

## TP150-240/4 A-F-A-DBUE 3x400D/690Y 50Hz

Grundfos Pump 96162098



**Thank you for your interest in our products**

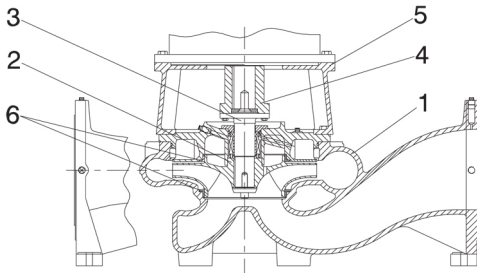
Please contact us for more information, or visit our website

<https://www.lenntech.com/grundfos/TP000/96162098/TP-150-240-4-A-F-A-DBUE.html>

[info@lenntech.com](mailto:info@lenntech.com)

tel. +31-15-261.09.00

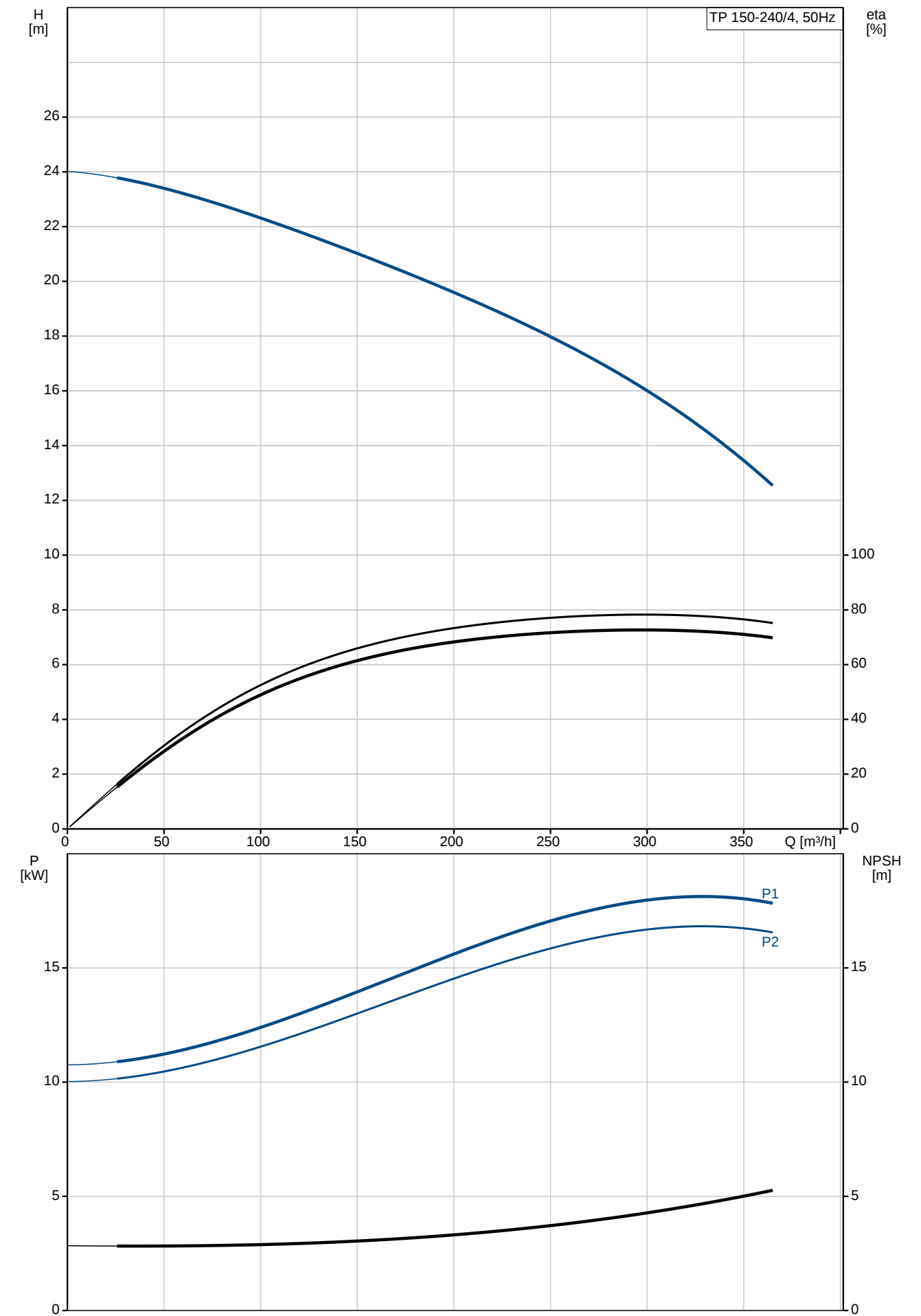
fax. +31-15-261.62.89

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | 1    | <p><b>TP 150-240/4 A-F-A-DBUE</b></p>  <p>Product No.: <a href="#">96162098</a></p> <p>Single-stage, close-coupled, volute pump with in-line suction and discharge ports. The pump is of the top-pull-out design, i.e. the power head (motor, pump head and impeller) can be removed for maintenance or service while the pump housing remains in the pipework.</p> <p>The pump is fitted with a balanced O-ring seal. The shaft seal is according to EN 12756. Pipework connection is via PN 25 DIN flanges (EN 1092-2 and ISO 7005-2).</p> <p>The pump is fitted with a fan-cooled asynchronous motor.</p> <p><b>Further product details</b></p> <p><b>Pump</b></p> <p>Pump housing and pump head are electrocoated to improve the corrosion resistance. Electrocoating includes:</p> <ol style="list-style-type: none"> <li>1) Alkaline-based cleaning.</li> <li>2) Pretreatment with zinc phosphate coating.</li> <li>3) Cathodic electrocoating (epoxy).</li> <li>4) Curing of paint film at 200-250 °C.</li> </ol>  <ol style="list-style-type: none"> <li>1: Pump housing</li> <li>2: Impeller</li> <li>3: Pump shaft</li> <li>4: Coupling</li> <li>5: Motor stool</li> <li>6: Wear rings</li> </ol> <p>The pump housing is provided with a replaceable bronze neck ring to reduce the amount of liquid running from the discharge side of the impeller to the suction side. The impeller is secured to the shaft with a nut.</p> <p>The pump is fitted with a balanced O-ring seal. Due to the balancing, this seal type is suitable for high-pressure applications. This seal type is excellent for high-viscosity, dirt- and fibre-containing liquids due to the spring location on the atmospheric side. The seal features a rigid torque transmission design.</p> <p>Primary seal:</p> <ul style="list-style-type: none"> <li>- Rotating seal ring material: Carbon graphite, resin-impregnated</li> <li>- Stationary seat material: Tungsten carbide (WC)</li> </ul> <p>This is a widely used material pairing. If the pumped liquid contains particles, wear on the seal faces must be expected. Due to the favourable lubricating properties of carbon graphite, the seal is suitable for use even under poor lubricating conditions, such as hot water. However, under such conditions, wear on the carbon graphite face reduces seal life.</p> <p>Secondary seal material: EPDM (ethylene-propylene rubber)</p> <p>EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</p> <p>A circulation of liquid through the duct of the air vent screw ensures lubrication and cooling of the shaft seal.</p> |

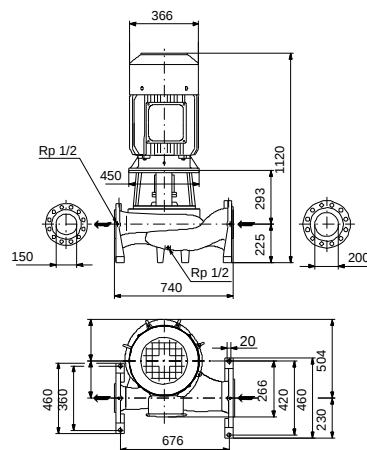
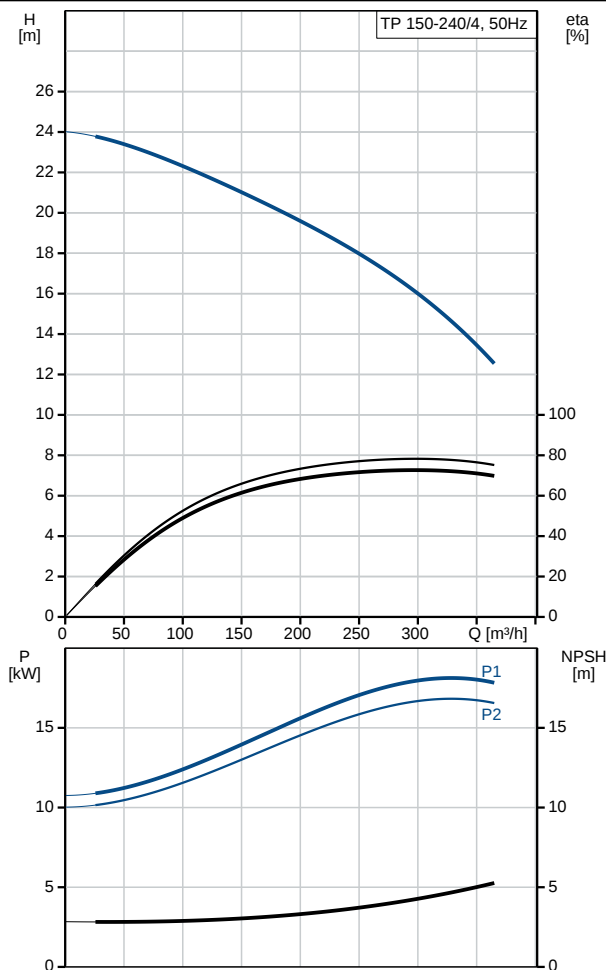
| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |      | <p>The flanges have tappings for mounting of pressure gauges.</p> <p>The motor stool forms connection between the pump housing and the motor, and is equipped with a manual air vent screw for venting of the pump housing and the shaft seal chamber. The sealing between motor stool and pump housing is an O-ring.</p> <p>The central part of the motor stool is provided with guards for protection against the shaft and coupling. The pump stub shaft is fastened directly on the motor shaft with key and set screws.</p> <p><b>Motor</b></p> <p>The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.</p> <p>The motor is flange-mounted with free-hole flange (FF).</p> <p>Motor mounting designation in accordance with IEC 60034-7: IM B 5, IM V 1 (Code I) / IM 3001, IM 3011 (Code II).</p> <p>The motor efficiency is classified as IE3 in accordance with IEC 60034-30.</p> <p>The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.</p> <p>Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.</p> <p>The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.</p> <p><b>Technical data</b></p> <p><b>Liquid:</b></p> <p>Pumped liquid: Water</p> <p>Liquid temperature range: 0 .. 150 °C</p> <p>Liquid temperature during operation: 20 °C</p> <p>Density: 998.2 kg/m<sup>3</sup></p> <p><b>Technical:</b></p> <p>Speed for pump data: 1460 rpm</p> <p>Rated flow: 280 m<sup>3</sup>/h</p> <p>Rated head: 17 m</p> <p>Actual impeller diameter: 278 mm</p> <p>Primary shaft seal: DBUE</p> <p>Curve tolerance: ISO9906:2012 3B</p> <p><b>Materials:</b></p> <p>Pump housing: Ductile cast iron<br/>EN-JS1020</p> <p>Impeller: ASTM A 395<br/>Ductile cast iron<br/>EN-JS1030<br/>ASTM A 536 60-40-18</p> <p><b>Installation:</b></p> <p>Range of ambient temperature: -20 .. 55 °C</p> <p>Maximum operating pressure: 25 bar</p> <p>Flange standard: DIN</p> <p>Pipe connection: DN 200 / DN 150</p> <p>Pump inlet: DN 200</p> <p>Pump outlet: DN 150</p> <p>Pressure rating: PN 25</p> <p>Port-to-port length: 740 mm</p> <p>Flange size for motor: FF300</p> <p><b>Electrical data:</b></p> <p>Motor type: SIEMENS</p> |

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |      | <p>IE Efficiency class: IE3</p> <p>Rated power - P2: 18.5 kW</p> <p>Power (P2) required by pump: 18.5 kW</p> <p>Mains frequency: 50 Hz</p> <p>Rated voltage: 3 x 380-420D/660-725Y V</p> <p>Rated current: 37,0-33,5/21,6-19,6 A</p> <p>Starting current: 690-690 %</p> <p>Cos phi - power factor: 0,82</p> <p>Rated speed: 1470 rpm</p> <p>Efficiency: IE3 92,6%</p> <p>Motor efficiency at full load: 92.6-92.6 %</p> <p>Motor efficiency at 3/4 load: 93.2-93.2 %</p> <p>Motor efficiency at 1/2 load: 93.2-93.2 %</p> <p>Number of poles: 4</p> <p>Enclosure class (IEC 34-5): 55 (Protect. water jets/dust)</p> <p>Insulation class (IEC 85): F</p> <p><b>Others:</b></p> <p>Net weight: 411 kg</p> <p>Gross weight: 566 kg</p> <p>Shipping volume: 2.29 m<sup>3</sup></p> |

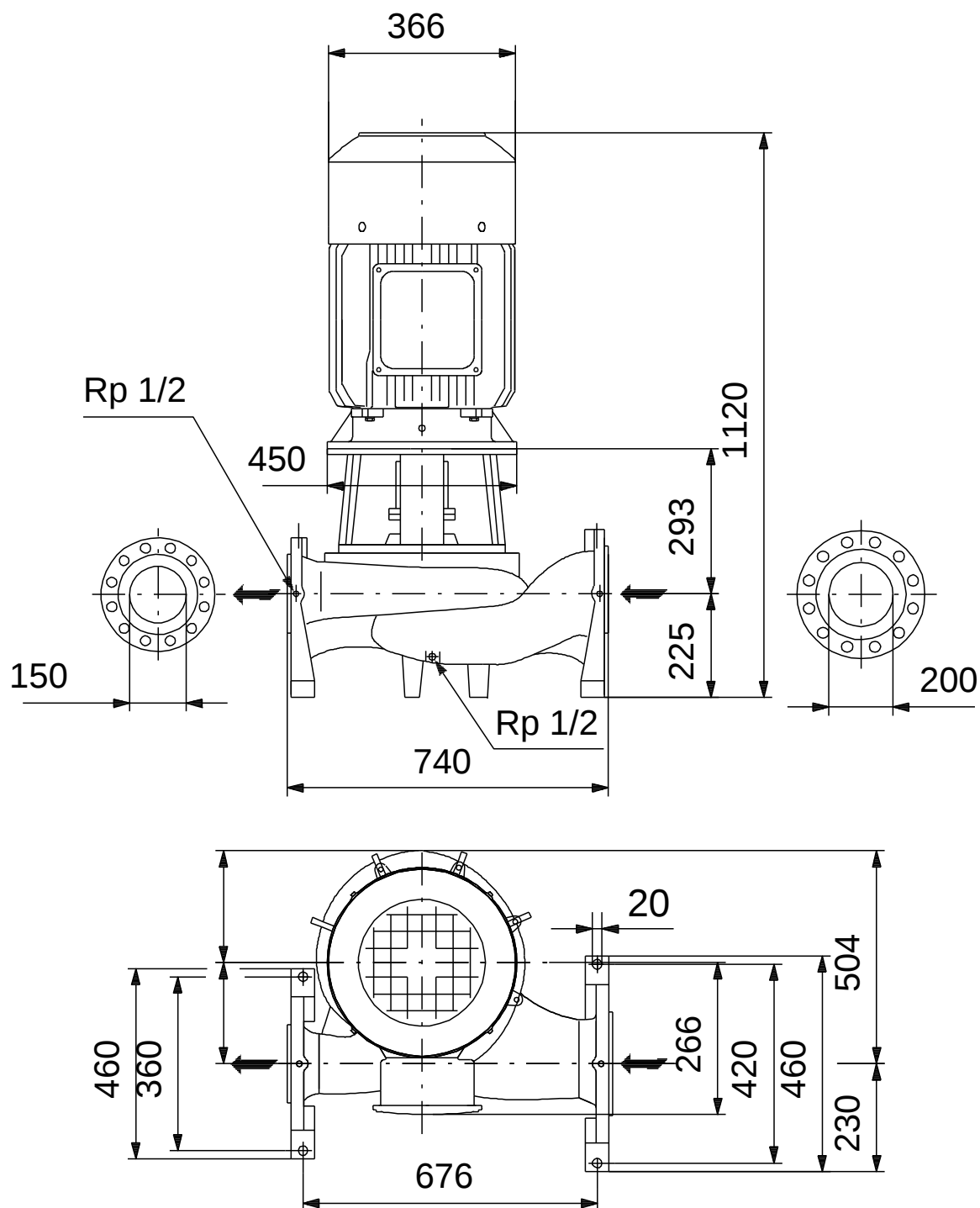
96162098 TP 150-240/4 50 Hz



| Description                          | Value                         |
|--------------------------------------|-------------------------------|
| <b>General information:</b>          |                               |
| Product name:                        | TP 150-240/4 A-F-A-DBUE       |
| Product No:                          | 96162098                      |
| EAN number:                          | 5700397223147                 |
| <b>Technical:</b>                    |                               |
| Speed for pump data:                 | 1460 rpm                      |
| Rated flow:                          | 280 m³/h                      |
| Rated head:                          | 17 m                          |
| Head max:                            | 240 dm                        |
| Actual impeller diameter:            | 278 mm                        |
| Primary shaft seal:                  | DBUE                          |
| Curve tolerance:                     | ISO9906:2012 3B               |
| Pump version:                        | A                             |
| Model:                               | A                             |
| <b>Materials:</b>                    |                               |
| Pump housing:                        | Ductile cast iron             |
|                                      | EN-JS1020                     |
|                                      | ASTM A 395                    |
| Impeller:                            | Ductile cast iron             |
|                                      | EN-JS1030                     |
|                                      | ASTM A 536 60-40-18           |
| Material code:                       | A                             |
| <b>Installation:</b>                 |                               |
| Range of ambient temperature:        | -20 .. 55 °C                  |
| Maximum operating pressure:          | 25 bar                        |
| Flange standard:                     | DIN                           |
| Connect code:                        | F                             |
| Pipe connection:                     | DN 200 / DN 150               |
| Pump inlet:                          | DN 200                        |
| Pump outlet:                         | DN 150                        |
| Pressure rating:                     | PN 25                         |
| Port-to-port length:                 | 740 mm                        |
| Flange size for motor:               | FF300                         |
| <b>Liquid:</b>                       |                               |
| Pumped liquid:                       | Water                         |
| Liquid temperature range:            | 0 .. 150 °C                   |
| Liquid temperature during operation: | 20 °C                         |
| Density:                             | 998.2 kg/m³                   |
| <b>Electrical data:</b>              |                               |
| Motor type:                          | SIEMENS                       |
| IE Efficiency class:                 | IE3                           |
| Rated power - P2:                    | 18.5 kW                       |
| Power (P2) required by pump:         | 18.5 kW                       |
| Mains frequency:                     | 50 Hz                         |
| Rated voltage:                       | 3 x 380-420D/660-725Y V       |
| Rated current:                       | 37,0-33,5/21,6-19,6 A         |
| Starting current:                    | 690-690 %                     |
| Cos phi - power factor:              | 0,82                          |
| Rated speed:                         | 1470 rpm                      |
| Efficiency:                          | IE3 92,6%                     |
| Motor efficiency at full load:       | 92.6-92.6 %                   |
| Motor efficiency at 3/4 load:        | 93.2-93.2 %                   |
| Motor efficiency at 1/2 load:        | 93.2-93.2 %                   |
| Number of poles:                     | 4                             |
| Enclosure class (IEC 34-5):          | 55 (Protect. water jets/dust) |
| Insulation class (IEC 85):           | F                             |
| Motor protec:                        | PTC                           |
| Motor No:                            | 83V15228                      |
| <b>Others:</b>                       |                               |
| Net weight:                          | 411 kg                        |
| Gross weight:                        | 566 kg                        |
| Shipping volume:                     | 2.29 m³                       |

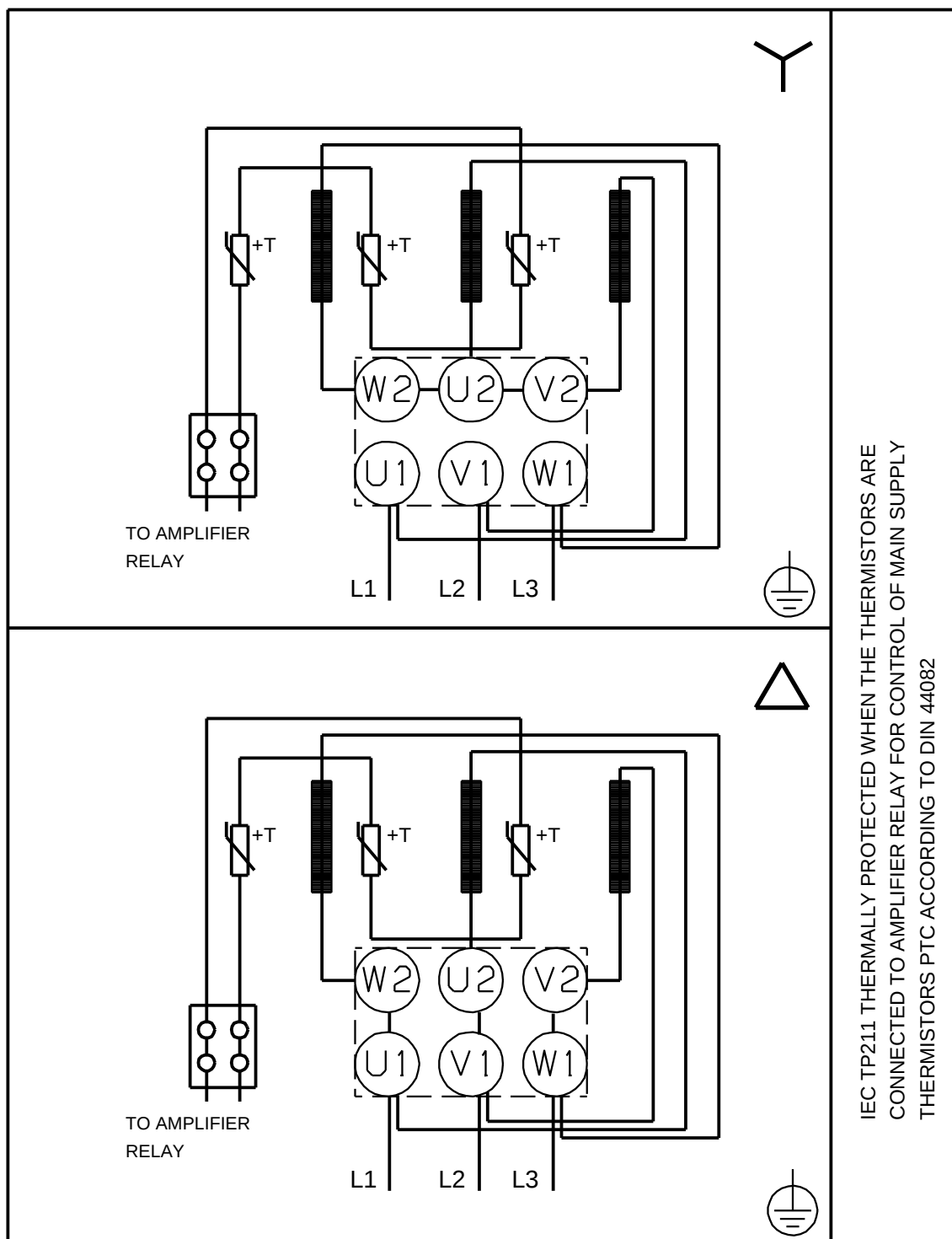


# 96162098 TP 150-240/4 50 Hz



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

# 96162098 TP 150-240/4 50 Hz



Note! All units are in [mm] unless others are stated.

*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.*



[info@lenntech.com](mailto:info@lenntech.com)

[www.lenntech.com](http://www.lenntech.com)

tel. +31-15-261.09.00

fax. +31-15-261.62.89