Submittal Data

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



CRN 64-1-1 A-G-A-V-HQQV

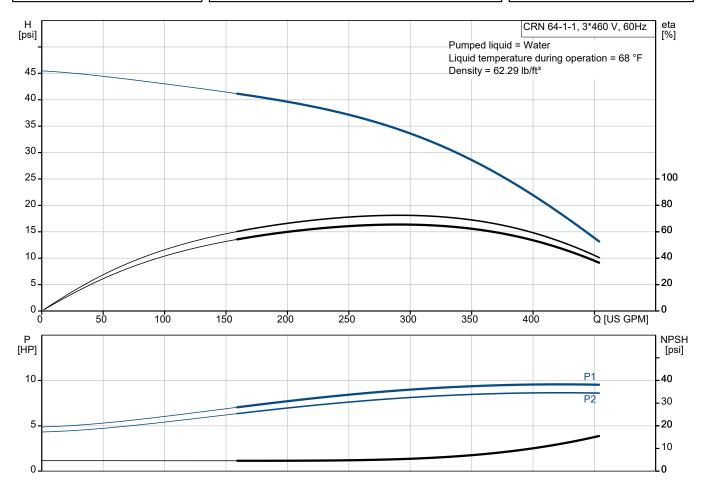
Vertical, multistage centrifugal pump with suction and discharge ports on the same level. Pump materials in contact with the liquid are in high-grade stainless steel (EN 1.4401)

Note! Product picture may differ from actual product

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

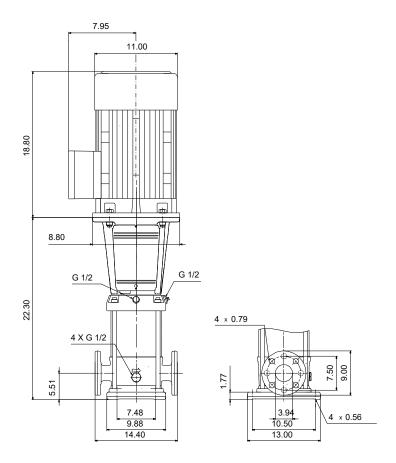
Pump Data	
Max pressure at stated temp:	232 psi / 194 °F
Liquid temperature range:	-4 194 °F
Maximum ambient temperature:	104 °F
Shaft seal:	HQQV
Product number:	99918344

Motor Data		
Rated power - P2:	10 HP	
Rated voltage:	230/460 V	
Mains frequency:	60 Hz	
Enclosure class:	IP55	
Insulation class:	F	
Motor protection:	NONE	
Motor type:	WEG	
Eta 1/1:	90.2 %	



1

Submittal Data



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: V



Date: 02/05/2024

Qty. | Description

1 CRN 64-1-1 A-G-A-V-HQQV



Product No.: 99918344

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 ANSI 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.

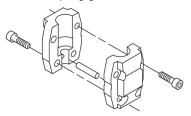
The entire process consists of these elements:

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

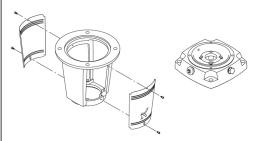
The colour code for the finished product is NCS 9000/RAL 9005.

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 motor stool connects the pump head and motor. 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.



Date: 02/05/2024

Qty. | Description

1 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.





The shaft seal is retained in the pump head by a cover and screws. It can be replaced without removing the motor.

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.

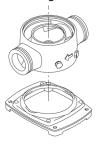
The pump has a stainless-steel base mounted on a separate base plate.

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

Both the inlet and the outlet side of the base have two pressure gauge tappings.

The pump is secured to the foundation by four bolts through the base plate.

The flanges are fastened to the base by means of locking rings.



Motor

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

Motor-mounting designation in accordance with IEC 60034-7: IM B 5 (Code I) / IM 3001 (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 .. 194 °F
Selected liquid temperature: 68 °F
Density: 62.29 lb/ft³



Date: 02/05/2024

Qty. | Description

1 Technical:

Pump speed on which pump data are based: 3467 rpm

Rated flow: 339 US GPM
Rated head: 29.53 psi
Actual impeller diameter: 5.59 in
Pump orientation: Vertical
Shaft seal arrangement: Single
Code for shaft seal: HQQV
Approvals: CURUS

Curve tolerance: ISO9906:2012 3B

Materials:

Base: Stainless steel

EN 1.4408 AISI 316

Impeller: Stainless steel

EN 1.4401 AISI 316

Bearing: SIC Support bearing: Graflon

Installation:

Maximum ambient temperature: 104 °F
Maximum operating pressure: 232.06 psi
Max pressure at stated temp: 232 psi / 194 °F

232 psi / -4 °F

Type of connection:
Size of inlet connection:
4 inch
Size of outlet connection:
4 inch
Pressure rating for connection:
Plange rating inlet:
150 lb
Flange size for motor:
213TC

Electrical data:

Motor standard: NEMA
Motor type: WEG
Rated power - P2: 10 HP
Power (P2) required by pump: 10 HP
Mains frequency: 60 Hz

Rated voltage: 3 x 230/460 V Service factor: 1.15

Rated current: 23.0/11.5 A
Starting current: 750 %
Cos phi - power factor: 0.91
Rated speed: 3530 rpm
IE efficiency: IE3 90,2%

IE Efficiency class: IE3 / NEMA Premium

Motor efficiency at full load: 90.2 %

Motor efficiency at 3/4 load: 90.2 %

Motor efficiency at 1/2 load: 89.5 %

Number of poles: 2

Enclosure class (IEC 34-5): IP55

Insulation class (IEC 85): F

Motor No: 99883246

Controls:

Frequency converter: None



Date: 02/05/2024

Qty. | Description

1 Others:

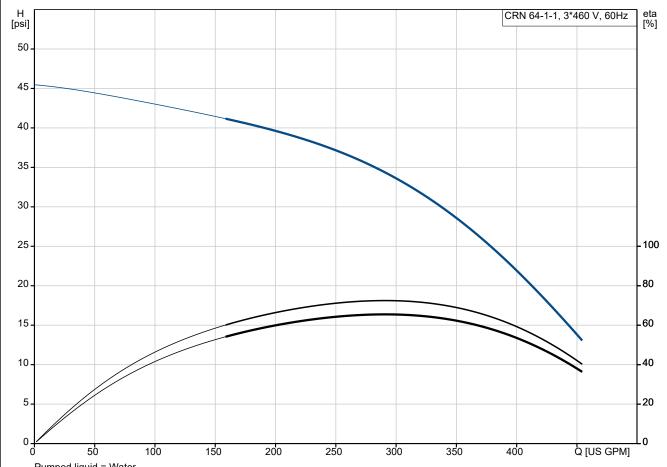
DOE Pump Energy Index CL: 0.93
Net weight: 312 lb
Gross weight: 330 lb
Shipping volume: 10.9 ft³
Country of origin: US

Custom tariff no.: 8413.70.2040

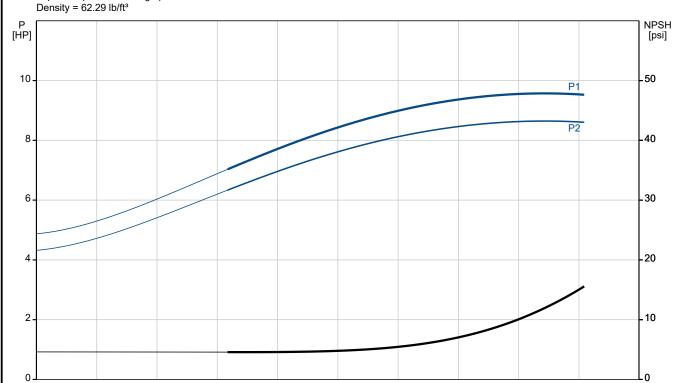


Date: 02/05/2024

99918344 CRN 64-1-1 A-G-A-V-HQQV 60 Hz



Pumped liquid = Water Liquid temperature during operation = 68 °F





Date: 02/05/2024

Description	Value
General information:	
roduct name:	CRN 64-1-1 A-G-A-V-HQQV
Product No:	99918344
AN number:	5715114132114
echnical:	
ump speed on which pump data are	3467 rpm
ased:	0407 Ipili
Rated flow:	339 US GPM
Rated head:	29.53 psi
/laximum head:	45.43 psi
Actual impeller diameter:	5.59 in
Stages:	1
mpellers:	1
lumber of reduced-diameter impellers:	1
ow NPSH:	N
ump orientation:	Vertical
Shaft seal arrangement:	Single
ode for shaft seal:	HQQV
pprovals:	CURUS
Curve tolerance:	ISO9906:2012 3B
ump version:	Α
lodel:	В
Cooling:	IC 411
laterials:	
lase:	Stainless steel
sase:	EN 1.4408
ase:	AISI 316
npeller:	Stainless steel
npeller:	EN 1.4401
npeller:	AISI 316
Material code:	Α
Code for rubber:	V
Bearing:	SIC
Support bearing:	Graflon
nstallation:	
Maximum ambient temperature:	104 °F
laximum operating pressure:	232.06 psi
fax pressure at stated temp:	232 psi / 194 °F
Max pressure at stated temp:	232 psi / -4 °F
ype of connection:	ANSI
size of inlet connection:	4 inch
ize of outlet connection:	4 inch
Pressure rating for connection:	PN 16
Flange rating inlet:	150 lb
lange size for motor:	213TC
Connect code:	G
iquid:	
umped liquid:	Water
iquid temperature range:	-4 194 °F
elected liquid temperature:	68 °F
Density:	62.29 lb/ft³
lectrical data:	
lotor standard:	NEMA
Notor type:	WEG
Rated power - P2:	10 HP
Power (P2) required by pump:	10 HP
ains frequency:	

H [psi]		CRN 64-1-1, 3*460 V, 60H	z eta [%]
45			
40			
35 -			
30 -			
25 -			100
20 -			- 80
15			- 60
10			40
5-			20
0 50 100	150 200 250 3	00 350 Q [US GPN	Lo ⁄/]
Pumped liquid = V			

Liquid temperature during operation = 68 °F

Density = 62.29 lb/ft³

P
[HP]

10

8

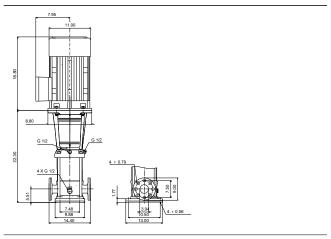
P2

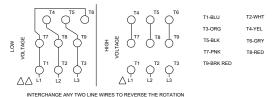
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40

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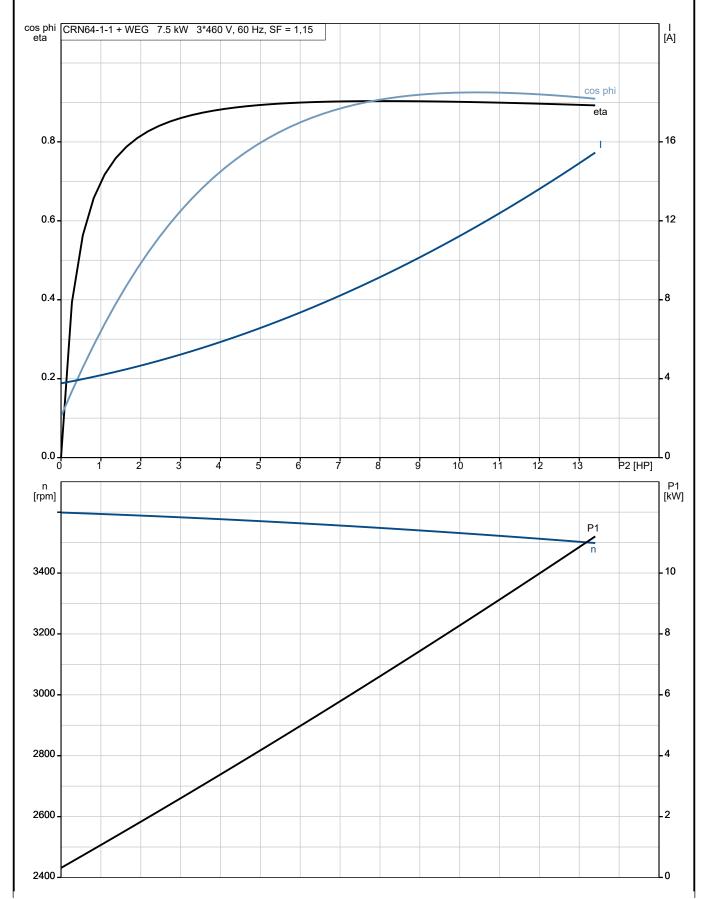
Date: 02/05/2024

Description	Value
Rated voltage:	3 x 230/460 V
Service factor:	1.15
Rated current:	23.0/11.5 A
Starting current:	750 %
Full load SF current:	26.5/13.2 A
Cos phi - power factor:	0.91
Rated speed:	3530 rpm
IE efficiency:	IE3 90,2%
IE Efficiency class:	IE3 / NEMA Premium
Motor efficiency at full load:	90.2 %
Motor efficiency at 3/4 load:	90.2 %
Motor efficiency at 1/2 load:	89.5 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	NONE
Motor No:	99883246
Controls:	
Frequency converter:	None
Others:	
DOE Pump Energy Index CL:	0.93
Net weight:	312 lb
Gross weight:	330 lb
Shipping volume:	10.9 ft³
Country of origin:	US
Custom tariff no.:	8413.70.2040



Date: 02/05/2024

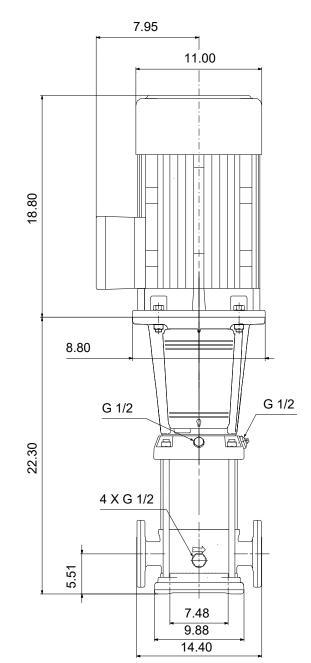
99918344 CRN 64-1-1 A-G-A-V-HQQV 60 Hz

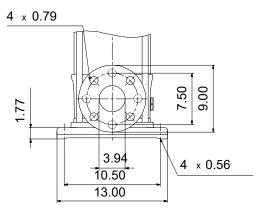




02/05/2024 Date:

99918344 CRN 64-1-1 A-G-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.



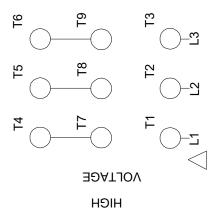
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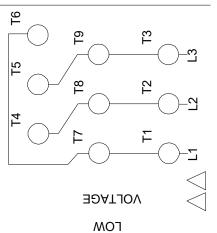
02/05/2024

99918344 CRN 64-1-1 A-G-A-V-HQQV 60 Hz

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

T1-BLU
T3-ORG
T5-BLK
T7-PNK
T9-RFK RF





INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION

Note! All units are in [in] unless others are stated.