

**Date:** 16/06/2022

### Qty. | Description

#### TPE 150-155/4 S-A-F-A-BQQE-NX3



Note! Product picture may differ from actual product

Product No.: 98908279

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.

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.

The pump is fitted with a differential pressure sensor.

The pump is suitable for applications requiring pressure control. The pump is fitted with a differential-pressure transmitter registering the differential pressure across the pump and enabling constant pressure or proportional-pressure control of the pump.

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.

A control panel enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop".

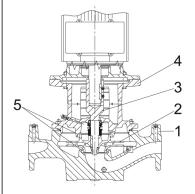
The control panel has indicator lights for "Operation" and "Fault".

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".

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



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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.

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 II).

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.

The terminal box holds terminals for these connections:

- · pump start/stop input (potential-free contact)
- remote setpoint setting via analog signal, 0-10 V, 0(4)-20 mA
- 10 V voltage supply for setpoint potentiometer, Imax = 5 mA
- · one analog sensor input, 0-10 V, 0(4)-20 mA; the factory-fitted pressure sensor is connected to this input
- 24 V voltage supply for sensor, Imax = 40 mA
- · one digital input
- two potential-free fault signal relays with changeover contact, reporting "Fault", "Operation" or "Ready"
- RS-485 GENIbus connection
- interface for Grundfos CIM fieldbus module.

### 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: Water
Liquid temperature range: -25 .. 120 °C
Selected liquid temperature: 20 °C
Density: 998.2 kg/m³



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#### Qty. Description

Technical:

Pump speed on which pump data are based: 1470 rpm

Rated flow: 259 m<sup>3</sup>/h Rated head: 12.5 m Actual impeller diameter: 218 mm Code for shaft seal: **BQQE** 

Curve tolerance: ISO9906:2012 3B

Materials:

Pump housing: Cast iron

> EN-GJL-250 ASTM class 35

Impeller: Cast iron

> EN-GJL-200 ASTM class 30

Installation:

Range of ambient temperature: -20 .. 40 °C Maximum operating pressure: 16 bar

16 bar / 120 °C Max pressure at stated temp:

Type of connection: DIN Size of connection: DN 150 Pressure rating for connection: PN 16 Port-to-port length: 800 mm Flange size for motor: FF300

Electrical data:

Motor type: 160MB IE Efficiency class: IF3 Rated power - P2: 11 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-480 V Rated current: 22.0-17.8 A Cos phi - power factor: 0.91-0.90 Rated speed: 240-1750 rpm Efficiency: IE3 91,4% Motor efficiency at full load: 91.4 % Number of poles: 4 Enclosure class (IEC 34-5): IP55

Insulation class (IEC 85): 86906160 Motor No:

F

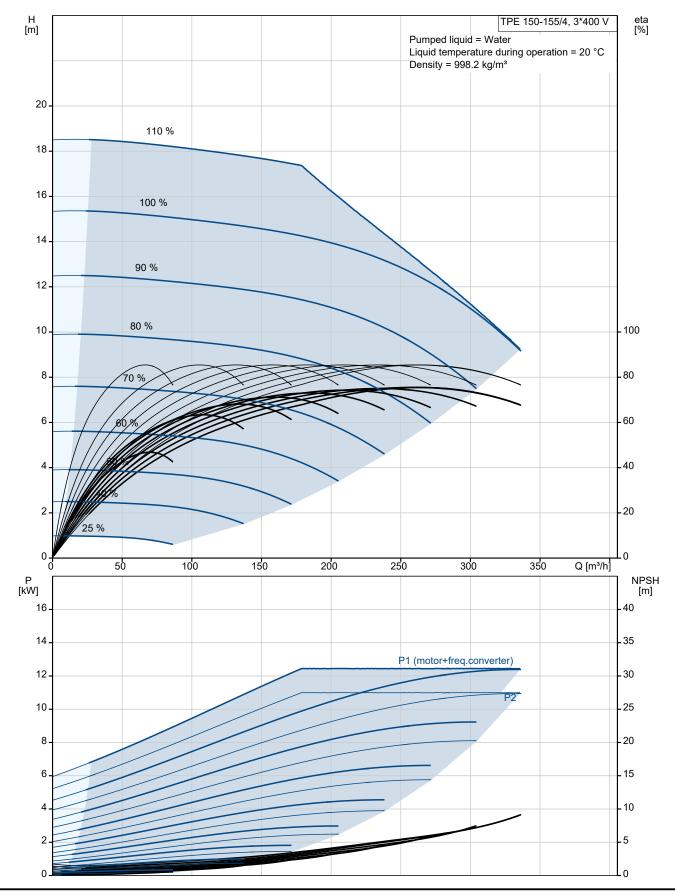
Others:

Minimum efficiency index, MEI ≥: 0.70 298 kg Net weight: Gross weight: 395 kg Shipping volume: 1.68 m<sup>3</sup> Danish VVS No.: 381928155 Finnish LVI No.: 4616553 Country of origin: HU Custom tariff no .: 84137051



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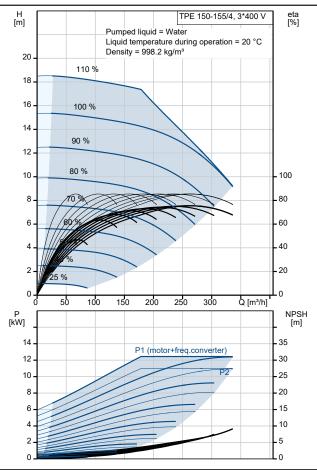
## 98908279 TPE 150-155/4 S-A-F-A-BQQE-NX3 50 Hz

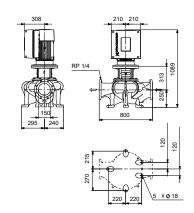


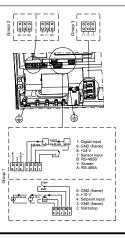


**Date:** 16/06/2022

Description	Value
General information:	TPE 150-155/4
Product name:	S-A-F-A-BQQE-NX3
Product No:	98908279
EAN number:	5712603382555
Technical:	
Pump speed on which pump data are	1470 rpm
based:	050 34
Rated flow:	259 m³/h
Rated head:	12.5 m
Maximum head:	155 dm
Actual impeller diameter: Code for shaft seal:	218 mm BQQE
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Materials:	Λ
Pump housing:	Cast iron
Pump housing:	EN-GJL-250
Pump housing:	ASTM class 35
Impeller:	Cast iron
Impeller:	EN-GJL-200
Impeller:	ASTM class 30
Material code:	A
Installation:	
Range of ambient temperature:	-20 40 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 120 °C
Type of connection:	DIN
Size of connection:	DN 150
Pressure rating for connection:	PN 16
Port-to-port length:	800 mm
Flange size for motor:	FF300
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-25 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor type:	160MB
IE Efficiency class:	IE3
Rated power - P2:	11 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-480 V
Rated current: Cos phi - power factor:	22.0-17.8 A
Cos pni - power ractor: Rated speed:	0.91-0.90 240-1750 rpm
Efficiency:	IE3 91,4%
Motor efficiency at full load:	91.4 %
Number of poles:	4
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	YES
Motor No:	86906160
Controls:	33330100
Control panel:	BS
Function Module:	PUMP I/O
Frequency converter:	Built-in
Others:	









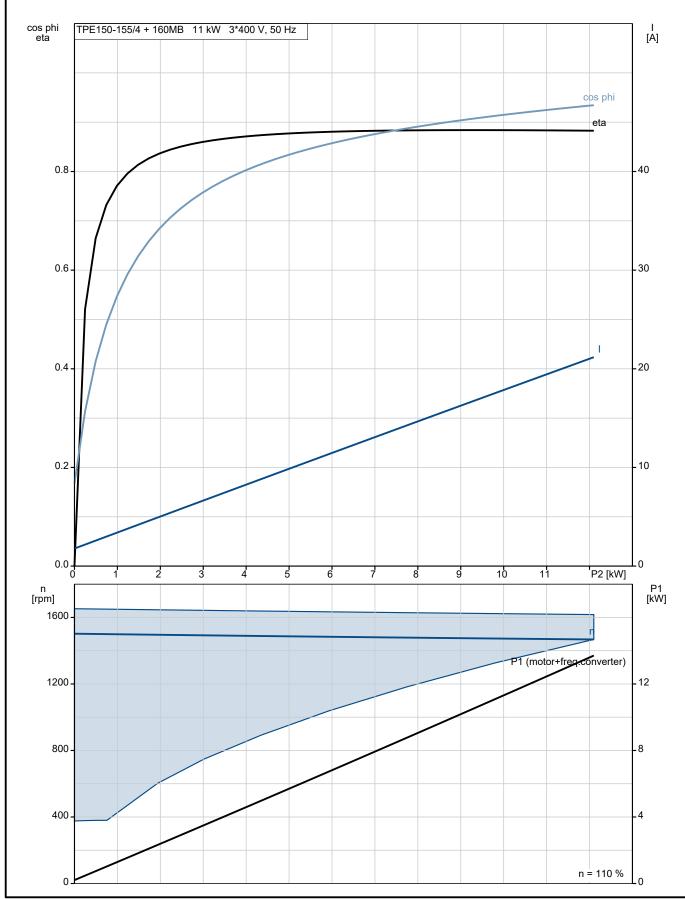
**Date:** 16/06/2022

Description	Value
Minimum efficiency index, MEI ≥:	0.70
Net weight:	298 kg
Gross weight:	395 kg
Shipping volume:	1.68 m³
Config. file no:	98905842
Danish VVS No.:	381928155
Finnish LVI No.:	4616553
Country of origin:	HU
Custom tariff no.:	84137051



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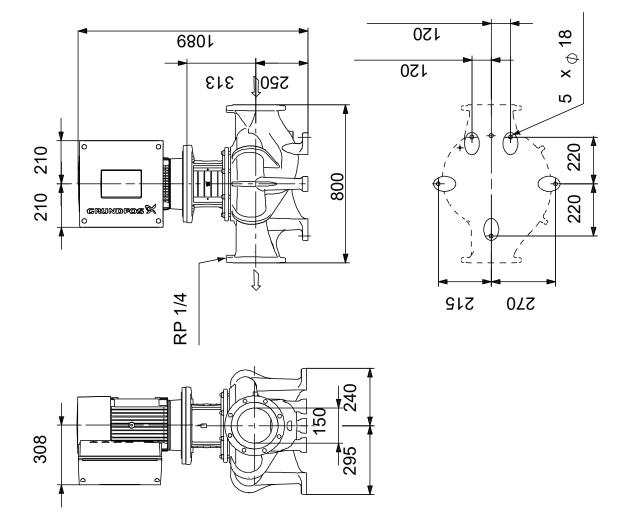
# 98908279 TPE 150-155/4 S-A-F-A-BQQE-NX3 50 Hz





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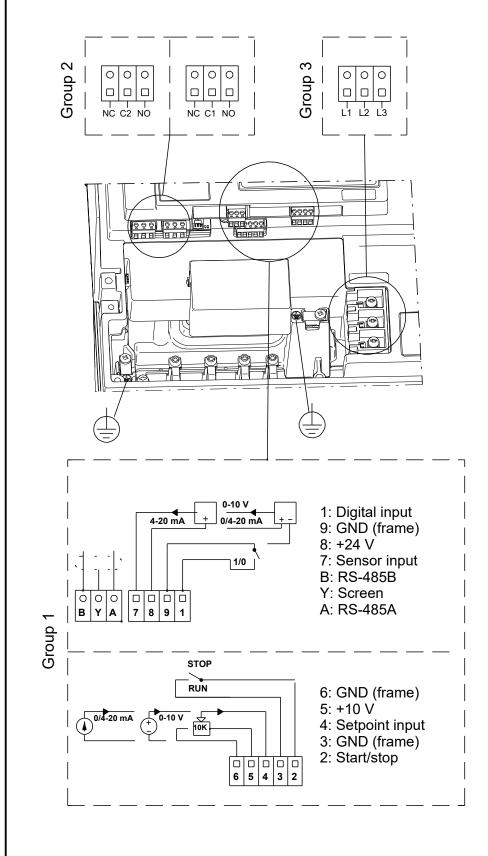


Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.



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Note! All units are in [mm] unless others are stated.



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Order Data:

Product name: TPE 150-155/4

Amount: 1

Product No: 98908279

Total: Price on request