

# GRUNDFOS INTELLIGENT PUMP SYSTEMS FOR COMMERCIAL BUILDINGS



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think  
innovate

**GRUNDFOS** 



**WITH 5.6 MILLION  
COMMERCIAL BUILDINGS  
CONSUMING 20%  
OF OUR COUNTRY'S ENERGY,  
IT'S TIME FOR  
INTELLIGENT  
SOLUTIONS.**

There are more than 5.6 million commercial buildings in the United States today, totaling over 87.1 billion square feet — from skyscrapers and schools to hotels and hospitals. These buildings account for more than 20% of our country's energy consumption and face continuous pressure to reduce usage and join the growing ranks of those seeking LEED and ENERGY STAR certification. That's why Grundfos offers a range of intelligent systems for any application, for both new construction and retrofits, to help you improve overall energy efficiency without sacrificing comfort or reliability.

## HEATING & COOLING

Keep the people in your building comfortable while reducing your energy consumption, costs and environmental footprint. Grundfos pump systems adapt continuously to system demands.



## DISTRICT ENERGY CENTRAL PLANT

Heat and cool a series of buildings with optimal efficiency through a connected system. Grundfos solutions maintain comfort while decreasing your energy consumption and life cycle costs.



## WASTEWATER

Balance your water system performance and reliability with cost efficiency and serviceability. Grundfos can design your entire system to meet your specific needs, leveraging high-quality components and decades of expertise.



## PRESSURE BOOSTING

Keep pressure consistent throughout your building, from floor to floor, all day long. Grundfos boosting systems make it possible with optimal efficiency.



## WATER TREATMENT

Ensure safe, clean water throughout your building with the highest level of efficiency. Grundfos chlorine dioxide disinfection systems deliver superior performance.



## RAINWATER HARVESTING

Reduce your water consumption and improve overall building sustainability by collecting rainwater for non-potable uses. Grundfos rainwater harvesting systems feature integrated smart controls for energy-efficient operation.



## FIRE PROTECTION

Rest assured that your pump is reliable in emergency situations, regardless of the type of fire protection system in your building. Grundfos provides a range of specialized solutions that allow you to focus on what's important in the event of a fire.



# PUMPING INTELLIGENCE FOR TODAY'S SMART BUILDINGS

High-performing buildings require reliable, high-performing pumps that can meet your evolving needs. Grundfos has designed intelligent pump systems that address your changing demands by allowing you to take control of your entire system. Smart control modes allow our pumps to automatically adjust to the most critical system demands, to ensure optimal temperature, flow and pressure without compromise. Grundfos gives you a pump system that helps you achieve the performance you're looking for, while increasing the efficiency of any application.

## GRUNDFOS SYSTEMS

Our intelligent pump systems are optimizing the way pumps and drives work with control and protection, measurement, and communication units as part of one system.



## GRUNDFOS COMMUNICATION

It's easy to control our intelligent pump systems from your own building management system (BMS) because our pumps can talk to every BMS. The MLE motor easily integrates with many communication network protocols, including the two leading protocols: BACnet and LON.

Looking for a mobile option? The Grundfos GO application gives you full control over pump performance and easy access to information and assistance for the Grundfos online tools. So get ready to save valuable time on pump control, data collection and reporting with the most comprehensive mobile platform on the market.

## GRUNDFOS INTELLIGENCE

- **Improved system reliability:**  
Reduced downtime and maintenance costs
- **Best-in-class energy efficiency:**  
Up to 50% energy savings and 25% reduction in life cycle costs per year\*
- **Better system performance:**  
Optimized process control through targeted functionality and extended measuring capability
- **Increased simplicity:**  
Built-in functionalities substitute for external components and control equipment



*\* Figures are based on a pump with a 4.02 HP motor in an application running 12 hours per day, 220 days per year. Average CO<sub>2</sub> per HPH is set to 0.816 lbs. Life cycle cost calculation is based on a 10-year period.*

# FEATURED PRODUCTS

There are many types of commercial buildings — from skyscrapers to hospitals and more. But they all have a few things in common when it comes to what they need from their pump systems. Of course, a key driver is optimal efficiency to meet today's rigorous energy consumption standards. Grundfos answers the call with a range of intelligent pump systems that don't sacrifice power for efficiency.

But energy efficiency is just one hallmark of our product range. Our design and engineering expertise also addresses and delivers upon our customers' other crucial must-haves:

- ✓ **Compact footprint**
- ✓ **Lower operating costs**
- ✓ **Quick plug-and-pump installation**
- ✓ **Easy integration**
- ✓ **Improved reliability**
- ✓ **Simplified maintenance**
- ✓ **Grundfos GO compatibility**



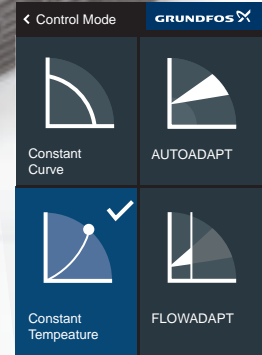
In our featured products, the MLE motor with built-in intelligent controls combines a VFD and a permanent magnet motor to deliver high efficiency and optimal performance.

## OVERALL EFFICIENCY

- Most efficient motor; two levels above NEMA Premium
- Up to 10% reduction in energy costs over NEMA Premium
- Up to 50% increase in annual energy savings with integrated variable frequency drive
- Up to 1 ton less CO<sub>2</sub> produced annually (per 4 HP)

## INTELLIGENT CONTROLS

- Multiple control modes that can be prioritized: constant T, P,  $\Delta T$  or  $\Delta P$
- Prolonged pump life because it is running based on demand
- Up to 25% reduction in payback time



## MAGN3

- Optional CIM cards for BMS integration
- AUTOADAPT self-adjusting set point
- Built-in heat energy meter
- Flow: max. 346 GPM
- Head: max. 58 feet
- Liquid temperature: 14 °F to 230 °F

### APPLICATIONS

Heating & Cooling  
Hot Water Recirculation



## TPE3

- Control modes: Autoadapt, proportional pressure, constant  $\Delta P$  and/or  $\Delta T$ , constant curve
- Wireless control of up to 4 pumps in parallel utilizing cascade mode or duty / stand-by
- Built-in heat energy meter
- FLOWADAPT eliminates the need for a balancing valve
- Capacity: max. 352 GPM
- Head: max. 82 feet
- Liquid temperature: -13 °F to 284 °F

### APPLICATIONS

Heating & Cooling  
District Energy  
Hot Water Recirculation



## CRE

- Vertical multistage centrifugal pump
- CIM card for BMS integration
- Quick, 15-minute cartridge seal change
- Integrated sensor available
- Flow: max. 450 GPM
- Head: max. 820 feet
- Liquid temperature: -22 °F to 248 °F

### APPROVALS:

System NSF 61/372 Certified  
UL® Listed Packaged Pumping System

### APPLICATIONS:

Heating & Cooling  
Hot Water Recirculation  
Boiler Feed  
Pressure Boosting



## LCSE

- Compact, close-coupled design, 35% smaller than traditional frame-mounted pumps
- Lifetime alignment guarantee
- No baseplate grouting or laser alignment required
- Quick-change seals
- Double volute /suction splitter design
- Flow: max. 1,900 GPM
- Head: max. 380 feet
- Liquid temperature: 10 °F to 275 °F

### APPLICATIONS:

Heating & Cooling  
District Energy



## VLSE

- Compact vertical in-line split coupled pump
- Grundfos sensor technology for proportional pressure
- Vertical shaft configuration for longer seal and bearing life
- Suction baffle for smooth, quiet pump operation
- Lifetime alignment guarantee
- Flow: max. 1,900 GPM
- Head: max. 420 feet
- Liquid temperature: 10 °F to 275 °F

### APPLICATIONS:

Heating & Cooling  
District Energy  
Pressure Boosting



## HYDRO MULTI-E

- Allows 2–3 CRE pump configurations
- Integrated, pre-tested components and pre-loaded pump curve data
- Graphic display of master pump or Grundfos GO app for easy control
- Energy-efficient VFD
- Flow (2–3 pumps): max. 460 GPM
- Head: max. 475 feet
- Liquid temperature: 32 °F to 176 °F

### APPROVALS:

System NSF 61/372 Certified  
UL Listed Packaged Pumping System

### APPLICATIONS:

Heating & Cooling  
District Energy  
Pressure Boosting



## HYDRO MPC

- 2–6 CRE pump configurations
- CU352 controller includes application-optimized and customizable software
- Multisensor zone control
- Built-in redundancy and monitoring settings, along with data logging capabilities
- Pump sequencing based on highest efficiency
- SCADA communication capable via Ethernet and all industry standard BUS protocols
- Flow (2–6 pumps): max. 3,600 GPM
- Head: max. 800 feet
- Liquid temperature: 32 °F to 176 °F

### APPROVALS:

System NSF 61/372 Approval  
OSHDP — Seismic Certification (OSP-0491-10)  
UL Listed Packaged Pumping System

### APPLICATIONS

Heating & Cooling  
District Energy  
Pressure Boosting



## GRUNDFOS ENGINEERED SYSTEMS

Grundfos engineers work with you to build complete, site-specific solutions with the most efficient pump technologies and intelligent controls available. We handle installation and startup, operating as a single source of responsibility to minimize your costs. Depend on GES for:

- Packaged heat transfer systems
- Packaged chiller plants
- Packaged pumping systems
- Packaged boiler systems and plants

To see our full list of solutions for commercial buildings visit [Grundfos.US/CBS](https://www.grundfos.us/cbs)

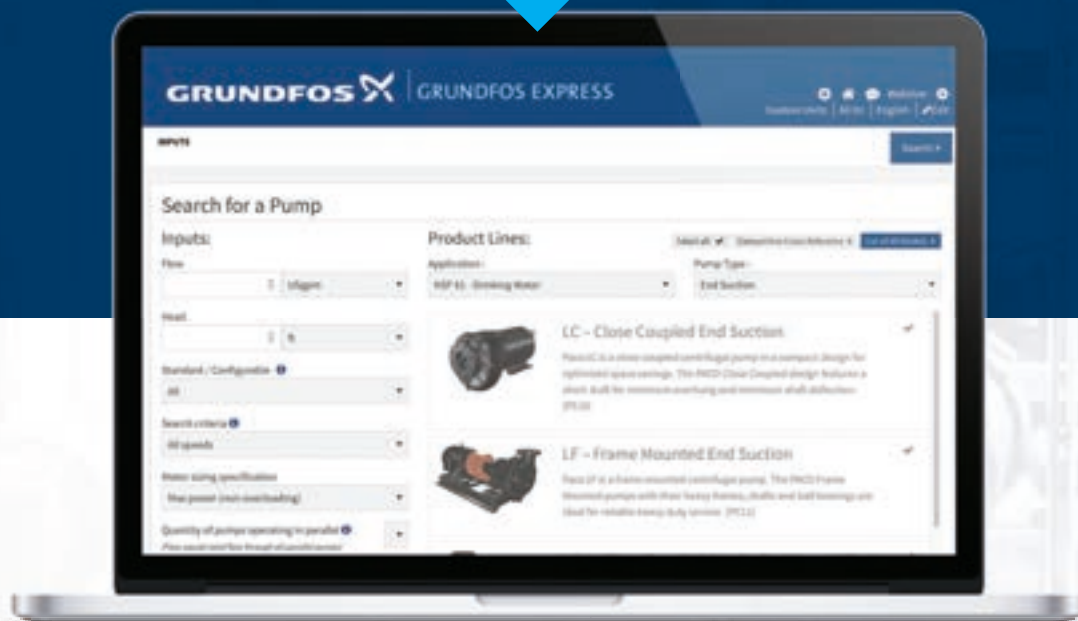
# EXPRESS SOLUTIONS FOR YOUR EXPRESS NEEDS

No matter what market your customers operate in, the Grundfos Express pump selection tool quickly finds a pump to meet their specific needs. Just enter your customers' equipment requirements and Grundfos Express provides details on matching products, including:

- Specs and performance data
- Submittal documents
- Pump schedules

Plus, you can save your inputs in the project portal for future use!

Find the right pump for your customers quickly and easily at [GrundfosExpress.com](https://www.grundfos.com/express)



# EDUCATION ON DEMAND WITH GRUNDFOS TECHNICAL INSTITUTE

The Grundfos Technical Institute makes it a breeze to fulfill your Professional Development Hours (PDH) and Continuing Education Units (CEU) when you register for our online training portal. And since it's accessible anytime from any device, you can brush up on your technical understanding and complete your training at a time that's right for you.

## THE ONLINE TRAINING PORTAL OFFERS A WEALTH OF CONTENT, INCLUDING:

- Interactive courses, webinars and face-to-face training
- YouTube videos and podcasts
- Materials that range in complexity from basic to advanced

Stay on top of your field at [Grundfos.US/Training](https://www.grundfos.us/training)



GRUNDFOS  
**TECHNICAL  
INSTITUTE**

Grundfos is a global leader in advanced pump solutions and a trendsetter in water technology. Grundfos supplies complete pumping systems and solutions for buildings, industry and every aspect of water use. An annual production of more than 16 million pump units makes Grundfos a leading pump manufacturer, with more than 18,000 employees worldwide. Key products include circulator and centrifugal pumps for industry, water supply, sewage and dosing; as well as standard and submersible motors and state-of-the-art electronics for monitoring and controlling pumps. In the U.S., more than 1,200 employees staff operations, sales and service facilities in Illinois (North American HQ), Kansas, Pennsylvania, California, Texas, Indiana and Alabama. Grundfos provides comprehensive market coverage in North America through a number of marquee product brands, with more than 765 years of service combined.

High on the company's corporate agenda is an active commitment to improving the environment. Grundfos contributes to global sustainability by pioneering technologies that improve quality of life for people and care for the planet. For more information, visit [www.grundfos.us](http://www.grundfos.us), or follow us on Facebook.