

**PURIFY YOUR BUSINESS**





# COMPLETE DEDICATION TO LASTING QUALITY

Water treatment is a hugely complex and demanding market with vastly varying technological challenges. So when customers turn to a disinfection and pump solution supplier, they need to be sure they're getting the very best expertise and competencies. As a global company with know-how gathered from over 60 years experience, Grundfos consistently delivers top quality, innovative products and solutions.



The Grundfos name is our customers' guarantee of excellence. From disinfection applications to treatment for potable water and water for industrial use, Grundfos can be trusted to provide

the tried and tested solutions for the water industry. Our customers can rest assured, safe in the knowledge that we are completely dedicated to the customers' requirements.

# WATER INDUSTRY EXPERTISE ACROSS THE BOARD

## A wide product range tailored to every segment

Grundfos has a full range of products that cover the entire water cycle: supply, treatment, distribution and wastewater collection. We can deliver everything from circulator pumps and boosters right through to mechanical and digital dosing pumps with a wide variety of specifications.

## International project handling skills

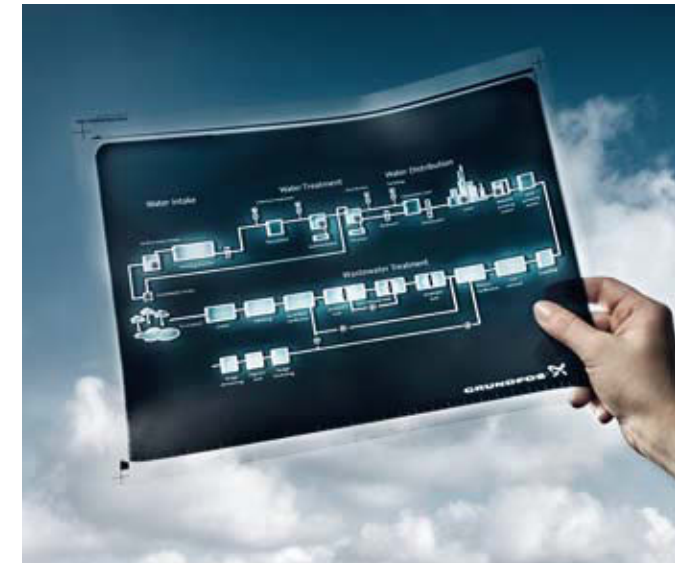
Grundfos customers always have our experience and expertise at their service. We can tailor complete end-to-end solutions, taking you from initial planning right the way through to project completion. And we offer full, transparent collaboration at every stage of the process. Our global competence centres ensure customers always have access to specialised technical backup and service facilities. This means you can expect a thoroughly planned project, completed on time for the benefit of your business.

## Extensive experience generates more solutions

With over 60 years in the industry and represented in 170 countries around the world, we understand our customers' needs. Choosing Grundfos as a preferred system provider means working together with a company that listens. Whatever your business needs and wherever you are based in the world, you will always be close to one of Grundfos' Competence Centres. These centres offer complete support for any challenges you may face. We have the expertise to meet your requirements, the product range to deliver the right solution, and the expert back up to keep you running.

## Backup to rely on

Grundfos products undergo gruelling testing before they leave the factory. This process is fully documented, which means our customers can rest assured: they are getting top performing, durable products and solutions that will continue to deliver optimum performance year after year. As part of our complete customer service, all documentation is readily available online. We have a range of tools that ensure our customers can optimise any chosen water treatment system. We also offer extensive, in-depth global training, consultancy, and commissioning services.





# INNOVATIVE AND UNIQUE PRODUCTS

Whether your business needs mechanical, chemical or organic water treatment solutions, you can rest assured that our products will live up to your expectations.

From sedimentation, flocculation, ion exchange and membrane filtering processes through to areas like UV/ozone applications, evaporation, chemical dosing and recovery, Grundfos has the solution for you. And because it's Grundfos quality, you can rely on great performance year after year.

## Mechanical treatment

### Water intake/evaporation

- Seawater pumps
- Brine recirculation and transport pumps
- Pre-chlorination of intake water with chlorine gas dosing and disinfection systems

### Standard filtration/sedimentation

- Polydos systems for the preparation and dosing of polyelectrolyte for flocculation processes
- Pumps to feed raw water
- Backwash pumps

### Membrane filtering:

- Raw water pumps and high-pressure feed-water pumps
- Digital dosing pumps for dosing of anti-scaling and anti-fouling chemicals to keep filtering systems clean



## Chemical/Organic treatment

### UV/ozone applications

- Transport pumps and mixing ion exchange
- Feed and regeneration pumps

### Biological / chemical water treatment

- Dosing pumps and systems for preparation and dosing within biological water treatment
- Dosing pumps and disinfection systems for the preparation and dosing of disinfectants within chemical water treatment
- pH neutralisation
- Prophylaxis against legionella with chlorine dioxide generators

### Process water treatment:

- Conditioning for industries such as pulp and paper
- Dosing within anti-corrosion processes (cooling systems)
- CIP applications
- Disinfection of boiler feed/cooling water (water re-use)



## Brauerei Zipf case story

Leading Austrian brewery Brauerei Zipf depends on consistent water quality and supply to ensure optimum production. They are also constantly exploring ways to reduce their energy consumption. To achieve these objectives the brewery installed three high-grade AISI 316 stainless steel CRN 64 pumps, controlled by a central PLC system, to supply all brewery water. A single CRN 8 is used as a jockey pump to maintain a constant pressure in the system. CR pumps' versatility mean they can be used for brewing water, cooling water, heating and cleaning amongst other applications.

Since installing the Grundfos solution, Brauerei Zipf systems run reliably and efficiently without, of course, compromising the all-important taste of the beer!



## Techwater case story

Grundfos Digital Dosing™ solutions mean Techwater customers are assured top quality water purification systems that can be relied upon to work exactly as intended. They are easy-to-operate, can be set to precise dosages, offer a wide operating band, even discharge, full pulse control and no pressure peaks.



# MASTERS OF WATER-TREATMENT TECHNOLOGY

In the complex world of water treatment, companies constantly need more technologically sophisticated solutions to help drive them forward. Grundfos has the practical, technological innovations that give sustained added value to customers all over the world. Grundfos uses the latest cutting-edge technologies to take water treatment to new levels of reliability, applicability and efficacy.

Grundfos is unique in the industry because it can take standard components and assemble them to meet specific customer disinfection and pump solution requirements. This flexibility means we can deliver solutions that can be tailored to virtually any business need.



## Gold medal for the Oxiperm Pro

Grundfos won gold for the Oxiperm Pro at the prestigious 2008 INSTALACJE international trade fair in Poland. Since 1979, the Poznan International Fair has awarded medals for outstanding new pump products. Medals are awarded on the basis of innovation, practical applicability and reliability, and economic efficiency. Of the 537 exhibitors from 23 countries, Grundfos was one of only 14 companies to be awarded the coveted gold medal.

## Digital dosing

Digital Dosing™ solutions ensure precise, chemical- saving dosing of pH regulation chemicals as well as flocculation and anti-scaling / anti-fouling aids. They deliver doses from 0.0025 l/h right up to 940 l/h. And because our pumps have turndown ratios of up to 1:1000, you can always dose exactly what you need. Digital Dosing™ solutions include stepper motor technology that results in an unrivalled level of precise and user-friendly dosing. The simple, logical user interfaces ensure all solutions are extremely easy to install, prime and calibrate. Also, adjustable suction speeds mean that Digital Dosing™ is ideal for dosing of viscous liquids.

## Oxiperm

Oxiperm® represents a highly efficient, compact chlorine dioxide preparation solution and is used for disinfection applications in cooling systems, warm water cycles and combating legionella. Oxiperm® chlorine dioxide generators deliver effective disinfection and reliable performance, allowing dosing quantities of 10 kg/h. Oxiperm® solutions all offer optimum precision and immunity to interference. They're user-friendly and ergonomic, too. Simple LEDs arranged in a clear flow chart let users easily monitor operations.

## Selcoperm

Selcoperm electrolysis systems offer significant benefits in terms of convenience, flexibility and cost. Using common salt as a base material, the hypochlorite disinfectant solution is generated on-site. This means customers save on transport costs and storage, as well as being able to produce disinfectant precisely according to requirements. Surprise peaks in demand are also no problem, as the disinfectant generated can easily be stored in buffer tanks for long periods of time. Reliable, user-friendly Selcoperm solutions are ideal for customers such as public swimming baths, municipal water works and independent water suppliers.

## Hydro Protect

Hydro Protect is an ingenious Plug'n'Play solution designed by Grundfos. It combines the benefits of a disinfection and booster system brilliantly. An Oxiperm Pro chlorine dioxide generator and a speed-controlled booster station are installed on a common framework. A measuring and control unit completes the system.

Chlorine dioxide is a very effective disinfectant against all kind of germs such as legionella but it is also effective against non-pathogens like beer spoilage and slime bacteria. Consequently, the system is ideal for use in the food and beverage industry, hotels, hospitals and nursing homes.

The integrated speed-controlled booster station increases the pressure of the disinfected water to the required value and feeds it into the system. The integrated measuring and control unit makes it easy to continuously monitor the chlorine dioxide content in the process water network.



Selcoperm



Hydro Protect



# WE HAVE WHAT YOUR BUSINESS NEEDS

As your end-to-end supplier, we can offer a full line of needed components up to complete turnkey solutions. Our range of water treatment products and services covers:



**Dosing pumps**  
For chemical and biological water treatment, precise and cost-efficient dosing of chemicals to keep membrane filters clean, distillation, disinfection and evaporation applications



**Horizontal multistage centrifugal pumps**  
The space-saving solution for water treatment systems



**In-line multistage centrifugal pumps**  
Packed with features and solidly built to our demanding standards. Ideal for filtering, ion exchange, membrane filtering and UV/Ozone applications



**Disinfection systems**  
(chlorine gas dosing systems, electro-chlorinator, chlorine dioxide generators) for clean and healthy water



**Submersible well pumps**  
Perfect for recovery applications. Offering complete flexibility with a pump for every duty point



**Measurement & control systems**  
For the complete control of dosing and disinfection processes



**Wastewater pumps**  
For wastewater and recovery applications. Able to handle dry pit as well as submerged installation



**Norm/block pumps**  
For transfer, distribution and feeding in water treatment applications. Combines low operating costs with excellent reliability



**Booster system**  
A unique pump system for brackish water and seawater desalination systems

# DO WHAT YOU DO BEST WITH GRUNDFOS

For more than 35 years, our solutions have allowed customers to carry on conducting their business in an effective and reliable manner. We have constructed installations ensuring the chemical process in the entire water treatment field: disinfection, flocculation, pH-correction and process function.

Our customers are municipal waterworks, OEM in plant construction, planning agencies, engineering consultants as well as governmental departments all over the world.

**We deliver:**

- Customer service (incl. consulting on the spot) and engineering
- Calculation of operating costs and project planning
- Delivery and commissioning
- Complete and reliable service for the project's duration
- Training of the operating staff
- After-sales service and maintenance contracts

**Turnkey water treatment solutions**

Our engineers from International Project Management can guide customers through the entire project process: from diagnosing and defining the challenge and recommending the best solution, to installation and long-term maintenance.



## Astramatic case story

"Our previous pump solution utilised products from several manufacturers, which often caused maintenance problems and costly downtime. We wanted to find a single supplier who had the expertise and technical backup to keep our factories running up to speed. Having looked at the market, we were impressed by Grundfos' extensive product range and industry track record. After consultation, we installed two new task-specific pumps and were so satisfied with the result that we ordered another ten. Now, 80% of our pumps are from Grundfos and we are purchasing more as our old pumps reach the end of their lifecycle." Pierre LeClerc, Managing Director La Belle France Juice, Grenoble.



## Wistoff case story

Wistoff Glassworks in Germany manufactures high-quality glass and plastic-based packing for the pharmaceutical and cosmetic industry. Their problem was that they were unable to precisely adjust the mix of water and oil in the cooling process of their modern glass melter, which was essential to maintaining optimum results. The Grundfos DME Digital Dosing™ pump with a variable speed stepper motor provided the solution. "It was the new technology behind the stepper motor that really convinced us to choose Grundfos because it makes precise dosing possible. Our investment resulted in not only highly precise dosing, improved product quality and higher productivity, it has also led to more stable production costs due to the reduced amount of coolant lubricant required in production." Ralf Kammerer, Technical Manager, Wistoff



## QUALITY AT EVERY STEP

Throughout our entire organisation, quality is our watchword. Grundfos is dedicated to quality from the earliest stages of product development right through to customer service and

support. The combined expertise and experience of the global Grundfos network is at our customers' disposal – wherever they are in the world.

### Developed by Grundfos

As innovation leaders in the pumping industry, we have a well-established development process. Before we recommend a solution, we ensure we completely understand our customer's specific requirements. It's this dedication and attention to detail that defines us, and ensures our customers get exactly the products they need.

After we have arrived at a solution, we subject it to rigorous testing under the most extreme conditions – including possible working environments. All our products and solutions are made with materials of the highest quality.

### Produced by Grundfos

All Grundfos production sites are thoroughly tested. Specially trained and highly skilled personnel ensure that Grundfos can manufacture the innovative products designed by the development team.

Our ceaseless quest for excellence means our customers can rest assured: when they buy Grundfos, they get superbly built, innovative products. And as a responsible global company, our production facilities meet the strictest environmental standards. This is why the Grundfos name is our customers' peace of mind.

### Supported by Grundfos

As a trusted supplier, we understand the importance of reliability. Our global operation means that help, after-sales service and support are never more than a phone call away. Grundfos is always ready to offer full assistance backed by comprehensive knowledge and long-term experience.



## THE TOOLS TO DELIVER UNIQUE SOLUTIONS

### everything you need online

Visit [grundfos.com/industry](http://grundfos.com/industry) for everything you need to know about the Grundfos water industry products, or any of our other full-line ranges. On the website, you can also find detailed information, including 3D technical drawings, installation manuals and technical documentation.

- See all the Grundfos ranges
- Access WebCAPS – our online selection and sizing tool that helps you select the most competitive pump or upgrade. You can also source pump documentation, including 3D technical drawings, installation manuals and literature
- Read case stories highlighting how Grundfos has brought pure quality to the water industry around the world
- Request information about how the Grundfos Pump Audit can help save money



### Unilever case story

The Grundfos Pump Audit gave Unilever Ice Cream UK an opportunity to assess the efficiency of 600 of their pumps. Results of the survey concluded that replacing their ageing 37kW single-speed process water pumps with 15kW variable-speed pumps would reduce pump-operating costs by half. Unilever engineering technician, Grant Burgess explains: "The use of variable speed pumps will give us even more savings and leave us with the flexibility to speed up the pump to accommodate any future additions to the process load."

*Read the full story at [grundfos.com/industry](http://grundfos.com/industry)*







## THE GLOBAL SUPPLIER

### Global reach

Founded in 1945 by Poul Due Jensen in Denmark, Grundfos has a strong pioneering tradition. This spirit has made Grundfos a technological leader, with manufacturing facilities around the world producing more than 10 million pumps. We are represented in 170 countries with more than 70 sales and service companies and 450 certified Grundfos partners.

Grundfos Aldos has competence centres in Germany, China, USA, Australia and South Africa. So wherever your business is located, you will not be far from us. And you can rest assured that whatever challenges you face will be expertly dealt with by our in-house experts.

### Leading by example

Grundfos never compromises on social and environmental responsibilities. Our commitment to the wellbeing of our employees and the environment is evident in every aspect of our production and maintenance.

### Global service

With Grundfos service centres in more than 40 countries throughout the world, supplemented by almost 600 Grundfos service partners/centres, we provide one of the most closely-knit service networks. At every single location you can rely on what you can expect from us: the accustomed high level of quality of Grundfos.

### Our experience makes us experts

If over 60 years in the business has taught us one thing, it's that no two companies have the same needs. That's why our products can be adapted to suit specific customer requirements.

We back all our solutions with full service and support carried out by highly trained and experienced employees. And because we are a global organisation, you will always find us close by.

PRODUCT	SUB-APPLICATION	WATER INTAKE	FILTERING	ION EXCHANGE	MEMBRANE FILTERING	EVAPORATION	UV/OZONE	CHEMICAL DOSING	RE-USE OF WATER	TECHNICAL DATA	PERFORMANCE
PRESSURE BOOSTING AND LIQUID TRANSFER	BM/BMB Centrifugal in-line pump									Flow, Q: max. 260 m <sup>3</sup> /h Head, H: max. 430 m Liquid temperature: 0 °C to +40 °C Operating pressure: max. 80 bar	
	BMP Axial piston pump									Flow, Q: max. 10.2 m <sup>3</sup> /h Head, H: max. 80 m Liquid temperature: 3 °C to +50 °C Operating pressure: max. 80 bar	
	BME/T Booster pump									Flow: max 95 m <sup>3</sup> /h Head: max 700 m Liquid temperature: max 40°C Operating pressure: max 70 bar	
	BMEX System Booster system									Flow: 0-1500 m <sup>3</sup> /h per 24 hours Head: max. 810 m Liquid temperature: +40°C Operating pressure: max. 70 bar	
	CM Horizontal multistage centrifugal pump									Flow: 0-25 m <sup>3</sup> /h nominal Head: 10 bar Liquid temperature: -30°C to +120°C Operating pressure: max 10 bar -30°C to +120°C	
	CRT Vertically multistage centrifugal pump in titanium									Flow, Q: max. 26 m <sup>3</sup> /h Head, H: max. 240 m Liquid temperature: -20°C to +120°C Operating pressure: max. 25 bar	
	CRN Vertically multistage centrifugal pump									Flow: 180 m <sup>3</sup> /h Head: 490m Liquid temperature: -40° to +180°C Operating pressure: 50 bar	
	HS Horizontal split-case pump									Flow: 2500 m <sup>3</sup> /h Head: 148 m Liquid temperature: 0-100 Operating pressure: max 16 bar	
	MTR Immersible multistage centrifugal pump									Flow, Q: max. 85 m <sup>3</sup> /h Head, H: max. 238 m Liquid temperature: -20 °C to + 90 °C Operating pressure: max.25 bar	
	NK & NB Single-stage, end-suction pump									Flow, Q: max. 1000 m <sup>3</sup> /h Head, H: max. 160 m Liquid temperature: -25 °C to +140 °C Operating pressure: max. 16 bar	
DOSING EQUIPMENT	Hydrobooster Pressure booster system									Flow, Q: max. 2000 m <sup>3</sup> /h Head, H: max. 160 m Liquid temperature: -25 °C to +140 °C Operating pressure: max. 16 bar	
	Polydos Dry material preparation and dosing systems									Customised complete installations Preparation capacity: max. 11,000 l/h Viscosity of prepared solution: max. 2500 mPa s.	
GROUND-WATER SUPPLY	SP Submersible pump									Flow: Full range up to 250 m <sup>3</sup> /h Head: 0-60 bar Liquid temperature: 40 grader C.	

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CHEMICAL TREATMENT AND CONDITIONING OF WATER	DME/DDI Digital Dosing™ pump									Capacity, Q: max. 940 l/h Pressure, p: max. 18 bar Liquid temperature: max. +50 °C	
	DMS/DMI Mechanical dosing pumps with internal synchronous motor									Capacity, Q: max. 18 l/h, Pressure, p: max. 16 bar, Liquid temperature: max. +50°C	
	DMX Mechanical Dosing pumps with external electromotor									Capacity, Q: max. 4000 l/h (Pump with two heads: 2 x 4000 l/h) Pressure, p: max. 10 bar Liquid temperature: max. +50 °C	
	DMH Hydraulically activated dosing pumps									Capacity, Q: max. 1500 l/h Pressure, p: max. 200 bar Liquid temperature: max. +50 °C	
WASTEWATER	SRP Submersible recirculation pump									Flow: 1450 l/s Head: up to 2.2 M Liquid temperature: 5-40°C	
	SE Submersible, SuperVortexor single channel wastewater pump									Flow: max 70 l/s Head: max 44 m Liquid temperature: max 40 celsius Operating pressure: max 6 bar	
DISINFECTION	Oxiperm OCD/OCC/OCG Chlorine dioxide preparation and dosing system									Capacity: 5 g/h-10,000 g/h Methods: Chlorite/acid or chlorite/chlorine gas	
	Selcoperm SES Electro-chlorinator									Electrolytical generation of chlorine (sodium hypochlorite) directly on site.Capacity: 125 g/h-2000 g/h (Higher capacities available on request). Only water, common salt and electricity is needed.	
	Vaccuperm VGB/VGA/VGS Chlorine Gas Dosing System									Vaccuperm: reliable full-vacuum method with chlorine gas Capacity: up to 200 kg/h	
MONITORING / SENSORING CONTROLS	HydroProtect Compact booster/ chlorine dioxide disinfection system									Volumetric flow: up to 50 m <sup>3</sup> /h Chlorine dioxide capacity: up to 10 g/h Pressure: up to 10 bar	
	Conex DIA-G/DIS-G Gas warning system for gas dosing installation and storage room									Monitors the admissible gas concentration in the air: chlorine, chlorine dioxide, ozone, ammonia and hydrochloric acid	
	Conex DIA amplifier and controller Measuring DIS and compact systems									Measuring parameters: chlorine, chlorine dioxide, ozone, pH, ORP (Redox), peroxide, peracetic acid, fluoride, conductivity	
	Grundfos Remote Management									Grundfos Remote Management is an internet-based telemetry system for remote management of pump installations	



## Grundfos water industry solutions

Grundfos has a complete range of disinfectant and pump solutions for the water treatment industry. Backed by a skilled, global team of consultants who can ensure implementation of the most efficient solutions available and a 60-year history of innovation and unsurpassed support, Grundfos has the answer to all your water industry and disinfection challenges.

- Pump and disinfection solutions to handle all water industry processes
- International project handling skills
- Vast, proven experience in delivering optimum pump solutions
- Comprehensive and reliable post- installation backup and optimisation documentation

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