

# Submittal Data

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

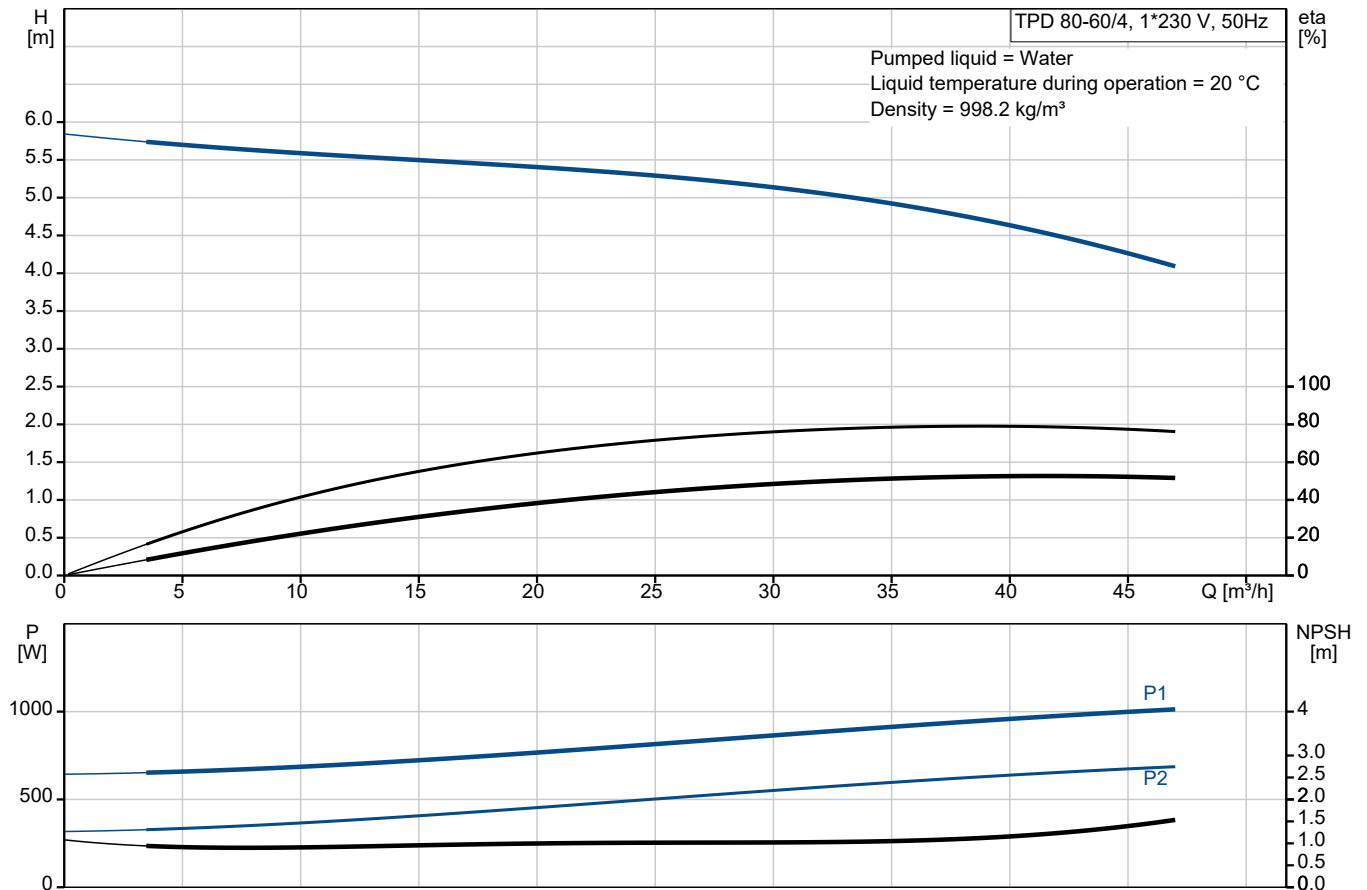


## TPD 80-60/4 A-F-A-BQQE-FW3

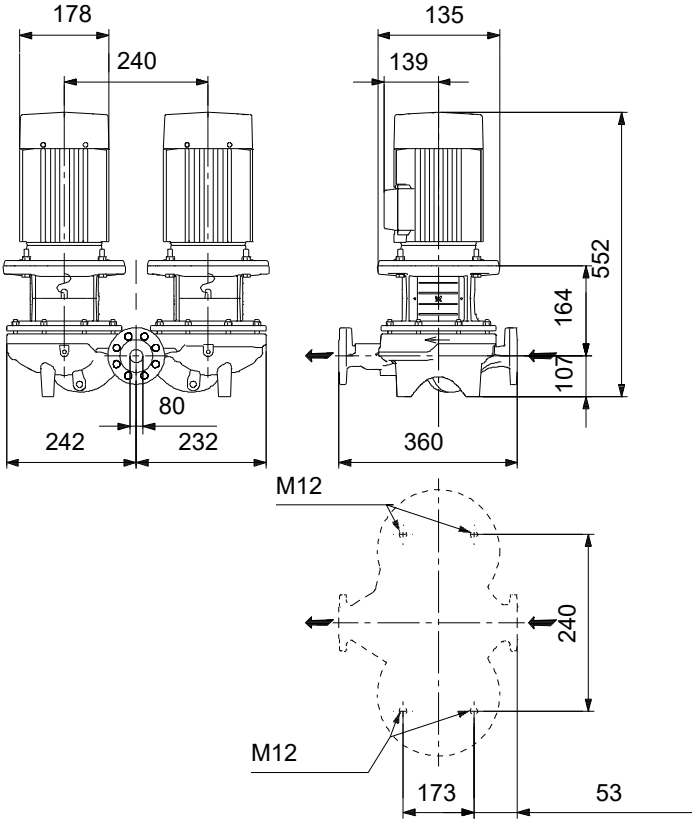
Grundfos TPD pumps are single-stage, close-coupled in-line centrifugal twin-head pumps with mechanical shaft seal and primarily for applications such as heating/cooling/district energy. The pumps are fitted with fixed speed motors.

Note! Product picture may differ from actual product

Conditions of Service		Pump Data		Motor Data	
Liquid:	Water	Max pressure at stated temp:	10 bar / 120 °C	Rated voltage:	220-230 V
Temperature:	20 °C	Liquid temperature range:	-25 .. 120 °C	Mains frequency:	50 Hz
Specific Gravity:	1.000	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:	90SA
				Eta 1/1:	71-70 %



# Submittal Data



- Materials:**
- Pump housing: Cast iron
  - Pump housing: ASTM class 35
  - Impeller: Stainless steel
  - Impeller: AISI 304
  - Impeller: EN 1.4301
  - Material code: A

**Qty. Description**

1 TPD 80-60/4 A-F-A-BQQE-FW3



**Note!** Product picture may differ from actual product

Product No.: On request

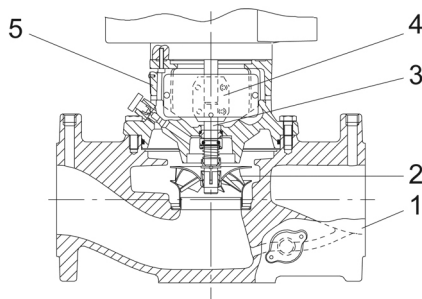
Single-stage, close-coupled, volute twin-head pump with in-line suction and discharge ports of identical diameter. The twin-head pump is designed with two parallel power-heads. The pump is of the top-pull-out design, i.e. the power head (motor, pump head and impeller) can be removed for maintenance or service while the pump housing remains in the pipework.

Each power head is fitted with an unbalanced rubber bellows seal. The shaft seal is according to EN 12756. Pipework connection is via PN 10 DIN flanges (EN 1092-2 and ISO 7005-2).

Each power head is fitted with a fan-cooled asynchronous motor of identical size.

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.

**Pump**



- 1: Pump housing
- 2: Impeller
- 3: Shaft
- 4: Coupling
- 5: Pump head

The twin-head pump is designed with two parallel power-heads. A flap valve in the common discharge port is opened by the flow of the pumped liquid and prevents backflow of liquid into the idle pump head.

The pump housing is provided with a replaceable stainless steel/PTFE neck ring to reduce the amount of liquid running from the discharge side of the impeller to the suction side.

The impeller is secured with a split cone with 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.

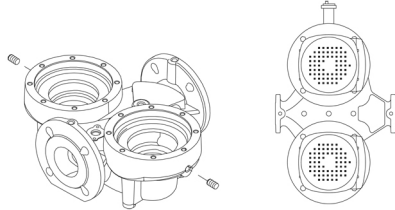
Secondary seal material: EPDM (ethylene-propylene rubber)

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.

**Qty. Description**

1 The pump housing has two Rp 1/8 tappings for mounting of automatic air vents. Fit an air vent to the upper pump housing if the twin-head pump is to be installed in a horizontal pipeline with horizontal pump shaft.



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. Motor and pump shaft are connected via a shell coupling.

**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 tapped-hole flange (FT).

Motor-mounting designation in accordance with IEC 60034-7: IM B 14, IM V 18 (Code I) / IM 3601, IM 3611 (Code II).

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.

**Further product details**

**Technical data**

Controls:

Frequency converter: None

Liquid:

Pumped liquid: Water

Liquid temperature range: -25 .. 120 °C

Selected liquid temperature: 20 °C

Density: 998.2 kg/m<sup>3</sup>

Technical:

Pump speed on which pump data are based: 1420 rpm

Rated flow: 39.1 m<sup>3</sup>/h

Rated head: 4.97 m

Actual impeller diameter: 133 mm

Code for shaft seal: BQQE

Curve tolerance: ISO9906:2012 3B2

Materials:

Pump housing: Cast iron

EN-GJL-250

ASTM class 35

Impeller: Stainless steel

EN 1.4301

AISI 304

Qty.	Description
1	<p>Installation:</p> <p>Range of ambient temperature: -30 .. 40 °C</p> <p>Maximum operating pressure: 10 bar</p> <p>Max pressure at stated temp: 10 bar / 120 °C</p> <p>Type of connection: DIN</p> <p>Size of connection: DN 80</p> <p>Pressure rating for connection: PN 10</p> <p>Port-to-port length: 360 mm</p> <p>Flange size for motor: FT115</p> <p>Electrical data:</p> <p>Motor type: 90SA</p> <p>Rated power - P2: 0.75 kW</p> <p>Mains frequency: 50 Hz</p> <p>Rated voltage: 1 x 220-230 V</p> <p>Rated current: 5.45 A</p> <p>Starting current: 320 %</p> <p>Cos phi - power factor: 0.96</p> <p>Rated speed: 1390-1410 rpm</p> <p>Motor efficiency at full load: 71-70 %</p> <p>Number of poles: 4</p> <p>Enclosure class (IEC 34-5): 55 Dust/Jetting</p> <p>Insulation class (IEC 85): F</p> <p>Motor No: 86215704</p> <p>Others:</p> <p>Minimum efficiency index, MEI ≥: 0.70</p> <p>Net weight: 89.8 kg</p> <p>Gross weight: 112 kg</p> <p>Shipping volume: 0.39 m<sup>3</sup></p>



Company name:

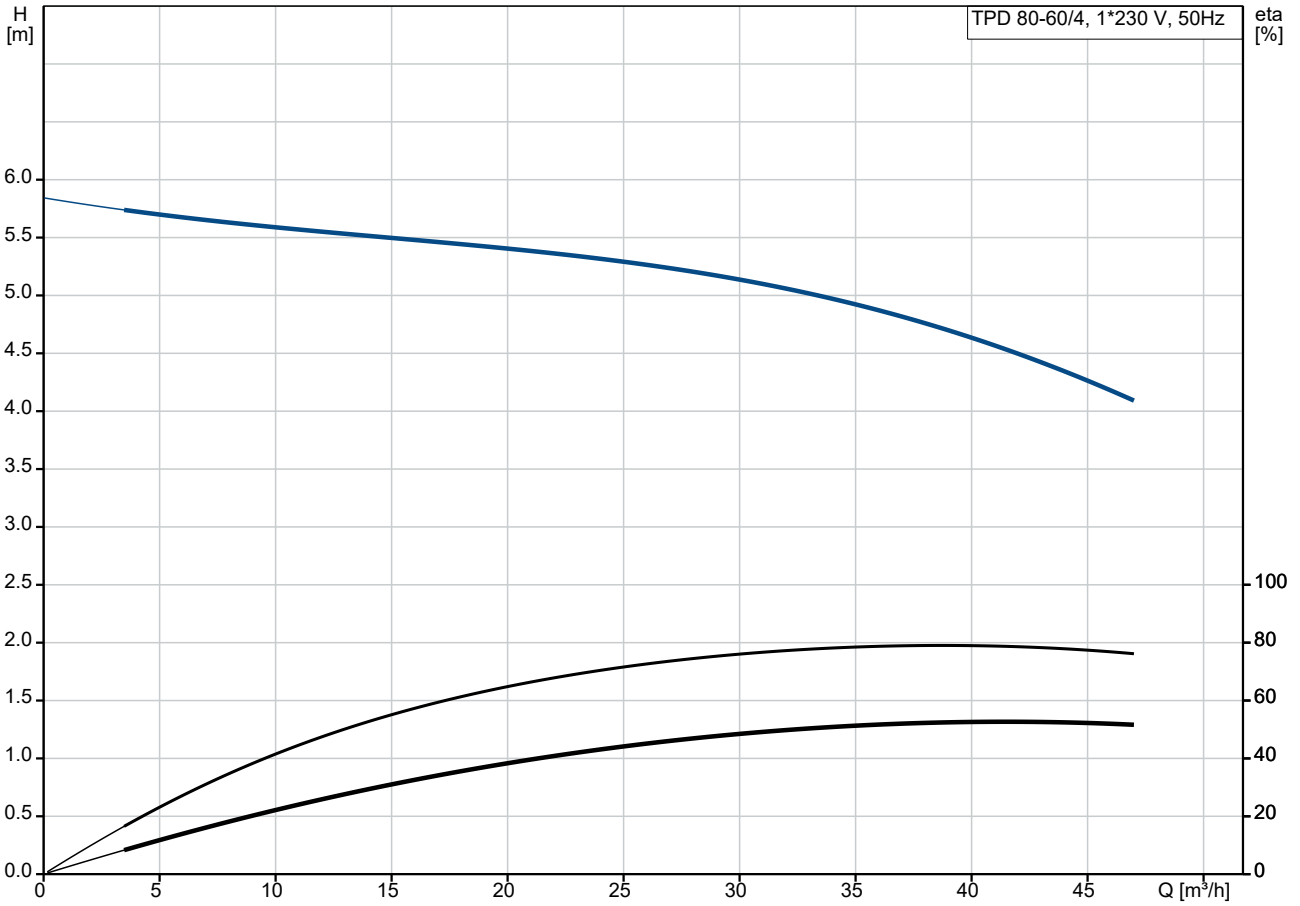
Created by:

Phone:

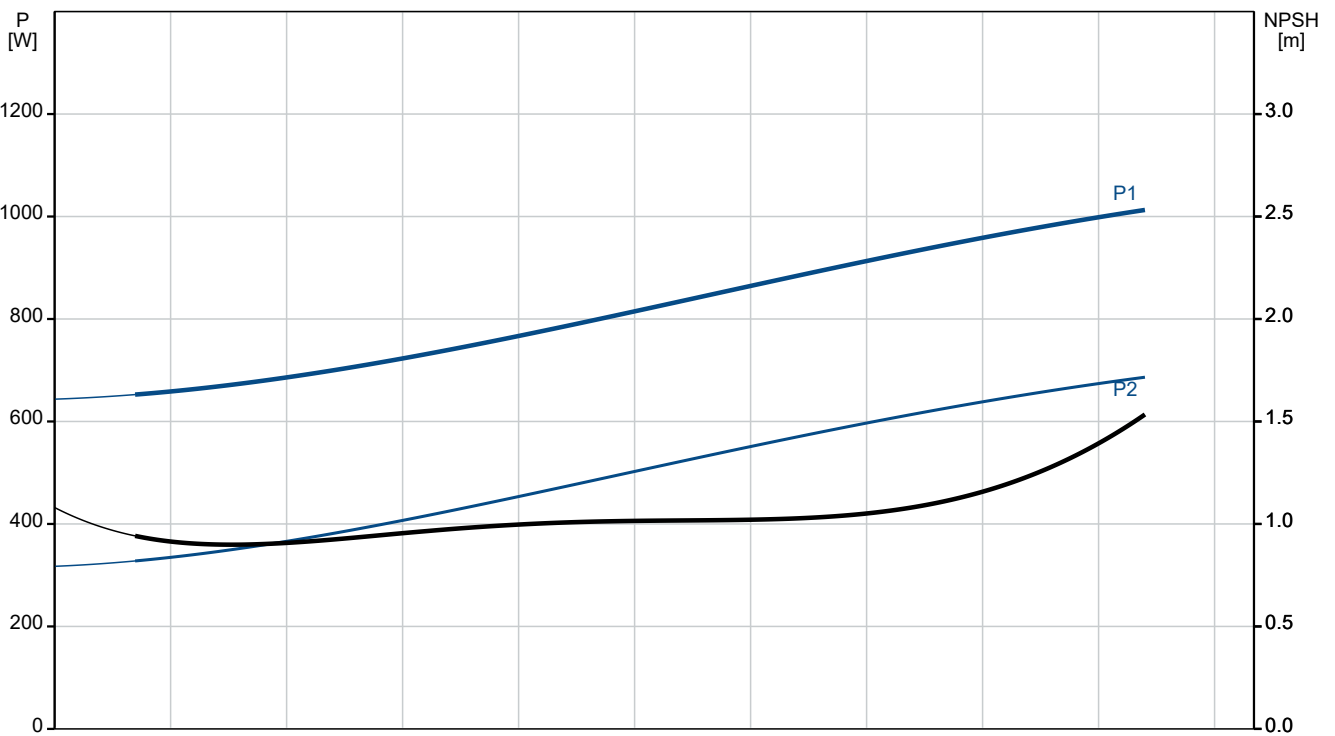
Date:

05/11/2024

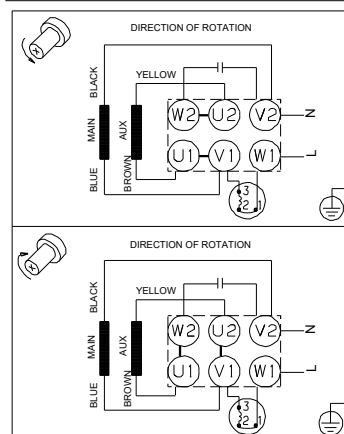
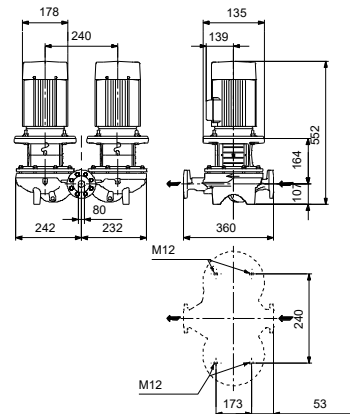
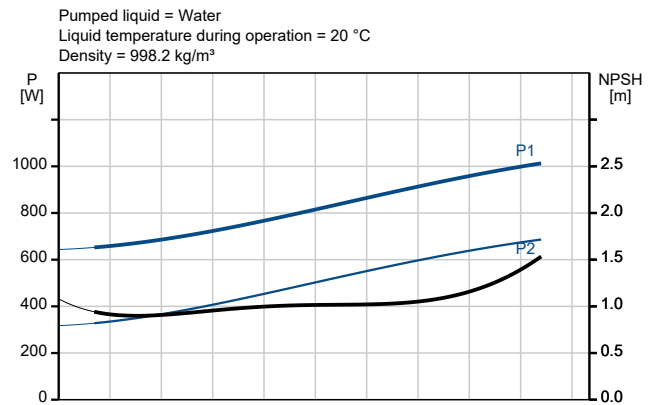
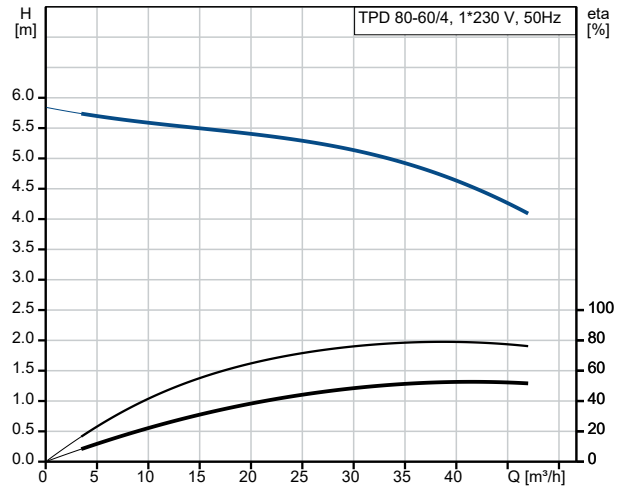
### On request TPD 80-60/4 A-F-A-BQQE-FW3 50 Hz



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



Description	Value
<b>General information:</b>	
Product name:	TPD 80-60/4 A-F-A-BQQE-FW3
Product No:	On request
EAN number:	On request
<b>Technical:</b>	
Pump speed on which pump data are based:	1420 rpm
Rated flow:	39.1 m <sup>3</sup> /h
Rated head:	4.97 m
Maximum head:	60 dm
Actual impeller diameter:	133 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:	Stainless steel
Impeller:	EN 1.4301
Impeller:	AISI 304
Material code:	A
<b>Installation:</b>	
Range of ambient temperature:	-30 .. 40 °C
Maximum operating pressure:	10 bar
Max pressure at stated temp:	10 bar / 120 °C
Type of connection:	DIN
Size of connection:	DN 80
Pressure rating for connection:	PN 10
Port-to-port length:	360 mm
Flange size for motor:	FT115
Connect code:	F
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m <sup>3</sup>
<b>Electrical data:</b>	
Motor type:	90SA
Rated power - P2:	0.75 kW
Mains frequency:	50 Hz
Rated voltage:	1 x 220-230 V
Rated current:	5.45 A
Starting current:	320 %
Cos phi - power factor:	0.96
Rated speed:	1390-1410 rpm
Motor efficiency at full load:	71-70 %
Number of poles:	4
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Built-in motor protection:	PTO
Motor No:	86215704
<b>Controls:</b>	
Frequency converter:	None
<b>Others:</b>	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	89.8 kg





Company name:

Created by:

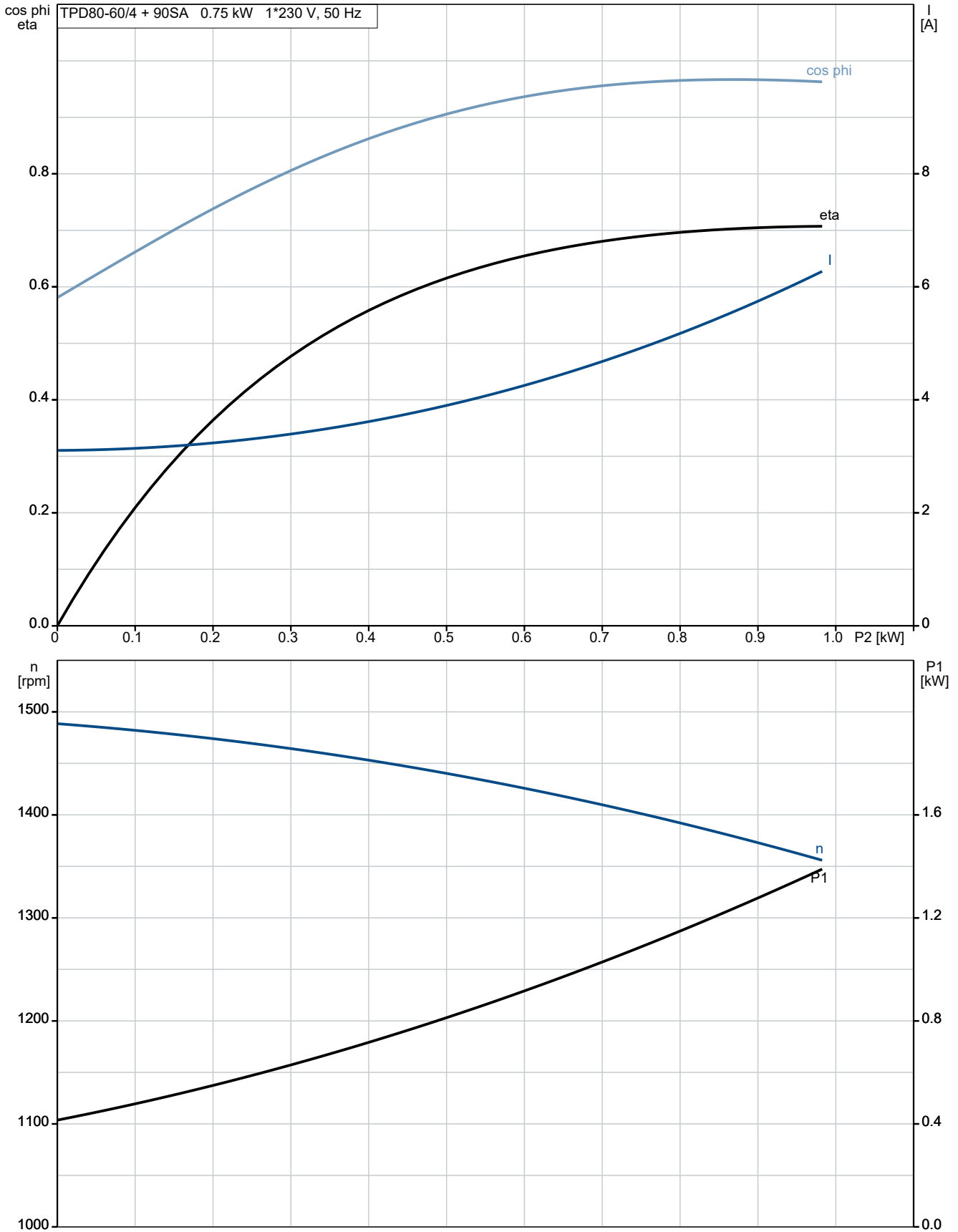
Phone:

Date:

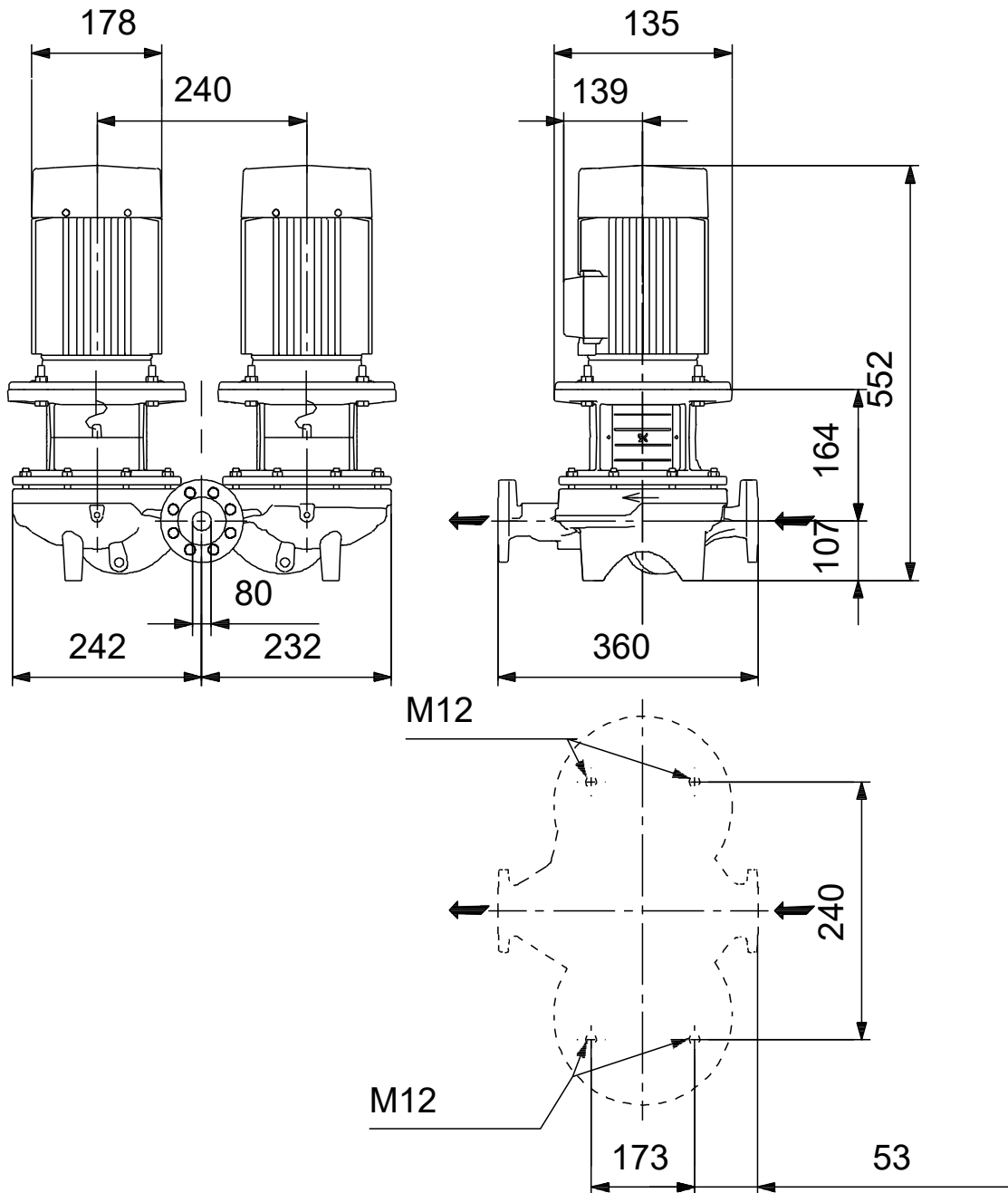
05/11/2024

Description	Value
Gross weight:	112 kg
Shipping volume:	0.39 m <sup>3</sup>

## On request TPD 80-60/4 A-F-A-BQQE-FW3 50 Hz

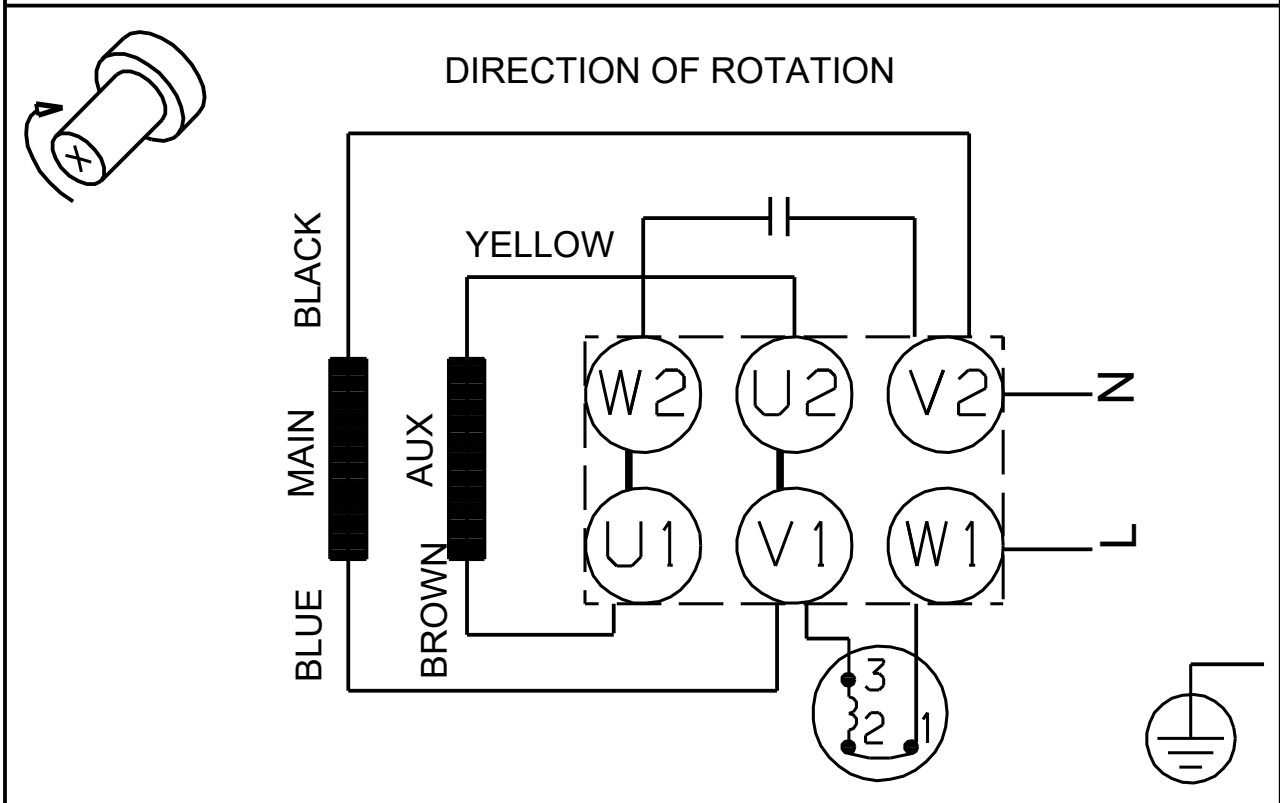
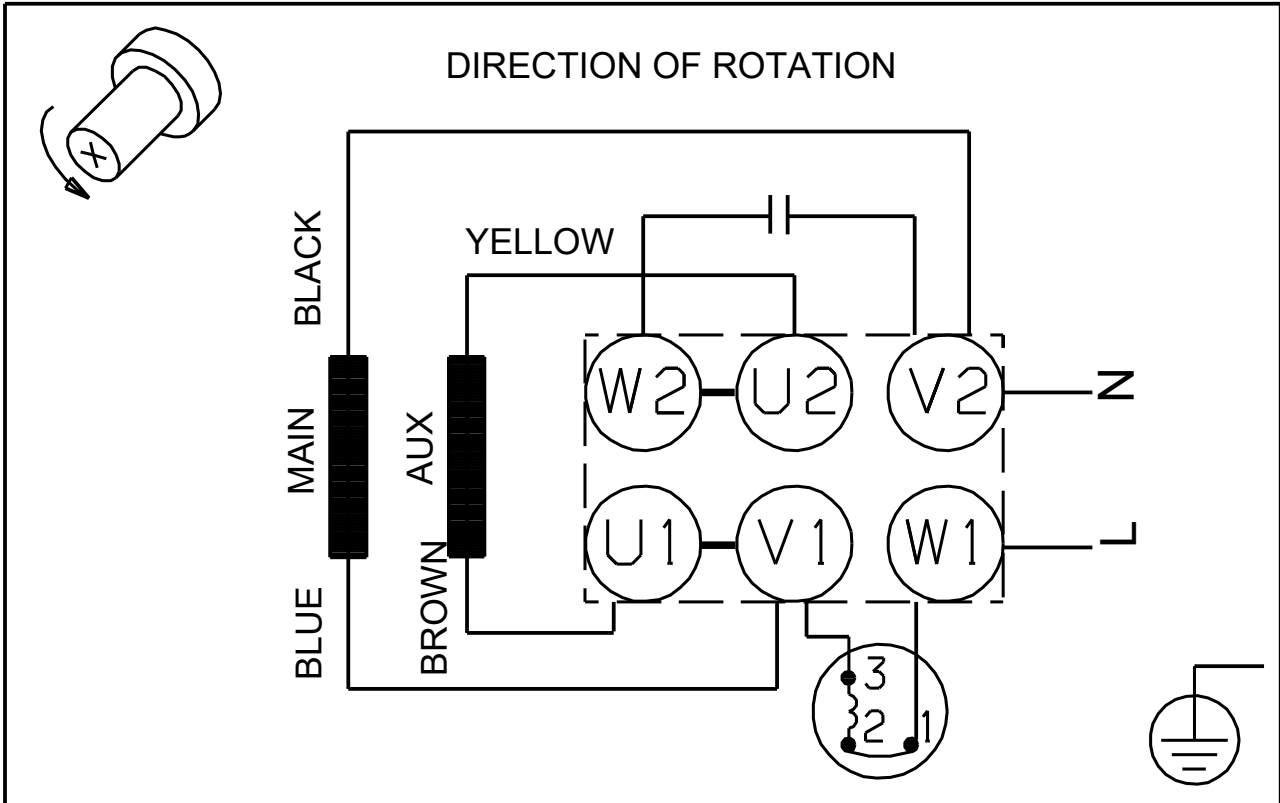


## On request TPD 80-60/4 A-F-A-BQQE-FW3 50 Hz



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

## On request TPD 80-60/4 A-F-A-BQQE-FW3 50 Hz



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

