

Date: 16/06/2022 Qty. Description 1 NKE 80-250/270 AA2F2AESBQQENW3 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 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. 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. 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 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. Vear rings used in pump housing and for impeller are made of bronze/brass. 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)



16/06/2022

```
Qty. | Description
```

• 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.

Date:

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 32 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 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, Imax = 5 mA
- one analog sensor input, 0-10 V, 0(4)-20 mA
- 24 V voltage supply for sensor, Imax = 40 mA
- one digital input
- two potential-free fault signal relays with changeover contact, reporting "Fault", "Operation" or "Ready"
- RS-485 GENIbus connection
- interface for Grundfos CIM fieldbus module.

### Further product details

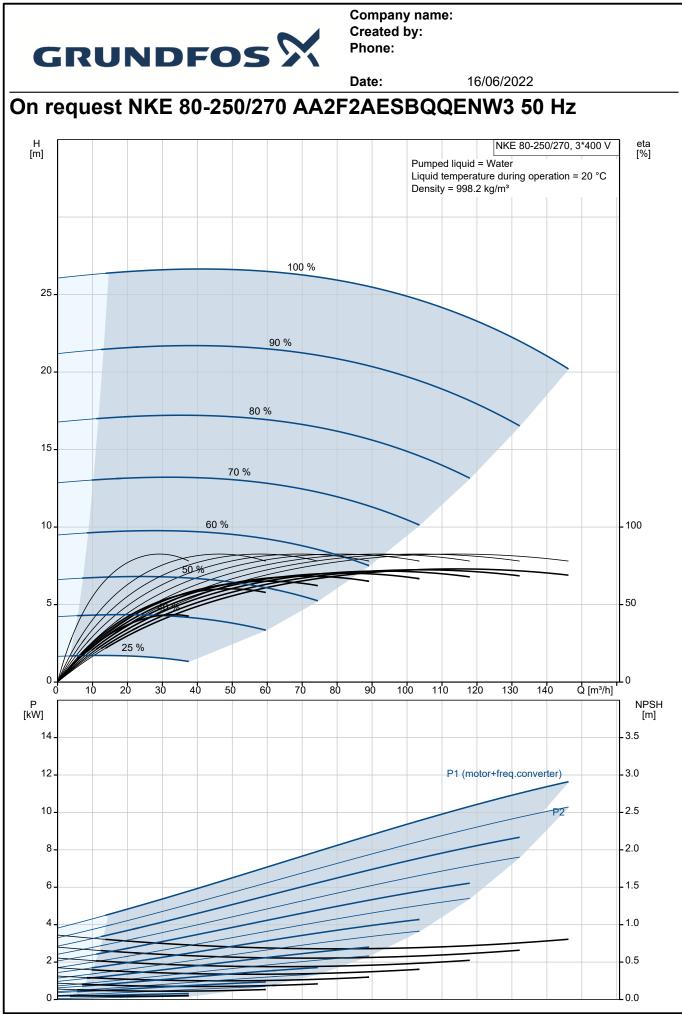
Cast-iron parts have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.

## **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: Pump speed on which pump data Rated flow: Pump with motor (Yes/No): Rated head: Actual impeller diameter: Nominal impeller diameter:	are based: 119.1 m³/h Y 22.81 m 270 mm 250	1460 rpm



ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	BQQE Single ISO9906:2012 3B2 Standard Cast iron EN-GJL-250 ASTM class 35 Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304 -20 40 °C 16 bar				
echanical seal type: urve tolerance: earing design: aterials: ump housing: 'ear ring: peller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	Single ISO9906:2012 3B2 Standard Cast iron EN-GJL-250 ASTM class 35 Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304 -20 40 °C				
urve tolerance: earing design: aterials: ump housing: fear ring: peller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	ISO9906:2012 3B2 Standard Cast iron EN-GJL-250 ASTM class 35 Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304 -20 40 °C				
urve tolerance: earing design: aterials: ump housing: fear ring: peller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	ISO9906:2012 3B2 Standard Cast iron EN-GJL-250 ASTM class 35 Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304 -20 40 °C				
earing design: aterials: ump housing: fear ring: peller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	Standard Cast iron EN-GJL-250 ASTM class 35 Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304				
aterials: ump housing: lear ring: npeller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	Cast iron EN-GJL-250 ASTM class 35 Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304				
ump housing: lear ring: peller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	EN-GJL-250 ASTM class 35 Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304				
lear ring: npeller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	EN-GJL-250 ASTM class 35 Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304				
npeller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	ASTM class 35 Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304				
npeller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304				
npeller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	Brass Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304				
npeller: ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	Cast iron EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304				
ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	EN-GJL-200 ASTM class 30 CED Stainless steel EN 1.4301 AISI 304				
ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	ASTM class 30 CED Stainless steel EN 1.4301 AISI 304 -20 40 °C				
ternal pump house coating: naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	CED Stainless steel EN 1.4301 AISI 304 -20 40 °C				
naft: stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	Stainless steel EN 1.4301 AISI 304 -20 40 °C				
stallation: ange of ambient temperature: aximum operating pressure: pe connection standard:	EN 1.4301 AISI 304 -20 40 °C				
ange of ambient temperature: aximum operating pressure: pe connection standard:	AISI 304 -20 40 °C				
ange of ambient temperature: aximum operating pressure: pe connection standard:	-20 40 °C				
ange of ambient temperature: aximum operating pressure: pe connection standard:					
ange of ambient temperature: aximum operating pressure: pe connection standard:					
aximum operating pressure: pe connection standard:					
pe connection standard:	in har				
	EN 1092-2				
/pe of inlet connection:	DIN				
/pe of outlet connection:	DIN				
ze of inlet connection:	DN 100				
ze of outlet connection:	DN 80				
essure rating for connection:	PN 16				
	Flexible w/spacer				
ectrical data:					
otor type:	160LB				
Efficiency class:	IE3				
ated power - P2:	11 kW				
•	50 Hz				
	-				
sulation class (IEC 85):	F				
otor No:	86906221				
thers:	0.70				
et weight:	343 kg				
ross weight:	370 kg				
nipping volume:	0.744 m³				
ountry of origin:	HU				
ustom tariff no.:	84137059				
	pupling type: use frame design: ode for base frame: outing (Yes/No): ectrical data: botor type: Efficiency class: uted power - P2: ains frequency: uted voltage: uted voltage: uted current: by phi - power factor: uted speed: ficiency: botor efficiency at full load: umber of poles: uclosure class (IEC 34-5): sulation class (IEC 85): botor No: hers: nimum efficiency index, MEI ≥: uted weight: oss weight: ipping volume: bountry of origin:	uppling type:Flexible w/spaceruse frame design:EN/ISOode for base frame:7outing (Yes/No):Nectrical data:160LBotor type:160LBEfficiency class:IE3ted power - P2:11 kWains frequency:50 Hzted voltage:3 x 380-480 Vted voltage:22.0-17.8 Aos phi - power factor:0.91-0.90ted speed:240-1750 rpmficiency:IE3 91,4%otor efficiency at full load:91.4 %unber of poles:4uclosure class (IEC 34-5):IP55sulation class (IEC 85):Fotor No:86906221hers:0.70et weight:343 kgoss weight:370 kgupping volume:0.744 m³upting volume:0.744 m³upting volume:0.744 m³	buying type:Flexible w/spaceruse frame design:EN/ISOde for base frame:7outing (Yes/No):Nectrical data:Flexible W/spacerotor type:160LBEfficiency class:IE3ted power - P2:11 kWains frequency:50 Hzted voltage:3 x 380-480 Vted current:22.0-17.8 Aobs phi - power factor:0.91-0.90ted speed:240-1750 rpmficiency:IE3 91,4%otor efficiency at full load:91.4 %umber of poles:4closure class (IEC 34-5):IP55sulation class (IEC 85):Fotor No:86906221hers:0.70nimum efficiency index, MEI ≥:0.70at weight:343 kgoss weight:370 kgupping volume:0.744 m³puntry of origin:HU	buy pupiling typeFlexible w/spaceruse frame design:EN/ISOade for base frame:7outing (Yes/No):Nectrical data: $160LB$ botor type:160LBEfficiency class:IE3ted power - P2:11 kWains frequency:50 Hzted voltage:3 x 380-480 Vted voltage:3 x 380-480 Vted speed:22.0-17.8 Asp phi - power factor:0.91-0.90ted speed:240-1750 rpmficiency:IE3 91,4%obtor efficiency at full load:91.4 %umber of poles:4closure class (IEC 34-5):IP55sulation class (IEC 35):Fobtor No:86906221hers:0.70nimum efficiency index, MEI ≥:0.70et weight:343 kgoss weight:370 kgipping volume:0.744 m³outry of origin:HU	hupling type:Flexible w/spaceruse frame design:EN/ISOdef for base frame:7outing (Yes/No):Nextrical data:bot type:160LBEfficiency class:IE3tted power - P2:11 kWains frequency:50 Hztot ottage:3 x 380-480 Vted ourrent:22.0-17.8 Asp phi - power factor:0.91-0.90ted speed:240-1750 rpmficiency:IE3 91,4%otor efficiency at full load:91.4 %umber of poles:4closure class (IEC 34-5):IP55sulation class (IEC 35):Fotor No:86906221hers:0.70etw weight:343 kgoss weight:370 kguntry of origin:HU



Printed from Grundfos Product Centre [2022.26.009]



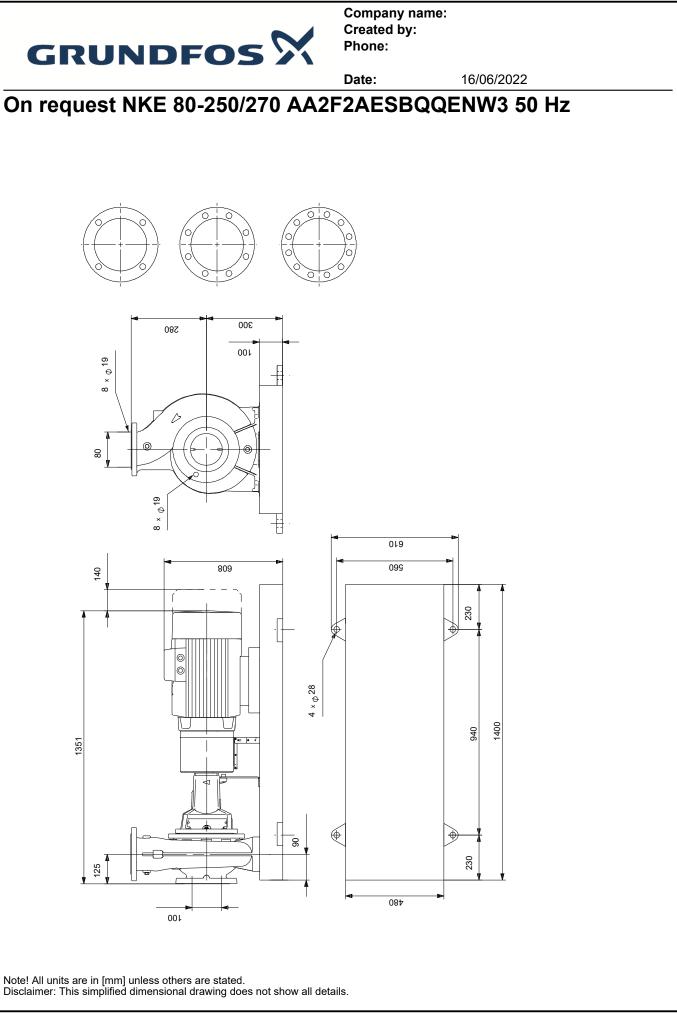
GROND		Date:	16/06/2022
Description	Value	H [m]	NKE 80-250/270, 3*400 V [%]
General information:	value	[]	Pumped liquid = Water
Product name:	NKE 80-250/270 AA2F2AESBQQENW3		Liquid temperature during operation = 20 °C Density = 998.2 kg/m <sup>3</sup>
Product No:	On request		100 %
EAN number:	On request	25 -	
Technical:	-		
Pump speed on which pump data are based:	1460 rpm	20 -	90%
Rated flow:	119.1 m³/h		80 %
Pump with motor (Yes/No):	Υ	15 -	
Rated head:	22.81 m		70 %
Actual impeller diameter:	270 mm		
Nominal impeller diameter:	250	10	60 %
Shaft diameter:	32 mm		EAB
Code for shaft seal:	BQQE		
Mechanical seal type:	Single	5-	- 50
Curve tolerance:	ISO9906:2012 3B2	25	5 %
Pump version:	A2		
Bearing design:	Standard	0 20	40 60 80 100 120 Q [m³/h]
Materials:		P [kW]	NPSH [m]
Pump housing:	Cast iron	[]	
Pump housing:	EN-GJL-250	12	P1 (motor+freq.converter) _ 3.0
Pump housing:	ASTM class 35	10	-2.5
Wear ring:	Brass	8 -	2.0
Impeller:	Cast iron		
Impeller:	EN-GJL-200	6	-1.5
Impeller:	ASTM class 30	4 -	-1.0
Internal pump house coating:	CED	2	0.5
Material code:	A		
Code for rubber:	E		
Shaft:	Stainless steel		
Shaft:	EN 1.4301		1351
Shaft:	AISI 304	125	
Installation:			
Range of ambient temperature:	-20 40 °C		
Maximum operating pressure:	16 bar		
Pipe connection standard:	EN 1092-2		
Type of inlet connection:	DIN	90	4.028
Type of outlet connection:	DIN		
Size of inlet connection:	DN 100		8
Size of outlet connection:	DN 80		
Pressure rating for connection:	PN 16	230	
Coupling type:	Flexible w/spacer		1400
Base frame design:	EN/ISO		
Code for base frame:	7		
Grouting (Yes/No):	Ν		
Connect code:	F		
Liquid:			
Pumped liquid:	Water		
Liquid temperature range:	-25 120 °C		
Selected liquid temperature:	20 °C		
Density:	998.2 kg/m <sup>3</sup>		
Electrical data:	U U		للا) 
Motor type:	160LB	6-15 V	1 : Digital Input
IE Efficiency class:	IE3		9 - 9 (MO (fame) 8 - 44 V   7 - Sensor input   8 - R54455
Rated power - P2:	11 kW		8. Ko-vadub Y. Soreen A: RS-485A
Mains frequency:	50 Hz		
Rated voltage:	3 x 380-480 V		6: GNU (trame) 5: +10 V 4: Selpcint input 3: GNU (trame)
Rated current:	22.0-17.8 A		2 Startiston

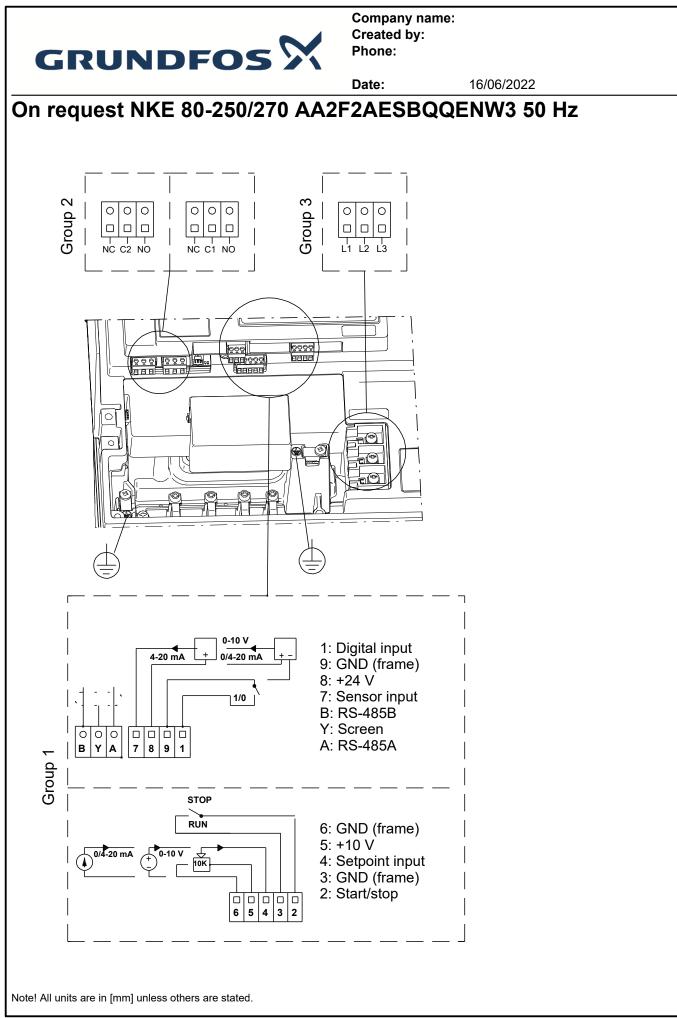
Printed from Grundfos Product Centre [2022.26.009]



16/06/2022

		Date:
Description	Value	
Cos phi - power factor:	0.91-0.90	-
Rated speed:	240-1750 rpm	
Efficiency:	IE3 91,4%	
Motor efficiency at full load:	91.4 %	
Number of poles:	4	
Enclosure class (IEC 34-5):	IP55	
Insulation class (IEC 85):	F	
Built-in motor protection:	YES	
Motor No:	86906221	
Controls:		
Control panel:	Standard	
Function Module:	PUMP I/O	
Frequency converter:	Built-in	
Pressure sensor:	Ν	
Others:		
Minimum efficiency index, MEI ≥:	0.70	
Net weight:	343 kg	
Gross weight:	370 kg	
Shipping volume:	0.744 m³	
Country of origin:	HU	
Custom tariff no.:	84137059	







16/06/2022

# Order Data:

Product name:NKE 80-250/270Amount:1Product No:On request

Total: Price on request