

TP 150-220/4-A-F-A-BQQE 400D 50HZ

Grundfos pump 96109872



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https://www.lenntech.com/grundfos/TP000/96109872/TP-150-220-4-A-F-A-BQQE.html

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Position | Qty. | Description

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TP 150-220/4 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).

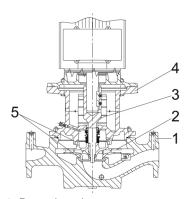
The pump is fitted with a fan-cooled asynchronous motor.

Further product details 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.

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.

Position | Qty. | Description

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: 278 m³/h
Rated head: 18.2 m
Actual impeller diameter: 256 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:

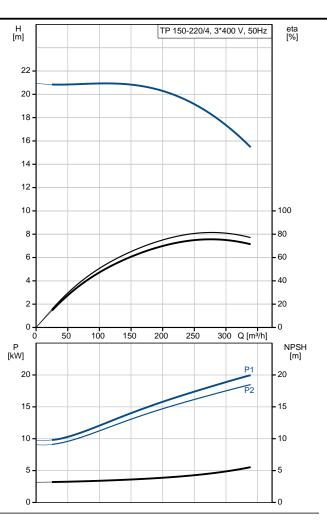
Range of ambient temperature: -20 .. 55 °C Maximum operating pressure: 16 bar Flange standard: DIN Pipe connection: **DN 150** Pump inlet: **DN 150** Pump outlet: **DN 150** Pressure rating: PN 16 (@):800 mm Flange size for motor: FF300

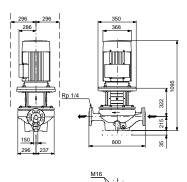
Electrical data:

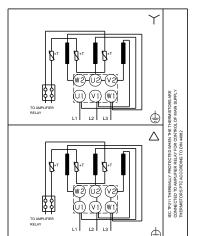
Motor type: SIEMENS
IE Efficiency class: IE3
Rated power - P2: 18.5 kW
Power (P2) required by pump: 18.5 kW

Position	Qty.	Description	
	-	Mains frequency: Rated voltage: Rated current: Starting current: Cos phi - power factor: Rated speed: Efficiency: Motor efficiency at full load: Motor efficiency at 1/2 load: Number of poles: Enclosure class (IEC 34-5): Insulation class (IEC 85):	50 Hz 3 x 380-420D/660-725Y V 37,0-33,5/21,6-19,6 A 690-690 % 0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting F
		Others: Minimum efficiency index, MEI ErP status: Net weight: Gross weight: Shipping volume: Danish VVS No.:	: 0.65 EuP Standalone/Prod. 378 kg 426 kg 1.12 m³ 381718220

Description	Value
General information:	value
Product name:	TP 150-220/4 A-F-A-BQQE
Product No:	On request
EAN number:	On request
Technical:	On request
Rated flow:	278 m³/h
Rated head:	18.2 m
Head max:	220 dm
Actual impeller diameter:	256 mm
Primary shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Materials:	
	Cast iron
Pump housing:	EN-JL1040
Inno allan	ASTM A48-40 B
Impeller:	Cast iron
	EN-JL1030
	ASTM A48-30 B
Material code:	A
Installation:	
Range of ambient temperature:	-20 55 °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/m³
Electrical data:	
Motor type:	SIEMENS
IE Efficiency class:	IE3
Rated power - P2:	18.5 kW
Power (P2) required by pump:	18.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-420D/660-725Y V
Rated current:	37,0-33,5/21,6-19,6 A
Starting current:	01,0 00,0121,0-10,0 A
	690-690 %
	690-690 % 0.82
Cos phi - power factor:	0.82
Cos phi - power factor: Rated speed:	0.82 1470 rpm
Cos phi - power factor: Rated speed: Efficiency:	0.82 1470 rpm IE3 92,6%
Cos phi - power factor: Rated speed: Efficiency: Motor efficiency at full load:	0.82 1470 rpm IE3 92,6% 92.6-92.6 %
Cos phi - power factor: Rated speed: Efficiency: Motor efficiency at full load: Motor efficiency at 3/4 load:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 %
Cos phi - power factor: Rated speed: Efficiency: Motor efficiency at full load: Motor efficiency at 3/4 load: Motor efficiency at 1/2 load:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 %
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:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 %
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):	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting
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):	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting
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): Motor protec:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting
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):	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting
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): Motor protec:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting F PTC
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): Motor protec: Motor No:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting F PTC
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): Motor protec: Motor No: Others:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting F PTC 99032117
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): Motor protec: Motor No: Others: Minimum efficiency index, MEI : ErP status:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 4 55 Dust/Jetting F PTC 99032117 0.65 EuP Standalone/Prod.
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): Motor protec: Motor No: Others: Minimum efficiency index, MEI : ErP status: Net weight:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting F PTC 99032117 0.65 EuP Standalone/Prod. 378 kg
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): Motor protec: Motor No: Others: Minimum efficiency index, MEI: ErP status: Net weight: Gross weight:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting F PTC 99032117 0.65 EuP Standalone/Prod. 378 kg 426 kg
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): Motor protec: Motor No: Others: Minimum efficiency index, MEI : ErP status: Net weight:	0.82 1470 rpm IE3 92,6% 92.6-92.6 % 93.2-93.2 % 93.2-93.2 % 4 55 Dust/Jetting F PTC 99032117 0.65 EuP Standalone/Prod. 378 kg







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