

NKE100-160/176 EUPA2F2AE-SGQQE

Grundfos pump 98760173



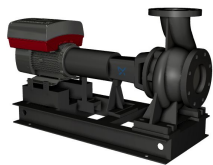
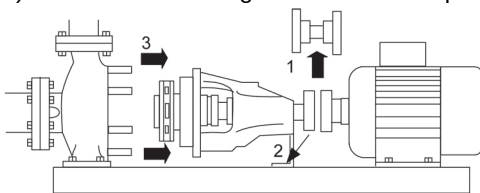
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<https://www.lenntech.com/grundfos/NKEBASIS/98760173/NKE-100-160-176-EUP-A2-F-A-E-GQQE.html>

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Position	Qty.	Description
	1	NKE 100-160/176 EUP A2-F-A-E-GQQE  Product No.: On request 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 shaft seal with reduced seal face is according to DIN EN 12756. The pump is fitted with a foot-mounted, fan-cooled asynchronous 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. Further product details An external sensor can be connected if controlled pump operation is required for flow, differential pressure or temperature control. An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The operating panel has indicator lights for "Operation" and "Fault". Communication with the pump is 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 make service on 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.  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. An integral part of the process is a pretreatment. The entire process consists of these elements: 1) Alkaline-based cleaning. 2) Zinc phosphating. 3) Cathodic electro-deposition. 4) Curing to a dry film thickness 18-22 my m. The colour code for the finished product is NCS 9000/RAL 9005. 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 or cast iron.

The shaft seal is an unbalanced rubber bellows seal with reduced seal face. Due to the bellows, the seal does not wear the shaft, and the axial movement is not prevented by deposits on the shaft. The narrow seal face makes the seal perform well in high-viscosity and anti-freezing liquids.

Primary seal:

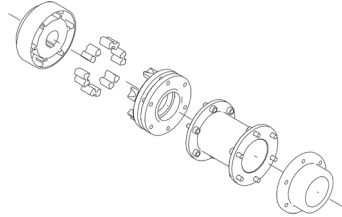
- Rotating seal ring material: silicon carbide (SiC)
- Stationary seat material: silicon carbide (SiC)

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 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 and mounting designation B3 (IM 1001). Electrical tolerances comply with IEC 60034.

The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.

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:

- pump start/stop input (potential-free contact)
- remote setpoint setting via analog signal, 0-10 V, 0(4)-20 mA
- 10 V voltage supply for setpoint potentiometer, $I_{max} = 5$ mA
- one analog sensor input, 0-10 V, 0(4)-20 mA
- 24 V voltage supply for sensor, $I_{max} = 40$ mA
- one digital input
- one potential-free fault signal relay with changeover contact, reporting "Fault", "Operation" or "Ready"
- RS-485 GENIbus connection.

Technical data

Liquid:

Pumped liquid: Water
Liquid temperature range: -25 .. 60 °C
Liquid temperature during operation: 20 °C
Density: 998.2 kg/m³

Technical:

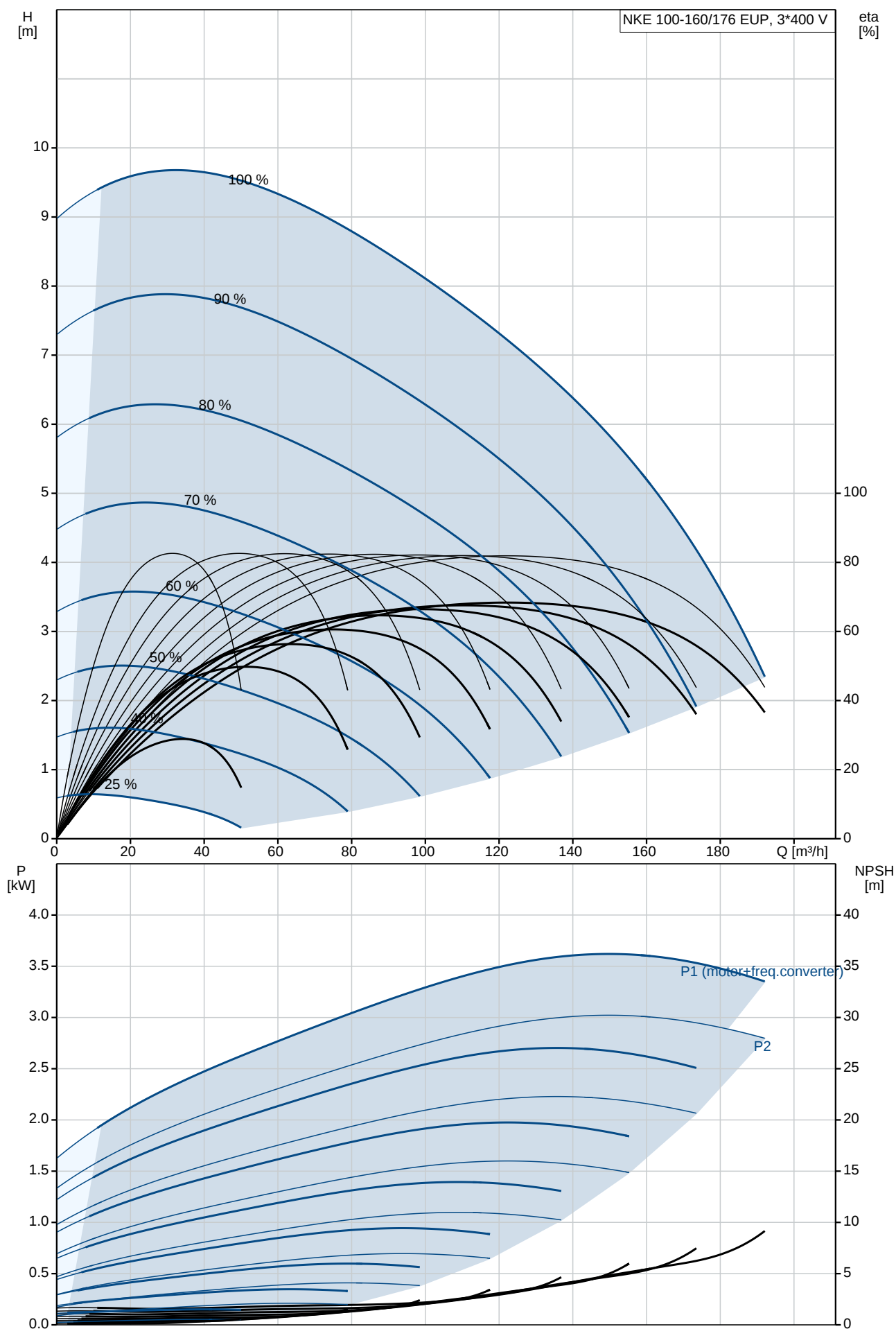
Rated flow: 119 m³/h
Rated head: 6.9 m
Actual impeller diameter: 176 EUP mm
Impeller nom: 160 mm
Primary shaft seal: GQQE
Secondary shaft seal: NONE
Curve tolerance: ISO9906:2012 3B

Materials:

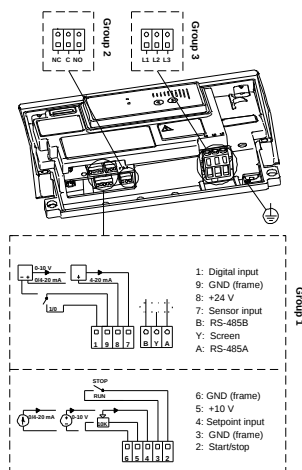
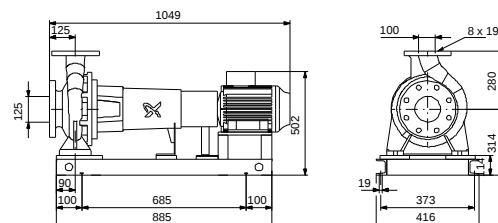
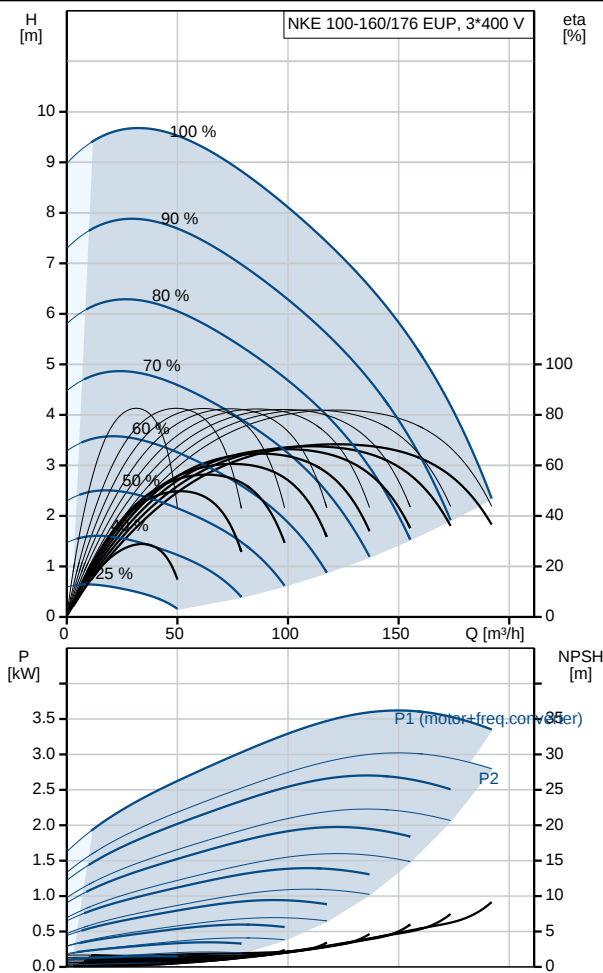
Pump housing: Cast iron
EN-GJL-250
ASTM A48-40 B
Impeller: Cast iron
EN-GJL-200
ASTM A48-30 B
Rubber: EPDM

Position	Qty.	Description
		Wear ring mat.: Bronze (CuSn10) Installation: Maximum ambient temperature: 40 °C Maximum operating pressure: 16 bar Pump inlet: DN 125 Pump outlet: DN 100 Pressure rating: PN 16 Coupling type: Spacer Base frame: C - Channel Electrical data: Motor type: 112MC IE Efficiency class: IE3 Rated power - P2: 4 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-480 V Rated current: 8.10-6.60 A Cos phi - power factor: 0.94-0.92 Rated speed: 180-1760 rpm Efficiency: IE3 88,6% Motor efficiency at full load: 88.6 % Number of poles: 4 Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Lubricant type: Grease Others: Minimum efficiency index, MEI ≥: 0.68 ErP status: EuP Standalone/Prod. Net weight: 183 kg Gross weight: 292 kg Shipping volume: 1.11 m³

On request NKE 100-160/176 EUP A2-F-A-E-GQQE 50 Hz



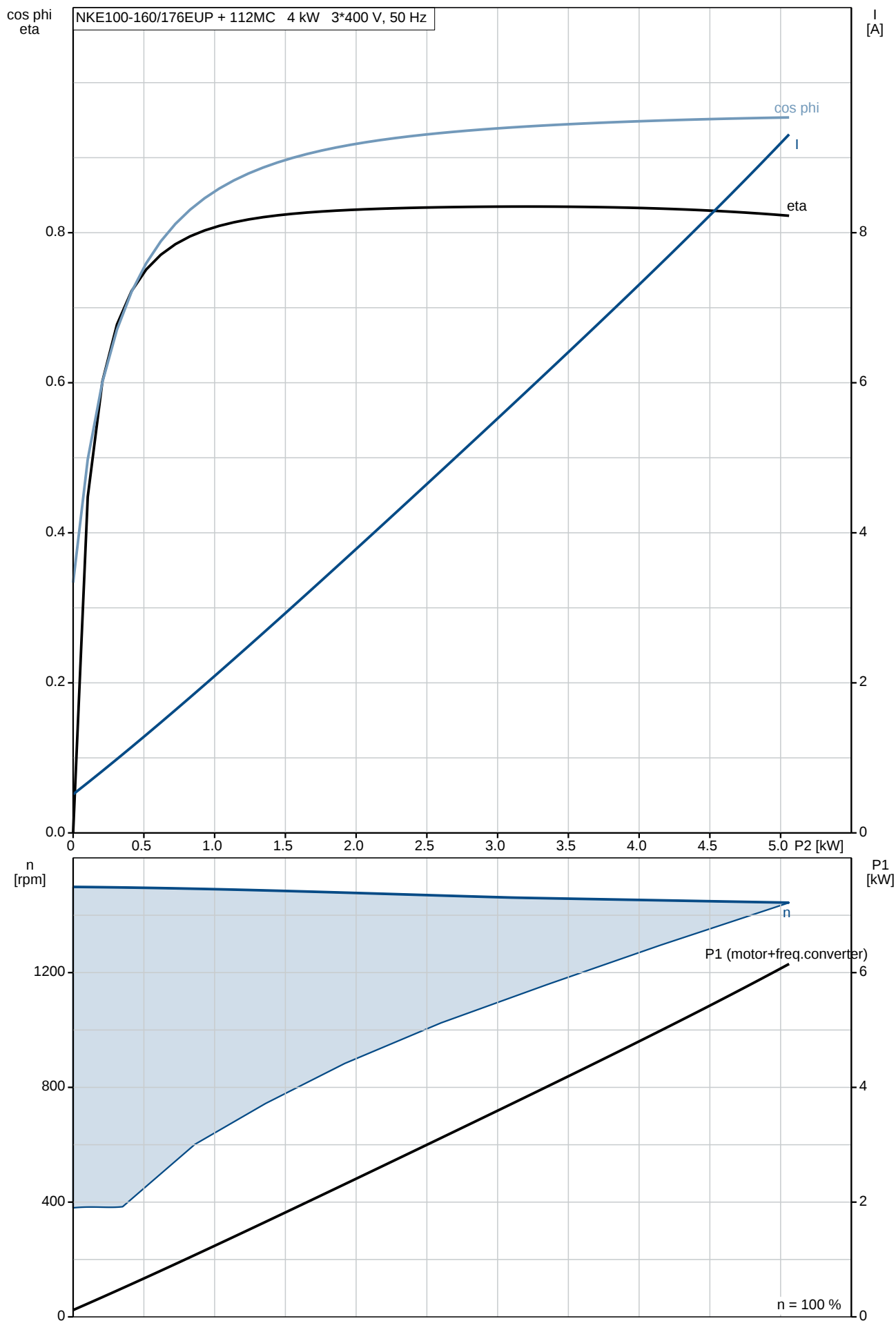
Description	Value
General information:	
Product name:	NKE 100-160/176 EUP
Product No:	A2-F-A-E-GQQE
EAN number:	On request
Technical:	
Rated flow:	119 m³/h
Rated head:	6.9 m
Actual impeller diameter:	176 EUP mm
Impeller nom:	160 mm
Primary shaft seal:	GQQE
Secondary shaft seal:	NONE
Shaft diameter:	24 mm
Curve tolerance:	ISO9906:2012 3B
Pump version:	A2
Materials:	
Pump housing:	Cast iron
	EN-GJL-250
	ASTM A48-40 B
Impeller:	Cast iron
	EN-GJL-200
	ASTM A48-30 B
Material code:	A
Rubber:	EPDM
Code for rubber:	E
Wear ring mat.:	Bronze (CuSn10)
Installation:	
Maximum ambient temperature:	40 °C
Maximum operating pressure:	16 bar
Pump inlet:	DN 125
Pump outlet:	DN 100
Pressure rating:	PN 16
Coupling type:	Spacer
Wear ring(s):	neckring(s)
Base frame:	C - Channel
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 60 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor type:	112MC
IE Efficiency class:	IE3
Rated power - P2:	4 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-480 V
Rated current:	8.10-6.60 A
Cos phi - power factor:	0.94-0.92
Rated speed:	180-1760 rpm
Efficiency:	IE3 88,6%
Motor efficiency at full load:	88.6 %
Number of poles:	4
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protec:	YES
Motor No:	86906313
Lubricant type:	Grease
Others:	
Minimum efficiency index, MEI ≥:	0.68
ErP status:	EuP Standalone/Prod.
Net weight:	183 kg
Gross weight:	292 kg
Shipping volume:	1.11 m³



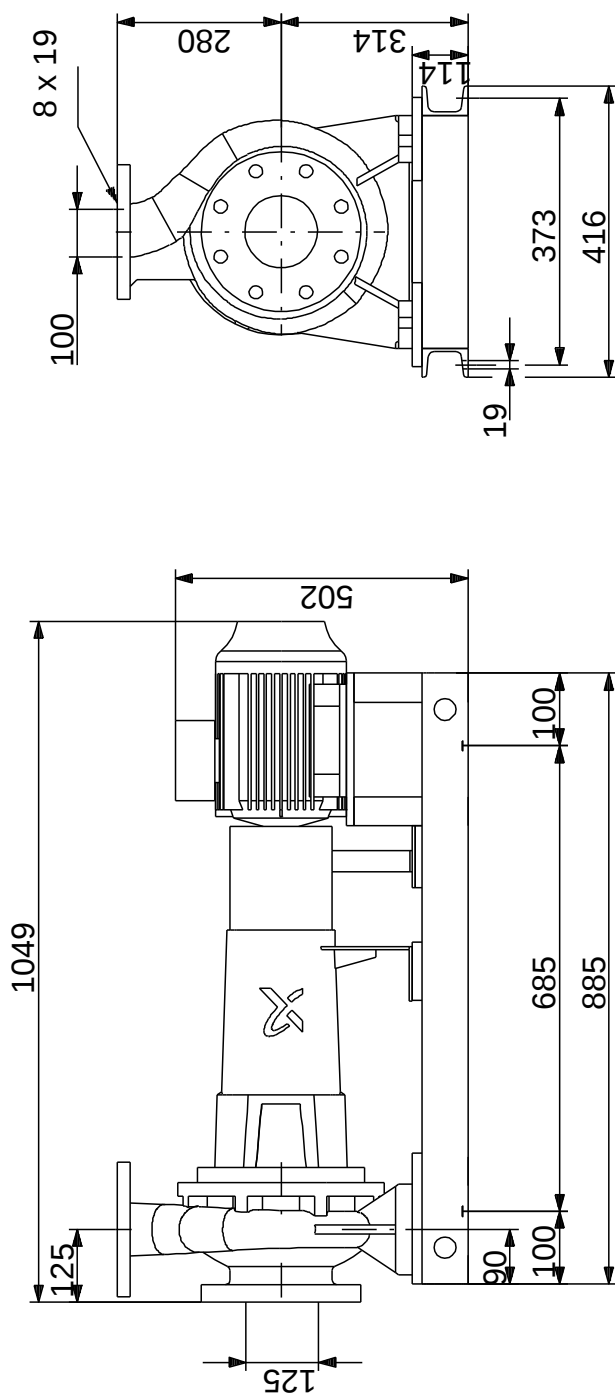
Description	Value
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Config. file no:	97912605
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Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view

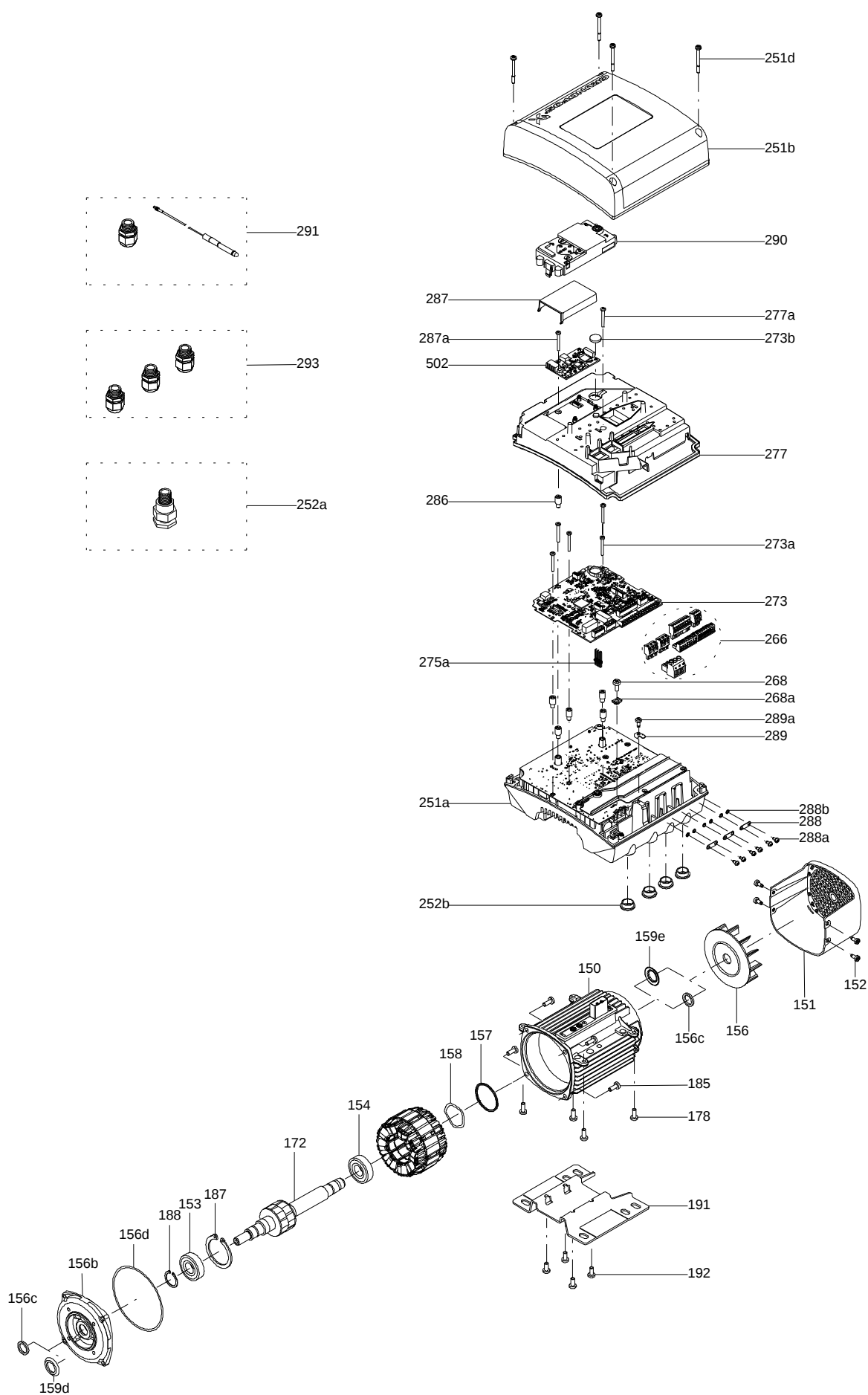


Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list NKE 100-160/176 EUP, Product No. On request
Valid from 30.4.2012 (1218)

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
+	Motor				1	pcs
-	Coupling cpl.				1	pcs
89.b	Socket set screw		Length (mm): 8		1	
			Thread: M6			
89.d	Hex socket head cap screw		Length (mm): 16		6	
			Thread: M6			
89.p	Coupling female				1	
89o	Coupling part spacer side				6	
89o	Coupling part spacer side				1	
89r	Spacer sleeve				1	
89s	Spacer ring				1	
-	Nut				1	pcs
66	Washer				1	
66a	Spring lock washer				1	
67	Nut		Thread: M14		1	
-	Pump housing cpl.				1	pcs
6	Pump housing				1	
36	Nut		Thread: M10		6	
- 7	Coupling guard cpl.				1	pcs
- 7	Coupling guard cpl.				1	
7c	Spacer f/coupling guard				1	
7e	Hex socket head cap screw				3	
94	Lock nut		Thread: M6		2	
7b	Retainer for coupling guard				1	
7k	Hex socket head cap screw		Length (mm): 10		4	
			Thread: M6			
- 7.d	Foot for coupling guard				1	pcs
7d	Foot for coupling guard				1	
7h	Hex socket head cap screw				2	
7l	Support f/coupling guard foot				1	
66	Washer				2	
49	Impeller				1	pcs
53.b	Spacer ring				1	pcs
72a	O-ring		Diameter: 177,39		1	pcs
			Material type: EPDM			
			Thickness: 3,53			
- 77	Cover				1	pcs
77	Cover				1	
- 86	Bearing bracket				1	pcs
28a	Hex head screw		Length (mm): 25		1	
			Thread: M12			
53.b	Spacer ring				1	
54	Ball bearing				2	
54a	O-ring		Diameter: 71,5		2	
			Material type: EPDM			
			Thickness: 3			
77a	Pan head screw				4	
86	Bearing bracket				1	
156a	Bearing cover				2	
159a	V-ring				2	
187	Retaining ring				2	
- 90	Base plate				1	pcs
	Hex head screw		Length (mm): 35MM		2	
			Thread: M12			
	Hex head screw				4	
	Washer				4	
	Washer				4	
	Base plate				1	
	Support block				2	

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
7h	Hex head screw		Length (mm): 16		2	
			Thread: M8			
28	Hex head screw				4	
36	Nut		Thread: M10		4	
66	Washer				2	
66	Washer				2	
90b	Hex head screw				4	
105	Shaft seal		Material type: GQQE		1	pcs

Disclaimer: The information about the Grundfos pump in this document may be outdated.

Data may be subject to alterations without further notice.

Please contact us to verify the data above is still accurate/up-to-date.

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