

## NK80-160/177A1F2AE-SBAQE

Grundfos pump 97829387



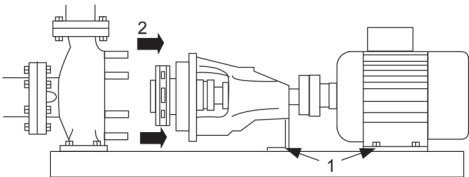
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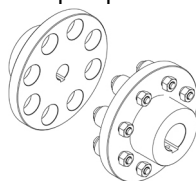
<https://www.lenntech.com/grundfos/NKBASIS/97829387/NK-80-160-177-A1-F-A-E-BAQE.html>

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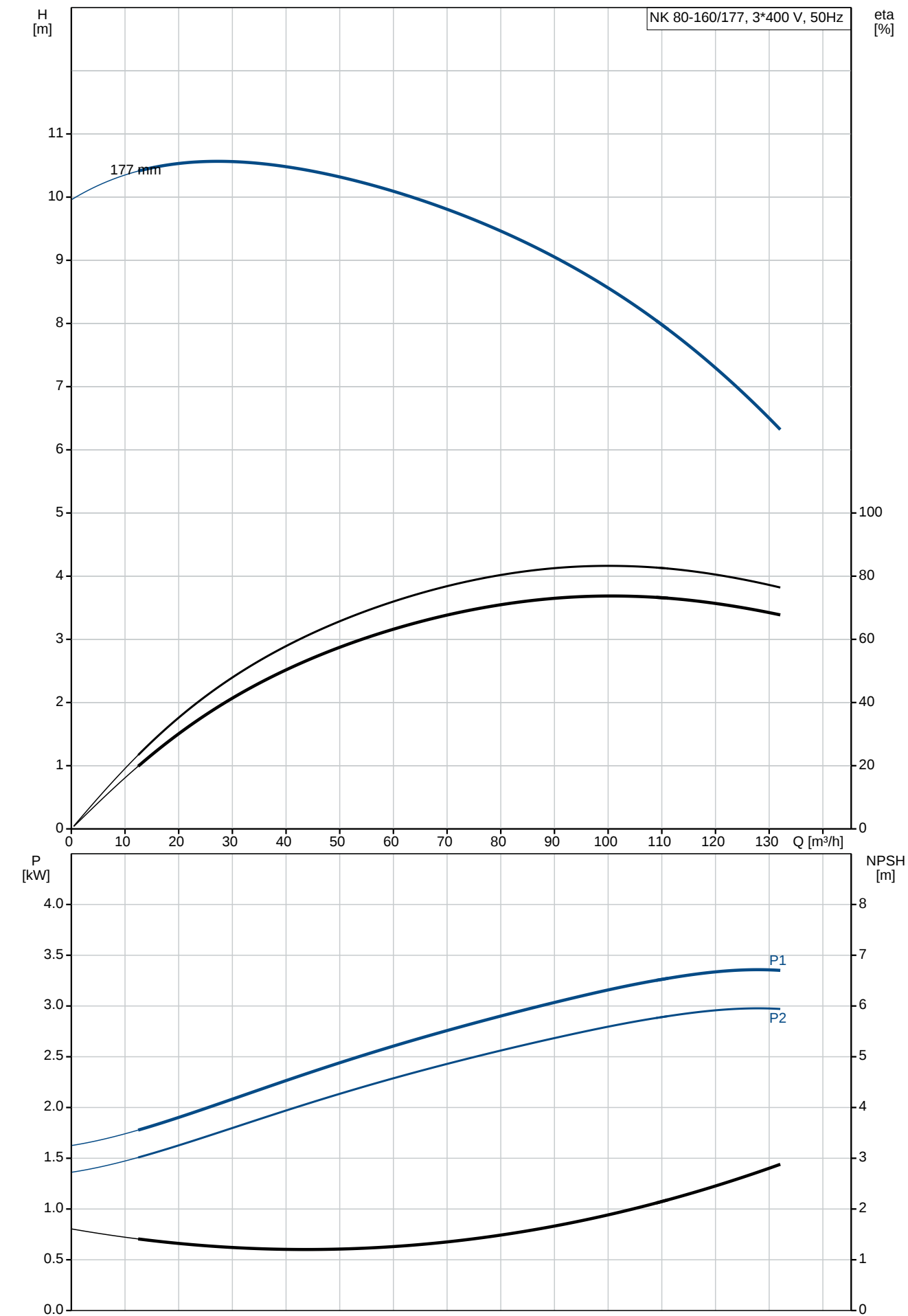
fax. +31 152 616 289

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|          | 1    | <p><b>NK 80-160/177 A1-F-A-E-BAQE</b></p>  <p>Product No.: On request</p> <p>Non-self-priming, single-stage, centrifugal volute pump designed according to ISO 5199 with dimensions and rated performance according to EN 733. Flanges are PN 16 with dimensions according to EN 1092-2. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the motor, coupling, bearing bracket and impeller without disturbing the pump housing or pipework.</p> <p>The unbalanced rubber bellows seal is according to DIN EN 12756.</p> <p>The pump is fitted with a foot-mounted, fan-cooled asynchronous motor. Pump and motor are mounted on a common base frame.</p> <p><b>Further product details</b></p> <p>The product's minimum efficiency index (MEI) is greater or equal to 0.70. This is by the Commission Regulation (EU) considered as an indicative benchmark for best-performing water pump available on the market as from 1 January 2013.</p> <p>Pump and motor are mounted on a common steel base frame in accordance with ISO 3661. The back pull-out design makes it possible to make service on the pump when the pump housing is still connected to the inlet and discharge pipes.</p> <ol style="list-style-type: none"> <li>1) Remove the bolts in the bearing bracket support foot and motor foot.</li> <li>2) Remove the bearing bracket and the motor from the pump housing.</li> </ol>  <p>Cast-iron parts 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>The pump housing has both a priming and a drain hole closed by plugs.</p> <p>The impeller is a closed impeller with double-curved blades with smooth surfaces. The impeller is statically balanced according to ISO 1940-1 class G6.3 and hydraulically balanced to compensate for axial thrust.</p> <p>Wear rings used in pump housing and for impeller are made of bronze/brass or cast iron.</p> <p>The pump is fitted with an unbalanced rubber bellows seal with torque transmission across the spring and around the bellows. Due to the bellows, the seal does not wear the shaft, and the axial movement is not prevented by deposits on the shaft.</p> <p>Primary seal:</p> <ul style="list-style-type: none"> <li>• Rotating seal ring material: carbon graphite, metal-impregnated</li> <li>• Stationary seat material: silicon carbide (SiC)</li> </ul> <p>This material pairing has a very good corrosion resistance and is especially suitable for water up to 120 °C. However, seal life will be reduced at temperatures above 90 °C. The material pairing is not recommended for liquids containing particles as this will result in heavy wear on the SiC face.</p> <p>Secondary seal material: EPDM (ethylene-propylene rubber)</p> |

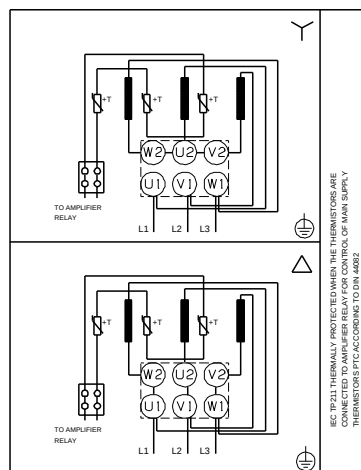
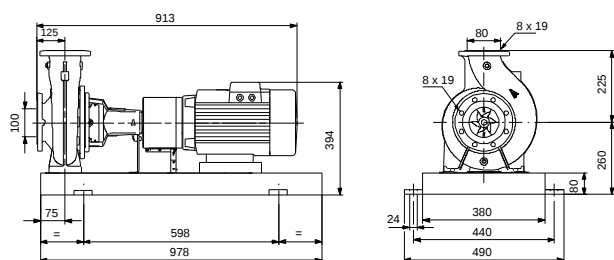
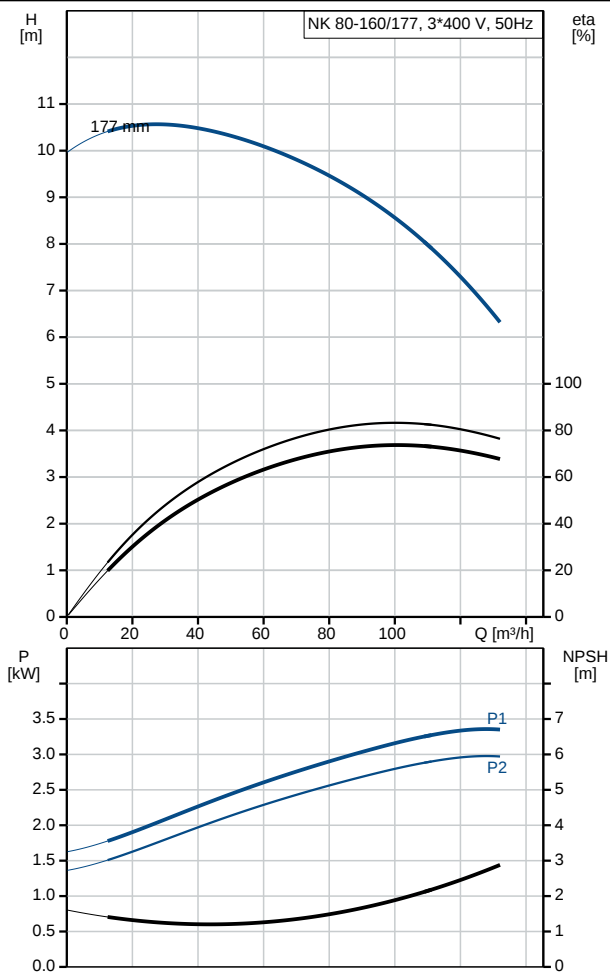
| Position                             | Qty.                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
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|                                      |                                          | <p>EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</p> <p>The shaft is made of stainless steel and has a diameter of 24 mm where the coupling is mounted. The pump uses a standard coupling between the pump and motor shaft.</p>  <p><b>Motor</b></p> <p>The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards and mounting designation B3 (IM 1001). Electrical tolerances comply with IEC 60034.</p> <p>The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.</p> <p>The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.</p> <p>Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.</p> <p>The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.</p> <p><b>Technical data</b></p> <p><b>Liquid:</b></p> <table><tr><td>Pumped liquid:</td><td>Water</td></tr><tr><td>Liquid temperature range:</td><td>0 .. 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>104 m³/h</td></tr><tr><td>Rated head:</td><td>8.2 m</td></tr><tr><td>Actual impeller diameter:</td><td>177 mm</td></tr><tr><td>Impeller nom:</td><td>160 mm</td></tr><tr><td>Primary shaft seal:</td><td>BAQE</td></tr><tr><td>Secondary shaft seal:</td><td>NONE</td></tr><tr><td>Curve tolerance:</td><td>ISO9906:2012 3B</td></tr></table> <p><b>Materials:</b></p> <table><tr><td>Pump housing:</td><td>Cast iron<br/>EN-GJL-250<br/>ASTM A48-40 B</td></tr><tr><td>Impeller:</td><td>Cast iron<br/>EN-GJL-200<br/>ASTM A48-30 B</td></tr><tr><td>Rubber:</td><td>EPDM</td></tr><tr><td>Wear ring mat.:</td><td>High alloy brass(CuZn34Mn3Al2</td></tr></table> <p><b>Installation:</b></p> <table><tr><td>Maximum ambient temperature:</td><td>60 °C</td></tr><tr><td>Maximum operating pressure:</td><td>16 bar</td></tr><tr><td>Flange standard:</td><td>EN 1092-2</td></tr><tr><td>Pump inlet:</td><td>DN 100</td></tr><tr><td>Pump outlet:</td><td>DN 80</td></tr><tr><td>Pressure rating:</td><td>PN 16</td></tr><tr><td>Coupling type:</td><td>Standard</td></tr><tr><td>Base frame:</td><td>EN / ISO</td></tr></table> <p><b>Electrical data:</b></p> | Pumped liquid: | Water | Liquid temperature range: | 0 .. 120 °C | Liquid temperature during operation: | 20 °C | Density: | 998.2 kg/m³ | Rated flow: | 104 m³/h | Rated head: | 8.2 m | Actual impeller diameter: | 177 mm | Impeller nom: | 160 mm | Primary shaft seal: | BAQE | Secondary shaft seal: | NONE | Curve tolerance: | ISO9906:2012 3B | Pump housing: | Cast iron<br>EN-GJL-250<br>ASTM A48-40 B | Impeller: | Cast iron<br>EN-GJL-200<br>ASTM A48-30 B | Rubber: | EPDM | Wear ring mat.: | High alloy brass(CuZn34Mn3Al2 | Maximum ambient temperature: | 60 °C | Maximum operating pressure: | 16 bar | Flange standard: | EN 1092-2 | Pump inlet: | DN 100 | Pump outlet: | DN 80 | Pressure rating: | PN 16 | Coupling type: | Standard | Base frame: | EN / ISO |
| Pumped liquid:                       | Water                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Liquid temperature range:            | 0 .. 120 °C                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Liquid temperature during operation: | 20 °C                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Density:                             | 998.2 kg/m³                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Rated flow:                          | 104 m³/h                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Rated head:                          | 8.2 m                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Actual impeller diameter:            | 177 mm                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Impeller nom:                        | 160 mm                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Primary shaft seal:                  | BAQE                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Secondary shaft seal:                | NONE                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Curve tolerance:                     | ISO9906:2012 3B                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Pump housing:                        | Cast iron<br>EN-GJL-250<br>ASTM A48-40 B |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Impeller:                            | Cast iron<br>EN-GJL-200<br>ASTM A48-30 B |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Rubber:                              | EPDM                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Wear ring mat.:                      | High alloy brass(CuZn34Mn3Al2            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Maximum ambient temperature:         | 60 °C                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Maximum operating pressure:          | 16 bar                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Flange standard:                     | EN 1092-2                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Pump inlet:                          | DN 100                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Pump outlet:                         | DN 80                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Pressure rating:                     | PN 16                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Coupling type:                       | Standard                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |
| Base frame:                          | EN / ISO                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |       |                           |             |                                      |       |          |             |             |          |             |       |                           |        |               |        |                     |      |                       |      |                  |                 |               |                                          |           |                                          |         |      |                 |                               |                              |       |                             |        |                  |           |             |        |              |       |                  |       |                |          |             |          |

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |      | <p> Motor type: 112MC<br/> IE Efficiency class: IE3<br/> Rated power - P2: 4 kW<br/> Mains frequency: 50 Hz<br/> Rated voltage: 3 x 380-415D V<br/> Rated current: 9.3 A<br/> Starting current: 790-870 %<br/> Cos phi - power factor: 0.75-0.68<br/> Rated speed: 1460 rpm<br/> Efficiency: IE3 88,6%<br/> Motor efficiency at full load: 88.6 %<br/> Motor efficiency at 3/4 load: 88.9 %<br/> Motor efficiency at 1/2 load: 88.3 %<br/> Number of poles: 4<br/> Enclosure class (IEC 34-5): 55 Dust/Jetting<br/> Insulation class (IEC 85): F<br/> Lubricant type: Grease </p> <p> <b>Others:</b><br/> Minimum efficiency index, MEI <math>\geq</math> 0.70<br/> ErP status: EuP Standalone/Prod.<br/> Net weight: 168 kg<br/> Gross weight: 188 kg<br/> Shipping volume: 0.44 m<sup>3</sup> </p> |

On request NK 80-160/177 A1-F-A-E-BAQE 50 Hz

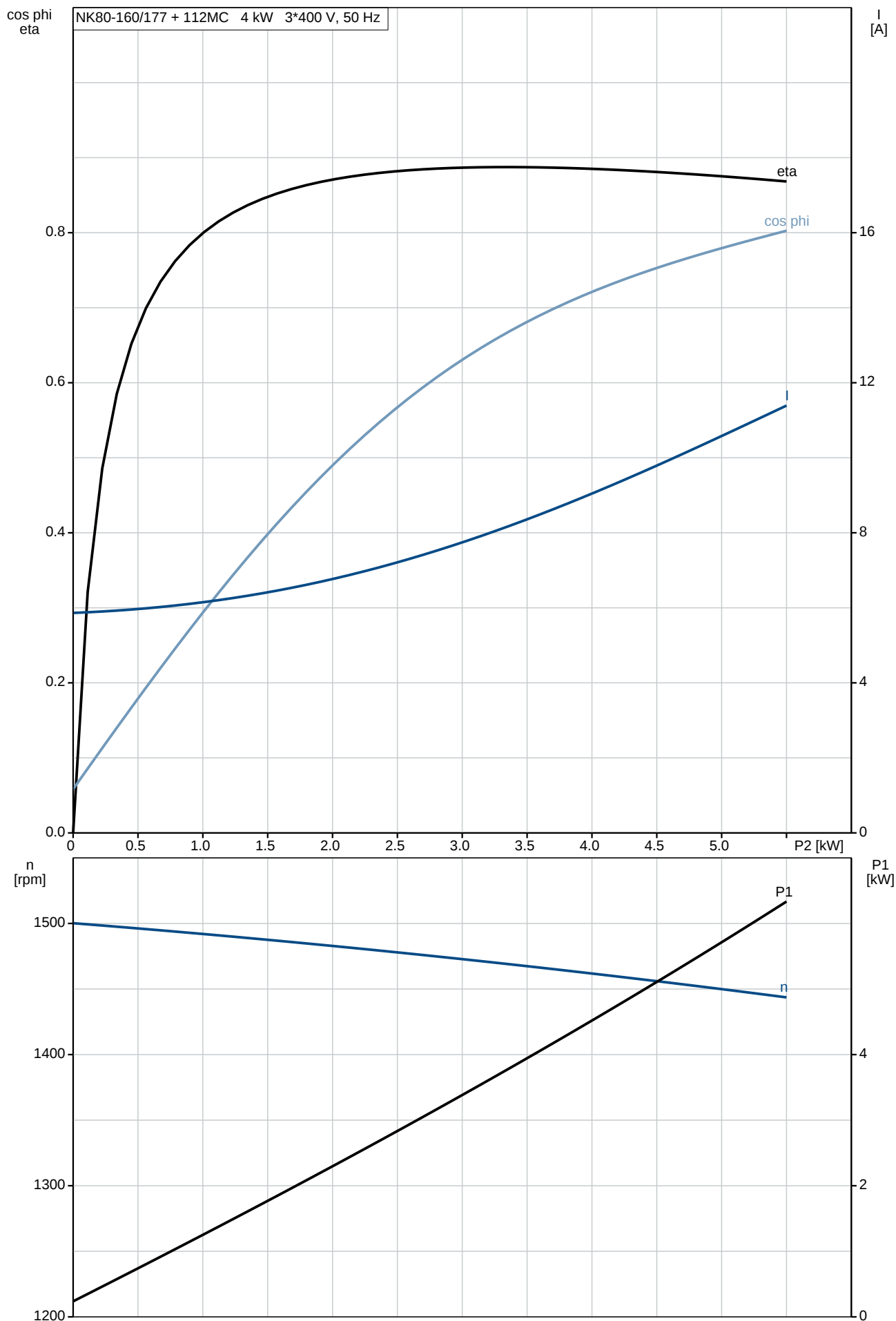


| Description                          | Value                            |
|--------------------------------------|----------------------------------|
| <b>General information:</b>          |                                  |
| Product name:                        | NK 80-160/177                    |
| Product No:                          | A1-F-A-E-BAQE                    |
| EAN number:                          | On request                       |
| <b>Technical:</b>                    |                                  |
| Rated flow:                          | 104 m³/h                         |
| Rated head:                          | 8.2 m                            |
| Actual impeller diameter:            | 177 mm                           |
| Impeller nom:                        | 160 mm                           |
| Primary shaft seal:                  | BAQE                             |
| Secondary shaft seal:                | NONE                             |
| Shaft diameter:                      | 24 mm                            |
| Curve tolerance:                     | ISO9906:2012 3B                  |
| Pump version:                        | A1                               |
| <b>Materials:</b>                    |                                  |
| Pump housing:                        | Cast iron                        |
|                                      | EN-GJL-250                       |
|                                      | ASTM A48-40 B                    |
| Impeller:                            | Cast iron                        |
|                                      | EN-GJL-200                       |
|                                      | ASTM A48-30 B                    |
| Material code:                       | A                                |
| Rubber:                              | EPDM                             |
| Code for rubber:                     | E                                |
| Wear ring mat.:                      | High alloy<br>brass(CuZn34Mn3Al2 |
| <b>Installation:</b>                 |                                  |
| Maximum ambient temperature:         | 60 °C                            |
| Maximum operating pressure:          | 16 bar                           |
| Flange standard:                     | EN 1092-2                        |
| Pump inlet:                          | DN 100                           |
| Pump outlet:                         | DN 80                            |
| Pressure rating:                     | PN 16                            |
| Coupling type:                       | Standard                         |
| Wear ring(s):                        | neckring(s)                      |
| Base frame:                          | EN / ISO                         |
| Connect code:                        | F                                |
| <b>Liquid:</b>                       |                                  |
| Pumped liquid:                       | Water                            |
| Liquid temperature range:            | 0 .. 120 °C                      |
| Liquid temperature during operation: | 20 °C                            |
| Density:                             | 998.2 kg/m³                      |
| <b>Electrical data:</b>              |                                  |
| Motor type:                          | 112MC                            |
| IE Efficiency class:                 | IE3                              |
| Rated power - P2:                    | 4 kW                             |
| Mains frequency:                     | 50 Hz                            |
| Rated voltage:                       | 3 x 380-415D V                   |
| Rated current:                       | 9.3 A                            |
| Starting current:                    | 790-870 %                        |
| Cos phi - power factor:              | 0.75-0.68                        |
| Rated speed:                         | 1460 rpm                         |
| Efficiency:                          | IE3 88,6%                        |
| Motor efficiency at full load:       | 88.6 %                           |
| Motor efficiency at 3/4 load:        | 88.9 %                           |
| Motor efficiency at 1/2 load:        | 88.3 %                           |
| Number of poles:                     | 4                                |
| Enclosure class (IEC 34-5):          | 55 Dust/Jetting                  |
| Insulation class (IEC 85):           | F                                |
| Motor protec:                        | PTC                              |
| Motor No:                            | 87322404                         |
| Lubricant type:                      | Grease                           |
| <b>Others:</b>                       |                                  |

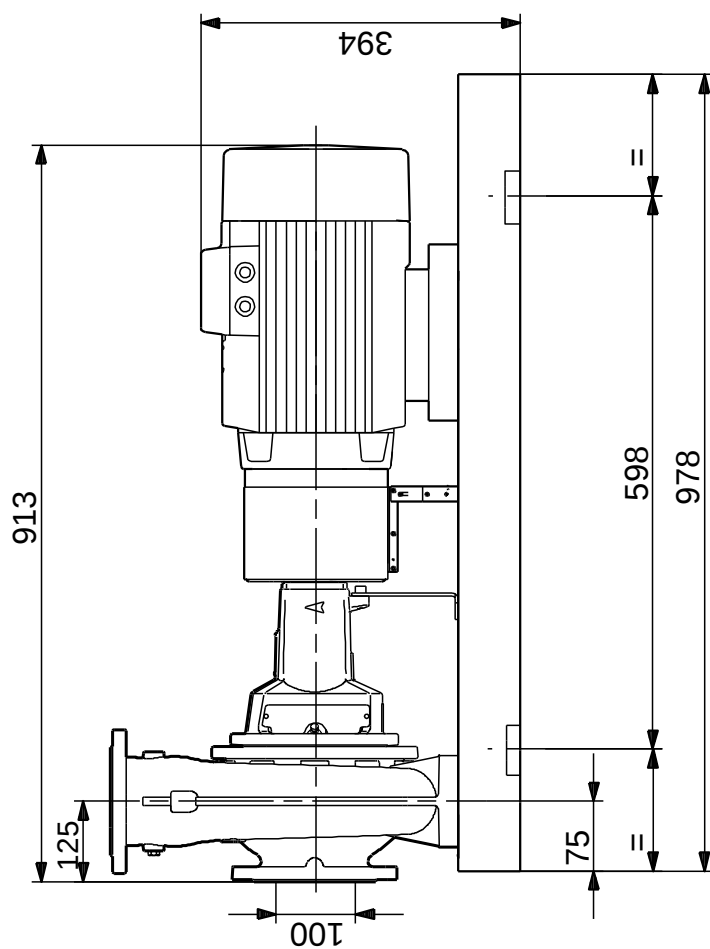
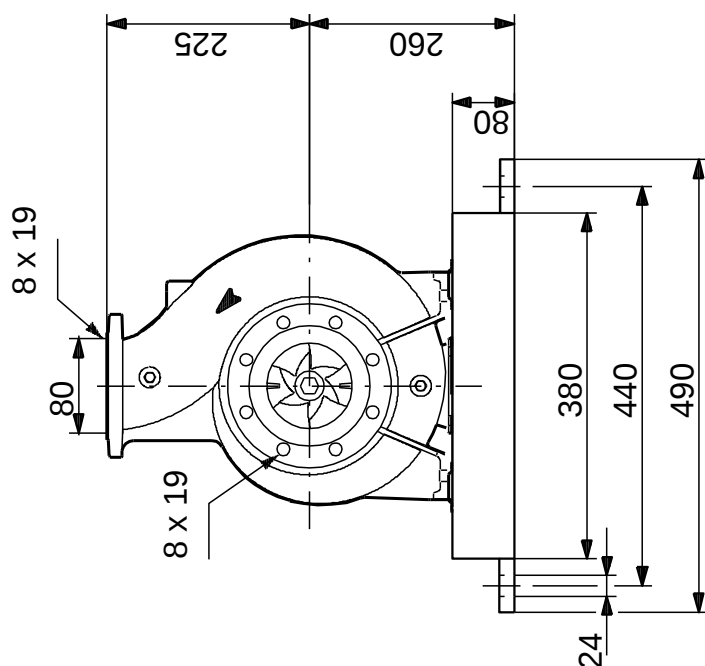


| Description                      | Value                |
|----------------------------------|----------------------|
| Minimum efficiency index, MEI ≥: | 0.70                 |
| ErP status:                      | EuP Standalone/Prod. |
| Net weight:                      | 168 kg               |
| Gross weight:                    | 188 kg               |
| Shipping volume:                 | 0.44 m <sup>3</sup>  |

# On request NK 80-160/177 A1-F-A-E-BAQE 50 Hz



# On request NK 80-160/177 A1-F-A-E-BAQE 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 NK 80-160/177, Product No. On request**  
**Valid from 1.3.2011 (1109)**

| Pos   | Description                 | Annotation | Données de classification | Référence | Quantité | Unité |
|-------|-----------------------------|------------|---------------------------|-----------|----------|-------|
| +     | Motor                       |            |                           |           | 1        | pcs   |
| -     | Coupling cpl.               |            |                           |           | 1        | pcs   |
| -     | Bolt                        |            |                           |           | 6        |       |
| -     | Bolt                        |            |                           |           | 1        |       |
| 89d   | Bolt                        |            |                           |           |          |       |
| 89e   | Nut                         |            |                           |           |          |       |
| 89f   | Washer                      |            | Internal diameter: 14,5   |           |          |       |
|       |                             |            | Outer diameter: 25        |           |          |       |
| 89g   | Spring lock washer          |            |                           |           |          |       |
| 89q   | Washer                      |            | Internal diameter: 16,5   |           |          |       |
|       |                             |            | Outer diameter: 25,0      |           |          |       |
| 89    | Rubber blocks for coupling  |            |                           |           | 1        |       |
| 89.b  | Socket set screw            |            | Length (mm): 8            |           | 2        |       |
|       |                             |            | Thread: M6                |           |          |       |
| 89.o  | Connector                   |            |                           |           | 1        |       |
| 89.p  | Coupling female             |            |                           |           | 1        |       |
| 89a   | Socket set screw            |            |                           |           | 2        |       |
| -     | Nut                         |            |                           |           | 1        | pcs   |
| 66    | Washer                      |            |                           |           | 1        |       |
| 66a   | Spring lock washer          |            |                           |           | 1        |       |
| 67    | Nut                         |            | Thread: M14               |           | 1        |       |
| -     | Pump housing cpl.           |            |                           |           | 1        | pcs   |
| 6     | Pump housing                |            |                           |           | 1        |       |
| 36    | Nut                         |            | Thread: M10               |           | 6        |       |
| - 7   | Coupling guard cpl.         |            |                           |           | 1        | pcs   |
| - 7   | Coupling guard cpl.         |            |                           |           | 1        |       |
| 7     | Guard                       |            |                           |           | 1        |       |
| 7c    | Spacer f/coupling guard     |            |                           |           | 1        |       |
| 7e    | Hex socket head cap screw   |            |                           |           | 3        |       |
| 94    | Lock nut                    |            | Thread: M6                |           | 2        |       |
| 7b    | Retainer for coupling guard |            |                           |           | 1        |       |
| 7k    | Hex socket head cap screw   |            | Length (mm): 10           |           | 4        |       |
|       |                             |            | Thread: M6                |           |          |       |
| - 7.d | Foot for coupling guard     |            |                           |           | 1        | pcs   |
| 7d    | Foot for coupling guard     |            |                           |           | 1        |       |
| 49    | Impeller                    |            |                           |           | 1        | pcs   |
| 72a   | O-ring                      |            | Diameter: 177,39          |           | 1        | pcs   |
|       |                             |            | Material type: EPDM       |           |          |       |
|       |                             |            | Thickness: 3,53           |           |          |       |
| - 77  | Cover                       |            |                           |           | 1        | pcs   |
| 77    | Cover                       |            |                           |           | 1        |       |
| - 86  | Bearing bracket             |            |                           |           | 1        | pcs   |
| 28a   | Hex head screw              |            | Length (mm): 25           |           | 1        |       |
|       |                             |            | Thread: M12               |           |          |       |
| 53.b  | Spacer ring                 |            |                           |           | 1        |       |
| 54    | Ball bearing                |            |                           |           | 2        |       |
| 54a   | O-ring                      |            | Diameter: 71,5            |           | 2        |       |
|       |                             |            | Material type: EPDM       |           |          |       |
|       |                             |            | Thickness: 3              |           |          |       |
| 77a   | Pan head screw              |            |                           |           | 4        |       |
| 86    | Bearing bracket             |            |                           |           | 1        |       |
| 156a  | Bearing cover               |            |                           |           | 2        |       |
| 159a  | V-ring                      |            |                           |           | 2        |       |
| 187   | Retaining ring              |            |                           |           | 2        |       |
| - 90  | Base plate                  |            |                           |           | 1        | pcs   |
|       | Hex head screw              |            |                           |           | 4        |       |
|       | Washer                      |            |                           |           | 4        |       |
|       | Washer                      |            |                           |           | 4        |       |
|       | Base plate                  |            |                           |           | 1        |       |

| Pos | Description    | Annotation | Données de classification | Référence | Quantité | Unité |
|-----|----------------|------------|---------------------------|-----------|----------|-------|
|     | Support rail   |            |                           |           | 2        |       |
|     | Support block  |            |                           |           | 2        |       |
|     | Support block  |            |                           |           | 2        |       |
| 7h  | Hex head screw |            | Length (mm): 16           |           | 2        |       |
|     |                |            | Thread: M8                |           |          |       |
| 28  | Hex head screw |            | Length (mm): 30           |           | 4        |       |
|     |                |            | Thread: M12               |           |          |       |
| 28  | Hex head screw |            | Length (mm): 30           |           | 2        |       |
|     |                |            | Thread: M12               |           |          |       |
| 66  | Washer         |            |                           |           | 2        |       |
| 66  | Washer         |            |                           |           | 2        |       |
| 105 | Shaft seal     |            | Material type: BAQE       |           | 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.*

*All information is copyright Grundfos.*



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