

### TP 40-140/4-A-F-A-BQQE 400Y 50HZ

Grundfos pump 98743317



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https://www.lenntech.com/grundfos/TP000/98743317/TP-40-140-4-A-F-A-BQQE.html

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#### Position | Qty. | Description

1 TP 40-140/4 A-F-A-BQQE



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 16 DIN flanges (EN 1092-2 and ISO 7005-2).

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

#### Further product details

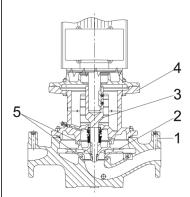
The product's minimum efficiency index (MEI) is greater or equal to 0.70. This is by the Commission Regulation (EU) considered as an indicative benchmark for best-performing water pump available on the market as from 1 January 2013.

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

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 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 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).

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: 19.2 m³/h
Rated head: 11.5 m
Actual impeller diameter: 212 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

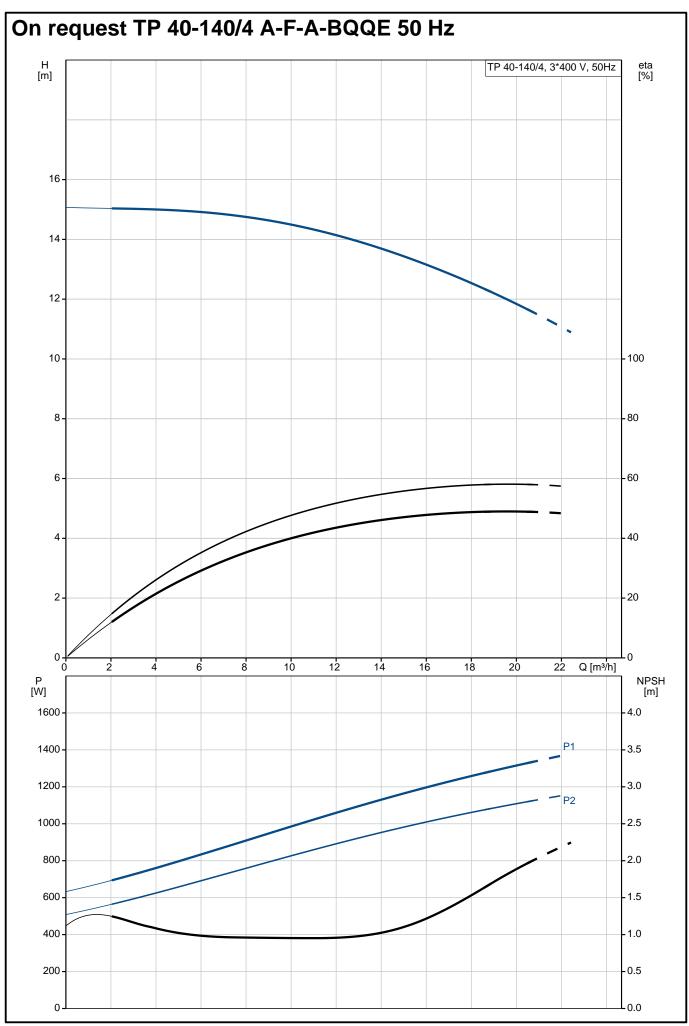
#### Installation:

Range of ambient temperature: -30 .. 60 °C Maximum operating pressure: 16 bar Flange standard: DIN Pipe connection: **DN 40** Pump inlet: **DN 40** Pump outlet: **DN 40** Pressure rating: **PN 16** 440 mm Flange size for motor: FF165

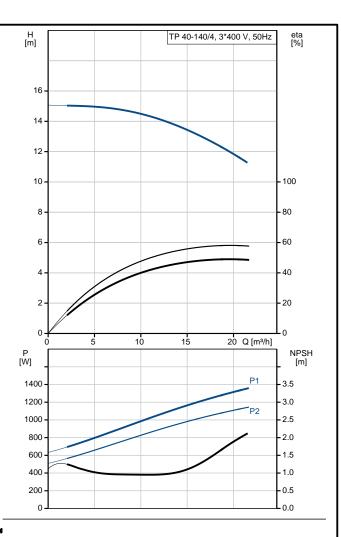
#### **Electrical data:**

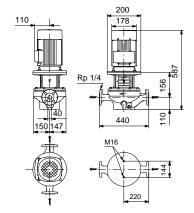
Motor type: 90SB
IE Efficiency class: IE3
Rated power - P2: 1.1 kW

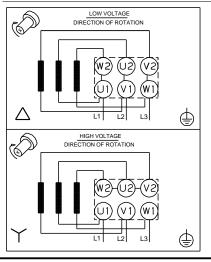
Position   Q	ty. Description	
Position Q	Power (P2) required by pump: Mains frequency: Rated voltage: Rated current: Starting current: Cos phi - power factor: Rated speed: Efficiency: Motor efficiency at full load: Motor efficiency at 3/4 load: Motor efficiency at 1/2 load: Number of poles: Enclosure class (IEC 34-5): Insulation class (IEC 85):  Others: Minimum efficiency index, MEI ErP status: Net weight: Gross weight: Shipping volume: Norwegian NRF no.:	50 Hz 3 x 220-240D/380-415Y V 4.85/2.80 A 820-900 % 0.71-0.64 1450-1460 rpm IE3 84,1% 84.1 % 84.6 % 82.9 % 4 55 Dust/Jetting F

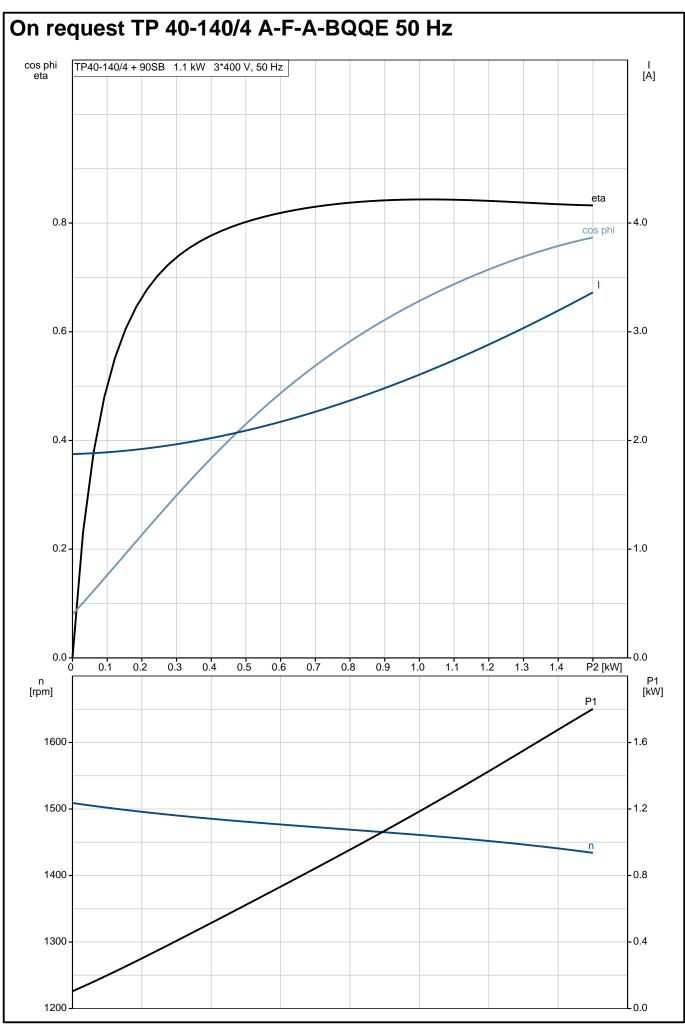


Description	Value		
General information:			
Product name:	TP 40-140/4 A-F-A-BQQE		
Product No:	On request		
EAN number:	On request		
Technical:			
Rated flow:	19.2 m³/h		
Rated head:	11.5 m		
Head max:	140 dm		
Actual impeller diameter:	212 mm		
Primary shaft seal:	BQQE		
Curve tolerance:	ISO9906:2012 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 40		
Pump inlet:	DN 40		
•	DN 40		
Pump outlet:			
Pressure rating:	PN 16		
(@)	440 mm		
Flange size for motor:	FF165		
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:	90SB		
IE Efficiency class:	IE3		
Rated power - P2:	1.1 kW		
Power (P2) required by pump:	1.1 kW		
Mains frequency:	50 Hz		
Rated voltage:	3 x 220-240D/380-415Y V		
Rated current:	4.85/2.80 A		
Starting current:	820-900 %		
Cos phi - power factor:	0.71-0.64		
Rated speed:	1450-1460 rpm		
Efficiency:	IE3 84,1%		
Motor efficiency at full load:	84.1 %		
Motor efficiency at 3/4 load:	84.6 %		
Motor efficiency at 1/2 load:	82.9 %		
Number of poles:	4		
Enclosure class (IEC 34-5):	55 Dust/Jetting		
• • • • • • • • • • • • • • • • • • • •	F Dust/Jetting		
Insulation class (IEC 85):			
Motor protec:	NONE 07000046		
	87220316		
Motor No:			
Others:			
Others: Minimum efficiency index, MEI :	0.7		
Others: Minimum efficiency index, MEI: ErP status:	0.7 EuP Standalone/Prod.		
Others: Minimum efficiency index, MEI: ErP status:	EuP Standalone/Prod. 60 kg		
Others: Minimum efficiency index, MEI :	EuP Standalone/Prod.		
Others: Minimum efficiency index, MEI: ErP status: Net weight:	EuP Standalone/Prod. 60 kg		

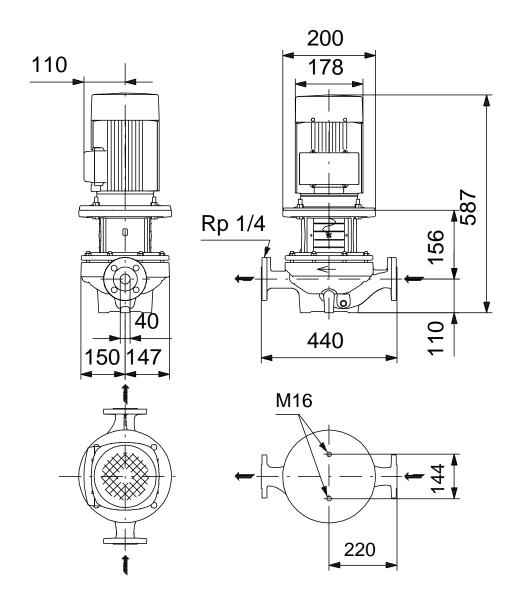




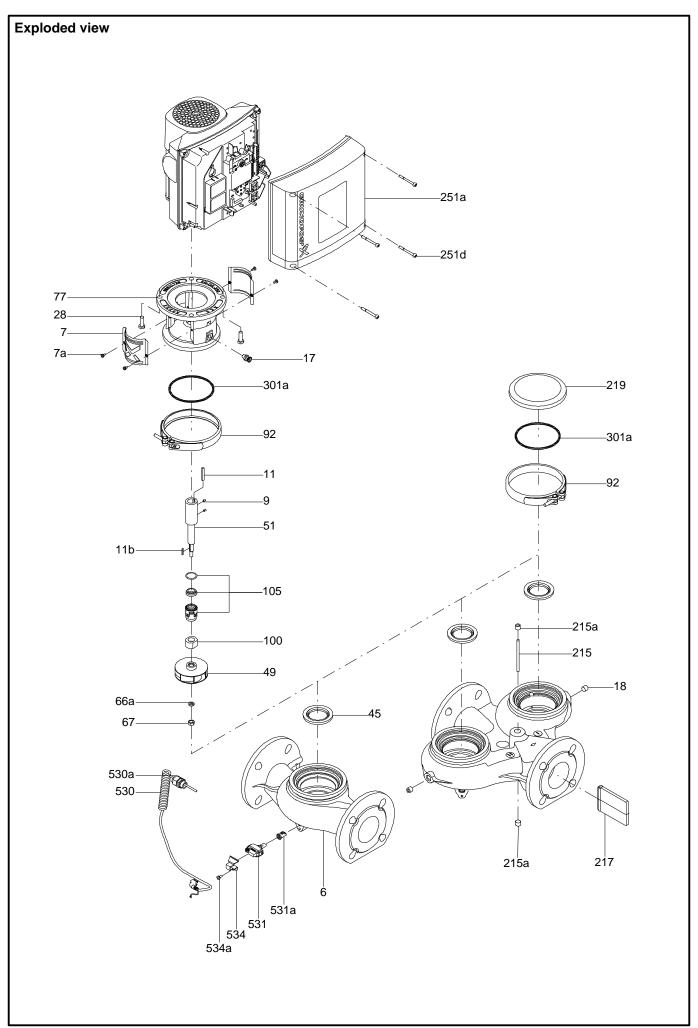


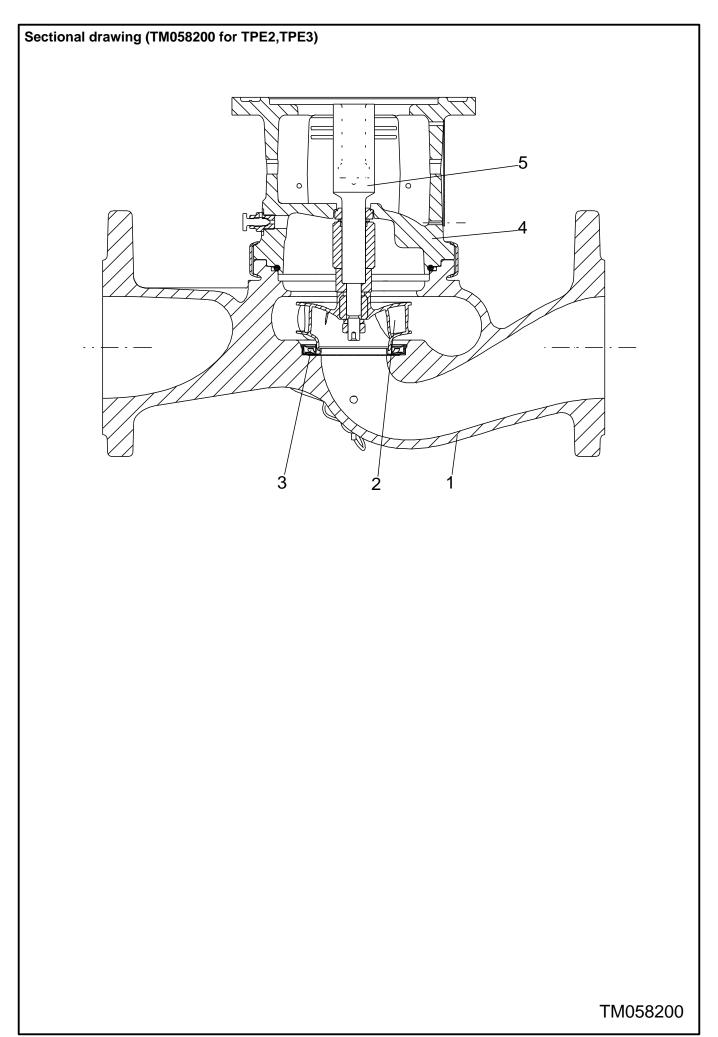


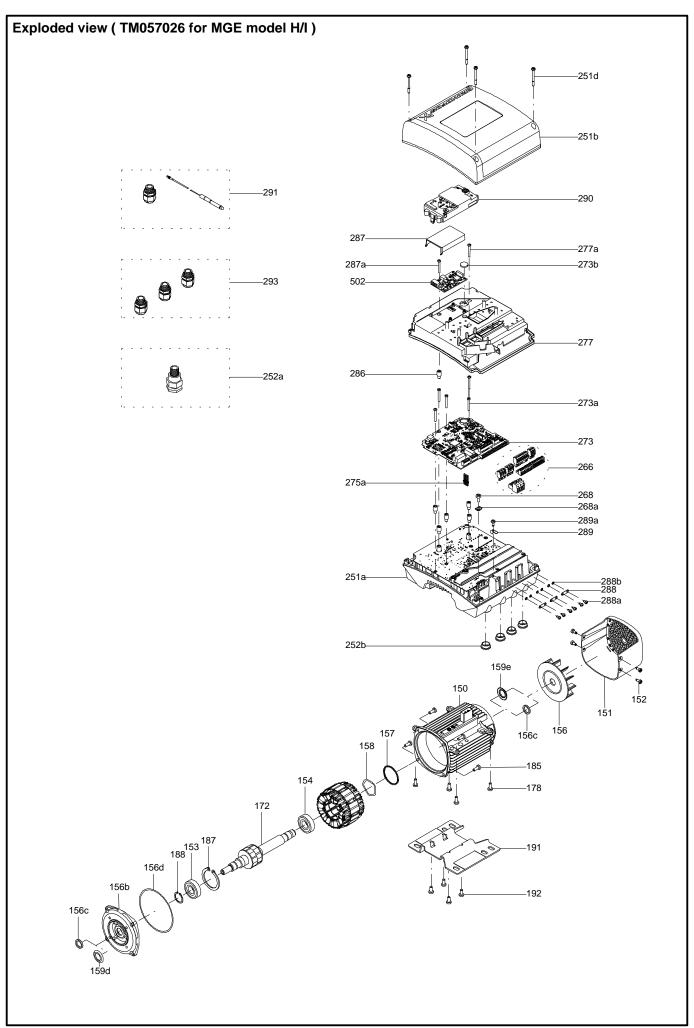
## On request TP 40-140/4 A-F-A-BQQE 50 Hz



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







# Parts list TP 40-140/4, Product No. On request Valid from 1.1.2011 (1152)

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
	Motor				1	pcs
	Nut				1	pcs
66	Washer				1	
66a	Spring lock washer				1	
67	Nut		Thread: M14		1	
	Motor stool cpl.				1	pcs
1a	Motor stool				1	
7	Coupling guard				2	
9	Hex socket head cap screw		Length (mm): 30		4	
			Thread: M10			
77a	Pan head screw				4	
	Pump housing cpl.				1	pcs
6	Pump housing				1	
36	Nut		Thread: M10		8	
	Shaft seal cpl.				1	pcs
72.a	O-ring		Diameter: 221,84		1	
			Material type: EPDM			
			Thickness: 3,53			
105	Shaft seal				1	
	Stub shaft				1	pcs
9	Socket set screw		Length (mm): 6		2	
			Thread: M8			
11	Parallel key		Dimension: 6X6X35		1	
51	Pump shaft				1	
17	Air vent screw				1	pcs
19	Plug				2	pcs
49	Impeller				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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