

Submittal Data

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

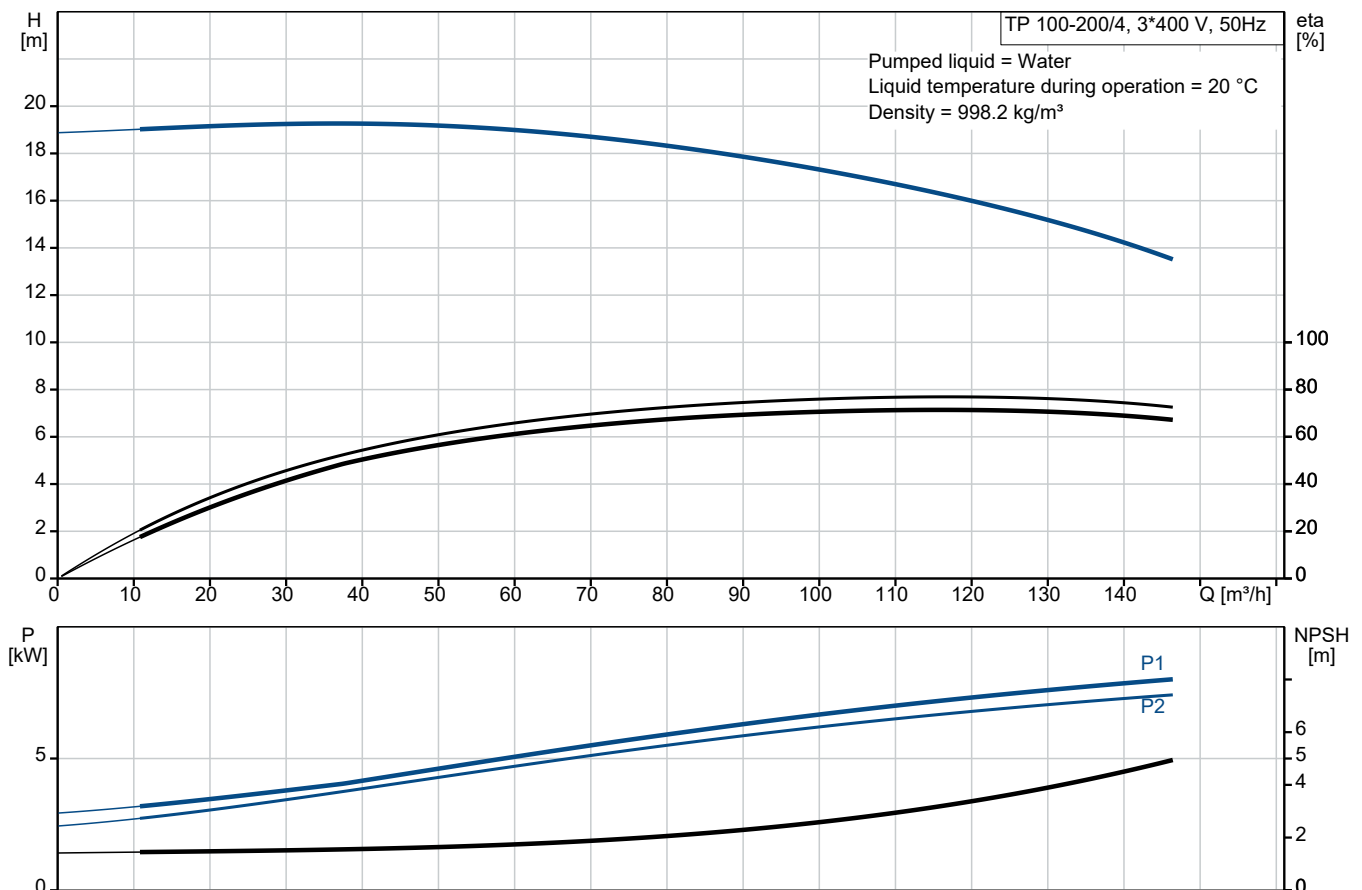


TP 100-200/4 A3-F-O-DAQF-MW3

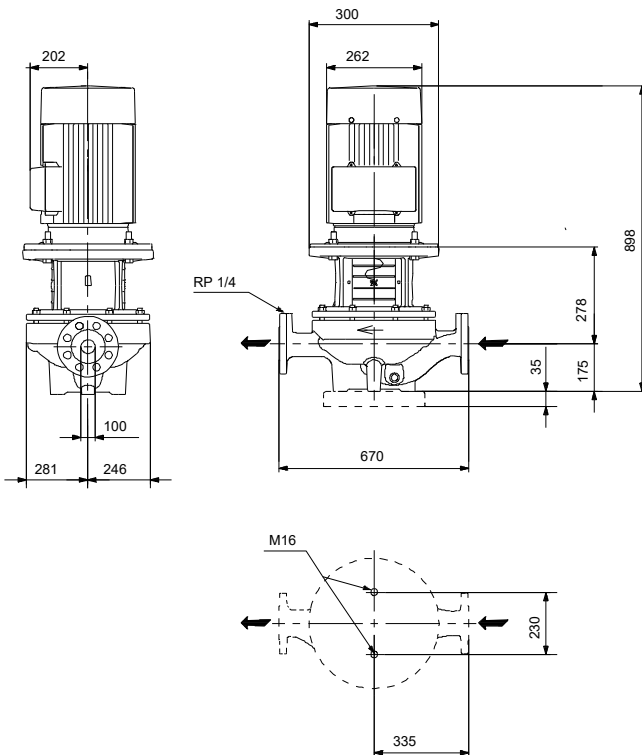
Grundfos TP pumps are single-stage, close-coupled in-line centrifugal pumps with mechanical shaft seal and primely for applications such as heating/cooling/district energy. The pumps are fitted with fixed speed motors.

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: 92.6-92.6 %



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="201 338 1414 365">FXM is particularly suitable for extremely high temperatures and pressures. FXM has a good chemical resistance.</p> <p data-bbox="201 398 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="201 427 847 454">The flanges have tappings for mounting of pressure gauges.</p> <p data-bbox="201 456 1442 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="201 544 1414 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="201 600 632 627">The pump is mounted with a base plate.</p> <p data-bbox="201 660 284 687">Motor</p> <p data-bbox="201 696 1394 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="201 752 794 779">The motor is flange-mounted with free-hole flange (FF).</p> <p data-bbox="201 781 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="201 842 1015 869">The motor efficiency is classified as IE4 in accordance with IEC 60034-30-1.</p> <p data-bbox="201 871 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="201 927 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="201 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="201 1099 512 1126">Further product details</p> <p data-bbox="201 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="201 1283 400 1310">Technical data</p> <p data-bbox="201 1350 300 1377">Controls:</p> <p data-bbox="201 1379 624 1406">Frequency converter: None</p> <p data-bbox="201 1440 276 1467">Liquid:</p> <p data-bbox="201 1469 683 1496">Liquid temperature range: 0 .. 140 °C</p> <p data-bbox="201 1529 316 1556">Technical:</p> <p data-bbox="201 1559 818 1585">Pump speed on which pump data are based: 1455 rpm</p> <p data-bbox="201 1588 663 1615">Rated flow: 117 m³/h</p> <p data-bbox="201 1617 639 1644">Rated head: 16.3 m</p> <p data-bbox="201 1646 655 1673">Actual impeller diameter: 240 mm</p> <p data-bbox="201 1675 635 1702">Code for shaft seal: DAQF</p> <p data-bbox="201 1704 772 1731">Curve tolerance: ISO9906:2012 3B2</p> <p data-bbox="201 1776 309 1803">Materials:</p> <p data-bbox="201 1805 810 1890">Pump housing: Ductile iron EN-GJS-400-18-LT ASTM Grade 60-40-18</p> <p data-bbox="201 1892 730 1977">Impeller: Cast iron EN-GJL-200 ASTM class 30</p> <p data-bbox="201 2022 325 2049">Installation:</p> <p data-bbox="201 2051 691 2078">Range of ambient temperature: -20 .. 55 °C</p> <p data-bbox="201 2080 635 2107">Maximum operating pressure: 25 bar</p>

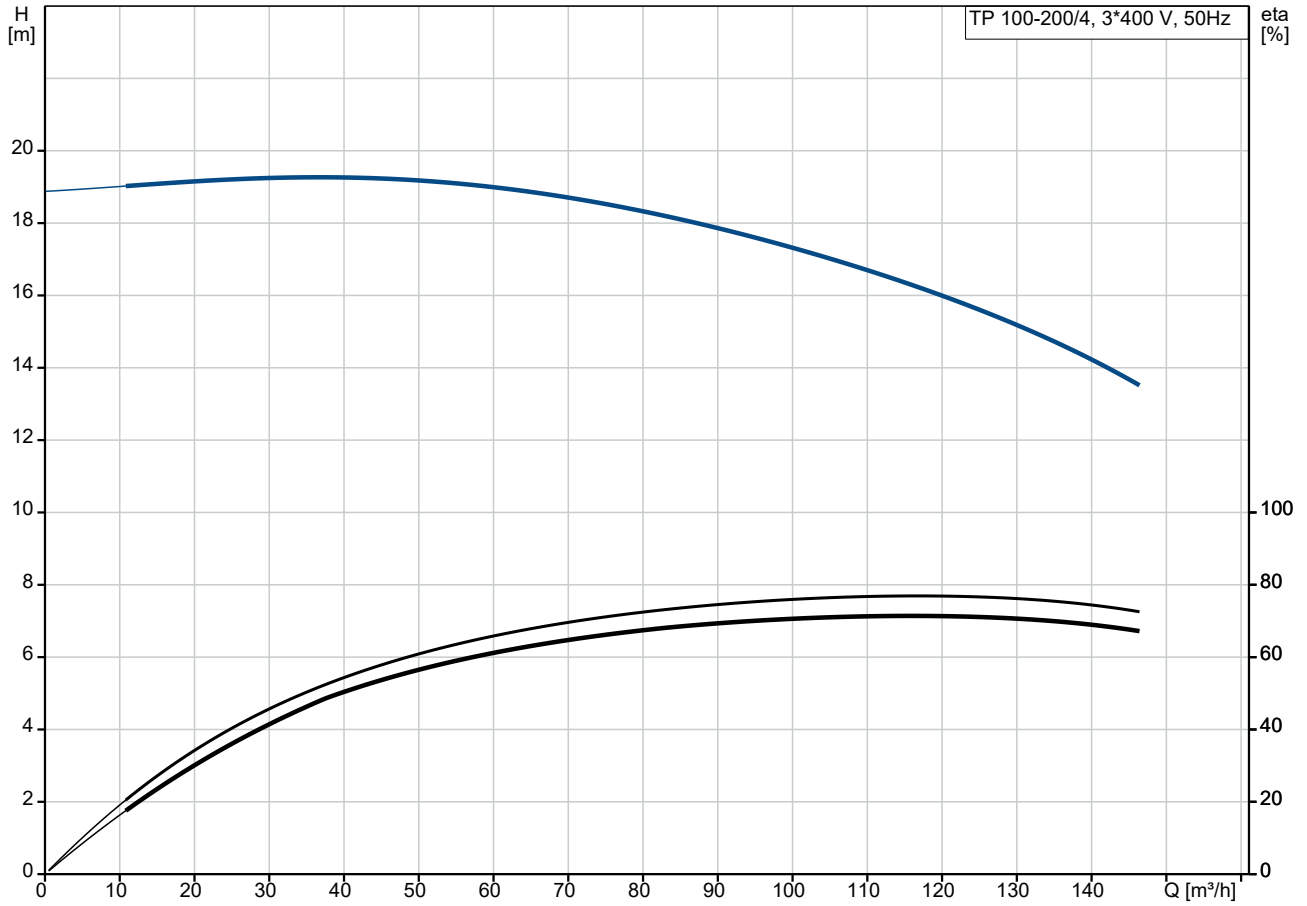
Qty.	Description
1	<p>Max pressure at stated temp: 25 bar / 140 °C Type of connection: DIN Size of connection: DN 100 Pressure rating for connection: PN 25 Port-to-port length: 670 mm Flange size for motor: FF265</p> <p>Electrical data: Motor type: SIEMENS Rated power - P2: 7.5 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-420D/660-725Y V Rated current: 14.4/8.4 A Starting current: 770-770 % Cos phi - power factor: 0.81 Rated speed: 1470 rpm IE efficiency: IE4 92,6% IE Efficiency class: IE4 Motor efficiency at full load: 92.6-92.6 % Motor efficiency at 3/4 load: 93.1-93.1 % Motor efficiency at 1/2 load: 92.7-92.7 % Number of poles: 4 Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Motor No: 83V16222</p> <p>Others: Minimum efficiency index, MEI ≥: 0.45 Net weight: 232 kg Gross weight: 269 kg Shipping volume: 0.743 m³ Country of origin: HU Custom tariff no.: 84137051</p>



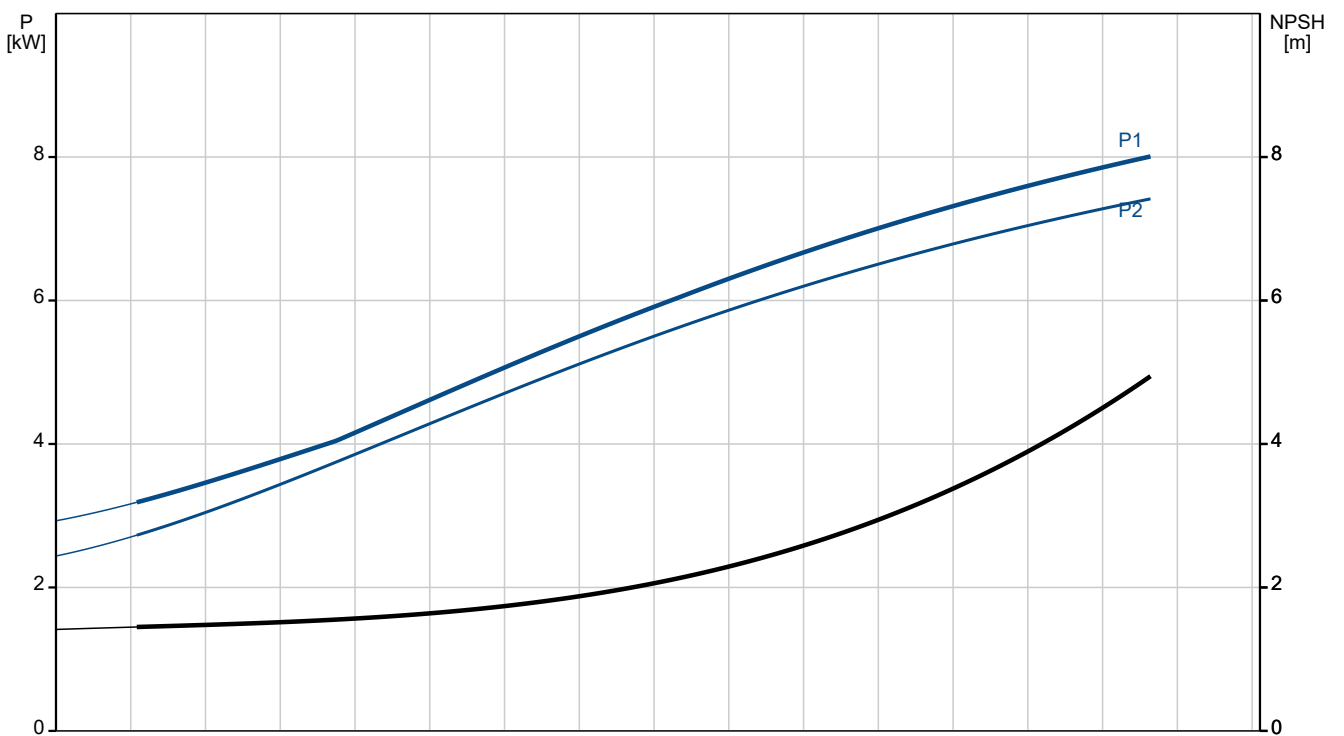
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Created by:
Phone:

Date: 01/12/2023

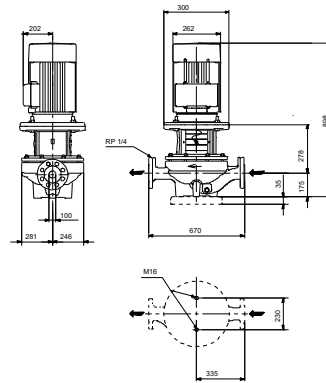
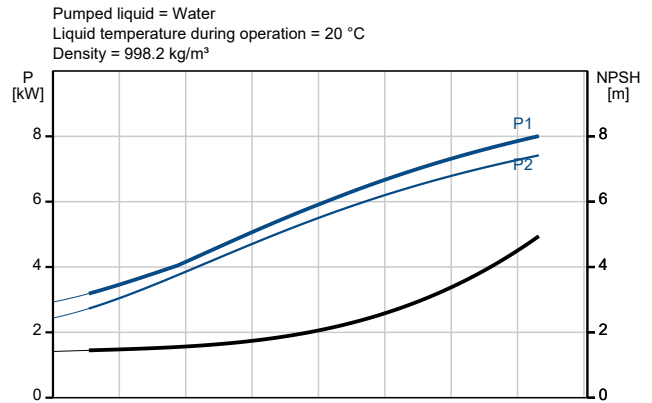
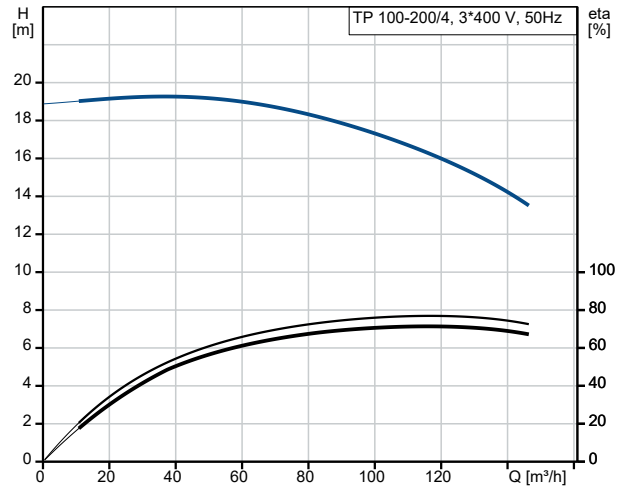
On request TP 100-200/4 A3-F-O-DAQF-MW3 50 Hz



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



Description	Value
General information:	
Product name:	TP 100-200/4 A3-F-O-DAQF-MW3
Product No:	On request
EAN number:	On request
Technical:	
Pump speed on which pump data are based:	1455 rpm
Rated flow:	117 m ³ /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
Materials:	
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
Installation:	
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
Liquid:	
Liquid temperature range:	0 .. 140 °C
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:	14.4/8.4 A
Starting current:	770-770 %
Cos phi - power factor:	0.81
Rated speed:	1470 rpm
IE efficiency:	IE4 92,6%
IE Efficiency class:	IE4
Motor efficiency at full load:	92.6-92.6 %
Motor efficiency at 3/4 load:	93.1-93.1 %
Motor efficiency at 1/2 load:	92.7-92.7 %
Number of poles:	4
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	83V16222
Controls:	
Frequency converter:	None
Others:	
Minimum efficiency index, MEI ≥:	0.45





Company name:

Created by:

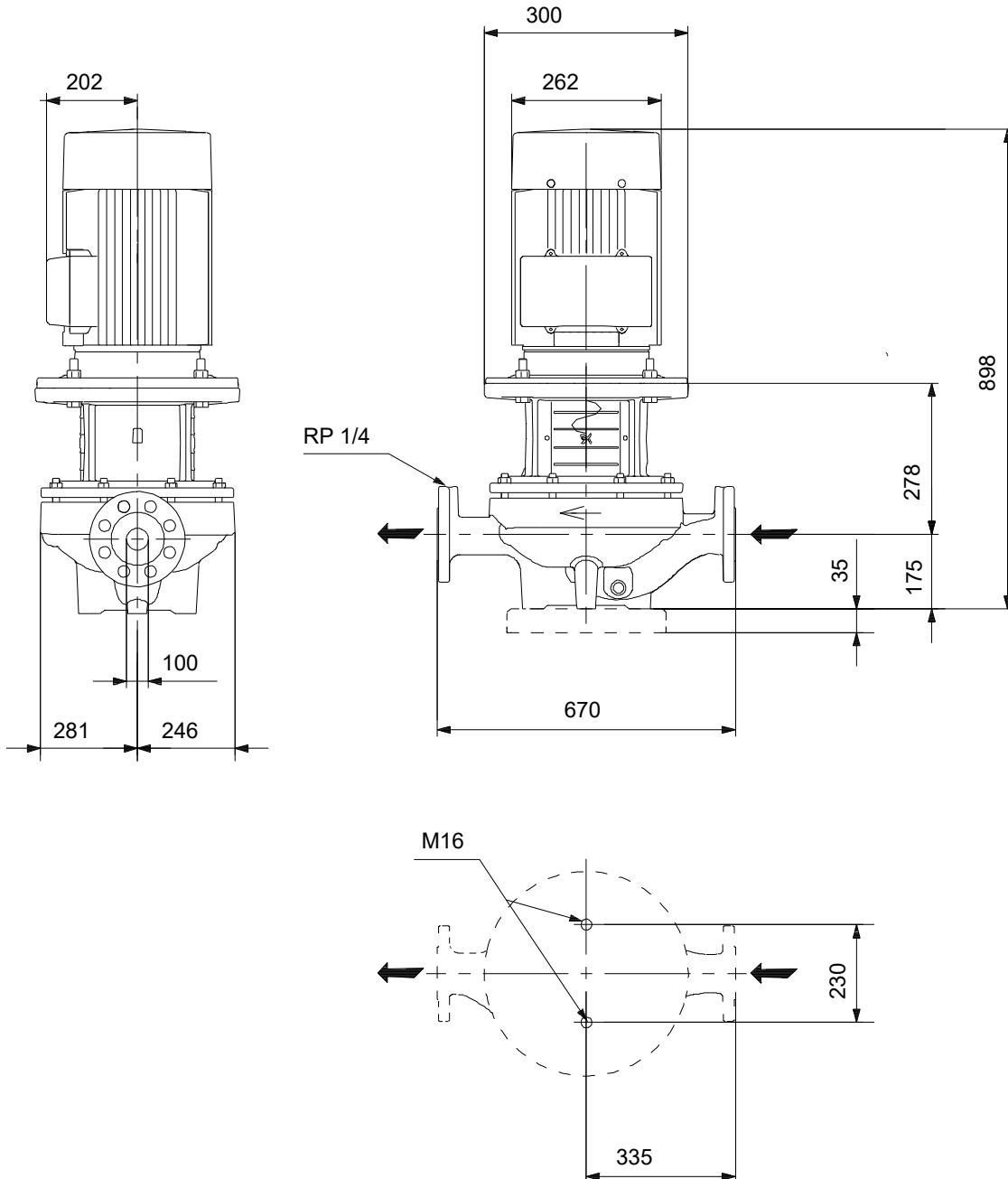
Phone:

Date:

01/12/2023

Description	Value
Net weight:	232 kg
Gross weight:	269 kg
Shipping volume:	0.743 m ³
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.

