GRUNDFOS A WIDE RANGE 50 Hz









A global business

With over 18 000 employees and annual production of some 16 million pump units a year, Grundfos is one of the world's leading pump manufacturers. 80 companies in 45 countries right across all the continents of the globe help to bring pumps to every corner of the world, from supplying drinking water to Antarctic expeditions, irrigation of Dutch tulips, groundwater monitoring beneath waste heaps in Germany, to air-conditioning in Egyptian hotels.

Efficient, sustainable products

Grundfos is constantly striving to make its products more userfriendly and reliable – and also energy-saving and efficient, so that both users and the environment benefit from their improvements.

Grundfos pumps are equipped with ultramodern electronics, allowing them to regulate their output according to current needs. This not only ensures convenience for the user, but also saves a great deal of energy.

Research and development

In order to maintain its leading position, Grundfos constantly places a great deal of emphasis on customeroriented research and development; customers are consulted when new products are developed or when



established products are improved.

Research and development make use of the latest technology within the pump industry, collaborating with universities and higher education institutions in search of new and better solutions for the design and function of the products.

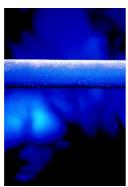
Corporate values

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

Pumps for all purposes

No matter for which purpose an efficient and energy saving pump solution is required, Grundfos offers a high-quality solution.











Heating and hotwater service systems

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

Cooling and airconditioning systems

Circulator pumps for circulation of cold water and other liquids in cooling and air-conditioning sys-

Industrial applications

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

Pressure boosting and liquid transfer

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

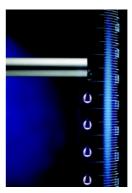
Groundwater supply

Submersible and dry installed pumps for groundwater supply, irrigation and groundwater lowering.











Domestic water supply

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

Wastewater

Drainage, effluent and sewage pumps, for a wide range of applications in building services, the industry as well as transfer of raw sewage in municipal sewage systems and treatment plants.

Environmental applications

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

Dosing and disinfection

Dosing pumps, disinfection systems and measuring & control for wastewater treatment systems, swimming pools and industry.

Renewable-energy systems

Renewable-energybased water supply systems suitable for remote locations not connected to the electricity supply grid.



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Product and application overview

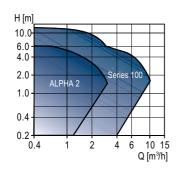
Groundwater supply	Dosing and disinfection
SP A, SP, SP-G	Conex® DIA, DIS
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Domestic water supply	DIP
CH, CHN	DIT-B
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SEN	LC, LCD 107, 108 and 110
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Unilift CC, KP, AP, AP-B	MP 204, CU 300, CU 301
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Environmental applications	Pressure tanks
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GRUNDFOS ALPHA2, UPS, UP Series 100

Circulator pumps, canned-rotor type



Technical data

Flow, Q: max. 10 m 3 /h Head, H: max. 12 m Liquid temp.: -25 °C to + 110 °C Operat. pressure: max. 10 bar.

Applications

- · Heating systems
- · Domestic hot-water systems
- Cooling and air-conditioning systems.

Features and benefits

- Low-energy Energy labelling class C to A
- · Maintenance-free
- · Low-noise
- · Wide range.

Options

- · Automatic performance adjustment
- · Display of actual power consumption
- · Automatic night setback
- Simple installation external plug for electrical connection
- Single-speed or 2- or 3-speed performance adjustment
- · Twin-head versions.



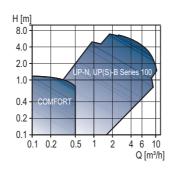
GRUNDFOS COMFORT UP-N, UP(S)-B Series 100

Circulator pumps, canned-rotor type



UPS Series 200

Circulator pumps, canned-rotor type



Technical data

Flow, Q: max. $10.5 \text{ m}^3/\text{h}$ Head, H: max. 7 m Liquid temp.: $-25 \,^{\circ}\text{C}$ to $+110 \,^{\circ}\text{C}$ Operat. pressure: max. $10 \,^{\circ}\text{bar}$.

Applications

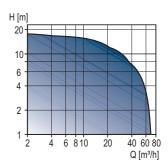
- Heating systems
- · Domestic hot-water systems
- Cooling and air-conditioning systems.

Features and benefits

- · Maintenance-free
- · Low-noise
- · Low-energy
- Wide range
- Corrosion-resistant stainless steel/ brass pump housing.

Options

- · 24-hour timer
- · Adjustable thermostat.



Technical data

Flow, Q: max. 70 m³/h
Head, H: max. 18 m
Liquid temp.: - 10 °C to + 120 °C
Operat. pressure: max. 10 bar.

Applications

- · Heating systems
- Domestic hot-water systems
- · Cooling and air-conditioning systems.

Features and benefits

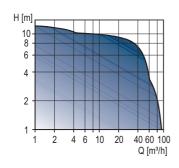
- · Maintenance-free
- · Built-in thermal switch
- · Low-noise
- Low-energy
- Energy labelling up to class B
 Single-phase with built-in protection module
- · Wide range.

- · Protection module
- Relay module with fault signal or operating output
- · Bronze pump housing
- · Twin-head versions.



GRUNDFOS MAGNA, Series 2000

Circulator pumps, canned-rotor type - electronically controlled



Technical data

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

Applications

 Heating systems in blocks of flats, schools, hospitals, hotels, industry etc.

Features and benefits

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

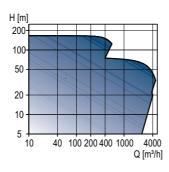
Options

- · Stainless steel pump housing
- · Twin-head versions
- · Wireless remote control, R100
- · Communication via GENIbus or LON.



TP

Circulator pumps, close-coupled type



Technical data

Flow, Q: max. $4600 \text{ m}^3/\text{h}$ Head, H: max. 170 mLiquid temp.: -25 °C to + 140 °COperat. pressure: max. 25 bar.

Applications

- · Heating systems
- · District heating plants
- · Local heating plants
- Domestic hot-water systems
- · Cooling and air-conditioning systems.

Features and benefits

- · Compact design
- Wide range
- · Standard motor
- · Service-friendly
- Various types of shaft seals depending on liquid, temperature and pressure.

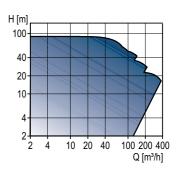
Options

- · Bronze pump housing
- · Twin-head versions.



TPE Series 2000

Single-stage, centrifugal pumps - electronically controlled



Technical data

Flow, Q: max. $340 \text{ m}^3/\text{h}$ Head, H: max. 90 mLiquid temp.: -25 °C to +140 °COperat. pressure: max. 16 bar.

Applications

- · Heating systems
- Domestic hot-water systems
- · Cooling and air-conditioning systems.

Features and benefits

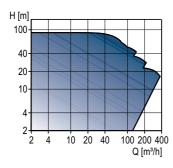
- · Low-energy
- Adaptation to existing operating conditions
- · Simple installation.

- · Parallel operation
- Wireless remote control, R100
- Communication via GENIbus or LON
- · Twin-head versions.



TPE Series 1000

Single-stage, centrifugal pumps - electronically controlled



Technical data

Flow, Q: max. $340 \text{ m}^3/\text{h}$ Head, H: max. 90 mLiquid temp.: -25 °C to + 140 °COperat. pressure: max. 16 bar.

Applications

- · District heating plants
- · Cooling and air-conditioning systems
- Industrial plants
- · Water supply systems.

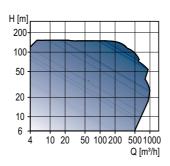
Features and benefits

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



NB, NBG

Single-stage standard pumps



Technical data

Flow, Q: max. $1000 \text{ m}^3/\text{h}$ Head, H: max. 160 mLiquid temp.: -25 °C to +120 °COperat. pressure: max. 16 bar.

Applications

- · District heating plants
- · Heating systems for blocks of flats
- Air-conditioning systems
- · Cooling systems
- · Washdown systems
- · Other industrial systems.

Features and benefits

- Standard dimensions according to EN and ISO standards
- Compact design
- Flexible pump range
- Standard motor
- Adaptable to any application and performance
- EN 12756 shaft seal.

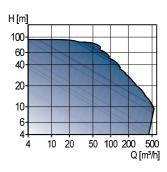
Optional

- Various types of shaft seal depending on liquid, temperature and pressure
- Cast iron, bronze or stainless steel impeller
- Cast iron or stainless steel pump housing.



NBE, NBGE

Single-stage standard pumps - electronically controlled



Technical data

Flow, Q: max. $550 \text{ m}^3/\text{h}$ Head, H: max. 100 mLiquid temp.: -25 °C to +120 °COperat. pressure: max. 16 bar.

Applications

- District heating plants
- · Heating systems for blocks of flats
- Air-conditioning systems
- Cooling systems
- Washdown systems
- · Other industrial systems.

Features and benefits

- Standard dimensions according to EN and ISO standards
- Compact design
- Flexible pump range
- Standard motor
- Adaptable to any application and performance
- EN 12756 shaft seal.

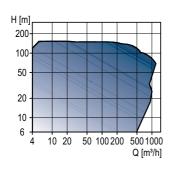
Optional

- Various types of shaft seal depending on liquid, temperature and pressure
- Cast iron, bronze or stainless steel impeller
- Cast iron or stainless steel pump housing.



NK, NKG

Single-stage standard pumps according to EN 733, ISO 2858 and ISO 5199



Technical data

Flow, Q: max. $1000 \text{ m}^3\text{/h}$ Head, H: max. 160 mLiquid temp.: -25 °C to + 120 °COperat. pressure: max. 16 bar.

Applications

- · District heating plants
- · Water supply systems
- · Air-conditioning systems
- Cooling system
- Washdown system
- · Fire fighting systems
- Other industrial systems.

Features and benefits

- Standard dimensions according to EN or ISO standards
- Robust design
- · Wide range
- Standard motor
- Adaptable to any application and performance
- EN 12756 shaft seal.

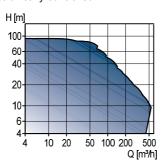
Optional

- Various types of shaft seal depending on liquid, temperature and pressure
- Cast iron, bronze or stainless steel impeller
- Cast iron or stainless steel pump housing.



NKE, NKGE

Single-stage standard pumps according to EN 733, ISO 2858 and ISO 5199 - electronically controlled



Technical data

Flow, Q: max. $550 \text{ m}^3/\text{h}$ Head, H: max. 100 mLiquid temp.: -25 °C to + 120 °COperat. pressure: max. 16 bar.

Applications

- · District heating plants
- · Water supply systems
- · Air-conditioning systems
- · Cooling systems
- Washdown systems
- · Other industrial systems.

Features and benefits

- Standard dimensions according to EN and ISO standards
- Robust design
- · Wide range
- Standard motor
- Adaptable to any application and performance
- EN 12756 shaft seal.

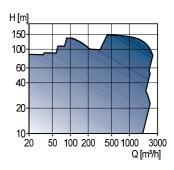
Options

- Various types of shaft seal depending on liquid, temperature and pressure
- Cast iron, bronze or stainless steel impeller
- · Cast iron or stainless steel pump housing.



HS

Horizontal split case pumps



Technical data

Flow, Q: max. 2500 m³/h Head, H: max. 148 m Liquid temp.: 0 °C to + 100 °C Operat. pressure: max. 16 bar.

Applications

- Water supply systems
- · Air-conditioning systems
- Cooling systems
- Irrigation systems
- · Other industrial systems.

Features and benefits

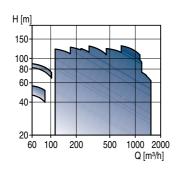
- Flange dimensions according to EN 1092-2 (DIN 2501)
- Robust design
- · Double suction and volute design
- · Wide range
- Standard motor
- Adaptable to any application and performance
- EN 12756 shaft seal.

- · Ductile iron and cast iron pump casing
- Stuffing box
- Bronze, aluminium bronze and stainless steel impeller.



Fire DNF, Fire HSEF

Fire pump systems



Technical data

Electrically powered

Flow, Q: 250-4500 GPM Head, H: max. 182 psi

Diesel powered

Flow, Q: 250-4000 GPM Head, H: max. 212 psi Liquid temp.: 5 °C to 40 °C.

Applications

Fire pump sets for fire extinguishing systems.

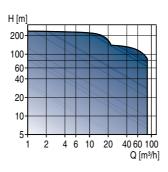
Features and benefits

- · Electrically powered or diesel powered
- FM approved and UL listed
- Simple installation and easy maintenance
- Designed for superior functionality and performance reliability.



SPK, MTH, CRK, MTR, MTA

Multistage centrifugal immersible pumps



Technical data

Flow, Q: max. 85 m³/h
Head, H: max. 238 m
Liquid temp.: - 20 °C to + 90 °C
Operat. pressure: max. 25 bar.

Applications

- · Spark machine tools
- Grinding machines
- · Machining centres
- · Cooling units
- · Industrial washing machines
- Filtering systems
- Lathes
- · Swarf conveyors
- · Temperature control
- · Boiler feed.

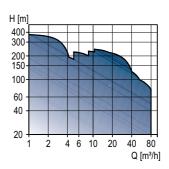
Features and benefits

- · Flexible installation length
- Wide range
- Reliability
- Service-friendly
- Simple installation
- Space-saving
- · High efficiency.



SPKE, MTRE

Multistage centrifugal immersible pumps - electronically controlled



Technical data

Flow, Q: $\max. 22 \text{ m}^3/\text{h}$ Head, H: $\max. 245 \text{ m}$ Liquid temp.: -10 °C to + 90 °COperat. pressure: $\max. 25 \text{ bar.}$

Applications

- · Boiler feed systems
- · Pumping of cooling lubricants
- · Water treatment systems
- Temperature control
- Industrial washing machines.

Features and benefits

- · Wide range
- Reliability
- · Service-friendly
- · Simple installation
- Space-saving
- · High efficiency
- · Many control facilities.

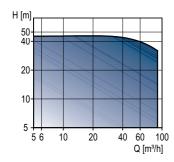
Options

• Wireless remote control, R100.



MTB

Single-stage centrifugal end-suction pumps with semi-open impeller



Technical data

Flow, Q: \max . 90 m³/h Head, H: \max . 47 m Liquid temp.: - 10 °C to + 90 °C Operat. pressure: \max . 16 bar.

Applications

- · Machine centres
- Coolant systems
- Filtration plants
- Grinding machines
- Parts cleaning systems
- Other industrial applications where semi-open impellers are needed.

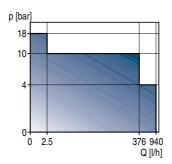
Features and benefits

- Standard dimension according to EN and ISO standards
- · Compact design
- Semi-open impeller/effective solid handling
- Standard EFF 1 motor.



DME

Digital diaphragm dosing pumps



Technical data

Capacity, Q: max. 940 l/h
Pressure, p: max. 18 bar
Liquid temp.: max. + 50 °C.

Applications

- Water treatment
- · Wastewater treatment
- Washing systems
- · Swimming pools
- Process plants
- · Filtration systems
- · Reverse osmosis.

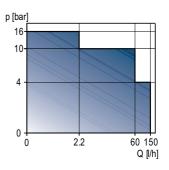
Features and benefits

- · Capacity setting in ml/h or l/h
- Full diaphragm control
- Stroke-speed or stroke-frequency capacity control
- Control panel with display and onetouch buttons
- · Front- or side-fitted control panel
- · Manual/pulse control
- Control panel lock
- · 4-20 mA control
- · Pulse-/timer-based batch control
- · Anti-cavitation function
- Easy calibration function
- Fieldbus communication module (option)
- · Diaphragm leakage sensor.



DDI

Digital diaphragm dosing pumps



Technical data

Capacity, Q: max. 150 l/h
Pressure, p: max. 16 bar
Liquid temp.: max. + 50 °C.

Applications

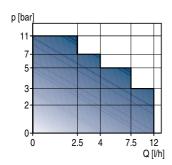
- · Water treatment
- · Wastewater treatment
- Washing systems
- · Swimming pools
- Process plants
- · Paper production
- Food and beverage industry.

- Powerful stepper motor (DDI 209) or brushless DC motor (DDI 222)
- Capacity setting in ml/h or l/h
- Smooth dosing through variable speed
- Reliable dosing of viscous liquids
- Front- or top-fitted control panel (DDI 222: side-fitted)
- Manual/pulse control
- 4-20 mA control
- Easy calibration and dosing of small liquid quantities or degassing media (DDI 209 with Plus³)
- Pioneering system for flow and pressure monitoring in the dosing head (control variant AF).
- PROFIBUS interface (control variant AP).



DMS

Compact diaphragm dosing pumps



Technical data

Capacity, Q: max. 12 l/h Pressure, p: max. 11 bar Liquid temp.: max. + 50 °C.

Applications

- · Water treatment
- · Wastewater treatment
- · Washing systems
- · Swimming pools
- · Process plants.

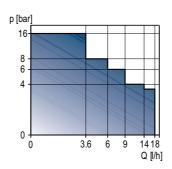
Features and benefits

- · Capacity setting in ml/h or l/h
- Full diaphragm control
- Stroke-frequency capacity control
- Control panel with display and onetouch buttons
- · Front- or side-fitted control panel
- Manual control
- Pulse control (control variants A and AR)
- 4-20 mA control (control variants A and AR)
- Alarm relay output (control variant AR)
- · Control panel lock
- · Easy calibration function.



DMI

Robust diaphragm dosing pumps



Technical data

Capacity, Q: max. 18 l/h Pressure, p: max. 16 bar Liquid temp.: max. + 50 °C.

Applications

- Water treatment
- Wastewater treatment
- Washing systems
- · Swimming pools
- · Process plants.

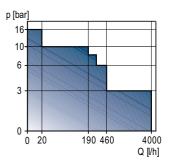
Features and benefits

- Well-proven synchronous motor technology
- Silent operation, 45 dB(A)
- Flexible installation: built-in pump for OEM solutions
- · Front- or top-fitted control panel
- · Manual/pulse control
- Contact signal control with multiplier/ divisor (control variant AR)
- Stroke-frequency control (control variant AR)
- Easy calibration and dosing of small liquid quantities or degassing media (dosing heads with Plus³ system)
- DMI is also available in a special version with injection unit and water meter (Unidos).



DMX

Motor-driven diaphragm dosing pumps



Technical data

Capacity, Q: max. 4000 l/h

(pump with two heads:

2 x 4000 l/h)

Pressure, p: max. 16 bar Liquid temp.: max. + 50 °C.

Applications

- · Drinking-water treatment
- Wastewater treatment (settlement/sludge treatment)
- · Pulp/paper and textile industries.

Features and benefits

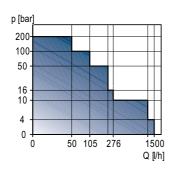
- · Robust design
- · Stroke-length adjustment.

- Pulse control (control variant AR)
- Analog control (control variant AR)
- Level input from storage tank (control variant AR)
- Motor frequency control
- ATEX (DMX 226).



DMH

Oscillating positive displacement pumps with hydraulic diaphragm control



Technical data

Capacity, Q: max. 1500 l/h

(pump with two heads:

2 x 1500 l/h)

Pressure, p: max. 200 bar Liquid temp.: max. + 90 °C.

Applications

- · Oil refinery industry
- · Heavy-duty applications
- Drinking-water treatment
- Wastewater treatment (settlement/sludge treatment)
- · Pulp/paper and textile industries.

Features and benefits

- · Designed for heavy-duty operation
- · Stroke-length adjustment.

Options

- Servomotor for stroke-length adjustment
- Motor frequency control
- Available with API 675 approval
- Available with ATEX approval.



Accessories for dosing pumps and systems

Accessories

- · Installation kits
- Tubing
- · Pump connections
- · Foot valves
- · Suction lines
- · Injection valves
- · Pressure-relief valves
- · Pressure-loading valves
- · Multi-function valve
- · Pulsation dampers
- Tanks
- · Agitators and mixers
- Automatic venting valves
- · Diaphragm leakage sensor
- · Dosing monitor
- Flowmeter
- · Water meter
- · Cables and plugs.



Conex® DIA, DIS

Measurement and control systems for dosing instrumentation

Technical data

Amplifier parameters:

Conex[®] DIA-1: Cl₂, ClO₂, O₃, PAA or

 H_2O_2 , fluoride, pH or redox (ORP).

Conex® DIA-2: 1: Cl₂, ClO₂, O₃ or

H₂O₂. 2: pH.

 $\mathsf{Conex}^{\texttt{®}}\,\mathsf{DIA}\text{-}\mathsf{2Q}\text{: }1\text{: }\mathsf{CI}_2,\,\mathsf{CIO}_2,\,\mathsf{O}_3,\,\mathsf{PAA}\,\mathsf{or}$

 H_2O_2 .

2: fluoride, pH or redox

(ORP).

Conex® DIS-C: conductivity (inductive

or conductive probes).

Conex[®] DIS-PR: pH or redox (ORP). Conex[®] DIS-D: Cl₂, ClO₂ or O₃.

Applications

Instrumentation in disinfection processes:

- · drinking water
- industrial water
- wastewater
- · pool water.

- User-friendly plain-text menu and operator prompting.
- Device calibration feature with plausibility check prevents errors occurring.
- · Multilingual menu.
- Self-monitoring feature ensures excellent water quality at all times.
- Compensation for disturbance factors ensures precise measurement. As a result, chemical consumption is reduced to a minimum.
- Available as a preassembled system (amplifier and measuring cell) mounted on a plate and ready for connection.



DIP

Measurement and control systems for dosing instrumentation

Technical data

Amplifier parameters:

DIP: 1: Cl_2 , ClO_2 or O_3 .

2: pH.

3: redox (ORP).

Applications

Instrumentation in disinfection processes:

- · drinking water
- · industrial water
- wastewater
- · pool water.

Features and benefits

- User-friendly plain-text menu and operator prompting.
- Device calibration feature with plausibility check prevents errors occurring.
- · Multilingual menu.
- Self-monitoring feature ensures excellent water quality at all times.
- Compensation for disturbance factors ensures precise measurement. As a result, chemical consumption is reduced to a minimum.
- Available as a preassembled system (amplifier and measuring cell) mounted on a plate and ready for connection.



Conex® DIA-G, DIS-G

Gas warning systems

Technical data

Conex® DIS-G: gas warning system for CI2, CIO2, O3 (amperometric probes).

Conex® DIA-G: gas warning system for CI2, CIO2, O3 (amperometric and potentiostatic probes) and NH3, HCI (potentiostatic probes).

Applications

- Gas dosing installations
- Gas storage rooms.

Features and benefits

Capable of monitoring two different gas storage rooms or two different gases at the same time.

- Simultaneous measurement and display of two measuring parameters
- · Optimum safety
- Very short response time
- Long and maintenance-free sensor service life
- Automatic sensor recognition and autocalibration
- Separate sensor interface for Conex[®] DIA-G for one potentiostatic sensor
- Internal CAN-bus for the connection of potentiostatic sensors
- Optional audible and visual alarm device.



DIT-B

Photometer for measurement and calibration

Technical data

Measuring parameters:

- aluminium
- chlorine (free and total)
- · chlorine dioxide
- · cyanuric acid
- iron
- ozone
- pH.

Applications

The compact hand photometer DIT is dedicated for routine analysis in water treatment monitoring. It provides a photometric measuring system for measurement and calibration.

- Up to 7 parameters can be measured. Precise and well-reproducible measuring values
- Long-term stable even after several measurements.
- Multi-lingual plain-text operator prompting.
- Patented, two-beam principle with carrier frequency technology compensates for the effects of turbidity or external light.



Vaccuperm

Full-vacuum chlorine gas dosing systems for disinfection

Technical data

Model VGB: max. 2 kg/h Model VGA: max. 10 kg/h Model VGS: max. 200 kg/h.

Applications

- Water treatment (municipal waterworks)
- · Treatment of industrial wastewater
- Water treatment in public swimming baths

Features and benefits

- · Reliable full-vacuum systems
- Approved disinfection method complying with WHO drinking water guidelines
- Systems for direct installation on chlorine gas cylinders or drums or for installation in header lines
- Fully automated systems (wall- or floormounted)
- Precise regulation and dosing of gaseous chlorine
- Simple handling and user-friendly design
- Complete range of accessories available on request: injectors, automatic changeover units, evaporators, liquid traps.



Selcoperm

Electro-chlorination systems for disinfection

Technical data

Capacity: max. 2000 g/h

(higher capacities on request)

Water consumption: max. 125 I per kg of

prepared chlorine
Salt consumption: max. 3 to 3.5 kg pe

max. 3 to 3.5 kg per kg of prepared

chlorine

Power consumption: approx. 4.5 kWh per

kg of prepared chlorine

Applications

- · Independent water suppliers
- Water treatment (municipal waterworks)
- · Treatment of industrial wastewater
- Treatment of industrial process water and water in cooling towers
- Water treatment in public swimming baths
- · Hotel pools and therapy pools.

Features and benefits

- Turn-key systems
- Only water, common salt and electricity are needed for the Selcoperm electrolysis method
- Fresh disinfectant solution (hypochlorite) is always available
- Simple handling and user-friendly design
- Approved disinfection method complying with WHO drinking water guidelines and many local regulations
- Low maintenance and long service life due to robust components.



Oxiperm

Chlorine dioxide preparation and dosing systems for disinfection

Technical data

Model OCD-164:

- Hypochloric acid/sodium chlorite method with diluted chemicals: HCl: 9 % by weight NaClO₂: 7.5 % by weight
- Capacity: 30 2000 g/h.

Model OCC-164:

- Hypochloric acid/sodium chlorite method with concentrated chemicals: HCI: 33 % by weight
- NaClO₂: 24.5 % by weight Capacity: max. 10 kg/h.

Model OCG-166:

- Chlorine gas/sodium chlorite method: NaClO₂: 24.5 % by weight
- · Capacity: max. 10 kg/h.

Applications

- Municipal waterworks
- Water treatment in hotels, hospitals, retirement homes, sports facilities
- · Prophylaxis of Legionella
- Treatment of industrial process water, washing water and cooling circuit water
- Disinfection in bottle wash systems, rinsers, CIP systems
- Disinfection in dairies (condenser vapour, pasteurization).

- · On-site preparation of chlorine dioxide
- · Ergonomic design
- · Optimum process monitoring
- Innovative dosing and calibration technology
- Complete chemical reaction within a minimum of time
- · Low consumption of chemicals
- · Easy maintenance.



Oxiperm Pro

Chlorine dioxide preparation and dosing systems

Technical data

Model OCD-162: Capacity: max. 60 g/h Concentration of chemicals: HCl: 9 % by weight

NaClO₂: 7.5 % by weight.

Applications

- Water treatment in hotels, hospitals, retirement homes, sports facilities, shower facilities
- Combating and prophylaxis of Legionella
- Municipal waterworks
- Treatment of industrial process water, washing water and cooling circuit water
- Treatment of brewing water
- Disinfection in bottle wash systems, rinsers, CIP systems
- Disinfection in dairies (condenser vapour, pasteurisation).

Features and benefits

- Compact system to be installed on confined spaces.
- Ergonomic design. Operation and maintenance are performed from the front.
- On-site preparation of the disinfectant chlorine dioxide.
- · Optional with chlorine dioxide control
- Simple assembly and start-up. The system can be connected and put into operation without interrupting the building's water supply.
- Complete chemical reaction within a minimum of time.
- Low operating costs and low consumption of chemicals.



Polydos, KD

Dry material preparation systems

Technical data

Customised complete installations Preparation capacity: max. 11,000 l/h Viscosity of prepared solution: max. 2500 mPa s.

Applications

Preparation of poly-electrolyte, lime milk, aluminium sulphate, etc. for water and wastewater treatment.

Features and benefits

- Model Polydos: two- or three-chamber installations for preparation and dosing of liquid organic flocculants out of dry or liquid materials.
- Model KD: single-chamber installation for preparation and dosing of solutions (e.g. lime milk) out of dry materials.
- · Includes dry material feeding system.
- Fully automatic systems with PLC control.
- Graphic display with multilingual user interface.
- Preparation and ripening chamber with electric agitators (optional for the dosing chamber)
- Ultrasonic sensor for continuous level control.
- Water apparatus with shut-off valve, solenoid valve (24 VDC), pressure reducing valve and contact water meter.



HydroProtect

Compact disinfection/booster systems

Technical data

Models: HydroProtect EcoLine

HydroProtect ProLine

Flow rate: 12 to 50 m³/h
ClO₂ capacity: 5 to 10 g/h
Pressure: max. 10 bar.

Applications

- Water treatment in the food and beverage industry
- Fending off beer spoilage bacteria.

- · Highly effective against Legionella.
- Highly effective even against microorganisms that spoil beer.
- No build-up of detectable organic chlorine compounds, i.e. chlorine dioxide is the optimum disinfectant for the food or beverage industry.
- The integrated measuring amplifier with measuring cell in the standard design makes it easy to continuously monitor the chlorine dioxide content in the process water network.
- Integrated speed-controlled booster station increases the pressure of the disinfected water to the required value and feeds it into the system.
- The speed control ensures efficient constant pressure and protects the system, making pressure surges a thing of the past.
- The integrated EFF 1 energy-efficient motor minimises energy costs.



DTS

Dosing tank stations

Technical data

A DTS includes a tank and some installation material, and is preprared for one of the dosing pumps: DDI, DME, DMI, DMS, DMX up to 60 l/h.

Components available for DTS:

- Mounting material for the dosing pumps: DDI, DME, DMI, DMS, DMX up to 60 l/h
- · Dosing tank up to 1000 I
- · Electric agitator or hand mixer
- Collecting tray
- Suction line, optionally with flow switch for empty/pre-empty indication
- · Multi-function valve
- · Injection unit
- · Dosing line
- · Drain valve
- · Tank inlet valve.

Dosing tank stations are preassembled from the factory. The dosing pump has to be ordered separately.

Applications

- · Water and wastewater treatment
- · Washing systems
- · Swimming pools
- Process plants
- · Paper production
- · Food and beverage industry.

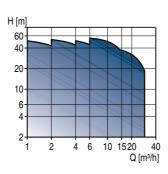
Features and benefits

- Flexible systems for a wide range of applications and dosing tasks
- Suitable for a lot of chemical media due to high quality materials
- Minimised installation and commissioning effort.



CHI, CHIU

Multistage centrifugal pumps



Technical data

Flow, Q: \max . 29 m³/h Head, H: \max . 58 m

Liquid temp.:

CHI 2 to CHI 12: -20 °C to + 110 °C CHI 15 and CHI 20: -20 °C to + 70 °C Operat. pressure: max. 10 bar.

Applications

- · Water treatment systems
- Industrial washing and dishwashing machines
- Pressure boosting of process water
- Heating and cooling in industrial processes
- Air-conditioning systems
- Airwashing, moisturisation, humidification (softened water)
- Water supply and pressure boosting (drinking water, also slightly chlorinated).

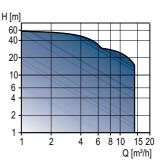
Features and benefits

- Compact design
- Wide range
- Suitable for slightly aggressive liquids
- Low noise
- · Leakage-free (CHIU only).



CHIE

Multistage centrifugal pumps - electronically controlled



Technical data

Flow, Q: max. 14 m 3 /h Head, H: max. 58 m Liquid temp.: -20 °C to + 110 °C Operat. pressure: max. 10 bar.

Applications

- Cooling systems
- · Industrial washing systems
- Aquafarms
- Fertilizer systems
- Dosing systems
- · Industrial plants.

Features and benefits

- Compact design
- · Wide range
- · Suitable for slightly aggressive liquids
- Many control facilities.

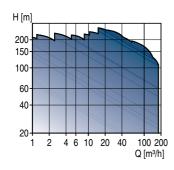
Options

· Wireless remote control, R100.



CR, CRI, CRN

Multistage centrifugal pumps



Technical data

Flow, Q: max. 180 m³/h Head, H: max. 330 m Liquid temp.: -40 °C to + 180 °C Operat. pressure: max. 33 bar.

Applications

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

Features and benefits

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

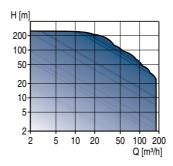
Options

· Dry-running protection and motor protection via LigTec.



CRE, CRIE, CRNE

Multistage centrifugal pumps electronically controlled



Technical data

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

Applications

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

Features and benefits

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

Options

· Wireless remote control, R100.



CR Monitor

Monitoring of pump efficiency, cavitation and performance

Technical data

- · Pump types supported: CR, CRI, CRN and CRN MAGdrive
- Motor range: 1.1 to 75 kW, EFF 1
- Available for pumps with standard MG/ Siemens motors, MG/Siemens motors supplied from a Grundfos CUE frequency converter and MGE motors with integrated frequency converter
- Based on well-known components from Control/Hydro MPC and the LiqTec sensor
- Enclosure class: IP54
- Voltage supply: 3 x 400 VAC.

Applications

- · Pumps in demanding applications where zero downtime is required.
- Pumps exposed to extreme wear or clogging due to materials in the pumped
- Pumps in processes where continuous monitoring and control are essential.

Features and benefits

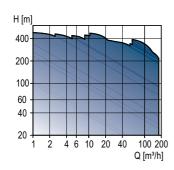
- Detects if the pump efficiency is reduced
- Detects if the pump is about to cavitate.
- Detects if the pump is running outside its normal operating range.
- Enables planning of pump maintenance in order to prevent unplanned downtime.

- 24/7 monitoring of operation and protection of equipment
- Bus communication to SCADA system or Web-link
- Data collection, monitoring and setting through local PC or via internet.



CR, CRN high pressure

Multistage centrifugal pumps



Technical data

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

Applications

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

Features and benefits

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

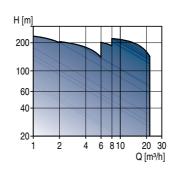
Options

 Dry-running protection and motor protection via LiqTec.



CRT

Multistage centrifugal pumps



Technical data

Flow, Q: max. $22 \text{ m}^3/\text{h}$ Head, H: max. 250 mLiquid temp.: -20 °C to + 120 °COperat. pressure: max. 25 bar.

Applications

- · Process water systems
- · Washing in cleaning systems
- Seawater systems
- · Pumping of acids and alkalis
- · Ultra-filtration systems
- Reverse osmosis systems
- · Swimming baths.

Features and benefits

- · High corrosion resistance
- Reliability
- High efficiency
- Service-friendly
- · Space-saving.

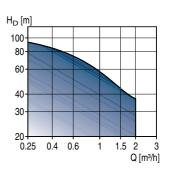
Options

 Dry-running protection and motor protection via LiqTec.



CR DW

Ejector pumps



Technical data

Operat. pressure: max. 16 bar Ambient temp.: max. 40 °C Liquid temp.: max. 40 °C.

Applications

 Minor water-supply systems, for instance irrigation in agriculture and horticulture, liquid transfer on farms with own well and in weekend cottages.

Features and benefits

- Four sizes and two material versions.
 One with all wetted parts made of stainless steel.
- · Suitable for wells down to 90 m.
- · Service-friendly.
- Pump head and base made of electroplated cast iron.

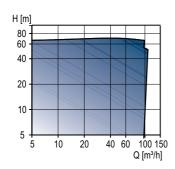
Options

 Hose kit (for simple change from CPE/ CPES to CR DW).



Euro-HYGIA®

Single-stage, end-suction sanitary pumps



Technical data

Flow, Q: max. 108 m³/h Head, H: max. 70 m Operat. temp.: + 95 °C

(+ 150 °C on request)

Operat. pressure: max. 16 bar.

Applications

- · Breweries and dairies
- Pure water systems (WFI)
- Process pumping in pharmaceutical/ cosmetic industry
- CIP (Cleaning-In-Place) systems
- · Biofuel application.

Features and benefits

- Unique hygienic design (QHD, EHEDG and 3A standards)
- CIP- and SIP-capable (DIN EN 12462)
- · Customised solutions
- Materials: AISI 316L (DIN EN 1.4404/ 1.4435)
- · Gentle liquid handling.

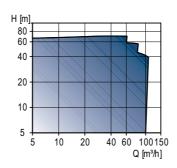
Options

- Electronically speed controlled versions
- ATEX-certified pumps
- · Wide range of impeller designs
- Three surface standards.



F&B-HYGIA®

Single-stage, end-suction sanitary pumps



Technical data

Flow, Q: max. 105 m³/h Head, H: max. 70 m Operat. temp.: + 95 °C

(+ 150 °C on request)

Operat. pressure: max. 16 bar.

Applications

- · Breweries and dairies
- Soft-drink mixing
- Syrup and sugar solutions
- Frying oil and blood processing
- Fruit-drink and yeast pumping
- · Food processing.

Features and benefits

- · Unique hygienic design.
- CIP- and SIP-capable (DIN EN 12462)
- Materials: AISI 316 (DIN EN 1.4404)
- · Compact design.

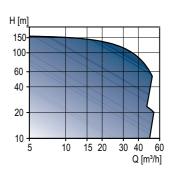
Options

- Large selection of supports for motor and pump
- · Several mechanical shaft seal types
- · Wide range of pipe connections
- · With or without motor shroud.



Contra

Single- and multi-stage, end-suction sanitary pumps



Technical data

Flow, Q: max. 55 m³/h Head, H: max. 160 m Operat. temp.: + 95 °C

(+ 150 °C on request)

Operat. pressure: max. 25 bar.

Applications

- · Breweries and dairies
- · Carbonising systems
- Food processing plants
- Purification systems
- Pure water systems (WFI)
- · Surface treatment systems
- CIP feeding systems
- · Biofuel applications.

Features and benefits

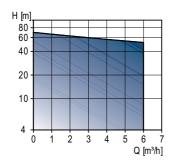
- Unique hygienic design (QHD, EHEDG and 3A standards)
- CIP- and SIP-capable (DIN EN 12462)
- · High efficiency
- Materials: AISI 316L (DIN EN 1.4404/ 1.4435).

- Electronically speed-controlled versions
- ATEX-certified pumps
- · Fully drainable versions.



durietta

Single- or multistage, end-suction sanitary pumps



Technical data

Flow, Q: max. 6 m³/h
Head, H: max. 70 m
Operat. temp.: + 90 °C
Operat. pressure: max. 8 bar.

Applications

- · Microbreweries and dairies
- · Bottling systems
- Purification systems
- · Drinking water systems
- · Industrial applications.

Features and benefits

- Unique hygienic design to 3A standards.
- CIP-capable (DIN EN 12462)
- Materials: AISI 316 (DIN EN 1.4404/ 1.4571)
- · Compact design.

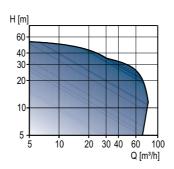
Options

- Electronically speed-controlled versions
- · Wide range of pipe connections
- · Vertical version
- · Various shaft seals.



SIPLA

Single-stage, self-priming side-channel sanitary pumps



Technical data

Flow, Q: max. 90 m³/h Head, H: max. 56 m Operat. temp.: + 95 °C

(+ 140 °C on request)

Operat. pressure: max. 10 bar.

Applications

- · CIP return pumping
- Transfer of glycerine
- Transfer of yeast
- Transfer of whey.

Features and benefits

- · Meets the 3A sanitary standard
- · High air-content handling
- · Efficient priming
- Robust, service-friendly.

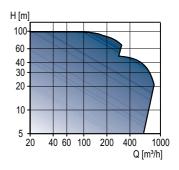
Options

- · Electronically speed controlled versions
- · ATEX-certified pumps
- · Various shaft seals
- · Various connections.



MAXA and MAXANA

End-suction process pumps



Technical data

Flow, Q: up to max. 820 m^3/h Head, H: up to max. 97 m

Operat. temp.: + 95 °C

(+ 150 °C on request)

Operat. pressure: max. 10 bar.

Applications

- Gentle pumping of mash and wort for beer filtration (hot side)
- Dairies
- · Water treatment plants
- Chemical and environmental handling systems
- Liquids with high content of solid particles
- Biofuel applications.

Features and benefits

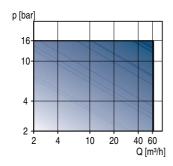
- Optimised hydraulics
- · Gentle product handling
- Materials: AISI 316 (DIN EN 1.4404)
- · Service-friendly.

- · Electronically speed controlled versions
- ATEX-certified pumps
- · Electro-polished versions
- Double mechanical shaft seals (tandem/back-to-back).



NOVAlobe

Rotary-lobe pumps with positive displacement



Technical data

Displacement: 0.03 to 1.29 l/rev.

Max. diff. pressure: 16 bar

Viscosity: max. 1,000,000 cP

Operat. temp.: + 150 °C

Operat. pressure: up to16 bar.

Applications

- Pumping of high-viscosity products, e.g. yoghurt, mayonnaise and shampoo
- Pumping of products requiring gentle handling, e.g. cheese curds, yeast and vaccine/fermentation broth
- · Filling and bottling applications.

Features and benefits

- Unique hygienic design (EHEDG and 3A)
- · Robust construction
- · Service-friendly
- CIP- and SIP-capable (DIN EN 12462)
- Materials: AISI 316 (DIN EN 1.4404/ 1.4435).

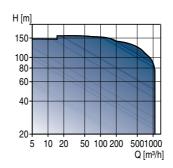
Options

- Integrated pressure-relief valve
- · Wide range of shaft seals (elastomer)
- Thermal jackets
- · Aseptic front cover.



Hydro MPC, Hydro Multi-E/-S Hydro Solo-E/-S

Complete pressure booster systems



Technical data

Flow, Q: max. 720 m 3 /h Head, H: max. 160 m Liquid temp.: 0 °C to + 70 °C Operat. pressure: max. 16 bar.

Applications

- · Water supply systems
- · Irrigation systems
- · Water treatment systems
- · Industrial plants.

Features and benefits

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



BMP

Piston pumps for transport of fluids under high pressure

Technical data

Flow, Q: max. 10.2 m³/h
Head, H: max. 1630 m
Liquid temp.: 3 °C to + 50 °C
Operat. pressure: max. 160 bar.

Applications

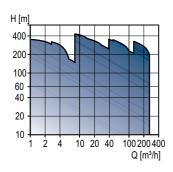
- · Cleaning/washing
- Injecting
- Misting
- Processing
- Desalination of brackish water and seawater.

- · High efficiency.
- · Small and light pump.
- Generates insignificant pulsations in the discharge line.
- · No preventive maintenance required.
- Long service life.
- · Few wear parts.
- · Wide speed control range.
- Extreme recirculation capability without overheating (up to 90 %).
- Lubricated by the pumped liquid.



BM, BMB

4", 6", 8" booster modules



Technical data

Flow, Q: max. $260 \text{ m}^3\text{/h}$ Head, H: max. 430 mLiquid temp.: 0 °C to + 40 °COperat. pressure: max. 80 bar.

Applications

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

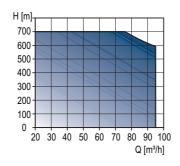
Features and benefits

- · Various material versions
- · Low-noise
- · Simple installation
- · Modular design
- · Compact design
- · Leakage-free.



BME, BMET

High-pressure booster systems



Technical data

Flow, Q: max. $95 \text{ m}^3/\text{h}$ Head, H: max. 700 mLiquid temp.: 0 °C to + 40 °COperat. pressure: max. 70 bar.

Applications

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

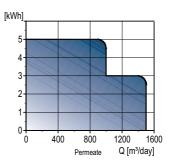
Features and benefits

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



BMEX

Booster systems for energy recovery in seawater reverse osmosis (SWRO) systems



Technical data

Permeate per day: 500 to 2500 m³
Head, H: max. 810 m
Ambient temp.: + 40 °C
Operat. pressure: max. 80 bar.

Applications

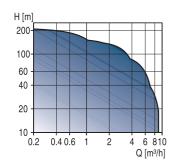
Desalination of brackish water and seawater.

- Energy recovery up to 60 %, compared to conventional systems, resulting in short payback period.
- Corrosion- and wear-resistant internal ceramic components.
- Couplings for easy installation.
- High-grade stainless steel frame and manifold.
- Large flow rates and high heads.
- Motor and bearings are standard components.
- Maintenance-free shaft seal.
- V-belt drive with high efficiency.
- · Easy to dismantle for service.



SQ, SQE

3" submersible pumps



Technical data

Flow, Q: $max. 9 m^3/h$ Head, H: max. 210 mLiquid temp.: 0 °C to + 40 °CInstallation depth: max. 150 m.

Applications

- · Domestic water supply systems
- · Groundwater supply to waterworks
- Irrigation in horticulture and agriculture
- Groundwater lowering
- · Industrial applications.

Features and benefits

- · Integrated dry-running protection
- · Soft start
- · Over- and undervoltage protection
- · High efficiency.

Options

 SQE can be protected, monitored and controlled by the CU 300 and CU 301 via R100.



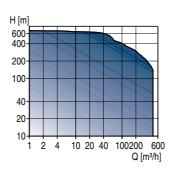
SP A, SP, SP-G

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



SQE-NE, SP-NE

Environmental pumps



Technical data

Flow, Q: max. $470 \text{ m}^3\text{/h}$ Head, H: max. 670 mLiquid temp.: 0 °C to + 60 °CInstallation depth: max. 600 m.

Applications

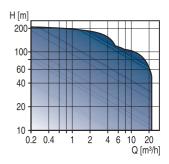
- · Groundwater supply to waterworks
- Irrigation in horticulture and agriculture
- · Groundwater lowering
- · Pressure boosting
- · Industrial applications.

Features and benefits

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

Options

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



Technical data

Flow, Q: max. $22 \text{ m}^3/\text{h}$ Head, H: max. 215 mLiquid temp.: 0 °C to + 40 °CInstallation depth: max. 600 m.

Applications

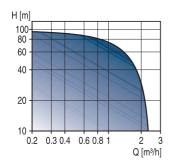
- Pumping contaminated groundwater
- Sampling
- Remedial pumping.

- · SQE-NE: as SQE
- · SP-NE: as SP.



MP₁

Environmental pumps



Technical data

 $\begin{array}{lll} \mbox{Flow, Q:} & \mbox{max. 2.4 m}^3 \mbox{/h} \\ \mbox{Head, H:} & \mbox{max. 95 m} \\ \mbox{Liquid temp.:} & \mbox{0 °C to + 35 °C.} \end{array}$

Applications

· Sampling.

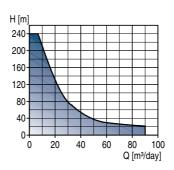
Features and benefits

- · Compact design
- · Fit into 50 mm boreholes.



SQFlex

Renewable-energy based water supply systems



Technical data

Flow, Q: max. 90 m³/day
Head, H: max. 200 m
Liquid temp.: 0 °C to + 40 °C
Voltage supply: 30-300 VDC
or 1 x 90-240 V,
50/60 Hz

Applications

Installation depth:

 Villages, schools, hospitals, singlefamily houses

max. 150 m.

- Farms and greenhouses
- Game parks and game farms
- Conservation areas.

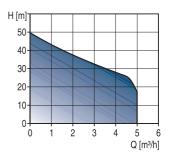
Features and benefits

- Energy supply from solar modules, wind turbine, generator or batteries
- Simple installation
- Reliable water supply
- · Virtually no maintenance
- Expansion possibilities
- Cost-efficient pumping
- Dry-running protection.



JP

Self-priming jet pumps



Technical data

Flow, Q: $max. 5 m^3/h$ Head, H: max. 48 mLiquid temp.: 0 °C to + 55 °COperat. pressure: max. 6 bar.

Applications

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

Features and benefits

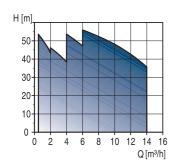
- Self-priming
- Stable operation even in case of air pockets in the liquid.

- Automatic start/stop when equipped with Presscontrol
- Booster systems for small-scale water supply.



CH, CHN

Multistage centrifugal pumps



Technical data

Flow, Q: max. $14 \text{ m}^3/\text{h}$ Head, H: max. 55 mLiquid temp.: 0 °C to + 90 °COperat. pressure: max. 10 bar.

Applications

- · Pressure booster systems
- · Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- · Horticultural irrigation systems
- Small industrial water supply systems.

Features and benefits

- Compact design
- · Robust design
- Full stainless steel design (CHN only)
- Low-noise.

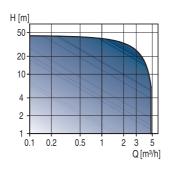
Options

- Automatic start/stop when equipped with Presscontrol
- Booster systems for domestic water supply.



MQ

Multistage centrifugal self-priming pumps



Technical data

Flow, Q: max. 5 m³/h
Head, H: max. 48 m
Liquid temp.: 0 °C to + 35 °C
Operat. pressure: max. 7.5 bar.

Applications

- · Single- or two-family houses
- · Weekend cottages
- Farms
- · Greenhouses.

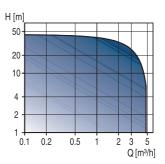
Features and benefits

- · All-in-one pressure booster unit
- Easy to install
- · Easy to operate
- Self-priming
- Dry-running protection with automatic reset
- Low-noise
- · Maintenance-free.



RMQ

Units for monitoring and control of rainwater collection and utilisation systems



Technical data

Flow, Q: $max. 5 m^3/h$ Head, H: max. 48 mLiquid temp.: 0 °C to + 35 °COperat. pressure: max. 7.5 bar.

Applications

- · Single- or two-family houses
- · Weekend cottages
- Farms
- Gardens and greenhouses.

Features and benefits

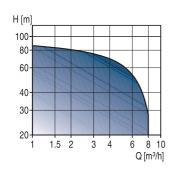
- Automatic changeover between rainwater tank and integrated mains water tank.
- Manual changeover between rainwater tank and integrated mains water tank
- Acoustic/visual alarm in case of overflow in integrated mains water tank.

- · Control of additional booster pump
- · Backflow monitoring equipment.



CHV

Multistage centrifugal pumps



Technical data

Flow, Q: max. $8 \text{ m}^3/\text{h}$ Head, H: max. 93 mLiquid temp.: 0 °C to + 90 °COperat. pressure: max. 12 bar.

Applications

- · Pressure booster systems
- · Domestic water supply systems
- · Cooling systems
- · Air-conditioning systems
- · Horticultural irrigation systems
- Small industrial water supply systems.

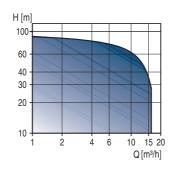
Features and benefits

- Compact design
- · Robust design
- · Low-noise
- · Space-saving.



CHV booster

Vertical pressure booster systems



Technical data

Flow, Q: max. $16 \text{ m}^3/\text{h}$ Head, H: max. 93 mLiquid temp.: 0 °C to + 40 °COperat. pressure: max. 10 bar.

Applications

- · Small waterworks
- · Small blocks of flats
- Hotels
- Stores
- · Light industry
- Hospitals
- Schools
- · Large houses.

Features and benefits

- · One- or two-pump system
- · User-friendly controllers
- ReliabilityHigh efficiency
- · Service-friendly.

Options

- · Overpressure protection
- · Dry-running protection.



Conlift

Pumps for removal of condensate water

Technical data

Flow: max. 630 l/h
Head H: max. 5.3 m
Liquid temp.: max. 35 °C,

short periods 80 °C

pH: min. 2.7 Container volume: 2.6 I Effective volume: 0.85 I.

Applications

- · Boilers up to 200 kW
- · Air-conditioning systems
- Cooling and refrigeration systems
- air dehumidifiers
- Evaporators.

- Built-in on/off control via two pressure switch ensures high security
- · Built-in alarm and potentialfree contact
- Angular mounting brackets to counteract buoyancy
- · LGA approval
- Modern design
- Easy to clean.



Conlift L

Pumps for removal of condensate water



Unilift CC, KP, AP, AP-B

Submersible drainage and effluent pumps



DW

Contractor pumps

Technical data

Flow: max. 342 l/h Head H: max. 4.5 m Liquid temp.: max. 35 °C,

short periods 80 °C

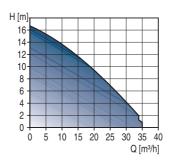
pH: min. 2.5 Container volume: 2.6 I Effective volume: 0.5 I.

Applications

- · Boilers up to 100 kW
- · Air-conditioning systems
- Cooling and refrigeration systems
- Air dehumidifiers
- Evaporators.

Features and benefits

- · Built-in on/off control via a microswitch
- Built-in safety switch/potential-free contact to switch off condensate source
- VDE and GOST approvals
- Pipe adapter for inlet and discharge included
- · Easy to clean
- Maintenance-free motor with thermal protection
- All installation material and discharge hose
- · Reliable and silent.



Technical data

Flow, Q: max. $35 \text{ m}^3/\text{h}$ Head, H: max. 18 mLiquid temp.: 0 °C to + 55 °CParticle size: $\emptyset 10\text{-}50 \text{ mm}$.

Applications

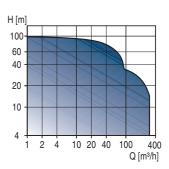
- · Drainage of flooded cellars
- · Pumping of household wastewater
- Groundwater lowering
- Emptying of swimming pools and excavations
- · Drainage of drain wells
- Emptying of tanks and reservoirs.

Features and benefits

- Simple installation
- Service- and maintenance-free.

Options

- · Unilift CC is suitable for low suction.
- Unilift AP35/50 and AP35B/50B have vortex impeller.
- Unilift AP35B and AP50B have autocoupling and horizontal outlet.



Technical data

Flow, Q: max. $300 \text{ m}^3/\text{h}$ Head, H: max. 100 mLiquid temp.: 0 °C to + 40 °C.

Applications

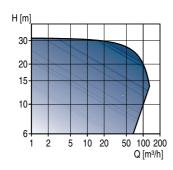
- Tunnels
- Mines
- Quarries
- Gravel pitsFish ponds
- · Building sites.

- Extremely hard-wearing due to specially selected materials
- · Simple installation
- · Service-friendly.



Pomona

Portable, self-priming pumps for temporary or permanent installation



Technical data

Flow, Q: max. 130 m³/h
Head, H: max. 31 m
Liquid temp.: 0 °C to + 100 °C
Operat. pressure: max. 6 bar.

Applications

- · Dewatering of construction sites
- · Groundwater water level control
- · Irrigation in gardens and parks
- Water supply in horticulture and agriculture
- · Draining of yachts and motor boats
- · Industrial applications.

Features and benefits

- · Self-priming
- Motor variation (electrical or internal combustion engines)
- · Wear-resistant
- · Versatile.

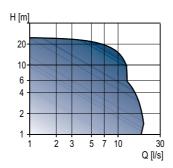
Options

 Pomona can be supplied as bare-shaft pump as well as with the motor on a trolley, carrying frame or base plate.



DP, EF, SL1 and SLV

Drainage, effluent and sewage pumps



Technical data

Flow, Q: max. 19.5 l/s $(70 \text{ m}^3/\text{h})$ Head, H: max. 25 mLiquid temp.: $0 ^\circ\text{C}$ to + 40 $^\circ\text{C}$ Discharge diameter: Rp 2 to DN 65.

Applications

- Drainage
- Effluent
- Wastewater
- · Process water
- · Domestic sewage.

Features and benefits

- · Cable plug connection
- Unique clamp connection
- · Single-channel and vortex impellers
- · Solids passage up to 65 mm
- Unique cartridge shaft seal
- Modular design
- Minimum downtime.

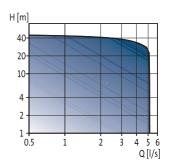
Options

- · Control and protection systems
- · Motor operation control.



SEG

Grinder pumps



Technical data

Flow, Q: max. 5 l/s Head, H: max. 47 m Liquid temp.: $0 \,^{\circ}$ C to + 40 $^{\circ}$ C.

Applications

 Pumping of wastewater with toilet waste through pipes of 40 mm in diameter and upwards.

Features and benefits

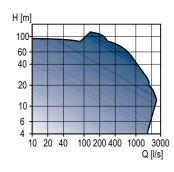
- Service-friendly
- Installation on foot or auto-coupling
- Continuous operation with fully submerged pump
- Built-in motor protection
- SmartTrim
- · Improved grinder system
- Totally sealed cable plug.

- Wide range of accessories
- Monitoring and control of one or several pumps.



S pumps

Supervortex pumps, single- or multichannel impeller pumps



Technical data

Flow, Q: max. 2500 l/s Head, H: max. 116 m Liquid temp.: 0 °C to + 40 °C Discharge diameter: DN 80 to DN 800 Particle size: max. Ø145 mm.

Applications

- · Transfer of wastewater
- · Transfer of raw water
- · Pumping of sludge-containing water
- · Pumping of industrial effluent.

Features and benefits

- · Wide range
- SmartTrim
- Operation with/without cooling jacket
- Submerged or dry installation
- Different types of impellers
- · Built-in motor protection.

Options

- · Control and protection systems
- · External cooling water
- External seal flush system
- · Sensors for monitoring of pump conditions.



AMD, AMG, AFG

Mixers and flowmakers

Technical data

Liquid temp.: + 5 °C to + 40 °C pH value: 4 to 10 Axial thrust: 160 to 6632 N Max. dynamic viscosity: 500 mPa s Max. density: 1060 kg/m³ Max. installation depth: 20 m Propeller diameter: 180 to 2600 mm Rotation speed: 22 to 1400 min⁻¹.

Applications

- · Municipal wastewater treatment systems
- Industrial processes · Sludge treatment systems
- Agriculture · Biogas plant.

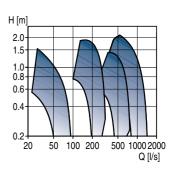
Features and benefits

- · Wide range of flexible installation accessories
- Easy to maintain and service without use of special tools
- · Electronic leak sensor in gearbox/shaft seal housing
- · Shaft seal protected against abrasive materials
- · Self-cleaning stainless steel or
- polyamide propellers.



SRP pumps

Submersible recirculation pumps



Technical data

Flow, Q: max. 1430 l/s $(5130 \text{ m}^3/\text{h})$ Head, H: max. 2.1 m 5 °C to + 40 °C Liquid temp.: Discharge pipe dia.: DN 300. DN 500 and DN 800.

Applications

- · Recirculation of sludge in sewage treatment plants
- · Pumping of stormwater.

Features and benefits

- High efficiency stainless steel impeller
- Totally submerged installations
- Built-in motor protection.

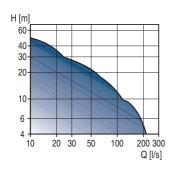
Options

· Control and protection systems.



SEN

Submersible stainless steel pumps



Technical data

Flow, Q: max. 215 l/s $(774 \text{ m}^3/\text{h})$ Head, H: max. 50 m 0 °C to + 40 °C Liquid temp.: Discharge diameter: DN 80 to DN 250.

Applications

- · Transfer of wastewater and raw water
- · Pumping of highly aggressive liquids
- · Pulp and paper industries.

Features and benefits

- SmartTrim
- Operation with/without cooling jacket
- Submerged or dry installation
- Different types of impellers Built-in motor protection
- Stainless steel versions
- · Liquids with a pH value of 2 to 14.

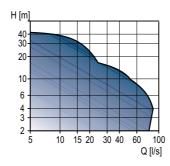
Options

- · Control and protection systems
- · External cooling water
- External seal flush system
- · Sensors for pump monitoring.



SE

Heavy duty submersible pumps



Technical data

Flow, Q: max. 88 l/s $(315 \text{ m}^3/\text{h})$ Head, H: max. 45 m 0 °C to + 40 °C Liquid temp.: Discharge diameter: DN 65 to DN 150.

Applications

- · Pumping of wastewater
- · Pumping of process water
- · Pumping of unscreened raw sewage.

Features and benefits

- Cable plug connection
- Unique clamp assembly system
- · Single-channel and vortex impellers
- · Solids passage up to 100 mm
- Minimum downtime
- Low operating costs
- · Liquidless motor cooling
- · Unique cartridge shaft seal.

Options

- · Control and protection systems
- · Motor operation control
- · Sensors for pump monitoring.



LC, LCD 107, 108 and 110

Pump controllers with pneumatic signal, float switch or electrodes

Technical data

Voltage supply: 1 x 230, 3 x 230 and 3 x 400 V, 50/60 Hz.

Applications

- Pumping stations
- Filling/emptying of tanks.

Features and benefits

- Control of one (LC) or two pumps (LCD)
- Automatic alternating operation (LCD)
- Automatic test run preventing shaft seals from seizing up during long periods of inactivity
- Water hammer protection
- Starting delay after power failure
- Stop delays
- Automatic alarm reset (if required)
- Automatic restart (if required)
- Liquid level indication
- High-level alarm
- Motor overload protection relay
- Protection against motor overheating via input from PTC resistor/thermal switch.

Optional

- SMS modem with built-in hour and start counter (information on mobile phone)
- Hour counter
- Start counter
- Signal lamp
- Acoustic signal
- External mains switch.



Dedicated controls

Pump controllers

Technical data

Voltage supply: 1 x 230, 3 x 230 and 3 x 400 V, 50/60 Hz.

Applications

- Network pumping stations with one or two pumps for commercial buildings and municipal systems
- · Control of mixer or flush valve.

Features and benefits

- Start/stop of wastewater pumps by means of float switches, analog pressure sensor or ultrasonic sensor
- · Alternating operation of two pumps
- Overflow measurement
- · Alarms and warnings
- Advanced alarm schedules
- · Start and stop delays
- Daily emptying
- Foam draining
- Anti-seizing.
- Easy installation and configuration via start-up wizard.
- Help texts for settings on the operator display.
- Advanced data communication, GSM/ GPRS to BMS and SCADA systems, SMS (transmit and receive) alarms and status, PC-tool support and data logging.

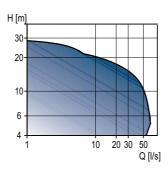
Optional

- Control panel with direct-on-line, stardelta or soft starter
- · Battery for UPS back-up
- IO 111 sensor interface.



Lifting stations

Complete pumping stations



Technical data

Flow, Q: max. 60 l/s (216 m³/h),

recom. 31 l/s (110 m³/h) max. 29 m

Head, H: max. 29 m Liquid temp.: 0 °C to + 40 °C Discharge dia.: DN 80 to DN 100.

Applications

- · Single- and multi-family houses
- · Weekend cottages
- · Restaurants
- · Small hotels
- · Sewage systems in the open country
- · Percolation systems.

Features and benefits

- · Ready for installation
- · Flexible pipe connection
- · Cable plug connection
- Unique clamp assembly system
- Single-channel and vortex impellers
- Solids passage up to 100 mm
- · Low risk of clogging
- · Minimum downtime
- Low operating costs
- Liquidless motor cooling
- · Unique cartridge shaft seal
- · Modular design.



Sololift+

Domestic lifting stations

Applications

- · Extra bathrooms
- Basement installations
- · Low-cost bathrooms in holiday cottages
- Added facilities in hotels and guesthouses
- Bathrooms for the elderly or the disabled
- Renovation of offices and other commercial buildings.

Features and benefits

- Unique design with smooth line and rounded edges - fits every modern bathroom environment.
- Plug-and-go product all you need in one package.
- · Low noise level.
- Discharge pipe connection in the side ensures easy maintenance.
- Flexible discharge pipe adapters for outer pipe diameters of Ø23, Ø25, Ø28 and Ø32 mm.
- · Thermal overload switch.
- Cover without screws easy service.
- Easy connection of extra sanitary appliances.

CWC-3

- Especially designed for wall-hung toilets
- Compact and slim for easy integration into the wall.

C-3

- Especially designed for high liquid temperature wastewater from washing machine or dishwasher
- Compact and slim for easy installation under a wash basin or in a closet.



Liftaway B and C

Domestic lifting stations

Technical data for Liftaway B

Inlet dimension: 3 x DN 100 Discharge connection: DN 40 Effective volume: 40 I.

Technical data for Liftaway C

3 x DN 100 Inlet dimension: + 1 x DN 40/50

Discharge connection: DN 40 Effective volume:

Applications

- · Collection of drainage and surface
- · Collection and pumping of wastewater from basement and laundry rooms below sewer level
- · Collection and pumping of wastewater from washbasins, washing machines and floor drains to sewer level
- · Collection and pumping of rainwater.

Features and benefits

· To be fitted with pumps from the Unilift KP and AP range.

Liftaway B

- · Telescopic part for easy height adjustment
- · Flexible and easy installation.

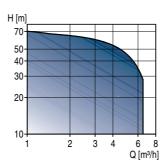
Liftaway C

- · Functional design and easy to clean
- · Overflow protection device
- Active carbon filter to eliminate odours
- · Compact and slim for easy installation under a washbasin or in a closet.



SPO

Water supply pumps approved for drinking water



Technical data

Flow, Q: max. 6 m³/h Head, H: max. 75 m 0 °C to 40 °C Liquid temp.: Installation depth: max. 20 m below water level

Operat. pressure: max. 10 bar.

Applications

- · Private homes and week-end cottages
- Traditional 5" or 6" wells
- · Shallow wells
- · Rainwater collection in tanks
- · Boosting of public water and
- · Emptying of garden ponds.

Features and benefits

- Long service life as all components are of stainless steel
- Stable operation
- · Easy to install.



MS motors

Stainless steel 4" and 6" submersible motors

Motor sizes

4" motor: 0.37 to 7.5 kW 6" motor: 5.5 to 30 kW.

Applications

The Grundfos MS submersible motors can be fitted on all Grundfos SP A. SP pumps and can be used in the highpressure booster modules, type BM and

Features and benefits

- · Overtemperature protection by means of a built-in Tempcon temperature transmitter
- Standardised NEMA head and shaft end
- Completely encapsulated in stainless
- Liquid-cooled and has liquid-lubricated bearings.

Options

Material variants.



MMS motors

Stainless steel 6", 8", 10", 12" rewindable submersible motors

Motor sizes

6": 3.7 to 37 kW 8": 22 to 110 kW 10": 75 to 190 kW 12": 147 to 250 kW.

Applications

The Grundfos MMS submersible motors can be fitted on all Grundfos SP and SP-G pumps.

Features and benefits

- · Wide range of rewindable motors
- · Easily rewinded
- · Protection against upthrust
- · High efficiency
- 6" and 8" have standardised NEMA head and shaft end
- Mechanical shaft seal, ceramic/carbon or SiC/SiC
- · PVC or PE/PA windings.

Options

- · Material variants
- Overtemperature protection via Pt100/ Pt1000.



LiqTec

Control and monitoring units

Applications

Monitoring and protection of pumps and processes.

Features and benefits

- · Protection against dry running
- Protection against liquid temperatures exceeding 130 °C ± 5 °C
- Protection against too high motor temperatures
- Manual or automatic restarting possible from a remote PC
- Simple installation plug-and-play technology
- · Robust sensor.



CUE

Frequency converters for 3-phase pumps

Technical data

- · Mains voltage:
 - 1 x 200-240 V
 - 3 x 400-500 V
 - 3 x 525-600 V
 - 3 x 575-690 V.

Applications

Adjustment of the pump performance to the demand. Together with sensors, the CUE offers these control modes:

- · proportional differential pressure
- constant differential pressure
- constant pressure
- constant pressure with stop function
- constant level
- · constant level with stop function
- · constant flow rate
- constant temperature.

The CUE can also be controlled by an external signal or via GENIbus.

- Adjustment of the pump performance to the demand, thus saving energy.
- Easy installation, as the CUE is designed for GRUNDFOS pumps.
- Short-circuit-protected output; no motor-protective circuit breaker required.
- Fault indication via display and a relay, if fitted.
- External setpoint influence via three programmable inputs.



MP 204, CU 300, CU 301

Control and monitoring units

Applications

Monitoring and protection of pump installations.

Features and benefits

- Protection against dry running and too high motor temperature
- Constant monitoring of pump energy consumption
- Reading out of operating data via R100.

Options

- Connection to large control systems via bus communication
- Connection of sensors enabling control based on sensor signals.



Control MPC

Control and monitoring units

Technical data

- Control of up to six identical pumps in parallel
- Motors from 0.37-75 kW can be connected (on request up to 315 kW)
- · Enclosure class: IP54.

Applications

- · Heating systems
- · Air-conditioning systems
- · Cooling systems
- · Pressure booster systems
- · Industrial processes
- · Water supply systems.

The Control MPC is designed for these pump types:

- CR(E), CRI(E) and CRN(E)
- NB(E), NBG(E)
- NK(E), NKG(E)
- TP
- TPE Series 1000
- TPE Series 2000
- HS
- SP
- MAGNA, UPE Series 2000.

Features and benefits

- · Easy installation and start-up
- · Simple control
- · Application-optimised software
- Modular solution with possibility of expansion
- Data communication via Ethernet, LON, Profibus, etc.



Control MPC Series 2000

Control and monitoring units for Series 2000 pumps

Technical data

- Control of up to six Grundfos MAGNA, UPE, TPE Series 2000 pumps of identical pump type and size.
- Voltage supply: 1 x 100-240 V.
- · All motor sizes can be connected.
- Enclosure class: IP54.

Applications

- · Heating systems
- · Air-conditioning systems.

Features

Optimal adjustment of the performance to the demand by closed-loop control of these parameters:

- · proportional differential pressure
- · constant differential pressure
- · differential pressure (remote) *
- flow rate *
- temperature *
- temperature difference. *
- * External sensor required.



CIM / CIU

Fieldbus communication interfaces

Technical data

The CIM/CIU interfaces enable the connection of Grundfos electronic products to standard fieldbus networks. CIM can be installed as an add-on module in 11-22 kW E-pumps and CU 361; for other products, use the CIU box with internal power supply.

Applications

The following product ranges are supported:

- MAGNA/UPE*
- CRE/CRNE/CRIE, MTRE, CME, NBE/ NKE, TPE Series 1000/2000, CUE
- Hydro MPC / Control MPC / Multi-E
- CR Monitor*
- MP 204*
- · Dedicated Controls*.
- * = Not supported by all CIM/CIU types.

Features

- Available with GENIbus, LON, Modbus RTU and Profibus DP
- Modular design
- Based on standard functional profiles.



R100

Wireless remote control

Applications

All pumps designed for wireless communication.

Features and benefits

- Simple and quick installation of the pump
- Reading out of various operating and fault signals
- Printing out of status information.



VFS

Vortex flow sensors for liquids

Technical data

Flow range: 1-400 l/min
Power supply: 5 V DC PELV
Output signal: 0.5-3.5 V
Temperature range: 0 °C to 100 °C
Meas. technology: MEMS

Applications

- Thermal management in solar heating systems
- Calorimetric capability for solar heat pumps
- · Industrial process flow control
- Cooling and temperature control for e.g. manifold systems
- Floor/radiant heating and valve systems.

Features and benefits

- No moving parts
- Flow- and temperature-sensor-in-one
- Flow range 1-12 and 2-40 l/m in 42 % glycol mixture with stainless steel flow pipe and insert
- Suitable for wet, aggressive media
- Ratiometric output for dedicated controls
- · Wide range of accessories
- Approved for drinking water.

Options

 Power supply and signal converter SI 010 CNV for desired 4-20 mA signal output. Additionally, the SI 010 CNV converts to 2-10 V or 1-5 V.



RPS and DPS 100

Relative and differential pressure sensors for liquids

Technical data

RPS range: 0-10 bar DPS 100 range: 0-6 bar Power supply: 5 V DC PELV RPS output signal: 0.5 - 3.5 V DPS 100 output signal: 0.5 - 4.5 V Meas. technology: **MEMS**

Applications

- · Domestic hot-water systems
- · Central heating systems
- · Dry-running protection in solar systems and boilers
- · Surveillance of filter efficiency
- · Pressure control for manifold systems.

Features and benefits

- · Pressure- and temperature-sensor-in-
- · Differential pressure sensor in high resolution version
- · Suitable for wet, aggressive media
- Ratiometric output for dedicated controls
- · Wide range of accessories
- · Approved for drinking water.

Options

· Power supply and signal converter SI 010 CNV for desired 4-20 mA signal output. Additionally, the SI 010 CNV converts to 2-10 V or 1-5 V.



DPI

Differential pressure transmitters for liquids in industry

Technical data

Pressure range: 0-10 bar Power supply: 12-30 V DC Output signal: 4-20 mA - 10 °C to + 70 °C Operating temp.:

Meas. technology: MEMS

Applications

- · Pump and pump control systems
- Heat exchanger control systems (monitoring fouling)
- · Filter monitoring
- Schlecht-Punkt-Regelung (SPR)
- · Water treatment systems.

Features and benefits

- · Venturi measurement
- · Constant differential pressure
- · Differential pressure (remote)
- · Suitable for wet, aggressive media
- · Wide range of accessories
- · Approved for drinking water.

Options

- · Upgrade package for TP1000
- Power supply SI 001 PSU for > 30 m cable lengths.



Pressure tanks

Diaphragm and bladder tanks

Technical data

Tank size: 8-5000 I max. + 90 °C Liquid temp.: Operat. pressure: max. 16 bar.

Applications

- · Water supply systems in housing
- · Pressure booster systems in housing
- Agriculture
- Horticulture
- Industrial systems.

- Optimal water supply
- Reduced number of pump starts
- · Ideal for drinking water.

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