CRN1-30 A-FGJ-G-E-HQQE 3x230/400 50HZ

Grundfos pump 96516417

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https://www.lenntech.com/grundfos/CRN01/96516417/CRN-1-30-A-FGJ-G-E-HQQE.html

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Position	Qty.	Description
	1	**CRN 1-30 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 asynchronous motor.

Further product details

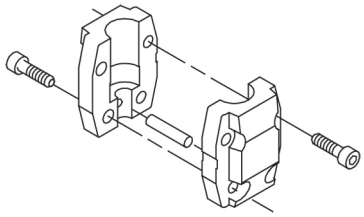
Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface. An 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.

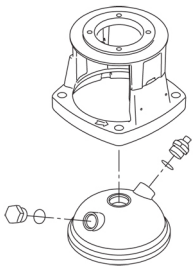
The colour code for the finished product is NCS 9000/RAL 9005.

Pump

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.

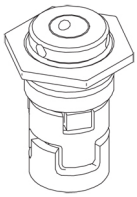
Primary seal:

- 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.

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 IE3 in accordance with IEC 60034-30-1.

The motor does not incorporate motor protection and must be connected to a motor-protective circuit breaker which can be manually reset. The motor-protective circuit breaker must be set according to the rated current of the motor (I1/1).

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.

Technical data

Controls:

Frequency converter:	NONE

Liquid:

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

Technical:

Rated flow:	1.8 m³/h
Rated head:	141.2 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:

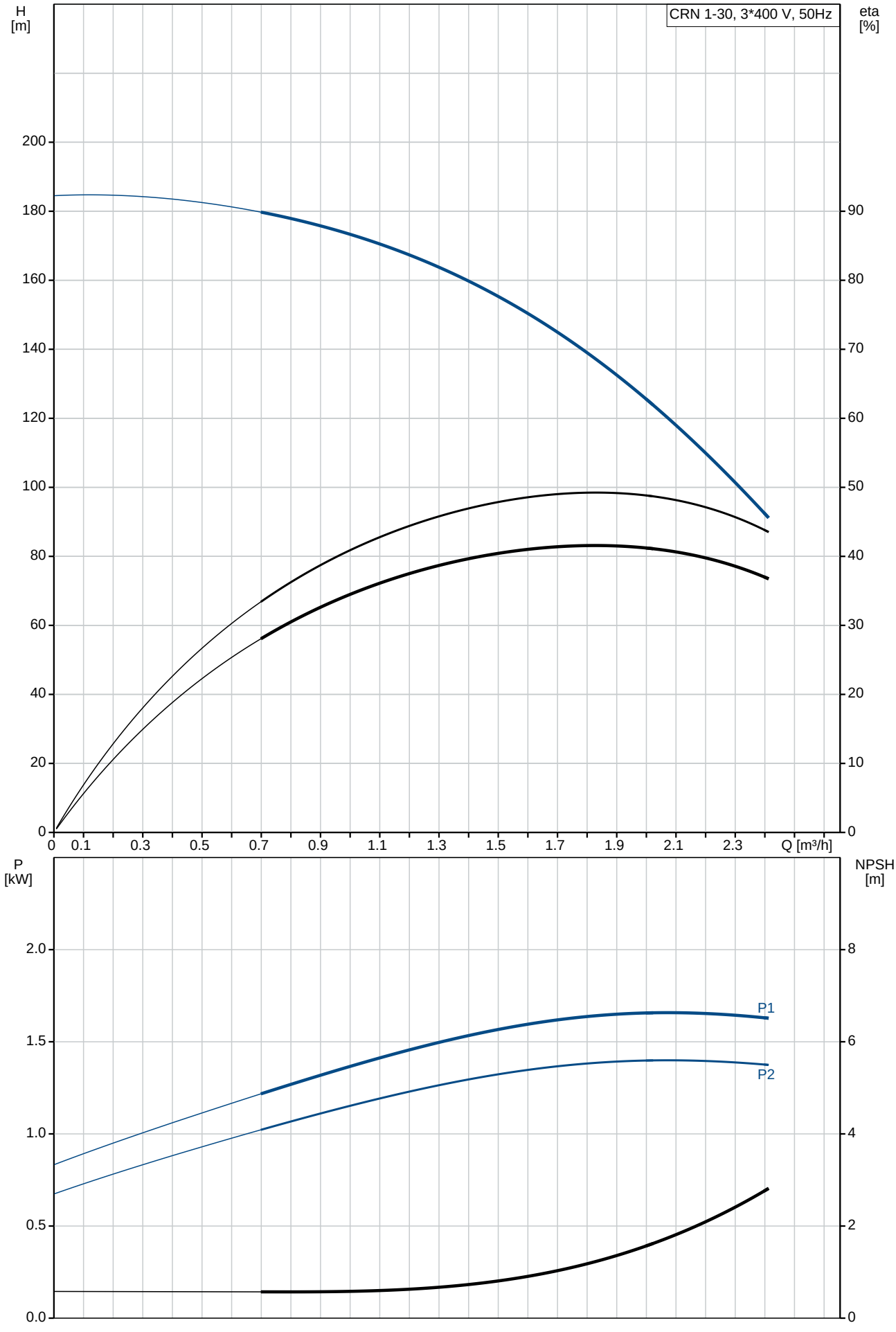
Base:	Stainless steel EN 1.4408 AISI 316
Impeller:	Stainless steel EN 1.4401 AISI 316
Bearing:	SIC

Installation:

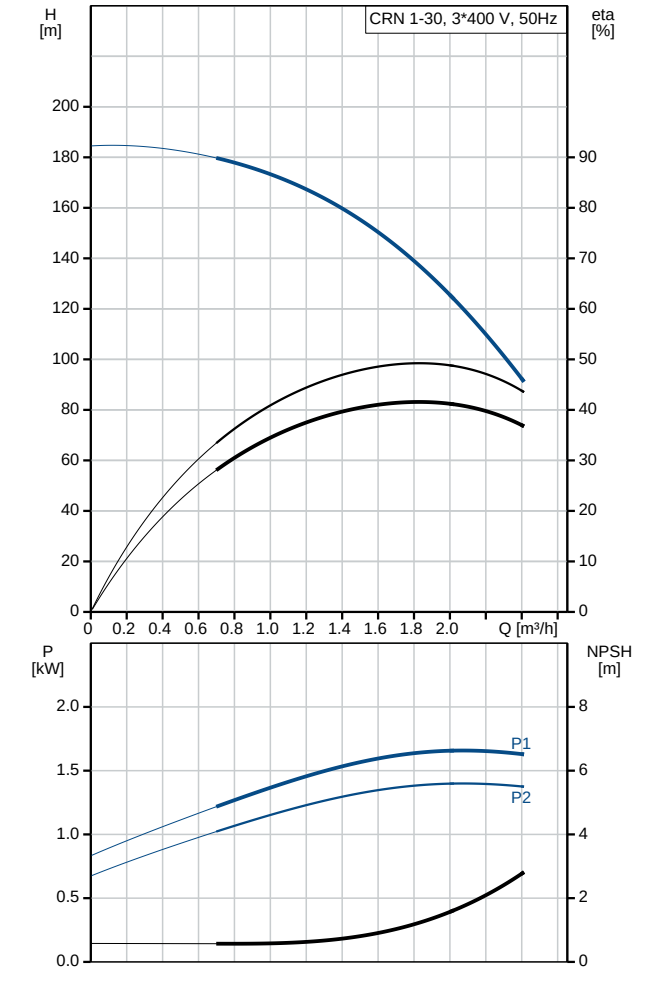
Maximum ambient temperature:	60 °C
Maximum operating pressure:	25 bar

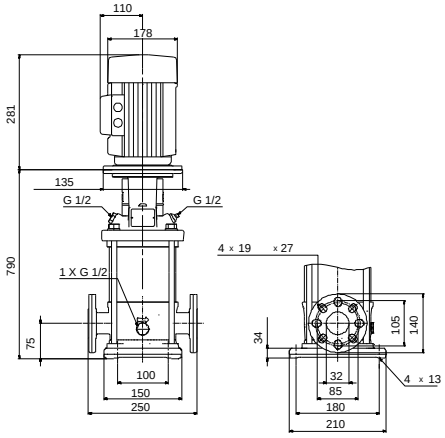
Position	Qty.	Description
		Max pressure at stated temp: 25 bar / 120 °C 25 bar / -20 °C Type of connection: DIN / ANSI / JIS Size of inlet connection: DN 25/32 1 1/4 inch Size of outlet connection: DN 25/32 1 1/4 inch Pressure rating for pipe connection: PN 25 Flange rating inlet: 300 lb Flange size for motor: FT115 **Electrical data:** Motor standard: IEC Motor type: 90SB IE Efficiency class: IE3 Rated power - P2: 1.5 kW Power (P2) required by pump: 1.5 kW Mains frequency: 50 Hz Rated voltage: 3 x 220-240D/380-415Y V Rated current: 5.45/3.15 A Starting current: 850-930 % Cos phi - power factor: 0.87-0.82 Rated speed: 2890-2910 rpm Efficiency: IE3 84,2% Motor efficiency at full load: 84.2 % Motor efficiency at 3/4 load: 84.5 % Motor efficiency at 1/2 load: 83.1 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F **Others:** Minimum efficiency index, MEI ≥: 0.7 Net weight: 44.3 kg Gross weight: 49.6 kg Shipping volume: 0.133 m^3

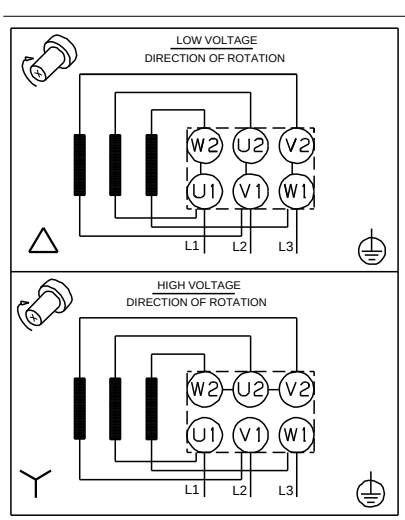
On request CRN 1-30 A-FGJ-A-E-HQQE 50 Hz



Description	Value
General information:	
Product name:	CRN 1-30 A-FGJ-A-E-HQQE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	1.8 m³/h
Rated head:	141.2 m
Stages:	30
Impellers:	30
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:	60 °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:	90SB
IE Efficiency class:	IE3
Rated power - P2:	1.5 kW
Power (P2) required by pump:	1.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 220-240D/380-415Y V
Rated current:	5.45/3.15 A
Starting current:	850-930 %
Cos phi - power factor:	0.87-0.82
Rated speed:	2890-2910 rpm
Efficiency:	IE3 84,2%
Motor efficiency at full load:	84.2 %
Motor efficiency at 3/4 load:	84.5 %

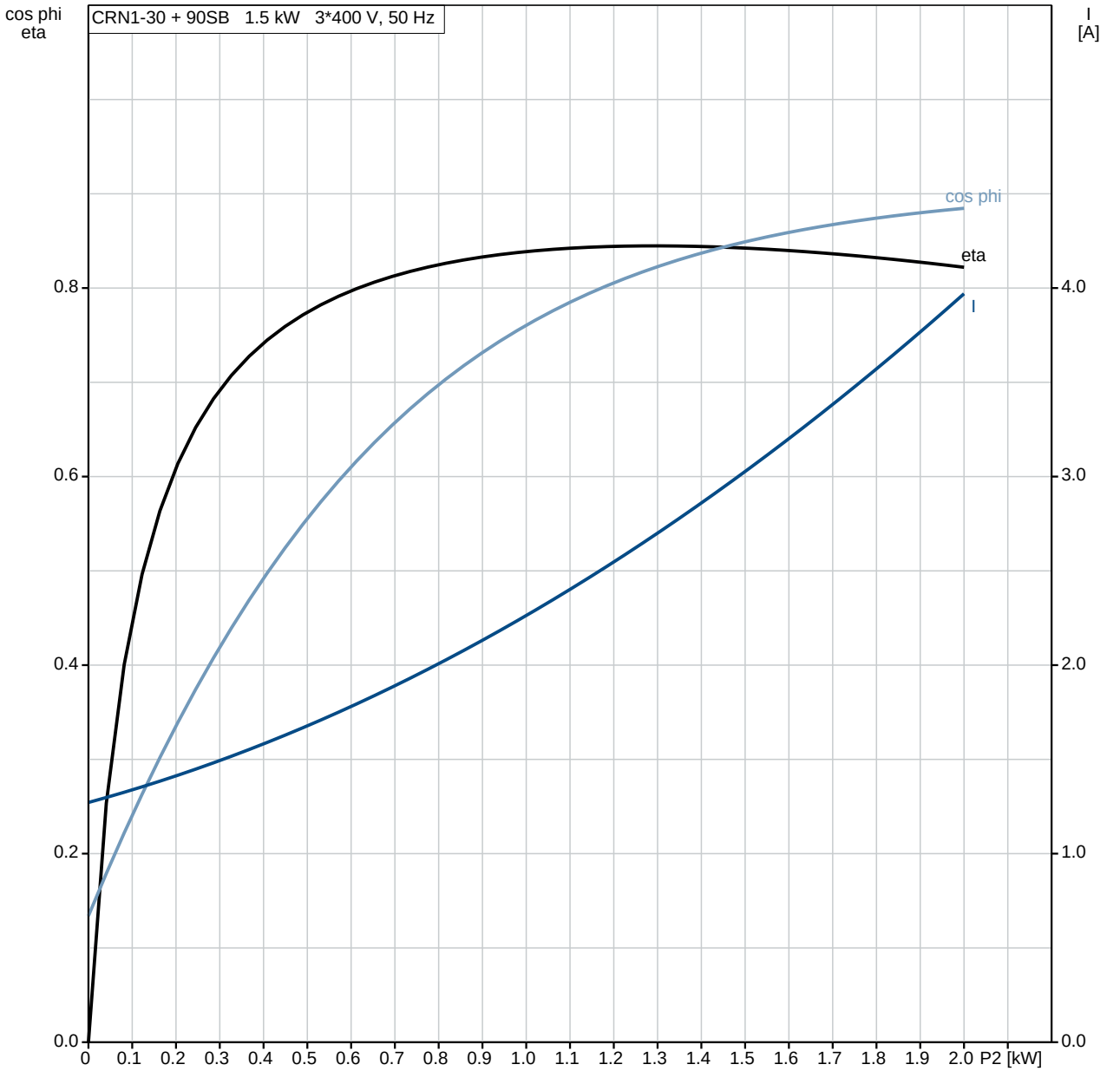


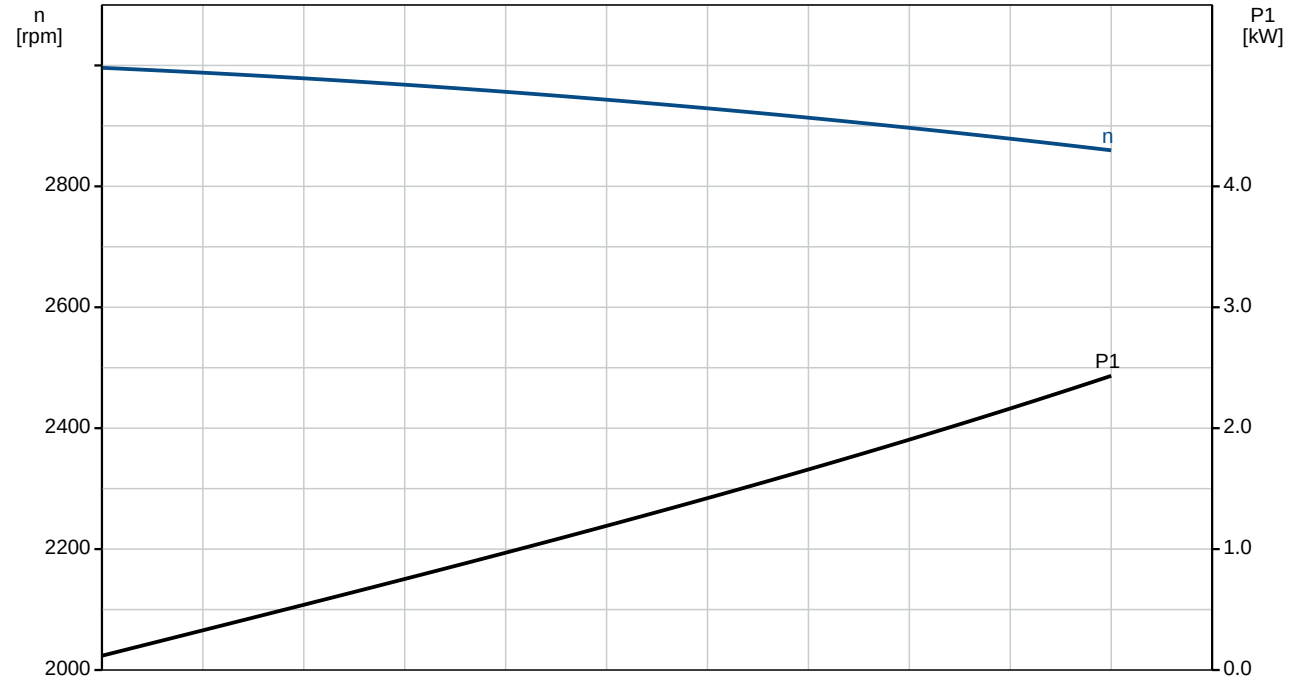




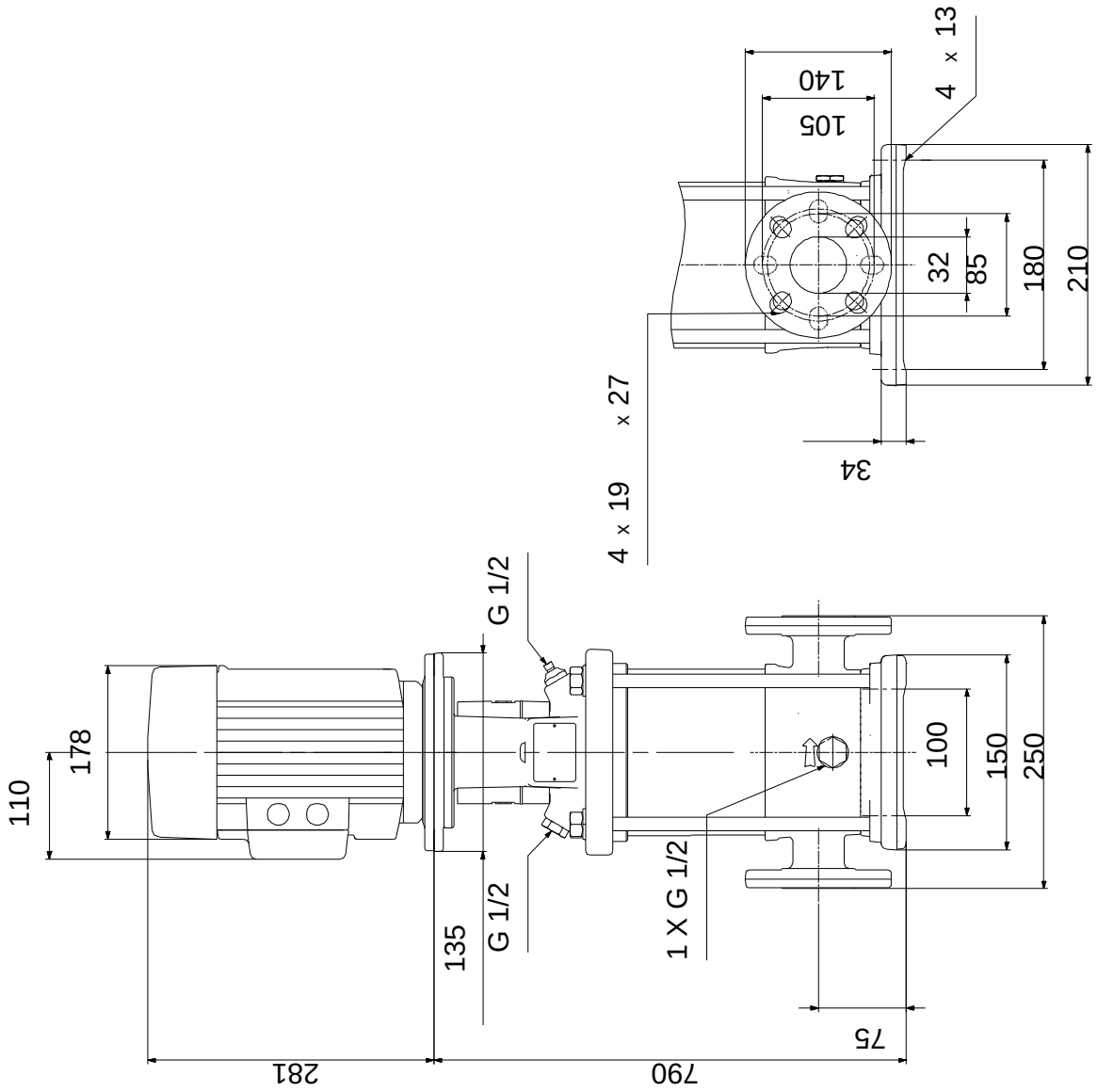
Description	Value
Motor efficiency at 1/2 load:	83.1 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protec:	NONE
Motor No:	85U05906
Controls:	
Frequency converter:	NONE
Others:	
Minimum efficiency index, MEI ≥:	0.7
Net weight:	44.3 kg
Gross weight:	49.6 kg
Shipping volume:	0.133 m^3

On request CRN 1-30 A-FGJ-A-E-HQQE 50 Hz



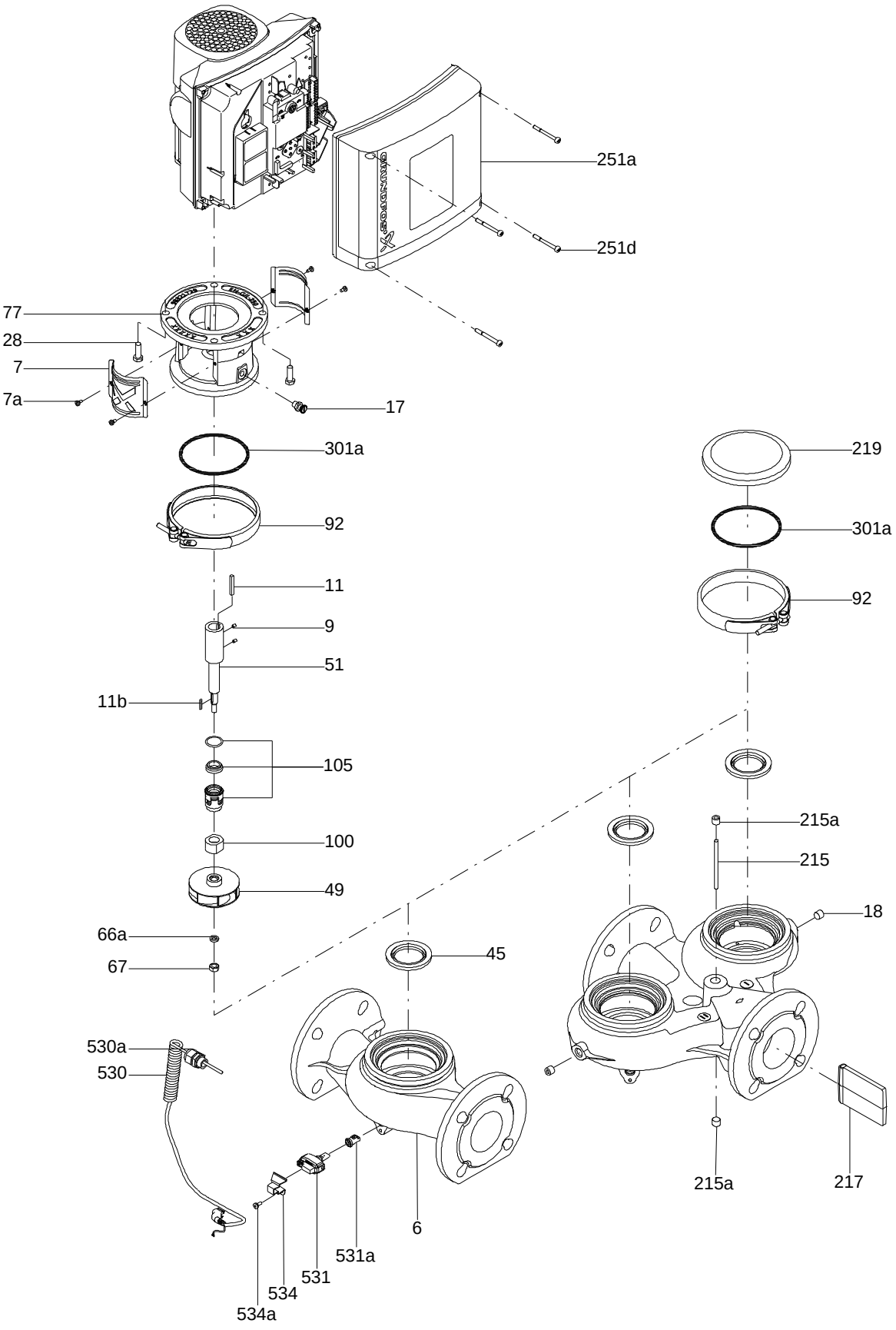


On request CRN 1-30 A-FGJ-A-E-HQQE 50 Hz

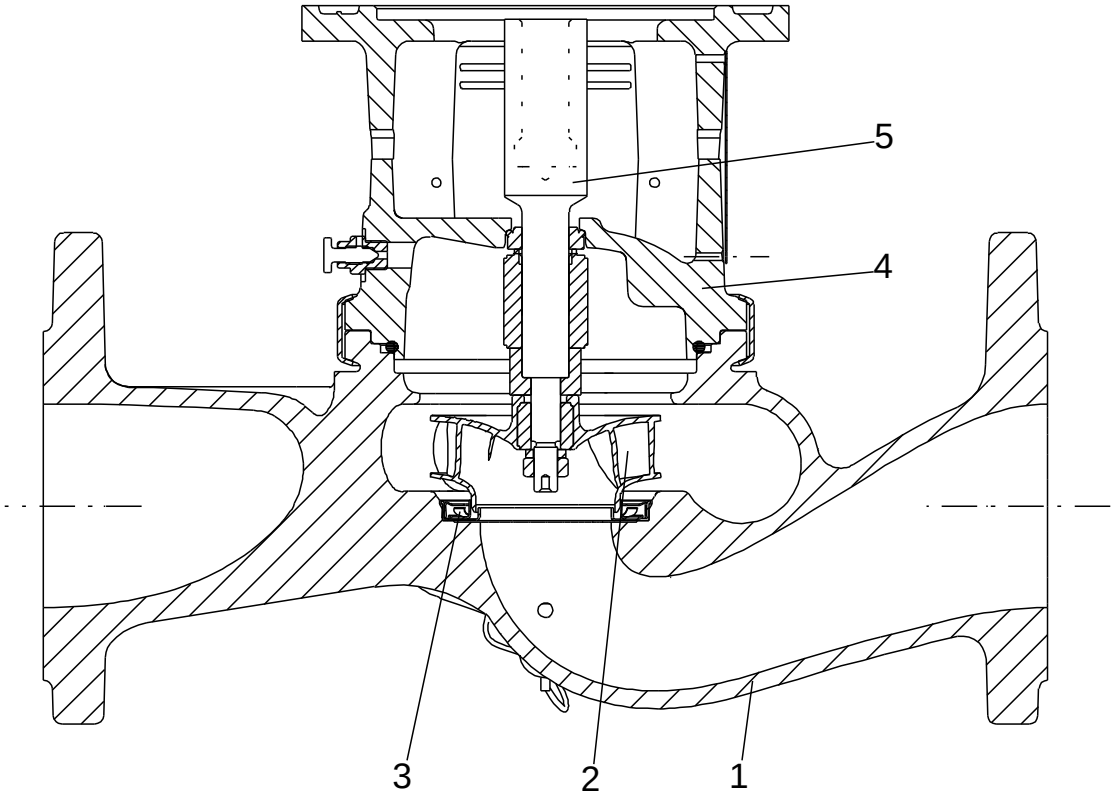


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view

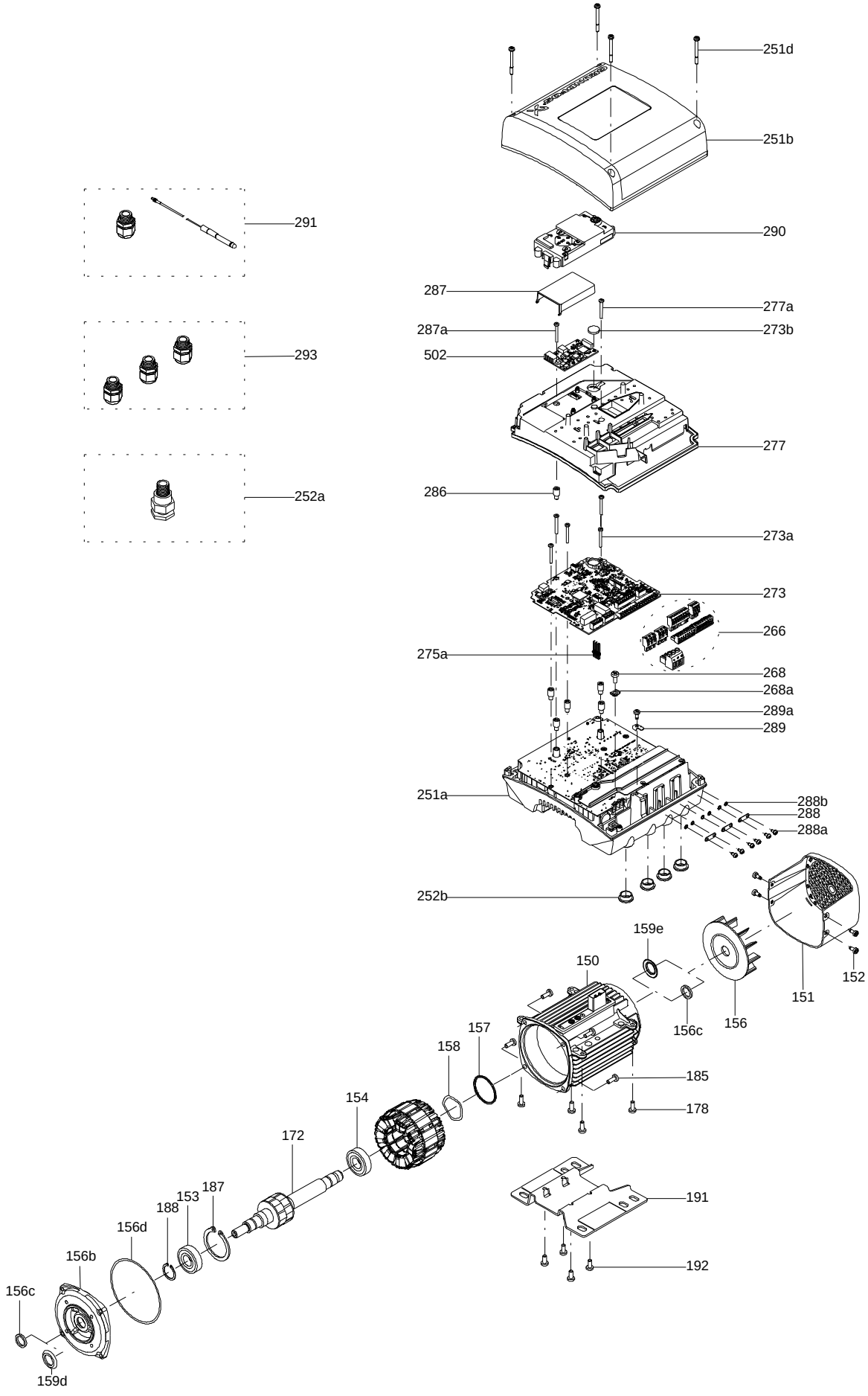


Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list CRN 1-30, Product No. On request
Valid from 1.1.2011 (1152)

	Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
+		Motor				1	pcs
+		Motor				1	pcs
-		Base cpl.				1	pcs
	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): 637		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.				25	
	4a	Intermediate chamber				1	
	45	Neck ring				1	
	65	Neck ring retainer				1	
-	4a	Chamber w. bearing cpl.				4	
	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				4	
	49	Impeller cpl.				30	

	Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
-	50a	Guide vane				1	
		Plate				1	
	50b	Top plate				1	
	51	Shaft, spline, cpl.				1	
	64a	Spacing pipe				25	
	64a	Spacing pipe		Internal diameter: 12,85		4	
				Outer diameter: 15,85			
				Length (mm): 4,50			
	64c	Clamp, splined		Internal diameter: 8,5		1	
				Outer diameter: 15			
	66	Wedge lock washer				1	
-	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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