

## CRN10-22 A-FGJ-G-E-HQQE 3x400/690 50 HZ

Grundfos pump 96501300




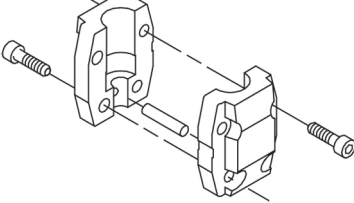
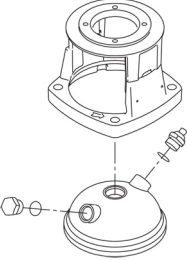
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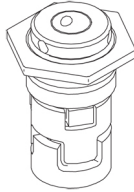
<https://www.lenntech.com/grundfos/CRN10/96501300/CRN-10-22-A-FGJ-G-E-HQQE.html>

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Position	Qty.	Description
	1	<p data-bbox="323 163 662 197"><b>CRN 10-22 A-FGJ-A-E-HQQE</b></p>  <p data-bbox="323 481 598 515">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 combined DIN-ANSI-JIS flanges.</p> <p data-bbox="323 683 1053 716">The pump is fitted with a 3-phase, fan-cooled asynchronous motor.</p> <p data-bbox="323 750 638 784"><b>Further product details</b></p> <p data-bbox="323 784 1444 884">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 data-bbox="323 896 1029 1041" style="list-style-type: none"> <li>1) Alkaline-based cleaning.</li> <li>2) Zinc phosphating.</li> <li>3) Cathodic electro-deposition.</li> <li>4) Curing to a dry film thickness 18-22 my m.</li> </ol> <p data-bbox="323 1019 1029 1052">The colour code for the finished product is NCS 9000/RAL 9005.</p> <p data-bbox="323 1075 406 1108"><b>Pump</b></p> <p data-bbox="323 1108 1412 1164">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 data-bbox="323 1411 1444 1489">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 data-bbox="323 1792 1428 1892">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 data-bbox="323 1904 470 1926"><b>Primary seal:</b></p> <ul data-bbox="359 1926 917 1982" style="list-style-type: none"> <li>• Rotating seal ring material: silicon carbide (SiC)</li> <li>• Stationary seat material: silicon carbide (SiC)</li> </ul> <p data-bbox="323 1993 1428 2049">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 data-bbox="323 2049 981 2072"><b>Secondary seal material: EPDM (ethylene-propylene rubber)</b></p> <p data-bbox="323 2072 1220 2105">EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</p>



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 separate 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 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.

The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.

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/m<sup>3</sup>

#### Technical:

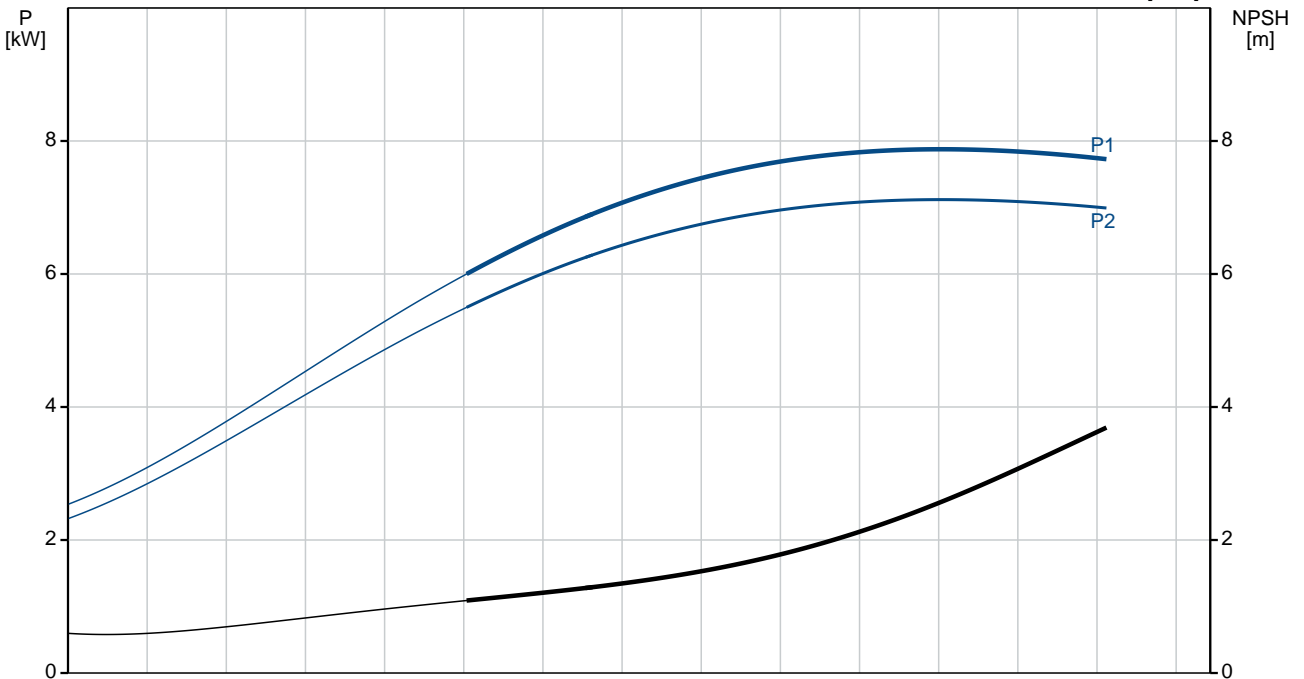
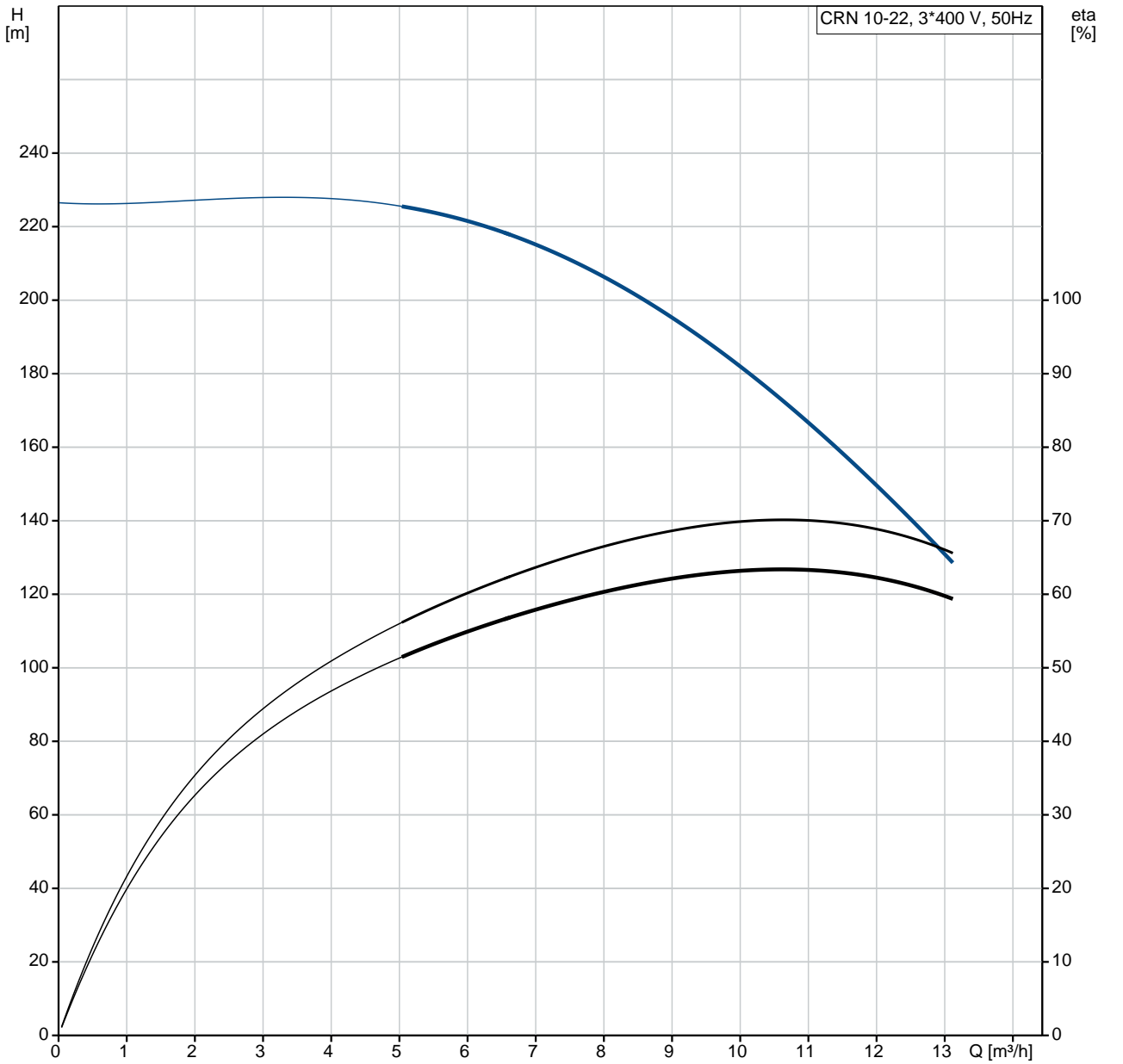
Rated flow: 10 m<sup>3</sup>/h  
Rated head: 180.6 m  
Pump orientation: Vertical  
Shaft seal arrangement: Single  
Code for shaft seal: HQQE  
Approvals on nameplate: CE, EAC, ACS  
Curve tolerance: ISO9906:2012 3B

#### Materials:

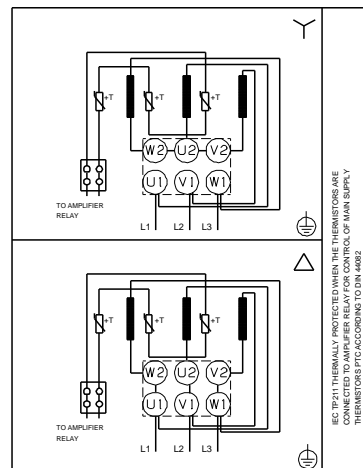
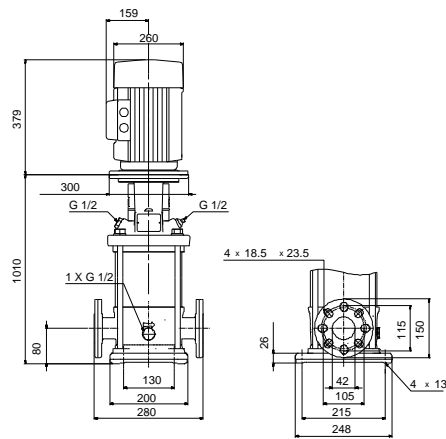
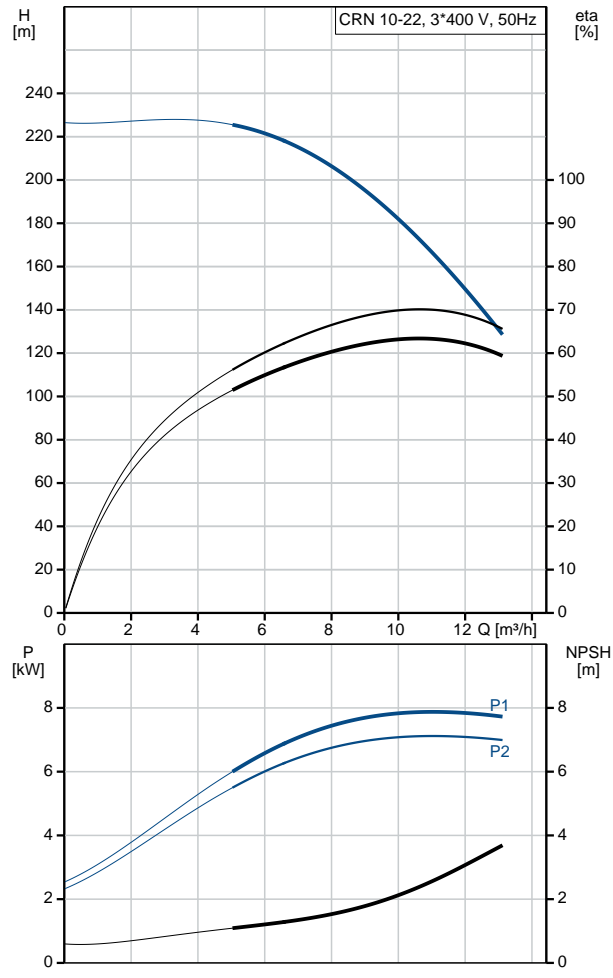
Base: Stainless steel  
EN 1.4408  
AISI 316  
Impeller: Stainless steel  
EN 1.4401  
AISI 316  
Bearing: SIC

Position	Qty.	Description
		<p><b>Installation:</b>  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 40  1 1/2 inch  Size of outlet connection: DN 40  1 1/2 inch  Pressure rating for pipe connection: PN 25  Flange rating inlet: 300 lb  Flange size for motor: FF265</p> <p><b>Electrical data:</b>  Motor standard: IEC  Motor type: 132SB  IE Efficiency class: IE3  Rated power - P2: 7.5 kW  Power (P2) required by pump: 7.5 kW  Mains frequency: 50 Hz  Rated voltage: 3 x 380-415D/660-690Y V  Rated current: 14,4-14,0/8,30-8,10 A  Starting current: 780-910 %  Cos phi - power factor: 0.88-0.82  Rated speed: 2910-2920 rpm  Efficiency: IE3 90,1%  Motor efficiency at full load: 90.1-90.4 %  Motor efficiency at 3/4 load: 90.8 %  Motor efficiency at 1/2 load: 90.8 %  Number of poles: 2  Enclosure class (IEC 34-5): 55 Dust/Jetting  Insulation class (IEC 85): F</p> <p><b>Others:</b>  Minimum efficiency index, MEI : 0.70  Net weight: 112 kg  Gross weight: 136 kg  Shipping volume: 0.365 m³</p>

# On request CRN 10-22 A-FGJ-A-E-HQQE 50 Hz



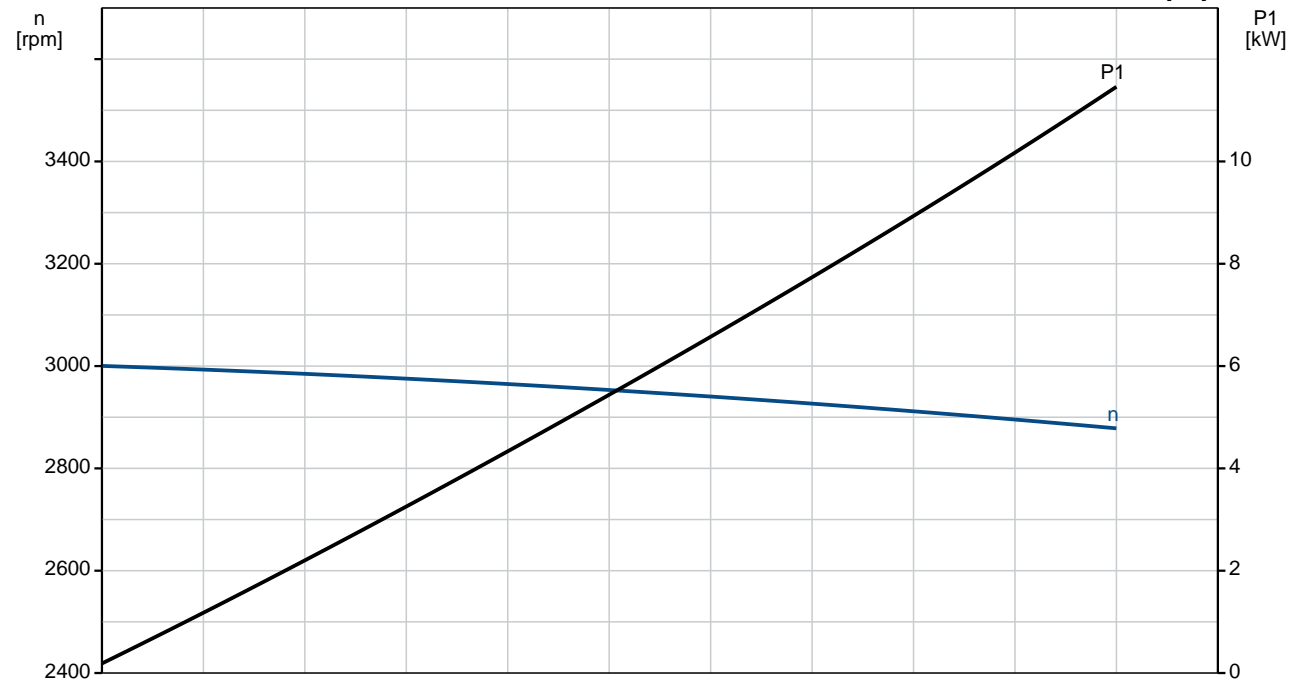
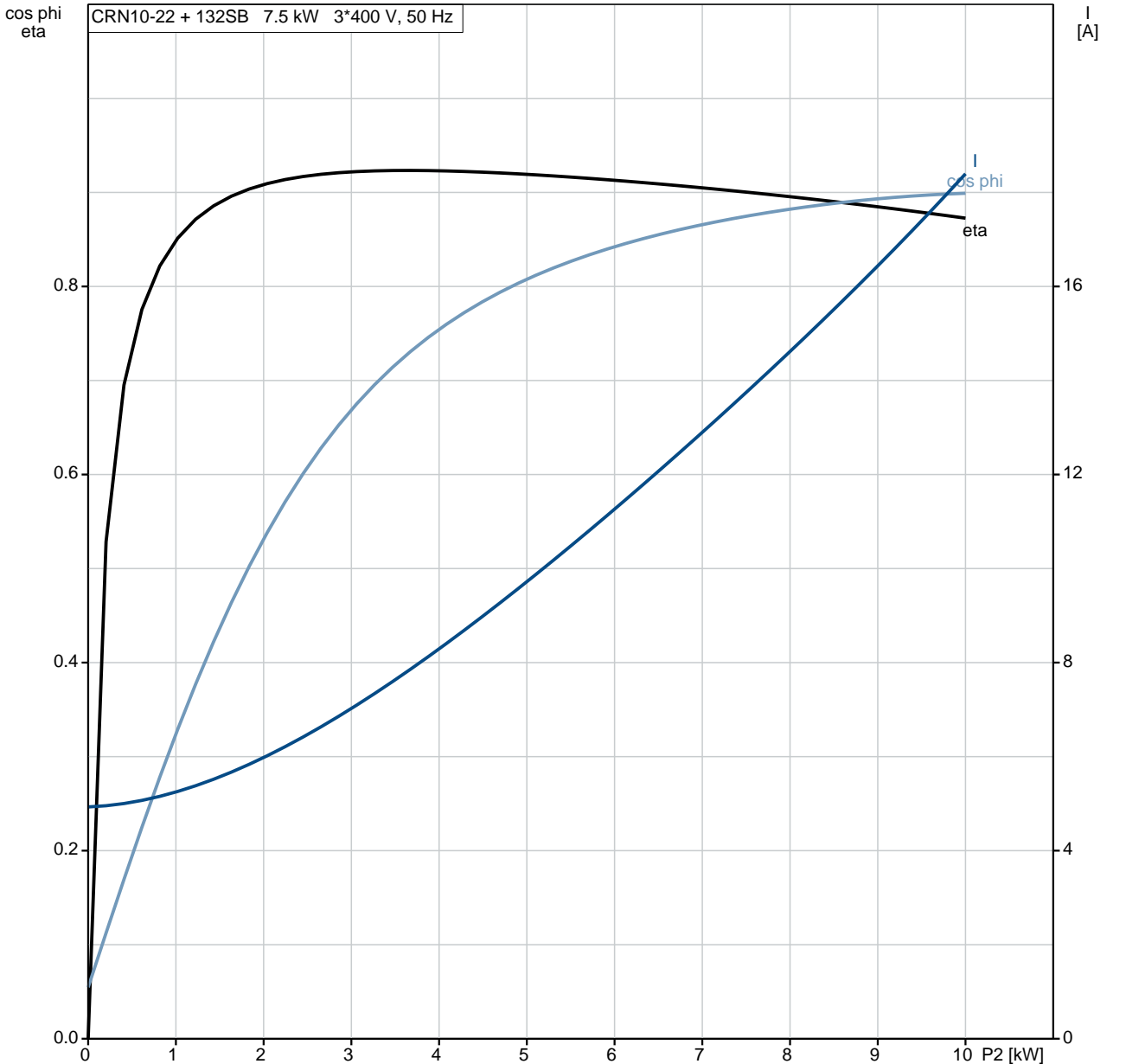
Description	Value
<b>General information:</b>	
Product name:	CRN 10-22 A-FGJ-A-E-HQQE
Product No:	On request
EAN number:	On request
<b>Technical:</b>	
Rated flow:	10 m <sup>3</sup> /h
Rated head:	180.6 m
Stages:	22
Impellers:	22
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
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
<b>Materials:</b>	
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
<b>Installation:</b>	
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 40 1 1/2 inch
Size of outlet connection:	DN 40 1 1/2 inch
Pressure rating for pipe connection:	PN 25
Flange rating inlet:	300 lb
Flange size for motor:	FF265
Connect code:	FGJ
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m <sup>3</sup>
<b>Electrical data:</b>	
Motor standard:	IEC
Motor type:	132SB
IE Efficiency class:	IE3
Rated power - P2:	7.5 kW
Power (P2) required by pump:	7.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D/660-690Y V
Rated current:	14,4-14,0/8,30-8,10 A
Starting current:	780-910 %
Cos phi - power factor:	0.88-0.82
Rated speed:	2910-2920 rpm
Efficiency:	IE3 90,1%
Motor efficiency at full load:	90.1-90.4 %
Motor efficiency at 3/4 load:	90.8 %



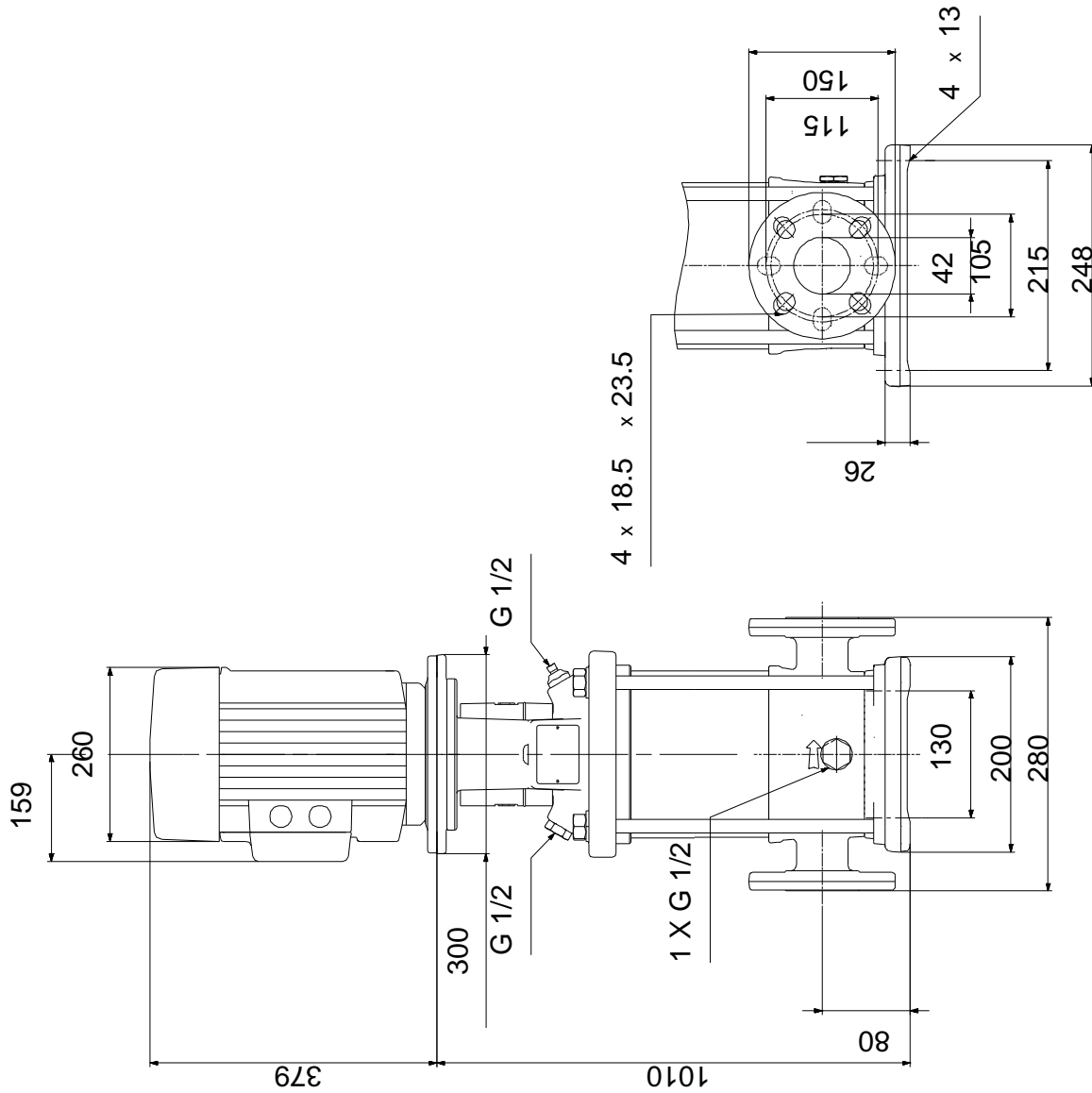
Description	Value
Motor efficiency at 1/2 load:	90.8 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protec:	PTC
Motor No:	85U17522
<b>Controls:</b>	
Frequency converter:	NONE
<b>Others:</b>	
Minimum efficiency index, MEI :	0.70
Net weight:	112 kg
Gross weight:	136 kg
Shipping volume:	0.365 m <sup>3</sup>

# On request CRN 10-22 A-FGJ-A-E-HQQE 50 Hz

CRN10-22 + 132SB 7.5 kW 3\*400 V, 50 Hz

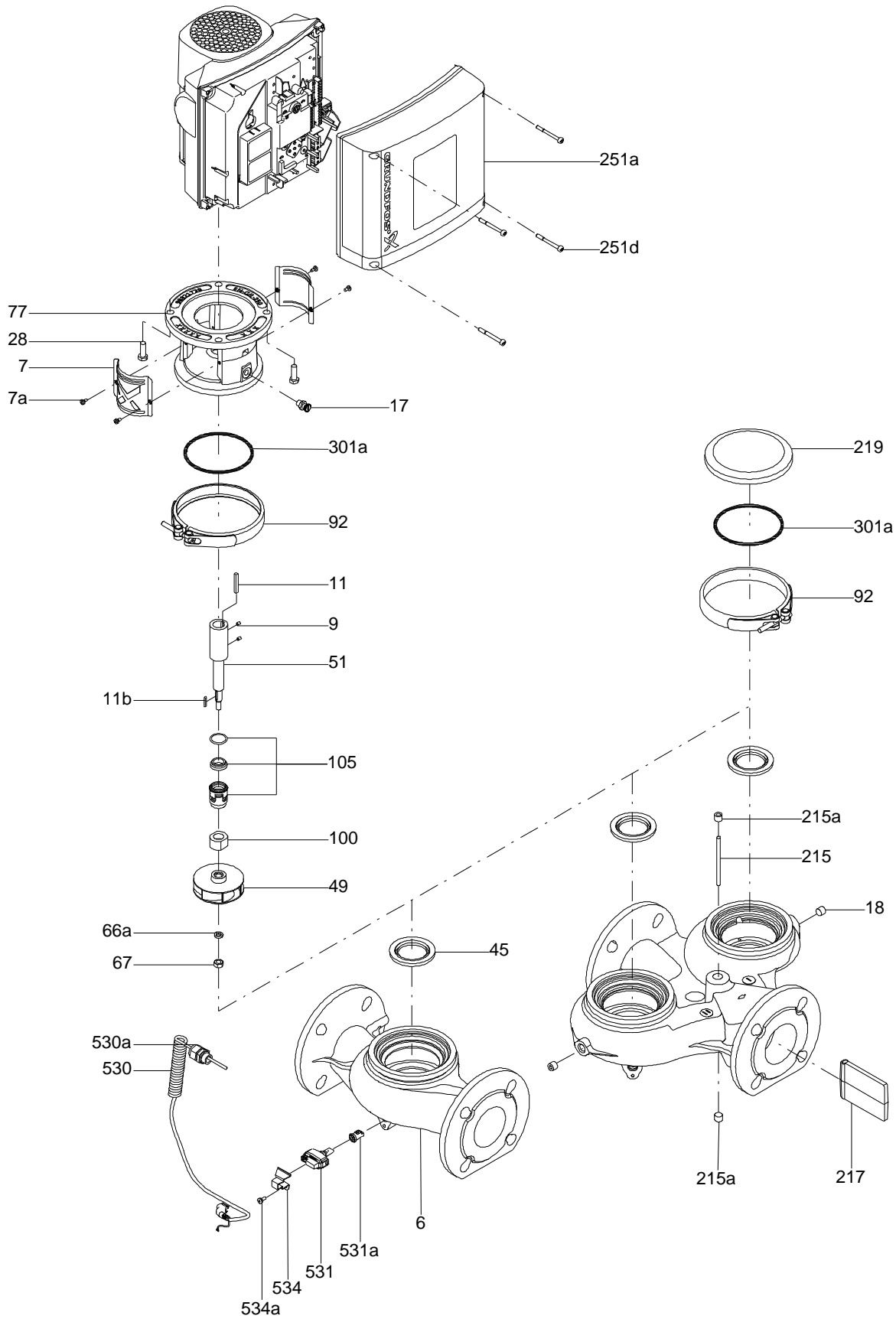


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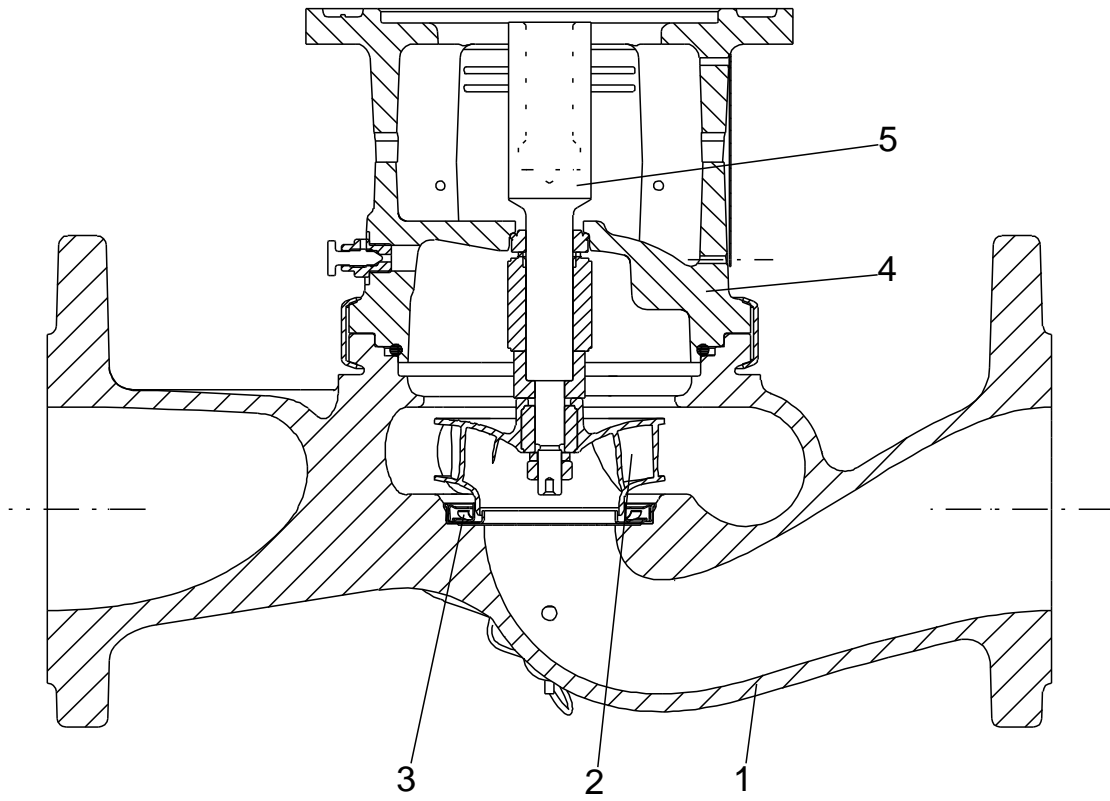


Note! All units are in [mm] unless others are stated.  
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view

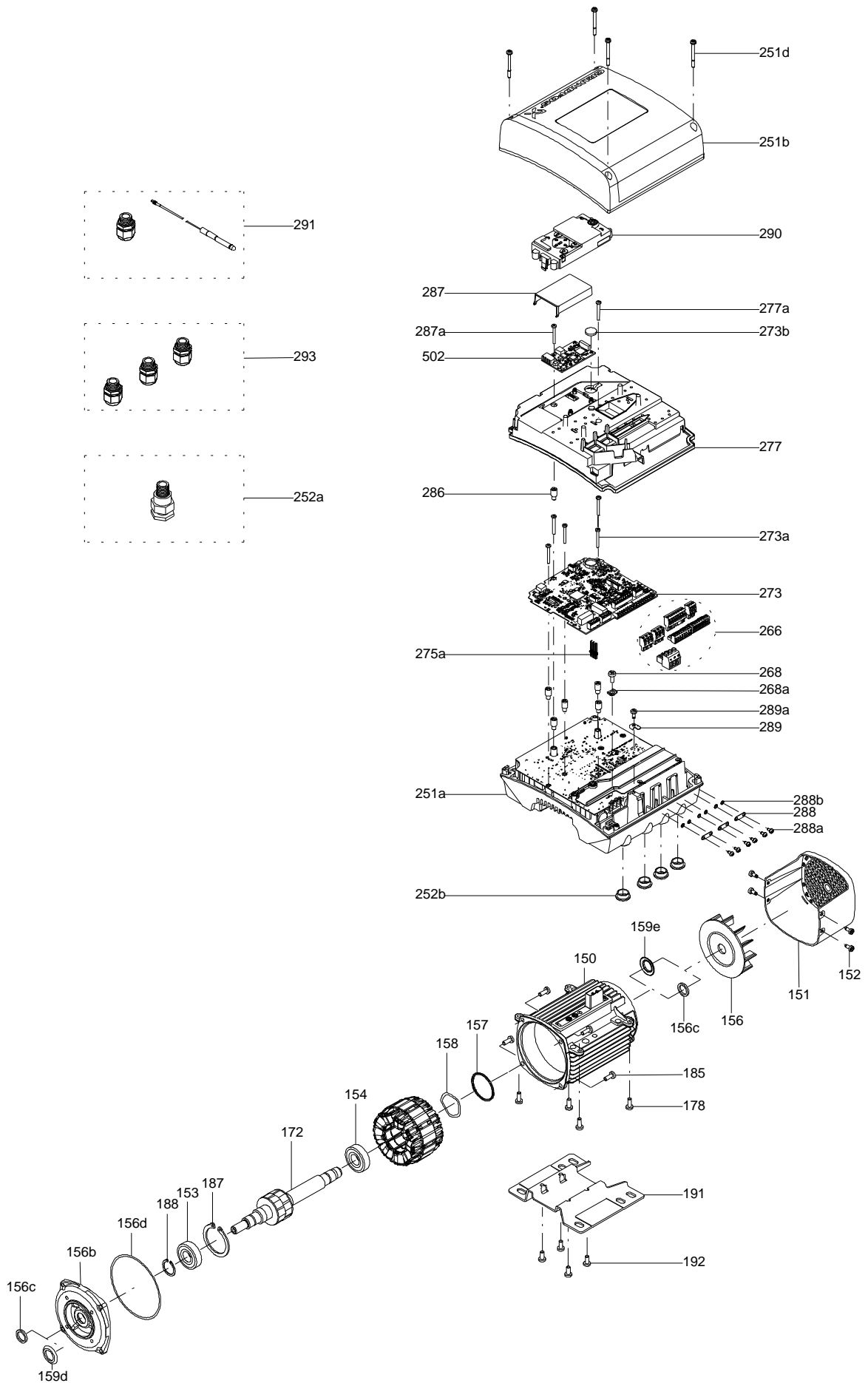


Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view ( TM057026 for MGE model H/I )



**Parts list CRN 10-22, Product No. On request**  
**Valid from 1.1.2011 (1152)**

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
+	Motor				1	pcs
-	Base cpl.				1	pcs
6	Base				1	
25	Drain plug				1	
56	Base plate				1	
201	Flange				2	
203	Helical compression spring				2	
-	Rubber module				1	pcs
20	Spring				4	
37	O-ring				2	
38	O-ring		Diameter: 16,3 Material type: EPDM Thickness: 2,4		1	
38a	O-ring		Diameter: 5,3 Material type: EPDM Thickness: 2,4		1	
100	O-ring		Diameter: 16,3 Material type: EPDM Thickness: 2,4		2	
- 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	
23a	Plug				1	
28	Hex head screw		Length (mm): 30 Thread: M12		4	
37a	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 Length (mm): 25 Thread: M10		4	
10	Shaft pin		Diameter: 5 Length (mm): 26		1	
10a	Coupling half				1	
26	Staybolt		Length (mm): 840		4	pcs
36	Nut		Thread: M16		4	pcs
55	Outer sleeve				1	pcs
66a	Washer		Designation: DIN 125 A2 Internal diameter: 17 Outer diameter: 30 Thickness: 3		4	pcs
- 80	Chamber stack				1	pcs
- 3	Top intermediate chamber				1	
	Cover plate				1	
	Guide vane				10	
3	Top intermediate chamber				1	
- 4	Intermediate chamber cpl.				18	
3a	Chamber w/o guide vanes				1	
45	Neck ring cpl.				1	
65	Retainer				1	
- 4a	Intermediate chamber cpl.				3	
	Guide vane				10	
	Bearing plate				1	

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
	Bearing bush				1	
	Guide cup				1	
	Sand Lifter				1	
3a	Chamber w/o guide vanes				1	
45	Neck ring cpl.				1	
65	Retainer				1	
26.b	Hex head screw				2	
26.c	Washer		Designation: DIN 125A		2	
			Thickness: 1,6			
26a	Strap cpl.		Length (mm): 674MM		2	
36	Lock nut		Thread: M8		1	
- 44a	Inlet part cpl.				1	
	Inlet part				1	
45	Neck ring cpl.				1	
65	Retainer				1	
44b	Inlet part				1	
47a	Bearing ring				3	
49	Impeller cpl.				22	
- 51	Shaft, spline, cpl.				1	
	Bar				1	
62	Stop ring				1	
64	Spacing bush		Length (mm): 9.00		3	
64.d	Spacer				3	
64c	Spacing pipe		Length (mm): 12.7		1	
66	Wedge lock washer				1	
69	Spacing pipe		Length (mm): 29.05		18	
69	Spacing bush		Length (mm): 18.00		1	
105	Shaft seal		Material type: HQQE		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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