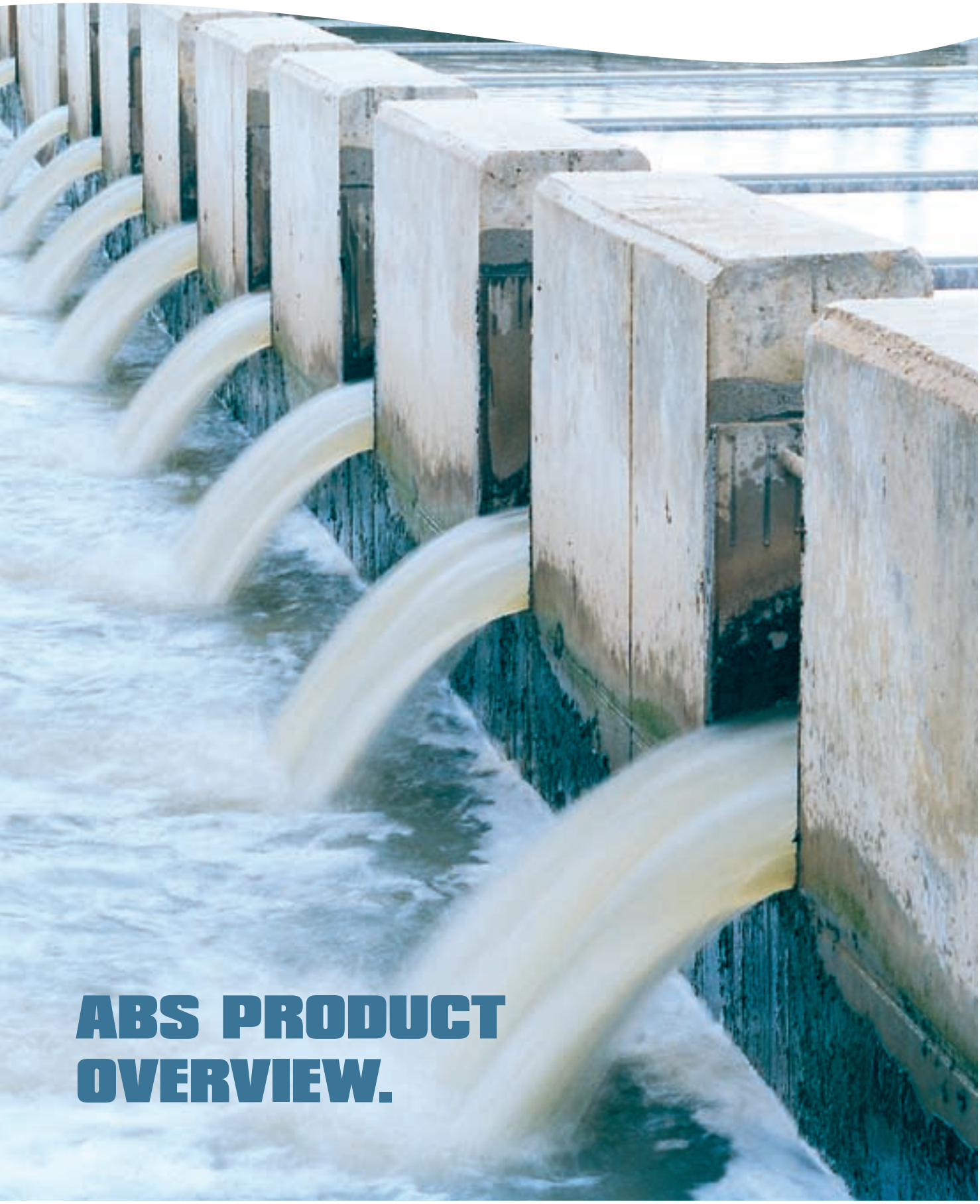


ABS PRODUCT OVERVIEW.

www.absgroup.com

We know how water works

WE KNOW HOW WATER

Water is the heart of our business. We see to its transportation and treatment, serving countless people worldwide. Our application know-how and leading solutions and services are evidence of our firm commitment to wastewater and dewatering technology.
Our competence in wastewater handling has developed during more than 100 years and today we offer one of the most complete wastewater technology portfolios in the world.
The ABS wastewater solution is divided into three business segments; Domestic and Commercial Wastewater, Wastewater Collection Networks and Wastewater Treatment.
Our fourth business segment – Dewatering – also has a long history and our products and services have gained market leading positions throughout the world.

DOMESTIC & COMMERCIAL WASTEWATER

Products and solutions for collecting wastewater from public and residential properties and transporting it into the municipal wastewater network. The ABS product offering includes small wastewater pumps, lifting stations and prefabricated pumping stations. Increasing demands for hygienic living standards and environmental concerns requires quick and effective removal of domestic and commercial wastewater. ABS solutions are synonymous with reliability, efficiency in operation and easy-to-install product philosophy.

WASTEWATER COLLECTION NETWORKS

Products and solutions for the municipal collection network. The ABS product offering includes pressurized sewage systems and network-, terminal-, inlet- and storm water pumping stations. A municipal wastewater network's only duty is to collect and transport wastewater to the treatment plant. Our solutions are supported by in-depth application knowledge, tried and tested equipment designs and a full understanding of the operation of a wastewater network.

WORKS.

ABS Group founded in 1860 is a global solution provider in wastewater and dewatering technology with a complete product portfolio of pumps, mixers, agitators, aerators, compressors and control & monitoring equipment and service. With presence in more than 100 countries the world over, we are able to service you wherever you are. The world-wide network of ABS sales, service and manufacturing units, representatives, agents and distributors demonstrates strong local focus in combination with global strength.

ABS is the wastewater specialist; no one else can offer you more expertise or as many proven solutions. Our experience in handling wastewater and sewage is unmatched and whether your property is municipal, industrial, commercial or domestic, ABS can help. We are dedicated to helping professionals design, select, install and service wastewater systems of any type. We care throughout the lifecycle of the investment - before, during and after.

WASTEWATER TREATMENT

Products and solutions for municipal and industrial wastewater treatment. Our solutions include equipment and services for the treatment process such as; aeration, recirculation, pumping, mixing and agitation products all characterized by efficiency in process and reduced operational costs. Our services involves consultative advice in equipment selection, life time cost analysis and maintenance and operational support of the plant.

DEWATERING

Products and solutions for dewatering applications in almost any situation be it construction, tunneling, ship yard, dry dock, mine or quarry. Our products, available for both purchase and rental, remove unwanted water efficiently and economically. Each dewatering situation has its own set of challenges and can be hard to predict, but all cases require a quick solution. ABS Group translates dewatering solutions with the optimal combination of products, application knowledge and service. ABS dewatering pumps are characterized by modularity, portability and sturdy design.

DOMESTIC & COMMERCIAL WASTEWATER.

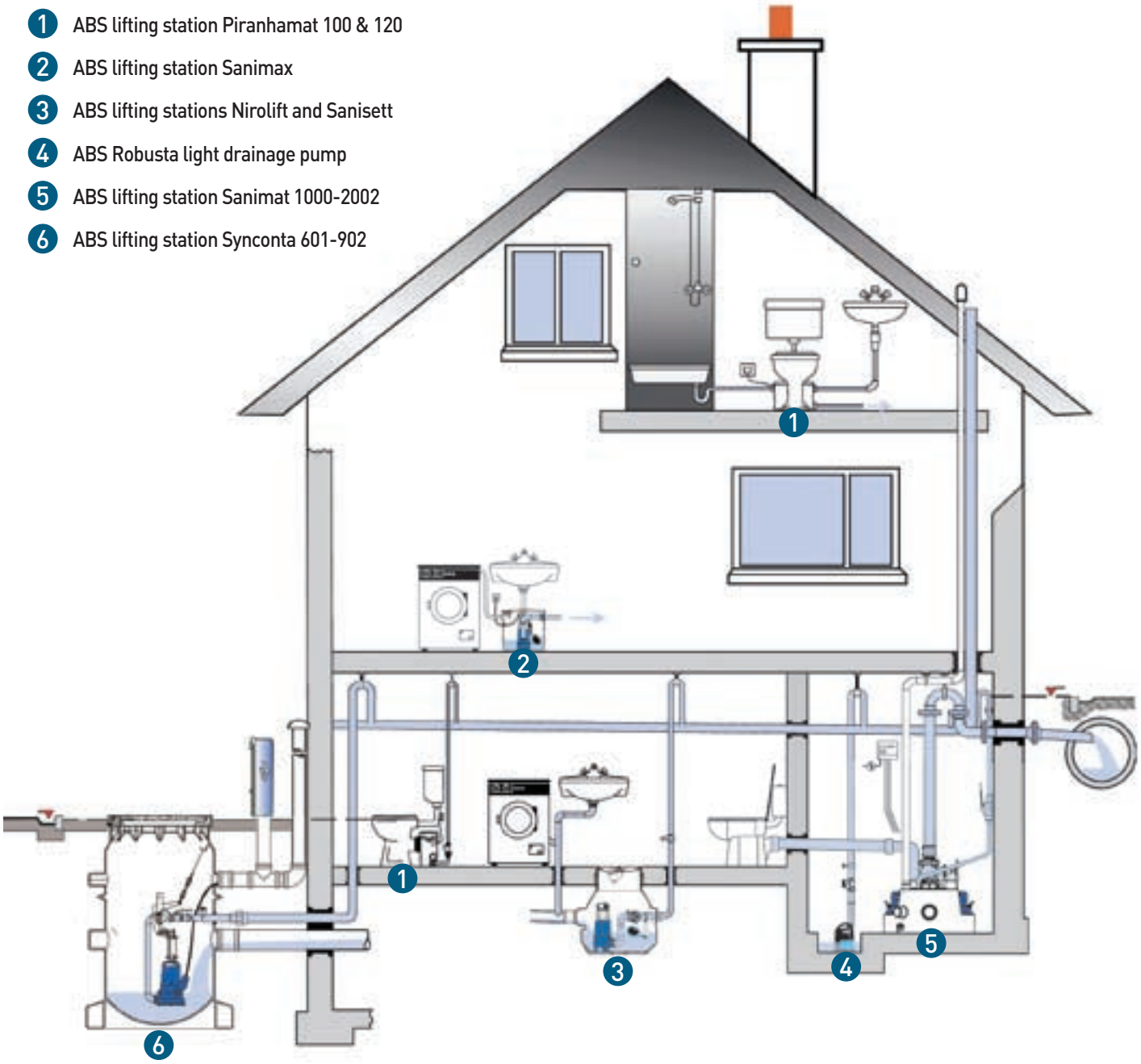
ABS Group has vast experience in domestic and commercial wastewater handling. We are dedicated to helping professionals design, select, install and service wastewater systems of any type. Whether you need a system for a single house or a multi-family home, a commercial property or industrial complex, ABS is a reliable partner from the start of the project to the final sign off of the property.

Complete solution
We have all types of wastewater and sewage pumps needed for keeping a building running smoothly. Our extensive range of products includes cellar drainage pumps, macerator/ grinder pumps, sewage pumps using Contrablock and vortex hydraulics, plus prefabricated lifting stations for internal and external installation.

Reliability first
Advanced R&D, backed by an engineering heritage going back over 100 years, is the spine of our competence and expertise in the design and installation of centrifugal pumps. Our know-how is not limited to mechanical design but also encompasses pump system integration. The result is robust, reliable and efficient pump installations, renowned for their ability to minimise total running costs.

Plug and play
Time on site is money and ABS is very aware of our role in making sure that all wastewater lifting stations are supplied complete with everything you need, easy to install, requiring a minimum of set up. They can be made operational in the absolute minimum of time. We call it Plug and play.

1. ABS lifting station Piranhamat 100 & 120
2. ABS lifting station Sanimax
3. ABS lifting stations Nirolift and Sanisett
4. ABS Robusta light drainage pump
5. ABS lifting station Sanimat 1000-2002
6. ABS lifting station Synconta 601-902



Design support & training
What you need is a partner who can work with you from the very start of the project to the final sign-off and acceptance of the property by your customer, giving you the correct solution. Our operational diversity and system expertise makes ABS the natural choice for providing consultative services when it comes to sizing and designing pump systems for entire building complexes. We also provide installation, operational optimization and training of the customers' own maintenance personnel.

Full service
Domestic and Commercial wastewater pumps must be kept going without interruption, as breakdown could negatively affect the environment. ABS offers a complete Service Programme with everything from on-site repair to full service maintenance contracts including Alarm management and 24-hour breakdown services. ABS may not be very well known to most homeowners, but they count on us the world over.

Availability of product
ABS has developed sophisticated stocking systems with international hub locations and on-hand stocks of key products in order to ensure rapid reliable availability of the product on-site when needed.

SMALL PUMPS AND LIFTING STATIONS.

ABS Robusta light drainage pump

The Robusta has been designed for pumping clear and wastewater from house, garden or yard and can pump away even very low water levels. It is supplied with built-in level control and check valve. The pump and motor section form a pressure-tight encapsulated and fully flood-proof unit. The pump is suitable for manual or automatic operation.


Vortex impeller


Plug fitted

1 phase
230 V

ABS light drainage pump IP

The ABS light drainage pump IP is a stainless steel pump for corrosive media with vortex hydraulics. It is suitable for pumping aggressive media with a high proportion of solid or fibrous matters. The IP is also ideal for dewatering of chemically contaminated wastewater, industrial effluent, and for use in agriculture. Level control switch is an option.


Vortex impeller


Plug fitted


KS float (optional)

1 phase
230 V

3 phase
400 V

ABS light drainage pump MF154-334

The MF 154-334 is a compact submersible wastewater pump range with vortex impeller for trouble free operation. The pumps are used for dewatering of buildings and for pumping fluids from low lying locations. Level control switch is an option.


Vortex impeller


Plug fitted


KS float (optional)

1 phase
230 V

3 phase
400 V

ABS lifting station Piranhamat 100 & 120

The Piranhamat 100-120 is designed for domestic wastewater removal from one WC located below the sewer backwash level or where sewage cannot flow by gravity into a sewer. It is also possible to connect one wash-hand basin, one shower and one bidet to the unit. The Piranhamat 100-120 is supplied plug-in ready with gas and odour tight tank and Piranha grinder pump.


Piranha cutting system


Plug fitted

1 phase
230 V

ABS lifting station Sanimax

The Sanimax is a compact lifting station suitable for installation at floor level or near the wastewater source below the sewer backwash level. Equipped with odour preventing vent system and flood-proof tank, it is perfect for reliable wastewater removal from wash/hand basins, washing machines and showers in cellars. The wastewater pump is a standard Robusta or MF pump.


Vortex impeller


Plug fitted


KS float

1 phase
230 V

ABS lifting stations Nirolift and Sanisett

The Nirolift and Sanisett series provides simple and quick removal of faecal free wastewater from areas below the backwash level, suitable for installation either above or below ground. The tank is made from a robust corrosion-resistant synthetic material with optional odour control systems available. The wastewater pump is a standard Robusta or MF pump.


Vortex impeller


Piranha cutting system


KS float

1 phase
230 V

3 phase
400 V


Plug fitted

ABS lifting station Sanimat 1000

The Sanimat 1000 is a single pump flood-proof lifting station for the automatic removal of domestic wastewater from area below the back-wash level in accordance with EN 12056. Robust synthetic (PE) 70 litre collection tank of compact design. Easy to transport.

Vortex impeller | Panel included | Ball valve included

1 phase **230 V** | 3 phase **400 V** | Plug fitted

ABS lifting station Sanimat 1002

The Sanimat 1002 is a two pump version of the Sanimat 1000 designed for use in applications where the additional security of a standby pump is required. Robust synthetic (PE) 140 litre collection tank of compact design. Easy to transport.

Vortex impeller | Panel included | Ball valve included

3 phase **400 V** | Plug fitted

ABS lifting station Sanimat 2002

The Sanimat 2002 is a large tank version of the Sanimat 1002. Supplied complete with two ABS wastewater pumps. Robust synthetic (PE) 320 litre collection tank of compact design. Easy to transport.

Vortex impeller | Panel included | Ball valve included

3 phase **400 V** | Plug fitted

ABS lifting stations Sanimat 1500-3700

The Sanimat 1500 - 3700 is a flood-proof lifting station for automatic removal of domestic & commercial wastewater from areas below the backwash level. It is ideal for both new and renovated structures in large buildings; multi-family housing units, hotels, hospitals, etc. The Sanimat has a robust and corrosion resistant synthetic (PE) 140-350 litre collection tank with compact design and large storage capacity.

AS pump | AFP pump | Panel (optional)

3 phase **400 V**

ABS lifting station Piranhamat 701

The Piranhamat 701 is a flood-proof lifting stations for automatic sewage removal from areas below the backwash level. This unit is fitted with one ABS Piranha submersible grinder pump suitable for pumping domestic wastewater. This range of lifting stations is ideal for locations where the diameter of the discharge line is restricted.

Piranha cutting system | Panel (optional)

1 phase **230 V** | 3 phase **400 V**

ABS lifting station Piranhamat 1002

The Piranhamat 1002 is a two pump version of the Piranhamat 701 for applications where the additional security of a second pump is required. This unit is fitted with two ABS Piranha submersible grinder pumps.

Piranha cutting system | Panel (optional)

3 phase **400 V**

RELIABILITY BASED ON EXPERIENCE AND DESIGN.

Equipment reliability is not the result of good luck; it takes years of experience, testing, and product development to ensure that products are reliable and suitable for their intended application. ABS has worked with wastewater for over 100 years and has equipment operating in some of the toughest environments in the world. What does this mean for you? ABS domestic and commercial wastewater products which make use of tried and tested design and technology giving you complete peace of mind.

ABS Contrablock system

The ABS Contrablock system is the perfect balance between hydraulic efficiency and anti blocking capabilities. The system has proven itself with decades of reliable service and is characterized by its long running life. The system is available from 1 kW motors and upwards. Primary design benefits are:

- Open single-channel impeller and large suction inlet allowing large solids handling and Contrablock capabilities.
- Adjustable bottom plate allowing easy regain of efficiency loss due to wear.
- Tooth-shearing ring on the rear of the impeller and bottom plate with sharp spiral shearing edges allowing efficient rag handling.

ABS Vortex impeller

The ABS vortex impeller has been designed to maximise the size of solids handled, allowing all items found in wastewater to be passed without blocking the pump. Primary design benefits are:

- Maximum solids handling, minimizing the risk of blockage in applications where lower efficiency is acceptable.
- For storm water applications where running hours are normally low.
- For liquids containing air, gas, coarse particles or items which can become roped.

ABS Piranha cutting system

The ABS Piranha cutting system offers a unique concept in grinder pump design. Our cutter design features a lobed rotor cutter attached to a centrifugal impeller together with a stationary cutting element. This designed in a wave form causing an opening to be formed between the rotor and stationary cutter. Primary design benefits are:

- Huge number of cuts (15,000 per minute) which makes it a very efficient cutter system that can handle almost all types of wastewater.
- The solids are sheared into very small particles (as small as 1 mm) - allowing the wastewater to be pumped through small bore pipes.

ABS light wastewater pump MF

The MF series (354-804) consist of compact submersible drainage water pumps. The pumps are used for dewatering of buildings and for pumping fluids from low lying locations. Level control switch is an option.

- Discharge Sizes: 2 inches
- Motor Range: 0.70 to 1.80 kW


Vortex impeller


Plug fitted


KS float (optional)

1 phase **230 V**

3 phase **400 V**

ABS submersible wastewater pump AS

The AS-series consist of robust and reliable domestic wastewater pumps. The AS-pumps have water pressure-tight encapsulated fully flood-proof motors and are suitable for portable as well as stationary installations.

- Discharge Sizes: DN50, DN65 & DN80
- Motor Range: 1.2 to 2.6 kW


Contrablock system


Vortex impeller

1 phase **230 V**

3 phase **400 V**

ABS Piranha submersible grinder pump

The Piranha range contains submersible wastewater pumps with a shredding action cutting up the domestic wastewater into small particles. This allows for reliable discharge of effluent under pressure using small diameter pipework.

- Discharge Sizes: DN32 & DN50
- Motor Range: 1.0 to 11.0 kW


Piranha cutting system

1 phase **230 V**

3 phase **400 V**

ABS lifting station Synconta 601

The Synconta 601 is a synthetic prefabricated sump for ABS submersible pump Piranha. It is ideal for applications where gravity discharge into the sewer is not possible. The sump is installed outside the building under ground. The unit is designed as a single pumping station with two inlet ports.


Piranha pump


Panel (optional)

1 phase **230 V**

3 phase **400 V**


Floats or level sensors (optional)

ABS lifting station Synconta 801

The Synconta 801 is a synthetic prefabricated sump for ABS submersible pumps AS and Piranha. It is ideal for applications where gravity discharge into the sewer is not possible. The sump is installed outside the building under ground. The unit is designed as a single pumping station and three inlet ports.


Piranha pump


AS pump


Panel (optional)

1 phase **230 V**

3 phase **400 V**


Floats or level sensors (optional)

ABS lifting station Synconta 901 & 902

The Synconta 901-902 is a larger capacity synthetic prefabricated sump for ABS submersible pumps AS and Piranha. The Synconta 901 is designed as a single pumping station and the Synconta 902 as a two pump pumping station.


Piranha Pump


AS pump


Panel (optional)

1 phase **230 V**

3 phase **400 V**


Floats or level sensors (optional)

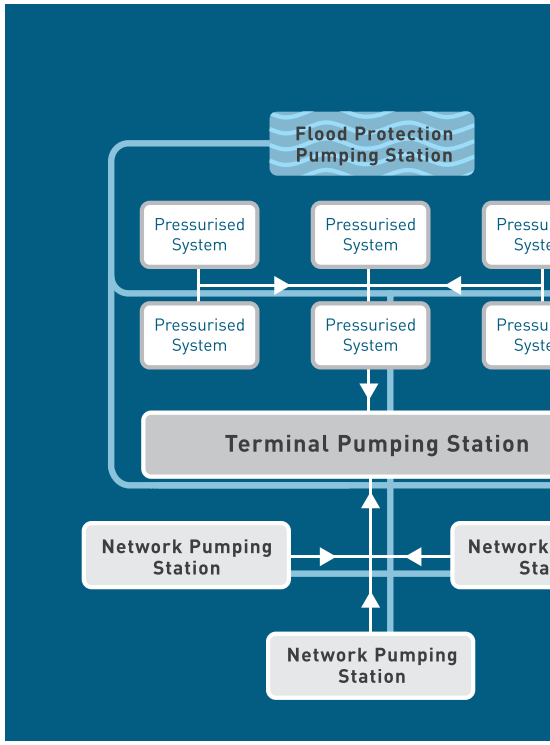
WASTEWATER COLLECTION NETWORKS.

It is easy to talk about improving the way we operate wastewater network pumping stations, but in reality delivering the improvement is a lot more difficult.

Networks consist of a large number of pumping stations and other equipment located over a large geographical area. In many cases we also rely on overloaded operators who work with a vast range of equipment types and applications. When we look at what is possible in terms of improvement with wastewater pumping stations, we can see that the potential for cost savings is very high. This is welcome news when we work in an environment that is under continuous pressure to reduce running costs and improve efficiency.

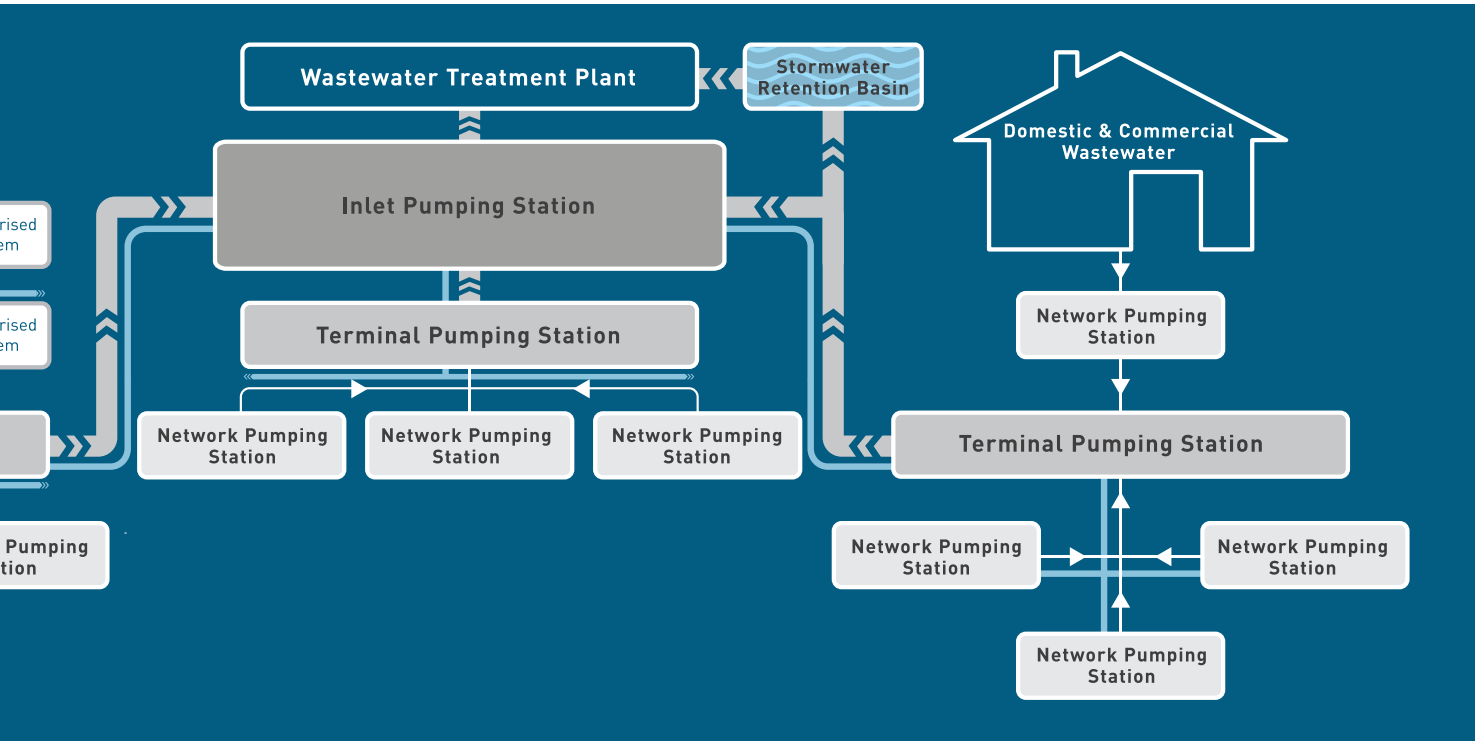
Room for improvement
Highlighting the cost saving opportunities is not difficult; delivering the saving is the challenge. At ABS we have years of experience in working with wastewater pumping stations. This experience has been put to use when we developed a range of solutions for the most efficient maintenance, operations and energy management of your pumping stations. ABS has also focused on the fact that it is not always possible, as a result of high workloads, to change the way networks are operated. Rather than relying solely on changing the skills and attitudes of the workforce, we have instead focused on the need for simple reliable solutions. Solutions that can be consistently repeated and give a lifetime of reliable operation in line with your business needs.

How does ABS provide you with a complete solution?
We begin by providing the most appropriate combinations of equipment based on your operational and maintenance requirements. The next step is the provision of high technology controllers and telemetry systems to ensure complete visibility of what is going on with your network. This is supported by a comprehensive service, spares & asset management programme to assist with operation and maintenance when required. What is the end result? Effective, reliable operation of your wastewater collection network throughout its design life.



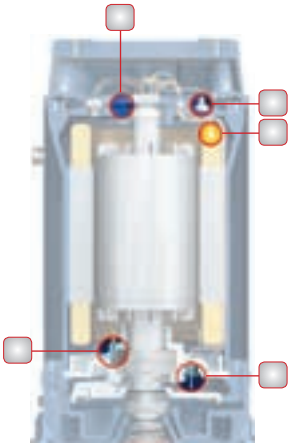
PRODUCT RANGE:

- Pressurized wastewater systems
- Network pumping stations
- Terminal pumping stations
- Engineered pumping stations
- Control & monitoring equipment


Wastewater Treatment Plant
Stormwater Retention Basin
Domestic & Commercial Wastewater
Inlet Pumping Station
Terminal Pumping Station
Network Pumping Station
Network Pumping Station
Network Pumping Station
Network Pumping Station
Terminal Pumping Station
Network Pumping Station
Network Pumping Station
Network Pumping Station

HIGH EFFICIENCY MOTORS WITH RELIABILTY BUILT IN.

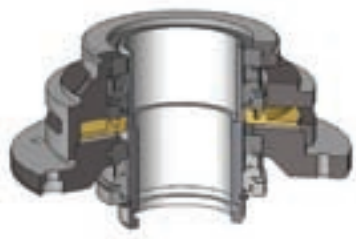
ABS is a market leader when it comes to submersible motor design. We were the first company to supply high efficiency submersible motors and have continued to develop our motor designs to ensure that you get the very best available in both efficiency and in built reliability.
ABS offers a range of submersible motors allowing you to choose the features you require based on your business needs, focus and budgets; allowing you to get the best solution every time.



Preventing break downs with equipment condition monitoring

Equipment condition monitoring is all about trying to avoid the consequences of a component failing. By monitoring vital components for example motor and seals we can give pre-indication of an accident waiting to happen. A simple component failure can sometimes result in major damage to the complete unit, resulting in expensive repairs and long period of down time.

ABS offers a complete range of monitoring devices to suit your needs. In our experience the needs are set by what action we intend to take when an alarm is given. If the answer is no action, our philosophy is don't measure it. Together with the customer we define the control and monitoring strategy and implement the system. We offer a complete range from simple to advanced control and monitoring systems.



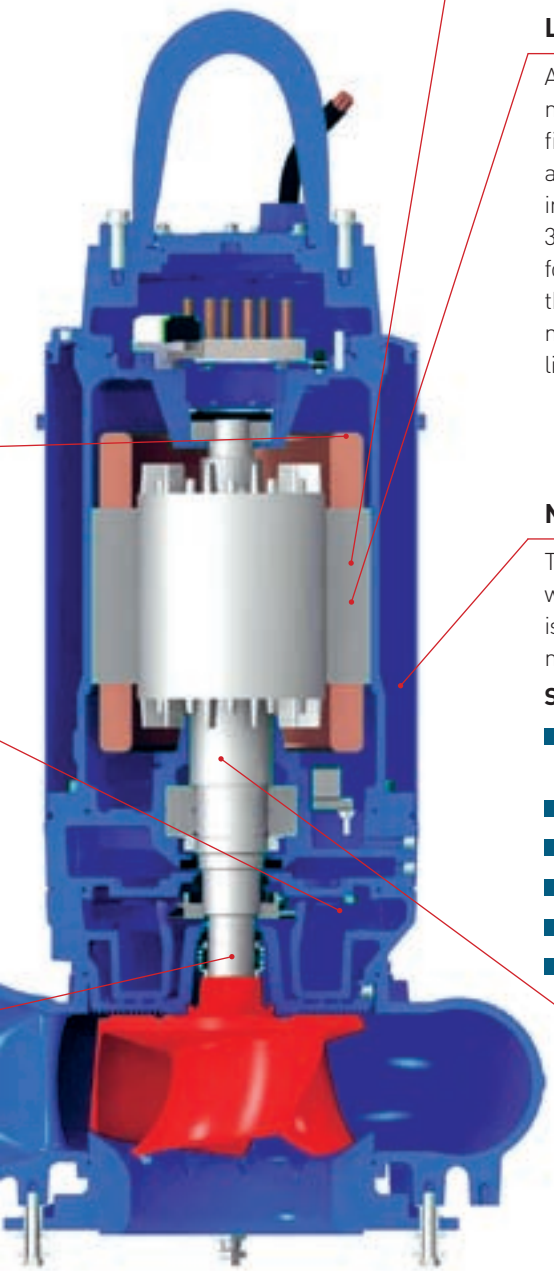
Easy maintenance with mechanical seal cartridge

Available as standard on AFPK models with the closed loop cooling system and M1-ME3 motor (optional on pumps without the cooling system). Key system benefits:

- Quick and easy mechanical seal changes, reducing maintenance time in the field and eliminating the need to bring the pump to the workshop for normal service.
- Modular design with three seal cartridges covering the complete M1-ME3 range, allowing efficient spare part handling.

High efficiency motors Class II

The AFP-ME series (9 to 280 kW) offers the highest motor efficiency in the submersible pump industry. The motor is a water pressure sealed 3-phase squirrel cage induction motor – with High efficiency (class II) specification. The motors are available both in standard and explosion proof versions in accordance with international standards e.g. EEx dII BT4/ATEX II 2Gk.



Long life motors through stators with Class H insulation

ABS motors are available with Class H insulation material and all motors are internally cooled by air re-circulation and without oil filling. The class H winding and impregnation material can withstand a permanent temperature of 180°C. If the motor is used up to 140°C international research shows an expected operational lifetime of 300 000 hours using class H insulation. The ABS motor is designed for an even much lower temperature and is also limited by a thermal sensor. Consequently when using the ABS motor under normal conditions of about 120°C or less, the average expected lifetime goes to infinity.

No cooling system blockage with closed loop cooling

The closed cooling system provides greatly improved cooling even when the motor is not submerged. The heat transfer of the motor is guaranteed, even with pumping media which tends to bake on the motors and cover it with a heavy heat insulation layer.

Summary of benefits

- Better serviceability as result of no contamination of the cooling circuit.
- Better cooling, when using VFD at low speed.
- Lower power consumption in comparison to open system.
- No blockage by baking materials like clay.
- No build up of micro organism or mussels inside cooling jacket.
- No ventilation problems, especially when vertically dry installed.

Superior reliability with 50,000 hour rated bearings

The ABS design is based on thorough calculations considering; axial thrust of the hydraulic forces to the impeller, weight of shaft, rotor and impeller, radial magnetic force from stator to rotor at maximum permissible eccentricity, radial hydraulic force of the impeller, given by local pressure differences in volute which gives a product with very robust design offering high reliability.

The design criteria for Shaft & Bearing are set to the highest standards:

- min safety against fatigue fracture: 1.7
- lifetime of bearings L10: 50,000 h
- max displacement in seal area: 0.05 mm
- max displacement in wear ring: 0.5 mm

RELIABILITY STARTS WITH THE CORRECT IMPELLER SELECTION.

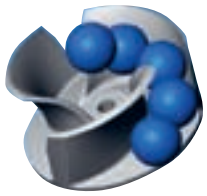
ABS does not believe in the one fits all strategy. Based on years of experience of pumping wastewater we can see that when you try and apply one impeller design to all applications it will always end in a compromise. It is also clear that each business requires a product that meets their exact need when it comes to maintenance and operational support.

The ABS Contrablock system

It is very clear that blockage is still a major problem when handling wastewater. In total, it accounts for more than 50 % of the site visits to a typical wastewater pumping station. Blockage can be caused by either soft items; rag and other fibrous materials or hard items where a solid item becomes jammed in the impeller. To achieve effective wastewater handling it is necessary to focus on all components of the blockage mechanism, the Contrablock system has been proven in more than one million installations the world over. The main features of the Contrablock system are:

LARGE FREE SOLIDS PASSAGE

Installation of equipment with high hydraulic efficiency is one of the results of the increased focus on energy. However it is very important to be aware that in many cases higher efficiency is achieved by increasing the number of impeller vanes, resulting in reduced free solids passage and therefore increasing the risk of hard blockage. The ABS Contrablock system focuses on achieving the best efficiency while still maintaining large free solids passage. This is achieved by optimizing impeller profiles using CFD technology and not just adding more vanes. The end result is good efficiency levels without increasing the risk of blockage.

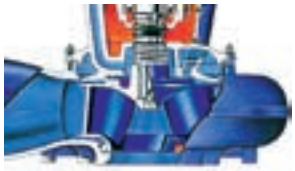


SEAL PROTECTION FROM SPINNING FIBRES

Pump blockage is not the only damage rag can cause passing through a pump. In many cases mechanical seal failure has been caused by rag becoming wrapped around the back on the impeller. The ABS Contrablock system makes use of either a castellation and spiral or back vanes working with a spiral and sine-wave shaped cutter to avoid this problem. The end result is no rotating fiber or sand accumulation at the medium side of the mechanical seal, greatly increasing reliability and reducing the risk of soft blockage or seal damage on the rear side of the impeller.

ADJUSTABLE SPIRAL BOTTOM PLATE FOR EFFICIENT RAG HANDLING AND EFFICIENCY REGAIN

Looking at the causes of soft blockage the typical reason is that the rag gets hung up before being passed through the impeller. The Contrablock system makes use of an adjustable spiral bottom plate with a spiral grove radiating from the centre to the outside edge of the plate. Any rag that is caught under the impeller will therefore be pushed out back into the main flow of liquid and through the impeller, greatly reducing the risk of soft blockage. To maintain this efficient rag handling and regain efficiency loss due to wear, the bottom plate can easily be adjusted from the outside of the pump without the need to return the pump to a workshop.



ABS closed impellers

The ABS closed impellers are designed for larger applications where high efficiency is paramount. The range includes single and multi channel closed impellers designed to give the optimum performance, without compromising effective rag and solids handling. The impeller design also includes a unique back shroud protecting the mechanical seal from spinning fibres, rag build up or excessive wear from grit. The impellers are available in the ABS submersible wastewater pump AFP range and are suitable for Municipal Wastewater applications both in Wastewater Collection and Treatment.

ABS Vortex impellers

The ABS vortex impeller has been designed to maximise the size of solids handled, allowing all items found in wastewater to be passed without blocking the pump. The Vortex impeller is the natural choice when risk of blockage is high and lower efficiency can be accepted, for example storm water applications with low running hours. Other suitable applications are pumping liquids containing air, gas, coarse particles or items which can become trapped.

The ABS Piranha cutting system

The ABS Piranha cutting system offers a unique concept in grinder pump design. Our cutter design features a lobed rotor cutter attached to a centrifugal impeller together with a stationary cutting element designed in a wave form. This causes an opening to be formed between the rotor and stationary cutter, which results in the huge number of 15,000 cuts per minute. The solids are sheared into particles as small as 1 mm, which allows them to be pumped through small bore pipes.

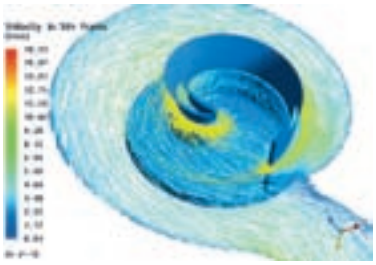
ABS axial flow propellers

The ABS submersible propeller pumps VUP are ideal for applications where large volumes of water have to be pumped up to heads of 12 m. They can be installed vertically in a space saving manner in a concrete riser or in a steel pressure pipe using a well proven coupling ring. Propellers with adjustable blades and special propellers for return activated sludge are available. They are ideal for storm water pumping stations, for polder dewatering, for storm water protection, for irrigation and dewatering.

ABS mixed flow impellers

The ABS submersible mixed flow column pump AFL for direct installation in a discharge pipe saves space and installation costs. They can be used everywhere where large volumes of stormwater or wastewater containing solid effluent must be pumped. The AFL pumps can be applied for sewage pumping in combination with screens, drainage pumps in pumping stations for dewatering reclaimed land in low lying coastal areas, storm water pumps for storm protection and transfer pumps to control the water level in lakes and lagoons.

Optimized hydraulic design using CFD technology



ABS offers a complete range of impellers optimized using CFD technology allowing us to match your exact needs and giving you the best in efficiency and reliability. The strategy adopted is the combination of the Design of Experiments method (DOE) with Numerical Simulation (CFD).

DOE is a numerical regression method allowing efficient analysis of multiple design parameters. In this case, factors critical to blockage performance are selected. CFD full transient numerical simulations are carried out in CFX-5 where we are also able to simulate unsteadiness in the flow of the single blade impeller, thus inducing inaccuracy in the less computationally expensive steady state analysis. The end result is a range of impellers optimized to handle different applications.

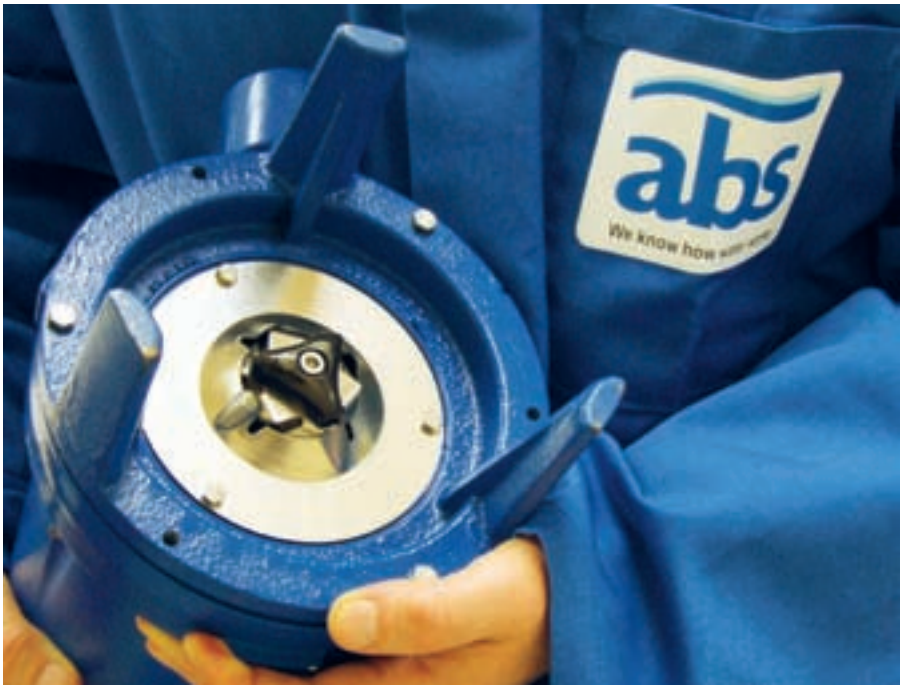
PRESSURIZED SEWAGE SYSTEMS.

Does your network include single houses spread over a wide rural area, camping sites, holiday home developments and recreation areas – and are all of them located a long distance from the entrance into the collection network? In this scenario it would be impractical and expensive to use conventional gravity sewage system. Add to this the challenge of increasing environmental and legislative pressure to connect as many residents as possible to the wastewater collection network. This causes headaches to many network operators. ABS has the cure!

Pressurized sewage system
The ABS solution includes a pre-fabricated tank, a grinder pump and the relevant telemetry equipment. The collected sewage is brought from each house to a pressurized network and further carried to a pumping station or treatment plant. The small diametre pipes of a pressurized sewage system are buried in the ground just below the frost line. The shallow ground work does not require any deep trenches. Thanks to the effective Piranha pump the sewage is shredded to fine particles to prevent clogging of the small pipes.

System design
Working with you right from the start, ABS can help you design and install a complete pressurized system, which will give you the most reliable and effective solution to your problem. Our cutting edge hydraulic modeling software enables us to look at all the options for design. This way we can ensure that all pipework and equipment are optimized to meet your exact requirements.

Are you in control?
Long distances equal high costs when it comes to breakdowns or problems on-site. To help you stay one step ahead, ABS offers simple-to-use alarm management & telemetry systems to keep you in control of your pressurized pumping system at all times. Without the need for a large investment in more complicated telemetry systems this allows you to keep your on-site costs to an absolute minimum.



ABS lifting station Piranhamat

The Piranhamat lifting station is developed for reliable and economical removal of domestic wastewater into a pressurized system. It is perfect for locations where the diameter of the discharge line is restricted. The lifting station is flood-proof and installed inside of the building for pumping from areas below the backwash level. Fitted with ABS Piranha submersible grinder pumps and the ABS basic pump controller BPC, this unit becomes the perfect solution for pressurized systems relying on discharge in small diameter pipe works.


Piranha cutting system


Panel (optional)

ABS lifting station Synconta

The Synconta is a single or twin pump lifting station developed for efficient removal of domestic wastewater from locations below the sewer backwash level. By equipping the synthetic prefabricated sump with one or two ABS Piranha submersible grinder pumps and the ABS basic pump controller BPC, this station is the ideal solution for applications where gravity discharge into the sewer is not possible. Installed outside of the building in open ground, the unit can deal with vehicular traffic if used with appropriate lid.


Piranha pump


AS pump


Floats or level sensors (optional)


Panel (optional)

ABS Piranha submersible grinder pump 08 to M110/2

The Piranha range includes submersible sewage pumps with a shredding action cutting up the sewage into small particles. This allows for reliable discharge of domestic sewage under pressure using small discharge lines. It is suitable for sewage removal from houses, especially in rural areas where higher elevations must be overcome, or where only small diameter pipe work can be laid. The Piranha can also be used for heavily polluted wastewater.


Piranha cutting system


Silicon carbide seal


Condition monitoring

ABS basic pump controller BPC

The ABS basic pump controller BPC is used for single and twin pumping stations up to 3 kW, single and three phase. With manual thermal protection reset. No Di seal monitoring. Suitable for lifting stations, sewage pumping stations and packaged pumping stations in accordance with EN 60204-1.

NETWORK PUMPING STATIONS.

Network pumping stations tell us a lot about modern consumer habits. They certainly know a lot about local weather conditions too. The pumping conditions are constantly varying and the station must stand the handling of wastewater with gravel from roads mixed with sanitary articles and packaging materials, dry periods followed by heavy rains or snow with more salt and grit.

No money to waste
As if that is not enough, your network may consist of a high number of small pumping stations scattered over a large geographical area. Problems with blockage, long traveling time to breakdowns, increasing energy costs, risk of overflows, shortage of people and the continuous pressure to reduce costs is the reality of the day-to-day operation of network pumping stations.

Optimization know-how
Efficient operation of network pumping stations requires a strong tie between equipment selection, maintenance and operating strategy. Poorly selected equipment will give a lifetime of additional costs because of blockage and breakdowns and the consequent site visits to rectify the problems.
At ABS we support you with our application knowledge from design of the pumping station to optimiziation of the running operation.

Approved combinations
Our solution builds on tried and tested equipment combinations developed for working in the aggressive environment of wastewater. No system requirement is left to chance; large solids handling to prevent blocking, pumping station controllers optimizing performance, protection of standby equipment, cleaning of the sump and management of energy cost.

Constant surveillance
Easy-to-use alarm management and telemetry systems designed specifically for use within a collection network helps you when something goes wrong. Our systems allow you to stay in control and get the best out of your available personnel. ABS also offers a worldwide service, spares & asset management programme to support you when you need it.

ABS submersible sewage pump AFP

IMPELLER OPTIONS


Contrablock system


Vortex impeller

ABS submersible sewage pump AFP is designed for commercial and municipal applications pumping unscreened sewage when limited optional features are required. Motors can be supplied as standard IP68 or explosion proof versions suitable for submerged installation.

- Discharge sizes: DN80, DN100 & DN150
- Motor range: 1.5 to 9.0 kW


Optimized hydraulics


Silicon carbide seals


Condition monitoring

ABS submersible sewage pump AFPK

IMPELLER OPTIONS


Contrablock system


Vortex impeller

ABS submersible sewage pump AFPK is designed for municipal and industrial applications pumping unscreened sewage. Available with a wide range of optional features. Motors can be supplied as standard IP68 or explosion proof versions suitable for both submerged and dry installation.

- Discharge sizes: DN80, DN100 & DN150
- Motor range: 1.5 to 9.0 kW


Effi 2 motors


Class H insulation


Oil free construction


Optimized hydraulics


Silicon carbide seals


Seal cartridge option


Condition monitoring

ABS submersible sewage pump AFPK (ME3)

IMPELLER OPTIONS


Contrablock system


Vortex impeller


Closed channel impeller

ABS submersible sewage pump AFPK (ME3) is designed for municipal and industrial applications pumping unscreened sewage. Available with a wide range of optional features. Supplied with high efficiency motors in standard IP68 or explosion-proof versions suitable for both submerged and dry installation.

- Discharge sizes: DN100, 150 & 200
- Motor range: 9.0 to 25.0 kW


Effi 2 motors


Closed cooling


Class H insulation


Oil free construction


Optimized hydraulics


Silicon carbide seals


Seal cartridge option


Condition monitoring

ABS dry installed sewage pump FR

IMPELLER OPTIONS


Vortex impeller


Closed channel impeller

ABS dry installed sewage pump FR for applications handling unscreened sewage in municipal and industrial applications. The back-pull-out design utilises standard electrical motors and a dryrunning capability is possible with a double seal arrangement.The pumps can be supplied with optional equipment where selfpriming is required.

- Discharge sizes: DN50, 80, 100, 150 & 200
- Motor range: 3.0 to 55.0 kW


Standard motor


Effi 2 motors


Oil free construction


Optimized hydraulics


Silicon carbide seals


Condition monitoring

TERMINAL PUMPING STATIONS.

Large in size with high flows and long operational hours are the terms used to describe a terminal pumping station. Handling large amounts of sewage pumped from the network pumping stations or fed in via large gravity sewers, these stations must achieve the highest levels of reliability. No amount of over-pumping, tankering or trying to bypass the station can save you when a problem arises with a terminal pumping station.

Calculating life cycle cost
Based on the fact that energy is a significant element of the Life Cycle Cost (LCC), it has always been accepted practice to look for the best efficiency when selecting a pump. However, if we make a field test of a pump in operation, the efficiency will often be significantly reduced over time due to wear and damage to the hydraulics. The efficiency loss varies considerably depending on the application, the type of impeller used and the maintenance strategy. With this in mind it is evident that calculated energy costs are not always totally accurate, since they are based on the "as new" efficiency and it is assumed that this is retained throughout the design life of the pump.

Selection is the key to efficiency
Pumping wastewater is a difficult job. It requires robust solutions to secure operation without frequent site attendances. ABS designs solutions where maintenance activities can be planned and undertaken at the optimum time frame. We offer the exact equipment combinations for your application, offsetting the cost of investment against the savings in energy costs. These solutions will not only meet your requirements to move wastewater. They will also fit with your business needs and available personnel. Merely selecting equipment without looking at the maintenance required and method of operation will only result in more costs for you.

ABS submersible sewage pump AFP (ME3)

IMPELLER OPTIONS


Contrablock system


Vortex impeller


Closed channel impeller

ABS submersible sewage pump AFP (ME3) is designed for reliable and economic pumping of unscreened sewage in industrial and municipal applications. The pumps have high efficiency water pressure-tight encapsulated fully flood-proof motors in standard or explosion proof version supplied with the option of a closed loop cooling system. Suitable for both wet and dry installation.

- Discharge sizes: DN100, 150 & 200
- Motor range: 9 to 25 kW


Effi 2 motors


Closed cooling


Class H insulation


Oil free construction


Optimized hydraulics


Silicon carbide seals


Condition monitoring


Sealed cable entry chamber

ABS submersible sewage pump AFP (ME4 & 5)

IMPELLER OPTIONS


Contrablock system


Closed channel impeller

ABS submersible sewage pump AFP (ME4 & 5) is designed for larger applications pumping unscreened sewage in industrial and municipal applications. The pumps have high efficiency water pressure-tight encapsulated fully flood-proof motors in standard or explosion proof version supplied with the option of a closed loop cooling system. Suitable for both wet and dry installation.

- Discharge sizes: DN100, 150, 200, 250, 300, 350 and 400
- Motor range: 15 to 125 kW


Effi 2 motors


Closed cooling


Class H insulation


Oil free construction


Optimized hydraulics


Silicon carbide seals


Condition monitoring


Sealed cable entry chamber

ABS submersible sewage pump AFP (ME6)

IMPELLER OPTIONS


Closed channel impeller

ABS submersible sewage pump AFP (ME6) is designed for larger applications pumping unscreened sewage in industrial and municipal applications. The pumps have high efficiency water pressure-tight encapsulated fully flood-proof motors in standard or explosion proof version supplied with the option of a closed loop cooling system. Suitable for both wet and dry installation.

- Discharge sizes: DN 200, 250, 300, 350, 400 & 500
- Motor range: 90 to 280 kW


Effi 2 motors


Closed cooling


Class H insulation


Oil free construction


Optimized hydraulics


Silicon carbide seals


Condition monitoring


Sealed cable entry chamber

ABS dry installed sewage pump FR

IMPELLER OPTIONS


Vortex impeller


Closed channel impeller

ABS dry installed sewage pump FR for larger applications handling unscreened sewage in municipal and industrial applications. The back-pull-out design utilises standard electrical motors and the dry-running capability is possible with a double seal arrangement. The pumps can be supplied with optional equipment where self-priming is required.

- Discharge sizes: DN100, 150, 200, 250 & 300
- Motor range: 3 to 75 kW


Effi 2 motors


Standard motor


Optimized hydraulics


Silicon carbide seals


Condition monitoring

ENGINEERED PUMPING STATIONS.

The secret of designing effective large pumping stations is experience and knowledge of the complete solution. Just selecting large pumps and installing them in a sump could buy you a lifetime of problems. Cavitation, air entrainment, poor efficiency and poor reliability – these are just a few issues you will face if you start out wrong.

Design and selection is the key

Reliable engineered pumping stations start with the correct basic design and equipment selection. Get this right and reliability and trouble-free operation will follow. At ABS we can offer the complete solution; starting with assistance at the design stage, including model testing when required, right through to recommendations in selecting the correct equipment from one of the largest ranges of wastewater equipment available on the market today.

By adding Life Cycle Cost modelling, it is possible to match your selection to the best maintenance and operation strategy. This will ensure the best lifetime energy consumption and optimum maintenance frequency for your engineered pumping stations. To make sure these benefits are continuously delivered, your pumping station solution can include cutting edge pump controllers, allowing you to be in control at all times.

ABS submersible sewage pump AFP (M8 & M9)

IMPELLER OPTIONS

Closed channel impeller

ABS submersible sewage pumps AFP (M8 & M9) are designed for reliable and economic pumping of heavily polluted sewage in commercial, industrial and municipal applications. The pumps have high efficiency water pressure-tight encapsulated fully flood-proof motors in standard or explosion proof version. As standard equipped with a jacket cooling system. Suitable for both wet and dry installation.

- Discharge sizes: DN 300, 400, 500, 600 & 800
- Motor range: 110 to 600 kW

Class H insulation

Sealed cable entry chamber

Optimized hydraulics

Silicon carbide seals

Condition monitoring

ABS dry installed sewage pump FR

IMPELLER OPTIONS

Closed channel impeller

ABS dry installed sewage pump FR for larger applications handles heavily polluted sewage and wastewater in municipal and industrial applications. The back-pull-out design utilises standard electrical motors and a dryrunning capability is possible with a double seal arrangement. The pumps can be supplied with optional equipment where self-priming is required.

- Discharge sizes: DN 150, 200, 250, 300, 400, 500, 600 & 800
- Motor range: 22 to 630 kW

Standard motor

High efficiency

Optimized hydraulics

Silicon carbide seals

Condition monitoring

ABS submersible mixed flow column pump AFL

IMPELLER OPTIONS

Mixed flow impeller

ABS submersible mixed flow column pump AFL for direct installation in discharge pipes is intended for large flows and moderate heads for stormwater, land drainage and flood protection. The AFL can handle sewage from commercial, municipal and industrial sources thanks to its semi-open impellers. The compact units are lowered into standard steel tubes and need no anchoring. Their own weight is sufficient to hold the units securely in position.

- Discharge sizes: DN 600 to 1200
- Motor range: 11 to 700 kW

Effi 2 motors

Class H insulation

Optimized hydraulics

Silicon carbide seals

Condition monitoring

Sealed cable entry chamber

ABS submersible propeller pump VUP

IMPELLER OPTIONS

Axial flow propeller

ABS submersible propeller pump VUP is designed for applications where large volumes of storm- or process water have to be pumped up to heads of 12 m. They are compact and can be installed vertically by being lowered into standard steel tubes and need no anchoring. Their own weight is sufficient to hold the units securely in position. Main applications storm water protection, irrigation, dewatering, cooling and process water.

- Discharge sizes: DN 600 to 1400
- Motor range: 11 to 700 kW

Effi 2 motors

Class H insulation

Optimized hydraulics

Silicon carbide seals

Condition monitoring

Sealed cable entry chamber

CONTROL AND MONITORING EQUIPMENT.

Working in the dark is not an option
When you are working with a wastewater collection network, visibility and up-to-date information are vital. You must have full visibility of your pumping stations at all times to ensure that you make the correct decision - every time.

Easy access at low cost
ABS can give you the full picture, by providing easy to use web based control and monitoring solutions that are tailor-made for each type of pumping station within your wastewater collection network. They can be easily accessed by all your personnel, without requiring weeks of training. We offer telemetry systems with low-cost fixed-term rental contracts. The systems are scalable and can grow with your business, making use of the latest software applications.

Years of operational experience built into the controllers
ABS has long experience of how to run and maintain pumping stations and also how to obtain the lowest Life Cycle Cost. In order to achieve optimal operation of different kind of pumping stations, ABS has designed pump controllers and control panels with unique functionality built in as standard.

ABS basic pump controller BPC

The ABS basic pump controller BPC is used for single and twin pumping stations up to 3 kW, single and three phase. Without With manual thermal protection reset. No Di seal monitoring. Suitable for lifting stations, sewage pumping stations and general pumping applications in accordance with EN 60204-1.

ABS advanced control panels

ABS Advanced Control Panels are providing a complete solution for a 2-pump pumping station. They are built around the PC 242 controller with advanced control and monitoring features. Two pumps in the power range of 1.5 to 22 kW can be controlled via DOL or built in soft starter, additionally a contactor for a sump mixer up to 5.5 kW is provided. They are designed according to EN 60204-1. A modem for data transfer to the ABS AquaWeb system can be fitted.

ABS pump controller PC 111, 211

The PC 111, 211 is a family of low budget controllers for domestic and commercial pumping applications with 1 or 2 pumps. It provides for a direct current measurement up to 12 A and has a built in motor overload protection. Various level sensors from float switches up to hydrostatic pressure transducers can be connected. Inputs for motor temperature and moisture sensors as well as a battery charger are standard features. The unit has 3 potential free relays for pump control and alarm output.

ABS pump controller PC 242

The PC 242 is a 2 pump controller designed mainly to be used in municipal wastewater pumping stations. It is has many advanced features to minimise the costs in the pumping station throughout the whole life cycle. The controller provides for various level measurement systems, current and power measurement, direct connection of motor monitoring devices and the control of a sump mixer. The unit can communicate with the ABS AquaWeb system via modem.

ABS control system PCx

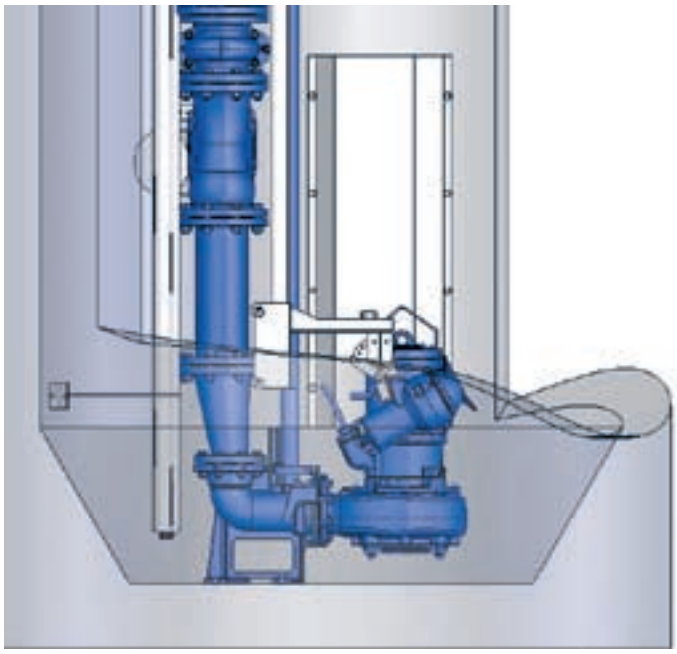
The PCx is a technically powerful high specification control system. The system build up is scalable, flexible and modular. The combination of software and modular configuration makes this unit suitable for application such as small and medium size sewage treatment plants, and larger sewage pumping stations. The main difference between PCx and conventional PLC-system is the simplicity of installation and configuration.

ABS alarm management & surveillance AquaWeb

ABS alarm management & surveillance systems AquaWeb offer a complete range of GSM / GPRS based alarm management and surveillance solutions. When making use of basic alarm transmitting devices for simpler low cost applications through to advanced pumping station controllers linked to WEB based alarm management and surveillance software, a complete control and optimization solution is provided.

THE COMPLETE PUMPING STATION SOLUTION.

Running an effective wastewater collection network is not only about pumps. To achieve a cost effective pumping solution it is necessary to optimize all aspects of the pumping station design. ABS is able to offer the complete solution when it comes to wastewater pumping stations including assistance with station and benching design, pipework and pedestals designed to allow safe access to the equipment through to a complete range of level control devices and pumping station controllers. This is not about being a one stop shop for a number of components, but being able to supply a completely integrated solution allowing you to get the best from your Wastewater Collection Pumping Station.



ABS pedestals and brackets

ABS pedestals are available with single guide rail system design making use of an elastomer leak proof seal to ensure a good seal even when small particles are caught in the sealing area. The pump can be lowered and lifted without having to enter the sump for disconnecting the pipe work. The ABS design supports the pump weight, not at the top of the discharge, but with the entire weight resting on two arms sideward's of the discharge connection. This means the pump cannot lift and no force is induced on the guide rail and the force on the seal is controlled to avoid damage.

ABS pre-fabricated pumping stations

ABS offers a complete range of pre-fabricated pumping stations suitable for various wastewater applications. All stations are supplied complete with pedestals and all internal pipe work allowing for quick and simple installation when on site. Pre-fabricated stations can also include electrical panels, level control equipment and full installation and commissioning when required.

ABS flushing valve

The ABS flushing valve is a programmable flushing valve for clean deposit-free sumps. Automatic sump cleaning avoids manual or mechanical de-sludging. By fitting the programmable flushing valve the pumped flow of the pump itself can be used to produce an intensive rinsing and flushing of the sump.

ABS submersible mixer RW

Compact ABS submersible mixer for flushing and cleaning of pump sumps plus a wide range of applications in sewage treatment plants and in industrial mixing applications.

ABS float switch KS

The ABS float switch can be used in liquids for control operations by using the liquid level. It is suitable for use in sewage. In the float switch a ball moves depending on the floating position and operates a high quality micro switch. The recessed rolling surface for the ball ensures trouble-free functioning even if the cable is twisted.

ABS submersible pressure sensor HSR

The HSR is a wastewater resistant, PVC encapsulated, 2-wire loop powered, submersible, hydrostatic level sensor. It is designed for level measurement in liquids like stormwater and wastewater in pump sumps. When connected in series with a DC power supply, the HSR gives a 4 to 20 mA output signal which is proportional to the level of the liquid.

ABS submersible pressure sensor HSC2

The HSC2 is a sewage water resistant, stainless steel encapsulated, submersible, hydrostatic level sensor of high accuracy. It is designed for level measurement in liquids like stormwater and sewage in pump sumps. The HSC2 loop powered level sensor gives a 4-20mA output signal which is proportional to the level of the liquid. Also available in Ex-version.

ABS conductive level switch KV

The KV is a conductive level switch, primarily used as overflow switch in sewage pumping pits. The KV can also be used in other applications where the conductivity of the media is between 25 and 750 µS/cm.

ABS advanced control panels

ABS advanced control panels provide a complete solution for a 2-pump pumping station. They are built around the PC 242 controller with advanced control and monitoring features. 2 pumps in the power range of 1.5 to 22 kW can be controlled via DOL or built in soft starter, additionally a contactor for a sump mixer up to 5.5 kW is provided.

WASTEWATER TREATMENT.

Clean water is essential to people and environments the world over. By providing effective solutions for wastewater treatment, ABS plays a major role in returning clean water to its source. ABS treatment products and services focus on safety, reliability and efficiency of the wastewater treatment processes.

Critical demands

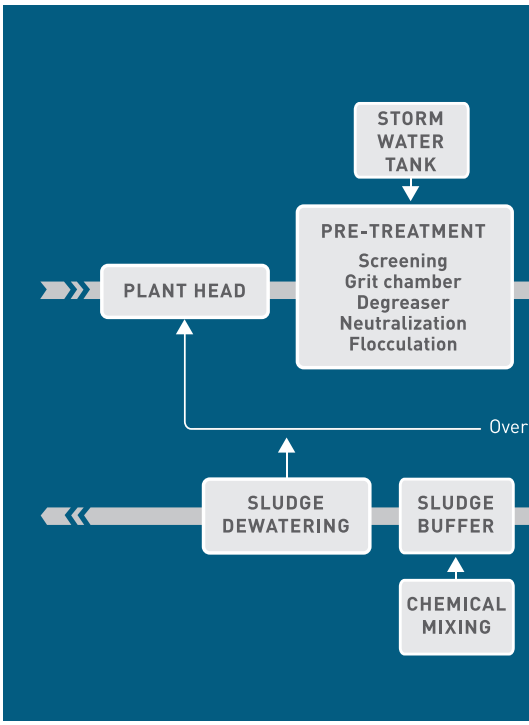
Wastewater treatment is demanding. Capital investments, operating costs, growing populations and environmental legislations are big concerns. Choosing the most cost-effective solution from one of many equipment suppliers is not easy. Maintaining and upgrading existing treatment systems is no small task either. The mission to protect a growing population and a limited resource, makes the choice of an experienced wastewater technology partner crucial.

The solution provider

Wastewater professionals worldwide are working with ABS solutions to remove organic pollutants, phosphates and nitrates, to protect surface and groundwater, to ensure safe coastal and bathing water qualities, and to process sludge for energy. Cost-effective solutions for new plants or refurbishments of existing installations are the strength of ABS. Our application know-how vouches for the optimal selection and combination of products and services for each unique application.

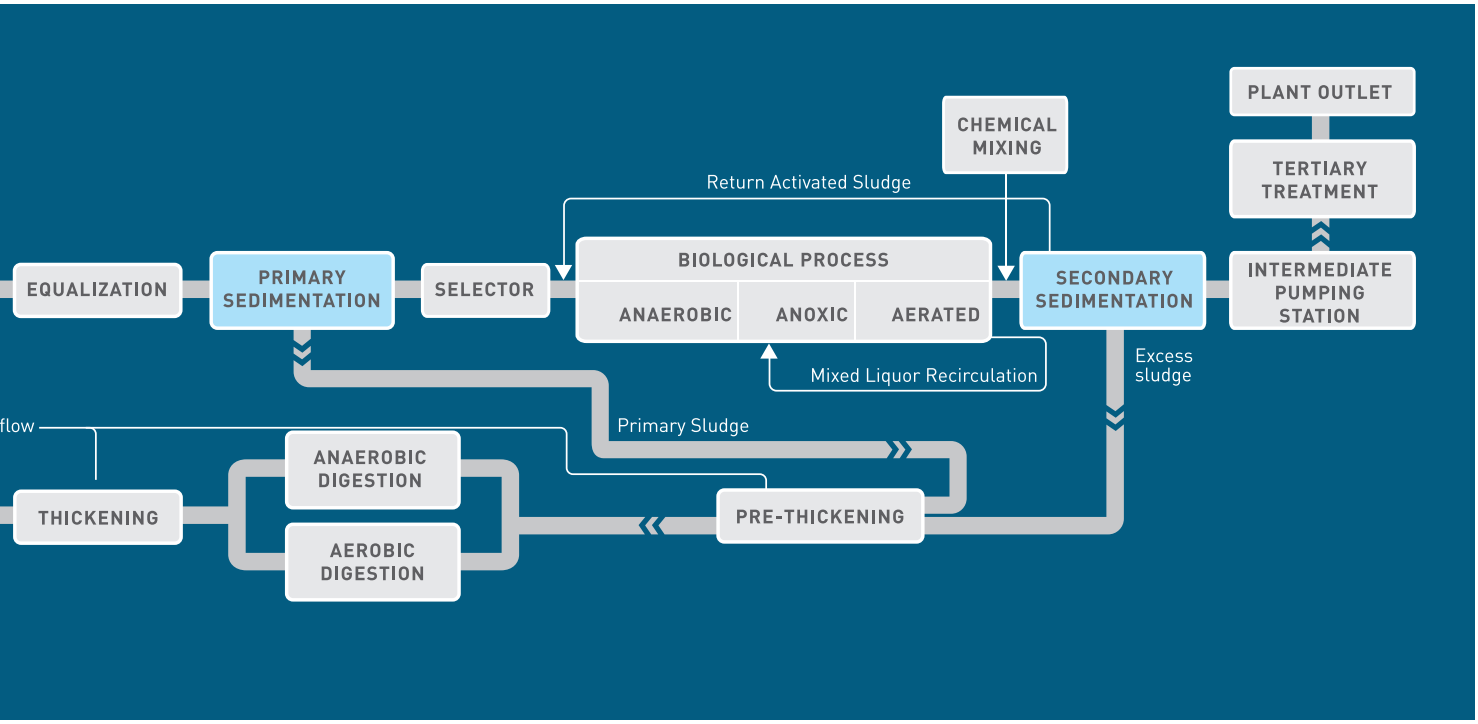
Maximized efficiency and minimized cost

The ABS service programme covers all aspects of operation and maintenance of pumps, mixers, aerators and automated controls from initial pumping station design to propositions on complete treatment facility management – and everything in between. The programme helps treatment plants to maximize operating efficiency and minimize costs.



PRODUCT RANGE WASTEWATER TREATMENT:

- Mixers & agitators
- Aeration systems
- Submersible, dry installed and recirculation pumps


PLANT OUTLET
TERTIARY TREATMENT
CHEMICAL MIXING
Return Activated Sludge
EQUALIZATION
PRIMARY SEDIMENTATION
SELECTOR
BIOLOGICAL PROCESS
ANAEROBIC
ANOXIC
AERATED
SECONDARY SEDIMENTATION
INTERMEDIATE PUMPING STATION
Mixed Liquor Recirculation
Excess sludge
flow
Primary Sludge
ANAEROBIC DIGESTION
THICKENING
AEROBIC DIGESTION
PRE-THICKENING

MIXERS AND AGITATORS.

It takes more than pumps to treat wastewater and bring fresh water to millions of people. ABS provides more water processing equipment and technology than any other pump manufacturer. We offer solutions that improve your water standards and decrease operational costs in one go.

Biological process know-how
ABS mixers and agitators play a major role in the biological process at the treatment plant, but removing pollutants and recovering clean water also demands expertise that cannot be manufactured. At ABS, hands-on field work and R&D are continuously in close interaction. Over the years, we have built a unique knowledge base that we put to use in providing you with the best solution. By combining state of the art pumps, mixers, agitators, aerators, compressors and control instruments in an integrated solution, we optimize performance in terms of reliability, efficiency and flexibility.

Return on investment
The ABS range covers highly efficient agitators and submersible mixers. For many municipal and industrial mixing applications - blending, solid suspension, dissolving, destratification and circulation - the modular mixer system in combination with flexible mixer positioning and easy installation, guarantees a considerable saving on investment and energy costs.

Easy and reliable
The patented concrete pedestal including the innovative coupling system guarantees an even higher process reliability and helping the plant operator to carry on his inspection work quickly and easily.

Tailor-made service offer
The ABS service programme can be tailored to meet your exact requirements making sure your plant operates in the most efficient way. We cover all aspects of operation and maintenance of pumps, mixers, aerators, turbocompressors and automated controls from initial pumping station design to comprehensive framework agreements covering your every need.

ABS submersible mixer RW

The RW mixers have an integral motor and are suitable for agitating, blending, mixing, dissolving and suspension of solids in municipal treatment plants, industry and agriculture. ABS offers highly efficient multipole and gear driven mixers with either standard or explosion proof motor enclosures. ABS application support includes literature and computer software for sizing and design of each installation.

Propeller diameter:	200 – 900 mm
Power range:	1.2 – 25 kW
Mixing flow max:	5900 m^3/h

ABS flow booster SB

The ABS flow boosters SB are slow running submersible units with integral motors for gentle circulation and mixing of fluids in treatment plants and industrial applications. The flow booster is complete with monocast propeller blades and excellent self-cleaning properties, giving optimum operation with low energy input. The unit is connected to a concrete pedestal by an innovative coupling system, which allows the unit to be raised and lowered for inspection even in filled tanks.

Propeller diameter:	900 – 2500 mm
Power range:	1.4 – 4.6 kW
Mixing flow max:	15500 m^3/h

ABS submersible mixer SB 1200 KA

The ABS submersible mixer SB 1200 KA combines all the specific requirements of those treatment processes where the biofilm is bound on the surface of plastic carriers. The low tip speed in combination with a special designed propeller, prevent any negative effects on the carrier material during the mixing. The energy cost is reduced thanks to a unique drive unit design including a high efficient gear box.

Propeller diameter:	900 – 1080 mm
Power range:	3.0 – 4.6 kW
Mixing flow max:	up to 4460 m^3/h

ABS Scaba agitator

The ABS Scaba agitators are of a robust, modular design and can be combined with various types of drive units, seals and impellers. The propeller makes the required process perform at the lowest possible power input. Treatment of highly polluted water or other biodegradable masses with high organic pollutants can produce biogas and energy by using ABS Scaba agitators within anaerobic digester. The agitator is individually tailored for different types of wastewater and tanks. By using special software, the most reliable solution for any type of mixing problems can be accurately designed.

Shaft diameter:	20 – 260 mm
Power:	0.12 – 200 kW
Propeller diameter:	125 – 8000 mm

AERATION SYSTEMS.

Under the right conditions Mother Nature is the most cost-effective catalyst you can employ for wastewater treatment. Providing perfect conditions for nature to work in a man-made environment with controlled processes requires coordination of technology and biology. At ABS we have the right knowledge.

Top efficiency at lowest cost
Our aeration systems just use compressed air to enhance the natural biological process. Clever aeration and mixing solutions decrease reaction times. This way we can boost the air-to-liquid interaction to help you obtain top efficiency at the lowest cost while minimizing the environmental impact.

System optimization
You can further improve treatment efficiencies while shrinking basin surfaces. Existing or new plants with space limitations can increase the liquid depth of basins to be deeper than 12 meters with an ABS solution. We make use of our process knowledge in combination with the most complete range of equipment in the market. We help you select the best combination of self aspirating submersible aerators, fine bubble diffusers system, submersible pressurized aerators, submersible mixers and recirculation pumps. Combined with the state of the art ABS turbocompressor HST, the system design can be optimized in terms of plant layout and energy consumption. Our job is to help you increase plant productivity while reducing the life cycle cost.

ABS turbocompressor HST

The ABS turbocompressor HST provides pressurized air to the aeration system. The HST is an integrated turbocompressor based on a high speed motor driven by a frequency converter. No mechanical wearing parts or lubricants are used in the HST. This is made possible by electronically controlled magnetic bearing technology which levitates the integrated rotor-impeller single-piece assembly. The optimized drive technology controls the machine's rotational speed, thus achieving optimal operating efficiency and minimizing energy consumption. Full control of flow and pressure within the whole operating range is possible and is accessible both locally and remotely. The ABS turbocompressors HST are used in wastewater treatment plants and in industrial low pressure processes.

Air flow range:	1,000 – 16,000 Nm^3/h
Pressure range:	40 – 125 kPa

ABS Nopon disc diffuser system

ABS Nopon disc diffuser system offers a number of alternative diffuser models (HKL, KKI, PIK, PRK, PRF, DS 20), which are easy to install and maintain. The diffusers have special features that improve the operation reliability and efficiency, such as the non-return valve available on all models and the sliding ring available on the latest version of ABS Nopon diffusers. High oxygen transfer efficiency combined with low pressure drops makes the ABS diffusers extremely effective.

Net effective area:	0.025 m^2 (HKL,KKI) 0.060 m^2 (PIK,PRK/PRF) 0,186 m^2 (DS 20)
Operating range:	0.5 – 15 m^3/h*

ABS submersible aerator OKI

ABS submersible aerator mixer OKI is a high performance and heavy duty unit with the capacity to operate both as an aerator and/or a mixer in both municipal and industrial wastewater applications. Maintenance or changing the plant configuration is always easy thanks to the OKI's liftability. This makes it unique and suitable for discontinuous aeration processes, such as simultaneous denitrification, nitrification and SBR processes. The OKI keeps the high aeration capacity over its lifetime and is capable of operating in deep tanks with levels even deeper then 12 m and in liquids with high dry matter present. The high pumping and mixing capacity of the OKI aerator makes it the right choice for MBR and MBBR processes.

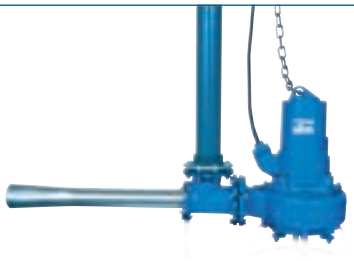
Oxygen transfer:	up to 420 kg O_2/h
Motor output:	max. 37 kW

ABS submersible aerators TA and TAK

ABS self-aspirating submersible aerators TA and TAK are suitable for wastewater treatment in municipal and industrial plants. Main areas of application are mixing and equalisation tanks, activated sludge tanks, SBR-reactors and sludge storage tanks at a water depth between 2 and 9 m.
The aerator is free standing on the bottom of the basin and hence can be installed without emptying the basin. The aerator is characterised by a very low noise level and no aerosol formation. The aerator produces fine bubbles and the oxygen transfer factor is high.

Oxygen transfer up to:	80kg O_2/h
Motor output, max:	75 kW

ABS venturi jet aerator



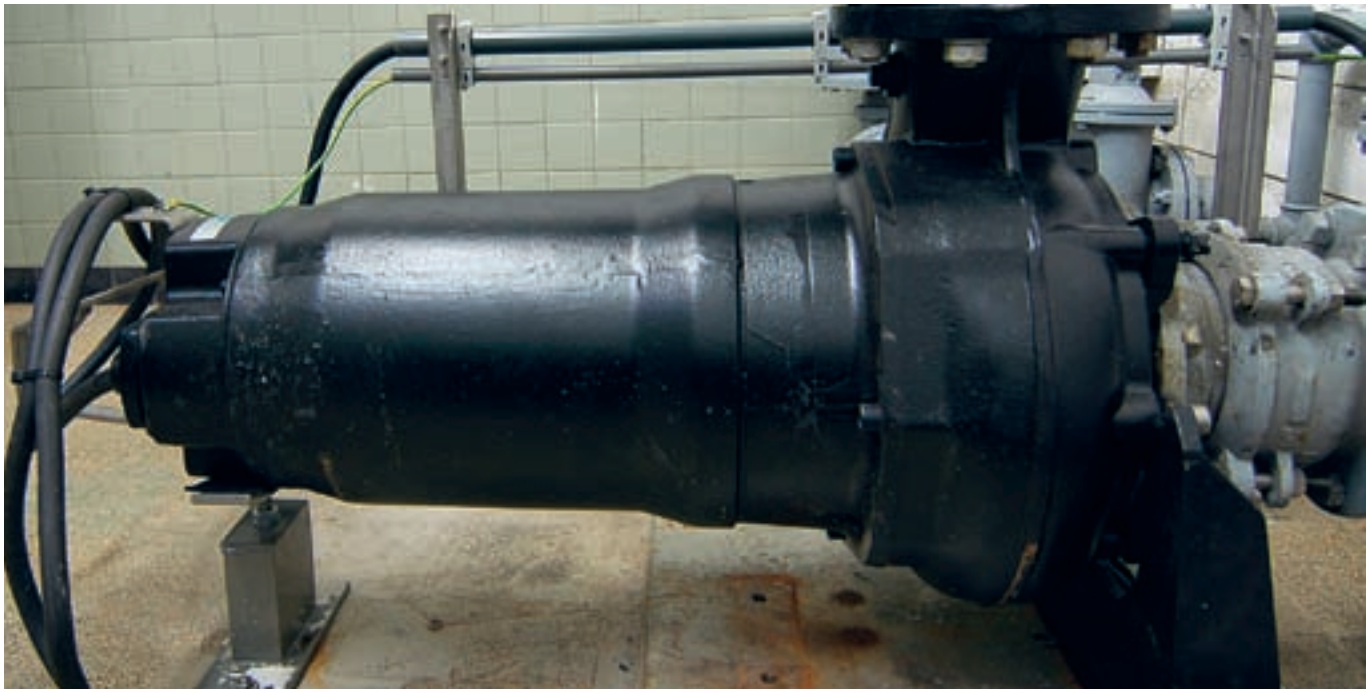
The venturi jet aerator is ideal for mixing combined with aeration of wastewater with aeration of both municipal and industrial wastewater in small-medium plants. It is also suitable for use in balance tanks where a combination of mixing and aeration reduces septicity and smell. Other usage areas are cleaning of storm water tanks. The Venturi is especially suitable for emergency or intermittent aeration tasks. The Venturi jet aerator is based on the injection principle; an effective air-water mix is produced which results in optimum aeration and suspension of solids.

Water circulation, max:	560 m^3/h
Air throughput, max:	600 m^3/h

* m^3/h are referred air t° = 20°C and 101,3 kPa ambient pressure

SUBMERSIBLE & DRY INSTALLED PUMPS.

Wastewater treatment works always need pumps for proper operation. From lifting the sewage up to the plant elevation to pressurizing the effluent against a river at high water, there are many different requirements for wastewater pumps of all sizes. For biological wastewater treatment plants ABS offers pumps for activated sludge return and for an intermediate lift into a tertiary treatment process. We also have extensive experience in stormwater retention applications as well as in stormwater bypass pumping stations.



ABS submersible sewage pump AFP and AFP-ME

The submersible sewage pumps AFP and AFP-ME are designed for reliable and economic pumping of heavily polluted sewage in commercial, industrial and municipal applications. The pumps have water pressure-tight encapsulated flood-proof motors in standard or explosion-proof versions with option of jacket cooling system and high efficiency motors. The pumps are suitable for both wet and dry installation making use of hydraulics with closed, single or multi-vane impellers and the Contrablock system for reduction of clogging. The AFP can be used for handling clear water, polluted water, sewage containing solids, faecal slurry and sludge.

Flow max:	11500 m³/h
Head max:	90 m

ABS dry installed sewage pump FR

The dry installed sewage pump FR is developed for economic pumping of heavily polluted sewage and wastewater in municipal and industrial applications. The back-pull-out design utilizes standard electrical motors, making the pump service-friendly. Ample space inside the impeller and volute makes the pumps less prone to clogging. A double seal arrangement makes dry running possible. The units are supplied with vortex impellers or with the Contrablock system for reduction of clogging.

Flow max:	8000 m³/h
Head max:	65 m

ABS submersible mixed flow column pump AFL

The AFL series is a range of submersible mixed flow column pumps for direct installation in discharge pipes that save space and installation costs. They are intended for large flows and moderate heads for stormwater, land drainage and flood protection. The AFL can handle sewage from commercial, municipal and industrial sources as well as liquids containing solids and fibrous material.

Flow max:	11000 m³/h
Head max:	30 m

ABS submersible recirculation pump RCP

The submersible recirculation pumps RCP are used for pumping and circulating activated sludge in wastewater treatment plants, especially for the denitrification/ nitrification process. The self-cleaning propeller is intended for lightly polluted sewage and activated sludge. The hydraulic efficiency is very high when pumping large flow and low heads. In contrast to conventional axial flow pumps, the RCP recirculation pumps do not require expensive structures in the tank. The compact unit is lowered along a guide tube and is easily connected to the pipeline by ABS automatic coupling system.

Flow max:	1250 l/s
Head max:	2.1 m

DEWATERING.

Choosing ABS as a partner for dewatering will bring you much more than just the right pump. Our dewatering philosophy is to provide you with the best total combination of expert advice, purchase or rental contract and service support for each specific situation or demand.

ABS solution – purchase, rental and service
Our real-world experience and application know-how makes us a partner who understands your challenges. We make sure to get the specifics of each project before giving you an offer. We want to know what media you are pumping, the requested flow, special conditions of your work site and what time schedules you have. Next step is helping you plan the project, assigning a suitable mix of pumps and suggesting the best service and back-up solution. Planning for a project with changing needs and unpredictable conditions is difficult and you always risk over-investing when playing safe. With ABS you have the option of renting instead of buying, giving you the most cost-efficient solution.

APPLICATION AREAS:

- Construction sites
- Sewage by-pass
- Infrastructure
- Tunneling
- Flood control
- Dredging
- Stone cutting
- Irrigations
- Open quarries
- Rescue pumping
- Fire fighting

PRODUCT RANGE:

- ABS submersible drainage pumps
- ABS submersible sludge pumps
- ABS engine driven diaphragm pumps
- ABS engine driven trash pumps

Reliable equipment
The core of ABS dewatering equipment is our range of highly reliable, easy to handle and transportable dewatering pumps. Our submersible range is characterized by robust design and low weight. The pumps have a modular design with interchangeable spare parts making service and maintenance easy. Our engine driven range consist of sturdy self-priming or vacuum assisted pumps with high suction lifts and ability to handle big volumes and high solid contents. Whatever your dewatering need is, ABS has the equipment to do the job.

Available when needed
Time is the most critical factor for most situations calling for a dewatering solution. ABS uses sophisticated stocking systems with international hub locations and on-hand stocks of key dewatering equipment to ensure a rapid reliable availability of products and spare parts.

DEWATERING PUMPS.

ABS submersible drainage pump J & JC

ABS submersible drainage pumps are suitable for pumping water and dirty water mixed with soil. The pumps have low weight and a compact design for convenient transport, handling and installation. The plug-in start enables quick start-up on site, and motor protection eliminates the risk of overheating. The modular design with interchangeable spare parts makes service easy and increase flexibility.

Motor size:	0,5 – 70 kW
Flow max:	1220 m^3/h
Head max:	101 m

ABS submersible sludge pump JS & JT/AFPT

ABS submersible sludge pumps are suitable for pumping sludge and water mixed with solids. The sludge range covers both slim portable light weight pumps and robust cast iron pumps for tougher conditions. The pumps are easy to handle and have a modular design with interchangeable spare parts. Plug-in start, motor overheating protection, low water level pumping and vortex impeller or Contrablock impeller for reduced blocking are main features. Explosion proof versions are available options.

Motor size:	0,9 – 25 kW
Flow max:	770 m^3/h
Head max:	53 m

ABS engine driven diaphragm pump

ABS engine driven diaphragm pumps are sturdy pumps for high solid content and shallow conditions. They are ideal for slow seepage applications with muddy water or sludge. The dry-running capability and self-priming function makes the diaphragm range reliable for keeping any area dry.

Engine size:	4 – 8 hp (3 – 6 kW)
Flow max:	45 m^3/h
Head max:	15 m total suction & discharge

ABS engine driven trash pump

ABS engine driven trash pumps are suitable for tough, dirty conditions requiring a pump that can handle big volumes of waste-water and high solids content. Contrablock impeller provides superior solids handling capabilities and resistance to clogs. The trailer or skid mounted pumps with or without sound attenuation are supplied with either self-priming or vacuum assisted pump ends.

Engine size:	4 – 156 hp (3 – 116 kW)
Flow max:	1360 m^3/h
Head max:	52 m

DRAINAGE PUMPS.

- Easy start – plug-in without worrying about overheating.
- Wear resistance – adjustable wear parts and high chrome impellers secure long lifetime.
- Reliable operation – dry running protection minimizes time for maintenance.
- Serviceability – same parts for different pumps lowers overall service.

SLUDGE PUMPS.

- Easy start – plug-in without worrying about overheating.
- Reliability - avoid downtime with free flow vortex impeller and primary seal in silicon carbide.
- Wear resistance – long running life with impeller and pump housing made from wear resistant ductile iron.
- Convenient handling – motor parts made in light weight aluminium on JS. Lifting handle and robust stand on JT.
- Servicability - same parts for different pumps lowers overall service.

DIAPHRAGM PUMPS.

- Wear resistance – from durable elastomer materials.
- Easy operation – automatically primes the suction hose.
- Dry running capability – no need for regularly inspections during operation.
- Reliability – a pump that last for years.
- Serviceability – easy access to the robust wear parts.

TRASH PUMPS.

- Avoid downtime – equipped with open impellers or Contrablock system ensuring cost savings and less maintenance.
- Long running time between refueling – due to the high hydraulic efficiency, the engine needs less fuel which equals lower operational cost.
- Long life and better fuel efficiency – automatic prime system. Only active (loading the engine) when needed.
- Strong seal design - allows for continuous dry running.
- Quick and easy – low side by side suction and discharge fitting makes coupling of pipes and hoses easy.

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