

## Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.

The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.

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.



|   |   |                                  |      | Date: |  | 22/12/2022 |  |
|---|---|----------------------------------|------|-------|--|------------|--|
| ╋ | Description   |                                  |      |       |  |            |  |
|   | 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.                                  |                                  |      |       |  |            |  |
|   | A variable speed drive makes adjustment of pump performance to any duty point possible. If the motor is to be connected to a variable speed drive, the pump must be ordered with an electrically insulated motor bearing.   |                                  |      |       |  |            |  |
|   | Further product details   |                                  |      |       |  |            |  |
|   | 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 a thin, well-controlled layer on the surface. |                                  |      |       |  |            |  |
|   | Technical data  |                                  |      |       |  |            |  |
|   | Controls:   |                                  |      |       |  |            |  |
|   | Frequency converter:  | NONE                             |      |       |  |            |  |
|   | Pressure sensor:  | Ν                                |      |       |  |            |  |
|   | Liquid:   |                                  |      |       |  |            |  |
|   | Pumped liquid:  | Water                            |      |       |  |            |  |
|   | Liquid temperature range:<br>Selected liquid temperature:   | -25 120 °C<br>20 °C              |      |       |  |            |  |
|   | Density:  | 20 °C<br>998.2 kg/m <sup>3</sup> |      |       |  |            |  |
|   | Technical:  |                                  |      |       |  |            |  |
|   | Pump speed on which pump da   | ta are based:                    | 1490 | ) rpm |  |            |  |
|   | Rated flow:   | 668.6 m³/h                       |      |       |  |            |  |
|   | Rated head:   | 49.63 m                          |      |       |  |            |  |
|   | Actual impeller diameter:   | 404 mm                           |      |       |  |            |  |
|   | Nominal impeller diameter:<br>Shaft seal arrangement:   | 400<br>Single                    |      |       |  |            |  |
|   | Code for shaft seal:  | BQQE                             |      |       |  |            |  |
|   | Curve tolerance:  | ISO9906:201                      | 2 3B |       |  |            |  |
|   | Bearing design:   | Standard                         |      |       |  |            |  |
|   | Materials:  |                                  |      |       |  |            |  |
|   | Pump housing:   | Cast iron                        |      |       |  |            |  |
|   |   | EN-GJL-250<br>ASTM class 3       | 35   |       |  |            |  |
| ĺ | Wear ring:  | Brass                            |      |       |  |            |  |
|   | Impeller:   | Cast iron                        |      |       |  |            |  |
|   |   | EN-GJL-200                       |      |       |  |            |  |
|   |   | ASTM class                       | 30   |       |  |            |  |
|   | Internal pump house coating:<br>Shaft:  | CED<br>Stainless ste             |      |       |  |            |  |
|   | Unait.  | EN 1.4301                        | 51   |       |  |            |  |
|   |   | AISI 304                         |      |       |  |            |  |
|   | Installation:   |                                  |      |       |  |            |  |
|   | Max. ambient temperature:   | 55 °C                            |      |       |  |            |  |
|   | Maximum operating pressure:   | 10 bar                           |      |       |  |            |  |
|   | Pipe connection standard:   | EN 1092-2                        |      |       |  |            |  |
|   | Size of inlet connection:<br>Size of outlet connection:   | DN 250<br>DN 200                 |      |       |  |            |  |
|   | Pressure rating for connection:   | PN 10                            |      |       |  |            |  |
|   | Bearing lubrication:  | Grease                           |      |       |  |            |  |
|   | Pump housing with feet:   | Yes                              |      |       |  |            |  |
| 1 | Support block (Yes/No):   | Y                                |      |       |  |            |  |

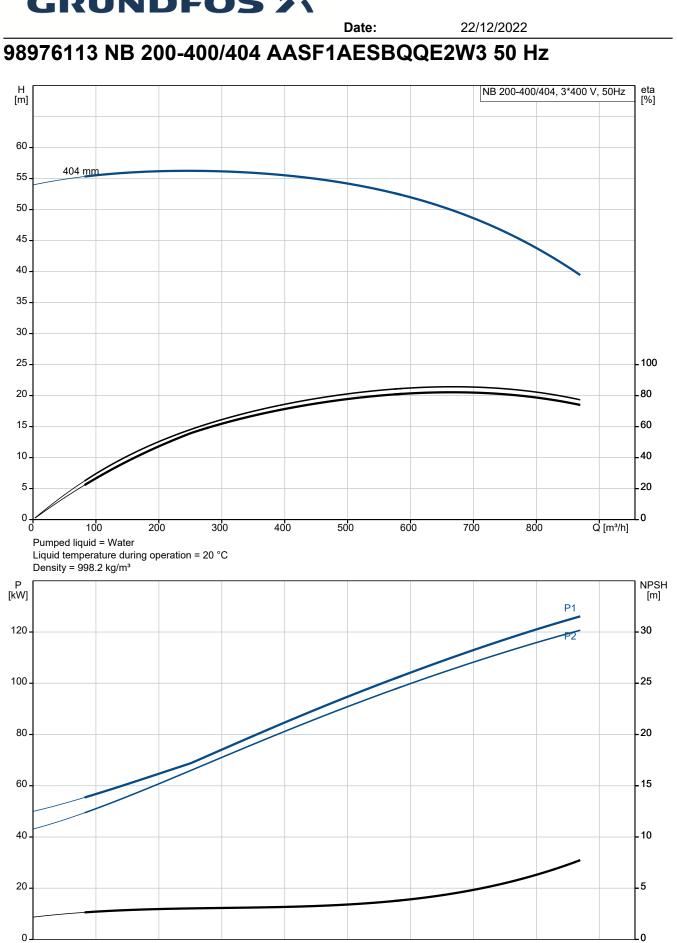


Date:

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| Qty. |                                  |                     |      |  |
|------|----------------------------------|---------------------|------|--|
|      | Description                      |                     |      |  |
| 1    | Electrical data:                 |                     |      |  |
| '    | Motor type:                      | SIEMENS             |      |  |
|      | IE Efficiency class:             | IE3                 |      |  |
|      | Rated power - P2:                | 132 kW              |      |  |
|      |                                  |                     |      |  |
|      | Mains frequency:                 | 50 Hz               |      |  |
|      | Rated voltage:                   | 3 x 380-420D/660-72 | 5Y V |  |
|      | Rated current:                   | 230/133 A           |      |  |
|      | Starting current:                | 730-730 %           |      |  |
|      | Cos phi - power factor:          | 0.87                |      |  |
|      | Rated speed:                     | 1490 rpm            |      |  |
|      | Efficiency:                      | IE3 95,6%           |      |  |
|      | Motor efficiency at full load:   | 95.6-95.6 %         |      |  |
|      | Motor efficiency at 3/4 load:    | 95.9-95.9 %         |      |  |
|      | Motor efficiency at 1/2 load:    | 95.9-95.9 %         |      |  |
|      | Number of poles:                 | 4                   |      |  |
|      | Enclosure class (IEC 34-5):      | IP55                |      |  |
|      | Insulation class (IEC 85):       | F                   |      |  |
|      | Motor No:                        | 83V15446            |      |  |
|      |                                  | STEEL BEARING       |      |  |
|      | Bearing insulation type N-end:   | STEEL DEARING       |      |  |
|      | Others:                          |                     |      |  |
|      | Minimum efficiency index, MEI ≥: | 0.58                |      |  |
|      | Net weight:                      | 1500 kg             |      |  |
|      | Gross weight:                    | 1570 kg             |      |  |
|      | Shipping volume:                 | 2.13 m <sup>3</sup> |      |  |
|      | Danish VVS No.:                  | 386068412           |      |  |
|      |                                  |                     |      |  |
|      | Country of origin:               | HU<br>84127051      |      |  |
|      | Custom tariff no.:               | 84137051            |      |  |
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| Description                                 | Value                             | H<br>[m]                          | NB 200-400/404, 3*400 V, 50Hz [9   |
|---|-----------------------------------|-----------------------------------|--|
| General information:                        |                                   | 60 -                              |  |
| Product name:                               | NB 200-400/404<br>AASF1AESBQQE2W3 | 55 - 404 mm                       |  |
| Product No:                                 | 98976113                          | 50 -                              |  |
| EAN number:                                 | 5712604555910                     | 45 -                              |  |
| Technical:                                  |                                   | 40 -                              |  |
| Pump speed on which pump data<br>are based: | 1490 rpm                          | 35                                |  |
| Rated flow:                                 | 668.6 m³/h                        | 25 -                              | - 10   |
| Rated head:                                 | 49.63 m                           | 20 -                              | 80   |
| Actual impeller diameter:                   | 404 mm                            |                                   |  |
| Nominal impeller diameter:                  | 400                               | 15-                               | - 60   |
| Shaft seal arrangement:                     | Single                            | 10 -                              |  |
| Shaft diameter:                             | 48 mm                             | 5-                                |  |
| Code for shaft seal:                        | BQQE                              |                                   | 0 400 500 600 700 800 Q [m³/h]   |
| Curve tolerance:                            | ISO9906:2012 3B                   | Pumped liquid = Water             | ע עטט עט איז   |
| Pump version:                               | AS                                | Liquid temperature durir          | ng operation = 20 °C   |
| Bearing design:                             | Standard                          | Density = 998.2 kg/m <sup>3</sup> |  |
| Materials:                                  | Standard                          | P<br>[kW]                         | P1 N   |
| Pump housing:                               | Cast iron                         |                                   |  |
|   | EN-GJL-250                        | 100                               |  |
| Pump housing:                               |                                   | 100 -                             | -29  |
| Pump housing:                               | ASTM class 35                     | 80 -                              | -20  |
| Wear ring:                                  | Brass                             |                                   |  |
| Impeller:                                   | Cast iron                         | 60 -                              |  |
| Impeller:                                   | EN-GJL-200                        | 40                                |  |
| Impeller:                                   | ASTM class 30                     |                                   |  |
| Internal pump house coating:                | CED                               | 20 -                              | -5   |
| Material code:                              | A                                 | 0                                 |  |
| Code for rubber:                            | E                                 | 0 -                               |  |
| Shaft:                                      | Stainless steel                   | #                                 | _  |
| Shaft:                                      | EN 1.4301                         |                                   | ( Starten and Star |
| Shaft:                                      | AISI 304                          | 544                               | 1077   |
| Installation:                               |                                   |                                   |  |
| Max. ambient temperature:                   | 55 °C                             |                                   |  |
| Maximum operating pressure:                 | 10 bar                            |                                   |  |
| Pipe connection standard:                   | EN 1092-2                         |                                   |  |
| Size of inlet connection:                   | DN 250                            | 200                               |  |
| Size of outlet connection:                  | DN 200                            |                                   |  |
| Pressure rating for connection:             | PN 10                             | 89                                | -+1-50<br>   |
| Bearing lubrication:                        | Grease                            |                                   |  |
| Pump housing with feet:                     | Yes                               |                                   |  |
| Support block (Yes/No):                     | Y                                 | 8 X g 23                          |  |
| Connect code:                               | F1                                |                                   |  |
| Liquid:                                     |                                   | ¥                                 |  |
| Pumped liquid:                              | Water                             |                                   |  |
| Liquid temperature range:                   | -25 120 °C                        |                                   | Y  |
| Selected liquid temperature:                | 20 °C                             |                                   | '   _  |
| Density:                                    | 998.2 kg/m³                       |                                   |  |
| Electrical data:                            |                                   |                                   | <b>₽</b>   |
| Motor type:                                 | SIEMENS                           | —      4000                       |  |
| IE Efficiency class:                        | IE3                               | - <u>41 000</u>                   | Beve<br>Area   |
| Rated power - P2:                           | 132 kW                            | TO AMPLIFIER<br>RELAY<br>L1 L2 L3 |  |
| Mains frequency:                            | 50 Hz                             |                                   |  |
| Rated voltage:                              | 3 x 380-420D/660-725Y V           |                                   |  |
| Rated current:                              | 230/133 A                         | <b>№</b> +т <b>№</b> +т           | I DIRECTED AND A DIRECTED   |
| Starting current:                           | 730-730 %                         |                                   | R Accord   |
| Cos phi - power factor:                     | 0.87                              | 뭐 '떨g'약                           | I THERE  |
| Rated speed:                                | 1490 rpm                          |                                   | I FE PARA  |
|   |                                   | RELAY L1 L2 L3                    |  |
| Efficiency:                                 | IE3 95,6%                         |                                   |  |

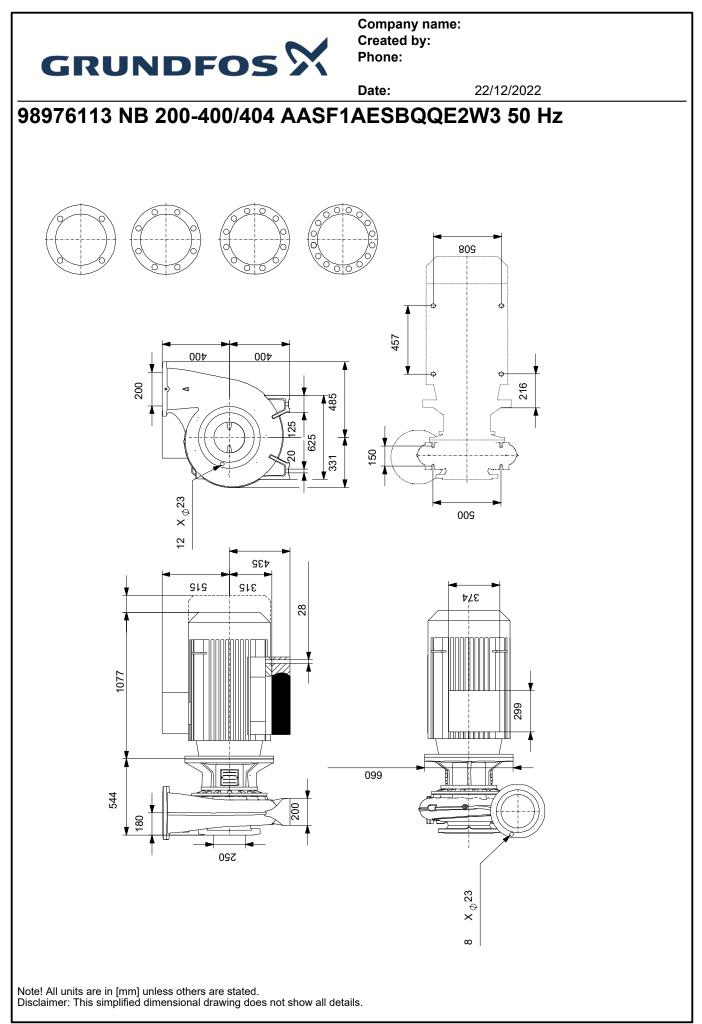
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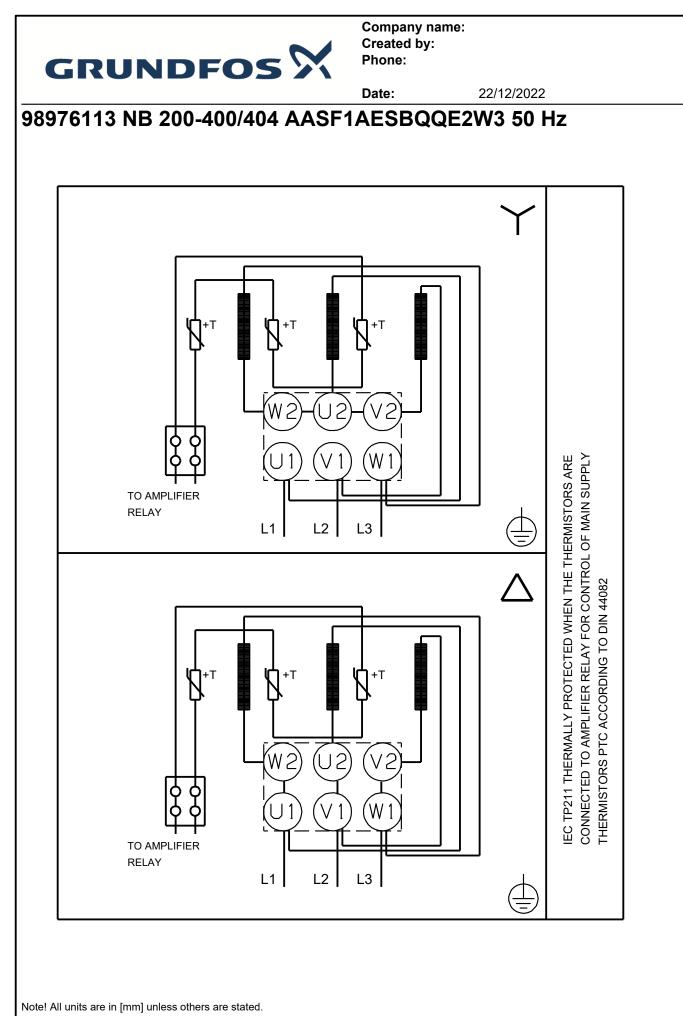


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| Description                      | Value               |
|----------------------------------|---------------------|
| Motor efficiency at full load:   | 95.6-95.6 %         |
| Motor efficiency at 3/4 load:    | 95.9-95.9 %         |
| Motor efficiency at 1/2 load:    | 95.9-95.9 %         |
| Number of poles:                 | 4                   |
| Enclosure class (IEC 34-5):      | IP55                |
| Insulation class (IEC 85):       | F                   |
| Built-in motor protection:       | PTC                 |
| Motor No:                        | 83V15446            |
| Mount. design. acc. IEC 34-7:    | IM B35              |
| Bearing insulation type N-end:   | STEEL BEARING       |
| Controls:                        |                     |
| Frequency converter:             | NONE                |
| Pressure sensor:                 | Ν                   |
| Others:                          |                     |
| Minimum efficiency index, MEI ≥: | 0.58                |
| Net weight:                      | 1500 kg             |
| Gross weight:                    | 1570 kg             |
| Shipping volume:                 | 2.13 m <sup>3</sup> |
| Danish VVS No.:                  | 386068412           |
| Country of origin:               | HU                  |
| Custom tariff no.:               | 84137051            |

22/12/2022







22/12/2022 Date: Order Data: Position | Your pos. | Amount | Product No | Product name Total

| Position          | Your pos.           | Product name     | Amount | Product No | lotal            |
|-------------------|---------------------|------------------|--------|------------|------------------|
|                   |                     | NB 200-400/404   | 1      | 98976113   | Price on request |
|                   |                     |                  |        |            |                  |
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