

## EF30.50.09.2.1.502 Grundfos pump 96115111



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<https://www.lenntech.com/grundfos/EFFAM/96115111/EF30-50-09-2-1-502.html>

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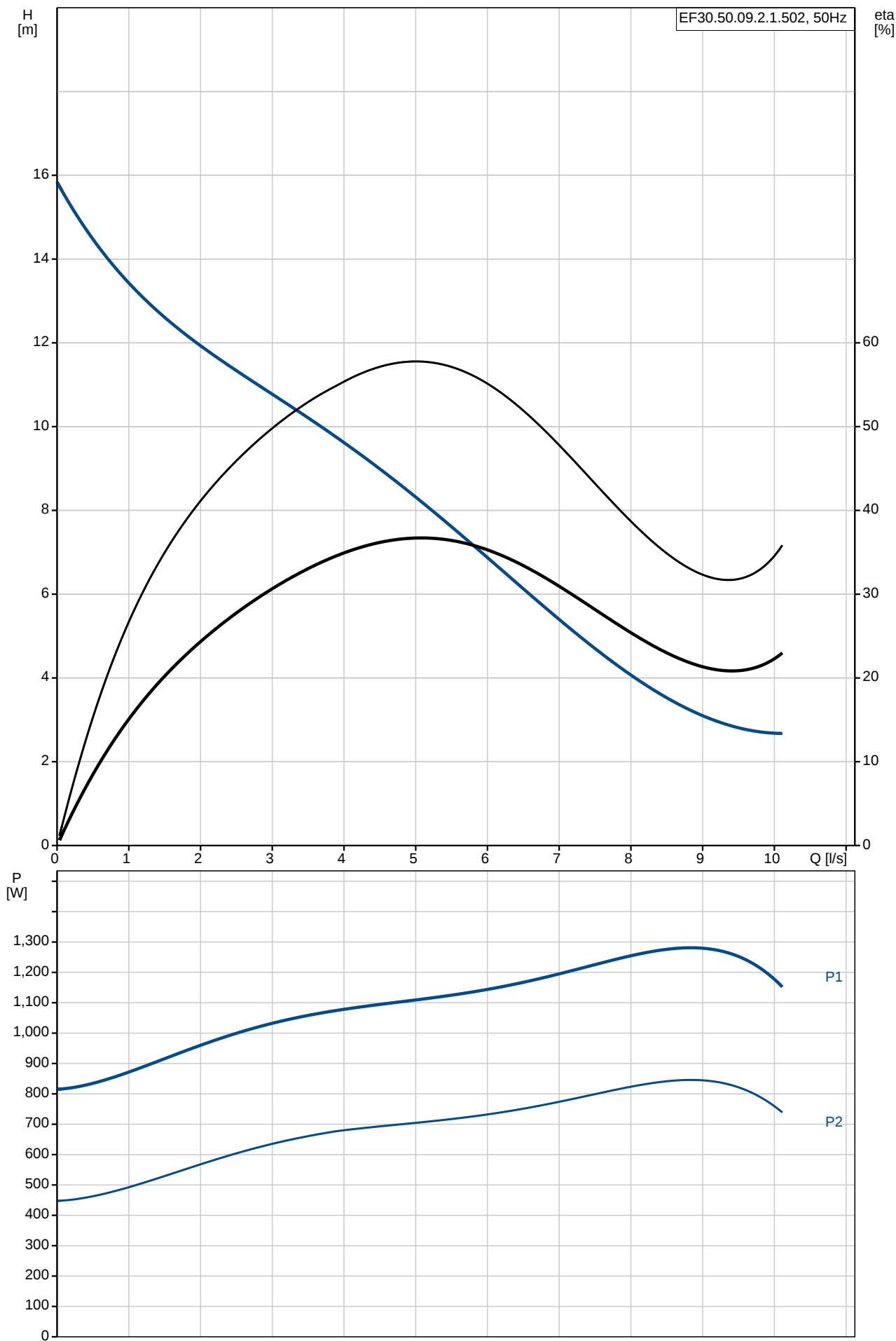
tel. +31 152 610 900

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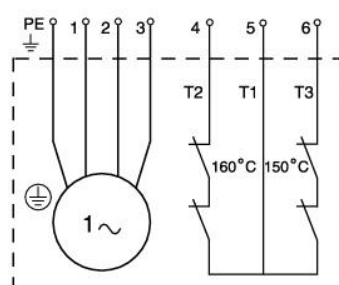
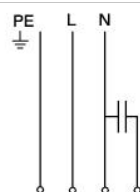
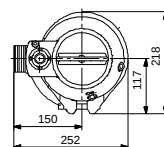
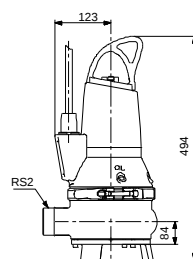
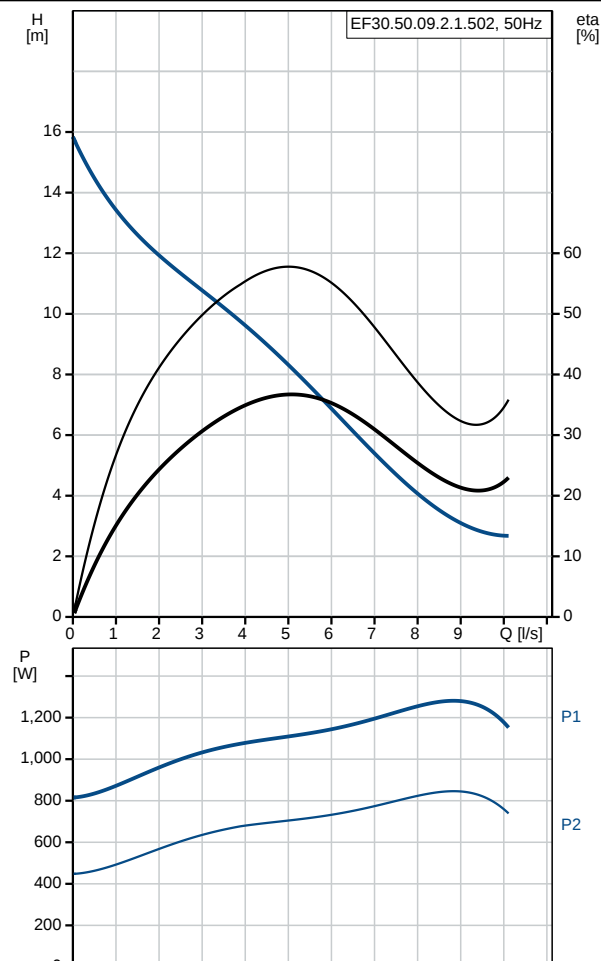
| Position                   | Qty.                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
|----------------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------|----------------------|-----------------------------|---------------------------|------------|----------|-------------|-------------------|-----------|------------------------|-------|---------------------|---------|-----------------------|---------|----------------------------|------|-------------------------|-----|------------------|------------------|---------------|-------------------------|-----------|---------------------------|
|                            | 1                           | <div><div></div><div><p>Product No.: On request</p><p>GRUNDFOS EF pump is a portable pump for both domestic and industrial applications.</p><p>The pump has a single-vane, semi-open impeller for 30 mm free passage and is suitable for pumping</p><ul style="list-style-type: none"><li>• drainage and surface water with small impurities</li><li>• wastewater with fibres, e.g. from laundries</li><li>• wastewater without discharge from toilets</li><li>• wastewater from commercial buildings without discharge from toilets.</li></ul><p>The compact design makes the pump suitable for both temporary and permanent installation.</p><p>The pump is a cast iron submersible pump with integrated submersible 1-phase motor. Approvals: LGA</p><p>The pump has an intermediate oil chamber pre-filled with non-toxic special oil.</p><p>The pump is fitted with a cable plug for easy dismantling. This plug is hermetically sealed with polyurethane to prevent water from penetrating through the cable into the motor.</p><p>A clamp between pump housing and motor ensures easy and safe dismantling and assembly. Inspection can be done in the field without any special tools.</p><p>The pump is fitted with a double shaft seal in the unique cartridge design. This makes it easy to replace the shaft seal very quickly in the field without any special tools. It also eliminates the risk of faulty installation.</p><p>The motor is insulation class F and has long-life, deep-groove, greased-for-life ball bearings.</p><p>The pump has R 2 discharge port and is ready for installation either free-standing or on an auto-coupling system.</p><p><b>Controls:</b></p><table><tr><td>Moisture sensor:</td><td>without moisture sensors</td></tr><tr><td>Water-in-oil sensor:</td><td>without water-in-oil sensor</td></tr></table><p><b>Liquid:</b></p><table><tr><td>Liquid temperature range:</td><td>0 .. 40 °C</td></tr><tr><td>Density:</td><td>998.2 kg/m³</td></tr></table><p><b>Technical:</b></p><table><tr><td>Type of impeller:</td><td>SEMI OPEN</td></tr><tr><td>Maximum particle size:</td><td>30 mm</td></tr><tr><td>Primary shaft seal:</td><td>SIC/SIC</td></tr><tr><td>Secondary shaft seal:</td><td>LIPSEAL</td></tr><tr><td>Max. hydraulic efficiency:</td><td>60 %</td></tr><tr><td>Approvals on nameplate:</td><td>LGA</td></tr><tr><td>Curve tolerance:</td><td>ISO9906:2012 3B2</td></tr></table><p><b>Materials:</b></p><table><tr><td>Pump housing:</td><td>Cast iron<br/>EN-GJL-200</td></tr><tr><td>Impeller:</td><td>Cast iron<br/>EN-GJS-500-7</td></tr></table></div></div> | Moisture sensor: | without moisture sensors | Water-in-oil sensor: | without water-in-oil sensor | Liquid temperature range: | 0 .. 40 °C | Density: | 998.2 kg/m³ | Type of impeller: | SEMI OPEN | Maximum particle size: | 30 mm | Primary shaft seal: | SIC/SIC | Secondary shaft seal: | LIPSEAL | Max. hydraulic efficiency: | 60 % | Approvals on nameplate: | LGA | Curve tolerance: | ISO9906:2012 3B2 | Pump housing: | Cast iron<br>EN-GJL-200 | Impeller: | Cast iron<br>EN-GJS-500-7 |
| Moisture sensor:           | without moisture sensors    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Water-in-oil sensor:       | without water-in-oil sensor |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Liquid temperature range:  | 0 .. 40 °C                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Density:                   | 998.2 kg/m³                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Type of impeller:          | SEMI OPEN                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Maximum particle size:     | 30 mm                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Primary shaft seal:        | SIC/SIC                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Secondary shaft seal:      | LIPSEAL                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Max. hydraulic efficiency: | 60 %                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Approvals on nameplate:    | LGA                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Curve tolerance:           | ISO9906:2012 3B2            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Pump housing:              | Cast iron<br>EN-GJL-200     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |
| Impeller:                  | Cast iron<br>EN-GJS-500-7   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                          |                      |                             |                           |            |          |             |                   |           |                        |       |                     |         |                       |         |                            |      |                         |     |                  |                  |               |                         |           |                           |

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |      | <p><b>Installation:</b></p> <p>Maximum ambient temperature: 40 °C<br/> Maximum operating pressure: 6 bar<br/> Pump outlet: R 2<br/> Maximum installation depth: 10 m<br/> Auto-coupling: Y</p> <p><b>Electrical data:</b></p> <p>Power input - P1: 1.3 kW<br/> Rated power - P2: 0.9 kW<br/> Mains frequency: 50 Hz<br/> Rated voltage: 1 x 230 V<br/> Voltage tolerance: +6/-10 %<br/> Max starts per. hour: 30<br/> Rated current: 6.1 A<br/> Rated current at 3/4 load: 5.1 A<br/> Rated current at 1/2 load: 4.1 A<br/> Starting current: 38 A<br/> Rated current at no load: 2.6 A<br/> Cos phi - power factor: 0.96<br/> Cos phi - p.f. at 3/4 load: 0.92<br/> Cos phi - p.f. at 1/2 load: 0.86<br/> Rated speed: 2870 rpm<br/> Locked-rotor torque: 6.5 Nm<br/> Breakdown torque: 7 Nm<br/> Moment of inertia: 0.0037 kg m<sup>2</sup><br/> Motor efficiency at full load: 67 %<br/> Motor efficiency at 3/4 load: 63 %<br/> Motor efficiency at 1/2 load: 55 %<br/> Capacitor size - run: 30 µF<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: no<br/> Length of cable: 10 m<br/> Cable type: H07RN-F<br/> Type of cable plug: NO PLUG</p> <p><b>Others:</b></p> <p>Net weight: 38 kg<br/> Danish VVS No.: 391292132</p> |

On request EF30.50.09.2.1.502 50 Hz

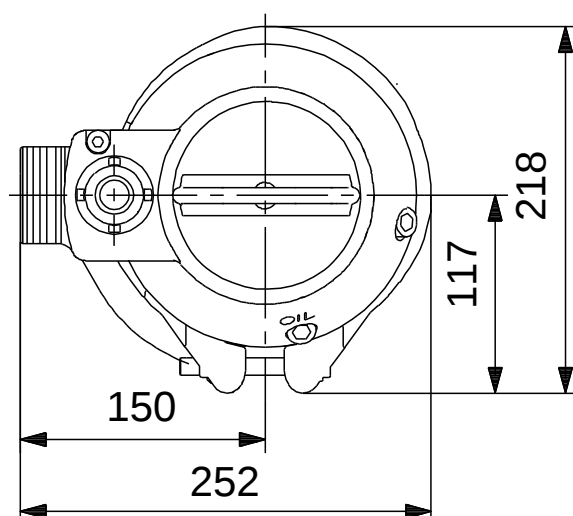
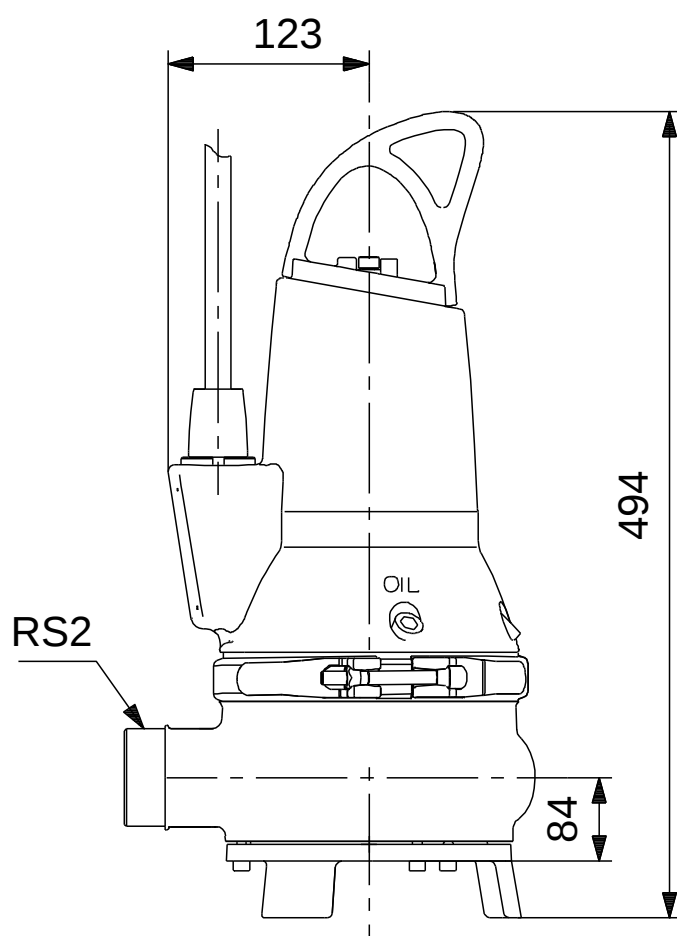


| Description                    | Value                    |
|--------------------------------|--------------------------|
| <b>General information:</b>    |                          |
| Product name:                  | EF30.50.09.2.1.502       |
| Product No:                    | On request               |
| EAN number:                    | On request               |
| <b>Technical:</b>              |                          |
| Max flow:                      | 10.8 l/s                 |
| Head max:                      | 16.8 m                   |
| Type of impeller:              | SEMI OPEN                |
| Maximum particle size:         | 30 mm                    |
| Primary shaft seal:            | SIC/SIC                  |
| Secondary shaft seal:          | LIPSEAL                  |
| Max. hydraulic efficiency:     | 60 %                     |
| Approvals on nameplate:        | LGA                      |
| Curve tolerance:               | ISO9906:2012 3B2         |
| <b>Materials:</b>              |                          |
| Pump housing:                  | Cast iron                |
|                                | EN-GJL-200               |
| Impeller:                      | Cast iron                |
|                                | EN-GJS-500-7             |
| <b>Installation:</b>           |                          |
| Maximum ambient temperature:   | 40 °C                    |
| Maximum operating pressure:    | 6 bar                    |
| Pump outlet:                   | R 2                      |
| Maximum installation depth:    | 10 m                     |
| Inst dry/wet:                  | S                        |
| Installation:                  | vertical                 |
| Auto-coupling:                 | Y                        |
| <b>Liquid:</b>                 |                          |
| Liquid temperature range:      | 0 .. 40 °C               |
| Density:                       | 998.2 kg/m <sup>3</sup>  |
| <b>Electrical data:</b>        |                          |
| Power input - P1:              | 1.3 kW                   |
| Rated power - P2:              | 0.9 kW                   |
| Mains frequency:               | 50 Hz                    |
| Rated voltage:                 | 1 x 230 V                |
| Voltage tolerance:             | +6/-10 %                 |
| Max starts per. hour:          | 30                       |
| Rated current:                 | 6.1 A                    |
| Rated current at 3/4 load:     | 5.1 A                    |
| Rated current at 1/2 load:     | 4.1 A                    |
| Starting current:              | 38 A                     |
| Rated current at no load:      | 2.6 A                    |
| Cos phi - power factor:        | 0.96                     |
| Cos phi - p.f. at 3/4 load:    | 0.92                     |
| Cos phi - p.f. at 1/2 load:    | 0.86                     |
| Rated speed:                   | 2870 rpm                 |
| Locked-rotor torque:           | 6.5 Nm                   |
| Breakdown torque:              | 7 Nm                     |
| Moment of inertia:             | 0.0037 kg m <sup>2</sup> |
| Motor efficiency at full load: | 67 %                     |
| Motor efficiency at 3/4 load:  | 63 %                     |
| Motor efficiency at 1/2 load:  | 55 %                     |
| Capacitor size - run:          | 30 µF                    |
| Number of poles:               | 2                        |
| Start. method:                 | direct-on-line           |
| Enclosure class (IEC 34-5):    | IP68                     |
| Insulation class (IEC 85):     | F                        |
| Explosion proof:               | no                       |
| Motor protec:                  | THERMAL SWITCH           |
| Thermal protec:                | internal                 |
| Length of cable:               | 10 m                     |
| Cable type:                    | H07RN-F                  |
| Type of cable plug:            | NO PLUG                  |
| <b>Controls:</b>               |                          |



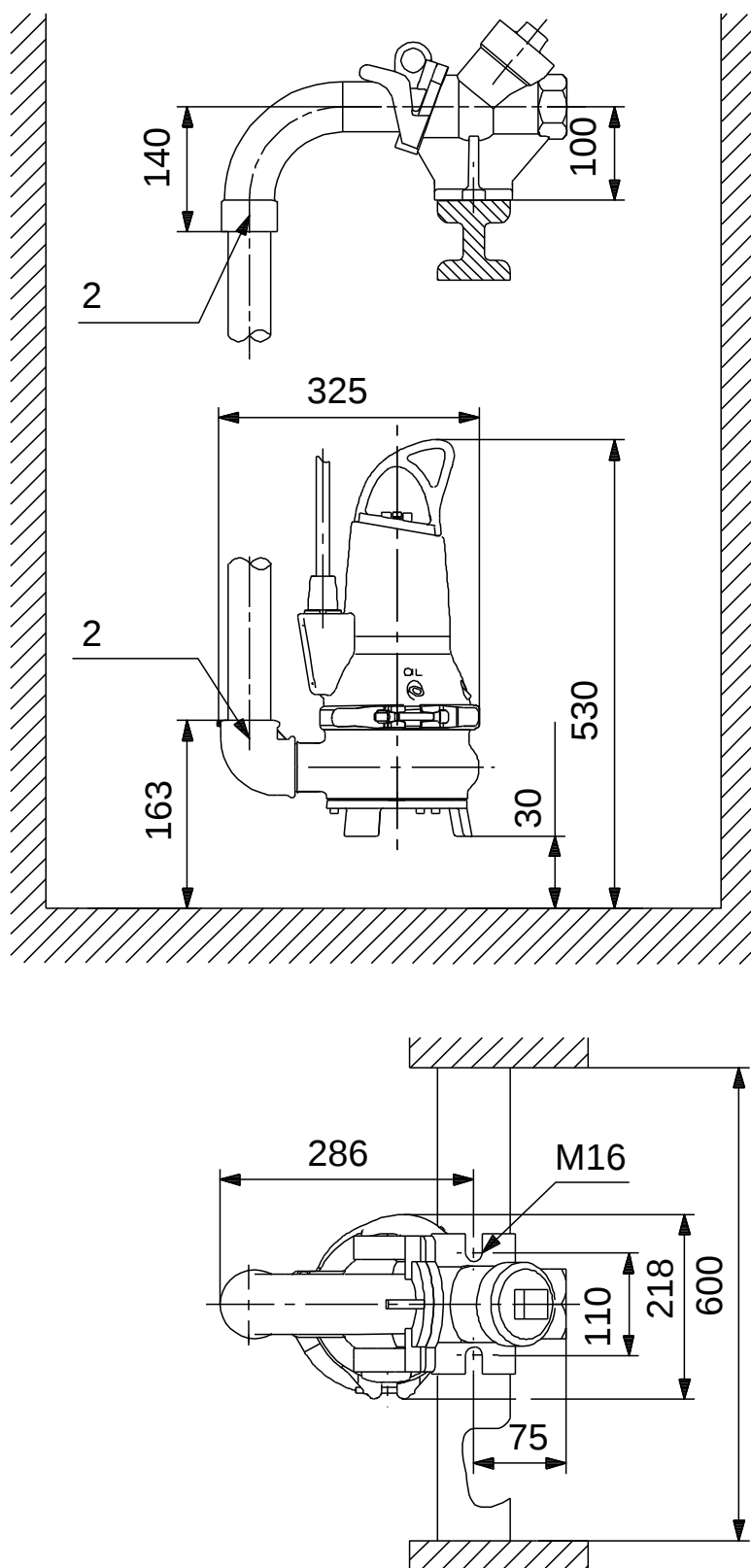
| Description          | Value                       |
|----------------------|-----------------------------|
| Control box:         | not included                |
| Additional I/O:      | External                    |
| Moisture sensor:     | without moisture sensors    |
| Water-in-oil sensor: | without water-in-oil sensor |
| <b>Others:</b>       |                             |
| Net weight:          | 38 kg                       |
| Danish VVS No.:      | 391292132                   |

On request EF30.50.09.2.1.502 50 Hz



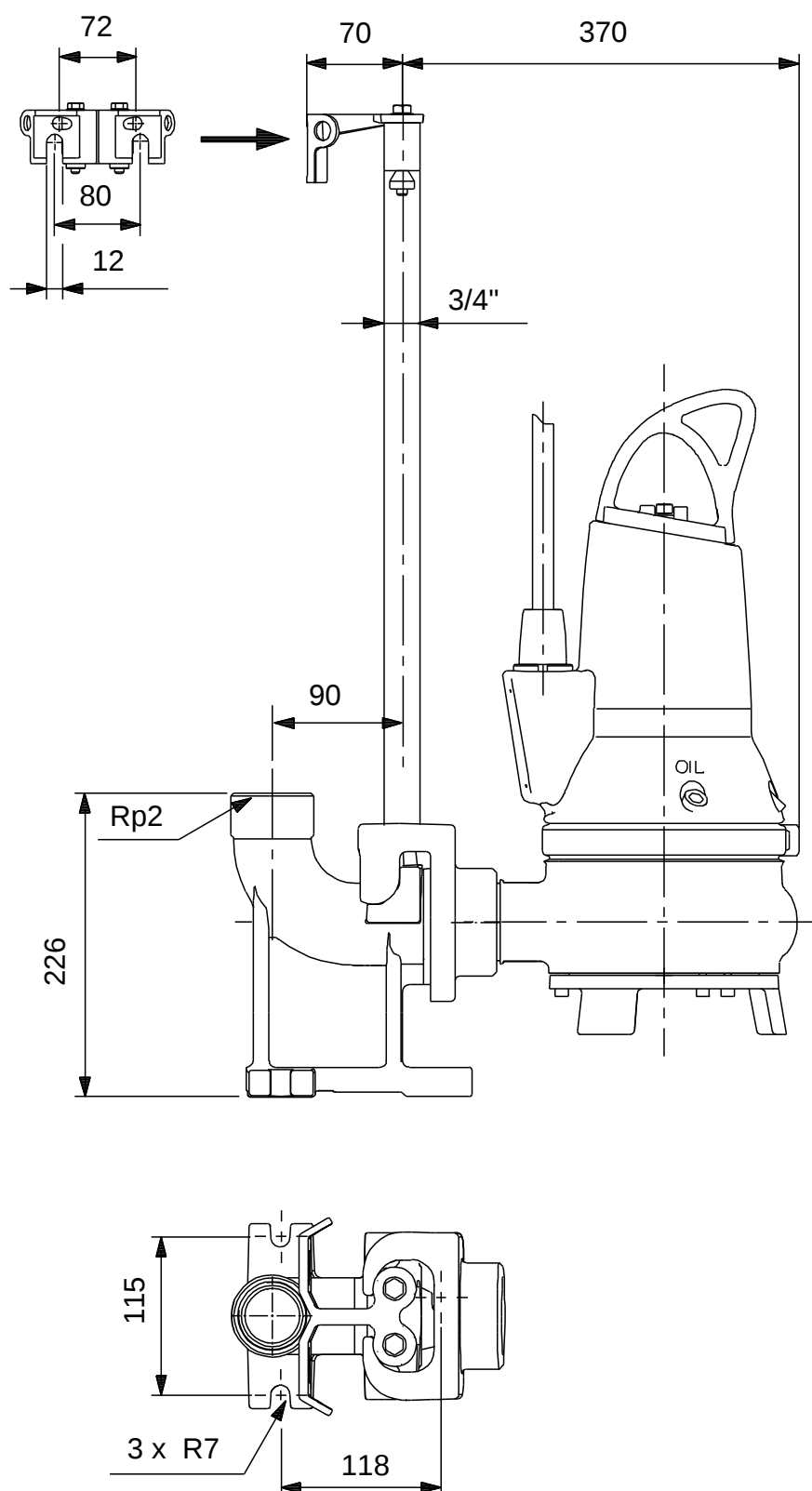
Note! All units are in [mm] unless others are stated.  
Disclaimer: This simplified dimensional drawing does not show all details.

On request EF30.50.09.2.1.502 50 Hz



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

On request EF30.50.09.2.1.502 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 EF30.50.09.2.1.502, Product No. On request**  
**Valid from 1.8.2004 (0431)**

| Pos   | Description               | Annotation | Données de classification    | Référence | Quantité | Unité |
|-------|---------------------------|------------|------------------------------|-----------|----------|-------|
| 7a    | Rivet                     |            |                              |           | 4        | 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                 |           |          |       |
| 37b   | O-ring                    |            | Diameter: 135                |           | 1        | pcs   |
|       |                           |            | Material type: 72NBR872      |           |          |       |
|       |                           |            | Thickness: 4                 |           |          |       |
| 49    | Impeller                  |            |                              |           | 1        | pcs   |
| 50    | Pump housing              |            |                              |           | 1        | pcs   |
| 66    | Wedge lock washer         |            | Designation: M8 A4           |           | 1        | pcs   |
| 76    | Nameplate                 |            |                              |           | 2        | pcs   |
| 92    | Clamp                     |            |                              |           | 1        | pcs   |
| 102   | O-ring                    |            | Diameter: 19                 |           | 1        | pcs   |
|       |                           |            | Material type: 72NBR872      |           |          |       |
|       |                           |            | Thickness: 1.5               |           |          |       |
| 103   | Bush                      |            |                              |           | 1        | pcs   |
| - 105 | Shaft seal                |            |                              |           | 1        | pcs   |
| 58    | Shaft seal retainer       |            |                              |           | 1        |       |
| 104   | Seal ring                 |            |                              |           | 1        |       |
| 105a  | Shaft seal                |            |                              |           | 1        |       |
| 107   | O-ring                    |            | Diameter: 47                 |           | 1        |       |
|       |                           |            | Material type: NBR           |           |          |       |
|       |                           |            | Thickness: 3                 |           |          |       |
| 107   | O-ring                    |            | Diameter: 50                 |           | 1        |       |
|       |                           |            | Material type: NBR           |           |          |       |
|       |                           |            | Thickness: 3                 |           |          |       |
| 153   | Ball bearing              |            | Designation: 6204 2CS C3 SYN |           | 1        | pcs   |
| 153b  | Washer                    |            | Internal diameter: 20        |           | 1        | pcs   |
|       |                           |            | Outer diameter: 28           |           |          |       |
|       |                           |            | Thickness: 2                 |           |          |       |
| 154   | Ball bearing              |            |                              |           | 1        | pcs   |
| 155   | Oil chamber               |            |                              |           | 1        | pcs   |
| 158   | Waved washer              |            |                              |           | 1        | pcs   |
| 162   | Suction cover             |            |                              |           | 1        | pcs   |
| 172   | Shaft w/rotor             |            |                              |           | 1        | pcs   |
| - 181 | Cable cpl.                |            |                              |           | 1        | pcs   |
| 198   | O-ring                    |            | Diameter: 34.2               |           | 1        |       |
|       |                           |            | Material type: NBR           |           |          |       |
|       |                           |            | Thickness: 3                 |           |          |       |
| 188.a | Hex socket head cap screw |            | Length (mm): 25              |           | 8        | pcs   |
|       |                           |            | Thread: M8                   |           |          |       |
| 188b  | Hex socket head cap screw |            | Designation: INNER HEXAGON   |           | 3        | pcs   |
|       |                           |            | Length (mm): 25              |           |          |       |
|       |                           |            | Thread: M8                   |           |          |       |
| 189   | Socket set screw          |            | Designation: INNER HEXAGON   |           | 3        | pcs   |
|       |                           |            | Length (mm): 12              |           |          |       |
|       |                           |            | Thread: M12                  |           |          |       |
| 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     |           | 1        | pcs   |

| Pos | Description | Annotation | Données de classification | Référence | Quantité | Unité |
|-----|-------------|------------|---------------------------|-----------|----------|-------|
|     |             |            | 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.*

*All information is copyright Grundfos.*



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