

**Date:** 16/06/2022

### Qty. | Description

#### 1 NKE 40-125/116 AA2F2AESBQQEIWB



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).

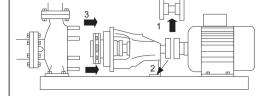
Communication with the pump is also possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

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.



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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)

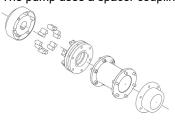
This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

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:



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Pump speed on which pump data are based: 2901 rpm

Rated flow: 42.51 m<sup>3</sup>/h

Pump with motor (Yes/No): Y

Rated head: 12.51 m
Actual impeller diameter: 116 mm
Nominal impeller diameter: 125
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 65 Size of inlet connection: Size of outlet connection: **DN 40** Pressure rating for connection: PN 16

Coupling type: Flexible w/spacer

Base frame design: EN/ISO
Code for base frame: 3
Grouting (Yes/No): N

Electrical data:

Motor type: 90LD
IE Efficiency class: IE5
Rated power - P2: 2.2 kW
Mains frequency: 50 Hz
Rated voltage: 3 x 380-500 V

Rated current: 4.15-3.40 A
Cos phi - power factor: 0.93-0.87
Rated speed: 360-4000 rpm

Efficiency: 90.1%

Motor efficiency at full load: 90.1 %

Number of poles: 2

Enclosure class (IEC 34-5): IP55

Insulation class (IEC 85): F

Motor No: 99306739

Bearing insulation type N-end: STEEL BEARING

Others:

 $\begin{array}{ll} \mbox{Minimum efficiency index, MEI} \geq : & 0.66 \\ \mbox{Net weight:} & 95.6 \mbox{ kg} \\ \mbox{Gross weight:} & 109 \mbox{ kg} \end{array}$ 



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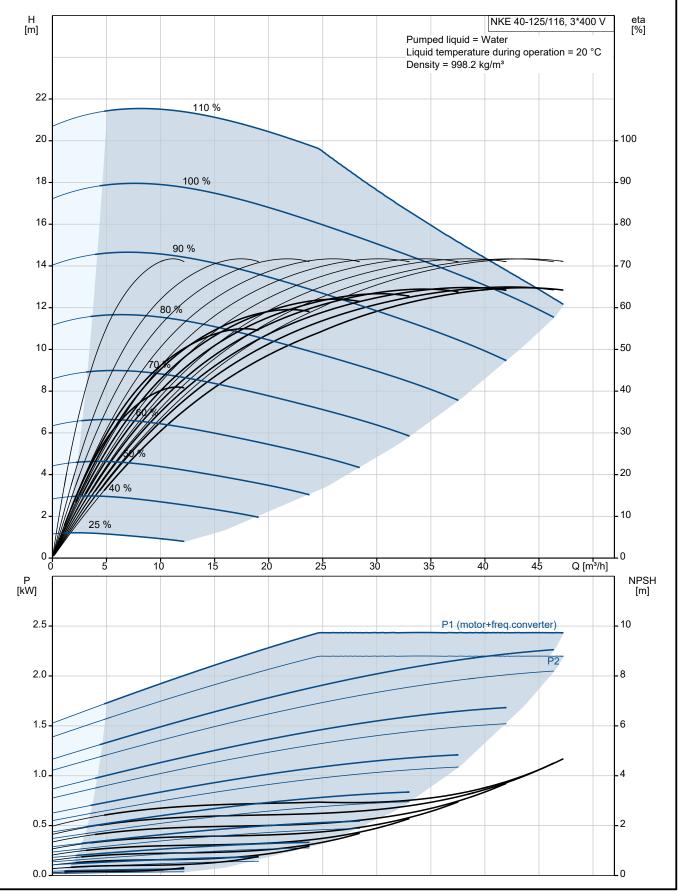
	Description	
	Shipping volume:	0.261 m³
	Country of origin:	HU

Country of origin: HU
Custom tariff no.: 84137059



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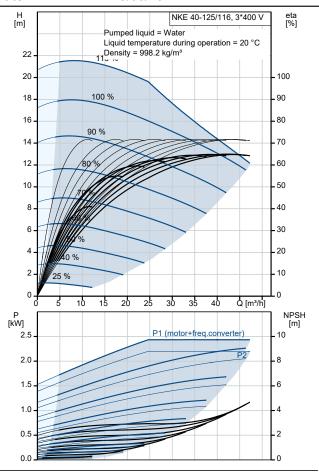
## On request NKE 40-125/116 AA2F2AESBQQEIWB 50 Hz

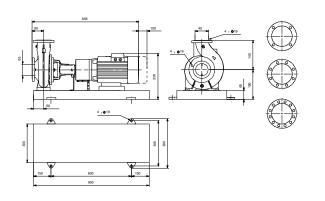


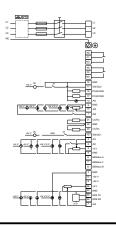


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Description	Value		
General information:			
Product name:	NKE 40-125/116 AA2F2AESBQQEIWB		
Product No:	On request		
EAN number:	On request		
Technical:			
Pump speed on which pump data are based:	2901 rpm		
Rated flow:	42.51 m³/h		
Pump with motor (Yes/No):	Y		
Rated head:	12.51 m		
Actual impeller diameter:	116 mm		
Nominal impeller diameter:	125		
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:	F		
Shaft:	Stainless steel		
Shaft:	EN 1.4301		
Shaft:	AISI 304		
Installation:	7.1.0.001		
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 65		
Size of outlet connection:	DN 40		
Pressure rating for connection:	PN 16		
Coupling type:	Flexible w/spacer		
Base frame design:	EN/ISO		
Code for base frame:	3		
Grouting (Yes/No):	N		
Connect code:	F		
Liquid:	<u>'</u>		
Pumped liquid:	Water		
Liquid temperature range:	-25 120 °C		
Selected liquid temperature:	20 °C		
Density:	998.2 kg/m³		
Electrical data:			
	90LD		
Motor type:	IE5		
IE Efficiency class:			
Rated power - P2:	2.2 kW		
Mains frequency:	50 Hz		
Rated voltage:	3 x 380-500 V		
Rated current:	4.15-3.40 A		









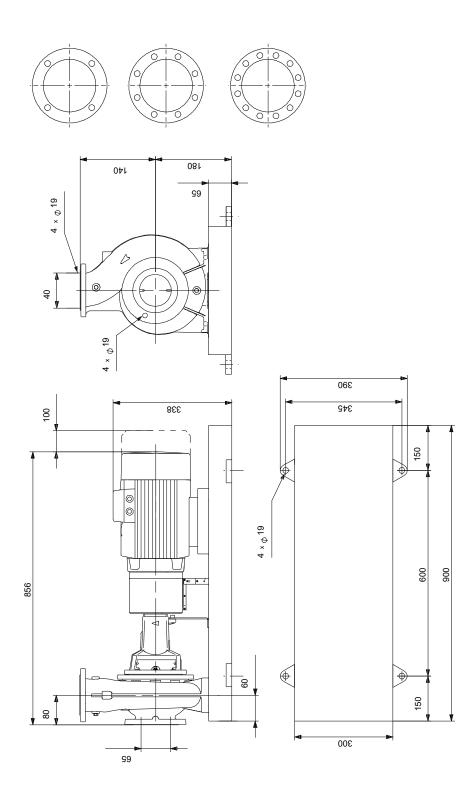
**Date:** 16/06/2022

Description	Value
Cos phi - power factor:	0.93-0.87
Rated speed:	360-4000 rpm
Efficiency:	90.1%
Motor efficiency at full load:	90.1 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	ELEC
Motor No:	99306739
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 ≥:	0.66
Net weight:	95.6 kg
Gross weight:	109 kg
Shipping volume:	0.261 m³
Country of origin:	HU
Custom tariff no.:	84137059



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# On request NKE 40-125/116 AA2F2AESBQQEIWB 50 Hz

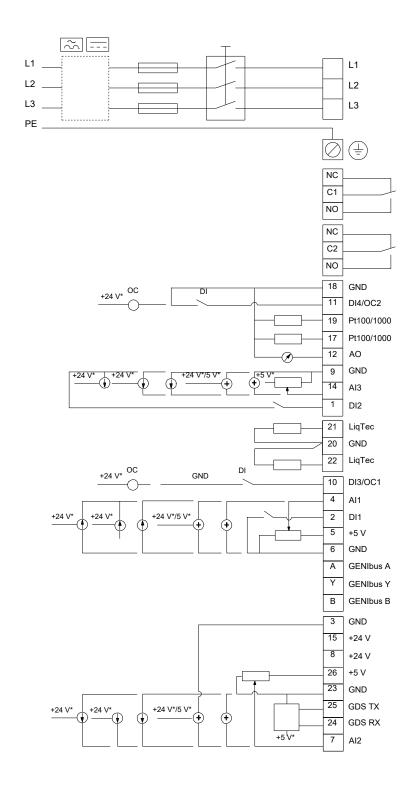


Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.



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



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Order Data:

Product name: NKE 40-125/116

Amount: 1

Product No: On request

Total: Price on request