

### TP 50-80/2-A-F-A-BUBE 400Y 60HZ

Grundfos pump 96430774



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https://www.lenntech.com/grundfos/TP000/96430774/TP-50-80-2-A-F-A-BUBE.html

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#### Position | Qty. | Description

1

#### TP 50-80/2 A-F-A-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 pump is fitted with an unbalanced rubber bellows seal. 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 asynchronous motor.

#### Further product details

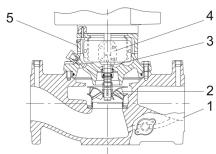
The product's minimum efficiency index (MEI) is greater or equal to 0.70. This is by the Commission Regulation (EU) considered as an indicative benchmark for best-performing water pump available on the market as from 1 January 2013.

#### **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 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.

#### Position | Qty. | Description

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 premium efficiency in accordance with EISA2007.

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 (I1/1).

#### **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: 20 m³/h
Rated head: 6.71 m
Actual impeller diameter: 74 mm
Primary shaft seal: BUBE

Curve tolerance: ISO9906:2012 3B

#### Materials:

Impeller:

Pump housing: Cast iron

EN-JL1040

ASTM A48-40 B Stainless steel

DIN W.-Nr. 1.4301

**AISI 304** 

#### Installation:

Range of ambient temperature: -30 .. 40 °C Maximum operating pressure: 10 bar Flange standard: DIN Pipe connection: **DN 50** Pump inlet: **DN 50** Pump outlet: **DN 50** Pressure rating: PN 6/10 280 mm (@):Flange size for motor: FT85

#### Electrical data:

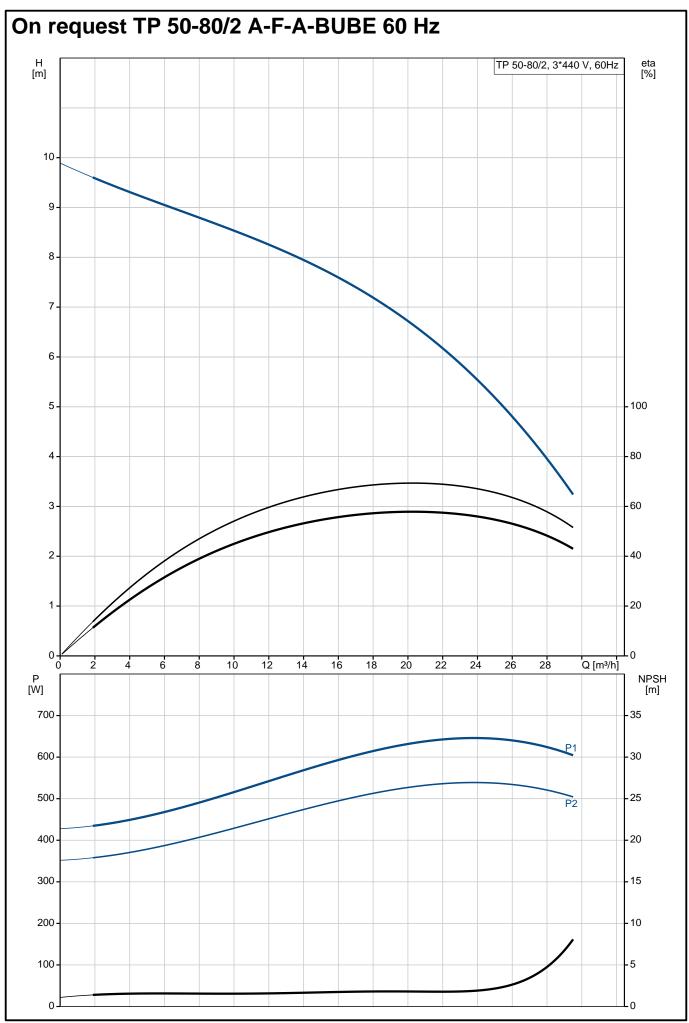
Motor type: 71B

IE Efficiency class: NEMA Premium / IE3 60Hz

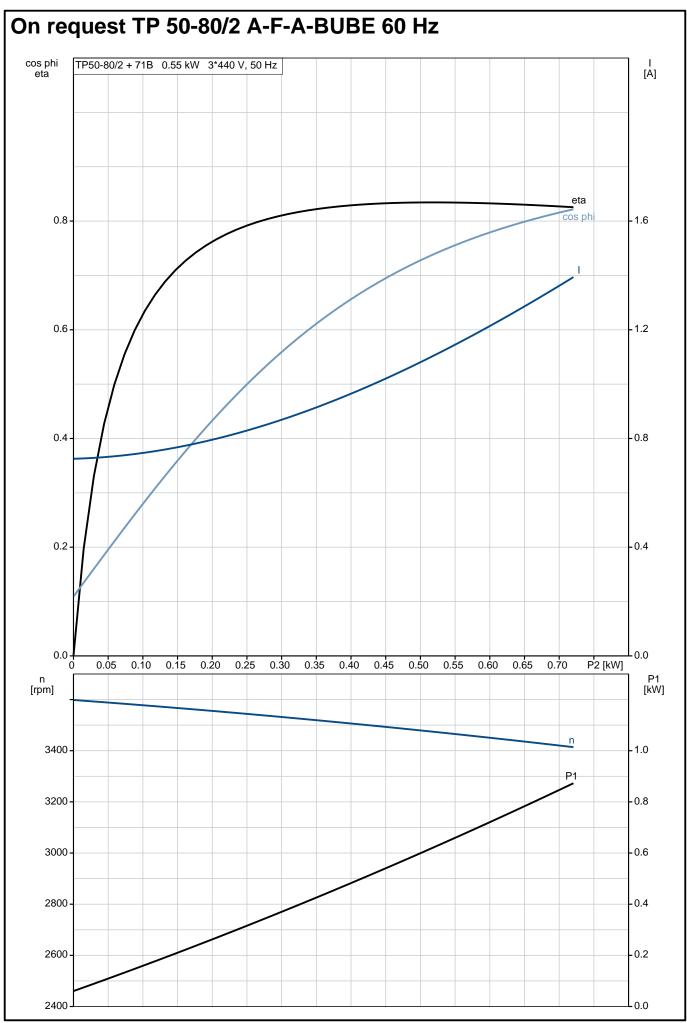
Rated power - P2: 0.55 kW Power (P2) required by pump: 0.55 kW Mains frequency: 60 Hz

Rated voltage: 3 x 220-255D/380-440Y V Rated current: 2,15-2,05/1,25-1,20 A

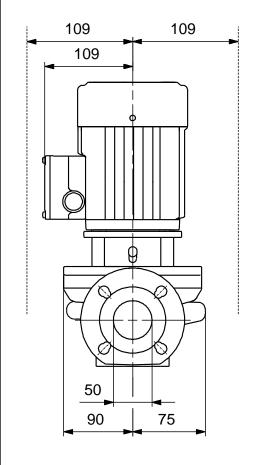
Position	Qty.	Description	
		Starting current: Cos phi - power factor: Rated speed: Efficiency: Motor efficiency at full load: Motor efficiency at 3/4 load: Motor efficiency at 1/2 load: Number of poles: Enclosure class (IEC 34-5): Insulation class (IEC 85):  Others:	500-600 % 0.85-0.76 3390-3460 rpm IE3 76,8% 76.8 % 81.5 % 79.5 % 2 55 Dust/Jetting F
		Minimum efficiency index, MEI ErP status: Net weight: Gross weight: Shipping volume:	: 0.70 EuP Standalone/Prod. 24.9 kg 27.4 kg 0.06 m³

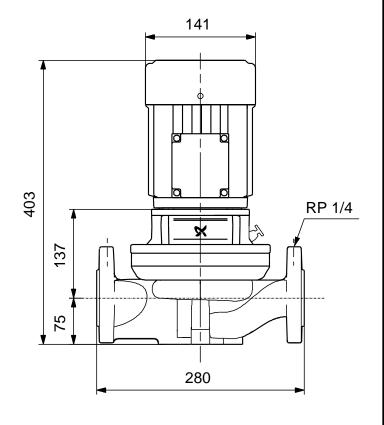


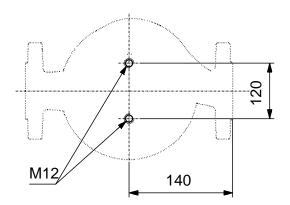
Description	Value	H [m] TP 50-80/2, 3*440 V, 60Hz eta [%]
General information:		
Product name:	TP 50-80/2 A-F-A-BUBE	40
Product No:	On request	10
EAN number:	On request	9-
Technical:		
Rated flow:	20 m³/h	8-
Rated head:	6.71 m	
Head max:	80 dm	7-
Actual impeller diameter:	74 mm	
Primary shaft seal:	BUBE	6
Curve tolerance:	ISO9906:2012 3B	5 100
Pump version:	A	4-80
Model:	A	
Materials:		3-60
Pump housing:	Cast iron	
	EN-JL1040	2 40
	ASTM A48-40 B	1 20
Impeller:	Stainless steel	
	DIN WNr. 1.4301	0
	AISI 304	Ö 5 10 15 20 25 Q [m³/h]
Material code:	A	P [W] NPSH [m]
Installation:		
Range of ambient temperature:	-30 40 °C	600
Maximum operating pressure:	10 bar	
Flange standard:	DIN	500 - P2 - 25
		400
Pipe connection:	DN 50	300
Pump inlet:	DN 50	
Pump outlet:	DN 50	200
Pressure rating:	PN 6/10	100
(@)	280 mm	
Flange size for motor:	FT85	0
Connect code:	F	109 109
Liquid:		109
Pumped liquid:	Water	
Liquid temperature range:	0 140 °C	
Liquid temperature during operation:	20 °C	
Density:	998.2 kg/m³	RP 1/4
Electrical data:		-      <b>  </b>
Motor type:	71B	
IE Efficiency class:	NEMA Premium / IE3 60Hz	
Rated power - P2:	0.55 kW	
Power (P2) required by pump:	0.55 kW	90 75
Mains frequency:	60 Hz	<del> </del>
Rated voltage:		
	3 x 220-255D/380-440Y V	
Rated current:	2,15-2,05/1,25-1,20 A	
Starting current:	500-600 %	· · · · · · · · · · · · · · · · · · ·
Cos phi - power factor:	0.85-0.76	M12
Rated speed:	3390-3460 rpm	··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··
Efficiency:	IE3 76,8%	HIGH VOLTAGE
Motor efficiency at full load:	76.8 %	DIRECTION OF ROTATION
Motor efficiency at 3/4 load:	81.5 %	
Motor efficiency at 1/2 load:	79.5 %	▘▎▗▃ ▕▗ <del>▎▔</del> ░░  ┃
Number of poles:	2	
Enclosure class (IEC 34-5):	55 Dust/Jetting	
	F	
Insulation class (IEC 85):	NONE	
Insulation class (IEC 85): Motor protec:		
Motor protec:	85805103	
Motor protec: Motor No:	85805103	LOW VOLTAGE DIRECTION OF ROTATION
Motor protec: Motor No: Others:		LOW VOLTAGE DIRECTION OF ROTATION
Motor protec: Motor No: Others: Minimum efficiency index, MEI:	0.70	
Motor protec: Motor No: Others: Minimum efficiency index, MEI: ErP status:	0.70 EuP Standalone/Prod.	
Motor protec: Motor No: Others: Minimum efficiency index, MEI: ErP status: Net weight:	0.70 EuP Standalone/Prod. 24.9 kg	LOW VOLTAGE DIRECTION OF ROTATION  TOWN TOLER OF ROTATION  TOWN TOLER OF ROTATION  TOWN TOLER OF ROTATION  TOWN TOLER OF ROTATION
Motor protec: Motor No: Others: Minimum efficiency index, MEI: ErP status: Net weight: Gross weight:	0.70 EuP Standalone/Prod. 24.9 kg 27.4 kg	
Motor protec: Motor No: Others: Minimum efficiency index, MEI: ErP status: Net weight:	0.70 EuP Standalone/Prod. 24.9 kg	



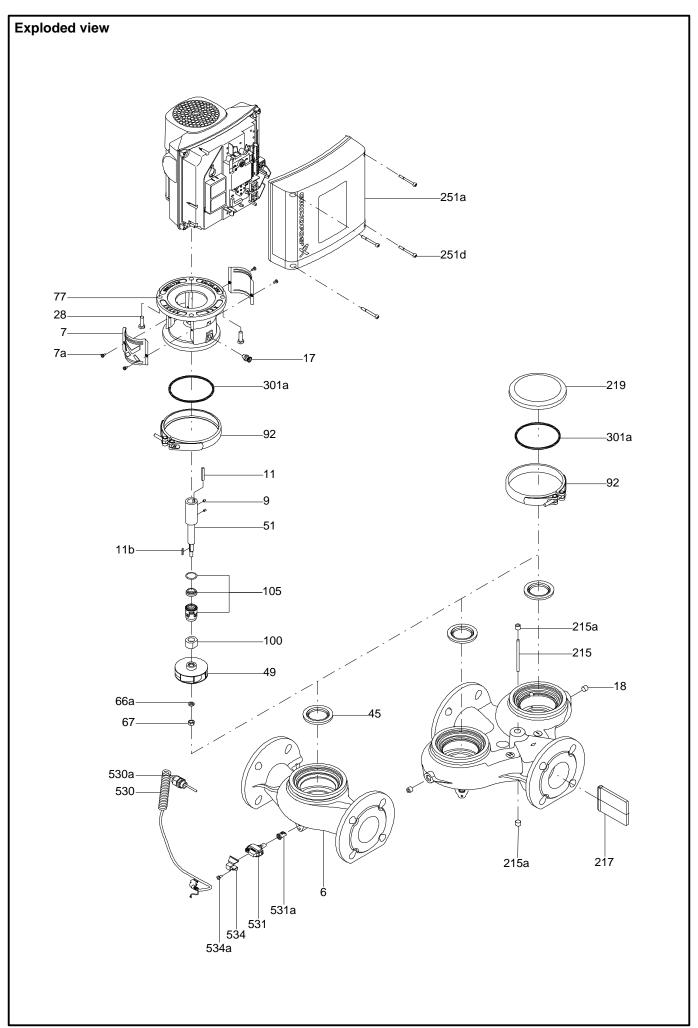
## On request TP 50-80/2 A-F-A-BUBE 60 Hz

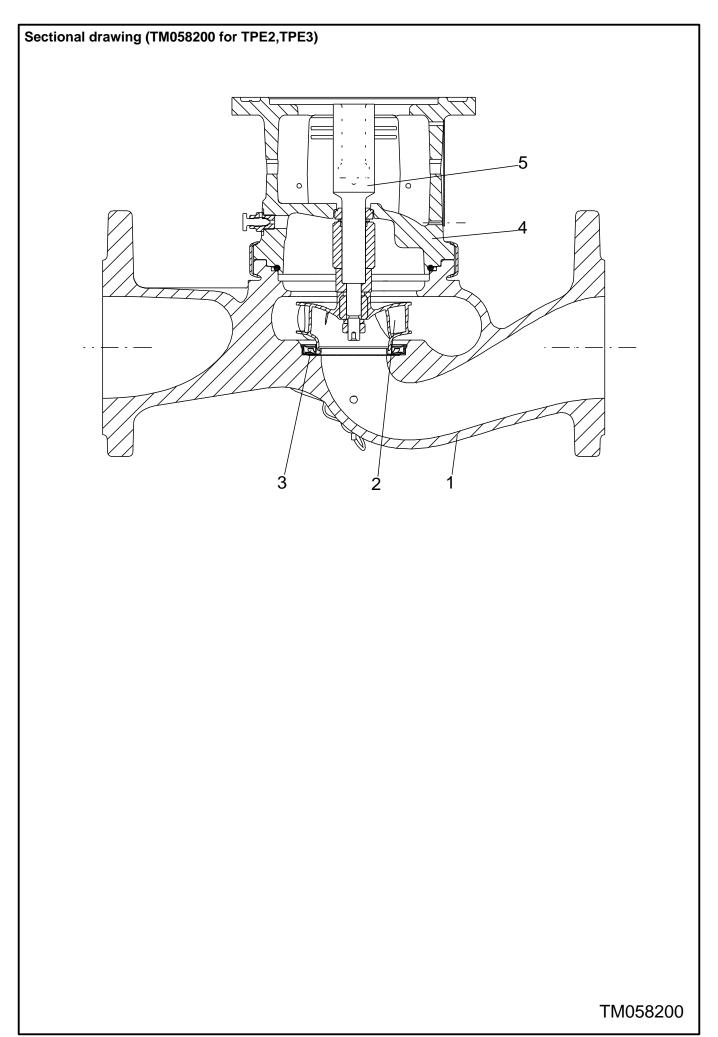


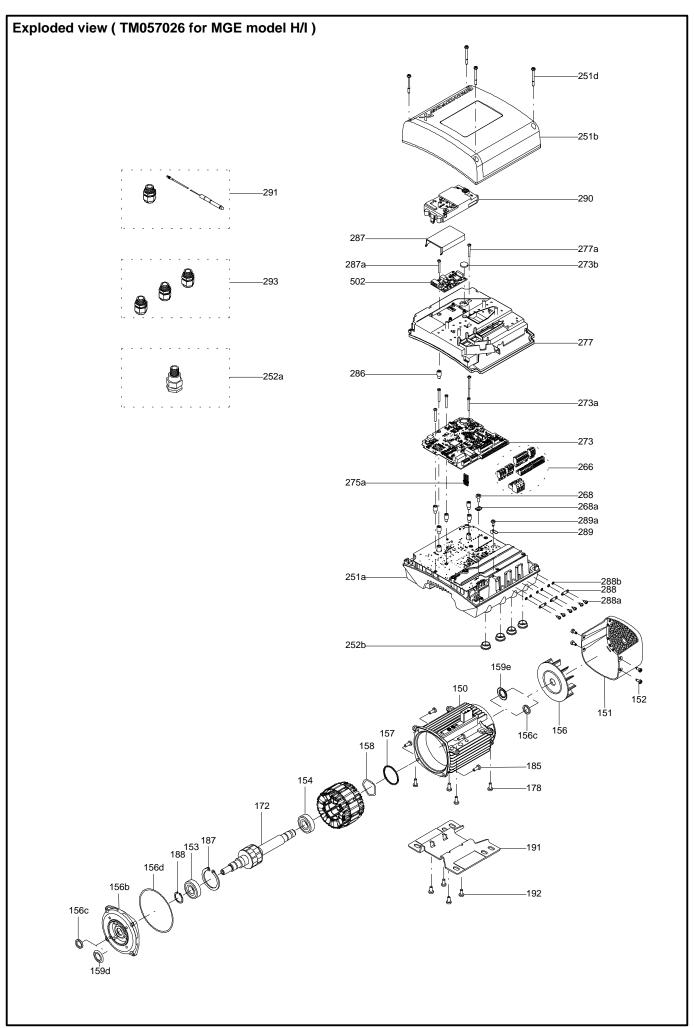




Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.







# Parts list TP 50-80/2, Product No. On request Valid from 20.6.2010 (1024)

	Pos	Description	Annotation	Données de classification	Référence	Quanti	té Unité
+		Motor				1	pcs
-		Coupling cpl.				1	pcs
	9	Hex socket head cap screw		Designation: DIN 912		4	
				Length (mm): 20			
				Thread: M6			
	10	Shaft pin		Diameter: 5		1	
				Length (mm): 26			
	10a	Coupling half				2	
-		Motor stool cpl.				1	pcs
	2	Motor stool				1	
	26	Hex head screw				4	
	28	Hex head screw		Length (mm): 20		4	
				Thread: M8			
-		Pump housing cpl.				1	pcs
	6	Pump housing				1	
	65	Teflon ring				1	
-		Coupling guard cpl.				1	pcs
	7	Coupling guard				2	
	7a	Pan head screw				4	
-		Shaft w/impeller cpl.				1	pcs
	48	Split cone nut				1	
	49	Impeller cpl.				1	
	49b	Split cone				1	
	51	Pump shaft				1	
	18	Air vent screw		Thread: 1/4"		1	pcs
	19	Plug				2	pcs
	72a	O-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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