

**Date:** 30/12/2022

Qty. | Description

1 NB 100-200/211 AAF2AESBQQEMW3



Product No.: 98180947

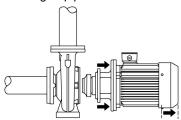
Non-self-priming, single-stage, centrifugal volute pump designed according to ISO 5199 with dimensions and rated performance according to EN 733 (10 bar).

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.

The unbalanced rubber bellows seal is according to DIN EN 12756.

The pump is close-coupled to a fan-cooled asynchronous motor.

The back pull-out design means that the pump can be serviced by a single person without disturbing the pump housing or pipes.



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.

### Pump

Motor stool and pump cover are made of cast iron (EN-GJL-250). Coupling guards are fitted to the motor stool.

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

#### Seal faces:

- Rotating seal ring material: silicon carbide (SiC)
- Stationary seat material: silicon carbide (SiC)

This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.

The pump housing has feet.

#### 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.

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.

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.



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### 1 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 as a thin, well-controlled layer on the surface.

#### **Technical data**

Controls:

Frequency converter: NONE Pressure sensor: N

Liquid:

Pumped liquid: Water
Liquid temperature range: -25 .. 120 °C
Selected liquid temperature: 20 °C
Density: 998.2 kg/m³

Technical:

Pump speed on which pump data are based: 1465 rpm

Rated flow: 163.4 m³/h
Rated head: 12.96 m
Actual impeller diameter: 211 mm
Nominal impeller diameter: 200
Shaft seal arrangement: Single
Code for shaft seal: BQQE

Curve tolerance: ISO9906:2012 3B2

Bearing design: Standard

Materials:

Pump housing: Cast iron

EN-GJL-250 ASTM class 35

Wear ring: Brass
Impeller: Cast iron

EN-GJL-200 ASTM class 30

Internal pump house coating: CED

Shaft: Stainless steel

EN 1.4301 AISI 304

Installation:

55 °C t max amb: Maximum operating pressure: 16 bar Pipe connection standard: EN 1092-2 Size of inlet connection: DN 125 **DN 100** Size of outlet connection: Pressure rating for connection: PN 16 Bearing lubrication: Grease Pump housing with feet: Yes Support block (Yes/No): Ν

Electrical data:

Motor type: SIEMENS
IE Efficiency class: IE3
Rated power - P2: 7.5 kW
Mains frequency: 50 Hz

Rated voltage: 3 x 380-420D/660-725Y V



**Date:** 30/12/2022

## Qty. | Description

Rated current: 14.3/8.3 A Starting current: 820-820 % Cos phi - power factor: 0.84 Rated speed: 1465 rpm Efficiency: IE3 90,4% Motor efficiency at full load: 90.4-90.4 % Motor efficiency at 3/4 load: 91.1-91.1 % Motor efficiency at 1/2 load: 90.8-90.8 %

Number of poles: 4
Enclosure class (IEC 34-5): IP55
Insulation class (IEC 85): F

Motor No: 83V15222

Bearing insulation type N-end: N

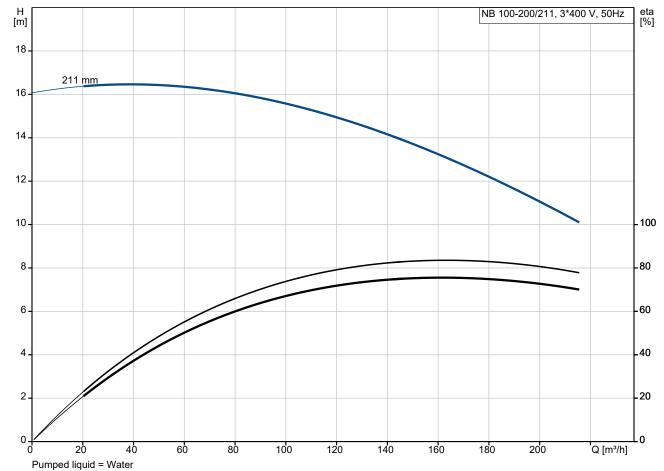
Others:

Minimum efficiency index, MEI ≥: 0.65 Net weight: 144 kg Gross weight: 165 kg Shipping volume:  $0.509 \text{ m}^3$  Danish VVS No.: 386065209

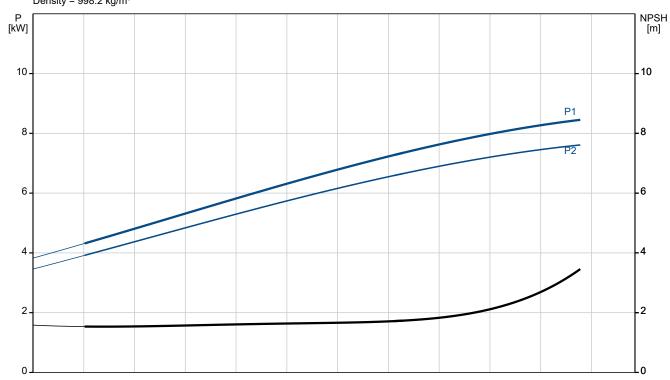


**Date:** 30/12/2022

## 98180947 NB 100-200/211 AAF2AESBQQEMW3 50 Hz



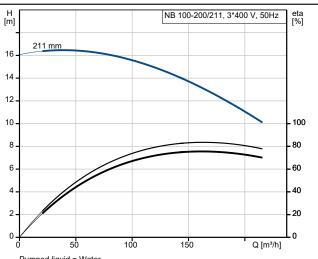
Liquid temperature during operation = 20 °C
Density = 998.2 kg/m³



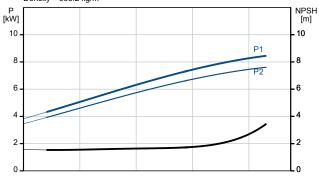


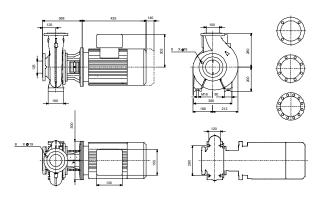
**Date:** 30/12/2022

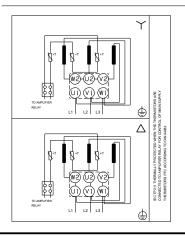
| Description                              | Value                   |  |  |
|--|-------------------------|--|--|
| General information:                     |                         |  |  |
| Product name:                            | NB 100-200/211          |  |  |
|  | AAF2AESBQQEMW3          |  |  |
| Product No:                              | 98180947                |  |  |
| EAN number:                              | 5711491023731           |  |  |
| Technical:                               |                         |  |  |
| Pump speed on which pump data are based: | 1465 rpm                |  |  |
| Rated flow:                              | 163.4 m³/h              |  |  |
| Rated head:                              | 12.96 m                 |  |  |
| Actual impeller diameter:                | 211 mm                  |  |  |
| Nominal impeller diameter:               | 200                     |  |  |
| Shaft seal arrangement:                  | Single                  |  |  |
| Shaft diameter:                          | 32 mm                   |  |  |
| Code for shaft seal:                     | BQQE                    |  |  |
| Curve tolerance:                         | ISO9906:2012 3B2        |  |  |
| Pump version:                            | A<br>Otana da and       |  |  |
| Bearing design:                          | Standard                |  |  |
| Materials:                               | O a at the su           |  |  |
| Pump housing:                            | Cast iron               |  |  |
| Pump housing:                            | EN-GJL-250              |  |  |
| Pump housing:                            | ASTM class 35           |  |  |
| Wear ring:                               | Brass                   |  |  |
| Impeller:                                | Cast iron               |  |  |
| Impeller:                                | EN-GJL-200              |  |  |
| Impeller:                                | ASTM class 30           |  |  |
| Internal pump house coating:             | CED                     |  |  |
| Material code:                           | A                       |  |  |
| Code for rubber:                         | E                       |  |  |
| Shaft:                                   | Stainless steel         |  |  |
| Shaft:                                   | EN 1.4301               |  |  |
| Shaft:                                   | AISI 304                |  |  |
| Installation:                            |                         |  |  |
| t max amb:                               | 55 °C                   |  |  |
| Maximum operating pressure:              | 16 bar                  |  |  |
| Pipe connection standard:                | EN 1092-2               |  |  |
| Size of inlet connection:                | DN 125                  |  |  |
| Size of outlet connection:               | DN 100                  |  |  |
| Pressure rating for connection:          | PN 16                   |  |  |
| Bearing lubrication:                     | Grease                  |  |  |
| Pump housing with feet:                  | Yes                     |  |  |
| Support block (Yes/No):                  | N                       |  |  |
| Connect code:                            | F2                      |  |  |
| Liquid:                                  |                         |  |  |
| Pumped liquid:                           | Water                   |  |  |
| Liquid temperature range:                | -25 120 °C              |  |  |
| Selected liquid temperature:             | 20 °C                   |  |  |
| Density:                                 | 998.2 kg/m³             |  |  |
| Electrical data:                         | 0.51.51.0               |  |  |
| Motor type:                              | SIEMENS                 |  |  |
| IE Efficiency class:                     | IE3                     |  |  |
| Rated power - P2:                        | 7.5 kW                  |  |  |
| Mains frequency:                         | 50 Hz                   |  |  |
| Rated voltage:                           | 3 x 380-420D/660-725Y V |  |  |
| Rated current:                           | 14.3/8.3 A              |  |  |
| Starting current:                        | 820-820 %               |  |  |
| Cos phi - power factor:                  | 0.84                    |  |  |
| Rated speed:                             | 1465 rpm                |  |  |
| Efficiency:                              | IE3 90,4%               |  |  |
|  |                         |  |  |



Pumped liquid = Water Liquid temperature during operation = 20 °C Density = 998.2 kg/m³









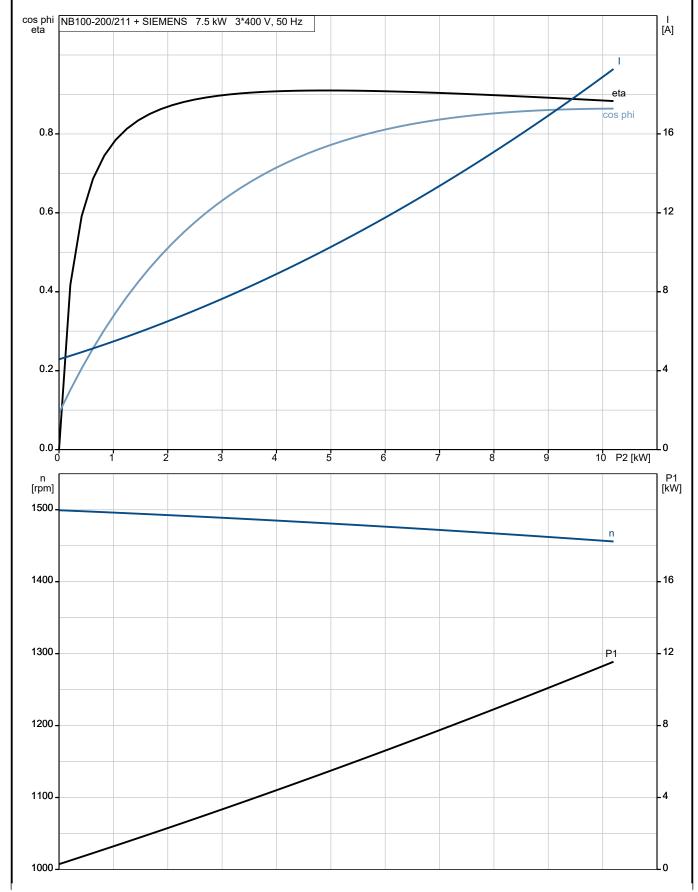
**Date:** 30/12/2022

| Description                      | Value       |
|----------------------------------|-------------|
| Motor efficiency at full load:   | 90.4-90.4 % |
| Motor efficiency at 3/4 load:    | 91.1-91.1 % |
| Motor efficiency at 1/2 load:    | 90.8-90.8 % |
| Number of poles:                 | 4           |
| Enclosure class (IEC 34-5):      | IP55        |
| Insulation class (IEC 85):       | F           |
| Built-in motor protection:       | PTC         |
| Motor No:                        | 83V15222    |
| Mount. design. acc. IEC 34-7:    | IM V1       |
| Bearing insulation type N-end:   | N           |
| Controls:                        |             |
| Frequency converter:             | NONE        |
| Pressure sensor:                 | N           |
| Others:                          |             |
| Minimum efficiency index, MEI ≥: | 0.65        |
| Net weight:                      | 144 kg      |
| Gross weight:                    | 165 kg      |
| Shipping volume:                 | 0.509 m³    |
| Danish VVS No.:                  | 386065209   |



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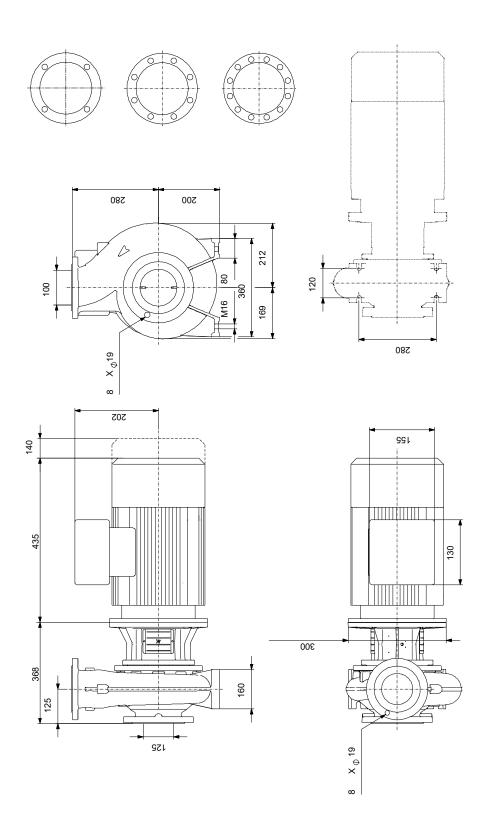
# 98180947 NB 100-200/211 AAF2AESBQQEMW3 50 Hz





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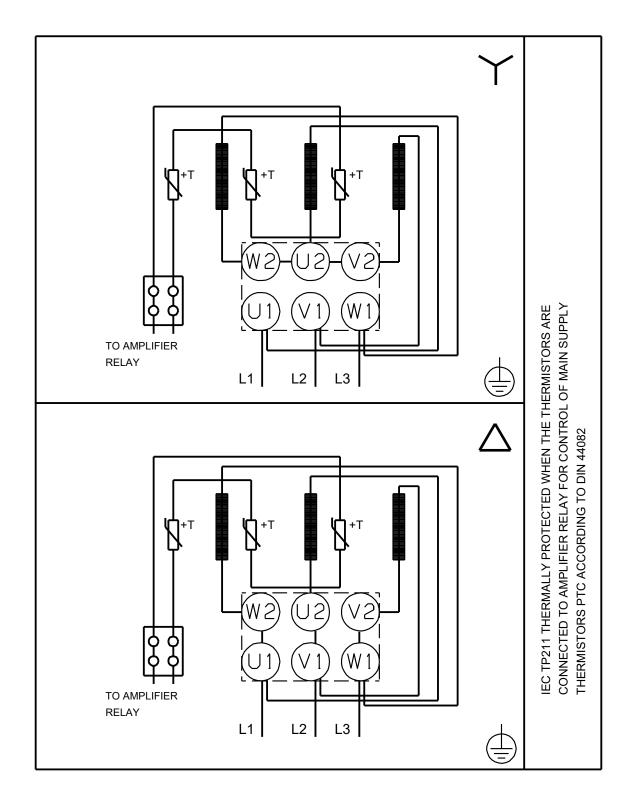


Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.



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



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## **Order Data:**

| Docition | Order Data:              |                |          |          |                  |  |  |
|----------|--------------------------|----------------|----------|----------|------------------|--|--|
| Position | Your pos.                | Product name   | Amount   |          | Total            |  |  |
|          |                          | NB 100-200/211 | 1        | 98180947 | Price on request |  |  |
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