A global business

With over 17,500 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 56 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 user-friendly 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 customer-oriented 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 hot-water service systems**: Circulator pumps for circulation of hot water in central and district heating systems and circulation in domestic hot water service systems.
- **Cooling and air-conditioning systems**: Circulator pumps for circulation of cold water and other liquids in cooling and air-conditioning systems.
- **Industrial applications**: A wide range of 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 as well as measuring and control for wastewater treatment systems, swimming pools and industry.

Renewable-energy systems
Renewable-energy-based water supply systems suitable for remote locations not connected to the electricity supply grid.
## Heating and hot-water service systems

<table>
<thead>
<tr>
<th>Product</th>
<th>Page</th>
</tr>
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<tbody>
<tr>
<td>Grundfos ALPHA2</td>
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## Cooling and air-conditioning systems

<table>
<thead>
<tr>
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<th>Page</th>
</tr>
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<tbody>
<tr>
<td>CM, CME, CMV</td>
<td>22</td>
</tr>
<tr>
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## Industrial applications

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<td>23</td>
</tr>
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## Pressure boosting and liquid transfer

<table>
<thead>
<tr>
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<th>Page</th>
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<tbody>
<tr>
<td>Hydro MPC</td>
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</tr>
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</tr>
<tr>
<td>MAXA, MAXANA</td>
<td>27</td>
</tr>
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<tr>
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<td>16</td>
</tr>
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<td>14</td>
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<td>13</td>
</tr>
<tr>
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</tr>
<tr>
<td>S pumps</td>
<td>37</td>
</tr>
<tr>
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<td>38</td>
</tr>
<tr>
<td>SIPLA</td>
<td>27</td>
</tr>
<tr>
<td>SL1/SLV and SE1/SEV</td>
<td>38</td>
</tr>
<tr>
<td>SRP</td>
<td>38</td>
</tr>
<tr>
<td>Hydro MPC</td>
<td>28</td>
</tr>
<tr>
<td>Hydro Multi-B</td>
<td>29</td>
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<td>13</td>
</tr>
<tr>
<td>TPE Series 1000</td>
<td>12</td>
</tr>
</tbody>
</table>
### Groundwater supply
- SP A, SP, SP-G ........................................... 32
- SQ, SQE .................................................. 31

### Domestic water supply
- CM, CME, CMV ............................................. 22
- CMB PM1, CMB PM2 ...................................... 23
- CR DW ..................................................... 25
- CR, CRI, CRN .............................................. 24
- CRE, CRIE, CRNE ......................................... 24
- Hydro MPC ............................................... 28
- Hydro Multi-B ............................................ 29
- Hydro Multi-E ............................................ 28
- Hydro Multi-S ............................................ 29
- Hydro Solo-E ............................................. 29
- Hydro Solo-S ............................................. 30
- JP ........................................................... 33
- JP Rain ..................................................... 33
- MQ ........................................................ 34
- RMQ ......................................................... 34
- SBA ......................................................... 42
- SP A, SP, SP-G ............................................ 32
- SPO ........................................................ 41
- SQ, SQE .................................................. 31

### Wastewater
- AMD, AMG, AFG ........................................... 37
- Conlift ..................................................... 41
- DP, EF ....................................................... 36
- DPK ........................................................ 35
- DW .......................................................... 35
- DWK ........................................................ 35
- LC, LCD .................................................... 39
- Liftaway B and C ........................................ 40
- Multilift .................................................... 40
- Pomona ..................................................... 36
- PUST ......................................................... 37
- S pumps ..................................................... 37
- SEG ........................................................ 36
- SEN ........................................................ 38
- SL1/SV and SE1/SEV ..................................... 38
- Sololift2 .................................................... 40
- SRP .......................................................... 38
- Unilift, KP Basic ......................................... 34

### Environmental applications
- CR, CRI, CRN .............................................. 24
- CRE, CRIE, CRNE ......................................... 24
- CRT .......................................................... 25
- MP 1 ......................................................... 32
- SQE-NE, SP-NE .......................................... 32

### Dosing and disinfection
- Conex® DIA, DIS ........................................... 19
- Conex® DIA-G, DIS-G ..................................... 19
- DDA ......................................................... 16
- DDC ......................................................... 16
- DDE ......................................................... 17
- DDI ........................................................ 17
- DIP .......................................................... 19
- DIT-M, DIT-L, DIT-IR ................................... 20
- DME ......................................................... 17
- DMH ........................................................ 18
- DMX ......................................................... 18
- DTS ........................................................ 22
- HydroProtect ............................................. 22
- Oxiperm .................................................... 21
- Oxiperm Pro ............................................... 21
- Polydos, KD ............................................... 21
- Selcoperm .................................................. 20
- Vaccuperm ................................................ 20

### Renewable-energy systems
- SQFlex ..................................................... 33

### Fire systems
- Fire DNF, Fire HSEF ....................................... 14

### Motors, controls and accessories
- Accessories for dosing pumps and systems ........ 18
- CIM / CIU .................................................. 44
- Control MPC .............................................. 44
- Control MPC Series 2000 ............................... 44
- CR Monitor ............................................... 24
- CU 100 ....................................................... 39
- CUE ........................................................ 43
- Dedicated controls ....................................... 39
- DPI .......................................................... 46
- Grundfos GO Remote .................................... 45
- GT-HR ....................................................... 47
- LC, LCD .................................................... 39
- LiqTec ....................................................... 43
- MMS ......................................................... 42
- MP 204, CU 300, CU 301 ............................... 43
- MS .......................................................... 42
- Pressure manager ......................................... 46
- Pressure tanks ............................................ 47
- R100 ......................................................... 45
- RPS and DPS ............................................... 46
- VFS ........................................................ 45
# Products A-Z

<table>
<thead>
<tr>
<th>Accessories for dosing pumps and systems</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFG</td>
<td>37</td>
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<tr>
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<td>33</td>
</tr>
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<td>33</td>
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MTH ........................................ 14
MTR ........................................ 14
MTRE ...................................... 15
MTS ........................................ 15
Multilift ................................... 40
NB ........................................... 12
NBE ......................................... 13
NBG ......................................... 12
NBGE ....................................... 13
NK ............................................ 13
NKE ......................................... 13
NKG ......................................... 13
NKGE ....................................... 13
NOVAlobe .................................. 28
Oxiperm ................................... 21
Oxiperm Pro ................................ 21
Polydos, KD ................................ 21
Pomona ..................................... 36
Pressure manager ......................... 46
Pressure tanks ............................. 47
PUST ........................................ 37
R100 ......................................... 45
RC ............................................ 23
RMQ ......................................... 34
RPS ........................................... 46
S pumps .................................... 37
SB ............................................. 41
SBA .......................................... 42
SE1 .......................................... 38
SEG .......................................... 36
Selcoperm .................................. 20
SEN .......................................... 38
SEV .......................................... 38
SIPLA ........................................ 27
SL1 .......................................... 38
SLV .......................................... 38
Sololift2 .................................... 40
SP ............................................. 32
SP A .......................................... 32
SP-G .......................................... 32
SP-NE ...................................... 32
SPK .......................................... 14
SPKE ........................................ 15
SPO .......................................... 41
SO ............................................. 31
SQE .......................................... 31
SQE-NE .................................... 32
SQFlex ...................................... 33
SRP .......................................... 38
TP ............................................ 11
TPE Series 1000 ......................... 12
TPE Series 2000 ......................... 12
Unilift ....................................... 34
UP Series 100 ............................. 10
UPS Series 100 ........................... 10
UPS Series 200 ......................... 11
Vaccuperm .................................. 20
VFS .......................................... 45
**Grundfos ALPHA2**
Circulator pumps, canned-rotor type

**Technical data**
- Flow rate: max. 10 m$^3$/h
- Head: max. 6 m
- Liquid temp.: +2 °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 consumption
- Energy labelling class A
- Maintenance-free
- Low noise level
- 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.

---

**UP, UPS Series 100**
Circulator pumps, canned-rotor type

**Technical data**
- Flow rate: max. 10 m$^3$/h
- Head: 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 consumption
- Energy labelling class C to A
- Low noise level
- Maintenance-free
- Wide range.

**Options**
- Automatic performance adjustment
- Simple installation (external plug for electrical connection)
- Twin-head versions.

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**Grundfos COMFORT PM**
Circulator pumps, canned-rotor type

**Technical data**
- Flow rate: max. 0.5 m$^3$/h
- Head: max. 1.2 m
- Liquid temp.: -2 °C to +95 °C
- Operat. pressure: max. 10 bar.

**Applications**
- Domestic hot-water systems
- Heating systems
- Cooling and air-conditioning systems.

**Features and benefits**
- Maintenance-free
- Low noise level
- Low energy consumption
- Wide range
- Corrosion-resistant stainless steel/brass pump housing.

**Options**
- 24-hour timer
- Adjustable thermostat.
11

GRUNDFOS

Technical data
Flow rate: max. 70 m³/h
Head: 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 level
• Low energy consumption
• Single-phase with built-in protection module
• Wide range.

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

UPS Series 200
Circulator pumps, canned-rotor type

Grundfos MAGNA Series 2000
Circulator pumps, canned-rotor type - electronically controlled

Technical data
Flow rate: max. 90 m³/h
Head: 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 level
• Low energy consumption
• 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 via Grundfos R100, MI 201, MI 202 and MI 301
• Communication via GENIbus or LON.

TP
Circulator pumps, close-coupled type

Technical data
Flow rate: max. 4600 m³/h
Head: max. 170 m
Liquid temp.: -25 °C to +150 °C
Operat. pressure: max. 25 bar.

Applications
• Heating systems
• District heating plants
• Local heating plants
• Domestic hot-water systems
• Cooling and air-conditioning systems
• District cooling plants
• Water supply systems.

Features and benefits
• Compact design
• Wide range
• Standard IE3 motor
• Service-friendly
• Various types of shaft seals depending on liquid, temperature and pressure.

Options
• Bronze pump housing
• Bronze impeller
• Stainless-steel impeller
• Twin-head versions.
**TPE Series 2000**
Single-stage, centrifugal pumps - electronically controlled

**Technical data**
- Flow rate: max. 550 m$^3$/h
- Head: max. 90 m
- Liquid temp.: -25 °C to +140 °C
- Operat. pressure: max. 16 bar.

**Applications**
- Heating systems
- Domestic hot-water systems
- Cooling and air-conditioning systems.

**Features and benefits**
- Low energy consumption
- Adaptation to existing operating conditions
- Simple installation.

**Options**
- Wireless remote control via Grundfos R100, MI 201, MI 202 and MI 301
- Communication via GENIbus, BACnet MS/TP, LON, Modbus RTU or PROFIBUS DP
- Twin-head versions.

**TPE Series 1000**
Single-stage, centrifugal pumps - electronically controlled

**Technical data**
- Flow rate: max. 550 m$^3$/h
- Head: max. 90 m
- Liquid temp.: -25 °C to +140 °C
- Operat. pressure: max. 16 bar.

**Applications**
- Heating systems
- District heating plants
- Local heating plants
- Domestic hot-water systems
- Cooling and air-conditioning systems
- District cooling plants
- Water supply systems.

**Features and benefits**
- Low energy consumption
- Adaptation to existing operating conditions
- Simple installation
- Many control facilities.

**Options**
- Wireless remote control via Grundfos R100, MI 201, MI 202 and MI 301
- Communication via GENIbus, BACnet MS/TP, LON, Modbus RTU or PROFIBUS DP.

**NB, NBG**
Single-stage standard pumps

**Technical data**
- Flow rate: max. 1000 m$^3$/h
- Head: max. 160 m
- Liquid temp.: -25 °C to +140 °C
- Operat. pressure: max. 25 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
- EN 12756 shaft seal.
Technical data
Flow rate: max. 550 m³/h
Head: max. 100 m
Liquid temp.: -25 °C to +140 °C
Operat. pressure: max. 25 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
• EN 12756 shaft seal.

Optional
• Wireless remote control via Grundfos R100, MI 201, MI 202 and MI 301
• Communication via GENibus, BACnet MS/TP, LON, Modbus RTU or PROFIBUS DP.

Technical data
Flow rate: max. 1,170 m³/h
Head: max. 160 m
Liquid temp.: -25 °C to +140 °C
Operat. pressure: max. 25 bar.

Applications
• District heating plants
• Water supply systems
• Air-conditioning systems
• Cooling systems
• Washdown systems
• Firefighting systems
• Other industrial systems.

Features and benefits
• Standard dimensions according to EN and ISO standards
• Robust design
• Standard motor
• EN 12756 shaft seal.

Options
• Wireless remote control via Grundfos R100, MI 201, MI 202 and MI 301
• Communication via GENibus, BACnet MS/TP, LON, Modbus RTU or PROFIBUS DP.
Technical data
Flow rate: max. 2500 m³/h
Head: max. 148 m
Liquid temp.: -12 °C to +100 °C
Operat. pressure: max. 16 bar.

Applications
• Water supply systems
• Air-conditioning systems
• Cooling systems
• Irrigation systems
• Other industrial systems
• District heating systems.

Features and benefits
• Robust between-bearing design
• Double suction to reduce axial forces
• Double volute casing to reduce radial load
• Removable bearing housing for easy maintenance
• Many variants available
• Flange dimensions according to EN 1092-2 (DIN 2501).

Options
• Cast iron housing
• Stuffing box
• Stainless steel impeller.

Technical data
With electric motor
Flow rate: 250-4500 gpm
Head: max. 182 psi

With diesel engine
Flow rate: 250-4000 gpm
Head: max. 212 psi
Liquid temp.: 5 °C to +40 °C.

Applications
• Fire pump sets for firefighting systems.

Features and benefits
• With electric motor or diesel engine
• FM-approved and UL-listed
• Simple installation and easy maintenance
• Designed for superior functionality and performance reliability.

Technical data
Flow rate: max. 85 m³/h
Head: max. 238 m
Liquid temp.: -10 °C to +90 °C
Operat. pressure: max. 25 bar.

Applications
• Machine tools
• Components washing machines
• Chiller units
• Industrial washing machines
• Filter and conveyor systems
• Temperature control
• Boiler feed
• General pressure boosting.

Features and benefits
• Flexible installation length
• Wide range
• Reliability
• Service-friendly
• Simple installation
• Space-saving
• High efficiency.
MTRE, SPKE
Multistage centrifugal immersible pumps - electronically controlled

Technical data
Flow rate: max. 85 m³/h
Head: max. 380 m
Liquid temp.: -10 °C to +90 °C
Operat. pressure: max. 25 bar.

Applications
• Machine tools
• Components washing machines
• Chiller units
• Industrial washing machines
• Filter and conveyor systems
• Temperature control
• Boiler feed
• General pressure boosting.

Features and benefits
• Wide range
• Reliability
• Service-friendly
• Simple installation
• Space-saving
• High efficiency
• Many control facilities.

Options
• Wireless remote control via Grundfos R100, MI 201, MI 202 and MI 301.

MTA
Single-stage coolant pump

Technical data
Flow rate: max. 355 l/min
Head: max. 13.5 m
Liquid temp.: 0 °C to +60 °C.

Applications
• Machine tools
• Filter and conveyor systems.

Features and benefits
• High-efficiency motor and hydraulic
• Wide range
• Flexible installation length
• Reliability
• No shaft seal
• Semi-open impeller
• Easy installation.

Options
• Dry installation
• Mechanical shaft seal
• Variety of connections.

MTS
High-pressure pumps for tank top installation

Technical data
Flow rate: max. 850 l/min
Head: max. 120 bar
Liquid temp.: 0 °C to +80 °C
Operat. pressure: max. 130 bar.

Applications
Pumping of coolants in machine tool applications, such as:
• Deep hole drilling
• Grinding
• Cutting.

Features and benefits
• High efficiency
• Wear-resistant
• Compact design
• Low noise level/pulsation.

Options
• Dry installation
• Mechanical shaft seal
• Variety of connections.
MTB
Single-stage centrifugal end-suction pumps with semi-open impeller

Technical data
Flow rate: max. 90 m³/h
Head: 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 IE2 motor.

DDA
Digital diaphragm dosing pumps

Technical data
Capacity, Q: max. 30 l/h
Pressure, p: max. 16 bar
Turn-down ratio: 1:3000 or 1:1000
Liquid temp.: max. +45 °C.

Applications
High-end solution
• Water and wastewater treatment
• Process water
• Food and beverage industry
• Ultrafiltration and reverse osmosis
• Pulp and paper industry.

Features and benefits
• Internal stroke-speed and frequency control
• Manual, pulse and 0/4-20 mA control
• Batch, timer cycle, timer week control
• FlowControl with selective fault diagnosis, pressure monitoring
• Integrated flow measurement and AutoFlowAdapt
• 0/4-20 mA and 2 relay outputs
• Auto deaeration
• Power supply 100-240 V, 50/60 Hz.

Options
• E-box for Profibus DP network.

DDC
Digital diaphragm dosing pumps

Technical data
Capacity, Q: max. 15 l/h
Pressure, p: max. 10 bar
Turn-down ratio: 1:1000
Liquid temp.: max. +45 °C.

Applications
Optimum price-performance-ratio.
• Water and wastewater treatment
• Boiler feed water
• Swimming pool water
• Cooling tower
• Chemical industry.

Features and benefits
• Internal stroke-speed and frequency control with stepper motor
• Flexible control cube and mounting plate
• Click wheel and graphical display
• Capacity setting in ml/h, l/h, or gph
• Manual, pulse and 0/4-20 mA control
• 2 relay outputs
• Smooth dosing of degassing liquids
• Slow Mode
• Power supply 100-240 V, 50/60 Hz.
**Technical data**

**DDE**
- Capacity, Q: max. 15 l/h
- Pressure, p: max. 10 bar
- Turn-down ratio: 1:1000
- Liquid temp.: max. +45 °C.

**Applications**
- Digital Dosing for basic applications.
- Water and wastewater treatment
- Swimming pool water
- Cooling tower
- Chemical industry
- Car wash
- Irrigation.

**Features and benefits**
- Internal stroke-speed and frequency control with stepper motor
- Only 2 models from 0.006 to 15 l/h
- Smooth continuous dosing
- Always full stroke length
- Flexible mounting plate
- Capacity adjustment knob
- Manual control (0.1-100 %)
- Pulse control (1:n)
- External stop and empty tank input
- Power supply 100-240 V, 50/60 Hz.

**DME**
- Capacity, Q: max. 940 l/h
- Pressure, p: max. 10 bar
- Liquid temp.: max. +50 °C.

**Applications**
- Water and wastewater treatment
- Process plants
- Filtration systems
- Paper production
- Food and beverage industry.

**Features and benefits**
- Capacity setting in ml/h or l/h
- Internal stroke-speed and frequency control with brushless DC-motor
- Front- or side-fitted control panel with display
- Control panel lock
- 4-20 mA control
- Pulse-filter-based batch control
- Anti-cavitation function
- Easy calibration function
- Diaphragm leakage sensor.

**DDI**
- Capacity, Q: max. 150 l/h
- Pressure, p: max. 10 bar
- Liquid temp.: max. +50 °C.

**Applications**
- Water and wastewater treatment
- Process plants
- Paper production
- Food and beverage industry.

**Features and benefits**
- Internal stroke-speed and frequency control with brushless DC-motor
- Capacity setting in ml/h or l/h
- Smooth dosing through variable speed
- Reliable dosing of viscous liquids
- Side-fitted control panel
- Manual/pulse control
- 4-20 mA control
- Easy calibration
- Pioneering system for flow and pressure monitoring in the dosing head (control variant AF)
- PROFIBUS interface (control variant AP).

**Options**
- Fieldbus communication module
**Technical data**

**DMX**

- **Capacity, \( Q \):** max. 4000 l/h (pump with two heads: \( 2 \times 4000 \) l/h)
- **Pressure, \( p \):** max. 10 bar
- **Liquid temp.:** max. +50 °C.

**Applications**

- Drinking-water treatment
- Wastewater treatment
- Pulp and paper industry
- Textile industry
- Industrial water and wastewater treatment
- Cooling tower.

**Features and benefits**

- Robust design
- Stroke-length adjustment.

**Options**

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

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**Technical data**

**DMH**

- **Capacity, \( Q \):** max. 1500 l/h (pump with two heads: \( 2 \times 1500 \) l/h)
- **Pressure, \( p \):** max. 200 bar
- **Liquid temp.:** max. +90 °C.

**Applications**

- Oil refinery industry
- Heavy-duty applications
- Pulp/paper and textile industries
- Cooling tower, power plants
- Industrial water and wastewater treatment.

**Features and benefits**

- Designed for heavy-duty operation
- Stroke-length adjustment
- Long life time due to piston diaphragm technology
- Full PTFE diaphragm.

**Options**

- Available with API 675 approval
- Available with ATEX approval.

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**Accessories**

- Installation kits
- Tubing
- Pump connections
- Foot valves
- Suction lines
- Injection valves
- Pressure-relief valves
- Pressure-loading valves
- Multifunction 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, H₂O₂, pH or redox (ORP).
Conex® DIA-2: parameter 1: Cl₂, ClO₂, O₃ or H₂O₂, parameter 2: pH.
Conex® DIA-2Q: parameter 1: Cl₂, ClO₂, O₃, PAA or H₂O₂, parameter 2: 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 (only effluent)
• 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 which reduces chemical consumption.
• Available as a preassembled system.

DIP
Measurement and control systems for dosing instrumentation

Technical data
Amplifier parameters:
DIP: 1: Cl₂, ClO₂ or O₃
2: pH
3: redox (ORP).

Applications
Instrumentation in disinfection processes:
• Drinking water
• Industrial water
• Wastewater (only effluent)
• 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 which reduces chemical consumption.
• Available as a preassembled system.

Conex® DIA-G, DIS-G
Gas warning systems

Technical data
Conex® DIA-G:
• Intelligent, membrane-covered gas sensors with integrated RAM for challenging measuring tasks.
• Sensor type, production number, manufacturing date and slope are stored in the memory. Gas warning system for Cl₂, ClO₂, O₃ (amperometric and potentiostatic probes) and NH₃, HCl (potentiostatic probes).

Applications
• Gas dosing installations
• Monitoring of 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 auto-calibration
• Separate sensor interface for Conex® DIA-G for each potentiostatic sensor
• Internal CAN-bus for the connection of potentiostatic sensors
• Optional acoustic and visual alarm device.
**Technical data**

Measuring parameters:
- DIT-M: aluminium, bromine, chlorine (free, total, combined), chlorine dioxide, chloride, chlorite, cyanuric acid, iron, fluoride, manganese, ozone, phosphate, pH, acid capacity KS 4.3, hydrogen peroxide
- DIT-L: chlorine, chlorine dioxide, chlorite or ozone as well as the pH value.

**Applications**
The compact hand photometers DIT-M and DIT-L are dedicated for routine analysis in water treatment monitoring and for calibration of measurement and control systems.
- Drinking-water treatment
- Swimming pool water treatment
- Industrial water treatment.

**Features and benefits**
- Compact and ergonomic design
- High operating convenience
- DIT-M: Multilingual plain-text operator prompting
- DIT-L: Language neutral user interface
- Interference filters and long-term stable LEDs without moving parts
- Long-term stable reagent tablets.

**Options**
- Data transfer to a PC or a printer with the optional DIT-IR infrared interface module.

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**Technical data**

VGB: max. 2 kg/h
VGA: max. 10 kg/h
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 floor-mounted)
- 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.

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**Technical data**

- Capacity: max. 2000 g/h
- Water consumption: 140-170 l per kg of prepared chlorine
- Salt consumption: approx. 4 to 4.5 kg per kg of prepared chlorine
- Power consumption: approx. 5.5 - 6.5 kWh per kg of prepared chlorine.

**Applications**
- Water treatment in municipal waterworks and with independent water suppliers
- 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
OCD-164:
• Hypochloric acid/sodium chlorite method with diluted chemicals:
  HCl: 9 % by weight
  NaClO₂: 7.5 % by weight
• Capacity: 30-2000 g/h.
OCC-164:
• Hypochloric acid/sodium chlorite method with concentrated chemicals:
  HCl: 33 % by weight
  NaClO₂: 24.5 % by weight
• Capacity: max. 10 kg/h.
OCG-166:
• Chlorine gas/sodium chlorite method:
  NaClO₂: 24.5 % by weight
• Capacity: max. 10 kg/h.

Applications
• Water treatment in municipal waterworks, hotels, hospitals, retirement homes, sports facilities
• Prophylaxis of Legionella
• 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
• 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

Oxiperm Pro
Chlorine dioxide preparation and dosing systems

Technical data
OCD-162:
• Hypochloric acid/sodium chlorite method with diluted chemicals:
  HCl: 9 % by weight
  NaClO₂: 7.5 % by weight.
• Capacity: max. 60 g/h

Applications
• Water treatment in municipal waterworks, hotels, hospitals, retirement homes, sports facilities, shower facilities
• Combating and prophylaxis of Legionella
• 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
• Polydos: Two- or three-chamber installations for preparation and dosing of liquid organic flocculants out of dry or liquid materials.
• 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: 12-50 m³/h
ClO₂ capacity: 5-10 g/h
Pressure: max. 10 bar.

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

Features and benefits
• 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 IE2 energy-efficient motor minimises energy costs.

DTS
Dosing tank stations

Technical data
A DTS includes a tank and some installation material, and is prepared for one of the following dosing pumps: DDA, DDC, DDE, DDI 60-10 and DMX up to 50 l/h.

Components available for DTS:
• Mounting material for the dosing pumps: DDA, DDC, DDE, DDI 60-10 and DMX up to 50 l/h.
• Dosing tank up to 1000 l
• Electric agitator or hand mixer
• Collecting tray
• Suction line with flow switch for empty/pre-empty indication
• Multifunction 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.

CM, CME, CMV
Multistage centrifugal pumps

Technical data
Flow rate: max. 36 m³/h
Head: max. 130 m
Liquid temp.: -30 °C to +120 °C
Operat. pressure: max. 16 bar.

Applications
• Washing and cleaning
• Water treatment
• Temperature control
• Pressure boosting.

Features and benefits
• Compact design
• Modular design
• Very low noise level down to 50 dB(A).

Options
• Customised products
• Built-in or stand-alone
• Variable frequency drive.
CMBE

Frequency controlled booster systems

**Technical data**
- Flow rate: max. 7.6 m³/h
- Head: max. 50 m
- Liquid temp.: 0 °C to +60 °C
- Operat. pressure: max. 6 bar.

**Applications**
- Single-family houses
- Two-family houses
- Cluster homes
- Blocks of flats
- Schools
- Small hotels/guest houses
- Small office buildings.

**Features and benefits**
- Constant pressure via integrated speed control
- Compact
- Robust, stainless steel
- Easy installation
- Dry-running protection
- Low noise level, 55 dB(A).

CMB PM1, CMB PM2

Pressure manager booster system

**Technical data**
- Flow rate: max. 6.5 m³/h
- Head: max. 55.3 m
- Liquid temp.: 0 °C to +60 °C
- Operat. pressure: max. 10 bar.

**Applications**
- Single-family houses
- Two-family houses
- Cluster homes
- Blocks of flats
- Schools
- Small hotels/guest houses
- Small office buildings.

**Features and benefits**
- Cast iron or stainless versions
- Compact
- Easy installation
- Automatic resetting of alarms
- Dry-running protection
- Anti cycling (leakage detection)
- Maximum continuous operating time (CMB PM2 only).

RC

Canned motor refrigerant circulation pumps

**Technical data**
- Flow, Q: max. 8.8 m³/h
- Head, H: max. 55 m
- Liquid temp.: -55 °C to + 40 °C
- Operat. pressure: max. 52 bar g
- Refrigerants: R744 (CO₂), R717 (NH₃), HFCs

**Applications**
- Circulation of refrigerants in refrigeration systems
- Transport of refrigerants.

**Features and benefits**
- Designed and optimised for CO₂
- Low-energy consumption
- Easy integration into system
- Light weight and compact design.
CR, CRI, CRN
Multistage centrifugal pumps

Technical data
Flow rate: max. 180 m³/h
Head: 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
• Firefighting 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 LiqTec.

CRE, CRIE, CRNE
Multistage centrifugal pumps - electronically controlled

Technical data
Flow rate: max. 180 m³/h
Head: 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
• Firefighting 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 via Grundfos R100, MI 201, MI 202 and MI 301.

CR Monitor
Monitoring of pump efficiency, cavitation and performance

Technical data
Supported pumps CR, CRI, CRN, CRN MAGdrive
Motor range: 1.1 to 75 kW
Enclosure class: IP54.

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

Applications
• Pumps in demanding applications where zero downtime is required.
• Pumps exposed to extreme wear or clogging due to materials in the pumped liquid.
• 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.

Options
• 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 rate: max. 180 m³/h
- Head: 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 rate: max. 22 m³/h
- Head: max. 250 m
- Liquid temp.: -20 °C to +120 °C
- Operat. 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
  - irrigation in agriculture and horticulture
  - liquid transfer on farms with own well
  - 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 electro-plated 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 rate: max. 110 m³/h
Head: max. 75 m
Operat. temp.: +95 °C
(±150 °C on request)
Operat. pressure: max. 25 bar.

Applications
• Breweries and dairies
• Pure water systems (WFI) soft drinks
• Process pumping in pharmaceutical/ cosmetics industry
• CIP (Cleaning-In-Place) systems
• Biofuel application.

Features and benefits
• Unique hygienic design (QHD and EHEDG)
• 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.

F&B-HYGIA®
Single-stage, end-suction sanitary pumps

Technical data
Flow rate: max. 110 m³/h
Head: max. 73 m
Operat. temp.: +95 °C
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 (QHD and EHEDG)
• CIP- and SIP-capable (DIN EN 12462)
• Materials: AISI 316 (DIN EN 1.4404)
• Compact design.

Options
• Electronically speed-controlled versions
• Several mechanical shaft seal types
• Wide range of pipe connections
• With or without motor shroud.

Contra
Single- and multistage, end-suction sanitary pumps

Technical data
Flow rate: max. 55 m³/h
Head: max. 160 m
Operat. temp.: +95 °C
(±150 °C on request)
Operat. pressure: max. 25 bar.

Applications
• Breweries and dairies
• Food processing plants
• Pure water systems (WFI)
• CIP feeding systems
• Biofuel applications
• Process pumping in pharmaceutical/ cosmetic industry.

Features and benefits
• Unique hygienic design (QHD and EHEDG)
• CIP- and SIP-capable (DIN EN 12462)
• Materials: AISI 316L (DIN EN 1.4404/1.4435).

Options
• Electronically speed-controlled versions
• ATEX-certified pumps
• Fully drainable versions
• With or without motor shroud.
**Technical data**
- **Flow rate:** max. 6 m³/h
- **Head:** max. 75 m
- **Operat. temp.:** +90 °C
- **Operat. pressure:** max. 8 bar.

**Applications**
- Micro breweries and dairies
- Bottling systems
- Purification systems
- Drinking-water systems
- Industrial applications.

**Features and benefits**
- Unique hygienic design
- CIP-capable (DIN EN 12462)
- Materials: AISI 316 (DIN EN 1.4404)
- Compact design.

**Options**
- Wide range of pipe connections
- Various shaft seals
- With or without motor shroud.

---

**Technical data**
- **Flow rate:** max. 85 m³/h
- **Head:** max. 54 m
- **Operat. temp.:** +95 °C
  (+140 °C SIP)
- **Operat. pressure:** max. 10 bar.

**Applications**
- CIP return pumping
- Breweries and dairies
- Soft drinks
- Food processing systems.

**Features and benefits**
- High air-content handling
- Efficient priming
- Robust, service-friendly.

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

---

**Technical data**
- **Flow rate:** max. 820 m³/h
- **Head:** 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
- Chemical industries.

**Features and benefits**
- Optimised hydraulics
- Materials: AISI 316 (DIN EN 1.4404)
- Service-friendly.

**Options**
- Electronically speed-controlled versions
- ATEX-certified pumps
- Electro-polished versions.
NOVAlobe

Rotary-lobe, positive displacement pumps

Technical data
- Displacement: 0.06 - 1.29 l/rev.
- Max. diff. pressure: 16 bar
- Viscosity: max. 1,000,000 cP
- Operat. temp.: +95 °C
- Operat. pressure: up to 16 bar.

Applications
- Pumping of high-viscosity products, e.g. yoghurt, mayonnaise and shampoo
- Breweries and dairies
- Pumping of products requiring gentle handling, e.g. cheese curds, yeast and vaccine/fermentation broth.

Features and benefits
- Unique hygienic design (EHEDG and 3A)
- Robust construction
- Service-friendly
- CIP- and SIP-capable (DIN EN 12462)

Options
- Integrated pressure-relief valve
- Thermal jackets
- Aseptic front cover
- Vertical or horizontal connections.

Hydro MPC

Turnkey booster system with CR(l)(E) pumps for transfer and pressure boosting of water

Technical data
- Flow rate: max. 1080 m³/h
- Head: max. 155 m
- Liquid temp.: 0 °C to +60 °C
- Operat. pressure: max. 16 bar.

Applications
- Water supply systems
- Irrigation systems
- Industrial plants
- Commercial buildings.

Features and benefits
- 2-6 pumps in cascade
- Easy installation and start-up
- Large user-friendly display
- Energy-optimised control
- Data communication
- Perfect constant pressure
- Application-optimised software.

Hydro Multi-E

Turnkey booster system with CRE or CME pumps for pressure boosting of water in buildings

Technical data
- Flow rate: max. 80 m³/h
- Head: max. 166 m
- Liquid temp.: 0 °C to +60 °C
- Operat. pressure: max. 16/10 bar.

Applications
- Blocks of flats
- Hotels
- Hospitals
- Schools
- Office buildings.

Features and benefits
- 2-3 pumps in cascade
- Plug-and-pump solution
- Easy to control
- Low energy consumption
- Perfect constant pressure.
Hydro Multi-S

Fixed-speed booster system with CR, CM or CMV pumps

Technical data
- Flow rate: max. 70 m³/h
- Head: max. 103 m
- Liquid temp.: 0 °C to +60 °C
- Operat. pressure: max. 16 bar.

Applications
- Irrigation
- Blocks of flats
- Hotels
- Schools.

Features and benefits
- 2-3 pumps in cascade
- Plug-and-pump solution
- Simple and robust design
- Easy to service and maintain.

Hydro Multi-B

Turnkey booster system with CM(E) pumps for pressure boosting of water in buildings

Technical data
- Flow rate: max. 108 m³/h
- Head: max. 125 m
- Liquid temp.: 0 °C to +60 °C
- Operat. pressure: max. 16 bar.

Applications
- Blocks of flats
- Hotels
- Hospitals
- Schools
- Office buildings.

Features and benefits
- 2-3 pumps in cascade
- Plug-and-pump solution
- Simple interface for control
- Energy-optimised control
- Data communication
- Perfect constant pressure
- Small footprint.

Hydro Solo-E

Turnkey booster system with CRE pumps for pressure boosting of water in buildings

Technical data
- Flow rate: max. 55 m³/h
- Head: max. 100 m
- Liquid temp.: 0 °C to +70 °C
- Operat. pressure: max. 10 bar.

Applications
- Single-family houses
- Cottages
- Farms
- Process water
- Irrigation.

Features and benefits
- Plug-and-pump solution
- Easy to control
- Low energy consumption
- Perfect constant pressure

Options
- Wireless remote control via Grundfos R100, MI 201, MI 202 and MI 301.

LENNTech
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### Hydro Solo-S

**Turnkey booster system with CR pumps for pressure boosting of water in buildings**

<table>
<thead>
<tr>
<th><strong>Technical data</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate:</td>
<td>max. 8.5 m³/h</td>
</tr>
<tr>
<td>Head:</td>
<td>max. 105 m</td>
</tr>
<tr>
<td>Liquid temp.:</td>
<td>0 °C to +70 °C</td>
</tr>
<tr>
<td>Operat. pressure:</td>
<td>max. 10 bar</td>
</tr>
</tbody>
</table>

**Applications**
- Single-family houses
- Cottages
- Farms
- Pressure boosting in systems for process water and irrigation.

**Features and benefits**
- Plug and pump solution
- Easy to control
- Low energy consumption
- Perfect constant pressure.

### BMP

**Piston pumps for liquid transfer under high pressure**

<table>
<thead>
<tr>
<th><strong>Technical data</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate:</td>
<td>max. 10.2 m³/h</td>
</tr>
<tr>
<td>Head:</td>
<td>max. 1630 m</td>
</tr>
<tr>
<td>Liquid temp.:</td>
<td>3 °C to +50 °C</td>
</tr>
<tr>
<td>Operat. pressure:</td>
<td>max. 160 bar</td>
</tr>
</tbody>
</table>

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

**Features and benefits**
- High efficiency
- Small, light-weight 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
- Compact design.

### BM, BMB

**4", 6", 8" booster modules**

<table>
<thead>
<tr>
<th><strong>Technical data</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate:</td>
<td>max. 260 m³/h</td>
</tr>
<tr>
<td>Head:</td>
<td>max. 430 m</td>
</tr>
<tr>
<td>Liquid temp.:</td>
<td>0 °C to +40 °C</td>
</tr>
<tr>
<td>Operat. pressure:</td>
<td>max. 80 bar</td>
</tr>
</tbody>
</table>

**Applications**
- Reverse osmosis systems
- Water supply systems
- Water treatment systems
- Industrial plants.

**Features and benefits**
- Various material versions
- Low noise level
- Simple installation
- Modular design
- Compact design
- Leakage-free
- In-line.
BME, BMET
High-pressure booster systems

Technical data
- Flow rate: max. 95 m³/h
- Head: max. 700 m
- Liquid temp.: 0 °C to +40 °C
- Operat. pressure: max. 70 bar.

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

Features and benefits
- High pressure, high flow rate
- Low energy consumption
- 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: max. 810 m
- Ambient temp.: +40 °C
- Operat. pressure: max. 80 bar.

Applications
- Desalination of brackish water and seawater.

Features and benefits
- 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 rate: max. 9 m³/h
- Head: max. 210 m
- Liquid temp.: 0 °C to +40 °C
- Installation 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.
**Technical data**

**Flow rate:** max. 470 m³/h  
**Head:** max. 670 m  
**Liquid temp.:** 0 °C to +60 °C  
**Installation depth:** max. 600 m.

**Applications**
- Groundwater supply to waterworks
- Irrigation in horticulture and agriculture
- 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**
- Wireless remote control via Grundfos R100, MI 201, MI 202 and MI 301.

---

**Technical data**

**Flow rate:** max. 22 m³/h  
**Head:** max. 215 m  
**Liquid temp.:** 0 °C to +40 °C  
**Installation depth:** max. 600 m.

**Applications**
- Pumping contaminated groundwater
- Sampling
- Remedial pumping.

**Features and benefits**
- SQE-NE: as SQE
- SP-NE: as SP.

---

**Technical data**

**Flow rate:** max. 2.4 m³/h  
**Head:** max. 95 m  
**Liquid temp.:** 0 °C to +35 °C.

**Applications**
- Sampling.

**Features and benefits**
- Compact design
- Fit into 50 mm boreholes.

---

**SP A, SP, SP-G**  
4", 6", 8", 10", 12" submersible pumps

**SQE-NE, SP-NE**  
Remediation and sampling pumps

**MP 1**  
Monitoring and sampling pumps
Renewable-energy based water supply systems

SQFlex

Technical data
Flow rate: max. 90 m³/day
Head: max. 200 m
Liquid temp.: 0 °C to +40 °C.
Supply voltage: 30-300 VDC or 1 x 90-240 V, 50/60 Hz
Installation depth: max. 150 m.

Applications
• Villages, schools, hospitals, single-family houses
• 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

Technical data
Flow rate: max. 6.5 m³/h
Head: max. 48 m
Liquid temp.: 0 °C to +55 °C
Operat. 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.

Options
• Automatic start/stop when equipped with Grundfos Pressure manager.
• Booster systems for small-scale water supply.

JP Rain

Technical data
Flow rate: max. 5.4 m³/h
Head: max. 42 m
Suction depth: max. 9 m
Liquid temp.: 0 °C to +35 °C
Operat. pressure: max. 6 bar.

Applications
• Gardens
• Hobby activities
• Agriculture
• Horticulture.

Features and benefits
• Self-priming
• Strong suction capacity
• Handles small sandy impurities with ease
• Built-in thermal protection.

Options
• Automatic start/stop when equipped with Grundfos Pressure manager.
• Booster systems for small-scale water supply.
**MQ**

Multistage centrifugal self-priming pumps

**Technical data**
- Flow rate: max. 5 m³/h
- Head: 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 booster unit
- Easy to install
- Easy to operate
- Self-priming
- Dry-running protection with automatic reset
- Low noise level
- Maintenance-free.

**RMQ**

Units for monitoring and control of rainwater collection and utilisation systems

**Technical data**
- Flow rate: max. 5 m³/h
- Head: 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
- 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.

**Options**
- Control of additional booster pump
- Backflow monitoring equipment.

**Unilift, KP Basic**

Submersible drainage and effluent pumps

**Technical data**
- Flow rate: max. 31 m³/h
- Head: max. 17 m
- Liquid temp.: 0 °C to +55 °C
- Installation depth: max. 10 m.

**Applications**
- Drainage of flooded cellars
- Pumping of domestic wastewater
- Groundwater lowering
- Emptying of swimming pools and excavations
- Emptying 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 auto-coupling and horizontal outlet.
**GRUNDFOS**

**Contractor pumps**

**DW**

**Technical data**
- Flow rate: max. 300 m³/h
- Head: max. 100 m
- Liquid temp.: 0 °C to +40 °C

**Applications**
- Tunnels
- Mines
- Quarries
- Gravel pits
- Fish ponds
- Building sites.

**Features and benefits**
- Corrosion resistant due to use of aluminum and stainless steel parts
- Extremely hard-wearing due to specially selected materials
- Simple installation
- Service-friendly
- Protection against abrasive particles
- Plug and pump (no special equipment required)
- Motor protection for longer life.

**Heavy-duty dewatering pumps**

**DWK**

**Technical data**
- Flow rate: max. 432 m³/h
- Head: max. 102 m
- Liquid temp.: 0 °C to +40 °C
- Installation depth: max. 25 m.

**Applications**
- Dewatering
  - Construction sites
  - Excavation sites
  - Tunnels
  - Mines.
- Draining
  - Underground building pits
  - Industrial pits
  - Stormwater pits.

**Features and benefits**
- Durability
- Ductile/high-chrome impeller
- Easy to operate
- High efficiency
- Compact design
- High-pressure capabilities.

**Submersible drainage pumps**

**DPK**

**Technical data**
- Flow rate: max. 155 m³/h
- Head: max. 51 m
- Liquid temp.: 0 °C to +40 °C
- Installation depth: max. 25 m.

**Applications**
- Draining
  - Underground building pits
  - Industrial pits
  - Stormwater pits.

**Features and benefits**
- High-pressure capabilities
- Flexible installation
- Easy to service and maintain.

**Options**
- Different discharge connections
- Auto-coupling system
- Monitoring unit.

**LENNTECH**

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www.lenntech.com
Pomona
Portable, self-priming pumps for temporary or permanent installation

Technical data
- Flow rate: max. 130 m³/h
- Head: max. 31 m
- Liquid temp.: 0 °C to +80 °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
- Industrial applications.

Features and benefits
- Robust and compact design
- Motor variation (electrical or internal combustion engines)
- Insensitive to impurities
- Wear-resistant
- Handling solid sizes up to 30 mm.

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
Drainage and effluent pumps

Technical data
- Flow rate: max. 12.8 l/s
- Head: max. 46 m³/h
- Liquid temp.: 0 °C to +40 °C
- Discharge dia.: Rp 2 to DN 65.

Applications
- Drainage
- Effluent
- Wastewater
- Process water.

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
- AUTOADAPT functions.

SEG
Grinder pumps

Technical data
- Flow rate: max. 5 l/s
- Head: max. 47 m
- Liquid temp.: 0 °C to +40 °C.

Applications
- Pumping of wastewater with toilet waste through pipes of ∅ 40 and up.

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.

Options
- Wide range of accessories
- Monitoring and control of one or several pumps
- AUTOADAPT functions.
S pumps
Supervortex pumps, single- or multichannel impeller pumps

Technical data
- Flow rate: max. 2500 l/s
- Head: max. 116 m
- Liquid temp.: 0 °C to +40 °C
- Discharge dia.: DN 80 to DN 800
- Particle size: max. 145.

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

Features and benefits
- 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
- Various cast stainless-steel versions available.

Technical data
- Diameter: Ø 400, Ø 600, Ø 800 and Ø 1000
- Depth: from 0.5 - 3.0 m
- Outlet pipe size: DN 40, DN 50 and DN 65
- Liquid temp.: max. 40 °C
- Made of PEHD, pipes and valves made of PE or stainless steel.

Applications
- Drainage
- Effluent/rainwater/surface water
- Wastewater.

Features and benefits
- Modular flexibility
- Corrosion-free materials
- Increased sump volume prevents push-up
- Easy installation
- Sturdy design
- Inlet holes drilled on site
- Design of sump limits sludge and odour problems.

Options
- Pumps
- Controls and communication
- Valve chambers
- Launcher for cleaning pig
- Flowmeter
- Inlet seals
- Drills for inlet seals
- Frost protection
- Ventilation package
- Covers for heavy traffic load.

PUST
Small pumping stations

Technical data
- Liquid temp.: +5 °C to +40 °C
- pH value: 4-10
- Axial thrust: 160-6632 N
- Max. dyn. viscosity: 500 mPa s
- Max. density: 1060 kg/m³
- Max. instal. depth: 20 m
- Propeller diameter: 180-2600 mm
- Rotation speed: 22-400 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.

AMD, AMG, AFG
Mixers and flowmakers

Technical data
- Liquid temp.: +5 °C to +40 °C
- pH value: 4-10
- Axial thrust: 160-6632 N
- Max. dyn. viscosity: 500 mPa s
- Max. density: 1060 kg/m³
- Max. instal. depth: 20 m
- Propeller diameter: 180-2600 mm
- Rotation speed: 22-400 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
Submersible recirculation pumps

Technical data
Flow rate: max. 1430 l/s (5130 m³/h)
Head: max. 2.1 m
Liquid temp.: 5 °C to +40 °C
Discharge dia.: DN 300, DN 500, 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 rate: max. 215 l/s (774 m³/h)
Head: max. 50 m
Liquid temp.: 0 °C to +40 °C
Discharge dia.: 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
• Motor control
• Built-in sensors for pump monitoring
• Various cast stainless-steel versions available
• Ideal for pumping stations.

SL1/SLV and SE1/SEV
Heavy-duty submersible pumps

Technical data
Flow rate: max. 270 l/s (1080 m³/h)
Head: max. 70 m
Free passage: 50 mm to 160 mm
pH range: pH 0 to 14
Discharge dia.: DN 65 to DN 300.

Applications
• Drainage water and surface water
• Domestic and municipal wastewater
• Industrial wastewater
• Process and cooling water.

Features and benefits
• Service friendly (smart design)
• Reliable and energy efficient (Grundfos Blueflux®)
• Intelligent solution (AUTOADAPT)
• S-tube or SuperVortex impellers.

Options
• Control and protection systems
• Motor control
• Built-in sensors for pump monitoring
• Various cast stainless-steel versions available
• Ideal for pumping stations.
CU 100
Small pump control units

Technical data
Supply voltage: 1 x 230, 3 x 230 and 3 x 400 V, 50 Hz.

Applications
The control unit CU 100 is designed for the starting, operation and protection of small pumps. The control unit is suitable for the following operating currents:
• Single-phase: up to 9 A.
• Three-phase: up to 5 A.

Features and benefits
• Control of one pump
• Start/stop by means of a float switch or manual start/stop.
• Several variants for single- and three-phase pumps
• Single-phase control units are supplied with capacitors and with or without float switch.
• Three-phase control units are supplied with a float switch
• IP54 cabinet with screwed metric cable entries.

LC, LCD
Pump controllers with pneumatic signal, float switch or electrodes

Technical data
Supply voltage: 1 x 230, 3 x 230, 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.

Dedicated controls
Pump controllers

Technical data
Supply voltage: 1 x 230, 3 x 230, 3 x 400 V, 50/60 Hz.

Applications
Dedicated controls are suitable in wastewater applications for emptying wastewater pits (up to six pumps).
• Pressurised pumping stations
• Network pumping stations
• Commercial buildings.

Features and benefits
• Automatic energy optimization
• Easy installation and configuration
• Configuration wizard
• Electrical overview
• Advanced data communication
• Advanced alarm and warning priority
• Supports several languages
• Daily emptying
• Mixer control or flush valve
• User-defined functions
• Anti-blocking
• Start level variation
• Advanced pump alternation with pump groups
• SMS scheduling
• Communication to SCADA, BMS, GRM or cell phone.

Optional
• Available as ready-made control panels or as modules for local assembly.
Technical data
Flow rate: max. 60 l/s (216 m³/h), recommended 31 l/s (110 m³/h)
Head: max. 29 m
Liquid temp.: 0 °C to +40 °C
Discharge dia.: DN 80 to DN 100.

Applications
• Single- and multifamily houses
• Weekend cottages
• Restaurants
• Hotels
• Sewage systems in the open country
• Percolation systems.

Features and benefits
• Ready for installation
• Flexible pipe connection
• Cable plug connection
• 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.

Applications
WC-1, WC-3 and CWC-3
• Designed for toilets, CWC-3 for wall-hung toilets, for easy integration into the wall.
C-3
• Designed for grey wastewater from washing machines or dishwashers.
D-2
• Compact design for grey wastewater from washing machines, dishwashers etc.

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

Features and benefits
• Compact and slim design with smooth line and rounded edges - fits every modern bathroom environment
• Low noise level
• Flexible discharge pipe adapters for outer pipe diameters of ø 22, ø 25, ø 28, ø 32, ø 36 and ø 40
• Thermal overload switch
• Easy service
• Easy connection of extra sanitary appliances.

Applications
• Collection of drainage and surface water
• 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.
Conlift
Condensate lifting stations

**Technical data**
- Flow rate: max. 588 l/h
- Head: max. 5.7 m
- Liquid temp.: max. 50 °C, (90 °C for 5 minutes)
- pH: min. 2.5
- Tank volume: 2.65 l
- Effective volume: 0.9 l.

**Applications**
Conlift is designed for the pumping of condensate from the following:
- Boilers
- Air-conditioning systems
- Cooling and refrigeration systems
- Air dehumidifiers
- Evaporators.

**Features and benefits**
- Fully sealed against moisture and evaporation
- Very silent and smooth operation
- Neutralisation unit with granulate for pH values below 2.5
- Selectable position of neutralisation unit
- Acoustic high-water alarm device
- Boiler source off.

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SPO
Water supply pumps approved for drinking water

**Technical data**
- Flow rate: max. 6 m³/h
- Head: max. 75 m
- Liquid temp.: 0 °C to +40 °C
- Installation depth: max. 20 m below water level
- Operat. pressure: max. 10 bar.

**Applications**
- Private homes and week-end cottages
- Conventional 6" boreholes
- Shallow wells
- Rainwater collection in tanks
- Boosting of public water
- Emptying of garden ponds.

**Features and benefits**
- Noiseless operation
- High reliability
- Dry-running protection
- Motor overload protection.

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SB
Submersible pumps for rain water applications

**Technical data**
- Flow, Q: max. 6.6 m³/h
- Head, H: max. 43.3 m
- Liquid temp.: 5 °C to +40 °C.

**Applications**
- Rain water applications

**Features and benefits**
- Noiseless operation
- High reliability
- Dry-running protection
- Motor overload protection.

**Options**
- Floating suction strainer model available.
SBA
Submersible fully automatic pump solution for rainwater applications

Technical data
Flow, Q: max. 6.6 m³/h
Head, H: max. 43.3 m
Liquid temp.: 0 °C to + 40 °C

Applications
• Rainwater applications
• Private wells.

Features and benefits
• Simplicity - all-in-one unit
• Easy installation - no external control unit
• Noiseless operation
• High reliability
• Integrated dry-running protection
• Motor overload protection
• Automatic start/stop
• Lifting eye.

Options
• Floating suction strainer model available
• Float switch.

MS
Stainless-steel 4" and 6" submersible motors

Technical data
Motor sizes
4": 0.37 - 7.5 kW
6": 5.5 - 30 kW.

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

Features and benefits
• Overtemperature protection by means of a built-in Tempcon temperature transmitter
• Standardised NEMA flange and shaft end
• Completely encapsulated in stainless steel
• Canned type submersible motor, all surfaces in contact with the liquid are made of stainless steel
• Liquid-cooled and has liquid-lubricated bearings.

Options
• Material variants.

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

Technical data
Motor sizes
6": 3.7 - 37 kW
8": 22 - 110 kW
10": 75 - 190 kW
12": 147 - 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 rewound
• Protection against upthrust
• High efficiency
• 6" and 8" have standardised NEMA flange and shaft end
• Mechanical shaft seal, ceramic/carbon or SiC/SiC
• PVC or PE/PA windings.

Options
• Material variants
• Overtemperature protection via Pt100/Pt1000.
LiQ Tec

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 three-phase pumps

Technical data
- Mains voltage:
  1 x 200-240 V
  2 x 200-240 V
  3 x 380-500 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.

Features and benefits
- 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.

Options
- Connection to large control systems via bus communication
- Connection of sensors enabling control based on sensor signals.
- Wireless remote control via Grundfos R100, MI 201, MI 202 and MI 301.
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
• Booster systems
• Industrial processes
• Water supply systems.

The Control MPC is designed for these pump types:
• CR(E), CRI(E), 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.
• Supply voltage: 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 323 / 352 / 361; for other products, use the CIU box with internal power supply.

Applications
The following product ranges are supported:
• MAGNA/UPE series
• CRE/CRIE/CRNIE, MTRE, CME, NBE/NKE, TPE Series 1000/2000, CUE
• Hydro MPC / Control MPC / Multi-E / Multi-B *
• CR Monitor *
• MP 204 *
• Dedicated Controls *
• SEG AUTOADAPT *
• DDA Dosing *.

* = Not supported by all CIM/CIU types.

Features
• Available with GENIbus, BACnet MS/TP, LON, Modbus RTU, PROFIBUS DP, COMLI and GSM/GPRS
• Modular design
• Based on standard functional profiles.
Grundfos GO Remote
Remote control application for use with the Grundfos MI 201, MI 202 and MI 301

Technical data
Grundfos MI 201 for iPod (iPod included)
Grundfos MI 202 for iPod and iPhone
Grundfos MI 301 for Android.
Pump communication: IR and radio.

Applications
The following Grundfos product types are supported:
- MAGNA
- UPE
- CRE, CRIE, CRNE, CME
- MTRE, SPKE, CRKE
- TPE, TPED
- NBE, NKE
- Hydro Multi-E
- SEG (AUTOADAPT)
- CU300
- CU301
- IQ351
- MP204
- CU3.

Features and benefits
- Intuitive user interface with context related help
- Product dashboard for quick overview
- Quick pump setup, monitoring and fault finding
- Installation report in PDF format
- Product info from Grundfos CAPS
- Find replacement pump
- Product catalogue.

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R100
Wireless remote control

Applications
All pumps designed for wireless communication.

Features and benefits
- Simple and quick setting of the pump
- Reading of various operating and fault signals
- Printing of status information.

R100
Wireless remote control

Applications
All pumps designed for wireless communication.

Features and benefits
- Simple and quick setting of the pump
- Reading of various operating and fault signals
- Printing 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
Operat. temp.: 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/min in 42 % glycol mixture with stainless-steel flow pipe and insert
- Suitable for wet, aggressive liquids
- 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

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
Operat. temp.: 0 °C to +100 °C
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 one
• Differential pressure sensor in high resolution version
• Suitable for wet, aggressive liquids
• Ratiometric output for Dedicated Controls
• Wide range of accessories
• Approved for drinking water.

Options
• SI 010 CNV power supply and signal converter 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 media in industry

Technical data
Pressure range: 0-10 bar
Power supply: 12-30 V DC
Output signal: 4-20 mA
Operat. temp.: -10 °C to +70 °C
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 liquids
• Wide range of accessories.

Options
• Upgrade package for TP1000
• Power supply SI 001 PSU for cable lengths > 30 m.

Pressure manager

For automatic start/stop of pumps

Technical data
Max. operat. pres.: 10 bar
Liquid temp.: 5 °C to + 40 °C
(up to 60 °C if VDE approval is not required *).

Applications
PM 1 and PM 2 pressure managers are designed for automatic start/stop control of Grundfos pumps and other water supply pumps
• Single-family houses
• Blocks of flats
• Summer houses and holiday cottages
• Horticulture and gardening
• Agriculture
• Rain water applications.

Features and benefits
• User-friendly interface
• Free position in installation
• Flexible power supply
• Incorporates functions which protect the pump.
**Pressure tanks**

Diaphragm and bladder tanks

**Technical data**
- Tank size: 8-5000 l
- Liquid temp.: max. +90 °C
- Operat. pressure: max. 16 bar.

**Applications**
- Water supply systems in housing
- Booster systems in housing
- Agriculture
- Horticulture
- Industrial systems.

**Features and benefits**
- Optimal water supply
- Reduced number of pump starts
- Ideal for drinking water.

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**GT-HR**

Diaphragm-type expansion tank

**Technical data**
- Tank size: 8-1000 l
- Liquid temp.: max. +90 °C
- Operat. pressure: max. 6 bar.

**Applications**
- Domestic-heating and chilled-water system
- Commercial-building heating and chilled-water systems
- Industrial-heating and chilled-water system.