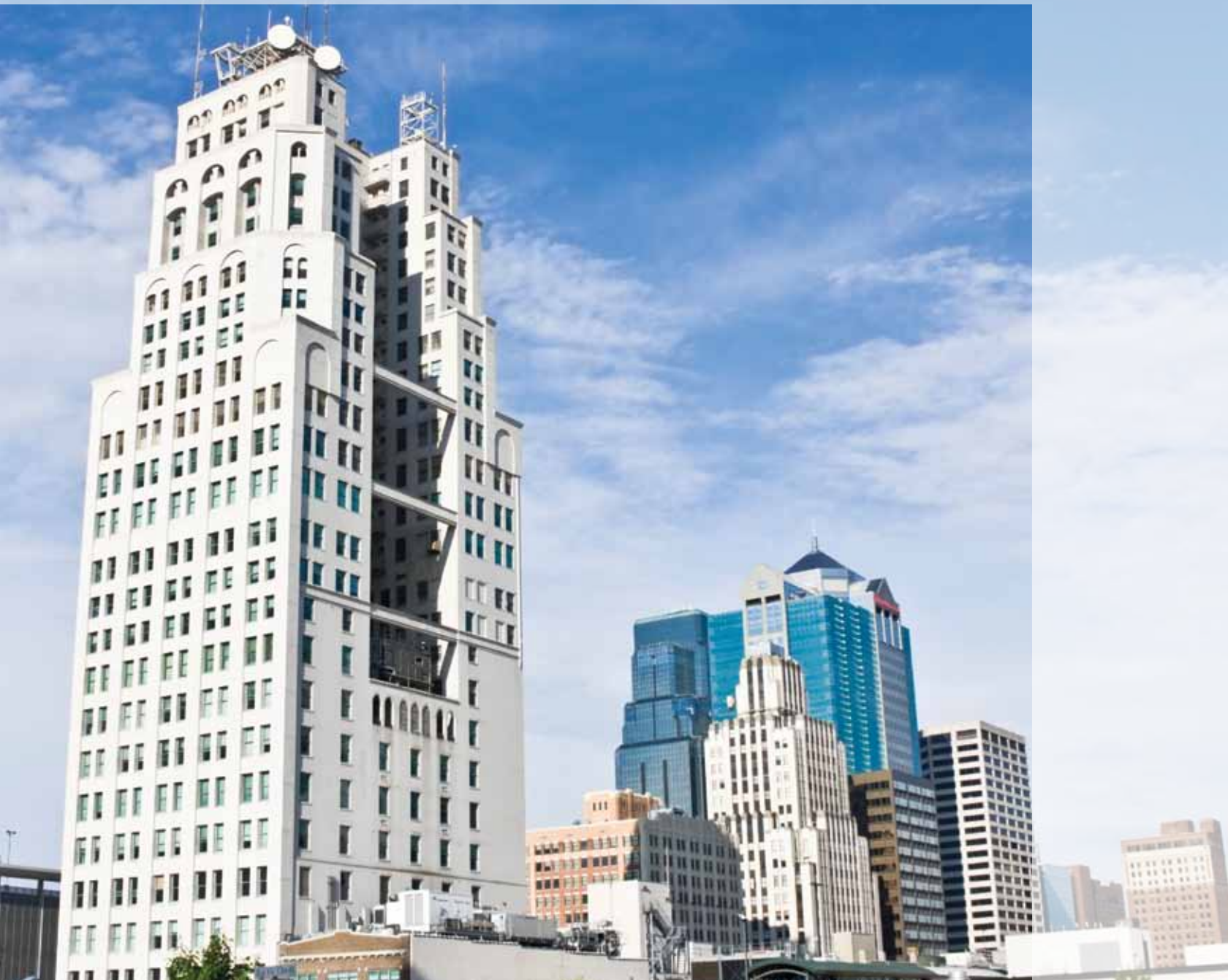


Dynamic Pressure Boosting Solutions from Grundfos



be
think
innovate

GRUNDFOS 

Superior Boosting and State-of-the-Art Reliability and Efficiency

THE OPTIMAL CHOICE FOR RELIABLE AND EFFICIENT PRESSURE BOOSTING

Grundfos pressure boosting solutions are the optimal choice for commercial building, water supply, industry, and irrigation applications.

Our complete, packaged systems – the Grundfos Hydro MPC BoosterpaQ®, Hydro Multi-E, and CRE-Plus – are all UL-listed, use pumps with NSF 61 approval, and provide consistent, reliable and efficient pressure boosting to meet capacity requirements for your application.

COMMERCIAL BUILDINGS

Water flows can vary significantly throughout the day and place extraordinary demands on pumping equipment in commercial installations. Grundfos pressure boosting systems are designed to handle these challenges to provide comfortable and constant water pressure for users in:

- › High-rise/multi-story buildings
- › Hotels
- › Apartments
- › Schools and dormitories
- › Other institutional buildings

WATER SUPPLY

Our systems are ideal for meeting capacity requirements with optimal efficiency. You can be assured of maintaining constant pressure in your waterworks applications and water distribution networks.

INDUSTRY

Your industry can benefit from using a Grundfos pressure boosting solution. Our systems are manufactured to handle even the most difficult applications with ease and accuracy.

- › Food industries (dairy, brewing, processing)
- › Petrochemical, pharmaceutical, and metal industries
- › Water treatment plants
- › Tourism and recreation (water parks, theme parks, fountains)

IRRIGATION

Our packaged boosting solutions can help you conserve water, optimize crop yields, ease demands on piping networks, and automatically adapt performance at any pressure zone during the irrigation cycle. Grundfos pressure boosting systems provide dependable irrigation for:

- › Commercial landscaping
- › Agriculture
- › Sports arenas and golf courses
- › Parks and other recreational settings
- › Nurseries

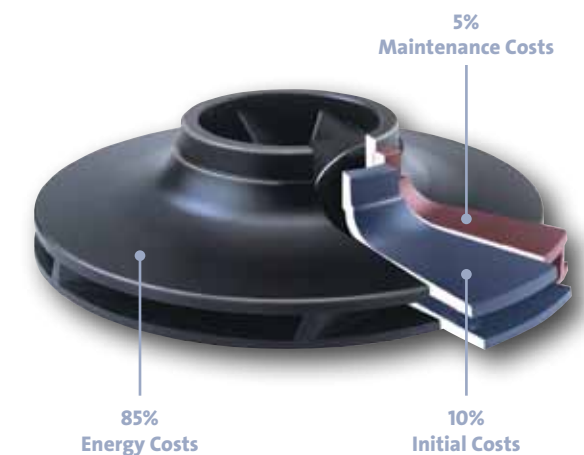
TAKING RESPONSIBILITY WITH SUSTAINABLE SOLUTIONS

When you specify or install a Grundfos pressure boosting system, you have the assurance that you're doing your part to conserve water, energy, and other precious resources.

Sustainability has long been at the forefront of our processes, and we continue to pioneer innovative designs that support sustainability.

On average, power consumption accounts for 85% of all costs incurred during the life cycle of a pump – nine times more than the initial purchase price and cost of regular maintenance. So, even the smallest improvement in efficiency can translate to sizeable savings.

By choosing a Grundfos pressure boosting solution, you will be minimizing your life cycle costs while saving energy and reducing waste.

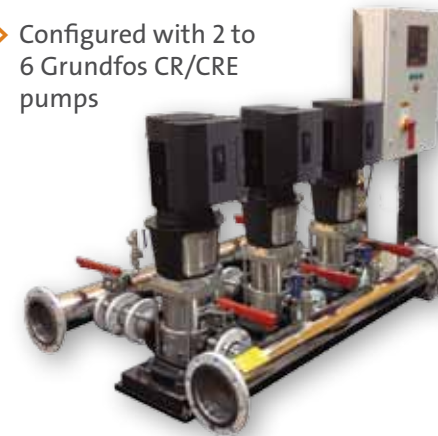


The Grundfos Booster Program – Complete, Comprehensive Systems



HYDRO MPC BOOSTERPAQ®

- Fully integrated systems (with advanced controls) utilizing combinations of variable-speed and on/off-controlled pumps (-E, -F, -S)
- Configured with 2 to 6 Grundfos CR/CRE pumps



HYDRO MULTI-E

- Parallel-mounted 2, 3, or 4 pump systems utilizing all Grundfos CRE variable-speed pumps size up to 10 hp
- Pump control integrated in terminal box



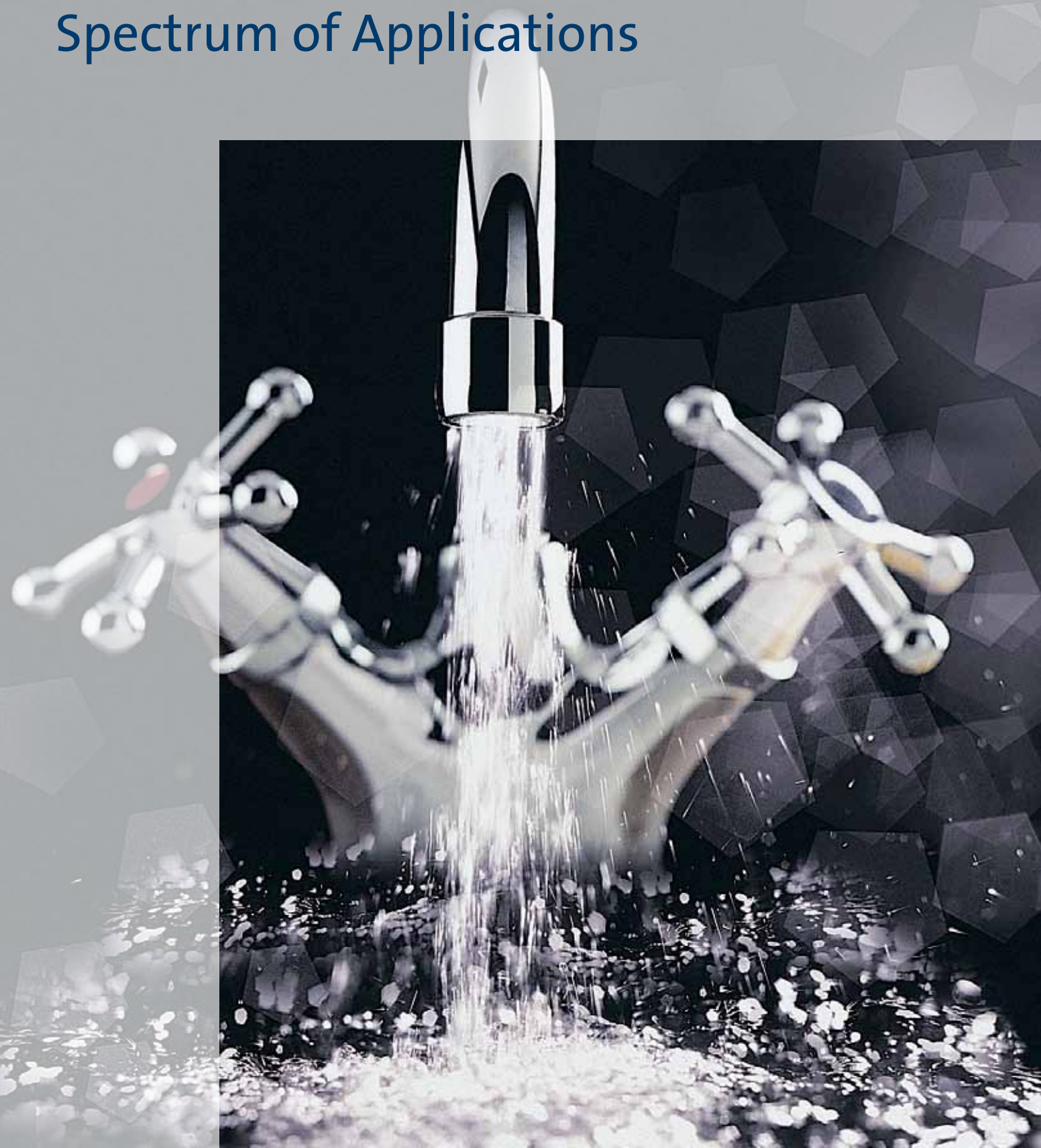
CRE-PLUS

- Single pump variable-speed systems
- Pump control integrated in terminal box

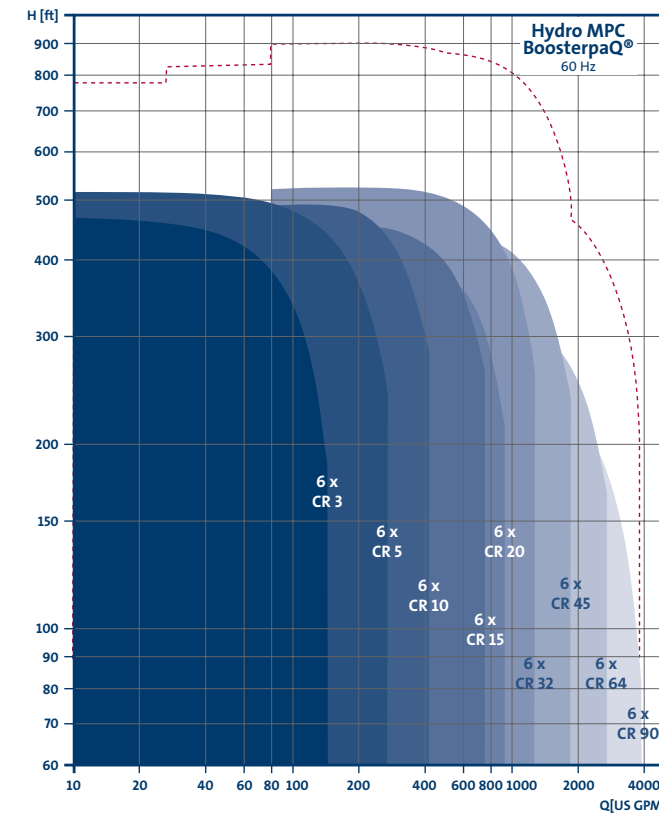


FEATURES/FUNCTIONS	HYDRO MPC BOOSTERPAQ®	HYDRO MULTI-E	CRE-PLUS
UL-listed	♦	♦	♦
NSF61 Annex G 372 Listed	♦	♦	♦
Pumps are NSF 61 approved	♦	♦	♦
Constant-pressure control	♦	♦	♦
Stop function (no flow shutdown)	♦	♦	♦
Dry-run protection via digital input	♦	♦	♦
Automatic cascade control	♦	♦	
Automatic pump alternation	♦	♦	
Advanced control interface	♦		
Dry-run protection via analog input	♦		
Alternative set-points	♦		
Pump test run	♦		
Password protection	♦		
Clock program	♦		
Forced pump changeover	♦		
Proportional pressure control	♦		
Pilot pump	♦		
Set-point influence (via analog input)	♦		
Soft pressure build-up	♦		
Emergency run (via digital input)	♦		
Pump curve data loaded into controller	♦		
High-system pressure shutdown	♦		
Low-system pressure shutdown	♦		
Limit exceeded 1 (flow, level, temp., etc.)	♦		
Limit exceeded 2 (flow, level, temp., etc.)	♦		
End of curve protection	♦		
Ethernet connection (built-in web server)	♦		
Estimated flow-rate read out	♦		
Built-in logging capability	♦		
Battery back-up capability	♦		

Performance Ranges That Cover a Spectrum of Applications

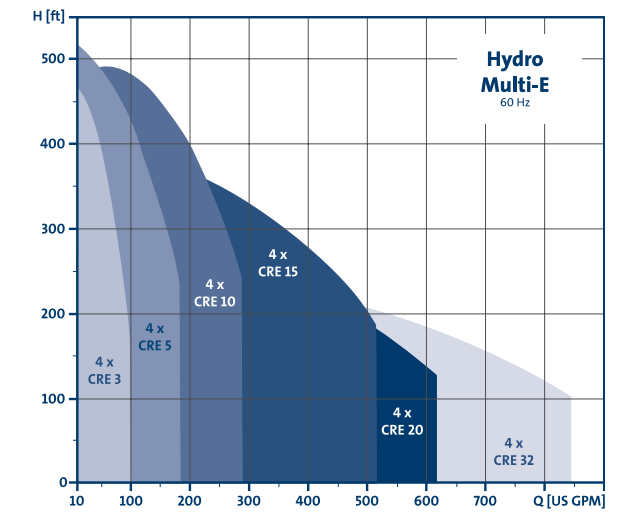


HYDRO MPC BOOSTERPAQ® PERFORMANCE RANGE

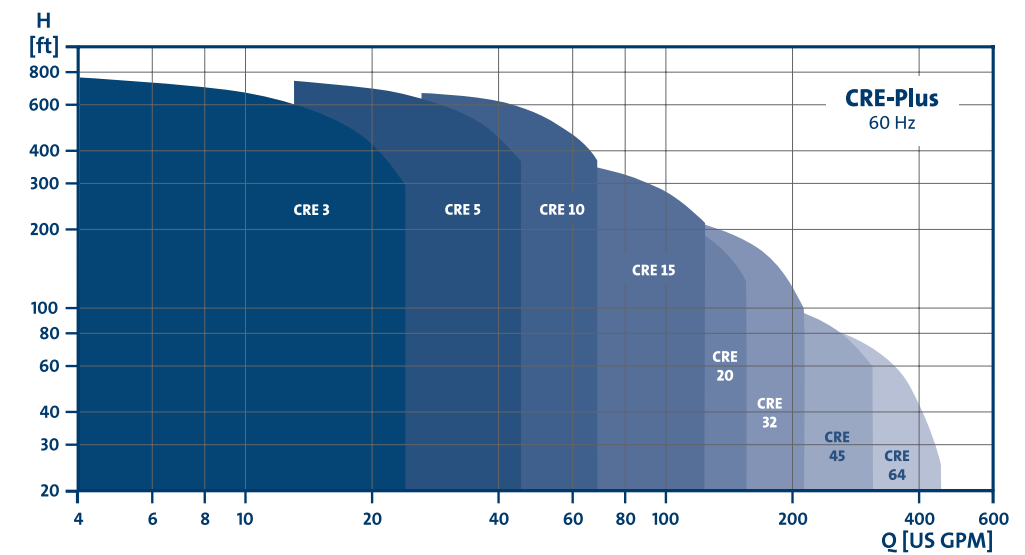


NOTE:
The area within the dotted line applies to Hydro MPC booster sets available on request. The performance range is based on the standard range of the CR and CRI pumps.

HYDRO MULTI-E PERFORMANCE RANGE



CRE-PLUS PERFORMANCE RANGE



Hydro MPC BoosterpaQ® – A “Fully Loaded” Packaged Solution

FEATURES AND BENEFITS

We can't say enough about the Hydro MPC BoosterpaQ® – our most complete pressure boosting system that features all the bells and whistles along with the reliability you've come to depend on from Grundfos pumps.

- › NSF 61 Annex G listed pump systems
- › Grundfos CR pumps, cascade control, stop function, and speed control help to lower energy consumption
- › Proven components that are designed, built, and tested by Grundfos guarantee reliable pump performance
- › Multiple configurations – with up to six pumps in parallel – provide a wide range of options for any application
- › Intuitive graphical interface and installation wizard makes the system user-friendly and easy to install and operate
- › Power consumption (Kw), energy consumption (Kwh), and specific energy (Kw/gpm) information available from display
- › Battery back-up capability on the controller
- › Built-in data logging capability. Logged values are graphically displayed on the controller and can be exported to the computer via standard connection
- › Estimated flow-rate read-out on display (no flow meter required)

The Hydro MPC BoosterpaQ® is an economical and flexible solution that provides constant pressure when you need it. Additional features available on the MPC include:

- › Standby pumps and redundant sensor
- › Min./max. pressure limits
- › Alternative set-points
- › External set-point influence
- › Pump test/change-over

TYPICAL APPLICATIONS

- › Water supply systems
- › Pressure boosting in high-rise buildings

- › Industrial plants
- › Irrigation systems
- › HVAC applications

MPC FUNCTIONS

The Hydro MPC BoosterpaQ® boasts a number of advantageous and customized functions.



Clock Program

Sets up to 10 events with day and time for each activation and deactivation.

Proportional Pressure/Friction Loss Compensator

Adapts the set-point to the current flow rate and used primarily in applications with moderate to high pipe system friction loss.

Stop Function

Stops the last pump if there is no or very little consumption with one of four stop parameter modes: energy-saving (factory setting), medium flow, highest comfort level, and customized.

Soft Pressure Build-Up

Ensures the smooth start-up of systems in one of two phases: pipe filling or pressure build-up.

Pump Start/Stop Speed

Controls the starting/stopping of pumps using one of two speed options: calculated speed or predetermined speed.

Emergency Run

Designed for systems where operation cannot be interrupted and has a higher priority than other operating modes.

Pump Curve Data

Pump curves are loaded into the controller to ensure optimal performance and flow estimation.

Pilot Pump

Used in situations where loads of the consumption profile fluctuate extensively.

Reduced Operation


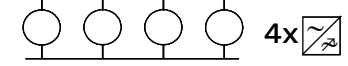
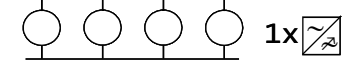
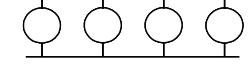
Can reduce the number of pumps available to operate or limit the maximum power consumption in situations with generator supplied power.

The Sky's the Limit with the Grundfos Hydro MPC BoosterpaQ®



CU352 — CONTROL INTERFACE



TYPE RANGE		
SYSTEM TYPE	CONTROL TYPE	SCHEMATIC
Hydro MPC-E	All E-pumps (E-pumps use integrated VFD/motor)	
Hydro MPC-E (CUE)	One external CUE VFD per pump	
Hydro MPC-F	One external VFD; rest fixed speed	
Hydro MPC-S	Only on/off control; all fixed speed	

Hydro Multi-E – An Innovative Solution for Pressure Boosting

ENERGY SAVINGS AND COMFORT

The Hydro Multi-E uses parallel mounted Grundfos CRE variable-speed pumps that have a reputation for providing the ultimate in efficiency and reliability for increased energy savings and comfort.

FEATURES AND BENEFITS

- › NSF 61 Annex G listed pump systems
- › Thoroughly tested systems arrive ready to install
- › Simple installation and operation
- › Integrated variable frequency drive motors allow unique control functionality for increased comfort for the user and decreased operating costs
- › Automatic pump changeover ensures equal wear and tear on all pumps in the system
- › Effective communication between pumps and control via the GENIbus/RS485 interface
- › High-quality material construction ensures durability and long life
- › Low-flow shutdown

The Hydro Multi-E is an affordable option for your pressure boosting applications. Additional features available with the Multi-E include:

- › Same plumbing as the Hydro MPC BoosterpaQ®
- › UL-listed
- › Advance programming via PC Tool
- › Set-point via Grundfos GO infrared remote
- › Simple program with few options and no panel
- › Redundancy
- › All components – pump, VFD motor, connections, and accessories – come from one supplier, which streamlines ordering and maintenance (single-source responsibility)

TYPICAL APPLICATIONS

- › Residential/commercial buildings
- › Municipal
- › Irrigation

E-PUMP FUNCTIONALITY

The Multi-E features a number of E-pump functionalities, including:

Setting via Control Panel

Set-point, start/stop, and max. curve (100% speed).

Reading via Control Panel

Set-point, operating indication, and fault indication.

Setting via Grundfos GO Remote

Set-point, start/stop, max. curve (100% speed), control mode, PI-controller, and stop function.

Reading via Grundfos GO Remote

Set-point, operating indication, and pump status.

External Signals

Inputs: sensor (fitted) and external fault.
Outputs: signal relay

AVAILABLE ACCESSORIES

- › Diaphragm tank (required for low-flow shutdown)
- › Grundfos GO Infrared remote control (for advanced settings and status information)
- › CIU/CIM SCADA communication modules. Available protocol: LON, Modbus, Bacnet, Profibus



CRE-Plus – An Intelligent Boosting Solution for Maximum Efficiency



VARIABLE SPEED MAKES THE DIFFERENCE

The CRE-Plus is one of a wide range of E-pumps offered by Grundfos. It utilizes “smart” pump technology to vary motor output according to demand so energy is not wasted on generating pump speed that isn’t required.

The CRE-Plus optimizes pumping efficiency at all times, saving energy, driving down costs, and lessening system wear and tear. CRE pumps maintain constant pressure at any time, even with the most challenging variations in demand.

FEATURES AND BENEFITS

- › NSF 61 Annex G listed pump systems
- › Superior efficiency plus variable speed control are a winning combination for saving on energy costs year after year
- › Grundfos CR pump and speed control help to lower energy consumption
- › Set-point via Grundfos GO Infrared control allows CRE pumps without a factory installed pressure sensor to control variables as demand changes
- › Low-flow shutdown
- › High-quality cartridge mechanical seal makes for easier maintenance and servicing without dismantling the pump
- › UL-listed package pump system
- › All components – pump, VFD motor, connections, and accessories – come from one supplier, which streamlines ordering and maintenance (single-source responsibility)

The CRE-Plus surpasses any other pump of its type in reliability and efficiency. This efficiency often makes it possible to power the pump with a smaller motor, thus increasing savings further.

TYPICAL APPLICATIONS

- › Water supply
- › Irrigation
- › Water treatment
- › Industrial plants

CONFIGURATION

The CRE-Plus is available with single and three-phase motors and a range of sizes. The complete pressure boosting system includes:

- › Pump
- › Motor frame
- › VFD with terminal box
- › Service disconnect switch
- › Inlet and discharge piping
- › Isolation valves
- › Check valve
- › Pressure transducer
- › Low pressure inlet switch

The diaphragm tank is shipped separately.



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Mixed Sources
Product group from well-managed
forests, controlled sources and
recycled wood or fibre
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