# TPED 32-380/2-S-A-F-A-BQQE 3X400 50HZ

**Grundfos pump 99132803**



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https://www.lenntech.com/grundfos/TPEDS2/99132803/TPED-32-380-2-S-A-F-A-BQQE.html

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| Position | Qty. | Description |
|---|---|---|
| | 1 | **TPED 32-380/2-S A-F-A-BQQE** |



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 16 DIN flanges (EN 1092-2 and ISO 7005-2).

Each power head is fitted with a fan-cooled, permanent-magnet synchronous motor of identical size. The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

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 control. The pump is fitted with a differential-pressure transmitter registering the differential pressure across the pump and enabling constant pressure or proportional-pressure control of the pump.

A cable ensures communication between the two power heads. The selector switch in the terminal boxes enables changeover between the operating modes "alternating operation" and "standby operation".

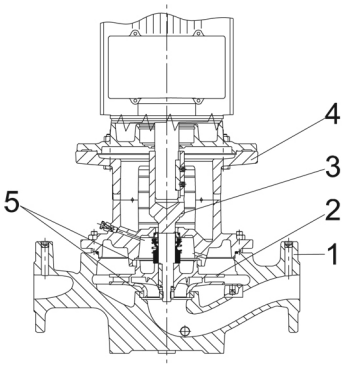
A control panel enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The control panel has indicator lights for "Operation" and "Fault".

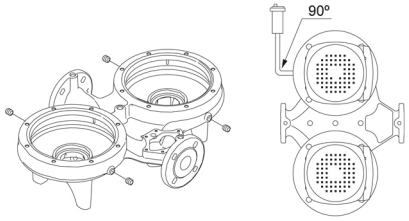
Communication with the pump is possible by means of the Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

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

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.



| Position | Qty. | Description |
|---|---|---|
| | | 1: Pump housing<br>2: Impeller<br>3: Stub shaft<br>4: Pump head/motor stool<br>5: Wear rings<br><br>The twin-head pump is designed with two parallel power-heads. A non-return 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.<br>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.<br><br>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.<br>Primary seal:<br>• Rotating seal ring material: silicon carbide (SiC)<br>• Stationary seat material: silicon carbide (SiC)<br>This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.<br>Secondary seal material: EPDM (ethylene-propylene rubber)<br>EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.<br><br>A circulation of liquid through the duct of the air vent screw ensures lubrication and cooling of the shaft seal.<br>The pump housing has four 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.<br><br><br>The flanges have tappings for mounting of pressure gauges.<br><br>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.<br>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.<br><br>**Motor**<br>The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.<br><br>The motor is flange-mounted with free-hole flange (FF).<br>Motor-mounting designation in accordance with IEC 60034-7: IM B 5, IM V 1 (Code I) / IM 3001, IM 3011 (Code II).<br><br>The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.<br>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.<br><br>The terminal box holds terminals for these connections:<br>- one dedicated digital input<br>- 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<br>- 5 V voltage supply to potentiometer and sensor<br>- one configurable digital input or open-collector output<br>- Grundfos Digital Sensor input and output<br>- 24 V voltage supply for sensors<br>- two signal relay outputs (potential-free contacts) |

| Position | Qty. | Description |
|---|---|---|

- the two power heads communicate via wireless GENIair or wired GENI connection
- interface for Grundfos CIM fieldbus module.

## Technical data

**Controls:**

| | |
|---|---|
| Frequency converter: | Built-in |

**Liquid:**

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

**Technical:**

| | |
|---|---|
| Rated flow: | 18.8 m³/h |
| Rated head: | 26.2 m |
| Actual impeller diameter: | 169 mm |
| Primary shaft seal: | BQQE |
| Curve tolerance: | ISO9906:2012 3B |

**Materials:**

| | |
|---|---|
| Pump housing: | Cast iron<br>EN-JL1040<br>ASTM A48-40 B |
| Impeller: | Cast iron<br>EN-JL1030<br>ASTM A48-30 B |

**Installation:**

| | |
|---|---|
| Range of ambient temperature: | -20 .. 50 °C |
| Maximum operating pressure: | 16 bar |
| Max pressure at stated temp: | 16 bar / 120 °C |
| Flange standard: | DIN |
| Pipe connection: | DN 32 |
| Pressure rating: | PN 16 |
| (@): | 340 mm |
| Flange size for motor: | FF215 |

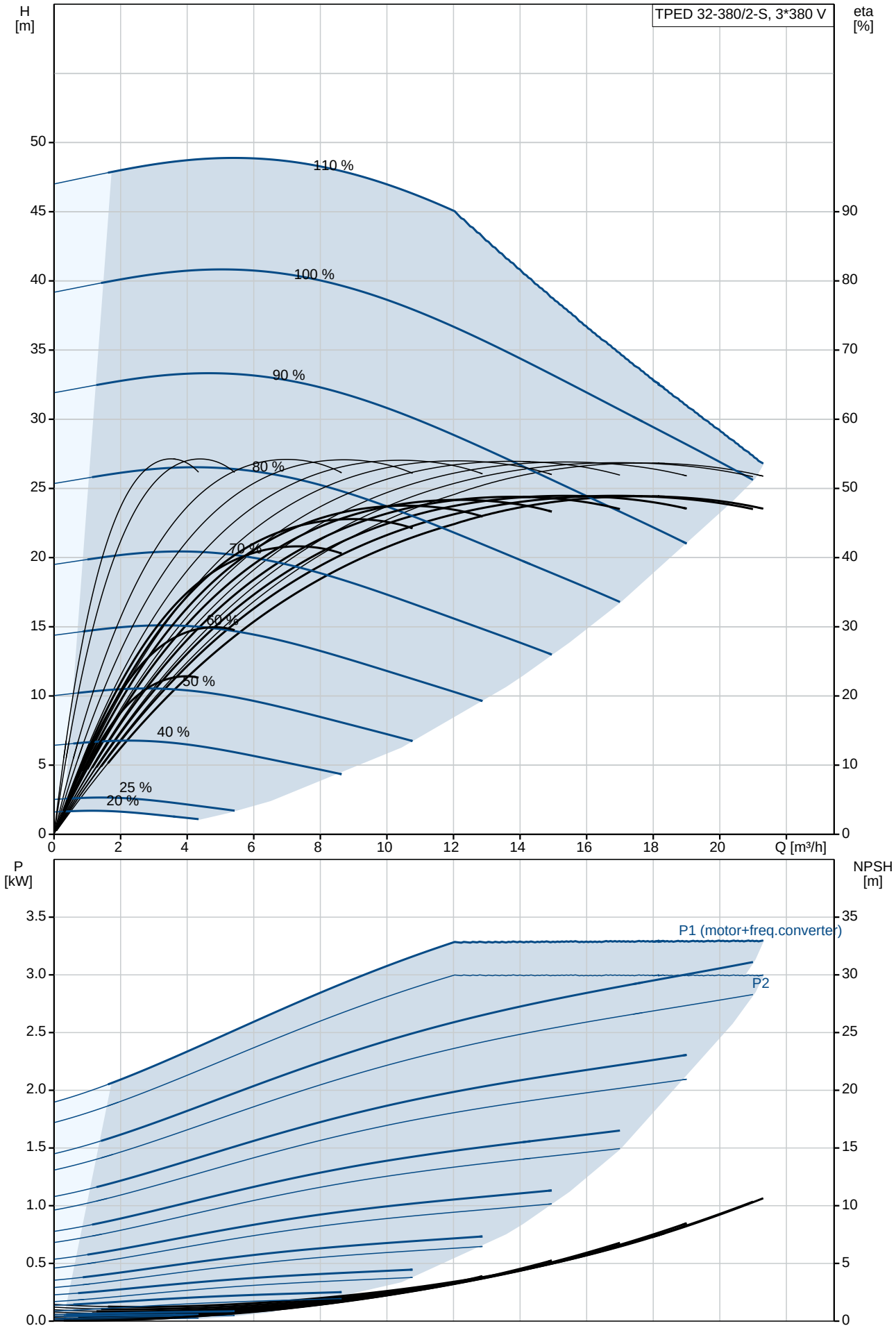
**Electrical data:**

| | |
|---|---|
| Motor type: | 100LA |
| IE Efficiency class: | IE5 |
| Rated power - P2: | 2 x 3 kW |
| Mains frequency: | 50 Hz |
| Rated voltage: | 3 x 380-500 V |
| Rated current: | 5.80-4.80 A |
| Cos phi - power factor: | 0.91-0.86 |
| Rated speed: | 360-4000 rpm |
| Efficiency: | 90.7% |
| Motor efficiency at full load: | 90.7 % |
| Enclosure class (IEC 34-5): | IP55 |
| Insulation class (IEC 85): | F |

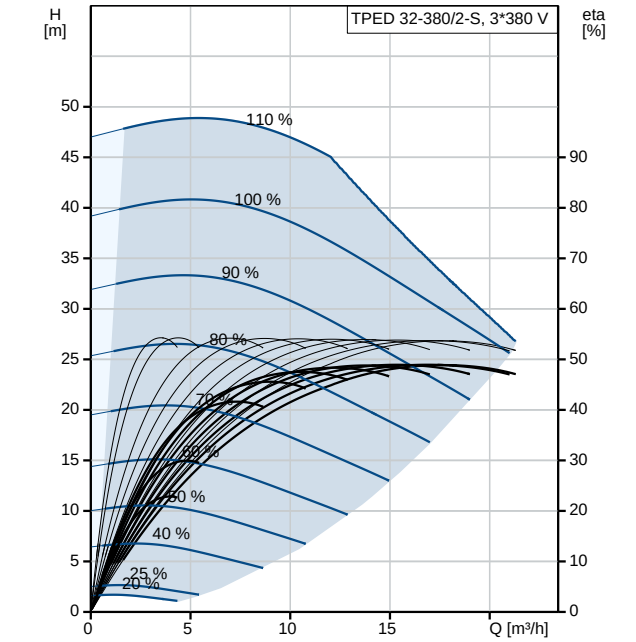
**Others:**

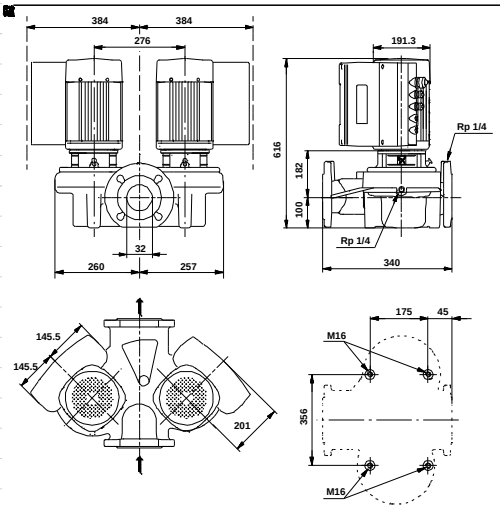
| | |
|---|---|
| Minimum efficiency index, MEI ≥: | 0.70 |
| ErP status: | EuP Standalone/Prod. |
| Net weight: | 117 kg |
| Gross weight: | 137 kg |
| Shipping volume: | 0.52 m³ |

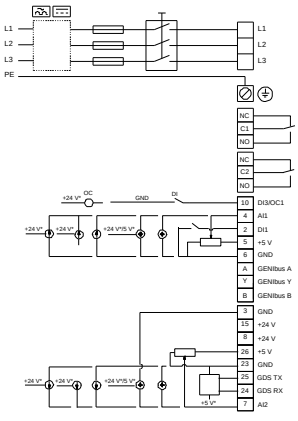
# On request TPED 32-380/2-S A-F-A-BQQE 50 Hz



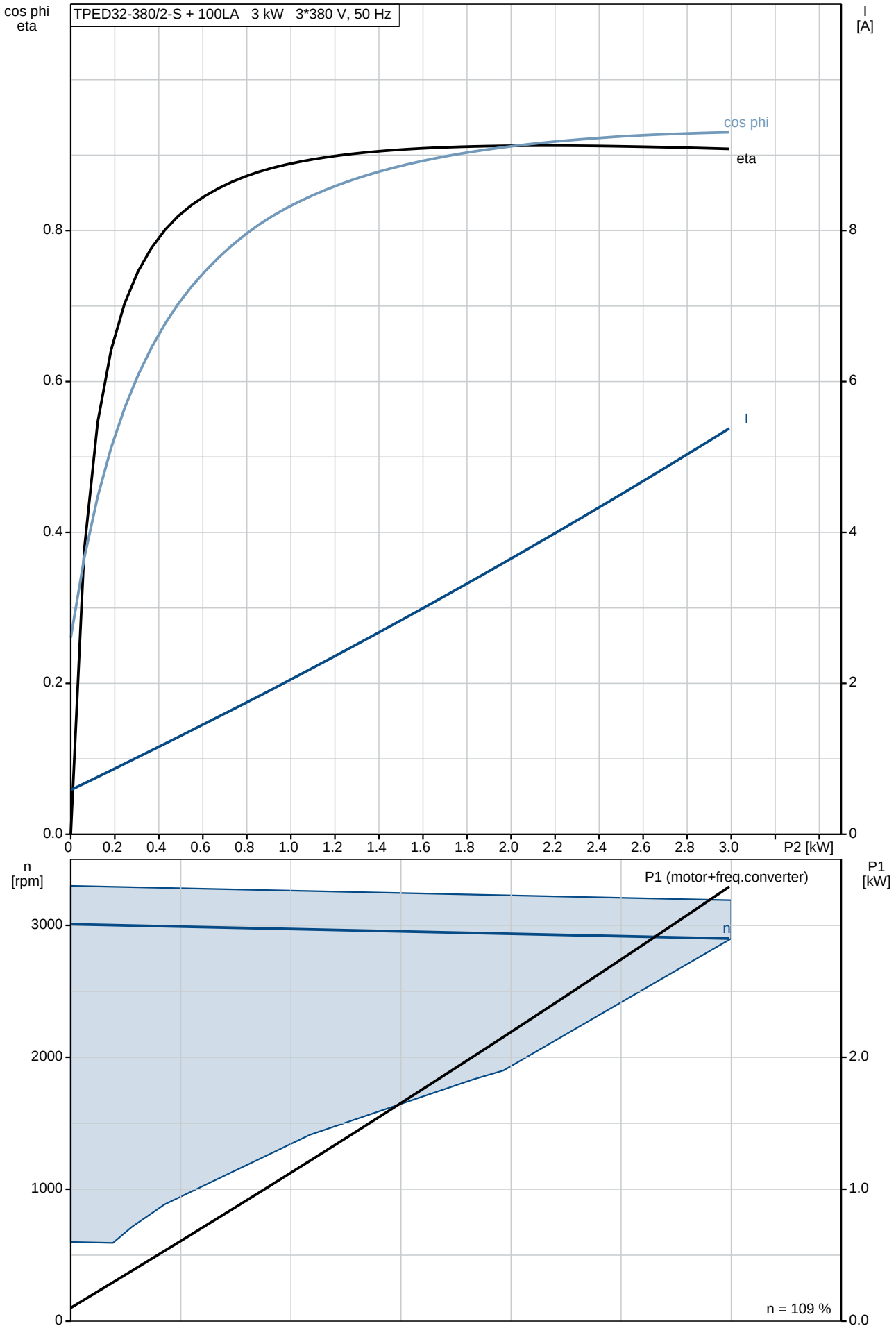
| Description | Value |
|---|---|
| **General information:** | |
| Product name: | TPED 32-380/2-S A-F-A-BQQE |
| Product No: | On request |
| EAN number: | On request |
| **Technical:** | |
| Rated flow: | 18.8 m³/h |
| Rated head: | 26.2 m |
| Head max: | 380 dm |
| Actual impeller diameter: | 169 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 |
| Max pressure at stated temp: | 16 bar / 120 °C |
| Flange standard: | DIN |
| Pipe connection: | DN 32 |
| Pressure rating: | PN 16 |
| (@) | 340 mm |
| Flange size for motor: | FF215 |
| Connect code: | F |
| **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: | 100LA |
| IE Efficiency class: | IE5 |
| Rated power - P2: | 2 x 3 kW |
| Mains frequency: | 50 Hz |
| Rated voltage: | 3 x 380-500 V |
| Rated current: | 5.80-4.80 A |
| Cos phi - power factor: | 0.91-0.86 |
| Rated speed: | 360-4000 rpm |
| Efficiency: | 90.7% |
| Motor efficiency at full load: | 90.7 % |
| Enclosure class (IEC 34-5): | IP55 |
| Insulation class (IEC 85): | F |
| Motor protec: | YES |
| Motor No: | 98971269 |
| **Controls:** | |
| Control panel: | HMI300 - Advanced |
| Function Module: | FM300 - Advanced |
| Frequency converter: | Built-in |
| **Others:** | |
| Minimum efficiency index, MEI ≥: | 0.70 |
| ErP status: | EuP Standalone/Prod. |
| Net weight: | 117 kg |
| Gross weight: | 137 kg |
| Shipping volume: | 0.52 m³ |
| Config. file no: | 99225206 |



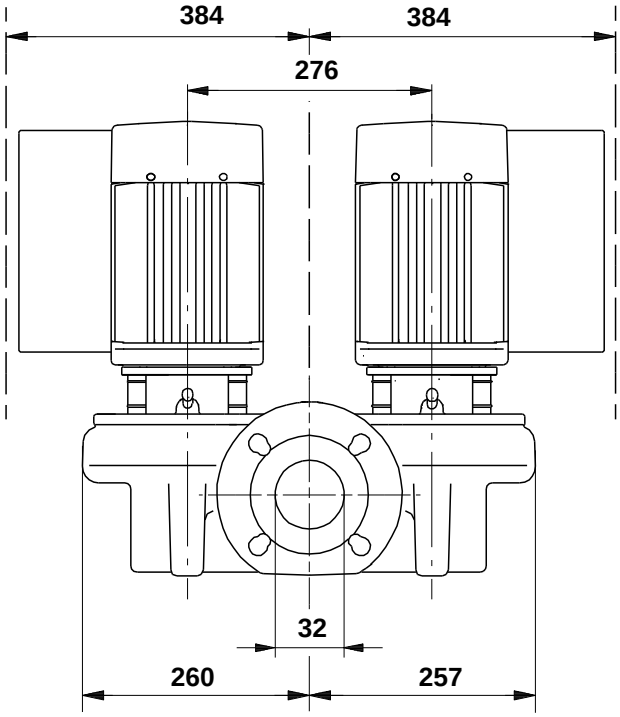



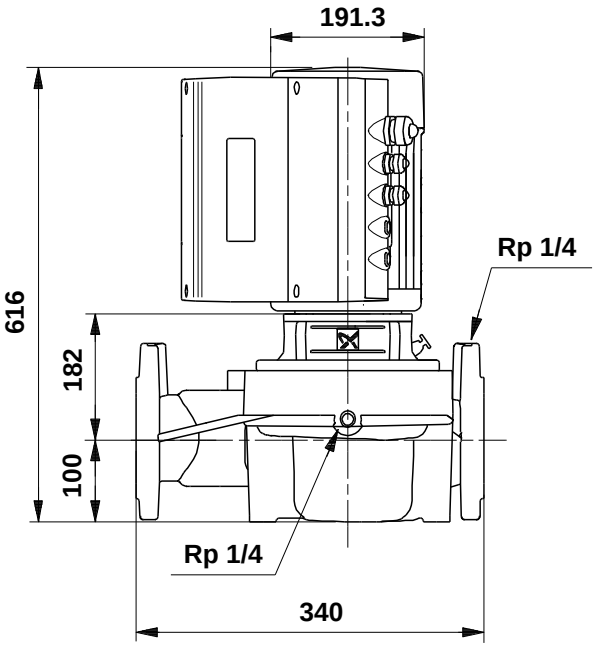



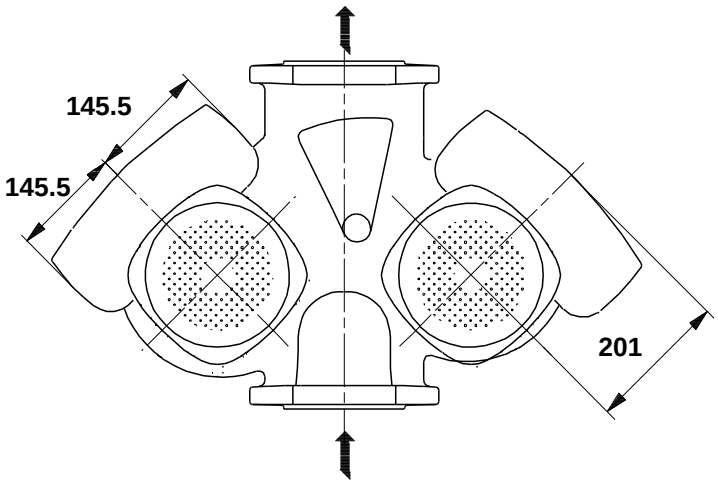
# On request TPED 32-380/2-S A-F-A-BQQE 50 Hz

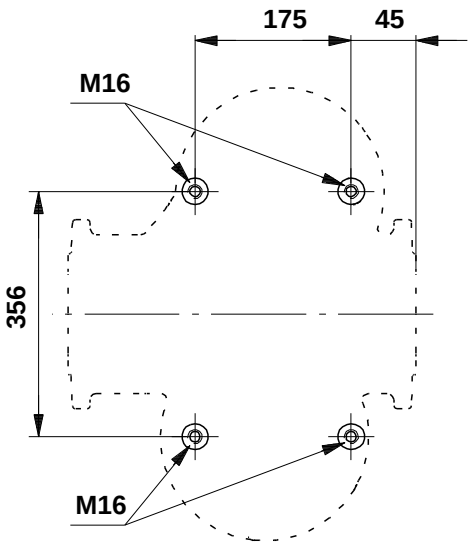


# On request TPED 32-380/2-S A-F-A-BQQE 50 Hz



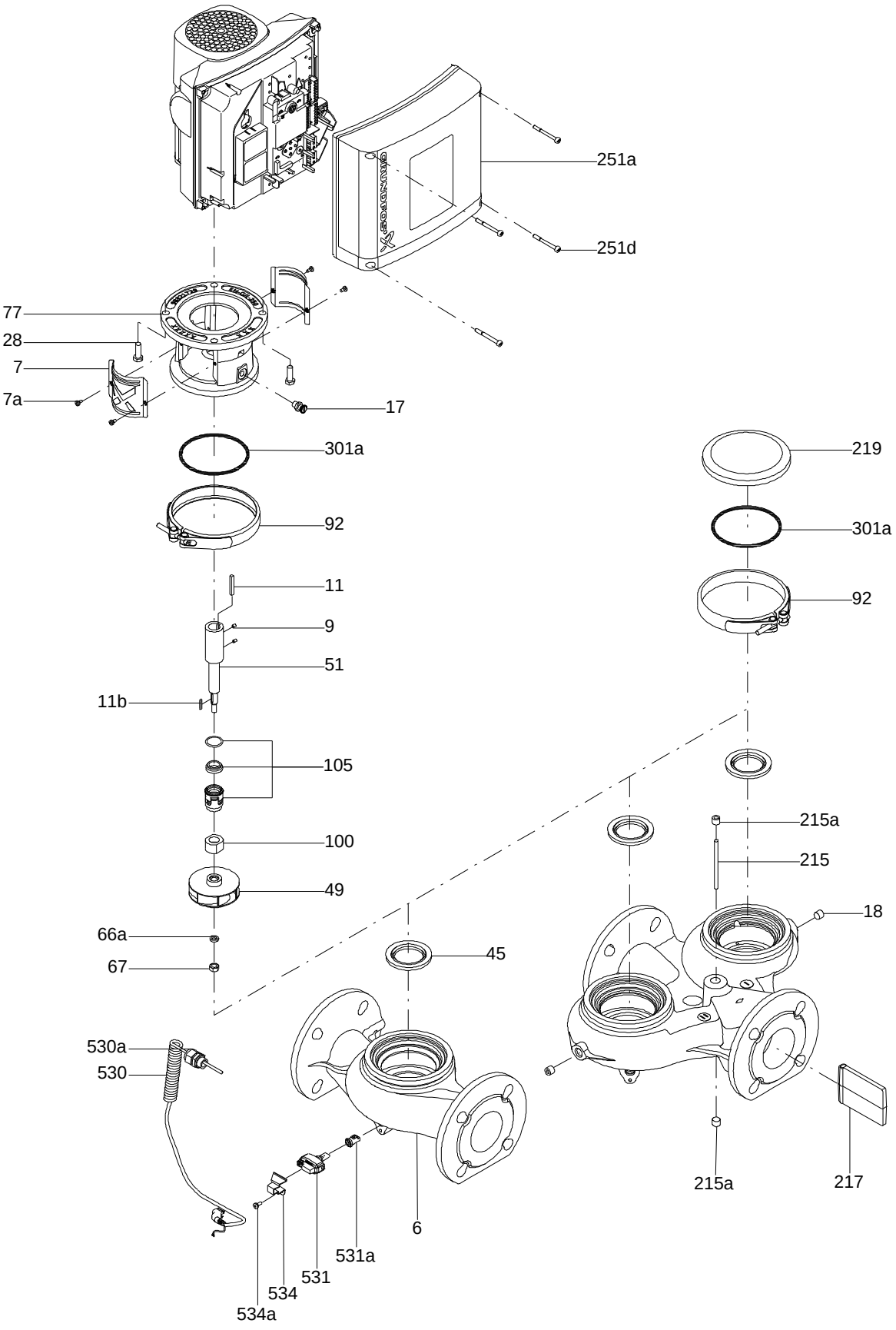



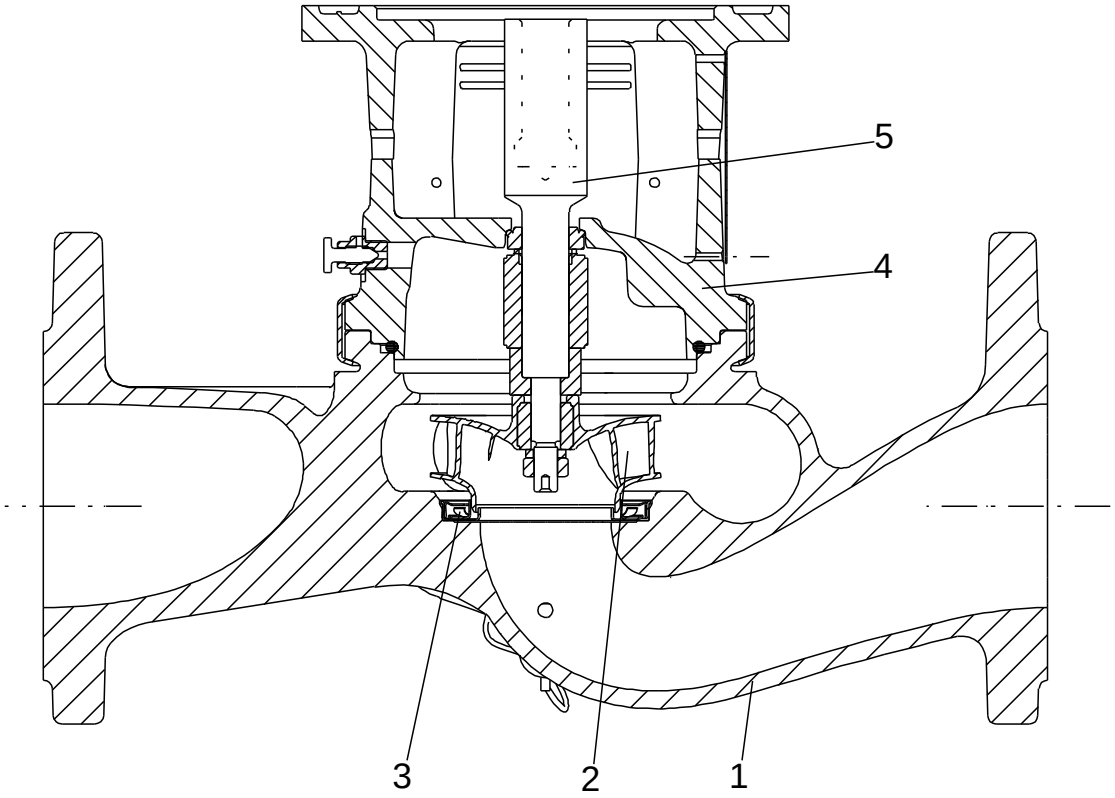




Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

## Exploded view

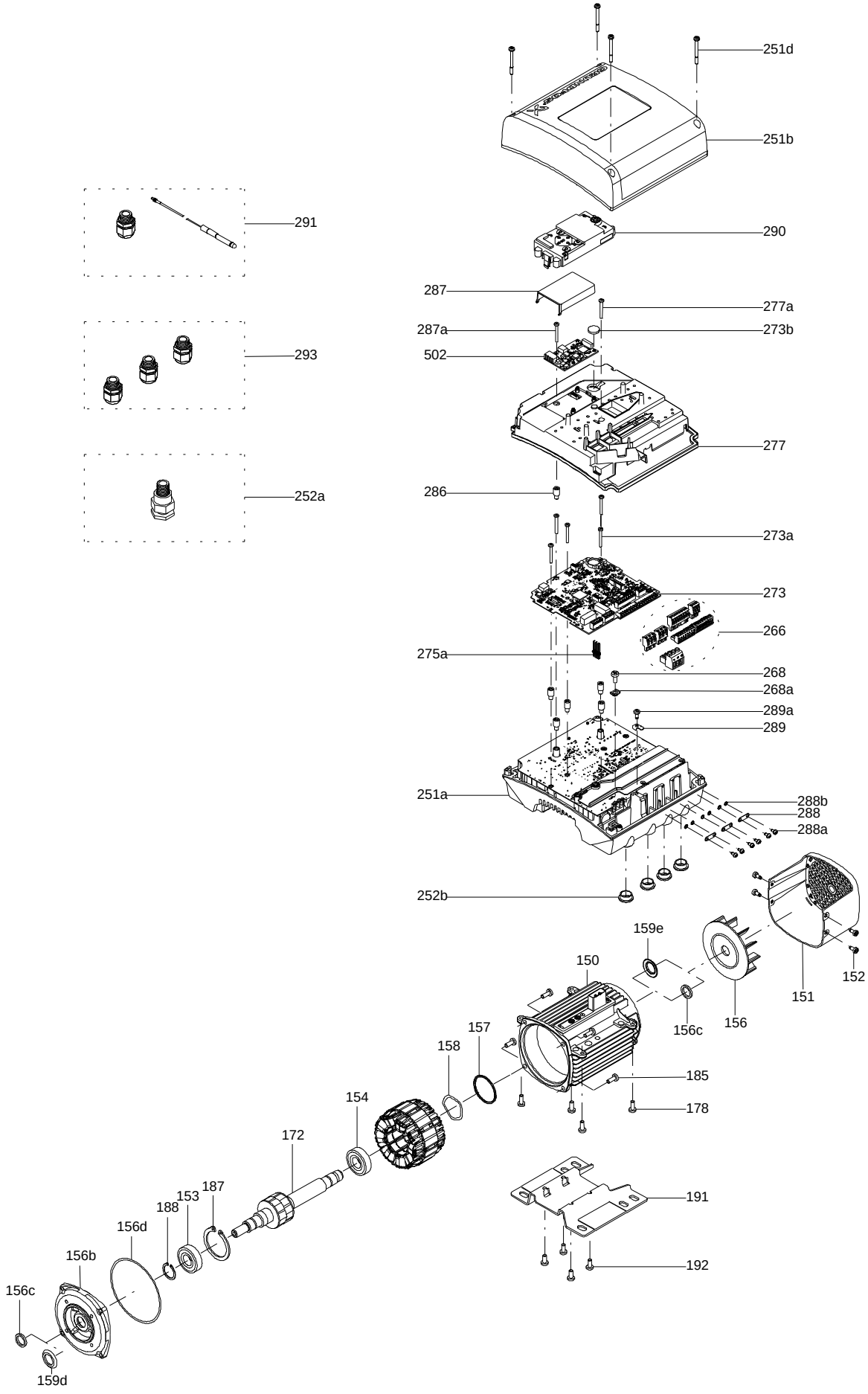


**Sectional drawing (TM058200 for TPE2,TPE3)**




TM058200

## Exploded view ( TM057026 for MGE model H/I )



# Parts list TPED 32-380/2-S, Product No. On request
# Valid from 23.9.2013 (1339)

| | Pos | Description | Annotation | Données de classification | Référence | Quantité | Unité |
|---|---|---|---|---|---|---|---|
| + | | Motor | | | | 2 | pcs |
| - | | Nut | | | | 2 | pcs |
| | 66 | Washer | | | | 1 | |
| | 66a | Spring lock washer | | | | 1 | |
| | 67 | Nut | | Thread: M14 | | 1 | |
| - | | Motor stool cpl. | | | | 2 | pcs |
| | 1a | Motor stool | | | | 1 | |
| | 7 | Coupling guard | | | | 2 | |
| | 77a | Pan head screw | | | | 4 | |
| - | | Pump housing cpl. | | | | 1 | pcs |
| | 6 | Pump housing | | | | 1 | |
| | 9 | Hex socket head cap screw | | Designation: DIN 912 | | 6 | |
| | | | | Length (mm): 20 | | | |
| | | | | Thread: M6 | | | |
| | 19 | Pipe plug | | Thread: R 3/8 | | 2 | |
| | 19 | Plug | | | | 5 | |
| | 66a | Nut | | Thread: M10 | | 12 | |
| | 210 | Cover | | | | 1 | |
| | 212 | Gasket | | | | 1 | |
| | 215 | Shaft pin | | | | 1 | |
| | 216 | Helical torsion spring | | | | 1 | |
| | 217 | Valve flap | | | | 2 | |
| - | | Diff. pressure transmitter. | | | | 1 | pcs |
| | | Fitting | | | | 2 | |
| | | Clip | | | | 1 | |
| | | Housing | | | | 1 | |
| | | Sensor | | | | 1 | |
| | 7a | Pan washer head screw | | | | 2 | |
| | 508 | Tube | | | | 1 | |
| | 509 | Capillary tube. | | | | 1 | |
| | 510 | Mounting bush. | | | | 2 | |
| | 530 | Cable | | | | 1 | |
| - | | Shaft seal cpl. | | | | 2 | pcs |
| | 72a | O-ring | | Diameter: 177,39 | | 1 | |
| | | | | Material type: EPDM | | | |
| | | | | Thickness: 3,53 | | | |
| | 105 | Shaft seal | | | | 1 | |
| - | | Stub shaft | | | | 2 | pcs |
| | 9 | Socket set screw | | Length (mm): 6 | | 2 | |
| | | | | Thread: M8 | | | |
| | 11 | Parallel key | | Dimension: 6X6X35 | | 1 | |
| | 51 | Pump shaft | | | | 1 | |
| | 17 | Air vent screw | | | | 2 | pcs |
| | 49 | Impeller | | Outer diameter: 169 | | 2 | pcs |

*Disclaimer: The information about the Grundfos pump in this document may be outdated.*
*Data may be subject to alterations without further notice.*
*Please contact us to verify the data above is still accurate/up-to-date.*

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