

**Date:** 4/16/2020

Count | Description

CR 1-13 A-FGJ-A-V-HQQV



Product No.: 96082228

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.

The pump is fitted with a 3-phase, fan-cooled asynchronous motor.

## Further product details

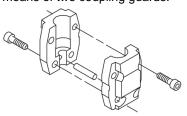
Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface. An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

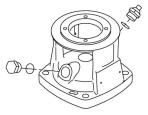
The colour code for the finished product is NCS 9000/RAL 9005.

### **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, 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)



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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.



The shaft seal is screwed into the pump head.

The pump has a special air-cooled shaft-seal chamber generating the same insulation effect as that of a vacuum flask. No external cooling is necessary; the ambient temperature is sufficient. An automatic vent vents the pump seal chamber.

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 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).

### **Technical data**

Liquid:

Pumped liquid: Water
Liquid temperature range: -4 .. 194 °F
Selected liquid temperature: 68 °F
Density: 62.29 lb/ft³

Technical:

Rated pump speed: 3466 rpm
Rated flow: 9.69 US gpm
Rated head: 283.8 ft
Pump orientation: Vertical
Shaft seal arrangement: Single



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Code for shaft seal: HQQV Approvals on nameplate: CURUS

Curve tolerance: ISO9906:2012 3B

Materials:

Base: Cast iron

EN 1561 EN-GJL-200

ASTM A48-25B

Impeller: Stainless steel

EN 1.4301 AISI 304

Bearing: SIC

Installation:

Maximum ambient temperature: 140 °F Maximum operating pressure: 362.59 psi

Max pressure at stated temperature: 363 psi / 194 °F

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: 80CA

IE Efficiency class: NEMA Premium / IE3 60Hz

Rated power - P2: 1.5 HP Power (P2) required by pump: 1.5 HP Main frequency: 60 Hz

Rated voltage: 3 x 208-230YY/460Y V

Service factor: 1.15

Rated current: 4,45-4,3/2,16 A

Starting current: 720 %

Cos phi - power factor: 0.84-0.78

Rated speed: 3440-3480 rpm

IE efficiency: IE3 84,1%

Motor efficiency at full load: 84.9 %

Motor efficiency at 3/4 load: 81.0 %

Motor efficiency at 1/2 load: 78.5 %

Number of poles: 2

Enclosure class (IEC 34-5): 55 Dust/Jetting

Insulation class (IEC 85): F

Motor Number: 98976607

Controls:

Frequency converter: NONE

Others:

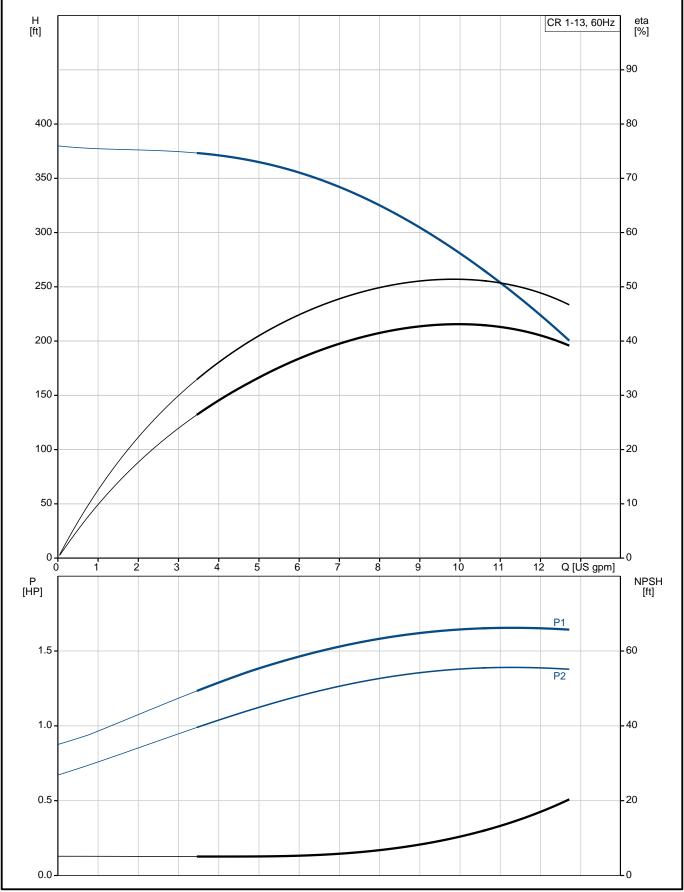
Net weight: 66.5 lb
Gross weight: 77.5 lb
Shipping volume: 6.11 ft³
Country of origin: US

Custom tariff no.: 8413.70.2040



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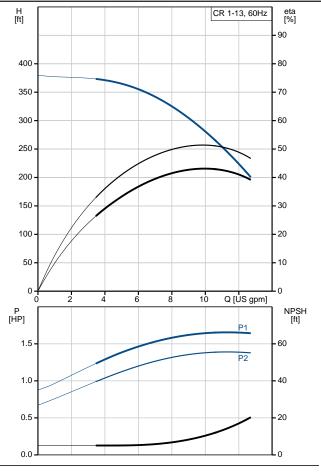
# 96082228 CR 1-13 A-FGJ-A-V-HQQV 60 Hz

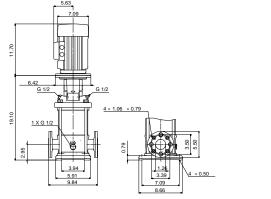


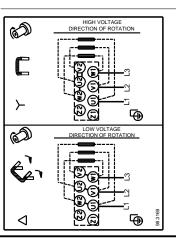


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Description	Value
General information:	
Product name:	CR 1-13 A-FGJ-A-V-HQQV
Product No.:	96082228
EAN:	5700395169669
	5700395169669
Technical:	
Rated pump speed:	3466 rpm
Rated flow:	9.69 US gpm
Rated head:	283.8 ft
Maximum head:	380.3 ft
Stages:	13
Impellers:	13
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQV
Approvals on nameplate:	CURUS
Curve tolerance:	ISO9906:2012 3B
Pump version:	Α
Model:	Α
Cooling:	TEFC
Materials:	
Base:	Cast iron
	EN 1561 EN-GJL-200
	ASTM A48-25B
Impeller:	Stainless steel
	EN 1.4301
	AISI 304
Material code:	A
Code for rubber:	V
Bearing:	SIC
Installation:	
Maximum ambient temperature:	140 °F
Maximum operating pressure:	362.59 psi
Max pressure at stated temperature:	363 psi / 194 °F
	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
Liquid:	Mater
Pumped liquid:	Water -4 194 °F
Liquid temperature range:	-4 194 F 68 °F
Selected liquid temperature:  Density:	62.29 lb/ft³
Electrical data:	02.29 Ib/It-
Motor standard:	NEMA
Motor type:	80CA
IE Efficiency class:	NEMA Premium / IE3 60Hz
Rated power - P2:	1.5 HP
Power (P2) required by pump:	1.5 HP
Main frequency:	60 Hz









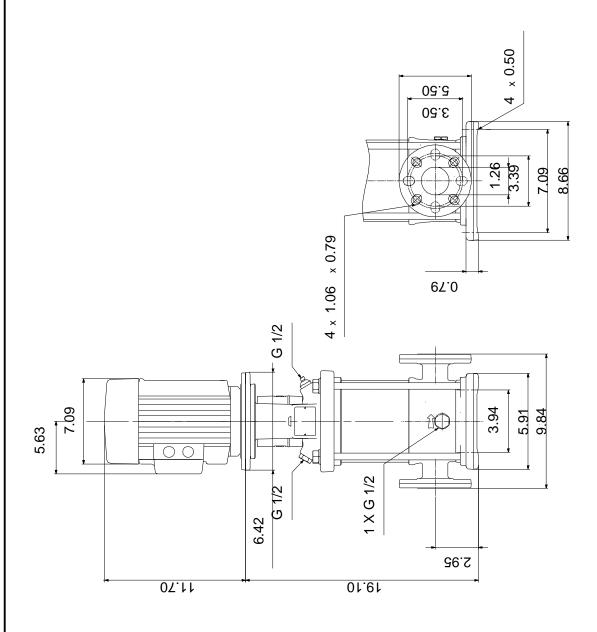
**Date:** 4/16/2020

Description	Value
Rated voltage:	3 x 208-230YY/460Y V
Service factor:	1.15
Rated current:	4,45-4,3/2,16 A
Starting current:	720 %
Load current:	5,1-4,95/2,48 A
Cos phi - power factor:	0.84-0.78
Rated speed:	3440-3480 rpm
IE efficiency:	IE3 84,1%
Motor efficiency at full load:	84.9 %
Motor efficiency at 3/4 load:	81.0 %
Motor efficiency at 1/2 load:	78.5 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protection:	NONE
Motor Number:	98976607
Controls:	
Frequency converter:	NONE
Others:	
Net weight:	66.5 lb
Gross weight:	77.5 lb
Shipping volume:	6.11 ft <sup>3</sup>
Country of origin:	US
Custom tariff no.:	8413.70.2040



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



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