

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

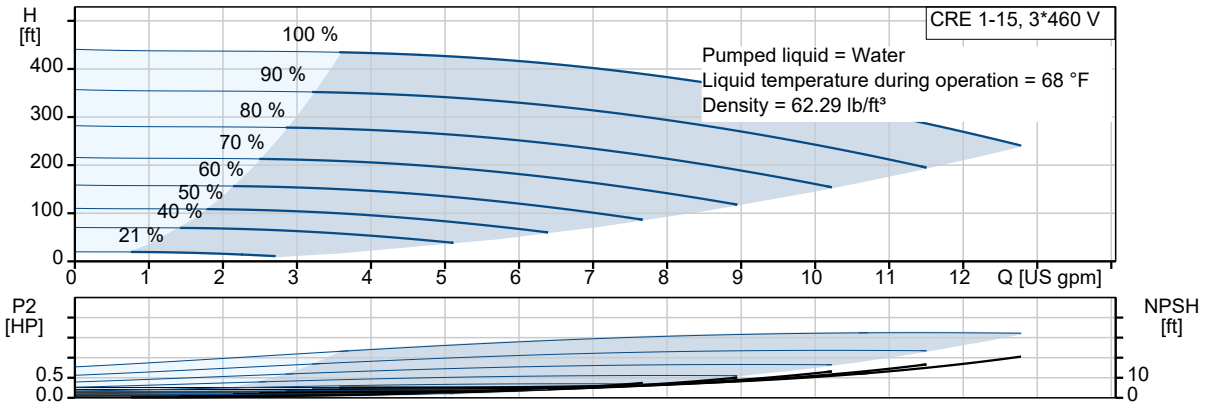
### CRE 1-15 N-FGJ-A-E-HQQE

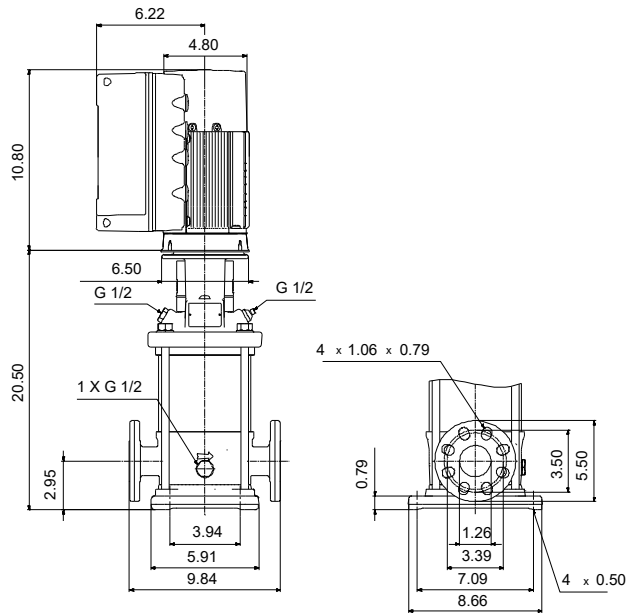
Vertical, multistage centrifugal pump with integrated frequency converter. Pump materials in contact with the liquid are in stainless steel (EN 1.4301)



Product photo could vary from the actual product


| Conditions of Service   | Pump Data  | Motor Data               |
|-------------------------|--|--------------------------|
| Efficiency: _____       | Max pressure at stated temperature: 363 psi / 250 °F | Rated power - P2: 2 HP   |
| Liquid: Water           | Liquid temperature range: -4 .. 248 °F               | Rated voltage: 440-480 V |
| Temperature: 68 °F      | Maximum ambient temperature: 122 °F                  | Main frequency: 60 Hz    |
| NPSH required: ft       | Approvals: CURUS, NSF/ANSI 61                        | Enclosure class: IP55    |
| Specific Gravity: 1.000 | Shaft seal: HQQE                                     | Insulation class: F      |
|                         | Product number: 99340744                             | Motor protection: ELEC   |
|                         |  | Motor type: 90C          |
|                         |  | Eff. 1/1: 89.4 %         |





**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

| Count | Description   |
|-------|---|
| 1     | <p data-bbox="298 415 610 443"><b>CRE 1-15 N-FGJ-A-E-HQQE</b></p>  <p data-bbox="298 730 558 758">Product No.: <a href="#">99340744</a></p> <p data-bbox="298 793 1409 890">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 combined DIN-ANSI-JIS flanges.</p> <p data-bbox="298 934 1409 1094">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.</p> <p data-bbox="298 1138 1409 1241">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".</p> <p data-bbox="298 1310 1409 1381">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".</p> <p data-bbox="298 1430 1409 1598">The Grundfos Eye indicator on the operating panel provides visual indication of pump status:</p> <ul data-bbox="337 1457 1377 1598" style="list-style-type: none"> <li>• "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)</li> <li>• "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)</li> <li>• "Alarm": Motor has stopped (flashing red indicator lights).</li> </ul> <p data-bbox="298 1633 1409 1682">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:</p> <ul data-bbox="337 1688 1377 1894" style="list-style-type: none"> <li>• two dedicated digital inputs</li> <li>• 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</li> <li>• 5 V voltage supply to potentiometer and sensor</li> <li>• one analog output, 0-10 V, 0(4)-20 mA</li> <li>• two configurable digital inputs or open-collector outputs</li> <li>• two Pt100/Pt1000 inputs</li> </ul> |



Company name:

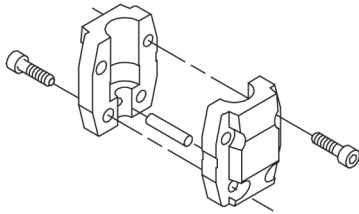
Created by:

Phone:

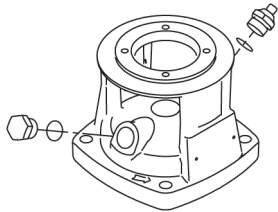
Date:

4/8/2021

| Count | Description  |
|-------|--|
|       | <ul style="list-style-type: none"><li>• LiqTec, dry-running protection sensor input</li><li>• Grundfos Digital Sensor input and output</li><li>• 24 V voltage supply for sensors</li><li>• two signal-relay outputs (potential-free contacts)</li><li>• GENIbus connection</li><li>• interface for Grundfos CIM fieldbus module.</li></ul> <p><b>Further product details</b></p> <p>The pump is equipped with a pressure sensor registering pump outlet pressure and enabling controlled pump operation based on constant pressure.</p> <p>The operating panel on the motor terminal box features a four-inch TFT display, push-buttons and the Grundfos Eye indicator.</p> <p>The display gives an intuitive and user-friendly interface to all functions.</p> <p>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".</p> <p>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".</p> <p>The Grundfos Eye indicator on the operating panel provides visual indication of pump status:</p> <ul style="list-style-type: none"><li>• "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)</li><li>• "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)</li><li>• "Alarm": Motor has stopped (flashing red indicator lights).</li></ul> <p>Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process.</p> <p>CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.</p> <p>An integral part of the process is a pretreatment.</p> <p>The entire process consists of these elements:</p> <ol style="list-style-type: none"><li>1) Alkaline-based cleaning.</li><li>2) Zinc phosphating.</li><li>3) Cathodic electro-deposition.</li><li>4) Curing to a dry film thickness 18-22 my m.</li></ol> <p>The colour code for the finished product is NCS 9000/RAL 9005.</p> <p><b>Pump</b></p> <p>A standard split coupling connects the pump and motor shaft. It is enclosed in the pump head/motor stool by means of two coupling guards.</p> |



The pump head, pump head cover and flange for motor mounting is made in one piece. The pump head has a combined 1/2" priming plug and vent screw.



The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system. This seal type is assembled in a cartridge unit which makes replacement safe and easy. Due to the balancing, this seal type is suitable for high-pressure applications. The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.

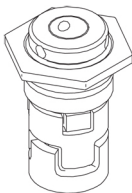
Primary seal:

- Rotating seal ring material: silicon carbide (SiC)
- Stationary seat material: silicon carbide (SiC)

This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

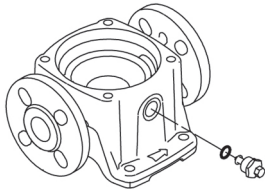
EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.



The shaft seal is screwed into the pump head.

The chambers and impellers are made of stainless-steel sheet. The chambers are provided with a PTFE neck ring offering improved sealing and high efficiency. The impellers have smooth surfaces, and the shape of the blades ensure a high efficiency.

The base is made of cast iron. The flanges and base are cast in one piece. The outlet side of the base has a combined drain plug and bypass valve. The pump is secured to the foundation by four bolts through the base plate.



## Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with tapped-hole flange (FT).

Motor-mounting designation in accordance with IEC 60034-7: IM B 14 (Code I) / IM 3601 (Code II).

Electrical tolerances comply with IEC 60034.

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

The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

## Technical data

### Liquid:

|                              |                          |
|------------------------------|--------------------------|
| Pumped liquid:               | Water                    |
| Liquid temperature range:    | -4 .. 248 °F             |
| Selected liquid temperature: | 68 °F                    |
| Density:                     | 62.29 lb/ft <sup>3</sup> |

### Technical:

|                         |                   |
|-------------------------|-------------------|
| Rated pump speed:       | 3452 rpm          |
| Rated flow:             | 9.69 US gpm       |
| Rated head:             | 315.6 ft          |
| Pump orientation:       | Vertical          |
| Shaft seal arrangement: | Single            |
| Code for shaft seal:    | HQQE              |
| Approvals on nameplate: | CURUS,NSF/ANSI 61 |
| Curve tolerance:        | ISO9906:2012 3B   |

### Materials:

|           |   |
|-----------|---|
| Base:     | Cast iron<br>EN 1561 EN-GJL-200<br>ASTM A48-25B |
| Impeller: | Stainless steel<br>EN 1.4301<br>AISI 304        |
| Bearing:  | SIC<br>SIC                                      |

### Installation:

|                                     |                  |
|-------------------------------------|------------------|
| Maximum ambient temperature:        | 122 °F           |
| Maximum operating pressure:         | 362.59 psi       |
| Max pressure at stated temperature: | 363 psi / 250 °F |



Company name:

Created by:

Phone:

Date:

4/8/2021

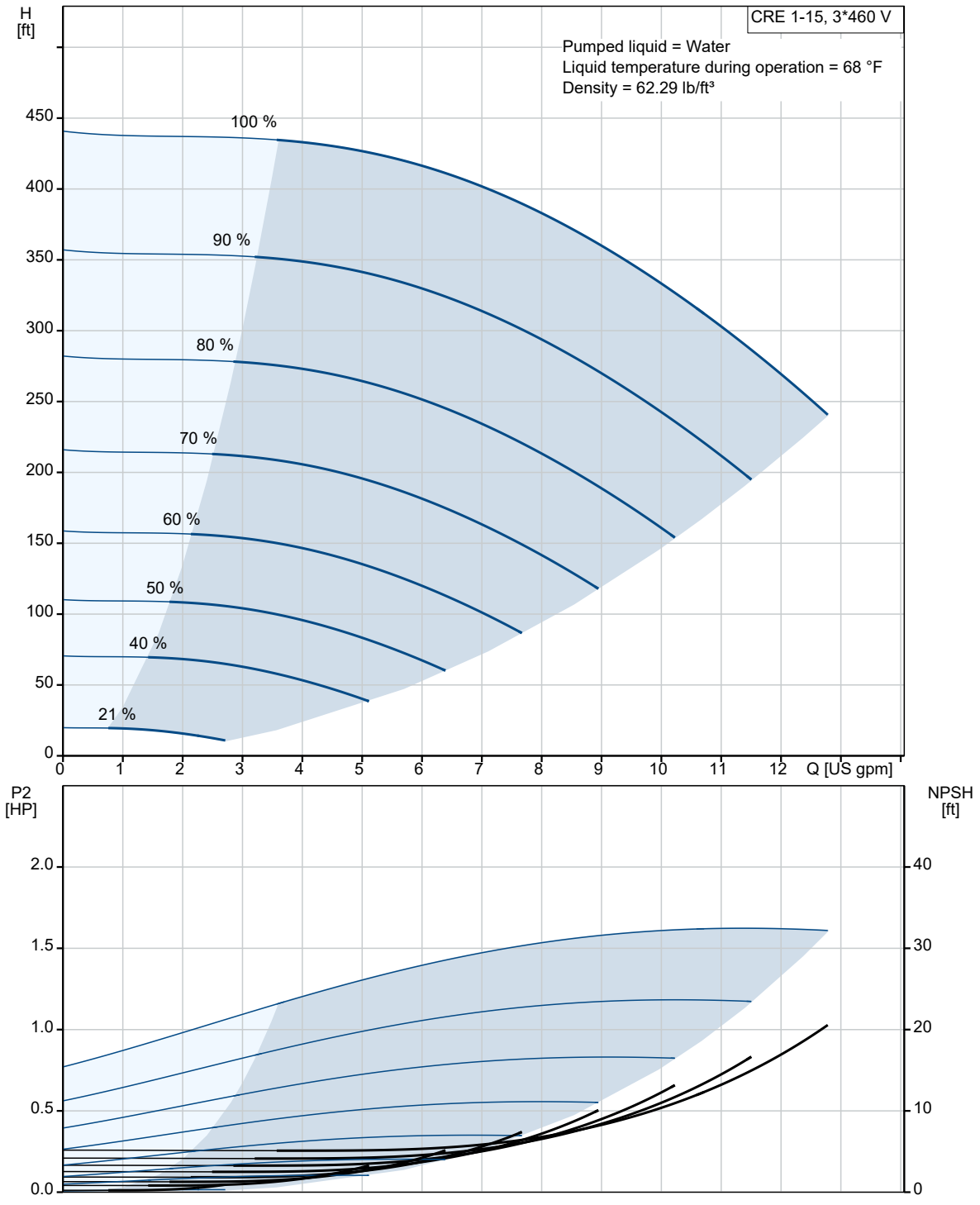
| Count | Description                           |
|-------|---------------------------------------|
|       | 363 psi / -4 °F                       |
|       | Type of connection: DIN / ANSI / JIS  |
|       | Size of inlet connection: DN 25/32    |
|       | Size of outlet connection: DN 25/32   |
|       | Pressure rating for connection: PN 25 |
|       | Flange rating inlet: 250 lb           |
|       | Flange size for motor: 56C            |
|       | Electrical data:                      |
|       | Motor standard: NEMA                  |
|       | Motor type: 90C                       |
|       | IE Efficiency class: IE5              |
|       | Rated power - P2: 2 HP                |
|       | Power (P2) required by pump: 2 HP     |
|       | Main frequency: 60 Hz                 |
|       | Rated voltage: 3 x 440-480 V          |
|       | Service factor: 1.15                  |
|       | Rated current: 2.65 A                 |
|       | Cos phi - power factor: 0.87          |
|       | Rated speed: 360-4000 rpm             |
|       | IE efficiency: 89.4%                  |
|       | Motor efficiency at full load: 89.4 % |
|       | Enclosure class (IEC 34-5): IP55      |
|       | Insulation class (IEC 85): F          |
|       | Motor Number: 98362281                |
|       | Controls:                             |
|       | Frequency converter: Built-in         |
|       | Pressure sensor: Y                    |
|       | Others:                               |
|       | Net weight: 84.6 lb                   |
|       | Gross weight: 99.1 lb                 |
|       | Shipping volume: 8.26 ft <sup>3</sup> |
|       | Country of origin: US                 |
|       | Custom tariff no.: 8413.70.2040       |



Company name:  
Created by:  
Phone:

Date: 4/8/2021

### 99340744 CRE 1-15 N-FGJ-A-E-HQQE 60 Hz



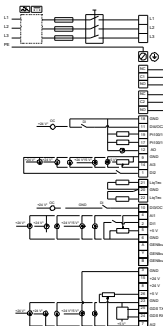
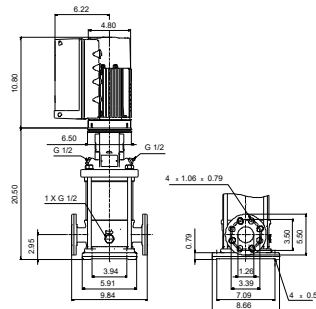
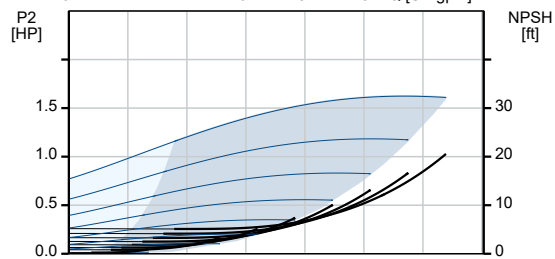
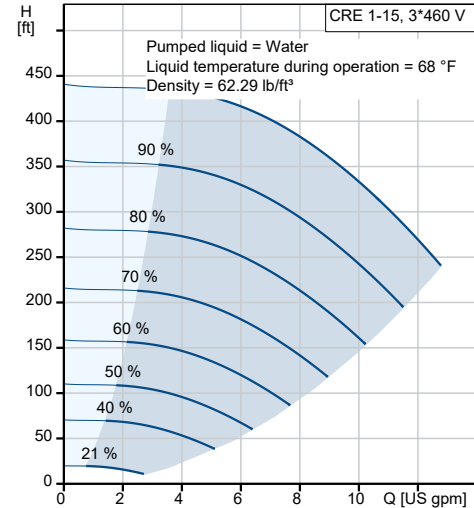




Company name:  
Created by:  
Phone:

Date: 4/8/2021

| Description                           | Value                      |
|---------------------------------------|----------------------------|
| <b>General information:</b>           |                            |
| Product name:                         | CRE 1-15<br>N-FGJ-A-E-HQQE |
| Product No.:                          | 99340744                   |
| EAN:                                  | 5713827513091              |
| <b>Technical:</b>                     |                            |
| Rated pump speed:                     | 3452 rpm                   |
| Rated flow:                           | 9.69 US gpm                |
| Rated head:                           | 315.6 ft                   |
| Maximum head:                         | 433.7 ft                   |
| Stages:                               | 15                         |
| Impellers:                            | 15                         |
| Number of reduced-diameter impellers: | 0                          |
| Low NPSH:                             | N                          |
| Pump orientation:                     | Vertical                   |
| Shaft seal arrangement:               | Single                     |
| Code for shaft seal:                  | HQQE                       |
| Approvals on nameplate:               | CURUS, NSF/ANSI 61         |
| Curve tolerance:                      | ISO9906:2012 3B            |
| Pump version:                         | N                          |
| Model:                                | A                          |
| <b>Materials:</b>                     |                            |
| Base:                                 | Cast iron                  |
| Base:                                 | EN 1561 EN-GJL-200         |
| Base:                                 | ASTM A48-25B               |
| Impeller:                             | Stainless steel            |
| Impeller:                             | EN 1.4301                  |
| Impeller:                             | AISI 304                   |
| Material code:                        | A                          |
| Code for rubber:                      | E                          |
| Bearing:                              | SIC                        |
| Bearing:                              | SIC                        |
| <b>Installation:</b>                  |                            |
| Maximum ambient temperature:          | 122 °F                     |
| Maximum operating pressure:           | 362.59 psi                 |
| Max pressure at stated temperature:   | 363 psi / 250 °F           |
| Max pressure at stated temperature:   | 363 psi / -4 °F            |
| Type of connection:                   | DIN / ANSI / JIS           |
| Size of inlet connection:             | DN 25/32                   |
| Size of outlet connection:            | DN 25/32                   |
| Pressure rating for connection:       | PN 25                      |
| Flange rating inlet:                  | 250 lb                     |
| Flange size for motor:                | 56C                        |
| Connect code:                         | FGJ                        |
| <b>Liquid:</b>                        |                            |
| Pumped liquid:                        | Water                      |





Company name:

Created by:

Phone:

Date:

4/8/2021

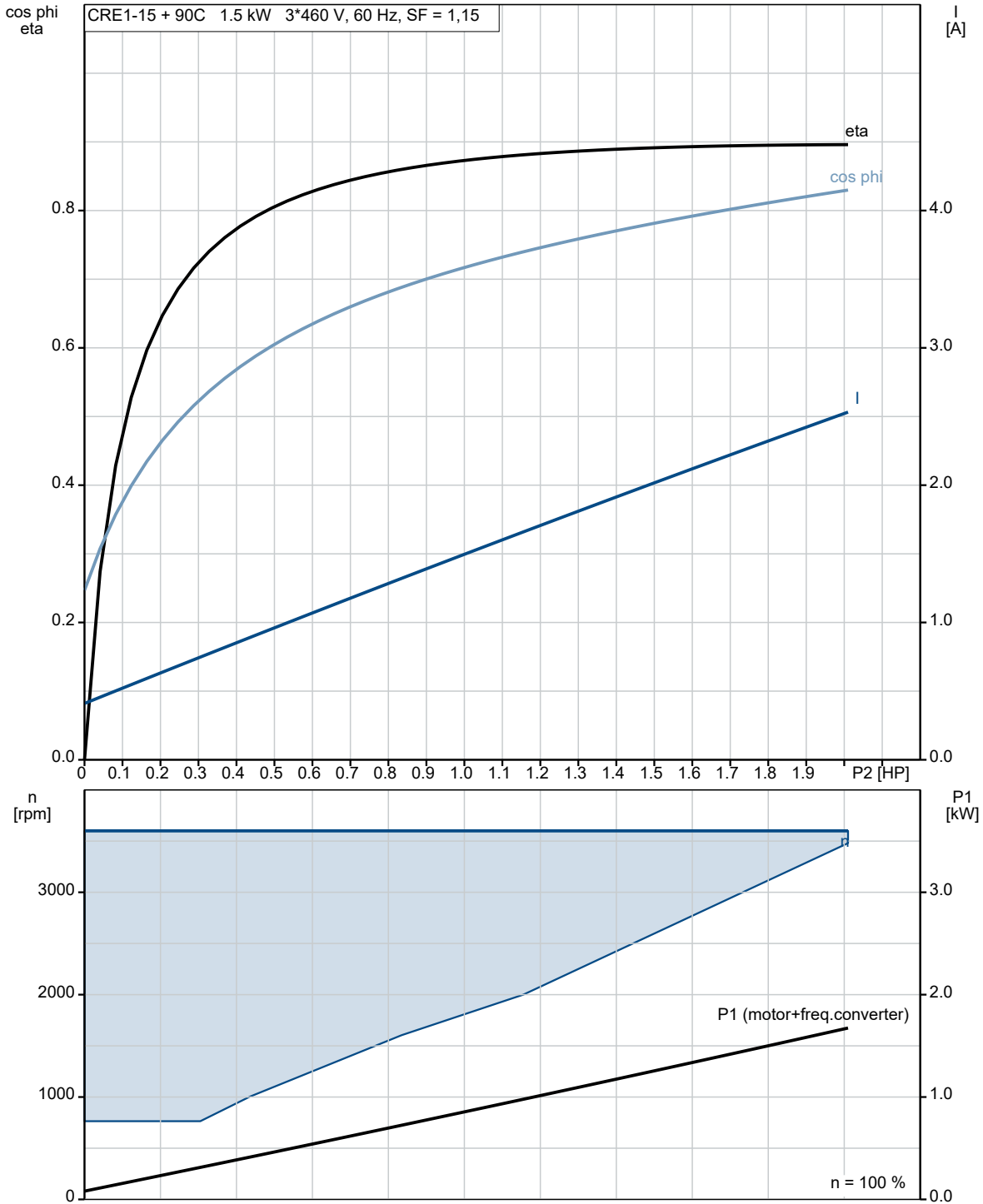
| Description                    | Value                    |
|--------------------------------|--------------------------|
| Liquid temperature range:      | -4 .. 248 °F             |
| Selected liquid temperature:   | 68 °F                    |
| Density:                       | 62.29 lb/ft <sup>3</sup> |
| <b>Electrical data:</b>        |                          |
| Motor standard:                | NEMA                     |
| Motor type:                    | 90C                      |
| IE Efficiency class:           | IE5                      |
| Rated power - P2:              | 2 HP                     |
| Power (P2) required by pump:   | 2 HP                     |
| Main frequency:                | 60 Hz                    |
| Rated voltage:                 | 3 x 440-480 V            |
| Service factor:                | 1.15                     |
| Rated current:                 | 2.65 A                   |
| Cos phi - power factor:        | 0.87                     |
| Rated speed:                   | 360-4000 rpm             |
| IE efficiency:                 | 89.4%                    |
| Motor efficiency at full load: | 89.4 %                   |
| Enclosure class (IEC 34-5):    | IP55                     |
| Insulation class (IEC 85):     | F                        |
| Motor protection:              | ELEC                     |
| Motor Number:                  | 98362281                 |
| <b>Controls:</b>               |                          |
| Control panel:                 | Graphical                |
| Function Module:               | FM300 - Advanced         |
| Frequency converter:           | Built-in                 |
| Pressure sensor:               | Y                        |
| <b>Others:</b>                 |                          |
| Net weight:                    | 84.6 lb                  |
| Gross weight:                  | 99.1 lb                  |
| Shipping volume:               | 8.26 ft <sup>3</sup>     |
| Config. file no:               | 98498551                 |
| Country of origin:             | US                       |
| Custom tariff no.:             | 8413.70.2040             |



Company name:  
Created by:  
Phone:

Date: 4/8/2021

### 99340744 CRE 1-15 N-FGJ-A-E-HQQE 60 Hz

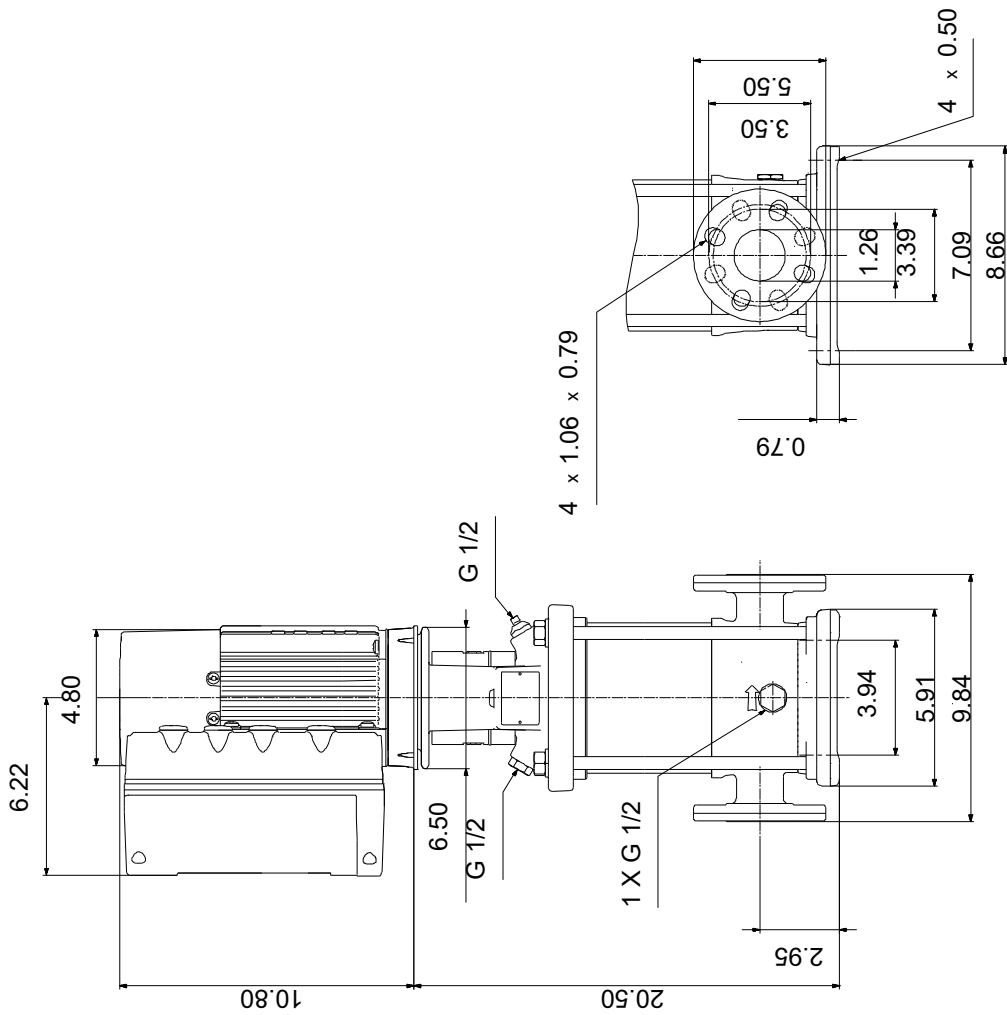




Company name:  
Created by:  
Phone:

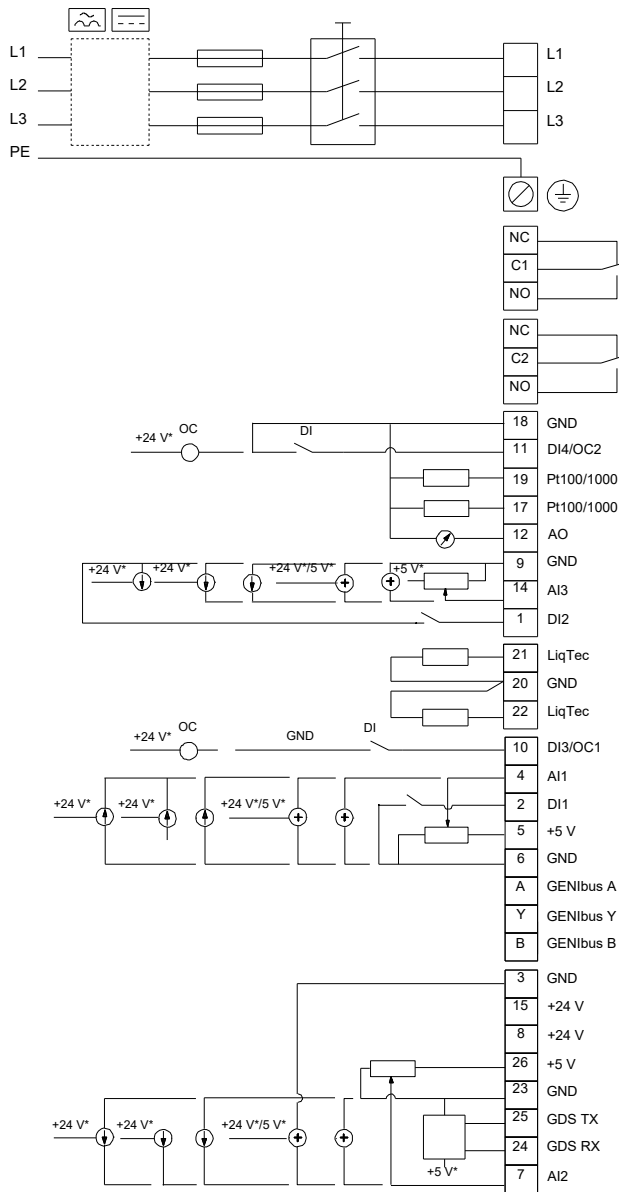
Date: 4/8/2021

### 99340744 CRE 1-15 N-FGJ-A-E-HQQE 60 Hz



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

## 99340744 CRE 1-15 N-FGJ-A-E-HQQE 60 Hz



All units are [in] unless otherwise presented.