

# **Submittal Data**

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



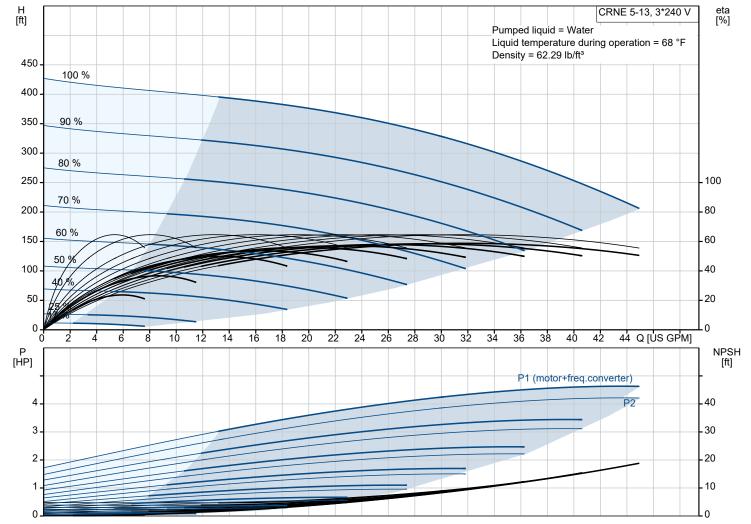
# CRNE 5-13 N-FGJ-A-E-HQQE

Vertical, multistage centrifugal pump with integrated frequency converter. Pump materials in contact with the liquid are in high-grade stainless steel (EN 1.4401)

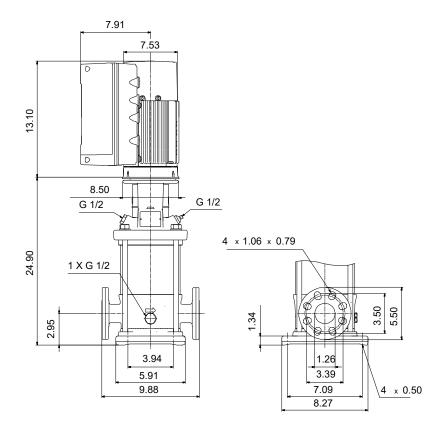
Conditions	of Service
Liquid:	Water
Temperature:	68 °F
Specific Gravity:	1.000

Pump Data		
Max pressure at stated temp:	363 psi / 250 °F	
Liquid temperature range:	-4 248 °F	
Maximum ambient temperature:	104 °F	
Shaft seal:	HQQE	
Product number:	99389100	

Motor Data		
Rated power - P2:	5 HP	
Rated voltage:	200-240 V	
Mains frequency:	60 Hz	
Enclosure class:	IP55	
Insulation class:	F	
Motor protection:	ELEC	
Motor type:	112C	
Eta 1/1:	90.9 %	







## Materials:

Base: Stainless steel
Base: EN 1.4408
Base: AISI 316
Impeller: Stainless steel
Impeller: AISI 316
Impeller: EN 1.4401

Material code: A Code for rubber: E

#### Qty. | Description

### CRNE 5-13 N-FGJ-A-E-HQQE

Product No.: 99389100

Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). Pump materials in contact with the liquid are in high-grade 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 combined DIN-ANSI-JIS flanges.

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: 3461 rpm

Rated flow: 30.4 US GPM Rated head: 315.3 ft 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:

Impeller:

Bearing:

Base: Stainless steel

EN 1.4408 AISI 316 Stainless steel EN 1.4401 AISI 316

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Installation:

t max amb: 104 °F

Maximum operating pressure: 362.59 psi

Max pressure at stated temp: 363 psi / 250 °F

# Qty. | Description

363 psi / -4 °F DIN / ANSI / JIS

Type of connection:
Size of inlet connection:
DIN / ANSI / JIS
DN 25/32
Size of outlet connection:
Pressure rating for connection:
PN 25
Flange rating inlet:
Flange size for motor:
DN 25/32
DN 25/32
PN 25
300 lb
182TC

Electrical data:

Motor standard: NEMA
Motor type: 112C
IE Efficiency class: IE5
Rated power - P2: 5 HP
Power (P2) required by pump: 5 HP
Mains frequency: 60 Hz

Rated voltage: 3 x 200-240 V

Service factor: 1.15
Rated current: 13.2-10.9 A
Cos phi - power factor: 0.94

Rated speed: 360-4000 rpm

Efficiency: 90.9%

Motor efficiency at full load: 90.9 %

Enclosure class (IEC 34-5): IP55

Insulation class (IEC 85): F

Motor No: 99301701

Controls:

Frequency converter: Built-in Pressure sensor: Y

Others:

Net weight: 105 lb Gross weight: 189 lb Shipping volume: 10.1 ft³

