TPED 150-160/4-S-A-F-A-BQQE 3X400 50HZ

Grundfos pump 96946129



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https://www.lenntech.com/grundfos/TPEDS2/96946129/TPED-150-160-4-S-A-F-A-BQQE.html

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Position	Qty.	Description
	1	**TPED 150-160/4-S A-F-A-BQQE**



Product No.: On request

Single-stage, close-coupled, volute twin-head pump with in-line suction and discharge ports of identical diameter. The twin-head pump is designed with two parallel power-heads. 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.

Each power head is fitted with an unbalanced rubber bellows seal. The shaft seal is according to EN 12756. Pipework connection is via PN 16 DIN flanges (EN 1092-2 and ISO 7005-2).

Each power head is fitted with a fan-cooled asynchronous motor of indentical size.

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.

The pump is fitted with a differential-pressure sensor.

Further product details

The pump is suitable for applications requiring pressure control. The pump is fitted with a differential-pressure transmitter registering the differential pressure across the pump and enabling constant pressure or proportional-pressure control of the pump.

A cable ensures communication between the two power heads. The selector switch in the terminal boxes enables changeover between the operating modes "alternating operation" and "standby operation".

A control panel enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The control panel has indicator lights for "Operation" and "Fault".

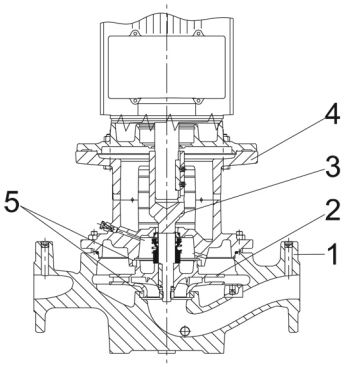
Communication with the pump is possible by means of the Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

Pump

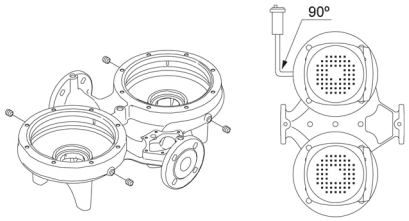
Pump housing and pump head are electrocoated to improve the corrosion resistance.

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: Stub shaft
4: Pump head/motor stool
5: Wear rings

Position	Qty.	Description
		The twin-head pump is designed with two parallel power-heads. A non-return 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 brass neck ring to reduce the amount of liquid running from the outlet side of the impeller to the inlet 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: 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. A circulation of liquid through the duct of the air vent screw ensures lubrication and cooling of the shaft seal. The pump housing has four Rp 1/8 tappings for mounting of automatic air vents. Fit an air vent to the upper pump housing if the twin-head pump is to be installed in a horizontal pipeline with horizontal pump shaft.  The flanges have tappings for mounting of pressure gauges. 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 is flange-mounted with free-hole flange (FF). Motor-mounting designation in accordance with IEC 60034-7: IM B 5, IM V 1 (Code I) / IM 3001, IM 3011 (Code II). The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1. 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: - pump start/stop input (potential-free contact) - remote setpoint setting via analog signal, 0-10 V, 0(4)-20 mA - 10 V voltage supply for setpoint potentiometer, Imax = 5 mA - one analog sensor input, 0-10 V, 0(4)-20 mA; the factory-fitted pressure sensor is connected to this input - 24 V voltage supply for sensor, Imax = 40 mA - one digital input - two potential-free fault signal relays with changeover contact, reporting "Fault", "Operation" or "Ready" - cable for communication between the two power heads - selector switch for alternating operation and standby operation - RS-485 GENIbus connection - interface for Grundfos CIU fieldbus module.

Position	Qty.	Description

Technical data

Controls:

Frequency converter:	Built-in

Liquid:

Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³

Technical:

Rated flow:	206 m³/h
Rated head:	12.4 m
Actual impeller diameter:	220 mm
Primary shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B

Materials:

Pump housing:	Cast iron EN-JL1040 ASTM A48-40 B
Impeller:	Cast iron EN-JL1030 ASTM A48-30 B

Installation:

Range of ambient temperature:	-20 .. 40 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 120 °C
Flange standard:	DIN
Pipe connection:	DN 150
Pressure rating:	PN 16
(@):	800 mm
Flange size for motor:	FF300

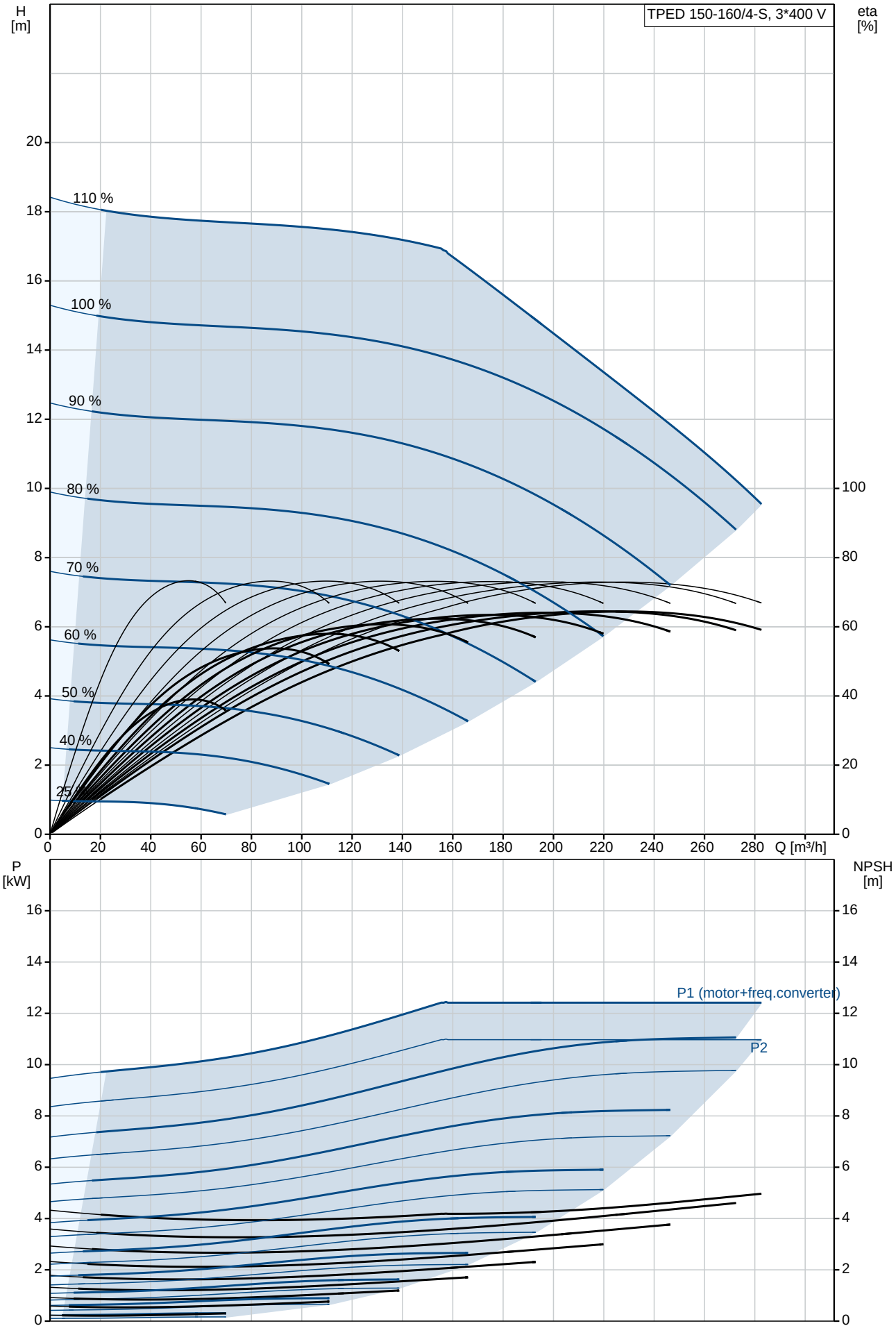
Electrical data:

Motor type:	160MB
IE Efficiency class:	IE3
Rated power - P2:	2 x 11 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-480 V
Rated current:	22.0-17.8 A
Cos phi - power factor:	0.91-0.90
Rated speed:	240-1750 rpm
Efficiency:	IE3 91,4%
Motor efficiency at full load:	91.4 %
Number of poles:	4
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F

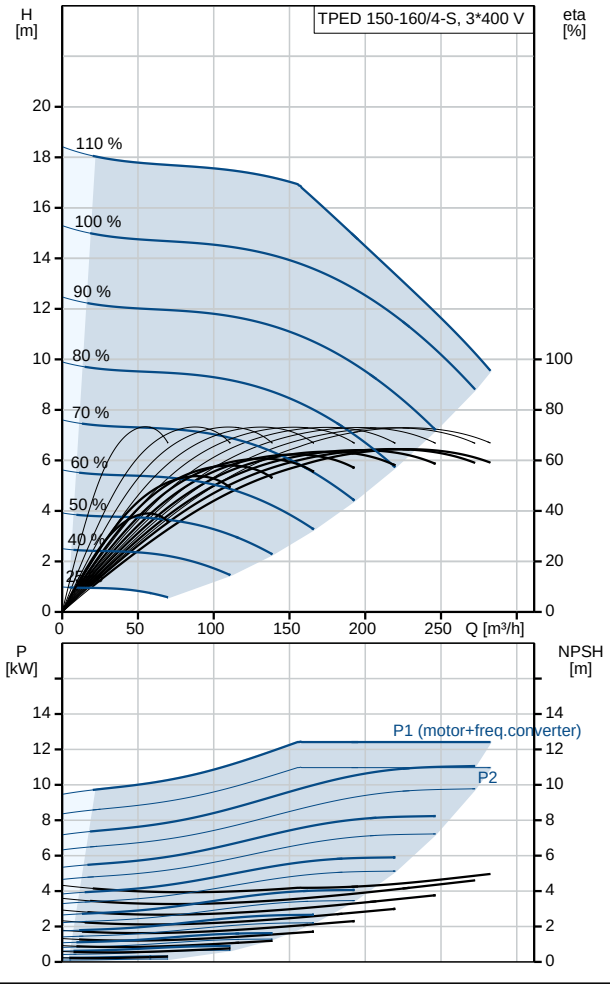
Others:

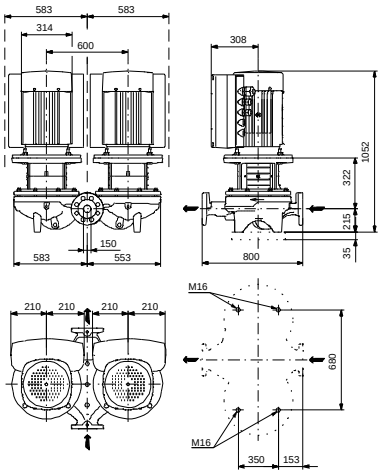
Minimum efficiency index, MEI ≥:	0.65
ErP status:	EuP Standalone/Prod.
Net weight:	678 kg
Gross weight:	786 kg
Shipping volume:	1.52 m³

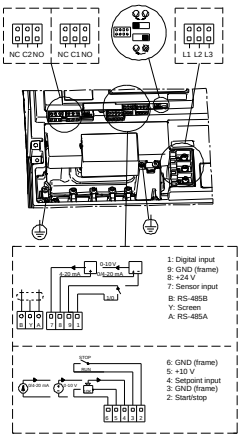
On request TPED 150-160/4-S A-F-A-BQQE 50 Hz



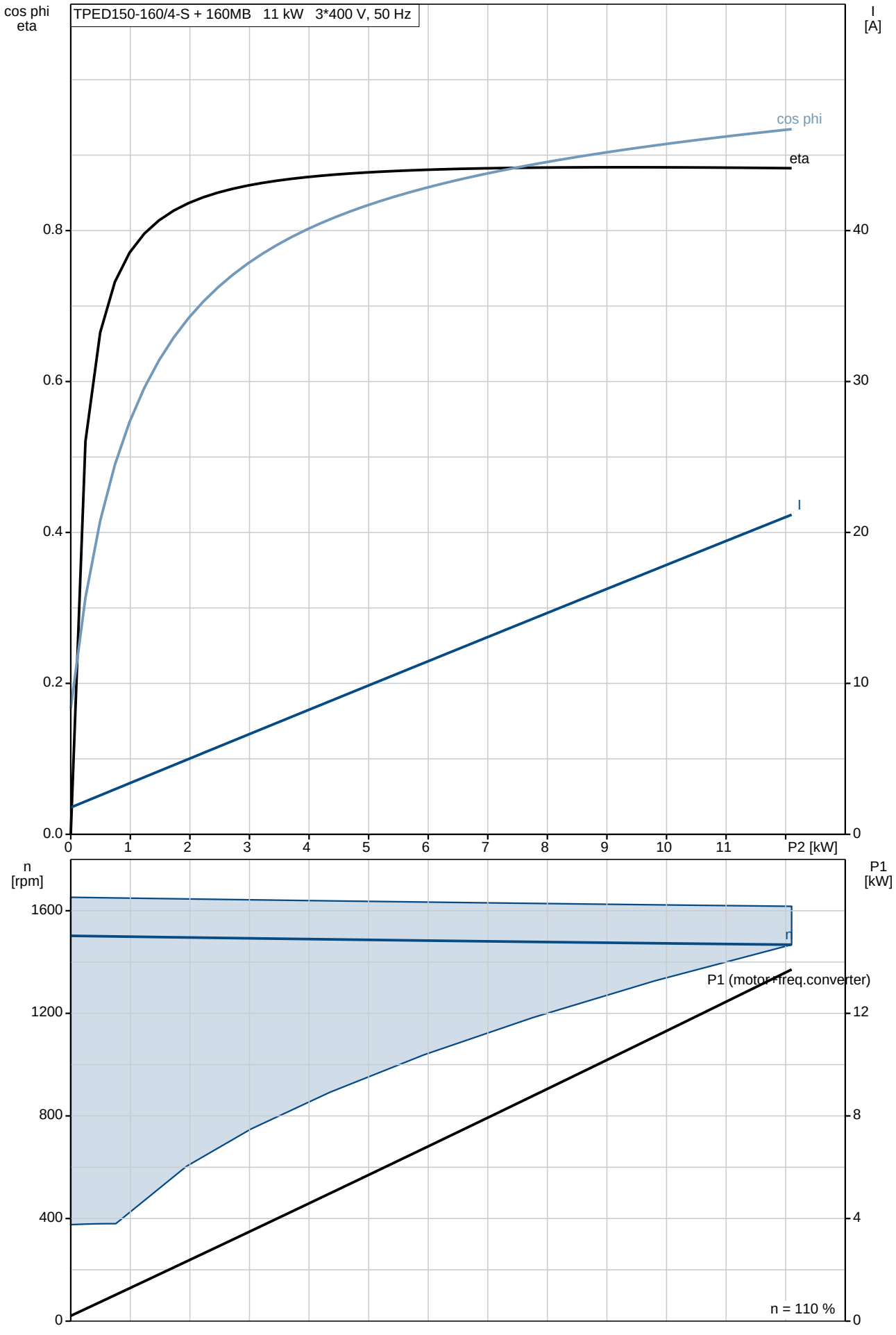
Description	Value
General information:	
Product name:	TPED 150-160/4-S A-F-A-BQQE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	206 m³/h
Rated head:	12.4 m
Head max:	160 dm
Actual impeller diameter:	220 mm
Primary shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Materials:	
Pump housing:	Cast iron
	EN-JL1040
	ASTM A48-40 B
Impeller:	Cast iron
	EN-JL1030
	ASTM A48-30 B
Material code:	A
Installation:	
Range of ambient temperature:	-20 .. 40 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 120 °C
Flange standard:	DIN
Pipe connection:	DN 150
Pressure rating:	PN 16
(@)	800 mm
Flange size for motor:	FF300
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor type:	160MB
IE Efficiency class:	IE3
Rated power - P2:	2 x 11 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-480 V
Rated current:	22.0-17.8 A
Cos phi - power factor:	0.91-0.90
Rated speed:	240-1750 rpm
Efficiency:	IE3 91,4%
Motor efficiency at full load:	91.4 %
Number of poles:	4
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protec:	YES
Motor No:	86906161
Controls:	
Control panel:	BS
Function Module:	TPED
Frequency converter:	Built-in
Others:	
Minimum efficiency index, MEI ≥:	0.65
ErP status:	EuP Standalone/Prod.
Net weight:	678 kg
Gross weight:	786 kg
Shipping volume:	1.52 m³
Config. file no:	97912872



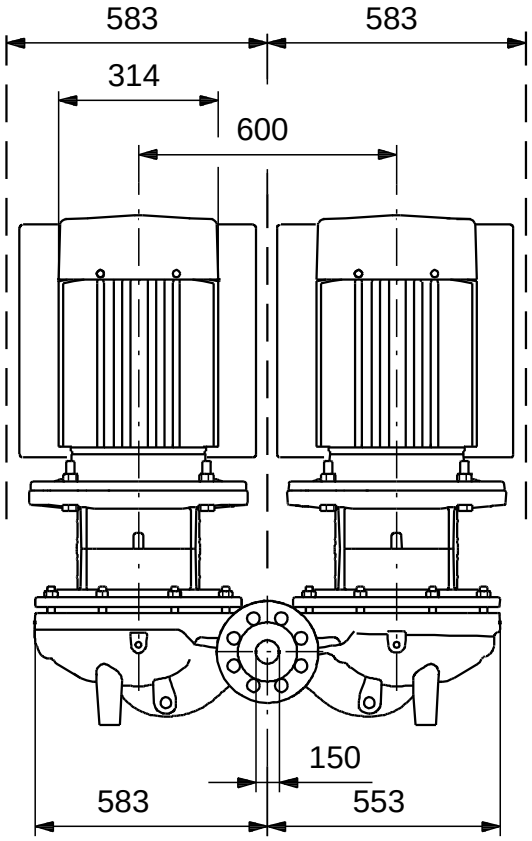


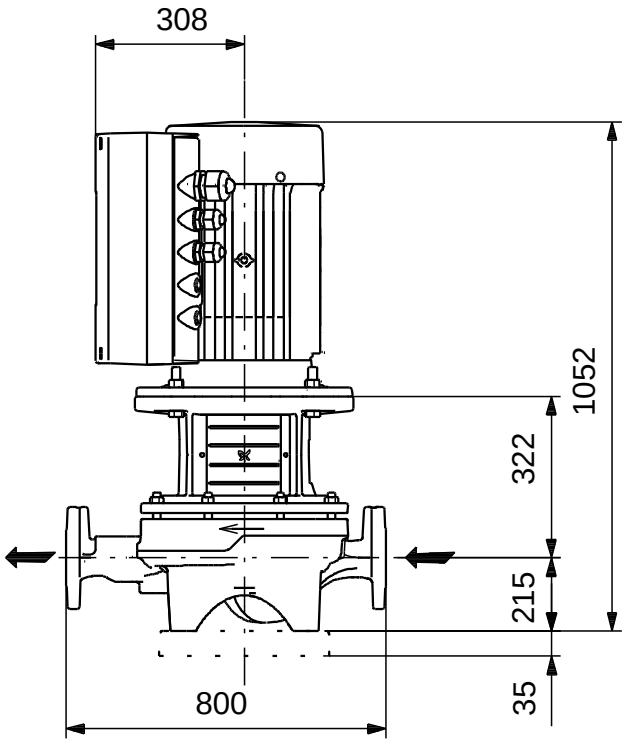


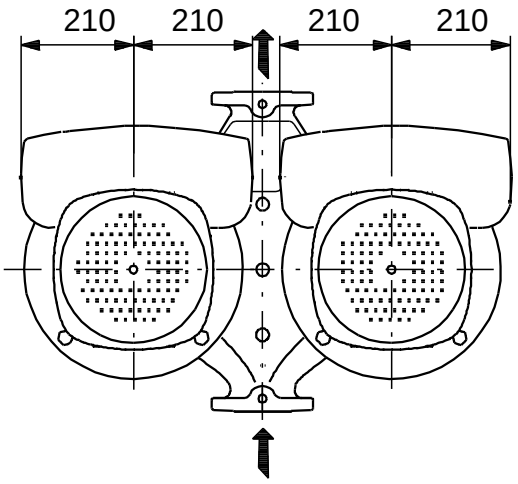
On request TPED 150-160/4-S A-F-A-BQQE 50 Hz

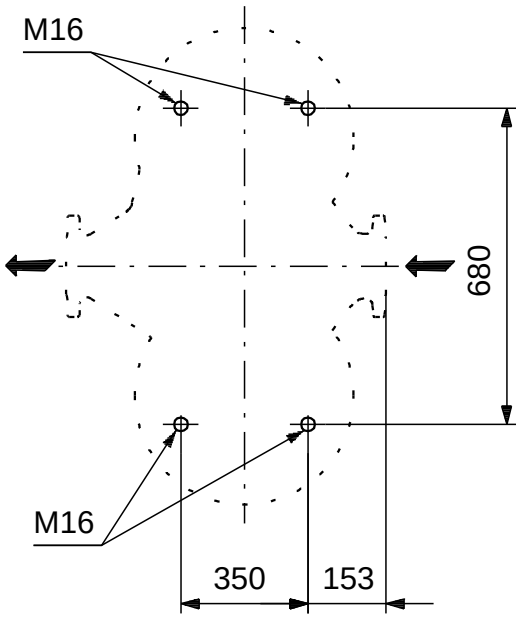


On request TPED 150-160/4-S A-F-A-BQQE 50 Hz



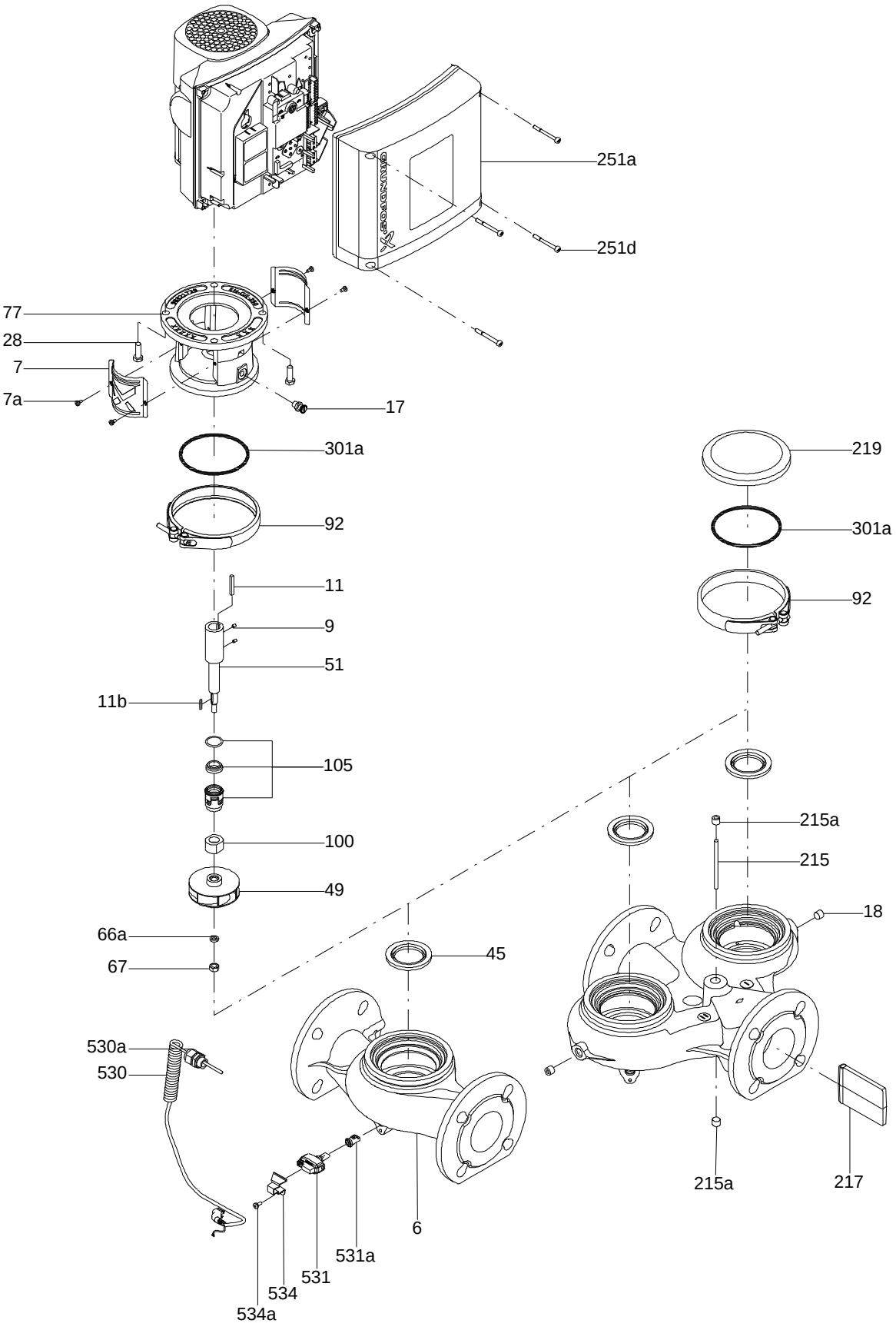




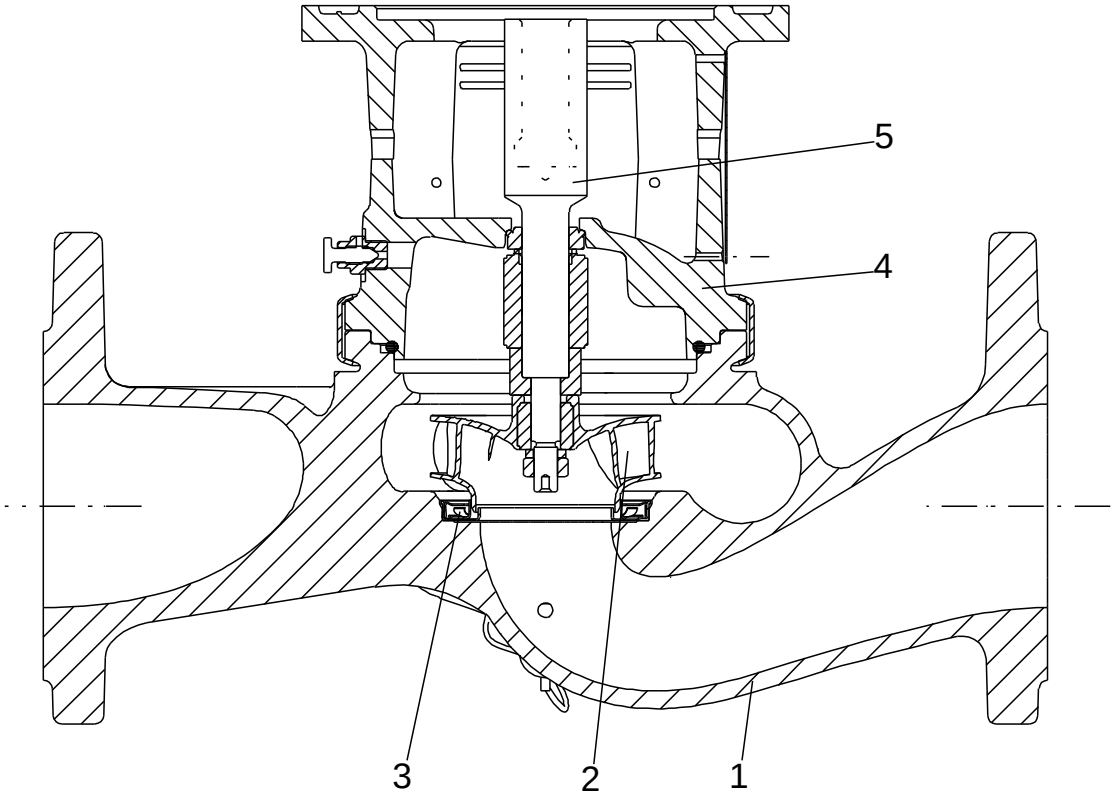


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view

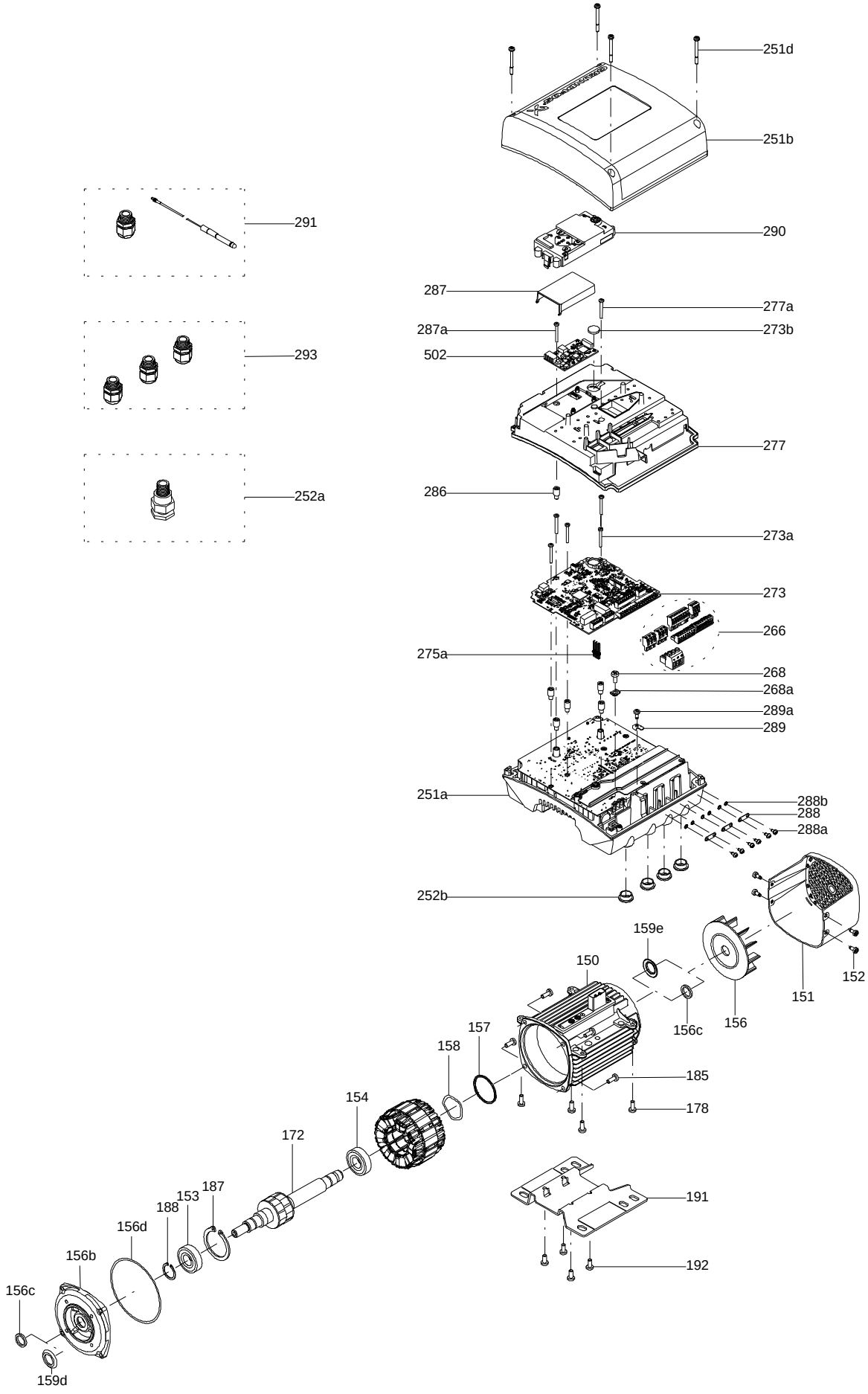


Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list TPED 150-160/4-S, Product No. On request
Valid from 21.2.2013 (1308)

	Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
+		Motor				2	pcs
-		Nut				2	pcs
	66	Washer		Designation: DIN 125 A2		1	
				Internal diameter: 19			
				Outer diameter: 34			
				Thickness: 3			
	66a	Spring lock washer				1	
	67	Nut		Thread: M18		1	
-		Motor stool cpl.				2	pcs
	1a	Motor stool				1	
	7	Coupling guard				2	
	77a	Pan head screw				4	
-		Cover cpl.				2	pcs
	36	Nut		Thread: M10		8	
	77	Cover				1	
-		Pump housing cpl.				1	pcs
	6	Pump housing				1	
	19	Plug				5	
	20	Plug				2	
	28a	Hex head screw		Length (mm): 50 MM		6	
				Thread: M12			
	66a	Nut		Thread: M12		24	
	210	Cover				1	
	212	Gasket				1	
	215	Shaft pin				1	
	216	Helical torsion spring				1	
	217	Valve flap				2	
-		Shaft seal cpl.				2	pcs
	72.a	O-ring		Diameter: 278,99		1	
				Material type: EPDM			
				Thickness: 3,53			
	105	Shaft seal				1	
-		Stub shaft				2	pcs
	9	Socket set screw		Length (mm): 6		2	
				Thread: M8			
	11	Parallel key				1	
	51	Pump shaft				1	
-		Bracket cpl.				1	pcs
		Cross recess countersunk screw				1	
	505	Bracket				1	
-		Base plate cpl.				1	pcs
	28g	Hex head cap screw		Length (mm): 30 MM		4	
				Thread: M16			
	56	Base				2	
	49	Impeller				2	pcs
	105b	Spacer				2	pcs
-	501	Pressure transducer				1	pcs
	7a	Pan washer head screw				2	
	501	DPI sensor cpl.				1	
	508	Tube				1	
	509	Capillary tube.				1	
	510	Mounting bush.				2	
	511	Cable pin				3	
	511	Cable cpl.				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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