

CRNE3-4 A-P-G-V-HQQV 3x380-500 60HZ Grundfos pump 98389884




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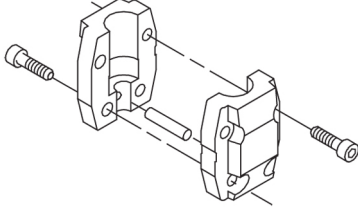
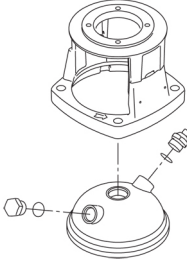
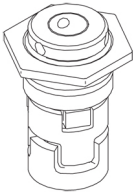
<https://www.lenntech.com/grundfos/CRNE03/98389884/CRNE-3-4-A-P-G-V-HQQV.html>

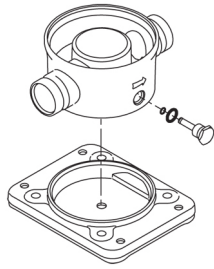
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Position	Qty.	Description
	1	<p data-bbox="323 163 614 197">CRNE 3-4 A-P-A-V-HQQV</p>  <p data-bbox="323 488 598 521">Product No.: On request</p> <p data-bbox="323 548 1444 649">Vertical, multistage centrifugal pump with inlet and outlet ports on same 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 PJE (Victaulic®) couplings.</p> <p data-bbox="323 689 1268 745">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.</p> <p data-bbox="323 750 1452 873">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:</p> <ul data-bbox="359 891 1436 1037" style="list-style-type: none"> • "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). <p data-bbox="323 1064 1444 1142">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".</p> <p data-bbox="323 1176 1380 1232">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:</p> <ul data-bbox="359 1236 1029 1590" style="list-style-type: none"> • 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. <p data-bbox="323 1624 638 1657">Further product details</p> <p data-bbox="323 1662 1348 1718">An external sensor can be connected if controlled pump operation based on for example flow, differential pressure or temperature is required.</p> <p data-bbox="323 1722 1436 1800">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:</p> <ul data-bbox="359 1805 1436 1951" style="list-style-type: none"> • "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). <p data-bbox="323 1977 1444 2056">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".</p>

Position	Qty.	Description
		<p>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:</p> <ol style="list-style-type: none"> 1) Alkaline-based cleaning. 2) Zinc phosphating. 3) Cathodic electro-deposition. 4) Curing to a dry film thickness 18-22 my m. <p>The colour code for the finished product is NCS 9000/RAL 9005.</p> <p>Pump</p> <p>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.</p>  <p>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.</p>  <p>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.</p> <p>Primary seal:</p> <ul style="list-style-type: none"> • Rotating seal ring material: silicon carbide (SiC) • Stationary seat material: silicon carbide (SiC) <p>This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.</p> <p>Secondary seal material: FKM (fluorocarbon rubber)</p> <p>FKM has excellent resistance to oils and chemicals. Above 90 °C, FKM should only be used in media without water.</p>  <p>The shaft seal is screwed into the pump head.</p> <p>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.</p> <p>The pump has a stainless-steel base mounted on a separate base plate. 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.</p>



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 .. 90 °C
Liquid temperature during operation: 20 °C
Density: 998.2 kg/m³

Technical:

Rated flow: 3.5 m³/h
Rated head: 27.6 m
Pump orientation: Vertical
Shaft seal arrangement: Single
Code for shaft seal: HQQV
Approvals on nameplate: CE, EAC
Curve tolerance: ISO9906:2012 3B

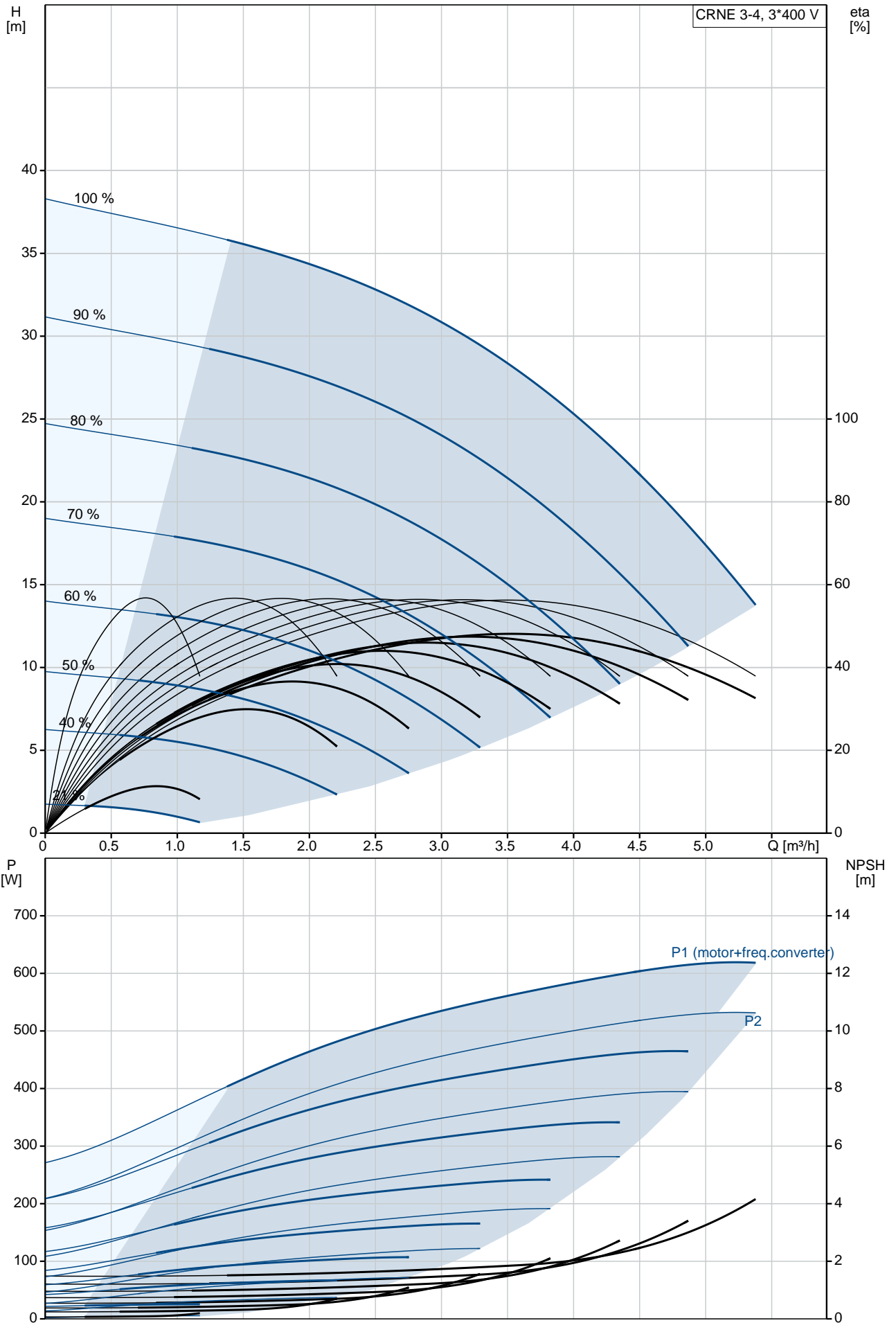
Materials:

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

Installation:

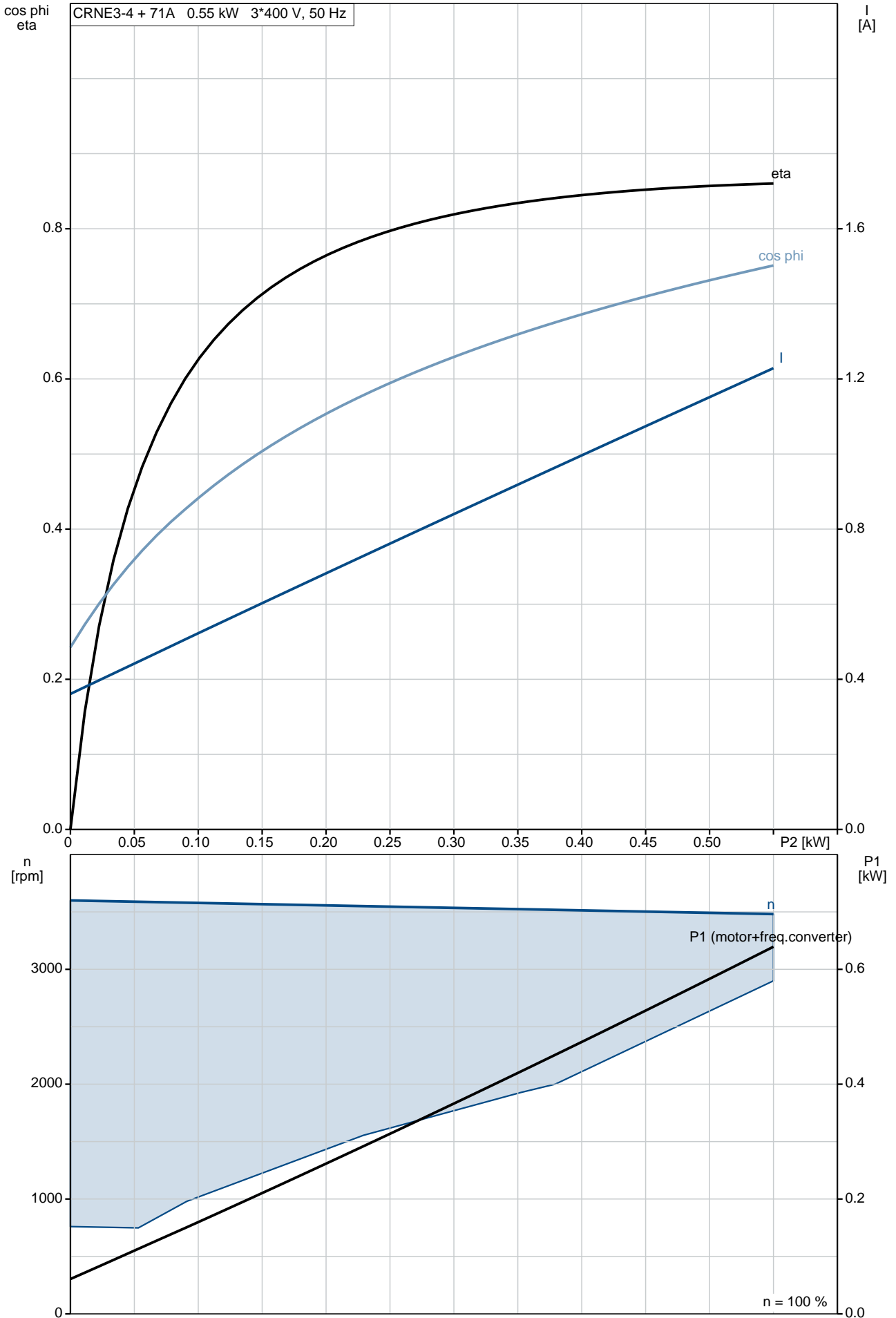
Position	Qty.	Description
		<p>Maximum ambient temperature: 50 °C Maximum operating pressure: 25 bar Max pressure at stated temp: 25 bar / 90 °C 25 bar / -20 °C</p> <p>Type of connection: PJE Size of inlet connection: DN 32 1 1/4 inch</p> <p>Size of outlet connection: DN 32 1 1/4 inch</p> <p>Pressure rating for pipe connection: PN 50 Flange size for motor: FT85</p> <p>Electrical data:</p> <p>Motor standard: IEC Motor type: 71A IE Efficiency class: IE5 Rated power - P2: 0.55 kW Power (P2) required by pump: 0.55 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-500 V Rated current: 1.35-1.30 A Cos phi - power factor: 0.77-0.61 Rated speed: 360-4000 rpm Efficiency: 85.9% Motor efficiency at full load: 85.9 % Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F</p> <p>Others:</p> <p>Minimum efficiency index, MEI : 0.7 Net weight: 21.4 kg Gross weight: 24.3 kg Shipping volume: 0.143 m³</p>

On request CRNE 3-4 A-P-A-V-HQQV 50 Hz

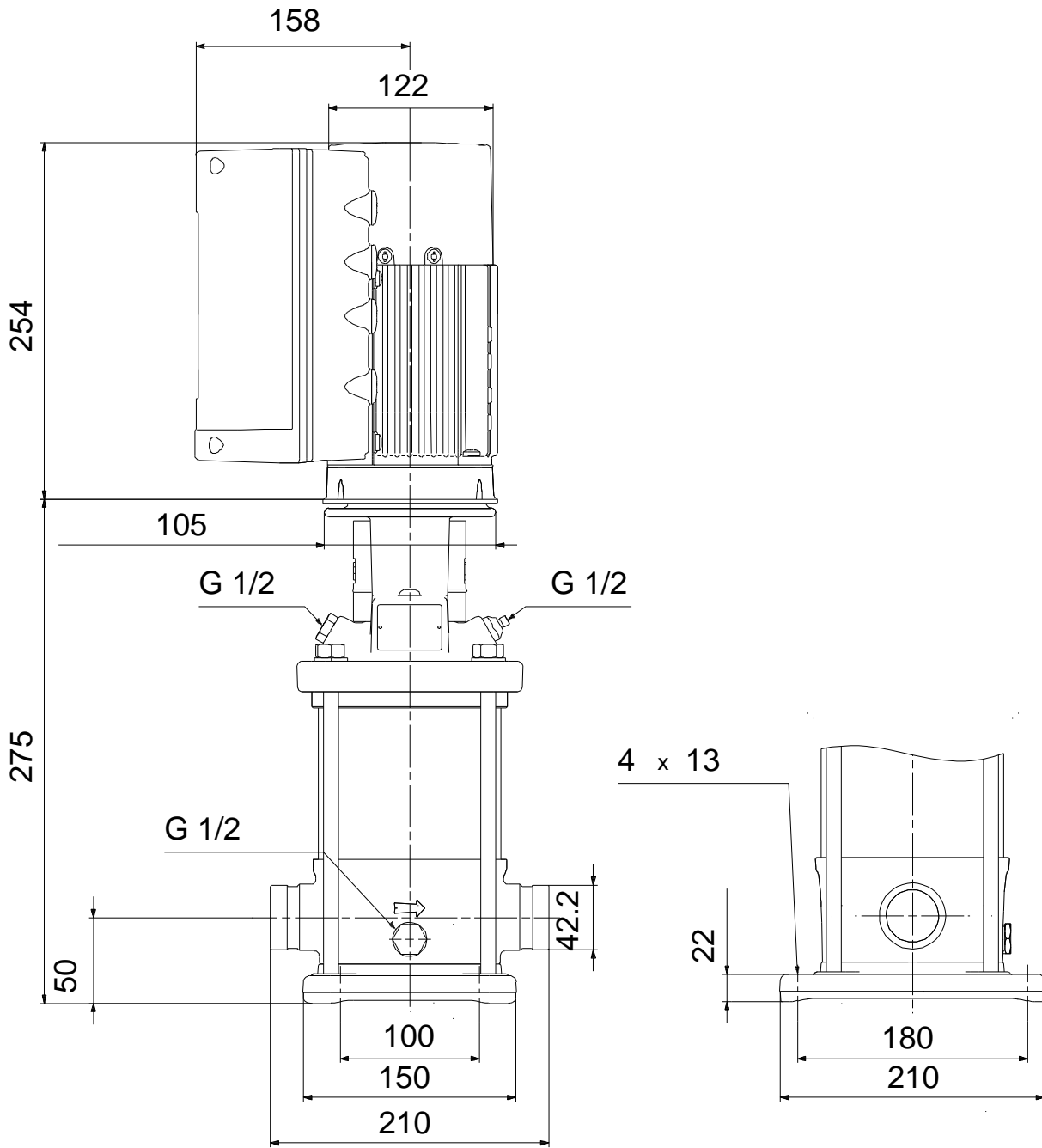


Description	Value
Controls:	
Control panel:	Standard
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Pressure sensor:	N
Others:	
Minimum efficiency index, MEI :	0.7
Net weight:	21.4 kg
Gross weight:	24.3 kg
Shipping volume:	0.143 m ³

On request CRNE 3-4 A-P-A-V-HQQV 50 Hz

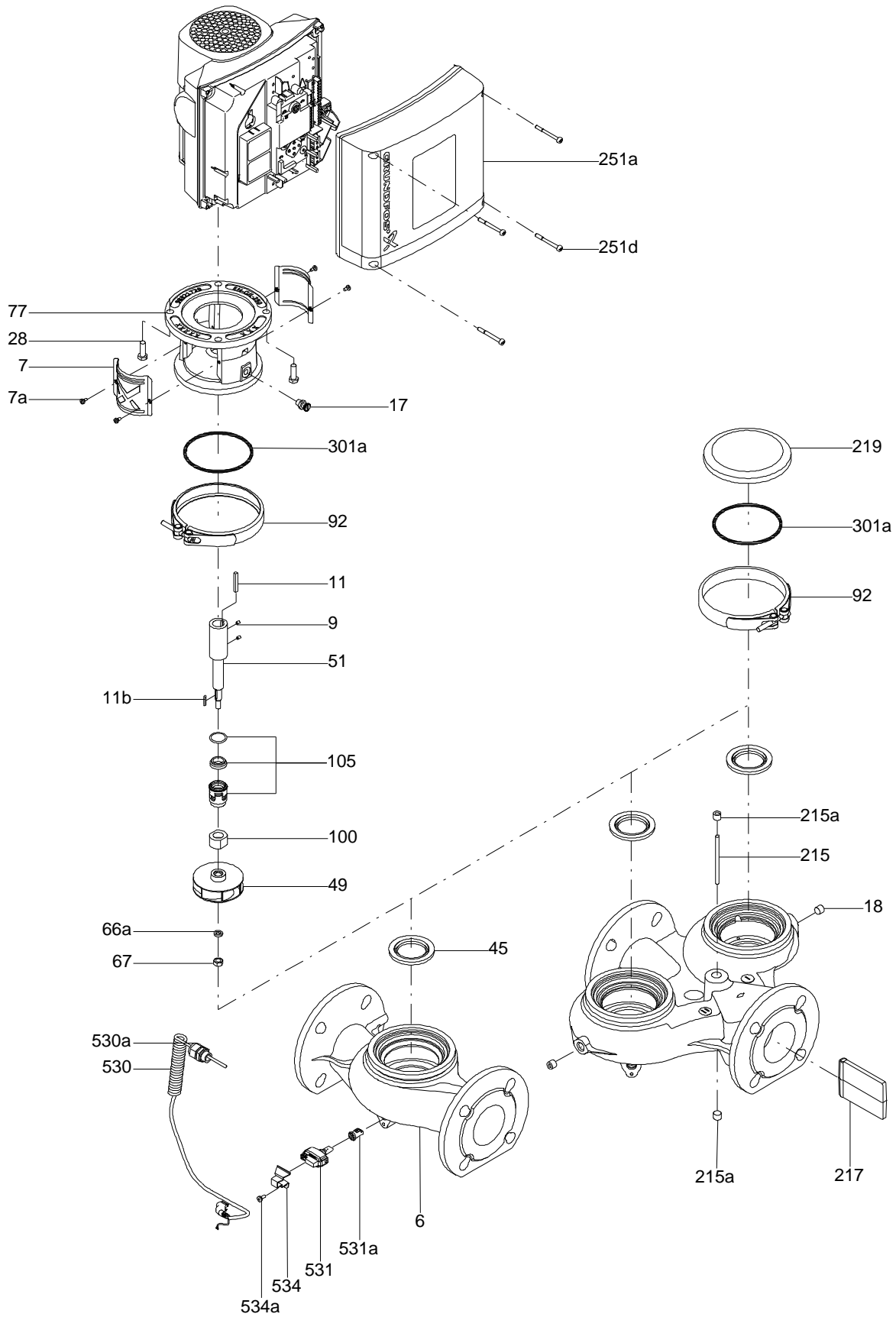


On request CRNE 3-4 A-P-A-V-HQQV 50 Hz

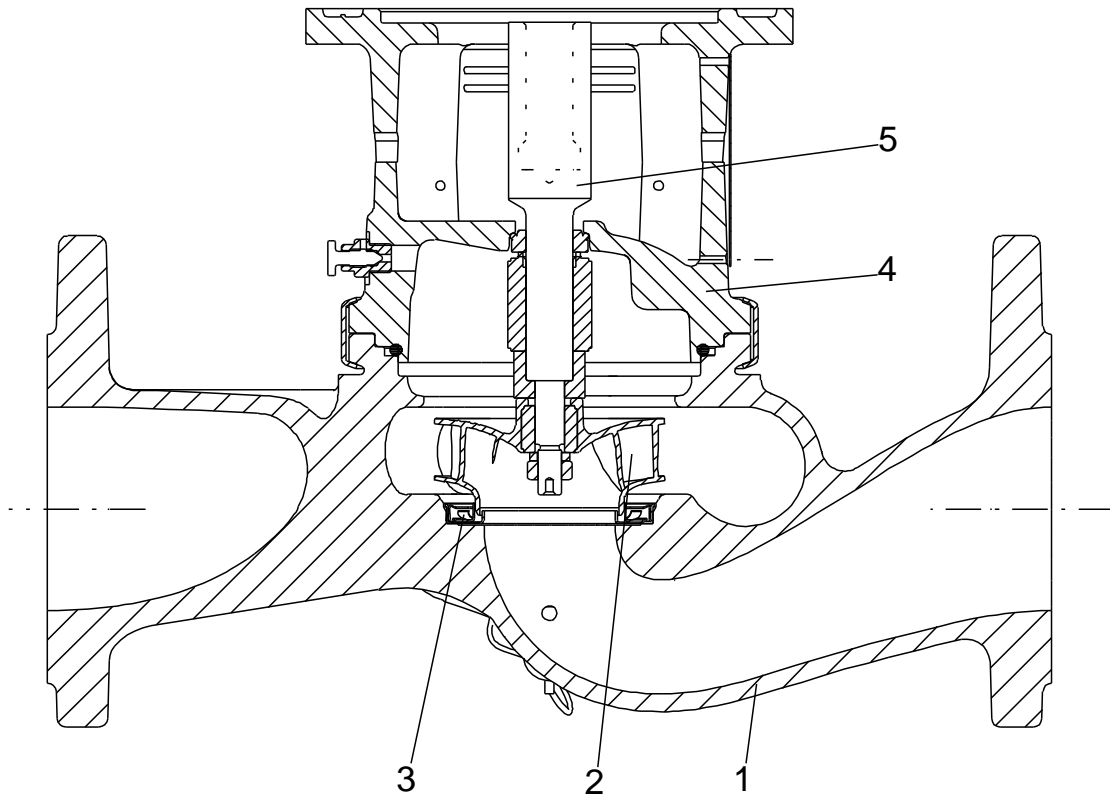


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view

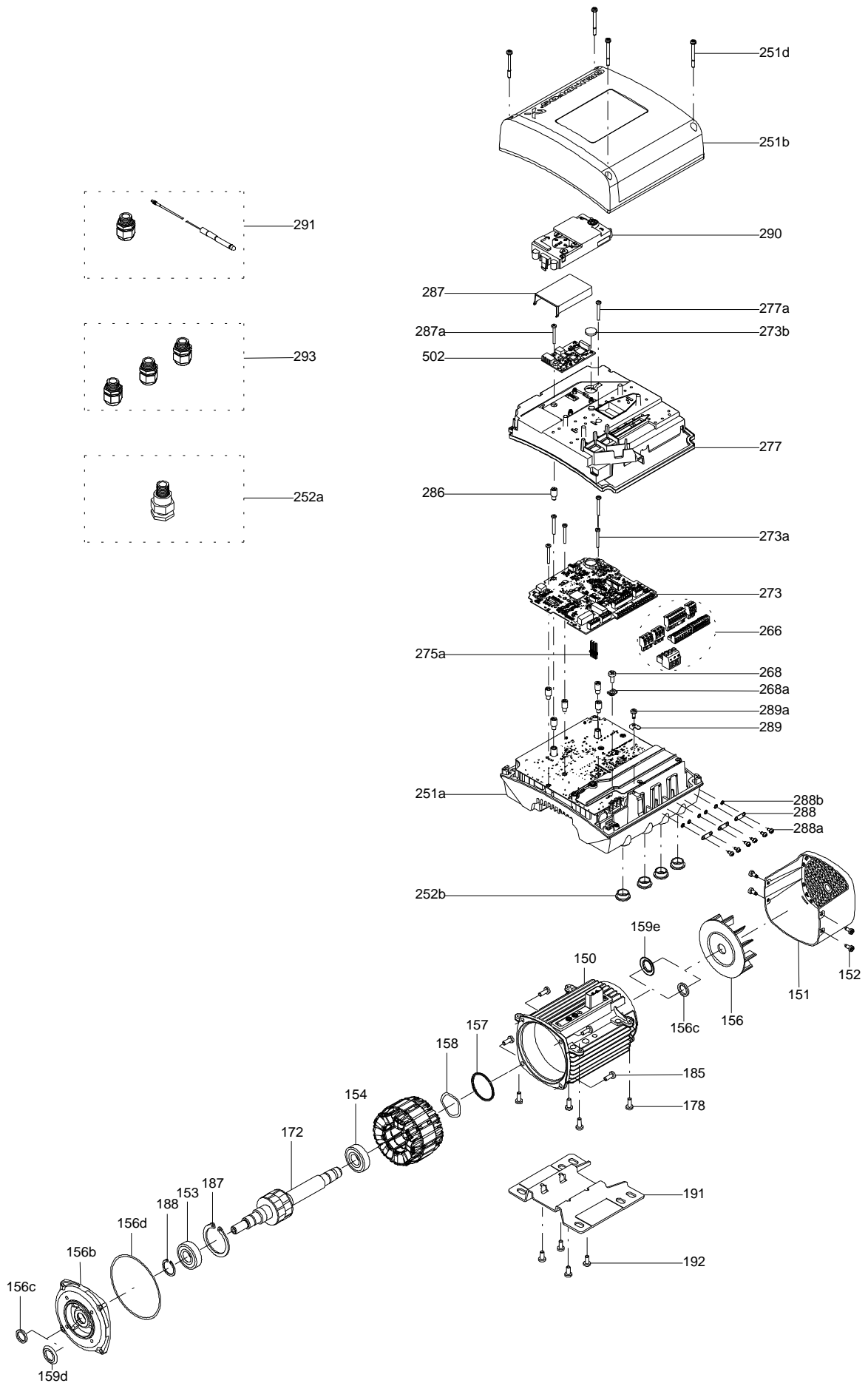


Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list CRNE 3-4, 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		Designation: 6204.2Z.C3.SYN		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	
159c	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	
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
6	Base				1	
25	Plug				2	

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
56	Base plate				1	
-	Sealing parts				1	pcs
- 25	Drain plug w/bypass valve				1	
38	O-ring		Diameter: 16,3		1	
			Material type: FKM			
			Thickness: 2,4			
37	O-ring		Diameter: 137,5		2	
			Material type: FKM			
			Thickness: 3,3			
100	O-ring		Diameter: 16,3		2	
			Material type: FKM			
			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: M6			
60	Formed wire spring				1	
77	Pump cover				1	
- 8	Coupling				1	pcs
9	Hex socket head cap screw		Designation: DIN 912		4	
			Length (mm): 20			
			Thread: M6			
10	Shaft pin		Diameter: 5		1	
			Length (mm): 26			
10a	Coupling half				2	
26	Staybolt		Length (mm): 169		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
- 4	Chamber cpl.				2	
4a	Intermediate chamber				1	
45	Neck ring				1	
65	Neck ring retainer				1	
- 4a	Chamber w. bearing cpl.				1	
4a	Intermediate chamber				1	
45	Neck ring				1	
65	Neck ring retainer				1	
- 5a	Chamber cpl.				1	
4a	Intermediate chamber				1	
45	Neck ring				1	
65	Neck ring retainer				1	
36	Lock nut		Thread: M8		1	
47a	Bearing ring, rotating				1	
49	Impeller cpl.				4	
- 50a	Guide vane cpl.				1	
	Guide vane				6	
	Plate				1	
50b	Top plate				1	
51	Shaft, spline, cpl.				1	
64a	Spacing pipe				2	
64a	Spacing pipe		Internal diameter: 12,85		1	
			Outer diameter: 15,85			
			Length (mm): 4,50			

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
64c	Clamp, splined		Internal diameter: 8,5 Outer diameter: 15		1	
66	Wedge lock washer				1	
- 105	Shaft seal		Material type: HQQV		1	pcs
	O-ring				1	
	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				3	
103	Seal ring, stationary				1	
105	Seal ring, rotating				1	
109	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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