

## SL1.80.80.40.A.EX.4.51D

Grundfos pump 98626460



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<https://www.lenntech.com/grundfos/SL1000/98626460/SL1-80-80-40-A-EX-4-51D-C.html>

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| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | 1    | <p><b>SL1.80.80.40.A.EX.4.51D.C</b></p>  <p style="text-align: center;"><b>Note! Product picture may differ from actual product</b></p> <p>Product No.: On request</p> <p>Non-self-priming, single-stage, centrifugal pump designed for handling wastewater, process water and unscreened raw sewage.</p> <p>The pump is designed for intermittent and continuous operations in submerged installation. The revolutionary S-tube® impeller provides free spherical passage of solids up to 80 mm and is suitable for wastewater with a dry matter content of up to 3 %.</p> <p>A unique stainless-steel clamp assembling system enables quick and easy disassembly of the pump from the motor unit for service and inspection. No special tools are required. Pipework connection is via a DIN flange.</p> <p>The pump is explosion-proof.</p> <p><b>Further product details</b></p> <p>Typical application is transfer of liquid, such as:</p> <ul style="list-style-type: none"> <li>- large quantities of drainage and surface water</li> <li>- domestic wastewater with discharge from toilets</li> <li>- wastewater from commercial buildings without discharge from toilets</li> <li>- sludge-containing industrial wastewater.</li> </ul> <p>The pump is ideal for pumping of the above liquids from for instance:</p> <ul style="list-style-type: none"> <li>- municipal network pumping stations</li> <li>- public buildings</li> <li>- blocks of flats</li> <li>- factories/industry.</li> </ul> <p>The pump is suitable for both temporary and permanent installation either as free-standing on ring stand or on an auto-coupling system.</p> <p><b>Pump</b></p> <p>The pump housing, motor top and impeller are made of cast iron (EN-GJL-250).</p> <p>The S-tube® impeller is providing free spherical passage through the impeller and pump housing and creates a natural extension of the pipework connected to the pump. The S-tube® impeller is a wet-balanced and tube-shaped channel impeller placed in a pump housing that matches the smooth tube shape leaving no obstructions or dead zones.</p> <p>The key to the S-tube® design is simplicity, with no cutting or moving functions that can get worn over time, thereby ensuring constant, superior efficiency. The simple design means lower life cycle costs because abrasive wear is reduced and there are fewer clogging incidents.</p>  |

The shaft seal consists of two mechanical seals that ensure a reliable sealing between the pumped liquid and motor. The shaft seals are incorporated in a single-unit cartridge shaft seal system that is easy to replace in the field without use of special tools.

The combination of the primary and secondary seals in a cartridge shaft seal system results in a shorter assembly length compared to conventional shaft seals.

- Primary seal: Silicon carbide/silicon carbide (SiC/SiC)
- Secondary seal: Carbon/Ceramics

The shaft seal is bidirectional, meaning it operates correctly in case of backflow through the pump.



The pump is approved according to CE, EN12050-1, ATEX.

### Motor

The motor is a watertight, totally encapsulated motor supplied with a 10 m power cable. The stainless steel plug is fastened with a union nut. This nut and the O-rings provide sealing against ingress of the liquid.

The plug is polyurethane-embedded, ensuring a watertight and durable seal around the leads of the cable. This prevents the ingress of water into the motor through the cable in case of cable breakage or adverse handling in connection with installation or service.

A compact motor construction with a short shaft reduces vibrations, resulting in an increased efficiency and lifetime of the shaft seal and ball bearings.

The motor features built-in thermal protection to protect the motor against overheating and ensure the reliability.

The pump is equipped with the following sensor(s):

- A digital moisture switch that is fitted in the motor chamber monitors whether water enters the motor chamber. If moisture is detected in the motor chamber, the switch will trip and send a warning to the sensor module.
- An analog sensor that is fitted in the oil chamber monitors whether water enters the pump from the liquid side. It sends a signal if the water content is outside the normal range (warning), or if there is air in the oil chamber (alarm).

All sensor signals are incorporated in the power cable and connected to the Grundfos IO 113 sensor module which is delivered together with the pump.

The pump is designed for speed-controlled operation to keep the energy consumption at a minimum. To avoid the risk of sedimentation in the pipes, we recommend that you operate the speed-controlled pump within a speed range of 30 % to 100 % and at a flow rate above 1 m/s.

### Controls:

|                      |                          |
|----------------------|--------------------------|
| Moisture sensor:     | with moisture sensors    |
| Water-in-oil sensor: | with water-in-oil sensor |

### Liquid:

|                             |                         |
|-----------------------------|-------------------------|
| Maximum liquid temperature: | 40 °C                   |
| Density:                    | 998.2 kg/m <sup>3</sup> |

### Technical:

|                         |                     |
|-------------------------|---------------------|
| Type of impeller:       | S-TUBE              |
| Maximum particle size:  | 80 mm               |
| Primary shaft seal:     | SIC/SIC             |
| Secondary shaft seal:   | CARBON/CERAMICS     |
| Approvals on nameplate: | CE, EN12050-1, ATEX |
| Curve tolerance:        | ISO9906:2012 3B2    |

### Materials:

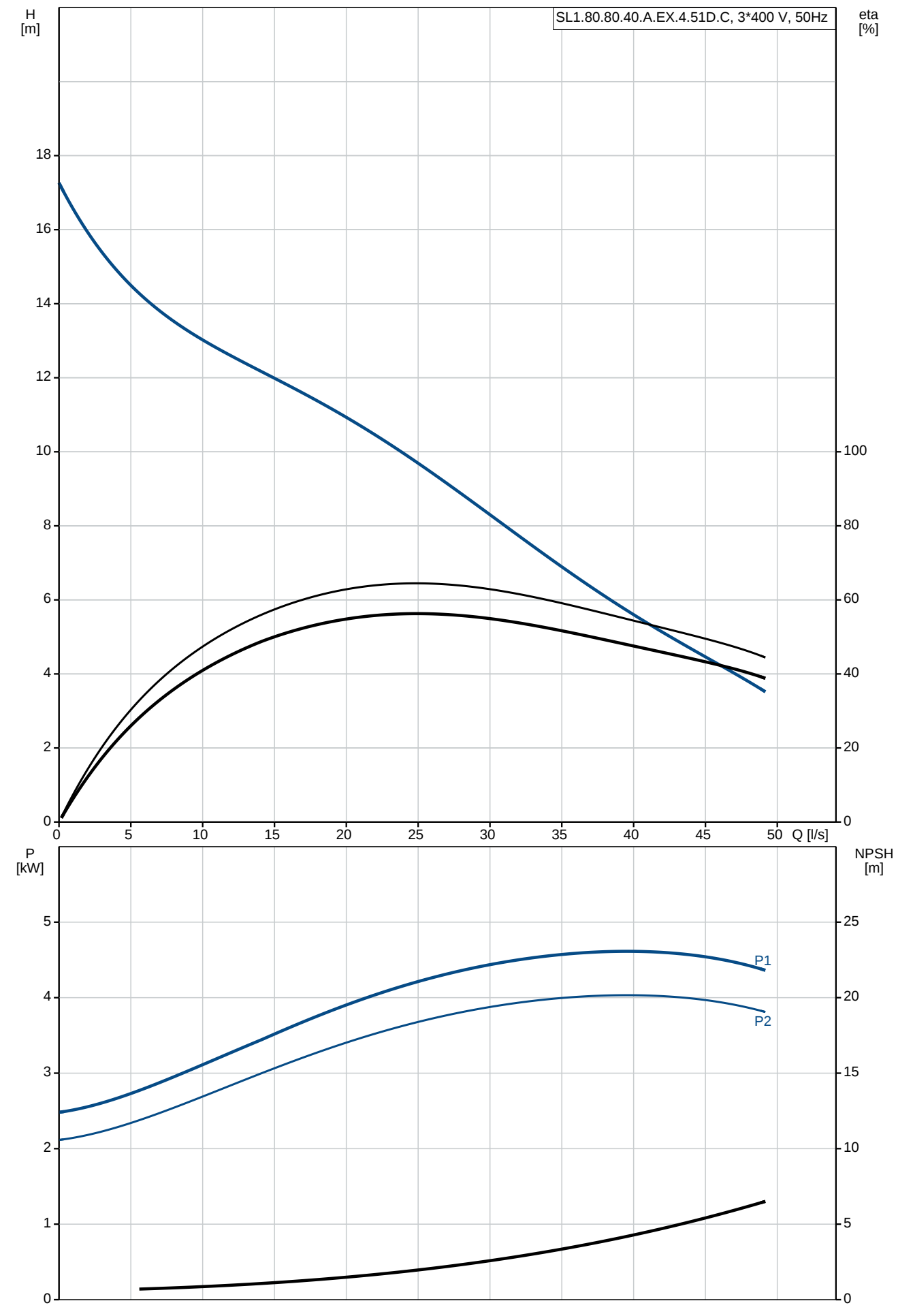
|               |                        |
|---------------|------------------------|
| Pump housing: | Cast iron (EN-GJL-250) |
| Impeller:     | EN-GJL-250             |
| Motor:        | Cast iron (EN-GJL-250) |
|               | EN-GJL-250             |
|               | EN-GJL-250             |

### Installation:

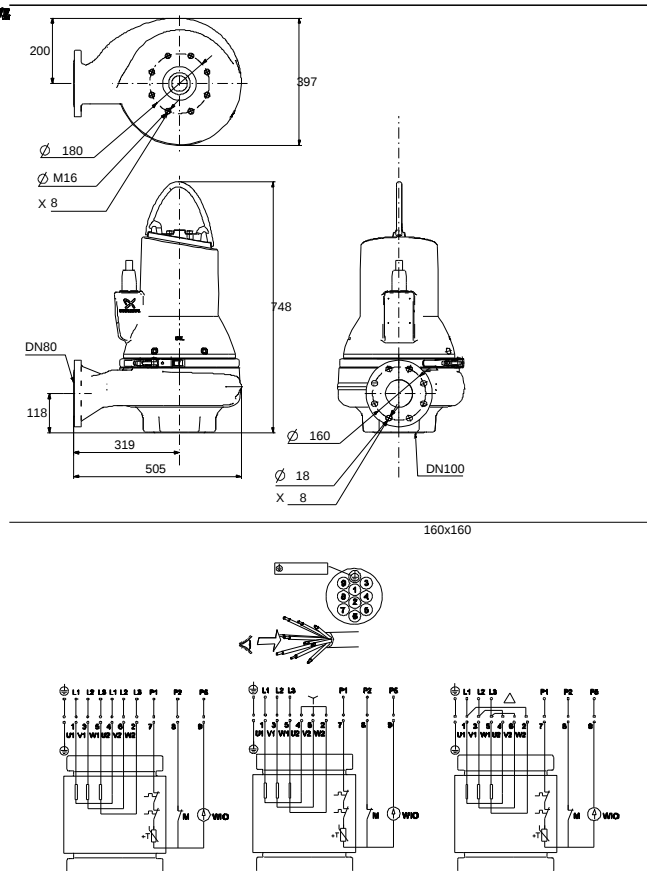
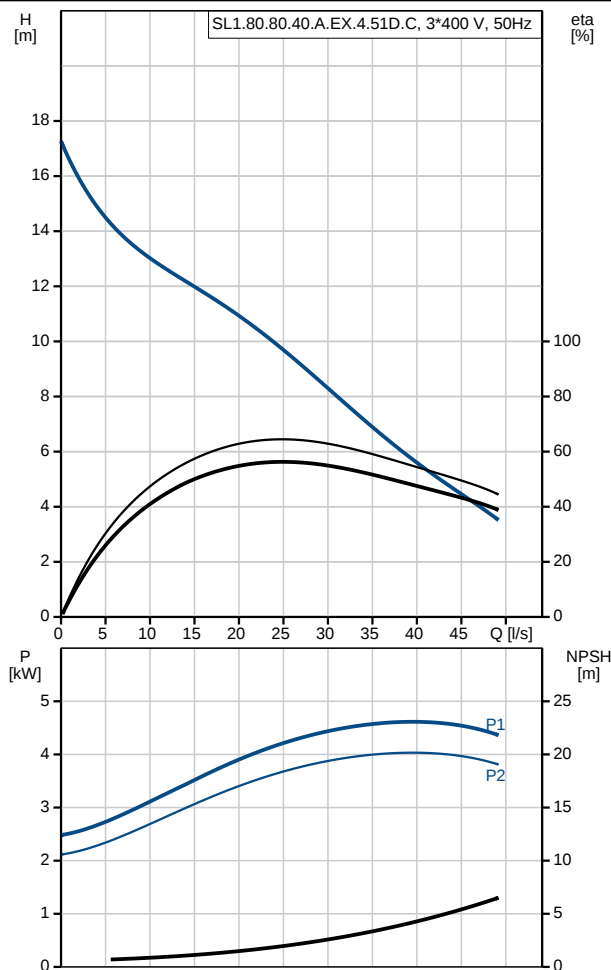
|                              |       |
|------------------------------|-------|
| Maximum ambient temperature: | 40 °C |
|------------------------------|-------|

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |      | Flange standard: DIN<br>Pump inlet: 100<br>Pump outlet: 80<br>Pressure rating: PN 10<br>Maximum installation depth: 20 m<br>Frame range: C<br><br><b>Electrical data:</b><br>Power input - P1: 4.8 kW<br>Rated power - P2: 4 kW<br>Mains frequency: 50 Hz<br>Rated voltage: 3 x 380-415 V<br>Voltage tolerance: +10/-10 %<br>Max starts per. hour: 20<br>Rated current: 10.1-10.1 A<br>Starting current: 65 A<br>Cos phi - power factor: 0.72<br>Cos phi - p.f. at 3/4 load: 0.63<br>Cos phi - p.f. at 1/2 load: 0.50<br>Rated speed: 1464 rpm<br>Motor efficiency at full load: 87.4 %<br>Motor efficiency at 3/4 load: 87.1 %<br>Motor efficiency at 1/2 load: 85.0 %<br>Number of poles: 4<br>Start. method: star/delta<br>Enclosure class (IEC 34-5): IP68<br>Insulation class (IEC 85): H<br>Explosion proof: yes<br>Length of cable: 10 m<br>Cable type: LYNIFLEX<br><br><b>Others:</b><br>Net weight: 148 kg |

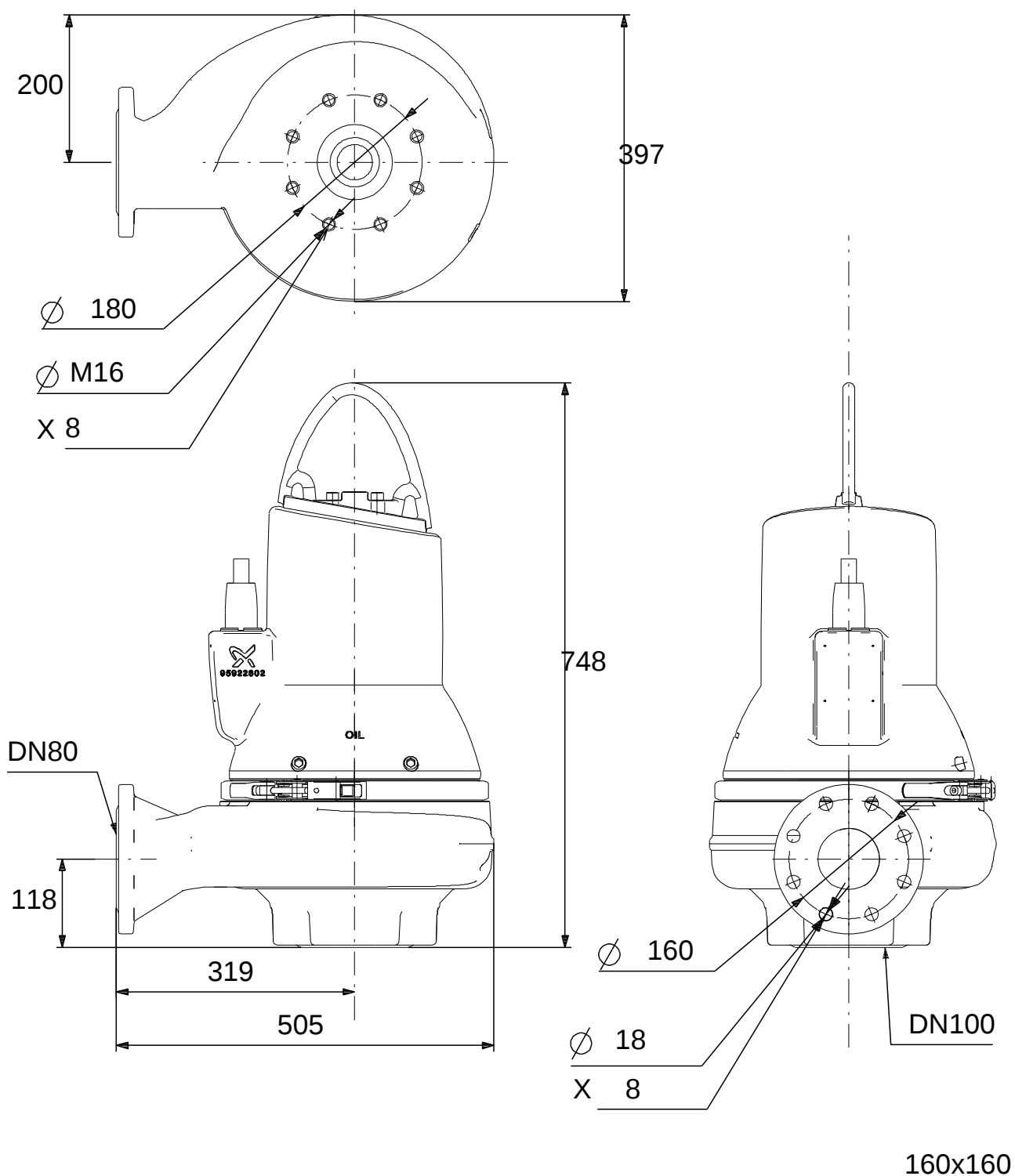
On request SL1.80.80.40.A.EX.4.51D.C 50 Hz



| Description                    | Value                     |
|--------------------------------|---------------------------|
| <b>General information:</b>    |                           |
| Product name:                  | SL1.80.80.40.A.EX.4.51D.C |
| Product No:                    | On request                |
| EAN number:                    | On request                |
| <b>Technical:</b>              |                           |
| Max flow:                      | 49.2 l/s                  |
| Head max:                      | 17.2 m                    |
| Type of impeller:              | S-TUBE                    |
| Maximum particle size:         | 80 mm                     |
| Primary shaft seal:            | SIC/SIC                   |
| Secondary shaft seal:          | CARBON/CERAMICS           |
| Approvals on nameplate:        | CE, EN12050-1, ATEX       |
| Curve tolerance:               | ISO9906:2012 3B2          |
| Cooling jacket:                | without cooling jacket    |
| <b>Materials:</b>              |                           |
| Pump housing:                  | Cast iron (EN-GJL-250)    |
|                                | EN-GJL-250                |
| Impeller:                      | Cast iron (EN-GJL-250)    |
|                                | EN-GJL-250                |
| Motor:                         | EN-GJL-250                |
| <b>Installation:</b>           |                           |
| Maximum ambient temperature:   | 40 °C                     |
| Flange standard:               | DIN                       |
| Pump inlet:                    | 100                       |
| Pump outlet:                   | 80                        |
| Pressure rating:               | PN 10                     |
| Maximum installation depth:    | 20 m                      |
| Inst dry/wet:                  | SUBMERGED                 |
| Installation:                  | Vertical                  |
| Frame range:                   | C </td                    |
| <b>Liquid:</b>                 |                           |
| Maximum liquid temperature:    | 40 °C                     |
| Density:                       | 998.2 kg/m <sup>3</sup>   |
| <b>Electrical data:</b>        |                           |
| Power input - P1:              | 4.8 kW                    |
| Rated power - P2:              | 4 kW                      |
| Mains frequency:               | 50 Hz                     |
| Rated voltage:                 | 3 x 380-415 V             |
| Voltage tolerance:             | +10/-10 %                 |
| Max starts per. hour:          | 20                        |
| Rated current:                 | 10.1-10.1 A               |
| Starting current:              | 65 A                      |
| Cos phi - power factor:        | 0.72                      |
| Cos phi - p.f. at 3/4 load:    | 0.63                      |
| Cos phi - p.f. at 1/2 load:    | 0.50                      |
| Rated speed:                   | 1464 rpm                  |
| Motor efficiency at full load: | 87.4 %                    |
| Motor efficiency at 3/4 load:  | 87.1 %                    |
| Motor efficiency at 1/2 load:  | 85.0 %                    |
| Number of poles:               | 4                         |
| Start. method:                 | star/delta                |
| Enclosure class (IEC 34-5):    | IP68                      |
| Insulation class (IEC 85):     | H                         |
| Explosion proof:               | yes                       |
| Motor protec:                  | Pt1000                    |
| Length of cable:               | 10 m                      |
| Cable type:                    | LYNIFLEX                  |
| <b>Controls:</b>               |                           |
| Control box:                   | not included              |
| Moisture sensor:               | with moisture sensors     |
| Water-in-oil sensor:           | with water-in-oil sensor  |
| <b>Others:</b>                 |                           |
| Net weight:                    | 148 kg                    |

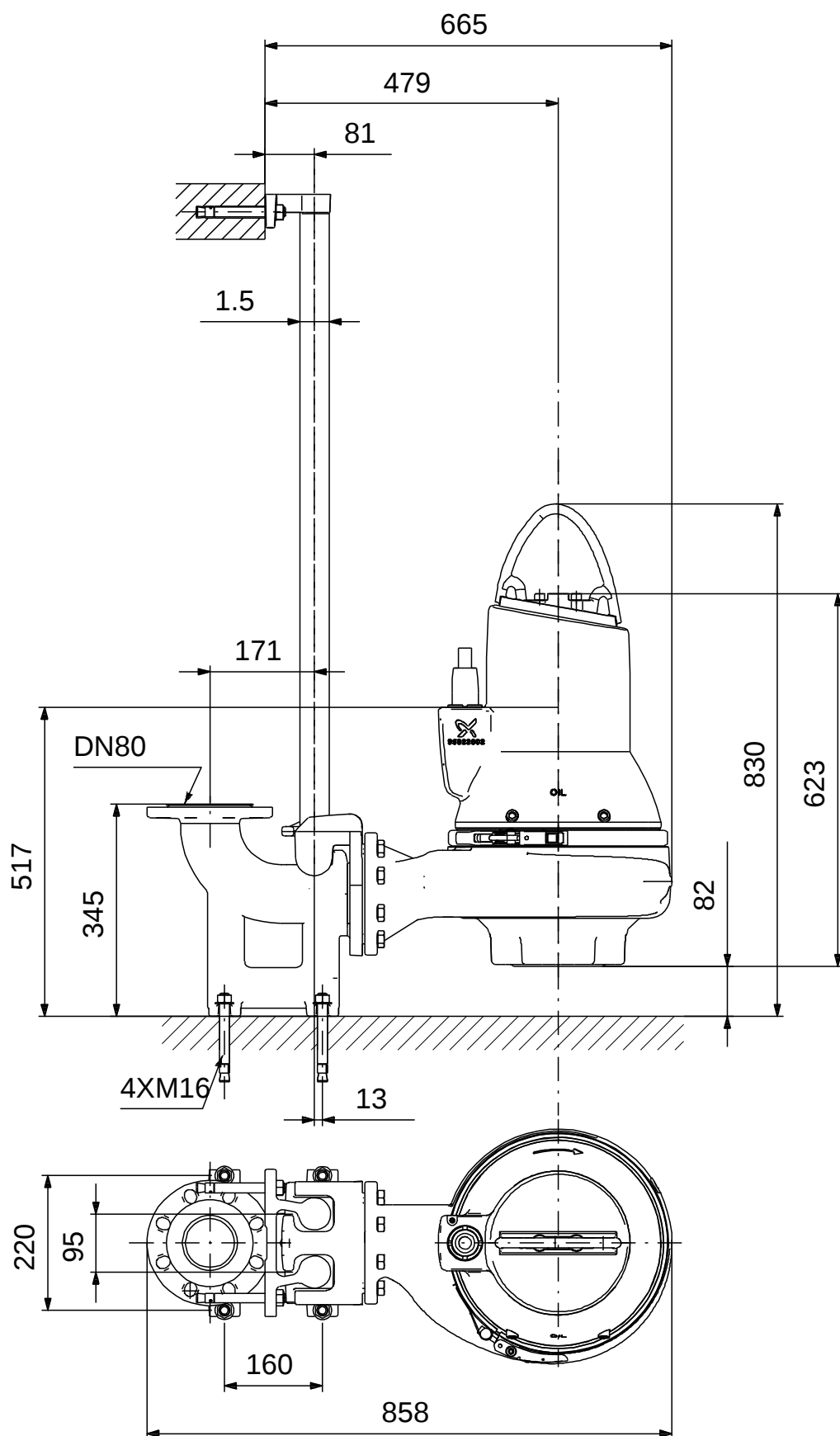


# On request SL1.80.80.40.A.EX.4.51D.C 50 Hz



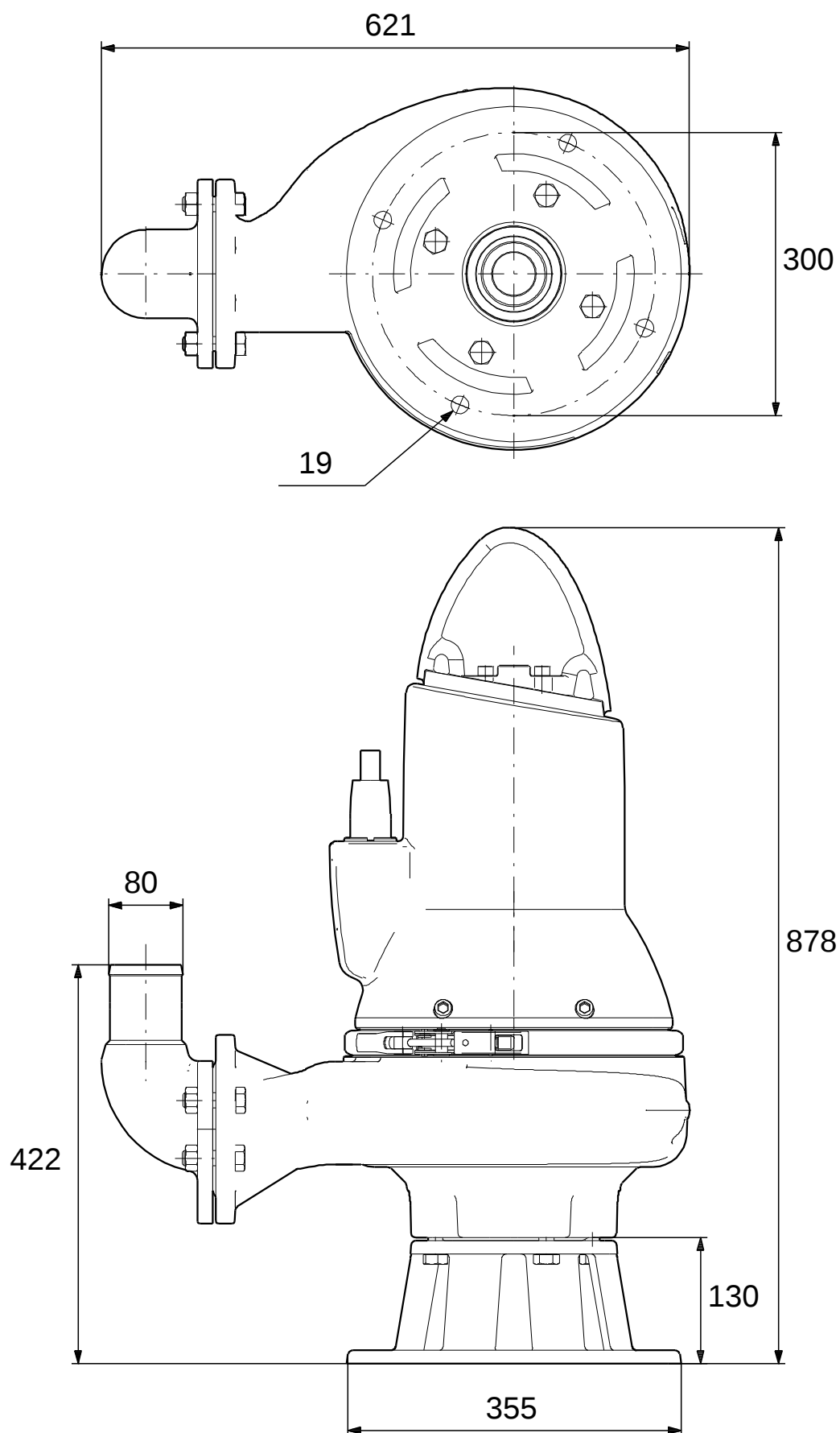
Note! All units are in [mm] unless others are stated.  
Disclaimer: This simplified dimensional drawing does not show all details.

On request SL1.80.80.40.A.EX.4.51D.C 50 Hz



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

**On request SL1.80.80.40.A.EX.4.51D.C 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 )



*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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