

# Submittal Data

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

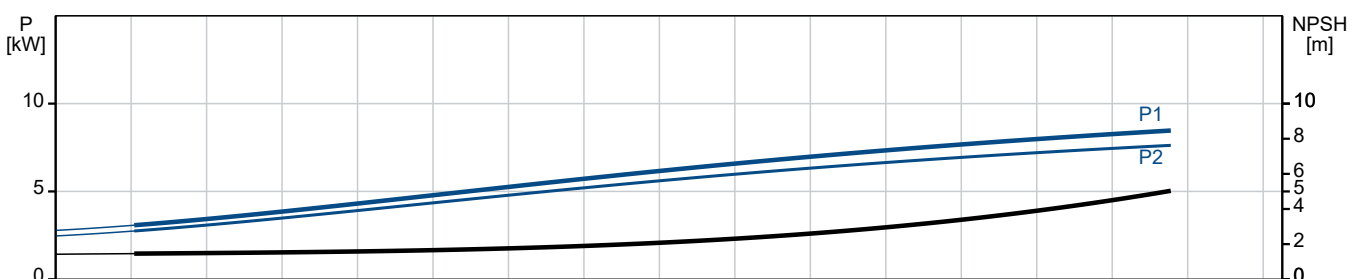
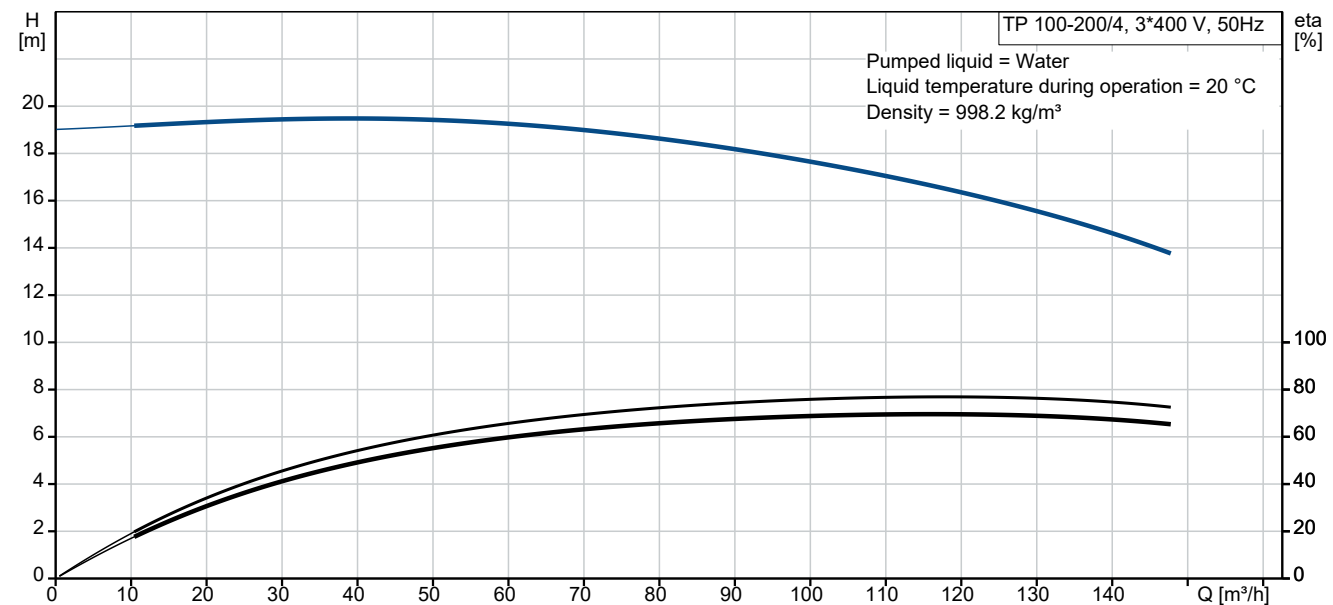


## TP 100-200/4 A3-F-O-DAQF-MW3

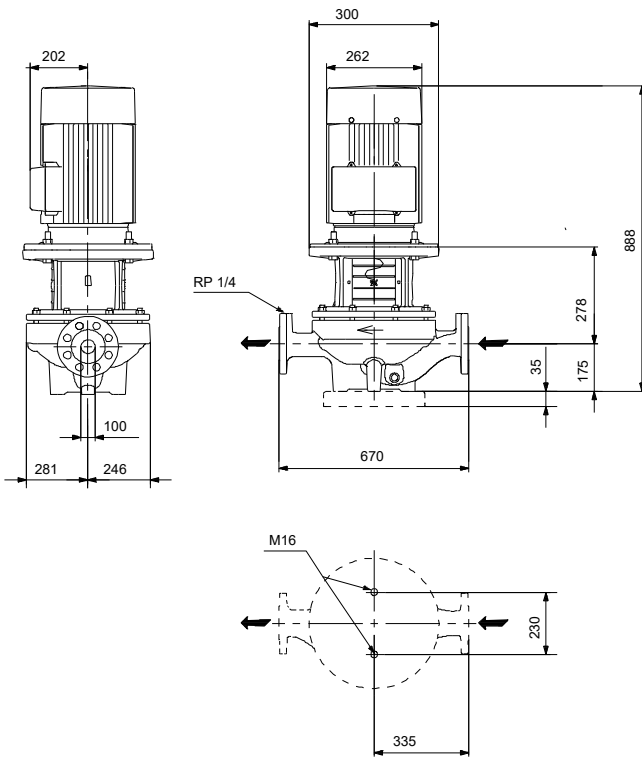
Grundfos TP pumps are single-stage, close-coupled in-line centrifugal pumps with mechanical shaft seal and primely for applications such as heating/cooling/district energy. The pumps are fitted with fixed speed motors.

Note! Product picture may differ from actual product

Conditions of Service	Pump Data	Motor Data
	Max pressure at stated temp: 25 bar / 140 °C Liquid temperature range: 0 .. 140 °C Maximum ambient temperature: 55 °C Shaft seal: DAQF Product number: On request	Rated voltage: 380-420D/660-725Y V Mains frequency: 50 Hz Enclosure class: IP55 Insulation class: F Motor protection: PTC Motor type: SIEMENS Eta 1/1: 90.4-90.4 %



# Submittal Data



**Materials:**

- Pump housing: Ductile iron
- Pump housing: ASTM Grade 60-40-18
- Impeller: Cast iron
- Impeller: ASTM class 30
- Impeller: EN-GJL-200
- Material code: O

**Qty. Description**

1 TP 100-200/4 A3-F-O-DAQF-MW3



**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 a balanced O-ring seal. The shaft seal is according to EN 12756. Pipework connection is via PN 25 DIN flanges (EN 1092-2 and ISO 7005-2).

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

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 a balanced O-ring seal. Due to the balancing, this seal type is suitable for high-pressure applications. This seal type is excellent for high-viscosity, dirt- and fibre-containing liquids due to the spring location on the atmospheric side. The seal features a rigid torque-transmission design.

Seal faces:

- Rotating seal ring material: carbon graphite, metal-impregnated
- Stationary seat material: silicon carbide (SiC)

Due to the favourable lubricating properties of carbon graphite, the seal is suitable for use even under poor lubricating conditions, such as hot water.

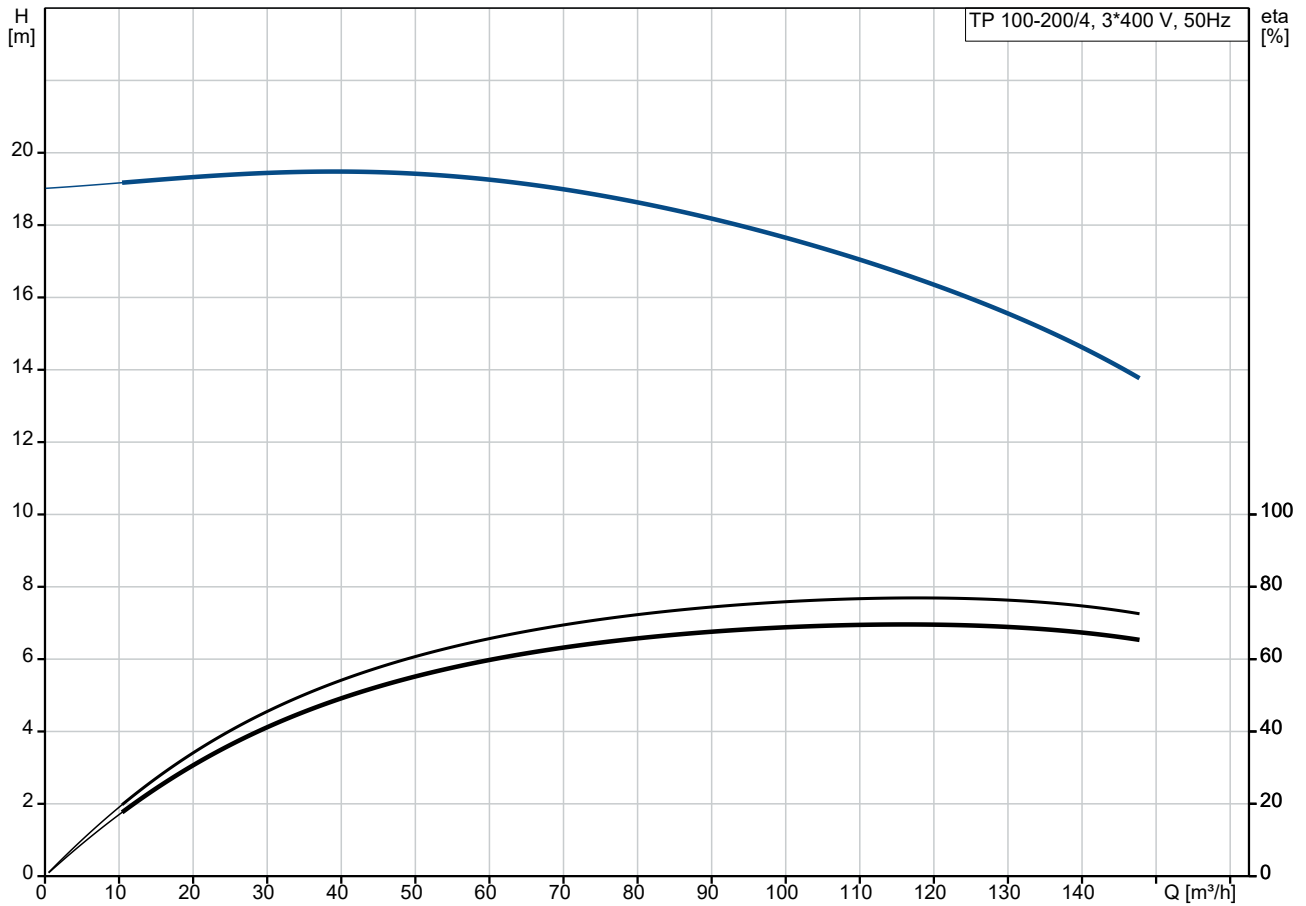
However, under such conditions, wear on the carbon graphite face can be expected, and seal life will be reduced .

The material pairing is not recommended for liquids containing particles as this will result in wear on the SiC face. Secondary seal material: FXM (fluorinated copolymer)

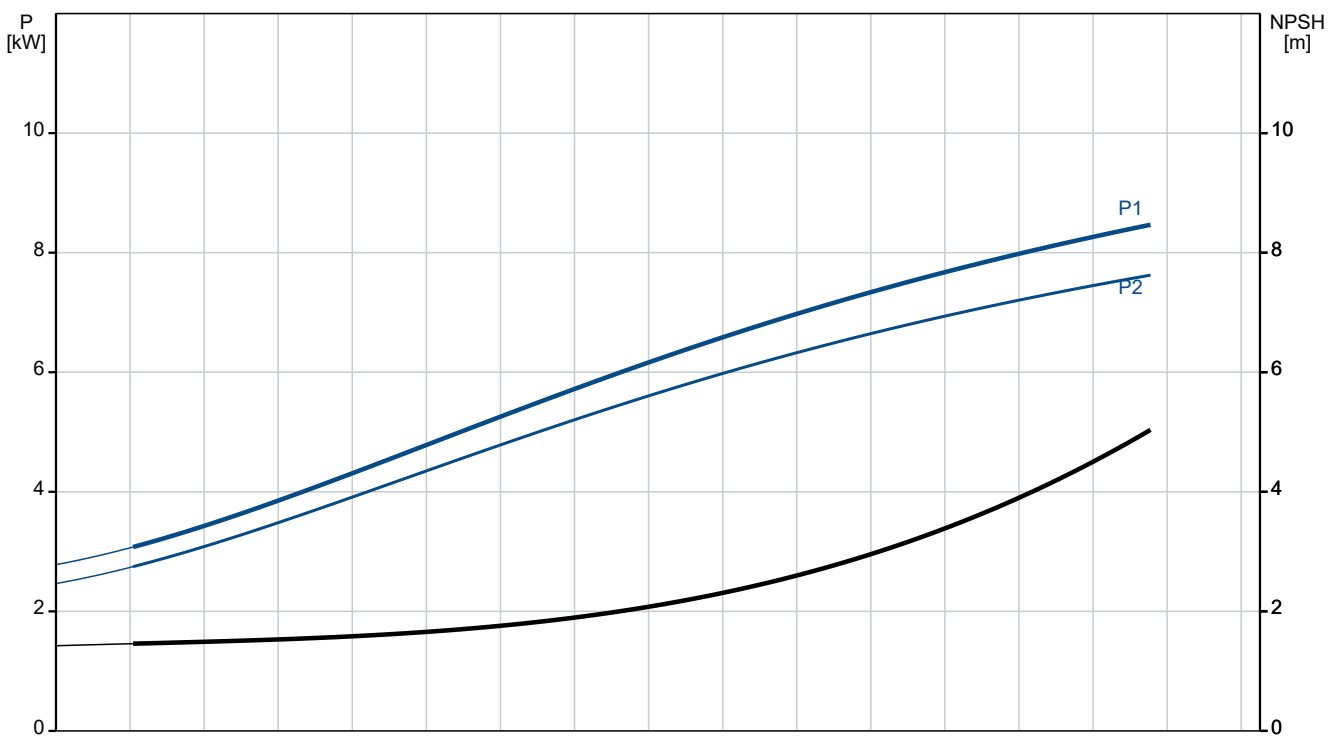
Qty.	Description
1	<p data-bbox="204 338 1414 365">FXM is particularly suitable for extremely high temperatures and pressures. FXM has a good chemical resistance.</p> <p data-bbox="204 398 1350 425">A circulation of liquid through the duct of the air vent screw ensures lubrication and cooling of the shaft seal.</p> <p data-bbox="204 427 847 454">The flanges have tappings for mounting of pressure gauges.</p> <p data-bbox="204 456 1441 533">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.</p> <p data-bbox="204 544 1417 595">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 data-bbox="204 600 632 627">The pump is mounted with a base plate.</p> <p data-bbox="204 660 284 687"><b>Motor</b></p> <p data-bbox="204 696 1393 748">The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.</p> <p data-bbox="204 752 794 779">The motor is flange-mounted with free-hole flange (FF).</p> <p data-bbox="204 781 1426 808">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 data-bbox="204 842 1015 869">The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.</p> <p data-bbox="204 871 1433 922">The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.</p> <p data-bbox="204 927 1422 1003">Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.</p> <p data-bbox="204 1014 1406 1066">The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.</p> <p data-bbox="204 1099 512 1126"><b>Further product details</b></p> <p data-bbox="204 1135 1453 1211">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 data-bbox="204 1283 400 1310"><b>Technical data</b></p> <p data-bbox="204 1350 300 1377">Controls:</p> <p data-bbox="204 1379 624 1406">Frequency converter:                      None</p> <p data-bbox="204 1440 276 1467">Liquid:</p> <p data-bbox="204 1469 683 1496">Liquid temperature range:                      0 .. 140 °C</p> <p data-bbox="204 1529 316 1556">Technical:</p> <p data-bbox="204 1559 818 1585">Pump speed on which pump data are based:    1455 rpm</p> <p data-bbox="204 1588 663 1615">Rated flow:    117 m<sup>3</sup>/h</p> <p data-bbox="204 1617 639 1644">Rated head:    16.3 m</p> <p data-bbox="204 1646 655 1673">Actual impeller diameter:                      240 mm</p> <p data-bbox="204 1675 635 1702">Code for shaft seal:                                      DAQF</p> <p data-bbox="204 1704 772 1731">Curve tolerance:                                      ISO9906:2012 3B2</p> <p data-bbox="204 1776 308 1803">Materials:</p> <p data-bbox="204 1805 810 1890">Pump housing:    Ductile iron EN-GJS-400-18-LT ASTM Grade 60-40-18</p> <p data-bbox="204 1895 730 1980">Impeller:    Cast iron EN-GJL-200 ASTM class 30</p> <p data-bbox="204 2018 325 2045">Installation:</p> <p data-bbox="204 2047 691 2074">Range of ambient temperature:                      -20 .. 55 °C</p> <p data-bbox="204 2076 635 2103">Maximum operating pressure:                      25 bar</p>

Qty.	Description
1	<p>Max pressure at stated temp: 25 bar / 140 °C            Type of connection: DIN            Size of connection: DN 100            Pressure rating for connection: PN 25            Port-to-port length: 670 mm            Flange size for motor: FF265</p> <p>Electrical data:            Motor type: SIEMENS            Rated power - P2: 7.5 kW            Mains frequency: 50 Hz            Rated voltage: 3 x 380-420D/660-725Y V            Rated current: 14.3/8.3 A            Starting current: 820-820 %            Cos phi - power factor: 0.84            Rated speed: 1465 rpm            IE efficiency: IE3 90,4%            IE Efficiency class: IE3            Motor efficiency at full load: 90.4-90.4 %            Motor efficiency at 3/4 load: 91.1-91.1 %            Motor efficiency at 1/2 load: 90.8-90.8 %            Number of poles: 4            Enclosure class (IEC 34-5): IP55            Insulation class (IEC 85): F            Motor No: 83V15222</p> <p>Others:            Minimum efficiency index, MEI ≥: 0.45            Net weight: 227 kg            Gross weight: 264 kg            Shipping volume: 0.743 m<sup>3</sup>            Country of origin: HU            Custom tariff no.: 84137051</p>

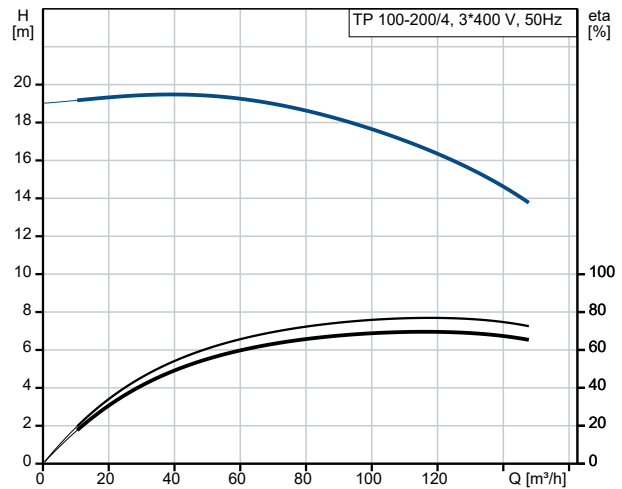
## On request TP 100-200/4 A3-F-O-DAQF-MW3 50 Hz



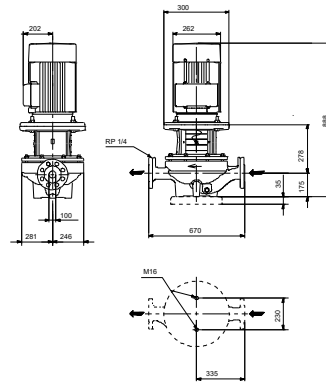
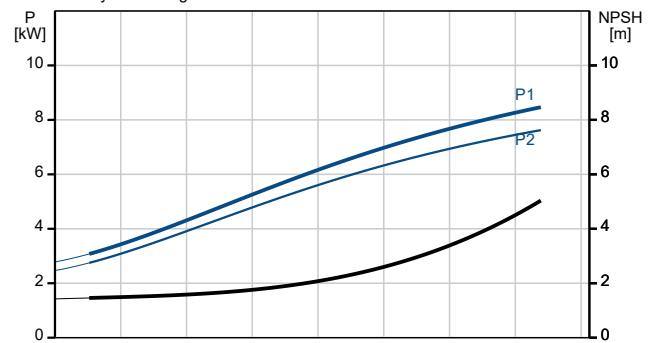
Pumped liquid = Water  
 Liquid temperature during operation = 20 °C  
 Density = 998.2 kg/m³



Description	Value
<b>General information:</b>	
Product name:	TP 100-200/4 A3-F-O-DAQF-MW3
Product No:	On request
EAN number:	On request
<b>Technical:</b>	
Pump speed on which pump data are based:	1455 rpm
Rated flow:	117 m <sup>3</sup> /h
Rated head:	16.3 m
Maximum head:	200 dm
Actual impeller diameter:	240 mm
Code for shaft seal:	DAQF
Curve tolerance:	ISO9906:2012 3B2
Pump version:	A3
<b>Materials:</b>	
Pump housing:	Ductile iron
Pump housing:	EN-GJS-400-18-LT
Pump housing:	ASTM Grade 60-40-18
Impeller:	Cast iron
Impeller:	EN-GJL-200
Impeller:	ASTM class 30
Material code:	O
<b>Installation:</b>	
Range of ambient temperature:	-20 .. 55 °C
Maximum operating pressure:	25 bar
Max pressure at stated temp:	25 bar / 140 °C
Type of connection:	DIN
Size of connection:	DN 100
Pressure rating for connection:	PN 25
Port-to-port length:	670 mm
Flange size for motor:	FF265
Connect code:	F
<b>Liquid:</b>	
Liquid temperature range:	0 .. 140 °C
<b>Electrical data:</b>	
Motor type:	SIEMENS
Rated power - P2:	7.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-420D/660-725Y V
Rated current:	14.3/8.3 A
Starting current:	820-820 %
Cos phi - power factor:	0.84
Rated speed:	1465 rpm
IE efficiency:	IE3 90,4%
IE Efficiency class:	IE3
Motor efficiency at full load:	90.4-90.4 %
Motor efficiency at 3/4 load:	91.1-91.1 %
Motor efficiency at 1/2 load:	90.8-90.8 %
Number of poles:	4
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	83V15222
<b>Controls:</b>	
Frequency converter:	None
<b>Others:</b>	
Minimum efficiency index, MEI ≥:	0.45



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



IEC 60741 THERMAL PROTECTED MAINS TERMINALS ARE CONNECTED TO AMPLIFIER RELAY FOR CONTROL OF MAIN SUPPLY THERMOSTATIC PTC ACCORDING TO DIN 4482



Company name:

Created by:

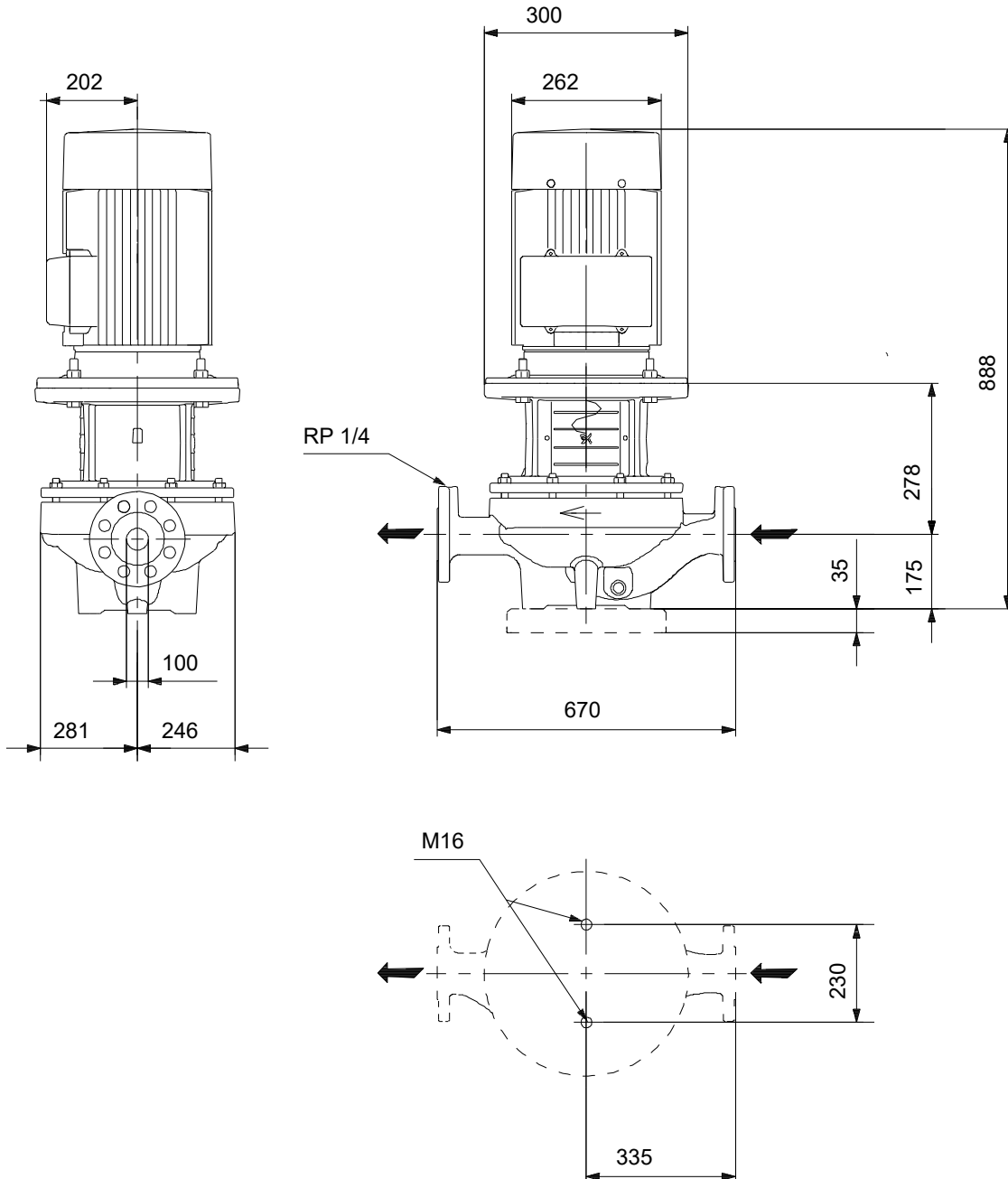
Phone:

Date:

01/12/2023

Description	Value
Net weight:	227 kg
Gross weight:	264 kg
Shipping volume:	0.743 m <sup>3</sup>
Country of origin:	HU
Custom tariff no.:	84137051

## On request TP 100-200/4 A3-F-O-DAQF-MW3 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 100-200/4 A3-F-O-DAQF-MW3 50 Hz



IEC TP211 THERMALLY PROTECTED WHEN THE THERMISTORS ARE  
CONNECTED TO AMPLIFIER RELAY FOR CONTROL OF MAIN SUPPLY  
THERMISTORS PTC ACCORDING TO DIN 44082

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

