# OPTIMIZED INDUSTRIAL SOLUTIONS

Pumps and systems for today's process and utility water challenges



# OPTIMIZED SOLUTIONS FOR THE ENTIRE INDUSTRIAL PLANT

Grundfos and its legacy brands provide a comprehensive range of optimized industrial solutions for the North American process and utility market. From water supply and wastewater treatment to boiler, cooling and thermal control, washing and cleaning, fire and water treatment, Grundfos is a full -line supplier of reliable products and robust service offerings for each process application; included, but not limited to food and beverage, oil and gas, power, chemicals and mining.











Grundfos has served the North American market for more than 40 years, flourishing from one small factory in Fresno, Calif., to 17 manufacturing, logistics, sales and service facilities throughout the region. Today Grundfos provides comprehensive, cross-continental coverage through a number of marquee product brands, some with roots going back a century or more. Together, Grundfos, PACO, Peerless Pump, LaBour Taber and YCC provide a complete portfolio of products for the North American industry market.



#### **PROCESS** APPLICATIONS

Including, but not limited to:
Food & beverage
Pharmaceutical
General Industry
Oil & gas

- PowerChemicals
- Mining

- Products:
  Single-stage pumps
  Vertical sump pumps
  Dosing pumps
  Controls & monitoring
  Multistage pumps
  Pump systems

**GENERAL** APPLICATIONS

- Utility Water:

   Boiler

   Cooling & Thermal

   Washing & Cleaning

   Water Treatment

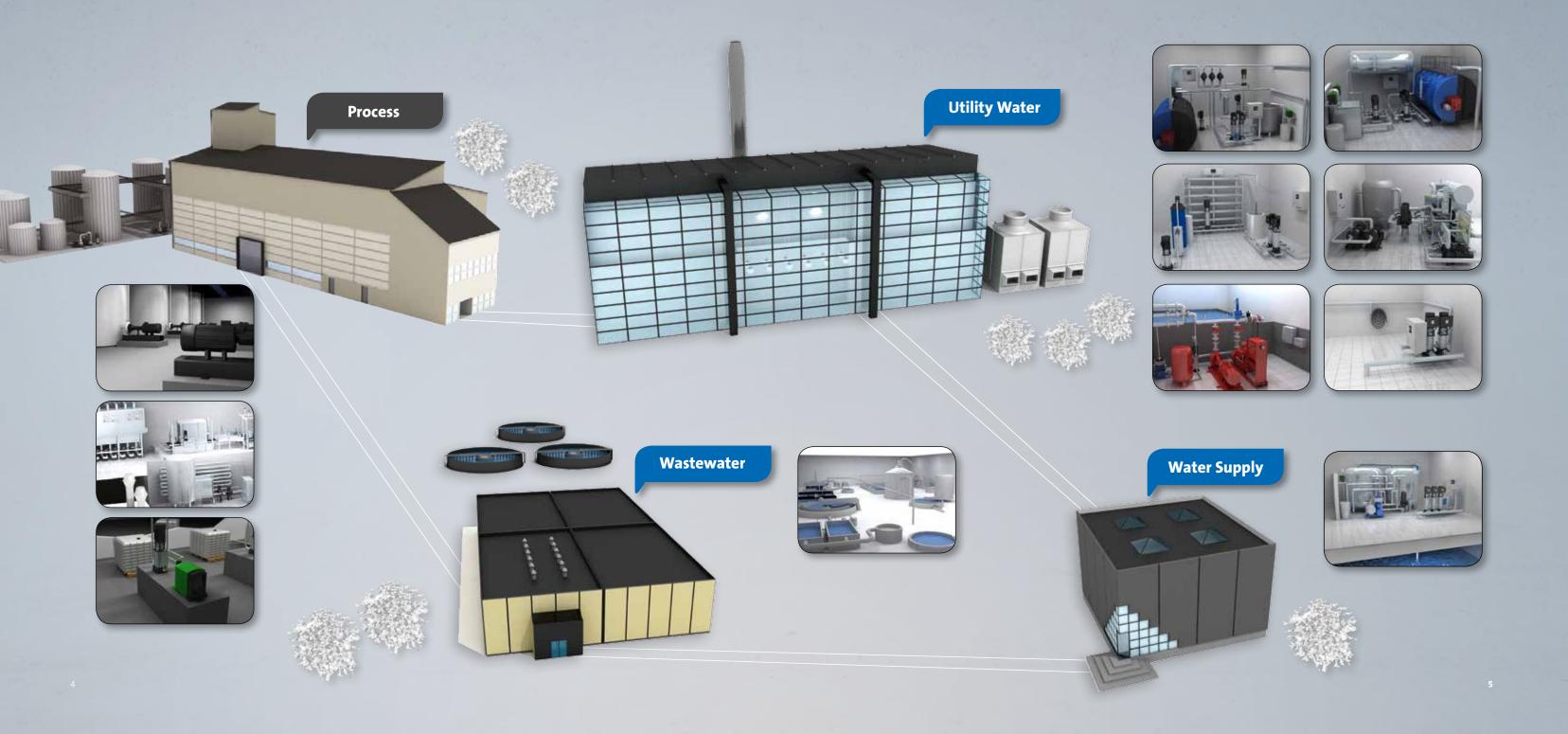
- Utility Products:
  Single-stage pumps
  Wastewater pumps
  Multistage pumps
  Dosing & disinfection
  Controls & monitoring
  Fire systems
  Pump systems

Wastewater:
• Transport
• Treatment

- Single-stage pumps
   Multistage pumps
   Dosing & disinfection
   Controls & monitoring
- Pump systems

Water Supply:
• Treatment
• Reuse

Water Supply Products:
• Submersible pumps
• Single-stage pumps
• Multistage pumps
• Dosing & disinfection
• Controls & monitoring



# **PROCESS PUMPS**

Thanks to decades of experience, Grundfos fulfills every pumping requirement and exceeds demands for compact design or energy efficiency. Whether you are dealing with corrosive, toxic or abrasive process liquids, Grundfos provides a dedicated solution that will keep production running smoothly day in and day out.







#### **PROCESS PUMPS - ANSI**

#### - PEERLESS 8196, LABOUR LVA, LABOUR TFA, CR(N)-H

These ANSI pumps are manufactured for a wide range of flow and head requirements and meet the latest ASME and ANSI B73.1M specifications. The 8196 and LVA Series combines high efficiency, maximum performance, lower vibration and shaft deflection resulting in extended MTBF (mean time between failures) for reduced maintenance cost. The TFA goes one step further with its triple volute design which balances radial loads better than conventional single or dual volute designs. This results in longer bearing and seal life at both the design and low flows, saving you money on replacement parts and maintenance. The Grundfos CR-H offers the efficiency and streamlined design of a Grundfos vertical multi-stage in a horizontal format that directly drops into ANSI connections. In specific applications the CR-H can provide improved efficiencies, ease of service, and even decreased motor sizing without requiring pipe changes.

- Design: Increased Air Handling through self-venting, preventing vapor lock; Integral back pump out vanes reduce stuffing box pressure, Impeller is an open design significantly reducing clogging and shear,
- Efficiency: Two heavy duty, back-to-back mounted, 7300 series, angular contact bearings, providing an industry leading L10 life in excess of 100,000 hours. Largest shaft diameter (D) and shortest impeller overhang (L), resulting in the lowest "Shaft Flexibility Factor (L3/D4)" in the industry; Flinger type lubrication system results in cooler running bearings
- · High reliability: Significantly increased MTBF, reduced down time and maintenance costs

#### **TECHNICAL DATA**

- Motor size: Up to 300 hp (224 kW)
- Flow (Q): Max. 5500 gpm (1022 m<sup>3</sup>/hr)
- Head (H): Max. 730 feet (222 meters)
- Liquid temp.: -50 to 500 °F (to 260°C)
- Operating pressure: Max. 375 psi (2586 kPa)

#### **PROCESS PUMPS**

#### - TABER VERTICAL

Heavy construction and rugged advanced design techniques throughout insure high performance and long, trouble-free service life. Vertical pumps are self-priming and self-venting. Hazards of bottom tank openings are eliminated. Space is conserved. Fugitive emissions are effectively controlled with various options and accessories.

- Rugged vertical design: Rugged construction provides long MTBPM and long
- Impeller adjustment above support rate: Allows for impeller adjustment with pump installed, reducing maintenance and adjustment time
- Long sleeve bearings: Offers better support of the shaft, less shaft deflection, and longer bearing life
- Oversized shaft diameters: Large shaft diameter minimizes deflection, provides longer MTBPM and better shaft/bearing stability
- Heavy duty support plates: Thicker support plates offer a longer service life due to more stiffness and vibration damping effect

- Motor size: Up to 200 hp (149 kW)
- Flow (Q): Max. 4,000 gpm (909 m<sup>3</sup>/hr)
- Head (H): Max. 600 feet (183 meters)
- Liquid temp.: 2,000°F (to 1,094°C)



# MULTI-STAGE CENTRIFUGAL PUMPS AND SYSTEMS

For applications that require high head relative to flow, Grundfos supplies a versatile and reliable range of multi-stage pumps tailored to meet your requirements. These pumps, which include the CR, VT and CM, allow for custom-engineered construction while ensuring maximum value, high efficiency and long-term pump performance.









#### **MULTI- STAGE CENTRIFUGAL PUMPS**

#### -CR/CRE

Grundfos was the first pump manufacturer ever to create a horizontal multi-stage in-line pump. The CR is available in 13 hydraulic sizes, four basic materials and over one million configurations.

#### **BENEFITS**

- Reduced footprint
- Service friendly
- High reliability: Reduced downtime and low maintenance costs

#### TECHNICAL DATA

- Flow, Q: max. 792 gpm
- Head, H: max. 995 ft
- Liquid temp.: 22°F to +248°F
- Working press.: max. 435 psi

#### MULTI-STAGE CENTRIFUGAL PUMPS

#### -CM/CME

The Grundfos CM/CME pump is a compact horizontal multi-stage close-coupled pump that is reliable and quiet designed for a variety of applications. CM pumps are fitted with mains-operated motors, and the CME has an integrated VFD.

#### BENEFITS

- Mechanical O-ring shaft seal: Reduced sticking problems
- Design: Dimensional advantages through advanced processes and technologies
- Single pump model: Wide range/multiple applications
- High reliability: Reduced downtime and low maintenance costs

#### **TECHNICAL DATA**

- Flow, Q: max. 154 gpm
- Head, H: max. 425 ft
- Liquid temp.: -4°F to +248°F
- Working press.: max. 145 psi

#### **VERTICAL TURBINE**

#### PEERLESS VTP

Offered in a wide range of hydraulic and mechanical coverage; and numerous material and design configuration. These configuration options allow for customengineered construction tailored for your requirements while ensuring maximum value, high efficiency and long term pump performance.

#### **BENEFITS**

- Efficiency: Peerless Pump pioneered and patented the 'double seal' lateral seal feature to provide increased pump efficiency and extended pump life with focus on the critical surfaces between bowls and impellers
- Design: Only manufacturer offering dual bowl bearings to provide extended pump life, utilizing rubber and bronze bearings to effectively protect shaft and impellers against wear
- Certification: Potable water NSF 372 certified materials

- Flow rate (Q): Up to 150,000 gpm (34,069 m³/h)
- Head: Up to 2,500 ft. (762 m)
- Horsepower: Up to 5,000 hp (3,428.5 kW)
- Temperature: Up to 180°F (82°C)



# SINGLE-STAGE STANDARD PUMPS

The Grundfos portfolio includes PACO and Peerless-brand pumps, reliable and cost-efficient products that expand our coverage of the Industrial Water Utility and Process Market. Available in vertical and horizontal configurations, these single-stage standard pumps are used for raw water or water supply applications that require low head relative to flow.



#### SINGLE-STAGE SPLIT CASE

#### - PEERLESS AE

The single stage, double suction, horizontal split case pump comes in forty-two different hydraulic configurations and twenty-five pump sizes. Discharge sizes range from two to ten inches. The AE has a wide selection of hydraulic performance envelopes, multiple mechanical configurations and several material options.

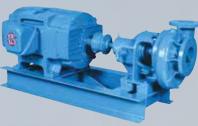
#### **BENEFITS**

- Single pump model: Wide range/multiple applications
- High reliability and performance: Reduced downtime and low maintenance costs
- Design: Parts are aligned and balanced for vibration free performance

#### **TECHNICAL DATA**

- Motor size: Up to 550 hp (410 kW)
- Flow (Q): Over 8,000 gpm (1817 m<sup>3</sup>/hr)
- Head (H): Up to 675 feet (206 meters)
- Liquid temp.: Up to 250°F (121°C)
- Operating pressure: Up to 510 psi (35 kg/cm2; 3,514 kPa)





## SINGLE-STAGE END SUCTION – PACO LC/LF

The PACO line of frame mounted or close-coupled end suction, single-stage pumps serves as the industry standard in performance, quality, and durability. With an expanded selection of 32 sizes, the advanced features ensure optimum performance and reliability. These features, as well as optional features that meet specialized needs, are available on the broadest line of high-efficiency pumps offered to the industry.

#### **BENEFITS**

- Innovative pump and impeller design: Double volute design, Increased efficiency, lower life cycle costs, Lead-Free Bronze Construction
- Compact construction and space savings
- Mechanical and back pull out design: Less downtime, ease of maintenance and service

- Flow, Q: max 6,000 gpm
- Head, H: max 400 feet
- Fluid temp.: max 275° F
- HP range: 1/3 to 300 hp
- Discharge sizes: 1" to 10"



#### SINGLE-STAGE END SUCTION

#### - PEERLESS F/C

The F series is a general purpose, frame mounted end suction type pump flexibly coupled to drivers and equipped with coupling guards. Each unit can be mounted on a steel base with an optional drip pan. The F Series delivers variety, durability, standardized options and configurations unequalled in the industry.

The C series are close coupled with standard C-face JM or JP solid shaft ball bearing motors specifically designed for pump applications in accordance with standards developed by the Hydraulic Institute (HI) and the National Electrical Manufacturers Association (NEMA).

#### **BENEFITS**

- Reliability: Pump casing fitted with bronze/steel replaceable wear ring
- Operation: Motor bearings are grease lubricated for L10 basic rating life, impeller allows for smooth and low vibration operation
- Performance: Motor/impeller shaft protected with replaceable (bronze/ stainless steel) sleeve

#### **TECHNICAL DATA**

- Flow, Q: max 3000 gpm (675 m<sup>3</sup>/h)
- Head, H: max 400 feet (122 m)
- Fluid temp.: 32°F to 250°F (0 °C to 120 °C)
- HP range: Up to 125 hp (93 kW)
- System operating pressure: max. 175 psi (12.3 kg/cm2, 1,206 kPa)



#### **SINGLE-STAGE**

#### - MAGNA3

The MAGNA3 is a circulator pump based on the tried and tested MAGNA technology and our industry-leading experience with electronic pumps. The permanent magnet motor, AUTOadapt function and integrated frequency converter is still part of the MAGNA package, with added, ground-breaking new technologies.

#### **BENEFITS**

- Energy Efficiency: Hydraulic, Electric, Logic & Controls = energy savings
- Simplified Operation: Pressure gauges, btu meter, temperature sensor all built in
- Flow limit/Flow adapt: Reduces energy, system complexity and purchase and maintenance costs
- Plug and pump: One pump, simple and guided installation all by one person = savings.

#### **TECHNICAL DATA**

- Flow, Q: max 570 gpm (150 m³/h)
- Head, H: max 60 feet (18 m)
- Fluid temp.: 14°F to 250°F (-10°C to 110°C)
- System operating pressure: max. 175 psi (12 bar)







#### SINGLE-STAGE

#### - TP/TPE

Grundfos TP and TPE vertical in-line pumps are single-stage, in-line centrifugal pumps with standard motors and mechanical shaft seals. The pumps are of the close-coupled type, i.e. pump and motor are separate units. Consequently, the pumps are less sensitive to impurities in the pumped liquid than similar pumps of the canned rotor type.

#### **BENEFITS**

- High efficiency & reliability: Optimized hydraulics, electro-coated for corrosion resistance, reliable motors (TPE have built-in frequency converter allowing for different control methods to be employed.
- · Ease of service: Top-pull-out design for easy dismantling
- Ease of installation: Straight pipework results in reductions in installation cost and footprint. ODP or TEFC motor options for maximum installation versatility
- Extended pump life: Stainless steel or bronze impeller is hydraulically and mechanically balanced to increase the life of motor bearings and shaft seals
- Retrofit: Industry standard flange-to-flange dimensions for easy retrofit applications

#### TECHNICAL DATA

- Flow, Q: max 3000 gpm (675 m³/h)
- Head, H: max 400 feet (122 m)
- Fluid temp.: 32°F to 250°F (0 °C to 120 °C)
- HP range: Up to 125 hp (93 kW)
- System operating pressure: max. 175 psi (12.3 kg/cm2, 1,206 kPa)

#### SINGLE-STAGE

#### - VL/VLS

The PACO VL (close coupled) and VLS (split coupled) in-line pump series are engineered to increase efficiency and reduce radial loads. These pumps are designed to help reduce operating and maintenance costs. These pumps are offered in a comprehensive range of sizes and configurations to meet your needs.

#### **BENEFITS**

- Footprint: Saves floor space while reducing piping work. Mounts like a
  valve for quick installation. Equal Size Suction and Discharge Pipes no
  need for reducers or other fittings.
- Ease of installation: No flexible connectors or foundation grouting needed. Bracket used for floor mount, rigid and reliable with easy alignment. Mounts like a valve for quick installation
- Performance: Double Volute extends seal and bearing life, minimizes noise and vibration, and improves operating efficiency. The suction baffle creates a smooth and quiet pump operation.
- Service: Back Pull-Out Design enables maintenance without disturbing piping. Case Wear Rings reduce maintenance, downtime and costs while maintaining high efficiencies.

- Flow, Q: 10 to 4,000 gpm
- Head, H: 10 to 420 feet
- Fluid temperature: -20° to 275° F
- Working pressure: max 300 psi
- HP range: ½ to 125
- Discharge sizes: 1.25" to 10"
- Impellers: 7" to 15"

# SUBMERSIBLE WELL PUMPS

A global leader in submersible groundwater pumps, Grundfos has perfected the total package. Our Submersible pumps feature state-of-the-art hydraulic design combined with energy-efficient motors, providing high operating reliability regardless of the application. Monitoring and controls are available for constant system optimization.





Complete range of submersible pumps for groundwater applications. Built to deliver optimum efficiency during periods of high demand, the SP features long product life and easy maintenance.

#### **BENEFITS**

• State-of-the-art hydraulics provide high efficiency and low operating costs

**SUBMERSIBLE PUMPS** 

- Made entirely of stainless steel to ensure high reliability and long lifetime, even in corrosive environments
- One supplier for the pump, motor and controls provides an optimal pumping system

#### **TECHNICAL DATA**

- Motor Size: 1/2 to 250 hp (0.37 to 186.5 kW)
- Flow Rate (Q): Maximum 1,400 gpm (318 m3/h)
- Head (H): Maximum 2,100 ft. (640 m)
- Liquid Temperature: 32°F to 140°F (0°C to 60°C)
- Discharge Diameters: 1, 1-1/4, 1-1/2, 2, 3, 4, 6 in.
- Pump/Motor Diameters: 4, 6, 8, 10 in.

## SUBMERSIBLE PUMPS – SQ (E)

Compact, light weight, three-inch submersible multi-stage centrifugal pump with a wide performance range for groundwater applications.

#### **BENEFITS**

- Built-in electronics provide multiple protection features for reliable water supply at all times
- Permanent magnet motors offer excellent efficiency levels and will supply pump heads up to 590 ft. (180 m) at rated flow
- Constant pressure option for water supply if connected to the Grundfos CU 301 control box

- Motor size: 1/2 to 1-1/2 hp (0.37 to 1.1 kW)
- Flow rate (Q): Maximum 40 gpm (9 m³/h)
- Head (H): Maximum 640 ft. (195 m)
- Liquid Temperature: 32°F to 104°F (0°C to 40°C)
- Discharge Diameter: 1, 1-1/4, 1-1/2 in.
- Enclosure Class: IP68
- Maximum System Pressure: Pre-Set 70 psi (4.83 Bar)

# WASTEWATER PUMPS

Grundfos offers a complete range of wastewater pumps for the collection and transportation of wastewater. These reliable and energy-efficient units feature an enclosed pump and motor, making them suitable for submersible operation as well as vertical or horizontal dry installation. In addition, guide rail installation allows the pumps to be serviced without the need for entering the pit









### SUBMERSIBLE WASTEWATER PUMPS - SL RANGE/S RANGE

Grundfos bring together intelligence, motors, hydraulics and functionality to meet the challenges of modern wastewater, maximizing the hydraulic, electrical and mechanical efficiency of your pumps and grinders. These can be installed submerged or dry.

#### **BENEFITS**

- Reliable: Intelligent adaptive controls ensure reliable operation with low energy consumption.
- Efficiency: Models available with NEMA Premium (IE3) motor components and SmartTrim for substantial energy and cost savings
- Design: Smooth external surfaces, S tube impellers, quick release clamps, and cartridge seals simplify installation and maintenance.

#### TECHNICAL DATA

- Motor size: 1.5 to 617 hp (0.9 460 kw)
- Flow rate (Q): Maximum 28,530 gpm (5344 m³/hr)
- Head (H): Maximum 280ft (85 m)
- Liquid temperature: 32°F to 104°F (0°C to 40°C)
- Discharge diameter: 1.5 to 24 in. (dn 40 mm to dn 600mm)
- Free passage: Up to 6.5 in. (165 mm)
- Insulation class: H & F
- Maximum efficiency: 83.7%
- Maximum system pressure: PN10

#### **SOLIDS HANDLING PUMPS**

#### - YEOMANS 6000/MORRIS 6100/ MORRIS 7100

When quality, durability, and efficiency matter Yeomans and Morris pumps are the solution to turn to when selecting a dry-pit solids handling pumps. Whether it's a pedestal mount, open line shaft, horizontal flex coupled, or belt driven Yeomans and Morris pumps can be adapted to most all installations.

#### **BENEFITS**

- Multiple sealing offerings including split seals and packing sealing
- Extended L10 bearing life
- Right and left hand rotation
- Standard non-clog, extra capacity, mixed flow and cup style recessed impeller options
- Hi-Chrome wet end components to include Cast Iron, Ductile Iron, 3%
   Nickel Iron, 28% Chrome Iron, 316 Stainless Steel or Duplex Stanless Steel

- Flow rate (Q): Up to 150,000 gpm (34,000 m³/h)
- Head (H): Up to 300 ft. (91 m)
- Temperature: Up to 250°F (120°C)
- Pressures to 110 PSIG (758 kPa)
- Discharge diameter: 4 to 54 in. (100 to 1350 mm)
- Free passage: Up to 9.75 in. (248 mm)

# **SYSTEM**PUMPS

Grundfos system pumps integrate the pump, driver, controls, piping and valves into one package. If you are looking for simple solutions to complex problems, Grundfos is the answer. Our system pump solutions maximize efficiency and make it easy to find the right fit for your needs.







#### **HYDRO MPC BOOSTERPAQ®**

Booster systems built to last: sturdy, compact units with easy access to all service parts and can be used wherever additional pressure is required. Each booster model has been designed to meet specific customer demands for capacity and control.

#### **BENEFITS**

- Intelligent cascade control ensures that the optimum number of pumps required to meet the demand operate at any time
- CR pumps with IE3 motors for the most energy-efficient solution available for constant pressure during changing flow demands
- Grundfos MPC controller handles even the most difficult boosting jobs with ease and accuracy

#### **TECHNICAL DATA**

- Motor size: 0.55 to 60 hp (0.4 to 45 kW) (100 hp on request)
- Flow rate (Q): 4,000 gpm (908 m<sup>3</sup>/h)
- Head (H): 500 ft. (152 m)
- Liquid temperature: 32°F to 160°F (0°C to 71°C)
- Discharge diameter: Up to 12 in. (305 mm)
- Maximum system pressure: PN16 (standard) (up to PN 40 on request)
- Maximum hydraulic efficiency: 80%
- Ambient: 32°F to 104°F (0°C to 40°C)

#### FIRE

Solutions are designed from a broad selection of pumps, drives, controls, baseplates and accessories. Pump choices include horizontal, in-line and end suction centrifugal fire pumps as well as vertical turbines. Applications vary from small, basic electric motor units to diesel engine driven, housed, packaged systems. Standard units are designed to handle fresh water, but special materials are available for sea water applications.

#### **BENEFITS**

- Ready to install
- Pump, driver and controller are mounted on a common base
- · All engineered systems have complete, interconnected wiring

#### DOSING SKID AND TANK SYSTEM

Designed as a standard system, using Grundfos SMART Digital Dosing technology, the system includes all the features that you require in a pre-engineered, assembled and tested modular unit.

Dosing tank stations are intended for storing and dosing liquid chemicals. As they are easy to install, dosing tank stations are the first choice in the matter of economic efficiency when adding liquids as coagulants, disinfectants or neutralizing agents in a precise and controlled way to a process.

#### **BENEFITS**

- Innovative design: SMART Digital Dosing™ technology
- Predesigned system: Cost saving and Easy installation
- Reliability: Superior hydraulically activated diaphragm pump technology with flows from 0.0007 gph to 556 gph
- Design: Standard, modified standard, and custom-designed systems for your needs



MONITORING

Grundfos supplies dedicated communication modules and controls for every eventuality, ensuring the trouble-free and continuous operation of complex pumping solutions. Grundfos offers open protocols, control and monitoring with data collection options that are all fully compatible with the customer's management system.

Many of our monitoring and control solutions use the packaged software Grundfos PC Tool monitor operating status, adjust settings, perform standard or custom configuration and save logged data. The PC tool and user interface also offer a huge range of specialized functions depending on the application.





#### **MOBILE PUMP CONTROL**

#### - GRUNDFOS GO REMOTE

Designed to save time and effort for the pump owner, this is the most comprehensive platform for mobile pump on the market, offering intuitive, handheld assistance and access to the Grundfos online tools, saving valuable time in reporting and data collection.

#### **BENEFITS**

- Group pumps, change configuration parameters and monitor pump data
- Descriptive error codes make trouble shooting easy and intuitive
- · Time saving, with quick links to documentation, replacement tool, and automatic updates

#### MULTI-PUMP CONTROLLER

#### - MPC

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

#### COMMUNICATION

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

#### **BENEFITS**

- · Easy to install and configure; Wizard helps the user to configure the system when you first start, ensuring the desired parameters are set up in the
- · Standby pump allocation, forced pump changeover and dry-running protection help to increase system reliability and decrease downtime and costly maintenance
- Soft pressure build-up function minimizes risk of water hammer, reducing the risk of water loss and costs of pipe maintenance

#### COMPONENTS

The basic components of the Control MPC are:

- CU 352 control unit
- IO 351 primary I/O unit

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

# MOTORS AND DRIVES

Grundfos motors provide a systems approach to your pumping needs, reducing production and operating costs, improving overall product quality and maximizing energy efficiency through adaptive intelligence.

Grundfos provides standard asynchronous motors with system controllers and variable frequency drives (VFDs), as well as separate VFDs that increase the energy efficiency of existing systems.









#### **MOTORS**

#### - MLE

The MLE eliminates the complexity in matching motor, drive and control logic components by providing a simple and effective out-of-the-box solution to meet your variable speed application needs. The integrated, energy optimized MLE consists of a system controller, VFD and permanent magnet or asynchronous motor all in one. It is a state-of-the-art system approach that increases system efficiency performance while reducing energy and life cycle costs.

#### BENEFITS

- Integrated solution: Reduced installation, wiring cost, saving money
- Plug and pump: Programmed and ready for installation and operation
- Innovative design: Compact, reliable, small footprint, easy maintenance

#### **E-PRODUCTS**

#### - CRE-DP

The CRE-DP expands Grundfos' offering by using proportional pressure to make installation even easier, and for your building to perform even better.

#### **BENEFITS:**

- Plug and pump: Programmed and ready for installation and operation
- Proportional pressure control: Eliminates the need to install a differential pressure sensor remotely - less labor, less installation time, less costs
- Integrated frequency drive: Saves energy by up to 50% compared to fixed speed pumps
- Innovative design: Compact, reliable, small footprint, easy maintenance and low service costs

#### **TECHNICAL DATA**

- Flow rate (Q): max. 550 gpm
- Head (H): max. 200 ft
- Liquid temp.: 32°F to +250°F
- System operating pressure: max. 150 psi

## EXTERNAL FREQUENCY CONVERTERS – CUE

A complete range of external frequency converters designed for speed control of a wide range of Grundfos pumps for water supply, wastewater and irrigation applications. A special start-up guide will lead you through the set-up of the CUE.

#### **COMMUNICATION**

- Supports communication with monitoring equipment or other external units via a number of different fieldbus protocols using the Communication Interface Unit (CIU)
- Compatible with Grundfos Remote Management.

#### **BENEFITS**

- Predefined control modes, sensor range and pump family data make it very easy to set up a system in only a few steps
- Shares the unique Grundfos intuitive interface with Grundfos control equipment

Very easy installation and set-up

 just 16 steps to get a system up
 and running

#### **COMPONENTS**

- Additional functions available that for example provide better application support and system optimization
- Additional analog input/output board, providing for additional inputs, for example temperature sensors for monitoring bearings
- A range of motor filters available

2.

# DOSING AND DISINFECTION

Grundfos offers one of the most extensive product ranges in the market for dosing and disinfection, covering everything from disinfection of drinking water to water treatment in highly sensitive industrial processes.

Grundfos can supply complete dosing pump systems for large or small volumes and based on different technologies for flocculation, disinfection, and pH adjustment. Moreover, the Grundfos range of electronic and electrochemical accessories offers complete control of your dosing and disinfection processes and can be seamlessly integrated into your system. We can also advise and supply disinfection solutions using chlorine dioxide (CIO<sub>2</sub>).





#### - DDA, DDC AND DDE

Diaphragm dosing pumps with powerful variable-speed stepper motors offer high dosing accuracy and flow control, longer maintenance intervals due to the universal chemical resistance of the full-PTFE diaphragm, and reduced energy consumption from the state-of-the-art drive technology.

#### **BENEFITS**

- **Modularity:** The included click-stop mounting plate is an example of the unique flexibility offered, with only a few variants.
- **Simplicity:** Easy handling and perfect overview and control ensure simple installation, commissioning and operation.
- Flow intelligence: The pump monitors the dosing process of liquids when the FlowControl function is activated, for advanced process reliability.

#### **TECHNICAL DATA**

- Flow (Q): 0.0007 to 8 gph
- Operating pressure: 232 to 60 psi
- Turndown ratio: Up to 3000:1

#### **DIGITAL DOSING**

#### - DME

Digital Dosing pumps that combine perfect precision and user-friendliness for large dosing quantities from 15.9 to 248 gph, offering all the benefits of the highly acclaimed smaller Digital Dosing range, making accurate dosing is easier than ever.

#### **BENEFITS**

- Wide dosing range with a turndown ratio of 800:1 for a range of water supply, wastewater and water treatment applications
- Easy to install, the operator can set the pump to discharge exactly the quantity of dosing liquid required in the application
- Available with Profibus interface to supply performance data and status information for quality control, preventive maintenance and future reference.

- Flow (Q): 0.02 to 248 gph
- Operating pressure: 145 to 60 psi
- Turndown ratio: Up to 800:1





## HYDRAULIC PISTON DIAPHRAGM DOSING PUMPS

#### -DMH

Extremely strong, robust pumps for applications requiring a reliable dosing and high-pressure capability for high-pressure applications up to 2900 psi. Highly versatile for a wide flow range and offering a variety of dosing head sizes, materials and accessories.

#### BENEFITS

- EX/ATEX and API 675 versions available
- Very accurate dosing
- Dosing of flammable liquids
- Full PTFE membrane as a standard

#### **TECHNICAL DATA**

- Motor size: 0.13 3 hp
- Flow rate (Q): 0.069 2 x 278 gph
- Maximum system pressure: 2900 psi
- Suction discharge connections: 1/4 to1-1/4 in.
- Enclosure class: IP 65
- Dosing flow variation: Below +/- 1% (DMH 28x)
- Dosing flow linearity: Below +/-1% (DMH 28x)



# CHLORINE DIOXIDE PREPARATION AND DOSING SYSTEMS

#### -OXIPERM

Chlorine dioxide generators that are extremely easy to use, bringing together precise dosing technology, an ideal mixture of components, quick chemical reactions with Maximum conversion rates, and outstanding reliability for effective disinfection

#### **BENEFITS**

- Compact design, also for confined spaces, offering easy installation
- Low operating costs from a solution that saves time
- Innovative dosing and calibration technology; always the optimum solution for your specific application

- Oxiperm Pro OCD 162 5/10/30/55 g/hour
- Oxiperm 164 C 450 g/hour -> 2.5 kg/hour
- Oxiperm 164 D 120 g/hour -> 750 g/hour
- Oxiperm 166 up to 10 kg/hour



#### **GRUNDFOS TECHNICAL INSTITUTE**

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