

## **Submittal Data**

UNIT TAG:	QUANTITY:
TYPE OF SERVICE:	
SUBMITTED BY:	DATE:
APPROVED BY:	DATE:
ORDER NO.:	DATE:
	TYPE OF SERVICE: SUBMITTED BY: APPROVED BY:



### CRN 15-2 A-FGJ-A-E-HQQE

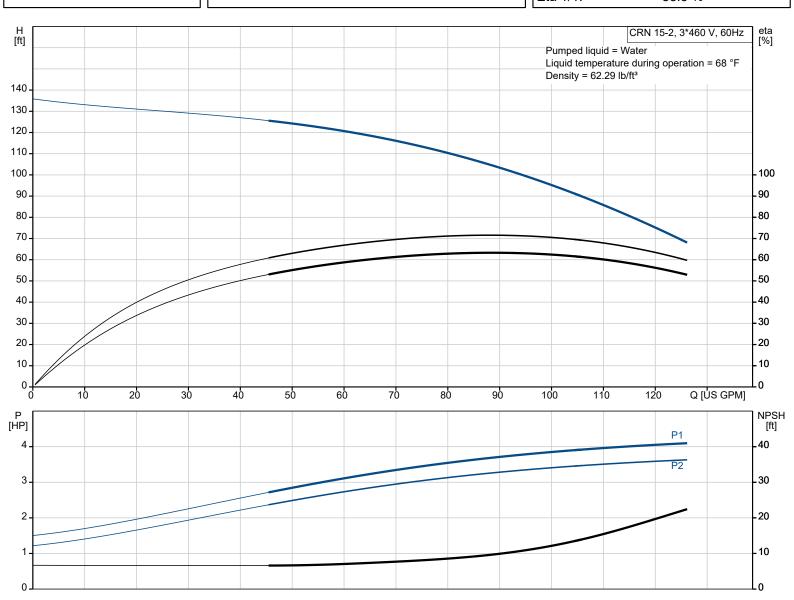
Vertical, multistage centrifugal pump with suction and discharge ports on the same level. Pump materials in contact with the liquid are in high-grade stainless steel (EN 1.4401)

Note! Product picture may differ from actual product

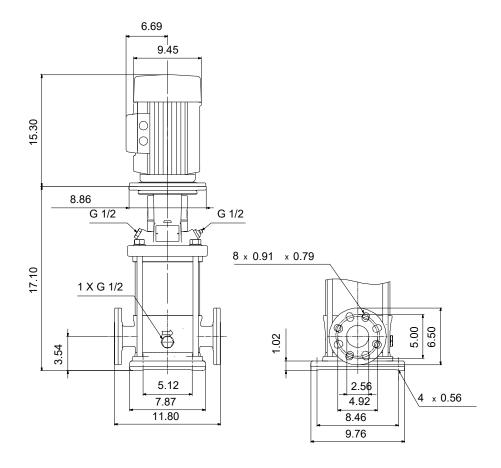
Conditions of Service		
Liquid:	Water	
Temperature:	68 °F	
Specific Gravity:	1.000	

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:	99917640

Motor Data			
Rated power - P2:	5 HP		
Rated voltage:	208-230DD/460D V		
Mains frequency:	60 Hz		
Enclosure class:	IP55		
Insulation class:	F		
Motor protection:	NONE		
Motor type:	WEG		
Eta 1/1:	88.5 %		







### 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



**Date:** 14/11/2022

Qty. | Description

CRN 15-2 A-FGJ-A-E-HQQE



Product No.: 99917640

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 asynchronous motor.

### Further product details

Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a

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.

An integral part of the process is a pretreatment.

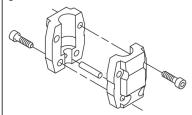
The entire process consists of these elements:

- 1) Alkaline-based cleaning.
- 2) Zinc phosphating.
- 3) Cathodic electro-deposition.
- 4) Curing to a dry film thickness 18-22 my m.

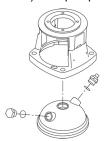
The colour code for the finished product is NCS 9000/RAL 9005.

#### **Pump**

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.



The pump head and flange for motor mounting is made in one piece (cast iron). The pump head cover is a separate component (stainless steel). 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.

#### Seal faces:

- 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.



**Date:** 14/11/2022

Qty. | Description

1



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 pump has a stainless steel base mounted on a separate base plate.

This base and base plate are kept in position by the tension of the staybolts which hold the pump together.

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.

The flanges and base are cast in one piece and prepared for connection by means of DIN, ANSI or JIS.

#### 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 premium efficiency in accordance with EISA2007.

The motor does not incorporate motor protection and must be connected to a motor-protective circuit breaker which can be manually reset. The motor-protective circuit breaker must be set according to the rated current of the motor (I1/1).

The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.

#### **Technical data**

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: 90.3 US GPM Rated head: 103.7 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

Materials:

Base: Stainless steel

EN 1.4408 AISI 316 Stainless steel

Impeller: Stainless steel EN 1.4401

AISI 316

Bearing: SIC

Installation:

t max amb: 104 °F

Maximum operating pressure: 362.59 psi

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

363 psi / -4 °F

DIN / ANSI / IIS

Type of connection: DIN / ANSI / JIS

Size of inlet connection: DN 50
Size of outlet connection: DN 50
Pressure rating for connection: PN 25



**Date:** 14/11/2022

Qty. | Description

Flange rating inlet: 300 lb Flange size for motor: 182TC

Electrical data:

Motor standard: NEMA Motor type: WEG

IE Efficiency class: IE3 / NEMA Premium

Rated power - P2: 5 HP Power (P2) required by pump: 5 HP Mains frequency: 60 Hz

Rated voltage: 3 x 208-230DD/460D V

Service factor: 1.15

Rated current: 13,1-11,8/5,9 A Starting current: 780-780 %

Cos phi - power factor:

Rated speed:

Strict Speed:

Rated speed:

Efficiency:

Efficiency:

Motor efficiency at full load:

Motor efficiency at 3/4 load:

Motor efficiency at 1/2 load:

Number of poles:

2

Enclosure class (IEC 34-5): IP55
Insulation class (IEC 85): F

Motor No: 99882380

Controls:

Frequency converter: NONE

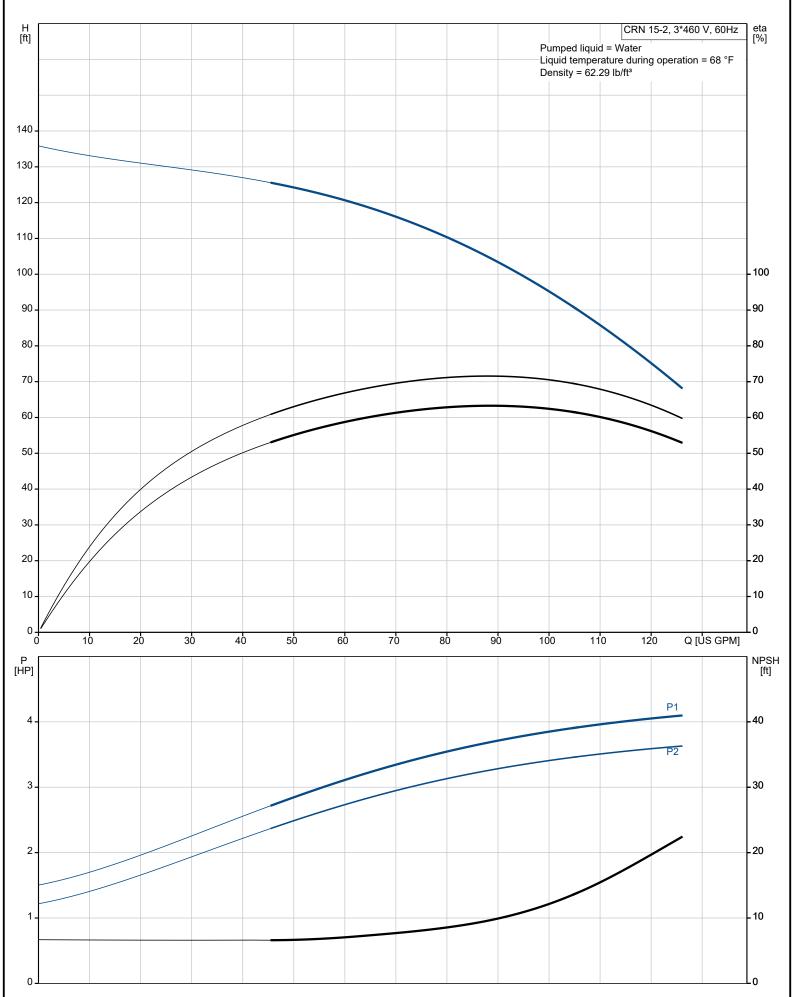
Others:

DOE Pump Energy Index CL: 0.91
Net weight: 170 lb
Gross weight: 187 lb
Shipping volume: 8.26 ft³



**Date:** 14/11/2022

## 99917640 CRN 15-2 A-FGJ-A-E-HQQE 60 Hz





Date:	14/11/2022
Date:	14/11/2022

Description	Value		
General information:			
Product name:	CRN 15-2 A-FGJ-A-E-HQQE		
Product No:	99917640		
EAN number:	5715114124508		
Technical:			
Pump speed on which pump data are based:	3461 rpm		
Rated flow:	90.3 US GPM		
Rated head:	103.7 ft		
Maximum head:	135.5 ft		
Actual impeller diameter:	4.13 in		
Stages:	2		
Impellers:	2		
Number of reduced-diameter impellers:	0		
Low NPSH:	N		
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		
Pump version:	A		
Model:	A		
Cooling:	IC 411		
Materials:			
Base:	Stainless steel		
Base:	EN 1.4408		
Base:	AISI 316		
Impeller:	Stainless steel		
Impeller:	EN 1.4401		
Impeller:	AISI 316		
Material code:	A		
Code for rubber:	E		
Bearing:	SIC		
Installation:			
t max amb:	104 °F		
Maximum operating pressure:	362.59 psi		
Max pressure at stated temp:	363 psi / 250 °F		
Max pressure at stated temp:	363 psi / -4 °F		
Type of connection:	DIN / ANSI / JIS		
Size of inlet connection:	DN 50		
Size of outlet connection:	DN 50		
Pressure rating for connection:	PN 25		
Flange rating inlet:	300 lb		
Flange size for motor:	182TC		
Connect code:	FGJ		
Liquid:			

Water

68 °F

NEMA

WEG

5 HP

5 HP

60 Hz

1.15

0.89 3500 rpm

-4 .. 248 °F

62.29 lb/ft<sup>3</sup>

IE3 / NEMA Premium

3 x 208-230DD/460D V

13,1-11,8/5,9 A

780-780 %

13.6/6.79 A

IE3 88,5%

Pumped liquid:

Electrical data: Motor standard:

IE Efficiency class:

Rated power - P2:

Mains frequency:

Rated voltage: Service factor:

Rated current:

Rated speed:

Efficiency:

Starting current: Full load SF current:

Cos phi - power factor:

Motor type:

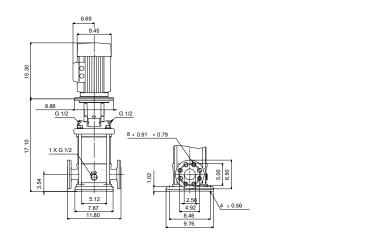
Density:

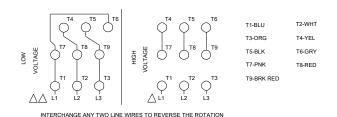
Liquid temperature range:

Selected liquid temperature:

Power (P2) required by pump:

H [ft]	CRN 15-2, 3*460 V, 60Hz	eta [%]
ניין	Pumped liquid = Water Liquid temperature during operation = 68 °F Density = 62.29 lb/ft³	1,01
140 _		-
130 -		_
120 -		
110 _		
100 -		100
90 -		90
80 _		-80
70 -		70
60 -		-60
50 -		- 50
40 -		40
30 -		-30
20 -		20
10 -		10
0-		$\int_{0}^{10}$
0	20 40 60 80 100 Q US GPM	]
P [HP]		NPSH [ft]
4 <b>-</b>	P1	40
7-	P2	Γ
3 _	1'	30
2 -		20
1 -		10
0_		L







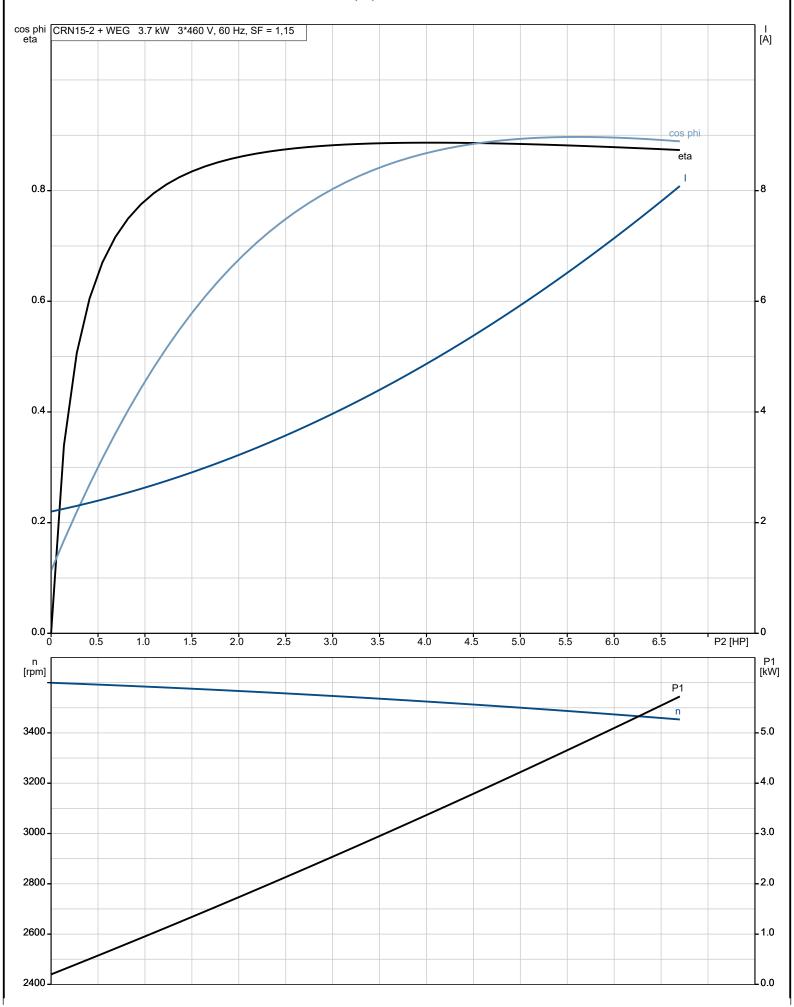
**Date:** 14/11/2022

Description	Value
Motor efficiency at full load:	88.5 %
Motor efficiency at 3/4 load:	88.5 %
Motor efficiency at 1/2 load:	87.5 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	NONE
Motor No:	99882380
Controls:	
Frequency converter:	NONE
Others:	
DOE Pump Energy Index CL:	0.91
Net weight:	170 lb
Gross weight:	187 lb
Shipping volume:	8.26 ft <sup>3</sup>



**Date:** 14/11/2022

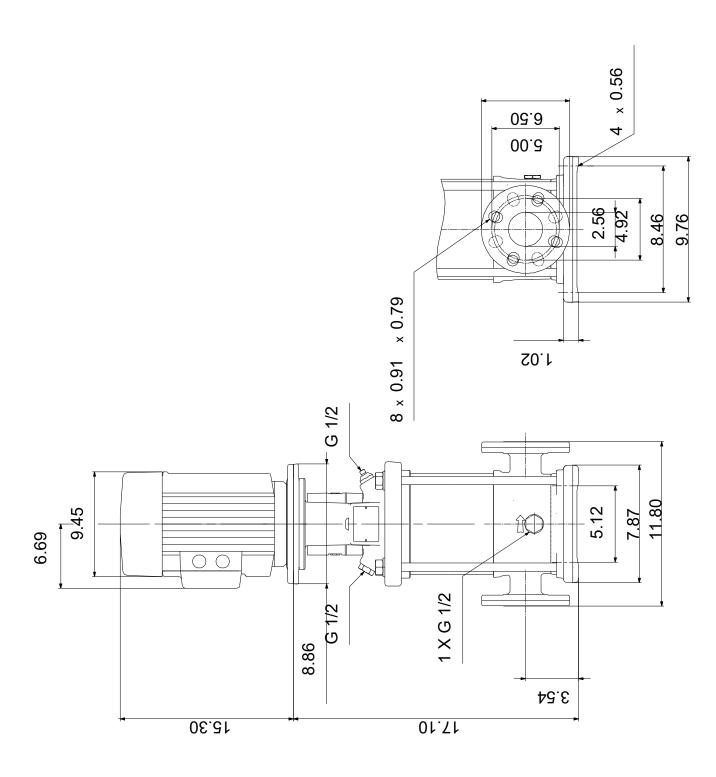
# 99917640 CRN 15-2 A-FGJ-A-E-HQQE 60 Hz





**Date:** 14/11/2022

## 99917640 CRN 15-2 A-FGJ-A-E-HQQE 60 Hz



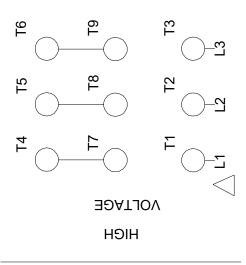


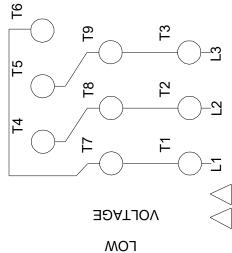
**Date:** 14/11/2022

# 99917640 CRN 15-2 A-FGJ-A-E-HQQE 60 Hz

T2-WHT
T4-YEL
T6-GRY
T8-RED

T1-BLU
T3-ORG
T5-BLK
T7-PNK
T9-BRK RED





INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION



**Date:** 14/11/2022

**Order Data:** 

Position Vour pos. Product name Amount Product No Total CRN 15-2 1 99917640 Price on request	Order Data:					
CRN 15-2 1 99917640 Price on request	Position	Your pos.	Product name			Total
			CRN 15-2	1	99917640	Price on
				+		