

**Date:** 16/06/2022

## Qty. | Description

#### 1 NKE 32-160/170 AA2F2AESBQQEEWA



Note! Product picture may differ from actual product

Product No.: On request

Non-self-priming, single-stage, centrifugal 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 coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework.

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

The pump is fitted with a foot-mounted, fan-cooled, permanent-magnet synchronous motor. Pump and motor are mounted on a common base frame.

The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement.

An external sensor can be connected if controlled pump operation is required for flow, differential pressure or temperature control.

The operating panel on the motor terminal box features a four-inch TFT display, push-buttons and the Grundfos Eye indicator.

The display gives an intuitive and user-friendly interface to all functions.

The push-buttons are used to navigate through the menu structure to access pump and performance data on site and enable setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop".

The Grundfos Eye indicator on the operating panel provides visual indication of pump status:

- "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
- "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)
- "Alarm": Motor has stopped (flashing red indicator lights).

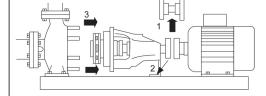
Communication with the pump is also possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

Pump and motor are mounted on a common steel base frame in accordance with ISO 3661.

The back pull-out design together with a spacer coupling makes it possible to service the pump without dismantling the pump housing and motor from the base frame.

This saves realignment of pump and motor after service.

- 1) Remove coupling.
- 2) Remove the bolts in the bearing bracket support foot.
- 3) Remove the bearing bracket from the pump housing.



#### 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.



**Date:** 16/06/2022

## Qty. | Description

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.

{IMG Filename: GRALON NB-NK-G SHAFTSEAL Bxxx.gif }

Seal faces:

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

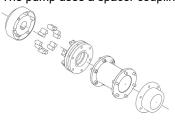
This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

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

The shaft is made of stainless steel and has a diameter of 24 mm where the coupling is mounted.

The pump uses a spacer coupling between the pump and motor shaft.



#### 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 IE5 in accordance with IEC 60034-30-2.

The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

The terminal box holds terminals for these connections:

- one dedicated digital input
- two analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 3.5 V
- 5 V voltage supply to potentiometer and sensor
- one configurable digital input or open-collector output
- Grundfos Digital Sensor input and output
- 24 V voltage supply for sensors
- two signal-relay outputs (potential-free contacts)
- GENIbus connection
- interface for Grundfos CIM fieldbus module.

## 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: Built-in Pressure sensor: N

Liquid:

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

Technical:



Date: 16/06/2022

#### Qty. **Description**

Pump speed on which pump data are based: 1450 rpm

Rated flow: 14.8 m<sup>3</sup>/h

Pump with motor (Yes/No): Rated head: 8 m Actual impeller diameter: 170 mm Nominal impeller diameter: 160 Code for shaft seal: **BQQE** Mechanical seal type: Single

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:

-20 .. 50 °C Range of ambient temperature: Maximum operating pressure: 16 bar EN 1092-2 Pipe connection standard: Type of inlet connection: DIN DIN Type of outlet connection: DN 50 Size of inlet connection: Size of outlet connection: **DN 32** Pressure rating for connection: PN 16

Flexible w/spacer Coupling type:

Base frame design: EN/ISO Code for base frame: 4 Ν Grouting (Yes/No):

Electrical data:

Motor type: 80B IE Efficiency class: IF5 Rated power - P2: 0.55 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-500 V

Rated current: 1.30-1.25 A Cos phi - power factor: 0.80-0.64 Rated speed: 180-2000 rpm

Efficiency: 84.6% Motor efficiency at full load: 84.6 % Number of poles: 4 Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F

Motor No: 99305875

Bearing insulation type N-end: STEEL BEARING

Others:

Minimum efficiency index, MEI ≥: 0.60 Net weight: 104 kg Gross weight: 118 kg



**Date:** 16/06/2022

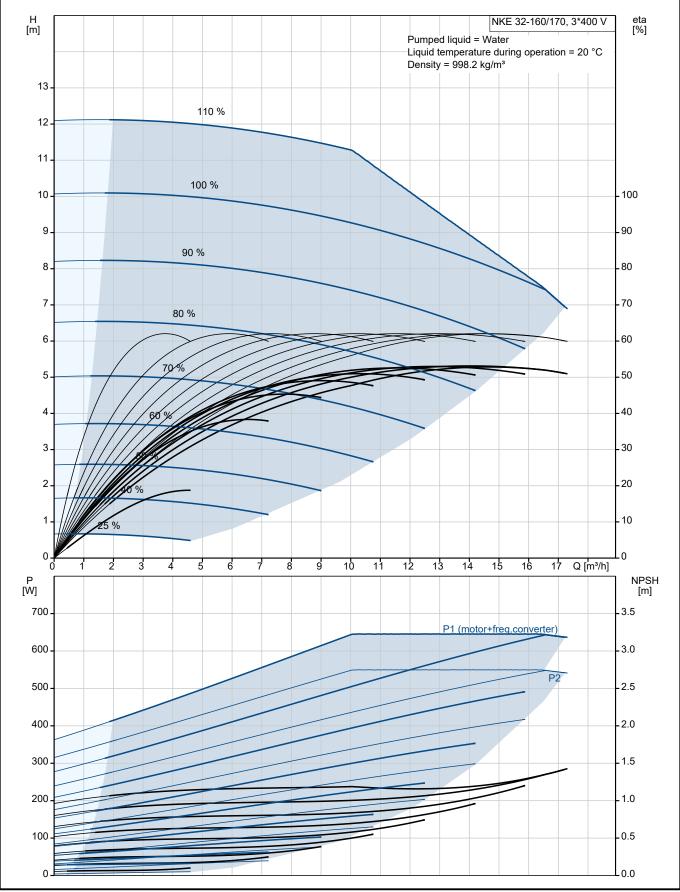
	Description	
	Shipping volume:	0.279 m³
	Country of origin:	HU

Country of origin: HU
Custom tariff no.: 84137059



**Date:** 16/06/2022

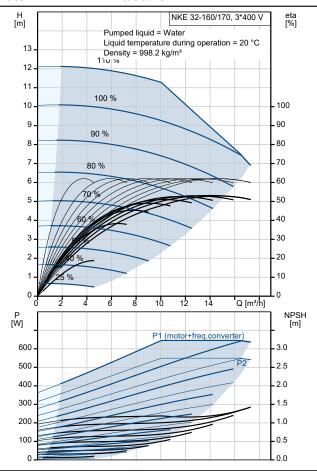
# On request NKE 32-160/170 AA2F2AESBQQEEWA 50 Hz

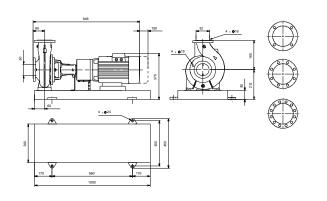


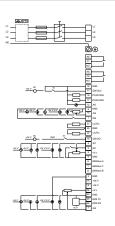


**Date:** 16/06/2022

Description	Value	
General information:		
Product name:	NKE 32-160/170 AA2F2AESBQQEEWA	
Product No:	On request	
EAN number:	On request	
Technical:		
Pump speed on which pump data are based:	1450 rpm	
Rated flow:	14.8 m³/h	
Pump with motor (Yes/No):	Υ	
Rated head:	8 m	
Actual impeller diameter:	170 mm	
Nominal impeller diameter:	160	
Shaft diameter:	24 mm	
Code for shaft seal:	BQQE	
Mechanical seal type:	Single	
Curve tolerance:	ISO9906:2012 3B2	
Pump version:	A2	
Bearing design:	Standard	
Materials:		
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:		
Range of ambient temperature:	-20 50 °C	
Maximum operating pressure:	16 bar	
Pipe connection standard:	EN 1092-2	
Type of inlet connection:	DIN	
Type of outlet connection:	DIN	
Size of inlet connection:	DN 50	
Size of outlet connection:	DN 32	
Pressure rating for connection:	PN 16	
Coupling type:	Flexible w/spacer	
Base frame design:	EN/ISO	
Code for base frame:	4	
Grouting (Yes/No):	N	
Connect code:	F	
Liquid:		
Pumped liquid:	Water	
Liquid temperature range:	-25 120 °C	
Selected liquid temperature:	20 °C	
Density:	998.2 kg/m³	
Electrical data:		
Motor type:	80B	
IE Efficiency class:	IE5	
Rated power - P2:	0.55 kW	
Mains frequency:	50 Hz	
Rated voltage:	3 x 380-500 V	
Rated current:	1.30-1.25 A	









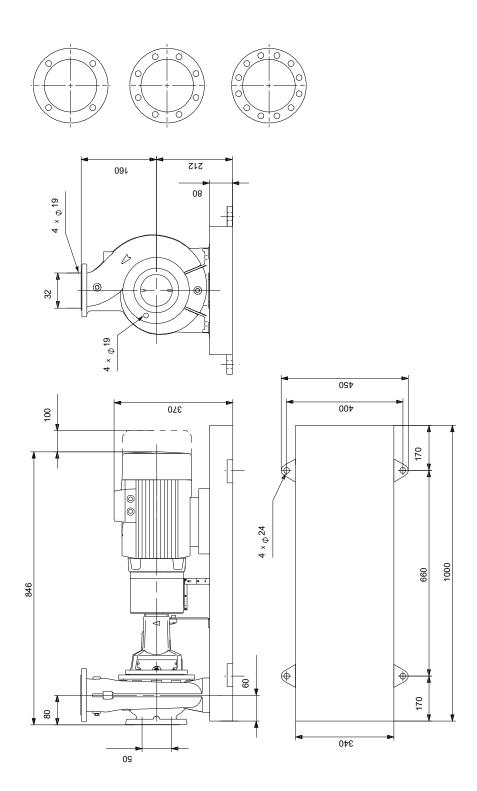
**Date:** 16/06/2022

Description	Value
Cos phi - power factor:	0.80-0.64
Rated speed:	180-2000 rpm
Efficiency:	84.6%
Motor efficiency at full load:	84.6 %
Number of poles:	4
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	ELEC
Motor No:	99305875
Bearing insulation type N-end:	STEEL BEARING
Controls:	
Control panel:	HMI300 - Graphical
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Pressure sensor:	N
Others:	
Minimum efficiency index, MEI ≥:	0.60
Net weight:	104 kg
Gross weight:	118 kg
Shipping volume:	0.279 m³
Country of origin:	HU
Custom tariff no.:	84137059



16/06/2022 Date:

# On request NKE 32-160/170 AA2F2AESBQQEEWA 50 Hz

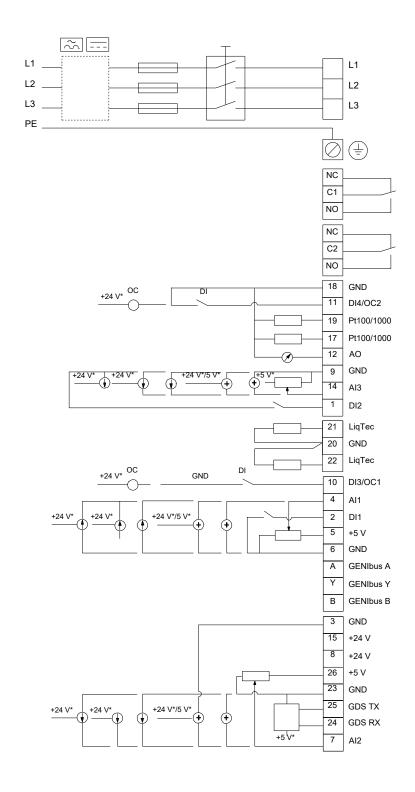


Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.



**Date:** 16/06/2022

# On request NKE 32-160/170 AA2F2AESBQQEEWA 50 Hz



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



**Date:** 16/06/2022

Order Data:

Product name: NKE 32-160/170

Amount: 1

Product No: On request

Total: Price on request