

## NB32-125/106 A-F2-A-BAQE

Grundfos pump 97838599



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<https://www.lenntech.com/grundfos/NB000/97838599/NB-32-125-106-A-F2-A-E-BAQE.html>

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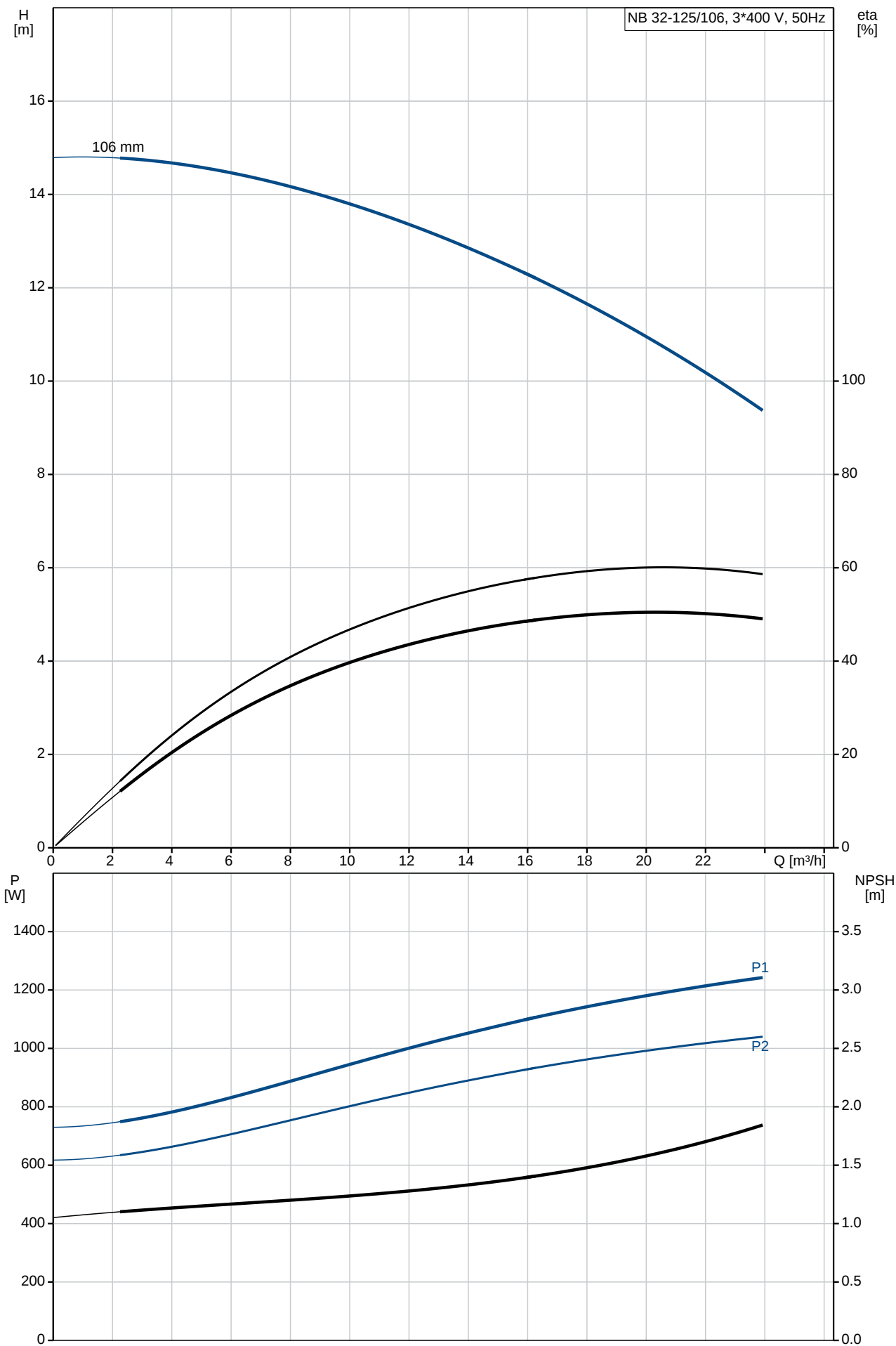
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| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|          | 1    | <p><b>NB 32-125/106 A-F2-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 (10 bar). Flanges are PN 16 with dimensions according to EN 1092-2. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover and impeller without disturbing the pump housing or pipework.</p> <p>The unbalanced rubber bellows seal is according to DIN EN 12756.<br/>The pump is close-coupled to a fan-cooled asynchronous motor.</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>The back pull-out design means that the pump can be serviced by a single person without disturbing the pump housing or pipe work.</p>  <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.<br/>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>Motor stool and pump cover are made of cast iron (EN-GJL-250). Coupling guards are fitted to the motor stool. The pump cover is provided with a manual air vent screw for venting of the pump housing and the shaft seal chamber.</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> |

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |      | <p>Secondary seal material: EPDM (ethylene-propylene rubber)<br/>EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</p> <p><b>Motor</b><br/>The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.</p> <p>The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.<br/>The motor does not incorporate motor protection and must be connected to a motor-protective circuit breaker which can be manually reset. The motor-protective circuit breaker must be set according to the rated current of the motor (I1/1).</p> <p><b>Technical data</b></p> <p><b>Liquid:</b><br/>Pumped liquid: Water<br/>Liquid temperature range: 0 .. 120 °C<br/>Liquid temperature during operation: 20 °C<br/>Density: 998.2 kg/m³</p> <p><b>Technical:</b><br/>Rated flow: 19.9 m³/h<br/>Rated head: 10.4 m<br/>Actual impeller diameter: 106 mm<br/>Impeller nom: 125 mm<br/>Primary shaft seal: BAQE<br/>Secondary shaft seal: NONE<br/>Curve tolerance: ISO9906:2012 3B</p> <p><b>Materials:</b><br/>Pump housing: Cast iron<br/>EN-GJL-250<br/>ASTM A48-40 B<br/>Impeller: Cast iron<br/>EN-GJL-200<br/>ASTM A48-30 B<br/>Shaft: Stainless steel<br/>1.4301<br/>304<br/>Rubber: EPDM<br/>Wear ring mat.: High alloy brass(CuZn34Mn3Al2</p> <p><b>Installation:</b><br/>Maximum ambient temperature: 60 °C<br/>Maximum operating pressure: 16 bar<br/>Flange standard: EN 1092-2<br/>Pump inlet: DN 50<br/>Pump outlet: DN 32<br/>Pressure rating: PN 16</p> <p><b>Electrical data:</b><br/>Motor type: 80C<br/>IE Efficiency class: IE3<br/>Rated power - P2: 1.1 kW<br/>Mains frequency: 50 Hz<br/>Rated voltage: 3 x 220-240D/380-415Y V<br/>Rated current: 4.35/2.50 A<br/>Starting current: 450-500 %<br/>Cos phi - power factor: 0.83-0.76<br/>Rated speed: 2840-2870 rpm<br/>Efficiency: IE3 82,7%<br/>Motor efficiency at full load: 82.7 %<br/>Motor efficiency at 3/4 load: 84.6 %<br/>Motor efficiency at 1/2 load: 85.4 %</p> |

| Position | Qty. | Description                                                                                                                                                                                                                                                                                                                                                              |
|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |      | <p>Number of poles: 2</p> <p>Enclosure class (IEC 34-5): 55 Dust/Jetting</p> <p>Insulation class (IEC 85): F</p> <p>Lubricant type: Grease</p> <p><b>Others:</b></p> <p>Minimum efficiency index, MEI <math>\geq</math> 0.70</p> <p>ErP status: EuP Standalone/Prod.</p> <p>Net weight: 34 kg</p> <p>Gross weight: 45 kg</p> <p>Shipping volume: 0.134 m<sup>3</sup></p> |

On request NB 32-125/106 A-F2-A-E-BAQE 50 Hz



| Description                          | Value                                    |
|--------------------------------------|------------------------------------------|
| <b>General information:</b>          |                                          |
| Product name:                        | NB 32-125/106<br>A-F2-A-E-BAQE           |
| Product No:                          | On request                               |
| EAN number:                          | On request                               |
| <b>Technical:</b>                    |                                          |
| Rated flow:                          | 19.9 m³/h                                |
| Rated head:                          | 10.4 m                                   |
| Actual impeller diameter:            | 106 mm                                   |
| Impeller nom:                        | 125 mm                                   |
| Primary shaft seal:                  | BAQE                                     |
| Secondary shaft seal:                | NONE                                     |
| Shaft diameter:                      | 24 mm                                    |
| Curve tolerance:                     | ISO9906:2012 3B                          |
| Pump version:                        | A                                        |
| <b>Materials:</b>                    |                                          |
| 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 |
| Shaft:                               | Stainless steel<br>1.4301<br>304         |
| 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 50                                    |
| Pump outlet:                         | DN 32                                    |
| Pressure rating:                     | PN 16                                    |
| Wear ring(s):                        | neckring(s)                              |
| Connect code:                        | F2                                       |
| <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:                          | 80C                                      |
| IE Efficiency class:                 | IE3                                      |
| Rated power - P2:                    | 1.1 kW                                   |
| Mains frequency:                     | 50 Hz                                    |
| Rated voltage:                       | 3 x 220-240D/380-415Y V                  |
| Rated current:                       | 4.35/2.50 A                              |
| Starting current:                    | 450-500 %                                |
| Cos phi - power factor:              | 0.83-0.76                                |
| Rated speed:                         | 2840-2870 rpm                            |
| Efficiency:                          | IE3 82,7%                                |
| Motor efficiency at full load:       | 82.7 %                                   |
| Motor efficiency at 3/4 load:        | 84.6 %                                   |
| Motor efficiency at 1/2 load:        | 85.4 %                                   |
| Number of poles:                     | 2                                        |
| Enclosure class (IEC 34-5):          | 55 Dust/Jetting                          |
| Insulation class (IEC 85):           | F                                        |
| Motor protec:                        | NONE                                     |
| Motor No:                            | 87120286                                 |
| Mount. design. acc. IEC 34-7:        | IM V1/B5                                 |

**Performance Graphs:**

**Head (H) vs. Flow (Q):** The graph shows the pump's head performance. The y-axis represents Head (H) in meters [m], ranging from 0 to 16. The x-axis represents Flow (Q) in m³/h, ranging from 0 to 25. A single curve is plotted for the 106 mm impeller diameter. The head starts at approximately 15.5 m at 0 m³/h and decreases to about 9.5 m at 25 m³/h.

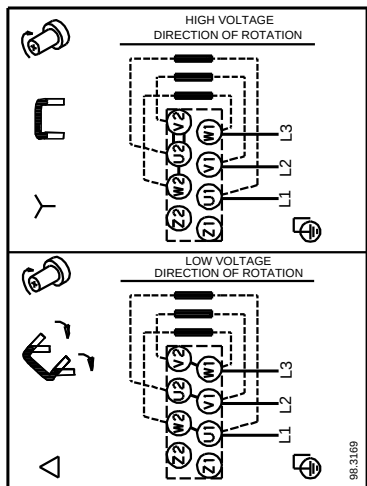
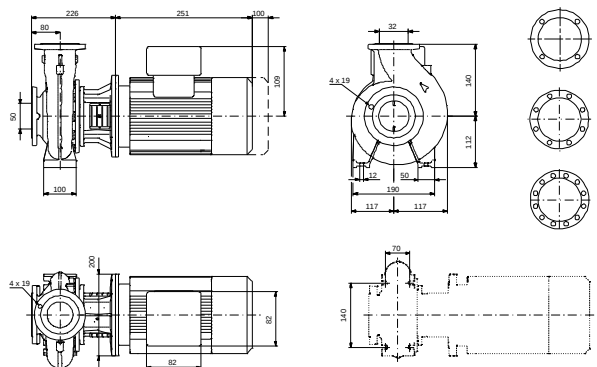
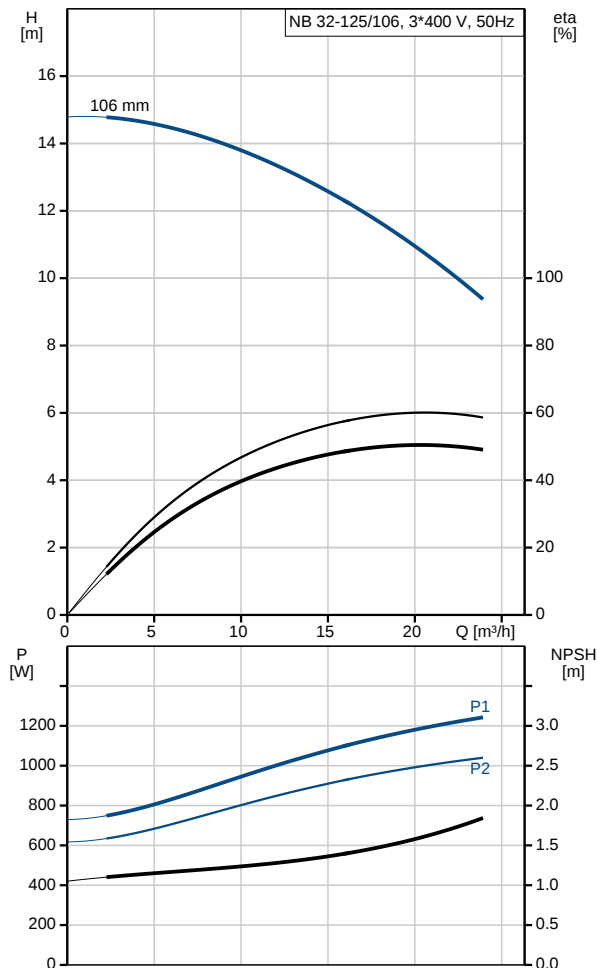
**Power (P) vs. Flow (Q):** The graph shows the pump's power requirements. The left y-axis represents Power (P) in Watts [W], ranging from 0 to 1200. The right y-axis represents Net Positive Suction Head (NPSH) in meters [m], ranging from 0.0 to 3.0. The x-axis represents Flow (Q) in m³/h, ranging from 0 to 25. Three curves are plotted: P1 (blue), P2 (blue), and a black curve. P1 starts at ~750 W and rises to ~1200 W. P2 starts at ~600 W and rises to ~1000 W. The black curve starts at ~400 W and rises to ~750 W.

**Dimensions and Mounting:**

The technical drawings show the pump's dimensions and mounting options. The main view shows a front view with dimensions: total width 326 mm, motor width 251 mm, and mounting flange diameter 100 mm. The side view shows the pump housing dimensions: total height 140 mm, motor height 100 mm, and mounting flange diameter 100 mm. The top view shows the pump housing dimensions: total width 140 mm, motor width 100 mm, and mounting flange diameter 100 mm. The bottom view shows the pump housing dimensions: total width 140 mm, motor width 100 mm, and mounting flange diameter 100 mm.

**Wiring Diagrams:**

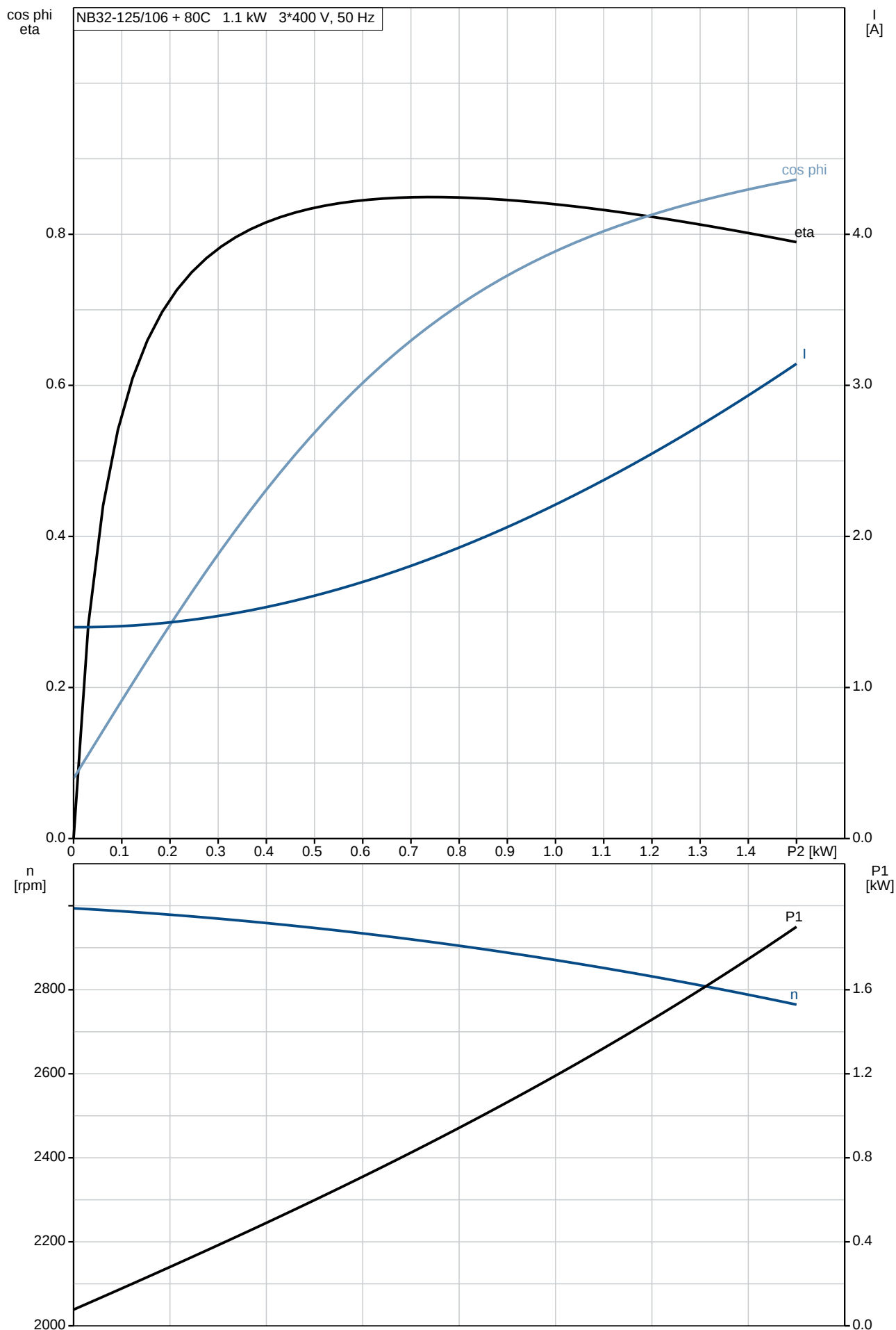
The wiring diagrams show the pump's electrical connections. The top diagram is for High Voltage (3 x 220-240D/380-415Y V) and the bottom diagram is for Low Voltage (3 x 220-240D/380-415Y V). Both diagrams show the pump's internal wiring and the connection points for the motor windings (L1, L2, L3) and the pump's control circuit (P1, P2).



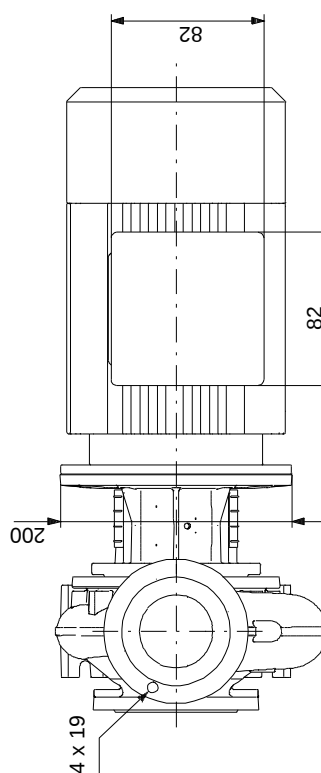
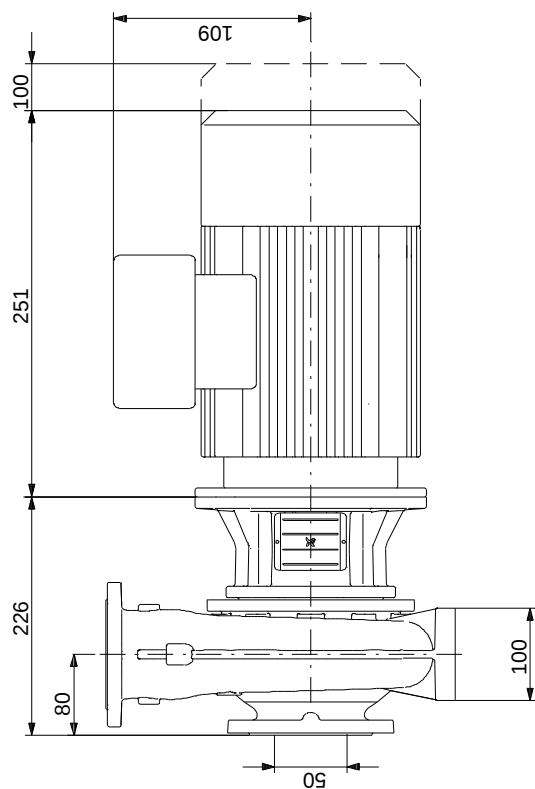
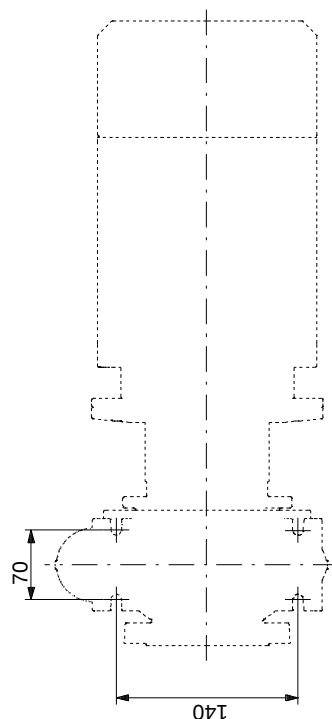
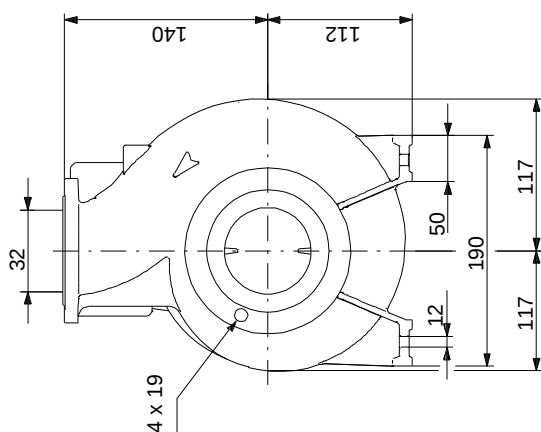
| Description                      | Value                |
|----------------------------------|----------------------|
| Lubricant type:                  | Grease               |
| <b>Others:</b>                   |                      |
| Minimum efficiency index, MEI ≥: | 0.70                 |
| ErP status:                      | EuP Standalone/Prod. |
| Net weight:                      | 34 kg                |
| Gross weight:                    | 45 kg                |
| Shipping volume:                 | 0.134 m <sup>3</sup> |

# On request NB 32-125/106 A-F2-A-E-BAQE 50 Hz

NB32-125/106 + 80C 1.1 kW 3\*400 V, 50 Hz



# On request NB 32-125/106 A-F2-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 NB 32-125/106, Product No. On request**  
**Valid from 1.3.2011 (1109)**

| Pos | Description               | Annotation | Données de classification | Référence | Quantité | Unité |
|-----|---------------------------|------------|---------------------------|-----------|----------|-------|
| +   | Motor                     |            |                           |           | 1        | pcs   |
| -   | Nut                       |            |                           |           | 1        | pcs   |
| 66  | Washer                    |            |                           |           | 1        |       |
| 66a | Spring lock washer        |            |                           |           | 1        |       |
| 67  | Nut                       |            | Thread: M14               |           | 1        |       |
| -   | Motor stool cpl.          |            |                           |           | 1        | pcs   |
| 1a  | Motor stool               |            |                           |           | 1        |       |
| 7   | Coupling guard            |            |                           |           | 2        |       |
| 9   | Hex socket head cap screw |            | Length (mm): 30           |           | 4        |       |
|     |                           |            | Thread: M10               |           |          |       |
| 77a | Pan head screw            |            |                           |           | 4        |       |
| -   | Pump housing cpl.         |            |                           |           | 1        | pcs   |
| 6   | Pump housing              |            |                           |           | 1        |       |
| 36  | Nut                       |            | Thread: M10               |           | 6        |       |
| -   | Stub shaft                |            |                           |           | 1        | pcs   |
| 9   | Socket set screw          |            | Length (mm): 6            |           | 2        |       |
|     |                           |            | Thread: M6                |           |          |       |
| 11  | Parallel key              |            | Dimension: 6X6X35         |           | 1        |       |
| 51  | Pump shaft                |            |                           |           | 1        |       |
| 17  | Air vent screw            |            |                           |           | 1        | pcs   |
| -   | Plug                      |            |                           |           | 1        | pcs   |
| 19  | Pipe plug                 |            | Thread: R 3/8             |           | 2        |       |
| 49  | Impeller                  |            |                           |           | 1        | pcs   |
| 72a | O-ring                    |            | Diameter: 177,39          |           | 1        | pcs   |
|     |                           |            | Material type: EPDM       |           |          |       |
|     |                           |            | Thickness: 3,53           |           |          |       |
| 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.*

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