

Qty. Description

1 CRN 3-31 S-P-A-E-HQQE

Product No.: [96892938](#)

Vertical, non-self-priming, high-pressure multistage centrifugal pump with suction and discharge ports on the same level (in-line) enabling installation in a horizontal one-pipe system. The chamber stack is turned upside-down to ensure that the shaft seal is not affected by the high pump discharge pressure. Pump materials in contact with the liquid are in high-grade stainless steel. A cartridge shaft seal ensures high reliability, safe handling and easy service and access. Power transmission is via a split coupling. Pipe connection is via PJE (Victaulic®) couplings.

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

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.

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.

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 IE3 in accordance with IEC 60034-30-1.

The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

Qty. Description

1 Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.

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: -20 .. 120 °C
 Selected liquid temperature: 20 °C
 Density: 998.2 kg/m³

Technical:

Pump speed on which pump data are based: 2902 rpm
 Rated flow: 3 m³/h
 Rated head: 153.2 m
 Code for shaft seal: HQQE
 Approvals: CE,EAC
 Approvals for drinking water: ACS
 Curve tolerance: ISO9906:2012 3B

Materials:

Pump housing: Stainless steel
 DIN W.-Nr. 1.4408
 ASTM A 351 CF 8M
 Impeller: Stainless steel
 DIN W.-Nr. 1.4401
 AISI 316

Installation:

t max amb: 60 °C
 Max pressure at stated temp: 50 bar / 120 °C
 50 bar / -20 °C
 Type of connection: PJE
 Size of connection: 1 1/4 inch
 Flange size for motor: FT130

Electrical data:

Motor type: 112MC
 IE Efficiency class: IE3
 Rated power - P2: 3 kW
 Power (P2) required by pump: 3 kW
 Mains frequency: 50 Hz
 Rated voltage: 3 x 380-415D V
 Rated current: 5.95 A
 Starting current: 970-1070 %
 Cos phi - power factor: 0.88-0.85
 Rated speed: 2910-2930 rpm
 Efficiency: IE3 88%
 Motor efficiency at full load: 88 %
 Motor efficiency at 3/4 load: 88.5 %
 Motor efficiency at 1/2 load: 88 %
 Number of poles: 2
 Enclosure class (IEC 34-5): 55 Dust/Jetting
 Insulation class (IEC 85): F
 Motor No: 85905157



Company name:

Created by:

Phone:

Date:

30/11/2022

Qty.	Description
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1	Others: Minimum efficiency index, MEI \geq 0.7 Net weight: 42.6 kg Gross weight: 47.6 kg
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Company name:

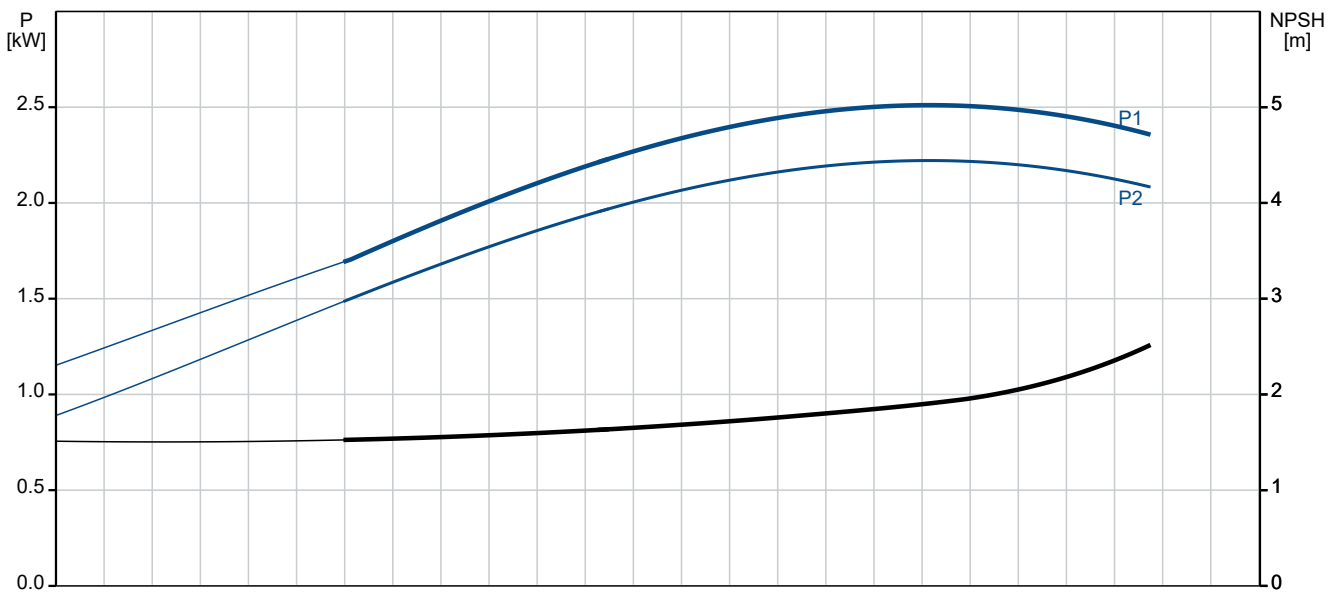
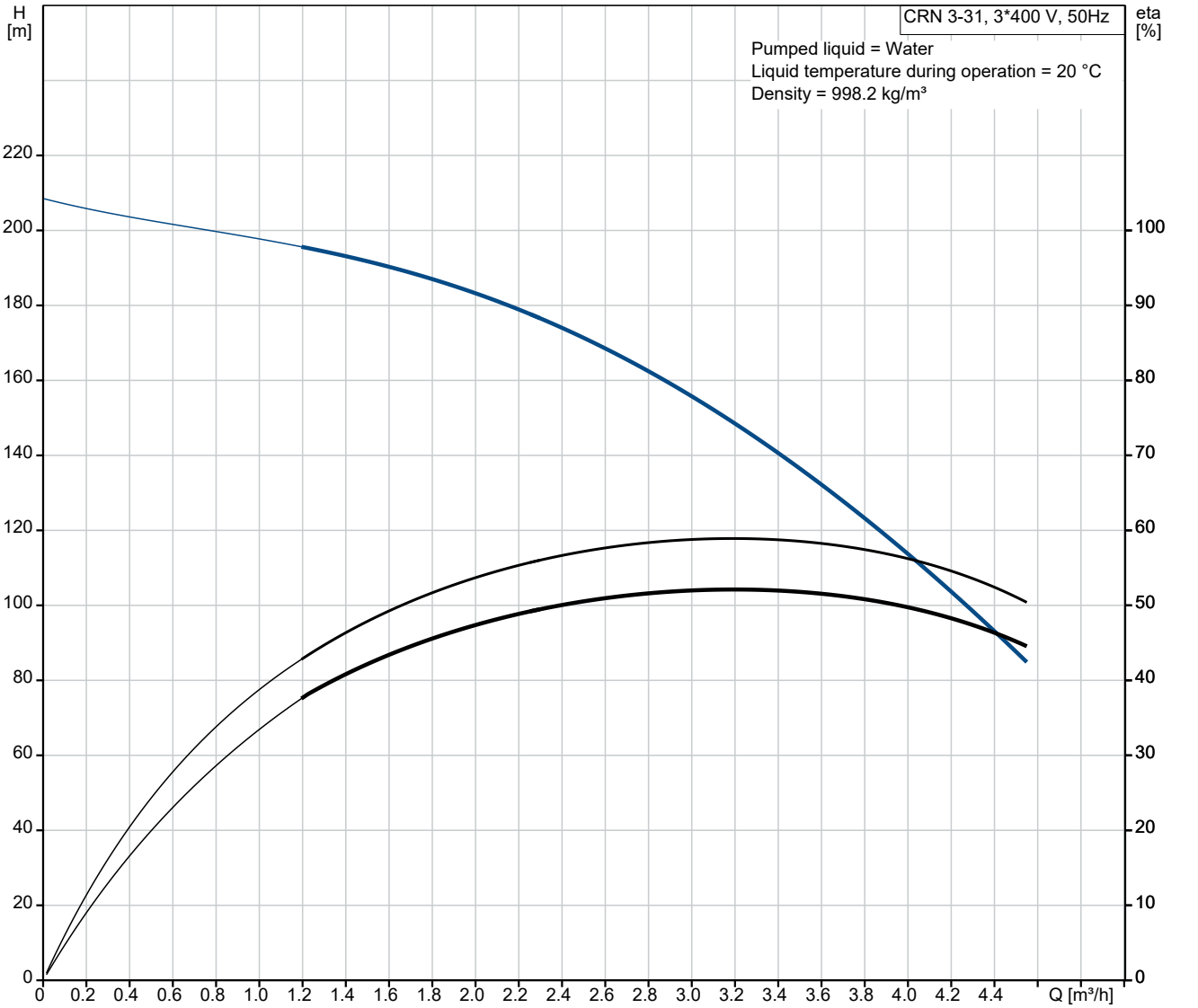
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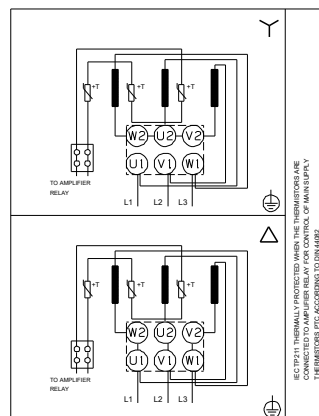
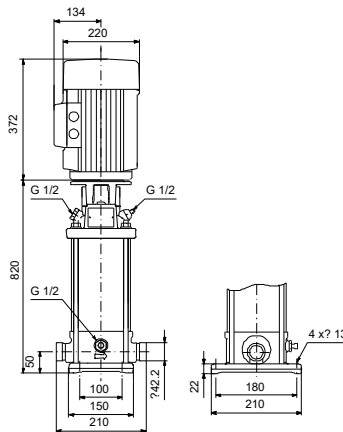
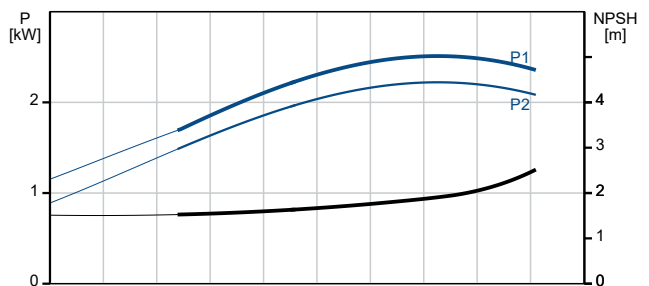
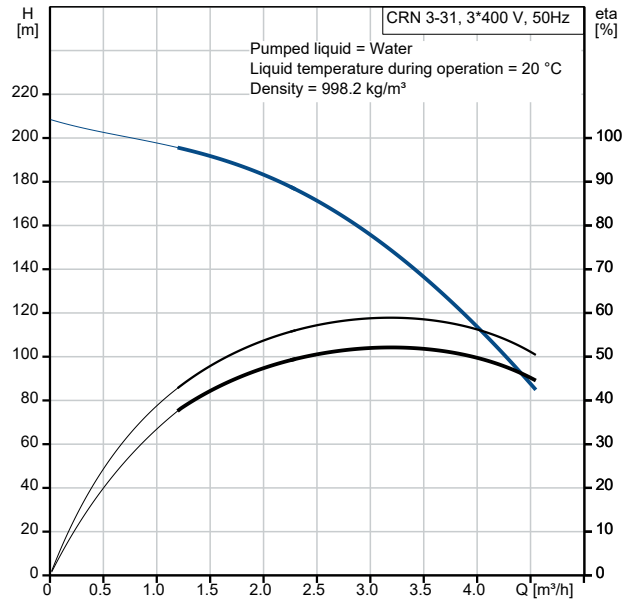
Date:

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96892938 CRN 3-31 S-P-A-E-HQQE 50 Hz



Description	Value
General information:	
Product name:	CRN 3-31 S-P-A-E-HQQE
Product No:	96892938
EAN number:	5700312978886
Technical:	
Pump speed on which pump data are based:	2902 rpm
Rated flow:	3 m ³ /h
Rated head:	153.2 m
Stages:	31
Impellers:	31
Code for shaft seal:	HQQE
Approvals:	CE,EAC
Approvals for drinking water:	ACS
Curve tolerance:	ISO9906:2012 3B
Pump version:	S
Model:	A
Materials:	
Pump housing:	Stainless steel
Pump housing:	DIN W.-Nr. 1.4408
Pump housing:	ASTM A 351 CF 8M
Impeller:	Stainless steel
Impeller:	DIN W.-Nr. 1.4401
Impeller:	AISI 316
Material code:	A
Code for rubber:	E
Installation:	
t max amb:	60 °C
Max pressure at stated temp:	50 bar / 120 °C
Max pressure at stated temp:	50 bar / -20 °C
Type of connection:	PJE
Size of connection:	1 1/4 inch
Flange size for motor:	FT130
Connect code:	P
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m ³
Electrical data:	
Motor type:	112MC
IE Efficiency class:	IE3
Rated power - P2:	3 kW
Power (P2) required by pump:	3 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D V
Rated current:	5.95 A
Starting current:	970-1070 %
Cos phi - power factor:	0.88-0.85
Rated speed:	2910-2930 rpm
Efficiency:	IE3 88%
Motor efficiency at full load:	88 %
Motor efficiency at 3/4 load:	88.5 %
Motor efficiency at 1/2 load:	88 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Built-in motor protection:	PTC





Company name:

Created by:

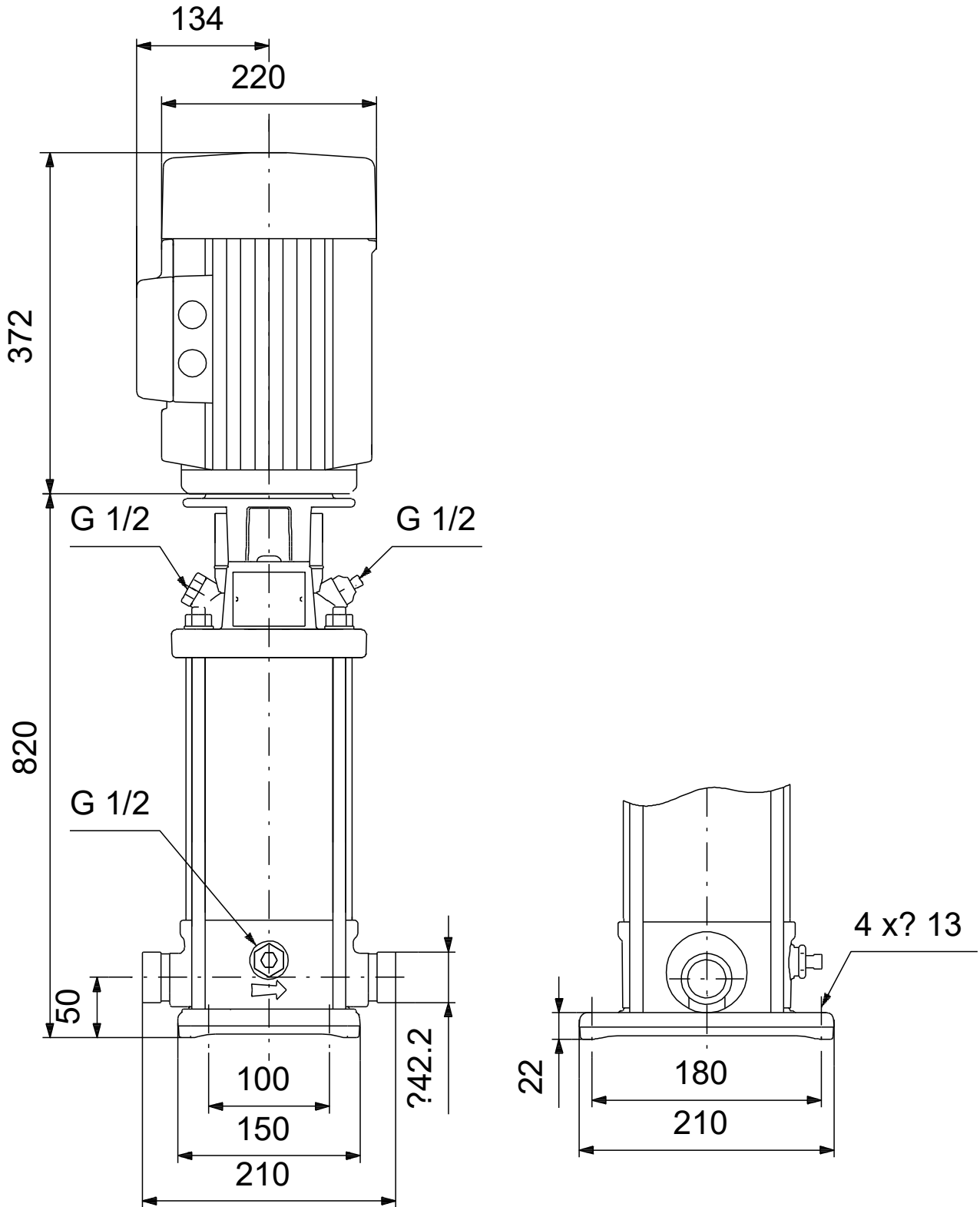
Phone:

Date:

30/11/2022

Description	Value
Motor No:	85905157
Others:	
Minimum efficiency index, MEI \geq :	0.7
Net weight:	42.6 kg
Gross weight:	47.6 kg

96892938 CRN 3-31 S-P-A-E-HQQE 50 Hz



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

