Submittal Data

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

Note! Product picture may differ from actual product

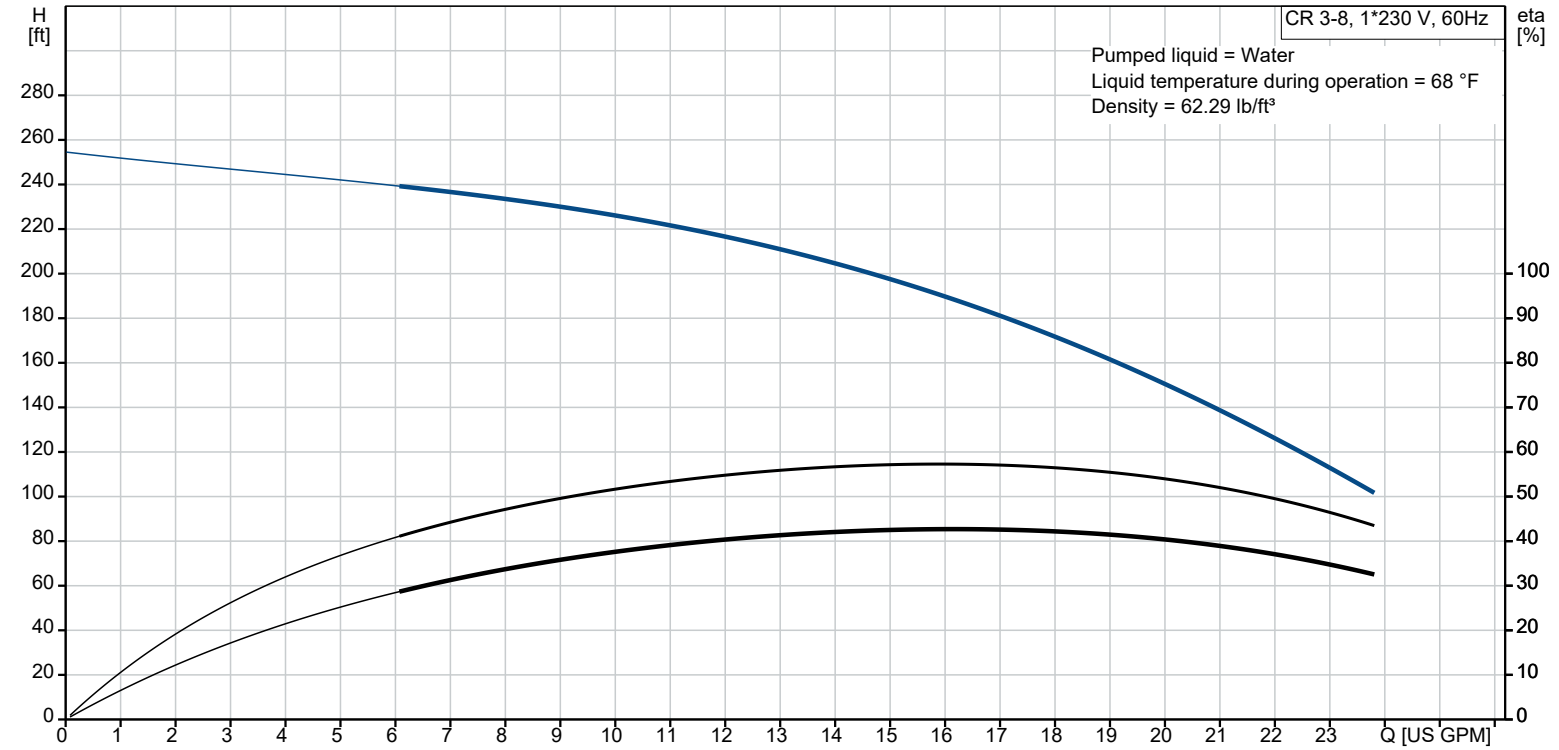
CR 3-8 A-FGJ-A-E-HQQE

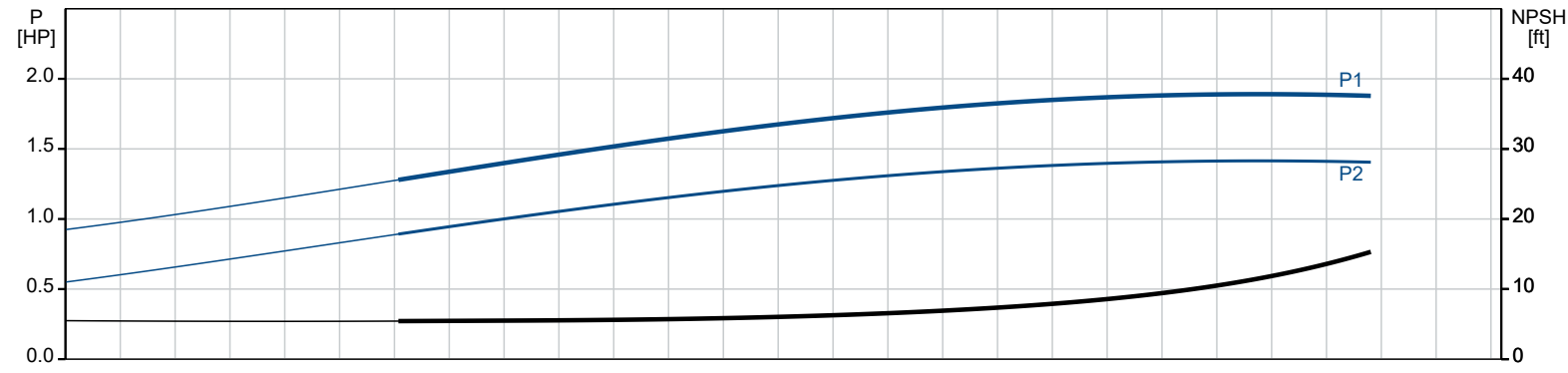
Vertical, multistage centrifugal pump with suction and discharge ports on the same level. The pump head and base are in cast iron - all other wetted parts are in stainless steel (EN 1.4301)

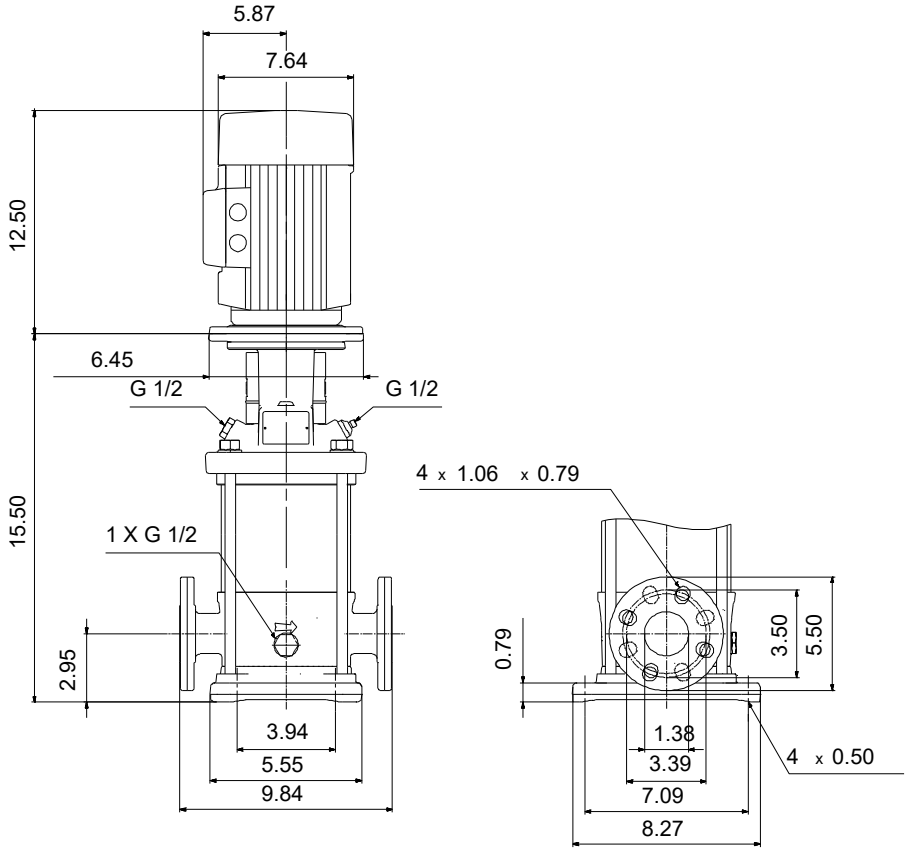
Conditions of Service	
Liquid:	Water
Temperature:	68 °F
Specific Gravity:	1.000

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:	On request

Motor Data	
Rated power - P2:	1.5 HP
Rated voltage:	115/208-230 V
Mains frequency:	60 Hz
Enclosure class:	IP55
Insulation class:	F
Motor protection:	PTO
Motor type:	WEG
Eta 1/1:	75.0 %







Materials:

Base:	Cast iron
Base:	EN 1561 EN-GJL-200
Base:	ASTM A48-25B
Impeller:	Stainless steel
Impeller:	AISI 304
Impeller:	EN 1.4301
Material code:	A
Code for rubber:	E

GRUNDFOS

Company name:
Created by:
Phone:

Date: 26/02/2024

Qty.	Description
1	**CR 3-8 A-FGJ-A-E-HQQE**

Product No.: On request

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

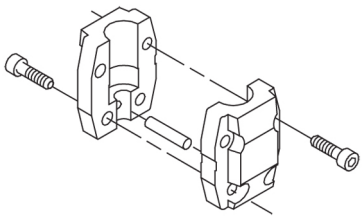
Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process.
CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.
An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

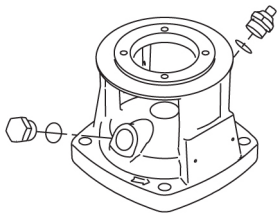
The colour code for the finished product is NCS 9000/RAL 9005.

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.



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.

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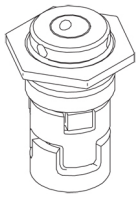
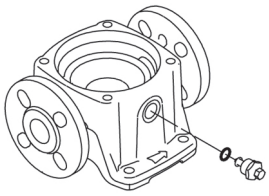
Qty.	Description
1	



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 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 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 .. 248 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³
Technical:	
Pump speed on which pump data are based:	3450 rpm
Rated flow:	15.4 US GPM
Rated head:	185.7 ft
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:	Cast iron
	EN 1561 EN-GJL-200
	ASTM A48-25B
Impeller:	Stainless steel
	EN 1.4301
	AISI 304
Bearing:	SIC
Installation:	
Maximum ambient temperature:	104 °F
Maximum operating pressure:	362.59 psi
Max pressure at stated temp:	363 psi / 250 °F
	363 psi / -4 °F

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Company name:
Created by:
Phone:

Date: 26/02/2024

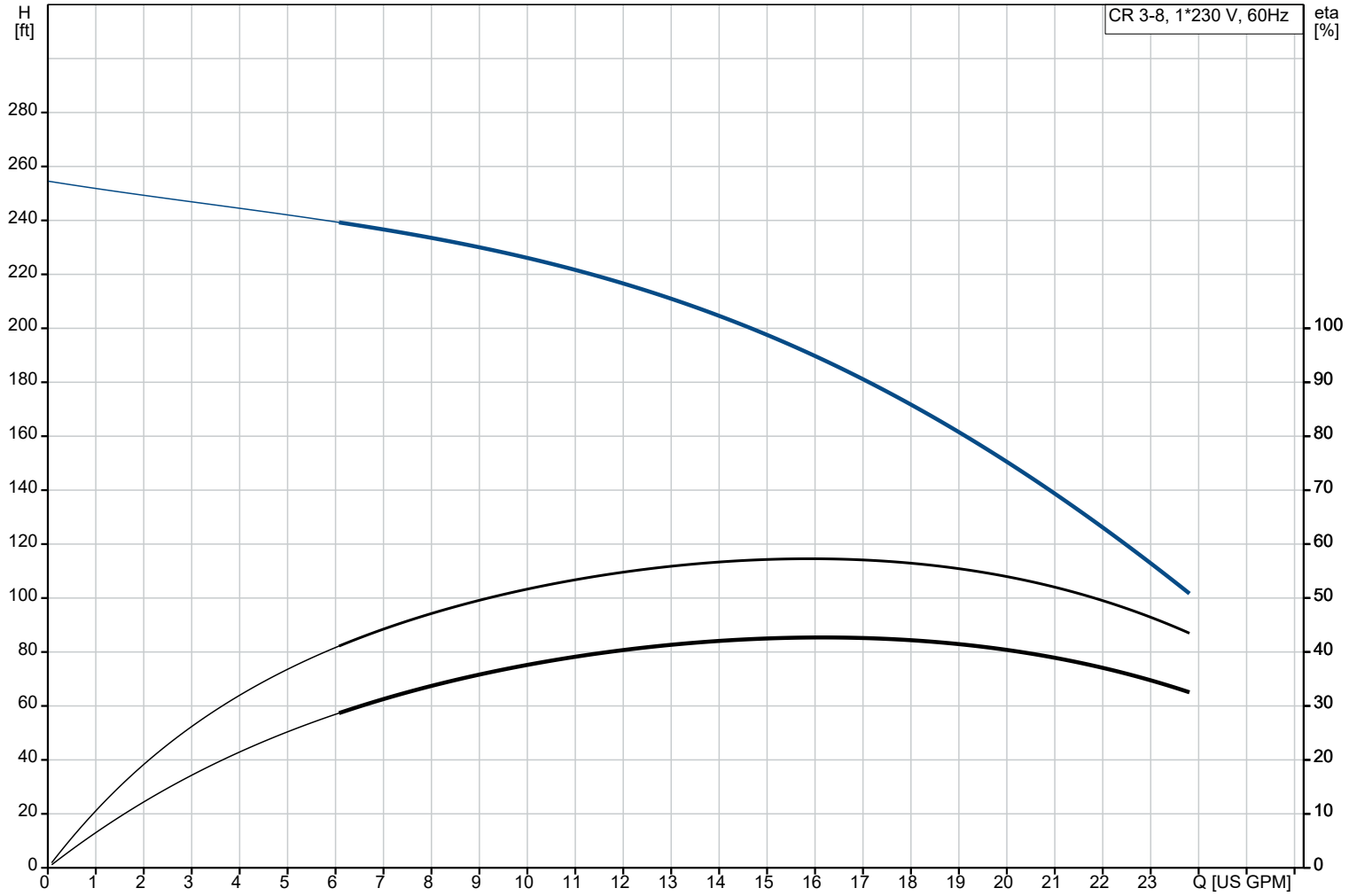
Qty.	Description	
1	Type of connection:	DIN / ANSI / JIS
	Size of inlet connection:	DN 25/32
	Size of outlet connection:	DN 25/32
	Pressure rating for connection:	PN 25
	Flange rating inlet:	250 lb
	Flange size for motor:	56C
	Electrical data:	
	Motor standard:	NEMA
	Motor type:	WEG
	Rated power - P2:	1.5 HP
	Power (P2) required by pump:	1.5 HP
	Mains frequency:	60 Hz
	Rated voltage:	1 x 115/208-230 V
	Service factor:	1.15
	Rated current:	13,2/7,3-6,6 A
	Starting current:	800-800 %
	Cos phi - power factor:	0.97
	Rated speed:	3500 rpm
	IE efficiency:	75.0%
	Motor efficiency at full load:	75.0 %
	Motor efficiency at 3/4 load:	73.0 %
	Motor efficiency at 1/2 load:	66.0 %
	Number of poles:	2
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor No:	99883319
	Controls:	
	Frequency converter:	None
	Others:	
	Net weight:	86.4 lb
	Gross weight:	97.4 lb
	Shipping volume:	6.11 ft³
	Country of origin:	US
	Custom tariff no.:	8413.70.2040

GRUNDFOS

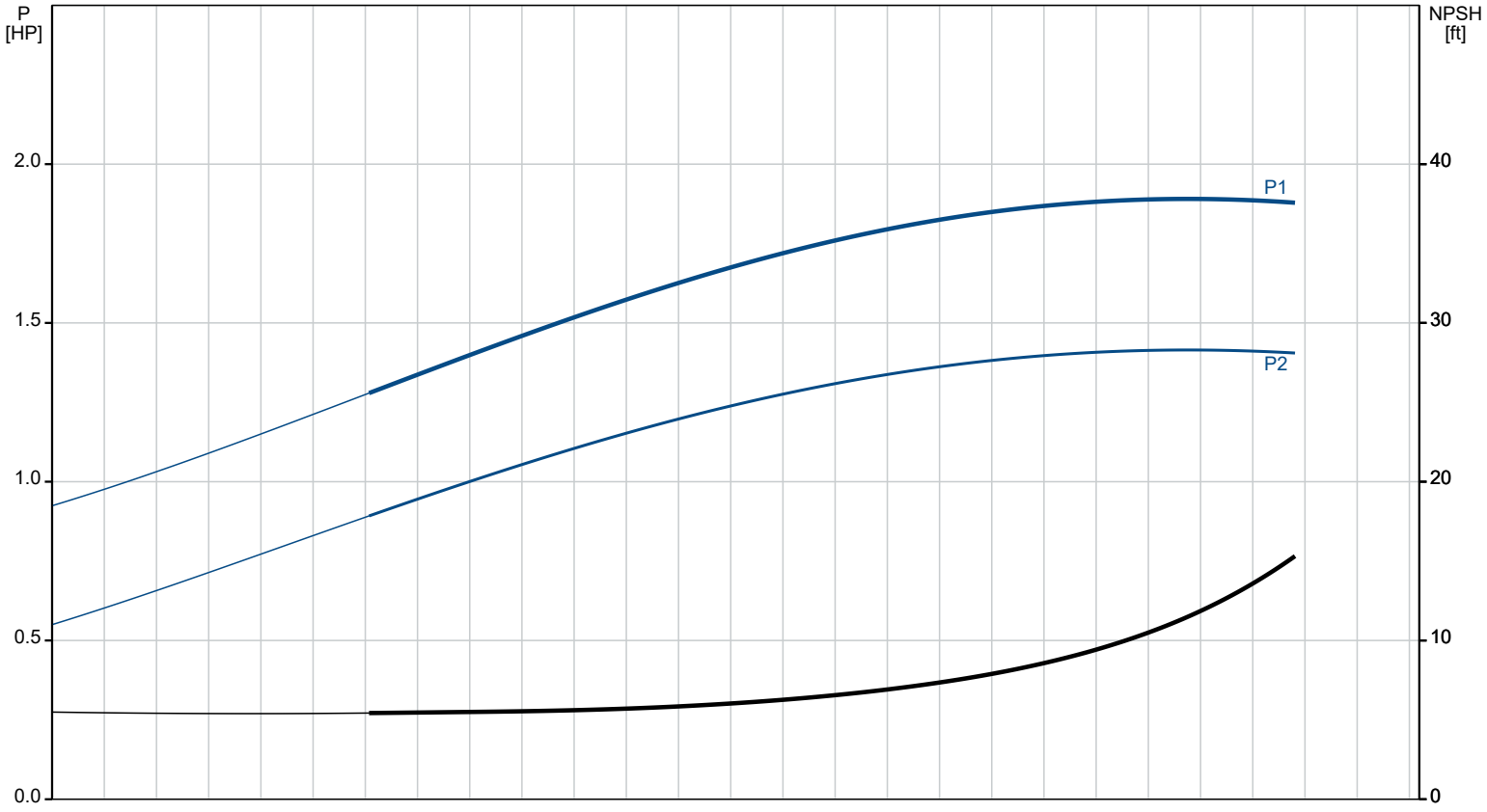
Company name:
Created by:
Phone:

Date: 26/02/2024

On request CR 3-8 A-FGJ-A-E-HQQE 60 Hz



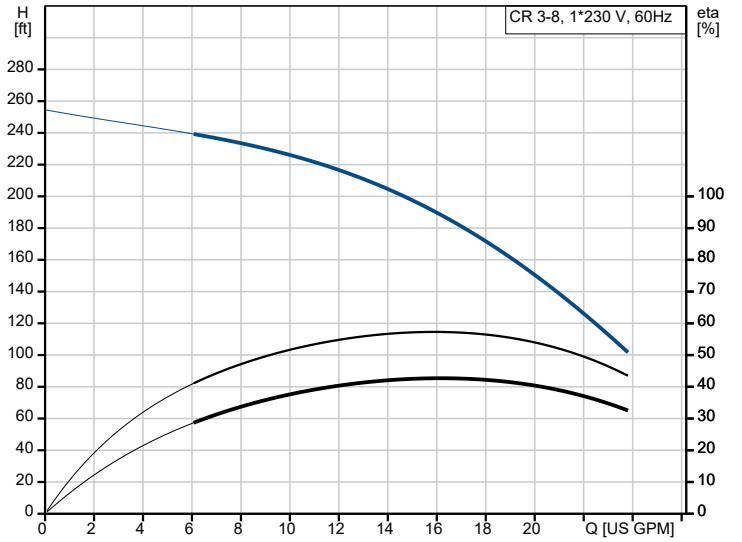
Pumped liquid = Water
Liquid temperature during operation = 68 °F
Density = 62.29 lb/ft³



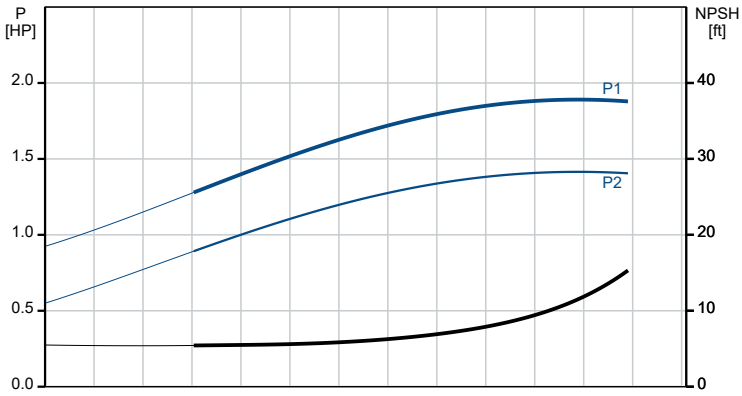
Company name:
Created by:
Phone:

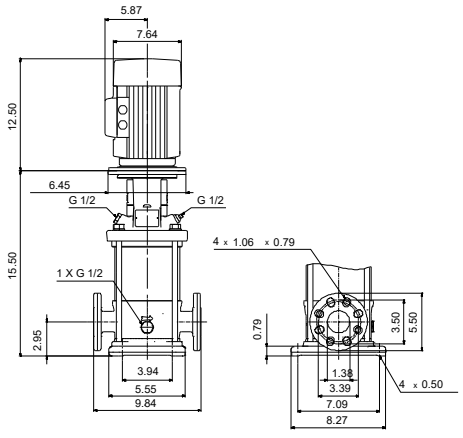
Date: 26/02/2024

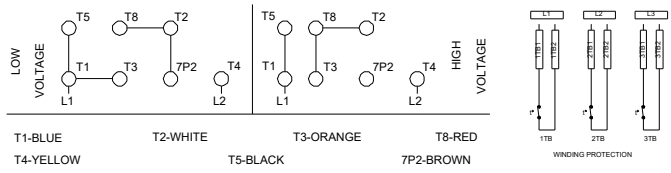
Description	Value
General information:	
Product name:	CR 3-8 A-FGJ-A-E-HQQE
Product No:	On request
EAN number:	On request
Technical:	
Pump speed on which pump data are based:	3450 rpm
Rated flow:	15.4 US GPM
Rated head:	185.7 ft
Maximum head:	250.3 ft
Stages:	8
Impellers:	8
Number of reduced-diameter 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:	Cast iron
Base:	EN 1561 EN-GJL-200
Base:	ASTM A48-25B
Impeller:	Stainless steel
Impeller:	EN 1.4301
Impeller:	AISI 304
Material code:	A
Code for rubber:	E
Bearing:	SIC
Installation:	
Maximum ambient temperature:	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 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:	
Pumped liquid:	Water
Liquid temperature range:	-4 .. 248 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³
Electrical data:	
Motor standard:	NEMA
Motor type:	WEG
Rated power - P2:	1.5 HP
Power (P2) required by pump:	1.5 HP
Mains frequency:	60 Hz
Rated voltage:	1 x 115/208-230 V
Service factor:	1.15
Rated current:	13,2/7,3-6,6 A
Starting current:	800-800 %
Full load SF current:	15.2/6.6 A
Cos phi - power factor:	0.97
Rated speed:	3500 rpm
IE efficiency:	75.0%
Motor efficiency at full load:	75.0 %
Motor efficiency at 3/4 load:	73.0 %



Pumped liquid = Water
Liquid temperature during operation = 68 °F
Density = 62.29 lb/ft³







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Company name:
Created by:
Phone:

Date: 26/02/2024

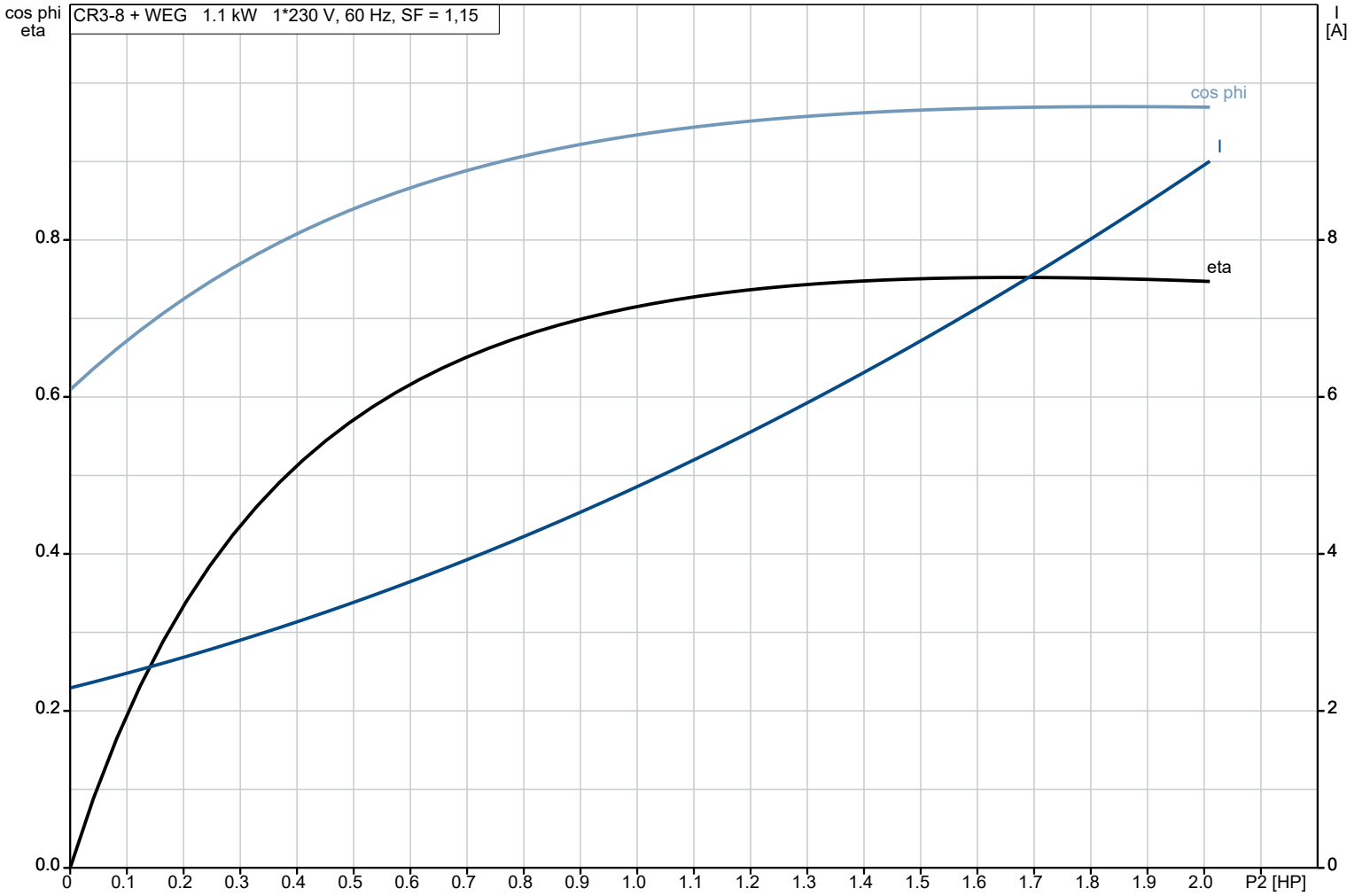
Description	Value
Motor efficiency at 1/2 load:	66.0 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTO
Motor No:	99883319
Controls:	
Frequency converter:	None
Others:	
Net weight:	86.4 lb
Gross weight:	97.4 lb
Shipping volume:	6.11 ft³
Country of origin:	US
Custom tariff no.:	8413.70.2040

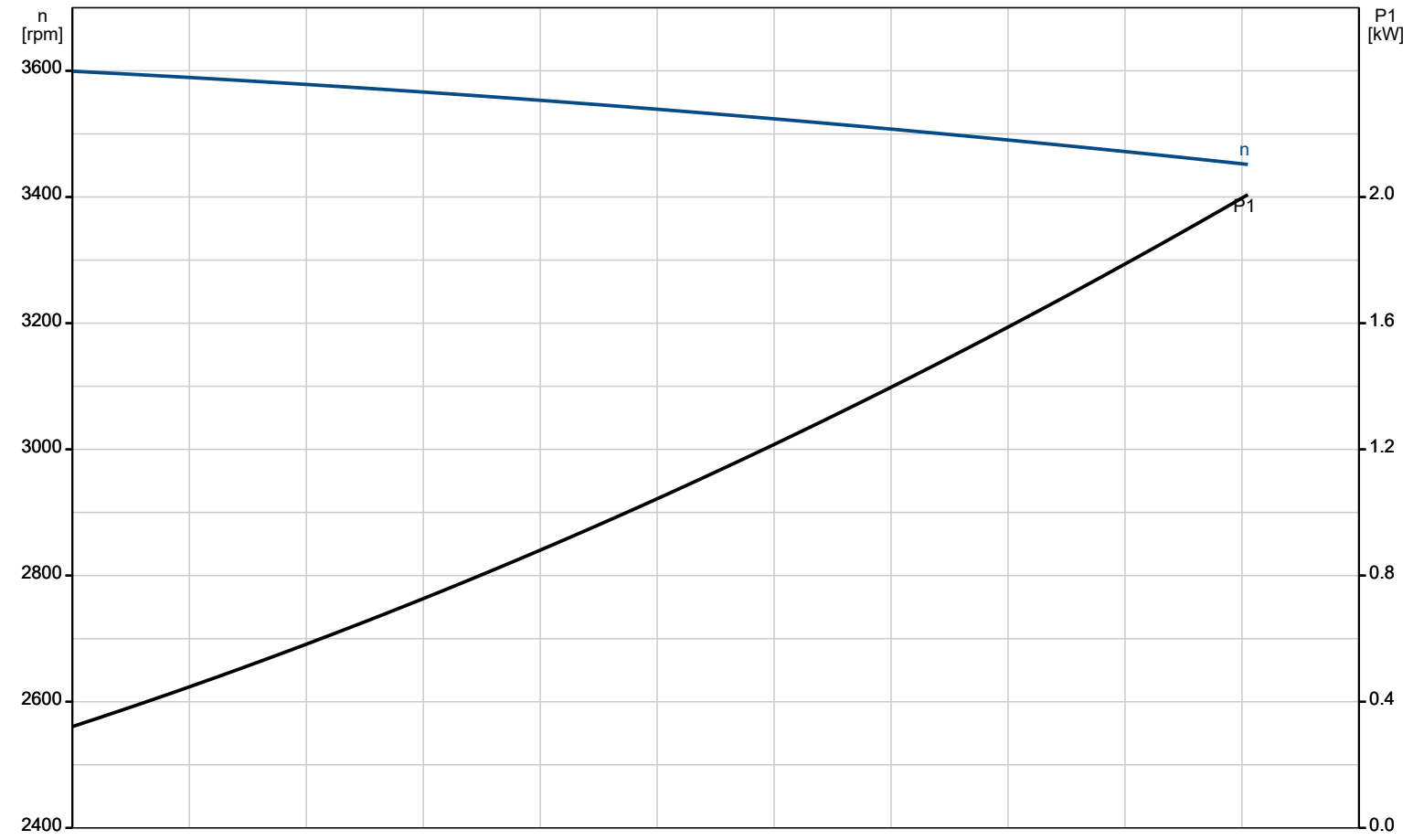
GRUNDFOS

Company name:
Created by:
Phone:

Date: 26/02/2024

On request CR 3-8 A-FGJ-A-E-HQQE 60 Hz

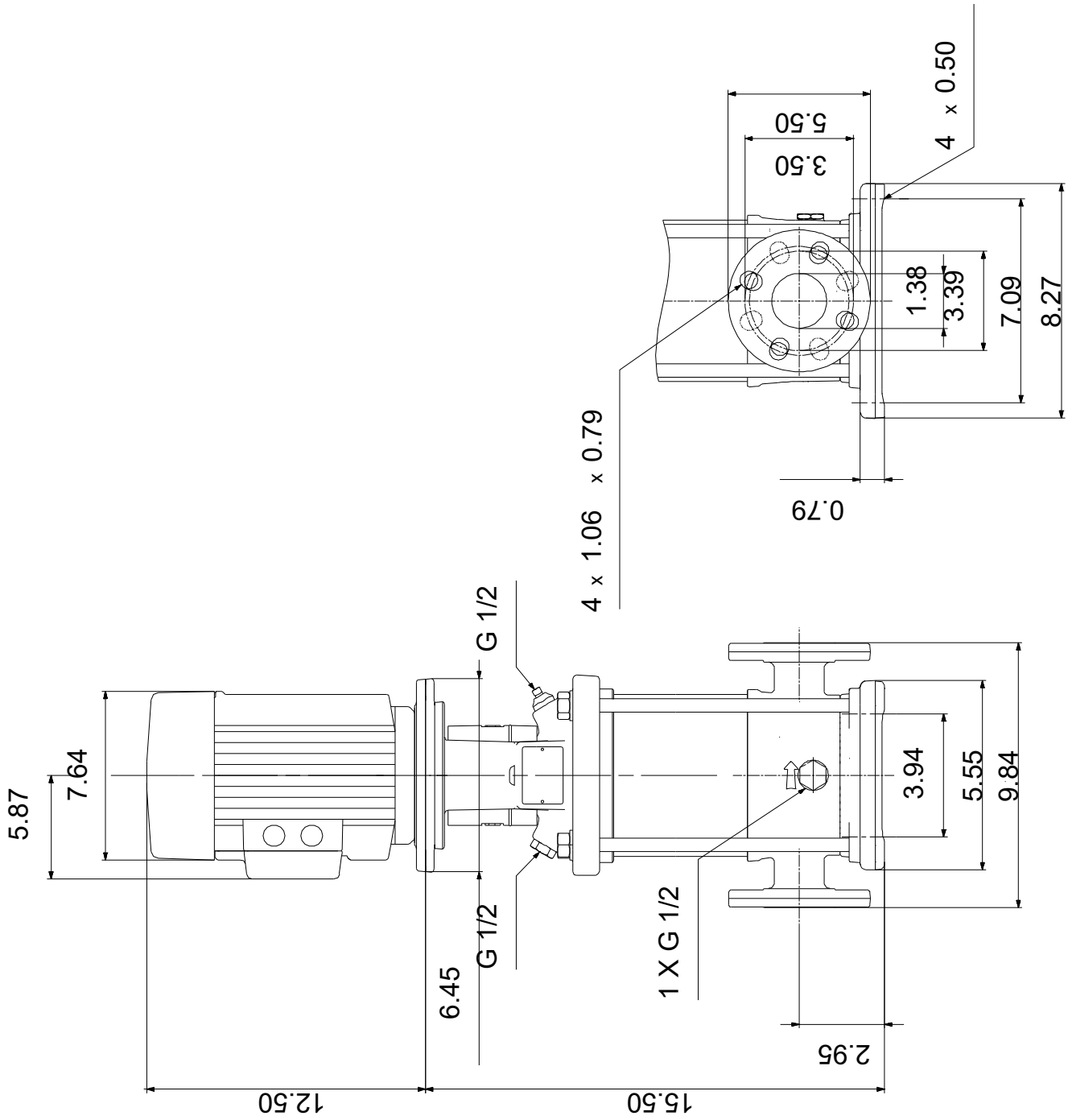




Company name:
Created by:
Phone:

Date: 26/02/2024

On request CR 3-8 A-FGJ-A-E-HQQE 60 Hz

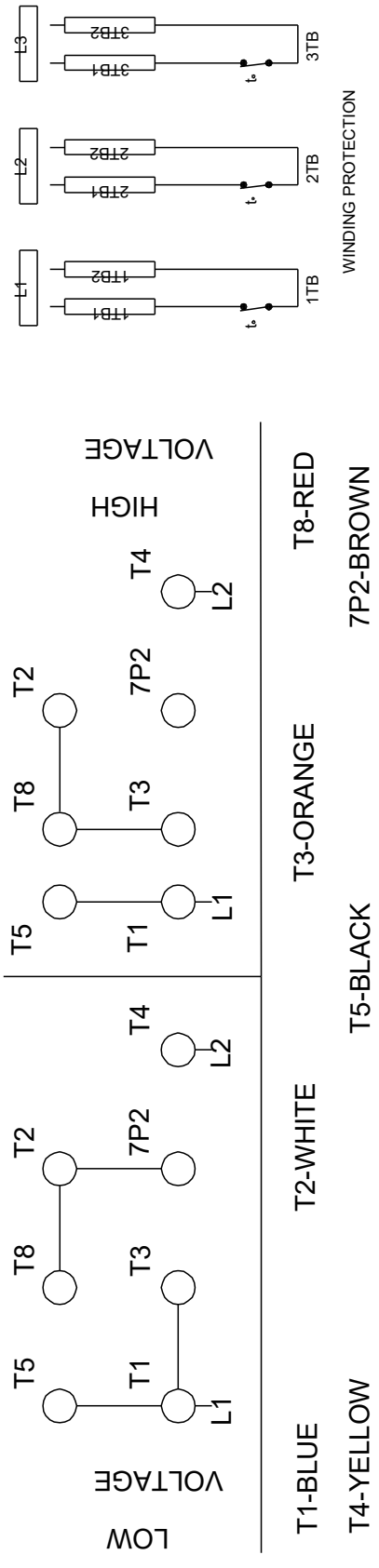


Note! All units are in [in] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Company name:
Created by:
Phone:

Date: 26/02/2024

On request CR 3-8 A-FGJ-A-E-HQQE 60 Hz



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