

22/08/2019

Date:

TPED 80-210/2 A-F-A-BQQE

1



Product No.: 99114617

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.

TPED 80-210/2 A-F-A-BQQEThe pump is fitted with an unbalanced rubber bellows seal. TPED 80-210/2 A-F-A-BQQETPED 80-210/2 A-F-A-BQQETPED 80-210/2 A-F-A-BQQEThe shaft seal is according to EN 12756. Pipework connection is via PN 16 DIN flanges (EN 1092-2 and ISO 7005-2).

Pipework connection is via PN 16 DIN flanges (EN 1092-2 and ISO 7005-2).

The pump is fitted with a fan-cooled, permanent-magnet synchronous motor. The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement.

Further product details

A control panel enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The control panel has indicator lights for "Operation" and "Fault".

Communication with the pump is possible by means of the Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The Grundfos Eye indicator on the operating panel provides visual indication of pump status:

- "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
- "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)
- "Alarm": Motor has stopped (flashing red indicator lights).

Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

Pump

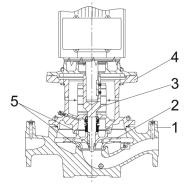
Pump housing and pump head are electrocoated to improve the corrosion resistance. Electrocoating includes:

- 1) Alkaline-based cleaning.
- 2) Pretreatment with zinc phosphate coating.
- 3) Cathodic electrocoating (epoxy).
- 4) Curing of paint film at 200-250 °C.



Date:

22/08/2019



- 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.

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 I).

The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

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.

TPED 80-210/2 A-F-A-BQQEThe terminal box holds terminals for these connections:

- one dedicated digital input
- two analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 3.5 V
- 5 V voltage supply to potentiometer and sensor
- one configurable digital input or open-collector output
- Grundfos Digital Sensor input and output



Company name:

	GRUNDFO	os X	Company na Created by: Phone:	
	Description		Date:	22/08/2019
Qty.	 Description 24 V voltage supply for s two signal-relay outputs (GENIbus connection interface for Grundfos CI 	potential-free contact	s)	
	 TPED 80-210/2 A-F-A-BQQETh one dedicated digital input two analog inputs, 0(4)-2 5 V voltage supply to pot one configurable digital in Grundfos Digital Sensor in 24 V voltage supply for set two signal relay outputs (the two power heads con interface for Grundfos CI 	ut 0 mA, 0-5 V, 0-10 V, 0 entiometer and senso oput or open-collector input and output ensors potential-free contacts omunicate via wireless	0.5 - 3.5 V r output s)	
	Technical data			
	Controls: Frequency converter:	Built-in		
	Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density at selected liquid tempe	Water -25 120 °C 20 °C rature: 998.2 kg/m ³		
	Technical: Pump speed on which pump dat Rated flow: Rated head: Actual impeller diameter: Primary shaft seal: Curve tolerance:	ta are based: 2920 r 53.5 m³/h 16.6 m 125 mm BQQE ISO9906:2012 3B	pm	
	Materials:			
	Pump housing: Impeller:	Cast iron EN-JL1040 ASTM A48-40 B Cast iron EN-JL1030 ASTM A48-30 B		
	Installation: Range of ambient temperature: Maximum operating pressure: Flange standard: Pipe connection: Pressure rating: Port-to-port length: Flange size for motor:	-20 50 °C 16 bar DIN DN 80 PN 16 360 mm FF215		
	Electrical data: Motor type: IE Efficiency class: Rated power - P2:	112MC IE5 4 kW		

4 kW

50 Hz

3 x 380-500 V

7.60-6.20 A

Rated power - P2:

Mains frequency:

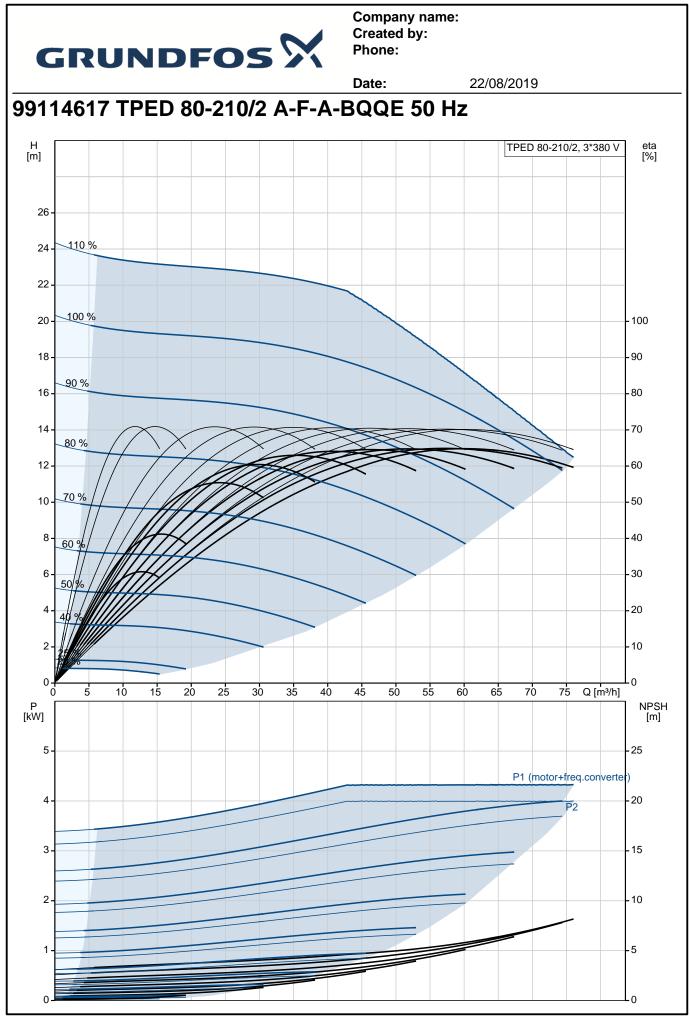
Rated voltage:

Rated current:



Company name: Created by:

	GRUNDF	osX	Phone:	-	
			Date:	22/08/2019	
Qty.	Description				
	Cos phi - power factor: Rated speed: Efficiency: Motor efficiency at full load: Enclosure class (IEC 34-5): Insulation class (IEC 85): Motor No:	0.92-0.87 360-4000 rpm 92.2% 92.2 % IP55 F 98971187			
	Others: Minimum efficiency index, MEI				
	ErP status: Net weight: Gross weight:	EuP Standalone/P 145 kg 165 kg	rod.		
	Shipping volume:	0.509 m ³			



Printed from Grundfos Product Centre [2019.04.002]

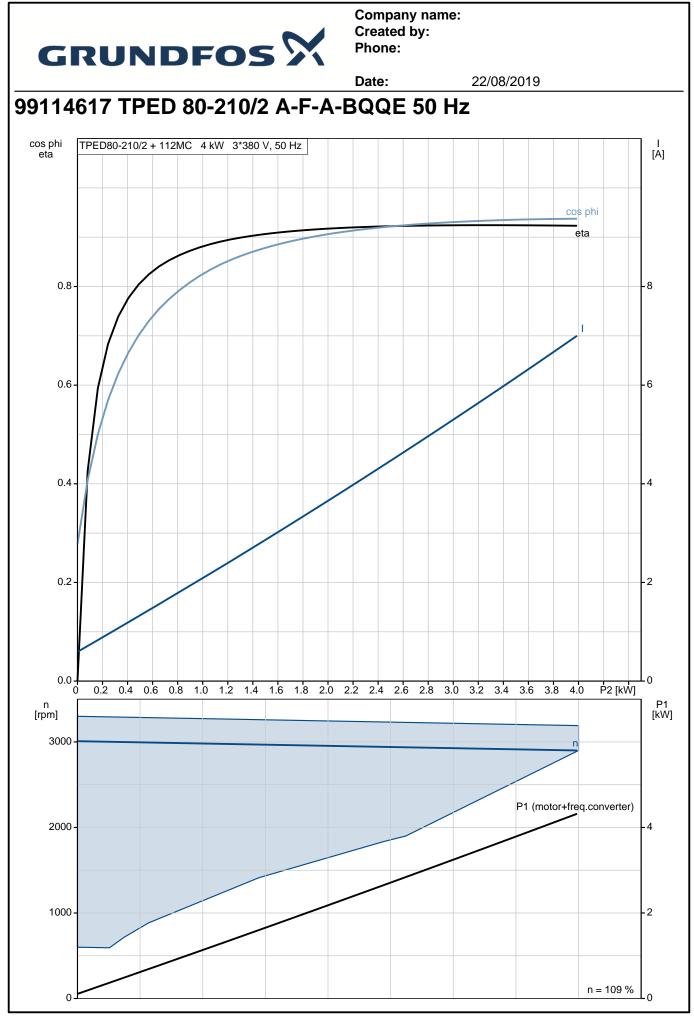


		Date:	22/08/2019	22/08/2019		
Description	Value	H [m]	TPED 80-210/2, 3*380 V	eta [%]		
General information:						
Product name:	TPED 80-210/2 A-F-A-BQQE	26 - 24 - 110 %				
Product No:	99114617					
EAN number:	5712607032616	22 -				
EAN NUMBER		20 - 100 %	10	0		
	5712607032616	18 -	-90	1		
Price:	8.693,00 GBP	90 %				
Technical:		16 -		1		
Pump speed on which pump data are based:	2920 rpm	14 - 80 %	-70			
Rated flow:	53.5 m³/h	12-	60)		
Rated head:	16.6 m	10 - 70 %	50)		
Head max:	210 dm			`		
Actual impeller diameter:	125 mm	8 - 60 %	40			
Primary shaft seal:	BQQE	6 - 50 9	30)		
Curve tolerance:	ISO9906:2012 3B	4 - 40	20)		
	A	2-0				
Pump version:		2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	10			
Model:	A	0 10	20 30 40 50 60 Q [m³/h]			
Materials:	Oration	P		NPSH		
Pump housing:	Cast iron	[kW]		[m]		
	EN-JL1040	5 -	- 25 P1 (motor+freq.convert			
	ASTM A48-40 B	4 -				
Impeller:	Cast iron		P2 20			
	EN-JL1030	3-	15	i		
	ASTM A48-30 B					
Material code: Installation:	Α	2-	-10	í.		
	00 50 00	1-	-5			
Range of ambient temperature:	-20 50 °C					
Maximum operating pressure:	16 bar	0				
Flange standard:	DIN	416 416				
Pipe connection:	DN 80	191.3 1 191.3				
Pressure rating:	PN 16	──────────────────────────────────────				
Port-to-port length:	360 mm					
Flange size for motor:	FF215					
Connect code:	F					
Liquid:						
Pumped liquid:	Water	RECENTED				
Liquid temperature range:	-25 120 °C	296 290				
Selected liquid temperature:	20 °C	. 1455 1455 - 1456 - 14	5.5. <u>M16</u>			
Density at selected liquid temperature:	998.2 kg/m³					
Electrical data:	-					
Motor type:	112MC					
IE Efficiency class:	IE5					
Rated power - P2:	4 kW	T	M16/ 175 78			
Mains frequency:	50 Hz					
Rated voltage:	3 x 380-500 V					
Rated voltage:			rti			
	7.60-6.20 A					
Cos phi - power factor:	0.92-0.87		Ø⊕ ⊑			
Rated speed:	360-4000 rpm					
Efficiency:	92.2%					
Notor efficiency at full load:	92.2 %	Ö				
Enclosure class (IEC 34-5):	IP55					
Insulation class (IEC 85):	F					
Motor protec:	YES					
Motor No:	98971187					
Controls:			A GONDard A Y GONDard Y B GONDard B			
Control panel:	HMI200 - Standard		7 0x0 11 14 - 44 V 8 - 34 V			
Function Module:	FM300 - Advanced	av have have				
Frequency converter:	Built-in					

Printed from Grundfos Product Centre [2019.04.002]



		Date:	22/08/2019
Description	Value		
Others:		_	
Minimum efficiency index, MEI ≥:	0.69		
ErP status:	EuP Standalone/Prod.		
Net weight:	145 kg		
Gross weight:	165 kg		
Shipping volume:	0.509 m ³		
Config. file no:	99100550		



Printed from Grundfos Product Centre [2019.04.002]