

**Qty. Description**

1 **NK 100-200/219 AA2F2AESBQQEVW1**



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

Product No.: [98698076](#)

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.

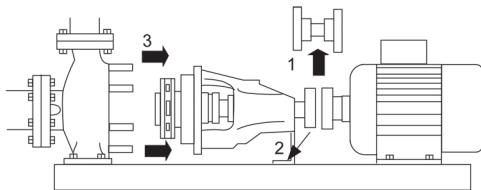
The pump is fitted with a foot-mounted, fan-cooled asynchronous motor. Pump and motor are mounted on a common base frame.

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)

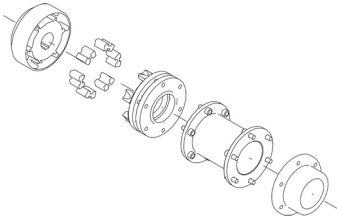
This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

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.



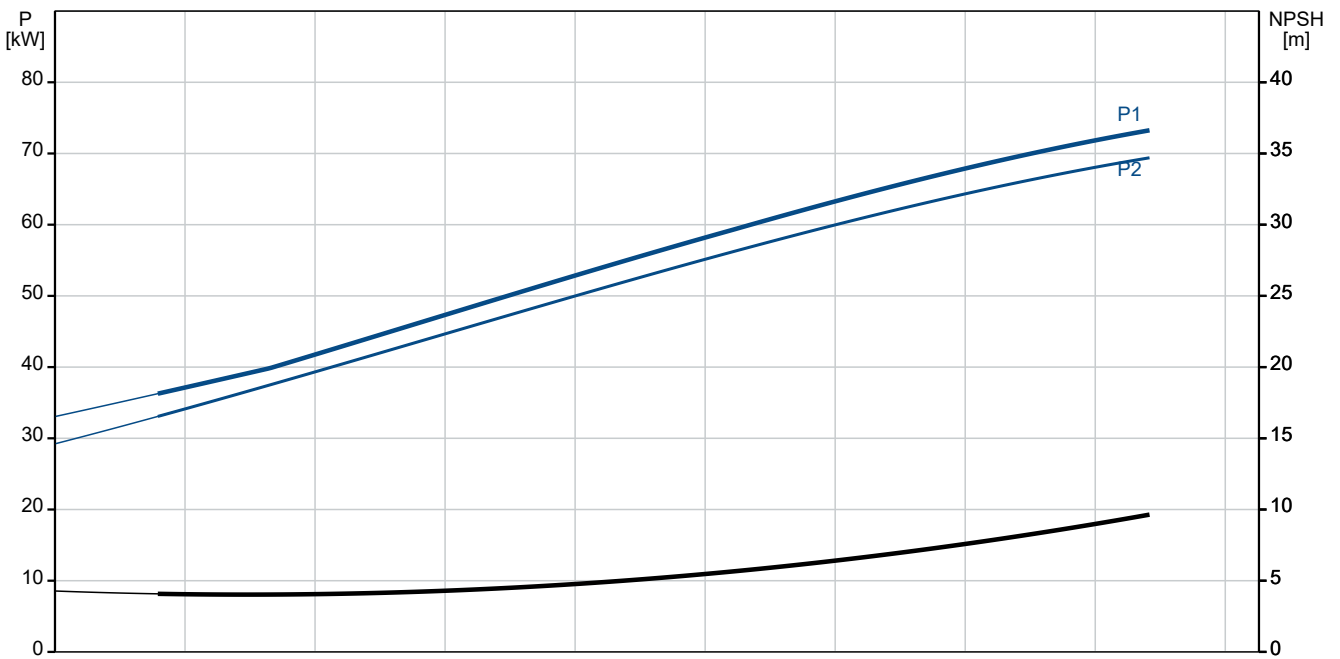
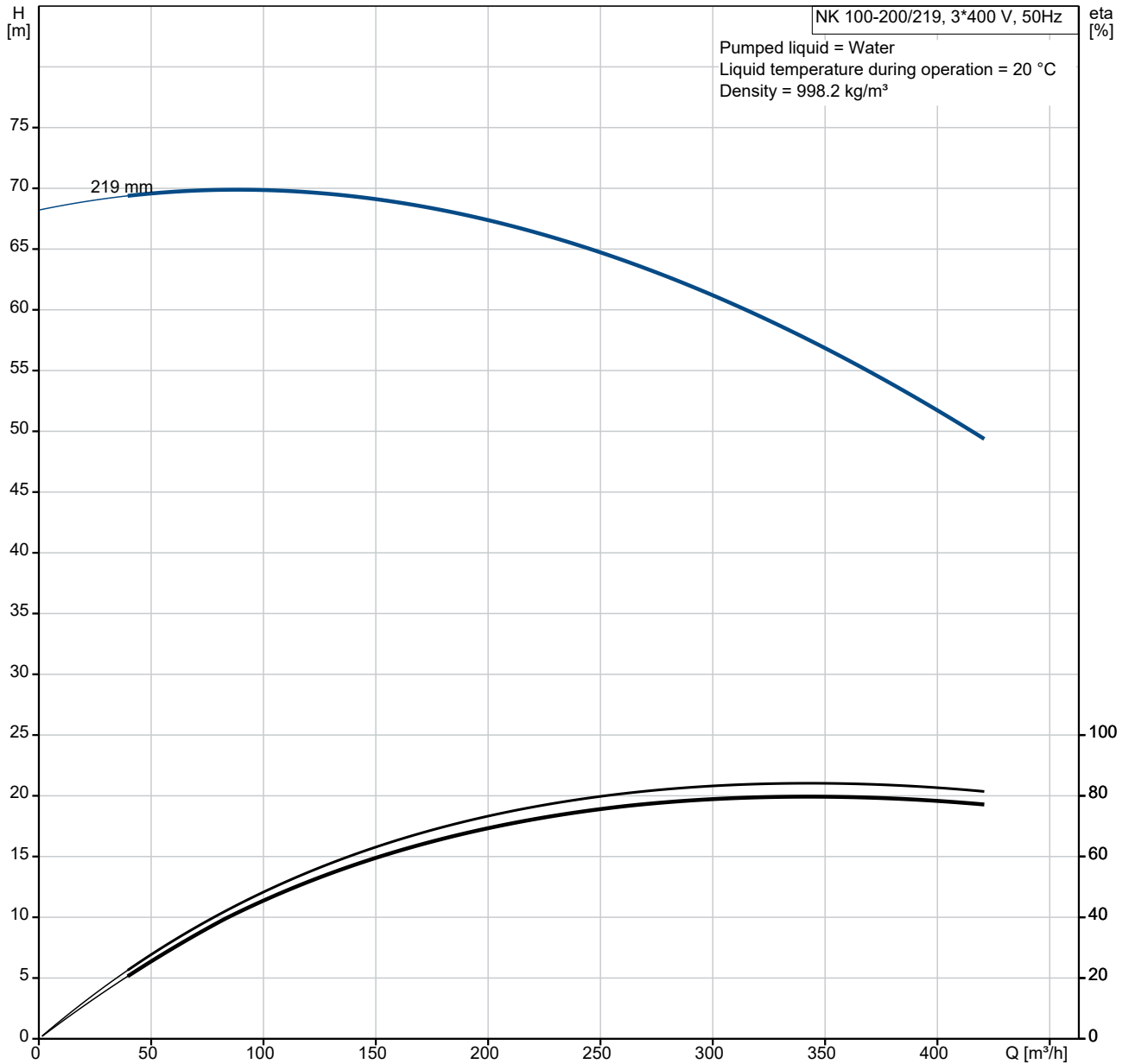
The base frame is prepared for grouting. Grouting improves the contact of the base frame with the foundation and stiffens the base frame construction. This changes the vibration level.

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.

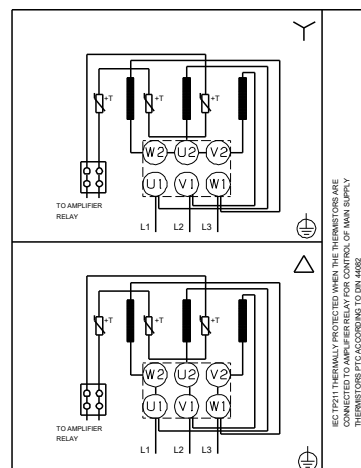
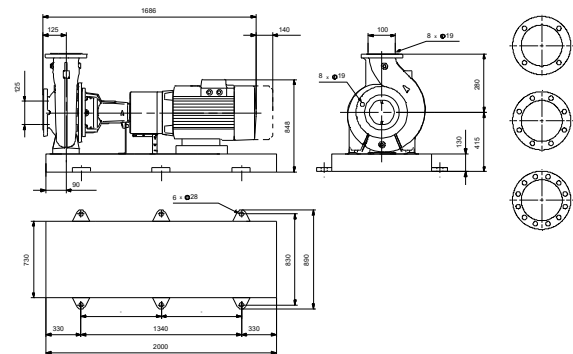
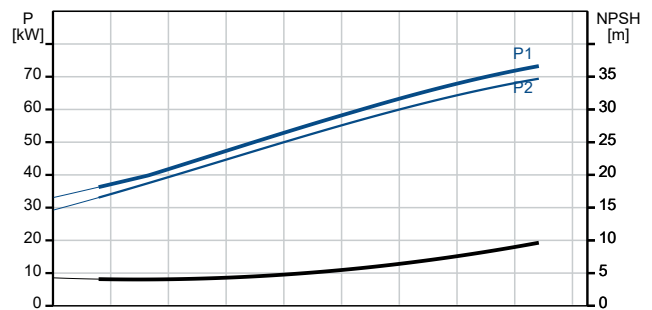
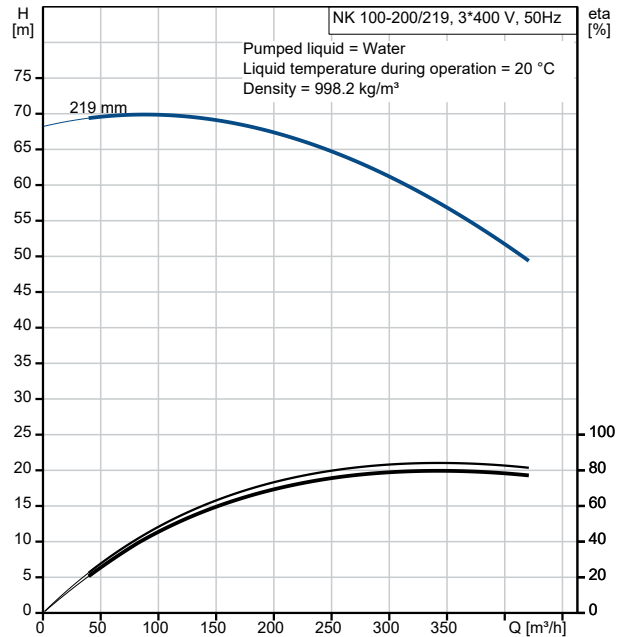
Qty.	Description																																																										
1	<p data-bbox="204 163 284 190"><b>Motor</b></p> <p data-bbox="204 199 1394 248">The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.</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="204 546 512 573"><b>Further product details</b></p> <p data-bbox="204 582 1453 654">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="204 725 400 752"><b>Technical data</b></p> <p data-bbox="204 790 300 817">Controls:</p> <table data-bbox="204 822 638 880"> <tr> <td data-bbox="204 822 432 848">Frequency converter:</td> <td data-bbox="564 822 635 848">NONE</td> </tr> <tr> <td data-bbox="204 853 384 880">Pressure sensor:</td> <td data-bbox="564 853 580 880">N</td> </tr> </table> <p data-bbox="204 911 276 938">Liquid:</p> <table data-bbox="204 943 703 1059"> <tr> <td data-bbox="204 943 363 969">Pumped liquid:</td> <td data-bbox="564 943 635 969">Water</td> </tr> <tr> <td data-bbox="204 974 480 1001">Liquid temperature range:</td> <td data-bbox="564 974 703 1001">-25 .. 120 °C</td> </tr> <tr> <td data-bbox="204 1005 504 1032">Selected liquid temperature:</td> <td data-bbox="564 1005 628 1032">20 °C</td> </tr> <tr> <td data-bbox="204 1037 288 1064">Density:</td> <td data-bbox="564 1037 695 1064">998.2 kg/m<sup>3</sup></td> </tr> </table> <p data-bbox="204 1090 316 1117">Technical:</p> <table data-bbox="204 1122 820 1413"> <tr> <td data-bbox="204 1122 687 1149">Pump speed on which pump data are based:</td> <td data-bbox="715 1122 820 1149">2975 rpm</td> </tr> <tr> <td data-bbox="204 1153 320 1180">Rated flow:</td> <td data-bbox="564 1153 683 1180">358.4 m<sup>3</sup>/h</td> </tr> <tr> <td data-bbox="204 1184 496 1211">Pump with motor (Yes/No):</td> <td data-bbox="564 1184 580 1211">Y</td> </tr> <tr> <td data-bbox="204 1216 336 1243">Rated head:</td> <td data-bbox="564 1216 655 1243">55.88 m</td> </tr> <tr> <td data-bbox="204 1247 472 1274">Actual impeller diameter:</td> <td data-bbox="564 1247 655 1274">219 mm</td> </tr> <tr> <td data-bbox="204 1279 488 1305">Nominal impeller diameter:</td> <td data-bbox="564 1279 608 1305">200</td> </tr> <tr> <td data-bbox="204 1310 411 1337">Code for shaft seal:</td> <td data-bbox="564 1310 639 1337">BQQE</td> </tr> <tr> <td data-bbox="204 1341 435 1368">Mechanical seal type:</td> <td data-bbox="564 1341 635 1368">Single</td> </tr> <tr> <td data-bbox="204 1373 379 1400">Curve tolerance:</td> <td data-bbox="564 1373 759 1400">ISO9906:2012 3B</td> </tr> <tr> <td data-bbox="204 1404 368 1431">Bearing design:</td> <td data-bbox="564 1404 667 1431">Standard</td> </tr> </table> <p data-bbox="204 1444 309 1471">Materials:</p> <table data-bbox="204 1476 730 1798"> <tr> <td data-bbox="204 1476 363 1503">Pump housing:</td> <td data-bbox="564 1476 730 1561">Cast iron EN-GJL-250 ASTM class 35</td> </tr> <tr> <td data-bbox="204 1565 316 1592">Wear ring:</td> <td data-bbox="564 1565 628 1592">Brass</td> </tr> <tr> <td data-bbox="204 1597 296 1624">Impeller:</td> <td data-bbox="564 1597 730 1682">Cast iron EN-GJL-200 ASTM class 30</td> </tr> <tr> <td data-bbox="204 1686 512 1713">Internal pump house coating:</td> <td data-bbox="564 1686 619 1713">CED</td> </tr> <tr> <td data-bbox="204 1718 268 1744">Shaft:</td> <td data-bbox="564 1718 724 1803">Stainless steel EN 1.4301 AISI 304</td> </tr> </table> <p data-bbox="204 1834 325 1861">Installation:</p> <table data-bbox="204 1865 683 2094"> <tr> <td data-bbox="204 1865 320 1892">t max amb:</td> <td data-bbox="564 1865 628 1892">55 °C</td> </tr> <tr> <td data-bbox="204 1897 523 1924">Maximum operating pressure:</td> <td data-bbox="564 1897 635 1924">16 bar</td> </tr> <tr> <td data-bbox="204 1928 480 1955">Pipe connection standard:</td> <td data-bbox="564 1928 683 1955">EN 1092-2</td> </tr> <tr> <td data-bbox="204 1960 464 1986">Type of inlet connection:</td> <td data-bbox="564 1960 608 1986">DIN</td> </tr> <tr> <td data-bbox="204 1991 480 2018">Type of outlet connection:</td> <td data-bbox="564 1991 608 2018">DIN</td> </tr> <tr> <td data-bbox="204 2022 456 2049">Size of inlet connection:</td> <td data-bbox="564 2022 651 2049">DN 125</td> </tr> <tr> <td data-bbox="204 2054 472 2080">Size of outlet connection:</td> <td data-bbox="564 2054 651 2080">DN 100</td> </tr> <tr> <td data-bbox="204 2085 528 2112">Pressure rating for connection:</td> <td data-bbox="564 2085 635 2112">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:	358.4 m <sup>3</sup> /h	Pump with motor (Yes/No):	Y	Rated head:	55.88 m	Actual impeller diameter:	219 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
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:	358.4 m <sup>3</sup> /h																																																										
Pump with motor (Yes/No):	Y																																																										
Rated head:	55.88 m																																																										
Actual impeller diameter:	219 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																																																										

Qty.	Description
1	<p data-bbox="204 163 754 280">Coupling type: Flexible w/spacer  Base frame design: EN/ISO  Code for base frame: 10  Grouting (Yes/No): Y</p> <p data-bbox="204 315 845 875">Electrical data:  Motor type: SIEMENS  IE Efficiency class: IE3  Rated power - P2: 75 kW  Mains frequency: 50 Hz  Rated voltage: 3 x 380-420D/660-725Y V  Rated current: 128/74 A  Starting current: 680-680 %  Cos phi - power factor: 0.89  Rated speed: 2975 rpm  Efficiency: IE3 94,7%  Motor efficiency at full load: 94.7-94.7 %  Motor efficiency at 3/4 load: 94.8-94.8 %  Motor efficiency at 1/2 load: 94.1-94.1 %  Number of poles: 2  Enclosure class (IEC 34-5): IP55  Insulation class (IEC 85): F  Motor No: 98943376  Bearing insulation type N-end: STEEL BEARING</p> <p data-bbox="204 911 675 1111">Others:  Minimum efficiency index, MEI ≥: 0.62  Net weight: 940 kg  Gross weight: 979 kg  Shipping volume: 2.13 m<sup>3</sup>  Country of origin: HU  Custom tariff no.: 84137059</p>

# 98698076 NK 100-200/219 AA2F2AESBQQEVW1 50 Hz

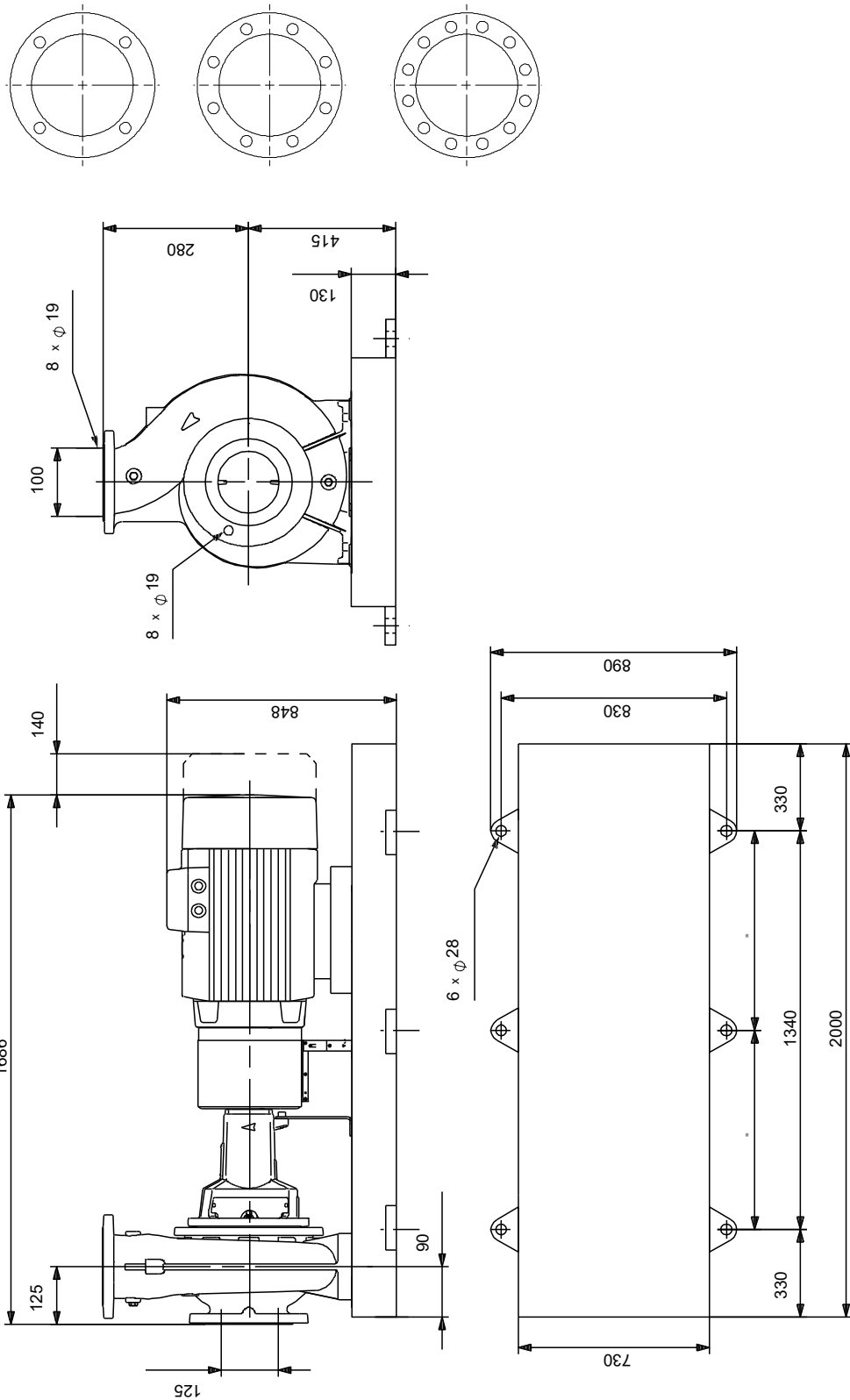


Description	Value
<b>General information:</b>	
Product name:	NK 100-200/219 AA2F2AESBQQEVW1
Product No:	98698076
EAN number:	5712600090392
<b>Technical:</b>	
Pump speed on which pump data are based:	2975 rpm
Rated flow:	358.4 m <sup>3</sup> /h
Pump with motor (Yes/No):	Y
Rated head:	55.88 m
Actual impeller diameter:	219 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:	10
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:	75 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-420D/660-725Y V
Rated current:	128/74 A
Starting current:	680-680 %
Cos phi - power factor:	0.89
Rated speed:	2975 rpm
Efficiency:	IE3 94,7%
Motor efficiency at full load:	94.7-94.7 %



Description	Value
Motor efficiency at 3/4 load:	94.8-94.8 %
Motor efficiency at 1/2 load:	94.1-94.1 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	98943376
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:	940 kg
Gross weight:	979 kg
Shipping volume:	2.13 m <sup>3</sup>
Country of origin:	HU
Custom tariff no.:	84137059

# 98698076 NK 100-200/219 AA2F2AESBQQEVW1 50 Hz



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

98698076 NK 100-200/219 AA2F2AESBQQEVW1 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.



