

Qty. Description

1 CRNE 3-23 Q-P-T-E-HQQE

**Note! Product picture may differ from actual product**Product No.: [99050564](#)

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.

The pump is fitted with a 3-phase, fan-cooled, permanent-magnet, synchronous motor.

The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement.

Further product details

An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The operating panel has indicator lights for "Operation" and "Fault".

Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

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)

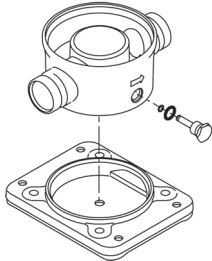
EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.

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.

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

Qty. Description

- 1 The base and base plate are kept in position by the tension of the staybolts which hold the pump together. 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. The base is prepared for connection by means of PJE (Victualic®) couplings.



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 IE5 in accordance with IEC 60034-30-2.

The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

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: 4100 rpm
 Rated flow: 5 m³/h
 Rated head: 183.7 m
 Code for shaft seal: HQQE
 Approvals: CE,EAC,UKCA,CURUS,SEPRO
 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: 50 °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



Company name:

Created by:

Phone:

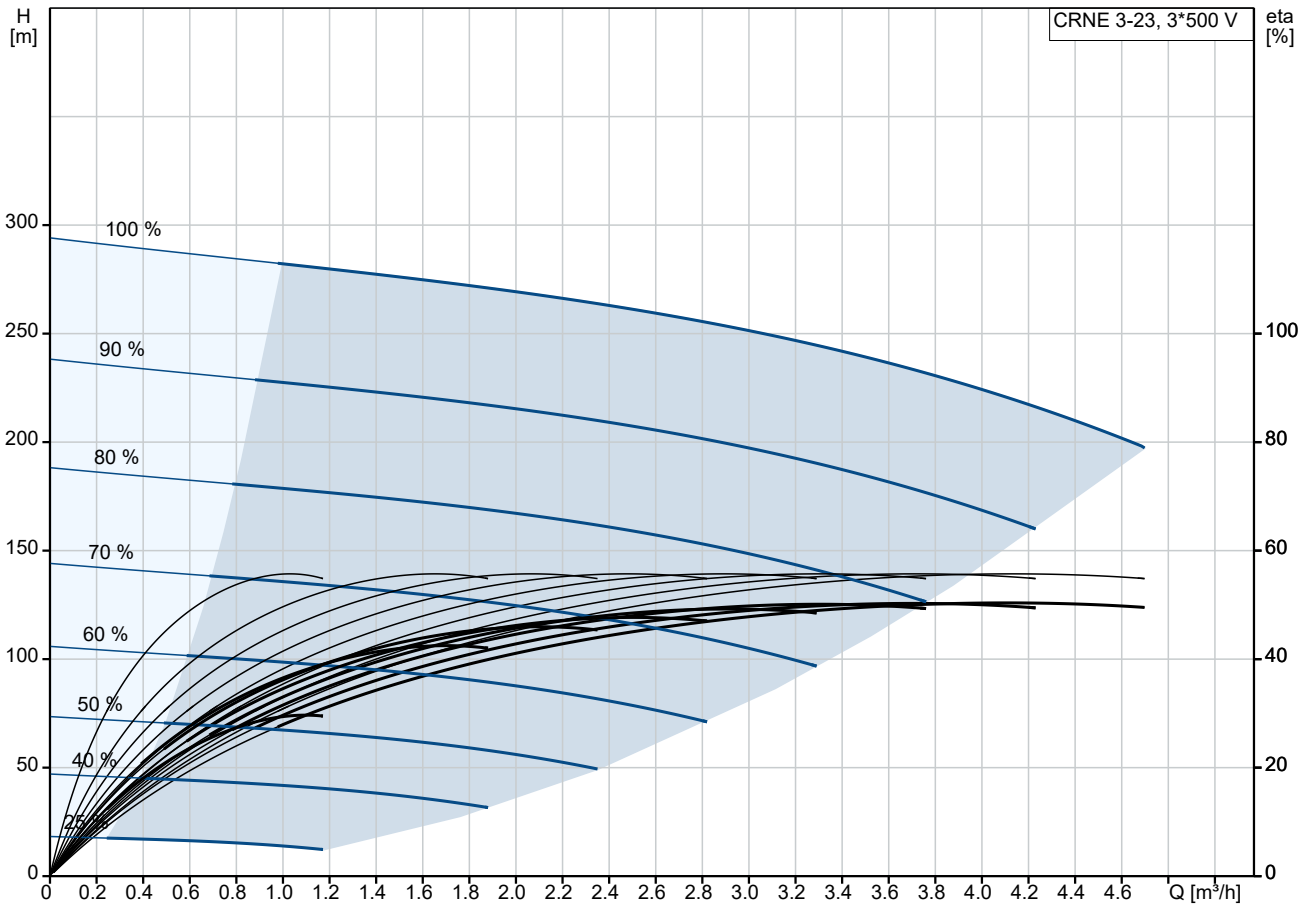
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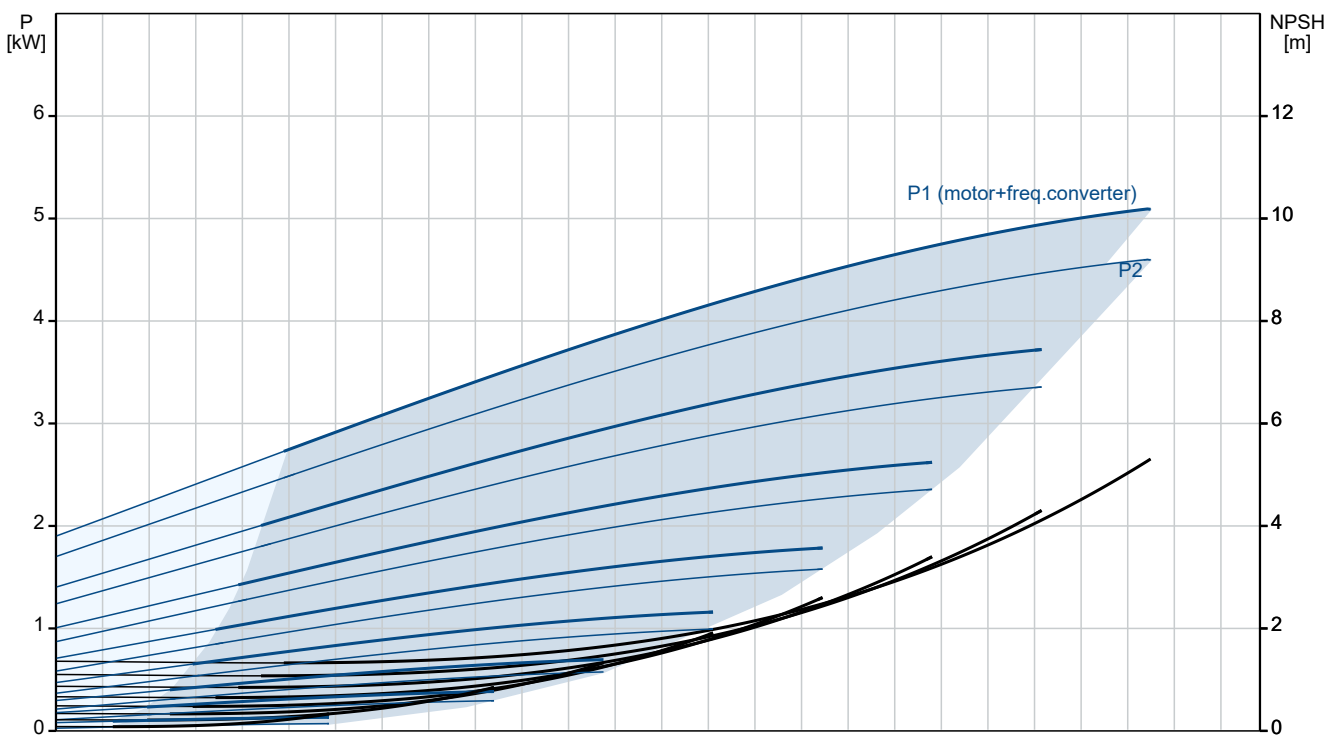
Qty. Description

1	IE Efficiency class:	IE5
	Rated power - P2:	4.6 kW
	Over/undersize motor:	Standard motor size
	Mains frequency:	50 / 60 Hz
	Rated voltage:	3 x 380-500 V
	Rated current:	8.60-6.90 A
	Cos phi - power factor:	0.92-0.88
	Rated speed:	480-5900 rpm
	Efficiency:	90.7%
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor No:	98988577
	Others:	
	Minimum efficiency index, MEI \geq :	0.70
	Net weight:	49.8 kg
	Gross weight:	71.2 kg
	Danish VVS No.:	386011523

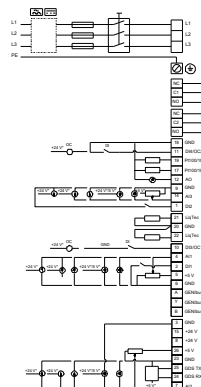
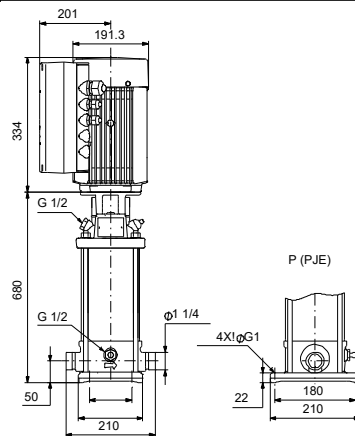
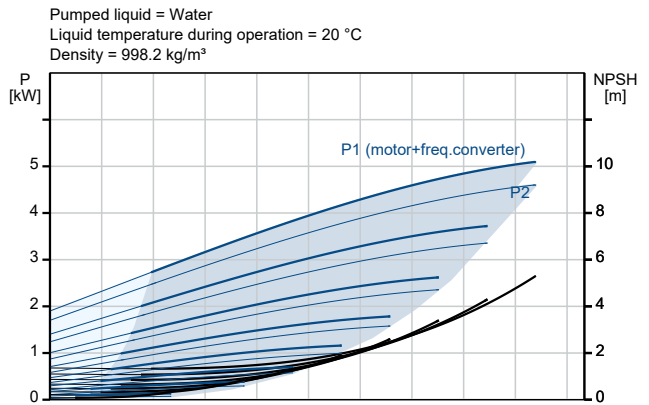
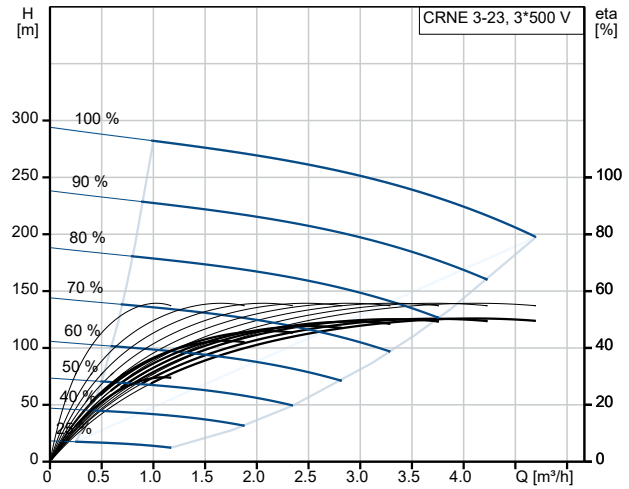
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Pumped liquid = Water
Liquid temperature during operation = 20 °C
Density = 998.2 kg/m³



Description	Value
General information:	
Product name:	CRNE 3-23 Q-P-T-E-HQQE
Product No:	99050564
EAN number:	5712605799023
Technical:	
Pump speed on which pump data are based:	4100 rpm
Rated flow:	5 m ³ /h
Rated head:	183.7 m
Head max:	294.1 m
Stages:	23
Impellers:	23
Code for shaft seal:	HQQE
Approvals:	CE,EAC,UKCA,CURUS,SE PRO
Approvals for drinking water:	ACS
Curve tolerance:	ISO9906:2012 3B
Pump version:	Q
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:	T
Code for rubber:	E
Installation:	
t max amb:	50 °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:	IE5
Rated power - P2:	4.6 kW
Over/undersize motor:	Standard motor size
Mains frequency:	50 / 60 Hz
Rated voltage:	3 x 380-500 V
Rated current:	8.60-6.90 A
Cos phi - power factor:	0.92-0.88
Rated speed:	480-5900 rpm
Efficiency:	90.7%
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	ELEC
Motor No:	98988577
Controls:	
Control panel:	HMI200 - Standard





Company name:

Created by:

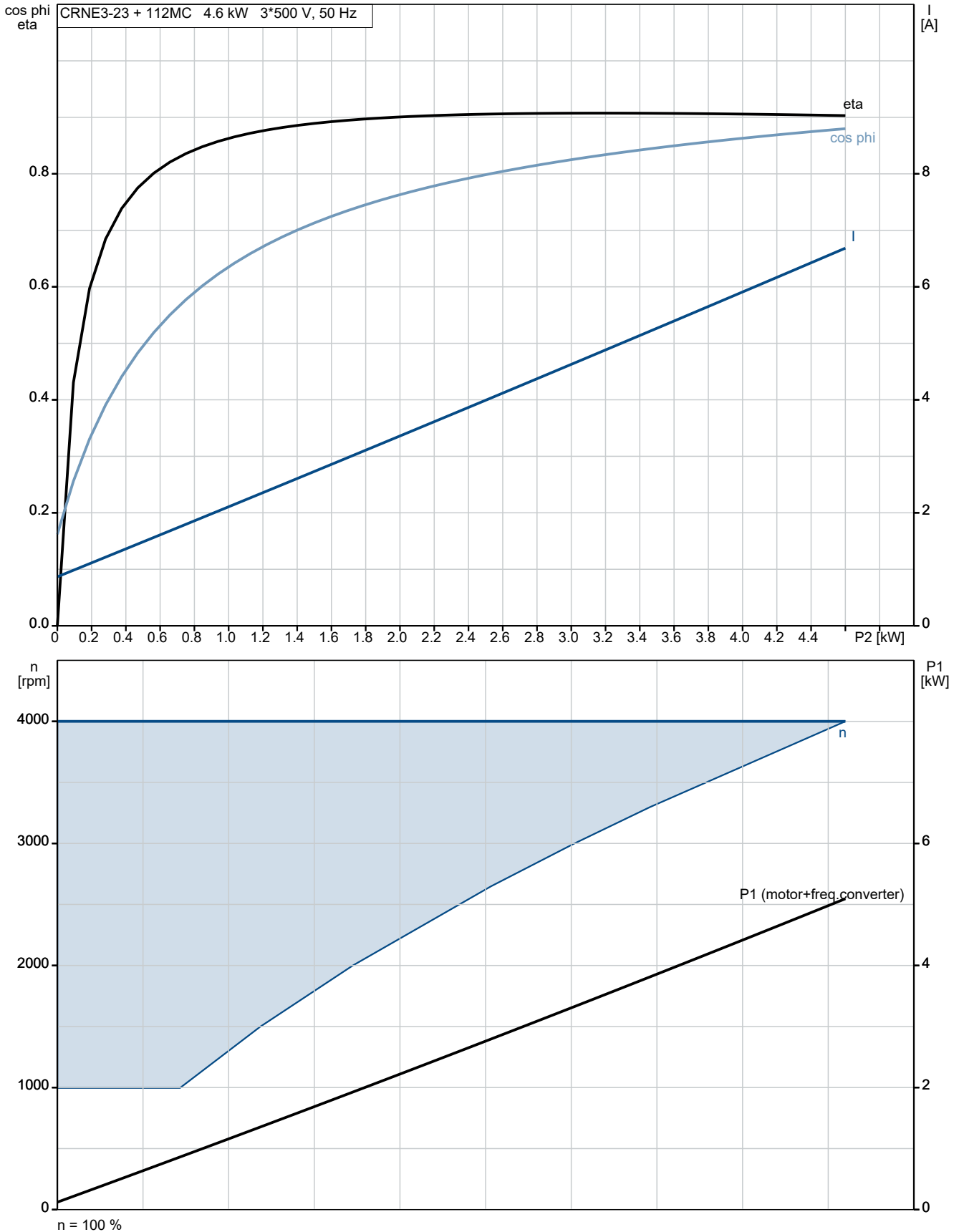
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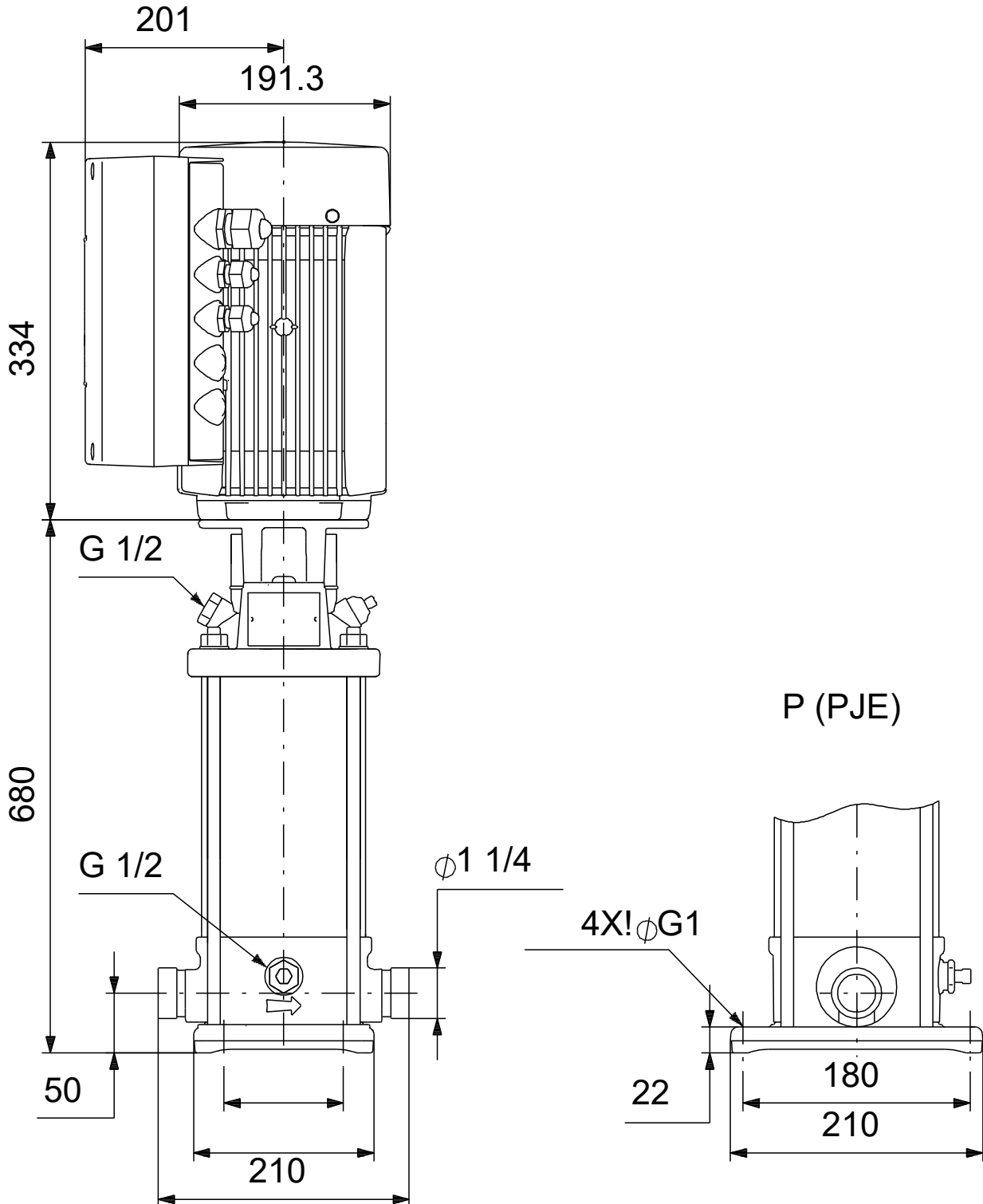
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Description	Value
Function Module:	FM300 - Advanced
Others:	
Minimum efficiency index, MEI \geq :	0.70
Net weight:	49.8 kg
Gross weight:	71.2 kg
Config. file no:	99063561
Danish VVS No.:	386011523

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

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