200	2.2				
	50	15	27.50*	2200	2.6	W 20	DR	63S4	6.6 667
	56	14	24.50*	2200	2.9	WF 20	DR	63S4	6.8 668
71	12	19.50*	2200	3.0	WA 20	DR	63S4	6.3 669	
84	10	16.50*	2200	2.9	WAF 20	DR	63S4	6.3 668	
96	9.6	14.33	2200	3.1					
135	7.2	10.25*	2160	3.5					
168	5.9	8.20*	2020	3.4					
210	4.9	6.57	1890	4.0					



$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
0.12	17	27	75.00*	1800	0.95				
	22	23	60.00*	1800	1.05				
	27	21	48.00*	1800	1.15				
	33	20	39.00*	1800	1.30				
	40	18	32.50*	1800	1.40				
	47	16	27.50*	1800	1.55	W 10	DT 56L4	5.3	664
	53	15	24.50*	1800	1.70	WF 10	DT 56L4	5.5	665
	67	13	19.50*	1800	2.00	WA 10	DT 56L4	5.3	666
	79	11	16.50*	1800	1.80	WAF 10	DT 56L4	5.5	665
	91	10	14.33	1800	2.2				
	127	7.7	10.25*	1800	1.70				
	159	6.3	8.20*	1800	1.90				
198	5.3	6.57	1800	2.3					
0.18	4.2	225	318	6080	0.80				
	4.9	193	270	6320	0.95				
	5.6	178	237	6420	1.00				
	6.3	156	210	6560	1.15				
	7.2	135	183	6680	1.35				
	8.3	122	159	6760	1.50	W 47R17	DR 63M4	18	683
	9.3	108	141	6840	1.65	WF 47R17	DR 63M4	19	683
	11	114	124	6900	1.40	WA 47R17	DR 63M4	17	683
	11	93	120	6930	1.95	WAF 47R17	DR 63M4	18	683
	13	96	105	6990	1.65				
	14	90	95	7020	1.75				
	16	79	85	7070	2.0				
	17	74	77	7090	2.2				
	18	67	72	7120	2.4				
	6.4	134	207	580	0.80				
	7.2	121	184	2620	0.90				
	8.2	110	160	3320	1.00				
	9.3	99	141	3500	1.10				
	11	88	125	3630	1.25	W 37R17	DR 63M4	13	683
	12	79	109	3740	1.40	WF 37R17	DR 63M4	13	683
	14	71	96	3820	1.55	WA 37R17	DR 63M4	13	683
	16	61	82	3910	1.80	WAF 37R17	DR 63M4	13	683
	18	64	73	3890	1.40				
	21	56	63	3940	1.60				
25	48	53	4000	1.85					
27	44	48	4020	2.0					
18	70	74.98	7060	2.6					
19	65	68.93	7080	2.8	W 47	DR 63M4	16	679	
22	56	58.98	7130	3.2	WF 47	DR 63M4	16	680	
26	50	51.12	7160	3.6	WA 47	DR 63M4	14	681	
28	47	47.78	7180	3.8	WAF 47	DR 63M4	15	680	
32	41	41.30	7210	4.4					
42	35	31.62	7020	4.6					
19	60	69.05	3920	1.85					
21	56	63.33	3950	1.95	W 37	DR 63M4	10	674	
24	48	53.92	4000	2.3	WF 37	DR 63M4	10	675	
28	43	46.49	4030	2.6	WA 37	DR 63M4	10	677	
35	36	37.88	4070	3.1	WAF 37	DR 63M4	10	675	
38	37	34.52	4060	2.4					
42	34	31.67	4070	2.6					
48	27	27.78	4100	4.1					
49	29	26.96	4090	3.1					
57	26	23.25	4100	3.5					
62	21	21.33	4120	5.2					
70	21	18.94	4120	4.3					
12	62	75.00*	3000	1.10	W 30	DR 63L6	9.8	670	
14	58	60.00*	3000	1.20	WF 30	DR 63L6	10	671	
27	39	32.50*	3000	1.80	WA 30	DR 63L6	9.5	673	
32	37	27.50*	3000	1.90	WAF 30	DR 63L6	9.8	672	

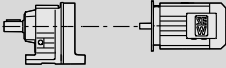

kVA	n
f	
i	
P	H <sub>Z</sub>

W..DRE/DRS  
W..DRE/DRS [kW]

P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>		m [kg]		
0.18	18	44	75.00*	3000	1.60				
	22	40	60.00*	3000	1.75				
	28	35	48.00*	3000	2.00				
	34	32	39.00*	3000	2.2				
	41	27	32.50*	3000	2.6				
	48	25	27.50*	3000	2.8	W 30	DR 63M4	9.0	670
	54	23	24.50*	3000	3.0	WF 30	DR 63M4	9.4	671
	68	20	19.50*	3000	3.6	WA 30	DR 63M4	8.8	673
	81	17	16.33	3000	3.5	WAF 30	DR 63M4	9.1	672
	92	15	14.33	3000	3.9				
	129	12	10.25*	3000	4.3				
	161	9.5	8.20*	3000	4.2				
	201	8.0	6.57	2980	5.0				
	111	12	24.50*	3000	6.0				
	139	9.9	19.50*	3000	7.1	W 30	DR 63S2	9.0	670
	167	8.5	16.33	3000	7.1	WF 30	DR 63S2	9.4	671
	190	7.7	14.33	3000	7.8	WA 30	DR 63S2	8.8	673
	265	5.7	10.25*	2720	8.7	WAF 30	DR 63S2	9.1	672
	332	4.7	8.20*	2540	8.6				
	14	49	60.00*	2200	0.80	W 20	DR 63L6	7.3	667
	32	35	27.50*	2200	1.15	WF 20	DR 63L6	7.4	668
	45	27	19.50*	2200	1.30	WA 20	DR 63L6	7.0	669
						WAF 20	DR 63L6	7.0	668
	18	39	75.00*	2200	1.00				
	22	34	60.00*	2200	1.15				
	28	32	48.00*	2200	1.25				
	34	29	39.00*	2200	1.40				
	41	28	32.50*	2200	1.40	W 20	DR 63M4	6.6	667
	48	24	27.50*	2200	1.70	WF 20	DR 63M4	6.8	668
	54	22	24.50*	2200	1.85	WA 20	DR 63M4	6.3	669
	68	19	19.50*	2200	1.90	WAF 20	DR 63M4	6.3	668
	80	16	16.50*	2200	1.85				
	92	15	14.33	2200	2.0				
129	11	10.25*	2140	2.2					
161	9.2	8.20*	2010	2.2					
201	7.7	6.57	1890	2.6					
111	11	24.50*	2200	3.6					
139	9.4	19.50*	2090	3.7	W 20	DR 63S2	6.6	667	
165	8.2	16.50*	1980	3.7	WF 20	DR 63S2	6.8	668	
190	7.5	14.33	1910	4.0	WA 20	DR 63S2	6.3	669	
265	5.6	10.25*	1720	4.5	WAF 20	DR 63S2	6.3	668	
332	4.6	8.20*	1610	4.4					
0.25	7.1	196	183	6300	0.90				
	8.2	175	159	6430	1.05				
	9.2	157	141	6550	1.15				
	11	164	124	6630	0.95	W 47R17	DR 63L4	19	683
	11	134	120	6690	1.35	WF 47R17	DR 63L4	20	683
	12	139	105	6760	1.15	WA 47R17	DR 63L4	18	683
	14	129	95	6820	1.25	WAF 47R17	DR 63L4	18	683
	15	114	85	6900	1.40				
	17	106	77	6940	1.50				
	18	97	72	6980	1.65				
	10	128	125	1880	0.85				
	12	114	109	3220	0.95				
	14	102	96	3450	1.10	W 37R17	DR 63L4	14	683
	16	88	82	3640	1.25	WF 37R17	DR 63L4	14	683
	18	92	73	3580	0.95	WA 37R17	DR 63L4	14	683
	21	82	63	3720	1.10	WAF 37R17	DR 63L4	14	683
	24	70	53	3840	1.30				
	27	64	48	3880	1.40				
	12	136	74.98	6680	1.30	W 47	DRS 71S6	18	679
	13	127	68.93	6730	1.40	WF 47	DRS 71S6	19	680
						WA 47	DRS 71S6	17	681
						WAF 47	DRS 71S6	17	680
	17	98	74.98	6900	1.85	W 47	DR 63L4	16	679
	19	91	68.93	6940	2.00	WF 47	DR 63L4	17	680
	22	79	58.98	7000	2.3	WA 47	DR 63L4	15	681
	25	70	51.12	7060	2.6	WAF 47	DR 63L4	16	680
	27	66	47.78	7080	2.7				

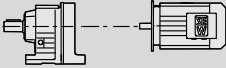





$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
<b>0.25</b>	19	85	69.05	3680	1.30				
	21	78	63.33	3750	1.40				
	24	68	53.92	3850	1.60				
	28	60	46.49	3920	1.85				
	34	50	37.88	3990	2.2				
	38	52	34.52	3980	1.75				
	41	48	31.67	4000	1.90				
	47	38	27.78	4060	2.9	W 37	DR 63L4	11	674
	48	41	26.96	4040	2.2	WF 37	DR 63L4	11	675
	56	36	23.25	4060	2.5	WA 37	DR 63L4	11	677
	61	30	21.33	4090	3.7	WAF 37	DR 63L4	11	675
	69	30	18.94	4090	3.0				
	83	25	15.67	4110	3.6				
	94	22	13.89	4110	4.0				
	102	21	12.70	4120	3.3				
112	20	11.65	4120	3.6					
122	17	10.67	3910	5.2					
131	17	9.92	3920	4.2					
12	85	75.00*	3000	0.85	W 30	DRS 71S6	12	670	
15	79	60.00*	3000	0.90	WF 30	DRS 71S6	12	671	
28	53	32.50*	3000	1.35	WA 30	DRS 71S6	11	673	
37	46	24.50*	3000	1.50	WAF 30	DRS 71S6	12	672	
46	39	19.50*	3000	1.80					
17	61	75.00*	3000	1.15					
22	57	60.00*	3000	1.25					
27	50	48.00*	3000	1.40					
33	45	39.00*	3000	1.55					
40	38	32.50*	3000	1.85	W 30	DR 63L4	9.8	670	
47	35	27.50*	3000	2.00	WF 30	DR 63L4	10	671	
53	33	24.50*	3000	2.1	WA 30	DR 63L4	9.5	673	
67	28	19.50*	3000	2.5	WAF 30	DR 63L4	9.8	672	
80	24	16.33	3000	2.5					
91	22	14.33	3000	2.8					
127	16	10.25*	3000	3.1					
159	13	8.20*	3000	3.0					
198	11	6.57	2970	3.6					
109	17	24.50*	3000	4.2					
136	14	19.50*	3000	5.0	W 30	DR 63M2	9.0	670	
163	12	16.33	3000	5.0	WF 30	DR 63M2	9.4	671	
186	11	14.33	3000	5.5	WA 30	DR 63M2	8.8	673	
260	8.1	10.25*	2720	6.2	WAF 30	DR 63M2	9.1	672	
324	6.6	8.20*	2540	6.0					
33	47	27.50*	2200	0.85					
37	43	24.50*	2200	0.95	W 20	DRS 71S6	9.1	667	
46	37	19.50*	2200	0.95	WF 20	DRS 71S6	9.2	668	
62	30	14.33	2200	1.00	WA 20	DRS 71S6	8.8	669	
87	22	10.25*	2200	1.10	WAF 20	DRS 71S6	8.8	668	
109	19	8.20*	2190	1.10					
136	16	6.57	2090	1.30					
22	48	60.00*	2200	0.85					
27	45	48.00*	2200	0.90					
33	41	39.00*	2200	1.00					
40	40	32.50*	2200	1.00					
47	34	27.50*	2200	1.20	W 20	DR 63L4	7.3	667	
53	30	24.50*	2200	1.30	WF 20	DR 63L4	7.4	668	
67	26	19.50*	2200	1.35	WA 20	DR 63L4	7.0	669	
79	23	16.50*	2200	1.30	WAF 20	DR 63L4	7.0	668	
91	21	14.33	2200	1.45					
127	16	10.25*	2100	1.60					
159	13	8.20*	1970	1.55					
198	11	6.57	1870	1.85					
82	21	32.50*	2200	1.95					
97	17	27.50*	2200	2.3					
109	16	24.50*	2190	2.6	W 20	DR 63M2	6.6	667	
136	13	19.50*	2050	2.6	WF 20	DR 63M2	6.8	668	
161	12	16.50*	1950	2.6	WA 20	DR 63M2	6.3	669	
186	11	14.33	1880	2.8	WAF 20	DR 63M2	6.3	668	
260	7.9	10.25*	1710	3.2					
324	6.5	8.20*	1600	3.1					

$kVA$	$n$
$f$	
$i$	
$P$	$H_z$

W..DRE/DRS  
W..DRE/DRS [kW]

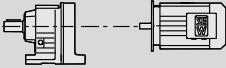

$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]		
0.37	9.8	220	141	6110	0.80				
	11	192	120	6320	0.95	W 47R17	DRS 71S4	21 683	
	13	198	105	6430	0.80	WF 47R17	DRS 71S4	21 683	
	15	183	95	6520	0.90	WA 47R17	DRS 71S4	19 683	
	16	163	85	6640	1.00	WAF 47R17	DRS 71S4	20 683	
	18	150	77	6710	1.05				
	19	138	72	6770	1.15				
	17	126	82	2020	0.85	W 37R17	DRS 71S4	15 683	
	26	100	53	3480	0.90	WF 37R17	DRS 71S4	15 683	
	29	91	48	3600	1.00	WA 37R17	DRS 71S4	15 683	
						WAF 37R17	DRS 71S4	15 683	
	12	200	74.98	6270	0.90	W 47	DRS 71M6	19 679	
	13	186	68.93	6360	0.95	WF 47	DRS 71M6	20 680	
	15	162	58.98	6520	1.10	WA 47	DRS 71M6	18 681	
	18	143	51.12	6640	1.25	WAF 47	DRS 71M6	19 680	
	19	134	47.78	6690	1.35				
	18	138	74.98	6670	1.30				
	20	128	68.93	6730	1.40				
	23	111	58.98	6820	1.60				
	27	98	51.12	6900	1.85				
	29	92	47.78	6930	1.95				
	33	81	41.30	6940	2.2				
	39	70	35.09	6660	2.6				
	44	69	31.62	6560	2.3				
	44	63	31.33	6460	2.9	W 47	DRS 71S4	18 679	
	50	60	27.41	6310	2.7	WF 47	DRS 71S4	19 680	
	52	54	26.76	6200	3.3	WA 47	DRS 71S4	17 681	
	54	56	25.62	6200	2.8	WAF 47	DRS 71S4	17 680	
	55	51	25.07	6090	3.5				
	62	49	22.15	5950	3.3				
	73	42	18.82	5680	3.8				
	82	38	16.80	5500	4.2				
	96	32	14.35	5250	4.9				
	112	30	12.30	5120	3.7				
	129	26	10.66	4890	4.3				
	139	24	9.96	4790	4.6				
	22	110	63.33	3320	1.00				
	26	96	53.92	3540	1.15				
	30	84	46.49	3680	1.30				
	36	70	37.88	3830	1.55				
	40	73	34.52	3810	1.25				
	44	67	31.67	3860	1.35				
	50	53	27.78	3970	2.1				
	51	58	26.96	3930	1.55	W 37	DRS 71S4	13 674	
	59	50	23.25	3990	1.80	WF 37	DRS 71S4	13 675	
65	42	21.33	4030	2.6	WA 37	DRS 71S4	13 677		
73	42	18.94	4040	2.2	WAF 37	DRS 71S4	13 675		
88	35	15.67	4070	2.6					
99	31	13.89	4030	2.9					
109	30	12.70	4090	2.3					
118	27	11.65	3990	2.6					
129	24	10.67	3740	3.7					
139	23	9.92	3800	3.0					
161	20	8.55	3630	3.5					
18	86	75.00*	3000	0.80					
23	80	60.00*	3000	0.90					
29	69	48.00*	3000	1.00					
35	63	39.00*	3000	1.10					
42	53	32.50*	3000	1.30					
50	49	27.50*	3000	1.40	W 30	DRS 71S4	12 670		
56	46	24.50*	3000	1.55	WF 30	DRS 71S4	12 671		
71	39	19.50*	3000	1.80	WA 30	DRS 71S4	11 673		
84	33	16.33	3000	1.80	WAF 30	DRS 71S4	12 672		
96	30	14.33	3000	2.00					
135	23	10.25*	3000	2.2					
168	19	8.20*	3000	2.1					
210	16	6.57	2870	2.6					

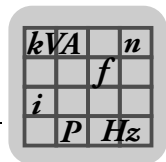


P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]			
												W	WF
0.37	108	25	24.50*	3000	2.8								
	136	21	19.50*	3000	3.4	W	30	DR	63L2	9.8	670		
	162	18	16.33	3000	3.4	WF	30	DR	63L2	10	671		
	185	16	14.33	2960	3.7	WA	30	DR	63L2	9.5	673		
	259	12	10.25*	2690	4.1	WAF	30	DR	63L2	9.8	672		
	323	9.9	8.20*	2510	4.0								
	50	47	27.50*	2200	0.85								
	56	43	24.50*	2200	0.95								
	71	37	19.50*	2200	0.95	W	20	DRS	71S4	9.1	667		
	84	32	16.50*	2180	0.95	WF	20	DRS	71S4	9.2	668		
	96	29	14.33	2130	1.00	WA	20	DRS	71S4	8.8	669		
	135	22	10.25*	1970	1.15	WAF	20	DRS	71S4	8.8	668		
	168	18	8.20*	1870	1.10								
	210	15	6.57	1800	1.30								
	108	23	24.50*	2080	1.70								
	136	20	19.50*	1970	1.75	W	20	DR	63L2	7.3	667		
	161	17	16.50*	1880	1.75	WF	20	DR	63L2	7.4	668		
	185	16	14.33	1820	1.90	WA	20	DR	63L2	7.0	669		
	259	12	10.25*	1660	2.1	WAF	20	DR	63L2	7.0	668		
	323	9.6	8.20*	1560	2.1								
	0.55	18	205	51.12	6200	0.85							
		19	198	47.78	6280	0.90							
		22	174	41.30	6440	1.05	W	47	DRS	80S6	22	679	
		26	150	35.09	6590	1.20	WF	47	DRS	80S6	22	680	
29		151	31.62	6700	1.05	WA	47	DRS	80S6	20	681		
29		136	31.33	6610	1.35	WAF	47	DRS	80S6	21	680		
33		132	27.41	6570	1.20								
36		124	25.62	6480	1.30								
18		200	74.98	6240	0.90								
20		190	68.93	6340	0.95								
23		165	58.98	6500	1.10								
27		146	51.12	6620	1.25								
29		137	47.78	6620	1.30	W	47	DRS	71M4	19	679		
33		120	41.30	6440	1.50	WF	47	DRS	71M4	20	680		
39		104	35.09	6230	1.75	WA	47	DRS	71M4	18	681		
44		102	31.62	6200	1.55	WAF	47	DRS	71M4	19	680		
44		94	31.33	6080	1.90								
50		89	27.41	6000	1.80								
54		84	25.62	5910	1.90								
36		104	37.88	3410	1.05								
44		100	31.67	3480	0.90								
50		79	27.78	3740	1.40								
51		86	26.96	3660	1.05								
59		75	23.25	3780	1.20								
65		62	21.33	3900	1.75								
73		62	18.94	3900	1.45								
88		52	15.67	3940	1.75	W	37	DRS	71M4	14	674		
99		46	13.89	3830	1.95	WF	37	DRS	71M4	14	675		
109		44	12.70	3990	1.60	WA	37	DRS	71M4	14	677		
118		41	11.65	3900	1.70	WAF	37	DRS	71M4	14	675		
129		36	10.67	3590	2.5								
139		35	9.92	3720	2.0								
161		30	8.55	3560	2.3								
198		25	6.97	3350	2.8								
239		20	5.77	3160	3.4								
270		18	5.11	3050	3.9								
352		14	3.93	2810	5.0								
42		79	32.50*	3000	0.90								
50		73	27.50*	3000	0.95								
56		68	24.50*	3000	1.05	W	30	DRS	71M4	13	670		
84		50	16.33	3000	1.20	WF	30	DRS	71M4	13	671		
96		45	14.33	3000	1.35	WA	30	DRS	71M4	13	673		
135		34	10.25*	3000	1.50	WAF	30	DRS	71M4	13	672		
168		28	8.20*	2980	1.45								
210		23	6.57	2800	1.70								

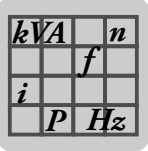
$kVA$	$n$
$f$	
$i$	
$P$	$H_z$



W..DRE/DRS  
W..DRE/DRS [kW]

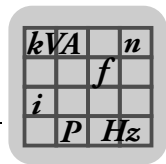
$P_m$ [kW]	$n_a$ [1/min]	$M_a$ [Nm]	$i$	$F_{Ra}^{1)}$ [N]	SEW $f_B$		$m$ [kg]	
<b>0.55</b>	115	35	24.50*	3000	2.0			
	144	29	19.50*	3000	2.4	W 30	DRS 71M2	13 670
	172	25	16.33	2940	2.4	WF 30	DRS 71M2	13 671
	196	23	14.33	2840	2.6	WA 30	DRS 71M2	13 673
	274	17	10.25*	2590	3.0	WAF 30	DRS 71M2	13 672
	343	14	8.20*	2420	2.9			
<b>0.75</b>	24	215	58.98	6100	0.85			
	28	192	51.12	6010	0.95			
	30	180	47.78	5970	1.00			
	35	158	41.30	5860	1.15			
	41	136	35.09	5720	1.30			
	45	134	31.62	5770	1.20	W 47	DRE 80M4	24 679
	46	123	31.33	5610	1.45	WF 47	DRE 80M4	25 680
	52	117	27.41	5620	1.35	WA 47	DRE 80M4	23 681
	54	107	26.76	5450	1.70	WAF 47	DRE 80M4	24 680
	56	110	25.62	5540	1.45			
	57	100	25.07	5380	1.80			
	65	96	22.15	5370	1.65			
	76	82	18.82	5180	1.95			
	117	58	12.30	4860	1.90			
	46	116	31.33	3030	0.95			
	52	104	27.78	3410	1.05			
	62	98	23.25	3500	0.90			
	67	82	21.33	3710	1.35			
	76	81	18.94	3720	1.10			
	92	68	15.67	3680	1.35			
	103	61	13.89	3590	1.50	W 37	DRE 80M4	19 674
	135	47	10.67	3400	1.90	WF 37	DRE 80M4	19 675
	145	46	9.92	3590	1.55	WA 37	DRE 80M4	19 677
	168	39	8.55	3450	1.80	WAF 37	DRE 80M4	19 675
	206	32	6.97	3250	2.2			
	249	27	5.77	3080	2.6			
	281	24	5.11	2970	2.9			
	366	18	3.93	2740	3.8			
	448	15	3.20*	2580	4.7			
	88	65	16.33	3000	0.90	W 30	DRE 80M4	18 670
	100	59	14.33	3000	1.00	WF 30	DRE 80M4	18 671
	140	44	10.25*	3000	1.10	WA 30	DRE 80M4	17 673
	175	36	8.20*	2850	1.10	WAF 30	DRE 80M4	18 672
	218	31	6.57	2700	1.30			
	118	46	24.50*	3000	1.50	W 30	DRE 80M2	18 670
	177	33	16.33	2820	1.80	WF 30	DRE 80M2	18 671
202	30	14.33	2730	2.00	WA 30	DRE 80M2	17 673	
282	22	10.25*	2510	2.2	WAF 30	DRE 80M2	18 672	
352	18	8.20*	2360	2.2				
<b>1.1</b>	40	200	35.09	4910	0.90			
	45	199	31.62	5120	0.80			
	45	182	31.33	4890	1.00			
	52	174	27.41	5050	0.90			
	53	158	26.76	4830	1.15			
	55	163	25.62	5010	1.00			
	57	149	25.07	4800	1.20	W 47	DRE 90M4	29 679
	64	142	22.15	4910	1.15	WF 47	DRE 90M4	30 680
	75	122	18.82	4780	1.30	WA 47	DRE 90M4	28 681
	85	109	16.80	4690	1.45	WAF 47	DRE 90M4	29 680
	99	94	14.35	4550	1.70			
	106	88	13.44	4490	1.80			
	115	86	12.30	4690	1.30			
	133	75	10.66	4520	1.45			
	143	70	9.96	4440	1.55			
	165	61	8.61	4270	1.80			

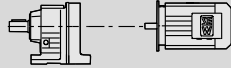



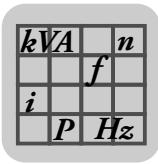
P <sub>m</sub> [kW]	n <sub>a</sub> [1/min]	M <sub>a</sub> [Nm]	i	F <sub>Ra</sub> <sup>1)</sup> [N]	SEW f <sub>B</sub>					m [kg]	
1.1	91	100	15.67	3270	0.90						
	102	90	13.89	3230	1.00						
	133	70	10.67	3120	1.30						
	143	68	9.92	3460	1.05	W	37	DRE	90M4	23	674
	166	58	8.55	3330	1.20	WF	37	DRE	90M4	23	675
	204	48	6.97	3160	1.45	WA	37	DRE	90M4	23	677
	246	40	5.77	3000	1.75	WAF	37	DRE	90M4	23	675
	278	35	5.11	2900	2.00						
	362	27	3.93	2690	2.6						
	444	22	3.20*	2540	3.2						
1.5	53	210	26.76	4100	0.85						
	57	200	25.07	4110	0.90						
	65	192	22.15	4360	0.85						
	76	165	18.82	4320	0.95						
	85	148	16.80	4270	1.10						
	100	127	14.35	4190	1.25	W	47	DRE	90L4	32	679
	106	120	13.44	4150	1.35	WF	47	DRE	90L4	32	680
	126	102	11.32	4040	1.60	WA	47	DRE	90L4	30	681
	134	101	10.66	4330	1.10	WAF	47	DRE	90L4	31	680
	144	95	9.96	4260	1.15						
	166	82	8.61	4110	1.35						
	195	70	7.32	3950	1.55						
	219	63	6.53	3830	1.75						
	134	94	10.67	2790	0.95						
	167	79	8.55	3180	0.90	W	37	DRE	90L4	26	674
	205	65	6.97	3030	1.10	WF	37	DRE	90L4	26	675
	248	54	5.77	2900	1.30	WA	37	DRE	90L4	26	677
	280	48	5.11	2810	1.45	WAF	37	DRE	90L4	26	675
	364	37	3.93	2620	1.90						
	447	30	3.20*	2480	2.3						
2.2	99	187	14.35	3560	0.85						
	106	176	13.44	3560	0.90						
	126	149	11.32	3540	1.05						
	165	121	8.61	3860	0.90	W	47	DRE	100M4	37	679
	195	103	7.32	3730	1.05	WF	47	DRE	100M4	37	680
	218	92	6.53	3640	1.20	WA	47	DRE	100M4	35	681
	255	79	5.58	3510	1.40	WAF	47	DRE	100M4	36	680
	273	74	5.23	3460	1.50						
	324	62	4.40	3310	1.75						
	366	55	3.89	3210	2.00						
	436	46	3.27	3070	2.4						
	247	79	5.77	2730	0.90	W	37	DRE	100M4	31	674
	279	70	5.11	2660	1.00	WF	37	DRE	100M4	31	675
	363	54	3.93	2500	1.30	WA	37	DRE	100M4	31	677
445	44	3.20*	2380	1.60	WAF	37	DRE	100M4	31	675	
3.0	223	123	6.53	3400	0.90						
	261	105	5.58	3300	1.05	W	47	DRE	100LC4	42	679
	278	99	5.23	3260	1.10	WF	47	DRE	100LC4	42	680
	330	83	4.40	3150	1.30	WA	47	DRE	100LC4	40	681
	374	74	3.89	3060	1.50	WAF	47	DRE	100LC4	41	680
	445	62	3.27	2940	1.75						


**12.4 W..R..DRE/DRS [Nm]**

$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]		$m$ [kg]		
110	0.31	4402	3320				
	0.36	3795	3320				
	0.42	3272	3320				
	0.48	2899	3320				
	0.54	2558	3320				
	0.58	2382	3320				
	0.64	2172	3320		W 37R17	DR 63S4	13 683
	0.71	1952	3320		WF 37R17	DR 63S4	13 683
	0.77	1795	3320		WA 37R17	DR 63S4	13 683
	0.87	1593	3320		WAF 37R17	DR 63S4	13 683
	0.94	1463	3320				
	1.1	1298	3320				
	1.8	754	3320				
	2.1	669	3320				
	1.2	1173	3320				
	1.3	1063	3320				
	1.4	956	3320				
	1.6	854	3320				
	2.3	600	3320		W 37R17	DR 63S4	13 683
	2.6	532	3320		WF 37R17	DR 63S4	13 683
	2.9	472	3320		WA 37R17	DR 63S4	13 683
	3.2	434	3320		WAF 37R17	DR 63S4	13 683
	3.6	384	3320				
	3.8	359	3320				
	4.2	327	3320				
	4.8	286	3320				
	5.0	267	3320		W 37R17	DR 63M4	13 683
	5.7	233	3320		WF 37R17	DR 63M4	13 683
	6.4	207	3320		WA 37R17	DR 63M4	13 683
	7.2	184	3320		WAF 37R17	DR 63M4	13 683
	8.2	160	3320				
	9.2	141	3320		W 37R17	DR 63L4	14 683
	10	125	3320		WF 37R17	DR 63L4	14 683
12	109	3320		WA 37R17	DR 63L4	14 683	
				WAF 37R17	DR 63L4	14 683	
14	96	3320		W 37R17	DRS 71S4	15 683	
17	82	3320		WF 37R17	DRS 71S4	15 683	
				WA 37R17	DRS 71S4	15 683	
				WAF 37R17	DRS 71S4	15 683	
90	18	73	3610	W 37R17	DR 63L4	14 683	
				WF 37R17	DR 63L4	14 683	
				WA 37R17	DR 63L4	14 683	
				WAF 37R17	DR 63L4	14 683	
	22	63	3610	W 37R17	DRS 71S4	15 683	
	26	53	3610	WF 37R17	DRS 71S4	15 683	
	29	48	3610	WA 37R17	DRS 71S4	15 683	
			WAF 37R17	DRS 71S4	15 683		
180	0.29	4815	6400				
	0.33	4173	6400				
	0.36	3870	6400				
	0.38	3598	6400				
	0.41	3354	6400				
	0.44	3171	6400				
	0.50	2748	6400				
	0.57	2425	6400		W 47R17	DR 63S4	19 683
	0.61	2258	6400		WF 47R17	DR 63S4	19 683
	0.65	2111	6400		WA 47R17	DR 63S4	17 683
	0.70	1959	6400		WAF 47R17	DR 63S4	18 683
	0.77	1797	6400				
	0.87	1595	6400				
	0.93	1486	6400				
	0.95	1448	6400				
	1.2	1170	6400				
	1.8	754	6400				



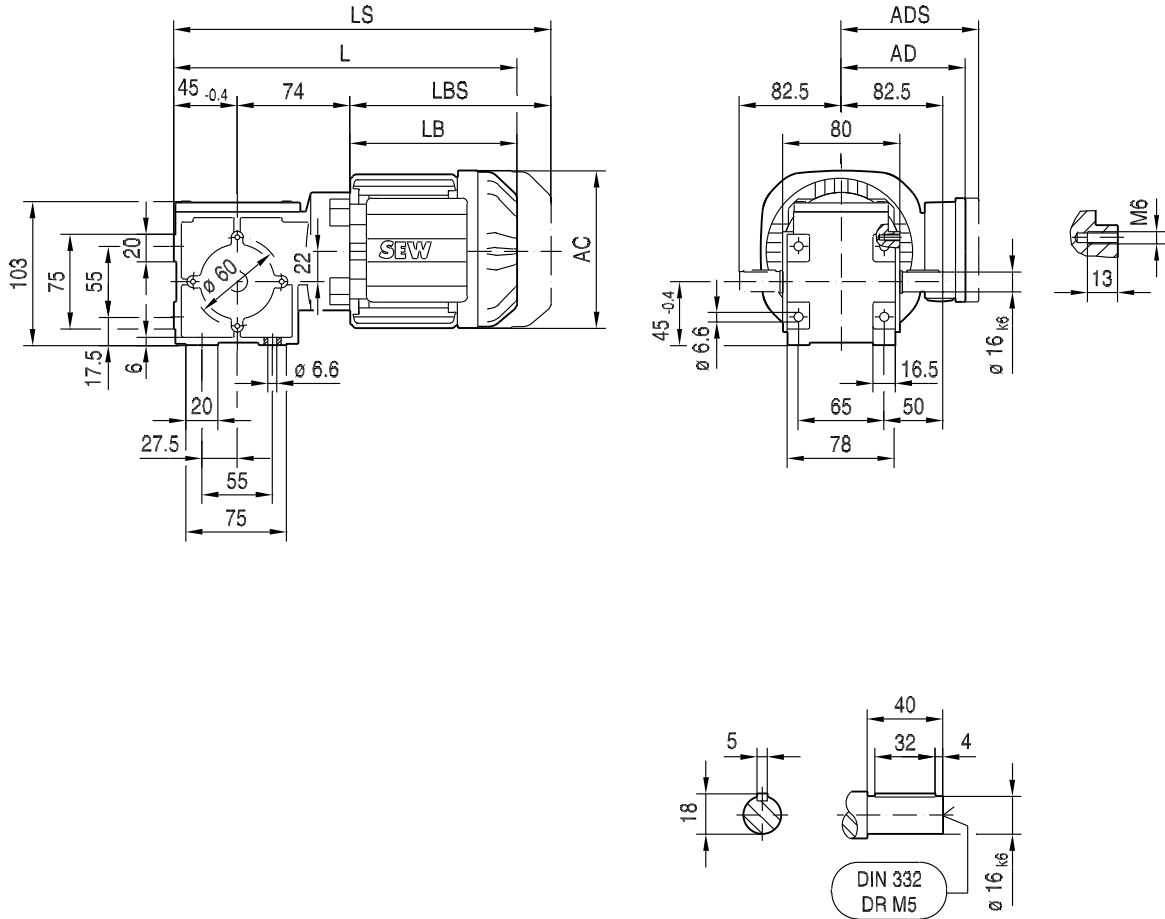
$M_{a \max}$ [Nm]	$n_a$ [1/min]	$i$	$F_{Ra}^{1)}$ [N]					$m$ [kg]	
<b>180</b>	1.1	1290	6400						
	1.2	1183	6400						
	1.3	1042	6400						
	1.4	956	6400	W	47R17	DR	63S4	18	683
	1.6	869	6400	WF	47R17	DR	63S4	19	683
	2.1	661	6400	WA	47R17	DR	63S4	17	683
	2.3	596	6400	WAF	47R17	DR	63S4	18	683
	2.6	536	6400						
	2.9	473	6400						
	3.2	434	6400						
	3.4	386	6400						
	3.7	359	6400	W	47R17	DR	63M4	18	683
	4.2	318	6400	WF	47R17	DR	63M4	19	683
	4.5	291	6400	WA	47R17	DR	63M4	17	683
	4.9	270	6400	WAF	47R17	DR	63M4	18	683
	5.0	265	6400						
	5.5	237	6400	W	47R17	DR	63L4	19	683
	6.2	210	6400	WF	47R17	DR	63L4	20	683
	7.1	183	6400	WA	47R17	DR	63L4	18	683
				WAF	47R17	DR	63L4	18	683
	8.7	159	6400	W	47R17	DRS	71S4	21	683
	9.8	141	6400	WF	47R17	DRS	71S4	21	683
				WA	47R17	DRS	71S4	19	683
				WAF	47R17	DRS	71S4	20	683
<b>160</b>	<b>11</b>	124	6650	W	47R17	DR	63L4	19	683
				WF	47R17	DR	63L4	20	683
				WA	47R17	DR	63L4	18	683
				WAF	47R17	DR	63L4	18	683
<b>180</b>	<b>11</b>	120	6400	W	47R17	DRS	71S4	21	683
				WF	47R17	DRS	71S4	21	683
				WA	47R17	DRS	71S4	19	683
				WAF	47R17	DRS	71S4	20	683
<b>160</b>	<b>13</b>	105	6650	W	47R17	DRS	71S4	21	683
	<b>15</b>	95	6650	WF	47R17	DRS	71S4	21	683
	<b>16</b>	85	6650	WA	47R17	DRS	71S4	19	683
				WAF	47R17	DRS	71S4	20	683
	<b>18</b>	77	6650	W	47R17	DRS	71M4	22	683
	<b>19</b>	72	6650	WF	47R17	DRS	71M4	23	683
				WA	47R17	DRS	71M4	21	683
				WAF	47R17	DRS	71M4	22	683



12.5 W..DR.. [mm]

W10..

20 010 00 06

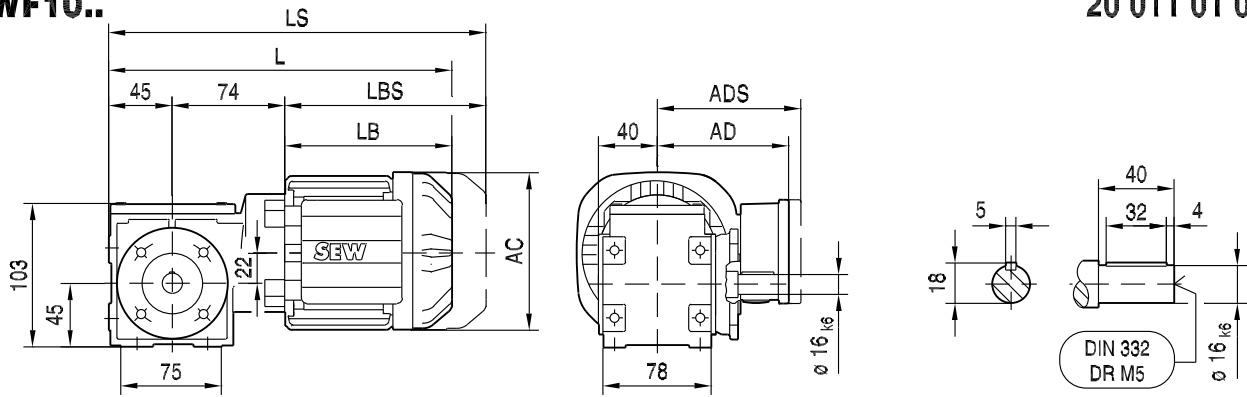


(→ 136)	DT56..							
AC	109							
AD	87							
ADS	87							
L	255							
LS	291							
LB	136							
LBS	172							

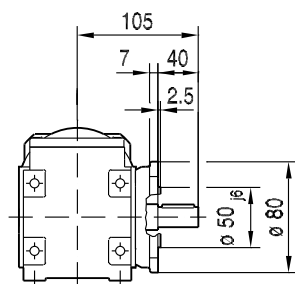
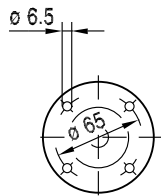


**WF10..**

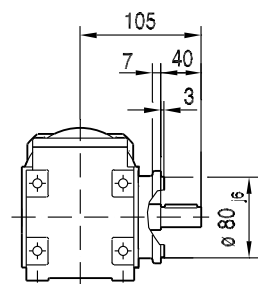
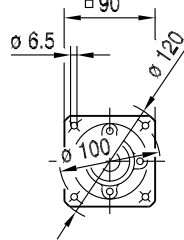
20 011 01 06



**∅ 80**

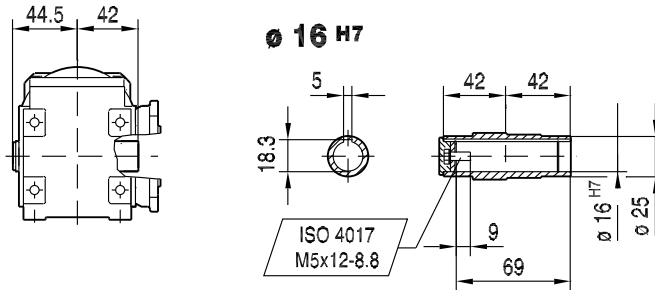


**∅ 120**

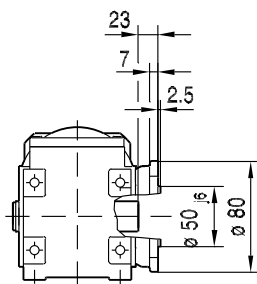
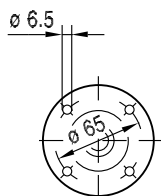


**WAF10..**

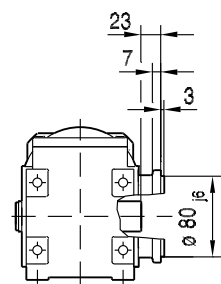
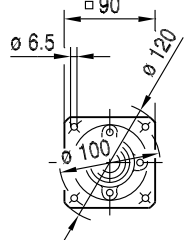
12



**∅ 80**



**∅ 120**

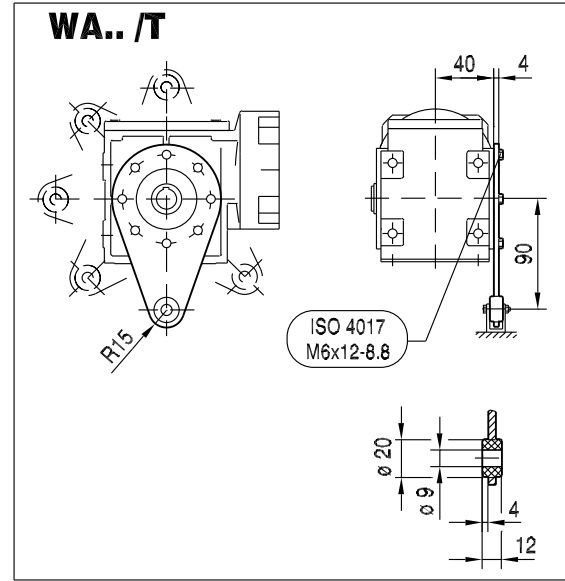


(→ 136)	DT56..						
AC	109						
AD	87						
ADS	87						
L	255						
LS	291						
LB	136						
LBS	172						

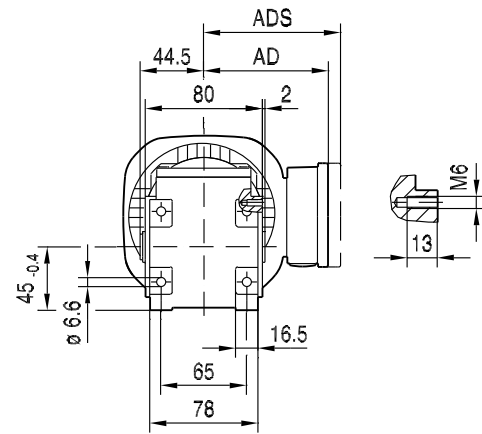
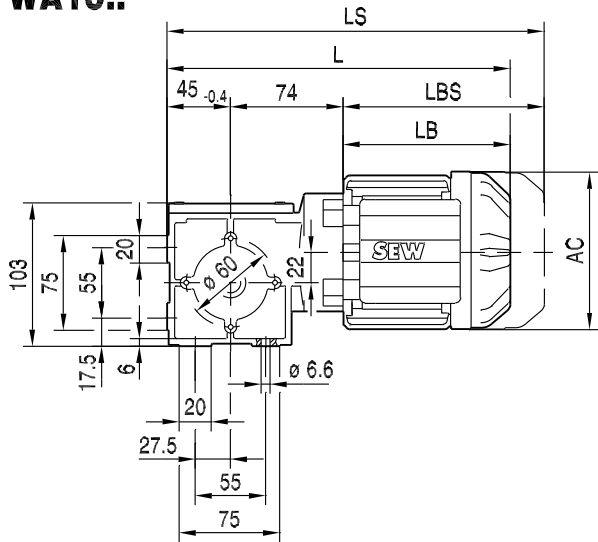
kVA	n
f	
i	
P	H <sub>Z</sub>

W..DRE/DRS  
W..DR.. [mm]

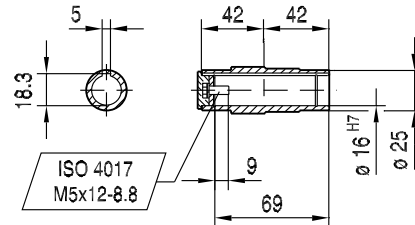
20 012 02 06



**WA10..**



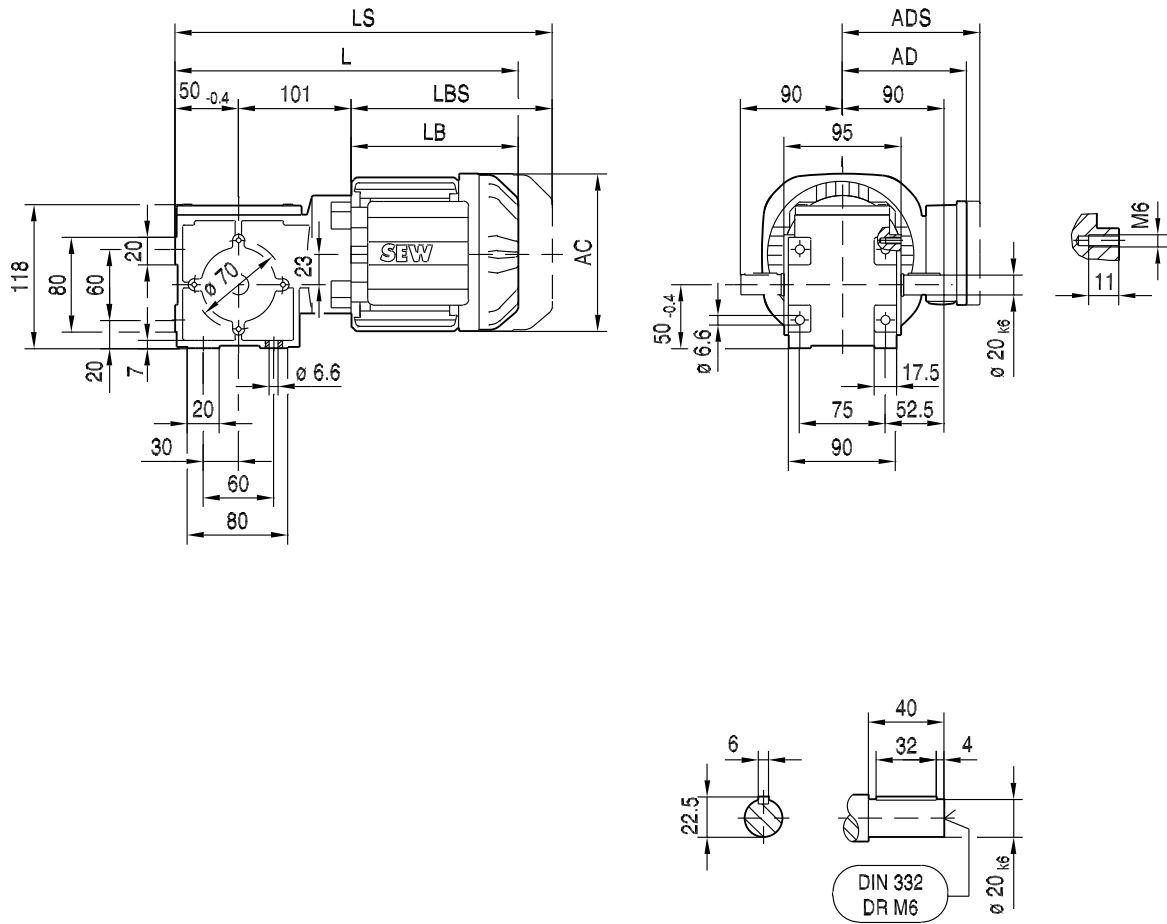
**Ø 16 H7**



(→ 136)	DT56..							
AC	109							
AD	87							
ADS	87							
L	255							
LS	291							
LB	136							
LBS	172							

W20..

20 013 00 06

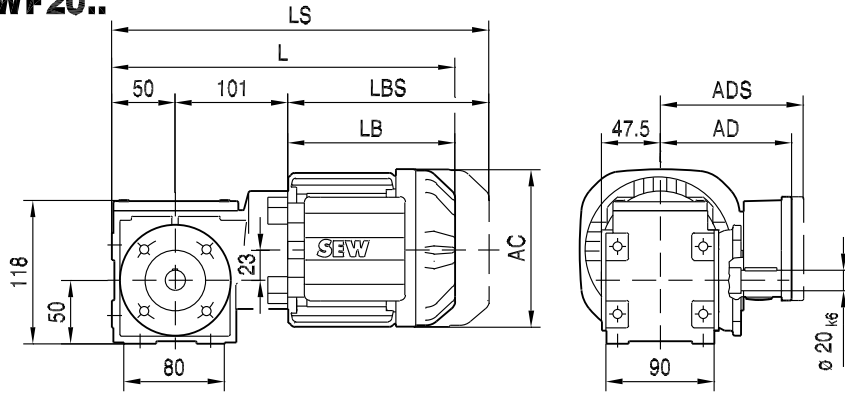


(→ 136)	DR63..	DR71S						
AC	132	139						
AD	105	119						
ADS	105	129						
L	300	311						
LS	355	379						
LB	149	160						
LBS	204	228						

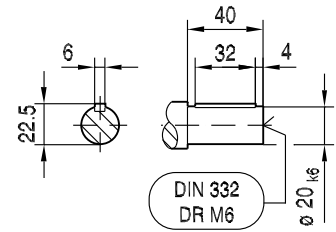
kVA	n
f	
i	
P	H <sub>Z</sub>

W..DRE/DRS  
W..DR.. [mm]

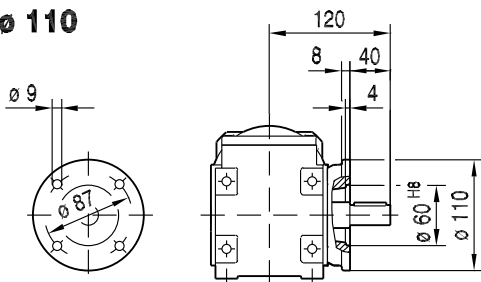
WF20..



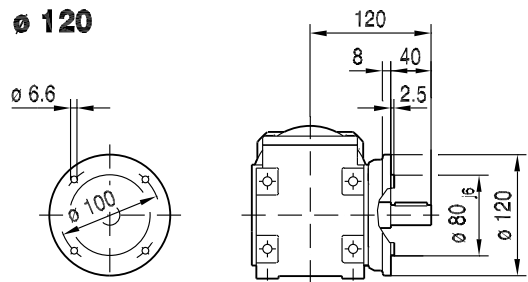
20 014 00 06



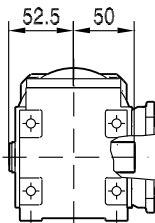
$\varnothing 110$



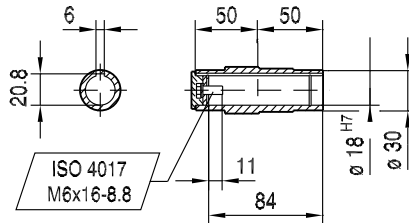
$\varnothing 120$



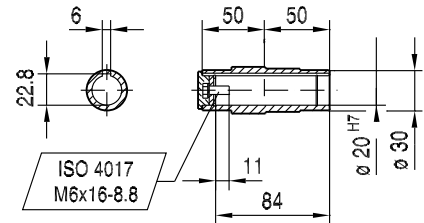
WAF20..



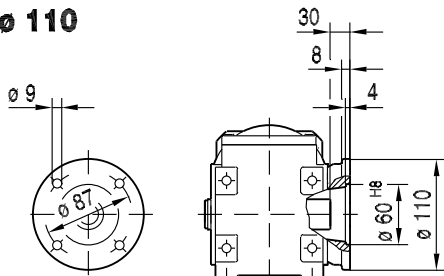
$\varnothing 18 H7$



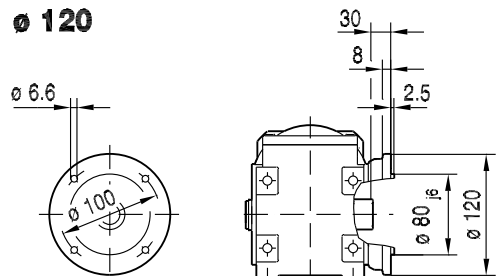
$\varnothing 20 H7$



$\varnothing 110$

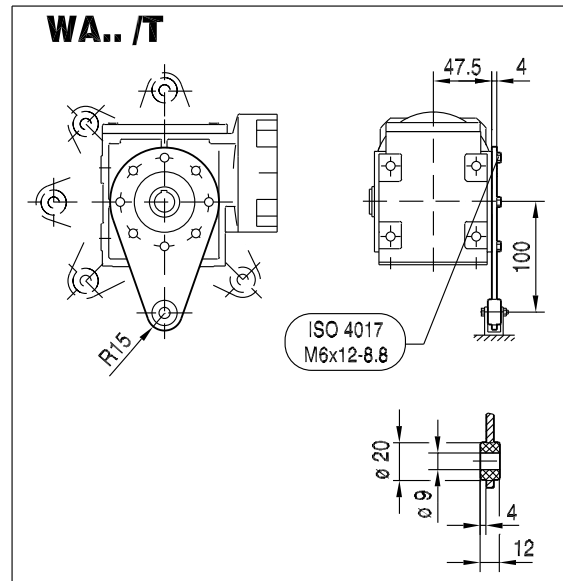


$\varnothing 120$

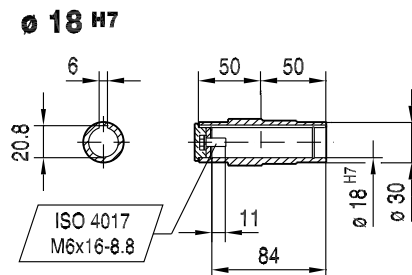
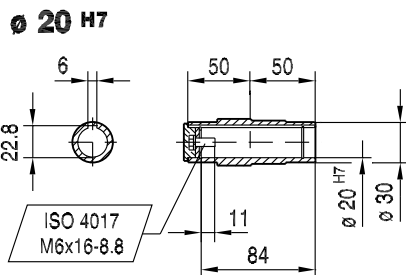
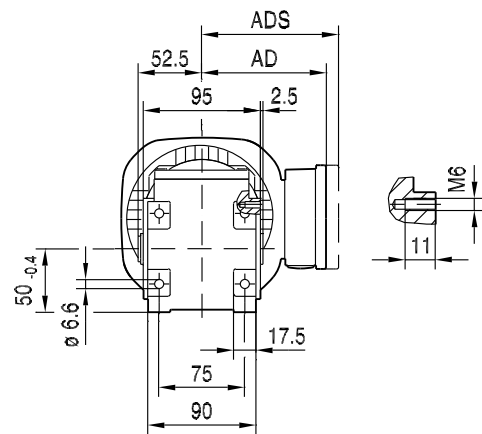
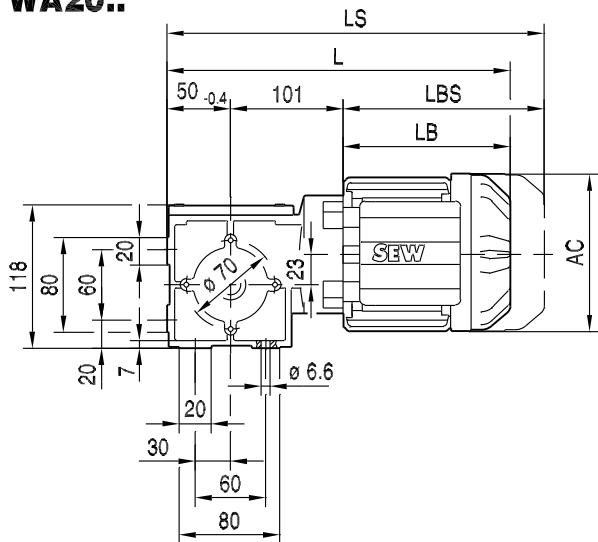


(→ 136)	DR63..	DR71S					
AC	132	139					
AD	105	119					
ADS	105	129					
L	300	311					
LS	355	379					
LB	149	160					
LBS	204	228					

20 015 02 06



**WA20..**



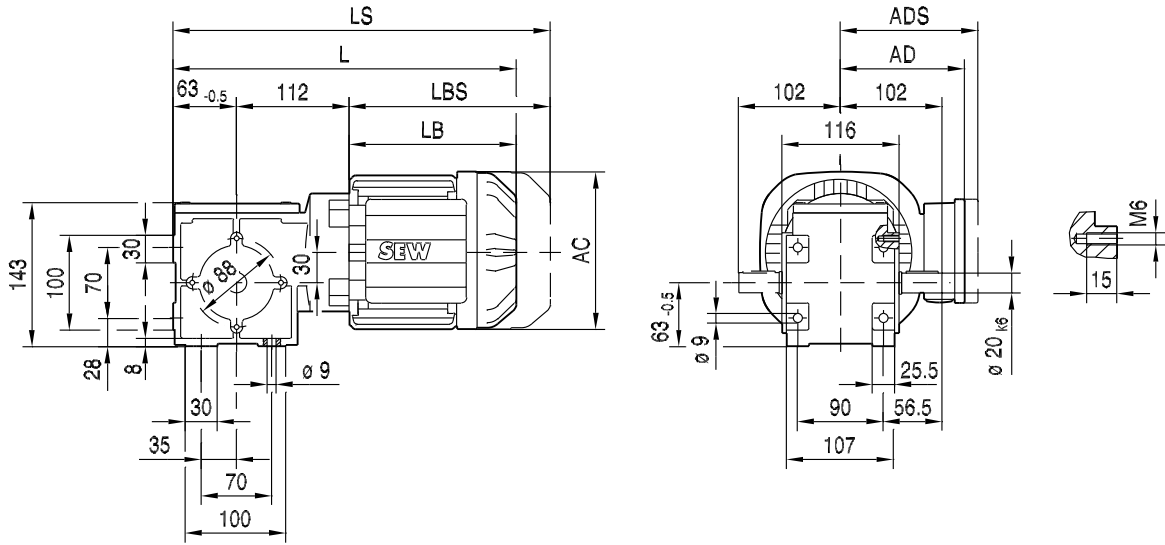
(→ 136)	DR63..	DR71S					
AC	132	139					
AD	105	119					
ADS	105	129					
L	300	311					
LS	355	379					
LB	149	160					
LBS	204	228					

kVA	n
f	
i	
P	Hz

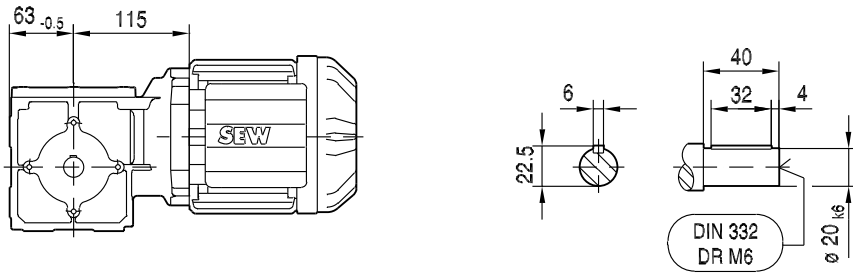
W..DRE/DRS  
W..DR.. [mm]

20 016 01 06

W30..



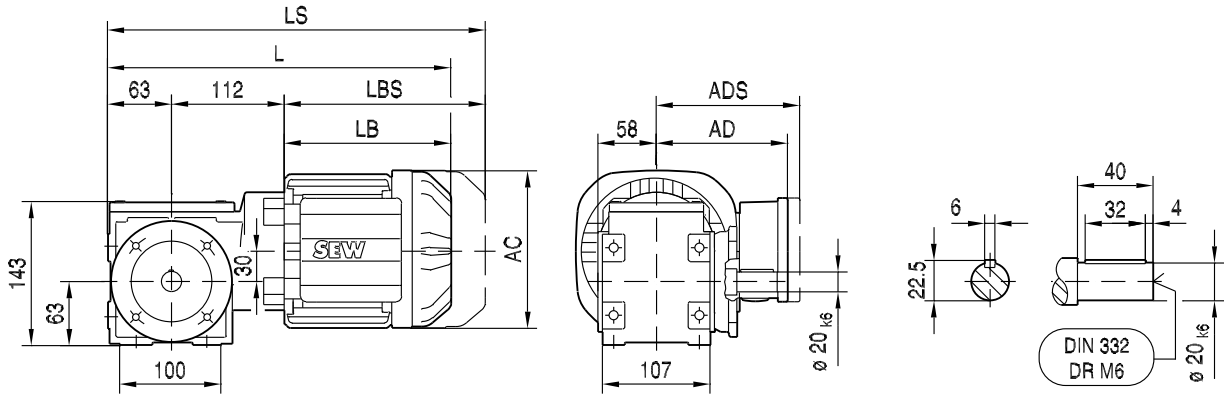
DR80..



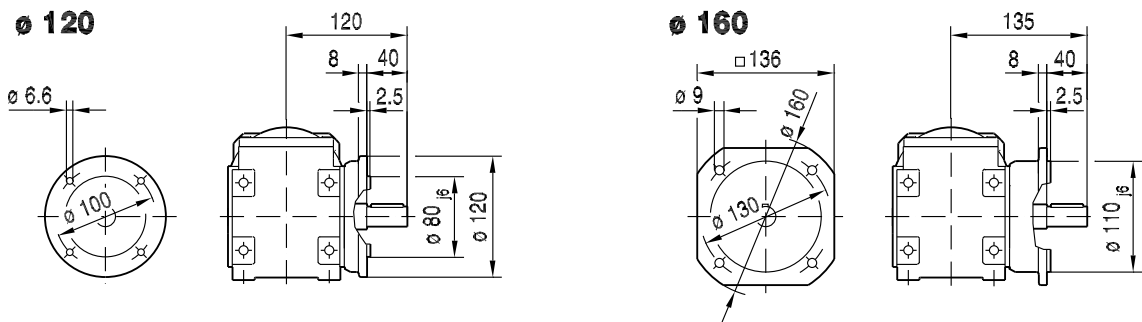
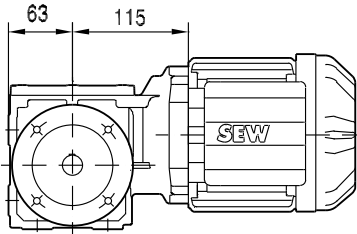
(→ 136)	DR63..	DR71S	DR71M	DR80M				
AC	132	139	139	156				
AD	105	119	119	128				
ADS	105	129	129	139				
L	324	335	360	398				
LS	379	403	428	479				
LB	149	160	185	220				
LBS	204	228	253	301				

**WF30..**

20 017 02 06



**DR80..**



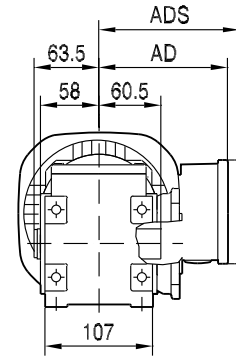
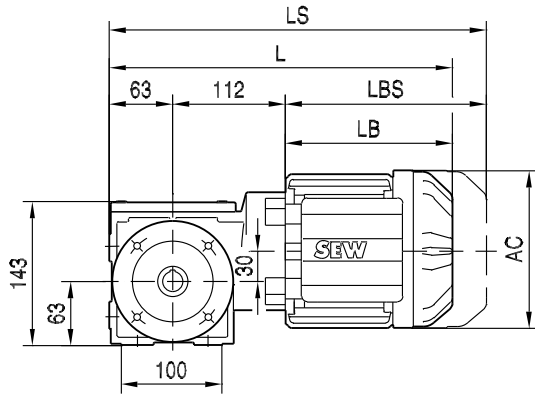
(→ 136)	DR63..	DR71S	DR71M	DR80M				
AC	132	139	139	156				
AD	105	119	119	128				
ADS	105	129	129	139				
L	324	335	360	398				
LS	379	403	428	479				
LB	149	160	185	220				
LBS	204	228	253	301				



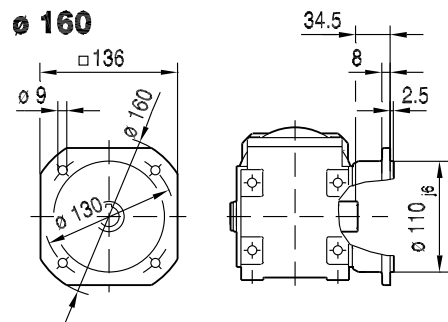
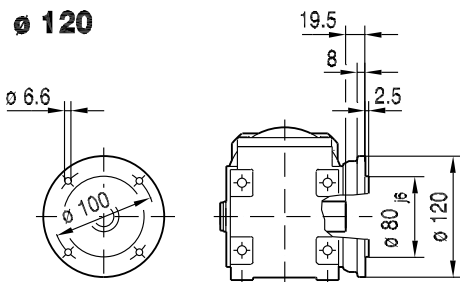
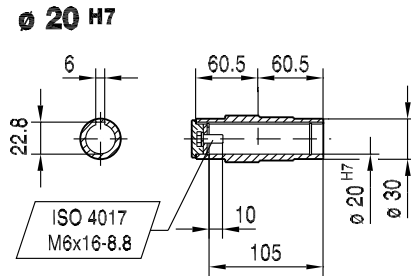
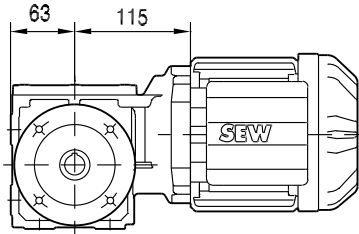
W..DRE/DRS  
W..DR.. [mm]

WAF30..

20 008 00 11



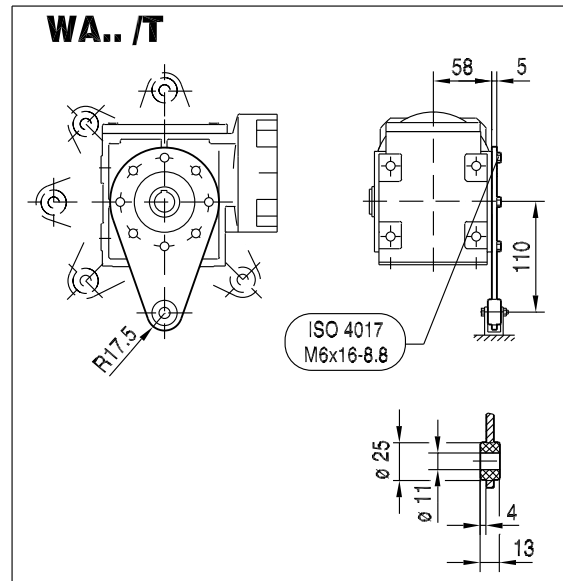
DR80..



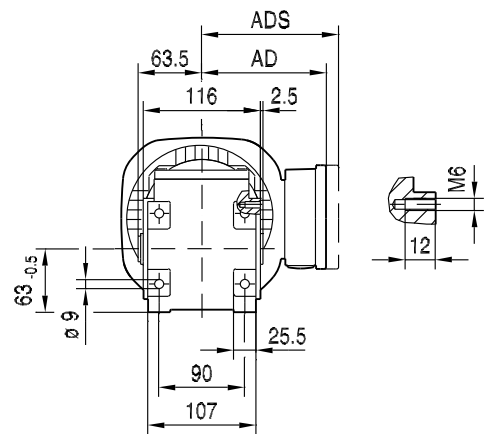
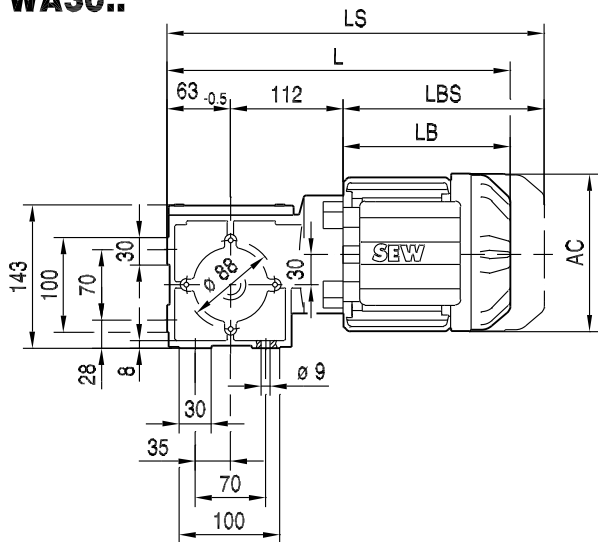
(→ 136)	DR63..	DR71S	DR71M	DR80M				
AC	132	139	139	156				
AD	105	119	119	128				
ADS	105	129	129	139				
L	324	335	360	398				
LS	379	403	428	479				
LB	149	160	185	220				
LBS	204	228	253	301				



20 018 02 06

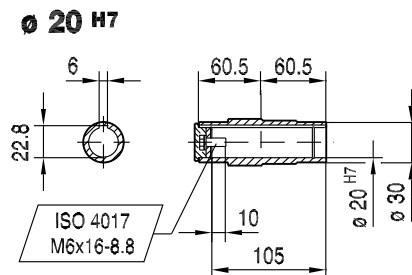
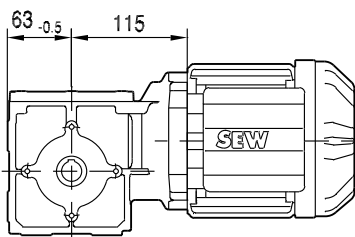


**WA30..**



12

**DR80..**



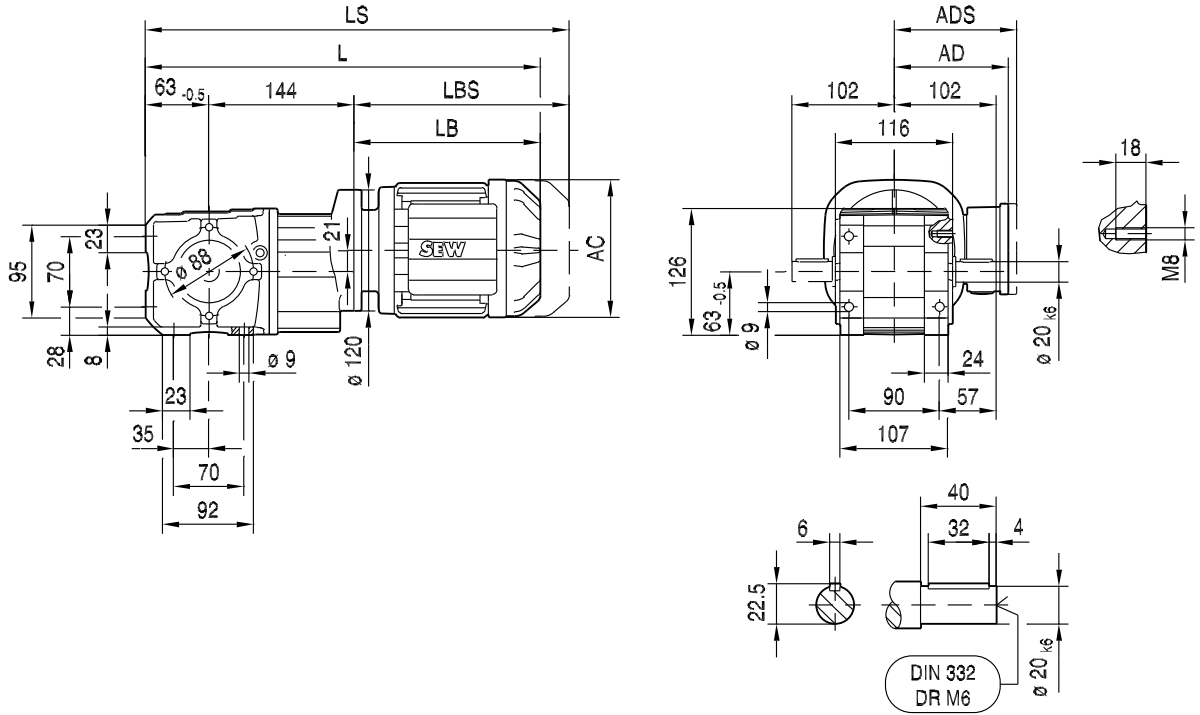
(→ 136)	DR63..	DR71S	DR71M	DR80M				
AC	132	139	139	156				
AD	105	119	119	128				
ADS	105	129	129	139				
L	324	335	360	398				
LS	379	403	428	479				
LB	149	160	185	220				
LBS	204	228	253	301				



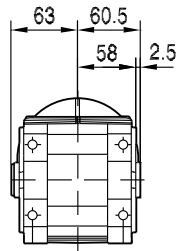
W..DRE/DRS  
W..DR.. [mm]

20 015 01 07

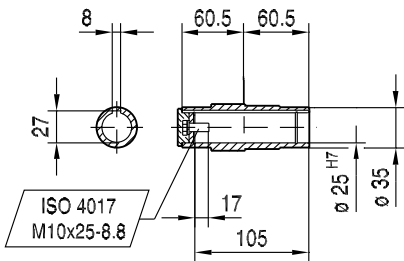
W37..



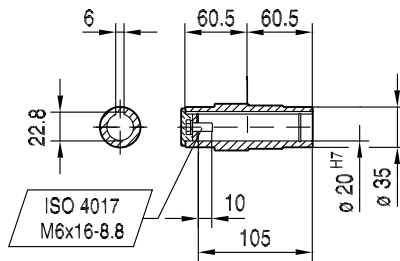
WA37B..



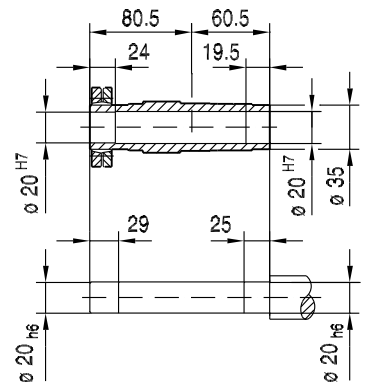
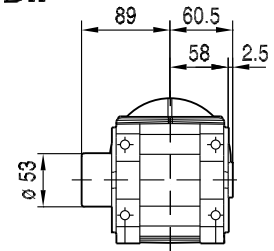
Ø 25 H7  
DIN 6885-3



Ø 20 H7



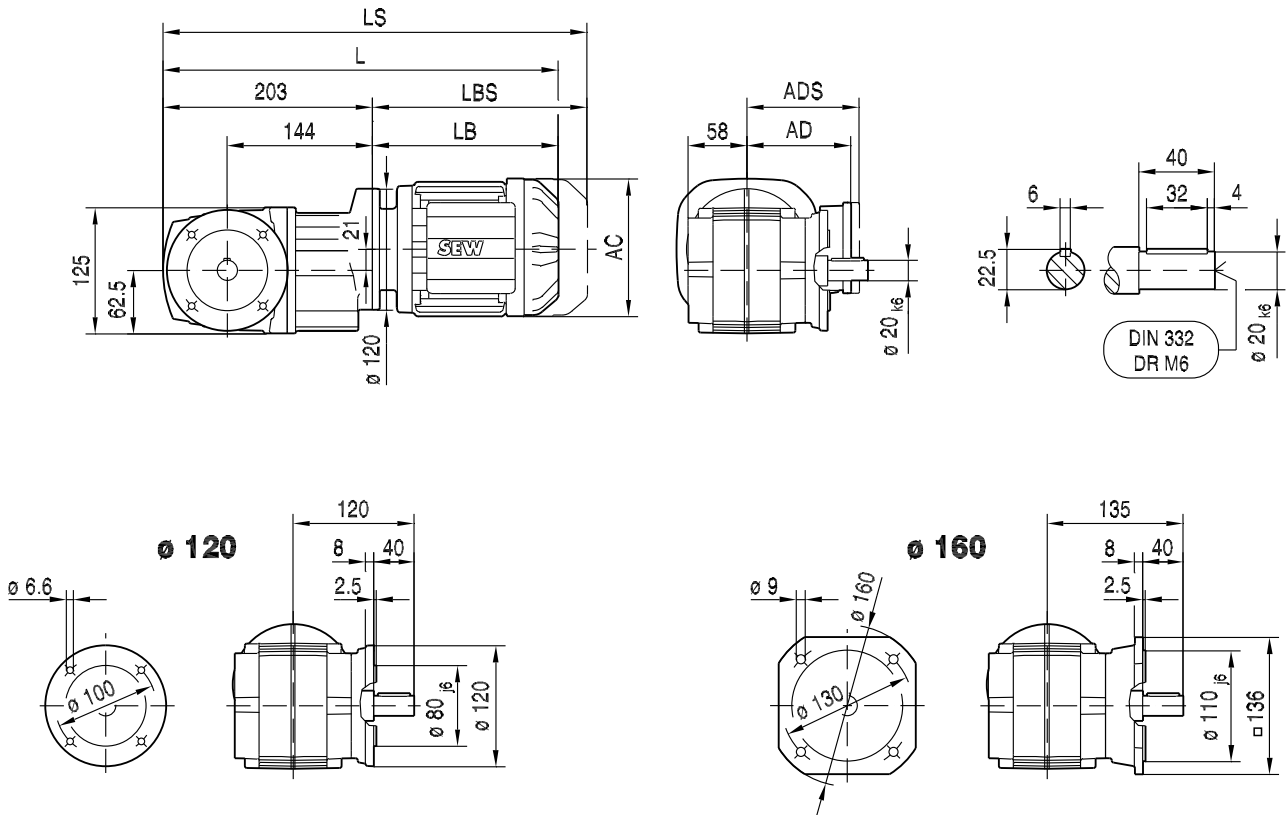
WH37B..



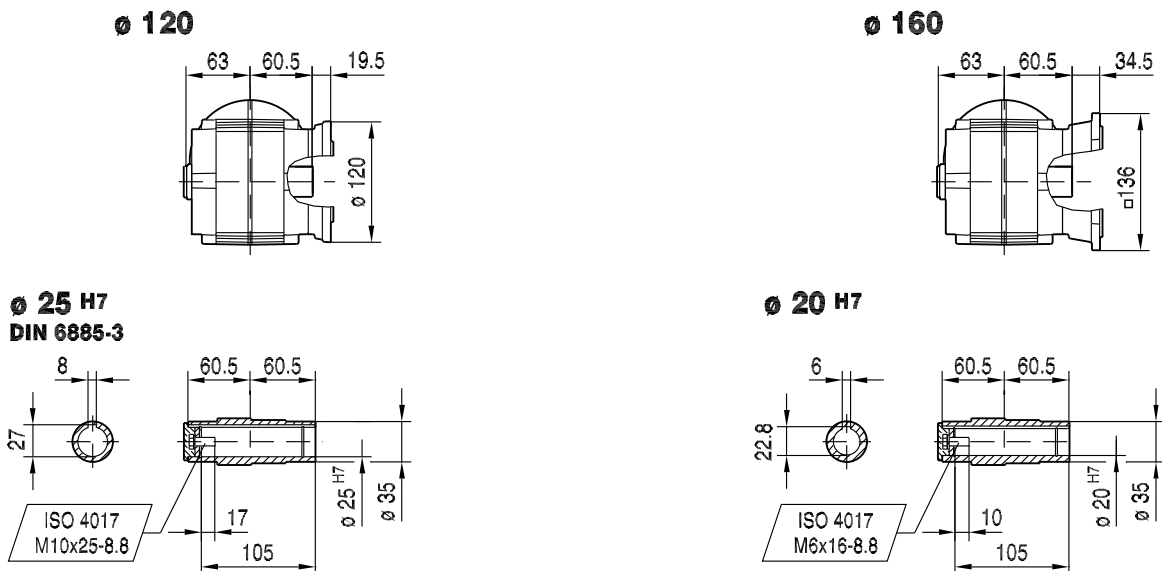
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	179	179	197
AD	105	119	119	128	140	140	157
ADS	105	129	129	139	150	150	158
L	398	409	434	475	479	499	529
LS	453	477	502	556	572	592	622
LB	191	202	227	268	272	292	322
LBS	246	270	295	349	365	385	415

20 016 01 07

**WF37..**



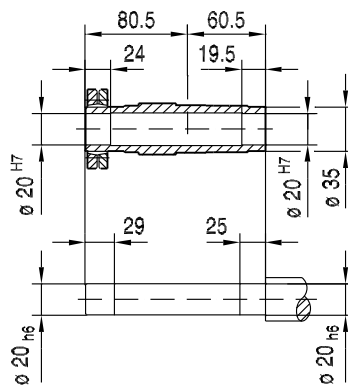
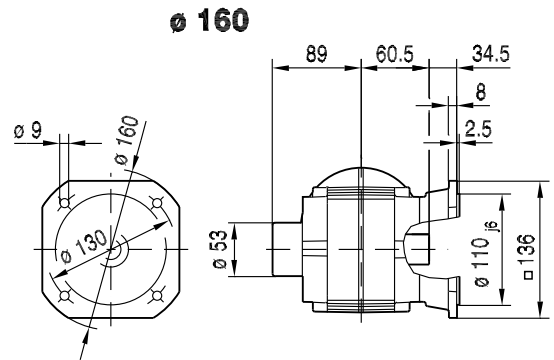
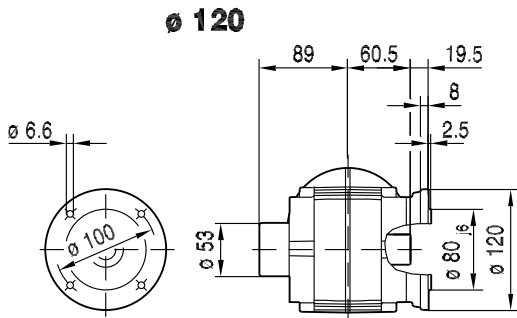
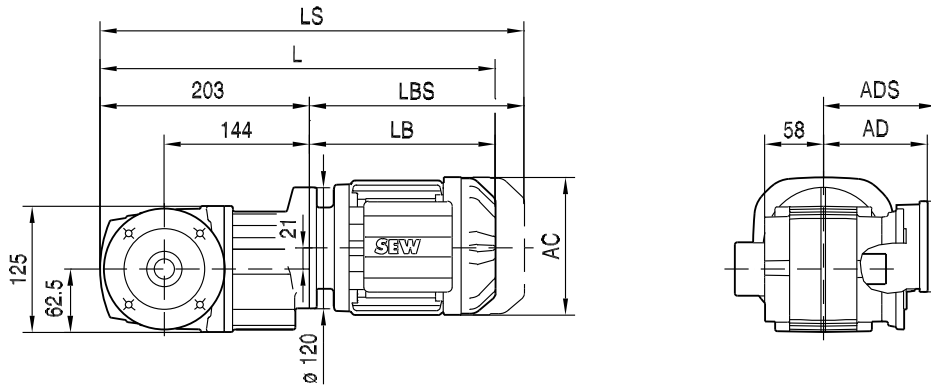
**WAF37..**



(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	179	179	197
AD	105	119	119	128	140	140	157
ADS	105	129	129	139	150	150	158
L	394	405	430	471	475	495	525
LS	449	473	498	552	568	588	618
LB	191	202	227	268	272	292	322
LBS	246	270	295	349	365	385	415



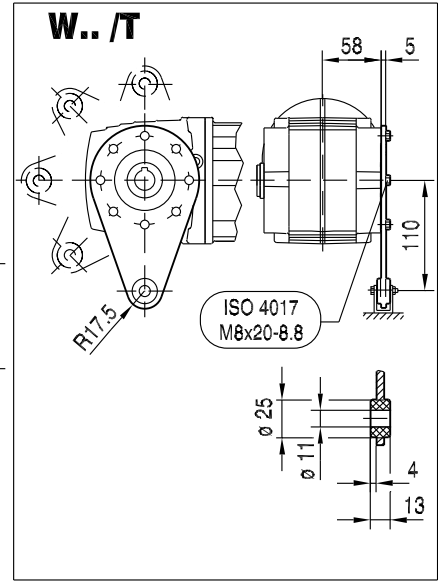
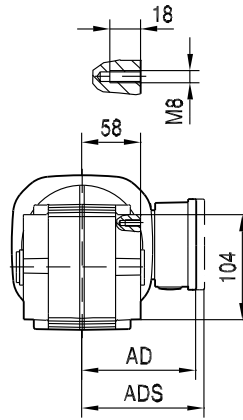
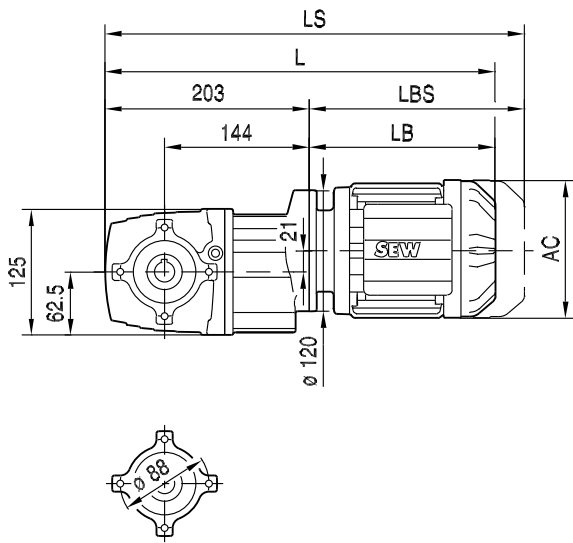
WHF37..



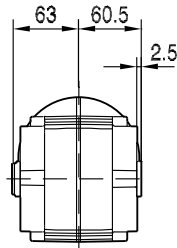
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M	
AC	132	139	139	156	179	179	197	
AD	105	119	119	128	140	140	157	
ADS	105	129	129	139	150	150	158	
L	394	405	430	471	475	495	525	
LS	449	473	498	552	568	588	618	
LB	191	202	227	268	272	292	322	
LBS	246	270	295	349	365	385	415	

**WA37..**

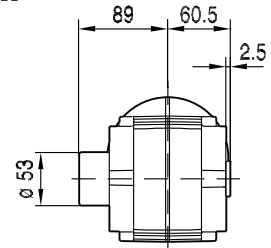
20 017 02 07



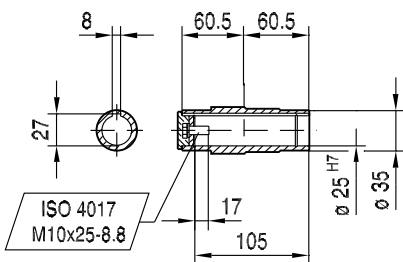
**WA37..**



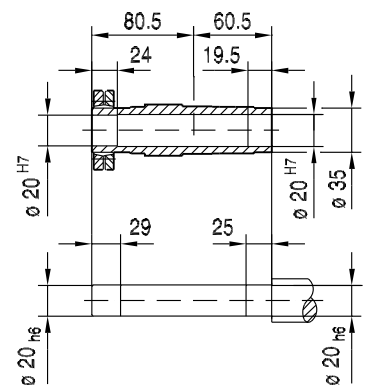
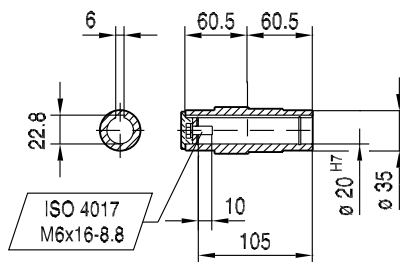
**WH37..**



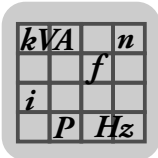
Ø 25 H7  
DIN 6885-3



Ø 20 H7



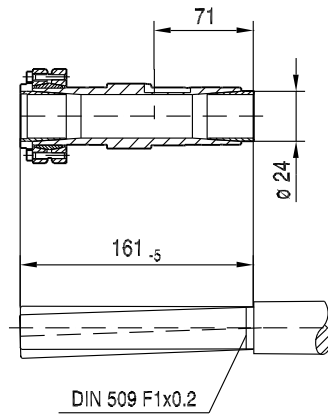
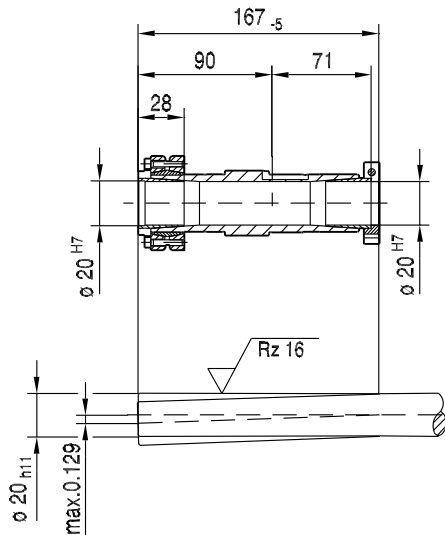
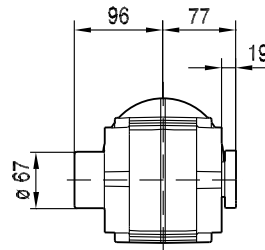
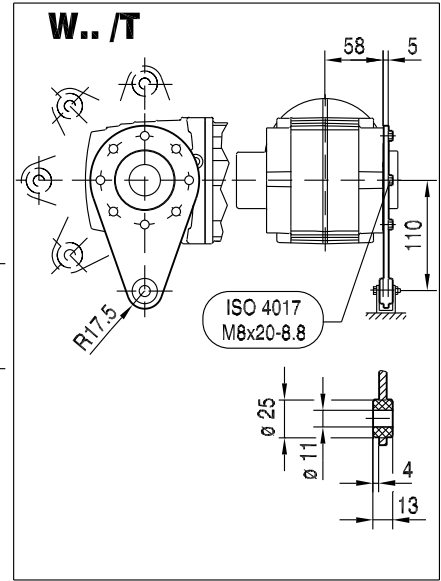
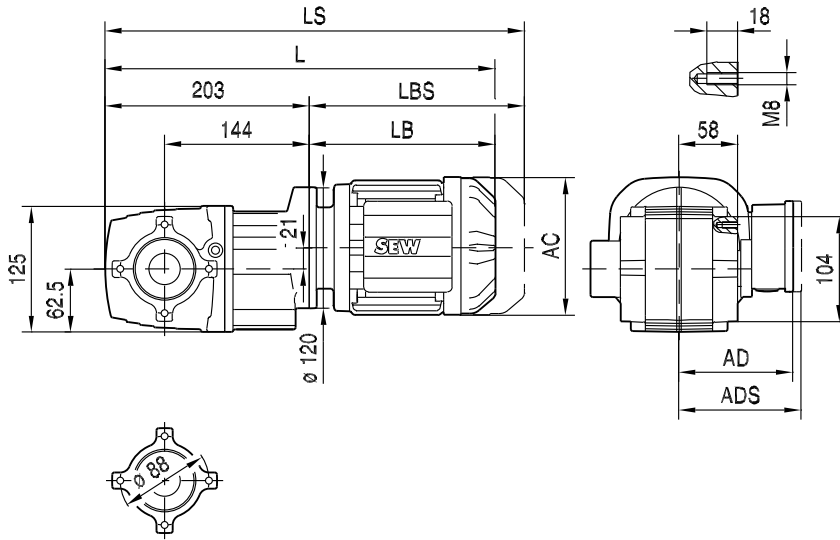
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	179	179	197
AD	105	119	119	128	140	140	157
ADS	105	129	129	139	150	150	158
L	394	405	430	471	475	495	525
LS	449	473	498	552	568	588	618
LB	191	202	227	268	272	292	322
LBS	246	270	295	349	365	385	415



W..DRE/DRS  
W..DR.. [mm]

WT37..

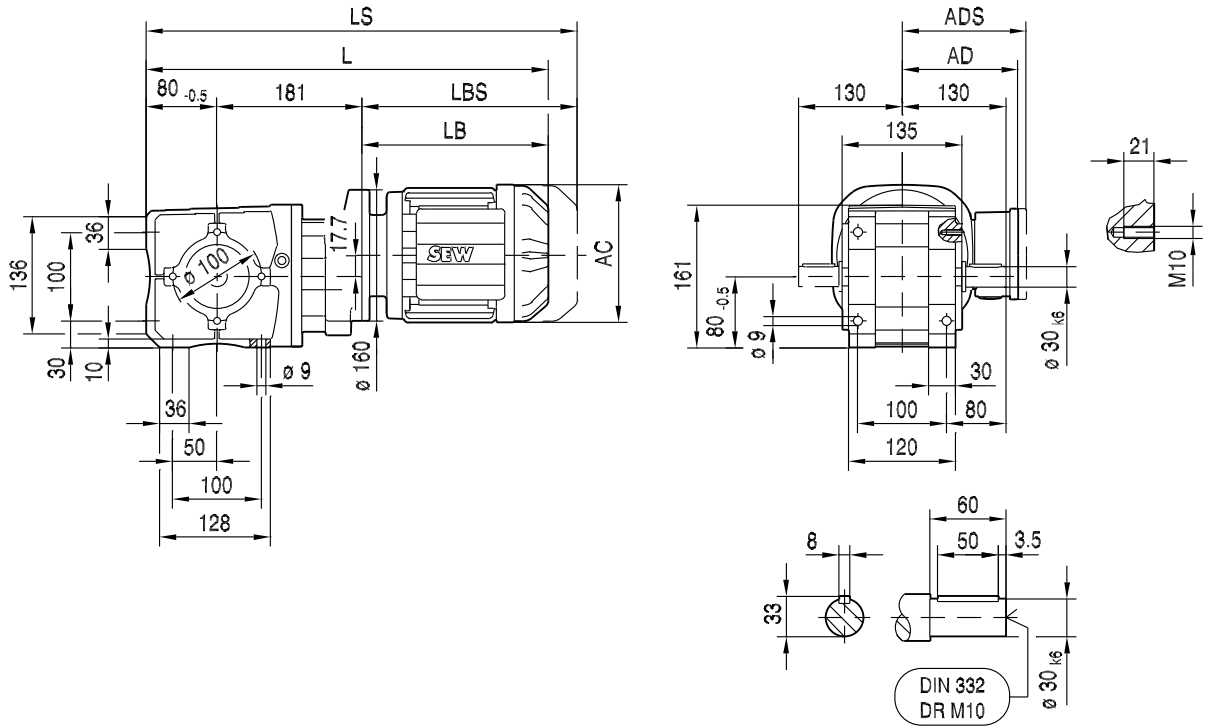
20 020 02 07



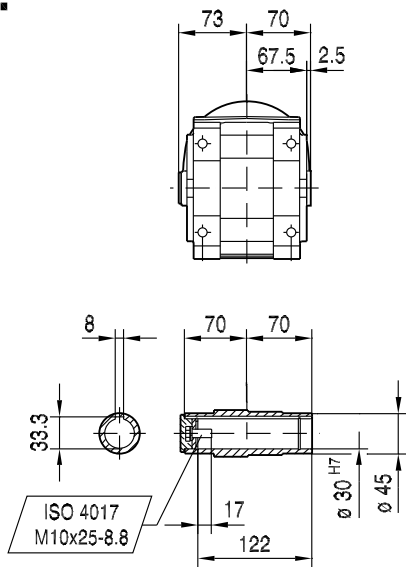
(→ 136)	DR63..	DR71S	DR71M	DR80M	DR90M	DR90L	DR100M
AC	132	139	139	156	179	179	197
AD	105	119	119	128	140	140	157
ADS	105	129	129	139	150	150	158
L	394	405	430	471	475	495	525
LS	449	473	498	552	568	588	618
LB	191	202	227	268	272	292	322
LBS	246	270	295	349	365	385	415

20 045 01 08

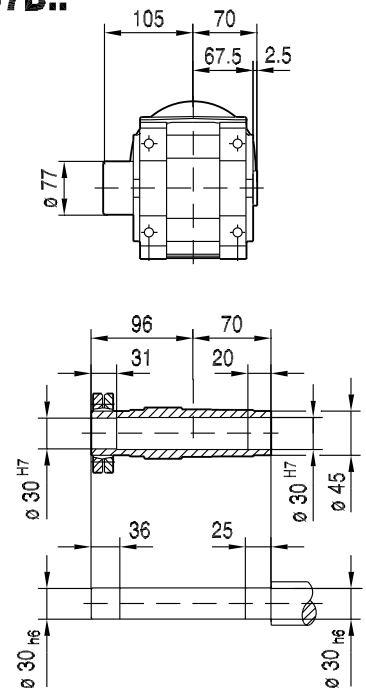
**W47..**



**WA47B..**



**WH47B..**

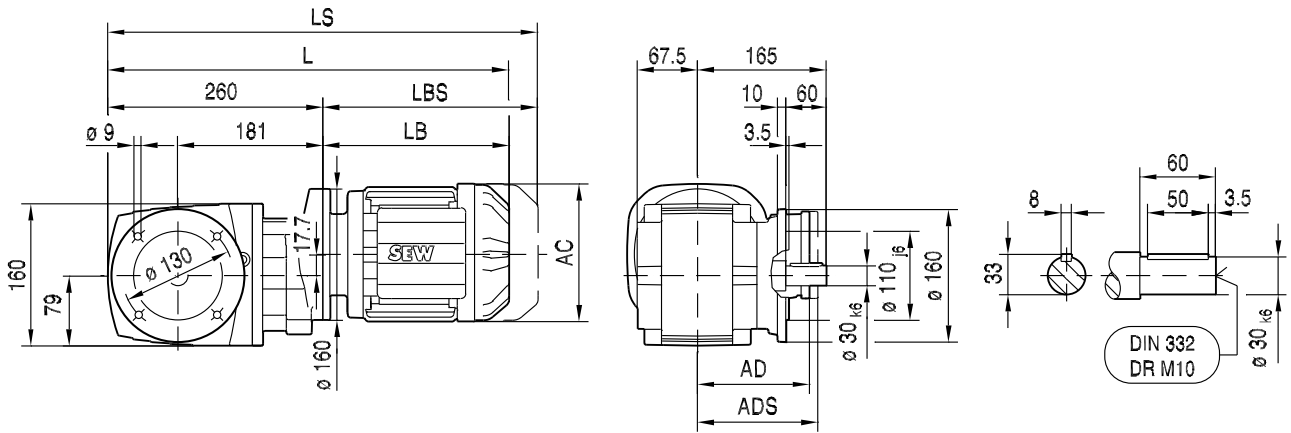


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	156	179	179	197	197
AD	105	119	119	128	128	140	140	157	157
ADS	105	129	129	139	139	150	150	158	158
L	446	457	482	491	522	524	544	574	604
LS	501	525	550	572	603	617	637	667	697
LB	185	196	221	230	261	263	283	313	343
LBS	240	264	289	311	342	356	376	406	436

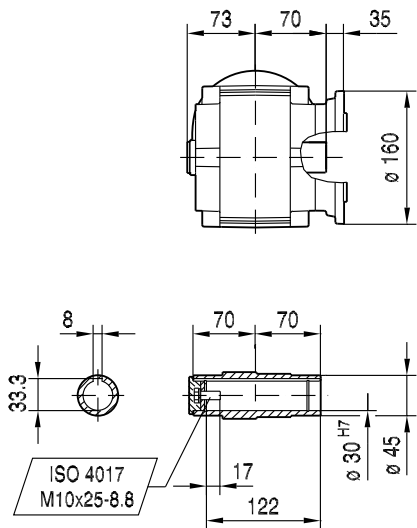


20 046 02 08

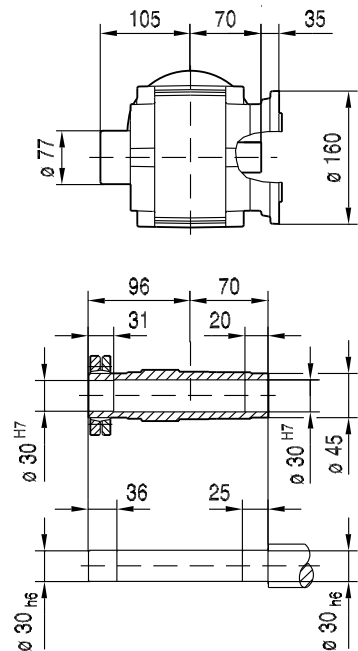
WF47..



WAF47..



WHF47..

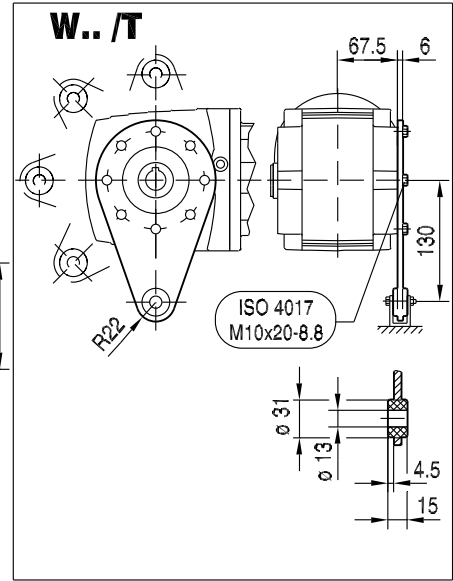
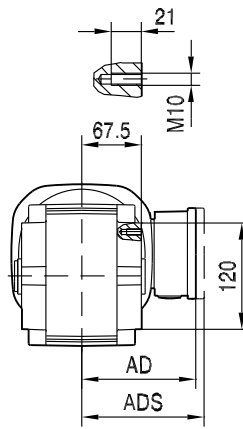
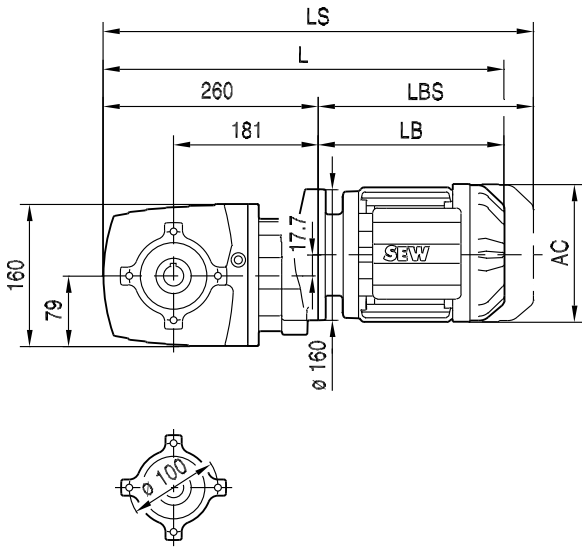


(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	156	179	179	197	197
AD	105	119	119	128	128	140	140	157	157
ADS	105	129	129	139	139	150	150	158	158
L	445	456	481	490	521	523	543	573	603
LS	500	524	549	571	602	616	636	666	696
LB	185	196	221	230	261	263	283	313	343
LBS	240	264	289	311	342	356	376	406	436



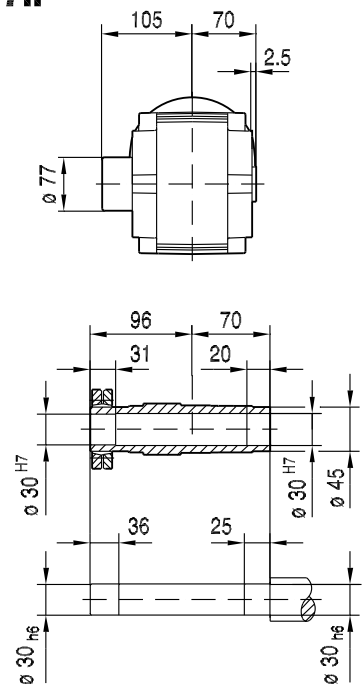
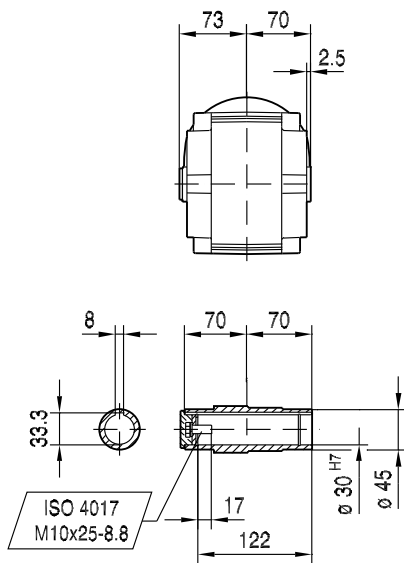
**WA47..**

20 048 02 08



**WA47..**

**WH47..**



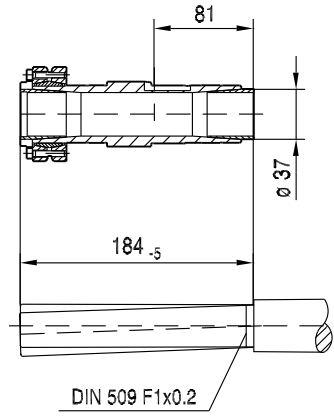
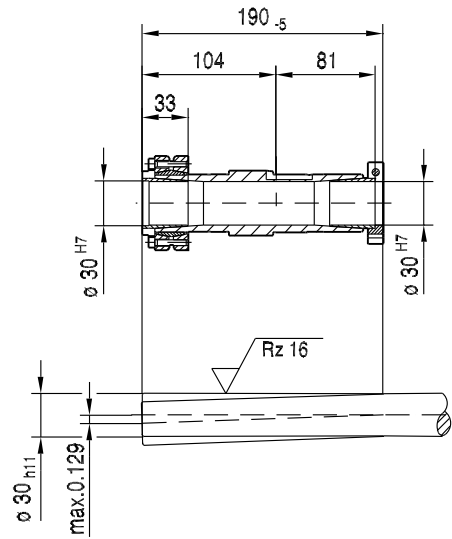
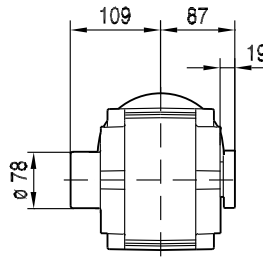
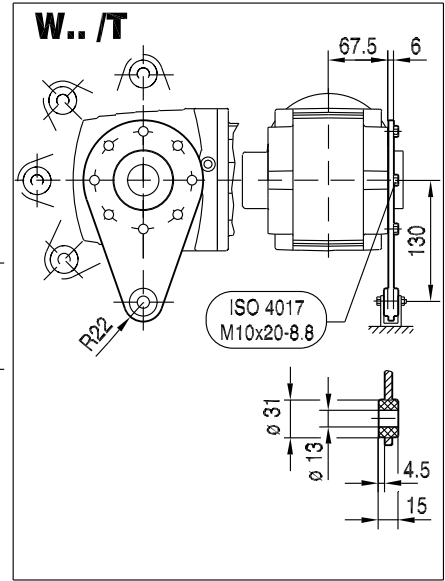
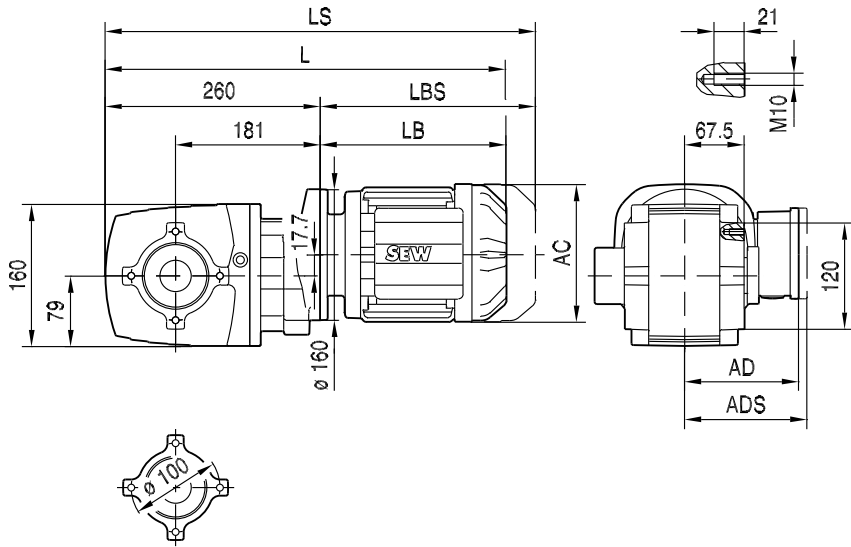
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	156	179	179	197	197
AD	105	119	119	128	128	140	140	157	157
ADS	105	129	129	139	139	150	150	158	158
L	445	456	481	490	521	523	543	573	603
LS	500	524	549	571	602	616	636	666	696
LB	185	196	221	230	261	263	283	313	343
LBS	240	264	289	311	342	356	376	406	436

kVA	n
f	
i	P Hz

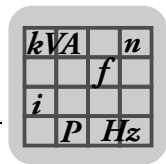
W..DRE/DRS  
W..DR.. [mm]

20 049 02 08

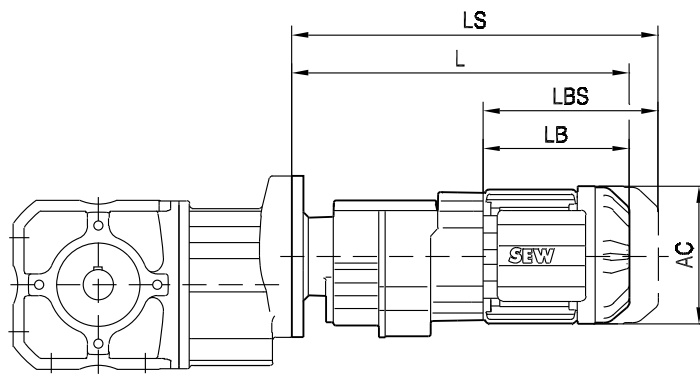
WT47..



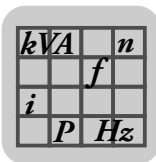
(→ 136)	DR63..	DR71S	DR71M	DR80S	DR80M	DR90M	DR90L	DR100M	DR100L/LC
AC	132	139	139	156	156	179	179	197	197
AD	105	119	119	128	128	140	140	157	157
ADS	105	129	129	139	139	150	150	158	158
L	445	456	481	490	521	523	543	573	603
LS	500	524	549	571	602	616	636	666	696
LB	185	196	221	230	261	263	283	313	343
LBS	240	264	289	311	342	356	376	406	436



20 018 00 09



(→ 136)		AC	L	LS	LB	LBS
W..37R17	DR63..	132	324	379	149	204
	DR71S..	139	335	403	160	228
W..47R17	DR63..	132	324	379	149	204
	DR71S..	139	335	403	160	228
	DR71M..	139	360	428	185	253



## 13 Technical data of the motors



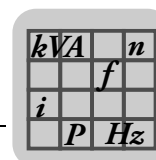
### INFORMATION

You find more information in the "AC Motors" catalog.

### 13.1 Key to the data of energy-efficient motors

The following table lists the short symbols used in the "Technical data" tables.

$P_N$	Rated power
$M_N$	Rated torque
$n_N$	Rated speed
$I_N$	Rated current
$\cos\varphi$	Power factor
$\eta_{50\%}$	Efficiency at 50% of the rated power
$\eta_{75\%}$	Efficiency at 75% of the rated power
$\eta_{100\%}$	Efficiency at 100% of the rated power
$I_A/I_N$	Starting current ratio
$M_A/M_N$	Starting torque ratio
$M_H/M_N$	Ramp-up torque ratio
$M_U/M_N$	Ratio of the switching torque from high to low speed
$m$	Mass of the motor
$J_{Mot}$	Mass moment of inertia of the motor
BE..	Brake used
$Z_0$ BG	Switching frequency for operation with BG brake control
$Z_0$ BGE	Switching frequency for operation with BGE brake controller
$M_B$	Braking torque
$m_B$	Mass of the brakemotor
$J_{MOT\_BE}$	Mass moment of inertia of the brakemotor



### 13.2 DR, DRS, DRE motors, 50 Hz, 2-pole, S1

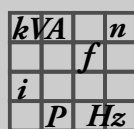
#### 2-pole DR, DRS motors for 50 Hz, IE1

Motor type	$P_N$	$M_N$	$n_N$	$I_N$	$I_N$	$\cos\phi$	IE class	$\eta_{50\%}$	$\eta_{75\%}$	$\eta_{100\%}$	$I_A/I_N$	$M_A/M_N$
	kW	Nm	1/min	400 V A	380-420 V A							%
DR63S	0.18	0.63	2720	0.45	0.46	0.88	-	-	-	-	4.2	2.4 2.2
DR63M2	0.25	0.9	2660	0.65	0.66	0.86	-	-	-	-	3.5	2.2 1.9
DR63L2	0.37	1.3	2650	0.92	1.0	0.87	-	-	-	-	3.5	2.1 1.9
DRS71S2	0.37	1.31	2700	1.01	1.06	0.89	-	-	-	-	3.2	2.2 1.9
DRS71M2	0.55	1.87	2810	1.37	1.42	0.79	IE1 <sup>1)</sup>	70.7	73.5	72.9	4.9	2.9 2.1

1) IE marking on customer request

#### 2-pole DR, DRS motors for 50 Hz, IE1

Motor type	$P_N$	$M_N$	$n_N$	$m$	$J_{Mot}$	Brake	$Z_0$	$M_B$	$m_B$	$J_{Mot\_BE}$
	kW	Nm	1/min	kg	$10^{-4} \text{ kgm}^2$		BG BGE 1/h			
DR63S2	0.18	0.63	2720	6.2	3.6	BR03	5000 -	1.6	8.0	4.8
DR63M2	0.25	0.9	2660	6.2	3.6	BR03	4500 -	2.4	8.0	4.8
DR63L2	0.37	1.3	2650	6.7	4.4	BR03	4000 -	3.2	8.5	5.6
DRS71S2	0.37	1.31	2700	7.8	4.9	BE05	2450 4150	2.5	10.2	6.2
DRS71M2	0.55	1.87	2810	9.1	7.1	BE05	2000 4500	3.5	11.5	8.4



## Technical data of the motors

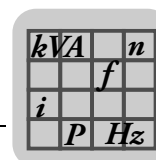
DR, DRS, DRE motors, 50 Hz, 2-pole, S1

### 2-pole DRE motors for 50 Hz, IE2

Motor type	$P_N$	$M_N$	$n_N$	$I_N$	$I_N$	$\cos\varphi$	IE class	$\eta_{50\%}$	$\eta_{75\%}$	$\eta_{100\%}$	$I_A/I_N$	$M_A/M_N$
	kW	Nm	1/min	400 V A	380-420 V A							$M_H/M_N$
DRE 80M 2	0.75	2.5	2890	1.54	1.6	0.89	IE2	81.1	79.2	79.2	7.9	3.4 3.0
DRE 90M 2	1.1	3.65	2870	2.2	2.3	0.89	IE2	83.5	82.2	81.2	7.2	3.2 3.0
DRE 90M 2	1.5	5.1	2830	2.95	3.05	0.89	IE2	83.3	83.5	81.8	5.9	2.7 2.6
DRE 100M 2	2.2	7.3	2880	4.15	4.3	0.91	IE2	87.4	85.6	84.5	8.2	3.8 3.3
DRE 100L 2	3	10.1	2850	5.5	5.7	0.93	IE2	88.0	87.4	85.6	7.2	3.5 3.1
DRE 112M 2	4	13.2	2900	7.5	7.8	0.89	IE2	87.7	87.6	86.5	6.3	2.3 2.1
DRE 132S 2	5.5	18.2	2890	10	10.5	0.91	IE2	89.2	88.9	87.4	6.5	2.3 2.1
DRE 132M 2	7.5	24.5	2910	13.5	14.3	0.91	IE2	90.0	89.8	88.5	7.3	2.5 2.3
DRE 132MC 2	9.2	30	2935	17.2	17.9	0.87	IE2	89.7	89.7	88.8	7.2	2.2 1.9

### 2-pole DRE motors for 50 Hz, IE2

Motor type	$P_N$	$M_N$	$n_N$	$m$	$J_{Mot}$	Brake	$Z_0$	$M_B$	$m_B$	$J_{Mot\_BE}$
	kW	Nm	1/min	kg	$10^{-4} \text{ kgm}^2$		BG BGE 1/h			
DRE 80M 2	0.75	2.5	2890	14.3	21.4	BE05	1300 3200	5	17.1	22.9
DRE 90M 2	1.1	3.65	2870	18.4	35.4	BE1	1100 2700	7	21.3	37
DRE 90M 2	1.5	5.1	2830	18.4	35.4	BE1	1100 2700	10	21.3	37
DRE 100M 2	2.2	7.3	2880	26	56	BE2	700 1800	14	30.6	60.7
DRE 100L 2	3	10.1	2850	29	68.3	BE2	450 1000	20	33.6	73
DRE 112M 2	4	13.2	2900	41.3	113	BE5	- 600	28	48.5	117.8
DRE 132S 2	5.5	18.2	2890	46.3	146	BE5	- 500	40	53.5	150.8
DRE 132M 2	7.5	24.5	2910	60	193	BE5	- 500	55	67.2	197.8
DRE 132MC 2	9.2	30	2935	63	239	BE11	- 380	80	77.5	249.5



### 13.3 DT, DR, DRS, DRE motors, 50 Hz, 4-pole, S1

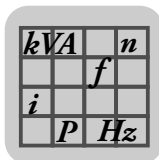
#### 4-pole DT, DR, DRS motors for 50 Hz, IE1

Motor type	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> 1/min	I <sub>N</sub> 400 V A	I <sub>N</sub> 380-420 V A	cosφ	IE	η <sub>50%</sub> %	η <sub>75%</sub> %	η <sub>100%</sub> %	I <sub>A</sub> /I <sub>N</sub>	M <sub>A</sub> /M <sub>N</sub> M <sub>H</sub> /M <sub>N</sub>
DT56M4	0.09	0.66	1300	0.29	0.31	0.68	-	-	-	-	2.6	2.1 1.8
DT56L4	0.12	0.88	1300	0.42	0.46	0.68	-	-	-	-	2.6	2.2 1.9
DR63S4	0.12	0.83	1380	0.39	0.39	0.69	-	-	-	-	3.3	2.4 2.2
DR63M4	0.18	1.3	1320	0.55	0.55	0.78	-	-	-	-	2.9	1.8 1.7
DR63L4	0.25	1.8	1300	0.68	0.73	0.81	-	-	-	-	2.8	1.8 1.7
DRS71S4	0.18	1.25	1380	0.64	0.66	0.70	-	-	-	-	3.5	1.8 1.8
DRS71S4	0.25	1.72	1390	0.67	0.69	0.75	IE1 <sup>1)</sup>	68.6	72.6	72.6	4.1	1.9 1.9
DRS71S4	0.37	2.55	1380	1.14	1.24	0.70	IE1 <sup>1)</sup>	59.1	65.3	66.6	3.5	1.8 1.8
DRS71M4	0.55	3.8	1380	1.55	1.62	0.72	IE1 <sup>1)</sup>	69.1	71.9	70.6	3.6	2.1 2.1

1) IE marking on customer request

#### 4-pole DT, DR, DRS motors for 50 Hz, IE1

Motor type	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> 1/min	m kg	J <sub>Mot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	Brake	Z <sub>0</sub> BG BGE 1/h	M <sub>B</sub> Nm	m <sub>B</sub> kg	J <sub>Mot_BE</sub> 10 <sup>-4</sup> kgm <sup>2</sup>
DT56M4	0.09	0.66	1300	-	1.1	BMG02	10000 -	0.8	-	1.2
DT56L4	0.12	0.88	1300	-	1.1	BMG02	10000 -	1.2	-	1.2
DR63S4	0.12	0.83	1380	6.1	3.6	BR03	10000 -	2.4	7.6	4.8
DR63M4	0.18	1.3	1320	6.1	3.6	BR03	10000 -	3.2	7.6	4.8
DR63L4	0.25	1.8	1300	6.7	4.4	BR03	10000 -	3.2	8.2	5.6
DRS71S4	0.18	1.25	1380	7.8	4.9	BE05	6000 9500	2.5	10.2	6.2
DRS71S4	0.25	1.72	1390	7.8	4.9	BE05	6000 9500	3.5	10.2	6.2
DRS71S4	0.37	2.55	1380	7.8	4.9	BE05	6000 9500	5	10.2	6.2
DRS71M4	0.55	3.8	1380	9.1	7.1	BE1	4100 11000	10	11.7	8.4



## Technical data of the motors

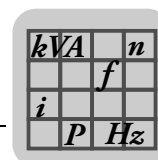
DT, DR, DRS, DRE motors, 50 Hz, 4-pole, S1

### 4-pole DRE motors for 50 Hz, IE2

Motor type	$P_N$	$M_N$	$n_N$	$I_N$	$I_N$	$\cos\varphi$	IE	$\eta_{50\%}$	$\eta_{75\%}$	$\eta_{100\%}$	$I_A/I_N$	$M_A/M_N$
	kW	Nm	1/min	400 V A	380-420 V A							$M_H/M_N$
DRE 80S 4	0.37	2.45	1435	0.87	-	0.77	IE2 <sup>1)</sup>	76.5	78.5	78.8	4.9	2.6 2.1
DRE 80M 4	0.55	3.65	1445	1.27	-	0.76	IE2 <sup>1)</sup>	-	82.0	82.3	6.7	3.1 2.2
DRE 80M 4	0.75	5	1435	1.68	1.75	0.79	IE2	79.2	81.3	81.0	6.2	2.9 2.1
DRE 90M 4	1.1	7.4	1420	2.45	2.55	0.79	IE2	82.5	83.5	82.4	5.9	2.9 2.3
DRE 90L 4	1.5	10	1430	3.35	3.45	0.77	IE2	83.5	84.7	84.0	6.6	3.2 2.8
DRE 100M 4	2.2	14.7	1425	4.6	4.7	0.80	IE2	86.3	86.7	85.4	6.4	3.3 2.7
DRE 100LC 4	3	19.7	1455	6.2	6.3	0.81	IE2	86.3	87.1	86.3	7.5	2.7 2.4
DRE 112M 4	3	19.7	1455	6	6.2	0.83	IE2	87.7	87.4	86.5	7.3	2.4 2.0
DRE 132S 4	4	26	1460	8	8.2	0.82	IE2	87.6	88.2	87.4	8.0	2.7 2.4
DRE 132M 4	5.5	36	1455	10.5	11	0.85	IE2	89.8	89.6	88.5	7.7	2.6 1.9
DRE 132MC 4	7.5	48.5	1470	14.8	15.2	0.82	IE2	88.9	89.5	89.0	8.2	2.2 1.8
DRE 160S 4	7.5	49	1465	14.7	15.3	0.82	IE2	90.3	90.3	89.3	6.5	2.4 1.8
DRE 160M 4	9.2	60	1470	18.3	18.7	0.80	IE2	90.4	90.7	90.0	7.7	2.9 2.2
DRE 160MC 4	11	71	1475	21.5	22	0.81	IE2	90.3	90.6	90.2	7.7	2.6 1.9
DRE 180S 4	11	71	1470	21	21.5	0.83	IE2	89.5	90.4	90.2	7.2	2.6 2.2
DRE 180M 4	15	97	1470	28	29	0.85	IE2	90.9	91.5	91.0	7.1	2.4 2.0
DRE 180L 4	18.5	120	1470	34	35.5	0.85	IE2	91.4	92.0	91.7	7.1	2.5 2.1
DRE 180LC 4	22	142	1480	42	43	0.82	IE2	91.7	92.2	91.8	7.1	2.3 1.9
DRE 200L 4	30	194	1475	57	59	0.82	IE2	92.6	92.9	92.4	6.3	2.1 1.9
DRE 225S 4	37	240	1477	70	72	0.82	IE2	93.0	93.4	93.0	7.0	2.5 2.0
DRE 225M 4	45	290	1478	84	86	0.83	IE2	93.5	93.7	93.3	7.3	2.5 2.1
DRE 250M 4	55	355	1479	104	107	0.82	IE2	93.0	93.8	93.6	6.9	3.0 2.1
DRE 280S 4	75	485	1480	138	143	0.83	IE2	93.3	94.1	94.4	7.8	3.0 2.1
DRE 280M 4	90	580	1478	170	172	0.82	IE2	93.7	94.5	94.4	7.0	3.4 2.3
DRE 315K 4	110	710	1483	196	205	0.85	IE2	94.4	94.9	94.7	6.0	2.3 1.8
DRE 315S 4	132	850	1483	230	235	0.87	IE2	94.3	95.0	95.0	6.6	2.4 2.0
DRE 315M 4	160	1030	1484	275	285	0.88	IE2	95.3	95.5	95.3	6.8	2.2 1.8
DRE 315L 4	200	1290	1482	345	360	0.89	IE2	95.4	95.7	95.3	6.3	2.2 1.8

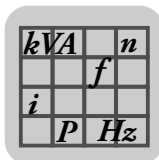
1) IE marking on customer request





4-pole DRE motors for 50 Hz, IE2

Motor type	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> 1/min	m kg	J <sub>Mot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	Brake	Z <sub>0</sub> BG BGE 1/h	M <sub>B</sub> Nm	m <sub>B</sub> kg	J <sub>Mot_BE</sub> 10 <sup>-4</sup> kgm <sup>2</sup>
DRE 80S 4	0.37	2.45	1435	11.5	14.9	BE05	3500 9000	5	14.3	16.4
DRE 80M 4	0.55	3.65	1445	14.3	21.4	BE1	3500 9000	7	17.3	22.9
DRE 80M 4	0.75	5	1435	14.3	21.4	BE1	3500 9000	10	17.3	22.9
DRE 90M 4	1.1	7.4	1420	18.4	35.4	BE2	3000 8000	14	23	40.1
DRE 90L 4	1.5	10	1430	21.4	43.7	BE2	3000 8000	20	26	48.4
DRE 100M 4	2.2	14.7	1425	26	56	BE5	- 8000	28	31.9	62
DRE 100LC 4	3	19.7	1455	31.2	89.8	BE5	- 3800	40	37.1	95.8
DRE 112M 4	3	19.7	1455	41.3	146	BE5	- 3100	40	48.5	150.8
DRE 132S 4	4	26	1460	46.3	190	BE5	- 2800	55	53.5	194.8
DRE 132M 4	5.5	36	1455	60	253	BE11	- 2000	80	74.5	263.5
DRE 132MC 4	7.5	48.5	1470	63	342	BE11	- 1500	110	77.5	352.5
DRE 160S 4	7.5	49	1465	79.5	370	BE11	- 1100	110	98.2	391.9
DRE 160M 4	9.2	60	1470	88.5	448	BE20	- 1000	150	115.2	499.1
DRE 160MC 4	11	71	1475	93.5	593	BE20	- 900	150	120.2	644.1
DRE 180S 4	11	71	1470	121.9	895	BE20	- 900	150	153.9	955
DRE 180M 4	15	97	1470	138.3	1110	BE20	- 800	200	170.3	1170
DRE 180L 4	18.5	120	1470	152.1	1300	BE30	- 590	300	192.1	1435
DRE 180LC 4	22	142	1480	161.1	1680	BE30	- 520	300	201.1	1815
DRE 200L 4	30	194	1475	258	2360	BE32	- 550	400	313	2590
DRE 225S 4	37	240	1477	294.5	2930	BE32	- 320	500	349.5	3160
DRE 225M 4	45	290	1478	315.5	3430	BE32	- 270	600	370.5	3660
DRE 250M 4	55	355	1479	442	6200	BE62	- 200	800	530.6	6795
DRE 280S 4	75	485	1480	528	8870	BE62	- 150	1000	616.6	9465
DRE 280M 4	90	580	1478	528	8870	BE122	- 100	1200	661.4	9890
DRE 315K 4	110	710	1483	850	18400	BE122	- 65	1600	975	19495
DRE 315S 4	132	850	1483	930	22500	BE122	- 50	2000	1055	23595
DRE 315M 4	160	1030	1484	1085	27900	BE122	- 35	2000	1210	28995
DRE 315L 4	200	1290	1482	1165	31900	BE122	- 25	2000	1290	32995



## Technical data of the motors

DR, DRS, DRE motors, 50 Hz, 6-pole, S1

### 13.4 DR, DRS, DRE motors, 50 Hz, 6-pole, S1

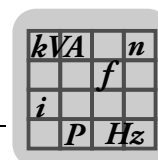
#### 6-pole DR, DRS motors for 50 Hz, IE1

Motor type	$P_N$	$M_N$	$n_N$	$I_N$	$I_N$	$\cos\phi$	IE class	$\eta_{50\%}$	$\eta_{75\%}$	$\eta_{100\%}$	$I_A/I_N$	$M_A/M_N$
	kW	Nm	1/min	400 V A	380-420 V A							$M_H/M_N$
DR63S6	0.09	0.95	900	0.38	0.42	0.64	-	-	-	-	2.2	1.8 1.6
DR63M6	0.12	1.2	900	0.58	0.62	0.65	-	-	-	-	2.1	1.8 1.7
DR63L6	0.18	2	870	0.78	0.81	0.70	-	-	-	-	2.2	1.6 1.5
DRS71S6	0.25	2.65	895	0.83	0.86	0.70	IE1 <sup>1)</sup>	55.3	61.4	62.2	2.7	1.7 1.7
DRS71M6	0.37	3.9	905	1.13	1.16	0.71	IE1 <sup>1)</sup>	61.9	66.4	66.5	3.1	1.9 1.9

1) IE marking on customer request

#### 6-pole DR, DRS motors for 50 Hz, IE1

Motor type	$P_N$	$M_N$	$n_N$	m	$J_{Mot}$	Brake	$Z_0$ BG BGE 1/h	$M_B$	$m_B$	$J_{Mot\_BE}$
	kW	Nm	1/min							
DR63S6	0.09	0.95	900	6.0	5.4	BR03	20000 -	2.5	7.5	6.6
DR63M6	0.12	1.2	900	6.0	5.4	BR03	20000 -	3.2	7.5	6.6
DR63L6	0.18	2	870	6.6	6.8	BR03	20000 -	3.2	8.1	8.0
DRS71S6	0.25	2.65	895	7.8	8.1	BE05	7000 16000	5	10.2	9.4
DRS71M6	0.37	3.9	905	9.1	11.7	BE1	6600 15000	10	11.7	13



6-pole DRE motors for 50 Hz, IE2

Motor type	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> 1/min	I <sub>N</sub> 400 V A	I <sub>N</sub> 380-420 V A	cosφ	IE class	η <sub>50%</sub> %	η <sub>75%</sub> %	η <sub>100%</sub> %	I <sub>A</sub> /I <sub>N</sub>	M <sub>A</sub> /M <sub>N</sub> M <sub>H</sub> /M <sub>N</sub>
DRE 71M 6	0.25	2.6	910	0.73	-	0.73	IE2 <sup>1)</sup>	64.8	70.0	68.8	3.4	2.0 2.0
DRE 80S 6	0.37	3.8	935	1.19	1.24	0.69	IE2 <sup>1)</sup>	67.2	71.2	71.5	3.7	2.0 2.0
DRE 80M 6	0.55	5.6	935	1.58	-	0.69	IE2 <sup>1)</sup>	70.5	74.0	74.0	4.4	2.2 2.2
DRE 90L 6	0.75	7.6	940	2.05	2.1	0.65	IE2	78.7	80.5	80.0	4.6	2.4 2.4
DRE 100M 6	1.1	11.2	940	3.1	3.15	0.64	IE2	77.2	79.4	78.7	4.7	3.0 2.9
DRE 100L 6	1.5	15.2	940	4	4.05	0.66	IE2	79.7	81.5	80.9	5.0	3.3 3.1
DRE 112M 6	2.2	22	955	5.2	5.3	0.74	IE2	83.5	84.2	83.0	5.5	2.1 1.8
DRE 132S 6	3	30	955	6.8	7	0.74	IE2	85.4	85.8	84.4	5.5	2.3 2.1
DRE 132M 6	4	40	960	9.5	9.6	0.71	IE2	85.3	86.2	85.4	6.1	2.8 2.6
DRE 132MC 6	5.5	54	970	12.1	12.3	0.76	IE2	87.5	88.0	86.9	5.8	1.9 1.7
DRE 160M 6	5.5	54	965	12.6	12.8	0.72	IE2	86.4	87.4	86.8	5.8	2.3 2.0

1) IE marking on customer request

6-pole DRE motors for 50 Hz, IE2

Motor type	P <sub>N</sub> kW	M <sub>N</sub> Nm	n <sub>N</sub> 1/min	m kg	J <sub>Mot</sub> 10 <sup>-4</sup> kgm <sup>2</sup>	Brake	Z <sub>0</sub> BG BGE 1/h	M <sub>B</sub> Nm	m <sub>B</sub> kg	J <sub>Mot_BE</sub> 10 <sup>-4</sup> kgm <sup>2</sup>
DRE 71M 6	0.25	2.6	910	9.1	11.7	BE05	6600 15000	5	11.5	13
DRE 80S 6	0.37	3.8	935	11.5	14.9	BE1	6000 14000	10	14.5	16.4
DRE 80M 6	0.55	5.6	935	14.3	21.4	BE2	4300 10000	14	18	25.9
DRE 90L 6	0.75	7.6	940	21.4	43.4	BE2	3500 8000	20	26	48.1
DRE 100M 6	1.1	11.2	940	26	55.6	BE5	- 7000	28	31.9	61.6
DRE 100L 6	1.5	15.2	940	29	67.8	BE5	- 6000	40	34.9	73.8
DRE 112M 6	2.2	22	955	41.3	145	BE5	- 4000	55	48.5	149.8
DRE 132S 6	3	30	955	46.3	188	BE11	- 3500	80	60.8	198.5
DRE 132M 6	4	40	960	60	250	BE11	- 3300	80	74.5	260.5
DRE 132MC 6	5.5	54	970	63	337	BE11	- 2900	110	77.5	347.5
DRE 160M 6	5.5	54	965	88.5	633	BE11	- 2700	110	107.2	654.9



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<b>Centre / Poitou</b>	SEW-USOCOME Parc d'activités de la forêt 4 rue des Fontenelles F-44140 Le Bignon	Tel. +33 2 40 78 42 11 Fax +33 2 40 78 42 20
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Lebanon			
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	<b>Service Competence Center</b>	<b>Lisboa</b> SEW-EURODRIVE, LDA. Núcleo Empresarial I de São Julião do Tojal Rua de Entremuros, 54 Fracção I P-2660-533 São Julião do Tojal	Tel. +351 21 958-0198 Fax +351 21 958-0245 <a href="mailto:esc.lisboa@sew-eurodrive.pt">esc.lisboa@sew-eurodrive.pt</a>
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