

## Inventflow: Grundfos A-partner

### Grundfos TPE 80-400/2 A-F-A-BQQE-OX1

Find the pump here:

<https://inventflow.nl/en/pompenfilter/tpe/grundfos-tpe-80-400-2-a-f-a-bqqe-ox1>

#### Contact

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#### Datasheet

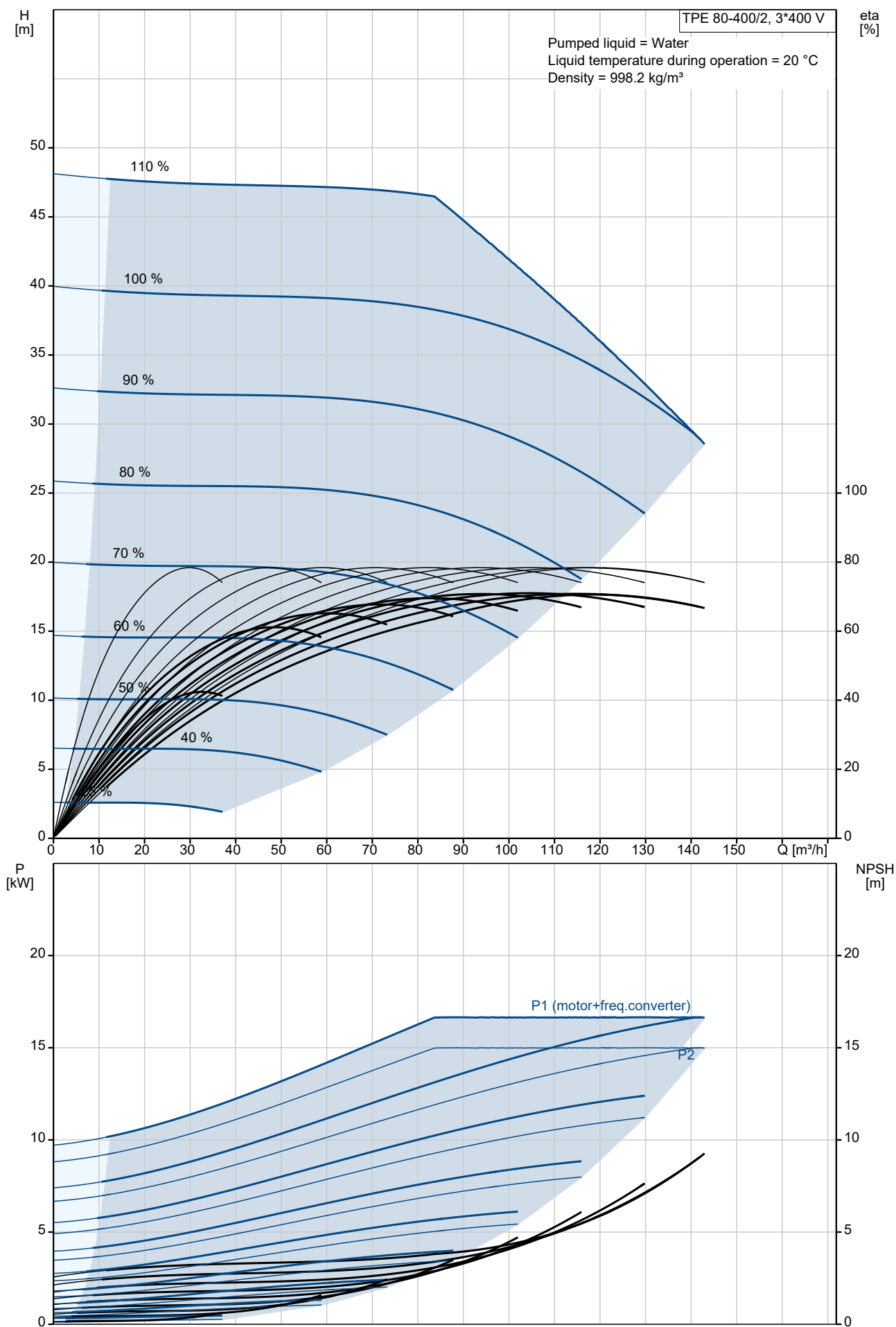


| Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| 1    | <p data-bbox="204 161 558 190"><b>TPE 80-400/2 A-F-A-BQQE-OX1</b></p> <div data-bbox="226 226 563 786">  </div> <p data-bbox="593 775 1064 797"><b>Note! Product picture may differ from actual product</b></p> <p data-bbox="204 806 464 833">Product No.: <a href="#">96110065</a></p> <p data-bbox="204 837 743 896">Single-stage, centrifugal volute in-line, single-head pump.</p> <p data-bbox="204 925 726 1010">The in-line design with opposite suction and discharge ports enables mounting in pipework or on a concrete foundation.</p> <p data-bbox="204 1046 604 1099">The shaft seal is a corrosion resistant maintenance-free mechanical seal.</p> <p data-bbox="204 1135 748 1310">The pump is fitted with an IEC-flanged three-phase MGE motor with frequency converter and PI-controller integrated in the motor terminal box. No additional motor protection is required as both motor and electronics are protected by integrated overload and temperature protection.</p> <p data-bbox="204 1344 705 1429">External sensor can be connected if controlled pump operation based on for example flow, differential pressure or temperature is required.</p> <p data-bbox="204 1462 738 1579">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".</p> <p data-bbox="204 1612 759 1756">Communication with the pump is possible by means of Grundfos R100 Remote Control enabling further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".</p> <p data-bbox="204 1789 628 1843">The terminal box holds terminals for the connection of:</p> <ul data-bbox="226 1848 774 2083" style="list-style-type: none"> <li>- Pump start/stop (potential-free contact),</li> <li>- external remote setpoint setting via analog signal, 0 - 5 V, 0 - 10 V, 0(4) - 20 mA,</li> <li>- 5 V voltage supply for setpoint potentiometer, I<sub>max</sub> = 5 mA,</li> <li>- sensor, 0 - 5 V, 0 - 10 V, 0(4) - 20 mA,</li> <li>- 24 V voltage supply for sensor, I<sub>max</sub> = 40 mA,</li> <li>- input for forced control to MIN or MAX</li> </ul> |

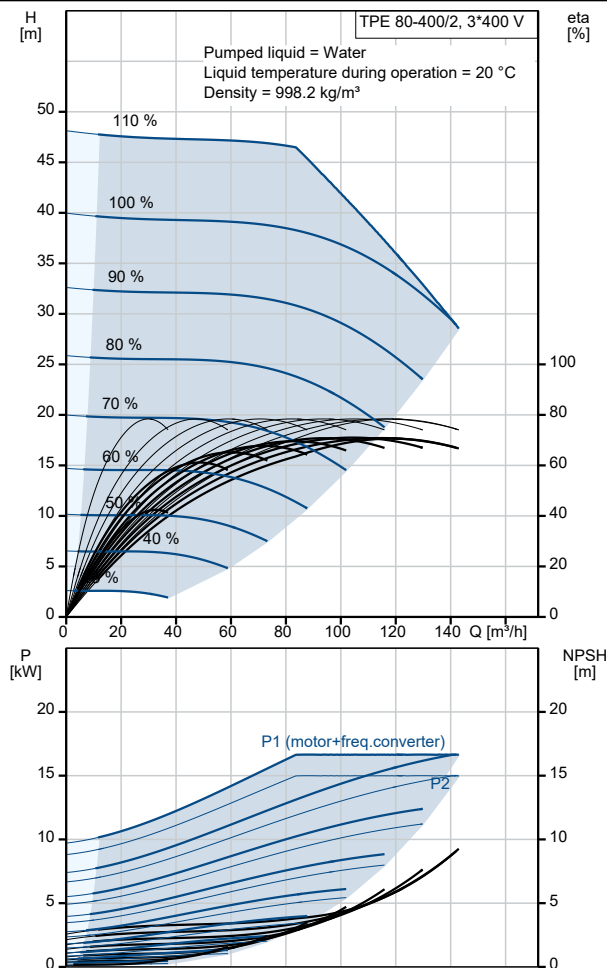
| Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <p>(potential-free contact),</p> <ul style="list-style-type: none"> <li>- potential-free fault signal relay with changeover contact,</li> <li>- RS485 GENIbus.</li> </ul> <p>Controls:</p> <p>Frequency converter: Built-in</p> <p>Liquid:</p> <p>Pumped liquid: Water</p> <p>Liquid temperature range: -25 .. 120 °C</p> <p>Selected liquid temperature: 20 °C</p> <p>Density: 998.2 kg/m<sup>3</sup></p> <p>Technical:</p> <p>Pump speed on which pump data are based: 2945 rpm</p> <p>Rated flow: 115 m<sup>3</sup>/h</p> <p>Rated head: 34.7 m</p> <p>Actual impeller diameter: 173 mm</p> <p>Code for shaft seal: BQQE</p> <p>Curve tolerance: ISO9906:2012 3B</p> <p>Materials:</p> <p>Pump housing: Cast iron<br/>EN-GJL-250<br/>ASTM class 35</p> <p>Impeller: Cast iron<br/>EN-GJL-200<br/>ASTM class 30</p> <p>Installation:</p> <p>Range of ambient temperature: -20 .. 40 °C</p> <p>Maximum operating pressure: 16 bar</p> <p>Max pressure at stated temp: 16 bar / 120 °C</p> <p>Type of connection: DIN</p> <p>Size of connection: DN 80</p> <p>Pressure rating for connection: PN 16</p> <p>Port-to-port length: 440 mm</p> <p>Flange size for motor: FF300</p> <p>Electrical data:</p> <p>Motor type: 160MD</p> <p>IE Efficiency class: IE3</p> <p>Rated power - P2: 15 kW</p> <p>Mains frequency: 50 Hz</p> <p>Rated voltage: 3 x 380-480 V</p> <p>Rated current: 30.0-26.0 A</p> <p>Cos phi - power factor: 0.91-0.86</p> <p>Rated speed: 480-3540 rpm</p> <p>Efficiency: IE3 91,9%</p> <p>Motor efficiency at full load: 91.9 %</p> <p>Number of poles: 2</p> <p>Enclosure class (IEC 34-5): IP55</p> <p>Insulation class (IEC 85): F</p> <p>Motor No: 85901225</p> <p>Others:</p> <p>Minimum efficiency index, MEI ≥: 0.68</p> <p>Net weight: 200 kg</p> <p>Gross weight: 237 kg</p> <p>Shipping volume: 0.56 m<sup>3</sup></p> <p>Danish VVS No.: 382015400</p> <p>Finnish LVI No.: 4616487</p> <p>Norwegian NRF no.: 9043643</p> <p>Country of origin: HU</p> |

| Qty. | Description                            |
|------|----------------------------------------|
|      | <div>Custom tariff no.: 84137051</div> |

# 96110065 TPE 80-400/2 A-F-A-BQQE-OX1 50 Hz

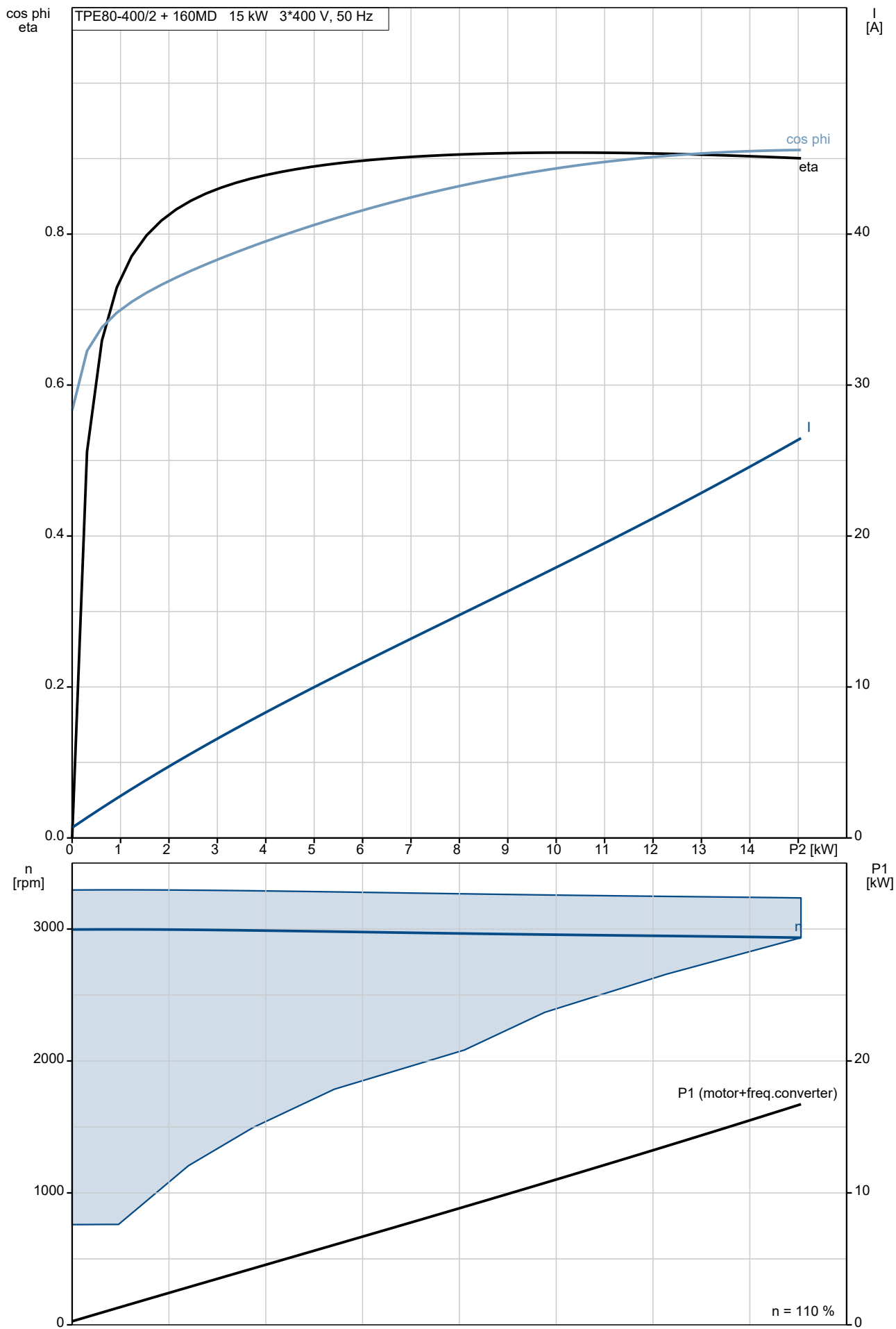


| Description                              | Value                          |
|------------------------------------------|--------------------------------|
| <b>General information:</b>              |                                |
| Product name:                            | TPE 80-400/2<br>A-F-A-BQQE-OX1 |
| Product No:                              | 96110065                       |
| EAN number:                              | 5700397021873                  |
| <b>Technical:</b>                        |                                |
| Pump speed on which pump data are based: | 2945 rpm                       |
| Rated flow:                              | 115 m³/h                       |
| Rated head:                              | 34.7 m                         |
| Maximum head:                            | 400 dm                         |
| Actual impeller diameter:                | 173 mm                         |
| Code for shaft seal:                     | BQQE                           |
| Curve tolerance:                         | ISO9906:2012 3B                |
| 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:            | -20 .. 40 °C                   |
| Maximum operating pressure:              | 16 bar                         |
| Max pressure at stated temp:             | 16 bar / 120 °C                |
| Type of connection:                      | DIN                            |
| Size of connection:                      | DN 80                          |
| Pressure rating for connection:          | PN 16                          |
| Port-to-port length:                     | 440 mm                         |
| Flange size for motor:                   | FF300                          |
| Connect code:                            | F                              |
| <b>Liquid:</b>                           |                                |
| Pumped liquid:                           | Water                          |
| Liquid temperature range:                | -25 .. 120 °C                  |
| Selected liquid temperature:             | 20 °C                          |
| Density:                                 | 998.2 kg/m³                    |
| <b>Electrical data:</b>                  |                                |
| Motor type:                              | 160MD                          |
| IE Efficiency class:                     | IE3                            |
| Rated power - P2:                        | 15 kW                          |
| Mains frequency:                         | 50 Hz                          |
| Rated voltage:                           | 3 x 380-480 V                  |
| Rated current:                           | 30.0-26.0 A                    |
| Cos phi - power factor:                  | 0.91-0.86                      |
| Rated speed:                             | 480-3540 rpm                   |
| Efficiency:                              | IE3 91,9%                      |
| Motor efficiency at full load:           | 91.9 %                         |
| Number of poles:                         | 2                              |
| Enclosure class (IEC 34-5):              | IP55                           |
| Insulation class (IEC 85):               | F                              |
| Motor protec:                            | YES                            |
| Motor No:                                | 85901225                       |
| <b>Controls:</b>                         |                                |
| Control panel:                           | Standard                       |
| Function Module:                         | PUMP I/O                       |
| Frequency converter:                     | Built-in                       |
| <b>Others:</b>                           |                                |
| Minimum efficiency index, MEI ≥:         | 0.68                           |
| Net weight:                              | 200 kg                         |
| Gross weight:                            | 237 kg                         |
| Shipping volume:                         | 0.56 m³                        |
| Config. file no:                         | 95139404                       |

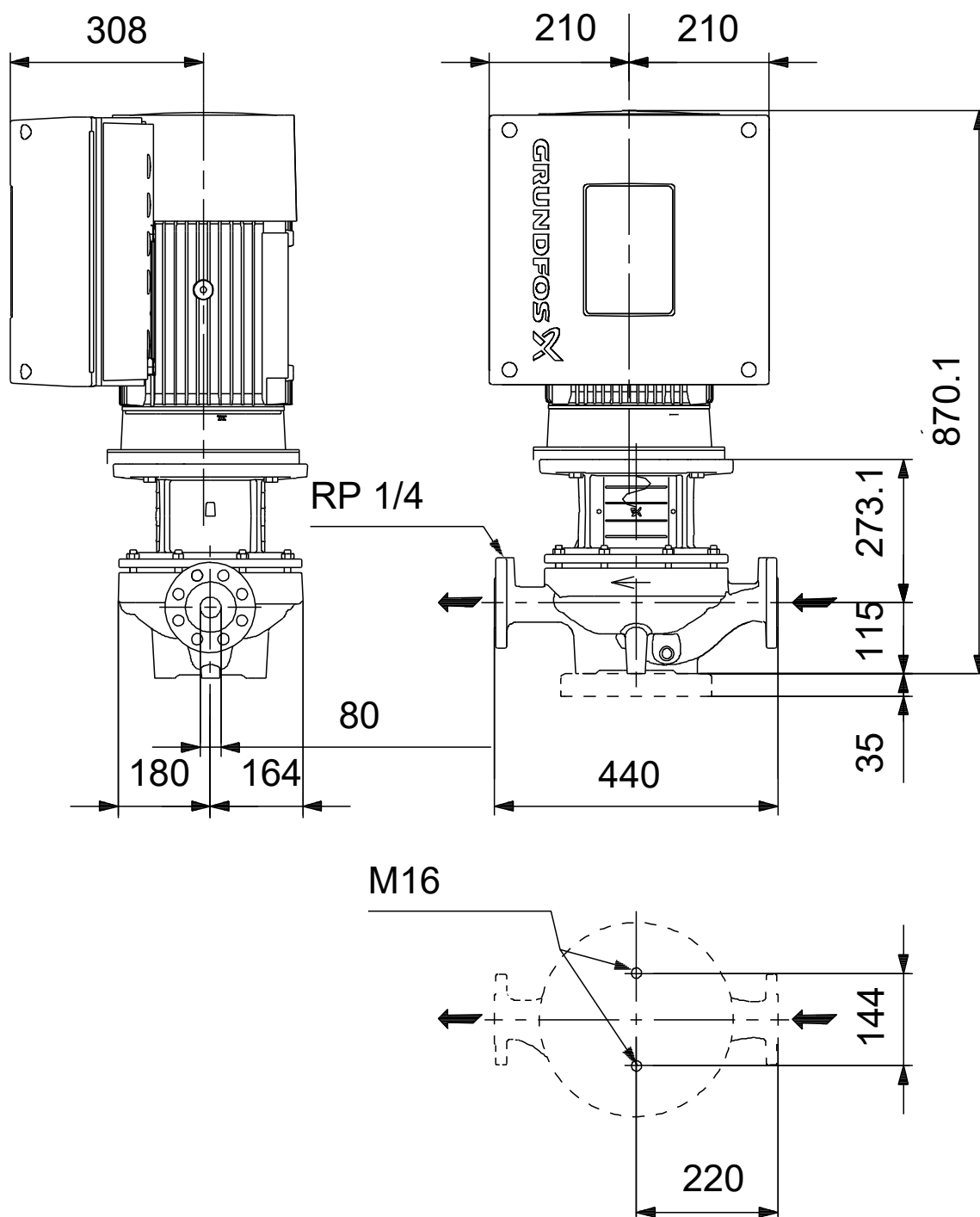


| Description        | Value     |
|--------------------|-----------|
| Danish VVS No.:    | 382015400 |
| Finnish LVI No.:   | 4616487   |
| Norwegian NRF no.: | 9043643   |
| Country of origin: | HU        |
| Custom tariff no.: | 84137051  |

# 96110065 TPE 80-400/2 A-F-A-BQQE-OX1 50 Hz



# 96110065 TPE 80-400/2 A-F-A-BQQE-OX1 50 Hz



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

**Spare parts TPE 80-400/2, Product No. 96110065**  
**Produced After 1026 (production year and week number)**

| Pos   | Omschrijving                   | Opmerking tekst | Classificatie Gegevens     | Onderdeelnr. | Aantal | Eenheid |
|-------|--------------------------------|-----------------|----------------------------|--------------|--------|---------|
| -     | Kit, Base plate                |                 |                            | 00485031     | 1      | pcs     |
| 28g   | Hex head screw                 |                 |                            |              | 2      |         |
| 56    | Base plate                     |                 |                            |              | 1      |         |
| -     | Motor                          |                 |                            |              | 1      | pcs     |
| -     | Kit, bearing cpl.              |                 |                            | 96796674     | 1      |         |
| 32b   | Waved washer                   |                 |                            |              | 1      |         |
| 111   | Ball bearing                   |                 |                            |              | 1      |         |
| 154   | Ball bearing                   |                 |                            |              | 1      |         |
| 157   | O-ring                         |                 |                            |              | 1      |         |
| -     | Kit, bearing plate             |                 |                            | 96796664     | 1      |         |
| 155.a | Bearing cover                  |                 |                            |              | 1      |         |
| 208a  | Gasket                         |                 |                            |              | 3      |         |
| 208   | Hex socket head cap screw      |                 | Designation: DIN912        |              | 3      |         |
|       |                                |                 | Length (mm): 40            |              |        |         |
|       |                                |                 | Thread: M5                 |              |        |         |
| -     | Kit, connector plugs           |                 |                            | 96348923     | 1      |         |
|       | Connector plug 5-pole          |                 |                            |              | 1      |         |
|       | Connector plug 4-pole          |                 |                            |              | 1      |         |
|       | Connector plug 4-pole          |                 |                            |              | 1      |         |
|       | Connector plug 3-pole          |                 |                            |              | 1      |         |
|       | Connector plug 3-pole          |                 |                            |              | 1      |         |
|       | Connector plug 3-pole          |                 |                            |              | 1      |         |
|       | Connector plug 3-pole          |                 |                            |              | 1      |         |
|       | Connector plug                 |                 |                            |              | 1      |         |
| - 273 | Kit, control board             |                 |                            | 96348918     | 1      |         |
|       | Service kit instruction        |                 |                            |              | 1      |         |
|       | Controlboard                   |                 |                            |              | 1      |         |
| -     | Kit, eyebolt                   |                 |                            | 96796712     | 1      |         |
| 189   | Eyebolt                        |                 |                            |              | 2      |         |
| -     | Kit, fan cover                 |                 |                            | 96830826     | 1      |         |
| 151   | Fan cover                      |                 |                            |              | 1      |         |
| 152.a | Rubber bush                    |                 |                            |              | 4      |         |
| 152   | Hex head cap screw             |                 |                            |              | 4      |         |
| 196   | Diaphragm                      |                 |                            |              | 1      |         |
| -     | Kit, flange                    |                 |                            | 96796662     | 1      |         |
| 156.b | Flange                         |                 |                            |              | 1      |         |
| 159.b | Seal ring                      |                 |                            |              | 1      |         |
| 185.b | Nut                            |                 |                            |              | 4      |         |
| 185   | Hex socket head cap screw      |                 |                            |              | 4      |         |
| 186   | Drain plug                     |                 |                            |              | 4      |         |
| 195.a | Grease nipple                  |                 |                            |              | 1      |         |
| -     | Kit, funct. module - E-pump    |                 |                            | 96348929     | 1      |         |
| 263   | MGE large I/O add-on           |                 |                            |              | 1      |         |
| -     | Kit, funct. module -Geni/RS485 |                 |                            | 96348932     | 1      |         |
| 263   | Add-on module, cpl. w/plugs    |                 |                            |              | 1      |         |
| -     | Kit, gaskets                   |                 |                            | 96798508     | 1      |         |
| 184   | O-ring                         |                 | Diameter: 235              |              | 2      |         |
| 275   | Kit, inverter board            |                 |                            | 96348920     | 1      |         |
| -     | Kit, key                       |                 |                            | 96279873     | 1      |         |
| 40    | Parallel key                   |                 | Designation: DS96 DIN 6885 |              | 1      |         |
|       |                                |                 | Dimension: 12X8X90         |              |        |         |
| -     | Kit, lubrication nipple        |                 |                            | 96796671     | 1      |         |

| Pos   | Omschrijving                  | Opmerking tekst | Classificatie Gegevens | Onderdeelnr. | Aantal | Eenheid |
|-------|-------------------------------|-----------------|------------------------|--------------|--------|---------|
| 195.b | Grease nipple                 |                 |                        |              | 2      |         |
| 195.a | Grease nipple                 |                 |                        |              | 1      |         |
| -     | Kit, motor                    |                 |                        | 96844380     | 1      |         |
|       | Flex insulation               |                 |                        |              | 3      |         |
|       | EMC filter                    |                 |                        |              | 1      |         |
|       | Cover cpl.                    |                 |                        |              | 1      |         |
|       | Motor                         |                 |                        |              | 1      |         |
| 99a   | Retaining ring                |                 |                        |              | 1      |         |
| 151   | Fan cover                     |                 |                        |              | 1      |         |
| 152.a | Rubber bush                   |                 |                        |              | 4      |         |
| 152   | Hex head cap screw            |                 |                        |              | 4      |         |
| 156   | Fan                           |                 |                        |              | 1      |         |
| 177   | Torx Screw                    |                 |                        |              | 1      |         |
| 185.b | Nut                           |                 |                        |              | 4      |         |
| 196   | Diaphragm                     |                 |                        |              | 1      |         |
| 273a  | Pan head thread forming screw |                 |                        |              | 4      |         |
| -     | Kit, ND-end shield cpl.       |                 |                        | 96796669     | 1      |         |
| 32b   | Waved washer                  |                 |                        |              | 1      |         |
| 156.a | End shield NDE                |                 |                        |              | 1      |         |
| 157   | O-ring                        |                 |                        |              | 1      |         |
| 159   | V-ring                        |                 |                        |              | 1      |         |
| 185.c | Nut                           |                 |                        |              | 4      |         |
| 185.a | Hex socket head cap screw     |                 |                        |              | 4      |         |
| 195.b | Grease nipple                 |                 |                        |              | 1      |         |
| -     | Kit, opr. panel               |                 |                        | 96348924     | 1      |         |
| 259   | Operation panel               |                 |                        |              | 1      |         |
| 274   | Kit, rectifier board          |                 |                        | 96348921     | 1      |         |
| -     | Kit, terminal box             |                 |                        | 96348914     | 1      |         |
| 164   | Cover cpl.                    |                 |                        |              | 1      |         |
| 166   | Pan head thread forming screw |                 |                        |              | 5      |         |
| 251   | Terminal box                  |                 |                        |              | 1      |         |
| 277   | Blind cover                   |                 |                        |              | 1      |         |
| 283   | Motor cover cpl.              |                 |                        |              | 1      |         |
| 284   | Cover                         |                 |                        |              | 1      |         |
| -     | Kit, varistor                 |                 |                        | 96348917     | 1      |         |
| 279.b | Pan head thread forming screw |                 |                        |              | 2      |         |
| 279   | Varistor                      |                 |                        |              | 1      |         |
| 19    | Plug                          |                 |                        | 98163028     | 2      | pcs     |
| 49    | Impeller                      |                 |                        | 98296627     | 1      | pcs     |
| -     | 50 Pump housing cpl.          |                 |                        | 98892152     | 1      | pcs     |
| 20    | Pipe plug                     | Thread: R 3/8   |                        | 96620487     | 2      |         |
| 36    | Nut                           | Thread: M10     |                        | 96620484     | 6      |         |
| 56    | Base plate                    |                 |                        | 96590430     | 1      | pcs     |
| 67    | Nut                           | Thread: M14     |                        | 92526531     | 1      | pcs     |
| 72a   | O-ring                        |                 |                        | 92547662     | 1      | pcs     |
| 72a   | O-ring                        |                 |                        | 92526508     | 1      | pcs     |
| 72a   | O-ring                        |                 |                        | 97511824     | 1      | pcs     |
| 72a   | O-ring                        |                 |                        | 99756265     | 1      | pcs     |
| 77a   | Pan head screw                |                 |                        | 99266550     | 4      | pcs     |
| 105   | Shaft seal                    |                 |                        | 99380916     | 1      | pcs     |
| 105   | Shaft seal                    |                 |                        | 99884645     | 1      | pcs     |