GRUNDFOS

Submittal Data

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

Note! Product picture may differ from actual product

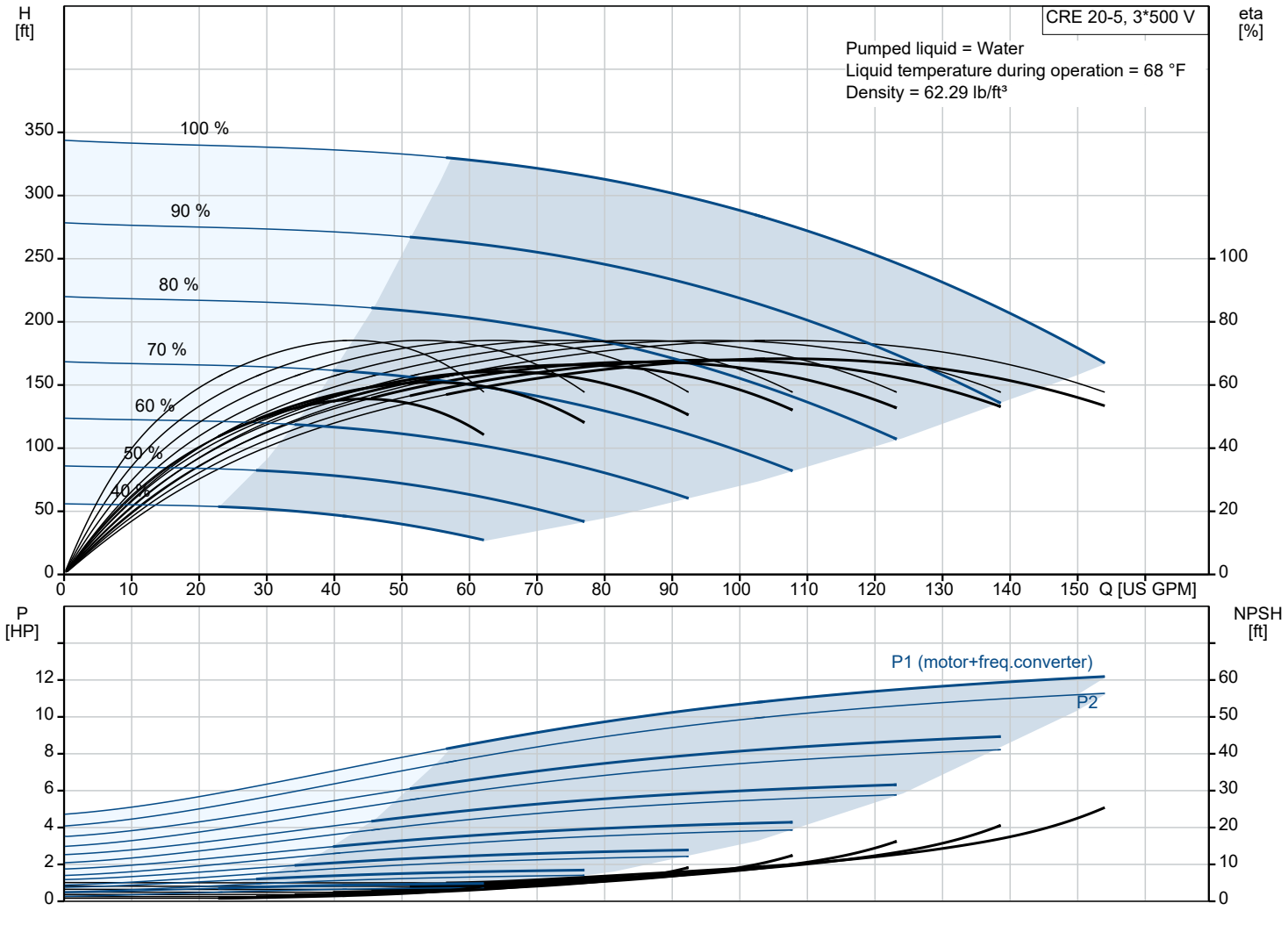
CRE 20-5 N-B-A-E-HQQE

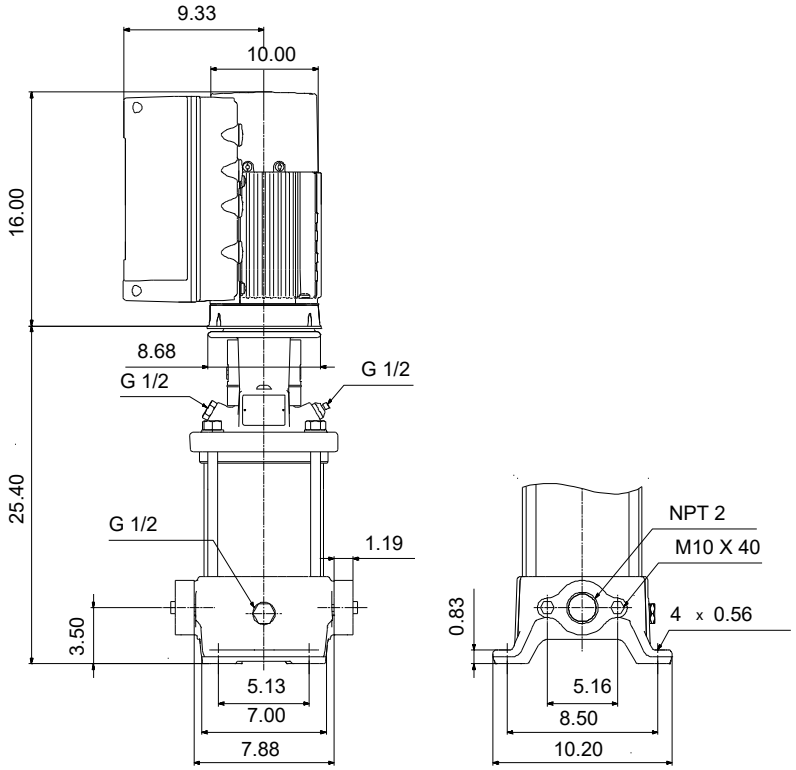
Vertical, multistage centrifugal pump with integrated frequency converter. The pump head and base are in cast iron - all other wetted parts are in stainless steel (EN 1.4301)

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

Pump Data	
Max pressure at stated temp:	145 psi / 250 °F
Liquid temperature range:	-4 .. 248 °F
Maximum ambient temperature:	122 °F
Shaft seal:	HQQE
Product number:	99076419

Motor Data	
Rated power - P2:	15 HP
Rated voltage:	440-480 V
Mains frequency:	60 Hz
Enclosure class:	IP55
Insulation class:	F
Motor protection:	ELEC
Motor type:	160H
Eta 1/1:	93.2 %





Materials:

Base:	Cast iron
Base:	EN 1561 EN-GJL-200
Base:	ASTM A48-25B
Impeller:	Stainless steel
Impeller:	AISI 304
Impeller:	EN 1.4301
Material code:	A
Code for rubber:	E

Qty.	Description
1	**CRE 20-5 N-B-A-E-HQQE**

Note! Product picture may differ from actual product

Product No.: 99076419

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 oval flanges with internal NPT threads.

The pump is fitted with a 3-phase, fan-cooled, permanent-magnet, synchronous motor.

The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

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.

The operating panel on the motor terminal box features a four-inch TFT display, push-buttons and the Grundfos Eye indicator.

The display gives an intuitive and user-friendly interface to all functions.

The push-buttons are used to navigate through the menu structure to access pump and performance data on site and enable setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop".

Communication with the pump is also 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 Grundfos Eye indicator on the operating panel provides visual indication of pump status:

- "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
- "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)
- "Alarm": Motor has stopped (flashing red indicator lights).

The terminal box has a number of inputs and outputs enabling the motor to be used in advanced applications where many inputs and outputs are required:

- two dedicated digital inputs
- three analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 - 3.5 V; the factory-fitted pressure sensor is connected to one of these inputs
- 5 V voltage supply to potentiometer and sensor
- one analog output, 0-10 V, 0(4)-20 mA
- two configurable digital inputs or open-collector outputs
- two Pt100/Pt1000 inputs
- LiqTec, dry-running protection sensor input
- Grundfos Digital Sensor input and output
- 24 V voltage supply for sensors
- two signal-relay outputs (potential-free contacts)
- GENIbus connection
- interface for Grundfos CIM fieldbus module.

Liquid:

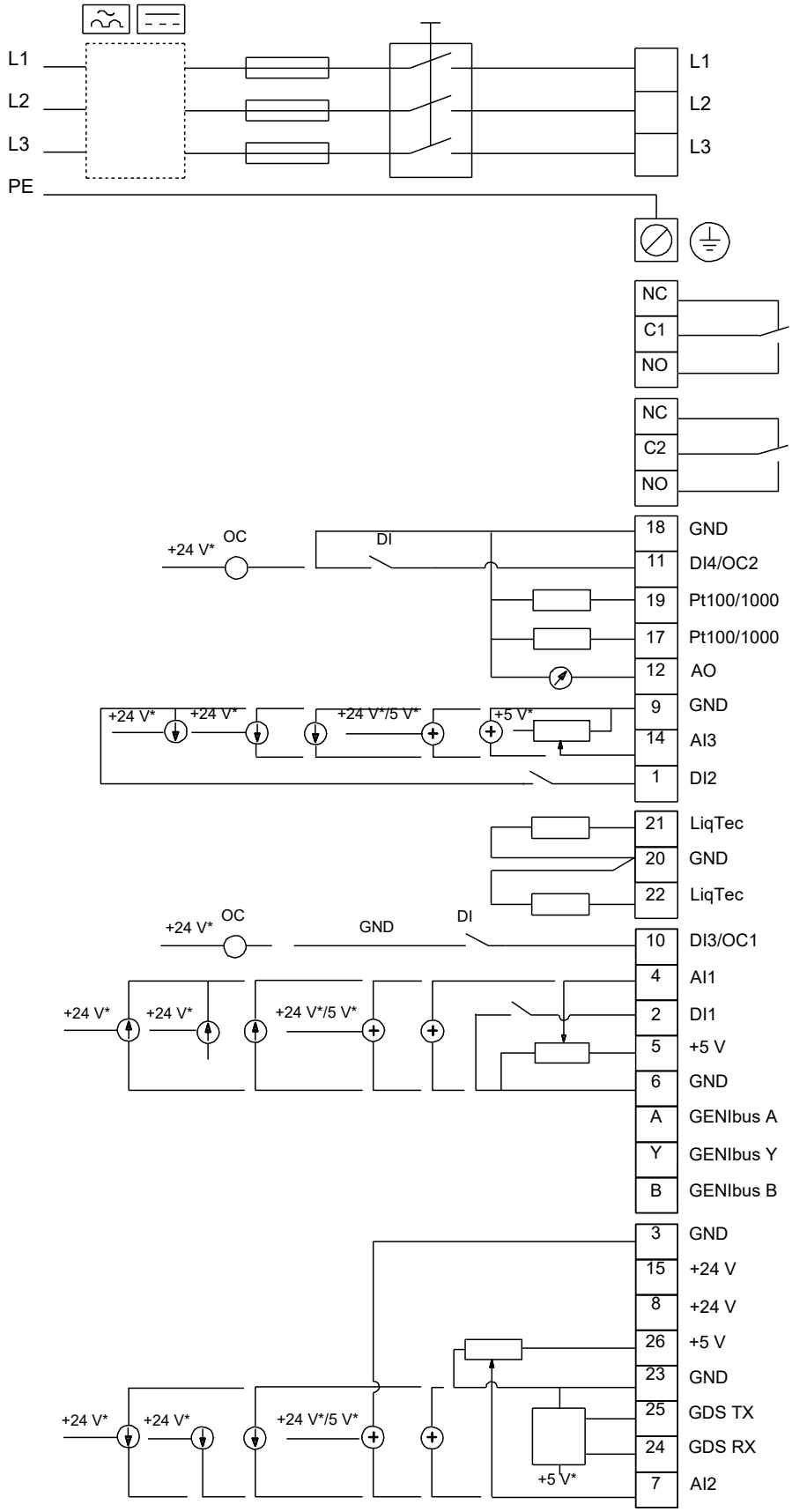
Pumped liquid:	Water
Liquid temperature range:	-4 .. 248 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³

Technical:

Pump speed on which pump data are based:	3444 rpm
Rated flow:	111 US GPM
Rated head:	268.7 ft
Actual impeller diameter:	4.13 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

Qty.	Description	
	Materials:	
	Base:	Cast iron
		EN 1561 EN-GJL-200
		ASTM A48-25B
	Impeller:	Stainless steel
		EN 1.4301
		AISI 304
	Bearing:	SIC
	Installation:	
	t max amb:	122 °F
	Maximum operating pressure:	145.04 psi
	Max pressure at stated temp:	145 psi / 250 °F
		145 psi / -4 °F
	Type of connection:	Oval / NPT(F)
	Size of inlet connection:	2 inch
	Size of outlet connection:	2 inch
	Pressure rating for connection:	PN 10
	Flange size for motor:	254TC
	Electrical data:	
	Motor standard:	NEMA
	Motor type:	160H
	IE Efficiency class:	IE5
	Rated power - P2:	15 HP
	Power (P2) required by pump:	15 HP
	Mains frequency:	60 Hz
	Rated voltage:	3 x 440-480 V
	Service factor:	1.15
	Rated current:	17.9-16.6 A
	Cos phi - power factor:	0.92-0.91
	Rated speed:	360-4000 rpm
	Efficiency:	93.2%
	Motor efficiency at full load:	93.2 %
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor No:	99256777
	Controls:	
	Frequency converter:	Built-in
	Pressure sensor:	Y
	Others:	
	DOE Pump Energy Index VL:	0.41
	Net weight:	227 lb
	Gross weight:	313 lb
	Shipping volume:	13.1 ft³

99076419 CRE 20-5 N-B-A-E-HQQE 60 Hz



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