

## CRIE15-05 A-FGJ-I-E-HQQE 3x380-500 60 HZ

Grundfos pump 99071549



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<https://www.lenntech.com/grundfos/CRIE15/99071549/CRIE-15-5-A-FGJ-I-E-HQQE.html>

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

tel. +31 152 610 900

fax. +31 152 616 289

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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|          | 1    | <p><b>CRIE 15-5 A-FGJ-A-E-HQQE</b></p>  <p>Product No.: On request</p> <p>Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). Pump materials in contact with the liquid are in stainless steel. A cartridge shaft seal ensures high reliability, safe handling, and easy access and service. Power transmission is via a rigid split coupling. Pipe connection is via combined DIN-ANSI-JIS flanges.</p> <p>The pump is fitted with a 3-phase, fan-cooled, permanent-magnet, synchronous motor. The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.</p> <p>The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement. An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The Grundfos Eye indicator on the operating panel provides visual indication of pump status:</p> <ul style="list-style-type: none"> <li>• "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)</li> <li>• "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)</li> <li>• "Alarm": Motor has stopped (flashing red indicator lights).</li> </ul> <p>Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".</p> <p>The terminal box has a number of inputs and outputs enabling the motor to be used in advanced applications where many inputs and outputs are required:</p> <ul style="list-style-type: none"> <li>• two dedicated digital inputs</li> <li>• three analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 - 3.5 V</li> <li>• 5 V voltage supply to potentiometer and sensor</li> <li>• one analog output, 0-10 V, 0(4)-20 mA</li> <li>• two configurable digital inputs or open-collector outputs</li> <li>• two Pt100/Pt1000 inputs</li> <li>• LiqTec, dry-running protection sensor input</li> <li>• Grundfos Digital Sensor input and output</li> <li>• 24 V voltage supply for sensors</li> <li>• two signal-relay outputs (potential-free contacts)</li> <li>• GENIbus connection</li> <li>• interface for Grundfos CIM fieldbus module.</li> </ul> <p><b>Further product details</b></p> <p>An external sensor can be connected if controlled pump operation based on for example flow, differential pressure or temperature is required.</p> <p>An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The Grundfos Eye indicator on the operating panel provides visual indication of pump status:</p> <ul style="list-style-type: none"> <li>• "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)</li> <li>• "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)</li> <li>• "Alarm": Motor has stopped (flashing red indicator lights).</li> </ul> <p>Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".</p> |

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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|          |      | <p>Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface. An integral part of the process is a pretreatment. The entire process consists of these elements:</p> <ol style="list-style-type: none"> <li>1) Alkaline-based cleaning.</li> <li>2) Zinc phosphating.</li> <li>3) Cathodic electro-deposition.</li> <li>4) Curing to a dry film thickness 18-22 my m.</li> </ol> <p>The colour code for the finished product is NCS 9000/RAL 9005.</p> <p><b>Pump</b></p> <p>A standard split coupling connects the pump and motor shaft. It is enclosed in the pump head/motor stool by means of two coupling guards.</p>  <p>The pump head and flange for motor mounting is made in one piece (cast iron). The pump head cover is a separate component (stainless steel). The pump head has a combined 1/2" priming plug and vent screw.</p>  <p>The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system. This seal type is assembled in a cartridge unit which makes replacement safe and easy. Due to the balancing, this seal type is suitable for high-pressure applications. The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.</p> <p>Primary seal:</p> <ul style="list-style-type: none"> <li>• Rotating seal ring material: silicon carbide (SiC)</li> <li>• Stationary seat material: silicon carbide (SiC)</li> </ul> <p>This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.</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>The shaft seal is screwed into the pump head.</p> <p>The chambers and impellers are made of stainless-steel sheet. The chambers are provided with a PTFE neck ring offering improved sealing and high efficiency. The impellers have smooth surfaces, and the shape of the blades ensure a high efficiency.</p> <p>The pump has a stainless steel base mounted on a separate base plate. This base and base plate are kept in position by the tension of the staybolts which hold the pump together. The outlet side of the base has a combined drain plug and bypass valve. The pump is secured to the foundation by four bolts through the base plate. The flanges and base are cast in one piece and prepared for connection by means of DIN, ANSI or JIS.</p> |

| Position                             | Qty.                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
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|                                      |                                          | <p><b>Motor</b></p> <p>The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with free-hole flange (FF).</p> <p>Motor-mounting designation in accordance with IEC 60034-7: IM B 5 (Code I) / IM 3001 (Code II).</p> <p>Electrical tolerances comply with IEC 60034.</p> <p>The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.</p> <p>The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.</p> <p>The terminal box has a number of inputs and outputs enabling the motor to be used in advanced applications where many inputs and outputs are required:</p> <ul style="list-style-type: none"><li>• two dedicated digital inputs</li><li>• three analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 - 3.5 V</li><li>• 5 V voltage supply to potentiometer and sensor</li><li>• one analog output, 0-10 V, 0(4)-20 mA</li><li>• two configurable digital inputs or open-collector outputs</li><li>• two Pt100/Pt1000 inputs</li><li>• LiqTec, dry-running protection sensor input</li><li>• Grundfos Digital Sensor input and output</li><li>• 24 V voltage supply for sensors</li><li>• two signal-relay outputs (potential-free contacts)</li><li>• GENIbus connection</li><li>• interface for Grundfos CIM fieldbus module.</li></ul> <p><b>Technical data</b></p> <p><b>Controls:</b></p> <table><tr><td>Frequency converter:</td><td>Built-in</td></tr><tr><td>Pressure sensor:</td><td>N</td></tr></table> <p><b>Liquid:</b></p> <table><tr><td>Pumped liquid:</td><td>Water</td></tr><tr><td>Liquid temperature range:</td><td>-20 .. 120 °C</td></tr><tr><td>Liquid temperature during operation:</td><td>20 °C</td></tr><tr><td>Density:</td><td>998.2 kg/m³</td></tr></table> <p><b>Technical:</b></p> <table><tr><td>Rated flow:</td><td>20.5 m³/h</td></tr><tr><td>Rated head:</td><td>81.1 m</td></tr><tr><td>Pump orientation:</td><td>Vertical</td></tr><tr><td>Shaft seal arrangement:</td><td>Single</td></tr><tr><td>Code for shaft seal:</td><td>HQQE</td></tr><tr><td>Approvals on nameplate:</td><td>CE, EAC,ACS</td></tr><tr><td>Curve tolerance:</td><td>ISO9906:2012 3B</td></tr></table> <p><b>Materials:</b></p> <table><tr><td>Base:</td><td>Stainless steel<br/>EN 1.4408<br/>AISI 316</td></tr><tr><td>Impeller:</td><td>Stainless steel<br/>EN 1.4301<br/>AISI 304</td></tr><tr><td>Bearing:</td><td>SIC</td></tr></table> <p><b>Installation:</b></p> <table><tr><td>Maximum ambient temperature:</td><td>50 °C</td></tr><tr><td>Maximum operating pressure:</td><td>16 bar</td></tr><tr><td>Max pressure at stated temp:</td><td>16 bar / 120 °C<br/>16 bar / -20 °C</td></tr><tr><td>Type of connection:</td><td>DIN / ANSI / JIS</td></tr><tr><td>Size of inlet connection:</td><td>DN 50<br/>2 inch</td></tr><tr><td>Size of outlet connection:</td><td>DN 50<br/>2 inch</td></tr><tr><td>Pressure rating for pipe connection:</td><td>PN 25</td></tr><tr><td>Flange rating inlet:</td><td>300 lb</td></tr></table> | Frequency converter: | Built-in | Pressure sensor: | N | Pumped liquid: | Water | Liquid temperature range: | -20 .. 120 °C | Liquid temperature during operation: | 20 °C | Density: | 998.2 kg/m³ | Rated flow: | 20.5 m³/h | Rated head: | 81.1 m | Pump orientation: | Vertical | Shaft seal arrangement: | Single | Code for shaft seal: | HQQE | Approvals on nameplate: | CE, EAC,ACS | Curve tolerance: | ISO9906:2012 3B | Base: | Stainless steel<br>EN 1.4408<br>AISI 316 | Impeller: | Stainless steel<br>EN 1.4301<br>AISI 304 | Bearing: | SIC | Maximum ambient temperature: | 50 °C | Maximum operating pressure: | 16 bar | Max pressure at stated temp: | 16 bar / 120 °C<br>16 bar / -20 °C | Type of connection: | DIN / ANSI / JIS | Size of inlet connection: | DN 50<br>2 inch | Size of outlet connection: | DN 50<br>2 inch | Pressure rating for pipe connection: | PN 25 | Flange rating inlet: | 300 lb |
| Frequency converter:                 | Built-in                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Pressure sensor:                     | N                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Pumped liquid:                       | Water                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Liquid temperature range:            | -20 .. 120 °C                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Liquid temperature during operation: | 20 °C                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Density:                             | 998.2 kg/m³                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Rated flow:                          | 20.5 m³/h                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Rated head:                          | 81.1 m                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Pump orientation:                    | Vertical                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Shaft seal arrangement:              | Single                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Code for shaft seal:                 | HQQE                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Approvals on nameplate:              | CE, EAC,ACS                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Curve tolerance:                     | ISO9906:2012 3B                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Base:                                | Stainless steel<br>EN 1.4408<br>AISI 316 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Impeller:                            | Stainless steel<br>EN 1.4301<br>AISI 304 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Bearing:                             | SIC                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Maximum ambient temperature:         | 50 °C                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Maximum operating pressure:          | 16 bar                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Max pressure at stated temp:         | 16 bar / 120 °C<br>16 bar / -20 °C       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Type of connection:                  | DIN / ANSI / JIS                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Size of inlet connection:            | DN 50<br>2 inch                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Size of outlet connection:           | DN 50<br>2 inch                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Pressure rating for pipe connection: | PN 25                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |
| Flange rating inlet:                 | 300 lb                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |          |                  |   |                |       |                           |               |                                      |       |          |             |             |           |             |        |                   |          |                         |        |                      |      |                         |             |                  |                 |       |                                          |           |                                          |          |     |                              |       |                             |        |                              |                                    |                     |                  |                           |                 |                            |                 |                                      |       |                      |        |

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |      | <p>Flange size for motor: FF265</p> <p><b>Electrical data:</b></p> <p>Motor standard: IEC</p> <p>Motor type: 132SF</p> <p>IE Efficiency class: IE5</p> <p>Rated power - P2: 7.5 kW</p> <p>Power (P2) required by pump: 7.5 kW</p> <p>Mains frequency: 50 Hz</p> <p>Rated voltage: 3 x 380-500 V</p> <p>Rated current: 14.1-11.2 A</p> <p>Cos phi - power factor: 0.93-0.89</p> <p>Rated speed: 360-4000 rpm</p> <p>Efficiency: 92.5%</p> <p>Motor efficiency at full load: 92.5 %</p> <p>Enclosure class (IEC 34-5): IP55</p> <p>Insulation class (IEC 85): F</p> <p><b>Others:</b></p> <p>Minimum efficiency index, MEI <math>\geq</math> 0.70</p> <p>Net weight: 92 kg</p> <p>Gross weight: 120 kg</p> <p>Shipping volume: 0.37 m<sup>3</sup></p> |

On request CRIE 15-5 A-FGJ-A-E-HQQE 50 Hz

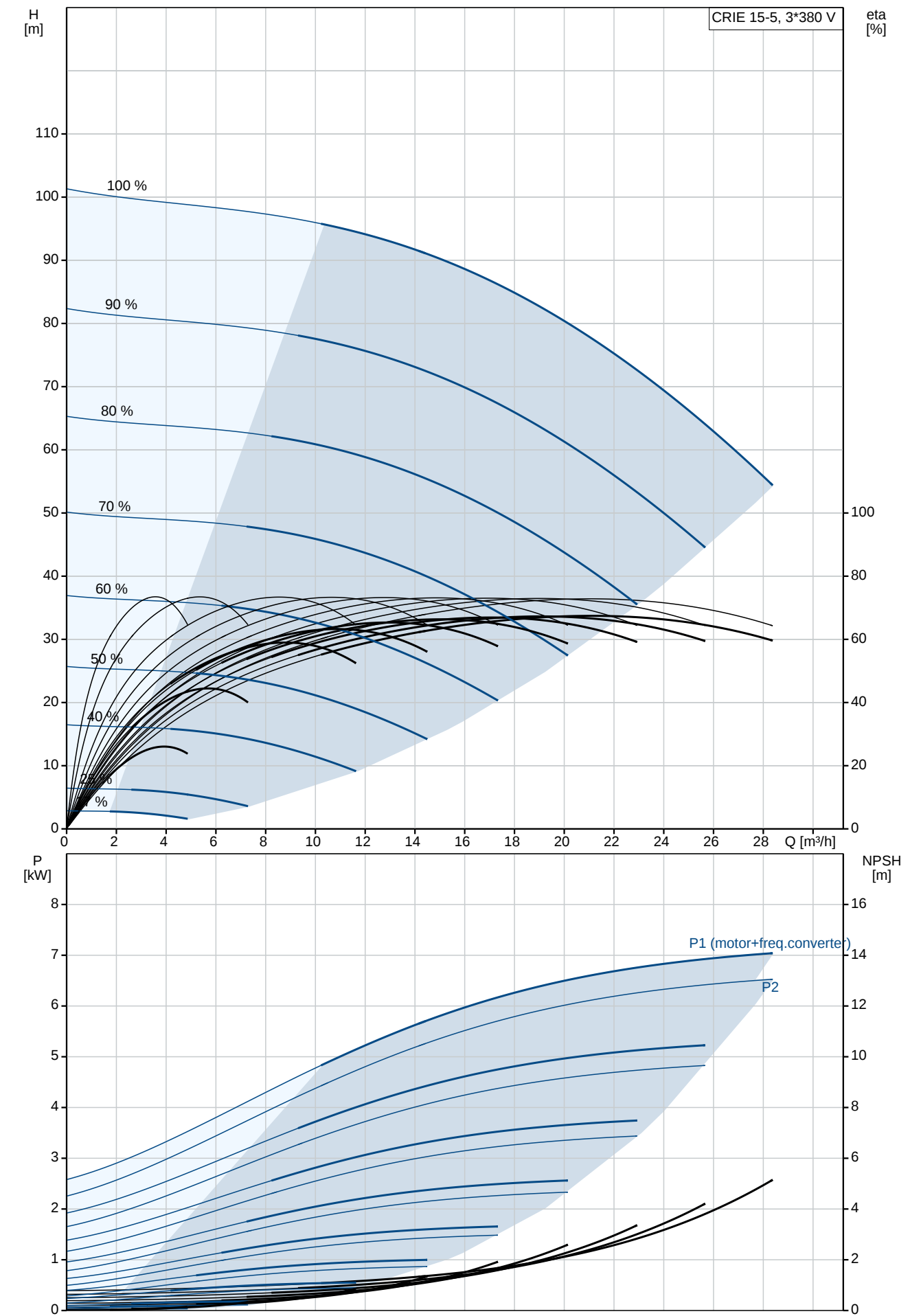
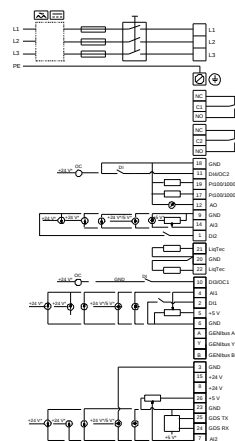
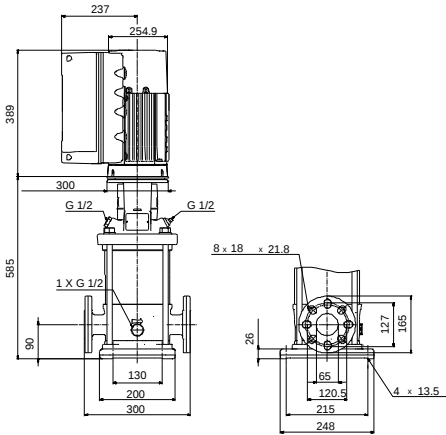


Figure 10 consists of two vertically stacked graphs sharing a common x-axis representing flow rate  $Q$  in  $\text{m}^3/\text{h}$ , ranging from 0 to 30.

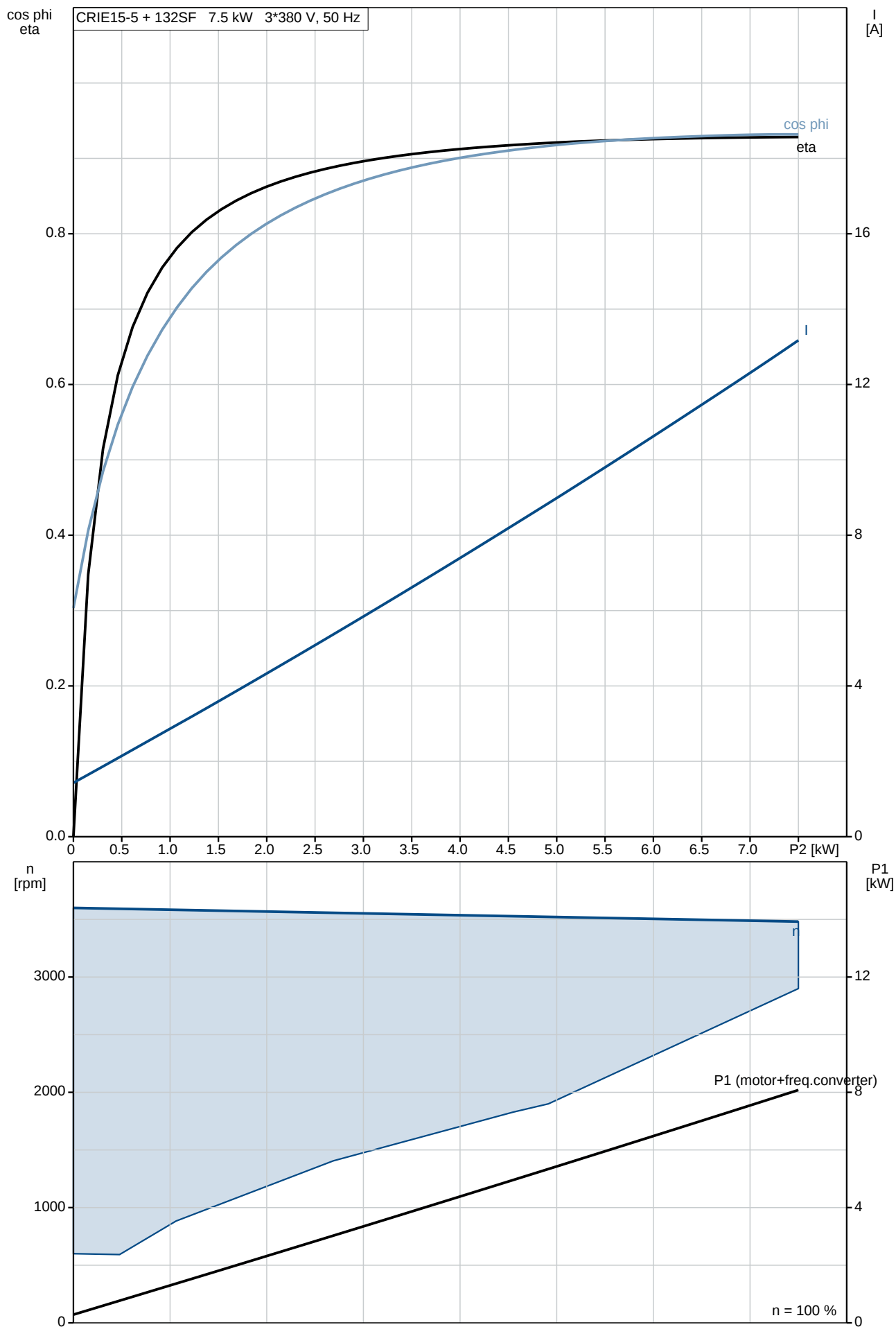
The top graph plots head  $H$  in meters (left y-axis, 0 to 110) and efficiency  $\eta$  in percent (right y-axis, 0 to 100). It shows a series of curves for efficiency levels from 7% to 100%. The 100% efficiency curve is the uppermost, starting at  $H \approx 102$  m at  $Q=0$  and decreasing to  $H \approx 55$  m at  $Q=25$  m³/h. The 7% efficiency curve is the lowermost, starting at  $H \approx 5$  m at  $Q=0$  and decreasing to  $H \approx 0$  m at  $Q \approx 5$  m³/h. A shaded region indicates the operating range of the pump.

The bottom graph plots power  $P$  in kW (left y-axis, 0 to 7) and NPSH in meters (right y-axis, 0 to 14). It shows curves for motor power  $P_1$  (labeled 'P1 (motor+freq.converter)') and total power  $P_2$ . The  $P_1$  curves start at  $P \approx 0.5$  kW at  $Q=0$  and increase to  $P \approx 7$  kW at  $Q=25$  m³/h. The  $P_2$  curves start at  $P \approx 0$  kW at  $Q=0$  and increase to  $P \approx 2.5$  kW at  $Q=25$  m³/h. A shaded region indicates the operating range of the pump.

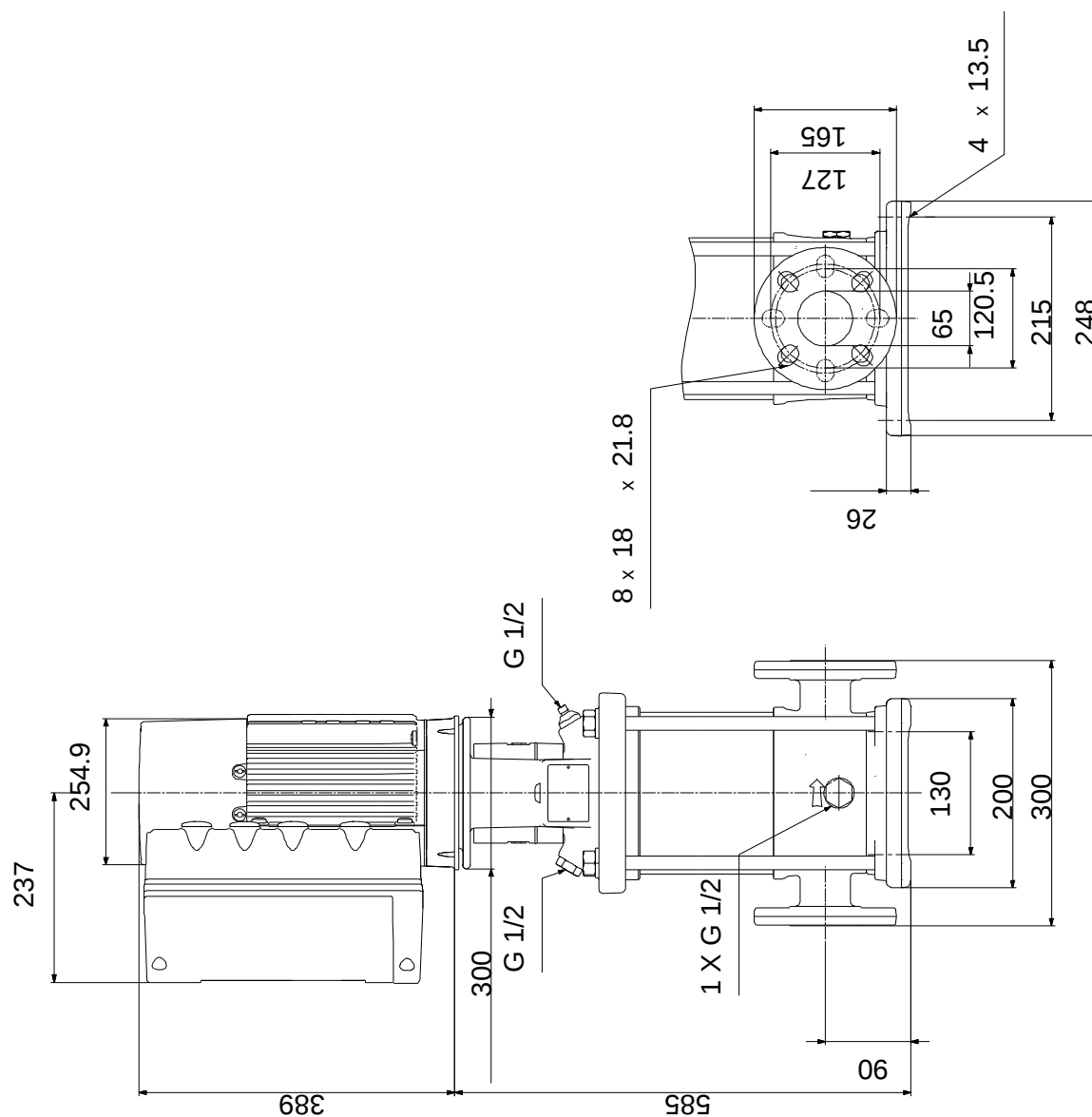


| Description                      | Value            |
|----------------------------------|------------------|
| Motor protec:                    | YES              |
| Motor No:                        | 98971052         |
| <b>Controls:</b>                 |                  |
| Control panel:                   | Standard         |
| Function Module:                 | FM300 - Advanced |
| Frequency converter:             | Built-in         |
| Pressure sensor:                 | N                |
| <b>Others:</b>                   |                  |
| Minimum efficiency index, MEI ≥: | 0.70             |
| Net weight:                      | 92 kg            |
| Gross weight:                    | 120 kg           |
| Shipping volume:                 | 0.37 m³          |

# On request CRIE 15-5 A-FGJ-A-E-HQQE 50 Hz



# On request CRIE 15-5 A-FGJ-A-E-HQQE 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 CRIE 15-5, Product No. On request**  
**Valid from 1.1.2004 (0401)**

| Pos  | Description                  | Annotation | Données de classification                                                             | Référence | Quantité | Unité |
|------|------------------------------|------------|---------------------------------------------------------------------------------------|-----------|----------|-------|
| +    | Motor                        |            |                                                                                       |           | 1        | pcs   |
| -    | Base cpl.                    |            |                                                                                       |           | 1        | pcs   |
| 6    | Base                         |            |                                                                                       |           | 1        |       |
| 25   | Drain plug                   |            |                                                                                       |           | 1        |       |
| 56   | Base plate                   |            |                                                                                       |           | 1        |       |
| 201  | Flange                       |            |                                                                                       |           | 2        |       |
| 203  | Lock ring                    |            |                                                                                       |           | 2        |       |
| -    | Rubber module                |            |                                                                                       |           | 1        | pcs   |
| 20   | Spring                       |            |                                                                                       |           | 4        |       |
| 37   | O-ring                       |            |                                                                                       |           | 2        |       |
| 38   | O-ring                       |            | Diameter: 16,3<br>Material type: EPDM<br>Thickness: 2,4                               |           | 1        |       |
| 38a  | O-ring                       |            | Diameter: 5,3<br>Material type: EPDM<br>Thickness: 2,4                                |           | 1        |       |
| 100  | O-ring                       |            | Diameter: 16,3<br>Material type: EPDM<br>Thickness: 2,4                               |           | 2        |       |
| - 2  | Pump head cpl.               |            |                                                                                       |           | 1        | pcs   |
| 1    | Flange                       |            |                                                                                       |           | 1        |       |
| 2    | Pump head                    |            |                                                                                       |           | 1        |       |
| 7    | Coupling guard               |            |                                                                                       |           | 2        |       |
| - 18 | Air vent screw               |            |                                                                                       |           | 1        |       |
|      | Plug                         |            |                                                                                       |           | 1        |       |
|      | Spindle                      |            |                                                                                       |           | 1        |       |
| 23a  | Plug                         |            |                                                                                       |           | 1        |       |
| 28   | Hex head screw               |            | Length (mm): 30<br>Thread: M12                                                        |           | 4        |       |
| 37a  | O-ring                       |            |                                                                                       |           | 1        |       |
| 76   | Nameplate                    |            |                                                                                       |           | 1        |       |
| 76a  | Rivet                        |            |                                                                                       |           | 1        |       |
| 77   | Pump cover                   |            |                                                                                       |           | 1        |       |
| - 8  | Coupling                     |            |                                                                                       |           | 1        | pcs   |
| 9    | Hex socket head cap screw    |            | Designation: DIN 912<br>Length (mm): 25<br>Thread: M10                                |           | 4        |       |
| 10   | Shaft pin                    |            | Diameter: 5<br>Length (mm): 26                                                        |           | 1        |       |
| 10a  | Coupling half                |            |                                                                                       |           | 1        |       |
| 26   | Staybolt                     |            |                                                                                       |           | 4        | pcs   |
| 36   | Hex nut                      |            | Thread: M16                                                                           |           | 4        | pcs   |
| 55   | Outer sleeve                 |            |                                                                                       |           | 1        | pcs   |
| 66a  | Washer                       |            | Designation: DIN 125 A<br>Internal diameter: 17<br>Outer diameter: 30<br>Thickness: 3 |           | 4        | pcs   |
| - 80 | Chamber stack                |            |                                                                                       |           | 1        | pcs   |
| - 4  | Intermediate chamber cpl.    |            |                                                                                       |           | 3        |       |
| 45   | Neck ring cpl.               |            |                                                                                       |           | 1        |       |
| 65   | Retainer for upper seal ring |            |                                                                                       |           | 1        |       |
| - 4  | Intermediate chamber cpl.    |            |                                                                                       |           | 1        |       |
|      | Guide vane                   |            |                                                                                       |           | 10       |       |
|      | Front plate                  |            |                                                                                       |           | 1        |       |
| 3    | Top intermediate chamber     |            |                                                                                       |           | 1        |       |
| - 4a | Intermediate chamber cpl.    |            |                                                                                       |           | 1        |       |
|      | Bearing plate                |            |                                                                                       |           | 1        |       |
|      | Bearing bush                 |            |                                                                                       |           | 1        |       |
| 3a   | Intermediate chamber         |            |                                                                                       |           | 1        |       |

| Pos   | Description                  | Annotation | Données de classification | Référence | Quantité | Unité |
|-------|------------------------------|------------|---------------------------|-----------|----------|-------|
| 45    | Neck ring cpl.               |            |                           |           | 1        |       |
| 65    | Retainer for upper seal ring |            |                           |           | 1        |       |
| 26.b  | Hex head screw               |            |                           |           | 2        |       |
| 26.c  | Washer                       |            | Designation: DIN 125A     |           | 2        |       |
|       |                              |            | Thickness: 1,6            |           |          |       |
| 26a   | Strap cpl.                   |            |                           |           | 2        |       |
| 36    | Lock nut                     |            | Thread: M8                |           | 1        |       |
| - 44a | Inlet part cpl.              |            |                           |           | 1        |       |
| 45    | Neck ring cpl.               |            |                           |           | 1        |       |
| 65    | Retainer for upper seal ring |            |                           |           | 1        |       |
| 44b   | Inlet part                   |            |                           |           | 1        |       |
| 47a   | Bearing ring                 |            |                           |           | 1        |       |
| + 49  | Impeller cpl.                |            |                           |           | 5        |       |
| - 51  | Shaft, spline, cpl.          |            |                           |           | 1        |       |
|       | Bar                          |            |                           |           | 0        |       |
| 62    | Stop ring                    |            |                           |           | 1        |       |
| 64b   | Spacing bush                 |            |                           |           | 1        |       |
| 64c   | Spacing pipe                 |            | Length (mm): 12.7         |           | 1        |       |
| 66    | Wedge lock washer            |            |                           |           | 1        |       |
| 69    | Spacing pipe                 |            | Length (mm): 43.6         |           | 3        |       |
| 69    | Spacing pipe                 |            | Internal diameter: 17,5   |           | 1        |       |
|       |                              |            | Length (mm): 17           |           |          |       |
| 69    | Spacing bush                 |            |                           |           | 1        |       |
| 105   | Shaft seal                   |            | Material type: HQQE       |           | 1        | pcs   |

*Disclaimer: The information about the Grundfos pump in this document may be outdated.*

*Data may be subject to alterations without further notice.*

*Please contact us to verify the data above is still accurate/up-to-date.*

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

<https://www.lenntech.com>

tel. +31 152 610 900

fax. +31 152 616 289