

# GRUNDFOS ALL PRODUCT BROCHURE



BE > THINK > INNOVATE >

GRUNDFOS 



# BE ➤

## **BE responsible**

Being responsible is our foundation. We know that we have a responsibility towards the people who are Grundfos, towards the innovative soul of Grundfos as well as towards the surrounding world. Whatever we do, we make sure that we have a firm and sustainable basis for doing it.



# THINK ➤

## **THINK ahead**

Thinking ahead makes innovation possible. We encourage a certain Grundfos way of thinking which is founded upon the belief that everyone must contribute by using his or her judgement and foresight. We are looking for commitment and ideas in everything we do in order to make the best solutions. We think — and then we act.

# INNOVATE ➤

## **INNOVATE**

Innovation is the essence. It is the innovations that make Grundfos unique. We stand out because of our ability to constantly create new solutions to the ever-changing demands of the pump business. We meet every challenge and we are never afraid of taking the initiative — remaining true to our ideals calls for renewal. Innovation is the soul of Grundfos.



**IT IS OUR MISSION** – the basis of our existence – to successfully develop, produce, and sell high quality pumps and pumping systems worldwide, contributing to a better quality of life and a healthier environment.

**A global business**

With almost 18,000 employees worldwide, and annual production of 16 million pump units per year, Grundfos is one of the world’s leading pump manufacturers. The 80 Grundfos Companies around the globe help bring pumps to every corner of the world, supplying drinking water to Antarctic expeditions, irrigating Dutch tulips, monitoring groundwater beneath waste heaps in Germany, and air conditioning Egyptian hotels.

**Efficient, sustainable products**

Grundfos is constantly striving to make its products more user-friendly and reliable as well as energy-saving and efficient. Our pumps are equipped with ultra-modern electronics allowing output to be regulated according to current needs. This ensures convenience for the end-user, saves a great deal of energy and, in turn, benefits the environment.

**Research and development**

In order to maintain its market position, Grundfos takes customer research to heart when improving or developing new products. Our Research and Development department makes use of the latest technology within the pump industry in search of new and better solutions for the design and function of our pump solutions.

**Corporate values**

The Grundfos Group is based on values such as sustainability, openness, trustworthiness, responsibility, and also on partnership with clients, suppliers and the whole of society around us, with a focus on humanity that concerns our own employees as well as the many millions who benefit from water that is procured, utilized and removed as wastewater with the help of Grundfos pumps.



Technology and Business Development Center at Group headquarters in Denmark

**GRUNDFOS NORTH AMERICA**

- > North American headquarters in Olathe, Kansas
- > Manufacturing in Fresno, California
- > Service, distribution and light assembly in Allentown, Pennsylvania
- > Sales and assembly located in Canada and Mexico
- > Grundfos CBS in Brookshire, Texas



## Pumps for all purposes

Grundfos offers high quality products for efficient, energy-saving pump solutions.



### Heating and hot water service systems

Circulator pumps for circulation of hot water in central and district heating systems and circulation in domestic hot water service systems.



### Cooling and air conditioning systems

Circulator pumps for circulation of cold water and other liquids in cooling and air conditioning systems.



### Industrial applications

A wide range of multistage pumps for the transfer of water, cooling lubricants, and other liquids in industrial and process systems.



### Pressure boosting and liquid transfer

Vertical and horizontal, centrifugal pumps, and pressure boosting systems for liquid transfer and boosting of hot and cold water.



### Sanitary

Hygienic end-suction-centrifugal, rotary positive displacement, self-priming and multistage pumps for food, beverage, and pharmaceutical process systems.



### Groundwater supply

Submersible pumps for groundwater supply, irrigation and groundwater de-watering.



### Domestic water supply

Submersible pumps, jet pumps, multistage centrifugal pumps and compact systems for water supply in homes, gardens, and hobby applications.



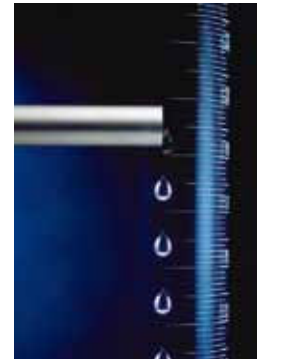
### Sewage and wastewater

Drainage, sump, effluent and sewage pumps for a wide range of applications in building services.



### Environmental applications

Purpose-built submersible pumps for remedial pumping of contaminated groundwater and for groundwater sampling for water quality analyses.



### Dosing/Disinfection

Dosing pumps and disinfection generators for water treatment systems, RO, cooling and heating, swimming pools, process industries, food and beverage, water supply and wastewater.

## PRODUCT AND APPLICATION OVERVIEW

Product name	Page	Product type	Application																	
			Heating and hot water service systems	Cooling and air conditioning systems	Industrial applications	Pressure boosting and liquid transfer	Sanitary	Groundwater supply	Domestic water supply	Sewage and wastewater	Environmental applications	Dosing / Disinfection								
ALPHA™	10	Circulator pump, wet-rotor type	●																	
Comfort System	10	Instant hot water recirculation kit	●																	
Small, Medium UP	10	Circulator pumps, wet-rotor type	●	●																
Small, Medium, Large UPS	11	Circulator pumps, wet-rotor type	●	●																
VersaFlo® UP, UPS	11	Circulator pumps, wet-rotor type	●	●																
MAGNA	11	Circulator pump, wet-rotor type	●																	
VersaFlo® TP, TPE	12	Circulator pumps	●	●																
LM, LP	12	Single-stage, In-line centrifugal pumps	●	●	●	●														
DME 60-940, DDI 60-150, DMX, DMH	12	Dosing pumps, diaphragm type	●	●	●			●												●
DME, DDI, DMS, DMI, DMX	12	Large dosing pumps, diaphragm type			●							●	●	●						●
Oxiperm OCD, OCC, OCG	13	Chlorine dioxide generators	●	●				●				●	●	●						●
Vaccuperm VGA	13	Chlorine Gas Dosing System			●			●				●	●	●						●
Selcoperm SES	13	Onsite sodium hypochlorite gen.		●	●			●				●	●	●						●
MTA, MTC, CRK, MTR, SPK	14	Immersible centrifugal pumps			●															
CM, CME	14	End-suction multistage pumps		●	●	●		●												●
CR-H, CRE-H	15	End-suction multistage pump		●	●	●		●												●
CR, CRI, CRN	15	Multistage centrifugal pumps	●	●	●	●				●		●	●							
CRE, CRIE, CRNE	15	Multistage centrifugal pumps	●	●	●	●				●		●	●							
FB	16	Single-stage centrifugal pump						●												
NL	16	Rotary positive displacement pump						●												
CRE-Plus	16	Pressure booster system (single pump)			●	●				●										
Hydro Multi-E	17	Pressure boosting system			●	●				●										
BoosterPaQ® Hydro MPC	17	Pressure boosting system	●	●	●	●				●										
HS	17	Single-stage end suction pump	●	●	●	●														

## PRODUCT AND APPLICATION OVERVIEW

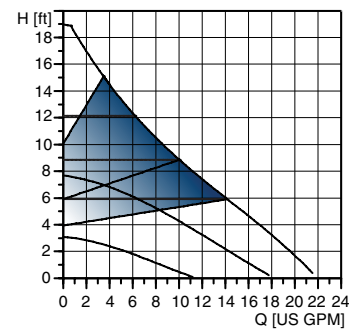
Product name	Page	Product type	Application																	
			Heating and hot water service systems	Cooling and air conditioning systems	Industrial applications	Pressure boosting and liquid transfer	Sanitary	Groundwater supply	Domestic water supply	Sewage and wastewater	Environmental applications	Dosing / Disinfection								
BM, BMB	18	Booster modules			●	●														
BME, BMET	18	High-pressure booster modules			●	●														
LiqTec™	18	Control and monitoring unit			●															
SQ	19	3" submersible pump									●	●								
SmartFlo™ SQE	19	Constant water pressure system									●	●								
SQFlex	19	Renewable energy submersible pump									●	●								
SP	20	4", 6", 8", and 10" submersible pumps									●	●								
MS Motors	20	4", and 6" submersible motors									●	●								
MMS	20	4", 6", 8", and 10" submersible pumps									●	●								
Redi-Flo2™ and Redi-Flo4™	21	Environmental pumps																		●
Redi-Flo 3™ and CU 300	21	Environmental pumps																		●
MP 204	21	Control and monitoring unit			●	●				●	●	●								
CUE	22	Series of frequency converters			●	●				●	●	●								
CIU	22	Fieldbus product	●	●	●	●				●		●								
EZ Boost	22	Constant pressure boosting system			●	●					●									
MQ	23	Flow based pressure boosting system			●						●									
JPF, JDF, JPS	23	Basic line jet			●						●									
Unilift KP	23	Drainage submersible pump																		●
Unilift CC	24	Drainage submersible pump																		●
Unilift AP12, AP35, AP50	24	Domestic sewage submersible pumps																		●
Unilift AP35B, AP50B	24	Domestic sewage submersible pumps																		●
*JPF, JPS Tank Package	25	Packaged systems																		●
*Hydrosolo-E	25	Pressure booster system			●	●					●									
*Hydrosolo-S	25	Pressure booster system			●	●					●									

\* Available only in Canada.



### ALPHA™ Variable Speed Circulator

Cast iron, stainless steel, permanent wet-rotor, circulator pumps



#### Technical data

Flow, Q: 0 to 22 gpm  
 Head, H: 0 to 19 ft  
 Voltage: 1 x 115V  
 Min. fluid temp: min. 36°F  
 Max. fluid temp: max. 230°F  
 Motor: Single phase, 115V  
 Working press.: max. 150 psi

#### Applications

- Open and closed systems
- Circulation of hot water in heating systems
- Variable head and flow system demands

#### Features and benefits

- Seven hydraulic settings;
- Three fixed speeds
- Three constant pressure
- AutoAdapt™

#### LED read outs;

- Power (Watts)
- Estimated flow (GPM)

#### Permanent magnet motor design;

- High starting torque
- 50% power reduction
- Nut capture feature
- Maintenance-free

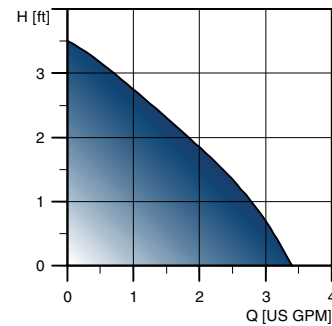
#### Description:

- AutoAdapt™ setting automatically adjusts to changing system demands



### Comfort System Hot Water Recirculation Kit

Stainless steel wet-rotor, circulator pumps



#### Technical data

Flow, Q: 0 to 3.4 gpm  
 Head, H: 0 to 3.5 ft  
 Min. fluid temp: min. 36°F  
 Max. fluid temp: max. 150°F  
 Motor: Single phase, 115V  
 Working press.: max. 145 psi

#### Applications

Circulation of hot water in:

- Domestic hot water recirculation
- Ideal for retrofit applications
- IAPMO and ANSI/NSF61 listed

#### Features and benefits

- Maintenance-free
- Low noise
- Low energy
- Wide range
- Corrosion-resistant stainless steel

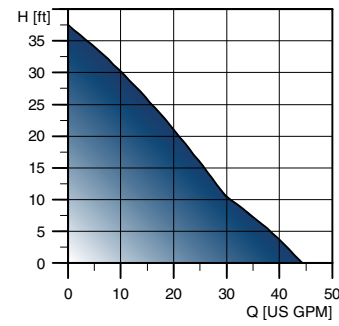
#### Description

- UP 15-10SU7P, Timer, Line Cord, Check Valve, 115V, Hot Water Tank Fittings and 1 valve
- Additional Comfort Valves are packaged in multiples of 15



### Small, Medium UP Open & Closed Systems

Cast iron, silicon bronze, stainless steel wet-rotor circulator pumps



#### Technical data

Flow, Q: 0 to 46 gpm  
 Head, H: 0 to 37 ft  
 Min. fluid temp.: min. 36°F  
 Max. fluid temp.: max. 230°F  
 Motor: Single phase, 115V  
 Working press.: max. 150 psi

#### Applications

Circulation of hot or cold water in:

- Open and closed systems
- Heating systems
- Cooling and air conditioning systems

#### Features and benefits

- Maintenance-free
- Low noise
- Low energy
- Wide range

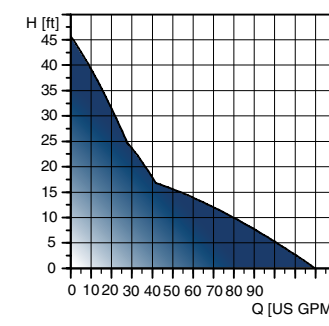
#### Optional

- Timer
- Line Cord
- Aquastat



### Small, Medium, UPS Open & Closed Systems

Cast iron, silicon bronze, stainless steel wet-rotor circulator pumps



#### Technical data

Flow, Q: 0 to 120 gpm  
 Head, H: 0 to 46 ft  
 Min. fluid temp: min. 36°F  
 Max. fluid temp: max. 230°F  
 Motor: Single phase, 115V 208/230V  
 Working press.: max. 150 psi

#### Applications

Circulation of hot or cold water in:

- Open and closed systems
- Heating systems
- Cooling and air conditioning systems
- Drop in replacement service work

#### Features and benefits

- Maintenance-free
- 3-speed
- Removable check valve
- Nut capture feature
- Low energy
- Wide range

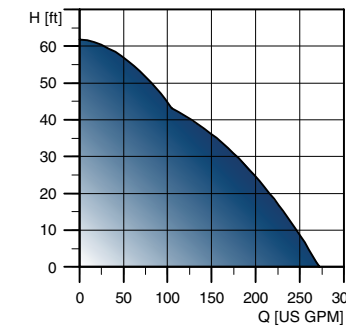
#### Optional

- Line Cord
- Timer
- Rotated flange



### VersaFlo® UP, UPS

Large multi-speed wet-rotor circulators



#### Technical data

Flow, Q: 9 to 270 gpm  
 Head, H: 1 to 62 ft  
 Fluid temp.: 14 to 230°F  
 Working press.: max. 145 psi  
 Ambient temp.: 32° to 104°F  
 HP range: 1/3 to 3 hp

#### Applications

Circulation of liquids in:

- Stationary open or closed central and solar heating systems
- Hot water recirculation systems
- Cooling and air conditioning systems
- Snow melt

#### Features and benefits

- Quiet, maintenance-free motor with internal thermal protection
- Built-in motor protection
- Industry standard flange-to-flange
- Cast iron or bronze

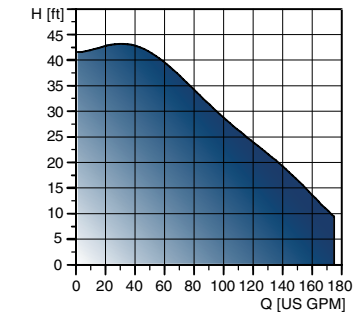
#### Optional

- Protection module
- Relay module with fault signal or operating output
- Bronze pump housing



### MAGNA

Large variable speed wet-rotor circulators with AUTOADAPT™



#### Technical data

Flow, Q: 10 to 170 gpm  
 Head, H: 1 to 42 ft  
 Fluid temp.: 59 to 230°F  
 Working press.: max. 175 psi  
 Ambient temp.: 32° to 104°F  
 HP range: 1/3 to 1 hp  
 Motor: 1x230V Permanent Magnet motor with integrated VFD

#### Applications

Circulation of liquids in:

- Heating systems
- Hot water recirculation systems
- Ideal for systems with varying flow
- Snow melt

#### Features and benefits

- Energy Optimization with AUTOADAPT™
- Sensor-less control
- Quiet, maintenance free
- Built-in motor protection
- Cast Iron or stainless steel

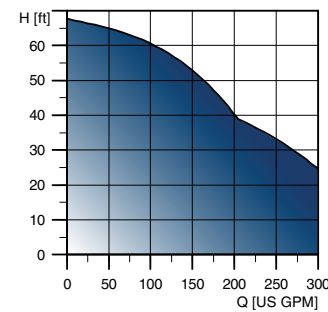
#### Optional

- MAGNA-LON module
- GENI Module
- CIU available for the fieldbus communication (requires GENI Module)



### VersaFlo® TP, TPE

Close coupled in-line circulators;  
TPE electronically controlled



#### Technical data

Flow, Q: 8 to 300 gpm  
Head, H: 3 to 67.5 ft  
Fluid temp.: 5 to 288°F  
Working press.: max. 145 psi  
Ambient temp.: max. 104°F  
HP range: 1/3 to 3 hp

#### Applications

Circulation of hot or cold water in:

- Large heating systems
- District heating plants
- Local heating plants
- Domestic hot water systems
- Cooling and air conditioning systems

#### Features and benefits

- Cast Iron or bronze
- Stainless steel construction for long life and maintenance-free operation
- Industry standard flange-to-flange
- ODP or TEFC motor flexibility
- Various types of shaft seals depending on liquid, temperature, and pressure

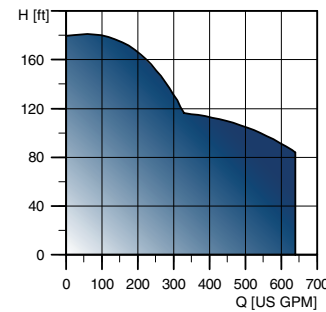
#### Optional

- Wireless remote control, R100
- Bronze pump housing
- CIU is available for fieldbus communication



### LM, LP

Close coupled in-line circulators



#### Technical data

Flow, Q: 30 to 600 gpm  
Head, H: 8 to 180 ft  
Fluid temp.: 5 to 250°F  
Working press.: max. 175 psi  
Ambient temp.: max. 104°F  
HP range: 3/4 to 20 hp

#### Applications

The pumps are used for circulation of water in:

- Water supply
- Heating and air conditioning systems
- Pressure boosting

Liquid transfer applications in:

- Industry
- Agriculture

#### Features and benefits

- Maintenance-free with a low starting torque and a high operating efficiency
- Direct-coupled to standard NEMA-C face motor
- 431 stainless steel pump shaft
- High quality stainless steel shaft seal
- Stainless steel impeller

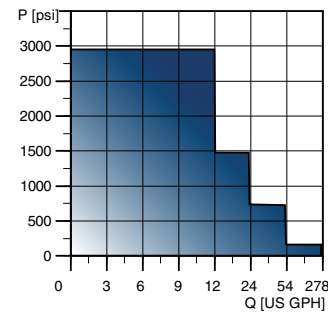
#### Optional

- Various types of shaft seals depending on liquid, temperature, and pressure



### DME, DMS

Compact diaphragm dosing pumps



#### Technical data

Capacity, Q: max. 278 gpm (double with duplex configuration)  
Pressure, p: max. 2900 psi  
Liquid temp.: max. 122°F

#### Applications

Injection of chemicals in water and waste water treatment systems, washing systems, swimming pools, and plant processes.

#### Features and benefits

- Precise capacity setting directly in gph or L/hr
- Different motor configuration (AC, DC stepper, synchronous)
- Full diaphragm control
- Digital flow capacity setting
- Control panel with display and one-touch buttons
- Front-or side-fitted control panel
- Manual/pulse/4-20mA control
- Control panel lock
- 4-20 mA control
- Pulse-based batch control
- Timer-based batch control
- Easy calibration/easy priming
- Fieldbus communication module (option)
- Optional alarm relay connection



### Instrumentation

Compact measuring systems

#### For the convenient measurement and control of:

- Chlorine
- Chlorine dioxide
- pH
- Redox
- Total chlorine or
- Chlorine independent from pH
- Ozone
- Hydrogen peroxide
- Peracetic acid
- Fluoride

#### Applications

For chlorine, chlorine dioxide and ozone combined potentiostatic measuring cells of type AquaCell have been developed, with an electric cleaning motor or with hydromechanical electrode cleaning.

#### Features and benefits

- Proven potentiostatic three-electrode measuring method directly in the sample water
- Optimized electrode cleaning
- Integrated temperature measurement
- Special measuring chamber with calibration cup for pH single-rod probe and redox electrode
- Non-wearing and counter electrode
- Easy exchange of the reference electrode
- Compound loop control available



### Oxiperm OCD, OCC, OCG

Chlorine dioxide generators

#### Technical data

Dilute acid - chlorite generation:  
Oxiperm OCD-162 5-60 g/h (25 - 3.00 lb/day)  
Oxiperm OCD-164 30-2000 g/h (1.5 - 105 lb/day)  
Concentrated acid - chlorite generation:  
Oxiperm OCC-164 150 g/h - 10 kg/h (8 - 525 lb/day)  
Chlorite - chlorine generation:  
Oxiperm OCG-166 0.75 - 10 kg/h (40 - 525 lb/day)

#### Applications

Disinfection in water and wastewater treatment systems, utility water, water conditioning, food and beverage and plant processes.

#### Features and benefits

- Safe and reliable generation of chlorine dioxide through proven methods of superior disinfection
- Easy to use controls and operations
- High efficiency generation of chlorine dioxide with a minimum of by-products
- Low chemical consumption
- Batch and continuous feed generators
- Fieldbus and alarm communication
- Generation using dilute or concentrated precursor chemicals



### Selcoperm SES

Onsite sodium hypochlorite generators

#### Technical data

Selcoperm electrolytic Cl<sub>2</sub> generator up to 2000 + kg/h (440 lb/h)

#### Applications

Disinfection in water and wastewater treatment systems, groundwater supply, utility water, water conditioning, food and beverage and plant processes.

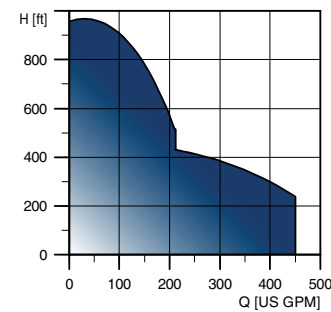
#### Features and benefits

- Safe and reliable generation of stable sodium hypochlorite solutions on location to minimize risks and costs
- Generation of sodium hypochlorite with salt and electricity, reducing plant operation costs
- Integrated generation system that reduces hydrogen gas exposure
- Interlocked safety devices and control systems for easy operation
- No explosion proof environments required for installation
- Durable, long-lasting equipment requiring a minimum of service



### MTA, MTC, CRK, MTR, SPK

Multistage centrifugal immersible pumps



#### Technical data

Flow, Q: max. 450 gpm  
 Head, H: max. 970 ft  
 Liquid temp.: -4°F to +194°F  
 Working press.: max. 362 psi

#### Applications

The pumps are suitable for liquid transfer in:

- EDM machine tools
- Grinding machines
- Machining centers
- Cooling units
- Industrial washing machines
- Filtering systems
- Lathes
- Chip conveyors
- Condensate

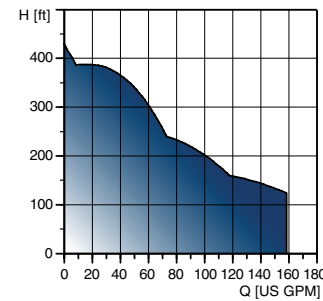
#### Features and benefits

- Flexible installation length
- Wide range
- Reliable
- Service-friendly
- Simple installation



### CM

Compact horizontal multistage pumps



#### Technical data

Flow, Q: max. 154 gpm  
 Head, H: max. 425 ft  
 Liquid temp.: -4°F to +248°F  
 Working press.: max. 145 psi

#### Applications

The pumps are suitable for liquid transfer in:

- Washing and cleaning
- Water treatment
- Temperature control
- Pressure boosting
- Distilling systems
- Comprised machinery

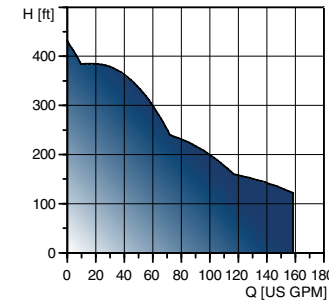
#### Features and benefits

- Compact design
- Wide performance range
- Variety of material versions
- Low noise
- High reliability
- Service-friendly
- Customized solutions



### CME

Compact horizontal multistage pumps-integrated VFD



#### Technical data

Flow, Q: max. 154 gpm  
 Head, H: max. 425 ft  
 Liquid temp.: -4°F to +248°F  
 Working press.: max. 145 psi

#### Applications

The pumps are suitable for liquid transfer in:

- Washing and cleaning
- Water treatment
- Temperature control
- Pressure boosting
- Distilling systems
- Metering/mixing

#### Features and benefits

- Compact design
- Wide range performance
- Variety of material versions
- Low noise
- High reliability
- Service-friendly
- Customized solutions
- Controlled operation
- Constant pressure
- Energy savings
- Increased comfort
- Pump and application monitoring

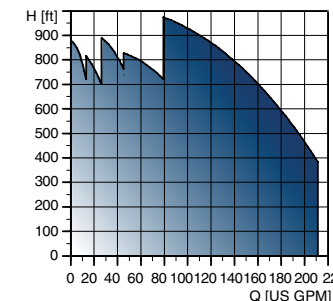
#### Optional

- Wireless remote control, R100



### CR-H, CRE-H

Horizontal end-suction multistage pumps



#### Technical data

Flow, Q: max. 210 gpm  
 Head, H: max. 995 ft  
 Liquid temp.: -22°F to +248°F  
 Working press.: max. 435 psi

#### Applications

The pumps are suitable for liquid transfer in:

- Pressure boosting
- Industrial processes
- Boiler feed
- Liquid transfer
- Irrigation
- ANSI B73.1 replacement

#### Features and benefits

- Low profile horizontal design
- Cartridge shaft seal
- Maximized efficiency
- Service-friendly
- Dimensional versions

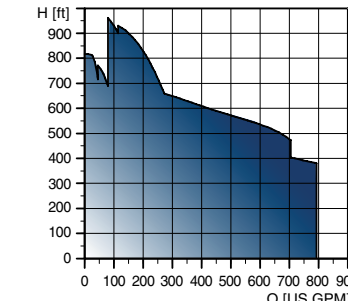
#### Optional

- Grundfos baseplate
- Wireless remote control, R100



### CR, CRI, CRN

Vertical in-line multistage pumps



#### Technical data

Flow, Q: max. 792 gpm  
 Head, H: max. 995 ft  
 Liquid temp.: -22°F to +248°F  
 Working press.: max. 435 psi

#### Applications

The pumps are suitable for liquid transfer in:

- Washing systems
- Cooling and air conditioning systems
- Water supply systems
- Water treatment systems
- Fire fighting systems
- Industrial plants
- Boiler feed systems

#### Features and benefits

- Reliability
- High efficiency
- Service-friendly
- Space-saving
- Suitable for slightly aggressive liquids

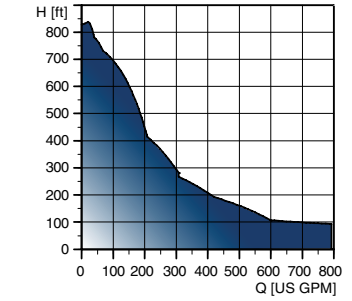
#### Optional

- Dry-running protection and motor protection via LiqTec™



### CRE, CRIE, CRNE

Multistage centrifugal pumps electronically controlled



#### Technical data

Flow, Q: max. 790 gpm  
 Head, H: max. 820 ft  
 Liquid temp.: -22°F to +248°F  
 Working press.: max. 435 psi

#### Applications

The pumps are suitable for liquid transfer in:

- Washing systems
- Cooling and air conditioning systems
- Water supply systems
- Water treatment systems
- Fire fighting systems
- Industrial plants
- Boiler feeding systems

#### Features and benefits

- Wide range
- Reliability
- In-line design
- High efficiency
- Service-friendly
- Space-saving
- Many control facilities

#### Optional

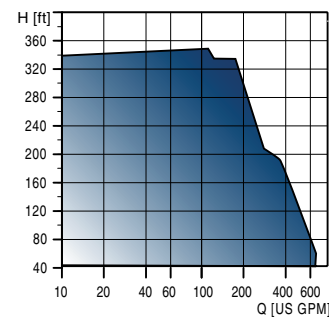
- Wireless remote control, R100





### FB

Single-stage hygienic centrifugal pumps



#### Technical data

Flow, Q: max. 675 gpm  
 Head, H: max. 350 ft  
 Liquid temp.: max. 302°F  
 Working press.: max. 232 psi

#### Applications

The pumps are suitable for liquid transfer in:

- Food and beverage
- Water treatment systems
- Life science/pharmaceutical
- Personal care

#### Features and benefits

- Reliability
- Hygienic design
- Service-friendly
- CIP/SIP capable

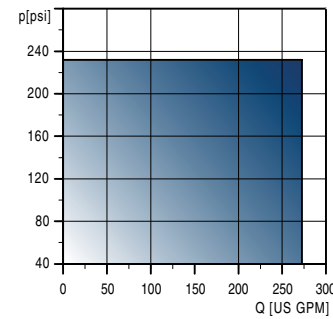
#### Optional

- Motor support
- Mechanical seal configuration



### NL

Hygienic rotary positive displacement



#### Technical data

Flow, Q: max. 0.5 g/rev  
 Head, H: max. 300 psi  
 Liquid temp.: max. 302°F  
 Working press.: max. 580 psi

#### Applications

The pumps are suitable for liquid transfer in:

- Food and beverage
- Water treatment systems
- Life science/pharmaceutical
- Personal care

Other:

- Pulp and paper, textile and chemical

#### Features and benefits

- Constant pressure
- Simple installation
- Low-energy
- Wide range

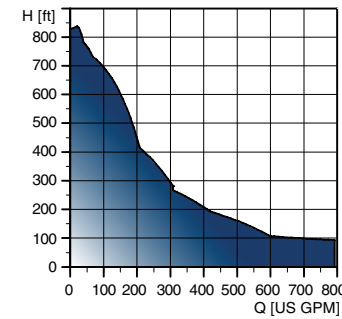
#### Optional

- External communication, Control 2000



### CRE-Plus

Single pump system



#### Technical data

Flow, Q (1 pump system): max. 790 gpm  
 Head, H: max. 820 ft  
 Liquid temp.: -22°F to +248°F  
 Working press.: max. 435 psi

#### Applications

- Residential/commercial buildings
- Irrigation
- Water supply systems
- Industrial applications

#### Features and benefits

- Constant pressure, variable speed control
- Simple installation
- Low-energy consumption
- Reduced maintenance

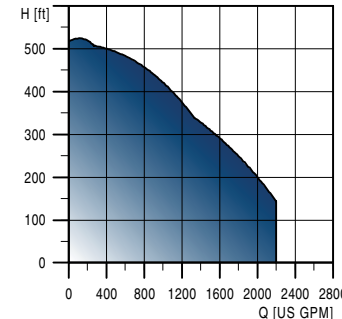
#### Optional

- External communication supports other fieldbus protocols such as Modbus, Profibus, LON, BACnet and more.



### Hydro Multi-E

Multiple packaged pump system



#### Technical data

Flow, Q (4 pump system): max. 2200 gpm  
 Head, H: max. 535 ft  
 Liquid temp.: +32°F to +176°F  
 Working press.: max. 232 psi

#### Applications

- Residential/commercial buildings
- Water supply systems
- Industrial applications
- HVAC applications

#### Features and benefits

- Constant pressure, all variable speed control
- Simple installation
- Low-energy consumption
- Wide range

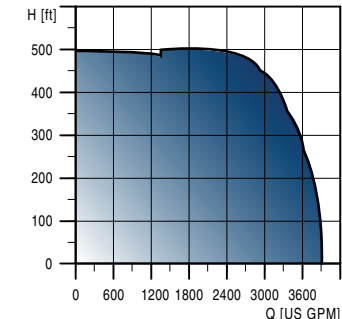
#### Optional

- External communication supports other fieldbus protocols such as Modbus, Profibus, LON, BACnet and more.



### BoosterpaQ® Hydro MPC

Advanced packaged pump system



#### Technical data

Flow, Q (4 pump system): max. 2540 gpm  
 Flow, Q (6 pump system): max. 3800 gpm  
 Head, H: max. 500 ft  
 Liquid temp.: +32°F to +176°F  
 Working press.: max. 232 psi

#### Applications

BoosterpaQ systems are suitable for pressure boosting in:

- Water supply systems
- Irrigation systems
- Water treatment systems
- Fire fighting systems
- Industrial plants
- HVAC systems

#### Features and benefits

- Constant pressure
- Simple installation
- Low-energy consumption
- Wide range
- Many advanced control functions
- Intuitive control interface

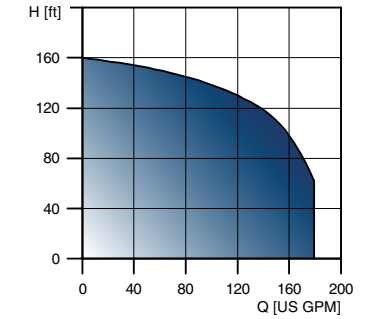
#### Optional

- Supports other fieldbus protocols such as Modbus, Profibus, LON, BACnet and more.



### HS

Single-stage end suction pumps



#### Technical data

Flow, Q: max. 175 gpm  
 Head, H: max. 160 ft  
 Liquid temp.: max. 180°F continuous  
 Working press.: max. 125 psi

#### Applications

The pumps are suitable for liquid transfer in:

- Water circulation
- Pressure boosting
- Filter systems
- Cooling systems
- Water supply
- Other industrial systems

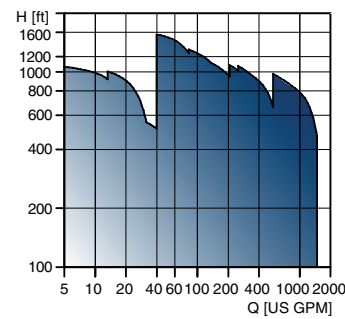
#### Features and benefits

- Wide range
- Compact design
- Standard motor
- Carbon/ceramic shaft seal
- Bronze impeller



### BM, BMB

4", 6", and 8" booster modules



#### Technical data

Flow, Q: max. 1320 gpm  
 Head, H: max. 1595 ft  
 Liquid temp.: +32°F to +104°F  
 Working press.: max. 1160 psi

#### Applications

The booster modules are suitable for pressure boosting in:

- Reverse osmosis systems
- Water supply systems
- Water treatment systems
- Industrial plants

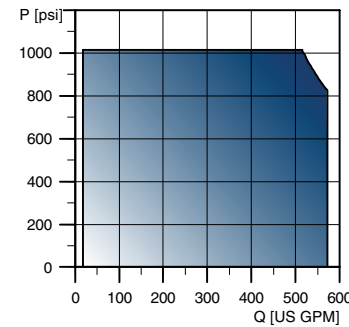
#### Features and benefits

- Low-noise
- Simple installation
- Modular design
- Compact design
- Sealless



### BME, BMET

High-pressure booster systems



#### Technical data

Flow, Q: max. 570 gpm  
 Pressure, p: max. 1015 psi  
 Liquid temp.: +32°F to +104°F  
 Working press.: max. 1160 psi

#### Applications

The booster systems are suitable for pressure boosting in:

- Reverse osmosis systems
- Water supply systems
- Water treatment systems
- Industrial plants

#### Features and benefits

- High-pressure/high-flow
- Low-energy
- Simple installation
- Compact design



### LiqTec™

Control and monitoring unit

#### Applications

- Monitoring and protection of pumps and processes

#### Features and benefits

- Protection against dry running and excessive motor temperatures
- Manual or automatic restarting possible from a remote PC
- Simple installation - plug-and-play technology
- Robust sensor

#### Note

- Available for CR only

### R100

Wireless remote control

#### Applications

- All pumps and electronics designed for wireless communication

#### Features and benefits

- Simple and quick installation and configuration of the pump controls
- Read out of various operating and fault signals
- Troubleshooting
- Print out of status information

#### Note

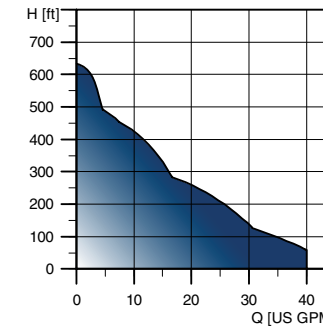
Products that can communicate with the R100:

- MLE, CRE, CU 300, CU 301, CME, Multi-E, MAGNA, TPE



### SQ

3" submersible pump



#### Technical data

Flow, Q: max. 40 gpm  
 Head, H: max. 640 ft  
 Liquid temp.: +32°F to +104°F  
 Instal. depth: max. 500 ft

#### Applications

- The pumps are suitable for:
- Domestic water supply
  - Irrigation in horticulture and agriculture
  - Groundwater de-watering
  - Industrial applications

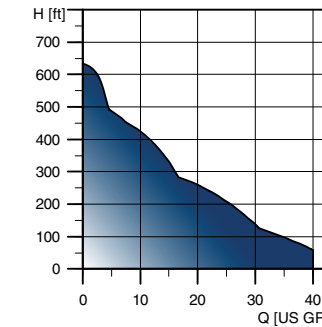
#### Features and benefits

- Integrated dry-running protection
- Soft start
- Over, and undervoltage protection
- High-starting torque
- Overload protection



### SmartFlo™ SQE Constant Pressure System

SQE pump and CU 301 Control Unit



#### Technical data

Flow, Q: max. 40 gpm  
 Head, H: max. 640 ft  
 Liquid temp.: +32°F to +104°F  
 Instal. depth: max. 500 ft

#### Applications

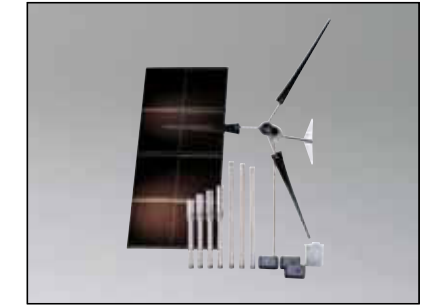
- The pumps are suitable for:
- Domestic water supply
  - Irrigation in horticulture and agriculture
  - Groundwater de-watering
  - Industrial applications

#### Features and benefits

- Constant water pressure under varying demands.
- Integrated dry-running protection
- Soft start
- Over-and undervoltage protection
- High-starting torque
- Overload protection

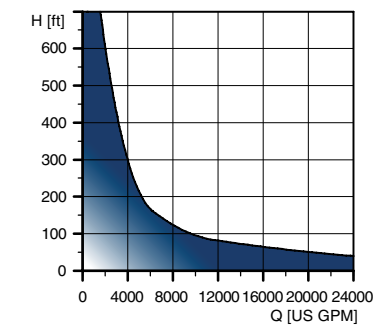
#### Optional

- CU 301 can be monitored and controlled via R100



### SQFlex

Renewable energy based water supply system



#### Technical data

Flow, Q: max. 85 gpm  
 Head, H: max. 820 ft  
 Liquid temp.: +32°F to +104°F  
 Voltage supply: 30-300 VDC or 1 x 90-240 V, 50/60 Hz

Instal. depth: max. 492 ft

#### Applications

The SQFlex systems are suitable for water supply in remote locations, such as:

- Livestock watering
- Farms and irrigation of greenhouses
- Camps
- Conservation areas
- Remote homes and cabins

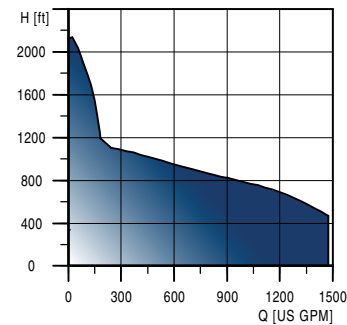
#### Features and benefits

- Energy supply: solar modules, wind turbine, AC generator
- Simple installation
- Reliable water supply
- Virtually no maintenance
- Expansion possibilities
- Cost-efficient pumping
- Integrated controls/inverter



## SP

4", 6", 8" and 10" submersible pumps



### Technical data

Flow, Q: max. 1,400 gpm  
 Head, H: max. 2,100 ft  
 Liquid temp.: +32°F to +140°F  
 Instal. depth: max. 1968 ft

### Applications

- The pumps are suitable for:
- Groundwater supply to waterworks
  - Irrigation in horticulture and agriculture
  - Groundwater de-watering
  - Pressure boosting
  - Industrial applications
  - Domestic water supply

### Features and benefits

- High efficiency
- Stainless steel components provide long service life
- Motor protection via CU 3
- Variable frequency drive compatible motors

### Optional

- Motor protection via MP 204
- Performance data can be monitored via CU 3/R100/PC Tool MP 204



## MS motors

Stainless steel 4" and 6" submersible motors.

### Motor sizes

4" motor: 0.5 to 10 hp  
 6" motor: 7.5 to 40 hp

### Applications

The Grundfos MS submersible motors can be fitted on all Grundfos pumps and can be used in the high-pressure booster modules, types BM and BMB.

### Features and benefits

- Overprotection by means of a built-in Tempcon temperature transmitter
- Standardized NEMA head and shaft end
- Completely encapsulated in stainless steel
- Liquid cooled and has liquid lubricated bearings
- Variable frequency drive compatible motors

### Optional

- Material variations available

## Control Box SA-SPM5

### Product range

- Standard: 0.5 hp to 5 hp
- Deluxe: 1.5 hp to 5 hp
- CSCR: .33 hp to 1 hp

### Enclosure

- NEMA Type 3R
- Gray epoxy coated
- 18-gauge steel construction

### Features and benefits

- Pull handle disconnect
- Safety shield
- UL-recognized mally start capacitor
- UL-recognized general electric
- Voltage relay
- Progressive knockouts
- 0.5 hp to 1 hp PumpSaver ready



## MMS

Stainless steel 6", 8", and 10" submersible motors.

### Motor sizes

6" motor: 50 hp  
 8" motor: 40 to 150 hp  
 10" motor: 100 to 250 hp

### Applications

The Grundfos MS submersible motors can be fitted on all Grundfos pumps and is for use in standard groundwater systems.

### Features and benefits

- Standardized NEMA head and shaft end on 6 and 8 inch. Keyed shaft for Grundfos pumps on 10 inch
- Built in port for pt100 temperature probe
- Wet wound motor for greater cooling
- Variable frequency drive compatible motors

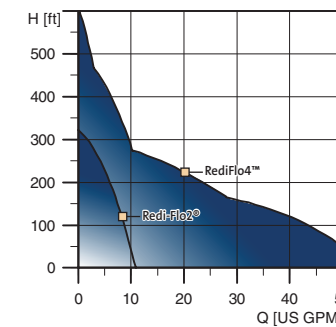
### Optional

- All stainless version in 316 or 904L



## Redi-Flo2® and Redi-Flo4™

Environmental pumps



### Redi-Flo2 Technical data

Flow, Q: max. 10.5 gpm  
 Head, H: max. 312 ft  
 Liquid temp.: +32°F to +95°F

### Redi-Flo4 Technical data

Flow, Q: max. 50 gpm  
 Head, H: max. 600 ft  
 Liquid temp.: +32°F to +104°F

### Applications

- The pumps are suitable for:
- Sampling and purging
  - Remediation
  - De-watering

### Redi-Flo2 Features and benefits

- Light and compact design
- Fits into 2" boreholes
- Provides precise, accurate, and reproducible groundwater samples

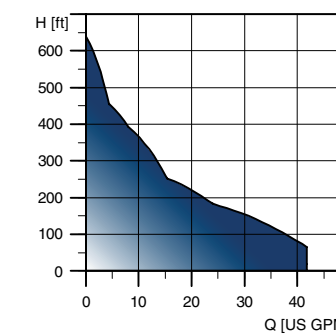
### Redi-Flo4 Features and benefits

- Constructed of virgin Teflon®
  - Fit into 4" boreholes
  - All stainless steel construction
- (Trademarks and Tradenames mentioned herein are the properties of their respective owners).



## Redi-Flo3™ and CU 300

Environmental pumps



### Technical data

Flow, Q: max. 42 gpm  
 Head, H: max. 640 ft  
 Liquid temp.: +32°F to +104°F  
 Instal. depth: max. 500 ft

### Applications

- The pumps are suitable for:
- Pumping up contaminated groundwater
  - Sampling
  - Remedial pumping
  - De-watering

### Features and benefits

#### SQE-NE

- All of the features of the SQE, but designed for environmental applications
- All 316 SS construction
- Inert composites

#### Redi-Flo3

- External sensor control of pump
- Flexible configuration capabilities
- Monitoring, configuration and control via R100 or PC Tool CU 300



## MP 204

Control and monitoring units

### Applications

- Monitoring and protection of pump installations

### Features and benefits

- Protection against dry running, motor over temperature, overload, overvoltage, undervoltage, current and phase imbalance
- Constant monitoring of power consumption

### Optional

- Connection to large control systems via bus communication
- Connection of sensors enabling control based on sensor signals
- Configure setup and monitor operating data via R100



## CUE

The CUE is a series of frequency converters designed for speed control of a wide range of Grundfos pumps. Typical uses include constant pressure, constant level, and constant flow.

### Comprehensive range

- 1-phase, 1x200-240 V, 50/60 Hz (1.5 - 10 hp)
- 3-phase, 3x200-240 V, 50/60 Hz (1 - 60 hp)
- 3-phase, 3x380-500 V, 50/60 Hz (0.75 - 300 hp)
- 3-phase, 3x525-600 V, 50/60 Hz (1 - 10 hp)
- 3-phase, 3x525-690 V, 50/60 Hz (10 - 300 hp)

### Applications

- Water supply and pressure boosting
- Heating and air-conditioning
- Process and sanitary applications
- Groundwater

### Features and benefits

- Intuitive start-up guide
- Smart user interface
- Automatic direction of rotation
- Low flow stop function
- Soft start
- Duty/standby
- Motor bearing supervision



## CIU

### Fieldbus Products

The Grundfos family of fieldbus products serve as translators between the Grundfos GENIBus protocol and Modbus, BACnet, LonWorks, and Profibus. These devices allow for easy integration of Grundfos E-Products into SCADA systems. Additionally, a GSM version will be available which provides cell- phone text messaging of any alarms that may occur.

### Technical data

Supply voltage: 24-240 VAC/VDC  
 Power consumption: max. 11W  
 Ambient temp.: -4 to 113°F  
 Enclosure class: NEMA 3R

### Product type

- CIU (Communication Interface Unit) stand-alone enclosure

### Applications

- Modbus RTU
- Profibus DP
- LonWorks - LonMark functional profile 8120
- BACnet
- GSM - SMS cell phone texting

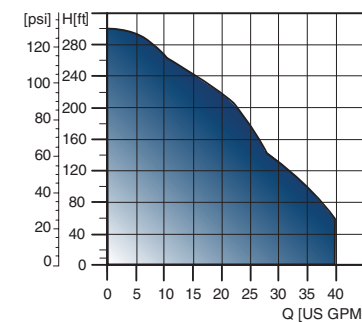
### Grundfos products supported

- E-Pumps- CRE, TPE, MAGNA, Multi-E
- Pump Controls- BoosterpaQ Hydro MPC, Control MPC, MP204
- VFD's- CUE



## EZ Boost

Constant pressure system



### Technical data

Flow, Q: max. 39 gpm  
 Head, H: max. 300 ft  
 Liquid temp.: +32°F to +95°F  
 Working press.: max. 347 psi  
 Inlet press.: min. 8 psi

### Applications

- EZ Boost systems are suitable for pressure boosting in:
- Water supply systems
  - Irrigation systems
  - Water treatment systems

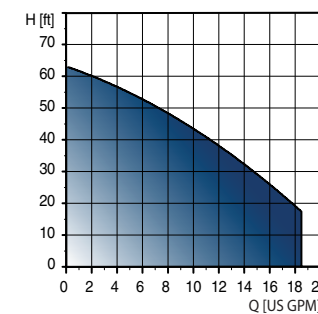
### Features and benefits

- Constant water pressure under varying demands
- Simple installation
- High efficiency
- Integrated variable speed
- Soft start
- Integrated dry-running protection
- Overload and over temperature protection



## MQ

Flow based pressure boosting system



### Technical data

Flow, Q: max. 18 gpm  
 Head, H: max. 145 ft  
 Liquid temp.: +32°F to +95°F  
 Working press.: max. 109 psi  
 Inlet press.: min. 44 psi

### Applications

- The MQ pump is designed for water supply and pressure boosting in:
- Homes
  - Cabins, cottages
  - Farms as well as gardens
  - Of potable water and rain water.

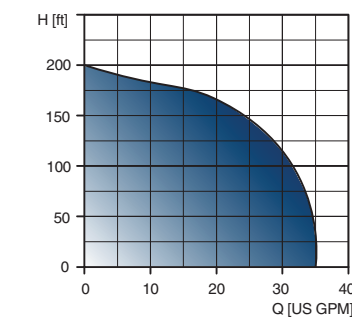
### Features and benefits

- Complete system
- Easy installation
- Simple operation
- Self-priming
- Built-in protective functions
- Automatic reset



## Jets JPF, JDF, JPS

Basic Line Jet



### Technical data

Flow, Q: max. 1.7 to 35 gpm  
 Head, H: max. 135 to 200 ft  
 Working press.: 87 to 110 psi  
 Motor power: 1/3 to 2 hp

### Applications

- Shallow well, deep well and convertible pump applications. Self-priming centrifugal pumps suitable for domestic water supply systems, light agricultural and industrial water transfer applications.

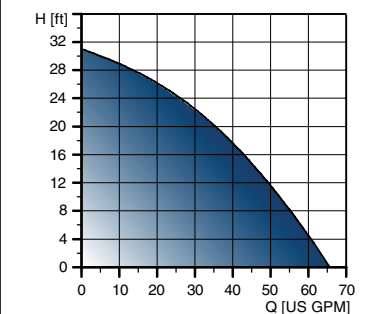
### Features and benefits

- Full range of shallow/deep well jet pumps
- I.E.C. motors for better efficiency, longer life, and quieter operation
- Rugged cast iron models (JPF, JDF)
- Corrosion-resistant stainless steel (JPS)
- Built-in thermal overload for motor protection



## Unilift KP

Submersible Drainage Pump



### Technical data

Flow, Q: max. 65 gpm  
 Head, H: max. 32 ft  
 Liquid temp.: 32°F to 122°F  
 Particle size: max. 0.4"  
 Material: Stainless Steel

### Applications

- The pumps are suitable for:
- Raw water, drainage and untreated wastewater containing solids no larger than 0.4" from households, farms, and small industry.

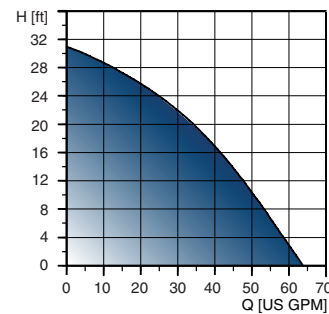
### Features and benefits

- Hermetically-sealed stator house
- Automatic or manual operation
- Installed as a permanent or portable pump



### Unilift CC

Submersible drainage pump



#### Technical data

Flow, Q: max. 62 gpm  
 Head, H: max. 30.8 ft  
 Liquid temp.: 32°F to 104°F  
 Particle size: max. 0.4"  
 Material: Composite  
 Suction: down to 0.12"

#### Applications

The pumps are suitable for:

- Raw water, drainage and untreated wastewater containing solids no larger than 0.4" from households, farms, and small industry.

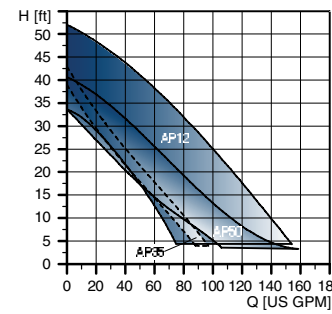
#### Features and benefits

- Corrosion-free, lightweight composite sleeve
- Strong stainless steel strainer
- Stainless steel inside for maximum strength
- Removes water to as low as 0.12"



### Unilift AP12, AP35, AP50

Submersible effluent & domestic sewage pumps



#### Technical data

Flow, Q: max. 155 gpm  
 Head, H: max. 52 to 52 ft  
 Liquid temp.: 32°F to 131°F  
 Particle size: max. 0.5" to 2.0"  
 Material: Stainless steel

#### Applications

The pumps are suitable for:

- Raw and dirty water, drainage and untreated water, solids up to 2"

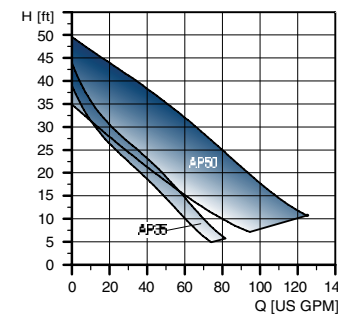
#### Features and benefits

- Field replaceable cable
- High-quality stainless steel
- Robust construction
- Pumps up to 2.0" solids



### Unilift AP35B, AP50B

Submersible effluent & domestic sewage pumps



#### Technical data

Flow, Q: max. 136 gpm  
 Head, H: max. 49 ft  
 Liquid temp.: 32°F to 104°F  
 Particle size: max. 1.4" to 2.0"  
 Material: Stainless steel

#### Applications

The pumps are suitable for:

- Raw and dirty water, drainage and untreated water, solids up to 2"

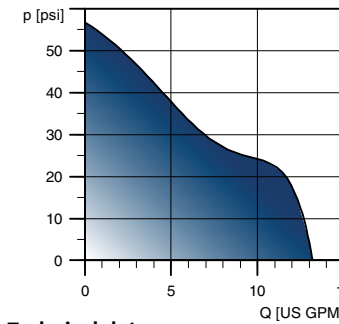
#### Features and benefits

- Field replaceable cable
- High-quality stainless steel
- Robust construction
- Pumps up to 2.0" solids



### JPF, JPS Tank Package

Packaged systems



#### Technical data

Flow, Q: max. 15 gpm  
 Head, H: max. 131 ft  
 Liquid temp.: +32°F to +131°F  
 Working press.: max. 87 psi

#### Applications

The pumps are suitable for liquid transfer in:

- Households
- Gardens
- Hobby activities
- Agriculture
- Horticulture
- Small industries

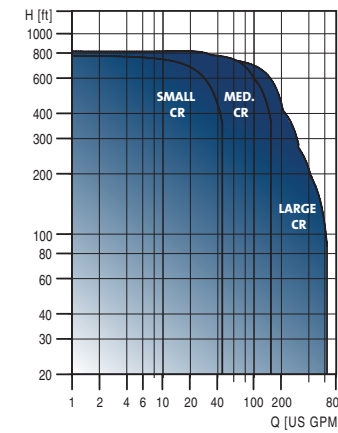
#### Features and benefits

- Self-priming
- Stable operation even in case of air pockets in the liquid
- Stainless steel diaphragm tank



### Hydrosolo-E

Pressure booster system



#### Technical data

Flow, Q: max. 630 gpm  
 Head, H: max. 995 ft  
 Liquid temp.: -22°F to +250°F

#### Applications

The pumps are suitable for:

- Transfer and pressure boosting of clean water in houses, cottages, farms, small commercial and residential building
- Pressure boosting in other systems e.g., process water systems and irrigation

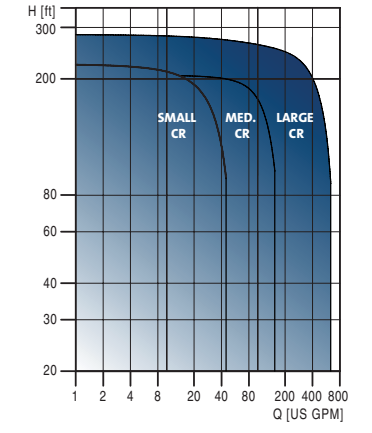
#### Features and benefits

- Eliminates control valves and problematic pressure storage tanks
- Harmonic distortion protection built in
- Lower energy consumption
- Less pump noise
- Easy to set up and operate
- Comprehensive protection of drive, motor and pump equipment
- Reduced maintenance
- Eliminates current in-rushes on the AC line
- Protection from extreme voltage and temperature conditions



### Hydrosolo-S

Pressure booster system



#### Technical data

Flow, Q: max. 620 gpm  
 Head, H: max. 270 ft  
 Liquid temp.: -22°F to +248°F  
 Working pressure: 362 psi

#### Applications

The pumps are suitable for:

- Transfer and pressure boosting of clean water in houses, cottages, farms, small commercial and residential building
- Pressure boosting in other systems e.g., process water systems and irrigation

#### Features and benefits

The booster set is ready for operation when the piping system and the electricity supply have been connected.

- Hydro Solo-S is compact
- Maintenance-free
- Easy to install

## WHY E-SOLUTIONS?

### BECAUSE SPEED CONTROL IS AT THE HEART OF THE MATTER

At Grundfos, we continuously strive to develop pump solutions that work efficiently and minimize energy consumption for the benefit of our customers and the surrounding environment.

Our full line of E-solutions with variable-speed functionality is a good example of how we think about sustainability.

### LESS SPEED, MORE SAVINGS

There are several good reasons for choosing a Grundfos E-solution with speed control over a conventional fixed-speed pump.

In most applications where output needs vary during the day or with the seasons, substantial energy savings can be gained by regulating the pump's speed according to the pump demand.

The frequency converter adjusts the speed to meet the pump demand so that energy is never wasted. The result is energy savings of up to 50% annually. Simple and quick installation and commissioning also contribute to reducing total life cycle costs.

### INCREASED COMFORT

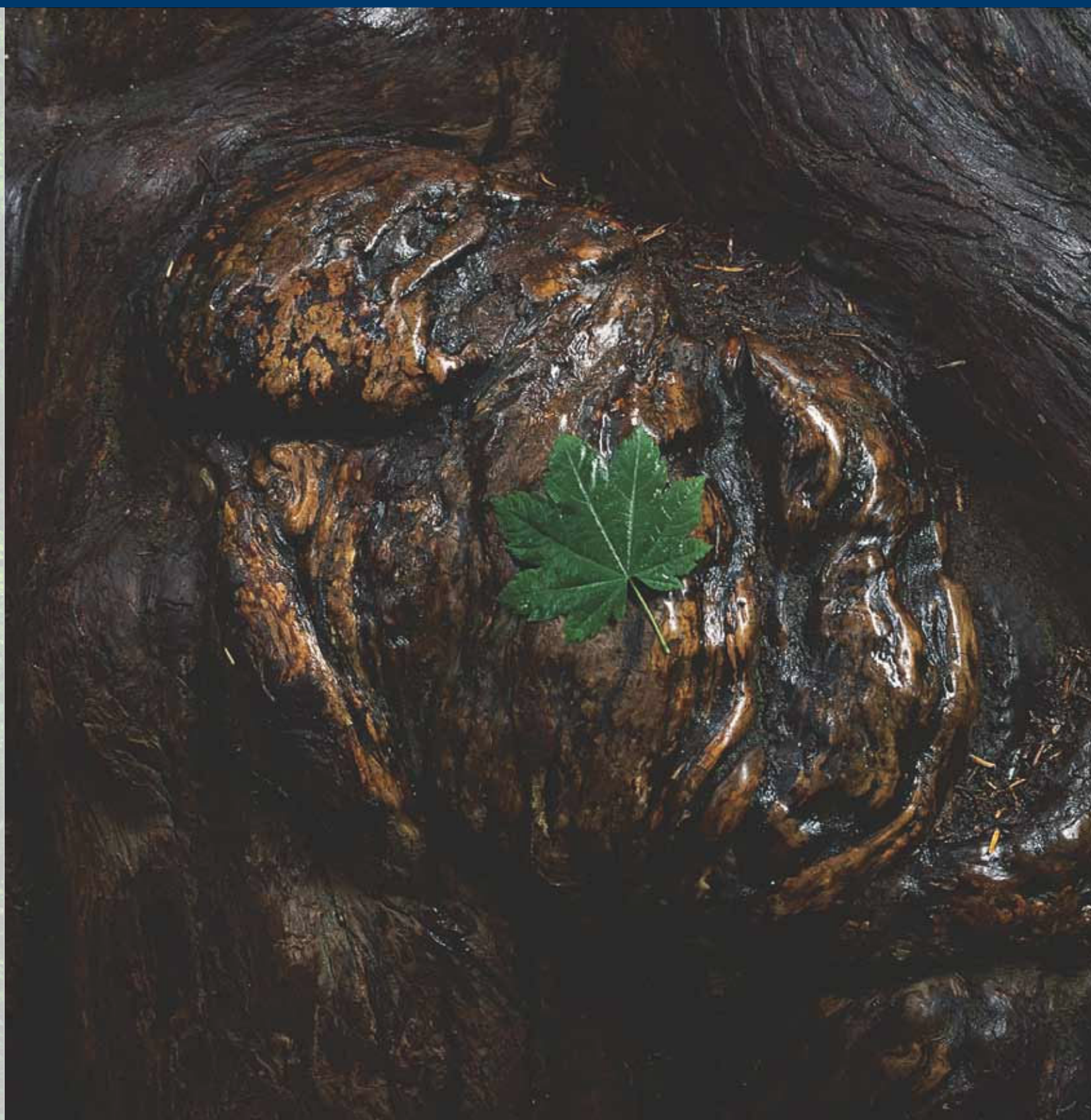
Grundfos E-solutions offer all the comfort you expect from a high-quality pump solution.

The E-solutions soft-start feature eliminates water hammer and flow noise from valves caused by excessively high pressure.

### COMPLETE PROCESS CONTROL

E-solutions are renowned for their unique functionality. You have total control of your pump application and processes at all times.

The advanced pump functionality provides extensive possibilities for complete process control.



## E-SOLUTIONS FEATURES AND FUNCTIONALITY

Grundfos E-solutions cover most pump types, applications, and power supplies. Whether you choose an integrated E-pump or a wall-mounted CUE solution, you get the special E-pump features and functionality:

- › Built-in PID controller for constant pressure, constant liquid level in a tank, constant flow, or constant temperature operation
- › Automatic stop function for water supply applications
- › Proportional pressure function for circulator pump applications
- › External control of setpoint is available
- › Optional external communication supports other fieldbus protocols including: Modbus, Profibus, LON, BACnet & more

## BENEFITS IN SHORT

- › Reduced life cycle costs
- › Substantial energy savings
- › Reduced CO<sub>2</sub> emissions
- › Easy installation and commissioning
- › Advanced features and functionality
- › Increased comfort
- › Remote control and monitoring
- › All components from one supplier



### The Grundfos Service Commitment

Every Grundfos product is built to set new standards in performance and reliability. Our products are backed by a proven and extensive commitment to service, evidenced by:

- International service support
- Service kits and parts
- 10-year availability of spare parts
- Repairs made to production standards
- Complete testing services
- Service tools and technical documentation



### After-Sales Service Options

1. Extensive spare parts kits availability with service manuals, installation guides, and tools.
2. Factory-authorized service centers in Canada, Mexico, and the United States.
3. Factory service at one of our sales locations in:

Apodaca, N.L. Mexico • Oakville, Ontario, Canada  
Fresno, California, USA • Allentown, Pennsylvania, USA

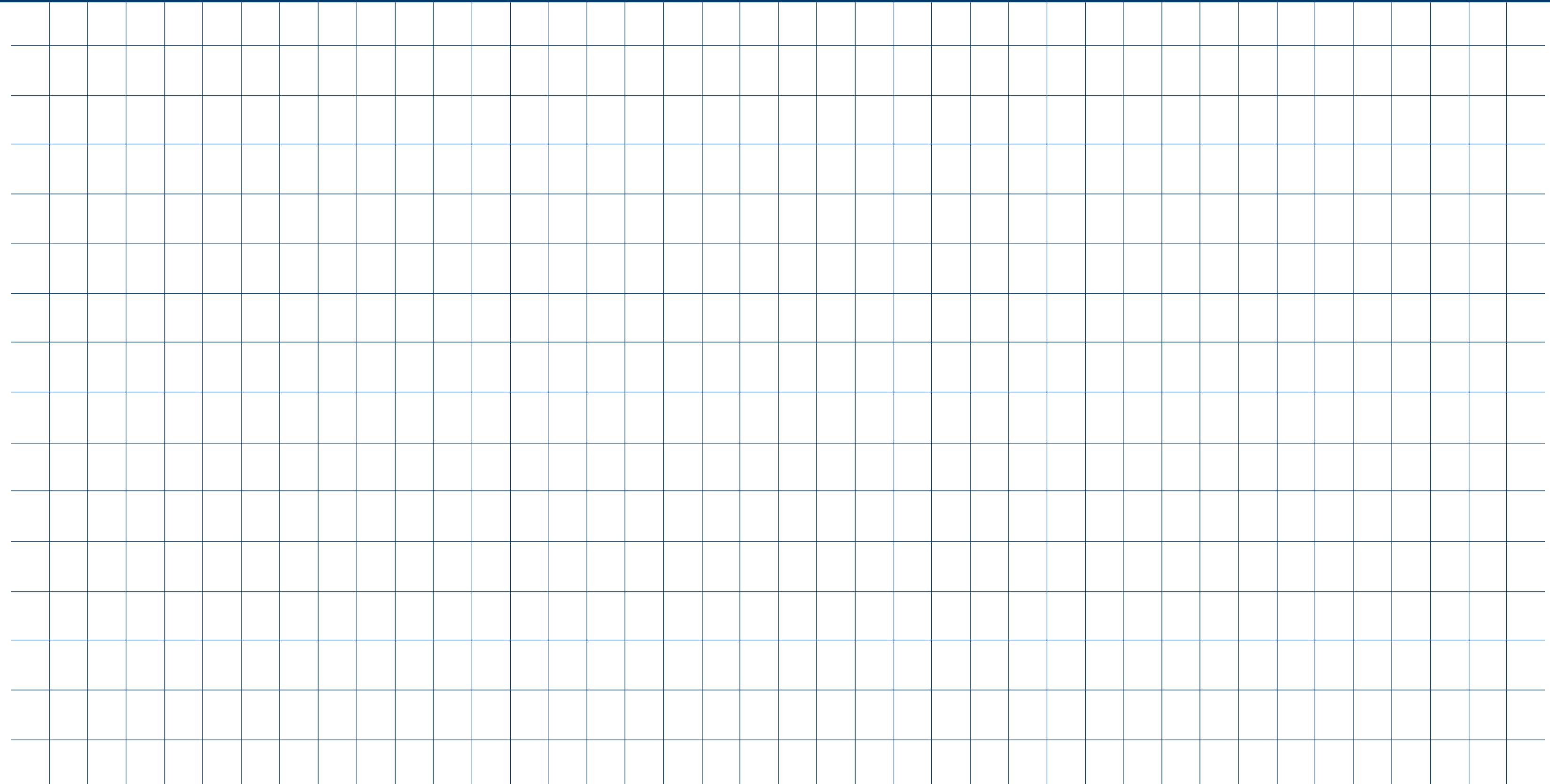
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