

TPD 150-160/4-A-F-A-BQQE 400D 50HZ

Grundfos pump 96109905



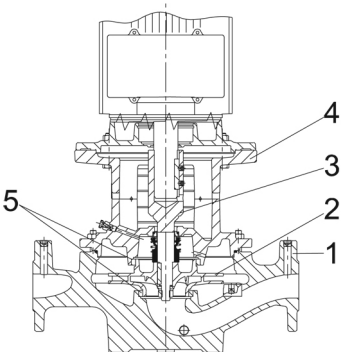
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<https://www.lenntech.com/grundfos/TPD00/96109905/TPD-150-160-4-A-F-A-BQQE.html>

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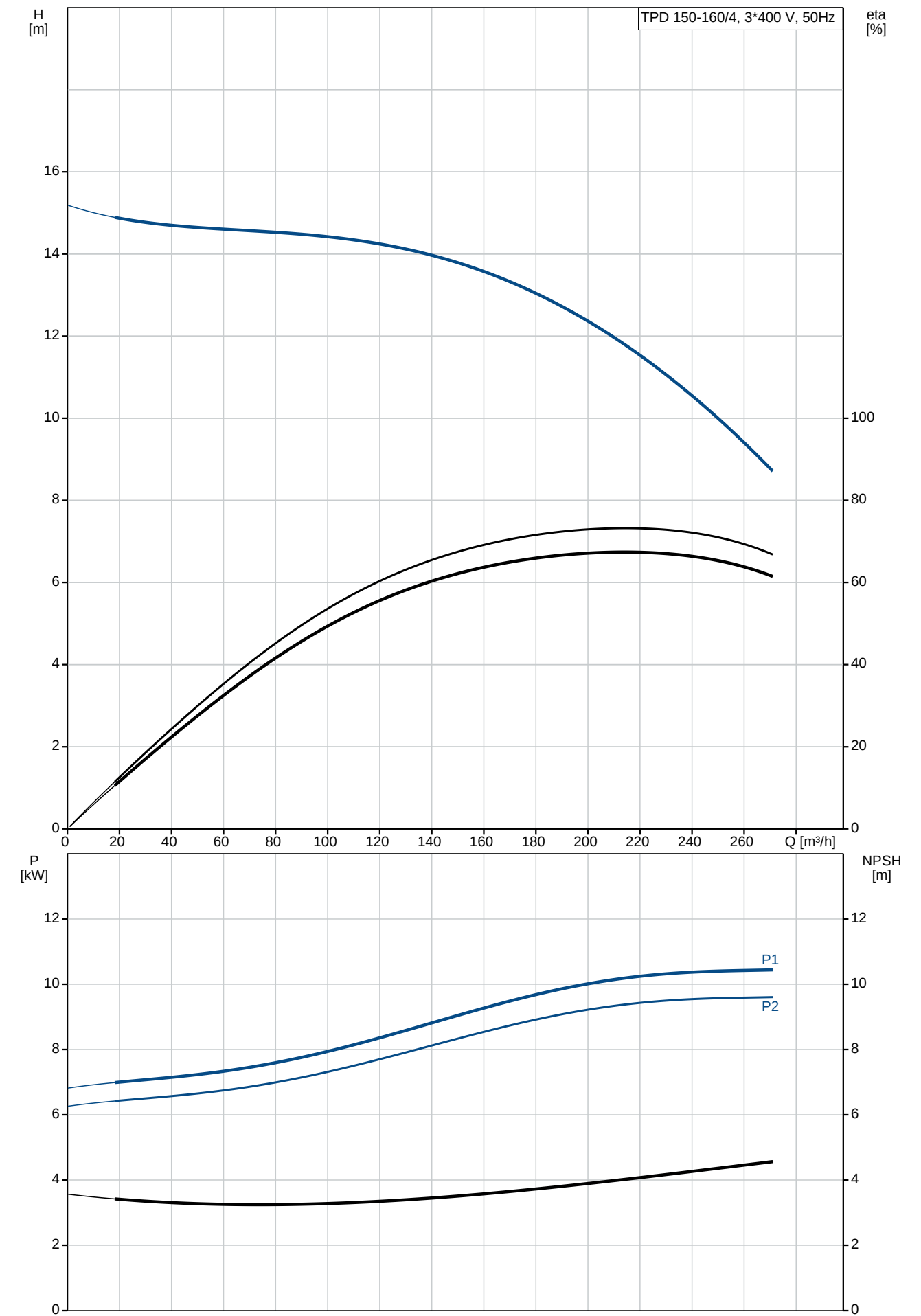
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Position	Qty.	Description
	1	TPD 150-160/4 A-F-A-BQQE  Product No.: On request Single-stage, close-coupled, volute twin-head pump with in-line suction and discharge ports of identical diameter. The twin-head pump is designed with two parallel power-heads. 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 identical size. Further product details 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 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.

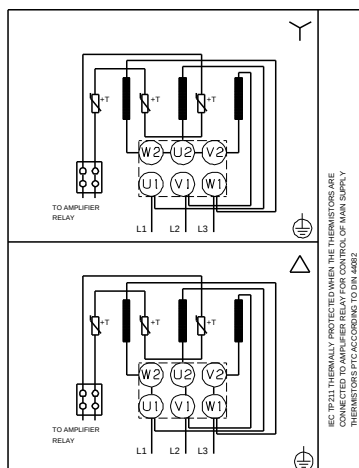
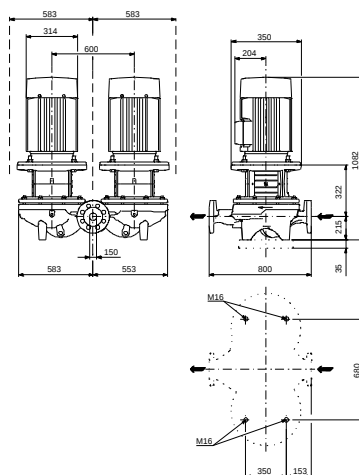
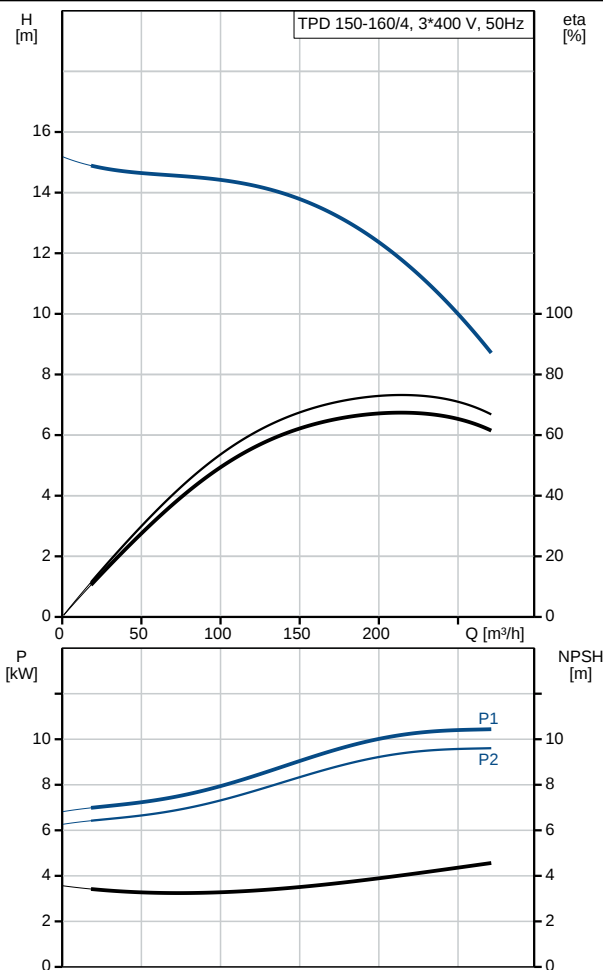
Position	Qty.	Description
		A circulation of liquid through the duct of the air vent screw ensures lubrication and cooling of the shaft seal. The pump housing has four Rp 1/8 tappings for mounting of automatic air vents. Fit an air vent to the upper pump housing if the twin-head pump is to be installed 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 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 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: -30 .. 60 °C

Position	Qty.	Description
		Maximum operating pressure: 16 bar Flange standard: DIN Pipe connection: DN 150 Pump inlet: DN 150 Pump outlet: DN 150 Pressure rating: PN 16 (@): 800 mm Flange size for motor: FF300 Electrical data: Motor type: 160MA IE Efficiency class: IE3 Rated power - P2: 2 x 11 kW Power (P2) required by pump: 11 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 21,2-20,4/12,2-12,0 A Starting current: 710-810 % Cos phi - power factor: 0.86-0.81 Rated speed: 1470-1475 rpm Efficiency: IE3 91,4% Motor efficiency at full load: 91.4 % Motor efficiency at 3/4 load: 92.1 % Motor efficiency at 1/2 load: 91.6 % Number of poles: 4 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Others: Minimum efficiency index, MEI $\geq$: 0.65 ErP status: EuP Standalone/Prod. Net weight: 666 kg Gross weight: 774 kg Shipping volume: 1.52 m³

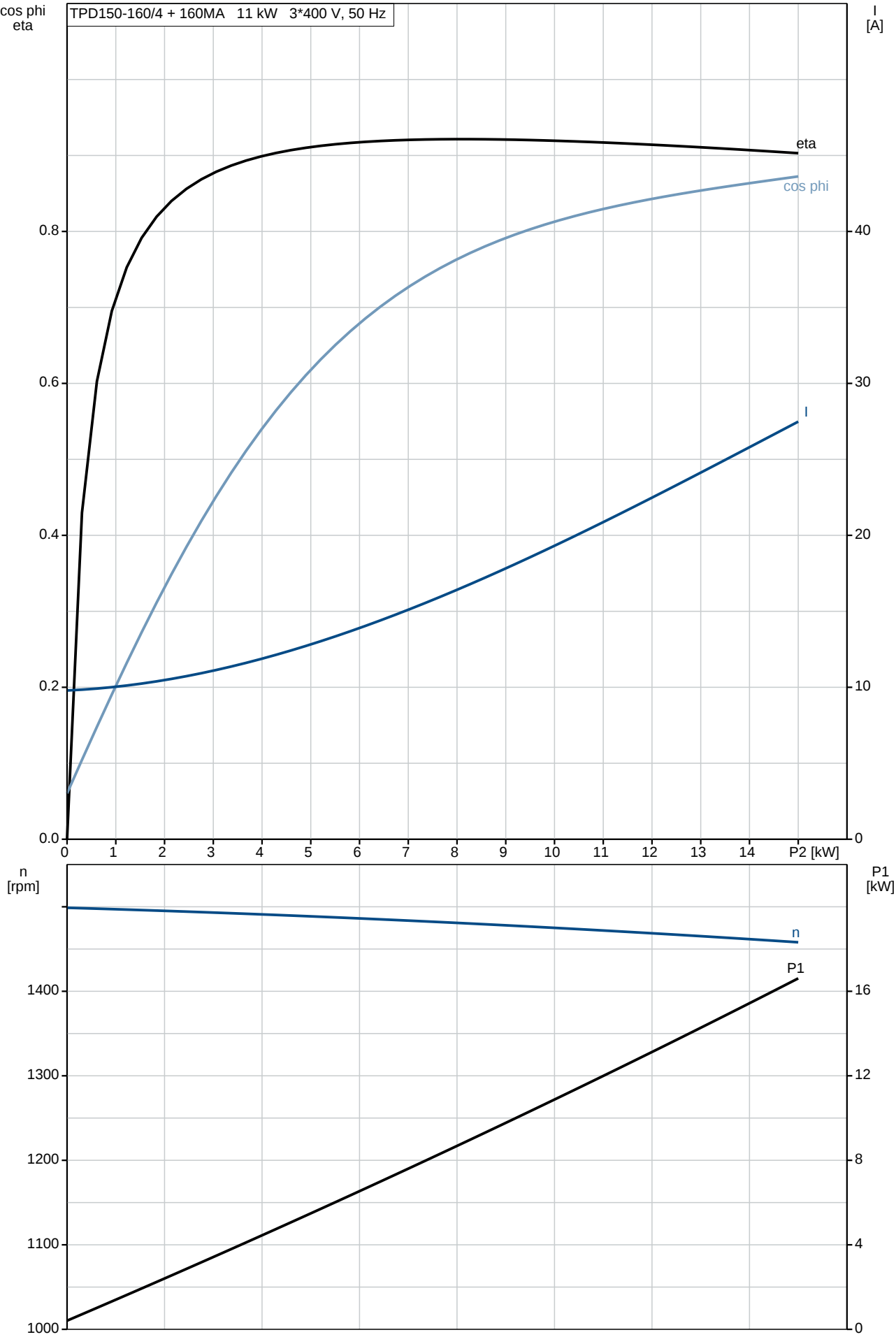
On request TPD 150-160/4 A-F-A-BQQE 50 Hz



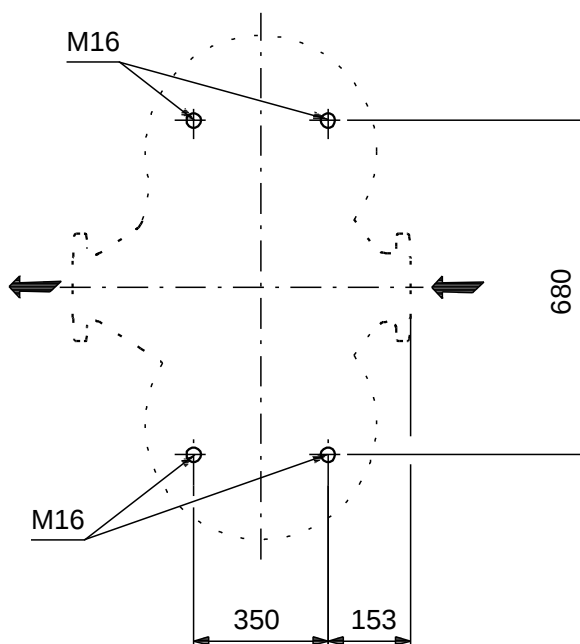
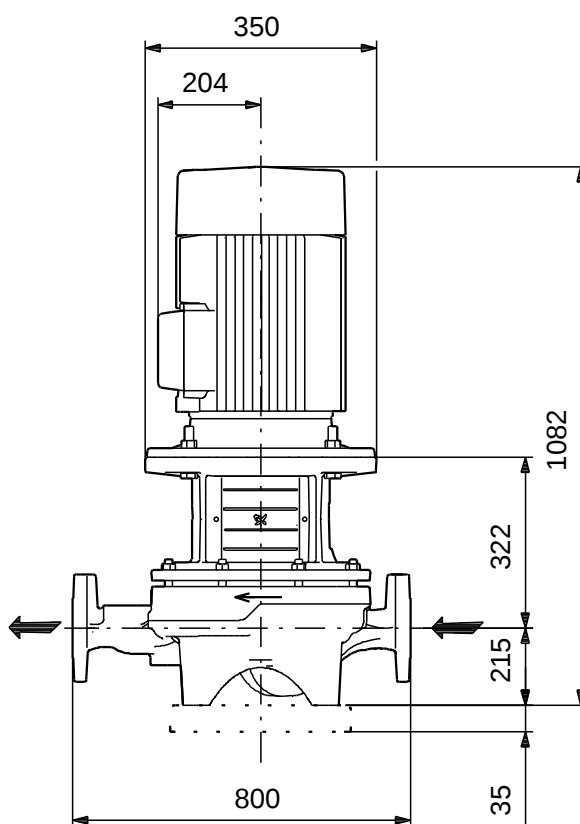
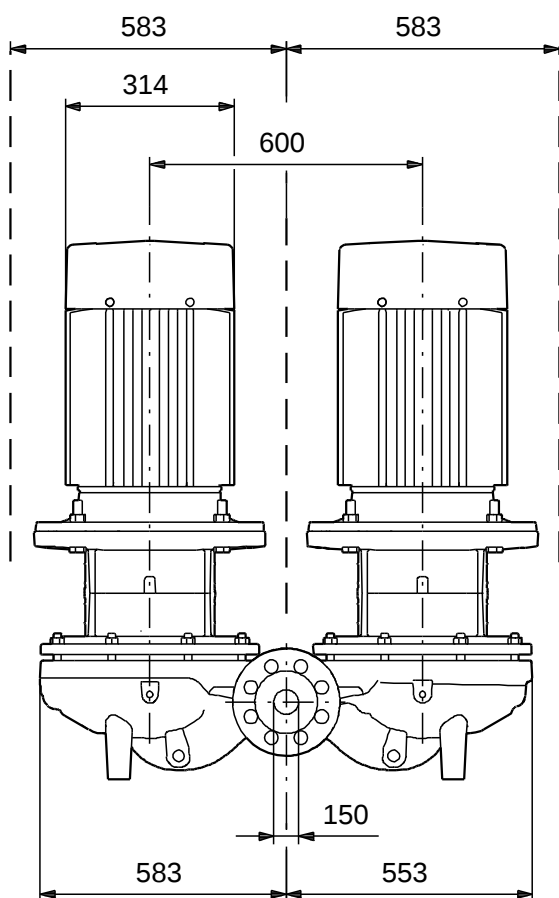
Description	Value
General information:	
Product name:	TPD 150-160/4 A-F-A-BQQE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	206 m ³ /h
Rated head:	12.4 m
Head max:	160 dm
Actual impeller diameter:	220 mm
Primary shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B
Pump version:	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:	-30 .. 60 °C
Maximum operating pressure:	16 bar
Flange standard:	DIN
Pipe connection:	DN 150
Pump inlet:	DN 150
Pump outlet:	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/m ³
Electrical data:	
Motor type:	160MA
IE Efficiency class:	IE3
Rated power - P2:	2 x 11 kW
Power (P2) required by pump:	11 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D/660-690Y V
Rated current:	21,2-20,4/12,2-12,0 A
Starting current:	710-810 %
Cos phi - power factor:	0.86-0.81
Rated speed:	1470-1475 rpm
Efficiency:	IE3 91,4%
Motor efficiency at full load:	91.4 %
Motor efficiency at 3/4 load:	92.1 %
Motor efficiency at 1/2 load:	91.6 %
Number of poles:	4
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protec:	PTC
Motor No:	87420031
Others:	
Minimum efficiency index, MEI ≥:	0.65
ErP status:	EuP Standalone/Prod.
Net weight:	666 kg
Gross weight:	774 kg
Shipping volume:	1.52 m ³



On request TPD 150-160/4 A-F-A-BQQE 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 TPD 150-160/4, Product No. On request
Valid from 1.1.2011 (1152)

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	
-	Base plate cpl.				1	pcs
28g	Hex head cap screw		Length (mm): 30 MM		4	
			Thread: M16			
56	Base				2	
19	Plug				2	pcs
49	Impeller				2	pcs
105b	Spacer				2	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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