TPE2 50-180-N-A-F-I-BUBE

Grundfos pump 98416590



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https://www.lenntech.com/grundfos/TPE3NI/98416590/TPE2-50-180-N-A-F-I-BUBE.html

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Position	Qty.	Description
	1	**TPE2 50-180-N A-F-I-BUBE**



Product No.: On request

Single-stage, close-coupled, volute pump with in-line suction and discharge ports of identical diameter. The pump is of the top-pull-out design, i.e. the power head (motor, pump head and impeller) can be removed for maintenance or service while the pump housing remains in the pipework.

The shaft seal is according to EN 12756. Pipework connection is via PN 6/10 DIN flanges (EN 1092-2 and ISO 7005-2).

The pump is fitted with a fan-cooled, permanent-magnet synchronous motor. The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

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.

Further product details

The stainless-steel pump housing makes the pump suitable for circulation of hot water.

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:

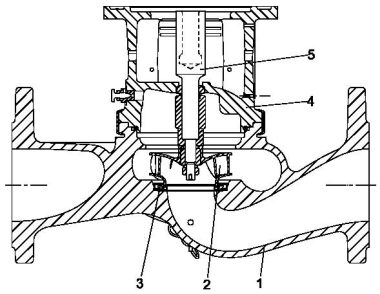
- "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
- "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)
- "Alarm": Motor has stopped (flashing red indicator lights).

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".

The product's minimum efficiency index (MEI) is greater or equal to 0.70. This is by the Commission Regulation (EU) considered as an indicative benchmark for best-performing water pump available on the market as from 1 January 2013.

Pump

Pump housing and pump head are electrocoated to improve the corrosion resistance.
Electrocoating includes:
1) Alkaline-based cleaning.
2) Pretreatment with zinc phosphate coating.
3) Cathodic electrocoating (epoxy).
4) Curing of paint film at 200-250 °C.



1: Pump housing
2: Impeller
3: Neck ring
4: Pump head/motor stool

Position	Qty.	Description

5: Stub shaft

TWINPUMP=D}The twin-head pump is designed with two parallel power-heads. A flap valve in the common discharge port is opened by the flow of the pumped liquid and prevents backflow of liquid into the idle pump head.

The pump housing is provided with a replaceable stainles steel/PTFE neck ring to reduce the amount of liquid running from the discharge side of the impeller to the suction side. The impeller is secured to the shaft with a nut.

The pump is fitted with an unbalanced rubber bellows seal with torque transmission across the spring and around the bellows. Due to the bellows, the seal does not wear the shaft, and the axial movement is not prevented by deposits on the shaft.

Primary seal:

- Rotating seal ring material: tungsten carbide (WC)
- Stationary seat material: carbon graphite, resin-impregnated

This is a widely used material pairing. If the pumped liquid contains particles, wear on the seal faces must be expected. Due to the favourable lubricating properties of carbon graphite, the seal is suitable for use even under poor lubricating conditions, such as hot water. However, under such conditions, wear on the carbon graphite face reduces seal life.

Secondary seal material: EPDM (ethylene-propylene rubber)
EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.

The motor stool forms connection between the pump housing and the motor, and is equipped with a manual air vent screw for venting of the pump housing and the shaft seal chamber. The sealing between motor stool and pump housing is an O-ring.

The central part of the motor stool is provided with guards for protection against the shaft and coupling. The pump shaft is fastened directly on the motor shaft with key and set screws.

Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. 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 holds terminals for these connections:

- one dedicated digital input
- two 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 configurable digital input or open-collector output
- 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

Liquid:

Pumped liquid:	Water
Liquid temperature range:	0 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³

Technical:

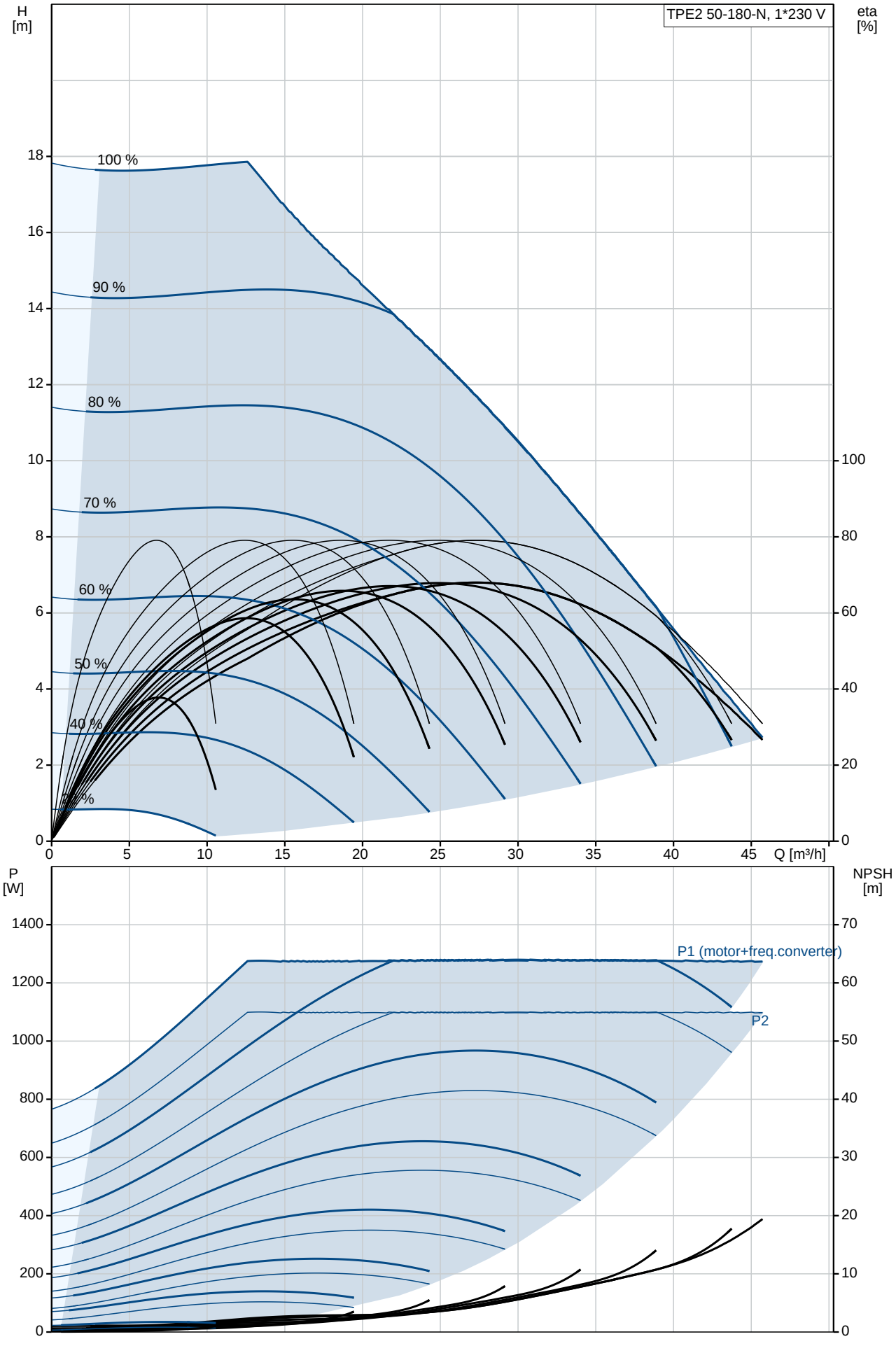
Rated flow:	26.1 m³/h
Rated head:	12.2 m
Actual impeller diameter:	74 mm
Primary shaft seal:	BUBE
Curve tolerance:	ISO9906:2012 3B

Materials:

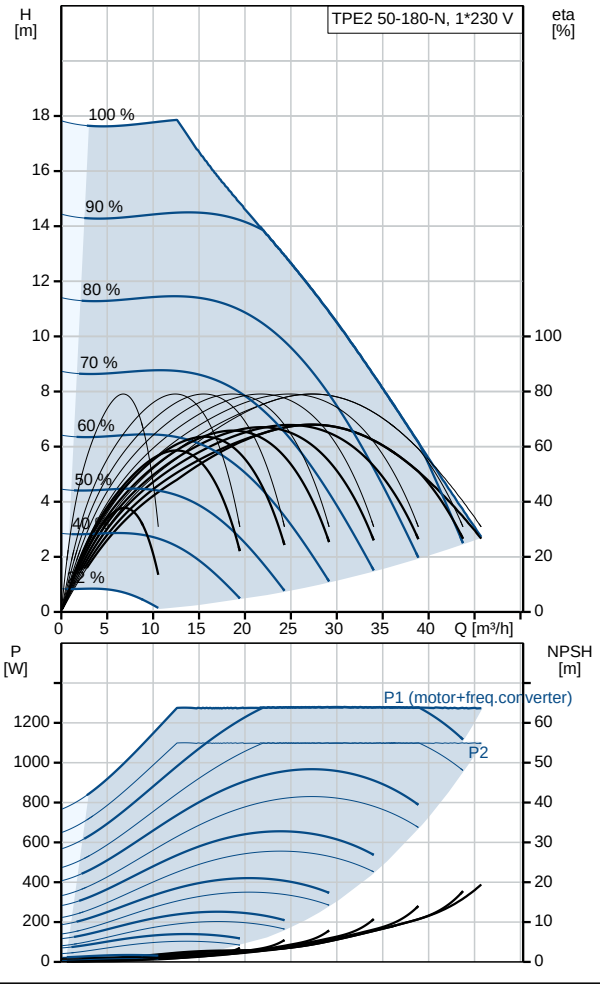
Pump housing:	Stainless steel DIN W.-Nr. 1.4308

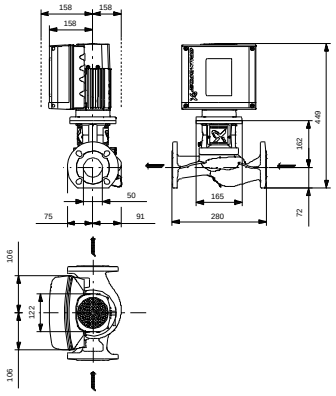
Position	Qty.	Description	
			ASTM CF8
		Impeller:	Composite PES/PP 30% GF
		Installation:	
		Range of ambient temperature:	-20 .. 50 °C
		Maximum operating pressure:	10 bar
		Flange standard:	DIN
		Pipe connection:	DN 50
		Pressure rating:	PN 6/10
		Flange size for motor:	56C
		Electrical data:	
		Motor type:	80A
		IE Efficiency class:	IE5
		Rated power - P2:	1.1 kW
		Mains frequency:	50 Hz
		Rated voltage:	1 x 200-240 V
		Rated current:	6.80-5.70 A
		Cos phi - power factor:	0.99
		Rated speed:	480-5900 rpm
		Efficiency:	85.7%
		Motor efficiency at full load:	85.7 %
		Enclosure class (IEC 34-5):	IP55
		Insulation class (IEC 85):	F
		Others:	
		Minimum efficiency index, MEI ≥:	0.7
		Net weight:	25.3 kg
		Gross weight:	32.5 kg
		Shipping volume:	0.1 m^3

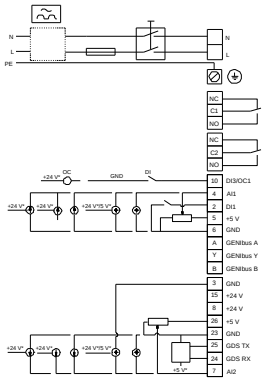
On request TPE2 50-180-N A-F-I-BUBE 50 Hz



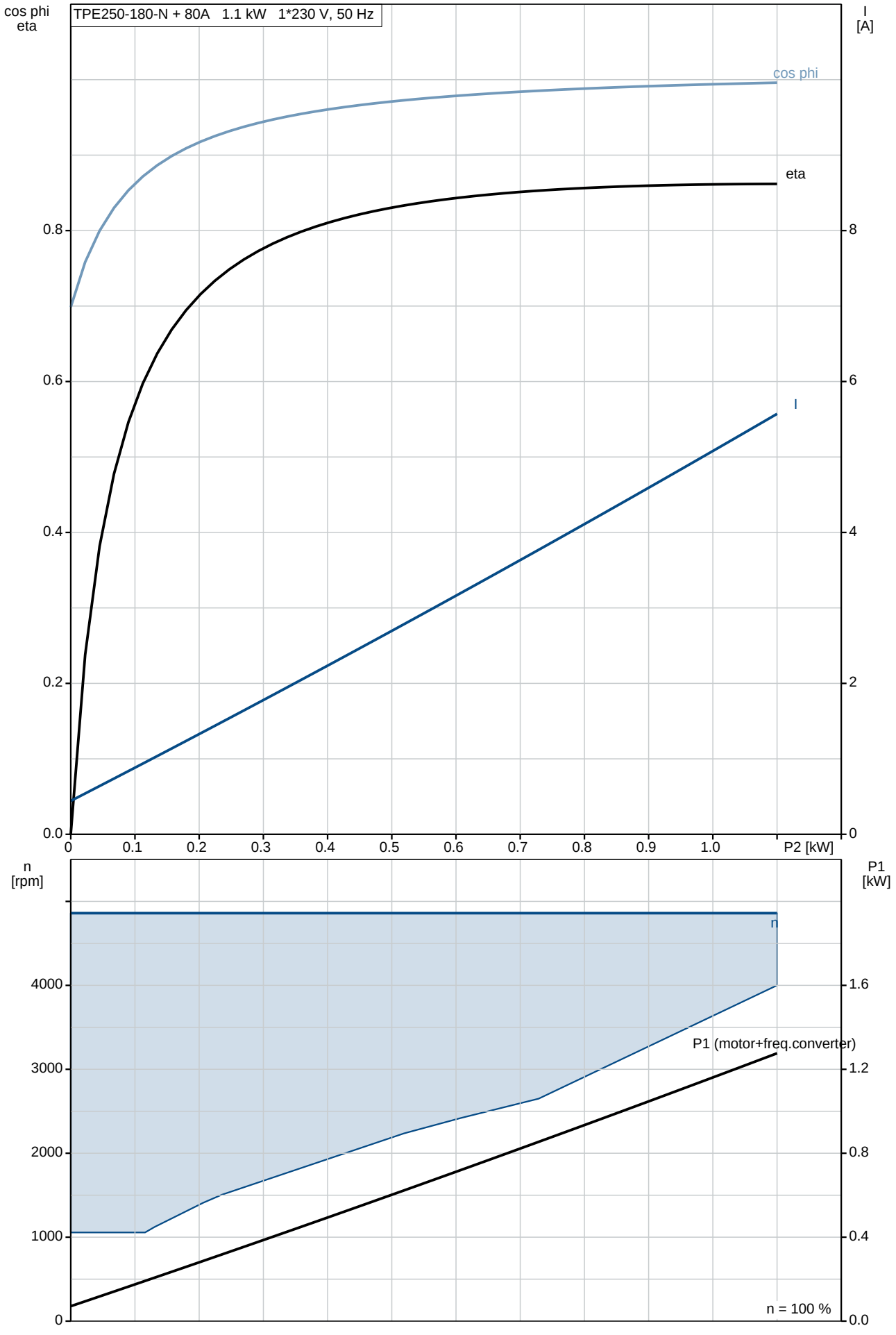
Description	Value
General information:	
Product name:	TPE2 50-180-N A-F-I-BUBE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	26.1 m³/h
Rated head:	12.2 m
Head max:	180 dm
Actual impeller diameter:	74 mm
Primary shaft seal:	BUBE
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Materials:	
Pump housing:	Stainless steel
	DIN W.-Nr. 1.4308
	ASTM CF8
Impeller:	Composite PES/PP 30% GF
Material code:	I
Installation:	
Range of ambient temperature:	-20 .. 50 °C
Maximum operating pressure:	10 bar
Flange standard:	DIN
Pipe connection:	DN 50
Pressure rating:	PN 6/10
Flange size for motor:	56C
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	0 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor type:	80A
IE Efficiency class:	IE5
Rated power - P2:	1.1 kW
Mains frequency:	50 Hz
Rated voltage:	1 x 200-240 V
Rated current:	6.80-5.70 A
Cos phi - power factor:	0.99
Rated speed:	480-5900 rpm
Efficiency:	85.7%
Motor efficiency at full load:	85.7 %
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protec:	YES
Motor No:	99137893
Controls:	
Control panel:	HMI200 - Standard
Function Module:	FM200 - Standard
Others:	
Minimum efficiency index, MEI ≥:	0.7
Net weight:	25.3 kg
Gross weight:	32.5 kg
Shipping volume:	0.1 m³
Config. file no:	98819177



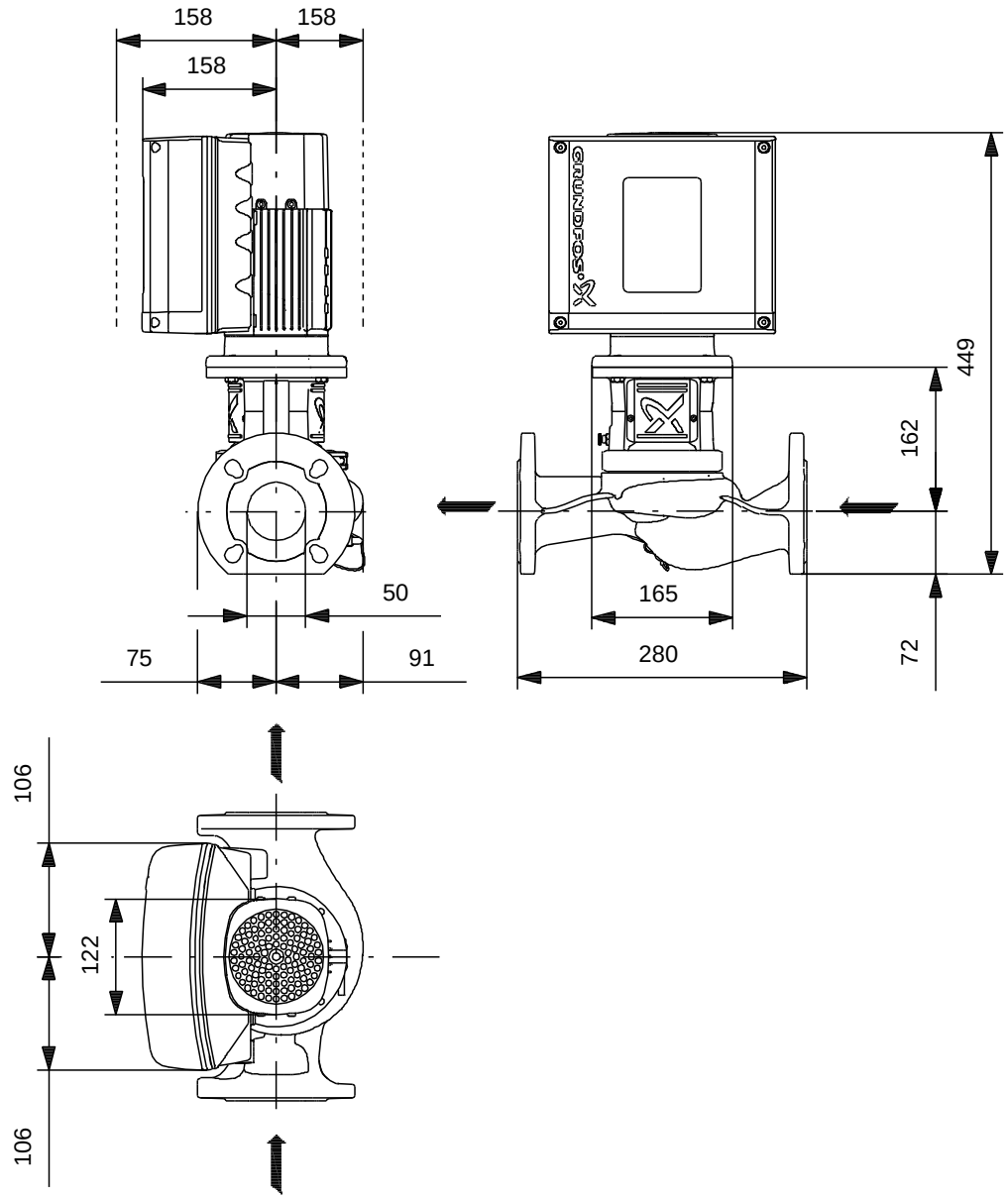




On request TPE2 50-180-N A-F-I-BUBE 50 Hz

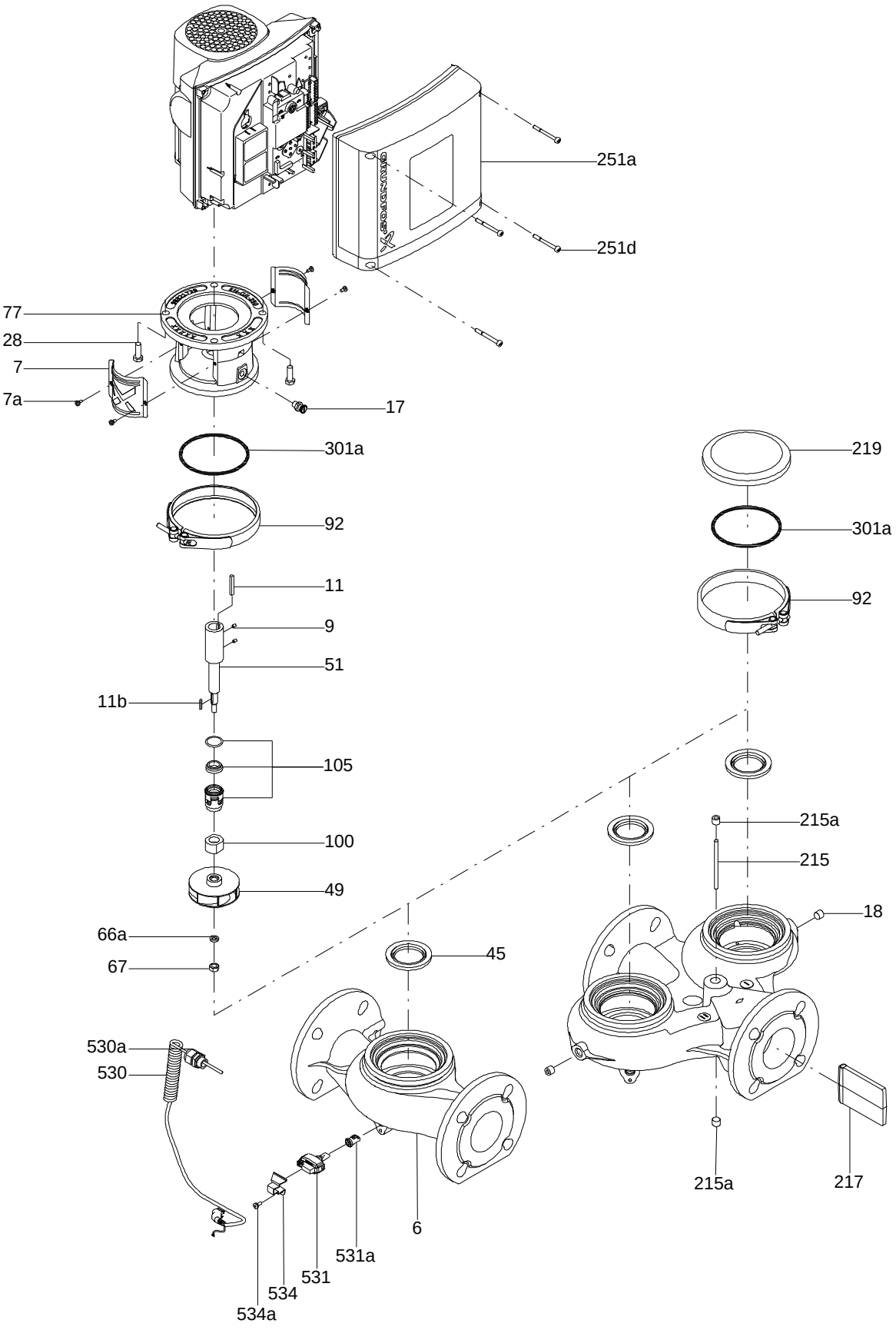


On request TPE2 50-180-N A-F-I-BUBE 50 Hz

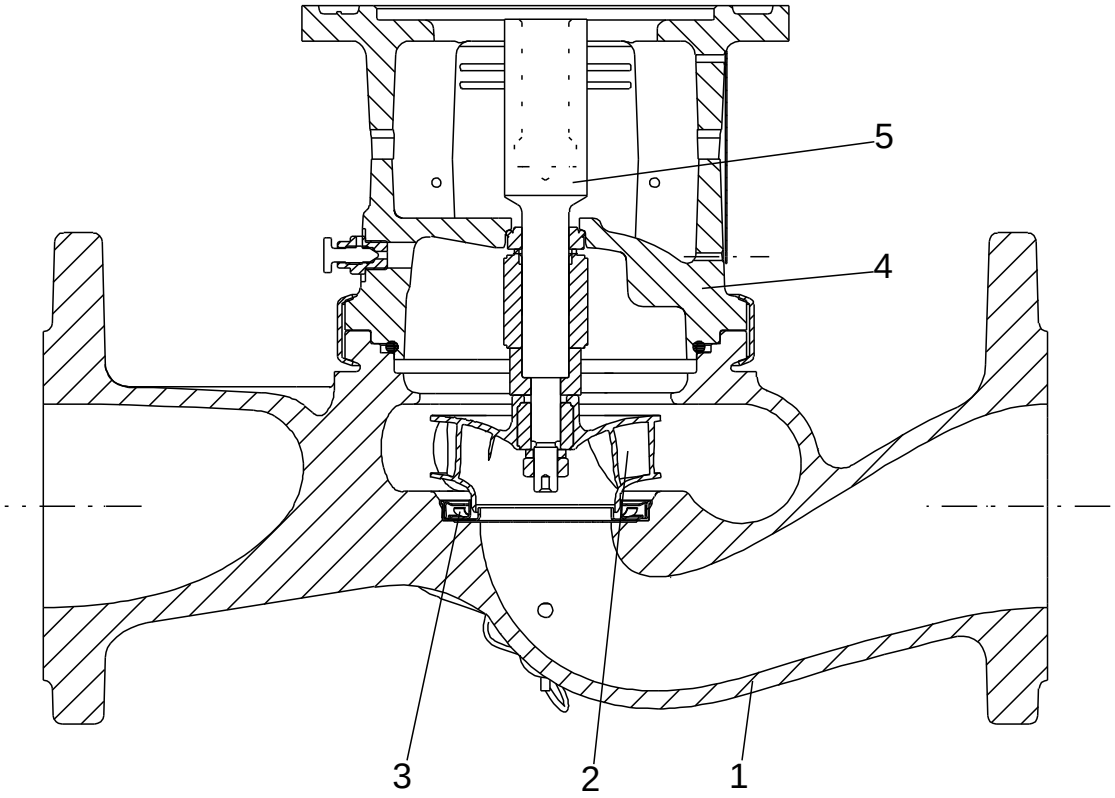


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view

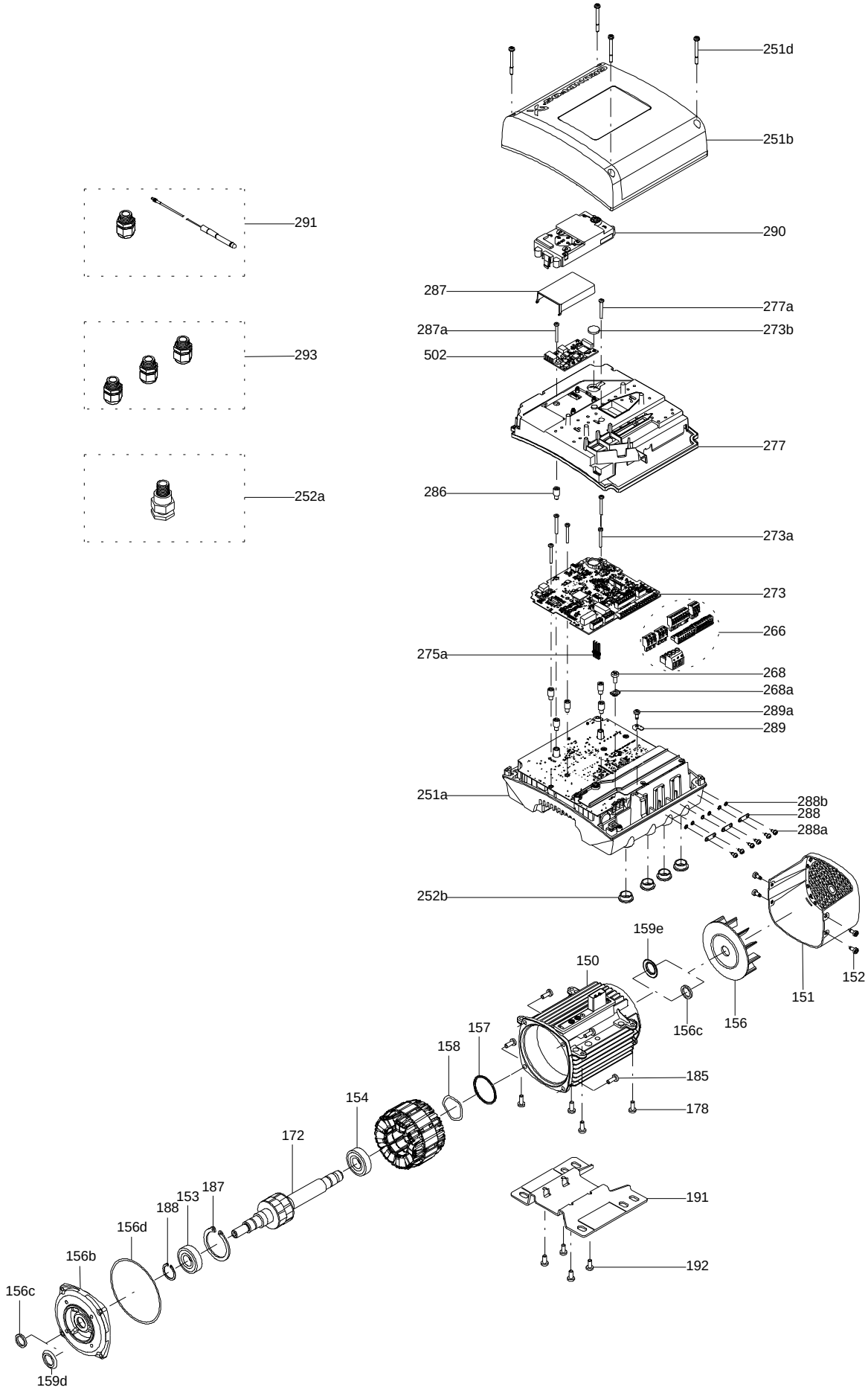


Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list TPE2 50-180-N, 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				1	
152	Pan head thread forming screw				4	
153	Ball bearing		Designation: 6304.2Z.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	Retaining ring				1	
158	Waved washer				1	
159c	Seal ring				1	
159c	Seal ring				1	
172	Shaft w/rotor				1	
172a	Parallel key				1	
173a	Base				1	
185	Cross recess Pan head screw				4	
186	Drain plug				3	
187	Lock ring				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 8-pole				1	
266	Connector plug 8-pole				1	
266	Connector plug 2-pole				1	
266	Connector plug 10-pole				1	
268	Pan head screw				1	
273	Funct. Module cpl.				1	
275a	Pin				1	
277	Isolation cover				1	
277a	Cross recess Pan head screw				4	
277a	Cross recess Pan head screw				1	
277a	Cross recess Pan head screw				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	
-	Guard				2	pcs
7	Guard				1	
7a	Pan head screw				2	
66	Lock washer				2	
-	Motor stool cpl.				1	pcs

	Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
	17	Air vent screw				1	
	28	Hex head cap screw		Length (mm): 25		4	
				Thread: UNC 3/8"			
	77	Motor stool				1	
-		Pump housing cpl.				1	pcs
	6	Pump housing				1	
	45	Neck ring cpl.				1	
-		Shaft cpl.				1	pcs
	9	Socket set screw				3	
	11b	Key				1	
	51	Shaft				1	
	66a	Wedge lock washer				1	
	67	Lock nut		Thread: M8		1	
-	49	Impeller cpl.				1	pcs
		Impeller cpl.				1	
	100	Spacer ring				1	pcs
	105	Shaft seal		Material type: EPDM		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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