



USA
English
60Hz

GRUNDFOS SOLUTIONS For Industry

WATER TREATMENT



Water Intake /
Supply / Transfer



Water Treatment



Wastewater
Treatment & Reuse

TEMPERATURE CONTROL



Industrial Heating



Industrial Cooling

INDUSTRIAL PROCESSES



Machining



Cleaning Processes



Process Liquid
Transfer

GRUNDFOS 

Possibility in every drop

A blue-tinted photograph of an industrial facility, likely a water treatment plant. The image shows several large, vertical cylindrical storage tanks or silos, connected by a complex network of pipes, valves, and structural steel beams. The perspective is from a low angle, looking up at the machinery. The overall atmosphere is industrial and technical.

Grundfos delivers a range of products, solutions, and services to help maintain industrial processes. Grundfos pumps are built to withstand aggressive media and the demands of industry. This portfolio overview presents these as well as dosing and disinfection, monitors, controls and sensors, service offerings and digital solutions available for all applications before, after and related to industrial processes.

The products shown are suitable for most applications. There could be exceptions where other products of our broad portfolio fit better. Please have a look in Grundfos Product Center for detailed data.



7 SERVICE OFFERINGS

8 PRODUCTS

8 Water Intake / Supply / Transfer

- 9 Ground water intake
- 11 Surface water intake
- 14 Seawater intake
- 16 Supply & Transfer

18 Water Treatment

- 19 Chemical Treatment
- 21 Physical Treatment
- 25 Disinfection
- 27 Sea Water Desalination

31 Wastewater Treatment & Reuse

- 32 Waste water transfer
- 35 Chemical Treatment
- 38 Biological Treatment
- 41 Physical Treatment
- 44 Disinfection

45 Industrial Heating

- 46 Boiler System
- 49 Heat Distribution

51 Industrial Cooling

- 52 Cooling Tower
- 55 Chiller/Evaporator/Condenser/Cooling Water Distribution

57 Machining

- 58 Clean Side
- 61 Dirty Side

63 Cleaning Processes

- 64 Food
- 67 Non-food

70 Process Liquid Transfer

- 71 Process Liquid Transfer

75 PROCESS CHARTS



Service & Solutions
















By taking a greater responsibility for the operation and efficiency of your pumps, we allow you to focus your attention on what is important to you rather than worrying about your pumps.

We bring peace of mind to you by minimizing downtime, optimizing performance, and helping you contribute to a more sustainable world.

We add value through:

- Enhanced asset management
- Energy and water savings
- Digital services



 Service Agreements	 Repair Services	 Operation Services	 Optimization Services
 Grundfos Energy Earnings	 Spare Parts	 Installation	 Energy Check Advanced
 All-In-Maintenance	 Repair	 Extended Warranty	 Grundfos Machine Health
 Customized Service Agreement		 Laser Alignment	 Energy Audit
 Standard Service Agreement		 Inspection	 Energy Check Basic
		 Commissioning	 Training



Optimization Services



Energy Check Advanced

Energy Check Advanced identifies opportunities for energy optimisation within your processes based on measured data. The energy check advanced report provides fully costed recommendations for process optimization and energy savings.

The Energy Check Advanced includes:

- Site visit to gather data from your pumping system
- Load profiles from measurement of power consumption
- Energy Check Advanced report
- Presentation of the final report and potential savings

The Energy Check Advanced report provides recommendations for replacement pumps correctly sized to the application with reduced energy



Grundfos Machine Health

Get immediate, predictive insights and pinpoint problems before they become costly failures. With Grundfos Machine Health, you'll get an overview of the condition of all your pumps and other critical assets, allowing you to take preventive action before surprises such as unexpected breakdowns occur.

What's in it for you?

- Manage and monitor your installed base
- Stay ahead of downtime and maintenance management
- Reduce energy consumption
- Ultimately, prevent costly damage



Energy Audit

Energy Audit is our most advanced service offering based on system performance measurements on-site. A service technician will visit your site and install measuring instruments. This can also include thermal analysis of energy consumption (Pump Thermography). Based on analysis of the data collected, we provide advice and a proposal on how to improve the energy efficiency of your system.

An energy audit will often result in significant energy savings by replacing a pump with a smaller one or completely redesigning your system by, for example, changing the number of installed pumps.



Energy Check Basic

Energy Check identifies opportunities for improvement of energy efficiency in your system based on pump nameplate specifications. The energy check report provides recommendations for replacement pumps with the same specifications but lower energy consumption.

The energy check process includes:

- Site visit to gather data from your pumping system
- Load profiles by measurement of power consumption (Energy Check Advanced)
- Energy check report

- Presentation of final report

The energy check report recommendations for replacement pumps with the same specifications but lower energy consumption.



Training



Repair Services



Spare Parts

With Grundfos original spare parts, you get more than just spare parts. You get the right spare part solutions and service kits with these benefits:

- Increased efficiency
- Greater reliability/minimized downtime
- Documented performance
- Fast delivery



Repair

Downtime is inconvenient and expensive so to minimize this, we offer two types of repair service: on-site and workshop repair.

Workshop repair: Workshop repairs are the ideal choice for smaller pumps that can be shipped easily. On-site repair: Having our service technician come to you to do on-site repair is the best option for large installed pumping systems.



Service Agreements



Grundfos Energy Earnings

Grundfos Energy Earnings allows you to finance your pumps with a share of your energy earnings. With Grundfos Energy Earnings, OPEX savings are guaranteed, and no CAPEX investments are required. Simply put, your energy earnings finance your new pump systems.

Benefits include:

- No initial equipment costs
- Guaranteed energy savings
- Contribute toward sustainability goals
- All-inclusive maintenance with a peace of mind operation



All-In-Maintenance

Broken pumps and stalled productions result in huge costs. Grundfos All-in-Maintenance is a complete maintenance solution allowing you to focus on your business, while we manage the service and maintenance of your assets at a fixed price. All-in-Maintenance is designed to maximize your peace of mind at no extra cost.

Benefits:

- Maximized reliability and efficiency
- Preventive maintenance
- Fixed maintenance costs
- Customize your spare parts inventory
- Less administrative work



Customized Service Agreement

A Customized Service Agreement is tailor-made to suit your needs. Pick and mix from our extensive service offering and pay only for what you need. The customizable service agreement gives you direct access to Grundfos professionals and our trusted partners for the selected service offerings.

Choose elements across:

- Repair services
- Operation services
- Optimization services



Standard Service Agreement

A Standard Service Agreement consists of one, or two, yearly inspections by a qualified service technician. The service technician checks your equipment, assesses the need for repair and/or preventive maintenance.

The check includes:

- Equipment check
- Recommendations for performance optimization, if required



Operation Services



Installation

We offer Installation by a skilled service technician to ensure correct installation according to I&O manual. This will ensure that your Grundfos pump achieves optimal performance.

Installation includes:

- Delivery to your facility
- Installation and mounting on the correct type of base
- Mechanical work, incl. alignment of pipes and flanges
- Electrical installation
- System start-up



Extended Warranty

How you benefit from our Extended Warranty

- Peace of mind: up to 5 years of warranty
- Easy overview: clearly defined warranty terms and conditions throughout warranty period
- Fast response: well-defined contacts and short response time in case of warranty claims

See how the Grundfos Extended Warranty works for you!

- 12, 24 or 36 months of additional warranty coverage
- Insurance against defects in materials or workmanship
- Same terms and conditions as standard warranty
- Well-defined contacts and short response time in case of warranty claims
- Can be purchased with pump or along with Service Contract



Laser Alignment

Misalignment between pump and motor can cause unnecessary wear and damage other parts of the system. To significantly reduce these risks, we offer Laser Alignment to ensure 100% accuracy.

Benefits:

- Prolonged lifetime, less wear and tear
- Lower noise level
- Lower lifecycle costs



Inspection

Your whole system is analyzed according to a specific checklist by expert personnel. This gives you an overview of any adjustments or spare part replacements necessary to improve your system and provide financial benefits.

Benefits:

- Reduce energy consumption
- Reduce operating costs
- Prolong lifetime
- Pumps run at peak performance



Commissioning

Expert service technicians verify that the installation is consistent with I&O manual, and that everything is set up correctly. This will ensure that your pumping system is running as efficiently as possible.

Benefits:

- Grundfos-approved installation
- Reduced operation costs
- Eliminated wear on pumps
- Prolonged lifetime



Service offerings

Service agreements and offerings covering operation, repair, and optimization as well as digital offerings are shown for the equipment categories relevant for the specific application.

	Multistage Pumps	Single-stage Pumps	Circulator Pumps	Submersible Groundwater Pumps	Submersible Wastewater Pumps	Hydro Boosters	Dosing Pumps	Disinfection Systems
Optimization Services								
Energy Check Advanced	●	●	●					
Grundfos Machine Health	●	●	●			●		
Energy Audit	●	●	●		○	●		
Energy Check Basic	●	●	●					
Training	○	○	○	○	○	○	○	○
Repair Services								
Spare Parts	●	●	●	●	●	●	●	●
Repair	●	●	●	●	●	●	●	●
Service Agreements								
Grundfos Energy Earnings	○							
All-In-Maintenance	●	●	●			●	●	
Customized Service Agreement	●	●	●	●	●	●	●	●
Standard Service Agreement	○	○	○	○	○	○	○	
Operation Services								
Installation	●	●	●	●	●	●	●	●
Extended Warranty	○	○	○	○	○	○	○	○
Laser Alignment		○						
Inspection	●	●	●	●	●	●	●	●
Commissioning	●	●	●	●	●	●	●	●

● Available ○ Special conditions and limitations

Water Intake / Supply / Transfer

A production plant needs water to operate. Grundfos offers a complete portfolio of pumps to reliably supply water to the plant; the right amount, at the right pressure and at the right time. Whether the source is a well, mains or a river or lake, and no matter the quality of the water, Grundfos has efficient and high-quality equipment that supplies and transfers the water as needed, with no surprises.

"Not only have we seen an immediately improved water supply with stable and constant pressure; we have been able to monitor and trend the flows, enabling continuous improvements on our processes."



Calvin Winch, Engineer,
Operations Development
GB & I, Britvic Soft Drinks
Ltd



GROUND WATER INTAKE

Pumps

Submersible groundwater pumps - **SP**



Grundfos SP are submersible borehole pumps, designed for pumping groundwater. Grundfos SP are all stainless-steel pumps, and they are available in 3 material grades. The pumps are suitable for boreholes in sizes ranging from 4" over 6" and 8" to 10".

Flow max.: 1530 US gpm Head max.: 2670 ft
Liquid temperature: 5..194 °F p max.: 870psi

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

Level Transmitters - **MS1, M2, FS1**

Float switches for level control/monitoring in tanks, pumping stations, or similar applications.



Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



Flow Sensors - **VFI/VFS**

Flow and temperature sensors designed to be robust and accurate. They use our Silicoat® coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Flow Sensors - **MAG 3100, 5100, 8000**

Several variants of the Mag Flow system are available, depending on needed requirements and specifications. In general, the system consists of a flow meter and a transmitter of choice. MAG 3100 covers all the applications which the other industry specific sensors do not cover.



Pressure Sensors - **DPI, DPS, RPI, RPS**

Our pressure sensor ranges are designed to be robust, accurate and reliable. Depending on the product family they measure relative or differential pressure and temperature. They use our Silicoat coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F



GROUND WATER INTAKE

Pressure Sensors - **ISP40, ISP44**



Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.

Temperature Sensors - **ITS**



ITS is an integrated temperature sensor from Grundfos Direct Sensors. It is fully compatible with wet, aqueous media and based on MEMS sensing technology in combination with the corrosion resistant Silicoat® coating technology on the sensor chip.

Temperature Sensors - **Danfoss MBT 3270**



The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.

M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi

Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.



SURFACE WATER INTAKE

- The Hydro MPC optimizes the energy consumption by determining the most efficient speed and required number of pumps.

Pumps

Vertical Multistage Pumps - **CR/CRE**



Vertical, multistage centrifugal pump with suction and discharge ports on the same level.

Flow max.: 1770 US gpm Head max.: 1600 ft
Liquid temperature: -40..302 °F p max.: 580psi

End-suction close coupled single-stage pumps - **NB/NBE**



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 523 ft
Liquid temperature: -13..248 °F p max.: 232psi

End-suction long coupled single-stage pumps - **NK/NKE**



Standard pumps according to EN 733. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 524 ft
Liquid temperature: -13..248 °F p max.: 232psi

Horizontal split-case pumps - **Paco KP**



Single-stage, between bearings, split case pump. The axially split design allows easy removal of the top casing and access to the pump components without disturbing the motor or pipe work.

Inline pumps - **PACO VL**



PACO VL is an in-line pump which mounts vertically and guarantees the smallest footprint. The pump requires no flexible connectors or foundation grouting.

Service offerings



All-In-Maintenance



Customized Service Agreement



Laser Alignment



Commissioning



Grundfos Machine Health

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.



SURFACE WATER INTAKE

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

Level Transmitters - **MS1, M2, FS1**

Float switches for level control/monitoring in tanks, pumping stations, or similar applications.



Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



Flow Sensors - **VFI/VFS**

Flow and temperature sensors designed to be robust and accurate. They use our Silicoat® coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Flow Sensors - **MAG 3100, 5100, 8000**

Several variants of the Mag Flow system are available, depending on needed requirements and specifications. In general, the system consists of a flow meter and a transmitter of choice. MAG 3100 covers all the applications which the other industry specific sensors do not cover.



Pressure Sensors - **DPI, DPS, RPI, RPS**

Our pressure sensor ranges are designed to be robust, accurate and reliable. Depending on the product family they measure relative or differential pressure and temperature. They use our Silicoat coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Pressure Sensors - **ISP40, ISP44**

Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.



Temperature Sensors - **ITS**

ITS is an integrated temperature sensor from Grundfos Direct Sensors. It is fully compatible with wet, aqueous media and based on MEMS sensing technology in combination with the corrosion resistant Silicoat® coating technology on the sensor chip.



Temperature Sensors - **Danfoss MBT 3270**

The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.



M&C for Dosing & Disinfection - **DID**

The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.



p max.: 44psi



SURFACE WATER INTAKE

Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.

Systems

Customized Systems - **Grundfos Engineered Systems**



Grundfos Engineered Systems (GES) designs and manufactures custom systems when a Grundfos pre-engineered system cannot fit the conditions required. There are multiple variations of type, size and quantity of pumps that can be packaged together.

Service offerings



All-In-Maintenance



Customized Service Agreement



Laser Alignment



Commissioning



Grundfos Machine Health



SEAWATER INTAKE

Pumps

End-suction close coupled single-stage pumps - **NBG/NBGE**



Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 8240 US gpm	Head max.: 861 ft
Liquid temperature: -13..284 °F	p max.: 363psi

End-suction close coupled single-stage pumps - **NB/NBE**



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm	Head max.: 523 ft
Liquid temperature: -13..248 °F	p max.: 232psi

End-suction long coupled single-stage pumps - **NK/NKE**



Standard pumps according to EN 733. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm	Head max.: 524 ft
Liquid temperature: -13..248 °F	p max.: 232psi

Submersible groundwater pumps - **SP**



Grundfos SP are submersible borehole pumps, designed for pumping groundwater. Grundfos SP are all stainless-steel pumps, and they are available in 3 material grades. The pumps are suitable for boreholes in sizes ranging from 4" over 6" and 8" to 10".

Flow max.: 1530 US gpm	Head max.: 2670 ft
Liquid temperature: 5..194 °F	p max.: 870psi

Customized Solutions - **Custom-Built Pumps**



Customized pumps to meet specific application challenges (temperatures, pressures, difficult liquids) or installation requirements (ambient conditions) not covered by the standard pump range. It is a modular platform built on stocked components. For more information please contact Grundfos sales.

SEAWATER INTAKE

Monitors, Controls and Sensors

Level Transmitters - **MS1, M2, FS1**

Float switches for level control/monitoring in tanks, pumping stations, or similar applications.



Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



Pressure Sensors - **DPI, DPS, RPI, RPS**

Our pressure sensor ranges are designed to be robust, accurate and reliable. Depending on the product family they measure relative or differential pressure and temperature. They use our Silicoat coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22...248 °F

Temperature Sensors - **ITS**

ITS is an integrated temperature sensor from Grundfos Direct Sensors. It is fully compatible with wet, aqueous media and based on MEMS sensing technology in combination with the corrosion resistant Silicoat® coating technology on the sensor chip.



M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi



SUPPLY & TRANSFER

- Hydro MPC E and Multi E help meet energy targets and are ready for future growth as it can deliver min and max flows keeping a high efficiency in mind. Additionally, the system can be delivered with a standby pump that can be easily used as a duty pump and by that extend the flow significantly.

Pumps

Vertical Multistage Pumps - **CR/CRE**



Vertical, multistage centrifugal pump with suction and discharge ports on the same level.

Flow max.: 1770 US gpm Head max.: 1600 ft
Liquid temperature: -40..302 °F p max.: 580psi

End-suction close coupled single-stage pumps - **NB/NBE**



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 523 ft
Liquid temperature: -13..248 °F p max.: 232psi

End-suction long coupled single-stage pumps - **NK/NKE**



Standard pumps according to EN 733. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 524 ft
Liquid temperature: -13..248 °F p max.: 232psi

Horizontal split-case pumps - **Paco KP**



Single-stage, between bearings, split case pump. The axially split design allows easy removal of the top casing and access to the pump components without disturbing the motor or pipe work.

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

Level Transmitters - **MS1, M2, FS1**



Float switches for level control/monitoring in tanks, pumping stations, or similar applications.



SUPPLY & TRANSFER

Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



Pressure Sensors - **DPI, DPS, RPI, RPS**

Our pressure sensor ranges are designed to be robust, accurate and reliable. Depending on the product family they measure relative or differential pressure and temperature. They use our Silicoat coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Pressure Sensors - **ISP40, ISP44**

Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.



Temperature Sensors - **ITS**

ITS is an integrated temperature sensor from Grundfos Direct Sensors. It is fully compatible with wet, aqueous media and based on MEMS sensing technology in combination with the corrosion resistant Silicoat® coating technology on the sensor chip.



Temperature Sensors - **Danfoss MBT 3270**

The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.



M&C for Dosing & Disinfection - **DID**

The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.



p max.: 44psi

Drives

External Frequency Converters - **CUE**

CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.



Systems

Booster Systems - **Hydro MPC, Hydro Multi-E**

Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2–6 (2–4 for Multi-E) parallel connected pumps, integrated advanced controller and all necessary fittings.



Flow max.: 6440 US gpm Head max.: 528 ft
Liquid temperature: 32..140 °F p max.: 232psi

Customized Systems - **Grundfos Engineered Systems**

Grundfos Engineered Systems (GES) designs and manufactures custom systems when a Grundfos pre-engineered system cannot fit the conditions required. There are multiple variations of type, size and quantity of pumps that can be packaged together.



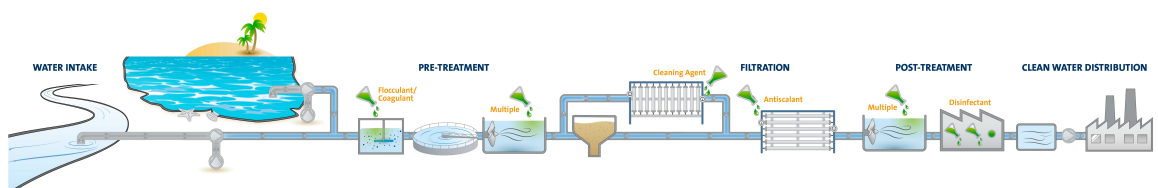
Water Treatment

Grundfos has an extensive range of water treatment pumps and solutions for the entire water treatment cycle from intake and distribution to handling of wastewater. Water treatment is technology-driven and heavily regulated, and pump, dosing and disinfection solutions have been designed to meet every demand and comply with regulations. Grundfos has years of water treatment application experience and guarantees the perfect match between component and sub-system, whether you are looking for packaged solutions or individual pumping products for each stage of the treatment process.

"Our small reverse osmosis 1000 lit./h system with activated carbon and softener for pretreatment. Thanks to Grundfos 'smart' pump we are controlling RO only with pump, there is no additional controller or PLC needed."



Vladimir Kruljac, CEO FELLER
d.o.o.





CHEMICAL TREATMENT

- Bubble formation due to **outgassing chemicals** like sodium hypochlorite could lead to inefficient and unreliable processes. With **FLOW CONTROL** in DDA dosing pumps this can be eliminated.
- **Measurement of pulsating flows** can be challenging for conventional flow meters. With **FCM** this functionality is **integrated in DDA dosing pumps** simplifying the installation with **less components**.
- **All relevant approvals**, certifications and documentation is **included** in our prefabricated **dosing skid systems** ready to install.

Pumps

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour
Liquid temperature: 14..122 °F p max.: 232psi

Mechanical Dosing Pumps - **DMH**



The DMH range is a series of extremely strong, robust hydraulically actuated piston diaphragm dosing pumps for applications requiring reliable dosing and high-pressure capability, such as process engineering. The range is highly versatile: it covers a wide flow range and offers a variety of dosing head sizes, materials and accessories.

Flow max.: 243 US gal/hour
Liquid temperature: 14..194 °F p max.: 2900psi

Customized Solutions - **Custom-Built Pumps**



Customized pumps to meet specific application challenges (temperatures, pressures, difficult liquids) or installation requirements (ambient conditions) not covered by the standard pump range. It is a modular platform built on stocked components. For more information please contact Grundfos sales.

Service offerings



All-In-Maintenance



Customized Service Agreement



Commissioning

Monitors, Controls and Sensors

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Level Transmitters - **Level Transmitter S, E, W**



Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



CHEMICAL TREATMENT

Pressure Sensors - **ISP40, ISP44**



Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.

Temperature Sensors - **Danfoss MBT 3270**



The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.

M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi

Systems

Dosing Tank Stations - **DTS**



Dosing tank stations are intended for storing and dosing liquids. Many different configurations can be selected flexibly to fulfil various dosing tasks. They are available in 6 tank sizes: 60 l, 100 l, 200 l, 300 l, 500 l and 1000 l.

Service offerings



All-In-Maintenance



Customized Service Agreement



Commissioning

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.



PHYSICAL TREATMENT

- High **pressure demands** can be fulfilled **with a compact pump design** (less stages) by operating at **over-synchronous speed**. Factory configured CRE's with **reinforced chambers** and impellers can be an option. The motor size must be adjusted accordingly.
- Our variable frequency drives (VFD) can **automate backwash** through the use of sensors, so that **no PLC is needed** in simple filtration systems.
- The **DDA FCM** can **accurately dose the right amount of chemicals** so that the membranes are clean and protected, while the **DID** probes and controller can **adjust the dosing pump based on changing water quality parameters**.

Pumps

Vertical Multistage Pumps - CR/CRE



Vertical, multistage centrifugal pump with suction and discharge ports on the same level.

Flow max.: 1770 US gpm Head max.: 1600 ft
Liquid temperature: -40..302 °F p max.: 580psi

End-suction close coupled multistage pumps - CM/CME



CM, CME are reliable, quiet, and compact horizontal end-suction pumps. The modular pump design makes it easy to make customized solutions.

Flow max.: 162 US gpm Head max.: 401 ft
Liquid temperature: -4..248 °F p max.: 232psi

End-suction close coupled single-stage pumps - NB/NBE



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 523 ft
Liquid temperature: -13..248 °F p max.: 232psi

End-suction long coupled single-stage pumps - NK/NKE



Standard pumps according to EN 733. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 524 ft
Liquid temperature: -13..248 °F p max.: 232psi

End-suction long coupled single-stage pumps - NKG/NKGE



Standard pumps according to ISO 2858 with axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 859 ft
Liquid temperature: -13..284 °F p max.: 363psi

Horizontal Multistage pumps - BM



High pressure booster modules are used for boosting, liquid transfer, and circulation in systems under a high static pressure. Modules of different sizes can be combined and connected either in series or in parallel to meet exact Q/H requirements.

Flow max.: 1480 US gpm Head max.: 1580 ft
Liquid temperature: 32..113 °F

Horizontal Multistage pumps - BMS



The Grundfos BMS range consists of hp (high pressure) and hs (high speed) versions. BMS hp are suitable for industrial and water supply applications where the inlet pressure is high. BMS hs enables the creation of high pressure.

Flow max.: 1500 US gpm Head max.: 3450 ft
Liquid temperature: 32..104 °F

Horizontal Multistage pumps - BMSX



A BMSX booster system consists of a BMS hs high-speed pump, a BM hp high-inlet-pressure pump and an isobaric pressure exchanger. It has a unique design dedicated to seawater and brackish water desalination.



PHYSICAL TREATMENT

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour
Liquid temperature: 14..122 °F p max.: 232psi

Customized Solutions - **Custom-Built Pumps**



Customized pumps to meet specific application challenges (temperatures, pressures, difficult liquids) or installation requirements (ambient conditions) not covered by the standard pump range. It is a modular platform built on stocked components. For more information please contact Grundfos sales.

Optimization services - **ENERGY CHECK**



A Grundfos Energy Check or Energy Audit will help you find hidden savings in your pump installation. It can also help to reduce your operating expenses and reach your sustainability targets.

Service offerings



Grundfos Machine Health

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Level Transmitters - **MS1, M2, FS1**

Float switches for level control/monitoring in tanks, pumping stations, or similar applications.



Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.





PHYSICAL TREATMENT

Flow Sensors - **VFI/VFS**

Flow and temperature sensors designed to be robust and accurate. They use our Silicoat® coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Flow Sensors - **MAG 3100, 5100, 8000**

Several variants of the Mag Flow system are available, depending on needed requirements and specifications. In general, the system consists of a flow meter and a transmitter of choice. MAG 3100 covers all the applications which the other industry specific sensors do not cover.



Pressure Sensors - **DPI, DPS, RPI, RPS**

Our pressure sensor ranges are designed to be robust, accurate and reliable. Depending on the product family they measure relative or differential pressure and temperature. They use our Silicoat coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Pressure Sensors - **ISP40, ISP44**

Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.



Temperature Sensors - **ITS**

ITS is an integrated temperature sensor from Grundfos Direct Sensors. It is fully compatible with wet, aqueous media and based on MEMS sensing technology in combination with the corrosion resistant Silicoat® coating technology on the sensor chip.



Temperature Sensors - **Danfoss MBT 3270**

The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.



M&C for Dosing & Disinfection - **DID**

The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.



p max.: 44psi

Drives

External Frequency Converters - **CUE**

CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.



Drive Accessories - **Sine-wave filter**

Sine wave filters have a high degree of filtering, resulting in a high reduction of the stress on the motor insulation system. At the same time, they reduce the acoustic noise from the motor. Motor losses are reduced when a sine-wave filter converts the output pulses of the frequency converter into a sine-wave-shaped.





PHYSICAL TREATMENT

Systems

Dosing Tank Stations - **DTS**



Dosing tank stations are intended for storing and dosing liquids. Many different configurations can be selected flexibly to fulfil various dosing tasks. They are available in 6 tank sizes: 60 l, 100 l, 200 l, 300 l, 500 l and 1000 l.

Customized Systems - **Grundfos Engineered Systems**



Grundfos Engineered Systems (GES) designs and manufactures custom systems when a Grundfos pre-engineered system cannot fit the conditions required. There are multiple variations of type, size and quantity of pumps that can be packaged together.

Service offerings



Grundfos Machine Health

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.



DISINFECTION

Pumps

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour
Liquid temperature: 14..122 °F p max.: 232psi

Mechanical Dosing Pumps - **DMH**



The DMH range is a series of extremely strong, robust hydraulically actuated piston diaphragm dosing pumps for applications requiring reliable dosing and high-pressure capability, such as process engineering. The range is highly versatile: it covers a wide flow range and offers a variety of dosing head sizes, materials and accessories.

Flow max.: 243 US gal/hour
Liquid temperature: 14..194 °F p max.: 2900psi

Monitors, Controls and Sensors

Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



Flow Sensors - **VFI/VFS**

Flow and temperature sensors designed to be robust and accurate. They use our Silicoat® coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Flow Sensors - **MAG 3100, 5100, 8000**

Several variants of the Mag Flow system are available, depending on needed requirements and specifications. In general, the system consists of a flow meter and a transmitter of choice. MAG 3100 covers all the applications which the other industry specific sensors do not cover.



Pressure Sensors - **ISP40, ISP44**

Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.



Temperature Sensors - **Danfoss MBT 3270**

The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.



M&C for Dosing & Disinfection - **DID**

The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.



p max.: 44psi

Systems

Dosing Tank Stations - **DTS**



Dosing tank stations are intended for storing and dosing liquids. Many different configurations can be selected flexibly to fulfil various dosing tasks. They are available in 6 tank sizes: 60 l, 100 l, 200 l, 300 l, 500 l and 1000 l.



DISINFECTION

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.



SEA WATER DESALINATION

- By bundling the BMS hs, BMS hp and pressure exchanger, **energy consumption can be reduced** to as low as 2 kWh/m³ of produced water—with capacities up to 1,500 m³/day.
- A product range designed for its environment with **resistant components** made of super duplex stainless steel, polymer and ceramic.
- **Protect your membranes** with **accurate dosage** of chemicals with the DDA FCM, while being able to react to water quality changes with the DID probes and controller.

Pumps

Vertical Multistage Pumps - CR/CRE



Vertical, multistage centrifugal pump with suction and discharge ports on the same level.

Flow max.: 1770 US gpm Head max.: 1600 ft
Liquid temperature: -40..302 °F p max.: 580psi

End-suction close coupled single-stage pumps - NBG/NBGE



Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 8240 US gpm Head max.: 861 ft
Liquid temperature: -13..284 °F p max.: 363psi

End-suction close coupled single-stage pumps - NB/NBE



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 523 ft
Liquid temperature: -13..248 °F p max.: 232psi

End-suction long coupled single-stage pumps - NK/NKE



Standard pumps according to EN 733. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 524 ft
Liquid temperature: -13..248 °F p max.: 232psi

End-suction long coupled single-stage pumps - NKG/NKGE



Standard pumps according to ISO 2858 with axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 859 ft
Liquid temperature: -13..284 °F p max.: 363psi

Horizontal Multistage pumps - BM



High pressure booster modules are used for boosting, liquid transfer, and circulation in systems under a high static pressure. Modules of different sizes can be combined and connected either in series or in parallel to meet exact Q/H requirements.

Flow max.: 1480 US gpm Head max.: 1580 ft
Liquid temperature: 32..113 °F

Horizontal Multistage pumps - BMS



The Grundfos BMS range consists of hp (high pressure) and hs (high speed) versions. BMS hp are suitable for industrial and water supply applications where the inlet pressure is high. BMS hs enables the creation of high pressure.

Flow max.: 1500 US gpm Head max.: 3450 ft
Liquid temperature: 32..104 °F

Horizontal Multistage pumps - BMSX



A BMSX booster system consists of a BMS hs high-speed pump, a BM hp high-inlet-pressure pump and an isobaric pressure exchanger. It has a unique design dedicated to seawater and brackish water desalination.



SEA WATER DESALINATION

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour
Liquid temperature: 14..122 °F p max.: 232psi

Customized Solutions - **Custom-Built Pumps**



Customized pumps to meet specific application challenges (temperatures, pressures, difficult liquids) or installation requirements (ambient conditions) not covered by the standard pump range. It is a modular platform built on stocked components. For more information please contact Grundfos sales.

Optimization services - **ENERGY CHECK**



A Grundfos Energy Check or Energy Audit will help you find hidden savings in your pump installation. It can also help to reduce your operating expenses and reach your sustainability targets.

Service offerings



Laser Alignment

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Communication Interface - **MI 301**



Grundfos remote controls used for installation, data monitoring, fault information and configuration of Grundfos pumps and systems, by radio or IR connections.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.



SEA WATER DESALINATION

Level Transmitters - **MS1, M2, FS1**

Float switches for level control/monitoring in tanks, pumping stations, or similar applications.



Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



Flow Sensors - **VFI/VFS**

Flow and temperature sensors designed to be robust and accurate. They use our Silicoat® coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Flow Sensors - **MAG 3100, 5100, 8000**

Several variants of the Mag Flow system are available, depending on needed requirements and specifications. In general, the system consists of a flow meter and a transmitter of choice. MAG 3100 covers all the applications which the other industry specific sensors do not cover.



Pressure Sensors - **DPI, DPS, RPI, RPS**

Our pressure sensor ranges are designed to be robust, accurate and reliable. Depending on the product family they measure relative or differential pressure and temperature. They use our Silicoat coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Temperature Sensors - **ITS**

ITS is an integrated temperature sensor from Grundfos Direct Sensors. It is fully compatible with wet, aqueous media and based on MEMS sensing technology in combination with the corrosion resistant Silicoat® coating technology on the sensor chip.



M&C for Dosing & Disinfection - **DID**

The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.



p max.: 44psi

Drives

External Frequency Converters - **CUE**

CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.



Drive Accessories - **Sine-wave filter**

Sine wave filters have a high degree of filtering, resulting in a high reduction of the stress on the motor insulation system. At the same time, they reduce the acoustic noise from the motor. Motor losses are reduced when a sine-wave filter converts the output pulses of the frequency converter into a sine-wave-shaped.





SEA WATER DESALINATION

Systems

Booster Systems - **Hydro MPC, Hydro Multi-E**



Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2–6 (2–4 for Multi-E) parallel connected pumps, integrated advanced controller and all necessary fittings.

Flow max.: 6440 US gpm

Head max.: 528 ft

Liquid temperature: 32..140 °F

p max.: 232psi

Dosing Tank Stations - **DTS**



Dosing tank stations are intended for storing and dosing liquids. Many different configurations can be selected flexibly to fulfil various dosing tasks. They are available in 6 tank sizes: 60 l, 100 l, 200 l, 300 l, 500 l and 1000 l.

Service offerings



Laser Alignment

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.

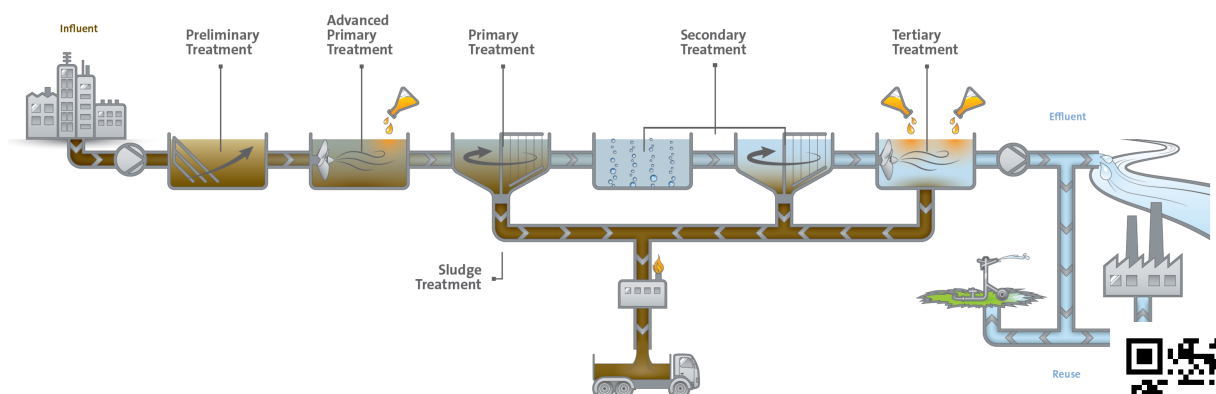
Wastewater Treatment & Reuse

Handling wastewater is a crucial part of any industrial water solution, and pumps play a key role in every application. Often, wastewater in industrial applications can be unpredictable, and an industrial wastewater solution must be tough enough to deal with everything from grit and grease to large particles. Wastewater pumps need to be efficient, reliable, and intelligent to handle these changing wastewater qualities. You also need to be certain that the water leaving the system is of the right quality before it enters the sewer or the environment.

“As you know, chemicals are always a big risk. So, for us it was very time saving and stress saving to get a complete dosing solution from Grundfos. We got the full cabinets with the dosing pumps, all the piping, the valves, everything was included, so we were very happy with that. In addition, the Grundfos pumps have a software with flow control. And that guarantees that you're dosing what you need to be dosing.”



Bryan de Bel, Project Manager with turnkey WWTP contractor Pantarein (about Carlsberg Fredericia project)





WASTE WATER TRANSFER

- Grundfos prefabricated pumping stations are cost effective and flexible, with already built-in components such as pumping and cables.
- Grundfos SEG, SL and SE wastewater pumps have built in **AUTOADAPT** to adjust to operating conditions.
- Grundfos **dedicated controllers** control up to 6 wastewater pumps to provide continuous energy optimization according to duty point.
- The **anti-clogging function** on the **DC controller** stops the pumps from blocking by acting during abnormal events.
- Grundfos packaged pumping stations with **LC controller and CIM** communication can provide: **Real time pump control and alerts** (high level, pump failures, warning logs, dry run etc).
- **Vortex pump** and **S tube reduce clogging** issue for high solid with larger length.

Pumps

Submersible wastewater pumps - S



The S pumps are a range of free-flow channel impeller pumps specifically designed for pumping sewage and wastewater in a wide range of municipal and industrial applications.

Flow max.: 29800 US gpm Head max.: 381 ft
Liquid temperature: 32..122 °F

Submersible wastewater pumps - SE, SE1, SEV



Submersible Grundfos SE sewage pumps are fitted with either S-tube (SE1) or SuperVortex impeller (SEV). The free passage through the pump varies from 50–100 mm depending on size.

Flow max.: 0 US gpm Head max.: 0 ft

Submersible wastewater pumps - SEG



Submersible Grundfos SEG sewage grinder pumps are designed for pumping wastewater, sludge-containing water, and sewage. Fitted with a patented grinder system designed to grind the media.

Flow max.: 163 US gpm Head max.: 158 ft
Liquid temperature: 32..104 °F p max.: 87psi

Submersible wastewater pumps - SL



Submersible Grundfos SL sewage pumps are fitted with an S-tube® impeller. The free passage through the pump varies from 50–100 mm depending on size.

Flow max.: 1300 US gpm Head max.: 104 ft
Liquid temperature: 32..104 °F p max.: 87psi

Submersible wastewater pumps - SLV



Submersible Grundfos SLV sewage pumps are fitted with a SuperVortex impeller. The free passage through the pump varies from 50–100 mm depending on size.

Flow max.: 501 US gpm Head max.: 152 ft
Liquid temperature: 32..104 °F p max.: 87psi

Submersible wastewater pumps - AP/APG



AP pumps are designed for pumping wastewater, sludge-containing water, groundwater, and sewage. APG are equipped with cutter system for grinding solids into small pieces.

Service offerings



Customized Service Agreement



Commissioning



WASTE WATER TRANSFER

Monitors, Controls and Sensors

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Pump control - **CU362**



The CU 362 control unit is a combined controller and user-friendly control panel with nine buttons and a large graphical LCD display. On the operator display, the current status of the system is shown. The actual positions of the pumps, mixer and measuring sensors are shown in the display.

Level Control - **LC 231 / LC 241**



LC 231 pump controllers are designed for level control, monitoring, and protection of pumping systems, one or two pumps starting DOL up to 12 Amp. LC 241 level controllers are designed for wastewater pumping systems, monitoring, and control of one or two pumps, up to 72 Amp.

Level Transmitters - **MS1, M2, FS1**

Float switches for level control/monitoring in tanks, pumping stations, or similar applications.



Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



Flow Sensors - **MAG 3100, 5100, 8000**

Several variants of the Mag Flow system are available, depending on needed requirements and specifications. In general, the system consists of a flow meter and a transmitter of choice. MAG 3100 covers all the applications which the other industry specific sensors do not cover.



Pump control accessories - **IO (for wastewater pumps)**

Various input and output modules for control solutions.



Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.



WASTE WATER TRANSFER

Service offerings



Customized Service Agreement



Commissioning

Accessories

Wastewater Accessories - **Installation sets, lifting devices, chains, ...**



Accessories designed for wastewater solutions:
Dry/submerged installation sets, lifting devices, chains, ...



CHEMICAL TREATMENT

- CU 382 control unit handles number of analogue/digital input/output for control and monitoring of water quality and accordingly have dosing control (example: pH control, ClO₂ dosing, Cl dosing etc.).
- Polydos for **coagulation/flocculation**: Compact and flexible installation of a **fully integrated system** including material handling, preparation and maturing, and solution dosing.

Pumps

End-suction close coupled single-stage pumps - **NB/NBE**



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm	Head max.: 523 ft
Liquid temperature: -13..248 °F	p max.: 232psi

Submersible wastewater pumps - **S**



The S pumps are a range of free-flow channel impeller pumps specifically designed for pumping sewage and wastewater in a wide range of municipal and industrial applications.

Flow max.: 29800 US gpm	Head max.: 381 ft
Liquid temperature: 32..122 °F	

Submersible wastewater pumps - **SE, SE1, SEV**



Submersible Grundfos SE sewage pumps are fitted with either S-tube (SE1) or SuperVortex impeller (SEV). The free passage through the pump varies from 50–100 mm depending on size.

Flow max.: 0 US gpm	Head max.: 0 ft
---------------------	-----------------

Submersible wastewater pumps - **SEG**



Submersible Grundfos SEG sewage grinder pumps are designed for pumping wastewater, sludge-containing water, and sewage. Fitted with a patented grinder system designed to grind the media.

Flow max.: 163 US gpm	Head max.: 158 ft
Liquid temperature: 32..104 °F	p max.: 87psi



CHEMICAL TREATMENT

Submersible wastewater pumps - **SL**



Submersible Grundfos SL sewage pumps are fitted with an S-tube® impeller. The free passage through the pump varies from 50–100 mm depending on size.

Flow max.: 1300 US gpm Head max.: 104 ft
Liquid temperature: 32..104 °F p max.: 87psi

Submersible wastewater pumps - **SLV**



Submersible Grundfos SLV sewage pumps are fitted with a SuperVortex impeller. The free passage through the pump varies from 50–100 mm depending on size.

Flow max.: 501 US gpm Head max.: 152 ft
Liquid temperature: 32..104 °F p max.: 87psi

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour
Liquid temperature: 14..122 °F p max.: 232psi

Digital Dosing Pumps - **DME**



Digital diaphragm dosing pump with variable-speed motor drive. For enhanced accuracy, the pump can be calibrated to the actual installation by means of a simple calibration function. The turndown ratio is 1 to 800 with the same accuracy and uniform dosage with reduced pulsation throughout the capacity range.

Flow max.: 248 US gal/hour
p max.: 145psi

Mechanical Dosing Pumps - **DMH**



The DMH range is a series of extremely strong, robust hydraulically actuated piston diaphragm dosing pumps for applications requiring reliable dosing and high-pressure capability, such as process engineering. The range is highly versatile: it covers a wide flow range and offers a variety of dosing head sizes, materials and accessories.

Flow max.: 243 US gal/hour
Liquid temperature: 14..194 °F p max.: 2900psi

Customized Solutions - **Custom-Built Pumps**



Customized pumps to meet specific application challenges (temperatures, pressures, difficult liquids) or installation requirements (ambient conditions) not covered by the standard pump range. It is a modular platform built on stocked components. For more information please contact Grundfos sales.

Service offerings



All-In-Maintenance



CHEMICAL TREATMENT

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Level Transmitters - **Level Transmitter S, E, W**



Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.

Pump control accessories - **IO (for wastewater pumps)**

Various input and output modules for control solutions.



Service offerings



All-In-Maintenance

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.

Wastewater Accessories - **Installation sets, lifting devices, chains, ...**



Accessories designed for wastewater solutions: Dry/submerged installation sets, lifting devices, chains, ...



BIOLOGICAL TREATMENT

- SE/SL come in three hydraulic concepts for **different wastewater contamination levels** (semi-open, closed and free flow impellers). The product range is designed for its environments, with extreme durability that covers aggressive environments.
- Grundfos **mixers and flowmakers** keep particles evenly distributed in the wastewater and sludge and can be controlled with Grundfos variable speed drive for optimized energy efficiency.
- The Aerojet can help to **avoid odor problems** during wastewater storage and keep the treatment process running. Since it is submersed, no harmful aerosols are dispersed into the surroundings.

Pumps

End-suction close coupled single-stage pumps - **NB/NBE**



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm	Head max.: 523 ft
Liquid temperature: -13..248 °F	p max.: 232psi

Submersible wastewater pumps - **S**



The S pumps are a range of free-flow channel impeller pumps specifically designed for pumping sewage and wastewater in a wide range of municipal and industrial applications.

Flow max.: 29800 US gpm	Head max.: 381 ft
Liquid temperature: 32..122 °F	

Submersible wastewater pumps - **SE, SE1, SEV**



Submersible Grundfos SE sewage pumps are fitted with either S-tube (SE1) or SuperVortex impeller (SEV). The free passage through the pump varies from 50–100 mm depending on size.

Flow max.: 0 US gpm	Head max.: 0 ft
---------------------	-----------------

Submersible wastewater pumps - **SEG**



Submersible Grundfos SEG sewage grinder pumps are designed for pumping wastewater, sludge-containing water, and sewage. Fitted with a patented grinder system designed to grind the media.

Flow max.: 163 US gpm	Head max.: 158 ft
Liquid temperature: 32..104 °F	p max.: 87psi



BIOLOGICAL TREATMENT

Submersible wastewater pumps - **SL**



Submersible Grundfos SL sewage pumps are fitted with an S-tube® impeller. The free passage through the pump varies from 50–100 mm depending on size.

Flow max.: 1300 US gpm	Head max.: 104 ft
Liquid temperature: 32..104 °F	p max.: 87psi

Submersible wastewater pumps - **SLV**



Submersible Grundfos SLV sewage pumps are fitted with a SuperVortex impeller. The free passage through the pump varies from 50–100 mm depending on size.

Flow max.: 501 US gpm	Head max.: 152 ft
Liquid temperature: 32..104 °F	p max.: 87psi

Submersible wastewater pumps - **AP/APG**



AP pumps are designed for pumping wastewater, sludge-containing water, groundwater, and sewage. APG are equipped with cutter system for grinding solids into small pieces.

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour	
Liquid temperature: 14..122 °F	p max.: 232psi

Digital Dosing Pumps - **DME**



Digital diaphragm dosing pump with variable-speed motor drive. For enhanced accuracy, the pump can be calibrated to the actual installation by means of a simple calibration function. The turndown ratio is 1 to 800 with the same accuracy and uniform dosage with reduced pulsation throughout the capacity range.

Flow max.: 248 US gal/hour	
	p max.: 145psi

Mechanical Dosing Pumps - **DMH**



The DMH range is a series of extremely strong, robust hydraulically actuated piston diaphragm dosing pumps for applications requiring reliable dosing and high-pressure capability, such as process engineering. The range is highly versatile: it covers a wide flow range and offers a variety of dosing head sizes, materials and accessories.

Flow max.: 243 US gal/hour	
Liquid temperature: 14..194 °F	p max.: 2900psi



BIOLOGICAL TREATMENT

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Communication Interface - **MI 301**



Grundfos remote controls used for installation, data monitoring, fault information and configuration of Grundfos pumps and systems, by radio or IR connections.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Level Transmitters - **Level Transmitter S, E, W**



Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.

Pump control accessories - **IO (for wastewater pumps)**

Various input and output modules for control solutions.



Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.

Wastewater Accessories - **Installation sets, lifting devices, chains, ...**



Accessories designed for wastewater solutions: Dry/submerged installation sets, lifting devices, chains, ...



PHYSICAL TREATMENT

- **High pressure** demands can be fulfilled with a **compact pump design** (less stages) by operating at **over-synchronous speed**. Factory configured CRE's with reinforced chambers and impellers can be an option. The motor size must be adjusted accordingly.

Pumps

Vertical Multistage Pumps - **CR/CRE**



Vertical, multistage centrifugal pump with suction and discharge ports on the same level.

Flow max.: 1770 US gpm	Head max.: 1600 ft
Liquid temperature: -40..302 °F	p max.: 580psi

End-suction close coupled single-stage pumps - **NBC/NBGE**



Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 8240 US gpm	Head max.: 861 ft
Liquid temperature: -13..284 °F	p max.: 363psi

End-suction close coupled single-stage pumps - **NB/NBE**



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm	Head max.: 523 ft
Liquid temperature: -13..248 °F	p max.: 232psi

End-suction long coupled single-stage pumps - **NK/NKE**



Standard pumps according to EN 733. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm	Head max.: 524 ft
Liquid temperature: -13..248 °F	p max.: 232psi

End-suction long coupled single-stage pumps - **NKG/NKGE**



Standard pumps according to ISO 2858 with axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm	Head max.: 859 ft
Liquid temperature: -13..284 °F	p max.: 363psi

Horizontal Multistage pumps - **BM**



High pressure booster modules are used for boosting, liquid transfer, and circulation in systems under a high static pressure. Modules of different sizes can be combined and connected either in series or in parallel to meet exact Q/H requirements.

Flow max.: 1480 US gpm	Head max.: 1580 ft
Liquid temperature: 32..113 °F	



PHYSICAL TREATMENT

Horizontal Multistage pumps - **BMS**



The Grundfos BMS range consists of hp (high pressure) and hs (high speed) versions. BMS hp are suitable for industrial and water supply applications where the inlet pressure is high. BMS hs enables the creation of high pressure.

Flow max.: 1500 US gpm Head max.: 3450 ft
Liquid temperature: 32..104 °F

Horizontal Multistage pumps - **BMSX**



A BMSX booster system consists of a BMS hs high-speed pump, a BM hp high-inlet-pressure pump and an isobaric pressure exchanger. It has a unique design dedicated to seawater and brackish water desalination.

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour
Liquid temperature: 14..122 °F p max.: 232psi

Digital Dosing Pumps - **DME**



Digital diaphragm dosing pump with variable-speed motor drive. For enhanced accuracy, the pump can be calibrated to the actual installation by means of a simple calibration function. The turndown ratio is 1 to 800 with the same accuracy and uniform dosage with reduced pulsation throughout the capacity range.

Flow max.: 248 US gal/hour
p max.: 145psi

Mechanical Dosing Pumps - **DMH**



The DMH range is a series of extremely strong, robust hydraulically actuated piston diaphragm dosing pumps for applications requiring reliable dosing and high-pressure capability, such as process engineering. The range is highly versatile: it covers a wide flow range and offers a variety of dosing head sizes, materials and accessories.

Flow max.: 243 US gal/hour
Liquid temperature: 14..194 °F p max.: 2900psi

Service offerings



Laser Alignment

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Communication Interface - **MI 301**



Grundfos remote controls used for installation, data monitoring, fault information and configuration of Grundfos pumps and systems, by radio or IR connections.



PHYSICAL TREATMENT

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Level Transmitters - **Level Transmitter S, E, W**



Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.

Flow Sensors - **MAG 3100, 5100, 8000**



Several variants of the Mag Flow system are available, depending on needed requirements and specifications. In general, the system consists of a flow meter and a transmitter of choice. MAG 3100 covers all the applications which the other industry specific sensors do not cover.

M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi

Systems

Booster Systems - **Hydro MPC, Hydro Multi-E**



Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2–6 (2–4 for Multi-E) parallel connected pumps, integrated advanced controller and all necessary fittings.

Flow max.: 6440 US gpm	Head max.: 528 ft
Liquid temperature: 32..140 °F	p max.: 232psi

Service offerings



Laser Alignment

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.



DISINFECTION

Pumps

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour
Liquid temperature: 14..122 °F p max.: 232psi

Digital Dosing Pumps - **DME**



Digital diaphragm dosing pump with variable-speed motor drive. For enhanced accuracy, the pump can be calibrated to the actual installation by means of a simple calibration function. The turndown ratio is 1 to 800 with the same accuracy and uniform dosage with reduced pulsation throughout the capacity range.

Flow max.: 248 US gal/hour
p max.: 145psi

Monitors, Controls and Sensors

Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.

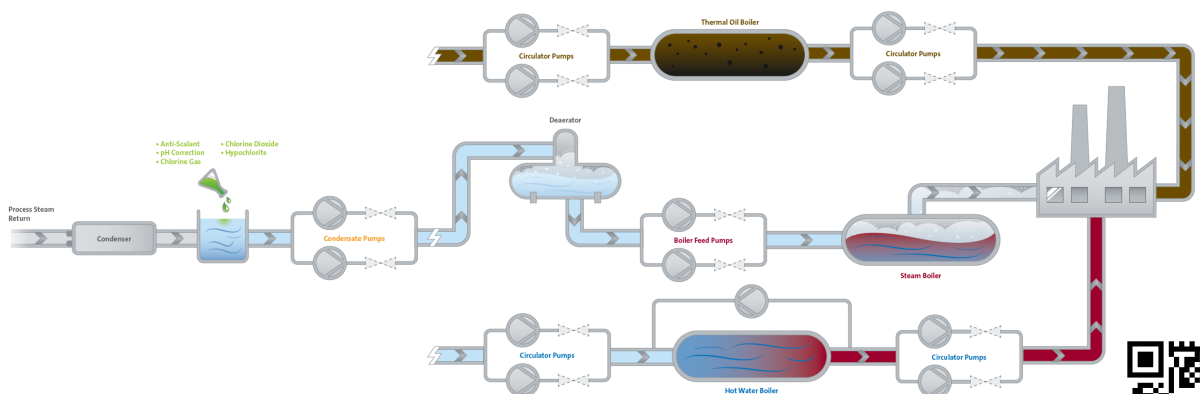
Industrial Heating

Grundfos supplies thoroughly tested, variable frequency drive-controlled pumps that optimize the boiler feed process. Designed with low NPSH, these solutions cater to systems with poor inlet conditions. This ensures cavitation-free operation even outside the pump's normal duty range. The Grundfos air-cooled top shaft seal solution eliminates the need for external cooling in high-temperature applications.

"We're seeing a greater energy efficiency of the boiler, gas usage, steam quality is better, control of level is better. No failure rates. No problems whatsoever."



Scott Curran, Maintenance Team Leader, William Grant & Sons' Girvan Distillery





BOILER SYSTEM

- **Low NPSH** versions (oversized impeller in 1st stage) for boiler feed pumps can better handle poor inlet pressure and hot water.
- Some installations result in same temperatures in the feed pumps as in the boiler. With **air-cooled top** the shaft seals are protected.
- **Direct boiler feed** with speed-controlled pumps replaces the modulating valves and leads to lower energy consumption, less stress on components and better steam quality.
- Stable operation with **pump curve compensation** for low flows with Grundfos frequency converters.
- Using a **level sensor** in the boiler for optimum level leads to better steam quality, efficiency and reliability.
- **MAGdrive** or **double shaft seal** to prevent from air entering the pump in duty/stand-by configurations.

Pumps

Vertical Multistage Pumps - **CR/CRE**



Vertical, multistage centrifugal pump with suction and discharge ports on the same level.

Flow max.: 1770 US gpm Head max.: 1600 ft
Liquid temperature: -40..302 °F p max.: 580psi

End-suction close coupled multistage pumps - **CM/CME**



CM, CME are reliable, quiet, and compact horizontal end-suction pumps. The modular pump design makes it easy to make customized solutions.

Flow max.: 162 US gpm Head max.: 401 ft
Liquid temperature: -4..248 °F p max.: 232psi

End-suction close coupled single-stage pumps - **NBG/NBGE**



Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 8240 US gpm Head max.: 861 ft
Liquid temperature: -13..284 °F p max.: 363psi

End-suction close coupled single-stage pumps - **NB/NBE**



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 523 ft
Liquid temperature: -13..248 °F p max.: 232psi

Inline single-stage pumps - **TP/TPE, TPD/TPDE**



Grundfos TP/TPE pumps are single-stage, close-coupled in-line centrifugal pumps with mechanical shaft seal and primarily for applications such as heating/cooling/district energy. TPD/TPDE pumps are the twin-head version.

Flow max.: 9330 US gpm Head max.: 535 ft
Liquid temperature: -40..302 °F p max.: 363psi

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour
Liquid temperature: 14..122 °F p max.: 232psi

Customized Solutions - **Custom-Built Pumps**



Customized pumps to meet specific application challenges (temperatures, pressures, difficult liquids) or installation requirements (ambient conditions) not covered by the standard pump range. It is a modular platform built on stocked components. For more information please contact Grundfos sales.

Optimization services - **ENERGY CHECK**



A Grundfos Energy Check or Energy Audit will help you find hidden savings in your pump installation. It can also help to reduce your operating expenses and reach your sustainability targets.



BOILER SYSTEM

Service offerings



All-In-Maintenance



Customized Service Agreement



Commissioning



Grundfos Machine Health

Monitors, Controls and Sensors

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



Flow Sensors - **VFI/VFS**

Flow and temperature sensors designed to be robust and accurate. They use our Silicoat® coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Pressure Sensors - **DPI, DPS, RPI, RPS**

Our pressure sensor ranges are designed to be robust, accurate and reliable. Depending on the product family they measure relative or differential pressure and temperature. They use our Silicoat coating to be in direct contact with the media and provide stable signals.



Liquid temperature: -22..248 °F

Pressure Sensors - **ISP40, ISP44**



Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.

Temperature Sensors - **Danfoss MBT 3270**

The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.



M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi



BOILER SYSTEM

Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.

Systems

Booster Systems - **Hydro MPC, Hydro Multi-E**



Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2–6 (2–4 for Multi-E) parallel connected pumps, integrated advanced controller and all necessary fittings.

Flow max.: 6440 US gpm	Head max.: 528 ft
Liquid temperature: 32..140 °F	p max.: 232psi

Dosing Tank Stations - **DTS**



Dosing tank stations are intended for storing and dosing liquids. Many different configurations can be selected flexibly to fulfil various dosing tasks. They are available in 6 tank sizes: 60 l, 100 l, 200 l, 300 l, 500 l and 1000 l.

Service offerings



All-In-Maintenance



Customized Service Agreement



Commissioning



Grundfos Machine Health

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.



HEAT DISTRIBUTION

- For high temperatures the shaft seals can be protected with **air-cooled top**.
- The MAGNA3 features a **built-in heat energy meter** that can monitor system heat energy distribution and consumption to **reduce** high **energy demand** caused by system imbalances.

Pumps

Inline single-stage pumps - **TP/TPE, TPD/TPED**



Grundfos TP/TPE pumps are single-stage, close-coupled in-line centrifugal pumps with mechanical shaft seal and primarily for applications such as heating/cooling/district energy. TPD/TPDE pumps are the twin-head version.

Flow max.: 9330 US gpm	Head max.: 535 ft
Liquid temperature: -40..302 °F	p max.: 363psi

Circulator pumps - **MAGNA**



The Grundfos MAGNA circulator pumps are designed for heating and cooling applications in commercial buildings. The pumps are available in both cast-iron and stainless-steel and as twin-head variants. The pumps are maintenance-free due to the canned-rotor type design.

Flow max.: 358 US gpm	Head max.: 62 ft
Liquid temperature: 14..230 °F	p max.: 232psi

Circulator pumps - **ALPHA**



The Grundfos ALPHA pumps are high-efficiency variable speed circulators designed for heating and air-conditioning and suitable for some industrial applications.

Flow max.: 18 US gpm	Head max.: 27 ft
Liquid temperature: 32..230 °F	p max.: 145psi

Customized Solutions - **Custom-Built Pumps**



Customized pumps to meet specific application challenges (temperatures, pressures, difficult liquids) or installation requirements (ambient conditions) not covered by the standard pump range. It is a modular platform built on stocked components. For more information please contact Grundfos sales.

Optimization services - **ENERGY CHECK**



A Grundfos Energy Check or Energy Audit will help you find hidden savings in your pump installation. It can also help to reduce your operating expenses and reach your sustainability targets.



HEAT DISTRIBUTION

Monitors, Controls and Sensors

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Flow Sensors - **VFI/VFS**



Flow and temperature sensors designed to be robust and accurate. They use our Silicoat® coating to be in direct contact with the media and provide stable signals.

Liquid temperature: -22..248 °F

Temperature Sensors - **Danfoss MBT 3270**



The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.

Systems

Booster Systems - **Hydro MPC, Hydro Multi-E**



Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2–6 (2–4 for Multi-E) parallel connected pumps, integrated advanced controller and all necessary fittings.

Flow max.: 6440 US gpm	Head max.: 528 ft
Liquid temperature: 32..140 °F	p max.: 232psi

Customized Systems - **Grundfos Engineered Systems**



Grundfos Engineered Systems (GES) designs and manufactures custom systems when a Grundfos pre-engineered system cannot fit the conditions required. There are multiple variations of type, size and quantity of pumps that can be packaged together.

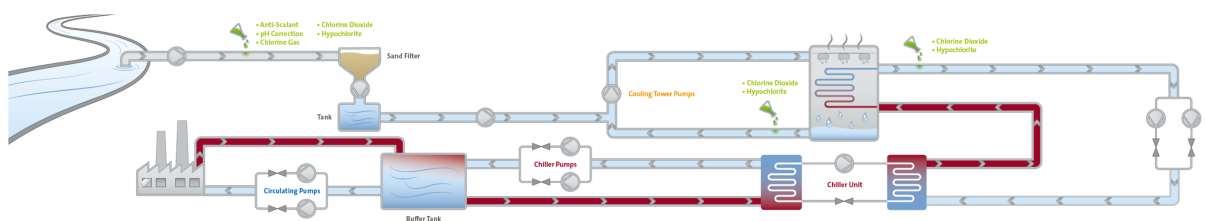
Industrial Cooling

As the demand for industrial production grows globally, so too does the demand for cooling. In almost every industrial facility, ensuring the right temperature for machines and processes is essential to production efficiency, reliability, and quality. Grundfos offers pumps and solutions equipped with variable frequency drive motors and sensors to create a complete solution that can improve operational efficiency and achieve greater OPEX savings.

"With 40 to 60% energy savings on every project that we're going for, then all the projects are being approved as quick as they're suggested."



Daniel Gray, Energy and Sustainability Manager, Suntory Beverage & Food GB & I





COOLING TOWER

- Cooling tower **fans** can be intelligently **controlled by MPC** controllers.
- The **cooling tower** with all its devices can be **run with the pump controller** without the need of another controller.
- **Differential temperature control** (according to return temperature) based on RPI+T sensors can significantly reduce OPEX.
- **Onsite chlorine dioxide production will** eliminate biofilm/legionella risk, improving the safety and efficiency of the cooling tower
- Grundfos iSOLUTIONS (DID + DDA) can automate the **blowdown process**, which leads to lower OPEX through less water and energy consumption.
- When **biocides** reach a defined lower threshold, the **DDA** automatically and accurately adjusts the dosing rate with up to 75% chemical savings.
- For **scaling and fouling control** the SMART Digital DDA with DDA can maintain a fixed flow and send alarms in case of e.g. low amount of chemicals. Chemical cost can be reduced.

Pumps

End-suction close coupled single-stage pumps - **NBG/NBGE**



Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 8240 US gpm	Head max.: 861 ft
Liquid temperature: -13..284 °F	p max.: 363psi

End-suction close coupled single-stage pumps - **NB/NBE**



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm	Head max.: 523 ft
Liquid temperature: -13..248 °F	p max.: 232psi

End-suction long coupled single-stage pumps - **NK/NKE**



Standard pumps according to EN 733. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm	Head max.: 524 ft
Liquid temperature: -13..248 °F	p max.: 232psi

Inline single-stage pumps - **TP/TPE, TPD/TPED**



Grundfos TP/TPE pumps are single-stage, close-coupled in-line centrifugal pumps with mechanical shaft seal and primarily for applications such as heating/cooling/district energy. TPD/TPDE pumps are the twin-head version.

Flow max.: 9330 US gpm	Head max.: 535 ft
Liquid temperature: -40..302 °F	p max.: 363psi

Immersible Pumps - **MTR/MTRE**



Vertical multistage centrifugal pump designed for tank top mounting and for pumping of cooling lubricants and cutting oils for machine tools, cooling applications, industrial liquid transfer and similar applications.

Flow max.: 458 US gpm	
Liquid temperature: 14..194 °F	p max.: 551psi

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour	
Liquid temperature: 14..122 °F	p max.: 232psi

Optimization services - **ENERGY CHECK**

A Grundfos Energy Check or Energy Audit will help you find hidden savings in your pump installation. It can also help to reduce your operating expenses and reach your sustainability targets.





COOLING TOWER

Monitors, Controls and Sensors

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

Flow Sensors - **VFI/VFS**



Flow and temperature sensors designed to be robust and accurate. They use our Silicoat® coating to be in direct contact with the media and provide stable signals.

Liquid temperature: -22...248 °F

Pressure Sensors - **DPI, DPS, RPI, RPS**



Our pressure sensor ranges are designed to be robust, accurate and reliable. Depending on the product family they measure relative or differential pressure and temperature. They use our Silicoat coating to be in direct contact with the media and provide stable signals.

Liquid temperature: -22...248 °F

Pressure Sensors - **ISP40, ISP44**



Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.

Temperature Sensors - **Danfoss MBT 3270**



The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.

M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi

Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.

Drive Accessories - **Sine-wave filter**



Sine wave filters have a high degree of filtering, resulting in a high reduction of the stress on the motor insulation system. At the same time, they reduce the acoustic noise from the motor. Motor losses are reduced when a sine-wave filter converts the output pulses of the frequency converter into a sine-wave-shaped.



COOLING TOWER

Systems

Booster Systems - **Hydro MPC, Hydro Multi-E**



Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2–6 (2–4 for Multi-E) parallel connected pumps, integrated advanced controller and all necessary fittings.

Flow max.: 6440 US gpm	Head max.: 528 ft
Liquid temperature: 32..140 °F	p max.: 232psi

Dosing Tank Stations - **DTS**



Dosing tank stations are intended for storing and dosing liquids. Many different configurations can be selected flexibly to fulfil various dosing tasks. They are available in 6 tank sizes: 60 l, 100 l, 200 l, 300 l, 500 l and 1000 l.

Customized Systems - **Grundfos Engineered Systems**



Grundfos Engineered Systems (GES) designs and manufactures custom systems when a Grundfos pre-engineered system cannot fit the conditions required. There are multiple variations of type, size and quantity of pumps that can be packaged together.

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.



CHILLER/EVAPORATOR/CONDENSER/COOLING WATER DISTRIBUTION

- In chiller units, setting to **constant temperature** (with E-motor) instead of constant pressure (with regulating valve) **saves energy** and smaller pumps can be used (running faster).
- The **viscosity of glycol and brines** changes with the liquid temperature. Grundfos pumps can be supplied with **oversized motors** that efficiently cope with higher load.
- **Critical cooling processes** require that the **temperature does not deviate**. Grundfos speed-controlled pumps make sure that the temperature is held constant.
- Low temperatures in installations can cause **water condensation** in the motor **at standstill**. With Grundfos **integrated motor heaters** condensation is completely avoided.
- To **prevent deformation** because of **thermal expansion** CRN versions are recommended for **low-temperature applications**.
- On the **secondary side** usually ice water, glycol, brine or alcohol-water are used as cooling liquid. This can be best handled with **stainless steel pumps**.

Pumps

End-suction close coupled multistage pumps - **CM/CME**

CM, CME are reliable, quiet, and compact horizontal end-suction pumps. The modular pump design makes it easy to make customized solutions.



Flow max.: 162 US gpm	Head max.: 401 ft
Liquid temperature: -4..248 °F	p max.: 232psi

End-suction close coupled single-stage pumps - **NBG/NBGE**

Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.



Flow max.: 8240 US gpm	Head max.: 861 ft
Liquid temperature: -13..284 °F	p max.: 363psi

End-suction close coupled single-stage pumps - **NB/NBE**

End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.



Flow max.: 7070 US gpm	Head max.: 523 ft
Liquid temperature: -13..248 °F	p max.: 232psi

End-suction long coupled single-stage pumps - **NK/NKE**

Standard pumps according to EN 733. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.



Flow max.: 7070 US gpm	Head max.: 524 ft
Liquid temperature: -13..248 °F	p max.: 232psi

Inline single-stage pumps - **TP/TPE, TPD/TPED**

Grundfos TP/TPE pumps are single-stage, close-coupled in-line centrifugal pumps with mechanical shaft seal and primarily for applications such as heating/cooling/district energy. TPD/TPDE pumps are the twin-head version.



Flow max.: 9330 US gpm	Head max.: 535 ft
Liquid temperature: -40..302 °F	p max.: 363psi

Circulator pumps - **MAGNA**

The Grundfos MAGNA circulator pumps are designed for heating and cooling applications in commercial buildings. The pumps are available in both cast-iron and stainless-steel and as twin-head variants. The pumps are maintenance-free due to the canned-rotor type design.



Flow max.: 358 US gpm	Head max.: 62 ft
Liquid temperature: 14..230 °F	p max.: 232psi

Immersible Pumps - **MTR/MTRE**

Vertical multistage centrifugal pump designed for tank top mounting and for pumping of cooling lubricants and cutting oils for machine tools, cooling applications, industrial liquid transfer and similar applications.



Flow max.: 458 US gpm	
Liquid temperature: 14..194 °F	p max.: 551psi

Customized Solutions - **Custom-Built Pumps**

Customized pumps to meet specific application challenges (temperatures, pressures, difficult liquids) or installation requirements (ambient conditions) not covered by the standard pump range. It is a modular platform built on stocked components. For more information please contact Grundfos sales.





CHILLER/EVAPORATOR/CONDENSER/COOLING WATER DISTRIBUTION

Monitors, Controls and Sensors

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

Flow Sensors - **VFI/VFS**



Flow and temperature sensors designed to be robust and accurate. They use our Silicoat® coating to be in direct contact with the media and provide stable signals.

Liquid temperature: -22..248 °F

Pressure Sensors - **ISP40, ISP44**



Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.

Temperature Sensors - **Danfoss MBT 3270**



The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.

Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.

Drive Accessories - **Sine-wave filter**



Sine wave filters have a high degree of filtering, resulting in a high reduction of the stress on the motor insulation system. At the same time, they reduce the acoustic noise from the motor. Motor losses are reduced when a sine-wave filter converts the output pulses of the frequency converter into at sine-wave-shaped.

Systems

Booster Systems - **Hydro MPC, Hydro Multi-E**



Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2–6 (2–4 for Multi-E) parallel connected pumps, integrated advanced controller and all necessary fittings.

Flow max.: 6440 US gpm Head max.: 528 ft
Liquid temperature: 32..140 °F p max.: 232psi

Customized Systems - **Grundfos Engineered Systems**



Grundfos Engineered Systems (GES) designs and manufactures custom systems when a Grundfos pre-engineered system cannot fit the conditions required. There are multiple variations of type, size and quantity of pumps that can be packaged together.

Machining

Machining processes such as grinding, turning, milling, boring, sawing, wire cutting and spark erosion lie at the heart of industrial manufacturing, where accuracy, economy, and reliability count for everything. The Grundfos range of immersible machine tool coolant pumps and high-pressure pumps for machining processes offer unsurpassed accuracy and stability to make sure that nothing interferes with these delicate processes. Integrated variable frequency drives can be optionally supplied for increased system efficiency and flexibility. Our immersible pumps suitable for machine tool applications offer a tank-mounted design, and our dry-installed multi-stage pumps are also well-suited for machine tool applications.

"Grundfos has handled the changeover to the horizontally mounted end-suction pump with open impeller very professionally. You could already tell that the people are at home in the machine tool industry."



Ralf Dörr, Process Planning
Gearboxes, ZF Saarbrücken



CLEAN SIDE

- For installations with **limited space** (i.e., installation in cabinets or machine centers) **high rpm versions** with over-synchronous operation can be suitable and provide the required flow and head, with a more compact pump design.
- **Leaking pumps** may lead to contamination and costly downtime. MTR pumps eliminate this risk with **drainage back to tank** (DBT).
- When **multiple duty points** are needed, E-pumps and sensors can speed up and slow down pumps to fulfil larger Q/H areas, and thereby replace 2–3 pumps or control valves with one E-pump.
- For global OEMs **stock costs** can be **reduced** with our IE5 E-motors providing multiple **approvals** and 50/60 Hz in one pump.
- The immersible pumps can be adjusted in length to accommodate different tank designs.
- The pumps are available in complete **stainless-steel** execution for **special applications**.
- The MTH/MTHE pumps are designed with **compactness** in mind increasing the ease of installation.

Pumps

Immersible Pumps - **MTR/MTRE**



Vertical multistage centrifugal pump designed for tank top mounting and for pumping of cooling lubricants and cutting oils for machine tools, cooling applications, industrial liquid transfer and similar applications.

Flow max.: 458 US gpm
Liquid temperature: 14..194 °F p max.: 551psi

Immersible Pumps - **MTH/MTHE**



Vertical multistage centrifugal pump designed for tank top mounting and for pumping of cooling lubricants and cutting oils for machine tools, cooling applications, industrial liquid transfer and similar applications.

Flow max.: 114 US gpm Head max.: 341 ft
Liquid temperature: 14..194 °F p max.: 145psi

Immersible Pumps - **MTC**



Vertical multistage, immersible, self-priming, centrifugal pump for installation in tanks etc. Designed for pumping of cooling lubricants for machine tools, condensate transfer and similar applications.

Vertical Multistage Pumps - **CR/CRE**



Vertical, multistage centrifugal pump with suction and discharge ports on the same level.

Flow max.: 1770 US gpm Head max.: 1600 ft
Liquid temperature: -40..302 °F p max.: 580psi



CLEAN SIDE

End-suction close coupled multistage pumps - **CM/CME**

CM, CME are reliable, quiet, and compact horizontal end-suction pumps. The modular pump design makes it easy to make customized solutions.



Flow max.: 162 US gpm Head max.: 401 ft
Liquid temperature: -4..248 °F p max.: 232psi

End-suction close coupled single-stage pumps - **NBG/NBGE**

Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.



Flow max.: 8240 US gpm Head max.: 861 ft
Liquid temperature: -13..284 °F p max.: 363psi

End-suction long coupled single-stage pumps - **NKG/NKGE**

Standard pumps according to ISO 2858 with axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.



Flow max.: 7070 US gpm Head max.: 859 ft
Liquid temperature: -13..284 °F p max.: 363psi

End-suction close coupled single-stage pumps - **NB/NBE**

End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.



Flow max.: 7070 US gpm Head max.: 523 ft
Liquid temperature: -13..284 °F p max.: 232psi

End-suction long coupled single-stage pumps - **NK/NKE**

Standard pumps according to EN 733. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.



Flow max.: 7070 US gpm Head max.: 524 ft
Liquid temperature: -13..248 °F p max.: 232psi

End-suction split coupled single-stage pumps - **NBS/NBSE**

Split-coupled end-suction pumps with NEMA motors and ANSI flange fittings.



Flow max.: 5680 US gpm Head max.: 443 ft
Liquid temperature: -13..284 °F p max.: 363psi

Service offerings



All-In-Maintenance



Customized Service Agreement



Commissioning

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**

Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.



Motor Protection - **MP 204**

MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.





CLEAN SIDE

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

Level Transmitters - **Level Transmitter S, E, W**

Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



Temperature Sensors - **Danfoss MBT 3270**



The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.

M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi

Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.

Service offerings



All-In-Maintenance



Customized Service Agreement



Commissioning



DIRTY SIDE

- The MTA pumps are available in **different immersible lengths** to accommodate different tank designs.
- The MTA pumps are designed **without shaft seal** to increase service life.
- The NBG/NKG pumps are built according to ISO 5199/2858. The impeller is designed according to the **super vortex principle**; thus, chips and fibers up to 25 mm will not clog up the pump.
- The NBG/NKG pumps are available in different materials with a broad range of shaft seal combinations to accommodate almost any customer requirement.

Pumps

Immersible Pumps - **MTA**



Single stage pump for tank top mounting for pumping cooling lubricants and cutting oils for machine tool applications.

Flow max.: 111 US gpm Head max.: 65 ft
Liquid temperature: 32..140 °F

End-suction close coupled single-stage pumps - **NBG/NBGE**



Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 8240 US gpm Head max.: 861 ft
Liquid temperature: -13..284 °F p max.: 363psi

End-suction long coupled single-stage pumps - **NKG/NKGE**



Standard pumps according to ISO 2858 with axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 859 ft
Liquid temperature: -13..284 °F p max.: 363psi

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi



DIRTY SIDE

Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.

Cleaning Processes

Part washing applications are notoriously demanding, as they often use aggressive liquids, high temperatures and high pressures. Using conventional pumps, this would result in bulky installations where the motor's power is not fully utilized. Wash and clean applications in the food processing industry, such as slaughterhouses and breweries, place restrictions on the physical size of the pump, as the equipment either is installed in a cabinet or fitted on a trolley moved by hand.

"By adjusting the pump capacity to the actual pressure required, a saving of 90 percent in energy consumption and energy costs was achieved. In the case of the parts cleaning system under consideration, these measures save 51,410 kWh of electricity per year and thus costs of around 6,200 €. With a total investment of only €3,800, this results in a return on investment of over 100 percent. The efficiency measures developed can in principle be extended to numerous comparable plants, enabling the company to tap further savings potential."



Özkan Karakurt, WPS/WSE,
Mercedes-Benz plant
Untertürkheim



FOOD

- **High pressure** demands can be fulfilled with a **compact pump design** (less stages) by operating at **over-synchronous speed**. Factory configured CRE's with reinforced chambers and impellers can be an option. The motor size must be adjusted accordingly.
- **Flow** demand can **change fast** with large variations. **Ramp and control trim** can **take stress from the pumps**.
- **Standstill motor heaters** are recommended **for very cold ambient temperatures** to **reduce condensation**. Drain holes might also need to be opened.

Pumps

Vertical Multistage Pumps - **CR/CRE**



Vertical, multistage centrifugal pump with suction and discharge ports on the same level.

Flow max.: 1770 US gpm Head max.: 1600 ft
Liquid temperature: -40..302 °F p max.: 580psi

End-suction close coupled multistage pumps - **CM/CME**



CM, CME are reliable, quiet, and compact horizontal end-suction pumps. The modular pump design makes it easy to make customized solutions.

Flow max.: 162 US gpm Head max.: 401 ft
Liquid temperature: -4..248 °F p max.: 232psi

End-suction close coupled single-stage pumps - **NBG/NBGE**



Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 8240 US gpm Head max.: 861 ft
Liquid temperature: -13..284 °F p max.: 363psi

End-suction close coupled single-stage pumps - **NB/NBE**



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 523 ft
Liquid temperature: -13..248 °F p max.: 232psi

Horizontal Multistage pumps - **BMS**



The Grundfos BMS range consists of hp (high pressure) and hs (high speed) versions. BMS hp are suitable for industrial and water supply applications where the inlet pressure is high. BMS hs enables the creation of high pressure.

Flow max.: 1500 US gpm Head max.: 3450 ft
Liquid temperature: 32..104 °F

Immersible Pumps - **MTR/MTRE**



Vertical multistage centrifugal pump designed for tank top mounting and for pumping of cooling lubricants and cutting oils for machine tools, cooling applications, industrial liquid transfer and similar applications.

Flow max.: 458 US gpm
Liquid temperature: 14..194 °F p max.: 551psi

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour
Liquid temperature: 14..122 °F p max.: 232psi



FOOD

Service offerings



All-In-Maintenance



Customized Service Agreement



Commissioning



Grundfos Machine Health

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Communication Interface - **MI 301**



Grundfos remote controls used for installation, data monitoring, fault information and configuration of Grundfos pumps and systems, by radio or IR connections.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.

Drive Accessories - **Sine-wave filter**



Sine wave filters have a high degree of filtering, resulting in a high reduction of the stress on the motor insulation system. At the same time, they reduce the acoustic noise from the motor. Motor losses are reduced when a sine-wave filter converts the output pulses of the frequency converter into at sine-wave-shaped.

Systems

Booster Systems - **Hydro MPC, Hydro Multi-E**



Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2–6 (2–4 for Multi-E) parallel connected pumps, integrated advanced controller and all necessary fittings.

Flow max.: 6440 US gpm
Liquid temperature: 32..140 °F

Head max.: 528 ft
p max.: 232psi

Customized Systems - **Grundfos Engineered Systems**



Grundfos Engineered Systems (GES) designs and manufactures custom systems when a Grundfos pre-engineered system cannot fit the conditions required. There are multiple variations of type, size and quantity of pumps that can be packaged together.



FOOD

Service offerings



All-In-Maintenance



Customized Service Agreement



Commissioning



Grundfos Machine Health

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.



NON-FOOD

- **High pressure** demands can be fulfilled with a **compact pump design** (less stages) by operating at **over-synchronous speed**. Factory configured CRE's with reinforced chambers and impellers can be an option. The motor size must be adjusted accordingly.
- **Flow** demand can **change fast** with large variations. **Ramp and control trim** can **take stress from the pumps**.
- **Standstill motor heaters** are recommended **for very cold ambient temperatures** to **reduce condensation**. Drain holes might also need to be opened.

Pumps

Vertical Multistage Pumps - **CR/CRE**



Vertical, multistage centrifugal pump with suction and discharge ports on the same level.

Flow max.: 1770 US gpm Head max.: 1600 ft
Liquid temperature: -40..302 °F p max.: 580psi

End-suction close coupled multistage pumps - **CM/CME**



CM, CME are reliable, quiet, and compact horizontal end-suction pumps. The modular pump design makes it easy to make customized solutions.

Flow max.: 162 US gpm Head max.: 401 ft
Liquid temperature: -4..248 °F p max.: 232psi

End-suction close coupled single-stage pumps - **NBG/NBGE**



Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 8240 US gpm Head max.: 861 ft
Liquid temperature: -13..284 °F p max.: 363psi

End-suction close coupled single-stage pumps - **NB/NBE**



End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.

Flow max.: 7070 US gpm Head max.: 523 ft
Liquid temperature: -13..248 °F p max.: 232psi

Horizontal Multistage pumps - **BMS**



The Grundfos BMS range consists of hp (high pressure) and hs (high speed) versions. BMS hp are suitable for industrial and water supply applications where the inlet pressure is high. BMS hs enables the creation of high pressure.

Flow max.: 1500 US gpm Head max.: 3450 ft
Liquid temperature: 32..104 °F

Immersible Pumps - **MTR/MTRE**



Vertical multistage centrifugal pump designed for tank top mounting and for pumping of cooling lubricants and cutting oils for machine tools, cooling applications, industrial liquid transfer and similar applications.

Flow max.: 458 US gpm
Liquid temperature: 14..194 °F p max.: 551psi

Digital Dosing Pumps - **SMART Digital S/XL**



SMART Digital diaphragm dosing pump with powerful variable-speed stepper motor (S) or powerful PMS (Permanent Magnet Synchronous) motor (XL) and FlowControl system to automatically detect malfunctions. High-end solution for complex and demanding applications with turn-down ratio up to 1:3000.

Flow max.: 53 US gal/hour
Liquid temperature: 14..122 °F p max.: 232psi

Customized Solutions - **Custom-Built Pumps**



Customized pumps to meet specific application challenges (temperatures, pressures, difficult liquids) or installation requirements (ambient conditions) not covered by the standard pump range. It is a modular platform built on stocked components. For more information please contact Grundfos sales.



NON-FOOD

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Communication Interface - **MI 301**



Grundfos remote controls used for installation, data monitoring, fault information and configuration of Grundfos pumps and systems, by radio or IR connections.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

Level Transmitters - **MS1, M2, FS1**



Float switches for level control/monitoring in tanks, pumping stations, or similar applications.

Level Transmitters - **Level Transmitter S, E, W**



Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.

Pressure Sensors - **ISP40, ISP44**



Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.

Temperature Sensors - **ITS**



ITS is an integrated temperature sensor from Grundfos Direct Sensors. It is fully compatible with wet, aqueous media and based on MEMS sensing technology in combination with the corrosion resistant Silicoat® coating technology on the sensor chip.

Temperature Sensors - **Danfoss MBT 3270**



The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.

M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi



NON-FOOD

Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.

Drive Accessories - **Sine-wave filter**



Sine wave filters have a high degree of filtering, resulting in a high reduction of the stress on the motor insulation system. At the same time, they reduce the acoustic noise from the motor. Motor losses are reduced when a sine-wave filter converts the output pulses of the frequency converter into a sine-wave-shaped.

Systems

Booster Systems - **Hydro MPC, Hydro Multi-E**



Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2–6 (2–4 for Multi-E) parallel connected pumps, integrated advanced controller and all necessary fittings.

Flow max.: 6440 US gpm	Head max.: 528 ft
Liquid temperature: 32..140 °F	p max.: 232psi

Customized Systems - **Grundfos Engineered Systems**



Grundfos Engineered Systems (GES) designs and manufactures custom systems when a Grundfos pre-engineered system cannot fit the conditions required. There are multiple variations of type, size and quantity of pumps that can be packaged together.

Accessories

Dosing Pump Accessories - **General and Tank Accessories**



Comprehensive range of accessories for safe operation covering every requirement when dosing with Grundfos pumps. The range includes installation kits, tanks, mixers, suction lances, tubing, adaptors, connectors, various valve types, pulsation dampeners, injection units, etc.

Process Liquid Transfer

Process liquids are liquids that are used in industrial processes for various purposes, such as cooling, heating, cleaning, chemical reactions or as ingredients. Examples of process liquids include water, oil, acids (e.g., hydrochloric acid and sulfuric acid), bases (e.g., sodium hydroxide and potassium hydroxide), and solvents (e.g., ethanol and methanol). These liquids are used in a wide range of industries, including food and beverage, chemical, pharmaceutical, and manufacturing. Certain requirements to the pumps are important to consider when pumping process liquids such as temperature, viscosity, corrosion/chemical resistance, and safety. Grundfos offers the right standard and customized solutions for a wide range of applications.





PROCESS LIQUID TRANSFER

- For high-viscous liquids precautions must be taken to ensure that the motor of the pump is not overloaded. The viscosity of a pumped liquid depends strongly on the liquid temperature. We offer CR pumps with oversize motors for stable operation.

Pumps

End-suction close coupled multistage pumps - **CM/CME**

CM, CME are reliable, quiet, and compact horizontal end-suction pumps. The modular pump design makes it easy to make customized solutions.



Flow max.: 162 US gpm	Head max.: 401 ft
Liquid temperature: -4..248 °F	p max.: 232psi

Vertical Multistage Pumps - **CR/CRE**



Vertical, multistage centrifugal pump with suction and discharge ports on the same level.

Flow max.: 1770 US gpm	Head max.: 1600 ft
Liquid temperature: -40..302 °F	p max.: 580psi

Customized Solutions - **Custom-Built Pumps**

Customized pumps to meet specific application challenges (temperatures, pressures, difficult liquids) or installation requirements (ambient conditions) not covered by the standard pump range. It is a modular platform built on stocked components. For more information please contact Grundfos sales.



End-suction close coupled single-stage pumps - **LC**

LC is a close coupled centrifugal end-suction pump in a compact design for optimized space savings. It utilizes a double volute design that reduces radial loads, internal recirculation and turbulence resulting in longer bearing and seal life.



Flow max.: 4000 US gpm	Head max.: 400 ft
Liquid temperature: 10..275 °F	p max.: 250psi

Immersible Pumps - **MTR/MTRE**

Vertical multistage centrifugal pump designed for tank top mounting and for pumping of cooling lubricants and cutting oils for machine tools, cooling applications, industrial liquid transfer and similar applications.



Flow max.: 458 US gpm	
Liquid temperature: 14..194 °F	p max.: 551psi

End-suction close coupled single-stage pumps - **NB/NBE**

End-suction close-coupled pumps according to EN 733. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.



Flow max.: 7070 US gpm	Head max.: 523 ft
Liquid temperature: -13..248 °F	p max.: 232psi

End-suction close coupled single-stage pumps - **NBG/NBGE**

Close-coupled pumps according to ISO 2858. Flanges are PN 16 with dimensions according to AS2129 table E. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover, and impeller without disturbing the pump housing or pipework.



Flow max.: 8240 US gpm	Head max.: 861 ft
Liquid temperature: -13..284 °F	p max.: 363psi

End-suction long coupled single-stage pumps - **NK/NKE**

Standard pumps according to EN 733. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.



Flow max.: 7070 US gpm	Head max.: 524 ft
Liquid temperature: -13..248 °F	p max.: 232psi

End-suction long coupled single-stage pumps - **NKG/NKGE**

Standard pumps according to ISO 2858 with axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.



Flow max.: 7070 US gpm	Head max.: 859 ft
Liquid temperature: -13..284 °F	p max.: 363psi



PROCESS LIQUID TRANSFER

Service offerings



All-In-Maintenance



Customized Service Agreement



Laser Alignment



Commissioning



Grundfos Machine Health

Monitors, Controls and Sensors

Communication Interfaces - **CIM/CIU**



Communication Interface Module/Communication Interface Unit is the range of communication options from Grundfos. They enable you to connect your product to the wide range of field bus standards.

Pump control - **Control MPC**



Control MPC controls up to six identical pumps connected in parallel. It uses advanced algorithms to optimize performance and minimize energy consumption.

Temperature Sensors - **Danfoss MBT 3270**



The MBT 3270 is an easy and cost-effective way to equip our MGE and CUE control products with a robust temperature measurement possibility. The sensors are resistance based with a Pt 100 output.

M&C for Dosing & Disinfection - **DID**



The DID system with bypass flow cell is intended for monitoring and control of disinfectants, pH, ORP, conductivity and temperature. The system is preassembled on a common backplate and includes a control unit CU382 as well as the water parameter sensor(s). Several accessories are available.

p max.: 44psi

Pressure Sensors - **DPI, DPS, RPI, RPS**



Our pressure sensor ranges are designed to be robust, accurate and reliable. Depending on the product family they measure relative or differential pressure and temperature. They use our Silicoat coating to be in direct contact with the media and provide stable signals.

Liquid temperature: -22..248 °F

Pressure Sensors - **ISP40, ISP44**



Grundfos ISP40 and ISP44 are robust industrial pressure transmitters which can be used in a wide temperature range and portfolio of wet medias including corrosive properties. They can also handle some degree of water hammering.

Temperature Sensors - **ITS**



ITS is an integrated temperature sensor from Grundfos Direct Sensors. It is fully compatible with wet, aqueous media and based on MEMS sensing technology in combination with the corrosion resistant Silicoat® coating technology on the sensor chip.

Level Transmitters - **Level Transmitter S, E, W**



Hydrostatic level transmitters with different versions. S: applicable for most wastewater, drinking water and other media usages, W: wastewater, E: endurance and robustness strengthened product.



PROCESS LIQUID TRANSFER

Flow Sensors - **MAG 3100, 5100, 8000**



Several variants of the Mag Flow system are available, depending on needed requirements and specifications. In general, the system consists of a flow meter and a transmitter of choice. MAG 3100 covers all the applications which the other industry specific sensors do not cover.

Communication Interface - **MI 301**



Grundfos remote controls used for installation, data monitoring, fault information and configuration of Grundfos pumps and systems, by radio or IR connections.

Motor Protection - **MP 204**



MP 204 protects the motor against overload, dry running and incipient motor defects based on many parameters like: supply voltage, phase sequence or harmonic distortion. It disconnects the contactor if, for example, the current exceeds the preset value. It can be used stand-alone or for example incorporated in a Control DC.

Level Transmitters - **MS1, M2, FS1**



Float switches for level control/monitoring in tanks, pumping stations, or similar applications.

Flow Sensors - **VFI/VFS**



Flow and temperature sensors designed to be robust and accurate. They use our Silicoat® coating to be in direct contact with the media and provide stable signals.

Liquid temperature: -22..248 °F

Drives

External Frequency Converters - **CUE**



CUE is a complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps. CUE has a built-in PI controller and offers the same functionality and user-interface as Grundfos E-pumps. Power range up to 250 kW.

Drive Accessories - **Sine-wave filter**



Sine wave filters have a high degree of filtering, resulting in a high reduction of the stress on the motor insulation system. At the same time, they reduce the acoustic noise from the motor. Motor losses are reduced when a sine-wave filter converts the output pulses of the frequency converter into a sine-wave-shaped.

Systems

Customized Systems - **Grundfos Engineered Systems**



Grundfos Engineered Systems (GES) designs and manufactures custom systems when a Grundfos pre-engineered system cannot fit the conditions required. There are multiple variations of type, size and quantity of pumps that can be packaged together.

Booster Systems - **Hydro MPC, Hydro Multi-E**



Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2–6 (2–4 for Multi-E) parallel connected pumps, integrated advanced controller and all necessary fittings.

Flow max.: 6440 US gpm	Head max.: 528 ft
Liquid temperature: 32..140 °F	p max.: 232psi



PROCESS LIQUID TRANSFER

Service offerings



All-In-Maintenance



Customized Service Agreement



Laser Alignment



Commissioning



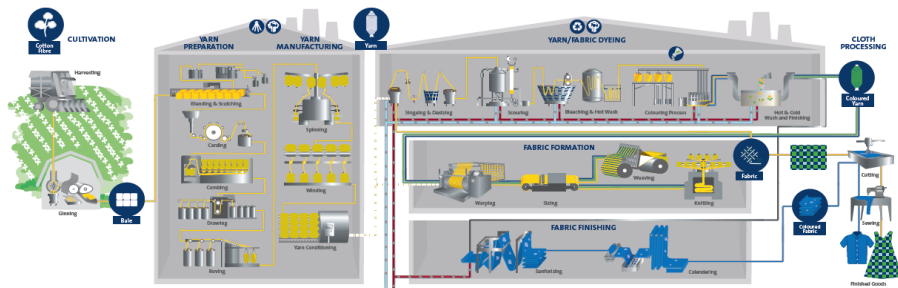
Grundfos Machine Health



Process Charts

Grundfos Products in Textile

GRUNDFOS PRODUCTS IN TEXTILE



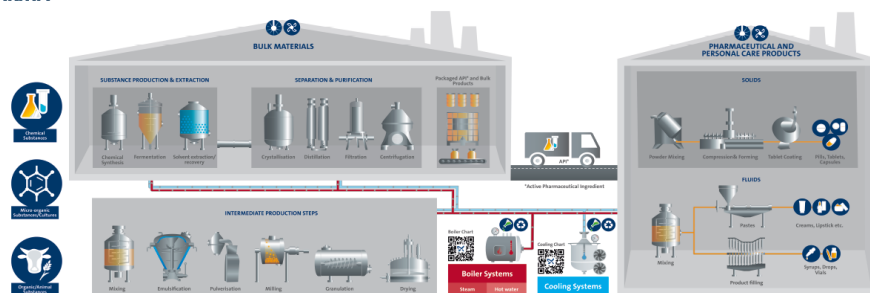
Semiconductor Production Process

SEMICONDUCTOR PRODUCTION PROCESS



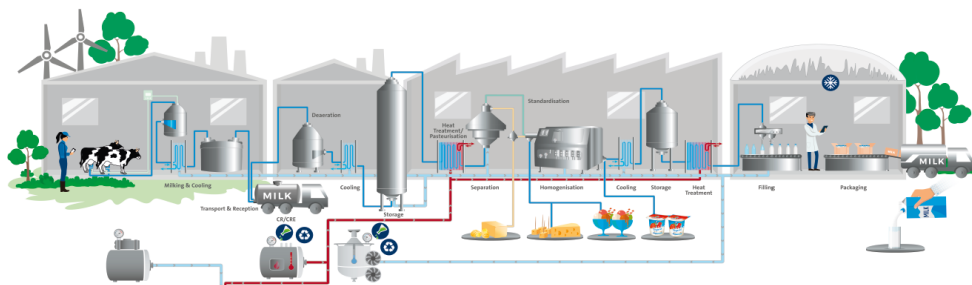
Pharmaceuticals and Personal Care Products

GRUNDFOS PRODUCTS IN PHARMA

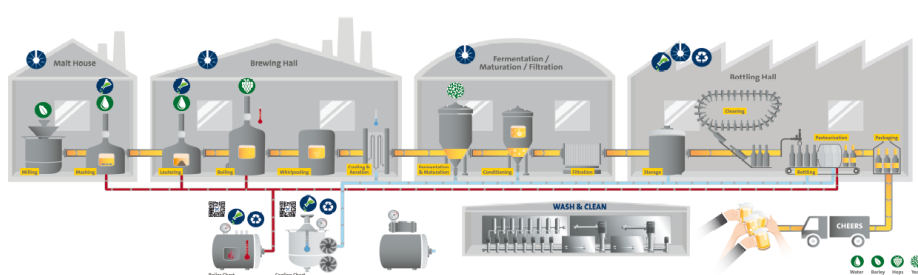




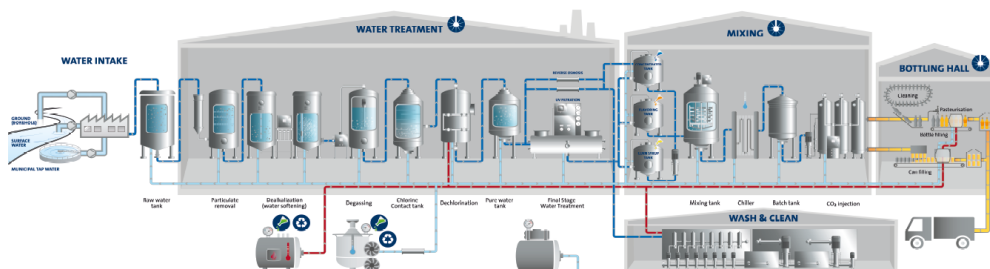
GRUNDFOS PRODUCTS IN DAIRIES



GRUNDFOS PRODUCTS IN BREWERIES

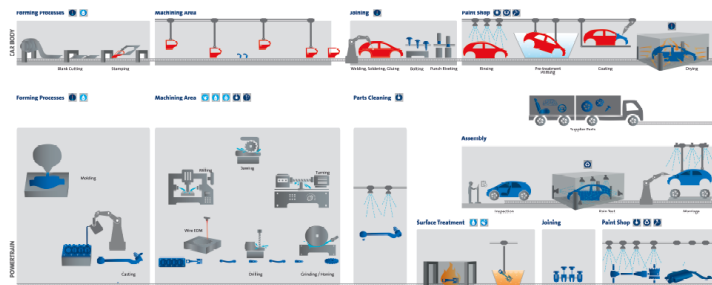


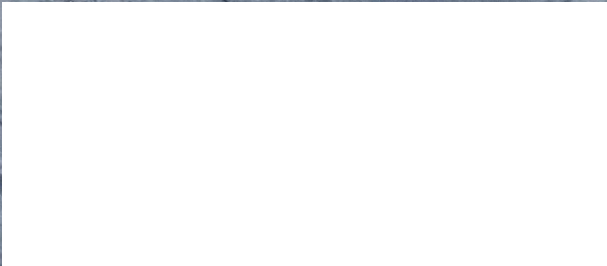
GRUNDFOS PRODUCTS IN SOFT DRINKS



Mobility

GRUNDFOS PRODUCTS IN AUTOMOTIVE





GRUNDFOS Pumps Corporation
9300 Loiret Boulevard
66219 Lenexa, Kansas
USA
Support-US@sales.grundfos.com
<http://www.grundfos.us>
913 227 3400

PDF generated:
2023-08-31