CRN45-2 A-F-G-V-HQQV 3x400/690 50 HZ

Grundfos pump 96123144



Thank you for your interest in our products. Please contact us for more information, or visit our website

https://www.lenntech.com/grundfos/CRN45/96123144/CRN-45-2-A-F-G-V-HQQV.html

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Position	Qty.	Description
	1	**CRN 45-2 A-F-A-V-HQQV**



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 DIN flanges.

The pump is fitted with a 3-phase, fan-cooled asynchronous motor.

Further product details

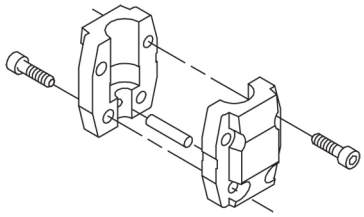
Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface. An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

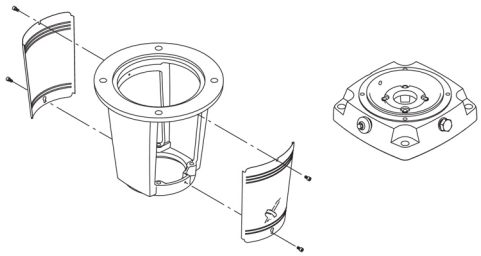
The colour code for the finished product is NCS 9000/RAL 9005.

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 motor stool connects the pump head and motor. 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.

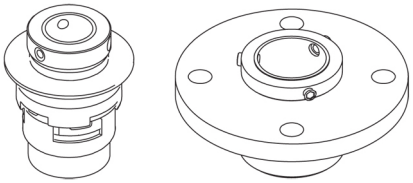
Primary seal:

- 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: FKM (fluorocarbon rubber)

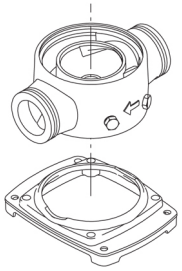
FKM has excellent resistance to oils and chemicals. Above 90 °C, FKM should only be used in media without water.



The shaft seal is retained in the pump head by a cover and screws. It can be replaced without removing the motor.

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. The base and base plate are kept in position by the tension of the staybolts which hold the pump together. Both the inlet and the outlet side of the base have two pressure gauge tappings. The pump is secured to the foundation by four bolts through the base plate. The flanges are fastened to the base by means of locking rings.



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

Technical:

Rated flow:	45 m³/h
Rated head:	38.8 m
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQV
Approvals on nameplate:	CE, EAC
Curve tolerance:	ISO9906:2012 3B

Position	Qty.	Description

Materials:

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

Installation:

Maximum ambient temperature:	60 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 90 °C
	16 bar / -20 °C
Type of connection:	DIN
Size of inlet connection:	DN 80
Size of outlet connection:	DN 80
Pressure rating for pipe connection:	PN 40
Flange size for motor:	FF265

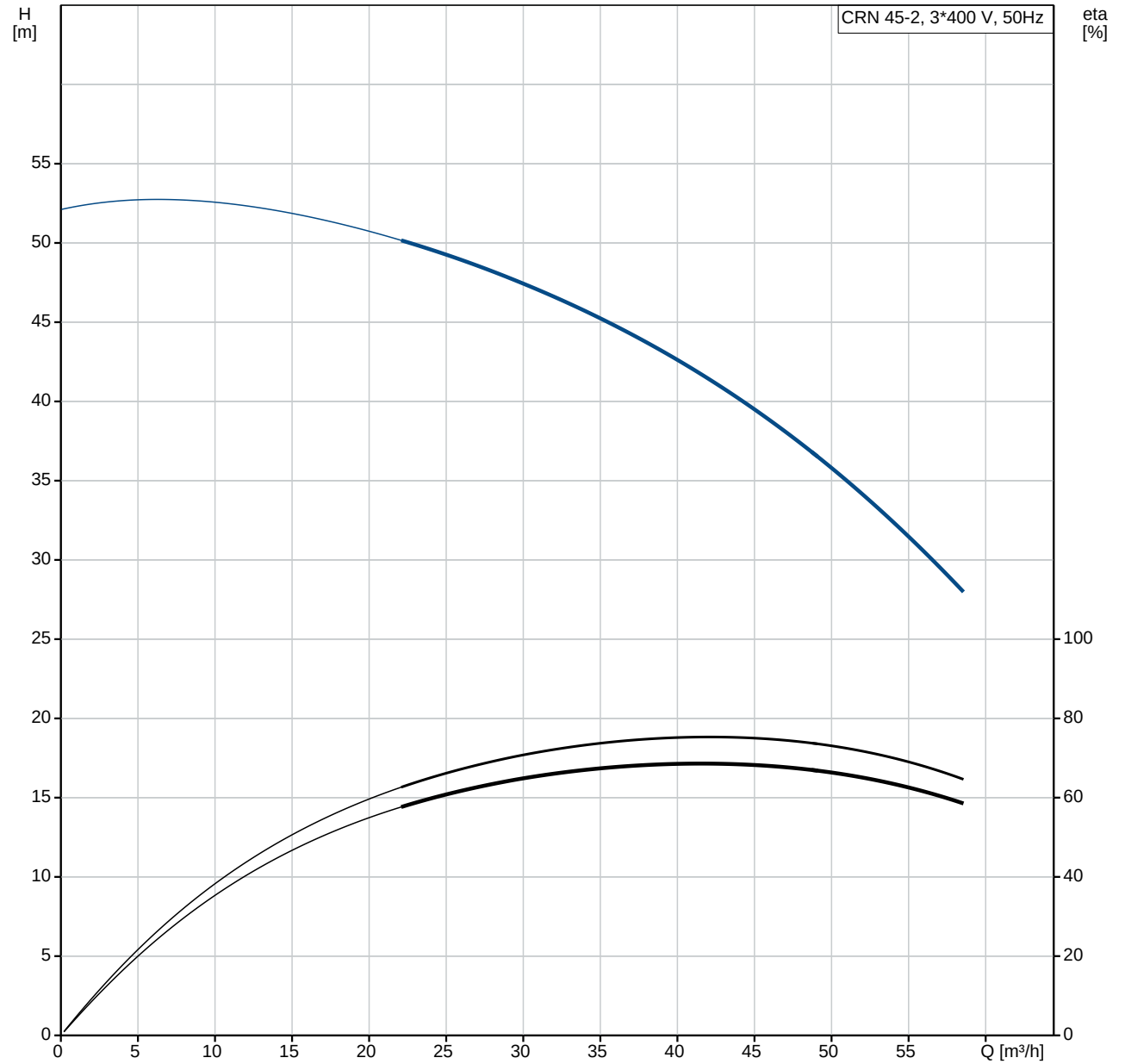
Electrical data:

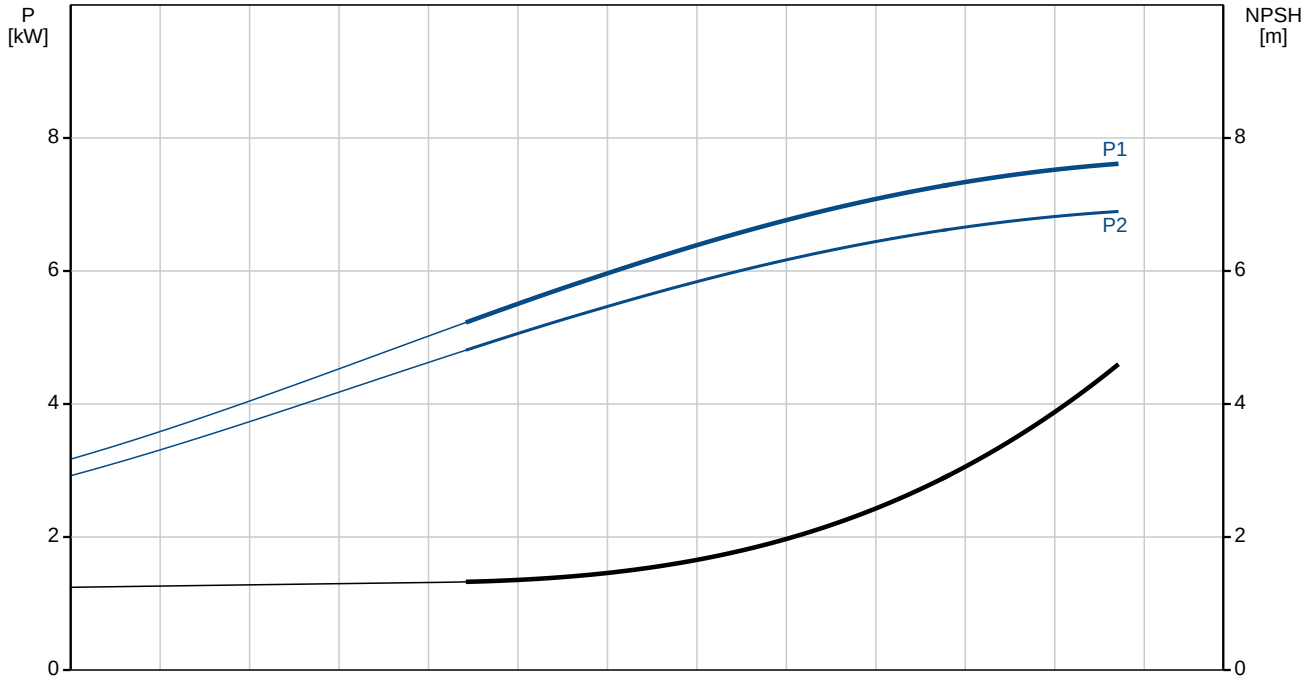
Motor standard:	IEC
Motor type:	132SB
IE Efficiency class:	IE3
Rated power - P2:	7.5 kW
Power (P2) required by pump:	7.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D/660-690Y V
Rated current:	14,4-14,0/8,30-8,10 A
Starting current:	780-910 %
Cos phi - power factor:	0.88-0.82
Rated speed:	2910-2920 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

Others:

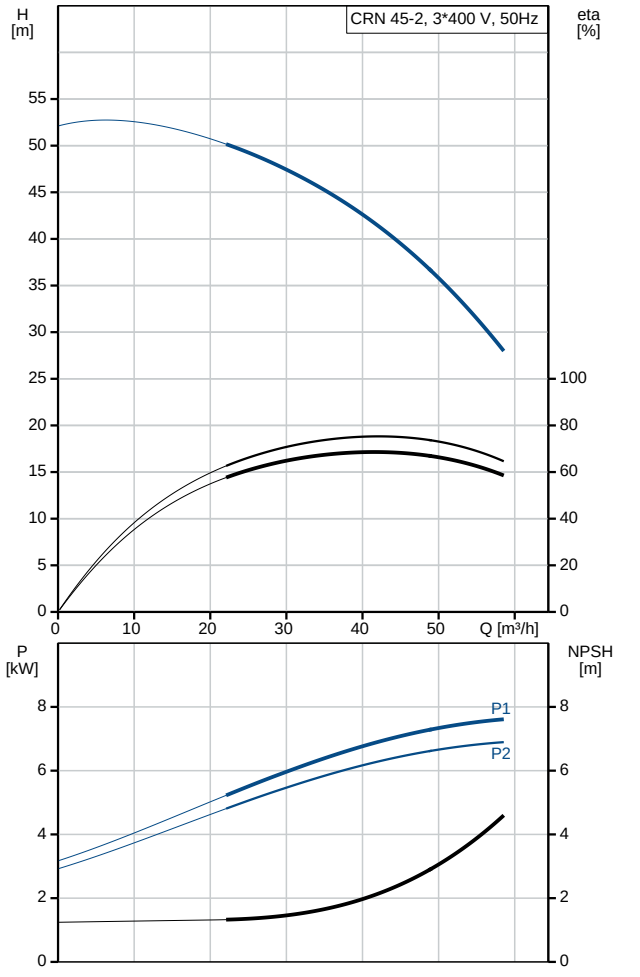
Minimum efficiency index, MEI ≥:	0.7
Net weight:	114 kg
Gross weight:	137 kg
Shipping volume:	0.309 m³

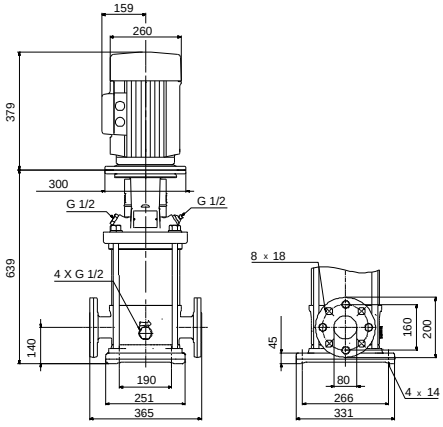
On request CRN 45-2 A-F-A-V-HQQV 50 Hz

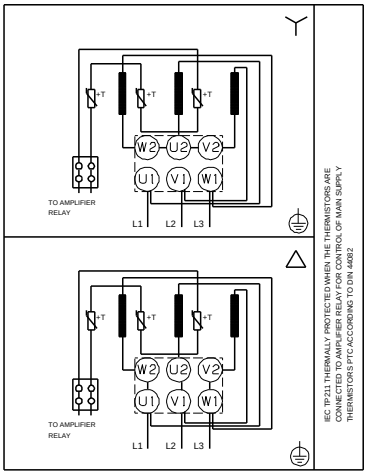




Description	Value
General information:	
Product name:	CRN 45-2 A-F-A-V-HQQV
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	45 m³/h
Rated head:	38.8 m
Stages:	2
Impellers:	2
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQV
Approvals on nameplate:	CE, EAC
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	B
Materials:	
Base:	Stainless steel
	EN 1.4408
	AISI 316
Impeller:	Stainless steel
	EN 1.4401
	AISI 316
Material code:	A
Code for rubber:	V
Bearing:	SIC
Support bearing:	Graflon
Installation:	
Maximum ambient temperature:	60 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 90 °C
	16 bar / -20 °C
Type of connection:	DIN
Size of inlet connection:	DN 80
Size of outlet connection:	DN 80
Pressure rating for pipe connection:	PN 40
Flange size for motor:	FF265
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 90 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
Electrical data:	
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

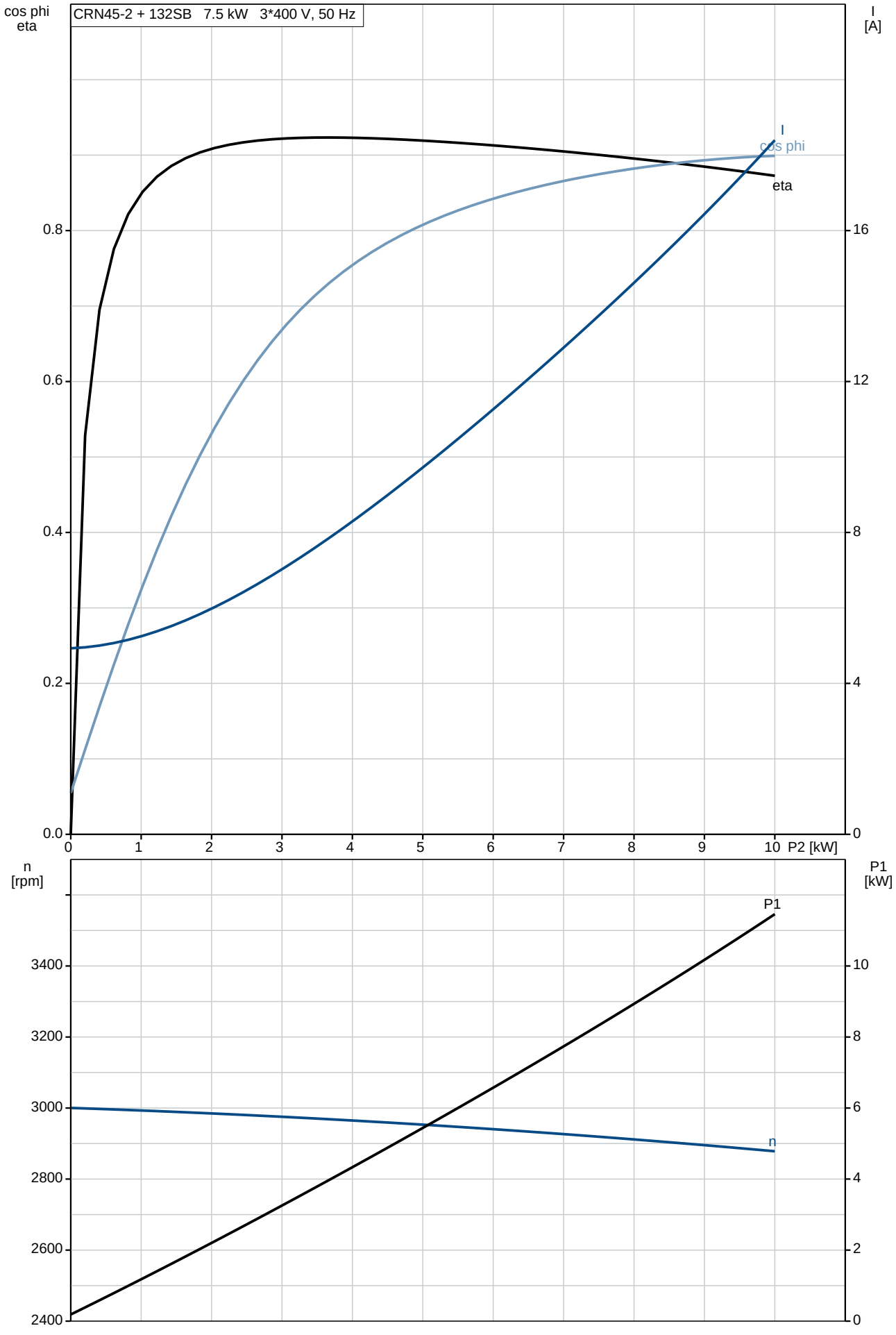




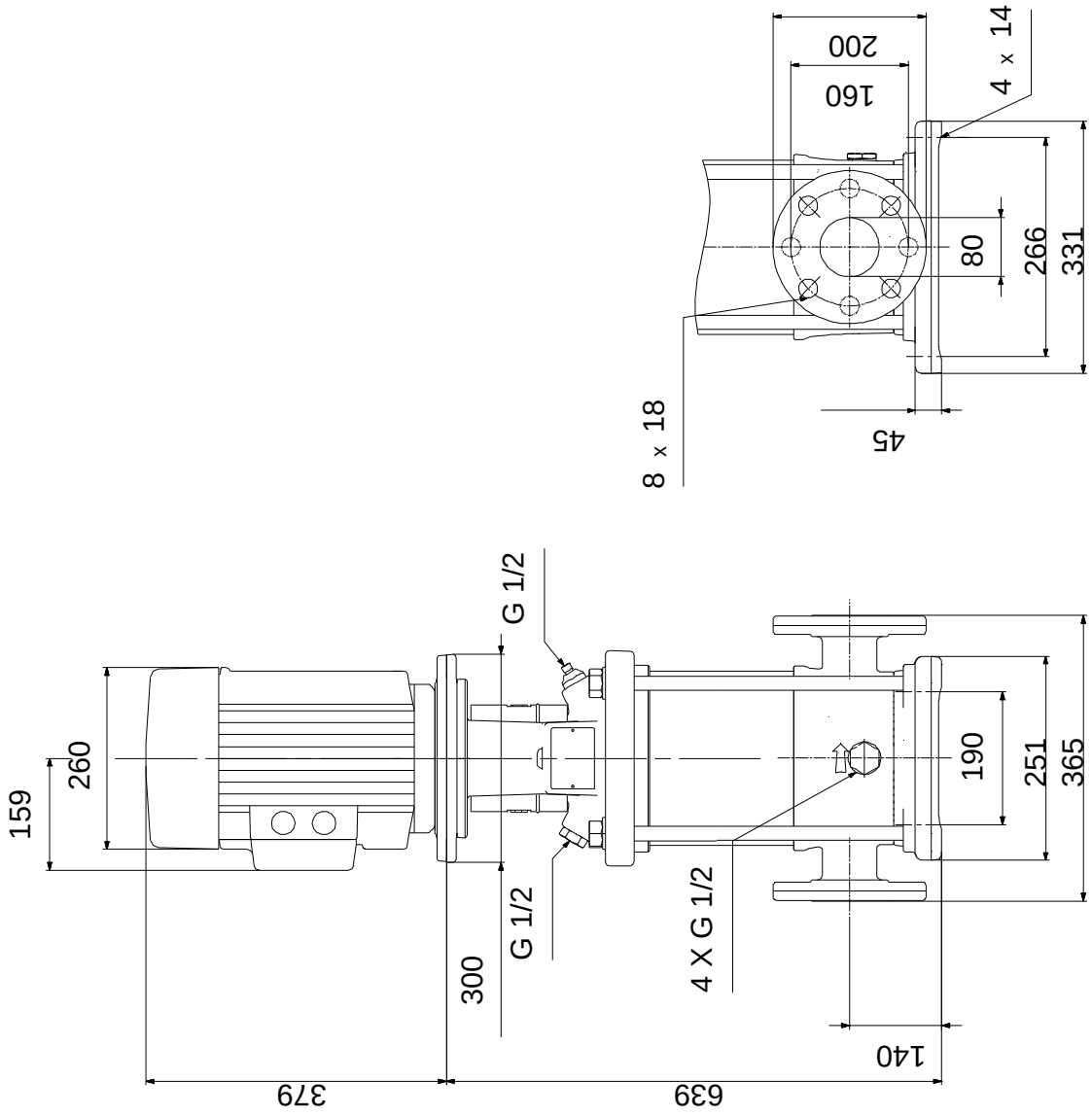


Description	Value
Insulation class (IEC 85):	F
Motor protec:	PTC
Motor No:	85U17522
Controls:	
Frequency converter:	NONE
Others:	
Minimum efficiency index, MEI ≥:	0.7
Net weight:	114 kg
Gross weight:	137 kg
Shipping volume:	0.309 m^3

On request CRN 45-2 A-F-A-V-HQQV 50 Hz

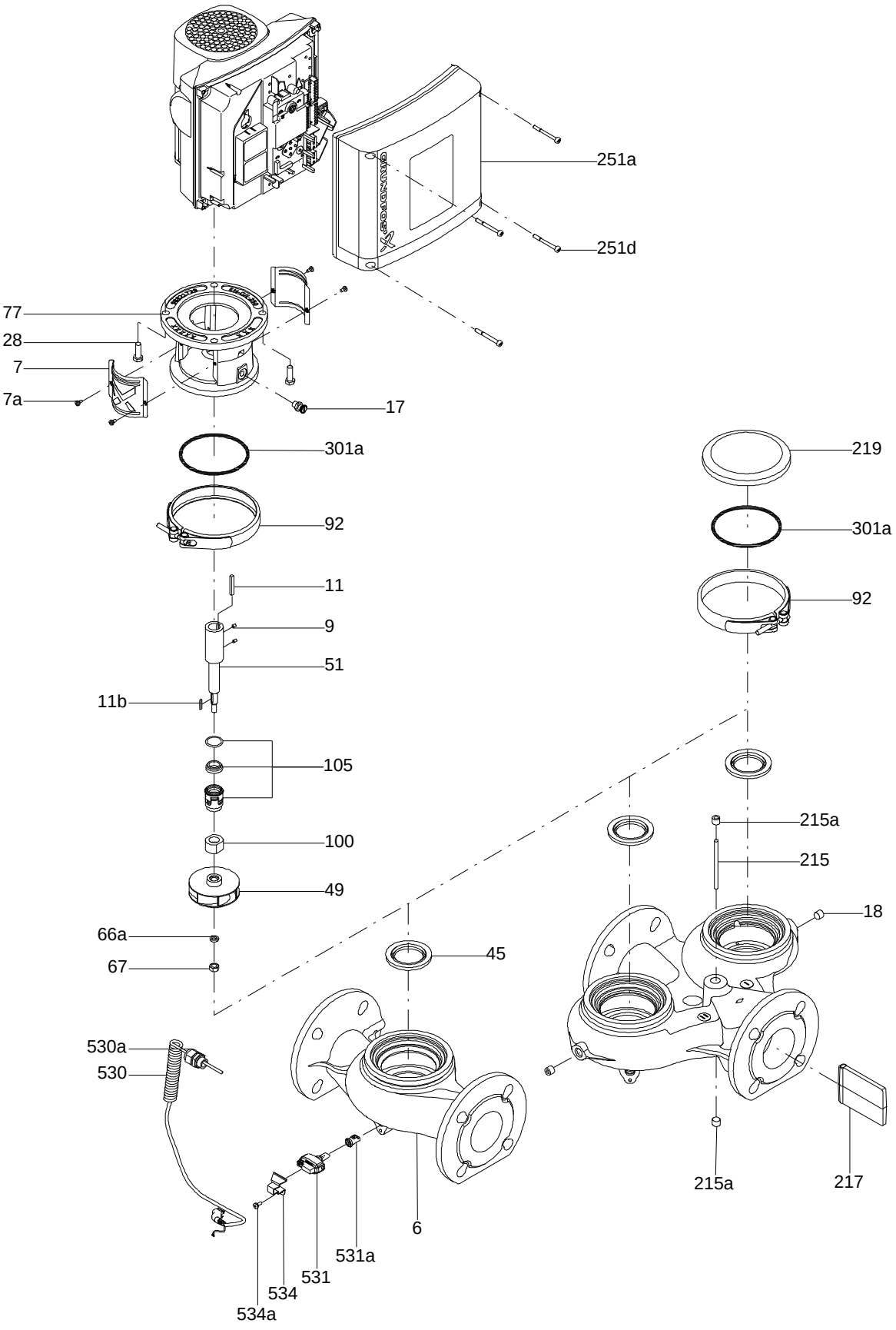


On request CRN 45-2 A-F-A-V-HQQV 50 Hz

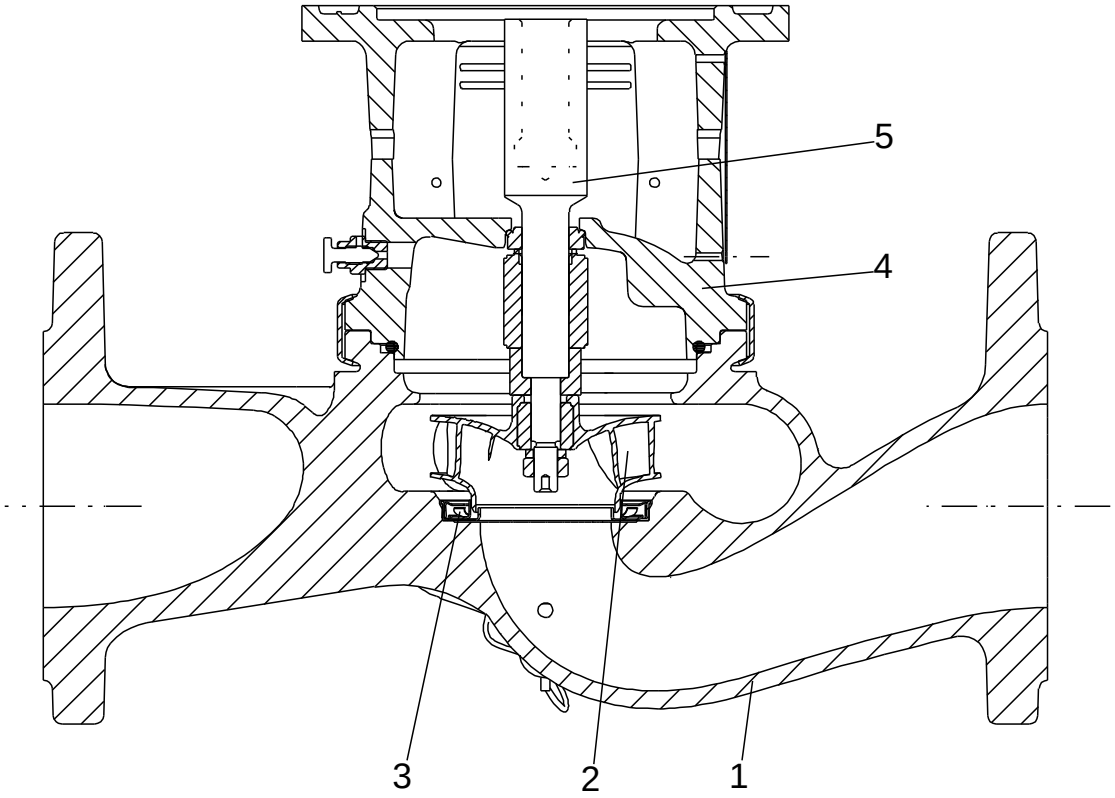


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view

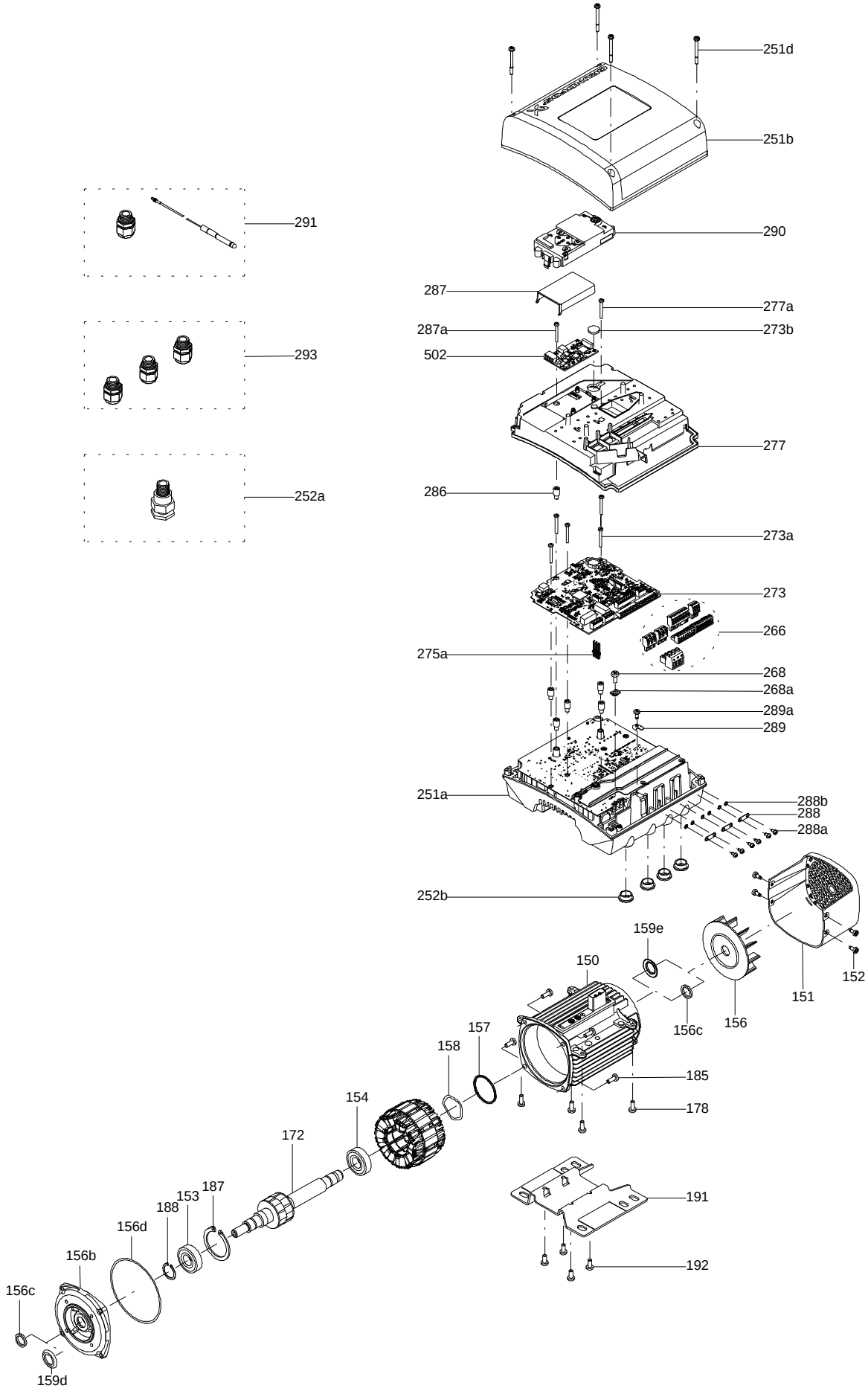


Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list CRN 45-2, Product No. On request
Valid from 25.3.2011 (1112)

	Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
+		Motor				1	pcs
-	1	Basic unit				1	pcs
-	2a	Pump head cpl.				1	
	2	Pump head				1	
	9	Hex socket head cap screw		Designation: DIN 912		4	
				Length (mm): 25			
				Thread: M10			
-	18	Air vent screw				1	
		Plug					
		Spindle					
	23	Plug				1	
	37	O-ring		Diameter: 216		1	
				Material type: FKM			
				Thickness: 4			
	58	Cover				1	
	60	Spring				4	
	100	O-ring		Diameter: 16,3		2	
				Material type: FKM			
				Thickness: 2,4			
-	6b	Base cpl.		Rubber type: FKM		1	
		Bearing ring, stationary				1	
	6	Base				1	
	25	Plug				4	
	31	Hex socket head cap screw				1	
	32	Washer		Designation: DIN 125A		1	
				Internal diameter: 6,4			
				Outer diameter: 12,0			
				Thickness: 1,6			
	37	O-ring		Diameter: 216		1	
				Material type: FKM			
				Thickness: 4			
	38	O-ring		Diameter: 16,3		4	
				Material type: FKM			
				Thickness: 2,4			
	56	Base plate				1	
	26	Staybolt		Length (mm): 390		4	
				Thread: M16			
	36	Nut		Thread: M16		4	
	55	Outer sleeve		Outer diameter: 216		1	
				Length (mm): 183,5			
	66a	Washer		Designation: DIN 125 A2		4	
				Internal diameter: 17			
				Outer diameter: 30			
				Thickness: 3			
-	1a	Motor stool cpl.				1	pcs
	1a	Motor stool				1	
	7	Coupling guard				2	
	7a	Socket button head screw				4	
-	8	Coupling cpl.		Dimension: 22/38		1	
	8	Coupling		Type: SPACER		1	
	9	Hex socket head cap screw		Designation: DIN 912		4	
				Length (mm): 25			
				Thread: M10			
	28	Hex socket head cap screw		Designation: DIN 912		4	
				Length (mm): 50			
				Thread: M10			
	28a	Hex head screw		Length (mm): 45 MM		4	
				Thread: M12			
	36a	Washer		Designation: DIN 125 A		8	

	Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
				Internal diameter: 13			
				Outer diameter: 24			
				Thickness: 2,5			
	66a	Nut		Thread: M12		4	
-	76	Nameplate set				1	pcs
	76	Plate				1	
	76a	Rivet				2	
-	105	Shaft seal		Material type: HQQV		1	pcs
		Adjusting fork				1	
	109	O-ring		Diameter: 44,45		1	
				Material type: FKM			
				Thickness: 3,53			
	110	O-ring		Diameter: 21,5		1	
				Thickness: 4,25			
-	200	Flange cpl.				2	pcs
-	201	Flange				1	
	201	Flange				1	
	203	Lock ring				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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