CUSTOM, EFFICIENT, PERFECT-FIT SOLUTIONS

Across the country, pumping stations and facilities face thousands of unique challenges and site-specific requirements. With no two projects exactly the same, you deserve a pumping solution as unique as your project. At Grundfos, we leverage our decades of experience and pumping expertise to design and engineer all components for your perfect fit, plug-and-pump Grundfos Engineered System (GES).

EXPERTLY DESIGNED, PLUG-AND-PUMP SYSTEMS

The systems begin with the selection of any number and combination of Grundfos pumps to best suit the operating conditions. Then, controls and monitoring components are integrated to run the pumps at their most efficient point. All GES packages are constructed on a common steel base and can be enclosed in a fiberglass or steel structure to meet your environmental conditions.

GES packages arrive on site pre-wired, pre-piped and pre-commissioned for ease of installation. Additionally, because the total packaged cost and production schedule are accurately determined long before installation, GES packaged systems eliminate the headaches of cost overruns and unforeseen operational problems often experienced with component-built systems.

APPLICATIONS

- Municipal Community Booster Stations
- Neighborhood Booster Stations
- Effluent and Transfer Pumping
- Stormwater Pumping
- Raw Water Intake
- Tank Fill
- Water Distribution
## MECHANICAL PUMPS

A global leader in advanced pump solutions and a trendsetter in water technology, Grundfos is known for its focus on innovation, efficiency and reliability. Grundfos pumps offer comprehensive solutions for every aspect of water use. Although any of our pumps can be integrated into our custom solutions, the following pumps represent those most often integrated into Grundfos Engineered Systems.

| CR, CRN, CRE | Energy-efficiency 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 |
| DDA | Chemical dosing pump for complex and demanding applications where the focus is on maximum process reliability |
| DSS | Grundfos DSS range from pre-engineered, standard one, two and three pump systems, to custom systems with multiple pumps and tanks all piped on a common skid complete with controls |
| Hydro MPC | Packaged pumping system designed for a wide range of applications including pressure boosting, HVAC, water transfer, and many more |

| Hydro Multi-B | Compact, reliable, and energy efficient constant pressure booster system |
| KP, KPV, KPVS | Horizontal and vertical split case pumps featuring innovative hydraulic design, low life-cycle cost and energy efficiency |
| LC, LF, LCS, LCSE | Compact single-stage, end-suction, split-coupled pumps available with integrated Grundfos MLE motor, drive and control |
| S Range | Designed for pumping raw water, unscreened raw sewage, water containing sludge and industrial effluent |
| SP | Submersible pumps renowned for high efficiency and reliability |
| VL, VLS, VLSE, VLC, VLSC | Space-saving inline pumps with integrated motor, variable frequency drive and control with Grundfos sensor technology |
| VT | Highly efficient vertical turbine pump provides a wide range of hydraulic and mechanical coverage; offered in numerous material and designs |

To see our full list of pump solutions visit [grundfos.us/ges](http://grundfos.us/ges)
**MECHANICAL**

Grundfos Engineered Systems arrive on a base with all the pumps, valves, accessories and controls mounted on a skid or in an enclosure. The base and its accessories include a number of options for customizing your perfect solution.

**Standard Skid Construction:**
Steel base with steel decking, lifting lugs and carbon steel headers

**Base Construction and Header Options:**
- Epoxy Coating for Corrosion Inhibitor
- Stainless Steel Base
- Aluminum Base
- Open Base for Field Grouting
- Galvanized / Aluminum / Stainless Decking
- Removable Lugs
- Fork Lifting Points
- Vibration Isolators
- Epoxy Coated Headers
- Stainless Steel Headers

**Standard Accessories:**
- Valves
- Diaphragm Tanks
- Pressure Sensors
- NSF / ANSI 61 and 372 compliant components

**Optional Accessories:**
- Flowmeters
- Dosing Skids
- Generators
- Dual, Self-Cleaning Basket Strainers

**ELECTRICAL**

**Power Panel**
All units are designed with a single power panel, which connects all devices on the skid into one electrical point. There are also options to add transfer switches and generators to provide continuous power to the unit.

**Standard Controls & Monitoring:**

**Dedicated Controls – CU352 Intelligent Controller:**
Our out-of-the-box, ready to use controller features a full color graphical display and intuitive menu structure with a setup wizard to get your new GES up and running in minutes. By using the CU352 with Grundfos CUE VFD drives, we optimize the speed and efficiency of the pumps in the GES package.

**Grundfos CUE/MLE VFDs:**
Specifically designed for operating pumps up to 350 hp, Grundfos VFDs communicate to the CU352 via GENIbus® (including data on frequency, state, voltage, current, power, energy and torque). User-friendly setup wizard takes 5-10 minutes from installation to full functionality.

**UL508A Control Panel with UL Type 12 enclosure**
- UL Type 3R, 4, 4X

**UL QCZJ Packaged Pumping System**
- Panel or remote mount drives
- Indoor or outdoor

**Controls & Monitoring Options:**

**Allen Bradley PLC and VFD:**
Grundfos Engineered Systems can integrate Allen Bradley controls into our standard Grundfos program or integrate user-specified components or user-created programs into the system.

**GRM Remote Management:**
An 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.

**MP204 Motor Protection and Information Module:**
This module monitors and protects pump station voltage, pump current, current asymmetry, power, energy, and insulation resistance. Works as a stand-alone device or transmits all data to CU352 via Grundfos GENIbus®.

**ABB, Danfoss and Square D Drives:**
Grundfos Engineered Systems are compatible with an array of drives.

**Standby Power Generation:**
Generator - Diesel / Liquid Propane / Liquid Natural Gas / Automatic Transfer Switch
**Structural**

Designed to withstand environmental challenges and site conditions, each Grundfos steel or fiberglass enclosure is built to standard specifications in our climate-controlled facility. Almost any option for heating and cooling, structural configuration and enclosure features can be added to our GES packages. In addition to our steel and fiberglass enclosures, Grundfos offers portable and temporary options, including trailer enclosures to serve short-term needs.

**Steel Enclosures:**
- Wall Thickness 3 ½” R-25 Value
- Roof Thickness 5” R-40 Value
- Wind load of 130 mph
- System 3 Painting (Primer and finish coat)
- LED light fixtures
- Indoor GFI receptacles
- Floor drains in every section

**Steel Enclosure Options:**
- HVAC:
  - Exterior wall mount
  - Mini split systems
  - Unit heater
  - Dehumidifier
- Multiple room layout
- State certification label
- Façade - factory applied or prepared for field install

**Fiberglass Enclosures:**
- Wall thickness: 1”
- R-7 Value polyurethane insulation core
- 20 mil polyester-based gel coating

**Fiberglass Enclosure Options:**
- Heating unit
- Ventilation
- Convenience receptacle
- Convenience lighting

**Service & Support**

All GES packages are built in our ISO 9001 manufacturing facility to ensure quality construction. Additionally, all packages undergo continuity and hydrotesting before shipping to the installation location.

All Grundfos Engineered Systems include a 12-month standard warranty from start-up as well as preventative maintenance. Our expert team offers factory start-up, training and installation assistance as an option with every package, as well as factory-authorized repairs.

**Certifications:**
- ISO 9001 manufacturing facility provides quality construction and value-added services
- UL 508A Industrial Control Panels
- ETL Certifications
- NSF Compliant materials
- UL - Packaged Pump Systems (QCZJ/7):
  - UL 508 – Industrial Control Equipment (US)
  - UL 508A – Industrial Control Panels (US)
- ANSI/UL 778 – Motor-operated Water Pumps (US)
- CAN/CSA-C22.2 No. 108 – Liquid Pumps (Canada)
- CAN/CSA-C22.2 No. 236 – Heating and Cooling Equipment (Canada)

**Testing**
- Hydrotesting of all finished piping and components up to 300 psi
- Continuity test of all 480V power wiring for proper phasing and grounding

**Testing Options:**
- Certified performance testing of pumps
- Certified performance testing of package
- Internet based witness testing

GES Facility – Brookshire, TX
NEIGHBORHOOD BOOSTER
Design Flow: 700 GPM at 150 PSI
Headers: 6” SS
Pumps: (2) Grundfos CRN 15-2 75 HP Vertical Multistage
Controller: Customer Supplied
VFDs: Grundfos CUE

COMMUNITY BOOSTER NOMINAL FLOW AND EMERGENCY FLOW
Design Flow: 1900 GPM at 150 PSI
Headers: 10” SS
Domestic Pumps: (3) Grundfos CRE 32-2-1 7.5HP Vertical Multistage
Emergency Flow Pumps: (2) Grundfos CR 150-1 30HP Vertical Multistage
Controller: Grundfos CU352
VFDs: Grundfos CUE

COMMUNITY BOOSTER WITH STEEL ENCLOSURE
Design Flow: 2000 GPM @ 150 PSI
Headers: 8” Carbon Steel w/ Epoxy Coating
Pumps: (4) Grundfos CR 90-1 20HP Vertical Multistage
Controller: Grundfos CU352
VFDs: Grundfos CUE
Enclosure: Painted Steel

COMMUNITY BOOSTER WITH STEEL ENCLOSURE AND FAUX BRICK EXTERIOR
Design Flow: 272 GPM @ 255.1’
Headers: 6” SS
Pumps: (2) Grundfos CR 20 15 HP Vertical Multistage
Controller: Grundfos CU352
VFDs: Grundfos CUE
Enclosure: 10’x11’x9’ Steel Enclosure w/ Brick Veneer (Factory Installed)
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 US, more than 1,200 employees staff operations, sales and service facilities in Illinois, 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, or follow us on Facebook and LinkedIn.