

**Qty. Description**

1 NB 50-250/263 AF2ABQQE

Product No.: [97989054](#)

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

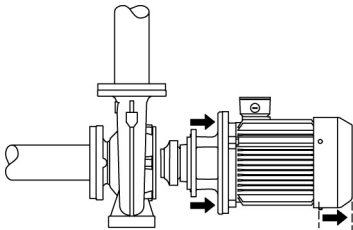
Flanges are PN 16 with dimensions according to EN 1092-2. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover and impeller without disturbing the pump housing or pipework.

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

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

The 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.

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

The pump housing has both a priming and a drain hole closed by plugs. 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.

Wear rings used in pump housing and for impeller are made of bronze/brass.

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.

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.

Primary seal:

- 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

**Qty. Description**

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.

**Further product details**
**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/m<sup>3</sup>

**Technical:**

Pump speed on which pump data are based: 1460 rpm

Rated flow: 47.12 m<sup>3</sup>/h

Rated head: 19.67 m

Actual impeller diameter: 263 mm

Nominal impeller diameter: 250

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

Shaft: Stainless steel  
EN 1.4301  
AISI 304

Internal pump house coating: CED

**Installation:**

Maximum ambient temperature: 55 °C

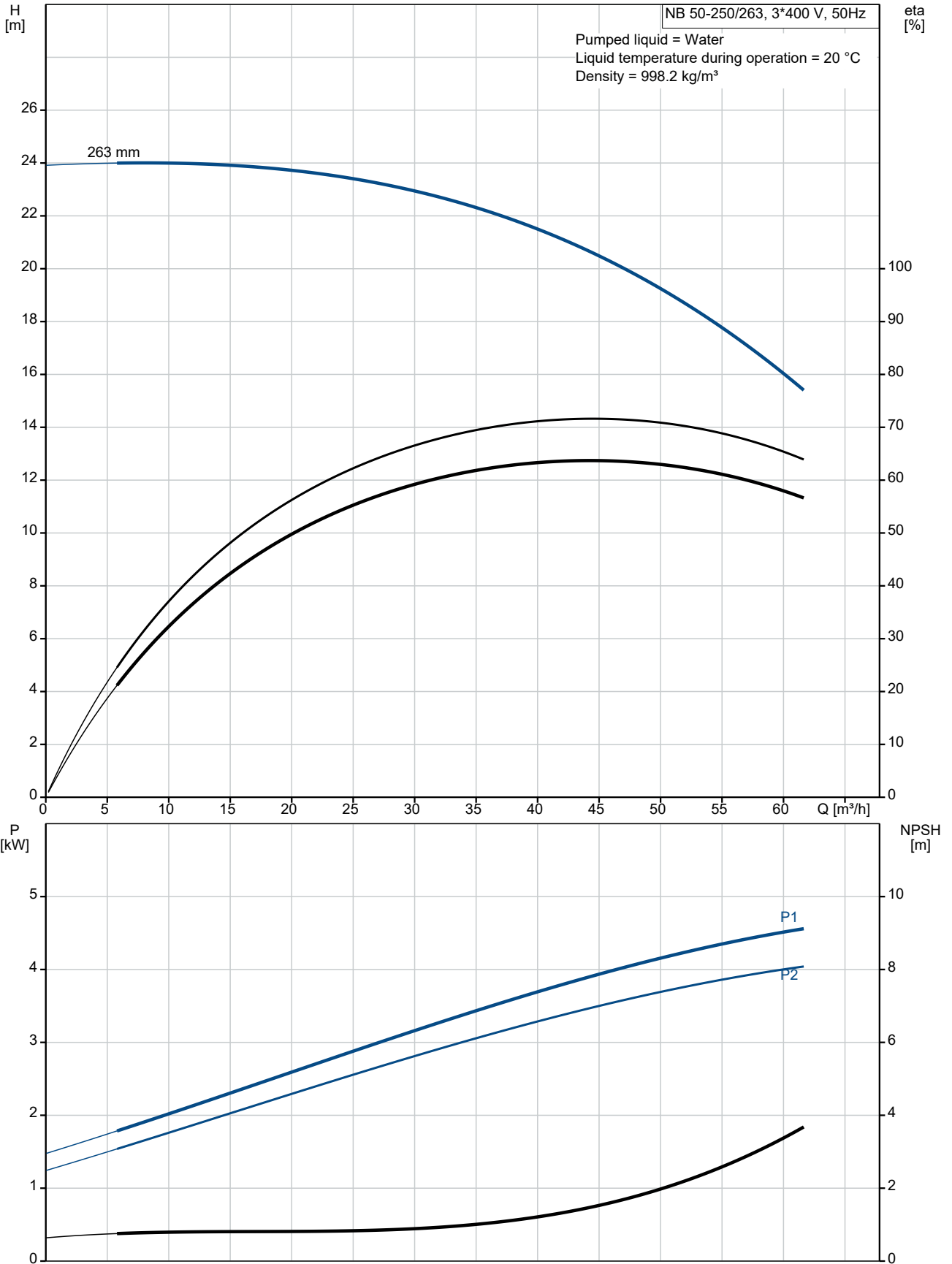
Maximum operating pressure: 16 bar

Pipe connection standard: EN 1092-2

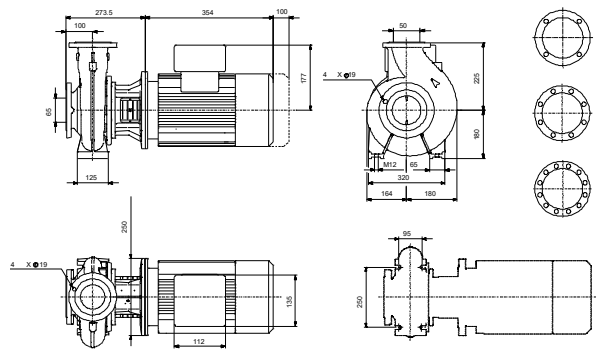
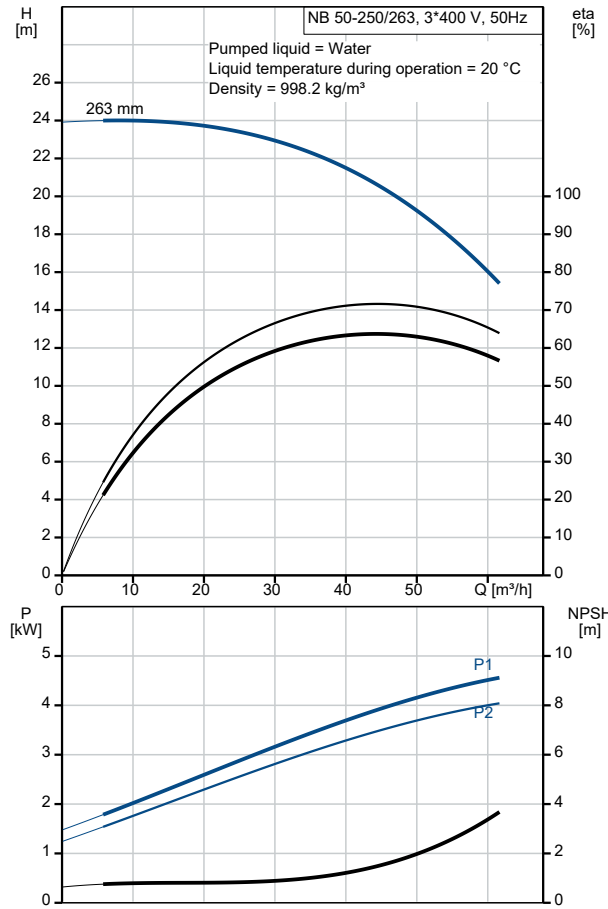
Size of inlet connection: DN 65

| Qty. | Description  |
|------|--|
|      | <p>Size of outlet connection: DN 50<br/>           Pressure rating for connection: PN 16<br/>           Bearing lubrication: Grease<br/>           Pump housing with feet: Yes<br/>           Support block: N</p> <p>Electrical data:</p> <p>Motor type: SIEMENS<br/>           IE Efficiency class: IE3<br/>           Rated power - P2: 4 kW<br/>           Mains frequency: 50 Hz<br/>           Rated voltage: 3 x 380-420D/660-725Y V<br/>           Rated current: 8,3-7,51/4,83-4,37 A<br/>           Starting current: 710-710 %<br/>           Cos phi - power factor: 0.82<br/>           Rated speed: 1460 rpm<br/>           Efficiency: IE3 88,6%<br/>           Motor efficiency at full load: 88.6-88.6 %<br/>           Motor efficiency at 3/4 load: 89.2-89.2 %<br/>           Motor efficiency at 1/2 load: 88.6-88.6 %<br/>           Number of poles: 4<br/>           Enclosure class (IEC 34-5): IP55<br/>           Insulation class (IEC 85): F<br/>           Motor No: 83V15213</p> <p>Others:</p> <p>Minimum efficiency index, MEI ≥: 0.70<br/>           Net weight: 78 kg<br/>           Gross weight: 95 kg<br/>           Shipping volume: 0.315 m³<br/>           Country of origin: HU<br/>           Custom tariff no.: 84137051</p> |

## 97989054 NB 50-250/263 AF2ABQQE 50 Hz



| Description                              | Value                   |
|--|-------------------------|
| <b>General information:</b>              |                         |
| Product name:                            | NB 50-250/263 AF2ABQQE  |
| Product No:                              | 97989054                |
| EAN number:                              | 5710627478636           |
| Price:                                   | GBP 2186                |
| <b>Technical:</b>                        |                         |
| Pump speed on which pump data are based: | 1460 rpm                |
| Rated flow:                              | 47.12 m <sup>3</sup> /h |
| Rated head:                              | 19.67 m                 |
| Actual impeller diameter:                | 263 mm                  |
| Nominal impeller diameter:               | 250                     |
| Shaft seal arrangement:                  | Single                  |
| Shaft diameter:                          | 24 mm                   |
| Code for shaft seal:                     | BQQE                    |
| Curve tolerance:                         | ISO9906:2012 3B2        |
| Pump version:                            | A                       |
| Bearing design:                          | Standard                |
| <b>Materials:</b>                        |                         |
| 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           |
| Shaft:                                   | Stainless steel         |
| Shaft:                                   | EN 1.4301               |
| Shaft:                                   | AISI 304                |
| Internal pump house coating:             | CED                     |
| Material code:                           | A                       |
| Code for rubber:                         | E                       |
| <b>Installation:</b>                     |                         |
| Maximum ambient temperature:             | 55 °C                   |
| Maximum operating pressure:              | 16 bar                  |
| Pipe connection standard:                | EN 1092-2               |
| Size of inlet connection:                | DN 65                   |
| Size of outlet connection:               | DN 50                   |
| Pressure rating for connection:          | PN 16                   |
| Bearing lubrication:                     | Grease                  |
| Pump housing with feet:                  | Yes                     |
| Support block:                           | N                       |
| Connect code:                            | F2                      |
| <b>Liquid:</b>                           |                         |
| Pumped liquid:                           | Water                   |
| Liquid temperature range:                | -25 .. 120 °C           |
| Selected liquid temperature:             | 20 °C                   |
| Density:                                 | 998.2 kg/m <sup>3</sup> |
| <b>Electrical data:</b>                  |                         |
| Motor type:                              | SIEMENS                 |
| IE Efficiency class:                     | IE3                     |
| Rated power - P2:                        | 4 kW                    |
| Mains frequency:                         | 50 Hz                   |
| Rated voltage:                           | 3 x 380-420D/660-725Y V |
| Rated current:                           | 8,3-7,51/4,83-4,37 A    |
| Starting current:                        | 710-710 %               |
| Cos phi - power factor:                  | 0.82                    |





Company name:

Created by:

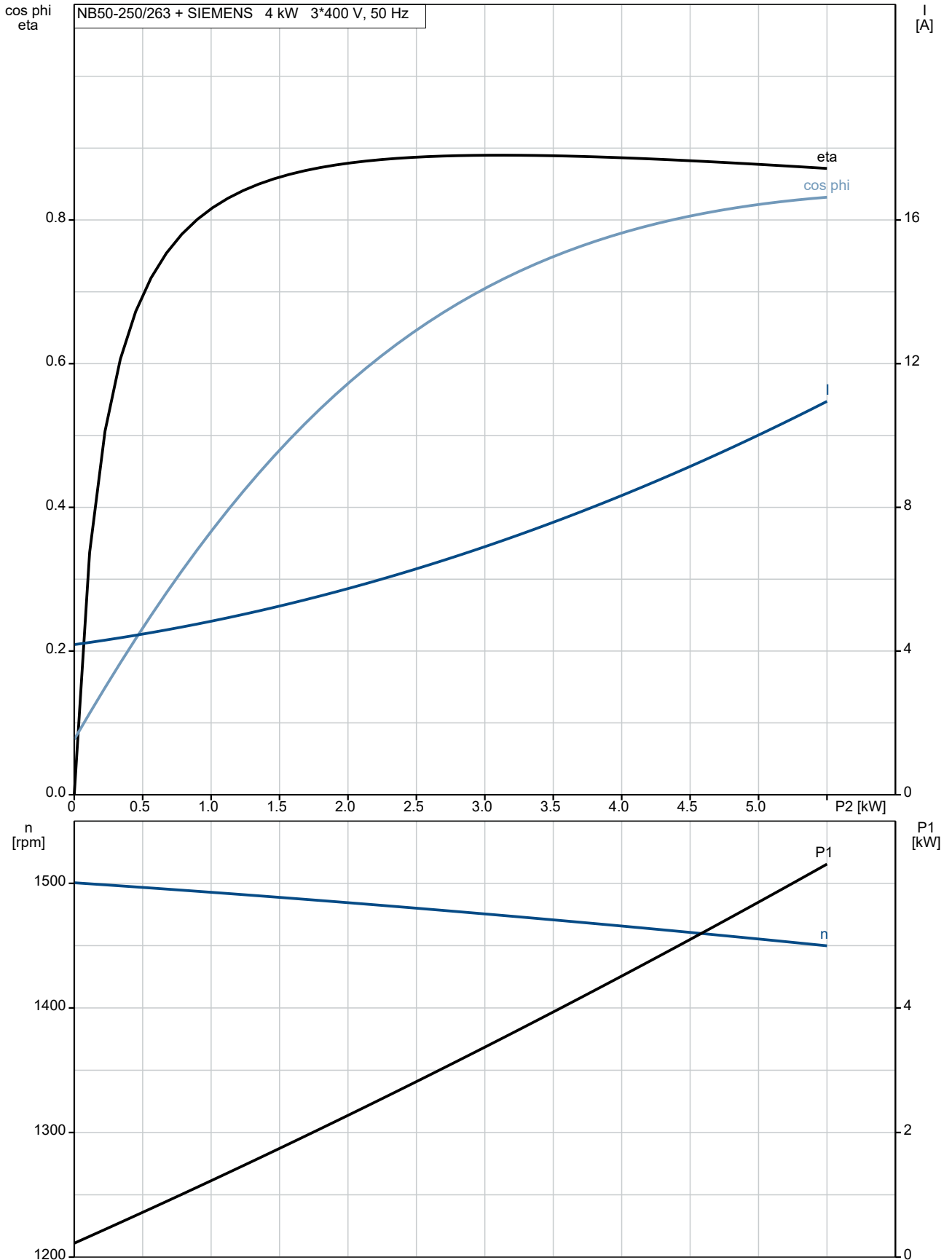
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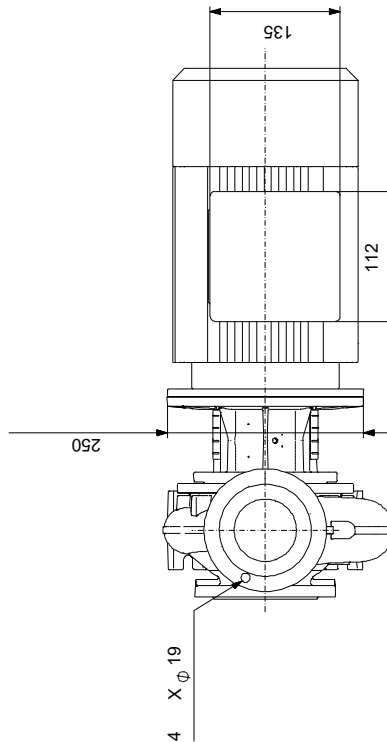
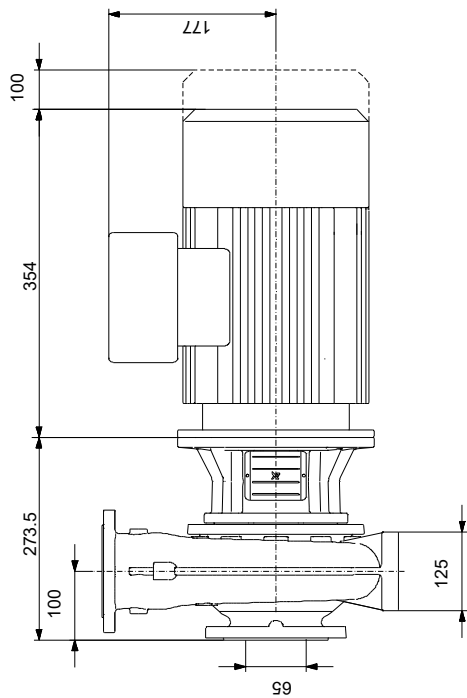
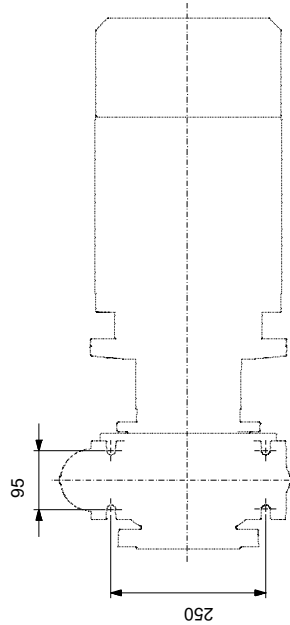
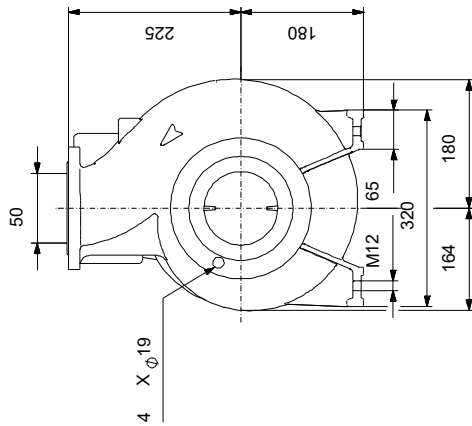
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| Description                            | Value                |
|--|----------------------|
| Rated speed:                           | 1460 rpm             |
| Efficiency:                            | IE3 88,6%            |
| Motor efficiency at full load:         | 88.6-88.6 %          |
| Motor efficiency at 3/4 load:          | 89.2-89.2 %          |
| Motor efficiency at 1/2 load:          | 88.6-88.6 %          |
| Number of poles:                       | 4                    |
| Enclosure class (IEC 34-5):            | IP55                 |
| Insulation class (IEC 85):             | F                    |
| Motor protec:                          | PTC                  |
| Motor No:                              | 83V15213             |
| Mount. design. acc. IEC 34-7:          | IM V1                |
| <b>Controls:</b>                       |                      |
| Frequency converter:                   | NONE                 |
| Pressure sensor:                       | N                    |
| <b>Others:</b>                         |                      |
| Minimum efficiency index, MEI $\geq$ : | 0.70                 |
| Net weight:                            | 78 kg                |
| Gross weight:                          | 95 kg                |
| Shipping volume:                       | 0.315 m <sup>3</sup> |
| Country of origin:                     | HU                   |
| Custom tariff no.:                     | 84137051             |

## 97989054 NB 50-250/263 AF2ABQQE 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.



## 97989054 NB 50-250/263 AF2ABQQE 50 Hz



IEC TP211 THERMALLY PROTECTED WHEN THE THERMISTORS ARE  
CONNECTED TO AMPLIFIER RELAY FOR CONTROL OF MAIN SUPPLY  
THERMISTORS PTC ACCORDING TO DIN 44082

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