TPE 80-330/2-S-A-F-A-BQQE 3X400 50HZ

Grundfos Pump 99114722



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https://www.lenntech.com/grundfos/TPE0S2/99114722/TPE-80-330-2-S-A-F-A-BQQE.html

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Position	Qty.	Description
	1	**TPE 80-330/2-S A-F-A-BQQE**



Product No.: 99114722

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, permanent-magnet synchronous 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.

Further product details

The pump is suitable for applications requiring pressure or temperature control and offers following control modes:

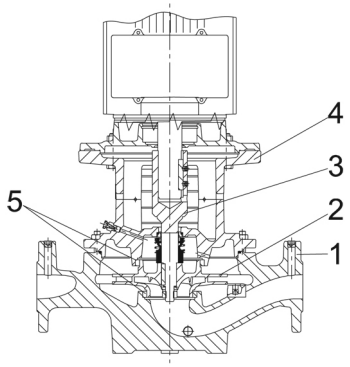
- AUTOADAPT. This function continuously adjusts the proportional-pressure curve and automatically sets a more efficient curve without compromising comfort demands.
- FLOWADAPT. This control mode combines AUTOADAPT with a flow-limitting function. The pump continuously monitors the flow rate to ensure the desired maximum flow is not exceeded. This will save the cost of a separate pump-throttling valve.
- Constant differential pressure. The pump head is kept constant, independent of the flow in the system.
- Proportional pressure. The head of the pump will increase proportionally to the flow in the system to compensate for the large pressure losses in the distribution pipes.
- Constant temperature. The return-pipe temperature is kept constant. Note: If the pump is intalled in the flow pipe, an external temperature sensor must be installed in the return pipe of the system.
- Constant differential temperature. The differential temperature can be measured by a differential-temperature sensor or two separate temperature sensors.
- Constant curve. The pump can be set to run at a constant speed in the range of 25 to 100 % of the maximum speed.

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".

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 bronze neck ring to reduce the amount of liquid running from the discharge side of the impeller to the suction 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 stub 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 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.

The 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; the factory-fitted pressure sensor is connected to one of these inputs
- 5 V voltage supply to potentiometer and sensor
- one configurable digital input or open-collector output
- Grundfos Digital Sensor input and output
- 24 V voltage supply for sensors
- two signal relay outputs (potential-free contacts)
- GENIbus connection

Position	Qty.	Description

- interface for Grundfos CIM fieldbus module.

Technical data

Liquid:

Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³

Technical:

Speed for pump data:	2930 rpm
Rated flow:	102 m³/h
Rated head:	27.4 m
Actual impeller diameter:	157 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 .. 50 °C
Maximum operating pressure:	16 bar
Flange standard:	DIN
Pipe connection:	DN 80
Pressure rating:	PN 16
Port-to-port length:	440 mm
Flange size for motor:	FF300

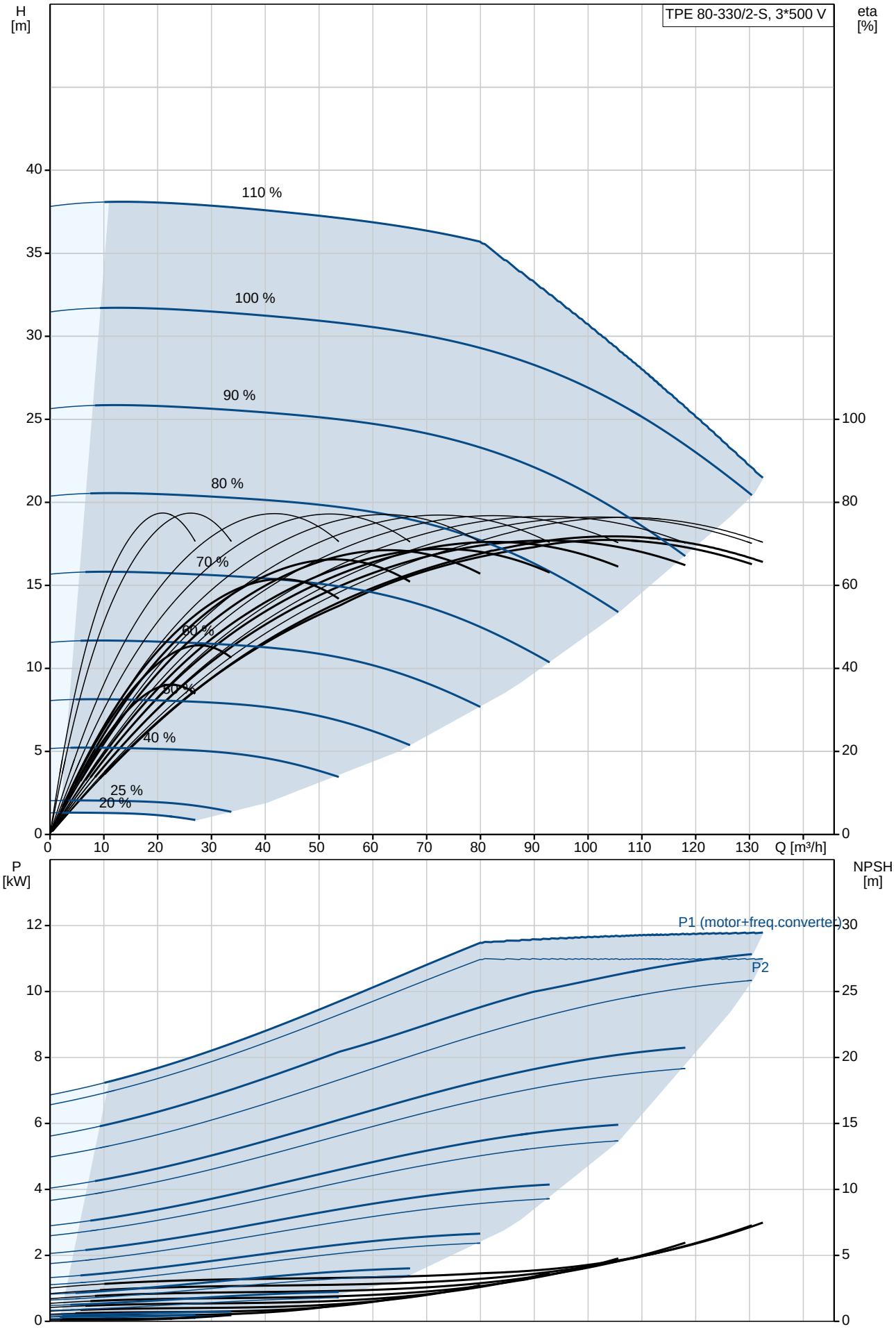
Electrical data:

Motor type:	160MH
IE Efficiency class:	IE5
Rated power - P2:	11 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-500 V
Rated current:	20,3-16,0 A
Cos phi - power factor:	0,93-0,90
Rated speed:	360-4000 rpm
Efficiency:	93,1%
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F

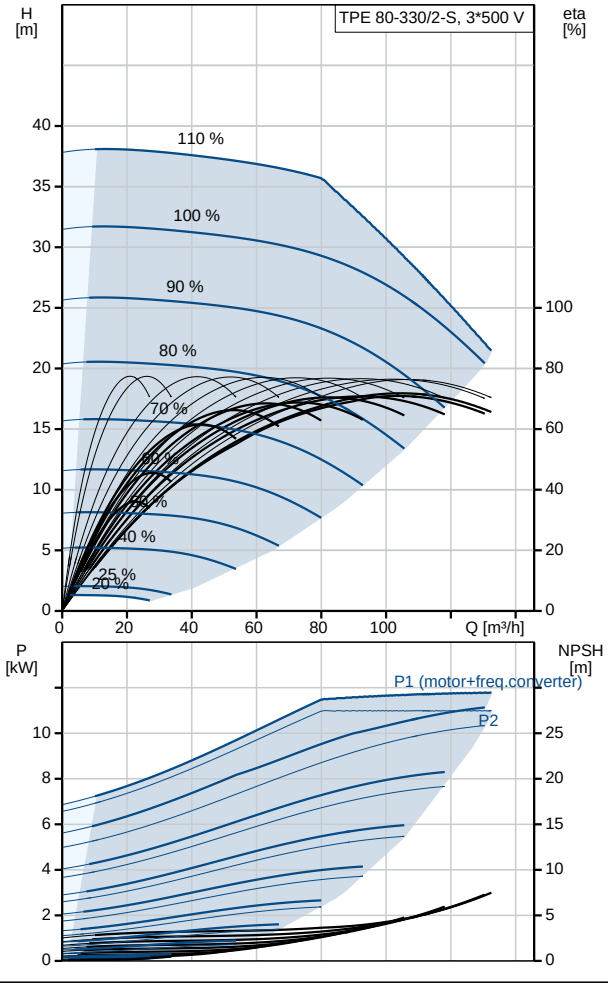
Others:

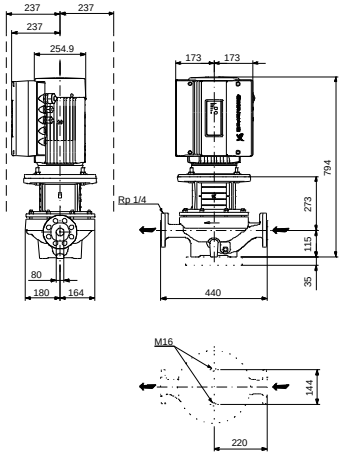
Minimum efficiency index, MEI ≥:	0.68
ErP status:	EuP Standalone/Prod.
Net weight:	131 kg
Gross weight:	150 kg
Shipping volume:	1.12 m³

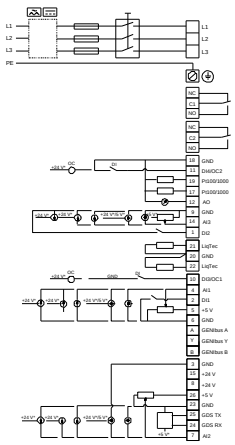
99114722 TPE 80-330/2-S 50 Hz



Description	Value
General information:	
Product name:	TPE 80-330/2-S A-F-A-BQQE
Product No:	99114722
EAN number:	5712607034689
Technical:	
Speed for pump data:	2930 rpm
Rated flow:	102 m³/h
Rated head:	27.4 m
Head max:	330 dm
Actual impeller diameter:	157 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:	-20 .. 50 °C
Maximum operating pressure:	16 bar
Flange standard:	DIN
Connect code:	F
Pipe connection:	DN 80
Pressure rating:	PN 16
Port-to-port length:	440 mm
Flange size for motor:	FF300
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:	160MH
IE Efficiency class:	IE5
Rated power - P2:	11 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-500 V
Rated current:	20,3-16,0 A
Cos phi - power factor:	0,93-0,90
Rated speed:	360-4000 rpm
Efficiency:	93,1%
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protec:	YES
Motor No:	98971273
Controls:	
Control panel:	HMI300 - Advanced
Function Module:	300
Others:	
Minimum efficiency index, MEI ≥:	0.68
ErP status:	EuP Standalone/Prod.
Net weight:	131 kg
Gross weight:	150 kg
Shipping volume:	1.12 m³
Config. file no:	99247889

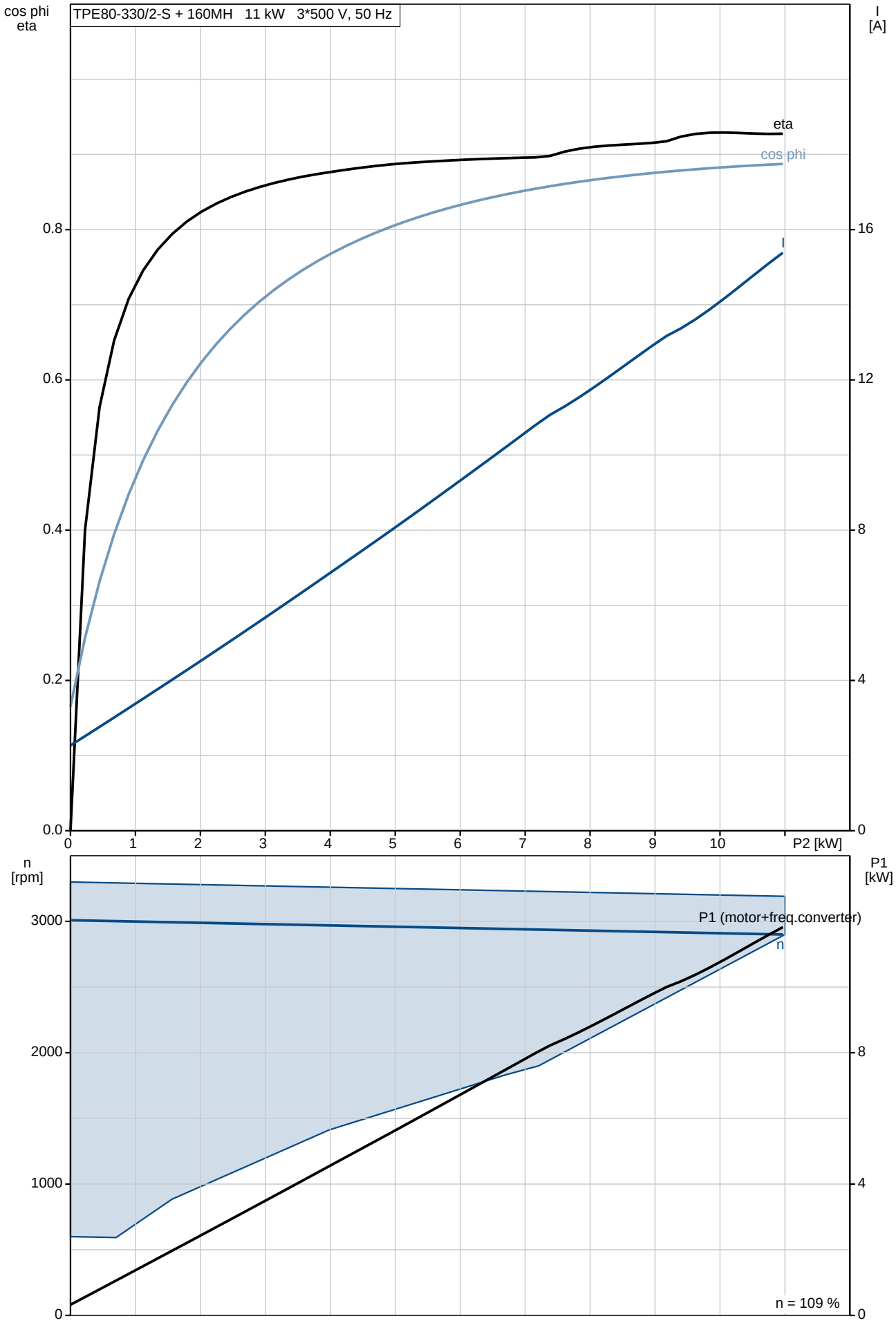






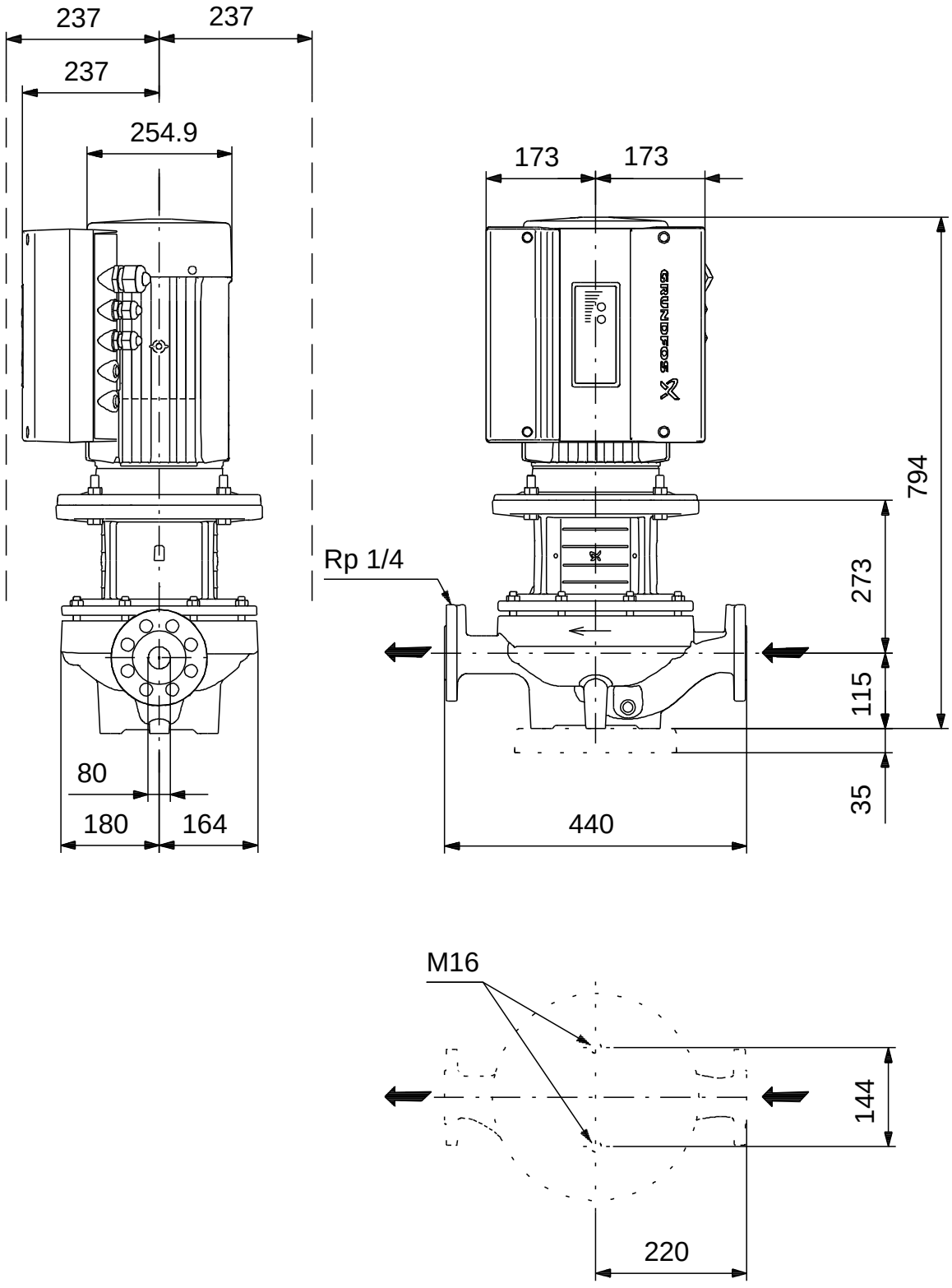
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99114722 TPE 80-330/2-S 50 Hz



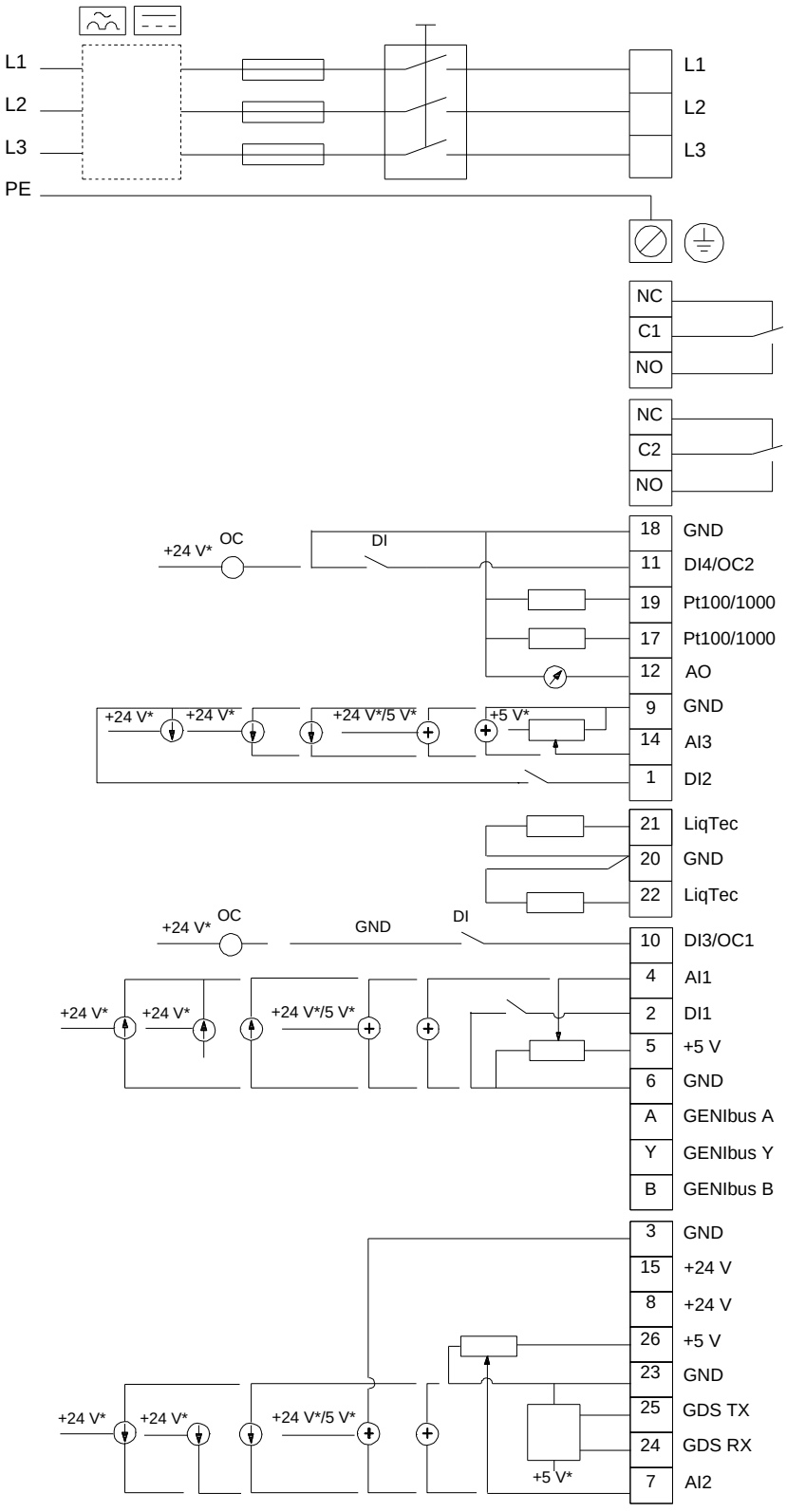
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99114722 TPE 80-330/2-S 50 Hz



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

99114722 TPE 80-330/2-S 50 Hz



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

Disclaimer: The information about the Grundfos pump in this document may be outdated.
Data may be subject to alterations without further notice.
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