

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

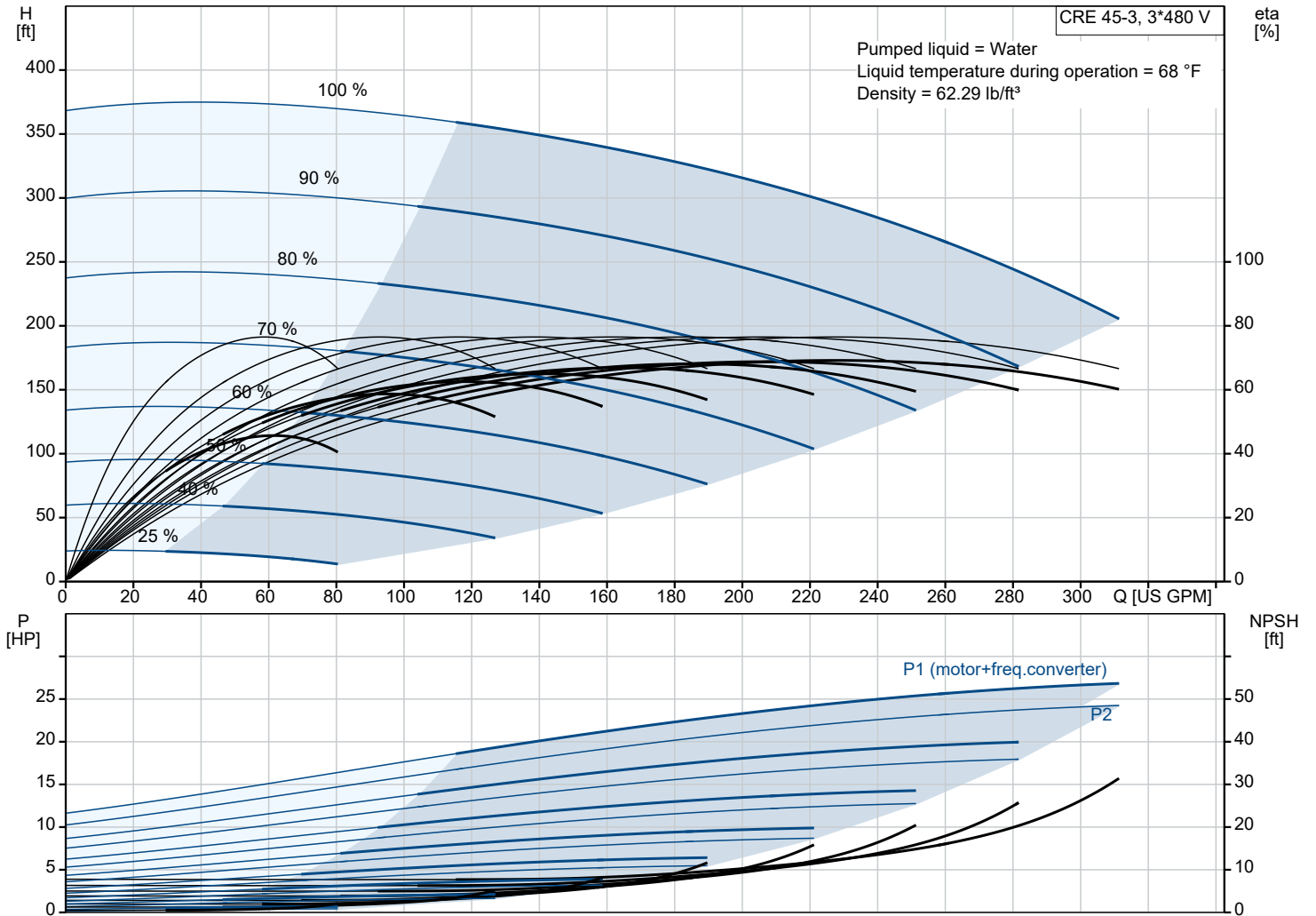


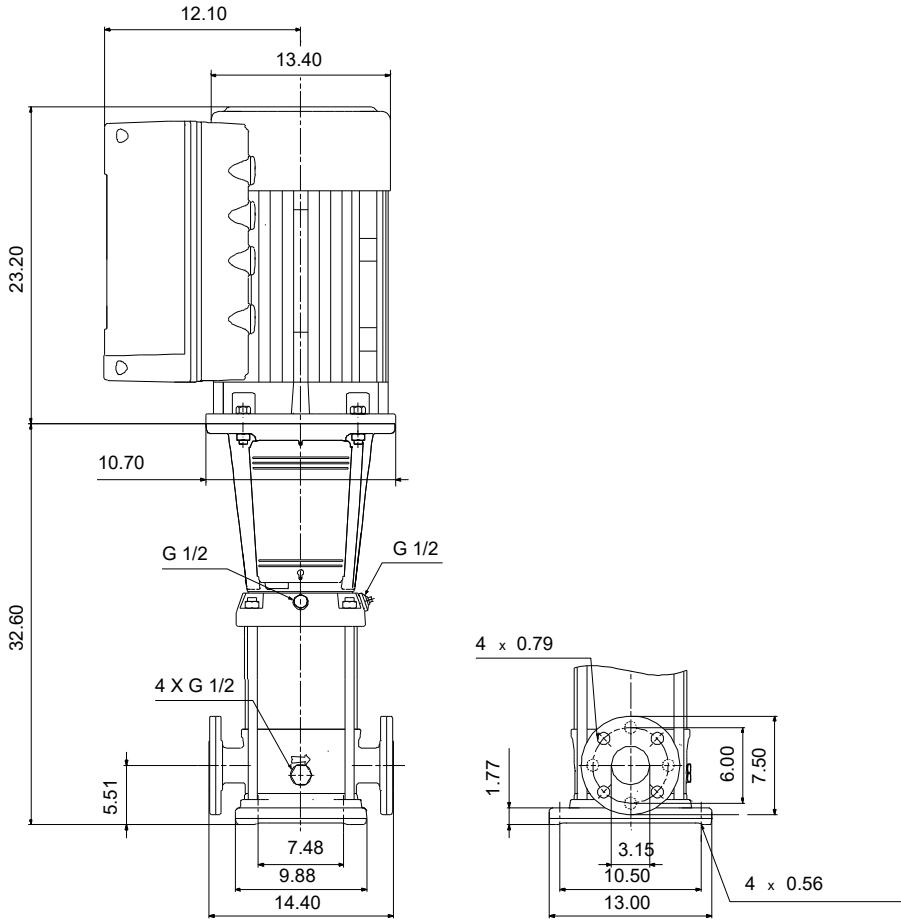
## CRE 45-3 N-G-A-E-HQQE

Vertical, multistage centrifugal pump with integrated frequency converter. The pump head and base are in cast iron - all other wetted parts are in stainless steel (EN 1.4301)

Note! Product picture may differ from actual product

Conditions of Service		Pump Data		Motor Data	
Liquid:	Water	Max pressure at stated temp:	232 psi / 250 °F	Rated power - P2:	25 HP
Temperature:	68 °F	Liquid temperature range:	-22 .. 248 °F	Rated voltage:	460 V
Specific Gravity:	1.000	Maximum ambient temperature:	104 °F	Mains frequency:	60 Hz
		Shaft seal:	HQQE	Enclosure class:	IP55
		Product number:	98183642	Insulation class:	F
				Motor protection:	YES
				Motor type:	160AC
				Eta 1/1:	91.7 %





**Materials:**

Base: Cast iron  
 Base: EN 1563 EN-GJS-500-7  
 Base: ASTM A536 80-55-06  
 Impeller: Stainless steel  
 Impeller: AISI 304  
 Impeller: EN 1.4301  
 Material code: A  
 Code for rubber: E

Qty.	Description
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1 **CRE 45-3 N-G-A-E-HQQE**



**Note! Product picture may differ from actual product**

Product No.: [98183642](#)

Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts are in stainless steel. A cartridge shaft seal ensures high reliability, safe handling, and easy access and service. Power transmission is via a rigid split coupling. Pipe connection is via ANSI flanges.

The pump is fitted with a 3-phase, fan-cooled asynchronous motor.

The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement.

An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The operating panel has indicator lights for "Operation" and "Fault".

Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

The terminal box holds terminals for these connections:

- pump start/stop input (potential-free contact)
- remote setpoint setting via analog signal, 0-10 V, 0(4)-20 mA
- 10 V voltage supply for setpoint potentiometer, I<sub>max</sub> = 5 mA
- three analog sensor inputs, 0-10 V, 0(4)-20 mA; the factory-fitted pressure sensor is connected to one of these inputs
- 24 V voltage supply for sensor, I<sub>max</sub> = 40 mA
- one analog output
- three digital inputs
- two Pt100 inputs
- two potential-free fault signal relays with changeover contact, reporting "Fault", "Operation" or "Ready"
- RS-485 GENIbus connection
- interface for Grundfos CIM fieldbus module.

Liquid:

Pumped liquid: Water  
 Liquid temperature range: -22 .. 248 °F  
 Selected liquid temperature: 68 °F  
 Density: 62.29 lb/ft<sup>3</sup>

Technical:

Pump speed on which pump data are based: 3521 rpm  
 Rated flow: 238 US GPM  
 Rated head: 282.5 ft  
 Actual impeller diameter: 5.37 in  
 Pump orientation: Vertical  
 Shaft seal arrangement: Single  
 Code for shaft seal: HQQE  
 Approvals: CURUS  
 Approvals for drinking water: NSF/ANSI 61  
 Curve tolerance: ISO9906:2012 3B

Materials:

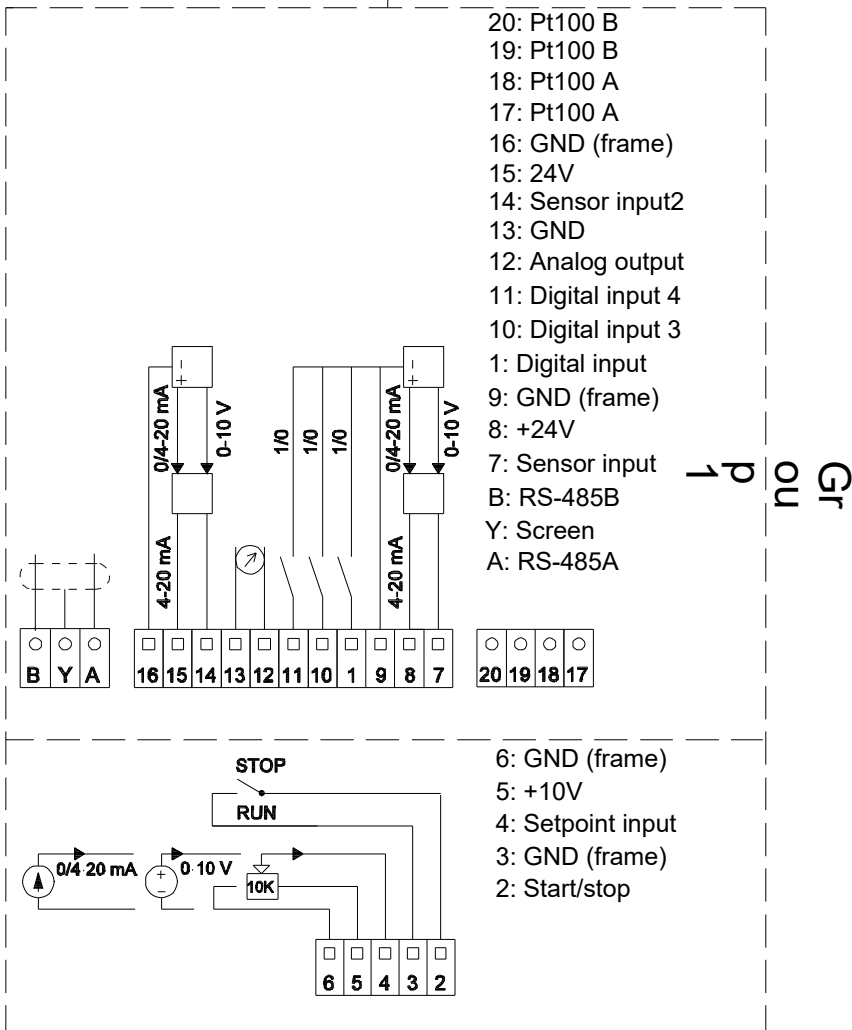
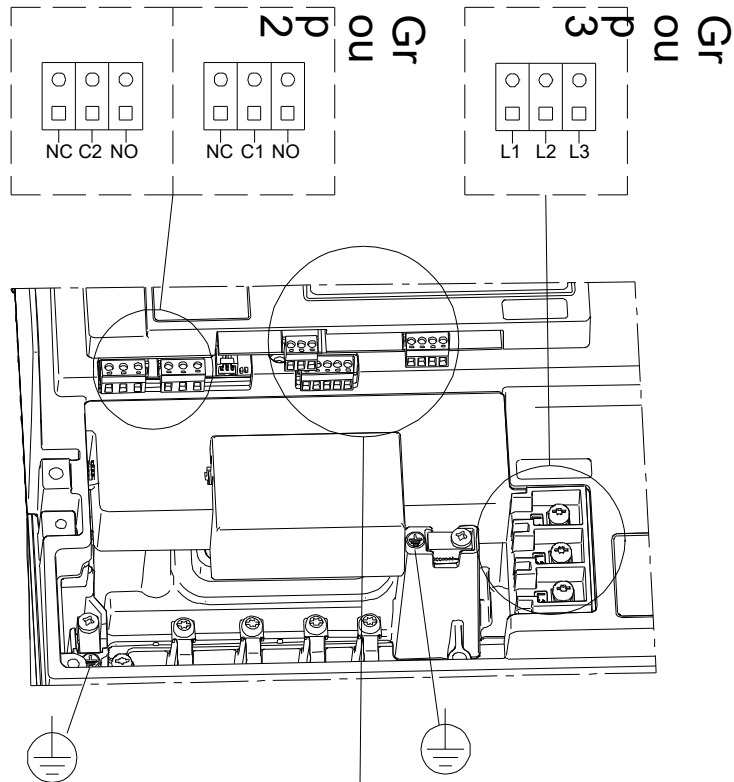
Base: Cast iron  
 EN 1563 EN-GJS-500-7  
 ASTM A536 80-55-06  
 Impeller: Stainless steel  
 EN 1.4301  
 AISI 304  
 Bearing: SIC  
 Support bearing: Graflon

Installation:

t max amb: 104 °F  
 Maximum operating pressure: 232.06 psi  
 Max pressure at stated temp: 232 psi / 250 °F

Qty.	Description
	232 psi / -22 °F
	Type of connection: ANSI
	Size of inlet connection: 3 inch
	Size of outlet connection: 3 inch
	Pressure rating for connection: PN 16
	Flange rating inlet: 150 lb
	Flange size for motor: 284TC
	Electrical data:
	Motor standard: NEMA
	Motor type: 160AC
	IE Efficiency class: NEMA Premium / IE3 60Hz
	Rated power - P2: 25 HP
	Power (P2) required by pump: 25 HP
	Mains frequency: 60 Hz
	Rated voltage: 3 x 460 V
	Service factor: 1.15
	Rated current: 30.5 A
	Cos phi - power factor: 0.88
	Rated speed: 480-3540 rpm
	Efficiency: IE3 91,7%
	Motor efficiency at full load: 91.7 %
	Number of poles: 2
	Enclosure class (IEC 34-5): IP55
	Insulation class (IEC 85): F
	Motor No: 85901138
	Controls:
	Frequency converter: Built-in
	Pressure sensor: Y
	Others:
	DOE Pump Energy Index VL: 0.46
	Net weight: 471 lb
	Gross weight: 489 lb
	Shipping volume: 29 ft³

# 98183642 CRE 45-3 N-G-A-E-HQQE 60 Hz



Note! All units are in [in] unless others are stated.