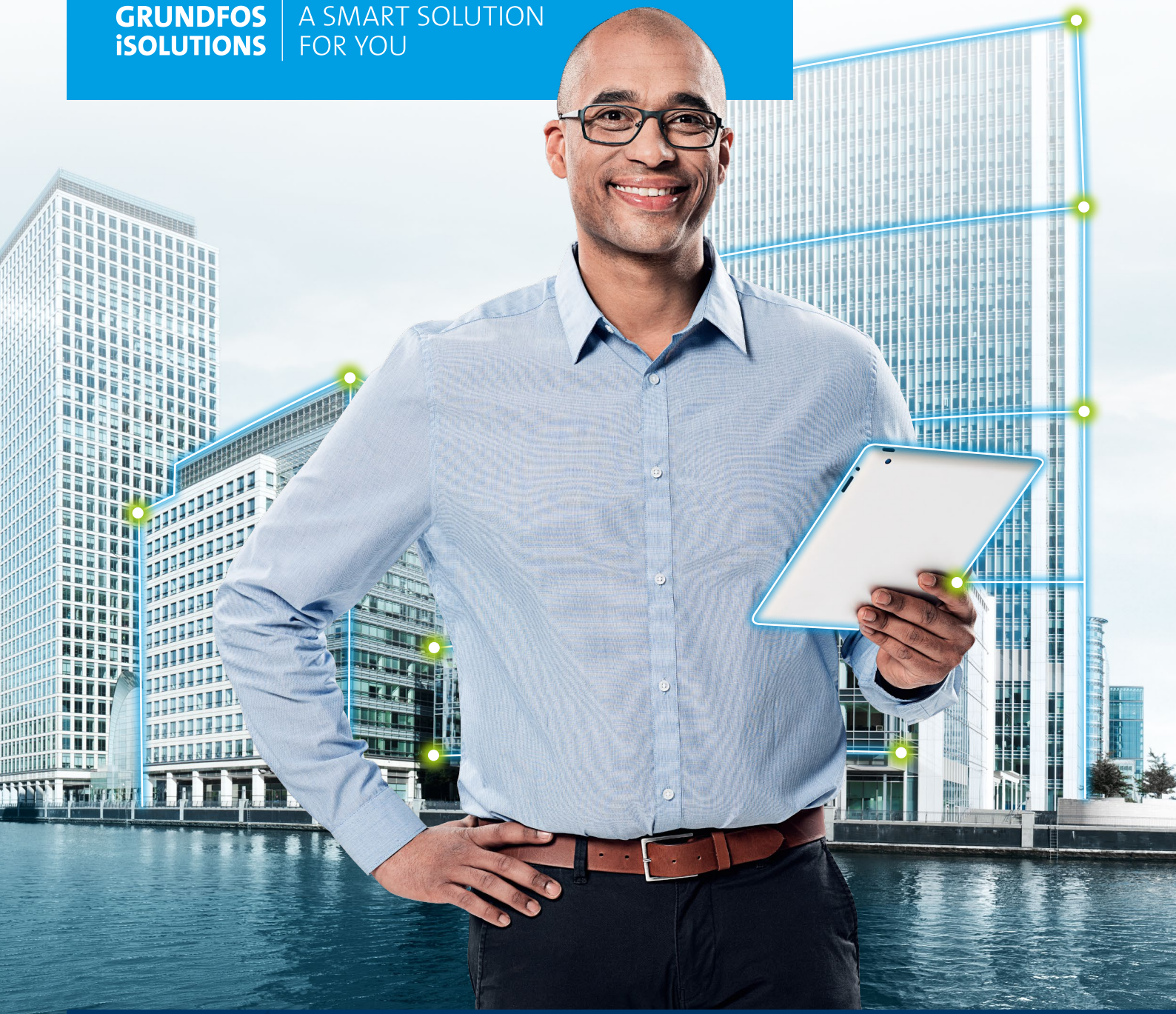
GRUNDFOS iSOLUTIONS IN COMMERCIAL BUILDINGS

GRUNDFOS iSOLUTIONS | A SMART SOLUTION FOR YOU



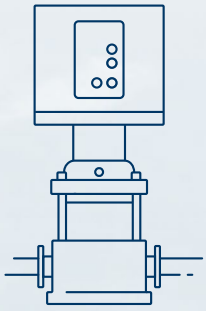
be
think
innovate

GRUNDFOS

CREATING INTELLIGENT BUILDINGS

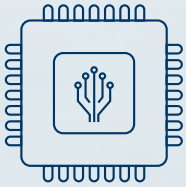
Intelligent pump solutions enable high performance buildings

To achieve an intelligent building, intelligent pumps are significant contributors taking responsibility for optimizing the system. However, it's time to go ever further and look beyond individual components and put focus on intelligent solutions that optimize the entire system. With Grundfos iSOLUTIONS, you get intelligent pumps and components working seamlessly together to enable full system integration and reach a new level of performance with high energy efficiency, reduced complexity, low life-cycle costs and more.



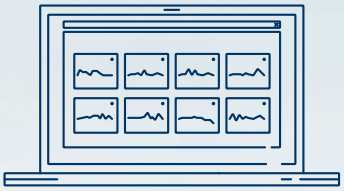
INTELLIGENT AND CONNECTED PUMPS

Grundfos pumps offer integrated system intelligence and full connectivity. This means pumps that can react and operate autonomously based on operational demands to optimise the entire system's performance.



INTELLIGENT PUMP COMPONENTS

With Grundfos iSOLUTIONS, our pumps can be intelligently combined with a range of communication components, such as controls, drives, sensors and more, to optimise your specific system needs.



EASY SYSTEM INTEGRATION

With intelligent pumps and smart controls in Grundfos iSOLUTIONS, you get a solution that is efficient and a fully integrated part of the communication suite within any building monitoring system (BMS) or IoT platform.

A pump is no longer just at pump

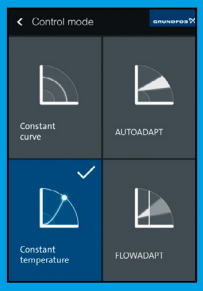
Intelligent pumps adapt to system demands and simplify design by replacing flow and pressure components with intelligent controls. Their ability to communicate with your smartphone simplifies control.

THE BENEFITS ARE CLEAR

- Optimal operation with multiple control modes
- Intelligent pump operation increase reliability and prevent system stress
- Lower energy consumption and total system cost

TAKE CONTROL OF ANY LOAD

Variable speed control allows the pump to adjust the flow to match demand. But demands vary, and they don't always depend on just a single parameter. Intelligent control modes ensure that your pump always adjusts to optimal performance and stays within the given limits. Depending on your challenge, the pump keeps a constant T, P, ΔT or ΔP. And when needed, several control modes can be utilised in a prioritised order.

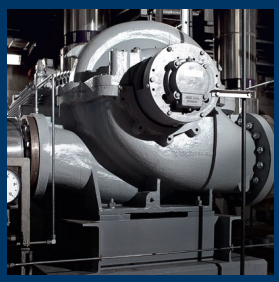


SOLUTIONS FOR ANY APPLICATION

Grundfos can help you meet the demands of any commercial building application. We provide intelligent solutions that ensure better performance, comfort, control and energy efficiency, no matter what the challenge is.

HEATING
In heating systems, energy efficient pumps are only half the story. With the right system design and correct operation, you can minimise energy consumption, increase comfort levels and future-proof your building. With our integrated or external frequency convertors your system will adapt to demands.
- Improved boiler performance, e.g. by securing condensation
- Optimal ΔP control, even without remote sensors
- Combination of control modes to control pressure, temperature and more
- Pumping systems that adjust to demand

COOLING & AIR-CONDITIONING
Accurately controlled cooling systems are crucial in maintaining the right indoor climate. But to achieve this level of accuracy you need sophisticated technology to monitor performance. Grundfos' speed control pumps give you the opportunity to monitor critical system parameters and adjust accordingly. This guarantees maximum efficiency and a minimum of energy consumption.
- Improved chiller performance
- Maintaining design ΔT
- Reduce risk of bypass flows
- Increased system performance
- Multiple control modes



DISTRICT ENERGY CONNECTIONS
Grundfos offers intelligent solutions and control to improve performance and comfort in the distribution network and within the buildings as e.g. heat exchangers, hot water production and mixing loops
- Heat loss reduction through temperature zoning with intelligent mixing loops
- Improved occupant comfort and energy savings by balancing the buildings in a network through mixing loops with intelligent temperature control
- Improved and faster balancing through flow limitations on the pumps
- Optimized system performance by utilizing smart functionalities and internal/external sensors

WATER BOOSTING
Booster systems must not only be reliable but have the intelligence to maintain the right pressure regardless of consumption. At Grundfos, we offer you highly efficient booster systems designed to provide optimal water supply throughout a building. These systems ensure equal water pressure to all floors without wasting energy.
- Low life-cycle costs and customisation with intelligent controls
- Increased hygiene through stainless steel solutions
- Pipe friction loss compensation
- Perfect pressure and reduced risk of pipe bursts
- Plug and pump solutions

WASTEWATER
Grundfos wastewater solutions build on decades of experience, allowing us to balance performance, reliability, cost-efficiency and serviceability. We can design the entire system or provide you with high-quality components. These include sewage pumps, drainage pumps, grinder pumps, lifting stations, pre-fabricated pumping stations and controllers.
- Full range of solutions to meet your specific demands
- Unparalleled reliability and efficiency for low life-cycle costs
- Reduced down time
- Plug and pump solutions

FIRE FIGHTING
Reliable high performance fire extinguishing systems are essential to protect lives and buildings from fires. Grundfos designs, builds and tests fire pump sets to all major fire pump codes. We deliver preconfigured modularized fire pump sets, sets assembled on common base frames or sets built in containers with complete infrastructure included.
- Pump sets for sprinkler – foam, low pressure mist, hydrant – and hose reel systems
- Fully pre-defined and comprehensive sales programme for fire pump sets
- Global setup for productions, sales and service companies
- Minimal installation-to-operation time

WATER DISINFECTION
Efficient water disinfection can be a matter of life and death.
With Grundfos' chlorine dioxide disinfection systems, legionella and other potentially fatal bacteria no longer pose a threat. We are also experts in anti-scaling, anti-fouling and anti-corrosion in air-conditioning, heating and boiler systems. This means water is always safe and clean while pipes are corrosion free.
- Disinfection with chlorine dioxide superior to any other disinfection system
- Highly safe with solutions for continuous water quality monitoring
- Extensive know-how in the field
- Eliminates need for high temperature cycles, reducing energy costs

HOT WATER CIRCULATION
Hot water applications require instant hot water when a tap is opened.
Traditional solutions use constant speed pumps to provide the required pressure, resulting in high energy consumption. Grundfos offers temperature controlled pumps to ensure that the required temperature is always present at the lowest possible cost. This eliminates throttling valves and saves energy.
- High comfort levels
- Eliminates the need for throttling valves
- Substantial energy savings

PRODUCTS

MAGNA3

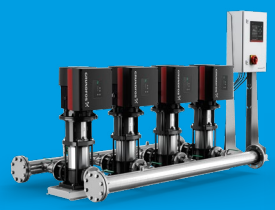
- High efficiency motor and hydraulics
- FLOW*LIMIT* and AUTO*AD-APT* reduces energy and installation costs
- ΔT control mode reduces energy and sensor costs
- Logging and BMS communications aid system optimisation

Applications
Heating system
Cooling & Air-Conditioning
Hot Water Circulation

TPE

- High efficiency motor and hydraulics
- ΔT control mode reduces energy and sensor costs
- Control influence based on several analogue and digital inputs
- Logging and BMS communications aid system optimisation

Applications
Heating system
Cooling & Air-Conditioning
Hot Water Circulation



HYDRO MPC

- Variety of pump sizes to fit any duty point
- System pre-configured from the factory
- System stops during low consumption periods to save energy
- Operation reliability is secured by redundant sensor or standby pumps
- Efficiency guaranteed through the controller's use of pump curve data

Application
Water Boosting

HYDRO MULTI-E

- Control of the system is located inside the pumps
- Ensure constant pressure as soon as it is switched on
- System stops during low consumption periods to save energy
- System can be operated directly from the pump's control panel
- Additional features are set up with Grundfos GO

Application
Water Boosting

MULTILIFT – MDV

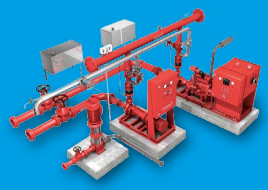
- Fully automatic operation and surveillance with smart controllers
- Complete pre-assembled units, including all connection material
- Robust, pressure and odour tight tanks made of wastewater resistant polyethylene
- Advanced tank, level sensor and pump design for reliable operation

Application
Wastewater

OXIPERM PRO

- Compact design ideal for confined spaces
- Low operating costs
- Adaptable for various disinfection tasks
- Reliability due to integrated control system

Application
Water disinfection

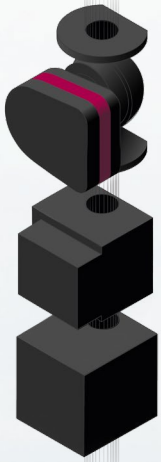


DUAL FIRE PUMP SYSTEM LISTED BY VDS

- Preconfigured modularized fire pump set with accessories built in sprinkler systems
- Fire pump sets assembled on common base frames with valves, pressure gauges, flow meters and pipes
- Minimal installation-to-operation time

Application
Fire fighting

DIGITAL TOOLS

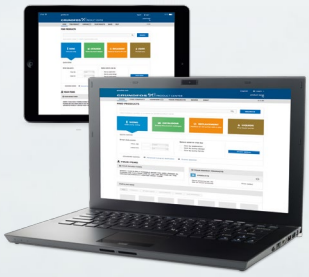


BIM ASSETS

Grundfos BIM assets use a data-light concept which can be rendered in a resolution to suit your needs and preferences and delivers high work speed and accuracy in all operational data and geometry.

- Purpose built Revit type catalogues
- Data-light concept
- Contains coarse, medium and fine renditions
- Exact geometry and electrical and piping connectors
- Includes operational, service and I&O data

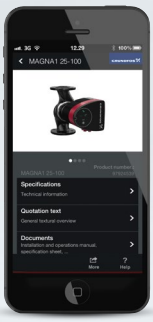
Available at Grundfos Product Center and bimobject®



GRUNDFOS PRODUCT CENTER

- An online tool to size pumps, browse the Grundfos product catalogue, find replacements and pumps for handling specific liquids
- Documentation includes pump curves, technical specs, BIM assets, CAD drawings, spare parts, videos, and more
- Optimised for your PC, tablet or smartphone

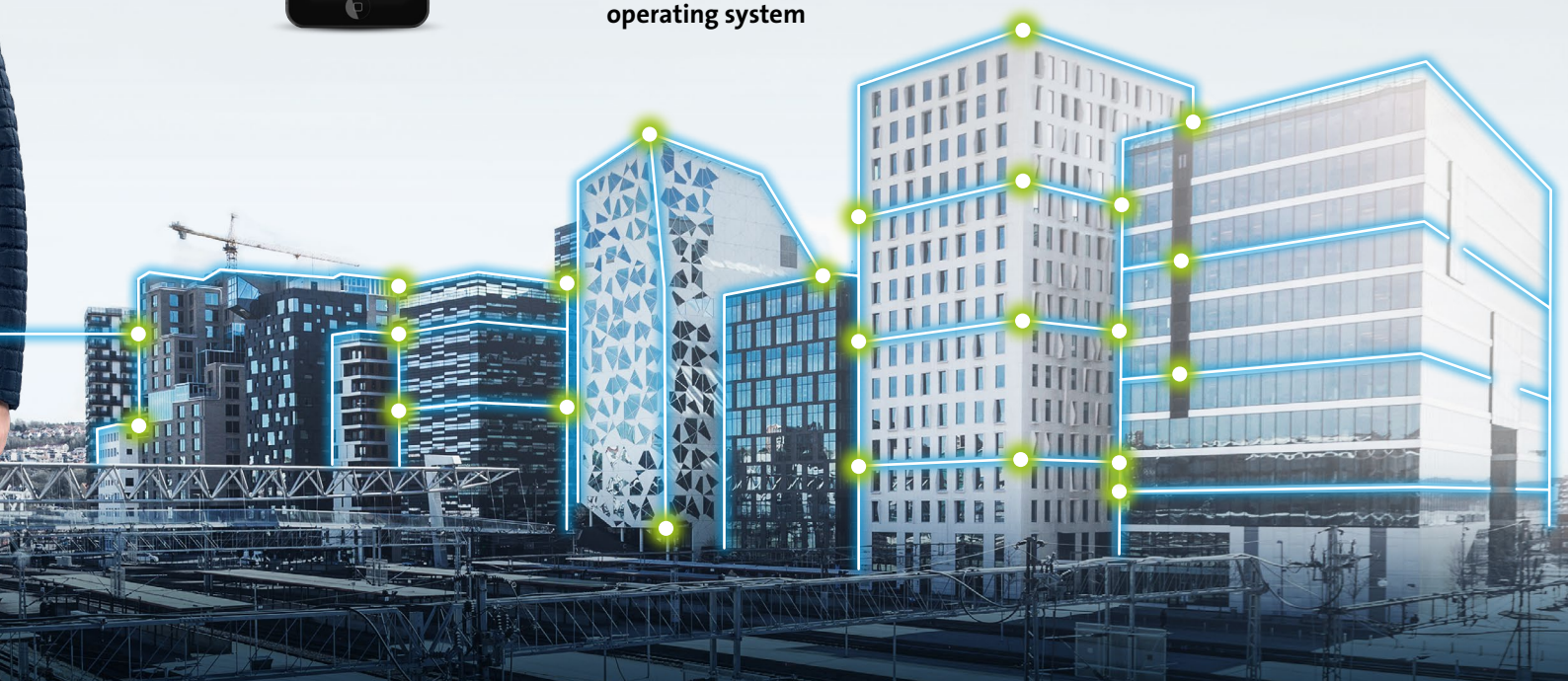
Visit the Grundfos Product Center at product-selection.grundfos.com



GRUNDFOS GO

- The market's most comprehensive platform for mobile pump control and pump selection
- Allows you to save time on everything from commissioning, data collection and reporting to sizing and replacement
- Offers intuitive, handheld assistance and access to Grundfos online tools

The app can be downloaded to any device with an iOS or Android operating system



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Grundfos is one of the world's leading suppliers of solutions across the full range of pump applications – all the way from water supply to wastewater discharge.

In Grundfos Commercial Buildings, we think beyond the pump. Our goal is to understand the building as a whole in order to provide you with intelligent solutions that achieve a higher level of performance in your systems.

This approach has made us a preferred partner for contractors, consulting engineers and building owners looking to build the most sustainable and efficient commercial buildings in the world.

To learn more go to www.grundfos.sg

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