

be think innovate

Being responsible is our foundation
Thinking ahead makes it possible
Innovation is the essence

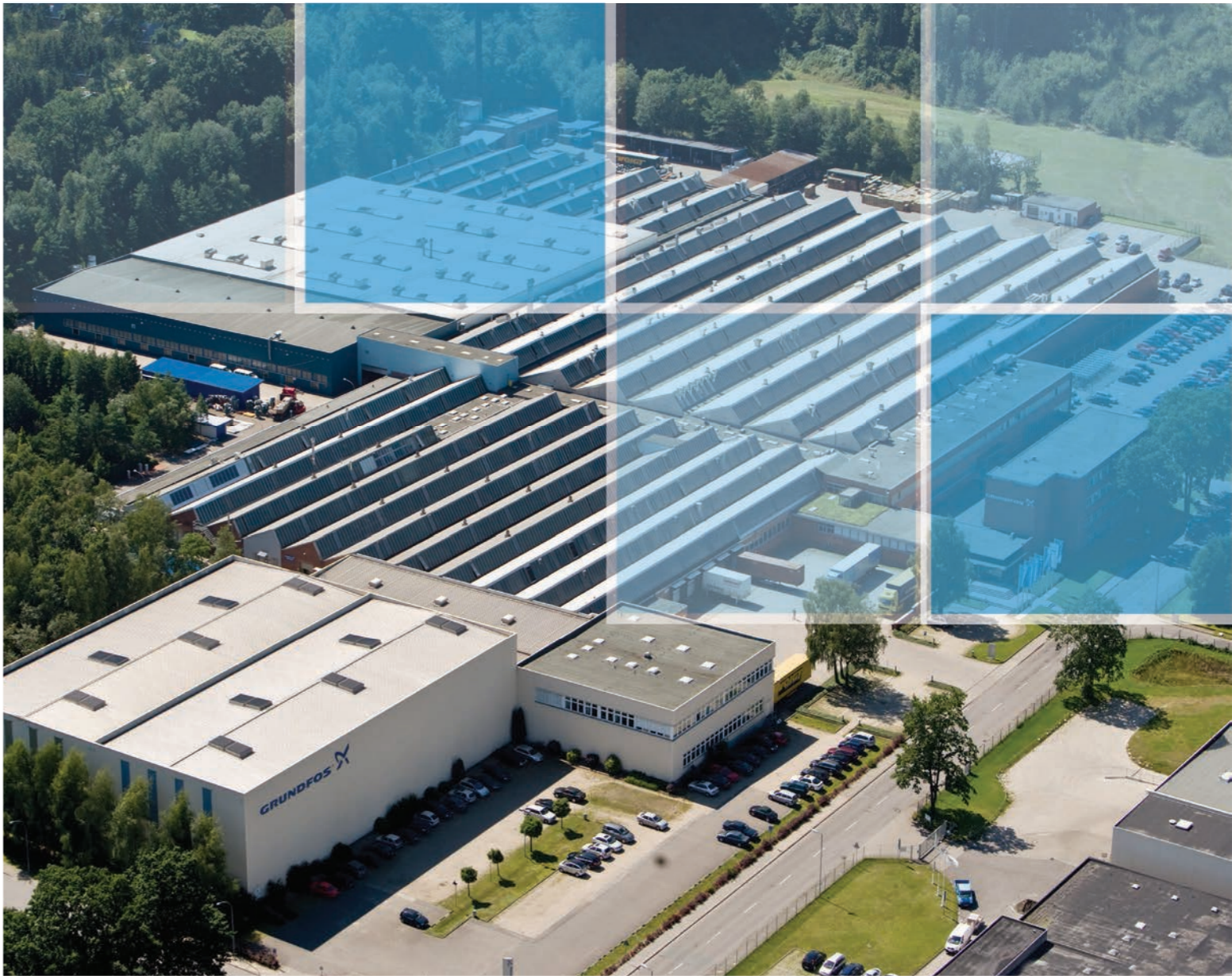
 Automotive	 Beverages	 CBS	 Cement
 Chemical	 Dosing	 DBS	 Food
 Fire	 Gas	 HVAC	 Iron/Steel
 Power	 Plumbing	 Pharma	 Marine
 OEM	 Paper	 Textile	 Tyre

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be think innovate

RELIABLE PUMPS FOR INDUSTRY

Performance Delivered



GRUNDFOS INDUSTRIAL SOLUTIONS STANDS FOR

QUALITY

QUALITY PUMPS THAT CAN ENSURE HIGH PLANT RELIABILITY

EFFICIENCY

PUMPS AND MOTORS WITH HIGH EFFICIENCY

WIDE RANGE

WIDE RANGE OF PUMPS AND PUMP SOLUTIONS FOR A LARGE NUMBER OF APPLICATIONS

COMPETENCE

COMPETENCES AVAILABLE TO ENSURE OPTIMAL PUMP SELECTION AND OPERATION

SUPPORT

LOCAL SUPPORT AVAILABLE TO ENSURE EASE OF SERVICE AND MINIMUM PLANT DOWNTIME

Thousands of industrial customers around the globe use pumping solutions designed, built and installed with Grundfos expertise. In all segments of the industry, our customers are served by dedicated specialists of the highest competence. Each pumping solution can be customised to exactly match the situation and the pumped liquid. Top quality production, testing and local service complete a package that always has your needs in mind. Our people contribute their know-how and expertise to ensure that you get what you need. We have a longstanding record of commitment to industrial professionals and we are determined to be your preferred pump supplier.

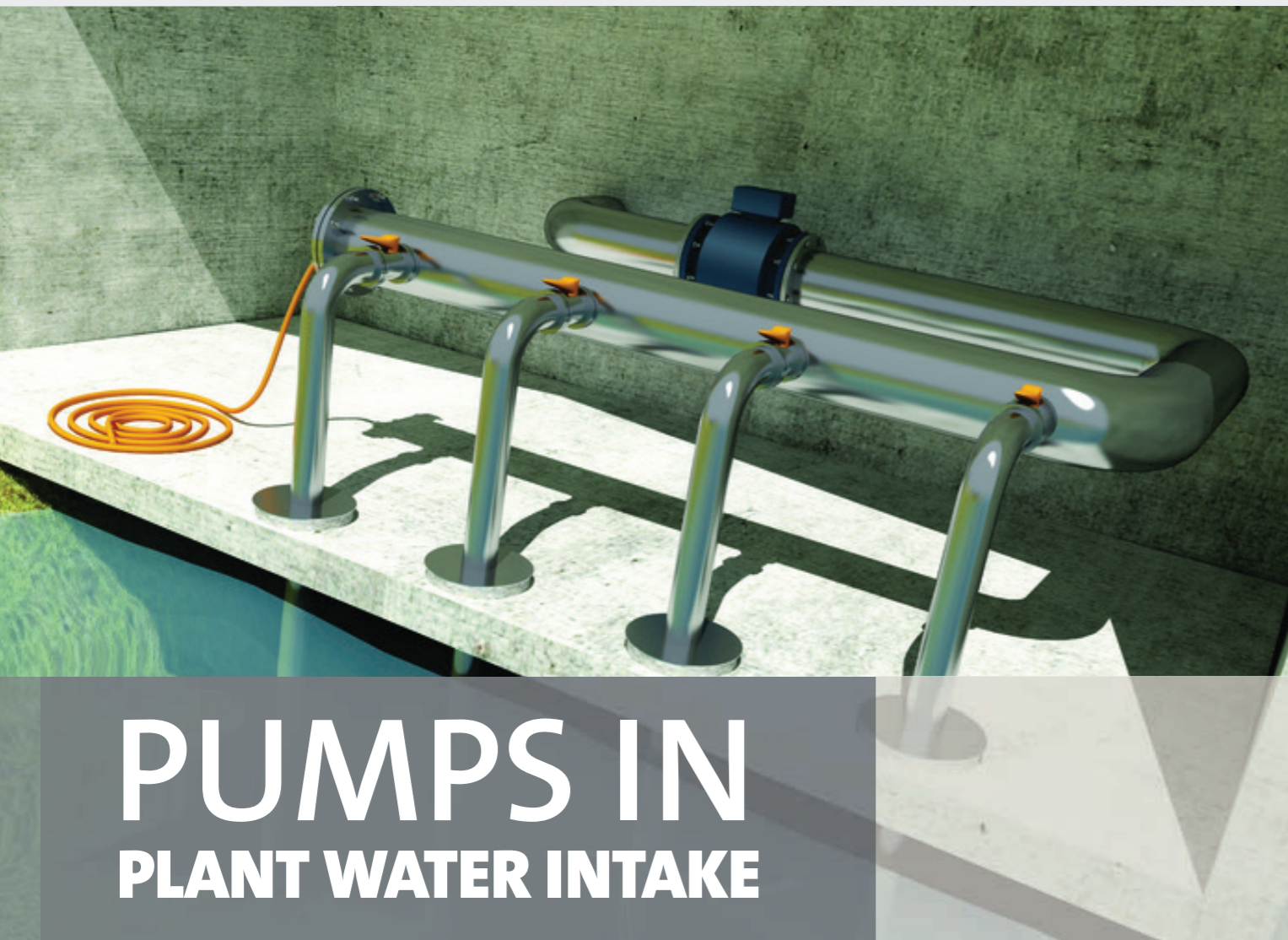


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- SERVICE SOLUTIONS



PUMPS IN PLANT WATER INTAKE

For water utilities, customers look for energy-efficient, intelligent solutions and worry-free processes. Consumption patterns vary from one industry to the next. Some require frequent use of water in smaller amounts while others need to fill several large tanks in no time – without it affecting the water supply in different parts of the building. The extensive range of Grundfos utility pumps has been carefully developed to ensure optimised uniform pressure and even flow at all times in water supply applications. As required the water quality is efficiently measured and controlled by means of an advanced measurement and control system.

Depending on your specific application, our reliable pumps can be customised to provide the exact pressure required. On top of single-stage and multistage pumps, high-performance booster pumps are available to guarantee optimised uniform pressure in critical or demanding applications. Booster systems can be delivered complete with VFDs and controls.

All Grundfos pumps for water supply applications carry official drinking water approvals.

NB (NKG) Single-stage, close coupled, back pull-out pumps

TECHNICAL DATA:

- Flow, Q: max. 1300 m³/h
- Head, H: max. 160 (210) m
- Liquid temp: -35°C to +140°C
- Operating pressure: max. 16 (21) bar

STANDARD FEATURES:

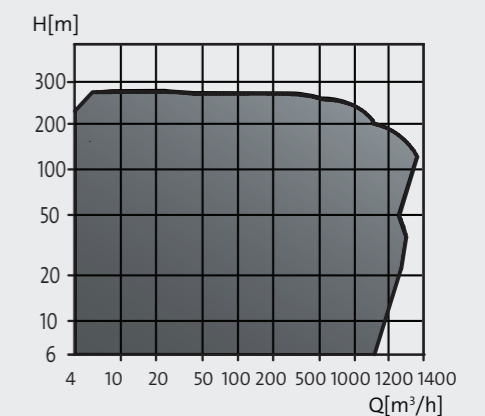
- Standard dimensions according to EN 733 and ISO 2858 standards
- Comprehensive operating range
- Robust design
- Flexibility
- Back pull-out design
- Self-flushing mechanical seals
- EN 12756 shaft seal
- Enclosed, balanced impeller
- CED coating
- Standard IE2 class motors

APPLICATIONS:

- District heating plants
- Heating systems for blocks of flats
- Air-conditioning systems
- Cooling systems
- Washdown systems
- Other industrial systems
- Industrial pressure boosting
- Industrial liquid transfer

OPTIONAL:

- Various types of shaft sealing depending on liquid, temperature and pressure
- Adaptability of materials (cast iron, brass, SS316 & duplex)
- Loose flanges for SS316 pumps
- Vertical mounting as option
- IE3 class motors as option



NK (NKG) Single-stage, long coupled, back pull-out pumps

TECHNICAL DATA:

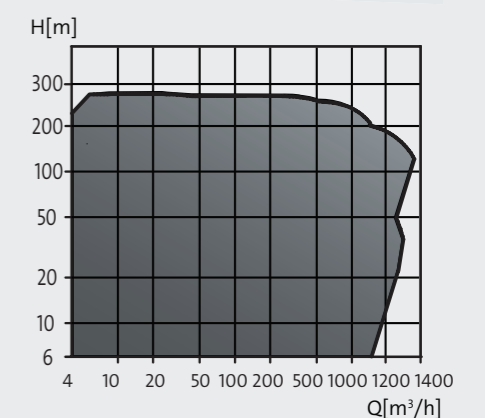
- Flow, Q: max. 1300 m³/h
- Head, H: max. 160 (250) m
- Liquid temp: -35°C to +140°C (220°C)
- Operating pressure: max. 16 (25) bar

APPLICATIONS:

- District heating plants
- Water supply systems
- Air-conditioning systems
- Cooling system
- Washdown systems
- Fire fighting systems
- Other industrial systems
- Industrial pressure boosting
- Industrial liquid transfer
- Desalination plants

OPTIONAL:

- Various types of shaft sealing depending on liquid, temperature and pressure
- Adaptability of materials
- Loose flange
- High inlet pressure
- Bearing monitoring systems
- IE3 class motors
- Diesel drive



STANDARD FEATURES:

- Standard dimensions according to EN 733 and ISO 2858 standards
- Comprehensive operating range
- Robust design
- Flexibility
- Back pull-out design
- Self-flushing mechanical seals
- EN 12756 shaft seal
- Enclosed, balanced impeller
- CED coating
- Standard IE2 class motors

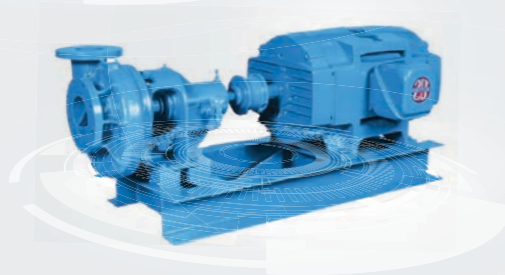
KP, KPV, LS

Axial split-case, double suction pumps



LF, LC

Frame mounted, single-stage, end suction pumps



TECHNICAL DATA:

- Flow, Q: max. 12,000 m³/h
- Head, H: max. 165 m
- Liquid temperature: -15°C to +120°C
- Working pressure: max. 25 bar
- Discharge sizes: 2" to 30"

APPLICATIONS:

- Chilled water
- Condensate water
- Commercial pools and water parks
- Direct and indirect cooling water
- Service water
- Water distribution systems

FEATURES:

- Wide hydraulic range
- Multiple material constructions and sealing arrangements
- Self-contained bearing housing
- Compensated dual volute design
- Vertical or horizontal mount

OPTIONAL:

- Bearing housing lubrication
- Materials of construction
- Seal materials and configurations
- NSF/ANSI-50 or NSF/ANSI-61 labels

TECHNICAL DATA:

- Flow, Q: max. 1400 m³/h
- Head, H: max. 125 m
- Liquid temperature: 120°C
- Working pressure: max. 16 bar
- Discharge sizes: 1" to 10"

APPLICATIONS:

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

FEATURES:

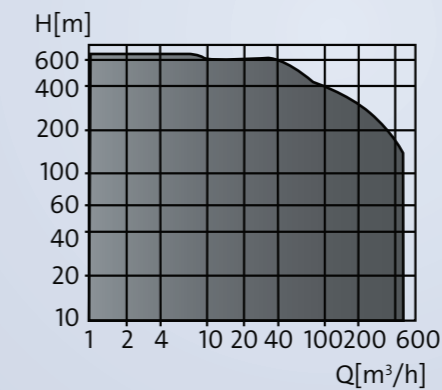
- Heavy-duty frame, shaft, bearing
- Wide hydraulic range
- Flexible, coupled design
- Steel or cast iron base plate
- Back pull out
- Double volute casing

OPTIONAL:

- Bearing frame lubrication
- All iron or all lead-free bronze
- Seal materials and configurations
- NSF/ANSI-50 or NSF/ANSI-61 labels

SP A, SP, SP-G

4", 6", 8", 10" & 12" submersible pumps



TECHNICAL DATA:

- Flow, Q: max. 470 m³/h
- Head, H: max. 670 m
- Liquid temp: 0°C to +60°C
- Installation depth: max. 600 m

APPLICATIONS:

- Groundwater supply to waterworks
- Irrigation in horticulture and agriculture
- Sea water intake
- Groundwater lowering
- Pressure boosting
- Industrial applications

FEATURES AND BENEFITS:

- High efficiency
- Long service life as all components are of stainless steel
- Motor protection via CUE or MP 204

OPTIONS:

- Data can be monitored and controlled via CUE, MP 204/R100

PUMPS IN WATER TREATMENT

ONE PARTNER FOR YOUR WATER TREATMENT CHALLENGES

Water treatment is technology-driven and heavily regulated and you need a partner who offers pump, dosing and disinfection solutions for the entire water treatment process. Whether you are looking for packaged solutions or individual pumping products for each stage of the water treatment cycle, Grundfos offers a range of high-quality products and unique expertise.



GRUNDFOS SOLUTION

CM: CENTRIFUGAL MODULAR

The CM and CME pumps are designed to cover a wide variety of applications ranging from small domestic installations to large industrial systems. The pumps are therefore suitable for a wide diversity of pumping systems where the performance and material of the pump must meet specific demands. Some of the most typical applications are washing & cleaning, water treatment, temperature control and pressure boosting.



TECHNICAL DATA:

- Flow, Q: max. 35 m³/h
- Head, H: max. 130 m
- Liquid temp: -20°C to 120°C
- Working pressure: max. 16 bar

FEATURES AND BENEFITS:

- Compact design & low noise
- Wide performance range
- Variety of material versions
- Service friendly
- CED coating

CR: CENTRIFUGAL RETURN

CR, CRN High Pressure

Multistage centrifugal pumps



TECHNICAL DATA:

- Flow, Q: max. 180 m³/h
- Head, H: max. 480 m
- Liquid temp: -40°C to +240°C
- Operating pressure: max. 50 bar

APPLICATIONS:

- Washing systems
- Water treatment systems
- Industrial plants
- Boiler feed systems

KEY FEATURES OF CR SERIES PUMPS

STANDARD FEATURES:

- Wide range
- In-line design
- Space saving
- Higher efficiency (no internal recirculation)
- Patented sealing system - Cartridge shaft seal - Less downtime
- Dual voltage adaptability
- 'Blue flux' motor - Highest energy efficient motors
- Highest durability & reliability
- Service-friendly

OPTIONAL:

- Various types of shaft sealing depending on liquid, temperature and pressure
- Adaptability of materials
- High inlet pressure
- Low-NPSH
- Air-cool top design
- High-pressure application
- Hygienic design
- Horizontal mounting
- Belt drive
- Many control facilities
- Wireless remote control, R100

CRE, CRIE, CRNE

Multistage centrifugal pumps – electronically controlled



TECHNICAL DATA:

- Flow, Q: max. 180 m³/h
- Head, H: max. 250 m
- Liquid temp: -40°C to +180°C
- Operating pressure: max. 33 bar

OPTIONS:

- Wireless remote control, R100

APPLICATIONS:

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

FEATURES AND BENEFITS:

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

GRUNDFOS BOOSTER MODULE

GRUNDFOS BM BOOSTER MODULE

BM is suitable for industrial and water supply applications requiring increased system pressure.

GRUNDFOS BMS hs:

BMS hs is a range of booster modules for reverse osmosis and filtration applications. These booster modules offer higher efficiency than the previous ranges. The reason is a direct-coupled pump which is powered by a permanent-magnet motor. Together with an improved design, this makes both maintenance and service easier than ever and you have a winning concept.

The BMS hs pump is delivered with a built-in non-return valve.

GRUNDFOS BMS hp:

The Grundfos BMS hp booster system is suitable for industrial and water supply applications where the inlet pressure is high, up to 82.7 bar (1200 psi). The BMS hp booster systems are used to increase the system pressure up to 82.7 bar (1200 psi). The BMS hp booster system is the optimum solution for applications requiring the following:

- Pumps capable of coping with high system pressures
- A minimum of maintenance

APPLICATIONS:

- Ultra-filtration in chemical & galvanic industries
- Desalination, metal & mineral industries in ZLD
- Pressure boosting & liquid transfer
- Water treatment plants
- Reverse osmosis

OPTIONS:

- MGE motor, MG motor



BM - TECHNICAL DATA:

- Flow, Q: max. 300 m³/h
- Head, H: max. 48.6 bar
- Liquid temp: +0°C to +40°C



BMS hs - TECHNICAL DATA:

- Flow, Q: max. 120 m³/h
- Head, H: max. 82.7 bar
- Liquid temp: +0°C to +40°C



BMS hp - TECHNICAL DATA:

- Head max: 12.56 bar
- Liquid temperature: +0°C to +40°C
- Max. flow: 343 m³/h

DOSING PUMPS

The Grundfos dosing and disinfection product range covers everything from disinfection of drinking water to water treatment in highly sensitive industrial processes. With one of the most extensive product ranges in the market, we are a natural partner for products and solutions in the pumping domain.

SMART DIGITAL DDA-FCM

ACCURATE DOSING

1% of set point at 50 ml/h and up; deviation below 2% when dosing chlorine bleach

BUILT-IN FLOW METER

FCM flow control measuring sensor (positive-displacement flow metre with integrated pressure sensor, measuring volume with every stroke)

AUTO FLOW ADAPT

Automatically adapting measured flow to attain target flow

DEGASSING FEATURES

Improved dosing head and valve design, air bubble detection, auto degassing drive strategy and auto-deaeration during pump standby

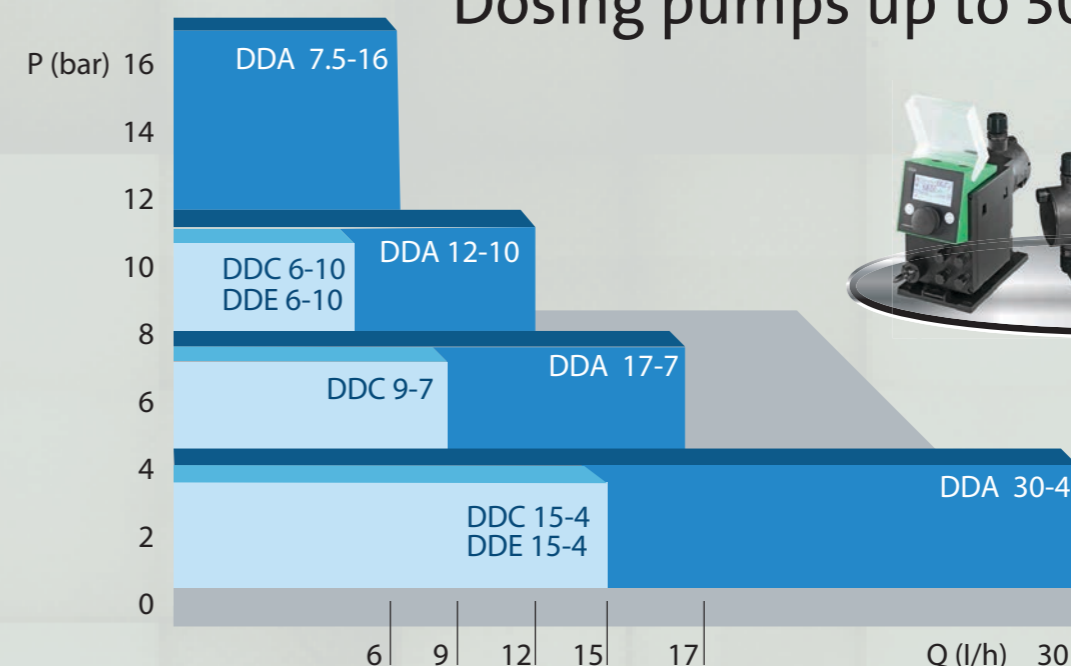
STEPPER MOTOR TECHNOLOGY

Pump runs at 100% stroke constantly

WIDE DOSING RANGE

Full range covered with only four dosing head sizes

SMART DIGITAL DIAPHRAGM Dosing pumps up to 30 l/h



DIGITAL DIAPHRAGM DOSING PUMPS: DME, DDI - UP TO 940 l/h

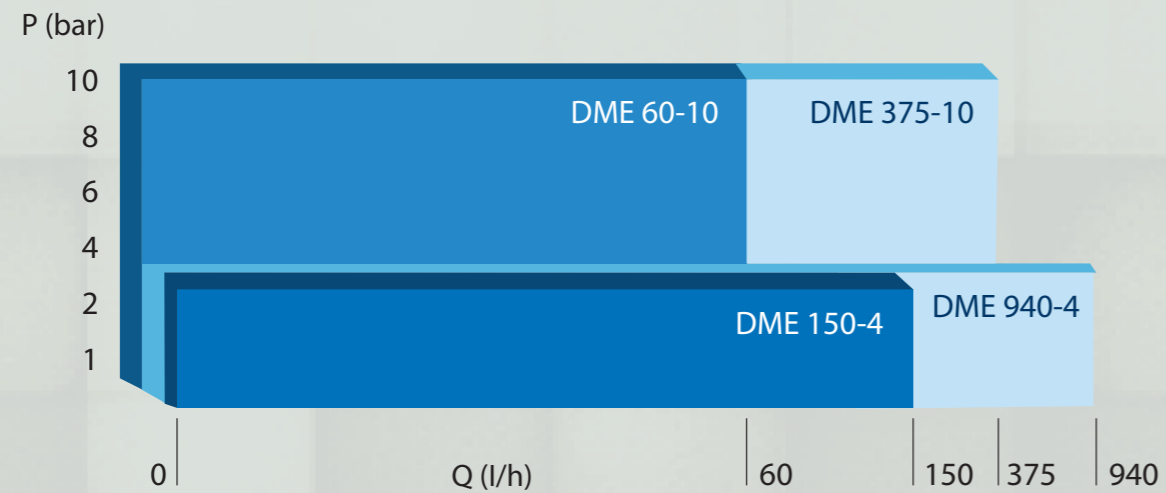
Dosing is precision work and Digital Dosing™ represents state-of-the-art technology. Grundfos DME and DDI Digital Dosing™ pumps combine precision with user-friendliness, covering large dosing quantities up to 940 l/h with few variants.

DME: PRECISE AND EASY SETTING

- Capacity from 75 ml/h up to 940 l/h and up to 10 bar
- Turn-down ratio 1:1000 with constant 100% stroke length
- Adjustable slow mode for dosing liquids with high viscosity (up to 3000 mPas)

DDI: FOR OPTIMUM PROCESS RELIABILITY

- Capacity from 75 ml/h up to 150 l/h and up to 10 bar
- 2 models cover the entire range
- PTFE diaphragm for universal chemical resistance
- Optional built-in flow control sensor



APPLICATION AREAS:

CHEMICAL TREATMENT AND CONDITIONING OF WATER

- Disinfection and pH adjustment
- Drinking water, process water and wastewater
- Food and beverage, clean-in-place
- Ultrafiltration and reverse osmosis
- Pulp and paper, boiler feed water
- Swimming pool water, cooling towers
- Coagulation, flocculation, precipitation
- Chemical industry, car wash, irrigation



DMX: MECHANICAL DIAPHRAGM

The Grundfos DMX range has proven its worth in dosing applications worldwide. With their robust diaphragm-based design and high-quality motors, DMX pumps require minimum maintenance and are the best choice for many dosing applications. The DMX range is highly versatile: it covers a wide flow range and offers a variety of dosing head sizes, materials and accessories.

DMX: ROBUST DESIGN FOR MINIMUM MAINTENANCE

- Capacity from 0.4 to 2x4000 l/h and up to 10 bar
- Double-head versions increase flexibility or dosing flow rate
- Available with EX classified or ATEX-certified motors

APPLICATION:

Disinfection, coagulation, flocculation, precipitation, etc. in:

- Drinking water treatment
- Wastewater treatment
- Pulp and paper industry
- Textile industry
- Cleaning water treatment
- Food and beverage industry, dairies
- Cooling tower water treatment
- Low-pressure boiler feed water treatment



FABRICATED DOSING SYSTEM

Grundfos provides a single point solution by offering the complete Dosing Systems, engineered to the customer's specification from design to commissioning. The components used by Grundfos are of high quality and reliability which in turn gives a trouble-free operation at the site, as these Dosing Systems are needed for continuous operation.

FEATURES:

- Digital dosing with stepper motor technology
- Turn down ratio up to 1:3000
- Auto flow adapt as an option
- Analog input and output signals
- MoC: PP, PVC, PVDF & SS

APPLICATIONS:

- Chlorine dosing
- pH correction
- Coagulant dosing
- Antiscalant dosing
- Hypo dosing

TECHNICAL DATA:

- Flow: up to 940 l/hr
- Head: up to 16 bar
- Operating temperature: up to 100°C
- As an option, we have hydraulic piston diaphragm pump, available up to 1500 iph & up to 200 bar



GRUNDFOS DTS – DIGITAL TANK STATION

DTS system is a compact dosing skid system, which is used when the chemicals are to be stored and dosed into the process line. This DTS system can be used for diverse dosing liquids because of its high-quality material. Maximum liquid temperature of 45 degree C.

DTS SYSTEM COMES WITH THE FOLLOWING COMPONENTS AS A SINGLE PACKAGE:

- Tank (60 litres to 1000 litres) – Black or transparent
- Grundfos pump
- Collecting tray
- Handheld mixer or electric stirrer
- Level switch for electric stirrer
- Suction lance
- Foot valve
- Discharge line
- Injection unit
- Dissolving hopper
- Drain valve
- Multi-function valve



APPLICATIONS:

- Dosing of biocides and inhibitors into cooling water
- Dosing of lyes and acids for pH regulation
- Dosing of coagulants (such as ferric (II/III) chloride) for wastewater treatment
- Dosing of hypochlorite
- Dosing of cleaning agents and disinfectants - CIP, cleaning machines
- Dosing of chemicals in paint shop & pre-treatment process

DISINFECTION SYSTEM - CHLORINE DIOXIDE GENERATOR

Capacity – Max 200 Kgs/Hr

Chlorine dioxide is an extremely long-lasting and effective disinfectant. Even relatively small quantities of chlorine dioxide display high disinfecting properties against all critical and chlorine-resistant germs, almost regardless of pH value. Chlorine dioxide can be used to successfully reduce the formation of biofilm in water pipes, which removes the life source for harmful germs such as legionella.

Oxiperm®: COMPACT, EFFICIENT AND COST-EFFECTIVE DISINFECTION

- Compact system to be installed in confined spaces
- On-site preparation of chlorine dioxide
- Complete chemical reaction within a minimum time
- Low operating costs and low consumption of chemicals

ClO ₂ PREPARATION CAPACITY [g/hr]	Pmax [bar]	CONSUMPTION OF COMPONENTS [l/h]		CONSUMPTION OF BYPASS WATER [l/h] (Input Pressure < Pmax)			WEIGHT [Kg]
		HCl	NaClO ₂	Continuous Operation	Batch Operation*		
		9%	7.50%		0.5 - 2 g/l	2 - 3.3 g/l	
30	9	0.7		420	-	-	40
120	9	2.9		420	55	55-31	42
220	7	5.2		420	100	100-56	44



CUSTOMIZED SYSTEM FOR THE GENERATION OF 1 KG TO 200 KG ClO₂/HOUR

GENERAL

The Grundfos chlorine dioxide production system is suitable for large water treatment applications. Based on a patented underwater production technology, it generates chlorine dioxide (ClO₂) using concentrated solutions of sodium chlorite (NaClO₂ 25-31 %) and hydrochloric acid (HCl 31-33 %). With their high precision, the integrated Grundfos dosing pumps assure a high-performance level and yield. The chlorine dioxide solution is produced in a very small reaction chamber which is installed in-line and is injected directly into the water to treat. In this way, the chlorine dioxide is present only in the treated water, which provides high safety and very effective consumption of the chemical precursors.

FEATURES AND BENEFITS:

- Very effective underwater production technology: Chemical reaction yield of 95-98 % requiring fewer chemicals and generating fewer by-products
- Low consumption of chemicals and power: Only 5.7 kg HCl per 1 kg of generated ClO₂
- Reduced transportation and chemical storage costs: Using concentrated sodium chlorite (NaClO₂ 25-31 %) and hydrochloric acid (HCl 31-33 %)
- Reduced investments and increased safety: No need for a storage tank or safety zone for the generated ClO₂ solution
- Lower risk due to low quantity: Small volume of reaction chamber means lower ClO₂ quantity
- No risk of concentrated ClO₂ gas released into the atmosphere: Highly concentrated ClO₂ is generated under water
- Few components
- Easy installation

CONTAINER INSTALLATION

If it is not possible to install the system indoors or if ambient conditions are not suitable for an outdoor installation, the dosing section and the control system can be preinstalled in an air-conditioned container.

CUSTOMIZED SYSTEMS

The Grundfos chlorine dioxide production system can be tailor-made according to customer needs: titanium pumps for pressurized injection, a distribution panel for multiple injections, complete or partial redundancy, external communication for remote control, etc.





PUMPS IN PLANT UTILITIES

BOILER FEED

Industry production lines depend heavily on efficient and reliable boiler operation. This is why Grundfos' robust feeding pumps for steam boilers, hot water boilers and thermal oil boilers have been specially designed to offer optimum performance in even the most extreme conditions.

All Grundfos feeding pumps can be fitted with an integrated frequency converter to optimise processes in terms of temperature, pressure level and quality of steam. If the makeup of water is part of the process, dosing pumps will ensure highly accurate dosing of any additive.

STEAM

When it comes to feeding pumps, steam boilers are among the harshest and the most challenging application. The process involves high pressure, high ambient temperatures and a significant number of starts and stops that stress the pump. To accommodate the extreme conditions, Grundfos' multistage feeding pumps have been optimised in every aspect and are even capable of efficiently handling poor inlet conditions. The pumps can further be supplied with an air-cooled top that protects the shaft from any damage caused by high temperatures – and with a monitor that will supervise the process and warn you about any deviances.

THERMAL OIL

Thermal oil is a highly suitable alternative to steam in many processes, particularly where a very high pressure is required. Grundfos' range of feeding pumps for thermal oil application handles temperatures up to 240°C.

HOT WATER

Grundfos' single-stage shunt pumps for hot water boilers handle temperatures up to 110°C, ensuring that any process requiring hot water is sufficiently supplied and that the water temperature in the boiler is constant.



CR Pump

CR-E Pump

CHALLENGE	SOLUTION
The very high temperature of hot liquids can be damaging to the pump and even destroy the shaft seal.	Grundfos offers specially designed solutions that handle liquid temperatures up to 240°C, including thermal oil.
The application's inlet conditions are poor.	An advanced Grundfos low-NPSH pump is available, that efficiently reduces NPSH & eliminates cavitation.
In high-pressure applications like steam boilers, the pump is subject to demanding operating conditions.	Dedicated high-pressure Grundfos pumps have been reinforced to be able to generate up to 50 bar pressure – without reducing the life of the shaft seal.
When temperature control is a part of the process, the pump material is potentially stressed because of the continuous thermal expansion and contraction.	By applying one of Grundfos' speed controlled pumps, the temperature is held constant.

PRESSURE BOOSTER

Optimised uniform pressure at all levels is a vital feature of any booster system installed in an industrial application of any nature. Our booster systems offer perfect constant-pressure control and will handle all variations in water consumption. Harmful peak pressures are prevented, resulting in less stress on the pipework and reduced water loss in the distribution circuit, as less water will be forced through leakages. Booster systems with high efficiency need not be big. Our booster systems take up a minimum amount of space wherever they are placed. In other words, they have a small footprint.

WHAT GRUNDFOS OFFERS?

Hydro MPC E/S/F

- Max. head: 160 m
- Flow rate: 0 to 1100 m³/h
- Liquid temperature: 0° to +60°C
- Max. operating pressure: 16 bar

We offer the option of having all pumps with mounted VFD on the pump or in a panel, having one pump on VFD and other pumps on the starter and many other customised combinations likewise.

APPLICATIONS:

- Potable water distribution within the plant to multiple buildings spread across a larger area
- Process water distribution for heating / cooling applications
- Water supply to buildings of different heights with optimised pressure at all levels
- Water supply to cooling towers / reactors
- Water supply to cleaning / washing applications
- Possibility of backup sensor (redundant primary sensor)

Intelligent multi-pump controller, CU 352

Pump operation is controlled by Control MPC with the following functions:

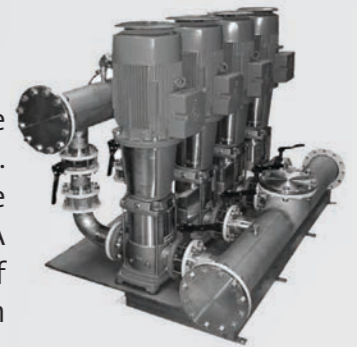
- Optimised uniform pressure control through continuous variable adjustment of the speed of each individual pump
- PID controller with adjustable PI parameters (Kp + Ti)
- Optimised uniform pressure at set point, independent of inlet pressure
- On/off operation at low flow
- Automatic cascade control of pumps for optimum efficiency
- Selection of minimum time between start/stop, automatic pump changeover and pump priority
- Automatic pump test function to prevent idle pumps from seizing up
- Possibility of standby pump allocation
- Possibility of backup sensor (redundant primary sensor)



CUSTOM-BUILT SOLUTIONS IN HYDRO SYSTEMS - HYDRO MPC E/S/F

1. BOOSTER SYSTEMS WITH DISCHARGE ELBOW MANIFOLD

To meet your requirement of a booster system with a small footprint, we offer custom-built booster systems with discharge elbows manifold. Discharge elbow manifolds are 90°C pipe elbows placed on the discharge side of the booster system between pump and manifold. A booster system with discharge elbow manifolds reduces the footprint of the booster system significantly compared to booster systems with traditional manifolds.



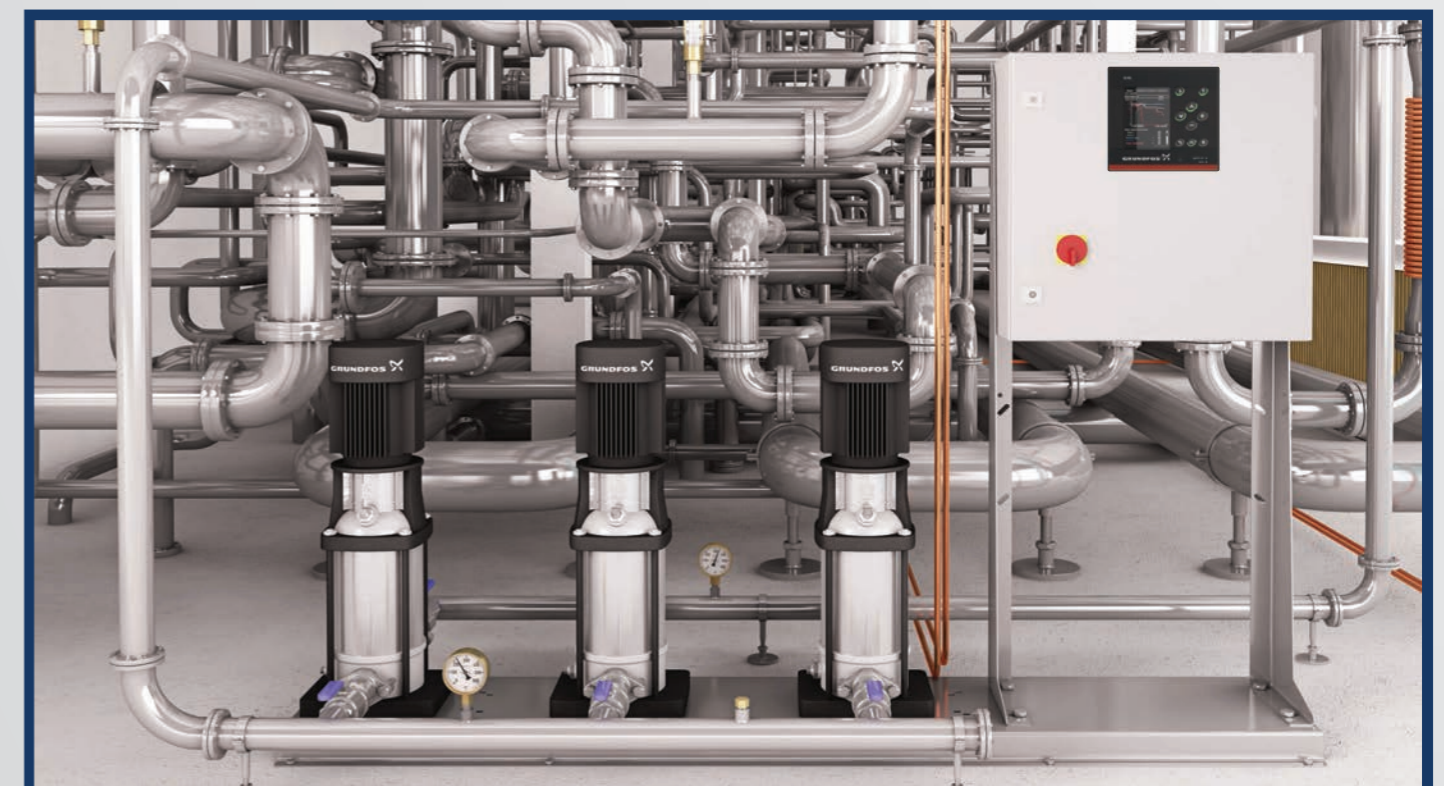
2. HYDRO BOOSTERS FOR HIGH TEMPERATURE

High temperature can be divided into two areas when it comes to pressure boosting:

- Pumping of hot water
- Pumping at high ambient temperature

In both situations, it is crucial for a successful operation that each component is well-sized and of the right material. Otherwise, the result may be a breakdown and reduced life. If you wish to pump water at a temperature higher than +120°C, it is advisable to fit the pumps of your hydro booster system with an air-cooled top. It is a special air-cooled seal chamber generating the same insulation effect as a vacuum flask.

No external cooling is necessary - the ambient temperature is sufficient. An automatic air vent is required for venting the seal chamber.



FIRE PUMPSET

GRUNDFOS PEERLESS PUMPS FM APPROVED & UL LISTED PUMPS (NFPA 20)

- Peerless fire pump units & systems deliver superior fire protection to facilities throughout the world. For over 75 years Peerless pumps have been offering complete service from engineering assistance to in-house fabrication to field start-up. Products are designed from a broad selection of pumps, drives, controls, baseplates and accessories.
- Pump choices include horizontal, in-line centrifugal fire pumps, as well as vertical turbine pumps, combined with right angle gear box.

GRUNDFOS - SKID MOUNTED FIRE SYSTEMS

Quality with reliability & safety inbuilt

FEATURES:

- Completely factory assembled. Pump sets comply with NFPA 20 & local NBC / TAC guidelines.
- Pump, driver and controller mounted on common base.
- Tailor made systems include accessories, fittings and layouts, meeting the customer's specifications.
- Eliminates the need for separate mounting surfaces thereby saving a lot of space.
- Reduced foundation works.
- Single supplier responsibility – units are fully assembled at the Grundfos' factory prior to delivery.
- In-house engineering and design expertise to ensure design requirements are realised.
- 'Plug-and-douse system' – faster and simplified installation and handling.

A WIDE RANGE OF APPROVALS



FEATURES (NFPA 20/FM/UL):

- Complete unit responsibility
- State-of-the-art engineering designs
- Value added services for customers
- Reduced installation costs
- Provide worldwide techno-commercial support
- Grundfos-Peerless network offers quick after sales service
- ISO 9001 manufacturing facility



SPECIFICATIONS (NFPA 20/FM/UL):

- Capacities: up to 1,136 m/hr
- Head: up to 359 metres
- Pressure: up to 45 kg/cm
- Horsepower: up to 597 kW
- Temperature: up to 115°F (46°C)
- Drives: Motors, engines, steam turbines combinations
- Liquids: Water
- Materials: Cast iron, bronze fitted as standard, other materials are also available

AIR-CONDITIONING

GRUNDFOS HVAC SOLUTIONS ARE YOUR GLOBAL AND INNOVATIVE BUSINESS PARTNER

We have customers & solutions in focus at all times and we keep you abreast with new developments in pumps, hydraulic systems and associated components for your systems. We develop standard and customised HVAC solutions in close contact with our customers. We can put you on the fast track to developing some of the best HVAC systems in the market. With Grundfos HVAC products in your chiller, solar thermal or heat pump systems, you are guaranteed superior quality and perfect integration. Our solutions are tried & tested and substantiated with around six million new pumps and hydraulic systems on the market every year.

MULTI-PUMP CONTROLLER (MPC)

MPC permits monitoring and control of up to six identical pumps connected in parallel and will minimise energy consumption and cut energy costs straight out of the box for the highest possible system energy efficiency.

COMMUNICATION:

- Supports communication with monitoring equipment or other external units using the communication interface.
- Module (CIM) via a number of different fieldbus protocols compatible with Grundfos Remote Management.

COMPONENTS:

The basic components of the Control MPC are:

- CU 352 - Control unit
- IO 351 - Primary I/O unit

The Control MPC comes in variants for mains operation, external VFD speed control or with speed control built-in.

APPLICATIONS:

- Water distribution
- Air-conditioning

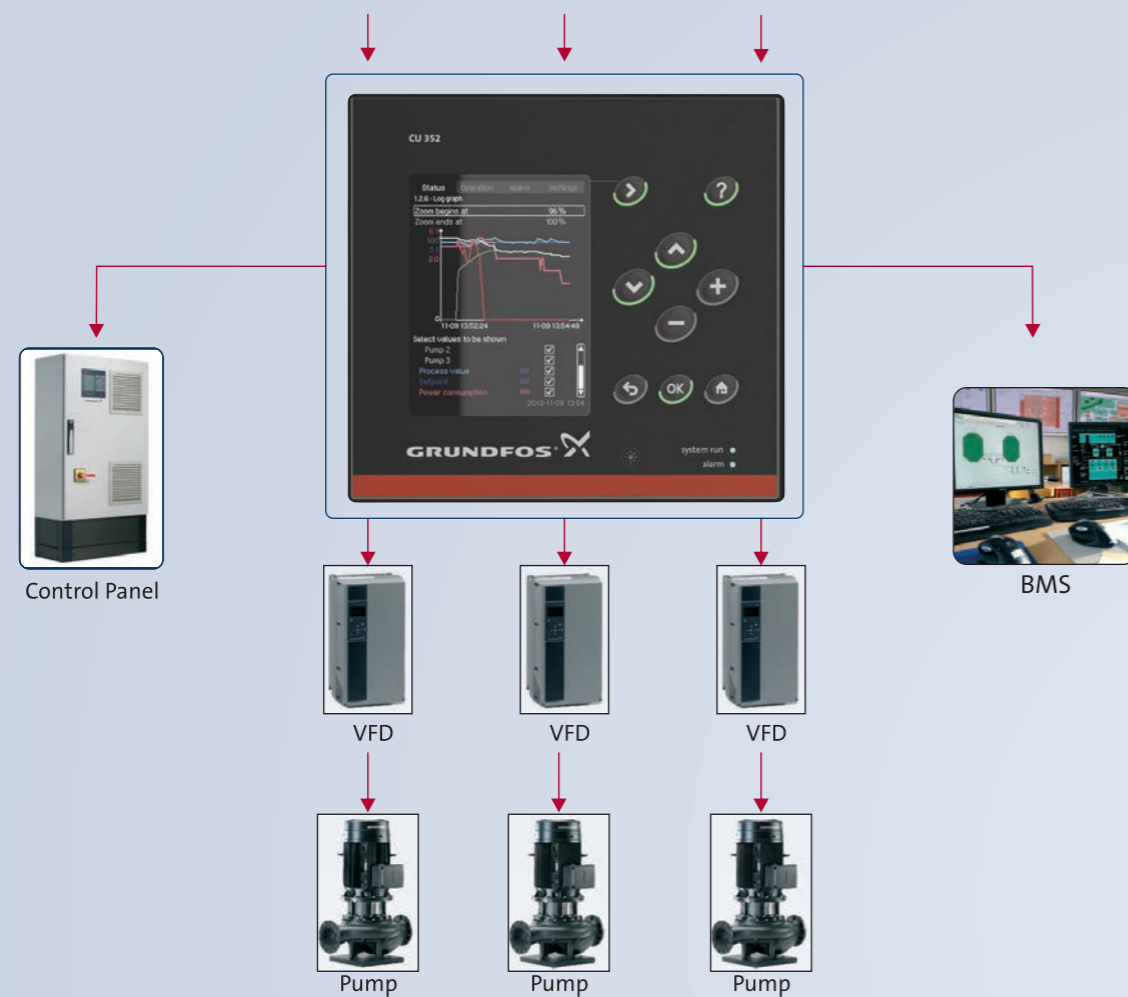
BENEFITS:

- Easy to install and configure: The installation wizard helps the user to configure the system when you first start, ensuring the desired parameters are set up in the correct sequence.
- Standby pump allocation, forced pump changeover and dry-running protection help to increase system reliability and decrease downtime and costly maintenance.
- Soft pressure build-up function minimises the risk of water hammer – reducing the risk of water loss and costs of pipe maintenance.



ANALOG INPUTS

FROM DIFFERENTIAL PRESSURE / FLOW / TEMPERATURE SENSORS



FEATURES:

- Dedicated pump logic controller for chilled / hot water variable speed pumping applications e.g. secondary, tertiary & condenser
- Modular design for multiple analogue inputs & outputs
- Additional analogue input for external set point influence
- End of curve protection
- Expandable modules
- Potential free contacts for BMS on board ethernet port
- 320x240 pixel graphical display with backlight
- Auto by-pass provision
- Fault memory up to 24 alarms with time stamping
- Programmable auto testing of all the pumps
- Friction loss compensation for additional energy savings
- Clock program function
- Programmable standby pumps

Controls up to six pumps in wastewater applications in main and pressurised pumping stations. A range of advanced features allows for system measurement, calculation and integration with the monitoring, control and energy optimising equipment.

COMPONENTS:

The main components of the system dedicated controls are:

- CU 362 - Control unit
- IO 351 - Basic I/O module
- IO 113 - Protection module for pump sensors
- SM 113 - Sensor module

BENEFITS:

- The anti-clogging attributes of the flush and reverse function are unique to dedicated controls, as is the ability for continuous energy optimisation according to duty condition.
- User-friendly display interface with an intuitive and easy-to-follow installation wizard where you can also choose your language.
- In addition to a comprehensive range of basic features, defined inputs / outputs can be added for system functions specific to the pumping station.

APPLICATIONS:

- Wastewater transport
- Flood control
- Wastewater treatment

CUSTOMISED CONTROL PANELS



PUMPS IN PLANT PROCESS

MACHINE TOOL PUMPS

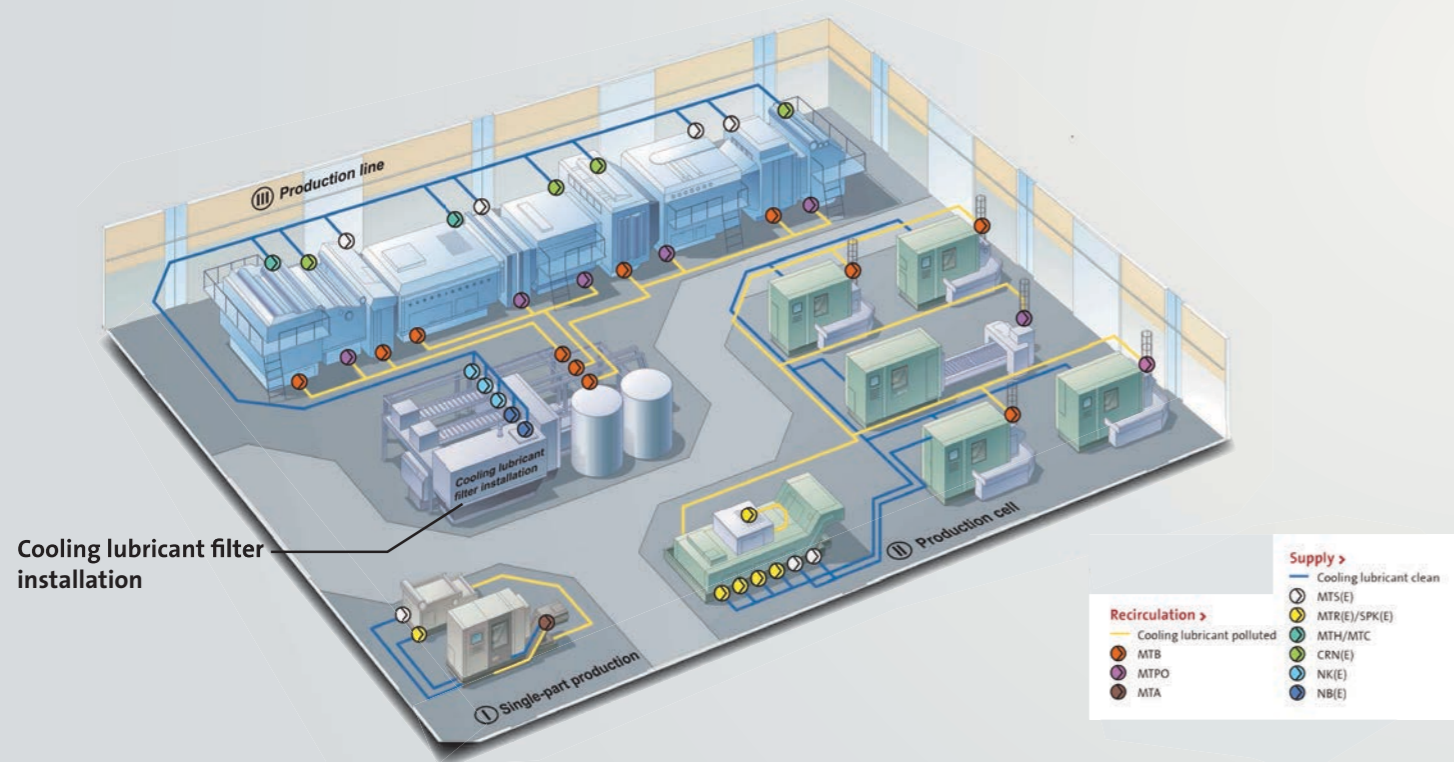
Push the Boundaries

Grundfos' range of high-pressure pumps offers unsurpassed accuracy and stability to make sure that nothing interferes with the delicate machining process.

Equally important, high efficiency ensures a remarkably low heat input into the cooling lubricant. Integrated frequency converters can be optionally supplied for increased system efficiency and flexibility. Pumps suitable for machine tool applications are the immersible MTH, MTS, MTR and SPK, offering a tank mounted design.

In addition, CR and CM are also suitable.

ADVANCED SOLUTIONS FOR DEMANDING SURROUNDINGS



Every application in the machining industry is covered by a robust Grundfos product. If you are looking for a pump for production purpose, we provide you with a choice of top-of-the-line solutions.

On top of an impressive range of high-quality pumps, we offer a wide array of motors, speed controls and monitors which efficiently optimise your processes and your energy consumption.

Application	Boring	Sawing	Milling	Grinding	Spark erosion	Wire cutting	Turning	Chilling	Part washing	Filtration
CM						•		•	•	
CR(E)					•				•	
MTA	•	•	•	•						•
MTB(E)										•
MTH	•		•	•	•	•	•	•	•	•
MTR(E)	•		•	•	•	•	•	•	•	•
MTS(E)	•		•	•			•			
NB/NK(E)			•	•				•		•
SPK(E)	•		•	•	•	•	•	•	•	





WASHING, CLEANING & SPRAYING

WASHING AND CLEANING

You are in safe and reliable hands when you let Grundfos be part of your washing and cleaning applications. We offer a variety of efficient pumps.

If you are building a new washing and cleaning system, we recommend that you talk to us as early in the development process as possible. The majority of our pumps can be easily adjusted to match your specific requirements and optimise the entire system.

APPLICATIONS:

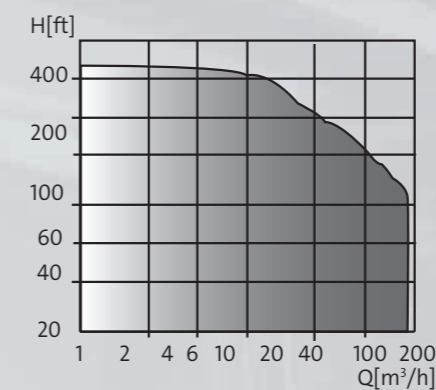
- Vehicle washes
- Wash-down systems
- Part washers
- CIP/SIP

OPTIONS:

- Wireless remote control, R100

FEATURES AND BENEFITS:

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



TECHNICAL DATA:

- Flow, Q: max. 180 m³/h
- Head, H: max. 250 m
- Liquid temp: -40°C to +180°C
- Operating pressure: max. 33 bar

CRE, CRIE, CRNE

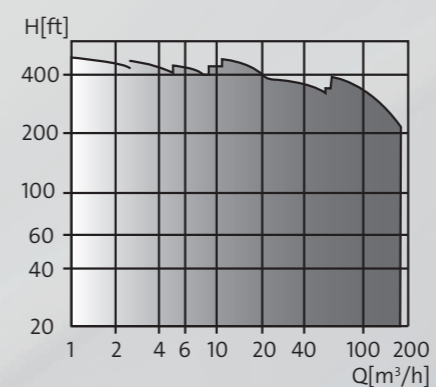


CR, CRN



FEATURES AND BENEFITS:

- Reliability
- High pressure
- Service-friendly
- Space-saving
- Suitable for slightly aggressive liquids
- Single-pump solution enabling high pressure



TECHNICAL DATA:

- Flow, Q: max. 180 m³/h
- Head, H: max. 480 m
- Liquid temp: -30°C to +120°C
- Operating pressure: max. 50 bar

PROCESS COOLING/ HEATING/ COOLING TOWERS

Cooling is the very nerve centre of many industrial applications from sanitary process lines across cooling towers to machining processes. This calls for highly reliable solutions and with Grundfos by your side you are guaranteed optimum performance of both primary and secondary refrigerants.

Grundfos coolant pumps expertly handle brine, glycol and ammonia as well as the most challenging refrigerants - carbon dioxide and CFC. This versatility along with a strong focus on the type of shaft seal required to optimise safety, durability and efficiency in a specific application is what set us apart from competition.

Naturally, any cooling or refrigeration solution can be supplied with dosing pumps that ensure very accurate dosing of chemical additives.

CR Range

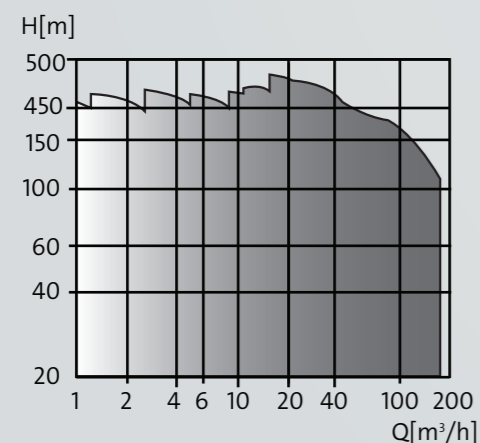


TECHNICAL DATA:

- Flow, Q: max. 180 m³/h
- Head, H: max. 480 m
- Liquid temp: -40°C to +240°C
- Operating pressure: max. 50 bar

FEATURES AND BENEFITS:

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



NB(G), NK(G)



TECHNICAL DATA:

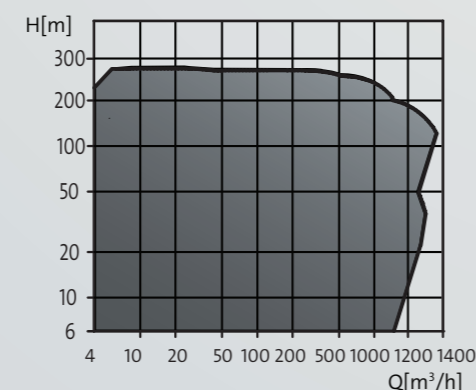
- Flow, Q: max. 1300 m³/h
- Head, H: max. 160 (250) m
- Liquid temp: -35°C to +140°C (220°C)
- Operating pressure: max. 16 (25) bar

FEATURES AND BENEFITS:

- Standard dimensions according to EN 733 and ISO 2858 standards
- Comprehensive operating range
- Self-flushing mechanical seals
- Enclosed, balanced impeller
- Standard IE2 class motors
- Back pull-out design
- CED coating
- Robust design
- Flexibility
- EN 12756 shaft seal

OPTIONAL:

- Various types of shaft sealing depending on liquid, temperature and pressure
- Adaptability of materials
- Bearing monitoring systems
- High inlet pressure
- Loose flange
- IE3 class motors



TEMPERATURE CONTROL

When it comes to temperature control Grundfos is an experienced partner to team up with, offering expert know-how within:

- Heating
- Cooling
- Refrigeration

Whether your system operates above or below zero and whatever is running through the pipes, we have got the pumping solution to match your requirements. Even difficult liquids like carbon dioxide, ammonia and flammable liquids are handled with great efficiency and care, promising smooth and safe operation at all times.

TECHNICAL DATA:

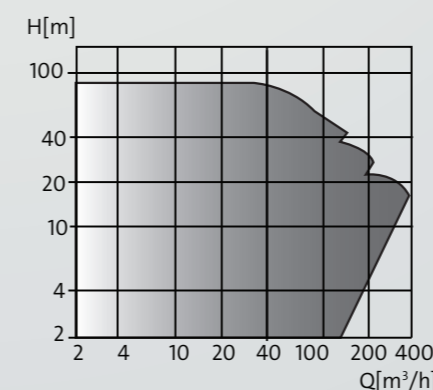
- Flow, Q: max. 340 m³/h
- Head, H: max. 90 m
- Liquid temp: -25°C to +140°C
- Operating pressure: max. 16 bar

APPLICATIONS:

- District heating plants
- Cooling and air-conditioning systems
- Industrial plants
- Flexible pump range
- Water supply systems

FEATURES AND BENEFITS:

- Low energy
- Adaptation to existing operating conditions
- Simple installation
- Many control facilities
- Wireless remote control, R100
- Communication via GENIbus or LON



TPE3



TECHNICAL DATA:

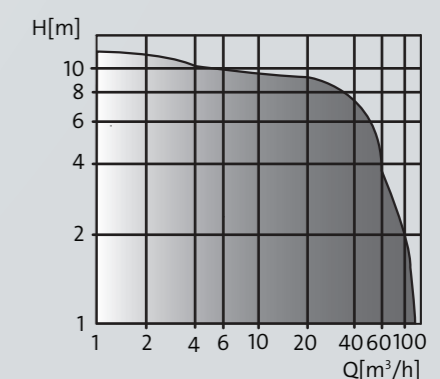
- Flow, Q: max. 90 m³/h
- Head, H: max. 12 m
- Liquid temp: +15°C to +110°C
- Operating pressure: max. 10 bar

FEATURES AND BENEFITS:

- Low noise
- Low energy
- Energy labelling: Class A
- Wide range
- Automatic performance adjustment
- Simple installation (no extra equipment or fittings required)
- Safe selection

OPTIONS:

- Stainless steel pump housing
- Twinhead versions
- Wireless remote control, R100
- Communication via GENIbus or LON



MAGNA3



HYDRO PNEUMATIC SYSTEM

Pressure boosting system is designed to increase the pressure in a water system in order to achieve sufficient water flow and pressure to consumers.

Pressure boosting systems generally consist of one or more pumps which are installed in a booster set to increase the pressure in a system to a certain point, independent of flow and inlet pressure.

SYSTEM CONFIGURATION

Pressure boosting sets are installed in various system configurations, each offering different advantages and characteristics such as comfort level, initial investment cost, running costs, flexibility and supply assurance.

ADVANCED BOOSTERS

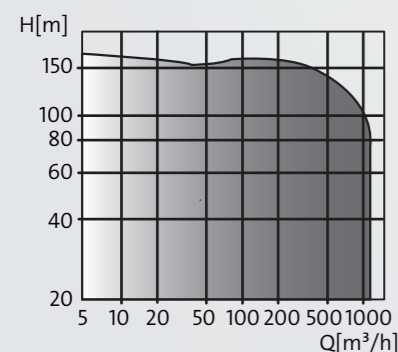
Our most advanced booster set features application-optimised software. Here you will find functions such as the proportional pressure function used for friction loss compensation in large pipe grids. You will also get the soft pressure build-up function, which is ideal for installations with unstable power supply.

TECHNICAL DATA:

- Flow, Q: max. 1100 m³/h
- Head, H: max. 160 m
- Liquid temp: 0°C to +70°C
- Operating pressure: max. 16 bar

APPLICATIONS:

- Treated water distribution



FEATURES AND BENEFITS:

- Easy installation and start-up
- User-friendly setting and monitoring
- Application-optimised software
- Modular solution with possibility of expansion
- Data communication via Ethernet, LON, Profibus etc.
- High efficiency



Go where superior technology is combined with a fresh outlook. Go to the wastewater professionals.

Go to Grundfos...

You can rely on Grundfos to take a professional approach to the challenges of modern wastewater management. We have a long history of making superior pumps, we have carried out judicious acquisitions of other companies to complete our range and we are proud that customers worldwide commend our products & services – and the firm values behind it all. And now our solutions cover the range from tried-and-tested.

The range is wide, the quality is top-notch and the performance is so impressive that you will never go back. Just describe your scenario, we are sure to have a solution with the optimum combination of pump performance, efficiency and reliability.

1. DRAINING & DEWATERING RANGE OF PUMPS

UNILIFT AP

These pumps are designed for liquid transfer and drainage of clean or slightly dirty wastewater. This pump has the ability to be completely or partly submerged in the liquid.

The pump can be used for automatic as well as manual operation and can be installed permanently or used as a portable pump.

TECHNICAL DATA:

- Max. flow rate, Q: 34 m³/h
- Max. head, H: 18.28 m
- Liquid temp: 0°C to +55°C
- Max. particle size: Ø12, 35 & 50
- Material: Stainless steel

APPLICATIONS:

- Drainage of cellars or buildings
- Pumping of wastewater in buildings
- Groundwater lowering
- Drainage in places prone to flooding
- Emptying applications, e.g. pools, tanks and vessels
- Dewatering in construction sites and excavations



UNILIFT AP



DWK

DWK

Durable and compact dewatering pumps

With the submersible solid cast iron construction and narrow design means the DWK range is ideal for pits, free standing installations, in any situation where effective dewatering is needed.

TECHNICAL DATA:

DWK.O (Semi-open up to 15 kW)

- Q: up to 190 m³/h
- H: up to 55 m

DWK.E (Enclosed from 22-90 kW)

- Q: up to 400 m³/h
- H: up to 110 m

DPK

High pressure & reliable submersible drainage and effluent pumps

The DPK range presents a surprisingly compact design, considering the pressure capabilities on offer. Together with the solid cast iron construction and available installation options, the DPK range is perfect for drainage pit applications. Suitable for free standing as well as permanent installations.

TECHNICAL DATA:

- Q: up to 164 m³/h
- H: up to 56 m
- Semi-open up to 22 kW



DPK

2. THE GRINDER PUMPS (SEG)

Tough, versatile pumps for domestic sewage transfer

In areas with no sewer systems or areas where gravitation systems are unsuitable, pressurised systems are the perfect choice for the transfer of effluent and domestic sewage to the public sewer or sewage treatment plant.

Grundfos offers the perfect pump for such systems, facilitating the use of smaller pressure pipes for minimal investment costs. The Grundfos grinder pump range (SEG) provides many benefits, combining cost-effectiveness with maximum protection to the environment.

TECHNICAL DATA:

SEG Range Sewage Grinder Pumps

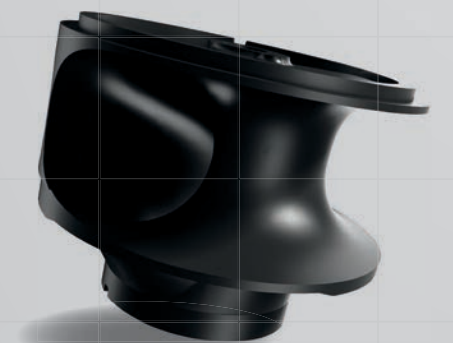
- Q: up to 19 m³/h
- H: up to 45.87 m



SEG

3. S-TUBE IMPELLER

The S-tube® is the only impeller available in the wastewater market that does not compromise hydraulic efficiency or free passage through the pump. The key to the design is simplicity, with no cutting or moving functions that can get worn over time and thereby ensures a constant and superior efficiency over time. The S-tube impeller is a tube-shaped impeller placed in a pump housing that matches the smooth tube shape through the entire pump with no obstructions or dead zones through the hydraulic.



S-TUBE®

The S-tube impeller and the new tube design through the pump provide:

- World-class hydraulic efficiency up to 84% without compromising free passage.
- Spherical free passage up to 160 mm, meaning better solids handling and greater non-clogging capabilities.
- A design as simple and robust as a tube results in longer lifetime and lower maintenance costs.

The difficulties in designing high-efficiency impellers have traditionally been challenges with sealing against backflow, vibrations, abrasive wear and clogging. The Grundfos S-tube impeller meets and surpasses all these challenges.

Furthermore, we have tested the S-tube in the field in many hundreds of wastewater installations worldwide prior to release with very good results. What our customers experienced was substantially lower noise & vibration levels, reduced maintenance and far better non-clogging capabilities than ever.

4. SEWAGE PUMPS TO SUITE YOUR VERSATILITY

SUPER VORTEX PUMPS DPK.V

The DPK.V range of submersible sewage pumps from Grundfos combines durable performance with ease of installation, providing immediate returns on your investment. The DPK.V is a good option for Raw Sewage Transfer in your treatment plant.

The pumps are available from 1.5 kW to 7.5 kW, the pumps can handle a particulate size up to 80 mm.

SE/SL - 0.9 TO 30 kW

With the S-tube, Grundfos sets new standards for wastewater hydraulic design. The S-tube resolves the challenges with sealing, vibration, abrasive wear and clogging that owners of wastewater pumping stations have lived with for way too long.

TECHNICAL DATA:

- Flow: up to 850 m³/h
- Head: up to 71.29 m



FEATURES & BENEFITS



Grundfos Blueflux® guarantees the highest motor efficiency from Grundfos. The Grundfos Blueflux® label guarantees that the motor technology used is ahead of current market standards and either meets or exceeds global legislative requirements for motor efficiency, where these apply.



AUTOADAPT

AUTOADAPT is the intelligent control that allows Grundfos pump systems or solutions to autonomously adapt its operation to dynamic operating conditions in the application. This results in a sustainable reduction in service calls, savings on energy consumption and on installation & commissioning costs. AUTOADAPT opens up for the benefits of remote surveillance, controls & management, making life easier while saving time & money.



smartdesign

What we call smartdesign describes the functional design of our products that combines elegant appearance with smart features, created with customer needs in mind. smartdesign does not only look good: the design also makes installation, operation and maintenance of the product easier and more user-friendly.

5. S RANGE PUMPS

The S range of pump from Grundfos consists of submersible sewage pumps available in a wide range of models and motor sizes. These robust and reliable pumps are designed to handle unscreened raw sewage as well as large quantities of raw water in wastewater / water infrastructure and industrial applications everywhere.

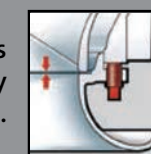
Grundfos S pumps are constructed to give you years of trouble-free service under the most demanding operating conditions. Depending on the model, the pumps are available with a highly efficient channel impeller & state-of-the-art SuperVortex impeller. Pumps are suitable for submersible (wet) as well as dry pit installation.

TECHNICAL DATA:

- Q: up to 7200 m³/h
- H: up to 116 m

SmartTrim IMPELLER ADJUSTMENT

The Grundfos-patented SmartTrim impeller adjustment system lets you maintain the factory-set impeller clearance at all times by tightening the adjustment screws on the exterior of the pump housing. This can be done on-site without dismantling the pump.



LEAK-PROOF FLANGE CONNECTION

The Grundfos Smart Seal auto-coupling gasket mounted on the pump discharge flange provides a completely leak-proof connection between the pump and the base unit of the auto-coupling system. This optimises the efficiency of the entire pumping system and keeps operating costs at a minimum.



CHANNEL IMPELLER

S pumps with channel impellers are ideal for a large flow of raw, unscreened sewage. Depending on the capacity, these channel impeller pumps are capable of handling solids up to 155 mm. The result is less clogging and increased pumping efficiency.



SuperVortex IMPELLER

For liquids containing large quantities of solids of fibres or glossy sludge; S pumps fitted with a SuperVortex impeller is ideal. Available in motor sizes up to 29 kW, the Grundfos SuperVortex impeller pumps allow for free passage solids of up to 100 mm.



S PUMP

6. WASTEWATER MIXERS/ FLOWMAKERS

Reliable submersible mixers and flowmakers for wastewater and sludge - Stirring support for your systems.

Grundfos offers a complete range of extremely dependable and highly efficient submersible mixers and flowmakers for a variety of processes in wastewater treatment plants and industrial processes.

The mixers and flowmakers are of a modular design, which makes them easy to maintain and service. All parts are manufactured from specially selected materials and each component is thoroughly tested for reliability and durability before assembly.

APPLICATIONS:

Typical application areas

- Sewage pumping stations
- Wastewater treatment plants
- Industrial processes

TECHNICAL DATA:

Flowmakers - SFG Range (Gear driven)

- Propeller diameter: 1,300 - 2,600 mm
- SFG Motors: 0.7 to 8 kW

Mixers - SMD (Direct driven) and SMG (Gear driven)

- Propeller diameter: 210 - 900 mm
- SMG Motors: 0.9 to 18.0 kW
- SMD Motors: 0.9 to 3.5 kW



7. DIFFUSERS

Energy efficient systems with fine bubble diffusers

With energy-efficient fine bubble diffusers, Grundfos customises complete aeration systems for wastewater treatment. Using the actual oxygen rate or standard oxygen rate and your tank data, we can calculate and deliver an engineered system that matches the specific oxygen demand of any treatment plant.



APPLICATIONS:

- Equalization of sewage/ effluent with coarse bubble diffusers
- Aeration systems in sewage/ effluent treatment plant with fine bubble diffuser
- Sludge stabilization with coarse bubble diffusers

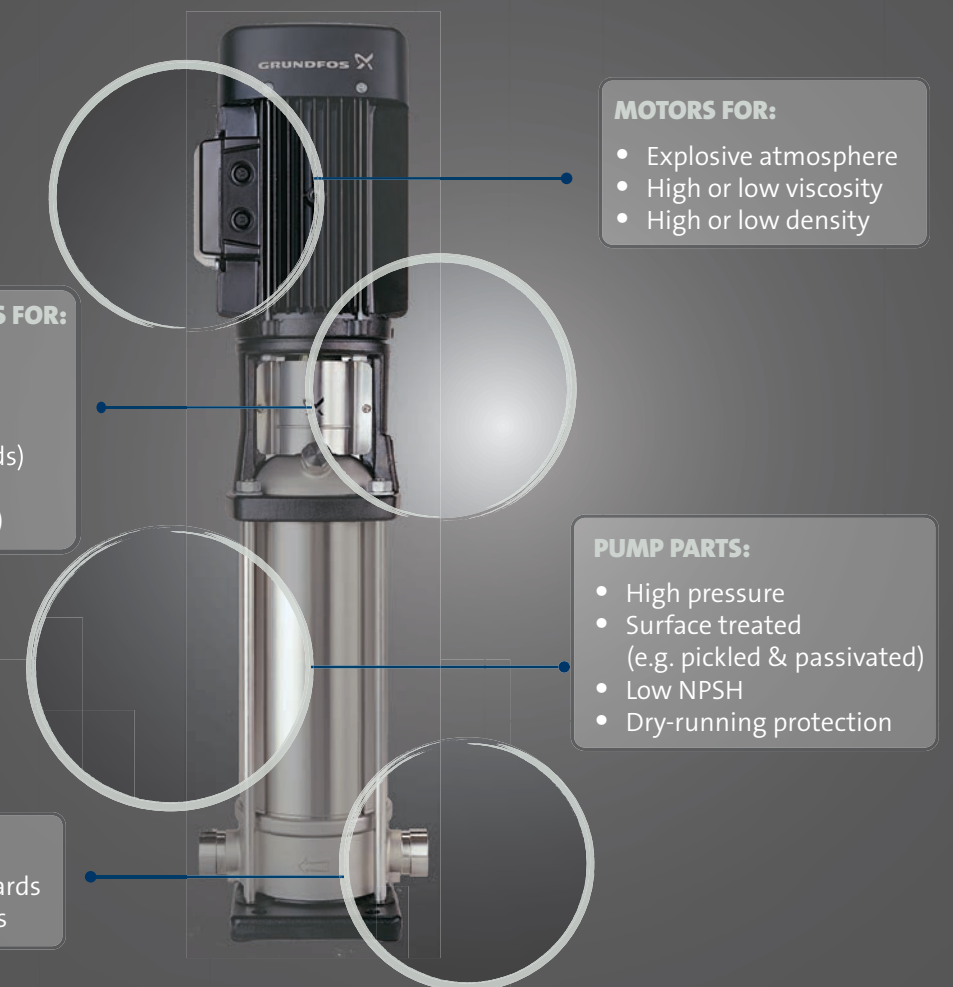
CUSTOM-BUILT PUMPS

CR – FACTORY PRODUCT VARIANT

COMBINING MODULES TO CUSTOMISE PUMPS

Grundfos takes a modular approach to custom engineered pumps. With expert assistance from our highly skilled engineers, customers can choose among an unmatched range of designs, features, options, materials and much more, combining them to create a tailor-made solution for the job at hand.

The Grundfos line of industrial pumps are based on the CR series of in-line multistage centrifugal pumps. The range of CR pumps produced for stock has a large variety of models, all of them uniquely reliable pumps designed to meet the strictest demands for robustness, cost-efficiency and trouble free operation.



SITUATION	CONSEQUENCE	SOLUTION
High inlet pressure	Motor bearings overloaded	Use bearing flanges to eliminate forces on motor bearings
High temperature	Shaft seal destroyed	Special Grundfos shaft seal designed to handle hot liquids up to 180°C
Poor inlet conditions	Risk of cavitation	Use low NPSH pump to reduce NPSH curve
Abrasive liquids	Excessive wear of shaft seal faces	Use double shaft seal
Toxic liquids	Contamination of environment or people	Use MAG drive or double shaft seal
Flamable liquids	Risk of explosion or fire	ATEX approved motor and pump for explosive environments
Crystallising liquids	Leakage due to crystallisation between shaft seal faces	Double shaft seal (tandem or back-to-back)
Secondary refrigerants	Standard pumps cannot handle very low temperatures	Special pump capable of handling liquids down to -40°C
Installation on ships or other vehicles	Pump stressed due to vibrations	Horizontal installation

SERVICE SOLUTIONS

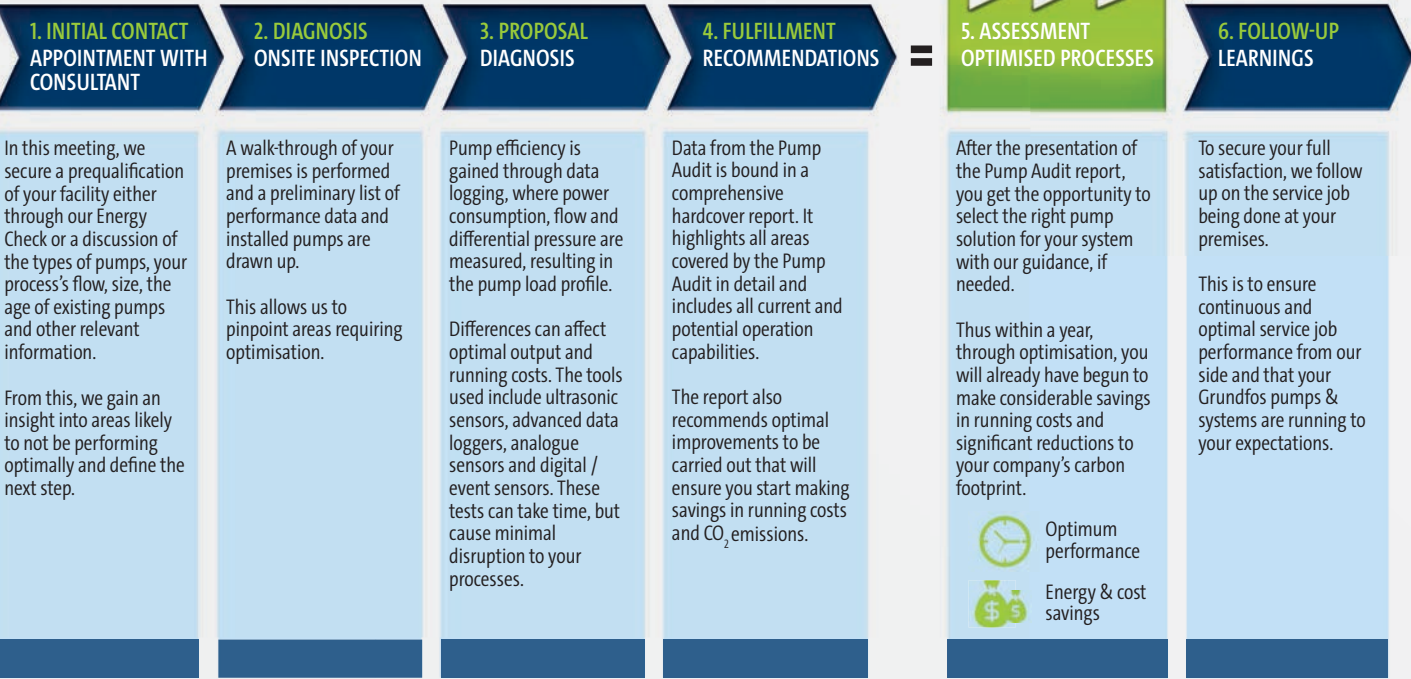
PUMP AUDIT

The Pump Audit is a diagnostic tool developed by Grundfos to identify excessive energy consumption in any kind of pumping system.

HOW THE PUMP AUDIT WORKS

A pump auditor will visit your site and perform real measurements on your pump system in order to collect the necessary data. After analysing the data a recommendation will be prepared for you. In this, the life cycle costs of your company's current pump system will be compared with the system you could have if the pumps were changed to more efficient models. Among other investigations, the auditor will check the overall efficiency of your company's pumps, look at the initial purchase price of a different pump solution and compare costs for both maintenance & power consumption.

A Grundfos Pump Audit is a comprehensive auditing service that identifies potential for energy savings in any pump system



INSTRUMENTS USED



CUSTOMER PERFORMANCE LETTERS

A Company of
ThyssenKrupp
Steel

ThyssenKrupp Electrical Steel India Private Limited

TO WHOM IT MAY CONCERN

This is to certify that 8 nos. of Grundfos pumps supplied by M/s. Laxmi Techno Services, Nashik for the following are working satisfactory.

Model no.	Application	Power Consumption with old pump. (kW)	Power Consumption with new pump. (kW)	Power saving (kW)
CR20-03	Clear effluent sump pump at ETP	14.5	3.16	11.34
CR15-05	Cooling tower make up water supply pump at WTP	10.4	6.2	4.2
NB65-160	Cooling tower2- Supply pump 6 (2)	20.3	8.94	11.36
CRN3-15	Naphtha supply pump	21.8	0.69	21.11
CR15-05	Drinking water & boiler water supply pumps at WTP	14.1	2.98	11.12
CR10-10	Hydrant water supply pump at Fire Fighting	7.1	3.63	3.47
CR20-06	Sprinkler water supply pump at Fire Fighting	6.86	5.31	1.55
CR10-18	Boiler feed water	9.2	5.5	3.7

We are satisfied with the performance of the Grundfos pumps.

For TKES India,

P. Sengupta, 14.8.2007
General Manager- Maintenance & Investment.

We supply

POWER CORE

Worldwide

Registered Office & Factory:

At Post: Gonde, Village Wadivarhe, Taluka: Igatpuri, District: Nashik, Maharashtra 422 403
Tel: ++91 (2553) 225182 – 88
Fax: ++91 (2553) 225181
www.tkesindia.com

Bankers:

Deutsche Bank, AG., Mumbai
ABN AMRO Bank, Mumbai
HSBC Bank, Mumbai

Income Tax Pan No:

AAACE 7791 B

Chairman:

Clemens Iller

Managing Director

Konrad Noertersheuser

38 Industrial Pumps

Service Solutions 39



SPDJ TRAINING ACADEMY

A GLOBAL TRAINING NETWORK

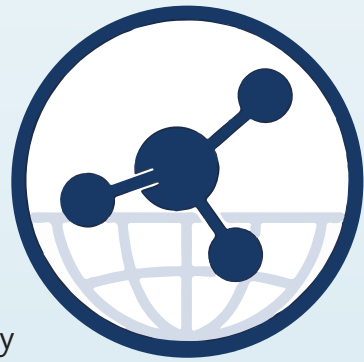
You can always acquire new skills and become better at what you do. To help you, we have 'The Poul Due Jensen Academy'. The role of the academy is to develop, deliver and distribute learning to our global organisation. Academy programmes are based on a professional blended learning platform designed to create high business impact and to drive change. Our current ambition is to become even better at creating the right learning blends based on our experience of what works. Over the past few years, we have established a global network of trainers and established academy satellites in Singapore, China, Russia, India and North America.

'The Satellite Poul Due Jensen' academy is first of its kind in India wherein different segments of Industry, Building and Water Services would be educated and trained in pumps & pumping systems by experts & professionals from the pump field.

Grundfos India is the third such facility in the world, accredited with this Satellite Academy Status by Grundfos Group.

ENROL AND ENJOY THE TRAINING SESSION

If you have any queries or suggestions for the training or nominations, please contact us.



SERVICE & SUPPORT

Easy overview and easy selection

Our service products are customised, personalised and delivered at your premises by our expert service teams who have in-depth knowledge of your specific industry and applications.

The service products are divided into five portfolios, making it easier for you to get an overview of available service products and select the right service product.

SERVICE PORTFOLIOS:

- Spare parts & service kits
- Repair & maintenance
- Installation & operation
- Optimisation & consultancy
- Surveillance & mobility



CIRCLE OF TRUST

Grundfos Service & Solutions service products that cover your service needs in the entire lifecycle – from selection and installation to operation and replacement.

