

# Submittal Data

PROJECT:	UNIT TAG:	QUANTITY:
REPRESENTATIVE: _____	TYPE OF SERVICE:	DATE: _____
ENGINEER:	SUBMITTED BY:	DATE:
CONTRACTOR:	APPROVED BY:	DATE:
	ORDER NO.:	DATE:

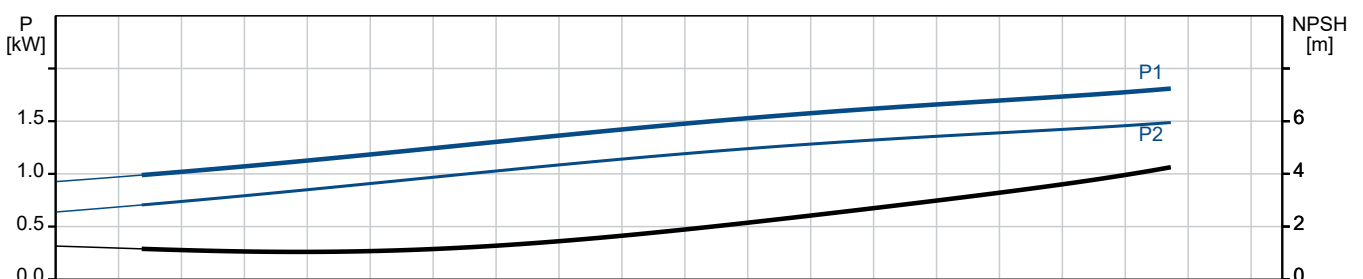
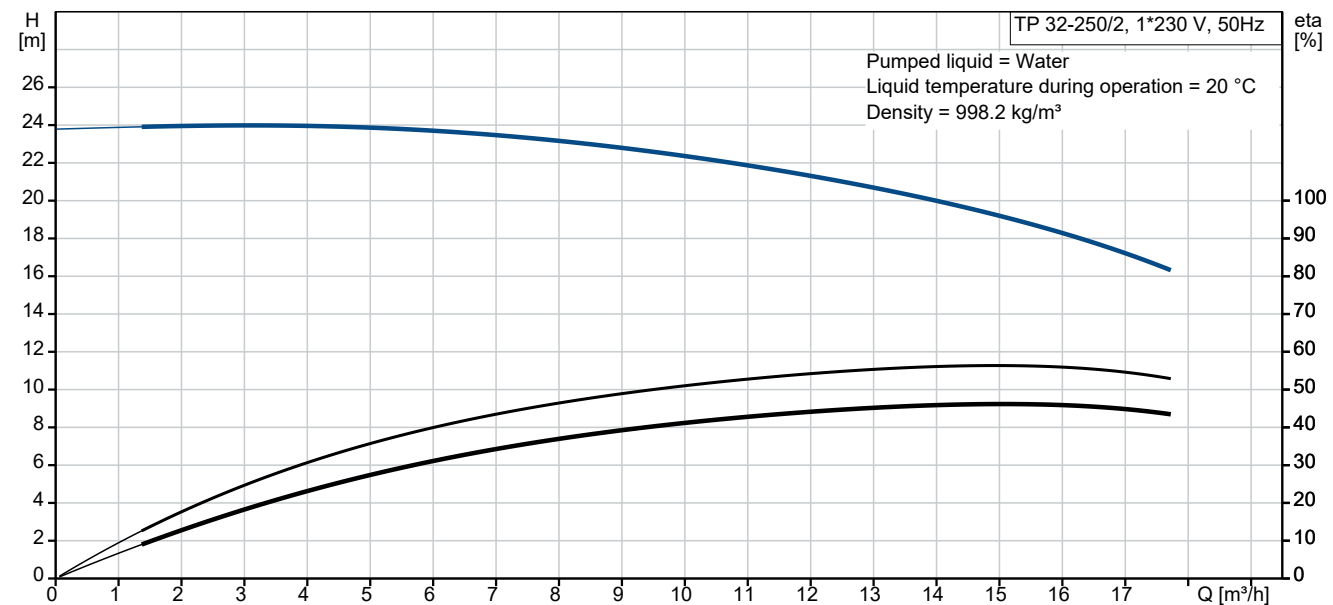


## TP 32-250/2 A-F-A-BQQE-HW1

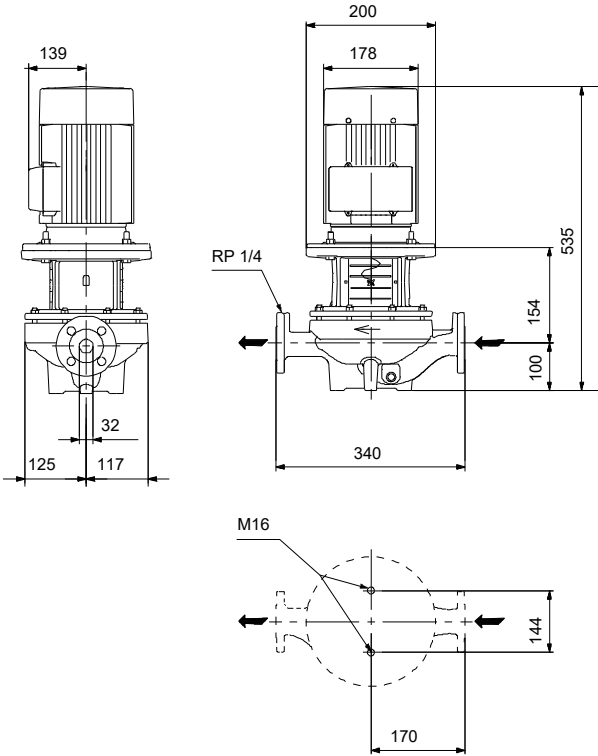
Grundfos TP pumps are single-stage, close-coupled in-line centrifugal pumps with mechanical shaft seal and primely for applications such as heating/cooling/district energy. The pumps are fitted with fixed speed motors.

Note! Product picture may differ from actual product

Conditions of Service	Pump Data	Motor Data
	Max pressure at stated temp: 16 bar / 120 °C	Rated voltage: 220-230 V
	Liquid temperature range: -25 .. 120 °C	Mains frequency: 50 Hz
	Maximum ambient temperature: 40 °C	Enclosure class: 55 Dust/Jetting
	Shaft seal: BQQE	Insulation class: F
	Product number: On request	Motor protection: PTO
		Motor type: 90SE
		Eta 1/1: 81.3-81.3 %



# Submittal Data



**Materials:**  
Pump housing: Cast iron  
Pump housing: ASTM class 35  
Impeller: Cast iron  
Impeller: ASTM class 30  
Impeller: EN-GJL-200  
Material code: A

Qty. Description

1 TP 32-250/2 A-F-A-BQQE-HW1



Note! Product picture may differ from actual product

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.

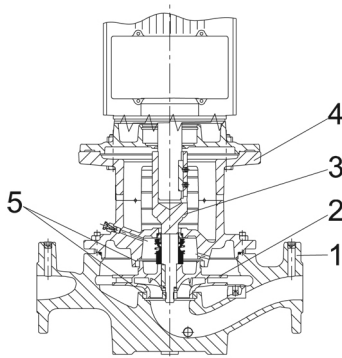
The pump is fitted with an unbalanced rubber bellows seal. The shaft seal is according to EN 12756. Pipework connection is via PN 16 DIN flanges (EN 1092-2 and ISO 7005-2).

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

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.

Secondary seal material: EPDM (ethylene-propylene rubber)

Qty.	Description
1	<p>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.</p> <p><b>Motor</b></p> <p>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).</p> <p>The motor efficiency is classified as IE2 in accordance with IEC 60034-30.                      The motor has built-in thermal protection (PTO current and temperature sensors) in accordance with IEC 60034-11 and requires no further motor protection. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.                      As the thermal protection incorporates automatic reset, the motor must be connected in a way which ensures that the automatic reset cannot cause accidents.</p> <p><b>Further product details</b></p> <p>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.</p> <p><b>Technical data</b></p> <p>Controls:                      Frequency converter:                      None</p> <p>Liquid:                      Liquid temperature range:                -25 .. 120 °C</p> <p>Technical:                      Pump speed on which pump data are based:    2900 rpm                      Rated flow:                                      15.1 m<sup>3</sup>/h                      Rated head:                                      19.1 m                      Actual impeller diameter:                    140 mm                      Code for shaft seal:                          BQQE                      Curve tolerance:                                ISO9906:2012 3B2</p> <p>Materials:                      Pump housing:                                    Cast iron                          EN-GJL-250                          ASTM class 35                      Impeller:    Cast iron                          EN-GJL-200                          ASTM class 30</p> <p>Installation:                      Range of ambient temperature:            -30 .. 40 °C                      Maximum operating pressure:              16 bar                      Max pressure at stated temp:              16 bar / 120 °C                      Type of connection:                            DIN                      Size of connection:                             DN 32</p>

Qty.	Description
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1	Pressure rating for connection: PN 16 Port-to-port length: 340 mm Flange size for motor: FF165  Electrical data: Motor type: 90SE Rated power - P2: 1.5 kW Mains frequency: 50 Hz Rated voltage: 1 x 220-230 V Rated current: 9.1-8.75 A Starting current: 480-540 % Cos phi - power factor: 0.97-0.98 Rated speed: 2860-2880 rpm IE Efficiency class: IE2 Motor efficiency at full load: 81.3-81.3 % Motor efficiency at 3/4 load: 81.8-79.9 % Motor efficiency at 1/2 load: 75.9-72.9 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Motor No: 92750816  Others: Minimum efficiency index, MEI $\geq$ : 0.70 Net weight: 48.2 kg Gross weight: 60 kg Shipping volume: 0.217 m <sup>3</sup> Country of origin: HU Custom tariff no.: 84137051
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Company name:

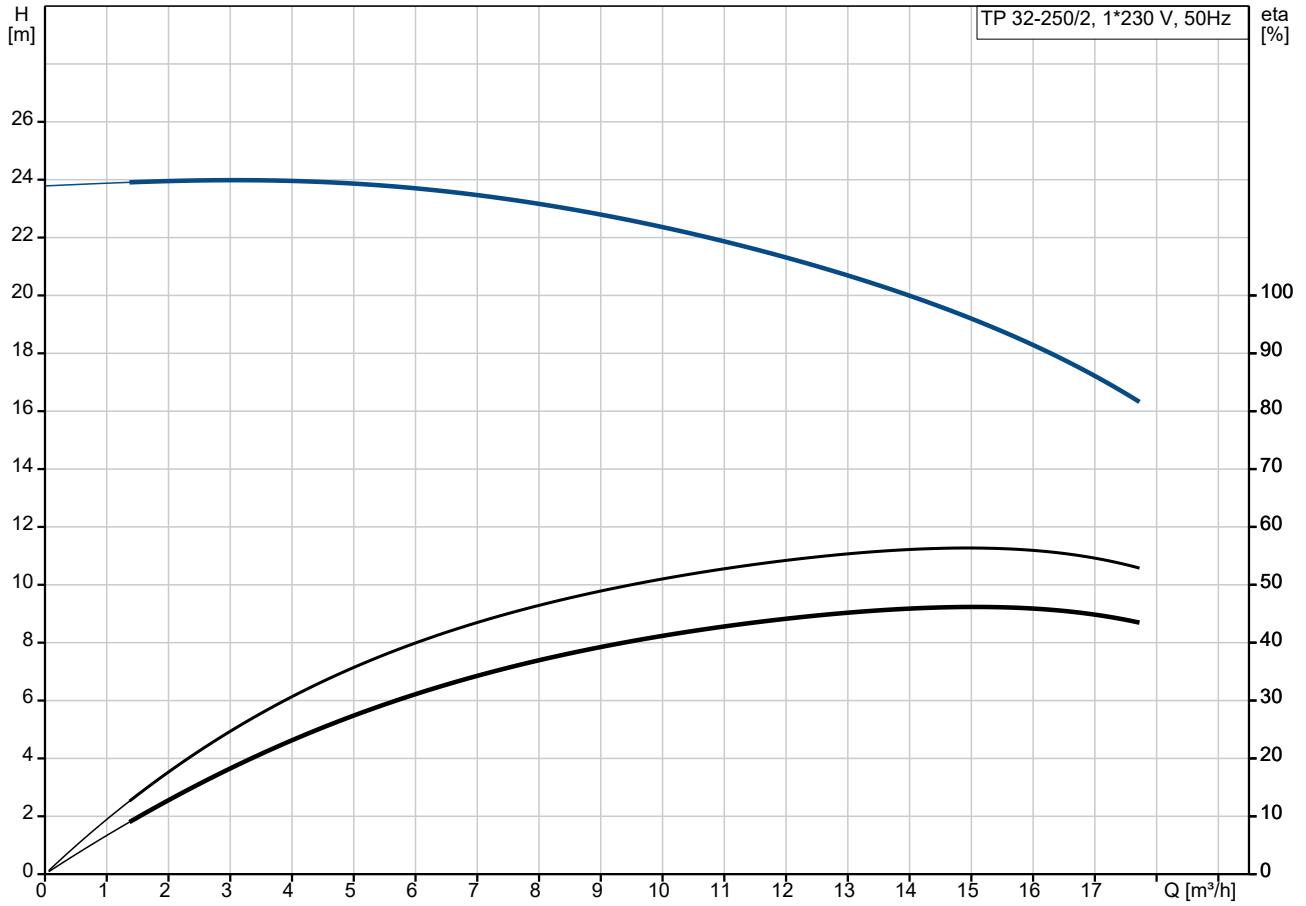
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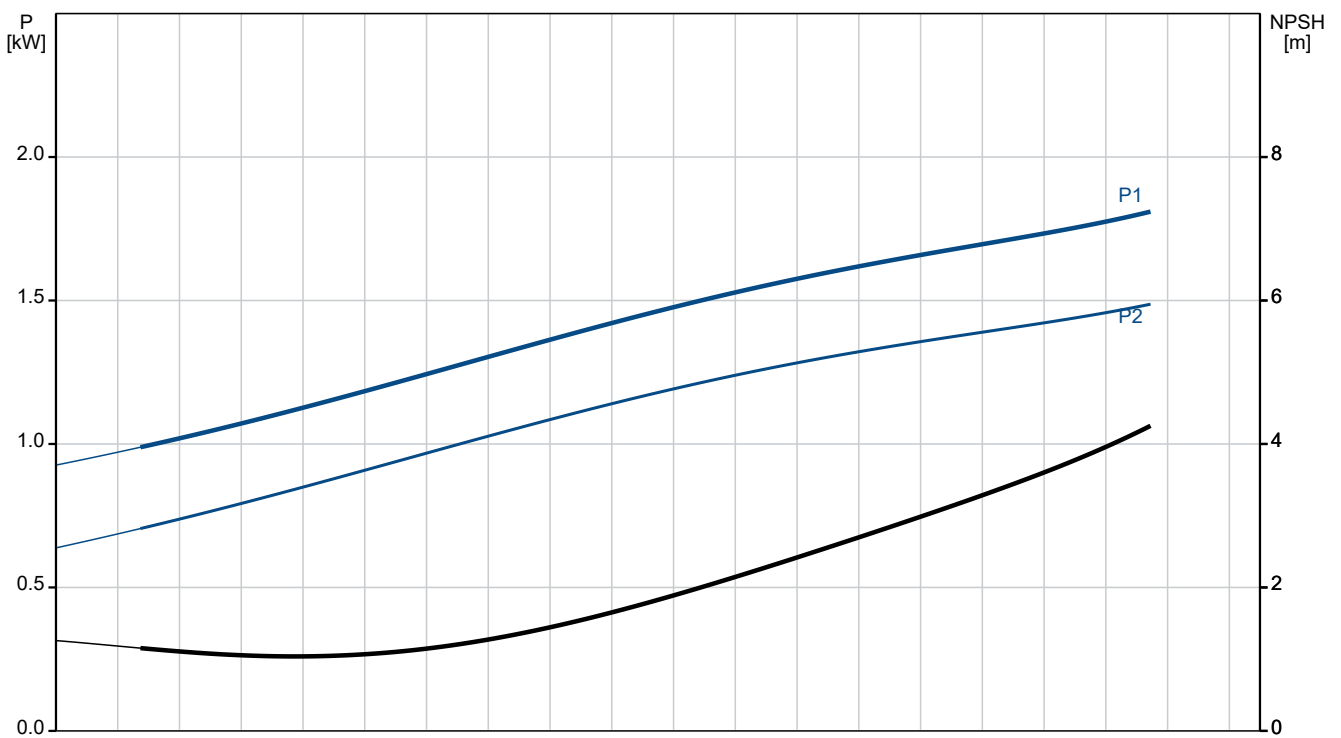
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29/11/2023

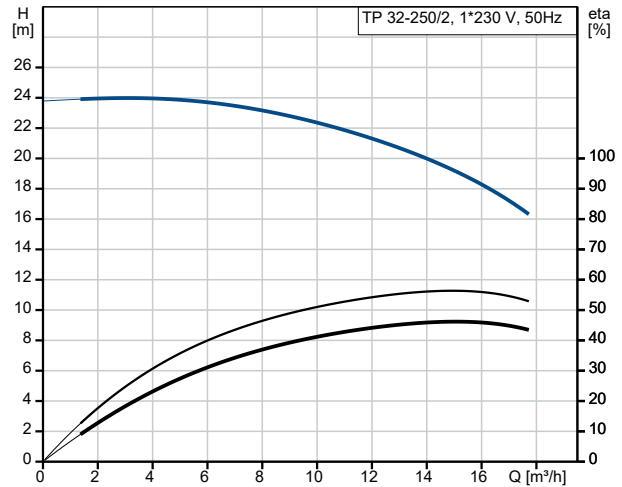
### On request TP 32-250/2 A-F-A-BQQE-HW1 50 Hz



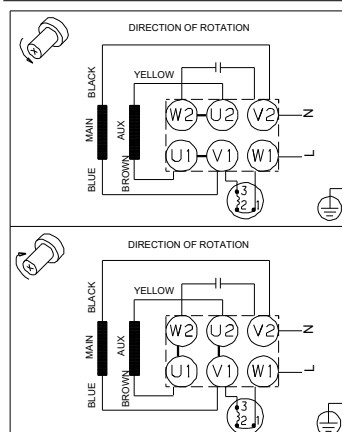
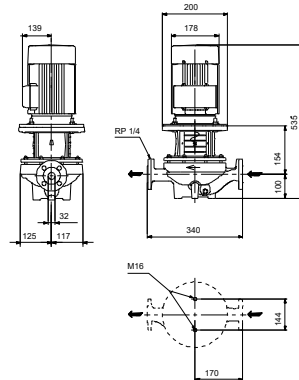
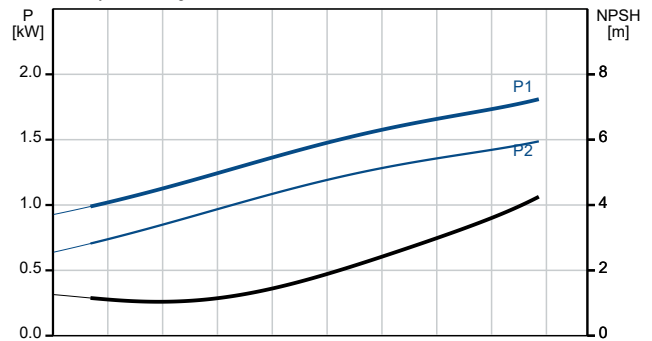
Pumped liquid = Water  
Liquid temperature during operation = 20 °C  
Density = 998.2 kg/m³



Description	Value
<b>General information:</b>	
Product name:	TP 32-250/2 A-F-A-BQQE-HW1
Product No:	On request
EAN number:	On request
<b>Technical:</b>	
Pump speed on which pump data are based:	2900 rpm
Rated flow:	15.1 m <sup>3</sup> /h
Rated head:	19.1 m
Maximum head:	250 dm
Actual impeller diameter:	140 mm
Code for shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B2
Pump version:	A
<b>Materials:</b>	
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
<b>Installation:</b>	
Range of ambient temperature:	-30 .. 40 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 120 °C
Type of connection:	DIN
Size of connection:	DN 32
Pressure rating for connection:	PN 16
Port-to-port length:	340 mm
Flange size for motor:	FF165
Connect code:	F
<b>Liquid:</b>	
Liquid temperature range:	-25 .. 120 °C
<b>Electrical data:</b>	
Motor type:	90SE
Rated power - P2:	1.5 kW
Mains frequency:	50 Hz
Rated voltage:	1 x 220-230 V
Rated current:	9.1-8.75 A
Starting current:	480-540 %
Cos phi - power factor:	0.97-0.98
Rated speed:	2860-2880 rpm
IE Efficiency class:	IE2
Motor efficiency at full load:	81.3-81.3 %
Motor efficiency at 3/4 load:	81.8-79.9 %
Motor efficiency at 1/2 load:	75.9-72.9 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Built-in motor protection:	PTO
Motor No:	92750816
<b>Controls:</b>	
Frequency converter:	None
<b>Others:</b>	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	48.2 kg



Pumped liquid = Water  
Liquid temperature during operation = 20 °C  
Density = 998.2 kg/m<sup>3</sup>





Company name:

Created by:

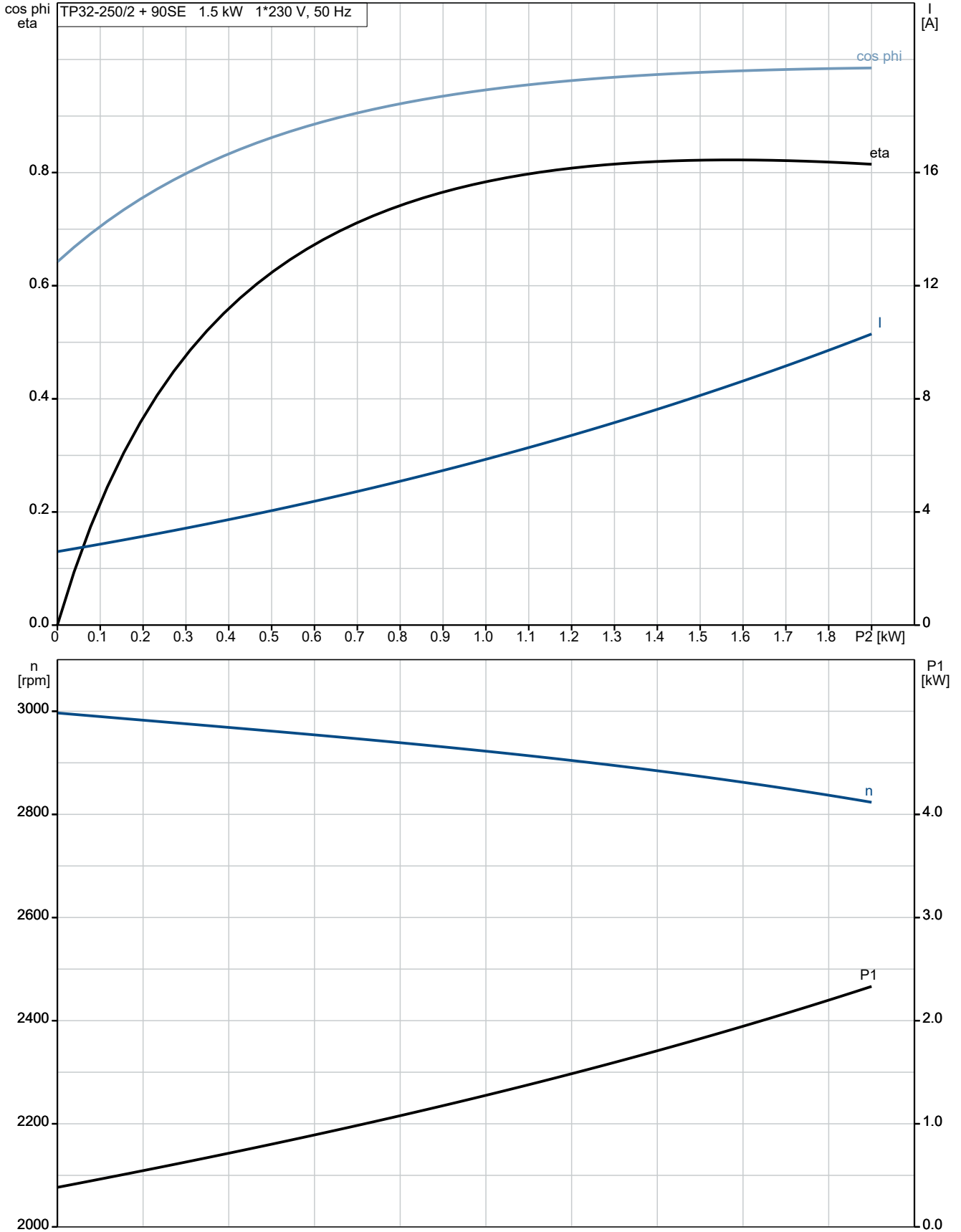
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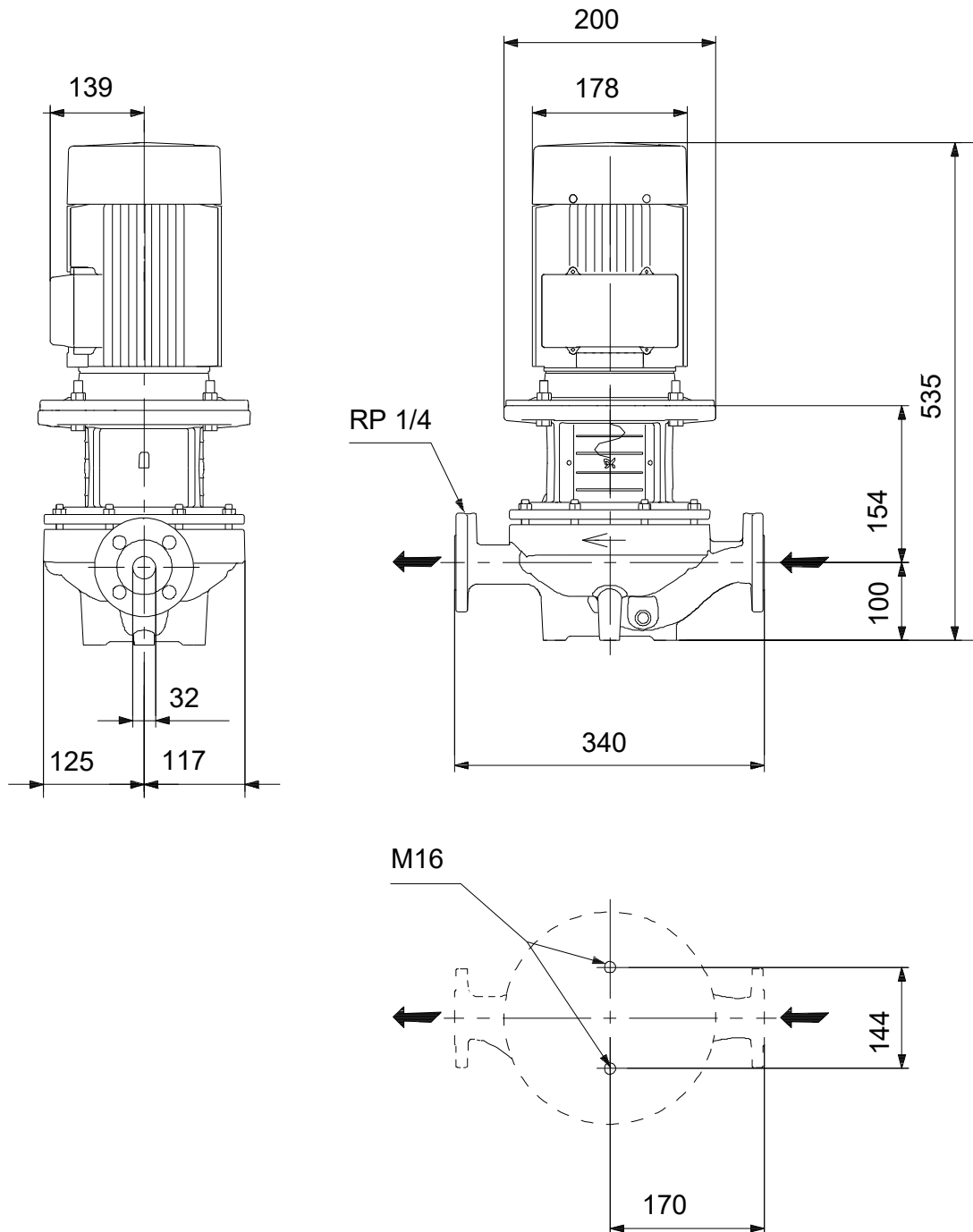
29/11/2023

Description	Value
Gross weight:	60 kg
Shipping volume:	0.217 m <sup>3</sup>
Country of origin:	HU
Custom tariff no.:	84137051

## On request TP 32-250/2 A-F-A-BQQE-HW1 50 Hz

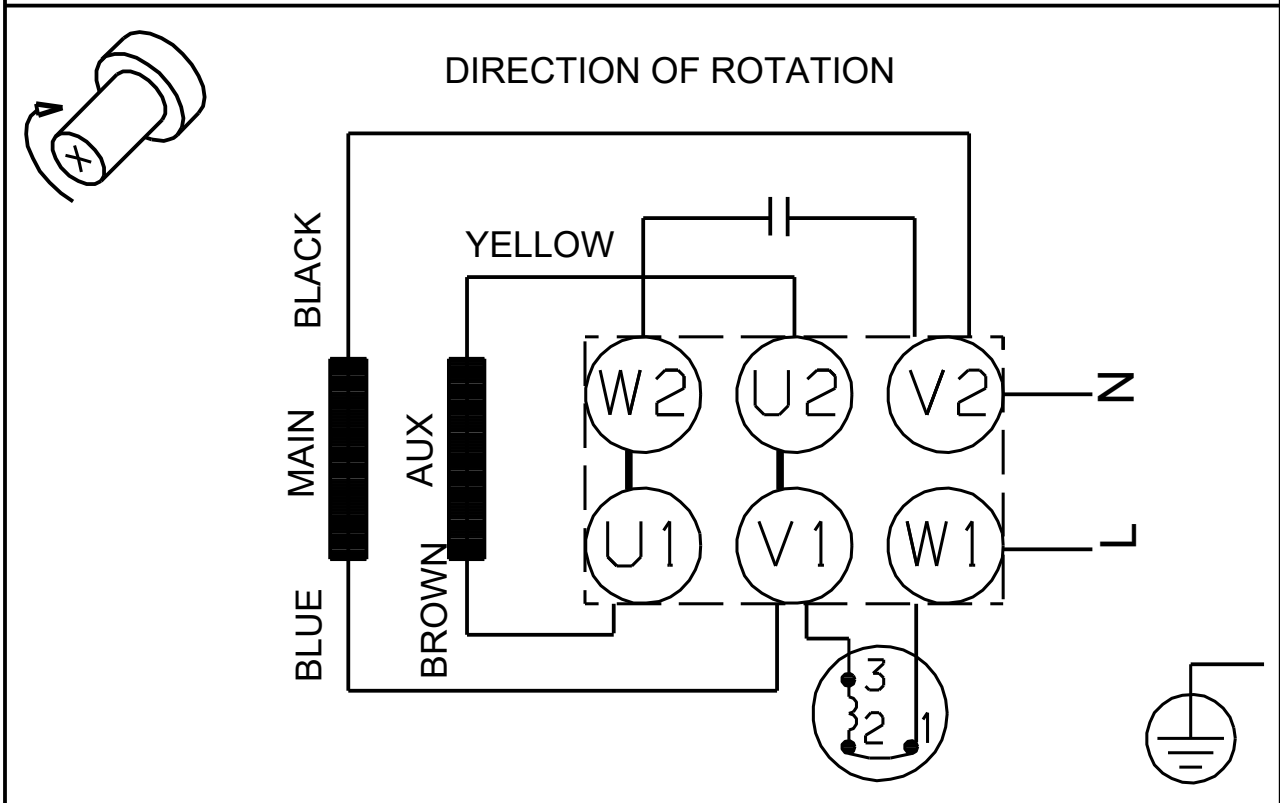
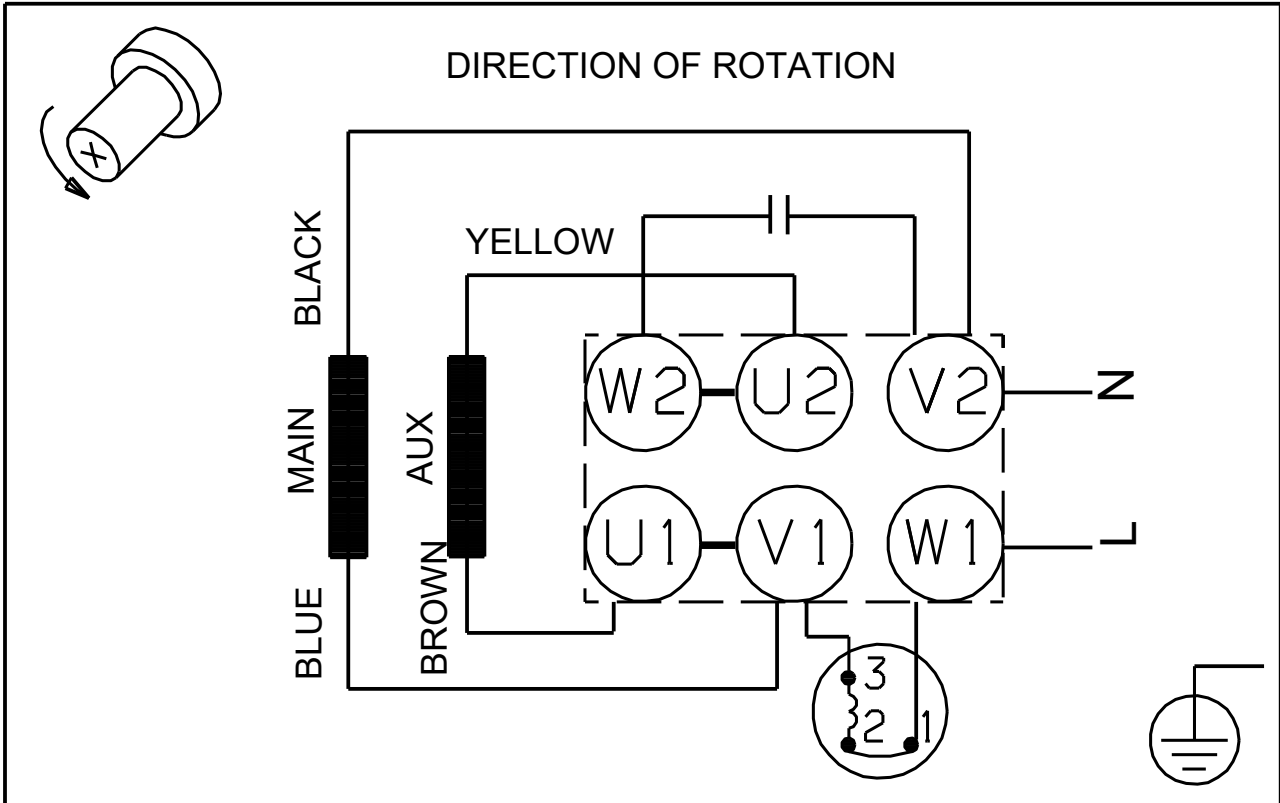


## On request TP 32-250/2 A-F-A-BQQE-HW1 50 Hz



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

## On request TP 32-250/2 A-F-A-BQQE-HW1 50 Hz



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

