Submittal Data

PROJECT:	UNIT TAG:	QUANTITY:
	TYPE OF SERVICE:	
REPRESENTATIVE:	SUBMITTED BY:	DATE:
ENGINEER:	APPROVED BY:	DATE:
CONTRACTOR:	ORDER NO.:	DATE:

Hydro MPC-E 6 CRE 45-3

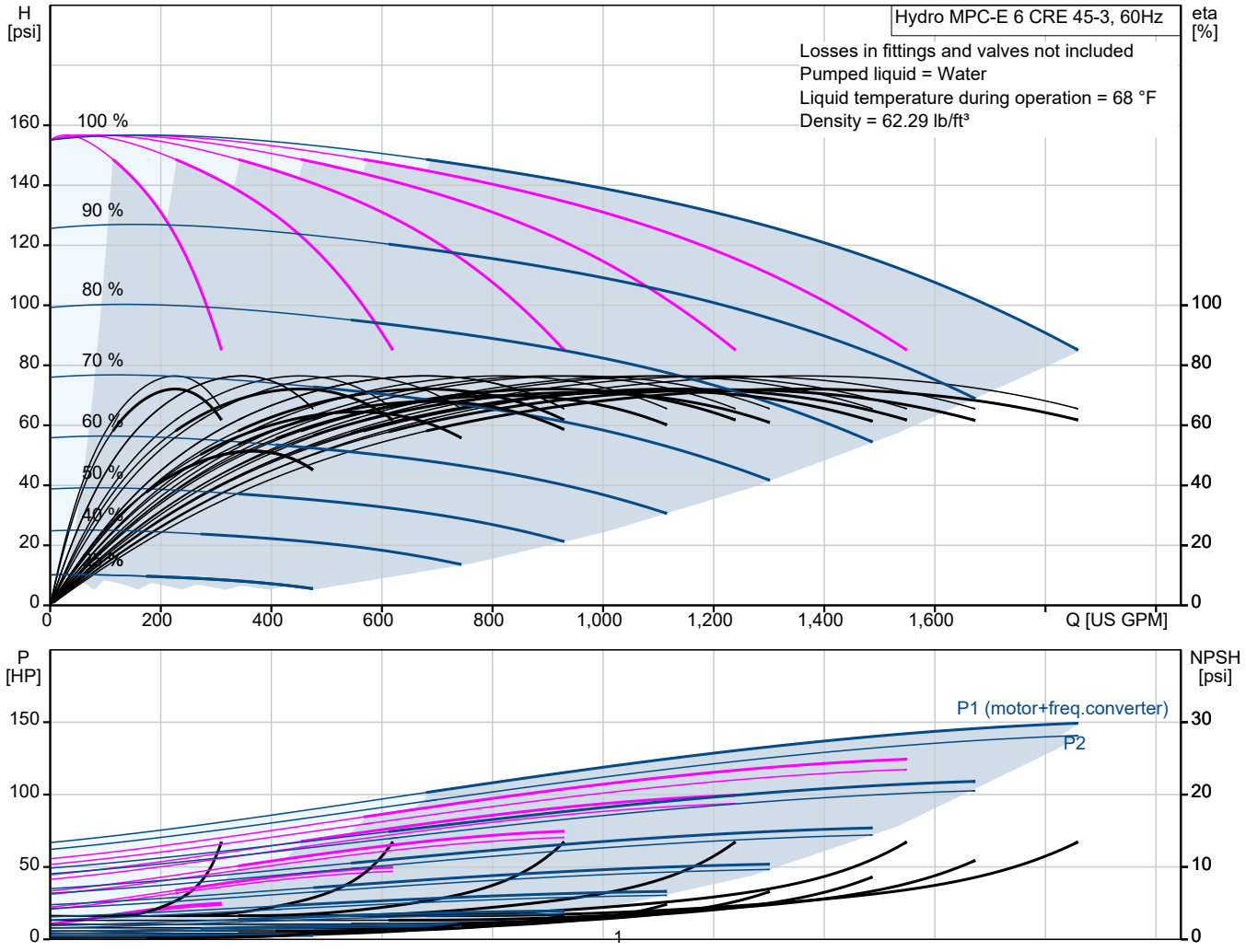
Advanced and energy efficient pressure boosting system for boosting of clean water. Available with 2-6 parallel connected pumps, Integrated advanced controller and all necessary fittings

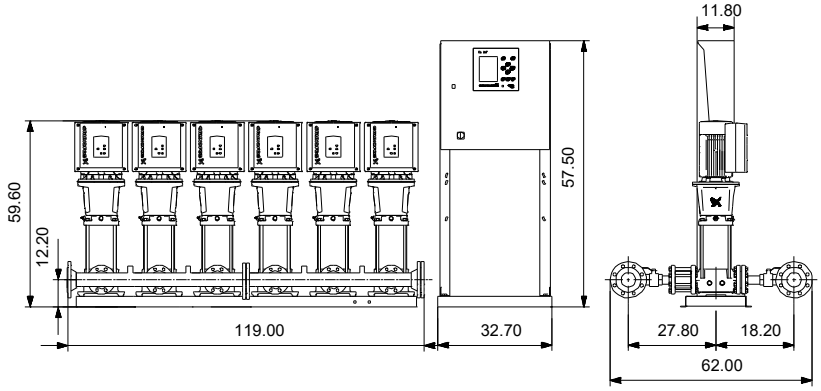
Note! Product picture may differ from actual product

Conditions of Service	
Liquid:	Water
Temperature:	68 °F
Specific Gravity:	1.000

Pump Data	
Liquid temperature range:	41 .. 179.6 °F
Maximum ambient temperature:	104 °F
Product number:	93067755

Motor Data	
Mains frequency:	60 Hz
Enclosure class:	IP54





Materials:

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Qty.	Description
1	**Hydro MPC-E 6 CRE 45-3**

Note! Product picture may differ from actual product

Product No.: 93067755

Pressure booster system supplied as a compact packaged assembly certified and listed by UL (Category QCZJ – Packaged Pumping Systems) for conformance to US and Canadian standards.

The Hydro MPC-E systems with Grundfos MLE motors from 0.5 to 30 hp (0.37 to 22 kW) have a total efficiency which exceeds the Super Premium Efficiency EuP IE5 level according to IEC 60034-30-1.

Approvals:
NSF61/NSF372 – Drinking Water and Low Lead approval. OSHPD Seismic certification available on MPC E CR(CUE) systems.

All pumps are variable-speed pumps.
Each pump is equipped with an integrated variable-frequency drive motor (MLE motor).

- Hydro MPC-E maintains constant pressure through continuous speed adjustment of the pumps.
- The system performance is adjusted to the demand by starting and stopping the required number of pumps and through parallel control of the pumps in operation.
- Pump changeover is automatic and depends on load, operating hours and fault.
- All pumps in operation will run at equal speed.

The system consists of these parts:
- vertical multistage centrifugal pumps, type CRE 45-3
- rotating pump parts in contact with the pumped liquid are made of ANSI 304 stainless steel as standard and available as ANSI 316 stainless steel as an option.

Pump bases and pump heads are made of cast iron (Class 30) as standard and ANSI 316 stainless steel as an option.

The pumps are equipped with the service-friendly cartridge-type mechanical-shaft seal HQQE (SiC/SiC/EPDM).
- Inlet and outlet manifolds are made of 316 stainless steel.
- Base frame is made of 304 stainless steel.
- One non-return valve (check valve) and two isolating valves for each pump.
- Adapter with isolating valve for connection of diaphragm tank.
- Pressure gauge and pressure transducer on each inlet and outlet manifold.

Dry-running protection is standard with use of pressure transducer on inlet manifold.
- Steel operating panel with UL Type 3R (MPC E CRE) or Type 12 MPC E CR(CUE) enclosure rating, including main disconnect switch, all required fuses, motor protection, switching equipment and microprocessor-controlled CU 352.

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Qty.	Description
1	Diaphragm tank is available as an accessory. Pump operation is controlled by CU352 controller, specifically designed to control parallel operation of multiple pumps with the following features and functions: - PID controller with adjustable PI parameters (Kp + Ti) - constant pressure at setpoint, independent of inlet pressure - stop function (no flow shutdown) - automatic cascade control of pumps for optimum efficiency - selection of min. time between start and stop, automatic pump changeover and pump priority - automatic pump test function to prevent idle pumps from seizing - standby pump allocation capability - redundant primary sensor capability - manual operation - proportional pressure control - multisensor zone control with up to six zones - differential pressure and temperature control using two separate sensors (that is outlet-inlet subtraction) - secondary fallback sensor will revert to secondary (local) sensor upon primary (remote) sensor failure - digital pulse water meter reading (log accumulated flow) - forced pump changeover - clock program - soft pressure build-up - external setpoint influence (via analogue input) - emergency run (via digital input) - password protection - possibility of digital remote-control functions (via digital inputs): - system on and off - max., min. or user-defined duty range - up to 6 alternative setpoints - digital inputs and outputs can be configured individually. Pump and system monitoring functions: - minimum and maximum limits of measured values (flow, level, temp., etc.) - built-in data-logging capability - non-return valve (check valve) failure detection - high system pressure protection - low system pressure protection - pump curve data loaded into controller to provide end-of-curve protection - alarm log with the previous 24 warnings and alarms - potential-free changeover switches for operation and fault - Grundfos bus communication with optional gateway connections for all popular communication protocols - Ethernet connection (built-in web server). Pre-fabricated and tested packaged pump system including pumps, pipes and wiring complete with control MPC. There are options to upgrade the pressure boosting system. Flow media: Water Flow (Plant): 1850 US GPM Nom. current of plant: 184 A Nominal power: 24.8 HP

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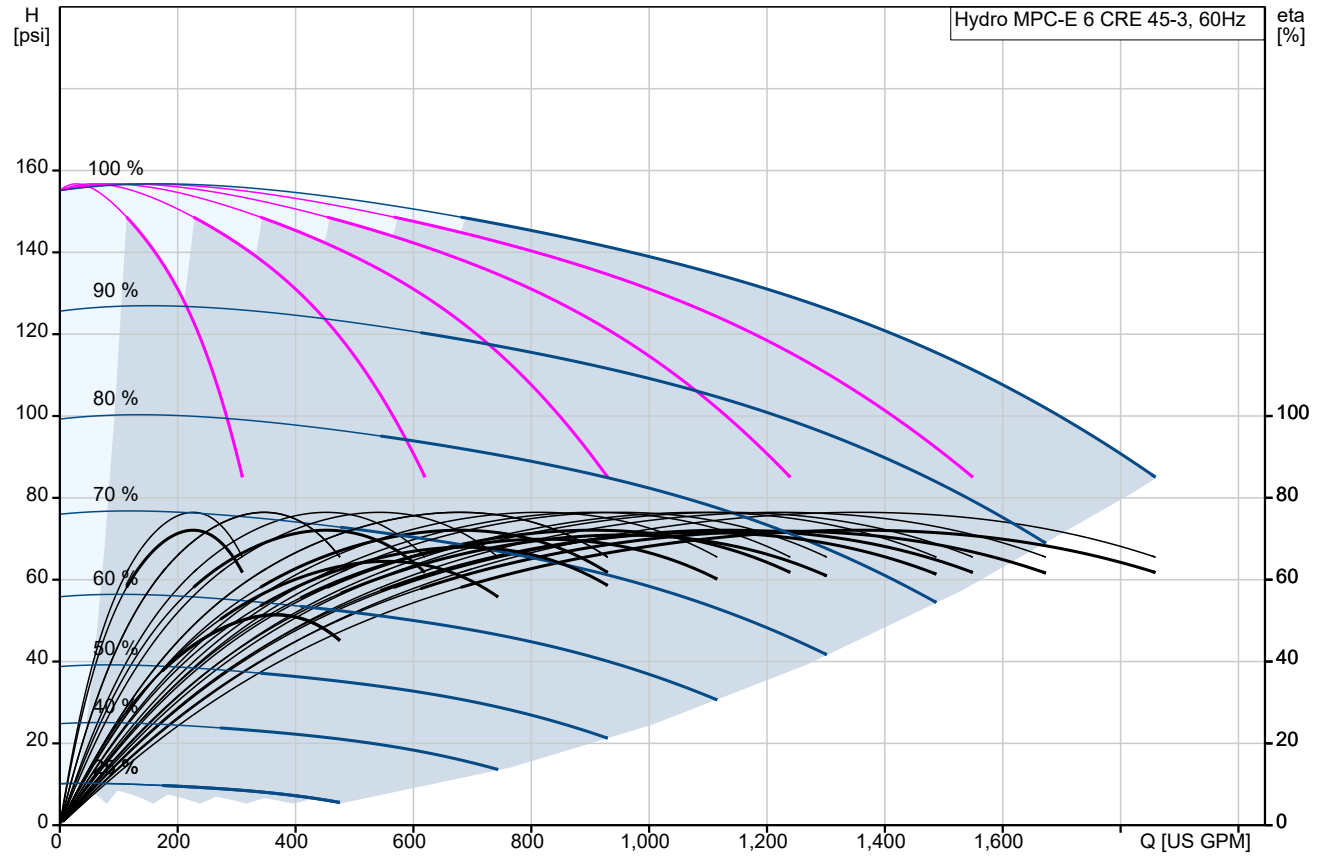
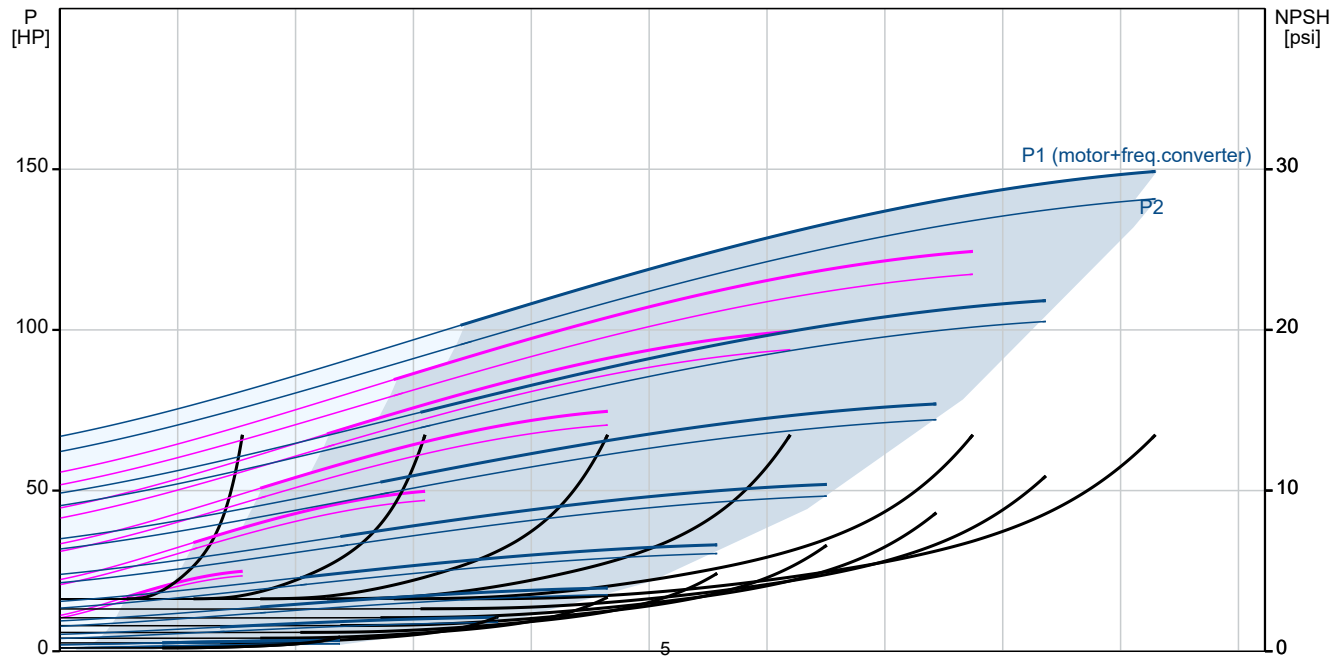
93067755 Hydro MPC-E 6 CRE 45-3 60 Hz



Losses in fittings and valves not included
Pumped liquid = Water
Liquid temperature during operation = 68 °F
Density = 62.29 lb/ft³



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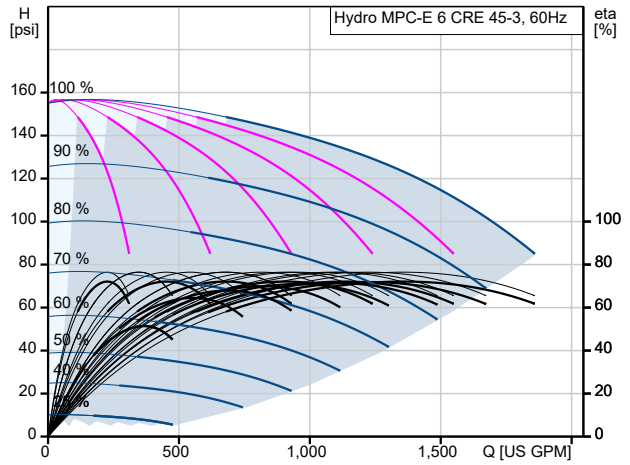
Description	Value
General information:	
Product name:	Hydro MPC-E 6 CRE 45-3
Product No:	93067755
EAN number:	5715467320510
Technical:	
Rated flow:	1430 US GPM
Max. flow:	1850 US GPM
Rated head:	122.2 psi
Maximum head:	157.9 psi
Approvals:	CULUS,PROP65
Main pump name:	CRE 45-3
Main pump No:	93046126
Non-return valve position:	Outlet
Number of pumps:	6
Materials:	
Manifold:	Stainless steel
	EN 1.4571
	AISI 316 TI
Base:	Stainless steel
	EN 1.4301
	ASTM 304
Installation:	
Range of ambient temperature:	41 .. 104 °F
Maximum operating pressure:	232.06 psi
Manifold inlet:	ANSI 10"
Manifold outlet:	ANSI 10"
Pressure rating for connection:	PN 16
Earth connection:	PE
System design:	D
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	41 .. 179.6 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³
Electrical data:	
Power (P2) main pump:	24.8 HP
Rated power - P2:	25 HP
Mains frequency:	60 Hz
Rated voltage:	3 x 460-480 V
Rated current:	27.5 A
Rated current of system:	184 A
Method of start:	Variable frequency drives
Enclosure class (IEC 34-5):	IP54
Radio interference supression:	EMC DIRECTIVE(2014/30/EU)
Number of phases of main pump:	3
Controls:	
Control type:	E
Dry running protection, mechanical:	PRESSURE SENSOR 0-10 BAR
Controller:	CU 352
Others:	
Net weight:	4130 lb
Gross weight:	4770 lb
Shipping volume:	389 ft³
Sales region:	Namreg



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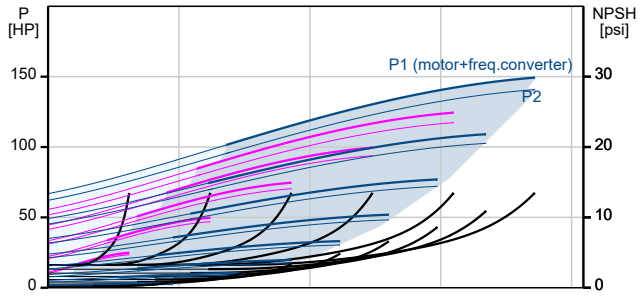

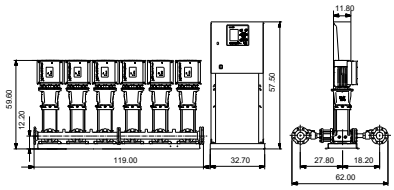

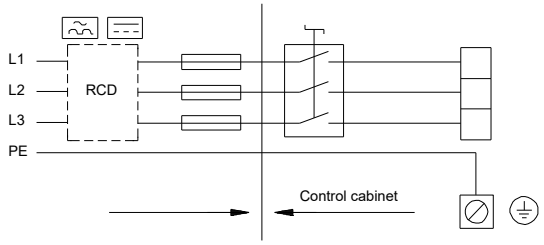

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Description	Value
Config. file no. pump:	98272446
Config. file no. Control MPC:	98271950
Config. file no. Hydro MPC:	98272054

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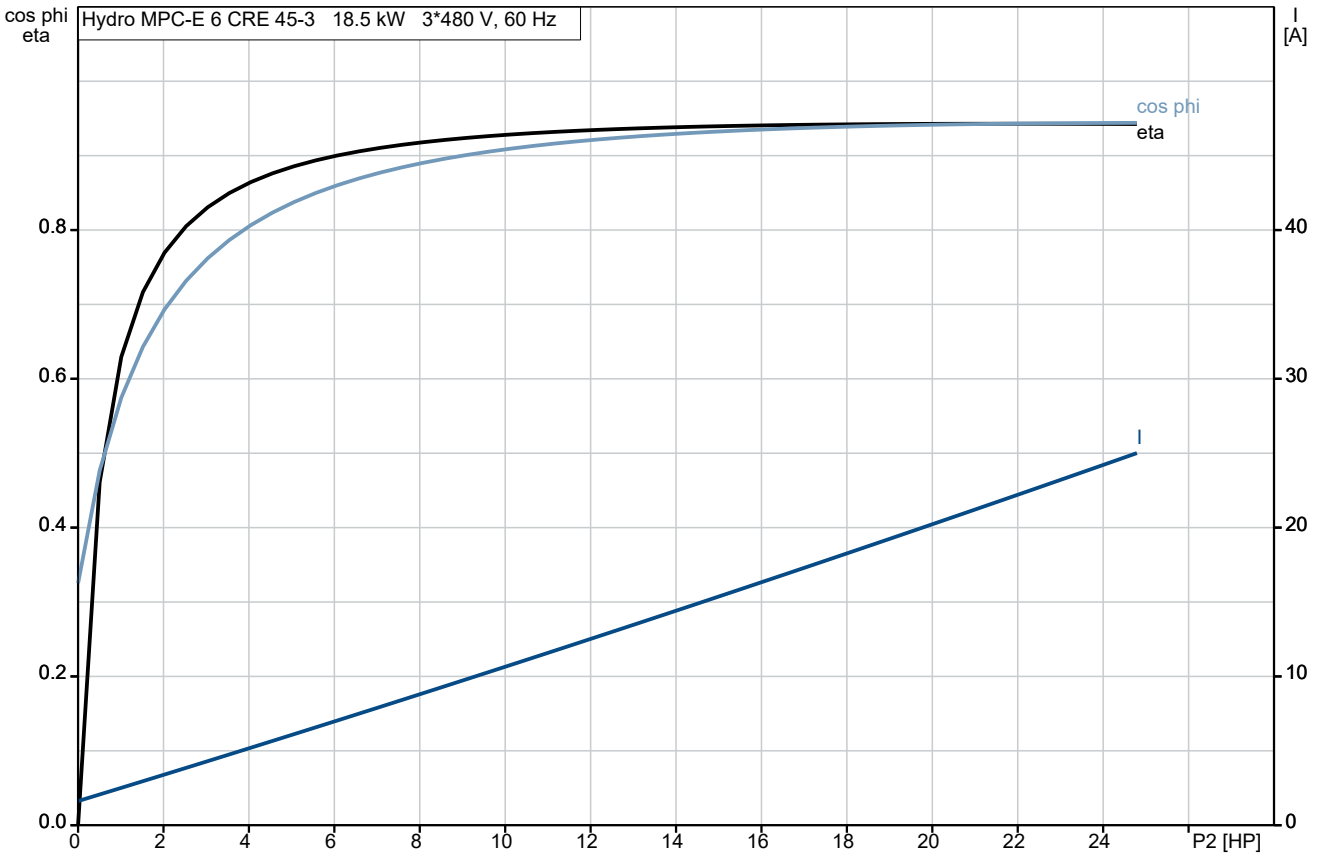

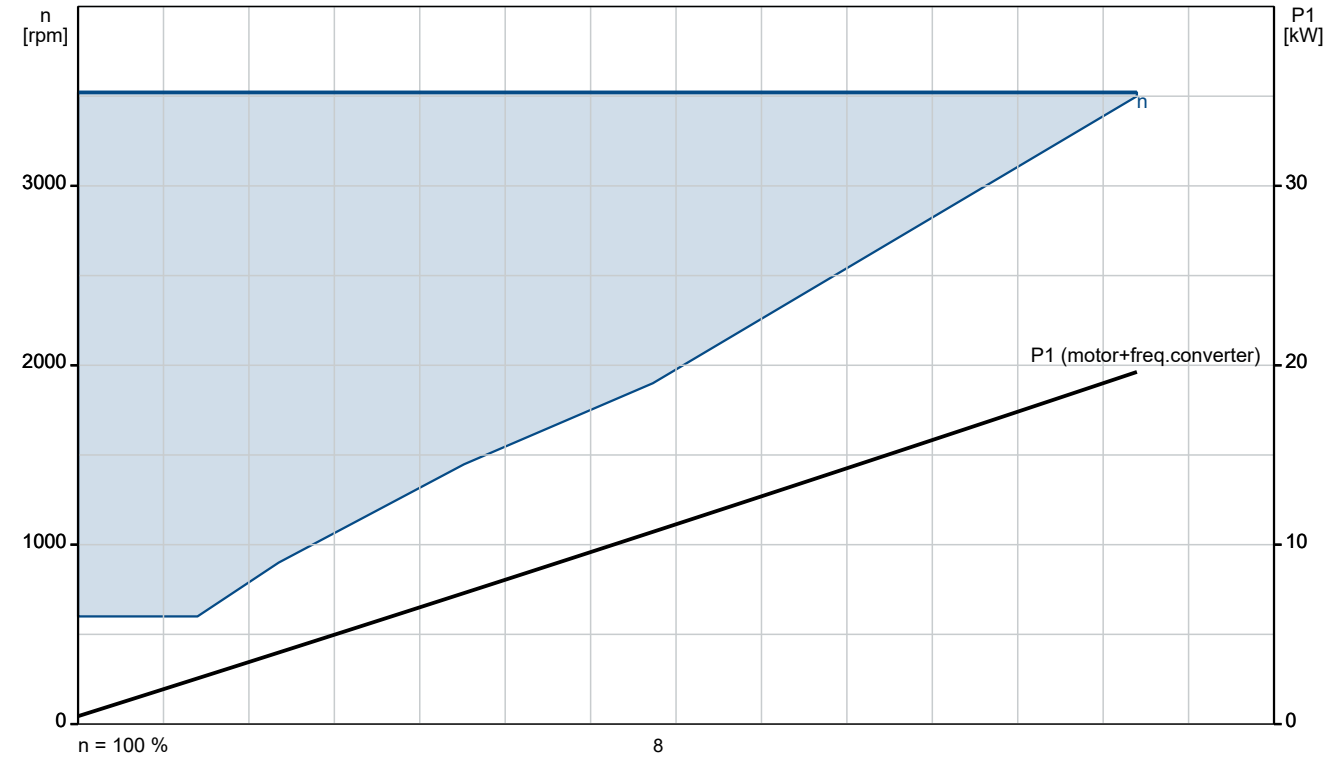

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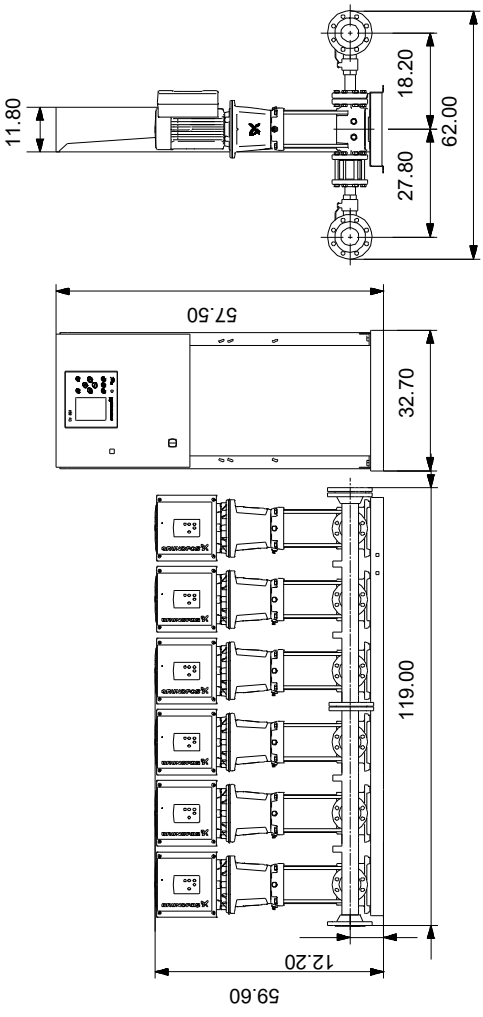

Note! All units are in [in] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

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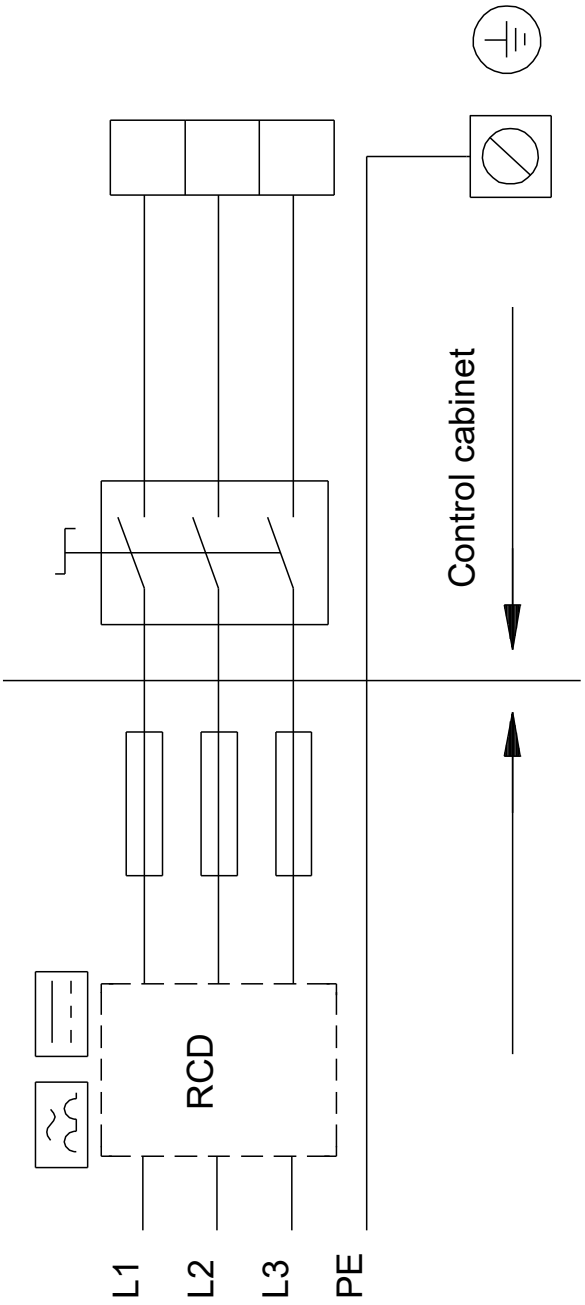

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