CRNE3-11 A-FGJ-G-E-HQQE 3x380-500 60HZ

Grundfos pump 98389893

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https://www.lenntech.com/grundfos/CRNE03/98389893/CRNE-3-11-A-FGJ-G-E-HQQE.html

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Position	Qty.	Description
	1	**CRNE 3-11 A-FGJ-A-E-HQQE**

Product No.: On request

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 combined DIN-ANSI-JIS flanges.

The pump is fitted with a 3-phase, fan-cooled, permanent-magnet, synchronous motor.
The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.
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. 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 Grundfos Eye indicator on the operating panel provides visual indication of pump status:

- "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
- "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)
- "Alarm": Motor has stopped (flashing red indicator lights).

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".

The terminal box has a number of inputs and outputs enabling the motor to be used in advanced applications where many inputs and outputs are required:

- two dedicated digital inputs
- three analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 - 3.5 V
- 5 V voltage supply to potentiometer and sensor
- one analog output, 0-10 V, 0(4)-20 mA
- two configurable digital inputs or open-collector outputs
- two Pt100/Pt1000 inputs
- LiqTec, dry-running protection sensor input
- Grundfos Digital Sensor input and output
- 24 V voltage supply for sensors
- two signal-relay outputs (potential-free contacts)
- GENIbus connection
- interface for Grundfos CIM fieldbus module.

Further product details

An external sensor can be connected if controlled pump operation based on for example flow, differential pressure or temperature is required.

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 Grundfos Eye indicator on the operating panel provides visual indication of pump status:

- "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
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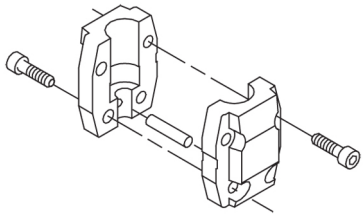
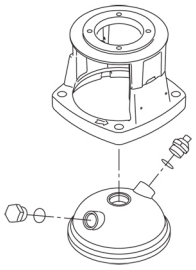
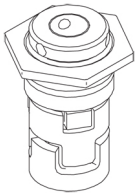
Position	Qty.	Description
		Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled 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 and flange for motor mounting is made in one piece (cast iron). The pump head cover is a separate component (stainless steel). 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. Primary seal: • 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 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 pump has a stainless-steel base mounted on a seperate base plate. This 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 flanges and base are cast in one piece and prepared for connection by means of DIN, ANSI or JIS.

Position	Qty.	Description

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 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.

The terminal box has a number of inputs and outputs enabling the motor to be used in advanced applications where many inputs and outputs are required:

- two dedicated digital inputs
- three analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 - 3.5 V
- 5 V voltage supply to potentiometer and sensor
- one analog output, 0-10 V, 0(4)-20 mA
- two configurable digital inputs or open-collector outputs
- two Pt100/Pt1000 inputs
- LiqTec, dry-running protection sensor input
- Grundfos Digital Sensor input and output
- 24 V voltage supply for sensors
- two signal-relay outputs (potential-free contacts)
- GENIbus connection
- interface for Grundfos CIM fieldbus module.

Technical data

Controls:

Frequency converter:	Built-in
Pressure sensor:	N

Liquid:

Pumped liquid:	Water
Liquid temperature range:	-20 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³

Technical:

Rated flow:	3.5 m³/h
Rated head:	79.2 m
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CE, EAC,ACS
Curve tolerance:	ISO9906:2012 3B

Materials:

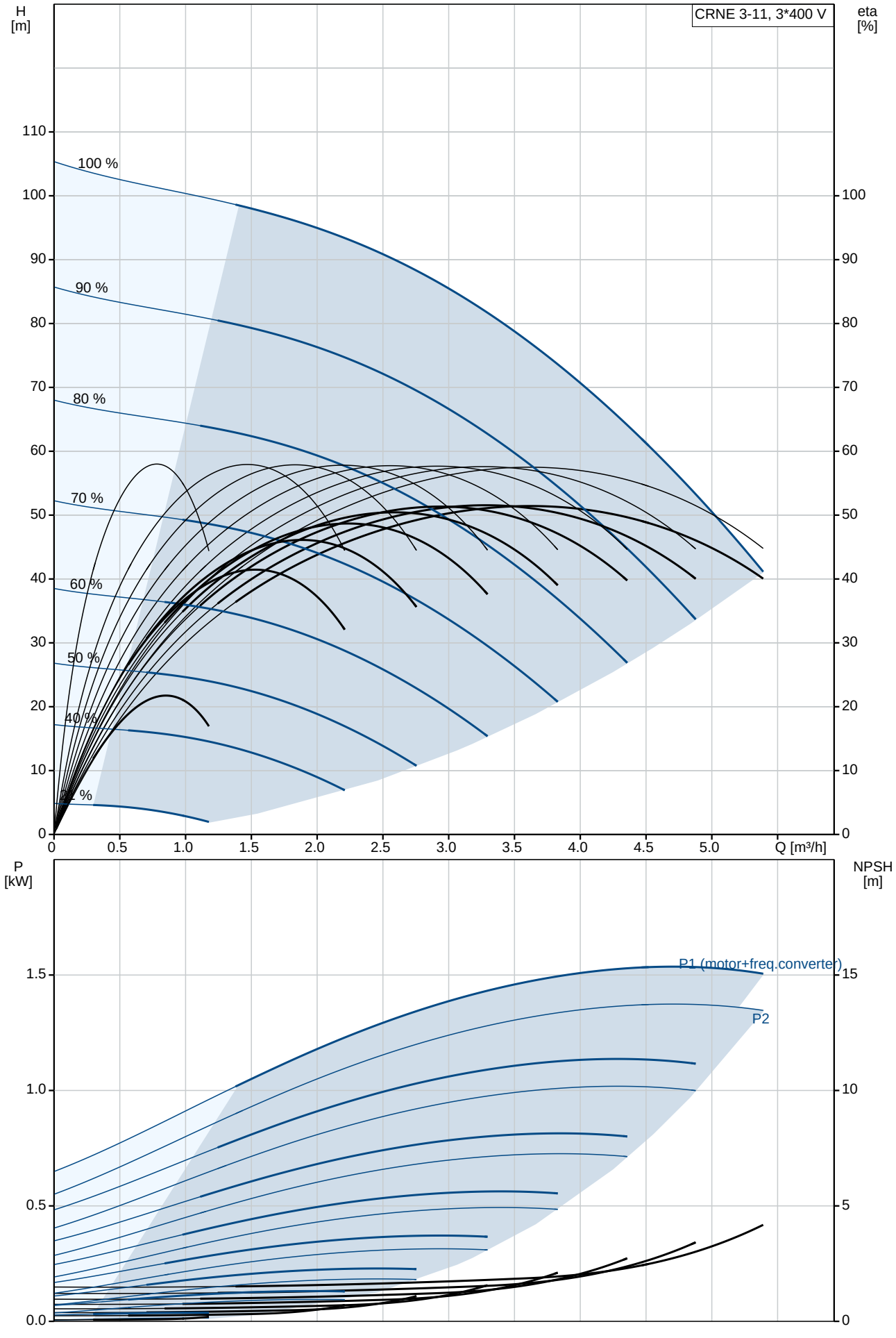
Base:	Stainless steel EN 1.4408 AISI 316
Impeller:	Stainless steel EN 1.4401 AISI 316
Bearing:	SIC

Installation:

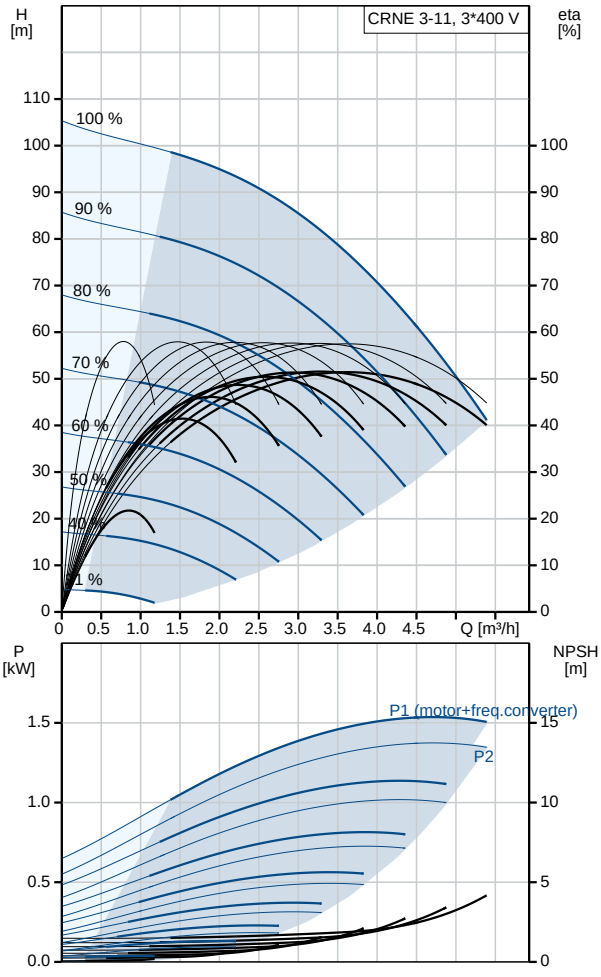
Maximum ambient temperature:	50 °C
Maximum operating pressure:	25 bar
Max pressure at stated temp:	25 bar / 120 °C 25 bar / -20 °C
Type of connection:	DIN / ANSI / JIS
Size of inlet connection:	DN 25/32 1 1/4 inch
Size of outlet connection:	DN 25/32 1 1/4 inch
Pressure rating for pipe connection:	PN 25
Flange rating inlet:	300 lb

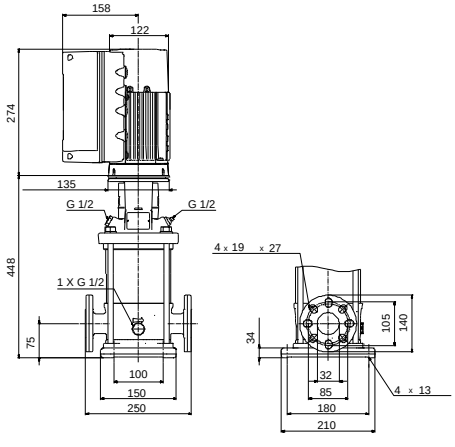
Position	Qty.	Description
		Flange size for motor: FT115
		Electrical data:
		Motor standard: IEC
		Motor type: 90SC
		IE Efficiency class: IE5
		Rated power - P2: 1.5 kW
		Power (P2) required by pump: 1.5 kW
		Mains frequency: 50 Hz
		Rated voltage: 3 x 380-500 V
		Rated current: 2.90-2.40 A
		Cos phi - power factor: 0.92-0.85
		Rated speed: 360-4000 rpm
		Efficiency: 88.9%
		Motor efficiency at full load: 88.9 %
		Enclosure class (IEC 34-5): IP55
		Insulation class (IEC 85): F
		Others:
		Minimum efficiency index, MEI ≥: 0.7
		Net weight: 32.9 kg
		Gross weight: 35.8 kg
		Shipping volume: 0.143 m^3

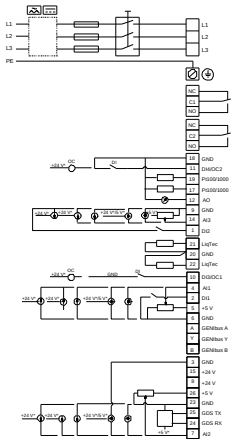
On request CRNE 3-11 A-FGJ-A-E-HQQE 50 Hz



Description	Value
General information:	
Product name:	CRNE 3-11 A-FGJ-A-E-HQQE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	3.5 m³/h
Rated head:	79.2 m
Stages:	11
Impellers:	11
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CE, EAC,ACS
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Materials:	
Base:	Stainless steel
	EN 1.4408
	AISI 316
Impeller:	Stainless steel
	EN 1.4401
	AISI 316
Material code:	A
Code for rubber:	E
Bearing:	SIC
Installation:	
Maximum ambient temperature:	50 °C
Maximum operating pressure:	25 bar
Max pressure at stated temp:	25 bar / 120 °C
	25 bar / -20 °C
Type of connection:	DIN / ANSI / JIS
Size of inlet connection:	DN 25/32
	1 1/4 inch
Size of outlet connection:	DN 25/32
	1 1/4 inch
Pressure rating for pipe connection:	PN 25
Flange rating inlet:	300 lb
Flange size for motor:	FT115
Connect code:	FGJ
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor standard:	IEC
Motor type:	90SC
IE Efficiency class:	IE5
Rated power - P2:	1.5 kW
Power (P2) required by pump:	1.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-500 V
Rated current:	2.90-2.40 A
Cos phi - power factor:	0.92-0.85
Rated speed:	360-4000 rpm
Efficiency:	88.9%
Motor efficiency at full load:	88.9 %
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F

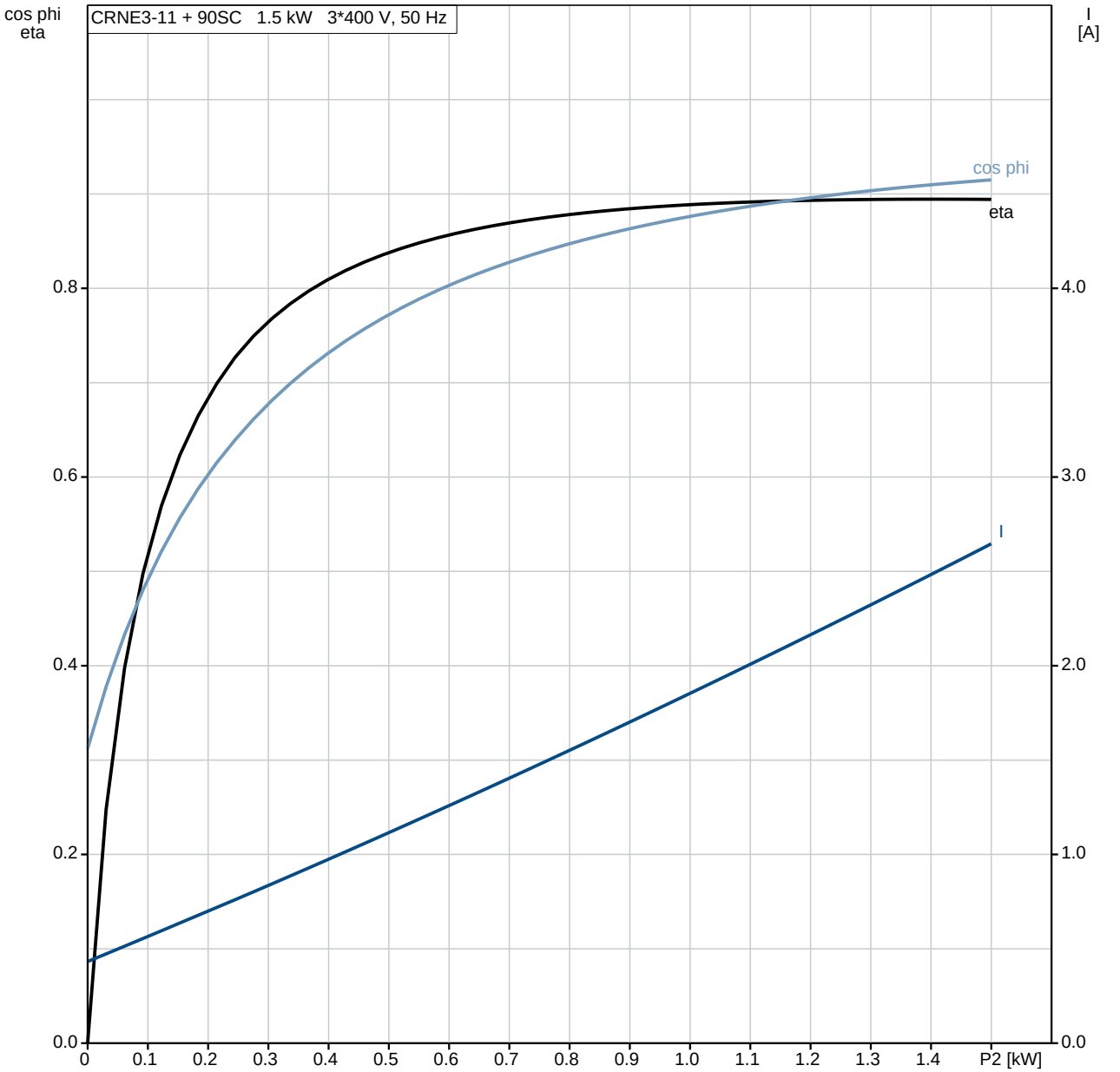


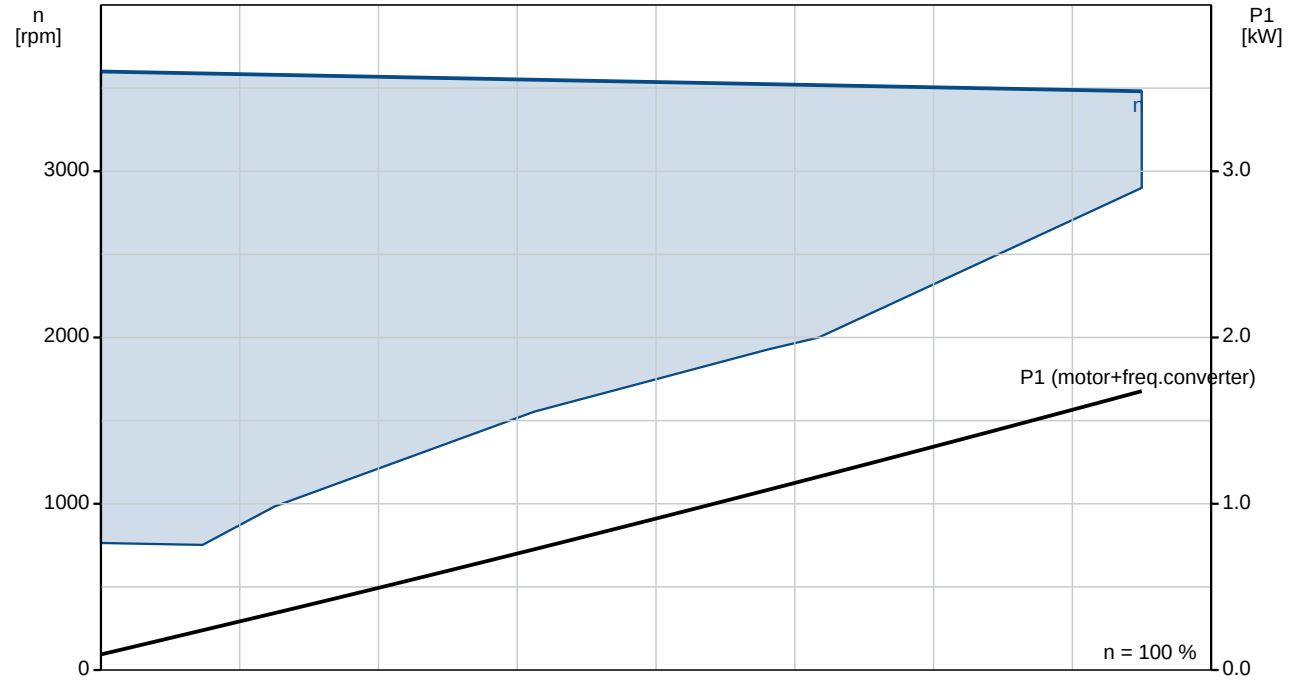




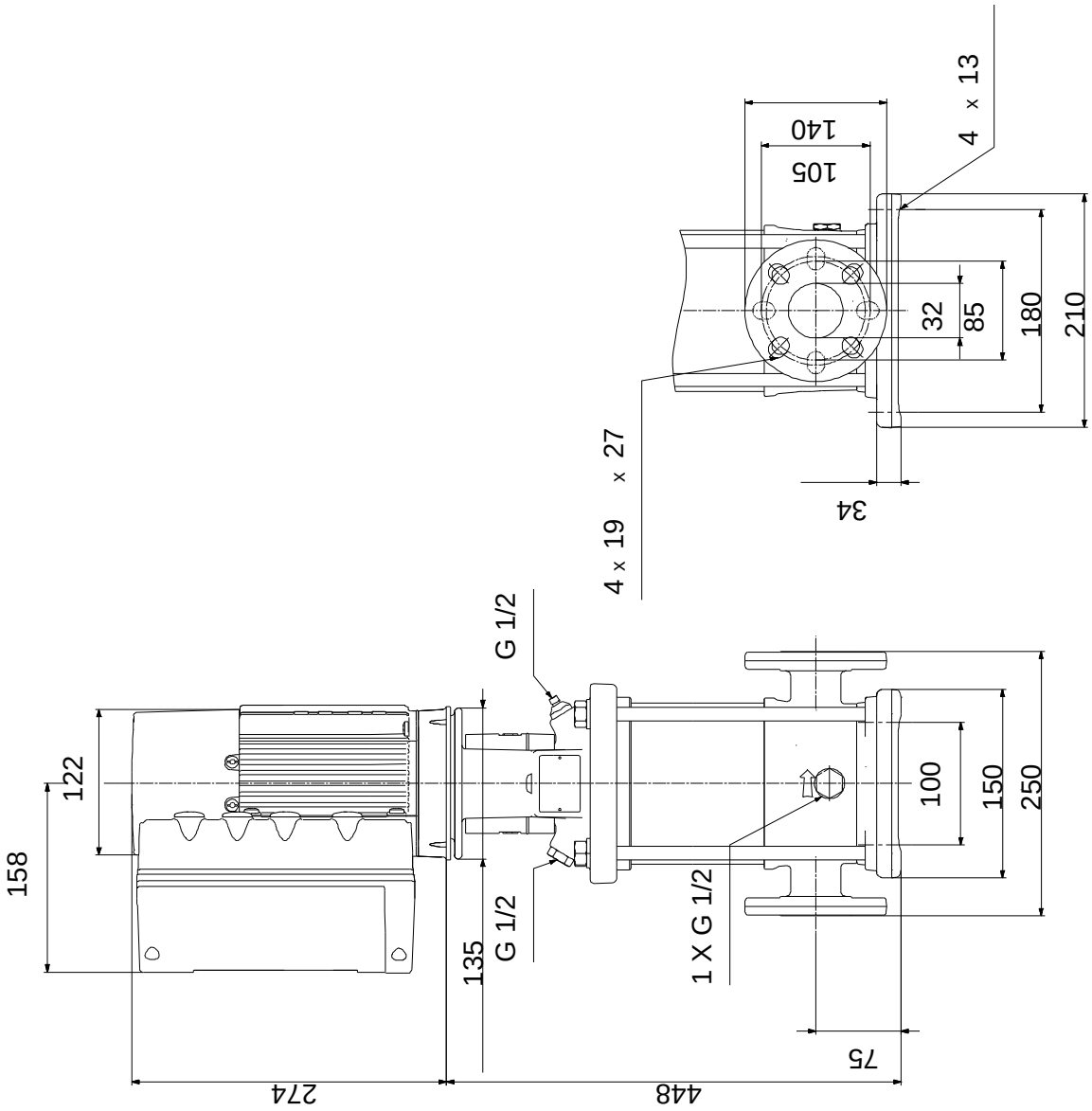
Description	Value
Motor protec:	YES
Motor No:	98190189
Controls:	
Control panel:	Standard
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Pressure sensor:	N
Others:	
Minimum efficiency index, MEI ≥:	0.7
Net weight:	32.9 kg
Gross weight:	35.8 kg
Shipping volume:	0.143 m^3

On request CRNE 3-11 A-FGJ-A-E-HQQE 50 Hz



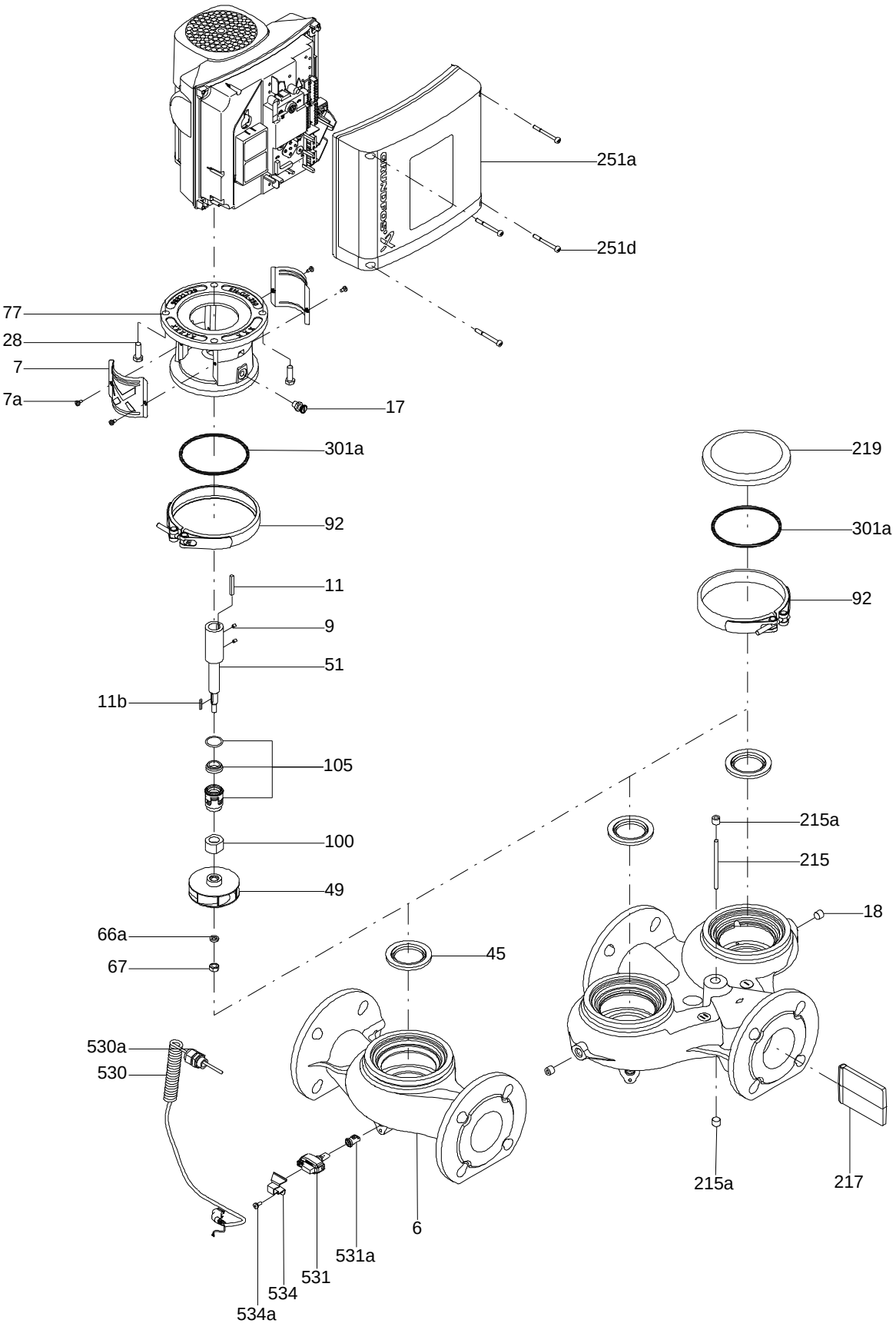


On request CRNE 3-11 A-FGJ-A-E-HQQE 50 Hz

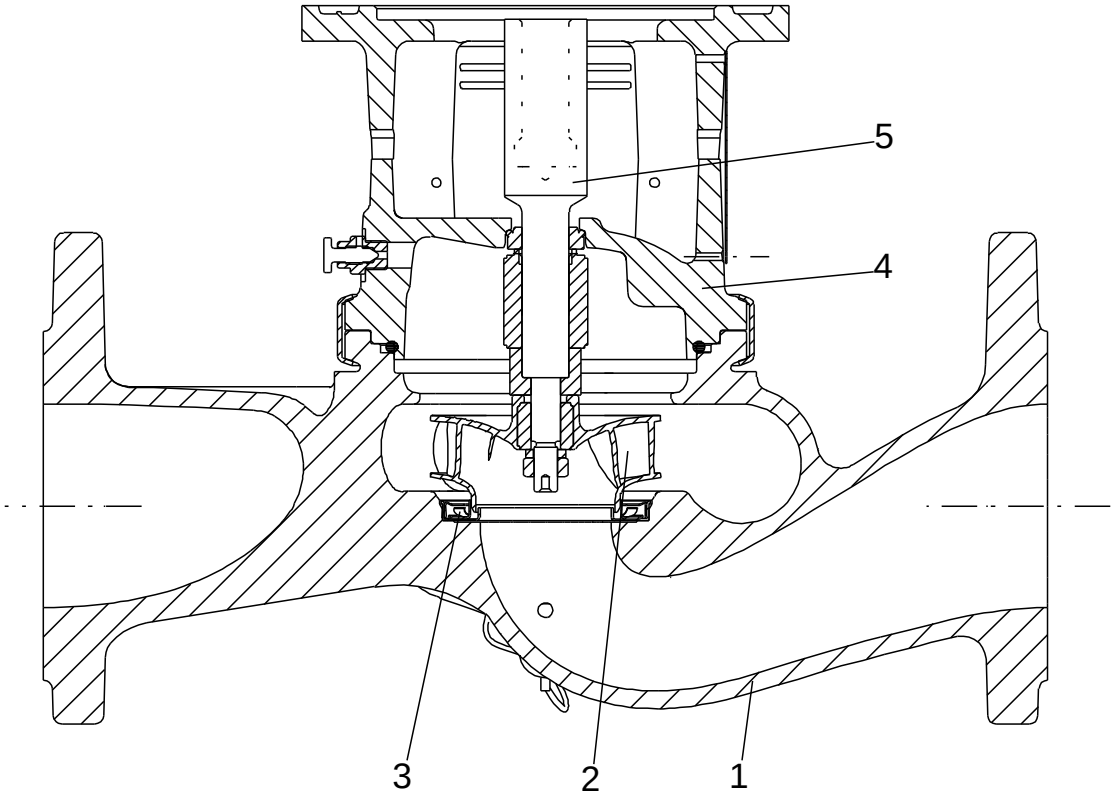


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view

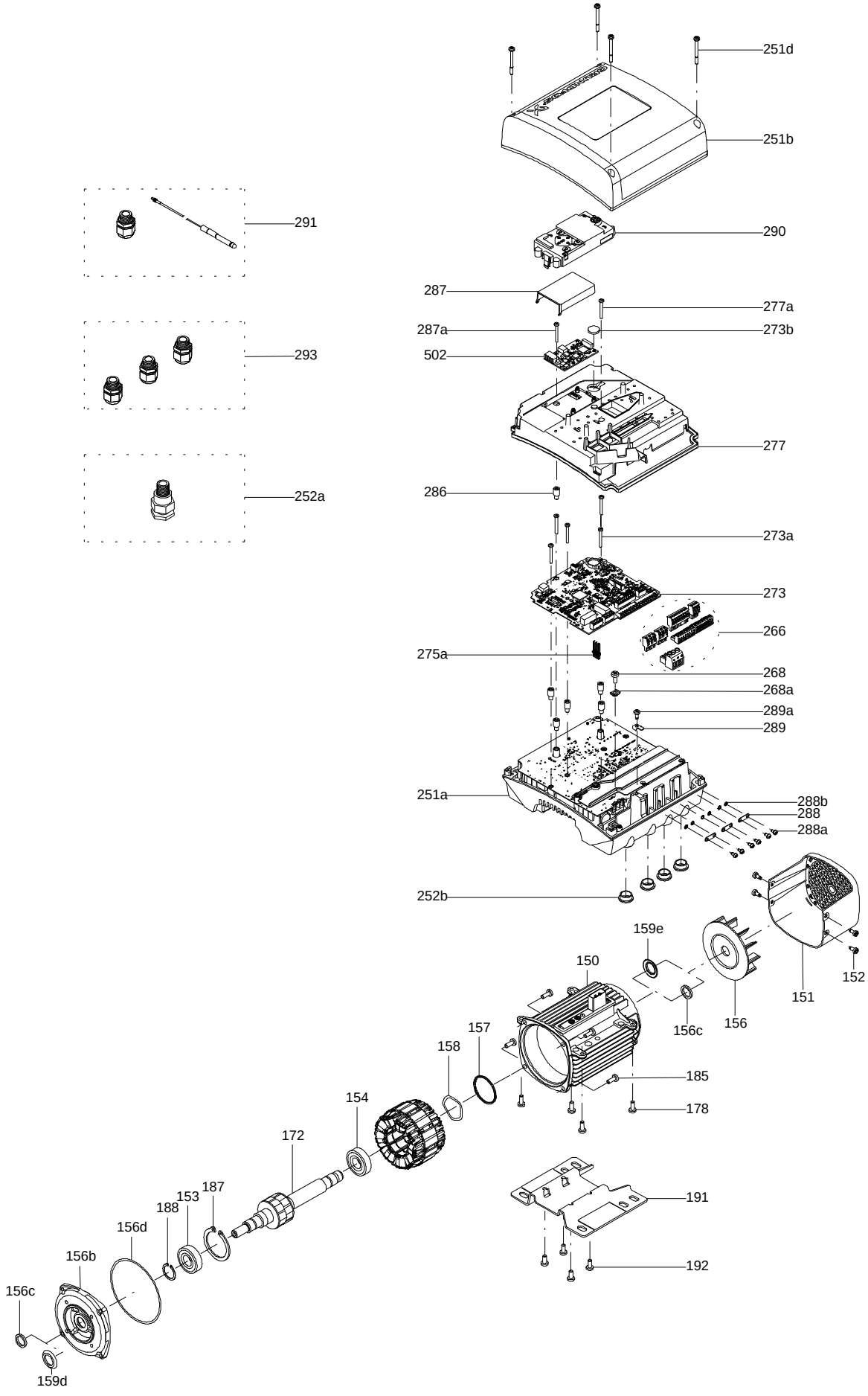


Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list CRNE 3-11, Product No. On request
Valid from 25.12.2012 (1252)

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
-	Motor				1	pcs
	Terminal				3	
	Pan head thread forming screw				4	
150	Stator housing				1	
150	Stator				1	
151	Fan cover				1	
152	Pan head thread forming screw				6	
152	Pan head thread forming screw				1	
152	Pan head thread forming screw				4	
152	Pan head thread forming screw				1	
153	Ball bearing				1	
154	Ball bearing		Designation: 6204.2Z.C3.SYN		1	
156	Fan				1	
156b	Flange				1	
156d	Gasket		Internal diameter: 114,80		1	
			Outer diameter: 121,20			
			Thickness: 0,25			
157	O-ring		Diameter: 47		1	
			Material type: NBR			
			Thickness: 3			
158	Waved washer				1	
159a	Seal ring				1	
159c	Seal ring				1	
166	Torx Screw				2	
172	Shaft w/rotor				1	
173a	Base				1	
185	Cross recess Pan head screw				4	
186	Drain plug				1	
187	Retaining ring				1	
188	Retaining ring				1	
203	Terminal plug				1	
251a	Control box				1	
251b	Control box				1	
251d	Pan head thread forming screw				4	
266	Connector plug 3-pole				1	
266	Connector plug 3-pole				1	
266	Connector plug 3-pole				1	
266	Connector plug 8-pole				1	
266	Connector plug 8-pole				1	
266	Connector plug 8-pole				1	
266	Connector plug 10-pole				1	
268	Pan head screw				1	
273	Funct. Module cpl.				1	
273b	Battery				1	
275a	Pin				1	
277	Isolation cover				1	
277a	Cross recess Pan head screw				1	
277a	Cross recess Pan head screw				1	
277a	Cross recess Pan head screw				4	
286	Spacer				1	
286	Spacer				1	
287	Cover				1	
288	Wire clamp				3	
288b	Washer				6	
289	Wire clamp				1	
290	Control panel, cpl.				1	
300	Plug cpl.				4	
301	Jumper				1	
-	Base cpl.				1	pcs

	Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
	6	Base				1	
	56	Base plate				1	
	201.a	Flange				2	
	203	Lock ring				2	
-		Sealing parts				1	pcs
-	25	Drain plug w/bypass valve				1	
	38	O-ring		Diameter: 16,3		1	
				Material type: EPDM			
				Thickness: 2,4			
	37	O-ring				2	
	100	O-ring		Diameter: 16,3		2	
				Material type: EPDM			
				Thickness: 2,4			
-	2	Pump head cpl.				1	pcs
	2	Pump head				1	
	7	Coupling guard				2	
	7.a	Combi Slot Torx screw				4	
-	18	Air vent screw				1	
		Plug				1	
		Spindle				1	
	23a	Plug				1	
	28	Hex head screw		Length (mm): 20		4	
				Thread: M8			
	60	Formed wire spring				1	
	77	Pump cover				1	
-	8	Coupling cpl.				1	pcs
	9	Hex socket head cap screw		Designation: DIN 912		4	
				Length (mm): 25			
				Thread: M8			
	10	Shaft pin		Diameter: 5		1	
				Length (mm): 26			
	10a	Coupling half				2	
	26	Staybolt		Length (mm): 292		4	pcs
				Thread: M12			
	36	Nut		Thread: M12		4	pcs
	55	Outer sleeve				1	pcs
	66a	Washer		Designation: DIN 125 A2		4	pcs
				Internal diameter: 13			
				Outer diameter: 24			
				Thickness: 2,5			
	80	Chamber stack				1	pcs
-	105	Shaft seal		Material type: HQQE		1	pcs
		O-ring				1	
		O-ring				1	
		Seal driver, upper				1	
		Seal driver, lower				1	
		Spacer ring				1	
		Pipe				1	
		Plug				1	
		Plug				1	
		Compression spring				1	
		Socket set screw				1	
	102	O-ring		Diameter: 22,00		1	
				Material type: EPDM			
				Thickness: 2,75			
	103	Seal ring, stationary				1	
	105	Seal ring, rotating				1	
	107	O-ring				1	
	113	Driver				1	

Disclaimer: The information about the Grundfos pump in this document may be outdated.
Data may be subject to alterations without further notice.
Please contact us to verify the data above is still accurate/up-to-date.

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