

## SEG.40.12.EX.2.50B

Grundfos pump 96075906



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<https://www.lenntech.com/grundfos/SEGFAM/96075906/SEG-40-12-EX-2-50B.html>

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| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | 1    | <p><b>SEG.40.12.EX.2.50B</b></p>  <p>Product No.: On request</p> <p>Non-self-priming, single-stage, centrifugal pump with horizontal discharge port, specifically designed for lift and pumping of wastewater containing discharge from toilets. The pump is equipped with a grinder system that grinds destructible solids into small pieces so that they can be led away through pipes of a relatively small diameter.</p> <p>The surface of the pump is smooth to prevent dirt and impurities from sticking to the pump. A corrosion resistant stainless steel clamp is securing the motor to the pump housing and allow for ease of service of the pump.</p> <p>For maintaining maximum pump efficiency during the pump life, a SmartTrim system allows easy adjustment of impeller clearance.</p> <p>The pump is explosion-proof.</p> <p><b>Further product details</b></p> <p>This grinder pump is specially designed for pumping effluent and untreated domestic sewage in areas with no sewer system or where gravitation systems are unsuitable.</p> <p>The pump is designed for transfer of domestic and municipal wastewater:</p> <ul style="list-style-type: none"> <li>- in sparsely populated areas</li> <li>- in small villages and farms</li> <li>- in areas of difficult topography</li> <li>- in areas with high groundwater</li> </ul> <p>The pump can also remove industrial wastewater containing fibres in industrial applications, such as washing plants.</p> <p><b>Pump</b></p> <p>The pump is primarily made of cast iron with surface treatment of powder coating: black NCS9000N/RAL 9005, gloss 30, thickness 100 µ.</p> <p>The pump features a patented grinder system, ensuring extremely high efficiency and reliable operation. Quick and easy dismantling for replacement of wear parts. No special tools are required.</p>  <p>A stainless-steel clamp connection between motor and pump housing ensures easy inspection and service of the impeller and shaft seal.</p> <p>The shaft seal consists of a cartridge seal that ensures a reliable sealing between pumped liquid and motor.</p> <ul style="list-style-type: none"> <li>- Primary seal: silicon carbide/silicon carbide (SiC/SiC) mechanical shaft seal</li> <li>- Secondary seal: lip seal</li> </ul> <p>In connection with service, the mechanical shaft seal and the lip seal are supplied as one unit ready for fitting.</p>  |

This pump is equipped with the unique SmartTrim system that enables you to easily restore the factory-set impeller clearance and maintain peak pumping efficiency. To do this, remove the cutter head and adjust the SmartTrim nut on the impeller. This can be done on site without dismantling the pump and without using special tools.

The pump has been tested and approved by VDE. Furthermore, the pump is approved for installation in explosive atmospheres and holds the following examination certificate:

- KEMA 06ATEX0127X
- IECEX KEM 06 0028X

Both certificates have been issued by KEMA according to the ATEX directive (94/9/EC).

Note: Explosion-proof pumps must always be fully submerged.

### 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 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.

The motor construction is compact with a short shaft. This reduces vibrations, resulting in an increased efficiency and life of the shaft seal and ball bearings. The motor has two thermal switches in the motor windings to protect the motor against overheating.

### Controls:

|                  |                          |
|------------------|--------------------------|
| Moisture sensor: | without moisture sensors |
| AUTOADAPT:       | NO                       |

### Liquid:

|                           |                         |
|---------------------------|-------------------------|
| Liquid temperature range: | 0 .. 40 °C              |
| Density:                  | 998.2 kg/m <sup>3</sup> |

### Technical:

|                         |                  |
|-------------------------|------------------|
| Type of impeller:       | GRINDER SYSTEM   |
| Primary shaft seal:     | SIC/SIC          |
| Secondary shaft seal:   | LIPSEAL          |
| Approvals on nameplate: | PA-I, ATEX       |
| Curve tolerance:        | ISO9906:2012 3B2 |

### Materials:

|               |                                |
|---------------|--------------------------------|
| Pump housing: | Cast iron<br>EN1561 EN-GJL-200 |
| Impeller:     | Cast iron<br>EN1561 EN-GJL-200 |

### Installation:

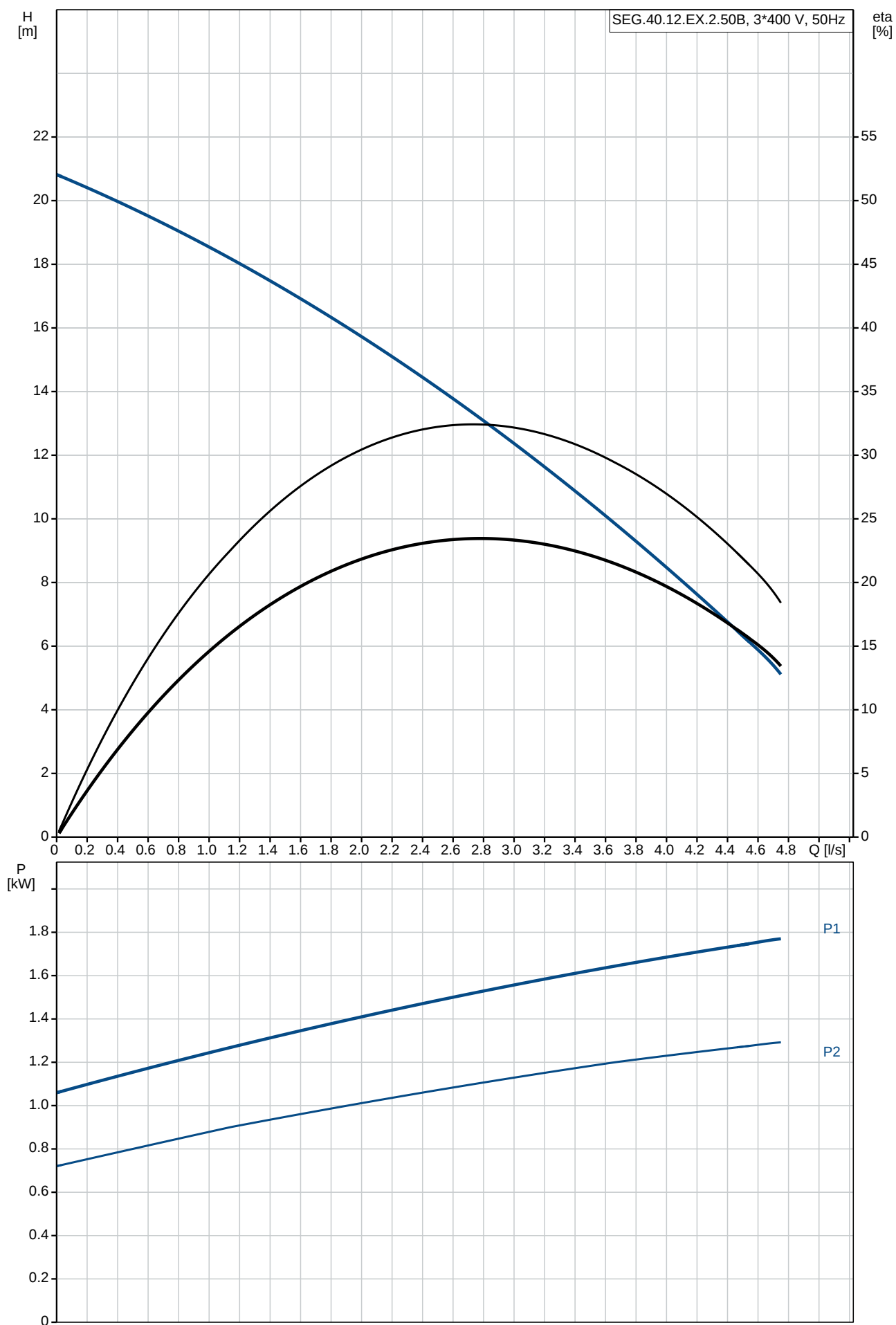
|                              |          |
|------------------------------|----------|
| Maximum ambient temperature: | 40 °C    |
| Maximum operating pressure:  | 6 bar    |
| Flange standard:             | DIN      |
| Pipework connection:         | DN40/50  |
| Pump outlet:                 | DN 40    |
| Pressure rating:             | PN 10    |
| Maximum installation depth:  | 10 m     |
| Auto-coupling:               | 96076063 |

### Electrical data:

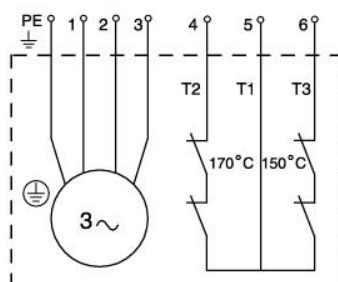
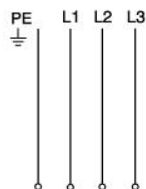
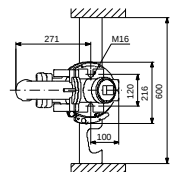
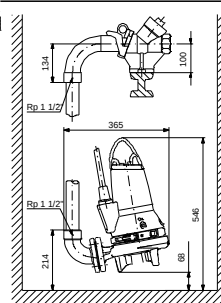
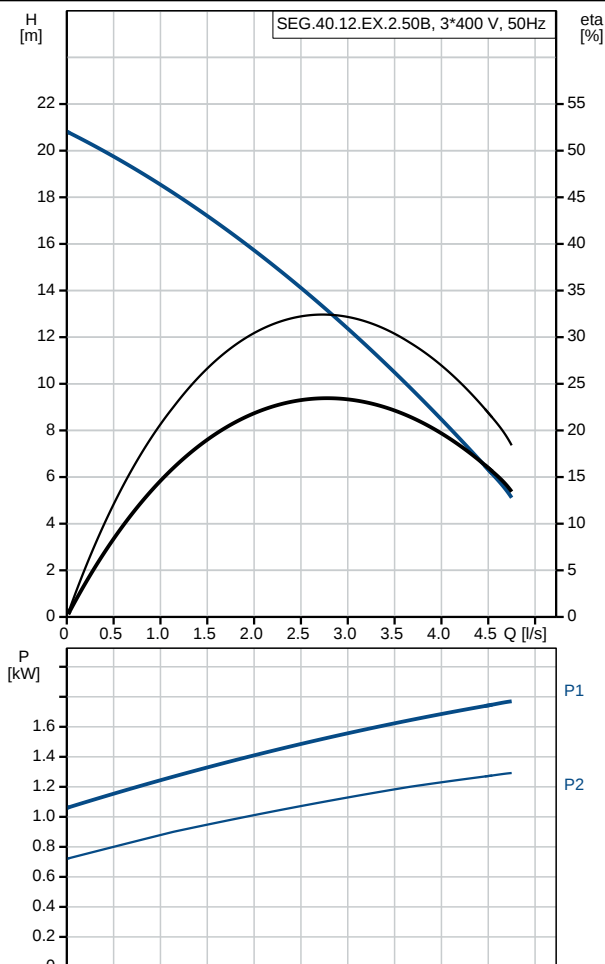
|                             |               |
|-----------------------------|---------------|
| Power input - P1:           | 1.6 kW        |
| Rated power - P2:           | 1.2 kW        |
| Mains frequency:            | 50 Hz         |
| Rated voltage:              | 3 x 400-415 V |
| Voltage tolerance:          | +6/-10 %      |
| Max starts per. hour:       | 30            |
| Rated current:              | 3 A           |
| Starting current:           | 21 A          |
| Rated current at no load:   | 2.1 A         |
| Cos phi - power factor:     | 0.81          |
| Cos phi - p.f. at 3/4 load: | 0.72          |

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |      | <p> Cos phi - p.f. at 1/2 load: 0.58<br/> Rated speed: 2750 rpm<br/> Moment of inertia: 0.0038 kg m<sup>2</sup><br/> Motor efficiency at full load: 73 %<br/> Motor efficiency at 3/4 load: 71 %<br/> Motor efficiency at 1/2 load: 66 %<br/> Number of poles: 2<br/> Start. method: direct-on-line<br/> Enclosure class (IEC 34-5): IP68<br/> Insulation class (IEC 85): F<br/> Explosion proof: yes<br/> Ex-description: EEX D IIB T4<br/> Explosion protection standard: EN 60079-0/EN 60079-1<br/> Length of cable: 10 m<br/> Cable type: LYNIFLEX<br/> Type of cable plug: NO PLUG </p> <p> <b>Others:</b><br/> Net weight: 42.4 kg </p> |

# On request SEG.40.12.EX.2.50B 50 Hz

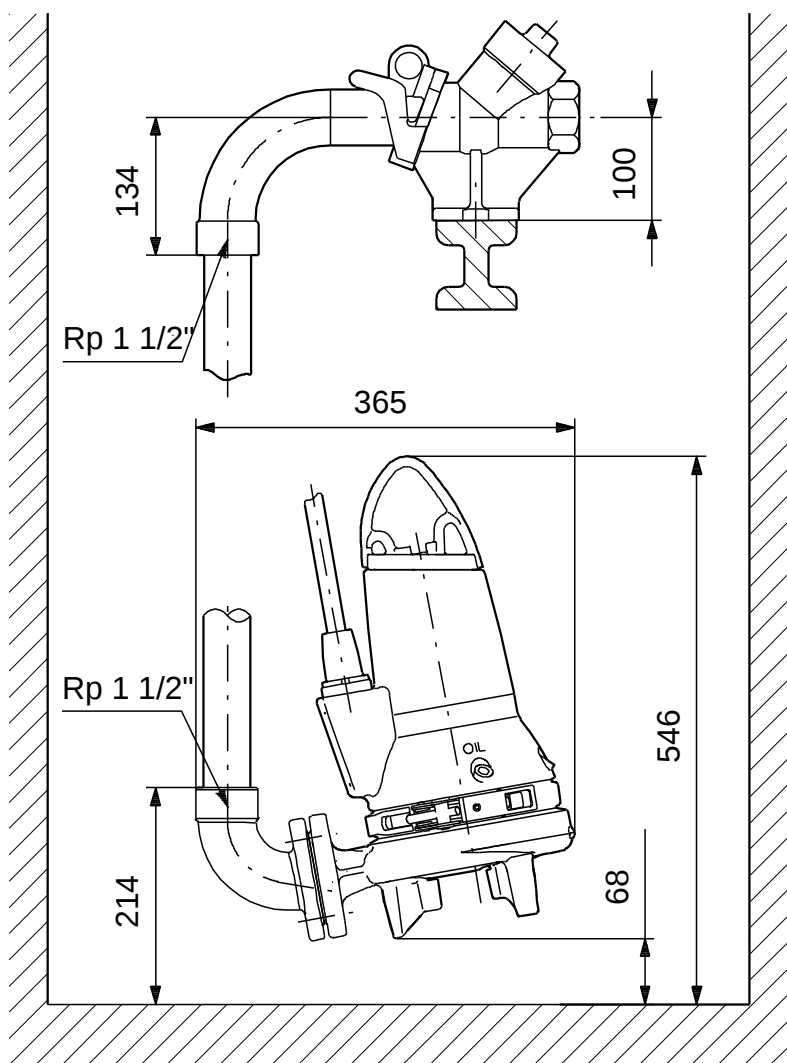


| Description                    | Value                    |
|--------------------------------|--------------------------|
| <b>General information:</b>    |                          |
| Product name:                  | SEG.40.12.EX.2.50B       |
| Product No:                    | On request               |
| EAN number:                    | On request               |
| <b>Technical:</b>              |                          |
| Max flow:                      | 5 l/s                    |
| Head max:                      | 20.7 m                   |
| Type of impeller:              | GRINDER SYSTEM           |
| Primary shaft seal:            | SIC/SIC                  |
| Secondary shaft seal:          | LIPSEAL                  |
| Approvals on nameplate:        | PA-I, ATEX               |
| Curve tolerance:               | ISO9906:2012 3B2         |
| <b>Materials:</b>              |                          |
| Pump housing:                  | Cast iron                |
|                                | EN1561 EN-GJL-200        |
| Impeller:                      | Cast iron                |
|                                | EN1561 EN-GJL-200        |
| <b>Installation:</b>           |                          |
| Maximum ambient temperature:   | 40 °C                    |
| Maximum operating pressure:    | 6 bar                    |
| Flange standard:               | DIN                      |
| Pipework connection:           | DN40/50                  |
| Pump outlet:                   | DN 40                    |
| Pressure rating:               | PN 10                    |
| Maximum installation depth:    | 10 m                     |
| Inst dry/wet:                  | SUBMERGED                |
| Auto-coupling:                 | 96076063                 |
| <b>Liquid:</b>                 |                          |
| Liquid temperature range:      | 0 .. 40 °C               |
| Density:                       | 998.2 kg/m <sup>3</sup>  |
| <b>Electrical data:</b>        |                          |
| Power input - P1:              | 1.6 kW                   |
| Rated power - P2:              | 1.2 kW                   |
| Mains frequency:               | 50 Hz                    |
| Rated voltage:                 | 3 x 400-415 V            |
| Voltage tolerance:             | +6/-10 %                 |
| Max starts per. hour:          | 30                       |
| Rated current:                 | 3 A                      |
| Starting current:              | 21 A                     |
| Rated current at no load:      | 2.1 A                    |
| Cos phi - power factor:        | 0.81                     |
| Cos phi - p.f. at 3/4 load:    | 0.72                     |
| Cos phi - p.f. at 1/2 load:    | 0.58                     |
| Rated speed:                   | 2750 rpm                 |
| Moment of inertia:             | 0.0038 kg m <sup>2</sup> |
| Motor efficiency at full load: | 73 %                     |
| Motor efficiency at 3/4 load:  | 71 %                     |
| Motor efficiency at 1/2 load:  | 66 %                     |
| Number of poles:               | 2                        |
| Start. method:                 | direct-on-line           |
| Enclosure class (IEC 34-5):    | IP68                     |
| Insulation class (IEC 85):     | F                        |
| Explosion proof:               | yes                      |
| Ex-description:                | EEX D IIB T4             |
| Explosion protection standard: | EN 60079-0/EN 60079-1    |
| Motor protec:                  | THERMAL SWITCH           |
| Thermal protec:                | external                 |
| Length of cable:               | 10 m                     |
| Cable type:                    | LYNIFLEX                 |
| Type of cable plug:            | NO PLUG                  |
| <b>Controls:</b>               |                          |
| Control box:                   | not included             |
| Additional I/O:                | External                 |
| Moisture sensor:               | without moisture sensors |



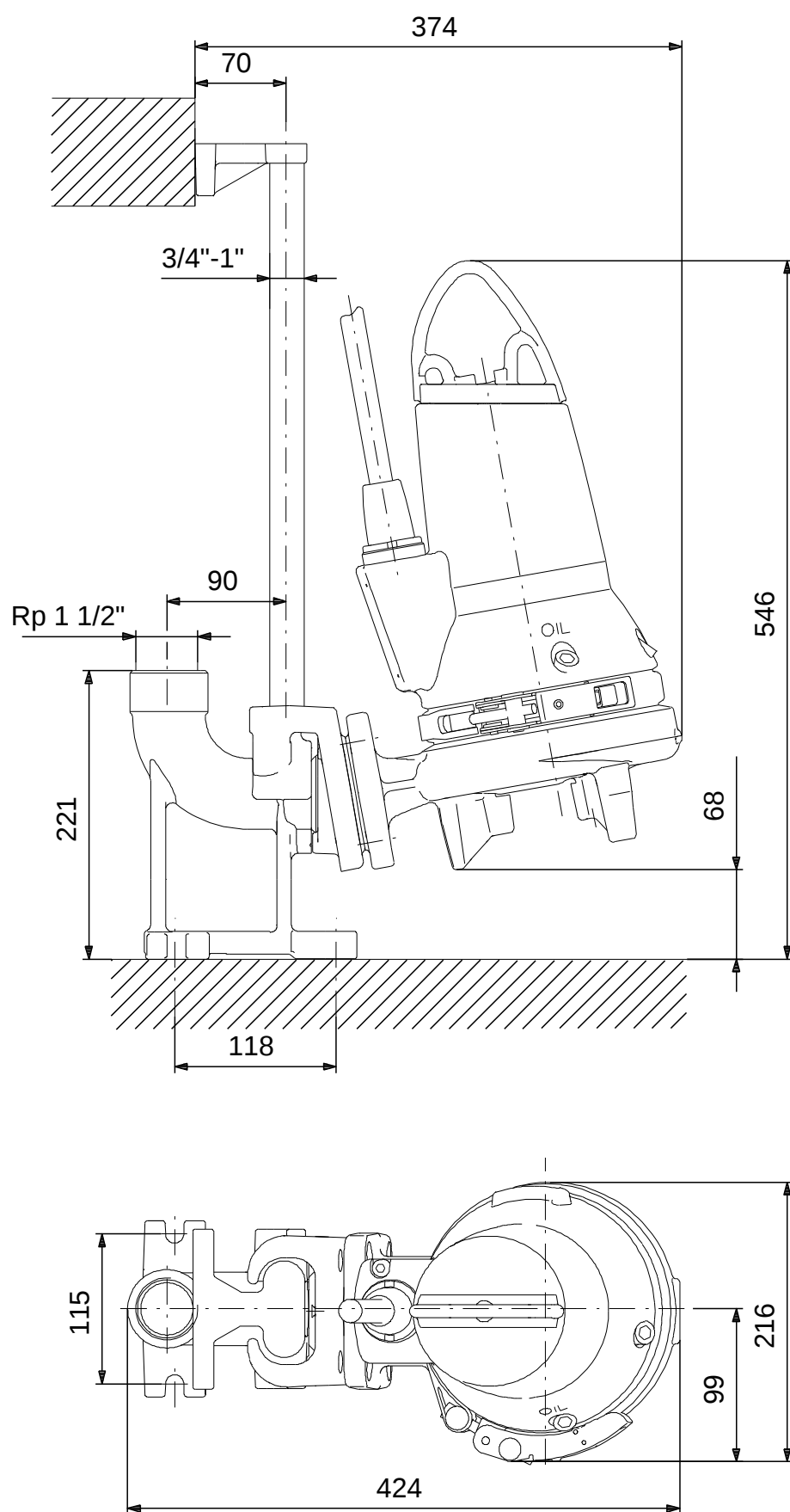
| Description | Value   |
|-------------|---------|
| AUTOADAPT:  | NO      |
| Others:     |         |
| Net weight: | 42.4 kg |

# On request SEG.40.12.EX.2.50B 50 Hz



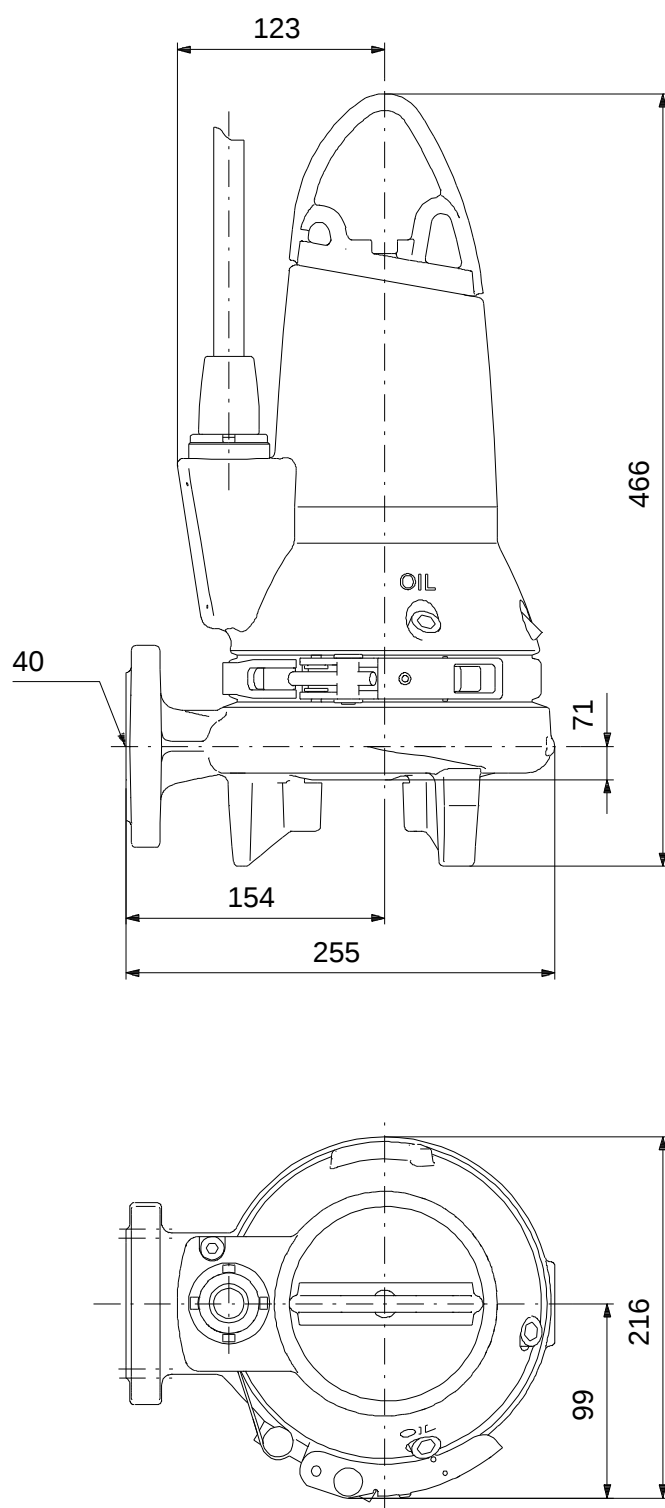
Note! All units are in [mm] unless others are stated.  
Disclaimer: This simplified dimensional drawing does not show all details.

# On request SEG.40.12.EX.2.50B 50 Hz



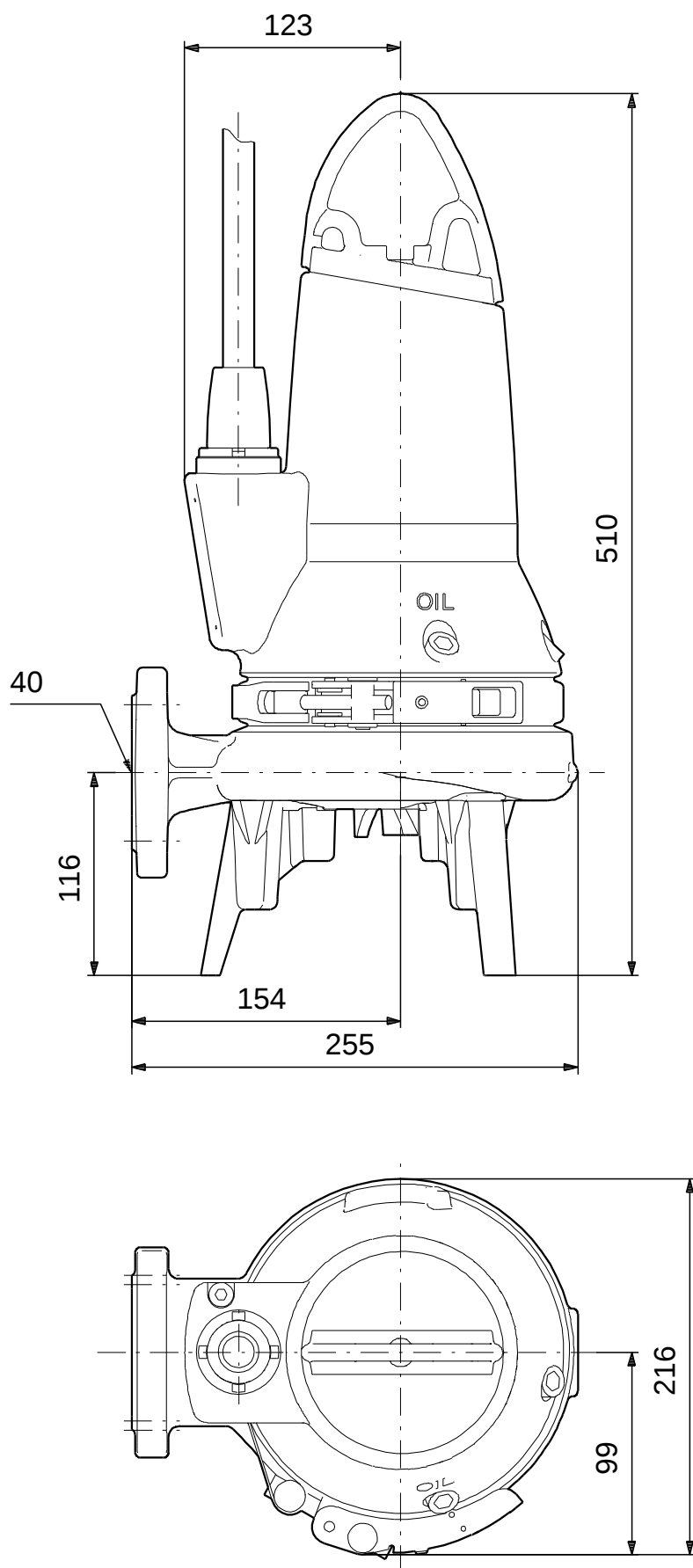
Note! All units are in [mm] unless others are stated.  
Disclaimer: This simplified dimensional drawing does not show all details.

# On request SEG.40.12.EX.2.50B 50 Hz



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

On request SEG.40.12.EX.2.50B 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 SEG.40.12.EX.2.50B, Product No. On request**  
**Valid from 1.12.2002 (0248)**

| Pos    | Description                 | Annotation | Données de classification     | Référence | Quantité | Unité |
|--------|-----------------------------|------------|-------------------------------|-----------|----------|-------|
| 7a     | Rivet                       |            |                               |           | 10       | pcs   |
| 9a     | Key                         |            | Dimension: 5X5X12             |           | 1        | pcs   |
| 26.a   | O-ring                      |            | Diameter: 32                  |           | 1        | pcs   |
|        |                             |            | Material type: NBR            |           |          |       |
|        |                             |            | Thickness: 4                  |           |          |       |
| 37     | O-ring                      |            | Diameter: 164                 |           | 1        | pcs   |
|        |                             |            | Material type: NBR            |           |          |       |
|        |                             |            | Thickness: 3                  |           |          |       |
| 37a    | O-ring                      |            | Diameter: 114                 |           | 2        | pcs   |
|        |                             |            | Material type: NBR            |           |          |       |
|        |                             |            | Thickness: 3                  |           |          |       |
| 44     | Grinder ring                |            |                               |           | 1        | pcs   |
| 45     | Grinder head                |            |                               |           | 1        | pcs   |
| 49     | Impeller                    |            |                               |           | 1        | pcs   |
| 50     | Pump housing                |            |                               |           | 1        | pcs   |
| 66     | Wedge lock washer           |            | Designation: M8 A4            |           | 1        | pcs   |
| 68     | Adjustment nut              |            |                               |           | 1        | pcs   |
| 76     | Nameplate                   |            |                               |           | 1        | pcs   |
| 92     | Clamp                       |            |                               |           | 1        | pcs   |
| 102    | O-ring                      |            | Diameter: 16                  |           | 1        | pcs   |
|        |                             |            | Material type: NBR            |           |          |       |
|        |                             |            | Thickness: 1.5                |           |          |       |
| 103    | Bush                        |            |                               |           | 1        | pcs   |
| - 105  | Shaft seal                  |            |                               |           | 1        | pcs   |
| 58     | Retainer for seal ring      |            |                               |           | 1        |       |
| 104    | Seal ring                   |            |                               |           | 1        |       |
| 105.a  | Shaft seal                  |            | Material type: BQQP           |           | 1        |       |
| 107    | O-ring                      |            | Diameter: 47                  |           | 1        |       |
|        |                             |            | Material type: NBR            |           |          |       |
|        |                             |            | Thickness: 3                  |           |          |       |
| 108    | O-ring                      |            | Diameter: 50                  |           | 1        |       |
|        |                             |            | Material type: NBR            |           |          |       |
|        |                             |            | Thickness: 3                  |           |          |       |
| - 150a | Stator w/housing cpl.       |            |                               |           | 1        | pcs   |
| 48     | Stator                      |            | Winding resistance: 4,55      |           | 1        |       |
| 48a    | Cover                       |            |                               |           | 1        |       |
| 55     | Stator housing              |            |                               |           | 1        |       |
| 66     | Wedge lock washer           |            | Designation: M8 A4            |           | 1        |       |
| 154    | Ball bearing                |            |                               |           | 1        |       |
| 158    | Waved washer                |            |                               |           | 1        |       |
| 159    | O-ring                      |            |                               |           | 1        |       |
| 173    | Cross recess Pan head screw |            | Designation: CROSS-HEAD SCREW |           | 1        |       |
| 173a   | Lock washer                 |            |                               |           | 1        |       |
| - 176  | Plug                        |            |                               |           | 1        |       |
|        | Pin                         |            |                               |           | 1        |       |
| 153b   | O-ring                      |            | Diameter: 28                  |           | 1        |       |
|        |                             |            | Material type: NBR            |           |          |       |
|        |                             |            | Thickness: 2                  |           |          |       |
| 185    | O-ring                      |            | Diameter: 31                  |           | 1        |       |
|        |                             |            | Material type: NBR            |           |          |       |
|        |                             |            | Thickness: 2                  |           |          |       |
| 188.a  | Hex socket head cap screw   |            | Length (mm): 25               |           | 1        |       |
|        |                             |            | Thread: M8                    |           |          |       |
| 153    | Ball bearing                |            | Designation: 6303 2RS C3 SYN  |           | 1        | pcs   |
| 154    | Ball bearing                |            |                               |           | 1        | pcs   |
| 155    | Oil chamber                 |            |                               |           | 1        | pcs   |
| 158    | Waved washer                |            |                               |           | 1        | pcs   |
| 172    | Shaft w/rotor               |            |                               |           | 1        | pcs   |
| - 181  | Cable Ex                    |            |                               |           | 1        | pcs   |

| Pos   | Description               | Annotation | Données de classification | Référence | Quantité | Unité |
|-------|---------------------------|------------|---------------------------|-----------|----------|-------|
| 198   | O-ring                    |            | Diameter: 34.2            |           | 1        |       |
|       |                           |            | Material type: NBR        |           |          |       |
|       |                           |            | Thickness: 3              |           |          |       |
| 188.a | Hex socket head cap screw |            | Length (mm): 25           |           | 9        | pcs   |
|       |                           |            | Thread: M8                |           |          |       |
| 190   | Lifting bracket           |            |                           |           | 1        | pcs   |
| 193   | Hex socket head cap screw |            | Designation: A2-70        |           | 2        | pcs   |
|       |                           |            | Length (mm): 20           |           |          |       |
|       |                           |            | Thread: M12               |           |          |       |
| 193a  | Oil                       |            | Material type: ONDINA 15  |           | 0        | pcs   |
|       |                           |            | Type: SHELL               |           |          |       |
| 194   | Washer                    |            | Internal diameter: 19     |           | 2        | pcs   |
|       |                           |            | Outer diameter: 12.2      |           |          |       |
|       |                           |            | Thickness: 4.4            |           |          |       |

*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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