Proportional Differential Pressure System

Grundfos CRE-DP

The CRE-DP pump is a perfect pump for HVAC applications – a unitized solution that brings together the pump, motor, variable frequency drive and controls to make energy optimization of your HVAC pump as easy as possible.

The pump features "closed loop control" including proportional differential pressure and constant differential pressure; and "open loop control" from control signal in order for you to optimize your HVAC pumping application.

Proportional differential pressure control will save energy by adjusting the setpoint pressure based on flow rate-lower setpoint at lower flows and higher setpoint at higher flows. This control adjust pump performance based on how friction head affects the head requirement needed from the pump.

Proportional differential pressure control gives you the ability to simulate a remote mounted DP sensor, whereas constant differential pressure offers the ability to maintain differential pressure across the pump or at a remote location, or control signal from user or building management syste.

Key Features and Benefits

- Plug-and-pump solution speeds installation, commissioning and startup due to integrated components
- Factory mounted and with a pre-configured differential pressure sensor, system arrives optimized and ready for installation and operation
- Flexibility with multiple control modes: closed loop – proportional differential pressure, closed loop – constant differential pressure, open loop – external setpoint, constant curve
- Proportional pressure control logic can be employed to adjust the setpoint to simulate operation of remote sensor, delivering maximum energy optimization via the factory installed sensor reducing labor, installation time and cost
- Easy savings of up to 70% by upgrading fixed speed pumps with a CRE-DP and the proportional differential pressure control
- Data communication via the communication interface module (CIM) and the communication interface unit (CIU) ensure easy building management system integration
- Grundfos GO lets you use your smart phone to access interface for control, data collection and reporting, regardless of pump location
- Low rotating mass provides less wear and longer seal life
- Innovative design to minimize equipment footprint, speed up installation, ease of service and maintenance
- Single source responsibility ensures one manufacturer for pump, motor, drive and control
- Compliant with ASHRAE 90.1 energy standard for buildings

Applications

- Chilled water
- Hot water
- District cooling/heating systems
- Cooling towers

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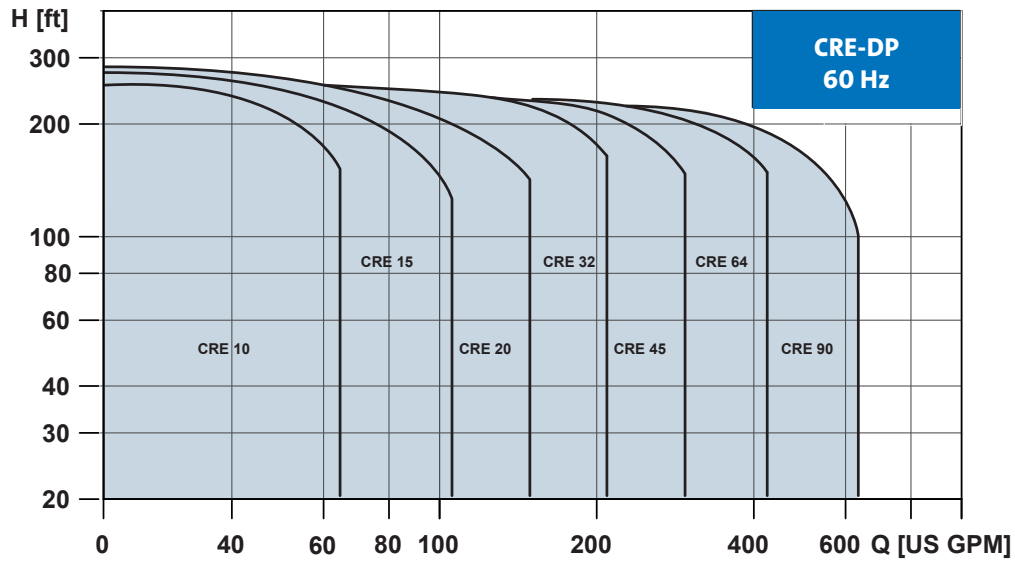
Possibility in every drop

Technical Data

CRE-DP information			
	Single-phase motors	Three-phase motors	
Power supply:	1x200-240V, 50/60 Hz	3x208-230V, 60 Hz	3x460-480V, 60 Hz
Power range:	0.5-2 hp	1.5-7.5 hp	1-30 hp
External setpoint signal:	10 kΩ potentiometer 0-10V 0-20 mA or 4-20 mA		
Built-In PI controller:	Yes		
Sensor Input signal:	0-20 mA or 4-20 mA 0-10V 24V supply for sensor included		
Start/stop input:	Input for external contact		
Signal relay:	Potential-free signal relay is included		
Pump control:	Grundfos GO or R100 infared remote control		
SCADA communication:	CIU/CIM SCADA communication modules with a variety of communication protocols		
EMC:	All pumps comply with “The Electromagnetic Compatibility Directive 89/336/EEC” EN61800-3		
Enclosure class:	TEFC, IP55 (IEC 34-5)		
Sensor:	Differential Pressure Sensor included		
Pump data:	Pump curve data loaded into motor		

Performance Data



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