

CRN15-16 SF-P-G-V-HQQV 3x380-415D 50 HZ

Grundfos pump 96512214



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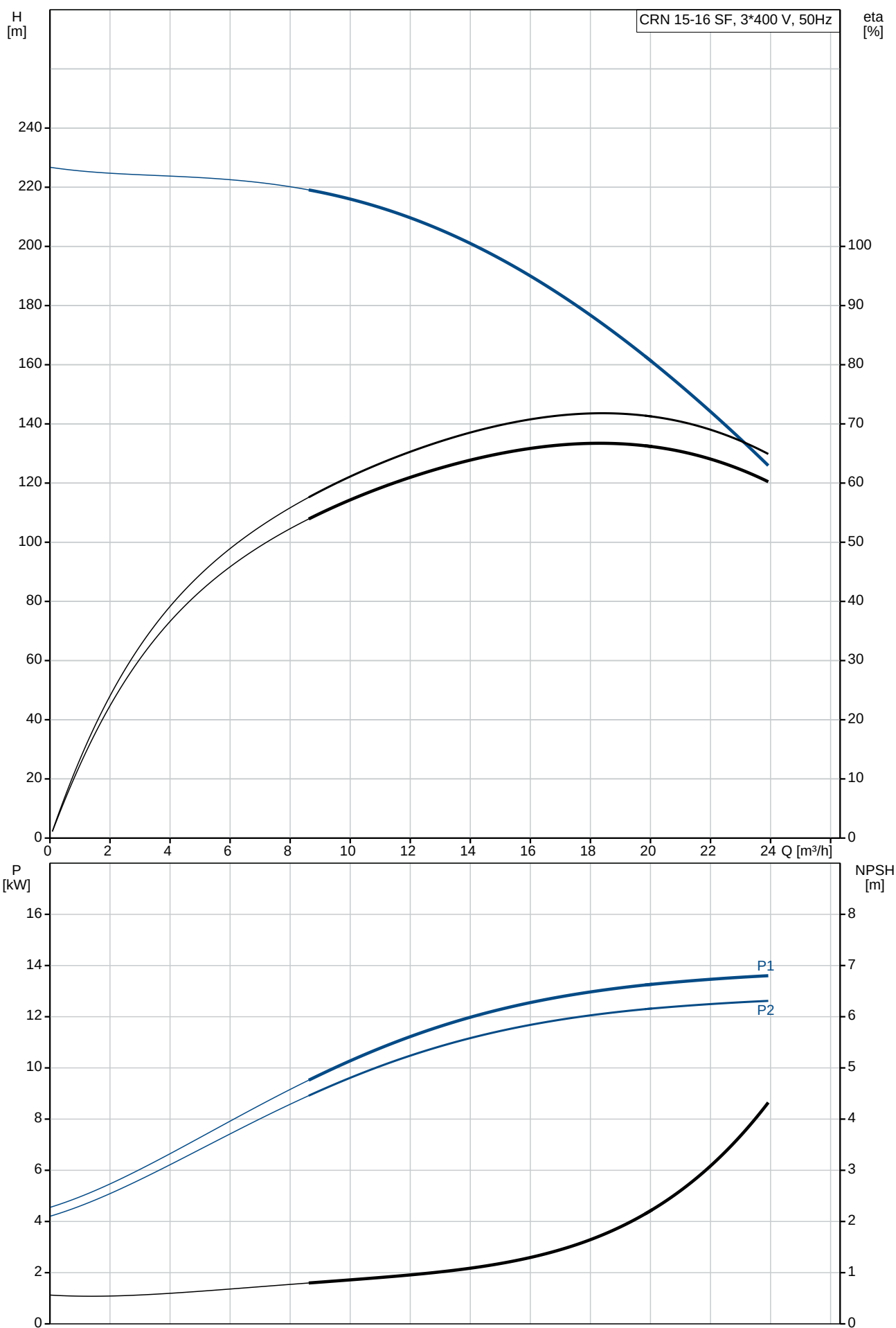
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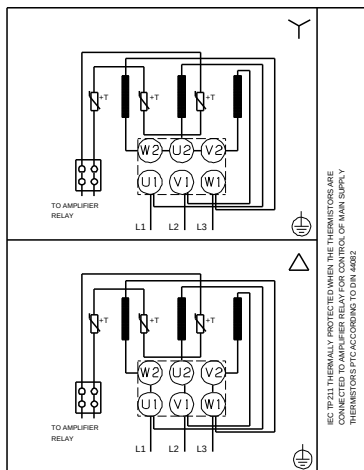
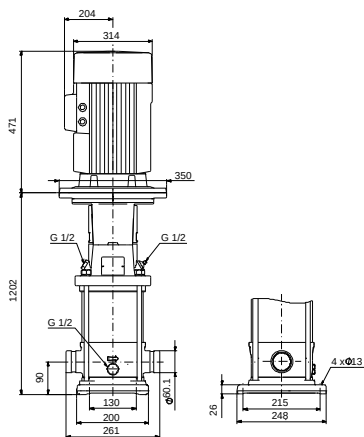
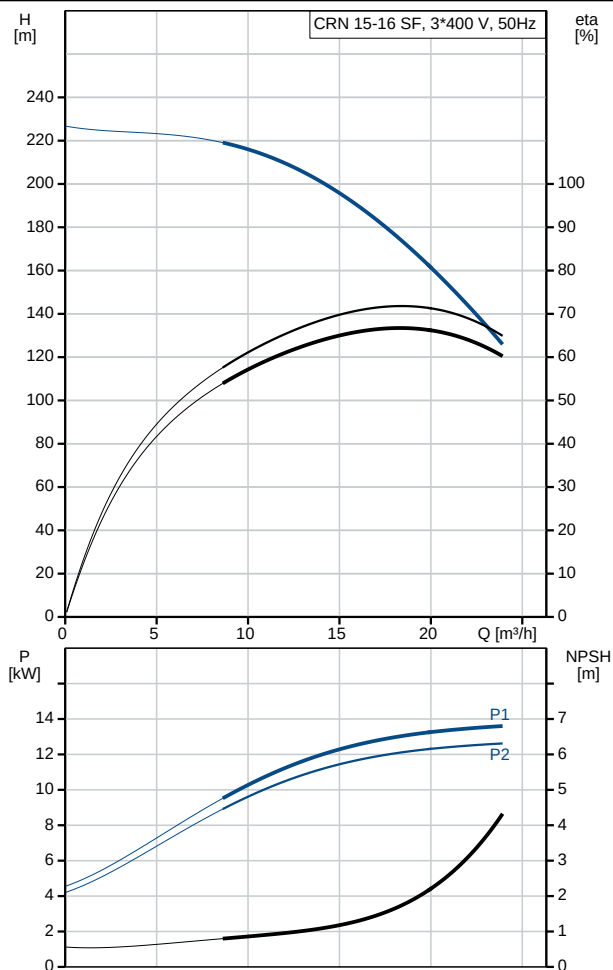
Position	Qty.	Description
	1	CRN 15-16 SF SF-P-G-V-HQQV  Product No.: On request Vertical, non-self-priming, high-pressure multistage centrifugal pump with suction and discharge ports on the same level (in-line) enabling installation in a horizontal one-pipe system. The chamber stack is turned upside-down to ensure that the shaft seal is not affected by the high pump discharge pressure. 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 asynchronous motor. Further product details This pump is a part of a double-pump system consisting of two pumps connected in series. The direction of rotation is the opposite of that of standard pumps as the chamber stack is turned upside-down. Consequently, the pumped liquid flows in the opposite direction inside the pump. This special design of the high-pressure pump ensures that only the discharge pressure from the connected feed pump affects the shaft seal. The performance curve only shows the high-pressure pump, not the double-pump system. 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. 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: FKM (fluorocarbon rubber) FKM has excellent resistance to oils and chemicals. Above 90 °C, FKM should only be used in media without water. 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. Technical data Liquid: Pumped liquid: Water

Position	Qty.	Description
		Liquid temperature range: -20 .. 90 °C Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Technical: Rated flow: 17 m³/h Rated head: 181.1 m Primary shaft seal: HQQV Approvals on nameplate: CE,TR 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: Maximum ambient temperature: 60 °C Max pressure at stated temp: 50 bar / 90 °C 50 bar / -20 °C Flange standard: PJE Pipe connection: 60,1 mm Flange size for motor: FF300 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 Others: Minimum efficiency index, MEI ≥: 0.70 Net weight: 146 kg Gross weight: 171 kg

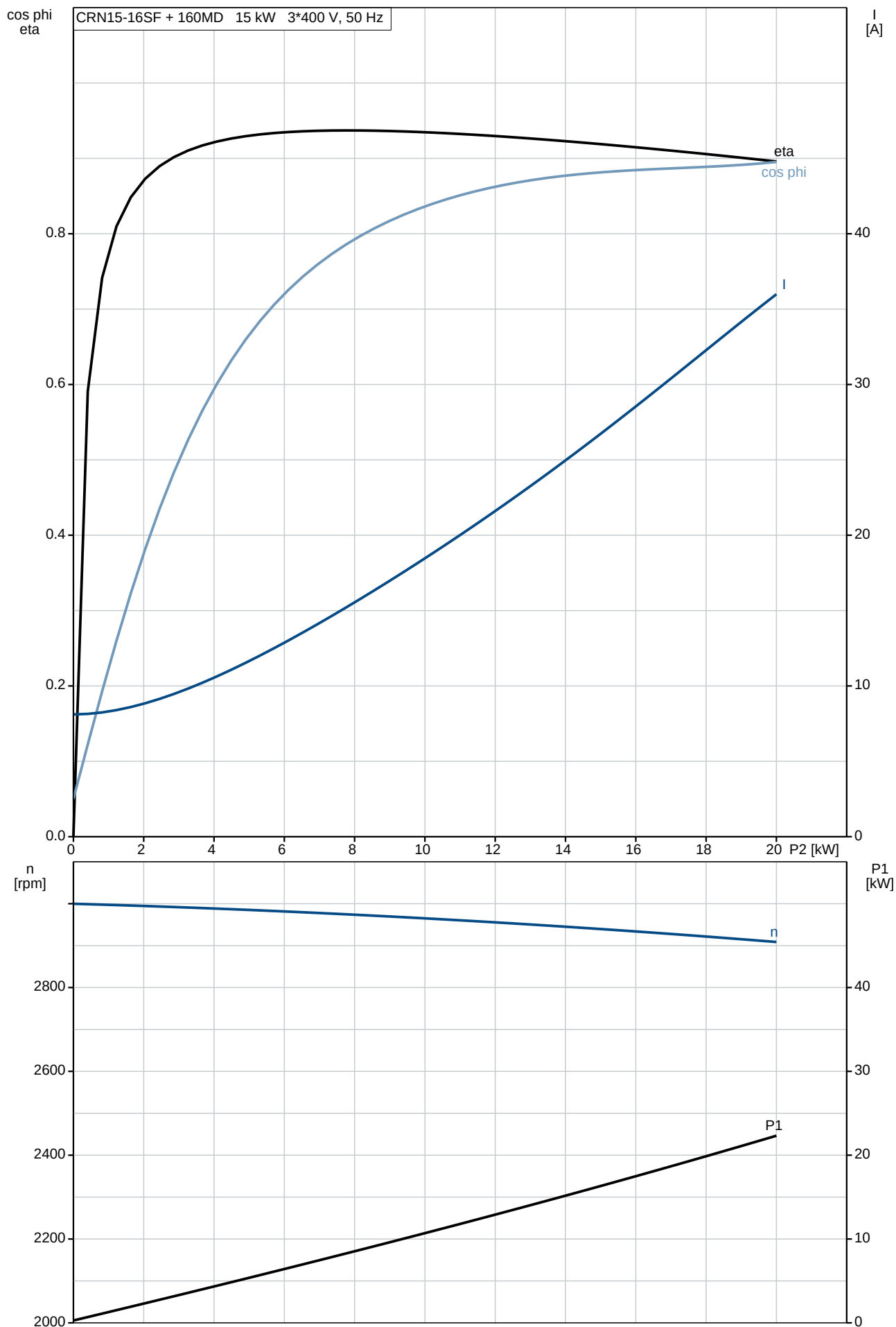
On request CRN 15-16 SF SF-P-G-V-HQQV 50 Hz



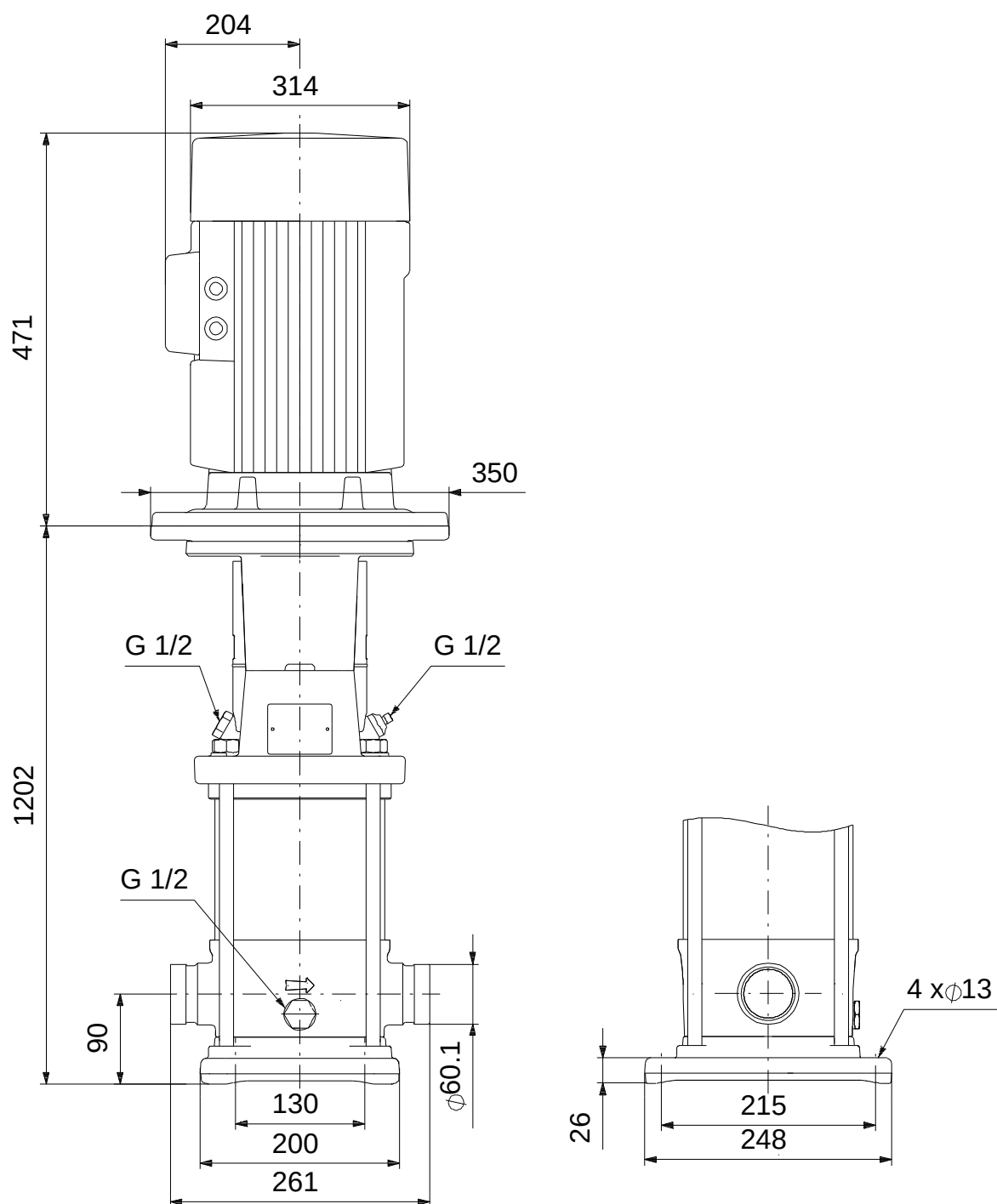
Description	Value
General information:	
Product name:	CRN 15-16 SF
Product No:	SF-P-G-V-HQQV
EAN number:	On request
Technical:	
Rated flow:	17 m³/h
Rated head:	181.1 m
Stages:	16
Impellers:	16
Primary shaft seal:	HQQV
Approvals on nameplate:	CE,TR
Curve tolerance:	ISO9906:2012 3B
Pump version:	SF
Model:	A
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
Material code:	G
Code for rubber:	V
Installation:	
Maximum ambient temperature:	60 °C
Max pressure at stated temp:	50 bar / 90 °C
	50 bar / -20 °C
Flange standard:	PJE
Pipe connection:	60,1 mm
Flange size for motor:	FF300
Connect code:	P
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 90 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
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 protec:	PTC
Motor No:	85905162
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	146 kg
Gross weight:	171 kg



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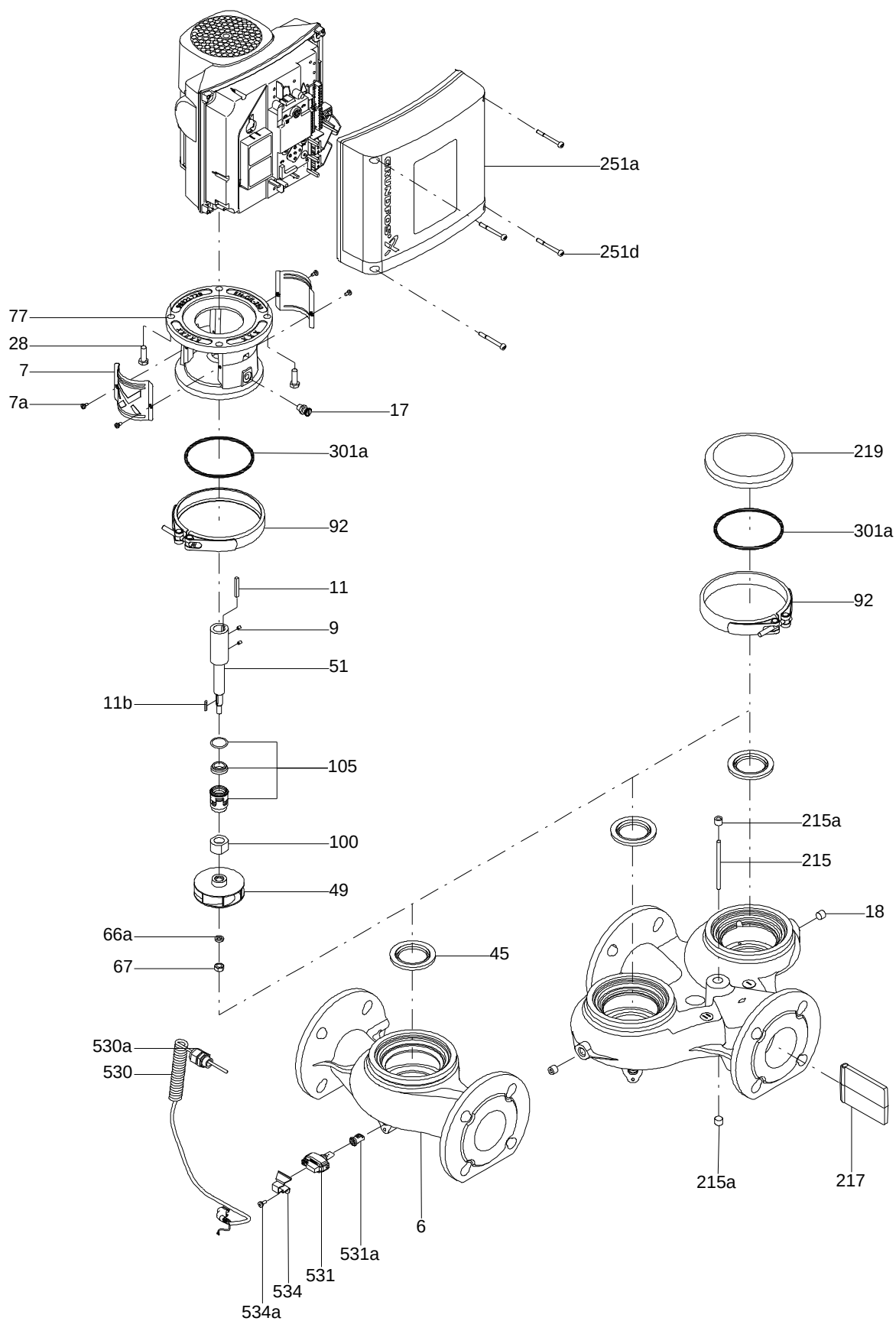


On request CRN 15-16 SF SF-P-G-V-HQQV 50 Hz

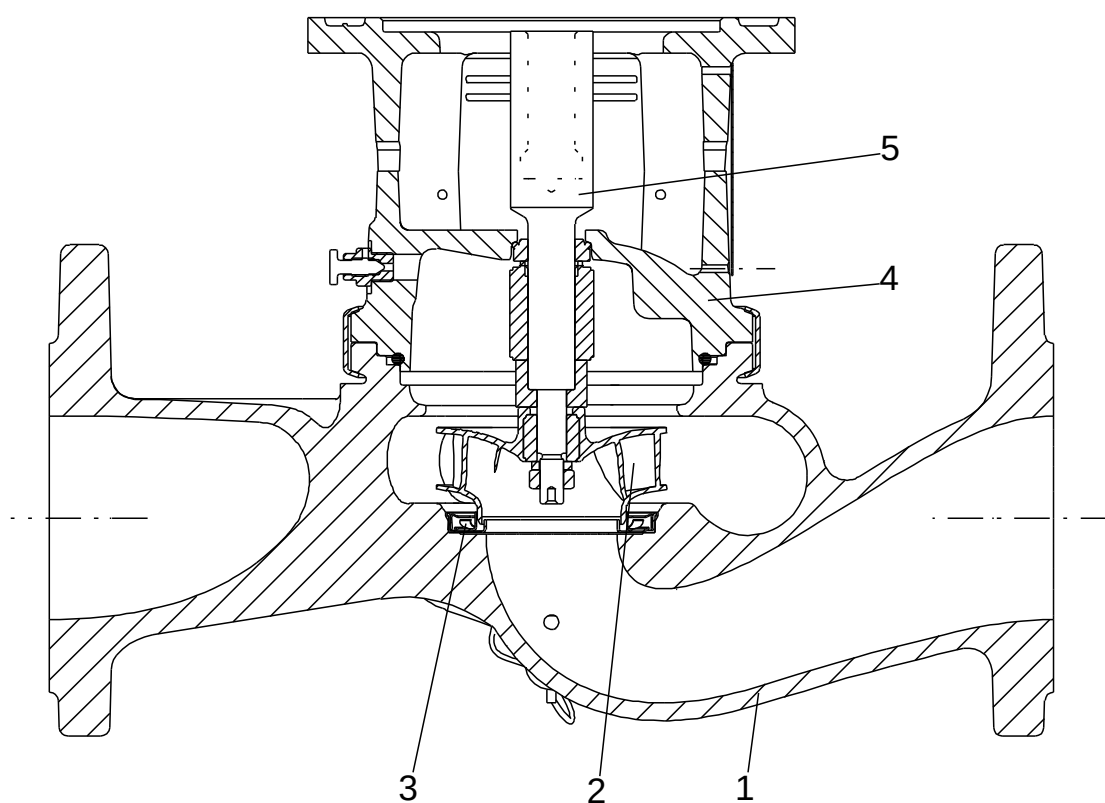


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view

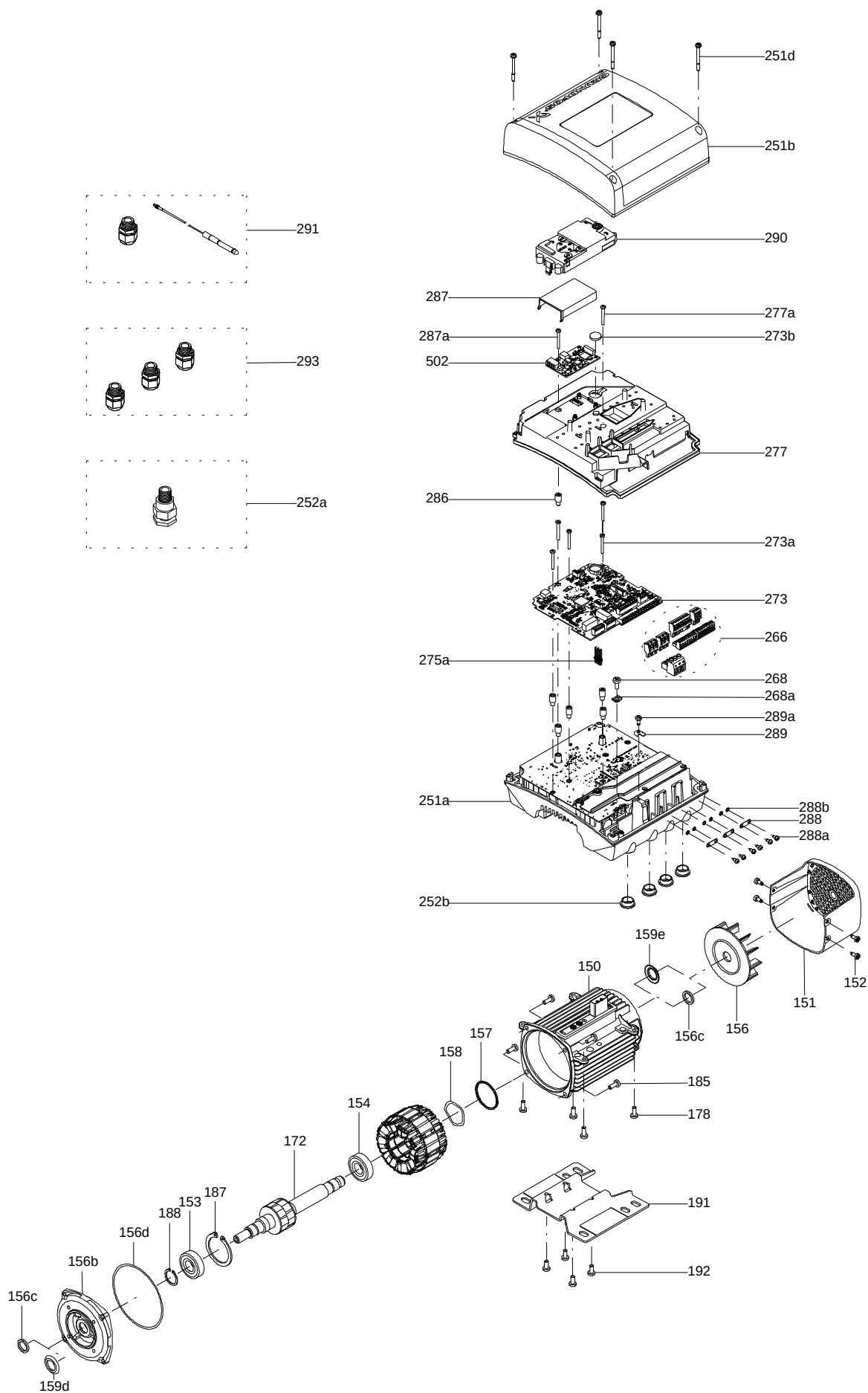


Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list CRN 15-16 SF, Product No. On request
Valid from 1.4.2011 (1113)

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
+	Motor				1	pcs
-	Base cpl.				1	pcs
6	Base				1	
6e	Formed wire spring				1	
25	Drain plug				1	
56	Base plate				1	
-	Rubber module				1	pcs
37	O-ring		Material type: FKM		2	
38	O-ring		Diameter: 16,3		1	
			Material type: FKM			
			Thickness: 2,4			
38a	O-ring		Diameter: 5,3		1	
			Material type: FKM			
			Thickness: 2,4			
46.a	O-ring				1	
46b	O-ring		Material type: FKM		1	
100	O-ring		Diameter: 16,3		2	
			Material type: FKM			
			Thickness: 2,4			
- 2	Pump head cpl.				1	pcs
1	Flange				1	
2	Pump head				1	
7	Coupling guard				2	
- 18	Air vent screw				1	
	Plug				1	
	Spindle				1	
23	Plug				1	
28	Hex head screw		Length (mm): 25		4	
			Thread: M12			
28a	Hex head screw		Length (mm): 45		4	
			Thread: M16			
36	Hex nut		Thread: M16		4	
37.a	O-ring				1	
76	Nameplate				1	
76a	Rivet				1	
77	Pump cover				1	
- 8	Coupling				1	pcs
9	Hex socket head cap screw		Designation: DIN 912		4	
			Length (mm): 25			
			Thread: M10			
10	Shaft pin		Diameter: 5		1	
			Length (mm): 26			
10a	Coupling half				2	
26	Staybolt		Length (mm): 945		1	pcs
36	Nut		Thread: M16		1	pcs
55	Outer sleeve				1	pcs
66.a	Washer		Designation: DIN 125 A2		1	pcs
			Internal diameter: 17			
			Outer diameter: 30			
			Thickness: 3			
- 80	Chamber stack				1	pcs
- 4	Intermediate chamber cpl.				13	
	Intermediate chamber				1	
45	Neck ring cpl.				1	
65	Retainer				1	
4.c	Intermediate chamber cpl.				1	
- 4a	Intermediate chamber cpl.				2	
	Guide vane				10	
	Bearing plate				1	

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
	Bearing bush				1	
	Intermediate chamber				1	
	Guide cup				1	
	Sand Lifter				1	
45	Neck ring cpl.				1	
65	Retainer				1	
26.b	Hex head screw				4	
26.c	Washer		Designation: DIN 125A		4	
			Thickness: 1,6			
26a	Strap cpl.				4	
36	Lock nut		Thread: M8		1	
44	Inlet part				1	
- 44a	Inlet part cpl.				1	
45	Neck ring cpl.				1	
65	Retainer				1	
46	Discharge part				1	
47a	Bearing ring				3	
- 49	Impeller cpl.				16	
	Impeller				1	
49c	Wear ring				1	
- 51	Shaft, spline, cpl.				1	
62	Stop ring				1	
64c	Spacing pipe		Length (mm): 12.7		1	
64c	Spacing bush				2	
64d	Spacing pipe		Length (mm): 10,6		3	
66	Wedge lock washer				1	
69	Spacing pipe		Length (mm): 43.6		13	
69	Spacing pipe		Length (mm): 58,6		1	
105	Shaft seal		Material type: HQQV		1	pcs

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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