

# **Submittal Data**

PROJECT:	UNIT TAG:		QUANTITY:	
	TYPE OF SERVICE:			
	THE OF CERTICE.			
REPRESENTATIVE:	SUBMITTED BY:		DATE:	
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ENGINEER:	APPROVED BY:	<u> </u>	DATE:	
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CONTRACTOR:	ORDER NO.:		DATE:	
CONTRACTOR.	ONDER NO		DATE.	



#### Product photo could vary from the actual product

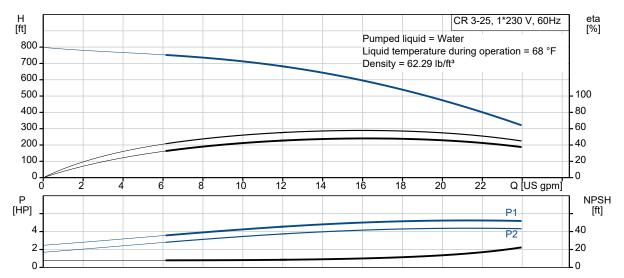
# CR 3-25 A-FGJ-A-V-HQQV

Vertical, multistage centrifugal pump with suction and discharge ports on the same level. The pump head and base are in cast iron. All other wetted parts are in stainless steel (EN 1.4301)(AISI 304)

Conditions of Service		
Efficiency:		
Liquid:	Water	
Temperature:	68 °F	
NPSH required:	ft	
Specific Gravity:	1.000	

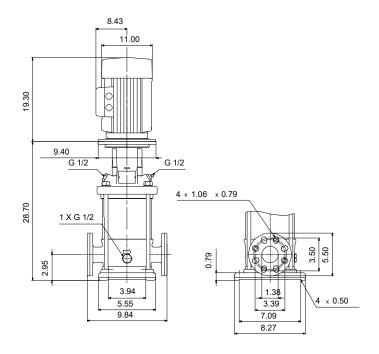
Pump Data				
Max pressure at stated temperature:	363 psi / 194 °F			
Liquid temperature range:	-4 194 °F			
Maximum ambient temperature:	104 °F			
Approvals:	CURUS			
Shaft seal:	HQQV			
Product number:	99916310			

Motor Data		
Rated power - P2:	5 HP	
Rated voltage:	208-230 V	
Main frequency:	60 Hz	
Enclosure class:	IP55	
Insulation class:	F	
Motor protection:	PTO	
Motor type:	WEG	
Eff. 1/1:	84.0 %	





# **Submittal Data**



## Materials:

Base: Cast iron

Base: EN 1561 EN-GJL-200
Base: ASTM A48-25B
Impeller: Stainless steel
Impeller: AISI 304

Impeller: AISI 304 Impeller: EN 1.4301

Material code: A Code for rubber: V



**Date:** 3/22/2021

Count | Description

CR 3-25 A-FGJ-A-V-HQQV



Product No.: 99916310

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 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**

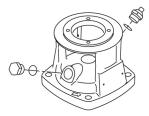
A standard split coupling connects the pump and motor shaft. It is enclosed in the pump head/motor stool by means of two coupling guards.



The pump head, 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.



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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: FKM (fluorocarbon rubber)

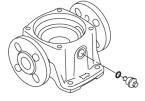
FKM has excellent resistance to oils and chemicals. Above 90  $^{\circ}$ C, FKM should only be used in media without water.



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.



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

Technical:

Rated pump speed: 3468 rpm
Rated flow: 15.4 US gpm
Rated head: 588.3 ft
Pump orientation: Vertical
Shaft seal arrangement: Single
Code for shaft seal: HQQV
Approvals on nameplate: CURUS

Curve tolerance: ISO9906:2012 3B

Materials:

Impeller:

Base: Cast iron

EN 1561 EN-GJL-200

ASTM A48-25B Stainless steel

EN 1.4301

AISI 304 SIC

Bearing: SIC SIC

SIC

Installation:

Maximum ambient temperature: 104 °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:

Size of outlet connection:

Pressure rating for connection:

Flange rating inlet:

PN 25/32

PN 25/32

PN 25

Size of outlet connection:

Size of outlet connection:

PN 25

Size of outlet connection:

PN 25

Size of outlet connection:

Size

Electrical data:

Motor standard: NEMA
Motor type: WEG
Rated power - P2: 5 HP



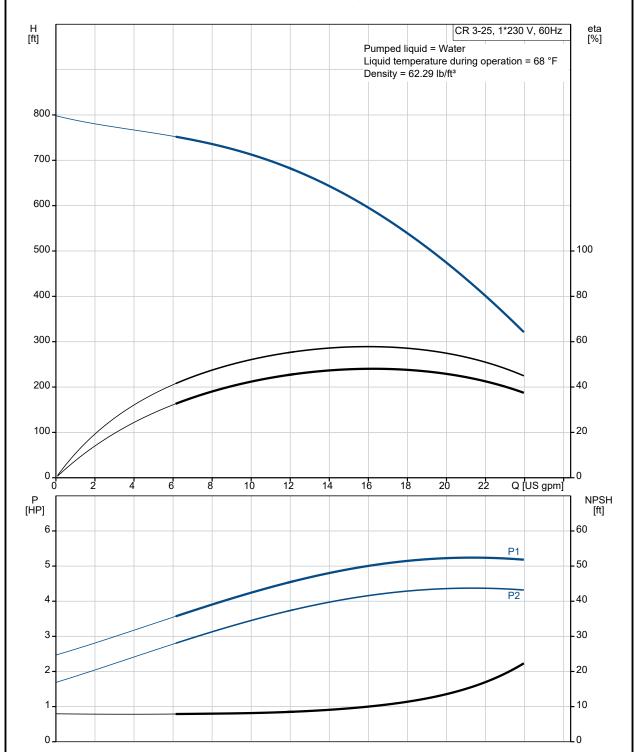
**Date:** 3/22/2021

			Date.	3/22/2021	
Count	Description				
	Power (P2) required by pump: Main frequency: Rated voltage: Service factor: Rated current: Starting current: Cos phi - power factor: Rated speed: IE efficiency: Motor efficiency at full load: Motor efficiency at 1/2 load: Number of poles: Enclosure class (IEC 34-5): Insulation class (IEC 85): Motor Number:  Controls: Frequency converter:  Others: Net weight: Gross weight: Shipping volume: Country of origin: Custom tariff no.:	5 HP 60 Hz 1 x 208-230 V 1.15 31.7-19.5 A 800-800 % 0.98 3515 rpm 84.0 % 82.0 % 76.4 % 2 IP55 F 99883304  NONE  199 Ib 217 Ib 17.2 ft³ US 8413.70.2040			



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# 99916310 CR 3-25 A-FGJ-A-V-HQQV 60 Hz



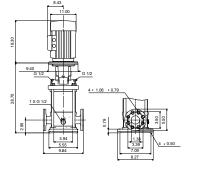


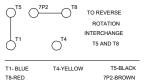
Date:

3/22/2021

		L
Description	Value	
General information:		
Product name:	CR 3-25 A-FGJ-A-V-HQQV	
Product No.:	99916310	
EAN:	5715114110594	
Technical:		
Rated pump speed:	3468 rpm	
Rated flow:	15.4 US gpm	
Rated head:	588.3 ft	
Maximum head:	785.8 ft	
Stages:	25	
Impellers:	25	
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:	A	
Model:	A	
Cooling:	IC 411	
Materials:		
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:	Α	
Code for rubber:	V	
Bearing:	SIC	
Bearing:	SIC	
Installation:		
Maximum ambient temperature:	104 °F	
Maximum operating pressure:	362.59 psi	
Max pressure at stated temperature:	363 psi / 194 °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:	182TC	
Connect code:	FGJ	
Liquid:		

Jale.	3/22/2021	
H [ft]	CR 3-25, 1*230 V, 60Hz	eta [%]
	Pumped liquid = Water Liquid temperature during operation = 68 °F Density = 62.29 lb/ft³	
800 -	Density – 02.29 ib/it	
700 –		
600 –		
500 -		<b>-</b> 100
400 -		<b>-</b> 80
300 -	\\	<b>-</b> 60
200 -		<b>-</b> 40
100 -		<b>-</b> 20
0 _	5 10 15 Q [US gpm]	Lo
P [HP]		NPSH [ft]
6 -	P1	<b>-</b> 60
4 -	P2	<b>-</b> 40
2 -		- 20
0 –		Lo









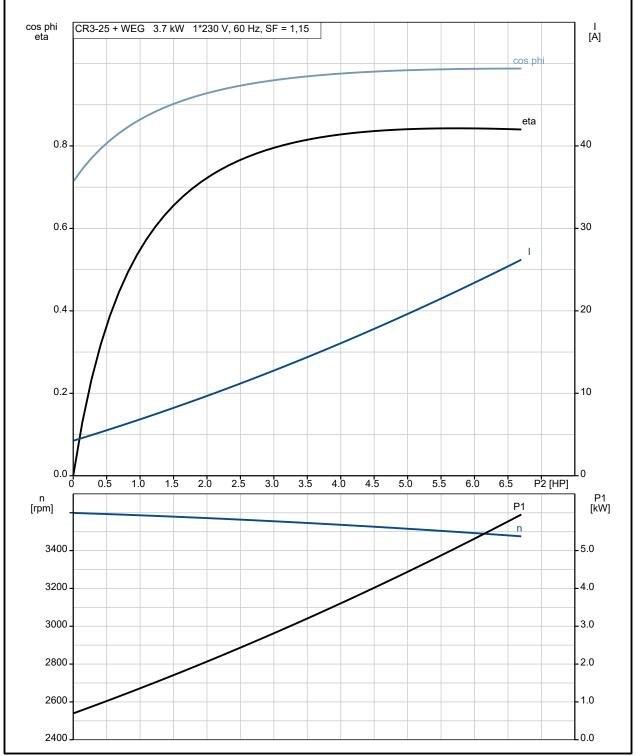
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Description	Value	
Pumped liquid:	Water	
Liquid temperature range:	-4 194 °F	
Selected liquid temperature:	68 °F	
Density:	62.29 lb/ft³	
Electrical data:		
Motor standard:	NEMA	
Motor type:	WEG	
Rated power - P2:	5 HP	
Power (P2) required by pump:	5 HP	
Main frequency:	60 Hz	
Rated voltage:	1 x 208-230 V	
Service factor:	1.15	
Rated current:	31.7-19.5 A	
Starting current:	800-800 %	
Load current:	31.7/22.4 A	
Cos phi - power factor:	0.98	
Rated speed:	3515 rpm	
IE 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 protection:	PTO	
Motor Number:	99883304	
Controls:		
Frequency converter:	NONE	
Others:		
Net weight:	199 lb	
Gross weight:	217 lb	
Shipping volume:	17.2 ft³	
Country of origin:	US	
Custom tariff no.:	8413.70.2040	



**Date:** 3/22/2021

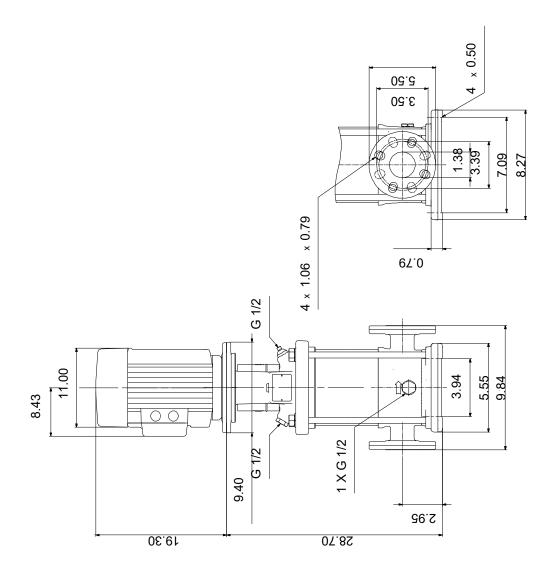
# 99916310 CR 3-25 A-FGJ-A-V-HQQV 60 Hz





Date: 3/22/2021

# 99916310 CR 3-25 A-FGJ-A-V-HQQV 60 Hz



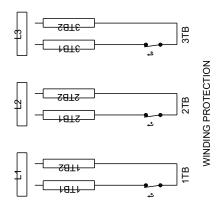
Note! All units are in [in] unless otherwise stated. Disclaimer: This simplified dimensional drawing does not show all details.

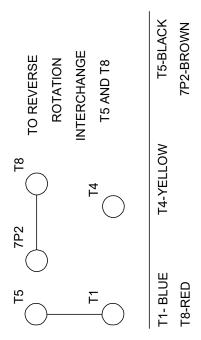


Date:

3/22/2021

# 99916310 CR 3-25 A-FGJ-A-V-HQQV 60 Hz





All units are [in] unless otherwise presented.