

**Qty. Description**

1 CRN 15-16 S-P-A-E-HQQE

Product No.: [96512213](#)

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 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 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	<p>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.</p> <p>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.</p> <p><b>Technical data</b></p> <p>Liquid:  Pumped liquid: Water  Liquid temperature range: -20 .. 120 °C  Selected liquid temperature: 20 °C  Density: 998.2 kg/m<sup>3</sup></p> <p>Technical:  Pump speed on which pump data are based: 2923 rpm  Rated flow: 17 m<sup>3</sup>/h  Rated head: 181.1 m  Code for shaft seal: HQQE  Approvals: CE,EAC,UKCA,SEPRO  Approvals for drinking water: ACS  Curve tolerance: ISO9906:2012 3B</p> <p>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</p> <p>Installation:  t max amb: 60 °C  Max pressure at stated temp: 50 bar / 120 °C  50 bar / -20 °C</p> <p>Type of connection: PJE  Size of connection: 2 inch  Flange size for motor: FF300</p> <p>Electrical data:  Motor type: 160MD  IE Efficiency class: IE3  Rated power - P2: 15 kW  Power (P2) required by pump: 15 kW  Mains frequency: 50 Hz  Rated voltage: 3 x 380-415D/660-690Y V  Rated current: 28,0-26,0/16,2-15,6 A  Starting current: 660-780 %  Cos phi - power factor: 0.89-0.87  Rated speed: 2930-2950 rpm  Efficiency: IE3 91,9%  Motor efficiency at full load: 91.9-91.9 %  Motor efficiency at 3/4 load: 92.4 %  Motor efficiency at 1/2 load: 92.4 %  Number of poles: 2  Enclosure class (IEC 34-5): 55 Dust/Jetting  Insulation class (IEC 85): F  Motor No: 85905162</p>



Company name:

Created by:

Phone:

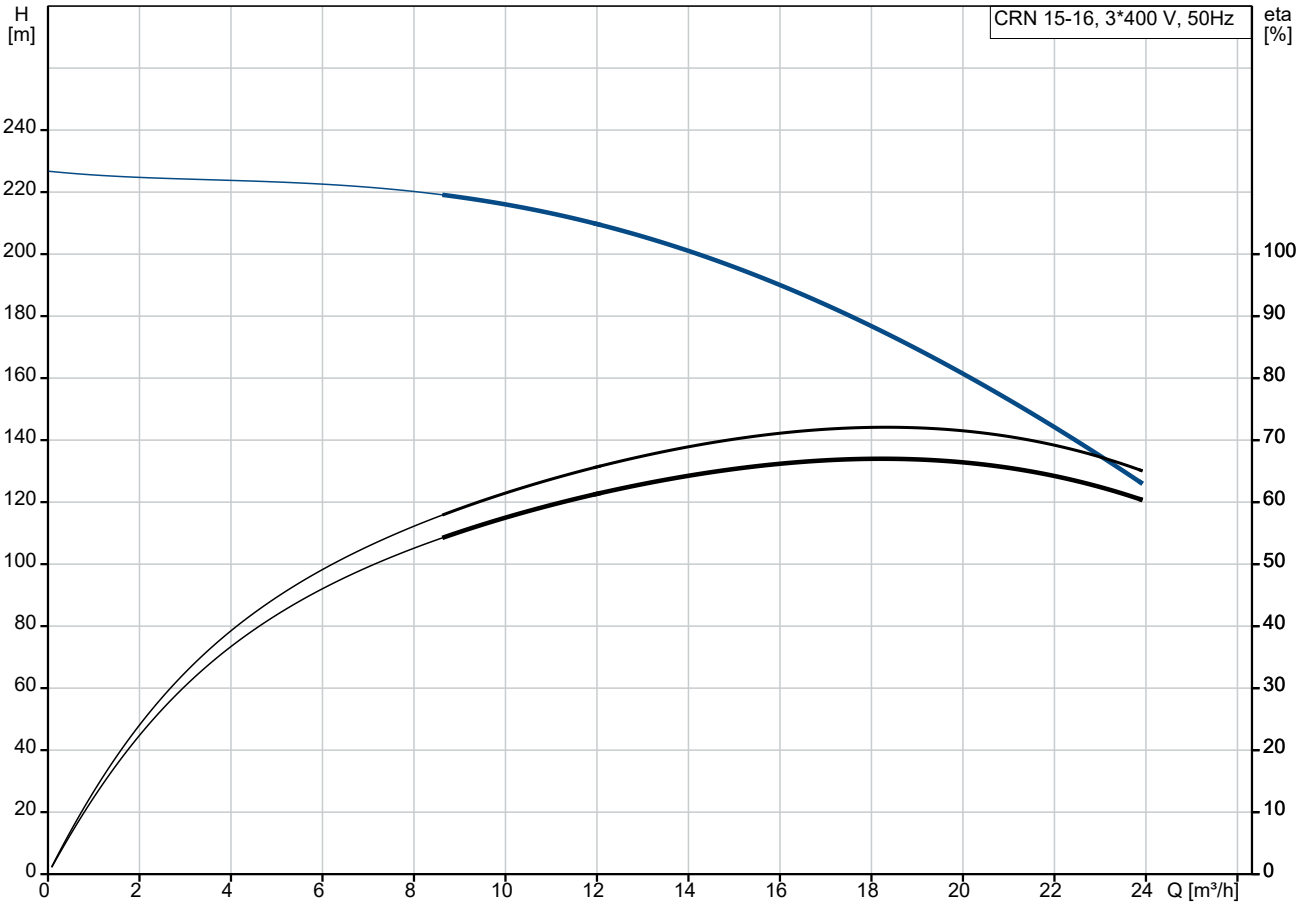
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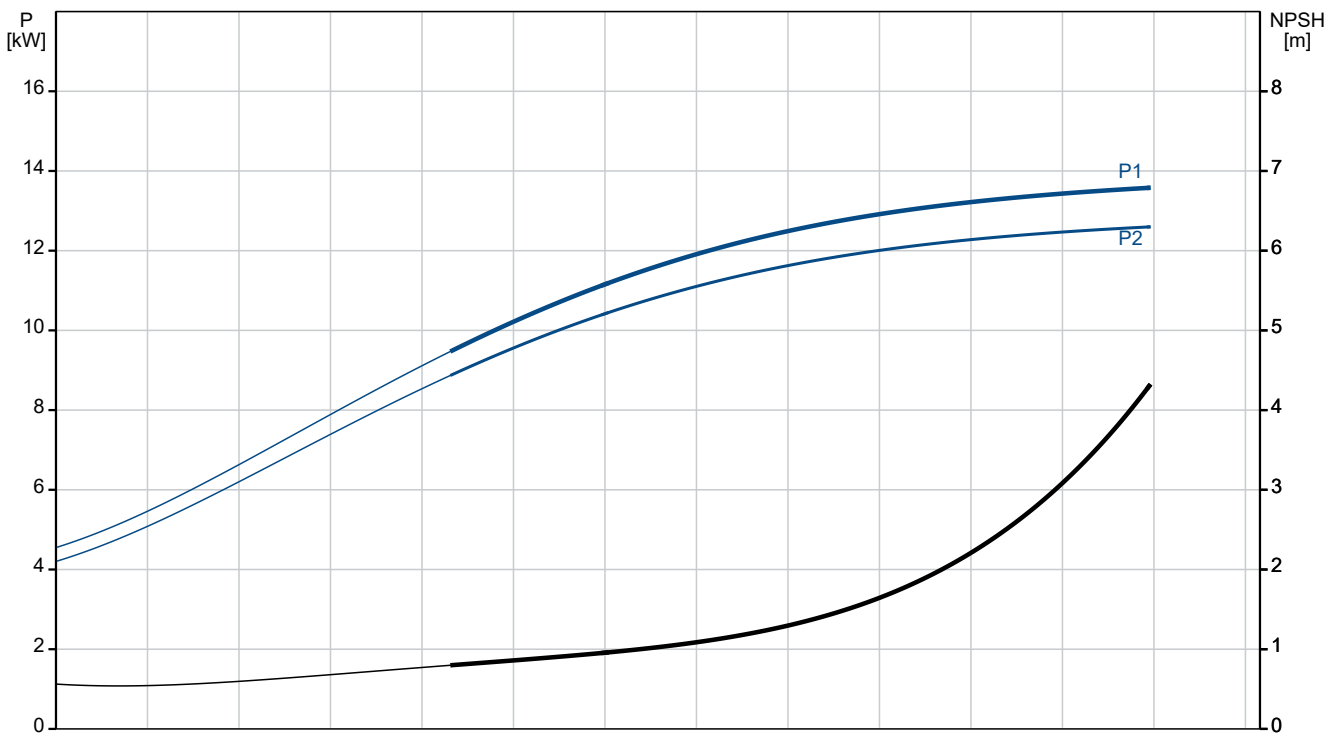
Qty.	Description
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1	Others: Minimum efficiency index, MEI $\geq$ : 0.70 Net weight: 146 kg Gross weight: 204 kg Country of origin: DK Custom tariff no.: 84139100
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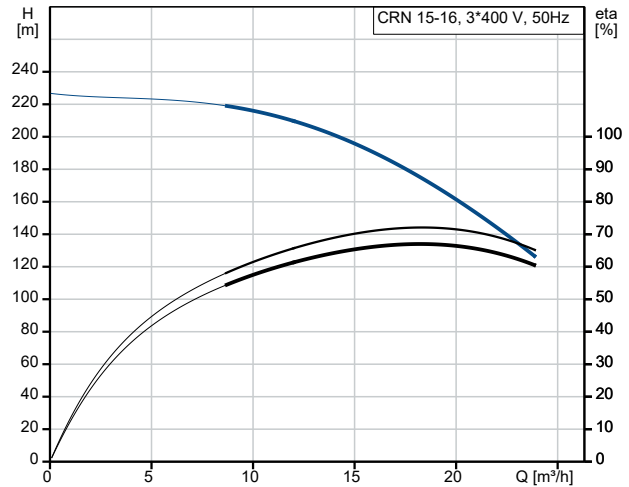
## 96512213 CRN 15-16 S-P-A-E-HQQE 50 Hz



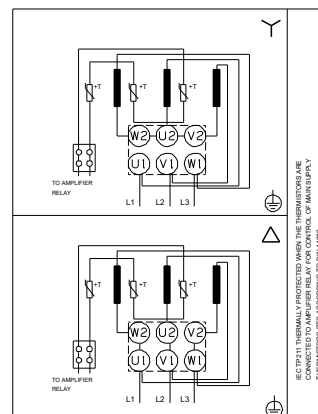
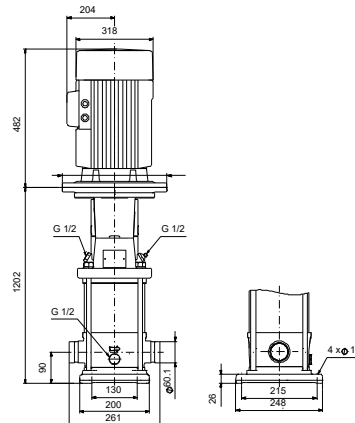
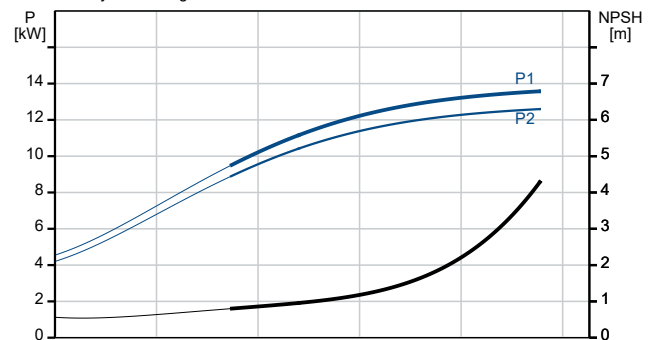
Pumped liquid = Water  
 Liquid temperature during operation = 20 °C  
 Density = 998.2 kg/m³



Description	Value
<b>General information:</b>	
Product name:	CRN 15-16 S-P-A-E-HQQE
Product No:	96512213
EAN number:	5700396600178
<b>Technical:</b>	
Pump speed on which pump data are based:	2923 rpm
Rated flow:	17 m <sup>3</sup> /h
Rated head:	181.1 m
Stages:	16
Impellers:	16
Code for shaft seal:	HQQE
Approvals:	CE, EAC, UKCA, SEPRO
Approvals for drinking water:	ACS
Curve tolerance:	ISO9906:2012 3B
Pump version:	S
Model:	A
<b>Materials:</b>	
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
<b>Installation:</b>	
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:	2 inch
Flange size for motor:	FF300
Connect code:	P
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m <sup>3</sup>
<b>Electrical data:</b>	
Motor type:	160MD
IE Efficiency class:	IE3
Rated power - P2:	15 kW
Power (P2) required by pump:	15 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D/660-690Y V
Rated current:	28,0-26,0/16,2-15,6 A
Starting current:	660-780 %
Cos phi - power factor:	0.89-0.87
Rated speed:	2930-2950 rpm
Efficiency:	IE3 91,9%
Motor efficiency at full load:	91.9-91.9 %
Motor efficiency at 3/4 load:	92.4 %
Motor efficiency at 1/2 load:	92.4 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F



Pumped liquid = Water  
Liquid temperature during operation = 20 °C  
Density = 998.2 kg/m<sup>3</sup>





Company name:

Created by:

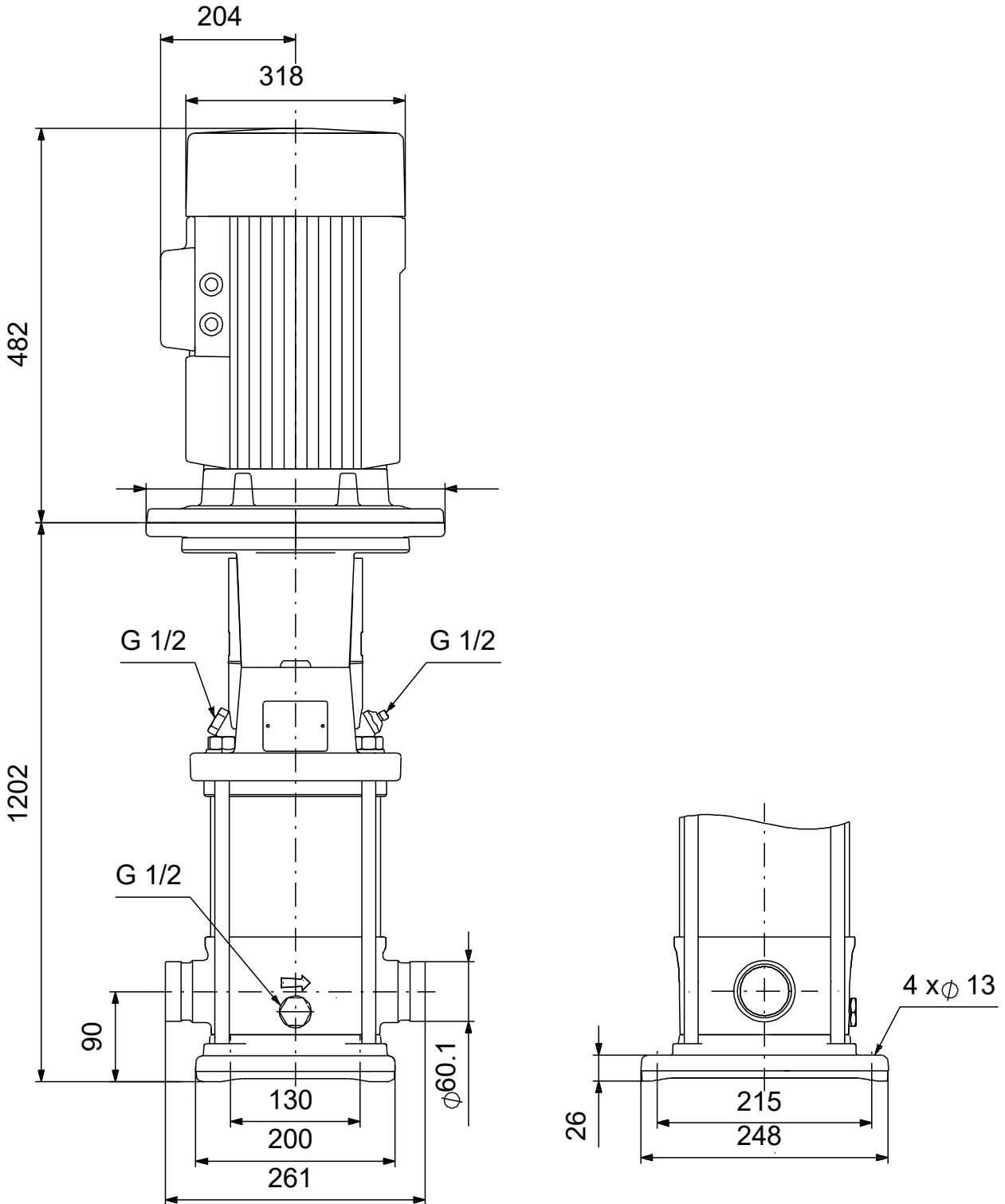
Phone:

Date:

02/01/2023

Description	Value
Built-in motor protection:	PTC
Motor No:	85905162
<b>Others:</b>	
Minimum efficiency index, MEI $\geq$ :	0.70
Net weight:	146 kg
Gross weight:	204 kg
Country of origin:	DK
Custom tariff no.:	84139100

## 96512213 CRN 15-16 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.

## 96512213 CRN 15-16 S-P-A-E-HQQE 50 Hz



IEC TP211 THERMALLY PROTECTED WHEN THE THERMISTORS ARE  
CONNECTED TO AMPLIFIER RELAY FOR CONTROL OF MAIN SUPPLY  
THERMISTORS PTC ACCORDING TO DIN 44082

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

