

The shaft seal is according to EN 12756. Pipework connection is via PN 16 DIN flanges (EN 1092-2 and ISO 7005-2).

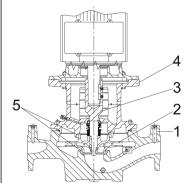
16/06/2022

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

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

Cast-iron parts have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.

#### Pump



- 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.

Seal faces:

- 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.



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### Description

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.

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

Qty.

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 efficiency is classified as IE3 in accordance with IEC 60034-30-1.

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.

#### Further product details

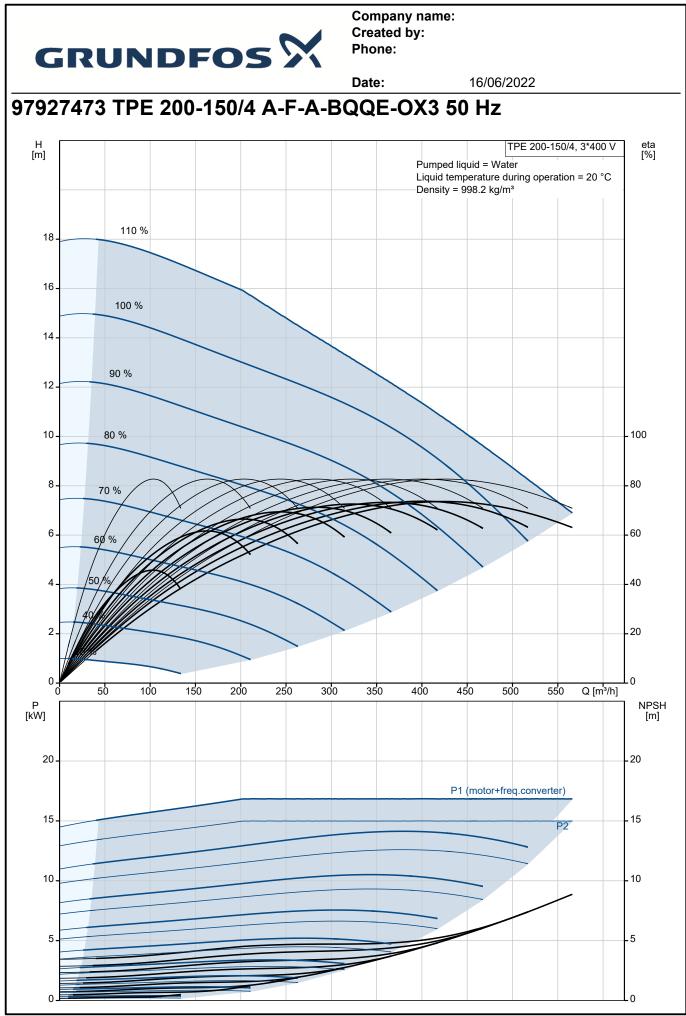
Cast-iron parts have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.

### **Technical data**

Controls: Frequency converter:	Built-in
Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density:	Water -25 120 °C 20 °C 998.2 kg/m³
Technical: Pump speed on which pump data Rated flow: Rated head: Actual impeller diameter: Code for shaft seal: Curve tolerance:	are based: 1470 rpm 396 m <sup>3</sup> /h 9.6 m 224 mm BQQE ISO9906:2012 3B
Materials: Pump housing: Impeller:	Cast iron EN-GJL-250 ASTM class 35 Cast iron EN-GJL-200 ASTM class 30
Installation: Range of ambient temperature: Maximum operating pressure: Max pressure at stated temp: Type of connection: Size of connection: Pressure rating for connection: Port-to-port length: Flange size for motor:	-20 40 °C 16 bar 16 bar / 120 °C DIN DN 200 PN 16 900 mm FF300



Description   Electrical data:   Motor type: 160LB   IE Efficiency class: IE3   Rated power - P2: 15 kW   Mains frequency: 50 Hz   Rated voltage: 3 x 380-480 V   Rated current: 30.0-25.4 A   Cos phi - power factor: 0.90-0.85   Rated speed: 240-1750 rpm   Efficiency: IE3 92.1%   Motor efficiency at full load: 92.1 %   Number of poles: 4   Enclosure class (IEC 34-5): IP55   Insulation class (IEC 85): F   Motor No: 86906190   Others: 0.70   Net weight: 408 kg   Gross weight: 504 kg   Shipping volume: 1.68 m³   Danish VVS No.: 382039150   Finnish LVI No.: 4616523   Country of origin: HU   Custom tariff no.: 84137051	16/06/2022
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Custom tariff no.: 84137051	



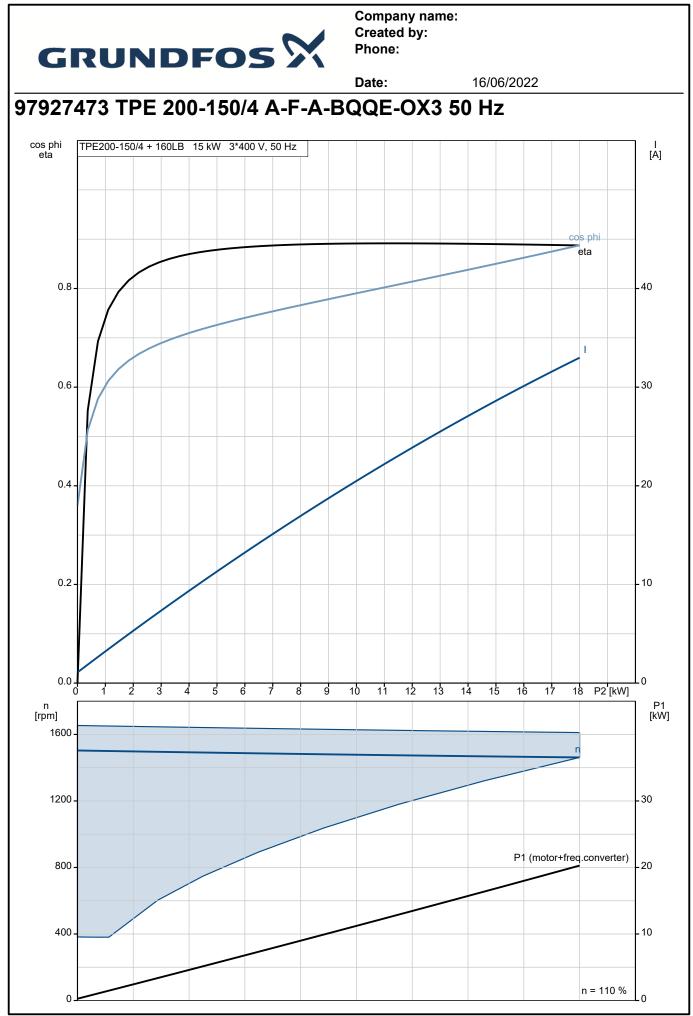


		Date:		16/06/202	.2		
Description	Value	H [m]		TPE 200-150/4, 3*400 V			
General information:		[]		umped liquid = V		ion - 00.00	
roduct name:	TPE 200-150/4 A-F-A-BQQE-OX3	18 -		quid temperature ensity = 998.2 kç		ion = 20 °C	
roduct No:	97927473						
AN number:	5710626550111	16 -	100 %				-
echnical:	0710020000111						
Pump speed on which pump data are ased:	1470 rpm	14 -	90 %				
Rated flow:	396 m³/h						
Rated head:	9.6 m	10 -	80 %				100
Aaximum head:	150 dm						
Actual impeller diameter:	224 mm		70 %		A D		- 80
Code for shaft seal:	BQQE		THH	A.S.	14		
Curve tolerance:	ISO9906:2012 3B	6-	-90 % MM				- 60
			50 Milli		X		40
Pump version:	A						
Aaterials:	Coatirar	2_					_20
Pump housing:	Cast iron		%				
Pump housing:	EN-GJL-250	0 <b>/</b>	100 20	0 300	400 5	00 Q [m³/h]	
Pump housing:	ASTM class 35	0 P <b>Г</b>	100 20	0 300	400 5	00 Q [m³/h]	NPSI
mpeller:	Cast iron	P [kW]					[m]
mpeller:	EN-GJL-200	20 -					_ 20
mpeller:	ASTM class 30			P1 (I	notor+freq.con	verter)	
/aterial code:	А	15 -				P2	15
nstallation:						- F2	
Range of ambient temperature:	-20 40 °C	10 -					10
Aaximum operating pressure:	16 bar						
lax pressure at stated temp:	16 bar / 120 °C	5 -					- 5
ype of connection:	DIN						
Size of connection:	DN 200	0					Lo
Pressure rating for connection:	PN 16	h					
Port-to-port length:	900 mm	3	8	210 210			
lange size for motor:	FF300	•		0 0 0			
Connect code:	F						
.iquid:					1		
Pumped liquid:	Water	6	RP 1/4	T	1142		
iquid temperature range:	-25 120 °C				8 		
Selected liquid temperature:	20 °C				280		
Density: Electrical data:	998.2 kg/m³	28:	200	900			
Motor type:	160LB				141		
E Efficiency class:	IE3		. 520				
Rated power - P2:	15 kW		+		<u>+</u> <u>†</u>		
Aains frequency:	50 Hz		330	12-0-2	Ť		
Rated voltage:	3 x 380-480 V			220 287 5	× Ø 18		
Rated current:	30.0-25.4 A						
Cos phi - power factor:	0.90-0.85						
Rated speed:	240-1750 rpm						
Efficiency:	IE3 92,1%						
Notor efficiency at full load:	92.1 %						
Number of poles:	4						
Inclosure class (IEC 34-5):	IP55						
nsulation class (IEC 85):	F	<b>■</b>	Ð				
Built-in motor protection:	YES						
Motor No:	86906190	1000	1: Digital input 9: GND (frame) 8: +24 V				
Controls:			10 7: Sensor input B: RS-485B				
Control panel:	Standard		Y: Screen A: RS-485A				
unction Module:	PUMP I/O	&	RUN 6: GND (frame)	-   			
requency converter:	Built-in	() () () () () () () () () () () () () (	Run 6: GND (frame) 5: +10 V 4: Setpoint input 3: GND (frame)	1			
Others:		1	2: Start/stop	1			

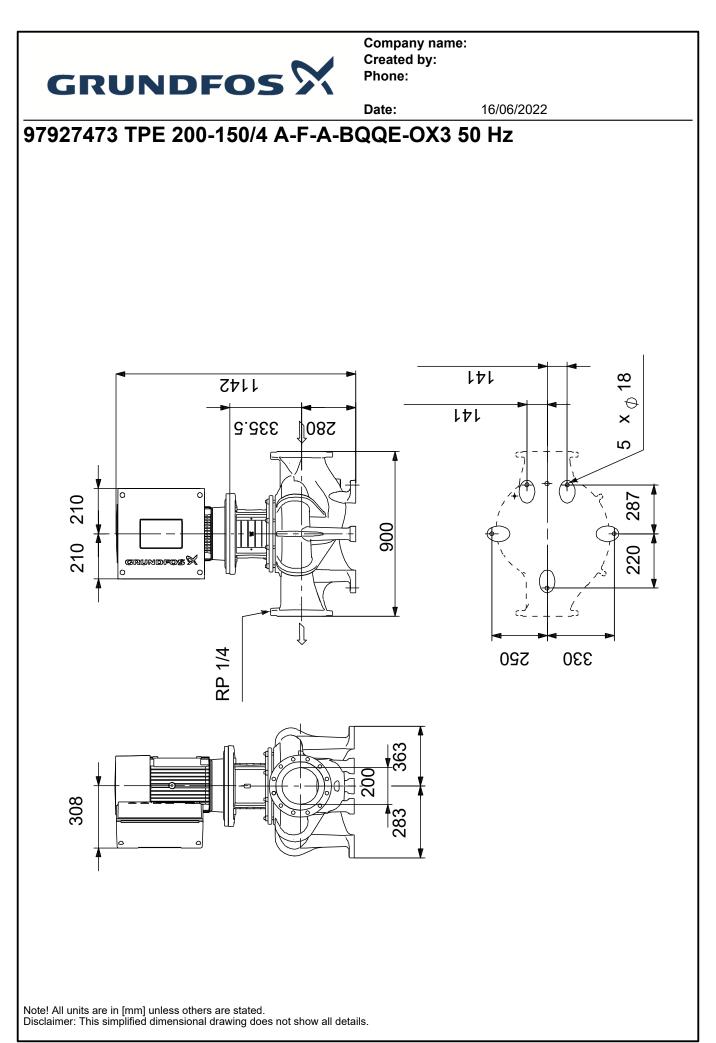
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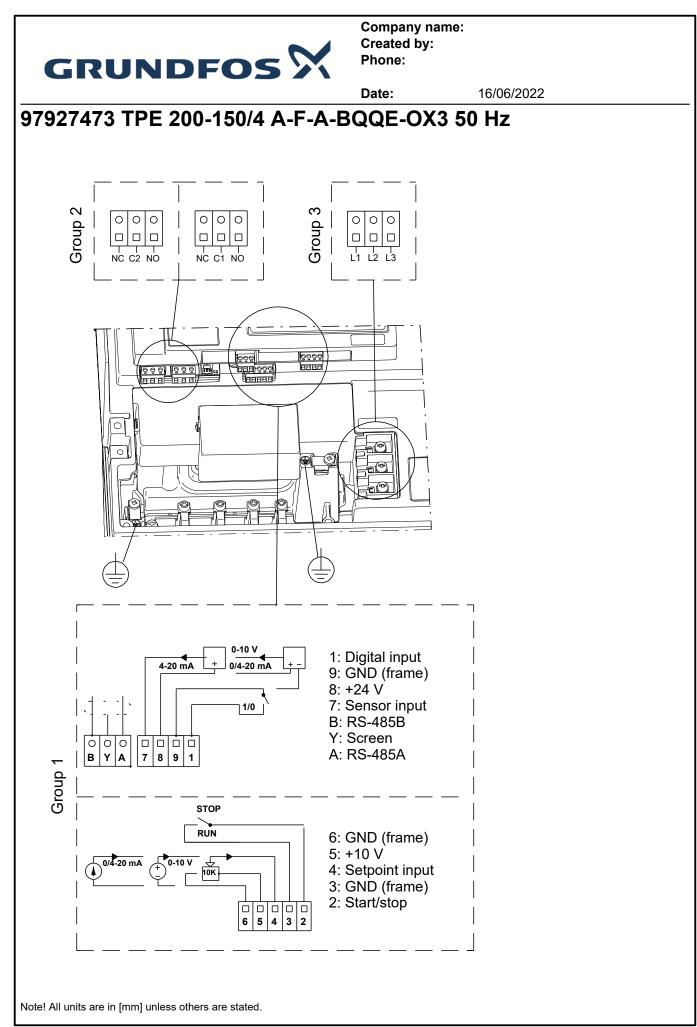


		Date:	16/06/2022	
Description	Value			
Minimum efficiency index, MEI ≥:	0.70			
Net weight:	408 kg			
Gross weight:	504 kg			
Shipping volume:	1.68 m³			
Config. file no:	95139410			
Danish VVS No.:	382039150			
Finnish LVI No.:	4616523			
Country of origin:	HU			
Custom tariff no.:	84137051			



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16/06/2022

# Order Data:

Product name:TPE 200-150/4Amount:1Product No:97927473

Total: Price on request