

TPED 100-60/4-AI-F-A-BUBE 3X400 50HZ

Grundfos pump 98504694



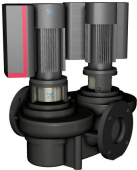
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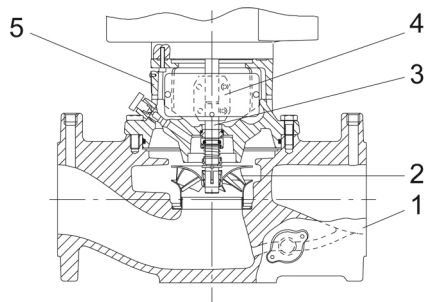
<https://www.lenntech.com/grundfos/TPED0/98504694/TPED-100-60-4-AI-F-A-BUBE.html>

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Position	Qty.	Description
	1	TPED 100-60/4 AI-F-A-BUBE  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 6 DIN flanges (EN 1092-2 and ISO 7005-2). Each power head is fitted with a fan-cooled, permanent-magnet synchronous motor of identical size. 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 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". 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: Shaft
- 4: Coupling
- 5: Pump head

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 stainless 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 with a split cone with 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

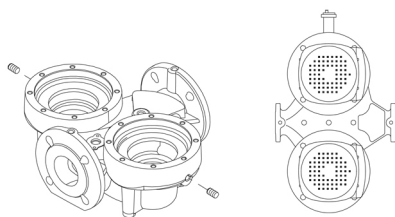
This is a widely used material pairing. If the pumped liquid contains particles, wear on the seal faces must be expected. Due to the favourable lubricating properties of carbon graphite, the seal is suitable for use even under poor lubricating conditions, such as hot water. However, under such conditions,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

A circulation of liquid through the duct of the air vent screw ensures lubrication and cooling of the shaft seal.

The pump housing has two 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. Motor and pump shaft are connected via a shell coupling.

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 tapped-hole flange (FT).

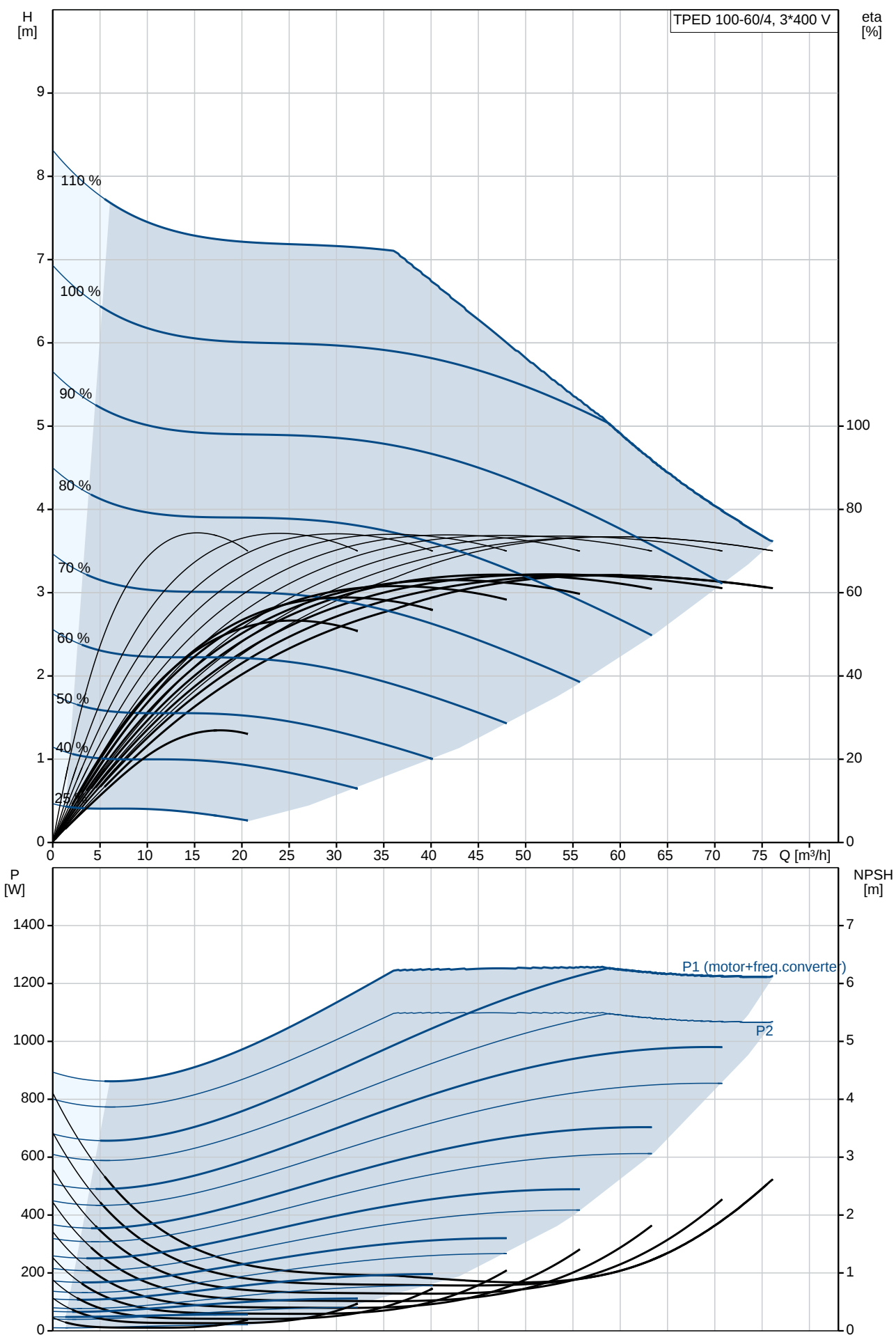
Motor-mounting designation in accordance with IEC 60034-7: IM B 14, IM V 18 (Code I) / IM 3601, IM 3611 (Code II).

The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

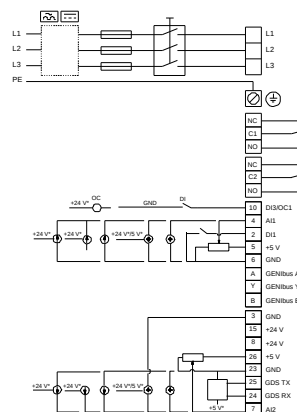
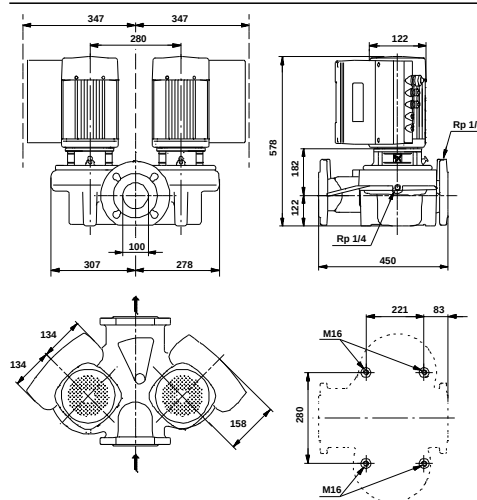
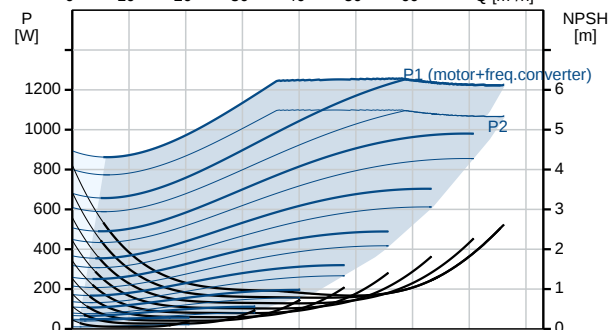
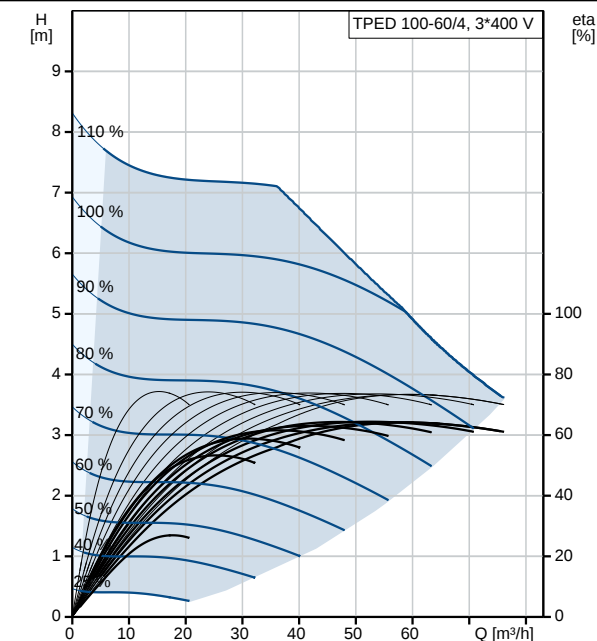
Position	Qty.	Description
		The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions. The terminal box holds terminals for these connections: - one dedicated digital input - 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) - the two power heads communicate via wireless GENlair or wired GENI connection - interface for Grundfos CIM fieldbus module. Technical data Liquid: Pumped liquid: Water Liquid temperature range: 0 .. 140 °C Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Technical: Rated flow: 63 m³/h Rated head: 5.04 m Actual impeller diameter: 144 mm Primary shaft seal: BUBE Curve tolerance: ISO9906:2012 3B Materials: Pump housing: Cast iron EN-JL1040 ASTM A48-40 B Impeller: Stainless steel DIN W.-Nr. 1.4301 AISI 304 Installation: Range of ambient temperature: -20 .. 50 °C Maximum operating pressure: 6 bar Flange standard: DIN Pipe connection: DN 100 Pressure rating: PN 6 (@): 450 mm Flange size for motor: FT115 Electrical data: Motor type: 90SD IE Efficiency class: IE5 Rated power - P2: 2 x 1.1 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-500 V Rated current: 2.30-2.10 A Cos phi - power factor: 0.90-0.74 Rated speed: 180-2000 rpm Efficiency: 87.2% Motor efficiency at full load: 87.2 % Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Others: Minimum efficiency index, MEI ≥: 0.70 ErP status: EuP Standalone/Prod. Net weight: 110 kg Gross weight: 126 kg

Position	Qty.	Description
		Shipping volume: 0.39 m ³

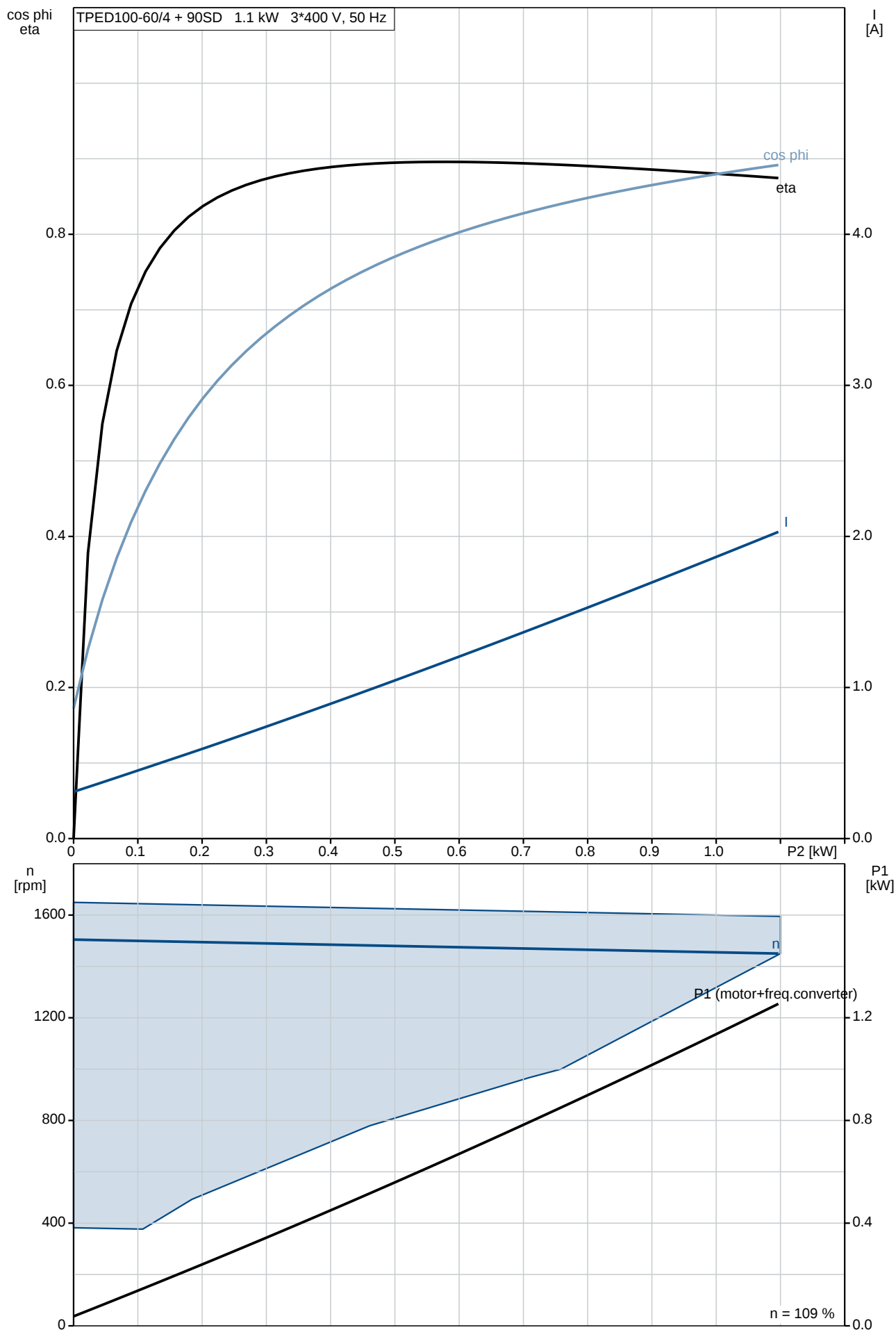
On request TPED 100-60/4 AI-F-A-BUBE 50 Hz



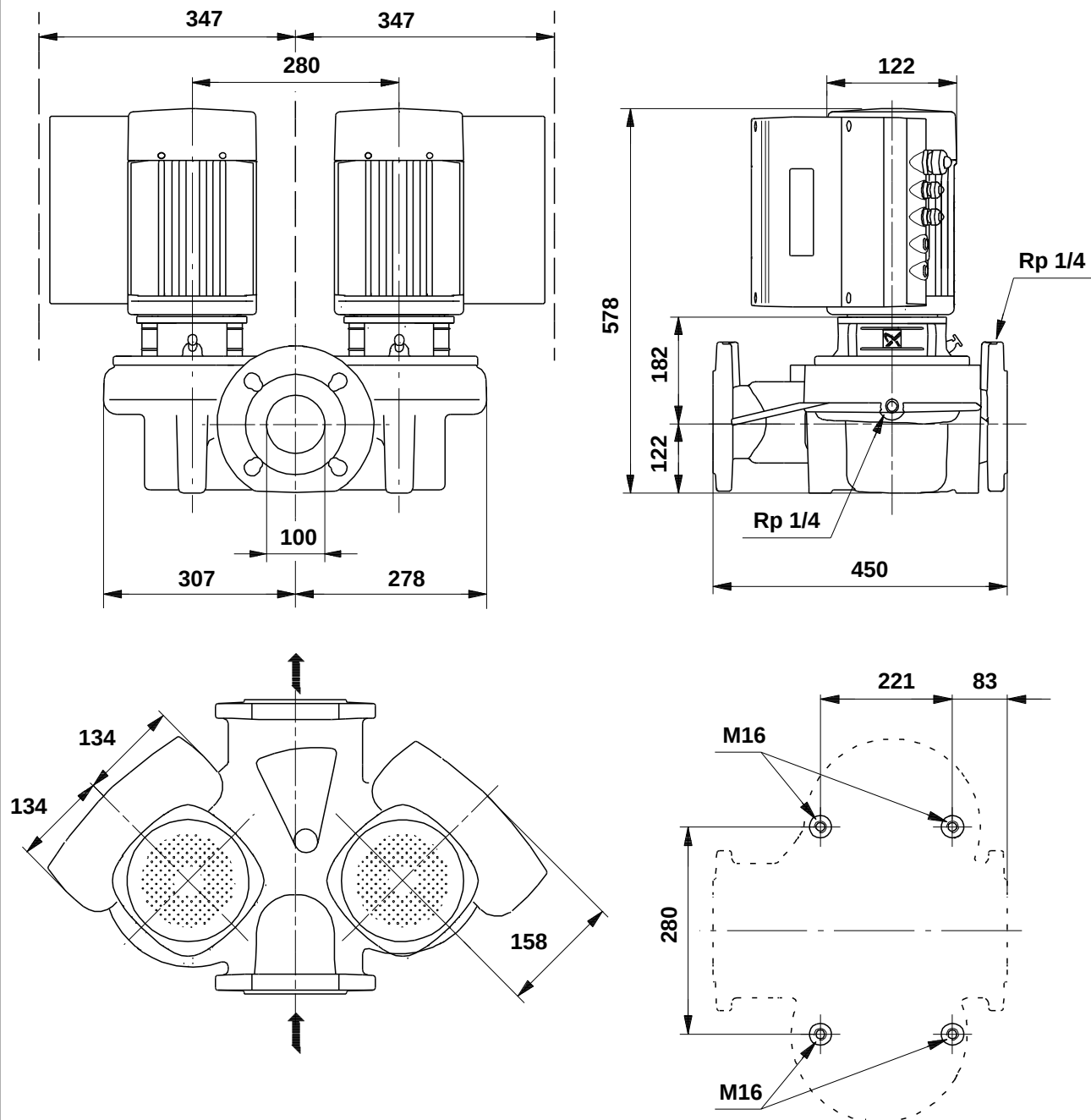
Description	Value
General information:	
Product name:	TPED 100-60/4 AI-F-A-BUBE
Product No:	On request
EAN number:	On request
Technical:	
Rated flow:	63 m³/h
Rated head:	5.04 m
Head max:	60 dm
Actual impeller diameter:	144 mm
Primary shaft seal:	BUBE
Curve tolerance:	ISO9906:2012 3B
Pump version:	AI
Model:	A
Materials:	
Pump housing:	Cast iron
	EN-JL1040
	ASTM A48-40 B
Impeller:	Stainless steel
	DIN W.-Nr. 1.4301
	AISI 304
Material code:	A
Installation:	
Range of ambient temperature:	-20 .. 50 °C
Maximum operating pressure:	6 bar
Flange standard:	DIN
Pipe connection:	DN 100
Pressure rating:	PN 6
(@)	450 mm
Flange size for motor:	FT115
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	0 .. 140 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor type:	90SD
IE Efficiency class:	IE5
Rated power - P2:	2 x 1.1 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-500 V
Rated current:	2.30-2.10 A
Cos phi - power factor:	0.90-0.74
Rated speed:	180-2000 rpm
Efficiency:	87.2%
Motor efficiency at full load:	87.2 %
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protec:	YES
Motor No:	98286749
Controls:	
Control panel:	HMI200 - Standard
Function Module:	FM200 - Standard
Others:	
Minimum efficiency index, MEI ≥:	0.70
ErP status:	EuP Standalone/Prod.
Net weight:	110 kg
Gross weight:	126 kg
Shipping volume:	0.39 m³
Config. file no:	98478701



On request TPED 100-60/4 AI-F-A-BUBE 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 TPED 100-60/4, Product No. On request
Valid from 23.9.2013 (1339)

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
-	Motor				2	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				4	
152	Pan head thread forming screw				1	
153	Ball bearing				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	Waved washer				1	
159a	Seal ring				1	
159c	Seal ring				1	
166	Torx Screw				2	
172	Shaft w/rotor				1	
173a	Base				1	
185	Cross recess Pan head screw				4	
186	Drain plug				1	
187	Retaining ring				1	
188	Retaining 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 3-pole				1	
266	Connector plug 8-pole				1	
266	Connector plug 8-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				1	
277a	Cross recess Pan head screw				1	
277a	Cross recess Pan head screw				4	
286	Spacer				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	
-	Coupling cpl.				2	pcs
9	Hex socket head cap screw		Designation: DIN 912		4	
			Length (mm): 25			
			Thread: M8			

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
10	Shaft pin		Diameter: 5		1	
			Length (mm): 26			
10a	Coupling half				2	
-	Motor stool cpl.				2	pcs
2	Motor stool				1	
26	Hex head screw		Length (mm): 25		8	
			Thread: M10			
28	Hex head screw		Length (mm): 20		4	
			Thread: M8			
-	Coupling guard cpl.				2	pcs
7	Coupling guard				2	
7a	Pan head screw				4	
-	Shaft w/impeller cpl.				2	pcs
49	Impeller				1	
49b	Split cone				1	
49b	Split cone nut				1	
51	Shaft				1	
-	6 Pump housing cpl.				1	pcs
-	6 Pump housing cpl.				1	
-	Pump housing				1	
+	Motor					
-	Base cpl.					
6	Base					
56	Base plate					
201.a	Flange					
203	Lock ring					
-	Sealing parts					
-	25 Drain plug w/bypass valve					
38	O-ring		Diameter: 16,3			
			Material type: EPDM			
			Thickness: 2,4			
37	O-ring					
100	O-ring		Diameter: 16,3			
			Material type: EPDM			
			Thickness: 2,4			
-	2 Pump head cpl.					
2	Pump head					
7	Coupling guard					
7.a	Combi Slot Torx screw					
-	18 Air vent screw					
	Plug					
	Spindle					
23a	Plug					
28	Hex head screw		Length (mm): 25			
			Thread: M8			
60	Formed wire spring					
77	Pump cover					
-	3 Chamber					
	Chamber					
	Seal ring					
45	Seal ring					
65	Neck ring retainer					
-	4 Chamber cpl.					
	Chamber					
45	Neck ring					
65	Neck ring retainer					
-	4a Chamber w. bearing cpl.					
	Chamber					
45	Neck ring					
65	Neck ring retainer					
-	8 Coupling cpl.					
9	Hex socket head cap screw		Designation: DIN 912			
			Length (mm): 25			
			Thread: M8			

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
10	Shaft pin		Diameter: 5			
			Length (mm): 26			
10a	Coupling half					
26	Staybolt		Length (mm): 799			
			Thread: M12			
36	Nut		Thread: M12			
36	Lock nut		Thread: M8			
47a	Bearing ring, rotating					
+ 49	Impeller cpl.					
49	Impeller cpl.					
- 50a	Guide vane					
	Guide vane					
	Plate					
50b	Top plate					
51	Shaft, spline, cpl.					
55	Outer sleeve					
64a	Spacing pipe		Internal diameter: 12,7			
			Outer diameter: 15,0			
			Length (mm): 7,3			
64a	Spacing pipe		Length (mm): 13.00			
64c	Clamp, splined		Internal diameter: 8,5			
			Outer diameter: 15			
66	Wedge lock washer					
66a	Washer		Designation: DIN 125 A2			
			Internal diameter: 13			
			Outer diameter: 24			
			Thickness: 2,5			
69	Spacing pipe		Length (mm): 26.0			
69	Spacing pipe		Length (mm): 2.00			
69a	Spacing pipe		Internal diameter: 12,7			
			Outer diameter: 15,0			
			Length (mm): 10,0			
- 105	Shaft seal		Material type: HUBE			
	O-ring					
	O-ring					
	Seal driver, upper					
	Seal driver, lower					
	Spacer ring					
	Pipe					
	Plug					
	Plug					
	Compression spring					
	Socket set screw					
102	O-ring		Diameter: 22,00			
			Material type: EPDM			
			Thickness: 2,75			
103	Seal ring, stationary					
105	Seal ring, rotating					
107	O-ring					
113	Driver					
45	Neck ring				2	
215	Guide pin				1	
217	Valve flap				1	
18	Air vent screw		Thread: 1/4"		2	pcs
19	Plug				6	pcs
72a	O-ring		Diameter: 154		2	pcs
			Material type: EPDM			
			Thickness: 4			
105	Shaft seal		Material type: EPDM		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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