

Date: 16/06/2022 Qty. Description 1 NKE 100-160/169 BA2F2AESBQQEJWA 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 Eve 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.



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#### 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.

Date:

{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**

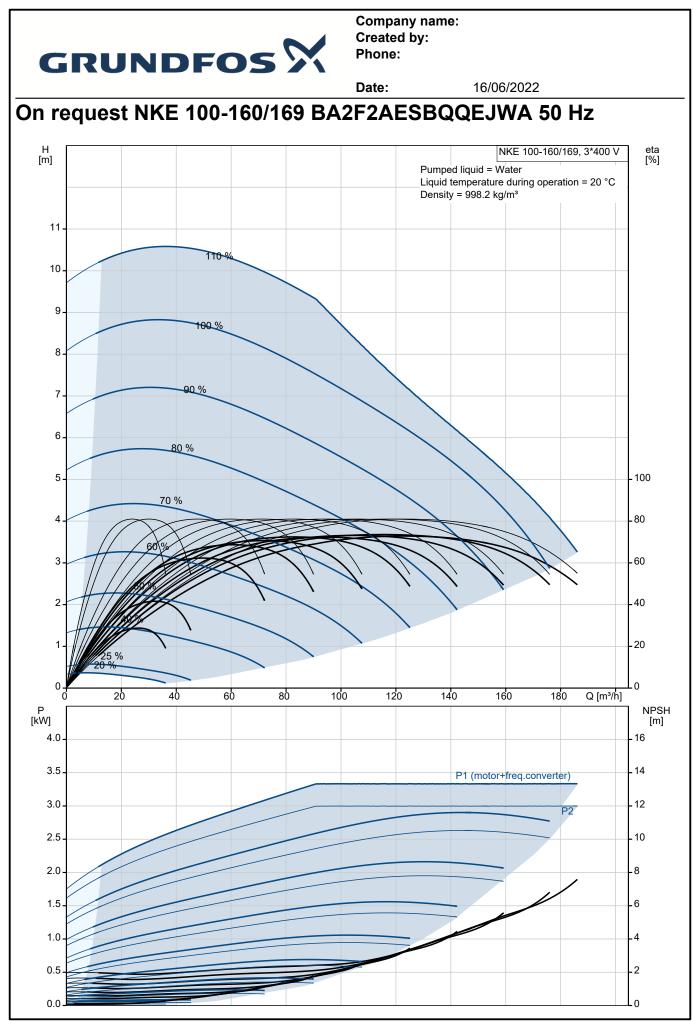
Controls: Frequency converter: Pressure sensor:	Built-in N
Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density:	Water -25 120 °C 20 °C 998.2 kg/m³
Technical:	



-			Date:	16/06/2022
	Description			
Pump speed on which pump data are based: 1450 rpm				
	Rated flow:	117 m³/h		
	Pump with motor (Yes/No):	Y		
	Rated head:	6.5 m		
	Actual impeller diameter:	169 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		
	r amp noucing.	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		
	Shait.			
		EN 1.4301 AISI 304		
		AI31 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 125		
	Size of outlet connection:	DN 100		
	Pressure rating for connection:	PN 16		
	Coupling type:	Flexible w/spacer		
	Base frame design:	EN/ISO		
	Code for base frame:	6		
	Grouting (Yes/No):	Ν		
	Electrical data:			
	Motor type:	100LD		
	IE Efficiency class:	IE5		
	Rated power - P2:	3 kW		
	Mains frequency:	50 Hz		
	Rated voltage:	3 x 380-500 V		
	Rated current:	5.80-4.60 A		
	Cos phi - power factor:	0.91-0.86		
	Rated speed:	180-2200 rpm		
	Efficiency:	90.1%		
	Motor efficiency at full load:	90.1 %		
	Number of poles:	4		
	Enclosure class (IEC 34-5):	4 IP55		
	Insulation class (IEC 85):	F		
	Motor No:	г 99305881		
	Bearing insulation type N-end:	STEEL BEARING		
	Others:	0.00		
	Minimum efficiency index, MEI ≥:			
	Net weight:	187 kg		
1	Gross weight:	202 kg		



			Date:	16/06/2022	
[	Description		Date.	10/00/2022	
_		0.554 m³			
	Shipping volume: Country of origin:	HU			
	Custom tariff no.:	84137059			



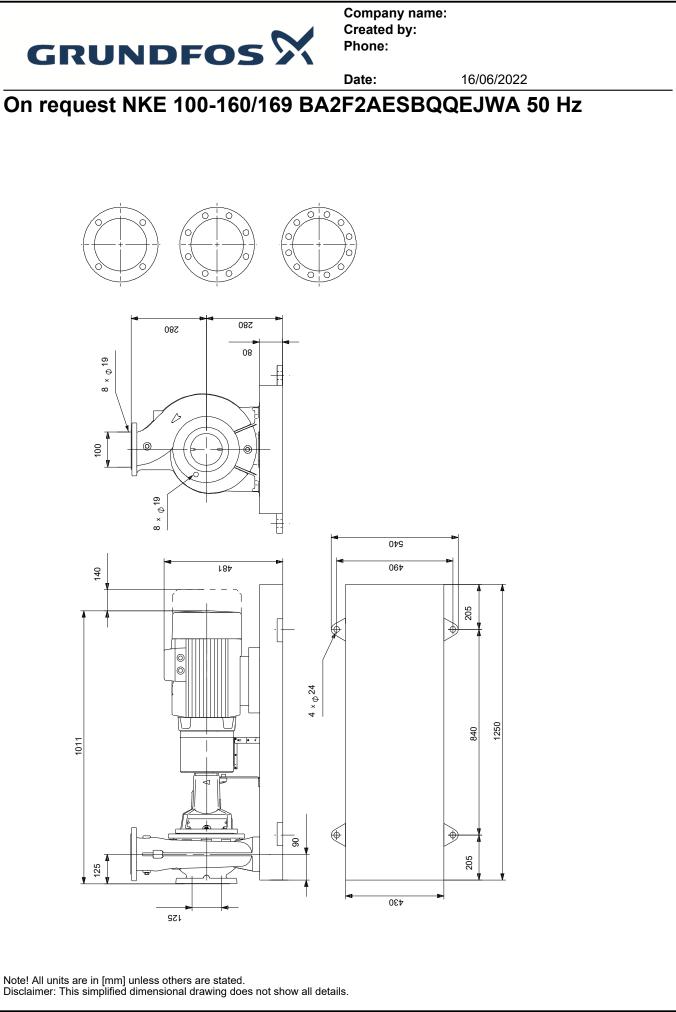


GRUND		Date:	16/06/2022
Description	Value	H [m]	NKE 100-160/169, 3*400 V [%] Pumped liquid = Water
General information:			Liquid temperature during operation = 20 °C
Product name:	NKE 100-160/169 BA2F2AESBQQEJWA	11-	Density = 998.2 kg/m <sup>3</sup>
Product No:	On request	10	
EAN number:	On request	9_	100 %
Technical:		8-	
Pump speed on which pump data are based:	1450 rpm	7	90 %
Rated flow:	117 m³/h		
Pump with motor (Yes/No):	Υ	6-	80 %
Rated head:	6.5 m	5	- 100
Actual impeller diameter:	169 mm		70 %
Nominal impeller diameter:	160	4	-80
Shaft diameter:	24 mm	3-11/2	-60
Code for shaft seal:	BQQE		
Mechanical seal type:	Single	2-	40
Curve tolerance:	ISO9906:2012 3B2	1	-20
Pump version:	A2	20%	
Bearing design:	Standard	0	50 100 150 Q [m³/h]
Materials:	Standard	P [kW]	NPSH
Pump housing:	Cast iron	[KVV]	[m]
· · ·	EN-GJL-250	3.5	P1 (motor+freq.converter) 14
Pump housing:		3.0 -	P2 12
Pump housing:	ASTM class 35	2.5	- 10
Wear ring:	Brass	2.0	-8
Impeller:	Cast iron		
Impeller:	EN-GJL-200	1.5-	
Impeller:	ASTM class 30	1.0	4
Internal pump house coating:	CED	0.5	-2
Material code:	A	0.0	
Code for rubber:	E		
Shaft:	Stainless steel		
Shaft:	EN 1.4301	125	
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 125	ŝ	& 8
Size of outlet connection:	DN 100		t
Pressure rating for connection:	PN 16	■ <sup>205</sup>	840 <b>2</b> 25 <b>1</b> 1250 <b>1</b>
Coupling type:	Flexible w/spacer	h	ikadi 🖌
Base frame design:	EN/ISO		
Code for base frame:	6		
Grouting (Yes/No):	Ν	<b>E</b>	_
Connect code:	F		₽ <b>₽</b> ₽₽
Liquid:		а. — — — — — — — — — — — — — — — — — — —	
Pumped liquid:	Water		
Liquid temperature range:	-25 120 °C		
Selected liquid temperature:	20 °C	-91/F 0C	
Density:	998.2 kg/m³		
Electrical data:	-	<u></u>	
Motor type:	100LD		
IE Efficiency class:	IE5		
Rated power - P2:	3 kW		L L I MORA 7 Maria A Maria A
Mains frequency:	50 Hz		
Rated voltage:	3 x 380-500 V		
Rated current:	5.80-4.60 A	<u></u>	
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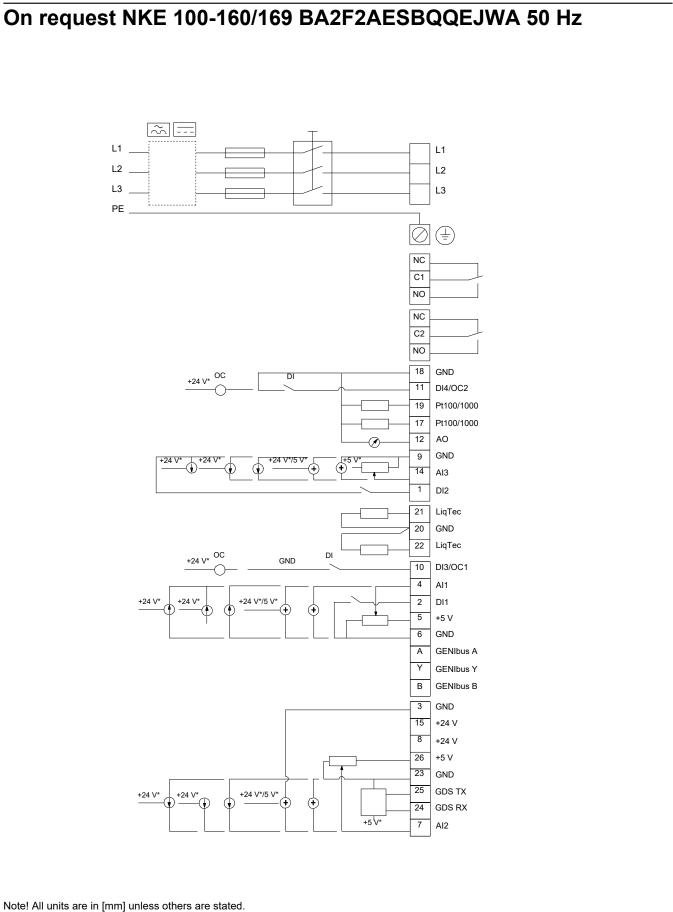
		Date:	16/06/2022
Description	Value		
Cos phi - power factor:	0.91-0.86	_	
Rated speed:	180-2200 rpm		
Efficiency:	90.1%		
Motor efficiency at full load:	90.1 %		
Number of poles:	4		
Enclosure class (IEC 34-5):	IP55		
Insulation class (IEC 85):	F		
Built-in motor protection:	ELEC		
Motor No:	99305881		
Bearing insulation type N-end:	STEEL BEARING		
Controls:			
Control panel:	HMI300 - Advanced		
Function Module:	FM300 - Advanced		
Frequency converter:	Built-in		
Pressure sensor:	Ν		
Others:			
Minimum efficiency index, MEI ≥:	0.68		
Net weight:	187 kg		
Gross weight:	202 kg		
Shipping volume:	0.554 m³		
Country of origin:	HU		
Custom tariff no.:	84137059		





Date:

16/06/2022





16/06/2022

# Order Data:

Product name:NKE 100-160/169Amount:1Product No:On request

Total: Price on request