

**Qty. Description**

1 **NK 100-200/203 AA2F2AESBQQEUW1**



**Note! Product picture may differ from actual product**

Product No.: [98606358](#)

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.

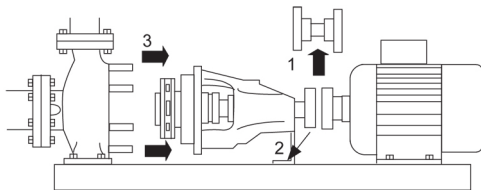
The pump is fitted with a foot-mounted, fan-cooled asynchronous motor. Pump and motor are mounted on a common base frame.

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 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)

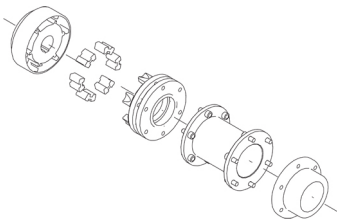
This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

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 32 mm where the coupling is mounted.

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



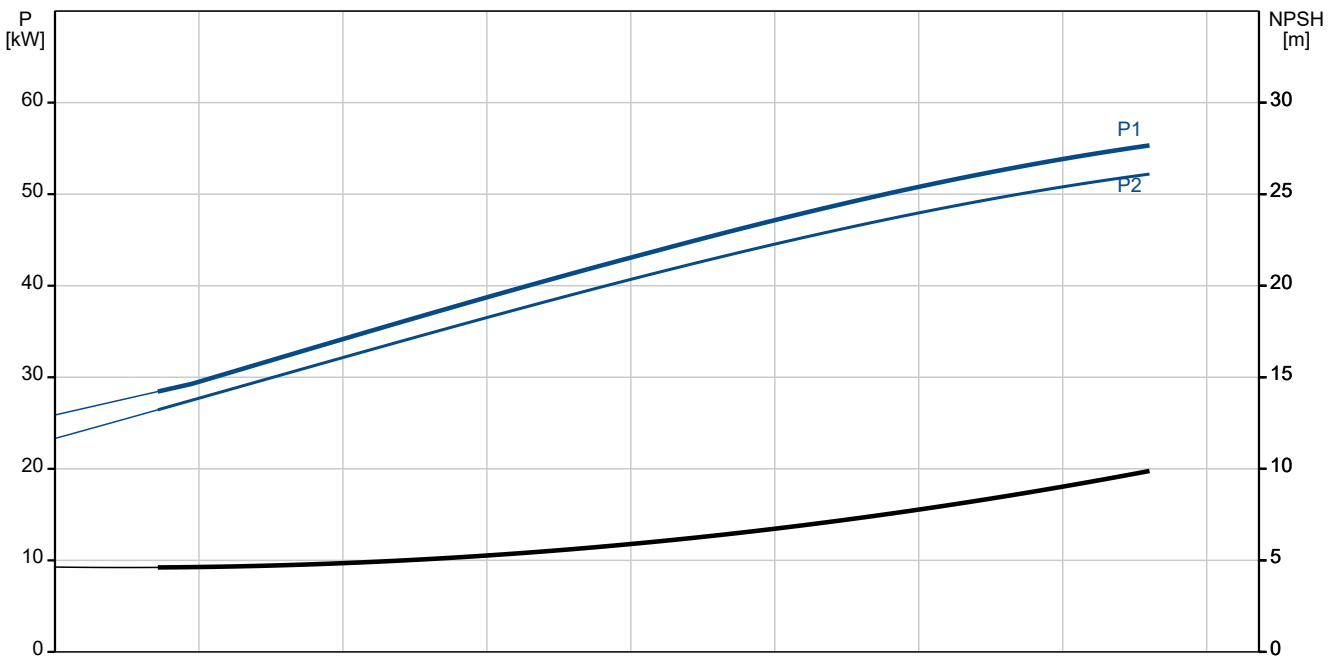
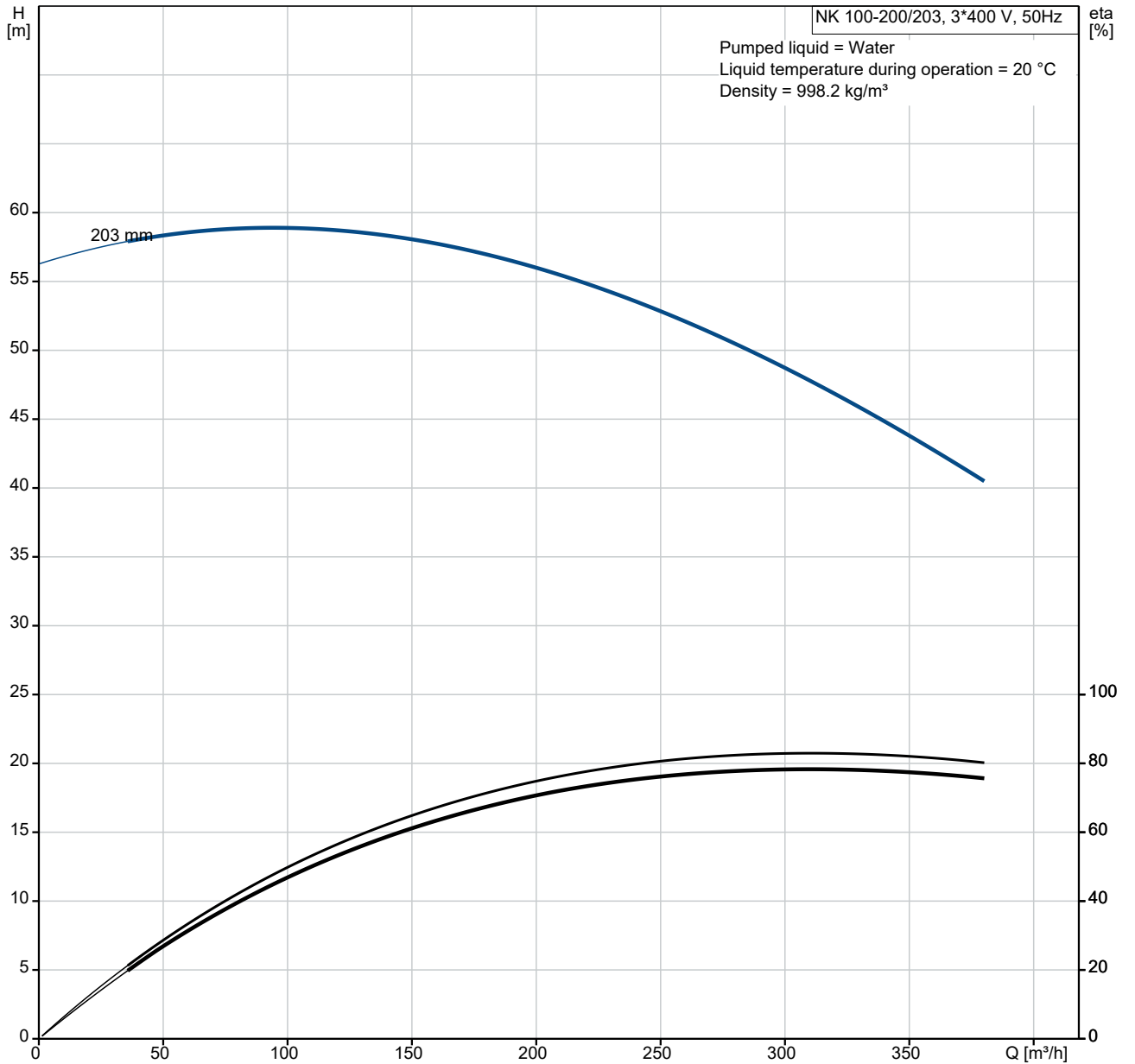
The base frame is prepared for grouting. Grouting improves the contact of the base frame with the foundation and stiffens the base frame construction. This changes the vibration level.

Grouting is mandatory for all base frame types for all 2-pole pumps equal to and above 55 kW to fulfill the max vibration level requirements stated in standards. For other pump motor combinations grouting of the base frame is optional.

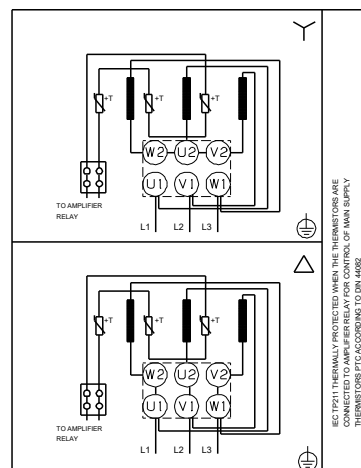
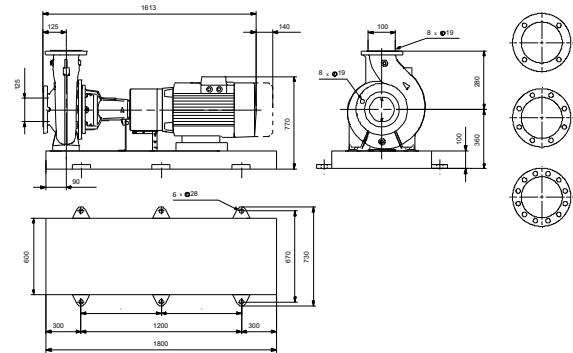
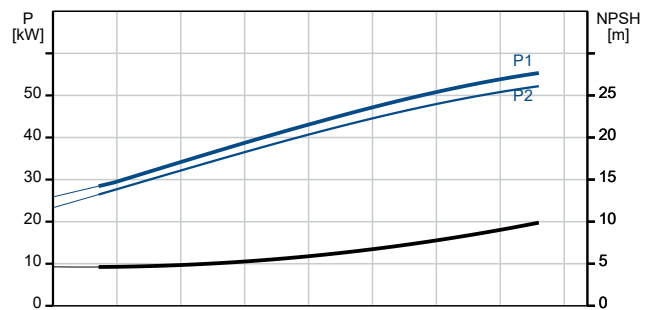
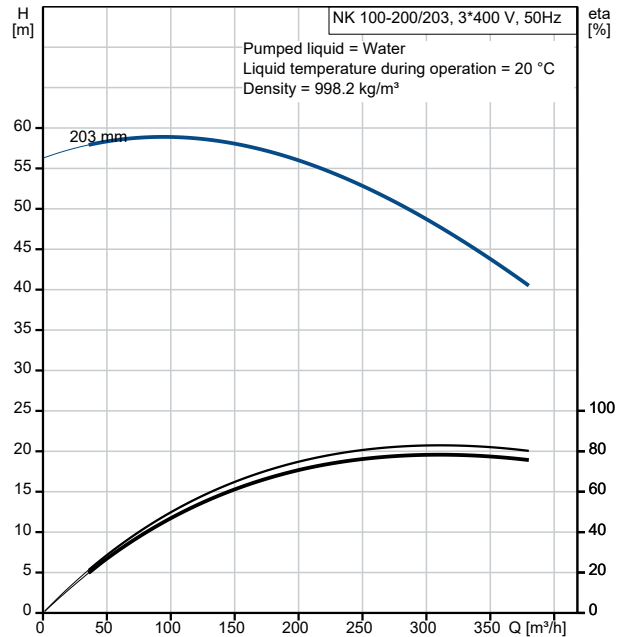
Qty.	Description																																																										
1	<p data-bbox="204 163 284 190"><b>Motor</b></p> <p data-bbox="204 199 1394 248">The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.</p> <p data-bbox="204 257 1018 284">The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.</p> <p data-bbox="204 293 1433 342">The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.</p> <p data-bbox="204 351 1422 423">Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.</p> <p data-bbox="204 432 1382 481">A variable speed drive makes adjustment of pump performance to any duty point possible. If the motor is to be connected to a variable speed drive, the pump must be ordered with an electrically insulated motor bearing.</p> <p data-bbox="204 548 512 575"><b>Further product details</b></p> <p data-bbox="204 584 1453 656">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.</p> <p data-bbox="204 723 400 750"><b>Technical data</b></p> <p data-bbox="204 790 300 817">Controls:</p> <table data-bbox="204 826 638 880"> <tr> <td>Frequency converter:</td> <td>NONE</td> </tr> <tr> <td>Pressure sensor:</td> <td>N</td> </tr> </table> <p data-bbox="204 911 276 938">Liquid:</p> <table data-bbox="204 947 703 1059"> <tr> <td>Pumped liquid:</td> <td>Water</td> </tr> <tr> <td>Liquid temperature range:</td> <td>-25 .. 120 °C</td> </tr> <tr> <td>Selected liquid temperature:</td> <td>20 °C</td> </tr> <tr> <td>Density:</td> <td>998.2 kg/m<sup>3</sup></td> </tr> </table> <p data-bbox="204 1090 316 1117">Technical:</p> <table data-bbox="204 1126 820 1413"> <tr> <td>Pump speed on which pump data are based:</td> <td>2975 rpm</td> </tr> <tr> <td>Rated flow:</td> <td>323.8 m<sup>3</sup>/h</td> </tr> <tr> <td>Pump with motor (Yes/No):</td> <td>Y</td> </tr> <tr> <td>Rated head:</td> <td>46.41 m</td> </tr> <tr> <td>Actual impeller diameter:</td> <td>203 mm</td> </tr> <tr> <td>Nominal impeller diameter:</td> <td>200</td> </tr> <tr> <td>Code for shaft seal:</td> <td>BQQE</td> </tr> <tr> <td>Mechanical seal type:</td> <td>Single</td> </tr> <tr> <td>Curve tolerance:</td> <td>ISO9906:2012 3B</td> </tr> <tr> <td>Bearing design:</td> <td>Standard</td> </tr> </table> <p data-bbox="204 1444 308 1471">Materials:</p> <table data-bbox="204 1480 730 1798"> <tr> <td>Pump housing:</td> <td>Cast iron EN-GJL-250 ASTM class 35</td> </tr> <tr> <td>Wear ring:</td> <td>Brass</td> </tr> <tr> <td>Impeller:</td> <td>Cast iron EN-GJL-200 ASTM class 30</td> </tr> <tr> <td>Internal pump house coating:</td> <td>CED</td> </tr> <tr> <td>Shaft:</td> <td>Stainless steel EN 1.4301 AISI 304</td> </tr> </table> <p data-bbox="204 1830 325 1856">Installation:</p> <table data-bbox="204 1865 683 2094"> <tr> <td>t max amb:</td> <td>55 °C</td> </tr> <tr> <td>Maximum operating pressure:</td> <td>16 bar</td> </tr> <tr> <td>Pipe connection standard:</td> <td>EN 1092-2</td> </tr> <tr> <td>Type of inlet connection:</td> <td>DIN</td> </tr> <tr> <td>Type of outlet connection:</td> <td>DIN</td> </tr> <tr> <td>Size of inlet connection:</td> <td>DN 125</td> </tr> <tr> <td>Size of outlet connection:</td> <td>DN 100</td> </tr> <tr> <td>Pressure rating for connection:</td> <td>PN 16</td> </tr> </table>	Frequency converter:	NONE	Pressure sensor:	N	Pumped liquid:	Water	Liquid temperature range:	-25 .. 120 °C	Selected liquid temperature:	20 °C	Density:	998.2 kg/m <sup>3</sup>	Pump speed on which pump data are based:	2975 rpm	Rated flow:	323.8 m <sup>3</sup> /h	Pump with motor (Yes/No):	Y	Rated head:	46.41 m	Actual impeller diameter:	203 mm	Nominal impeller diameter:	200	Code for shaft seal:	BQQE	Mechanical seal type:	Single	Curve tolerance:	ISO9906:2012 3B	Bearing design:	Standard	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	t max amb:	55 °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
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Qty.	Description
1	<p data-bbox="204 163 754 280">Coupling type: Flexible w/spacer  Base frame design: EN/ISO  Code for base frame: 9  Grouting (Yes/No): Y</p> <p data-bbox="204 315 847 875">Electrical data:  Motor type: SIEMENS  IE Efficiency class: IE3  Rated power - P2: 55 kW  Mains frequency: 50 Hz  Rated voltage: 3 x 380-420D/660-725Y V  Rated current: 95/55 A  Starting current: 670-670 %  Cos phi - power factor: 0.89  Rated speed: 2975 rpm  Efficiency: IE3 94,3%  Motor efficiency at full load: 94.3-94.3 %  Motor efficiency at 3/4 load: 94.5-94.5 %  Motor efficiency at 1/2 load: 93.9-93.9 %  Number of poles: 2  Enclosure class (IEC 34-5): IP55  Insulation class (IEC 85): F  Motor No: 98943375  Bearing insulation type N-end: STEEL BEARING</p> <p data-bbox="204 911 676 1111">Others:  Minimum efficiency index, MEI ≥: 0.62  Net weight: 661 kg  Gross weight: 752 kg  Shipping volume: 1.89 m<sup>3</sup>  Country of origin: HU  Custom tariff no.: 84137059</p>

# 98606358 NK 100-200/203 AA2F2AESBQQEUW1 50 Hz

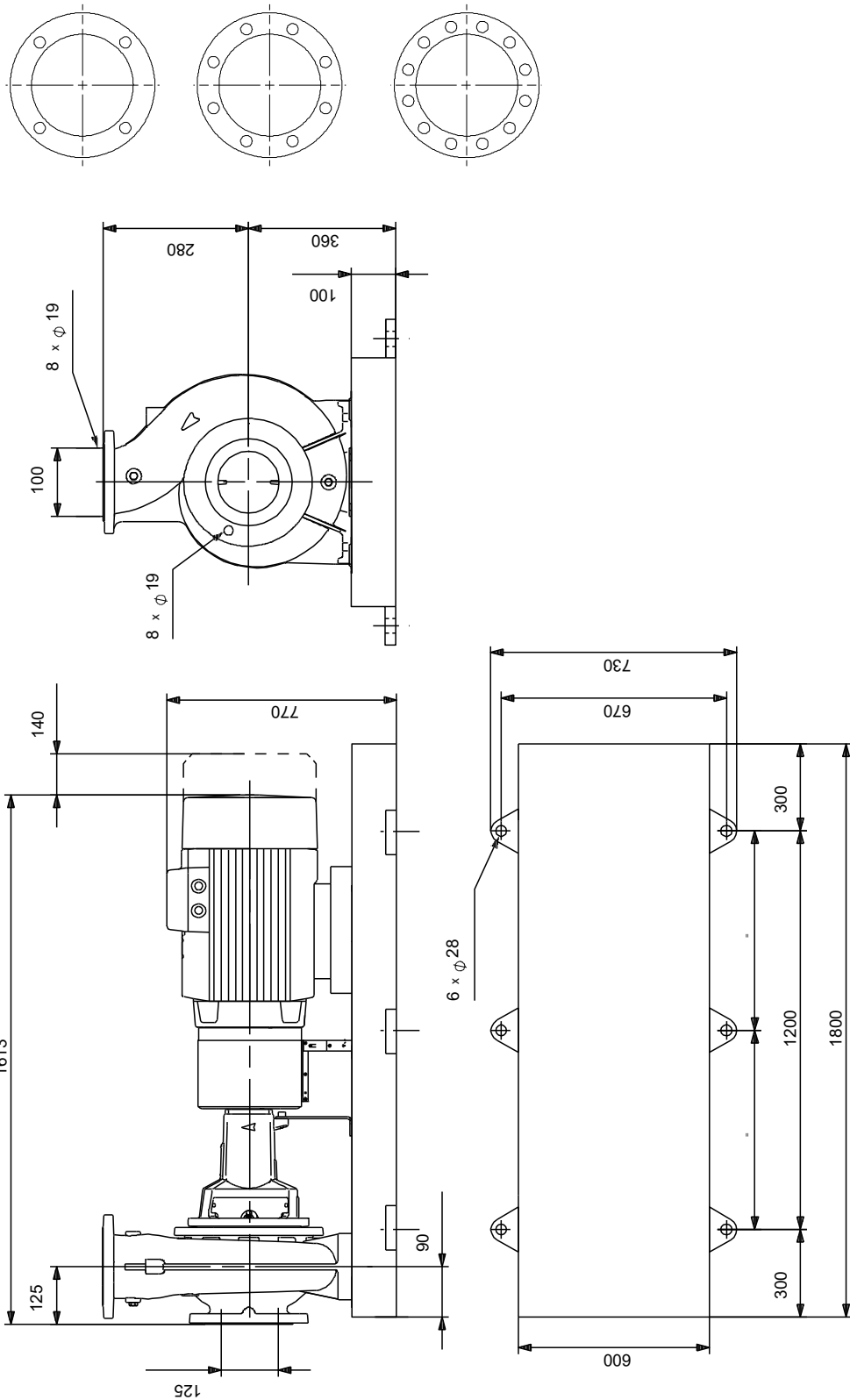


Description	Value
<b>General information:</b>	
Product name:	NK 100-200/203 AA2F2AESBQQEUW1
Product No:	98606358
EAN number:	5711498106673
<b>Technical:</b>	
Pump speed on which pump data are based:	2975 rpm
Rated flow:	323.8 m <sup>3</sup> /h
Pump with motor (Yes/No):	Y
Rated head:	46.41 m
Actual impeller diameter:	203 mm
Nominal impeller diameter:	200
Shaft diameter:	32 mm
Code for shaft seal:	BQQE
Mechanical seal type:	Single
Curve tolerance:	ISO9906:2012 3B
Pump version:	A2
Bearing design:	Standard
<b>Materials:</b>	
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
<b>Installation:</b>	
t max amb:	55 °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:	9
Grouting (Yes/No):	Y
Connect code:	F
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m <sup>3</sup>
<b>Electrical data:</b>	
Motor type:	SIEMENS
IE Efficiency class:	IE3
Rated power - P2:	55 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-420D/660-725Y V
Rated current:	95/55 A
Starting current:	670-670 %
Cos phi - power factor:	0.89
Rated speed:	2975 rpm
Efficiency:	IE3 94,3%
Motor efficiency at full load:	94.3-94.3 %



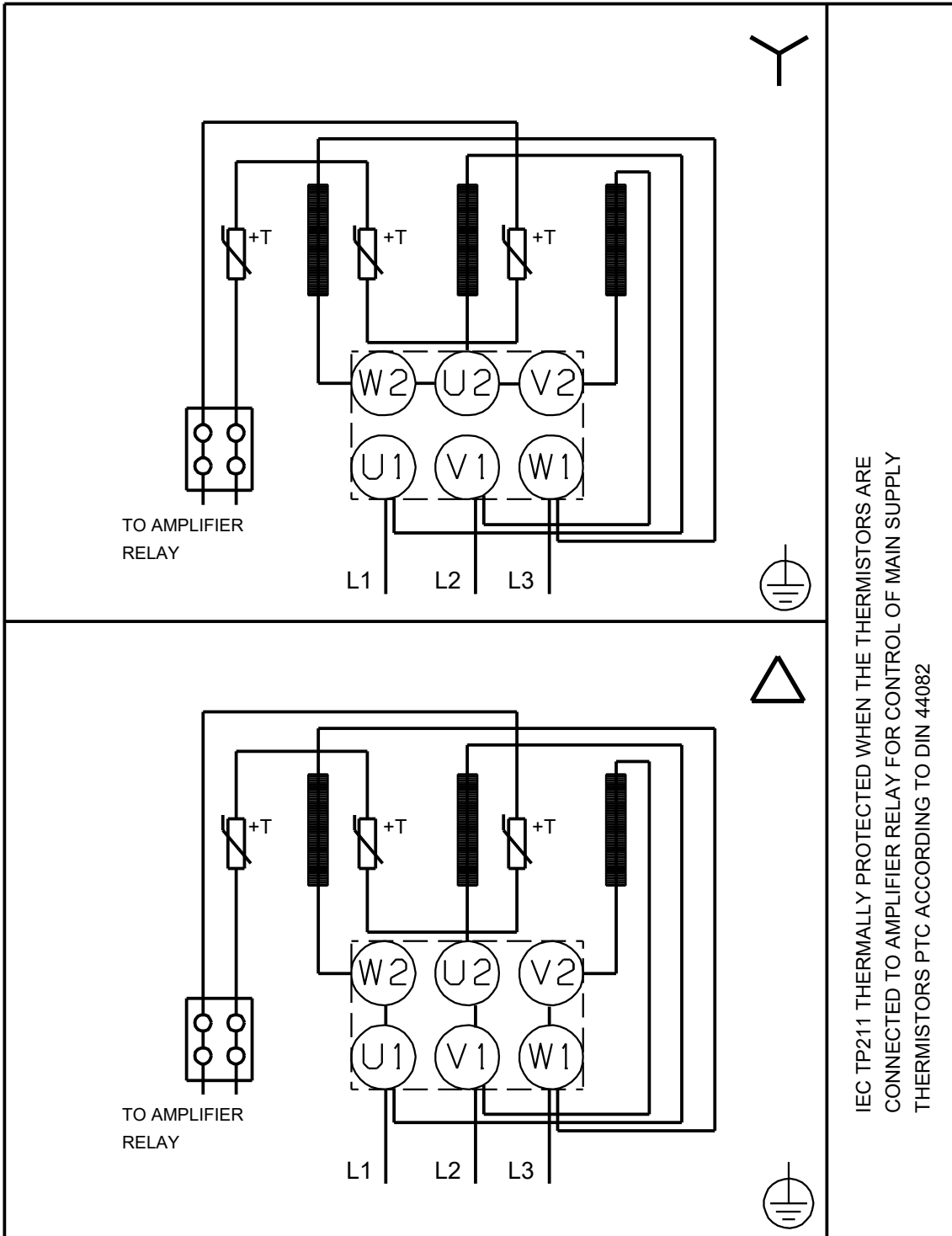
Description	Value
Motor efficiency at 3/4 load:	94.5-94.5 %
Motor efficiency at 1/2 load:	93.9-93.9 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	98943375
Bearing insulation type N-end:	STEEL BEARING
<b>Controls:</b>	
Frequency converter:	NONE
Pressure sensor:	N
<b>Others:</b>	
Minimum efficiency index, MEI ≥:	0.62
Net weight:	661 kg
Gross weight:	752 kg
Shipping volume:	1.89 m <sup>3</sup>
Country of origin:	HU
Custom tariff no.:	84137059

# 98606358 NK 100-200/203 AA2F2AESBQQEUW1 50 Hz



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

**98606358 NK 100-200/203 AA2F2AESBQQEUW1 50 Hz**



IEC TP211 THERMALLY PROTECTED WHEN THE THERMISTORS ARE  
 CONNECTED TO AMPLIFIER RELAY FOR CONTROL OF MAIN SUPPLY  
 THERMISTORS PTC ACCORDING TO DIN 44082

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



