

# GRUNDFOS ENGINEERED SYSTEMS FOR COMMERCIAL BUILDINGS

EFFICIENT PUMPING SOLUTIONS FOR  
ANY BUILDING APPLICATION



# COMPLETE RELIABLE SOLUTIONS TO FIT YOUR NEEDS

Every commercial building is unique, with its own distinct challenges and site-specific requirements. For more than 75 years Grundfos has been working with customers to provide reliable and energy-efficient pumping solutions for their unique applications — from off-the shelf products to custom solutions.

Cutting-edge pumps are the center of our business, but we also bring our years of experience from working with our customers, understanding their pumping needs to deliver the highest-quality packaged pumping solutions. The expert team at Grundfos Engineered Systems (GES) partners with you to design a system that delivers the reliability and energy efficiency, in the time frame and budget your unique job requires.

## **Expertly Designed Packages**

Grundfos Engineered Systems (GES) packages arrive on site pre-wired, pre-piped, pre-commissioned and pre-tested for ease of installation. Unlike component-built systems — which rely on varying operations, costs and timelines — our complete GES packages are sourced entirely by us; which means you benefit from having one: supplier, point of contact, production schedule, ship date, and total package cost. When the GES package arrives, it's as easy as plug-and-pump.

# COMMERCIAL BUILDINGS CHOOSE GRUNDFOS ENGINEERED SYSTEMS

Grundfos understands every commercial building application is different, and we've successfully provided tailored solutions to our customers for years. No matter your building type and goals, Grundfos can help. Whether your data center needs to maximize uptime and energy efficiency; or your office building needs simple and flexible designs that are easy to use and deliver reliable comfort; or central plant options for achieving superior year round efficiency; or a district plant that requires sophisticated arrangements to deliver larger delta T. From day one, you can count on Grundfos to be your partner with the experience and expertise to deliver.

## Some of the commercial buildings we've helped achieve significant returns include:

- K-12
- Higher Education
- Office Buildings
- Hospitals and Healthcare
- District Cooling and Heating
- Central Utility Plants
- Data Cooling Centers
- Retail
- Multi-family Residential
- Food and Beverage
- Oil and Gas

### SOLUTIONS FOR:

- Packaged chilled-water systems in Variable Primary Flow or Primary Secondary
- Packaged condenser-water systems
- Packaged hot-water systems
- Packaged heat transfer systems
- Packaged boiler plants

### APPLICATIONS FOR:

- Chilled water distribution
- Condenser water distribution
- Heating water distribution
- Geothermal loop
- District heating and cooling
- Pressure boosting

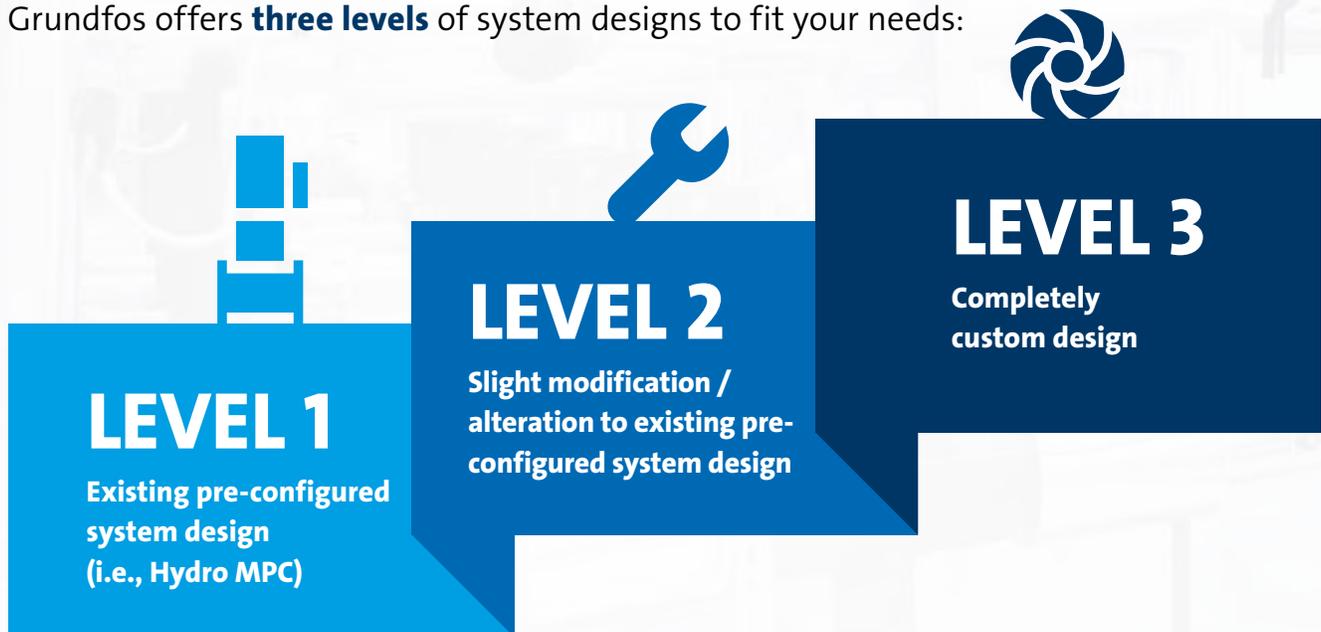
# OUR EXPERTISE

Grundfos pumps are at the heart of our packaged systems, and this ensures a timelier and more reliable and efficient packaged system since we as the pump manufacturer are doing our own packaging. Our team of engineers and experts brings **more than 80 years of collective experience** in developing customized packaged solutions to your project; and a team of specialized experts including application, electrical, controls and project engineers, and project managers will work with you from design, to scheduling, component assembly, delivery and after sale support.

We understand also that time is money, which is why we factor speed of delivery into the best-fit solution for your building. Our broad range of packages can be modified to deliver the most efficient and reliable solutions. Need something customized? Our team of engineers can customize a complete, high-quality system that's right for you.

All package solutions are built in our enclosed manufacturing facility to ensure fewer delays and on-time delivery. We test and optimize systems before they ship so you just plug and pump upon arrival.

Grundfos offers **three levels** of system designs to fit your needs:



# HOW TO GET STARTED

1

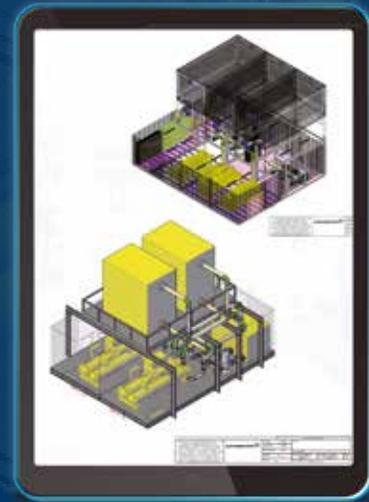
Contact your local Grundfos sales manager to discuss your project's needs, specifications, and budget.

2

Project dynamics during the design phase can often lead to changes to both the design and the system's components. Our team will manage these changes, along with fine-tune the design and component selection, saving you time.

3

- GES provides detailed submittal information for every component in the package
- Energy analysis data can be provided for more refined selections
- Detailed 2D, 3D, and BIM drawings are supplied per the design engineer's preference



4

GES packages are built in our **ISO 9001 manufacturing facility**, always following the best quality management standards. Components are procured, subassemblies are built, and packages are fully assembled and tested at our enclosed facility to guarantee optimum performance at startup.

5

Keep your GES solution running smoothly and increase its life with proper maintenance and service. We engineer our products and systems to last with maximum durability and reliability, and simplify their care with the easiest maintenance features. We recommend:

- Determining your spare parts stocking plan. Learn more about our flexible spare parts options, or request Grundfos OEM spare parts at [grundfos.us/spareparts](https://www.grundfos.us/spareparts)
- Locating your local Grundfos service specialist, they are conveniently located throughout the US and around the world to meet your needs. Find your Grundfos service specialist at [grundfos.us/service](https://www.grundfos.us/service)
- Requesting maintenance and/or service at [grundfos.us/service](https://www.grundfos.us/service). Our factory-trained technicians provide certified quality support for both regular maintenance and emergency needs

# TOP QUALITY, SERVICE & SUPPORT

We build all GES packages at our enclosed ISO 9001 manufacturing facility to ensure the highest quality construction, and to avoid timeline delays caused by inclement weather. GES packages undergo continuity testing and hydrotesting before being shipped to the installation location.

At start-up the standard 12-month manufacturer warranty goes into effect. Need additional assistance? We offer factory start-up, training and installation assistance as can be requested as an additional option with each package, as well as factory-authorized repairs.

## NEED ADDITIONAL ASSISTANCE?

Add factory start-up, training and installation assistance from Grundfos to your packaged system order.

## CERTIFICATIONS

- ISO 9001 manufacturing facility provides quality construction and value-added services
- ETL Certifications
- NSF Compliant materials
- UL Listing — Packaged Pump Systems (QCZJ)
- UL 508 — Industrial Control Equipment
- UL 508A — Industrial Control Panels
- UL 67 — Panelboards
- UL 50 — Enclosures for Electrical Equipment ANSI
- UL 778 — Motor-operated Water Pumps (US)
- Project Management (PMP)
- CAN/CSA-C22.2 No. 108 — Liquid Pumps (Canada)
- CAN/CSA-C22.2 No. 236 — Heating and Cooling Equipment (Canada)

Our systems  
comply with the  
**Buy American Act**

## TESTING

### Standard:

- Hydrotesting of all finished piping and component
- Continuity test of all power wiring for proper phasing and grounding

### Additional Options:

- Certified performance testing of pumps
- Certified performance testing of package
- Witness testing; in-person or virtual

***Let us know if you have additional testing requirements or needs, and our team will work with you to ensure they are met.***

# PUMPS

Grundfos is a proven global leader in advanced pumping solutions and a trendsetter in water technology that deliver simplicity, innovation, efficiency and reliability. Offering comprehensive solutions for every aspect of water use, Grundfos can customize any of our pre-existing pumping systems to meet your needs or create something new using any component.



## CR, CRN, CRE

- Energy-efficient vertical inline multistage pumps available with integrated MLE variable speed motor to optimize energy efficiency. Expanded performance range offers more than 1,000 gpm and 1,000 feet of head



## CM, CME

- Horizontal multistage pumps provide a compact, reliable and quiet solution designed to work in a variety of applications



## LC, LCS

- Compact single-stage, end-suction, split-coupled pumps available with integrated Grundfos MLE motor, drive and control
- These pumps have traditionally offered a good balance between design point efficiency and first cost



## KP, KPVS

- Horizontal and vertical split-case pumps featuring innovative hydraulic design, low life-cycle cost and energy efficiency
- One of the most reliable and best performing pumps on the market. Best suited for large flow rate applications with tight space constraints and low sound/vibration needs



## VL, VLS

- Space-saving inline pumps with integrated motor, variable frequency drive and control with Grundfos sensor technology

To see our full list of pump solutions  
visit [grundfos.us/GES](https://www.grundfos.us/GES)

# MECHANICAL

GES systems arrive on a structural steel base with all the pumps, piping, valves, fittings, accessories, instrumentation, electrical and controls mounted on a skid or in an enclosure. The base and its accessories include options for customizing your perfect solution.

## Package System Construction

### Standard:

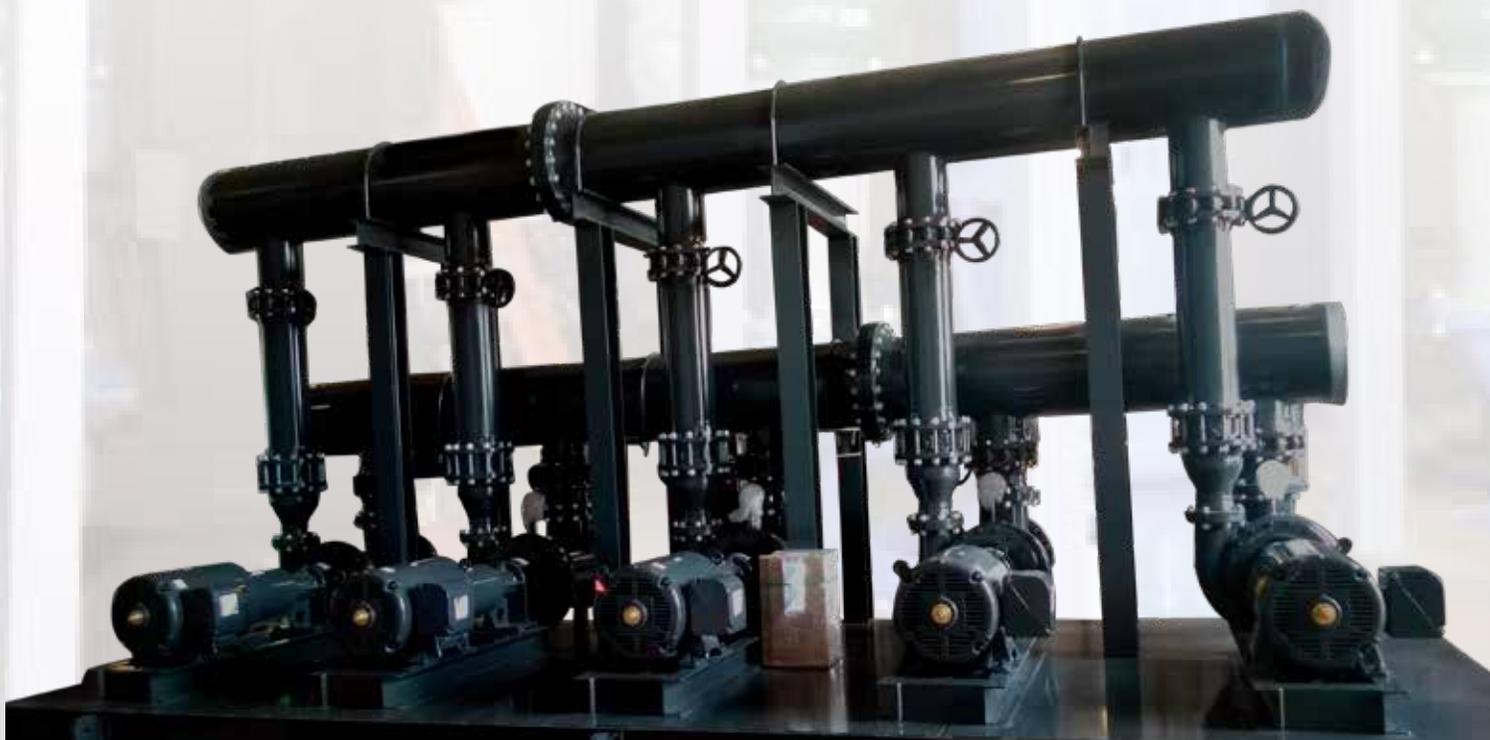
- Pumps
- Structural Steel Base with or without Steel Decking
- Carbon Steel Headers
- Isolation Valves
- Water Check or Combination Valves
- Suction Diffusers
- Pressure Sensors
- NSF/ANSI 61 and 372 compliant components
- Lifting Lugs

### Optional Accessories:

- Control Valves
- Flowmeters
- Diaphragm Tanks
- Buffer/Storage Tanks
- Chemical Pot Feeders
- Heat Exchangers
- Generators
- Dual, Self-Cleaning Basket Strainers

### Additional Accessories:

- Epoxy Coating for Corrosion Protection
- Stainless Steel Base
- Open Base for Field Grouting
- Galvanized/Stainless Steel Decking
- Removable Lugs
- Forklift Pockets
- Vibration Isolators
- Epoxy Coated Headers and Stainless Steel Headers



# ELECTRICAL

## Power Panel

All packages are typically designed with a single power panel, which connects all devices on the skid into one electrical point. Options are available to add transfer switches and generators to provide continuous power to the unit.

## Controls & Monitoring

### Standard:

- Dedicated Controls – CU 352 Intelligent Controller is the most advanced pump controller on the market. This out-of-the-box, ready to use controller features a full color graphical display and intuitive menu structure with a setup wizard that takes 5–10 minutes from installation to full functionality. It comes standard in a UL Type 12 enclosure for indoor/outdoor use.
- Grundfos CUE VFD
- Grundfos MLE permanent magnet motor with integrated VFD
- UL 508A Control Panel with UL Type 12 enclosure
- UL QCZJ Packaged Pumping System

### Additional Accessories:

- **Control HVAC:** Add more control feature options by upgrading to the Grundfos Control HVAC controller. This controller is designed specifically for HVAC applications, with the ability to control up to 26 zones and includes chiller bypass control.
- **Allen Bradley PLC:** GES can integrate Allen Bradley controls into our standard Grundfos program or integrate user-specified components or user-created programs into the system.
- **Grundfos Remote Management (GRM):** This Internet-based remote monitoring, management and reporting system for pump installations in water infrastructure and commercial applications, GRM provides data and alarms and allows users full control of their system from a PC or smart phone.
- **Demand-Driven Distribution:** Demand-driven distribution offers reduction of non-revenue water through Grundfos algorithm and satisfaction of critical point demand 24/7.



# STRUCTURAL WEATHER ENCLOSURES

Designed to withstand the harshest environmental conditions, each steel enclosure is built to standard specifications and can be added to our GES packages. Grundfos also offers portable and temporary options, including trailer enclosures, to serve short-term needs.

## Steel Enclosures

### Standard:

- Wall Thickness up to 3 ½" R-25 Value
- Roof Thickness up to 5" R-40 Value
- Wind load up to 175 mph
- System 3 Painting (Primer and finish coat) suitable for outdoor coastal applications
- LED light fixtures
- Indoor GFI receptacles
- Floor drains in every section

### Additional Accessories:

- HVAC:
  - Ventilation fan/louver system
  - Air-condition system
  - Unit heater
  - Dehumidifier
- Multiple room layout
- State certification label
- Facade — factory applied or prepared for field install

## Fiberglass Enclosures

### Standard:

- Wall thickness: 1"
- R-7 Value polyurethane insulation core
- 20 mil polyester-based gel coating

### Additional Accessories:

- Heating unit
- Ventilation
- Convenience receptacle
- Convenience lighting



# WHY CHOOSE GRUNDFOS

Grundfos is committed to solving our customers' challenges. The results are complete solutions that solve the problem, and not just a piece of it.

For more than 75 years we've been the global industry leader by focusing on innovation and driving new technologies with groundbreaking results. Over time our solutions have become global industry standards.

Grundfos believes in making a difference, not only for our customers, but also for the environment. Currently 10% of global electrical consumption comes from pumps. Grundfos is pushing technical innovation toward our goal of reducing that number by half.

Today we stand by our strong heritage as well as our vision for the future. Ours is a journey of excellence that includes doing what is best for our customers and mankind, and doing work that we can be proud of.

## GET STARTED TODAY

Find your local distributor and get started visit: [grundfos.us/info](http://grundfos.us/info)

Ready to purchase: [grundfos.us/purchase](http://grundfos.us/purchase)

Learn more: [grundfos.us/GES](http://grundfos.us/GES)



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 and LinkedIn.

Visit [grundfos.us/pei](http://grundfos.us/pei) to learn more about Department of Energy (DOE) pump energy index (PEI) requirements and PEI ratings on specific Grundfos models.