# **GRUNDFOS**

## Submittal Data

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

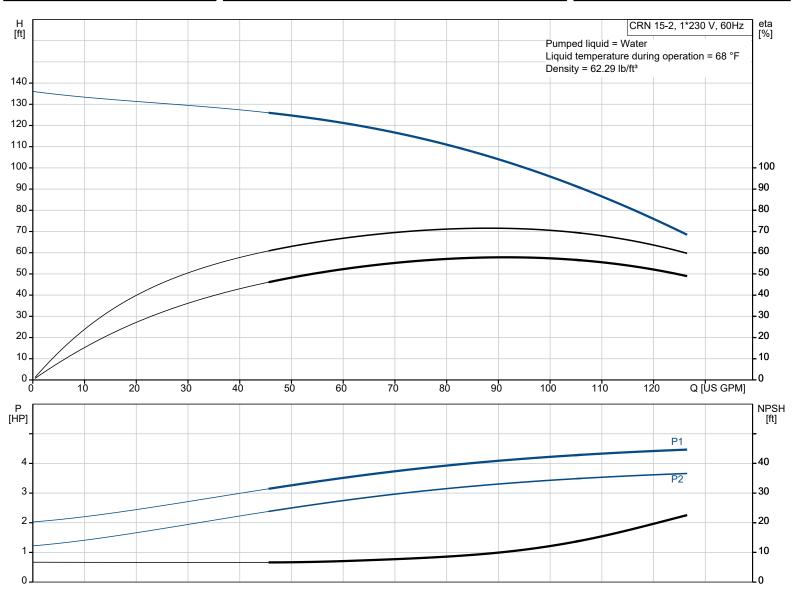


## CRN 15-2 A-FGJ-A-V-HQQV

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)

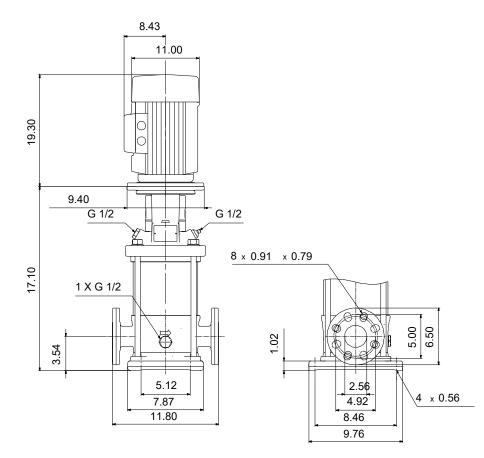
Note! Product picture may differ from actual product

Conditions of Service		Pump Data	Motor Data		
Liquid: Temperature: Specific Gravity:	Water 68 °F 1.000	Max pressure at stated temp: Liquid temperature range: Maximum ambient temperature: Shaft seal: Product number:	363 psi / 194 °F -4 194 °F 104 °F HQQV 99917603	Rated power - P2: Rated voltage: Mains frequency: Enclosure class: Insulation class: Motor protection: Motor type: Eta 1/1:	5 HP 208-230 V 60 Hz IP55 F PTO WEG 84.0 %



## Submittal Data





#### Materials:

wateriais.	
Base:	Stainless steel
Base:	EN 1.4408
Base:	AISI 316
Impeller:	Stainless steel
Impeller:	AISI 316
Impeller:	EN 1.4401
Material code:	А
Code for rubber:	V



Date:

14/11/2022

#### Qty. | Description

1 CRN 15-2 A-FGJ-A-V-HQQV



Product No.: 99917603

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 1-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 thin, well-controlled layer on the surface.

An integral part of the process is a pretreatment.

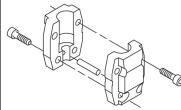
The entire process consists of these elements:

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

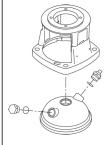
The colour code for the finished product is NCS 9000/RAL 9005.

#### 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: FKM (fluorocarbon rubber) FKM has excellent resistance to oils and chemicals. Above 90 °C, FKM should only be used in media without water.



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#### Qty. | Description

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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 has built-in thermal protection (PTO current and temperature sensors) in accordance with IEC 60034-11 and requires no further motor protection. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

As the thermal protection incorporates automatic reset, the motor must be connected in a way which ensures that the automatic reset cannot cause accidents.

#### **Technical data**

Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density:	Water -4 194 °F 68 °F 62.29 lb/ft³
Technical: Pump speed on which pump data Rated flow: Rated head: Actual impeller diameter: Pump orientation: Shaft seal arrangement: Code for shaft seal: Approvals: Curve tolerance:	are based: 3468 rpm 90.3 US GPM 103 ft 4.13 in Vertical Single HQQV CURUS ISO9906:2012 3B
	1000000.2012 00
Materials: Base:	Stainless steel
Impeller:	EN 1.4408 AISI 316 Stainless steel EN 1.4401 AISI 316
Bearing:	SIC
Installation: t max amb: Maximum operating pressure: Max pressure at stated temp:	104 °F 362.59 psi 363 psi / 194 °F 363 psi / -4 °F
Type of connection: Size of inlet connection: Size of outlet connection: Pressure rating for connection: Flange rating inlet:	DIN / ANSI / JIS DN 50 DN 50 PN 25 300 lb



Qty. | Description

QLY.	Description	
1	Flange size for motor:	182TC
	Electrical data:	
	Motor standard:	NEMA
	Motor type:	WEG
	Rated power - P2:	5 HP
	Power (P2) required by pump:	5 HP
	Mains frequency:	60 Hz
	Rated voltage:	1 x 208-230 V
	Service factor:	1.15
	Rated current:	31.7-25.3 A
	Starting current:	800-800 %
	Cos phi - power factor:	0.98
	Rated speed:	3515 rpm
	Efficiency:	84.0%
	Motor efficiency at full load:	84.0 %
	Motor efficiency at 3/4 load:	82.0 %
	Motor efficiency at 1/2 load:	76.4 %
	Number of poles:	2
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor No:	99883304
	Controls:	
	Frequency converter:	NONE
	Others:	
	DOF Pump Energy Index CI :	0.91

DOE Pump Energy Index CL:	0.91
Net weight:	214 lb
Gross weight:	300 lb
Shipping volume:	13.1 ft³

Date:

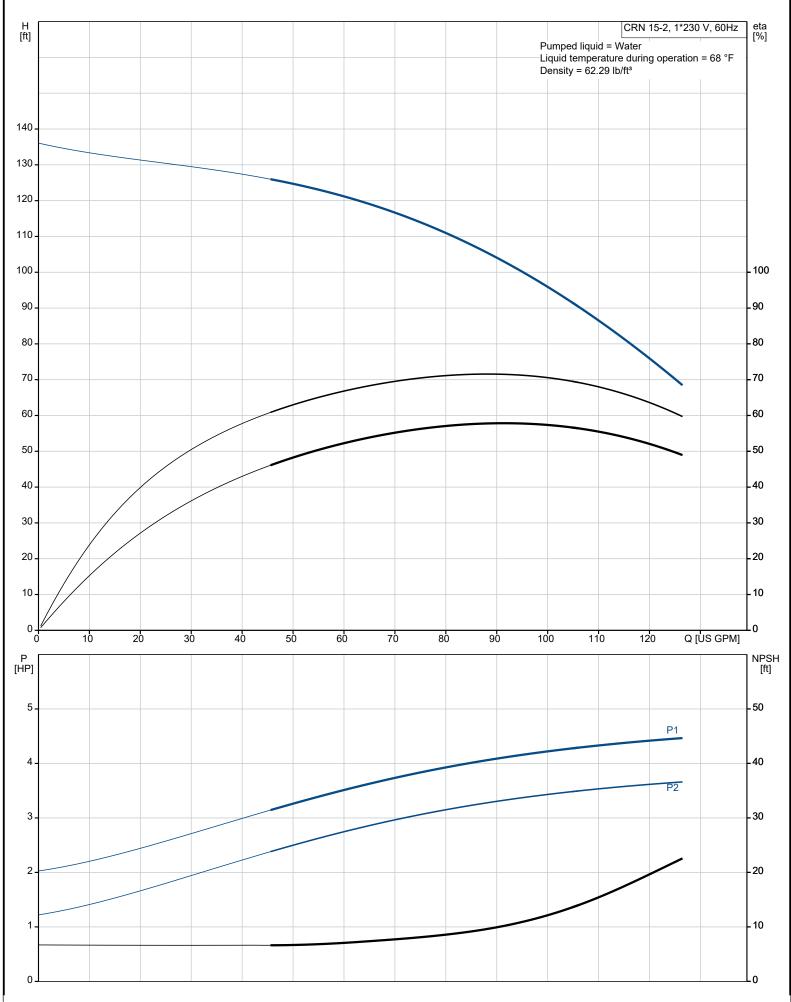
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Date:

14/11/2022

## 99917603 CRN 15-2 A-FGJ-A-V-HQQV 60 Hz





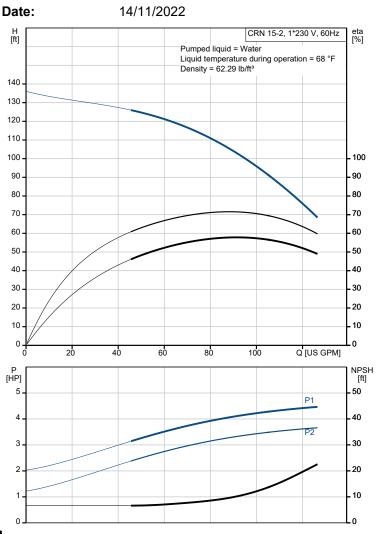
#### Description Value General information: Product name: CRN 15-2 A-FGJ-A-V-HQQV Product No: 99917603 EAN number: 5715114124232 Technical: Pump speed on which pump data are based: 3468 rpm Rated flow: 90.3 US GPM Rated head: 103 ft Maximum head: 135.5 ft Actual impeller diameter: 4.13 in Stages: 2 Impellers: 2 Number of reduced-diameter impellers: 0 Low NPSH: Ν Pump orientation: Vertical Single Shaft seal arrangement: HQQV Code for shaft seal: CURUS Approvals: ISO9906:2012 3B Curve tolerance: Pump version: А Model: А Cooling: IC 411 Materials: Base: Stainless steel Base: EN 1.4408 Base: AISI 316 Impeller: Stainless steel EN 1.4401 Impeller: Impeller: AISI 316 Material code: А V Code for rubber: Bearing: SIC Installation: 104 °F t max amb: 362.59 psi Maximum operating pressure: 363 psi / 194 °F Max pressure at stated temp: 363 psi / -4 °F Max pressure at stated temp: DIN / ANSI / JIS Type of connection:

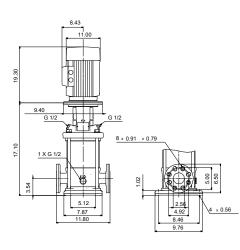
Size of inlet connection: DN 50 Size of outlet connection: DN 50 Pressure rating for connection: PN 25 Flange rating inlet: 300 lb Flange size for motor: 182TC Connect code: FGJ Liquid: Pumped liquid: Water Liquid temperature range: -4 .. 194 °F Selected liquid temperature: 68 °F Density: 62.29 lb/ft3 Electrical data: Motor standard: NEMA Motor type: WEG Rated power - P2: 5 HP Power (P2) required by pump: 5 HP 60 Hz Mains frequency: Rated voltage: 1 x 208-230 V Service factor: 1.15 Rated current: 31.7-25.3 A Starting current: 800-800 % Full load SF current: 31.7/22.4 A Cos phi - power factor: 0.98 Rated speed: 3515 rpm Efficiency: 84.0% Motor efficiency at full load: 84.0 %

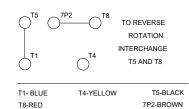
82.0 %

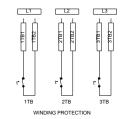
Motor efficiency at 3/4 load:

Company name: Created by: Phone:







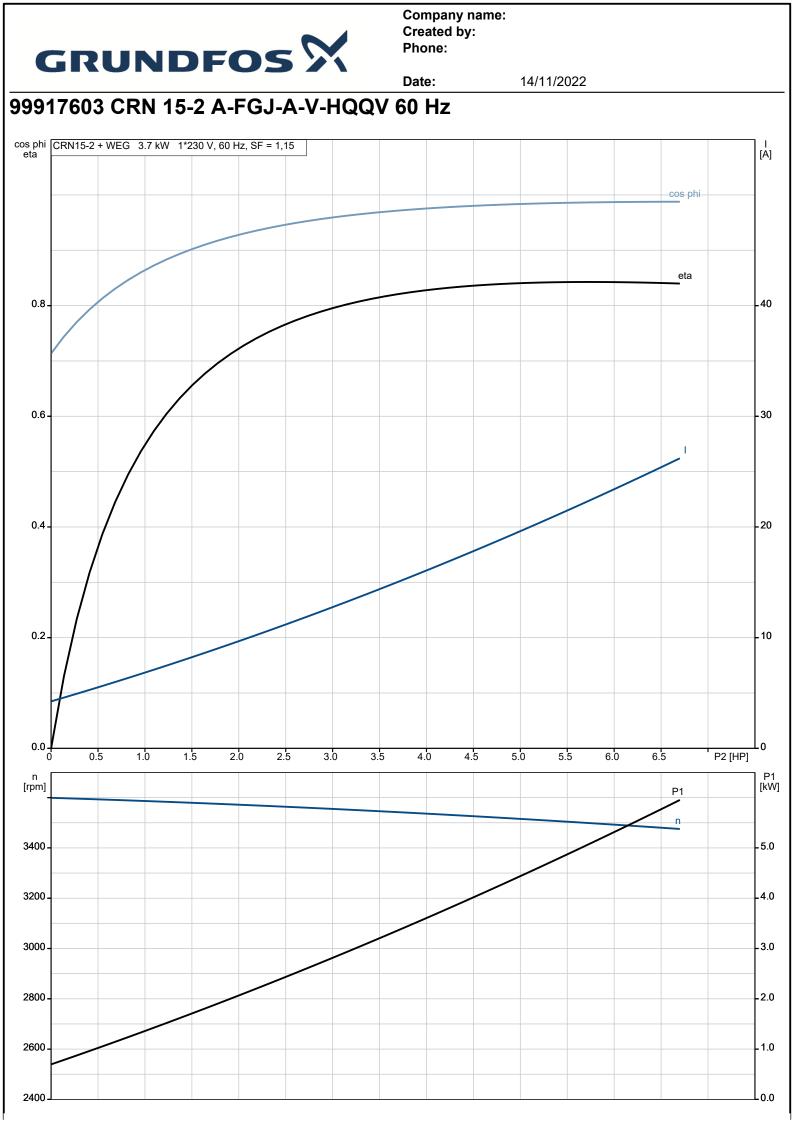




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Date:

Description Value Motor efficiency at 1/2 load: 76.4 % Number of poles: 2 Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F РТО Built-in motor protection: 99883304 Motor No: Controls: Frequency converter: NONE Others: DOE Pump Energy Index CL: 0.91 Net weight: 214 lb Gross weight: 300 lb Shipping volume: 13.1 ft<sup>3</sup>

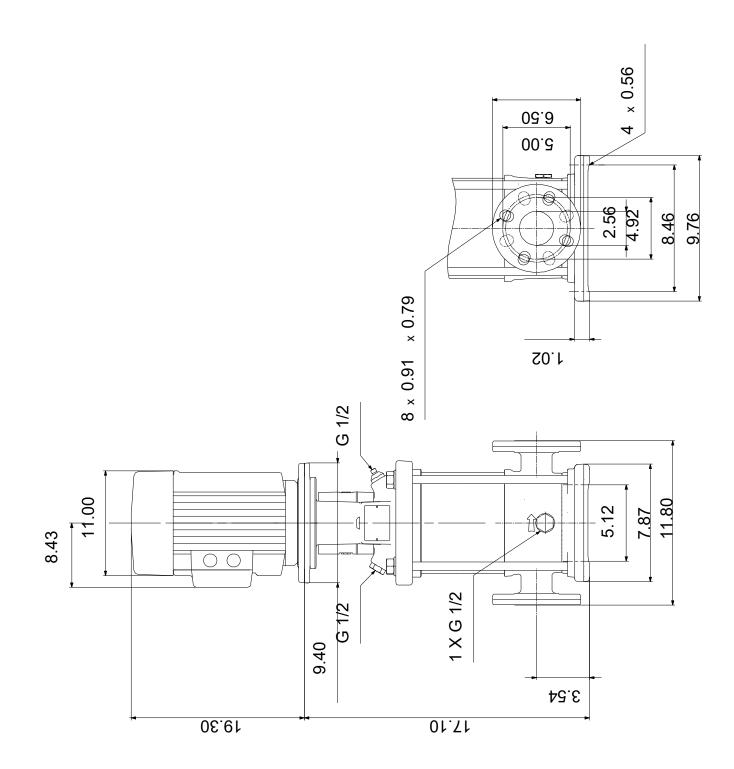




Date:

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## 99917603 CRN 15-2 A-FGJ-A-V-HQQV 60 Hz



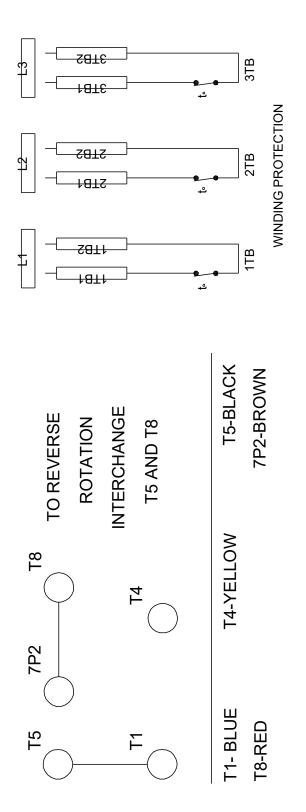
Note! All units are in [in] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details. GRUNDFOS

Company name: Created by: Phone:

Date:

14/11/2022

## 99917603 CRN 15-2 A-FGJ-A-V-HQQV 60 Hz



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G	CUNI	JFU		Date:	14/11/202	2		
Order Data:								
Position	Your pos.		Product name		Amount	Product No	Total	
		CRN 15-2			1	99917603	Price on request	