

## TP 80-60/4-AI-F-Z-AUUE 400Y 50HZ

Grundfos pump 96404922



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https://www.lenntech.com/grundfos/TPB00/96404922/TP-80-60-4-B-AI-F-Z-AUUE.html

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#### Position | Qty. | Description

1 TP 80-60/4 B AI-F-Z-AUUE



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 pump is fitted with an unbalanced O-ring seal. The shaft seal is according to EN 12756. Pipework connection is via PN 6 DIN flanges (EN 1092-2 and ISO 7005-2).

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

## Further product details

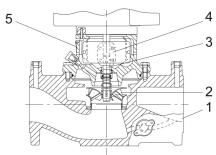
The bronze pump housing and stainless-steel impeller make the pump suitable for circulation of hot water.

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 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 with a split cone with nut.

The pump is fitted with an unbalanced O-ring seal with a rigid torque-transmission system. It has a fixed seal driver ensuring a reliable rotation of all parts. The dynamic secondary seal is an O-ring.

#### Primary seal:

- Rotating seal ring material: tungsten carbide (WC)
- Stationary seat material: tungsten carbide (WC)

This material pairing is extremely wear resistant and can resist rough handling. The dry friction is high, meaning that the pairing has poor dry-running properties. Above certain pressures and temperatures, the seal may generate noise. The run-in wear period can generate noise up to four weeks.

Secondary seal material: EPDM (ethylene-propylene rubber)

## Position | Qty. | Description

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 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 IE3 in accordance with IEC 60034-30-1.

The motor does not incorporate motor protection and must be connected to a motor-protective circuit breaker which can be manually reset. The motor-protective circuit breaker must be set according to the rated current of the motor (11/1).

#### **Technical data**

## Liquid:

Pumped liquid: Water
Liquid temperature range: 0 .. 90 °C
Liquid temperature during operation: 20 °C
Density: 998.2 kg/m³

#### Technical:

Rated flow: 39.1 m³/h
Rated head: 4.97 m
Primary shaft seal: AUUE

Curve tolerance: ISO9906:2012 3B

#### Materials:

Pump housing: Bronze

DIN W.-Nr. 2.1050 ASTM B505-C90700

Impeller: Stainless steel

DIN W.-Nr. 1.4301

**AISI 304** 

## Installation:

Range of ambient temperature: -30 .. 60 °C

Maximum operating pressure: 6 bar

Flange standard: DIN

Pipe connection: DN 80

Pressure rating: PN 6

(@): 360 mm

Flange size for motor: FT100

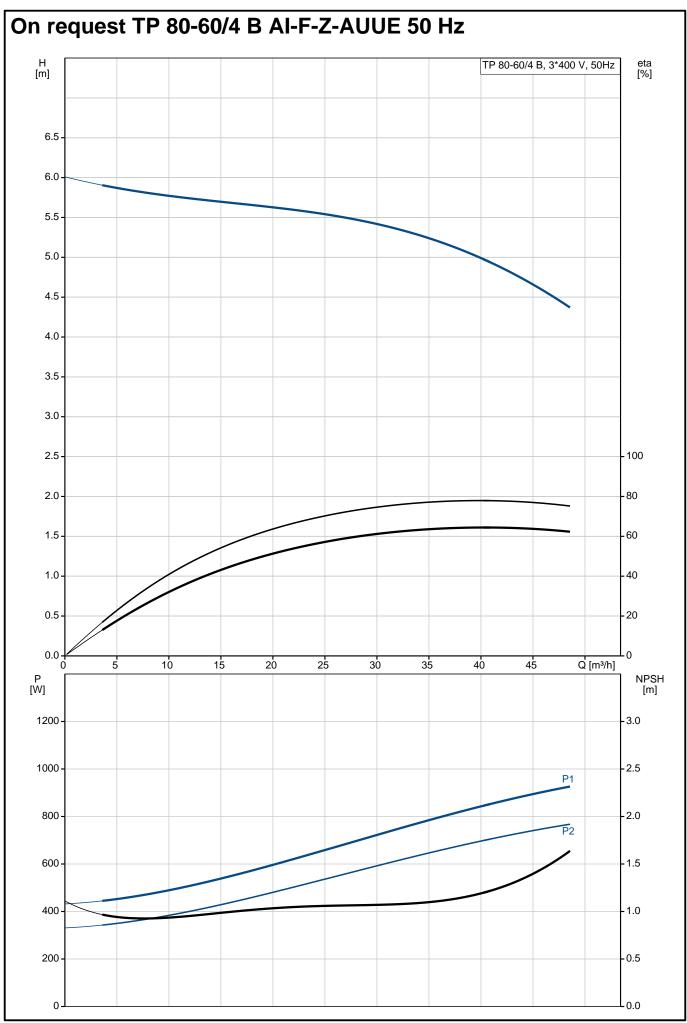
#### **Electrical data:**

Motor type: 90SC
IE Efficiency class: IE3
Rated power - P2: 0.75 kW
Power (P2) required by pump: 0.75 kW
Mains frequency: 50 Hz

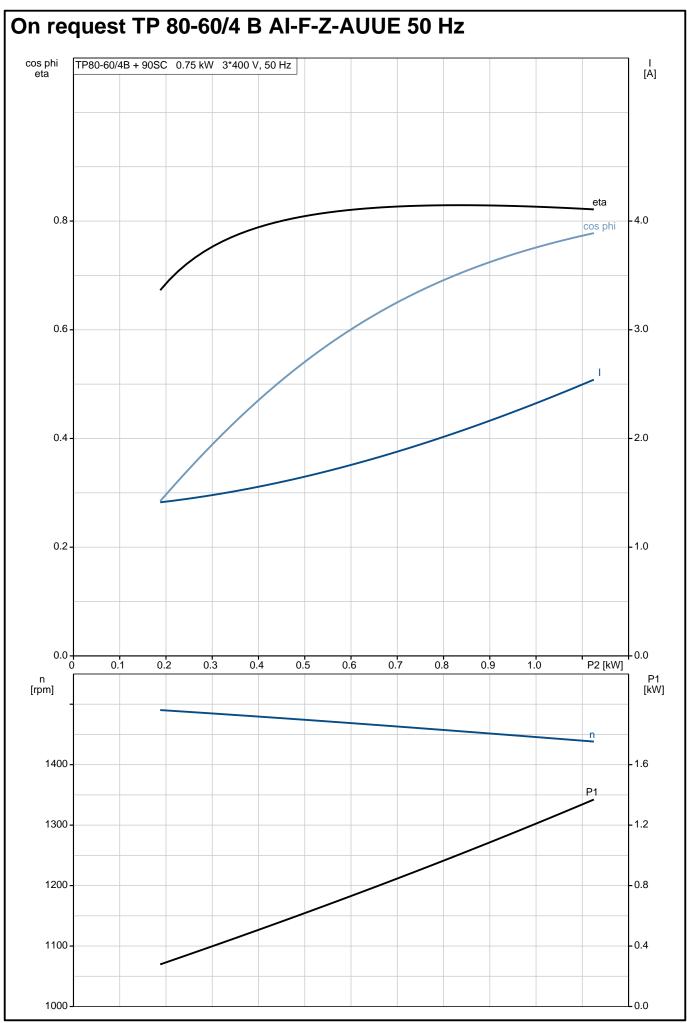
Rated voltage: 3 x 220-240 D/380-415 Y V

Rated current: 3.30/1.90 A Starting current: 620-670 %

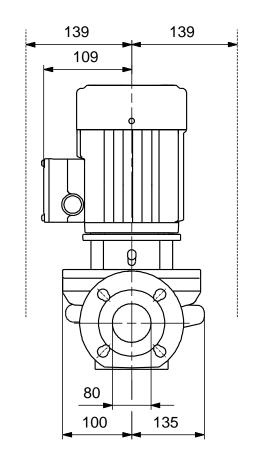
Position   Qty.   D	Description	
C R E M M M N E In	Cos phi - power factor: Rated speed: Efficiency: Motor efficiency at full load: Motor efficiency at 1/2 load: Motor efficiency	0.71-0.64 1455-1463 rpm 1E3 82.5 % 82.5 % 83.6 % 81.1 % 4 55 Dust/Jetting F : 0.70 EuP Standalone/Prod. 55.1 kg 0.16 m³

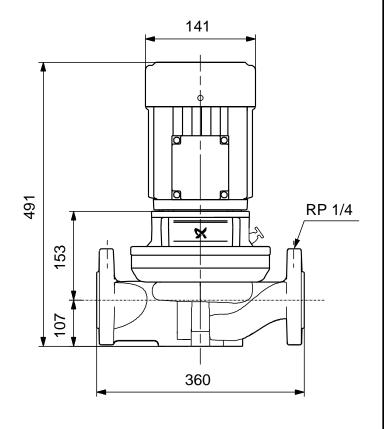


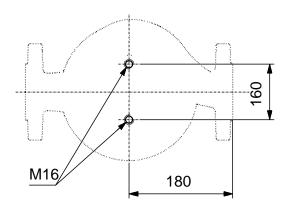
Description	Value	H [m]	TP 80-60/4	B, 3*400 V, 50Hz	eta [%]
General information:					
Product name:	TP 80-60/4 B AI-F-Z-AUUE	6.5 -			
Product No:	On request	6.0			
EAN number:	On request				
Technical:	On request	5.5 -			
Rated flow:	39.1 m³/h	5.0			
Rated head:	4.97 m				
		4.5 -			
Head max:	60 dm	4.0			
Primary shaft seal:	AUUE	2.5			
Curve tolerance:	ISO9906:2012 3B	3.5 -			
Pump version:	Al	3.0			
Model:	A	2.5			<b>-</b> 100
Materials:		2.5			- 100
Pump housing:	Bronze	2.0			- 80
	DIN WNr. 2.1050	1.5			- 60
	ASTM B505-C90700				
Impeller:	Stainless steel	1.0 -			<b>-</b> 40
imponer.	DIN WNr. 1.4301	0.5			-20
	AISI 304				
Material code:	Z	0.0	10 15 20 25 30 35	40 Q [m³/h]	L <sub>0</sub>
		Р			NPSH
Installation:	00 00 00	[W]			[m] -
Range of ambient temperature:	-30 60 °C				
Maximum operating pressure:	6 bar	1000 -		P1	- 2.5
Flange standard:	DIN	000			
Pipe connection:	DN 80	800 -		P2	-2.0
Pressure rating:	PN 6	600 -			<b>-</b> 1.5
(@)	360 mm				
Flange size for motor:	FT100	400 -			<b>-</b> 1.0
Connect code:	F	200			<b>-</b> 0.5
Liquid:		2007			-0.5
Pumped liquid:	Water	0			L <sub>0.0</sub>
Liquid temperature range:	0 90 °C				
Liquid temperature during operation:	20 °C	139 139 109	141	-	
Density:	998.2 kg/m³		• -	-	
Electrical data:	990.2 kg/III-		\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1	
	2020				
Motor type:	90SC				
IE Efficiency class:	IE3		64	RP 1/4	
Rated power - P2:	0.75 kW			Ď Č	
Power (P2) required by pump:	0.75 kW	AMI			
Mains frequency:	50 Hz				
Rated voltage:	3 x 220-240 D/380-415 Y V	80	360		
Rated current:	3.30/1.90 A	100 135	H=		
Starting current:	620-670 %				
Cos phi - power factor:	0.71-0.64		n	\ \ \ \	
Rated speed:	1455-1463 rpm				
Efficiency:	IE3 82,5%		In/_	/ <del>       </del>	
Motor efficiency at full load:	82.5 %		· //		
Motor efficiency at 3/4 load:	83.6 %		M16/	80	
Motor efficiency at 1/2 load:	81.1 %		LOW VOLTAGE DIRECTION OF ROTATION		
Number of poles:	4		DIRECTION OF ROTATION		
Enclosure class (IEC 34-5):	55 Dust/Jetting	'			
Insulation class (IEC 85):	F				
Motor protec:	NONE		(MS) (AS)		
Motor No:	86U05904				
Others:					
Minimum efficiency index, MEI :	0.70		L1 L2 L3		
ErP status:	EuP Standalone/Prod.				
Net weight:	55.1 kg	DIR	HIGH VOLTAGE ECTION OF ROTATION		
Gross weight:	61 kg				
Shipping volume:	0.16 m <sup>3</sup>				
Chipping Volume.	5.10 III		<u> </u>		
			<b>■</b> (U1) (V1) (W1)		
			1 ( ) ( ) ( ) ( )		



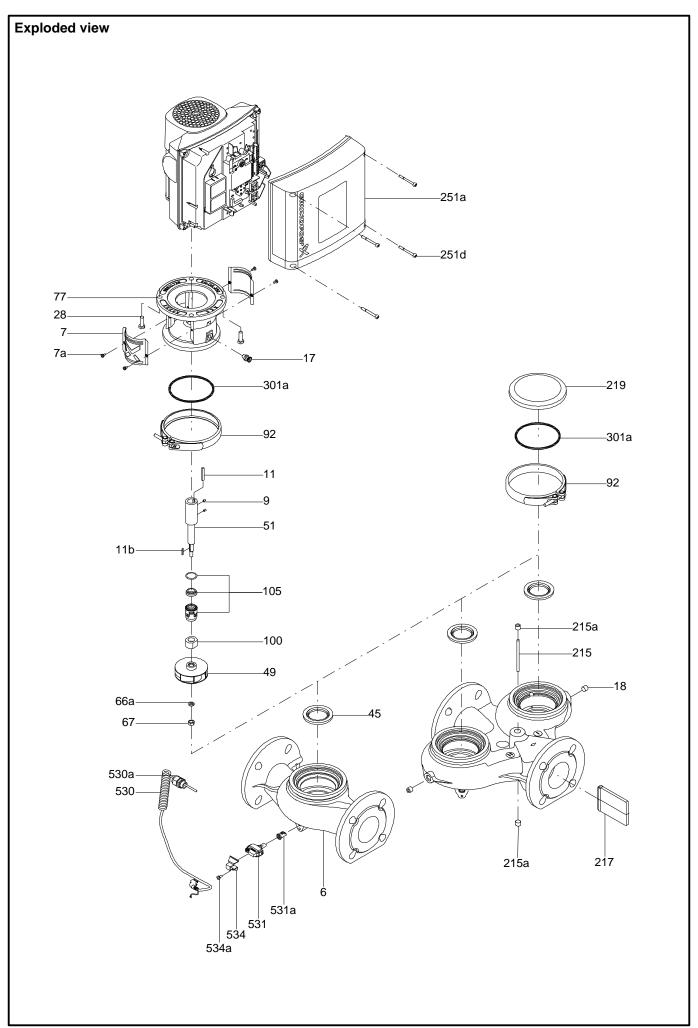
# On request TP 80-60/4 B AI-F-Z-AUUE 50 Hz

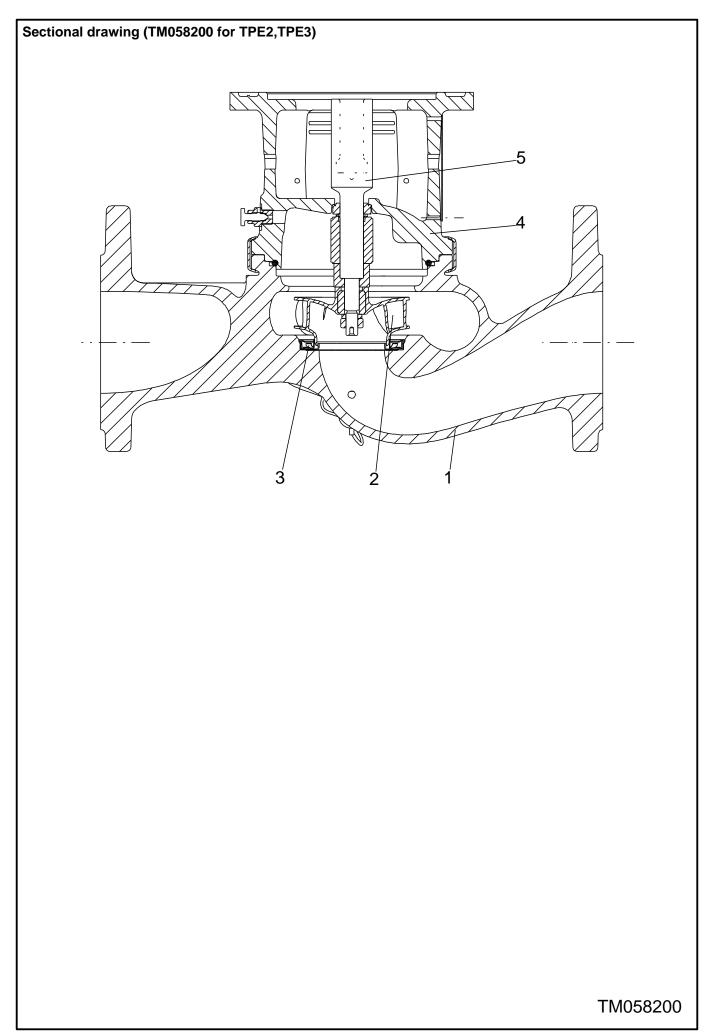


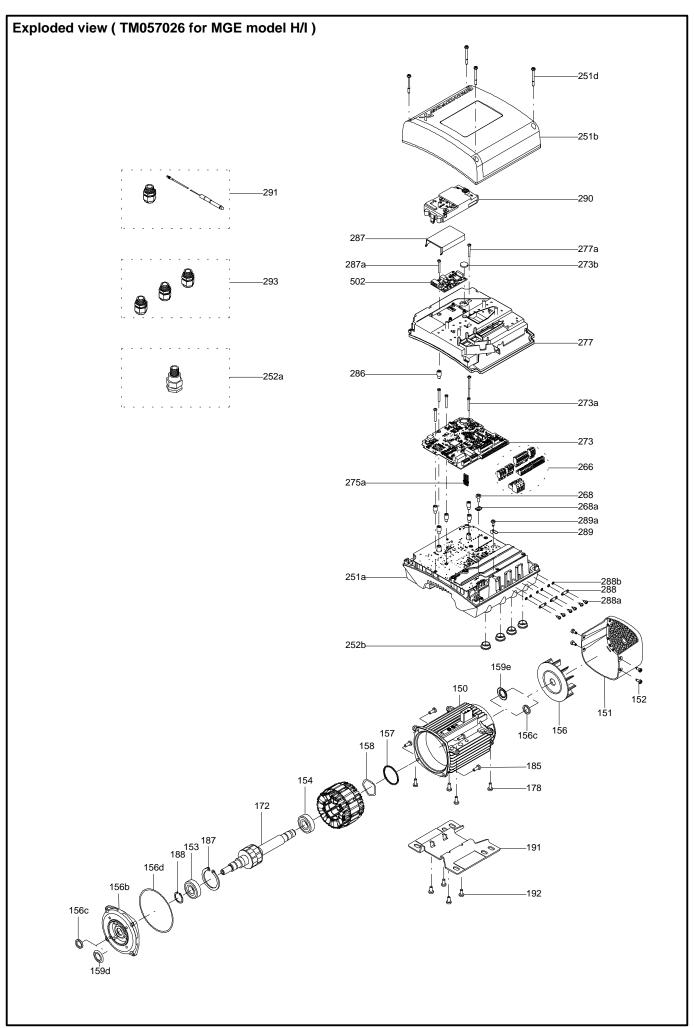




Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.







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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