

Qty. Description1 **NK 100-315/284 AA2F2AESBQQE2W1**

Note! Product picture may differ from actual product

Product No.: [98972891](#)

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.

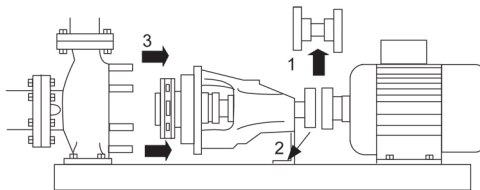
The pump is fitted with a foot-mounted, fan-cooled asynchronous motor. Pump and motor are mounted on a common base frame.

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.

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Seal faces:

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

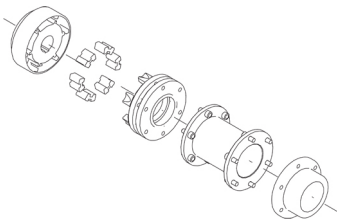
This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

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.



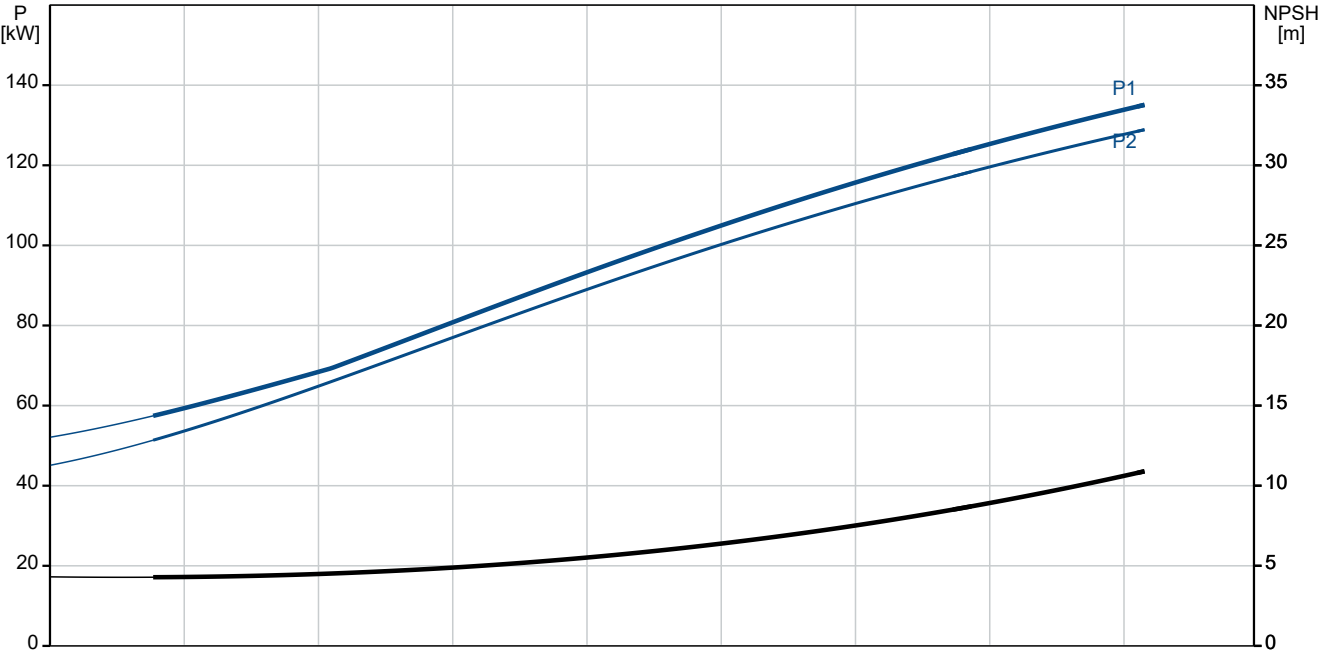
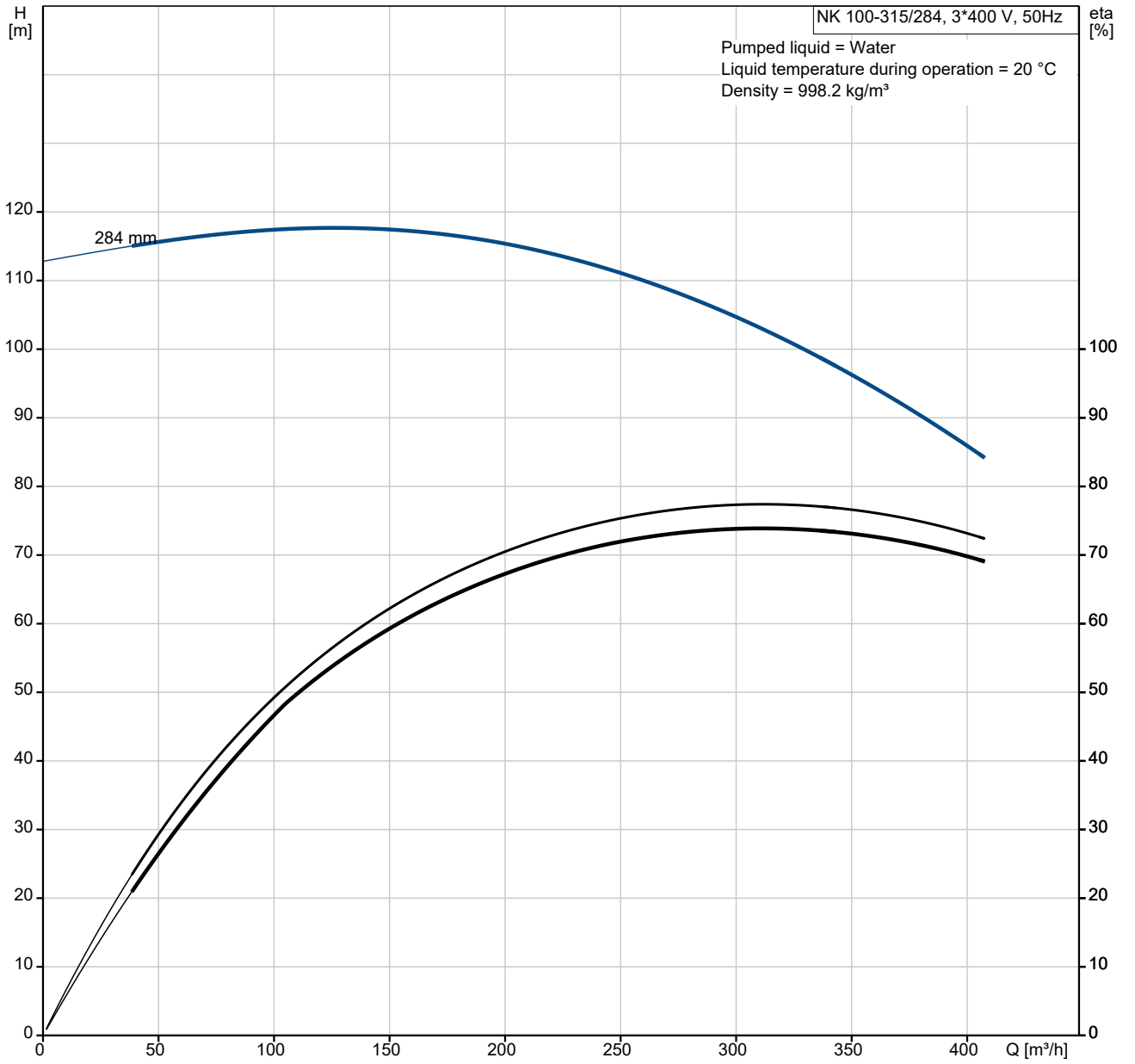
The base frame is prepared for grouting. Grouting improves the contact of the base frame with the foundation and stiffens the base frame construction. This changes the vibration level.

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.

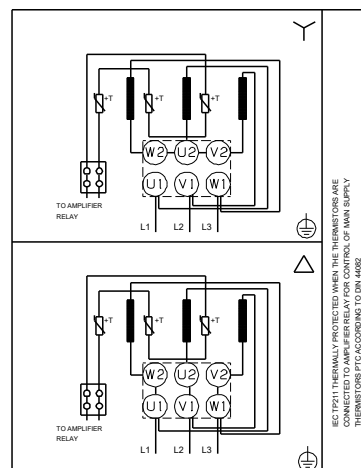
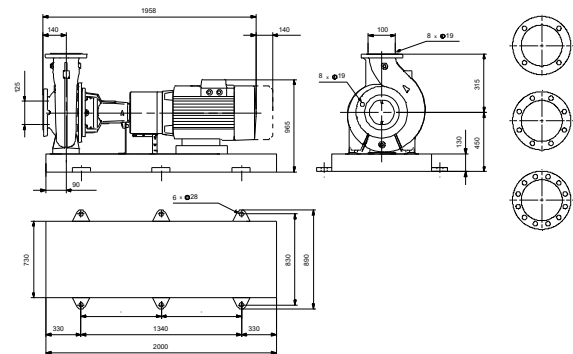
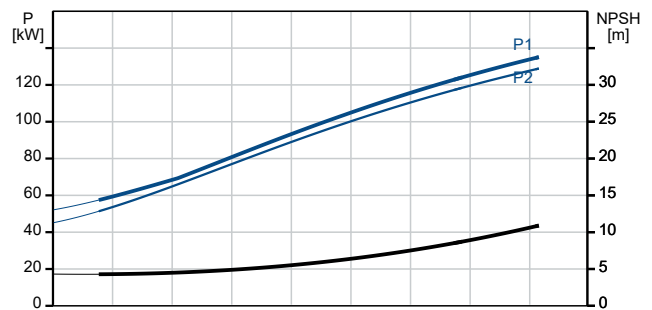
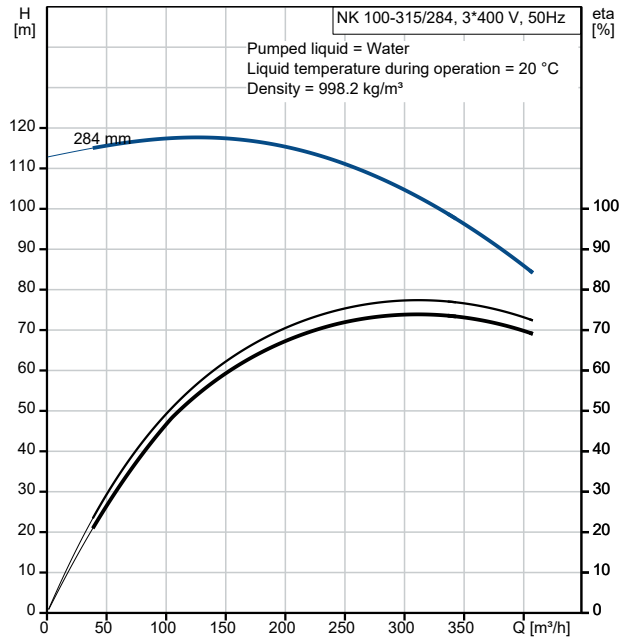
Qty.	Description																																																										
1	<p data-bbox="201 163 284 192">Motor</p> <p data-bbox="201 199 1394 248">The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.</p> <p data-bbox="201 255 1015 282">The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.</p> <p data-bbox="201 288 1433 338">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="201 344 1422 418">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="201 425 1382 479">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="201 546 512 575">Further product details</p> <p data-bbox="201 582 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="201 723 400 752">Technical data</p> <p data-bbox="201 790 300 817">Controls:</p> <table data-bbox="201 819 638 875"> <tr> <td data-bbox="201 819 432 846">Frequency converter:</td> <td data-bbox="564 819 635 846">NONE</td> </tr> <tr> <td data-bbox="201 848 384 875">Pressure sensor:</td> <td data-bbox="564 848 580 875">N</td> </tr> </table> <p data-bbox="201 909 276 936">Liquid:</p> <table data-bbox="201 938 703 1055"> <tr> <td data-bbox="201 938 363 965">Pumped liquid:</td> <td data-bbox="564 938 635 965">Water</td> </tr> <tr> <td data-bbox="201 967 480 994">Liquid temperature range:</td> <td data-bbox="564 967 703 994">-25 .. 120 °C</td> </tr> <tr> <td data-bbox="201 996 504 1023">Selected liquid temperature:</td> <td data-bbox="564 996 628 1023">20 °C</td> </tr> <tr> <td data-bbox="201 1025 288 1052">Density:</td> <td data-bbox="564 1025 695 1052">998.2 kg/m³</td> </tr> </table> <p data-bbox="201 1088 312 1115">Technical:</p> <table data-bbox="201 1117 818 1413"> <tr> <td data-bbox="201 1117 687 1144">Pump speed on which pump data are based:</td> <td data-bbox="715 1117 818 1144">2982 rpm</td> </tr> <tr> <td data-bbox="201 1146 320 1173">Rated flow:</td> <td data-bbox="564 1146 663 1173">320 m³/h</td> </tr> <tr> <td data-bbox="201 1176 491 1202">Pump with motor (Yes/No):</td> <td data-bbox="564 1176 580 1202">Y</td> </tr> <tr> <td data-bbox="201 1205 331 1232">Rated head:</td> <td data-bbox="564 1205 655 1232">101.5 m</td> </tr> <tr> <td data-bbox="201 1234 472 1261">Actual impeller diameter:</td> <td data-bbox="564 1234 655 1261">284 mm</td> </tr> <tr> <td data-bbox="201 1263 491 1290">Nominal impeller diameter:</td> <td data-bbox="564 1263 612 1290">315</td> </tr> <tr> <td data-bbox="201 1292 411 1319">Code for shaft seal:</td> <td data-bbox="564 1292 639 1319">BQQE</td> </tr> <tr> <td data-bbox="201 1321 435 1348">Mechanical seal type:</td> <td data-bbox="564 1321 635 1348">Single</td> </tr> <tr> <td data-bbox="201 1350 379 1377">Curve tolerance:</td> <td data-bbox="564 1350 759 1377">ISO9906:2012 3B</td> </tr> <tr> <td data-bbox="201 1379 368 1406">Bearing design:</td> <td data-bbox="564 1379 663 1406">Standard</td> </tr> </table> <p data-bbox="201 1447 308 1473">Materials:</p> <table data-bbox="201 1476 730 1798"> <tr> <td data-bbox="201 1476 363 1503">Pump housing:</td> <td data-bbox="564 1476 730 1559">Cast iron EN-GJL-250 ASTM class 35</td> </tr> <tr> <td data-bbox="201 1561 316 1588">Wear ring:</td> <td data-bbox="564 1561 628 1588">Brass</td> </tr> <tr> <td data-bbox="201 1590 296 1617">Impeller:</td> <td data-bbox="564 1590 730 1673">Cast iron EN-GJL-200 ASTM class 30</td> </tr> <tr> <td data-bbox="201 1675 512 1702">Internal pump house coating:</td> <td data-bbox="564 1675 619 1702">CED</td> </tr> <tr> <td data-bbox="201 1704 264 1731">Shaft:</td> <td data-bbox="564 1704 724 1798">Stainless steel EN 1.4301 AISI 304</td> </tr> </table> <p data-bbox="201 1832 323 1859">Installation:</p> <table data-bbox="201 1861 683 2094"> <tr> <td data-bbox="201 1861 320 1888">t max amb:</td> <td data-bbox="564 1861 628 1888">55 °C</td> </tr> <tr> <td data-bbox="201 1890 523 1917">Maximum operating pressure:</td> <td data-bbox="564 1890 635 1917">16 bar</td> </tr> <tr> <td data-bbox="201 1919 480 1946">Pipe connection standard:</td> <td data-bbox="564 1919 683 1946">EN 1092-2</td> </tr> <tr> <td data-bbox="201 1948 464 1975">Type of inlet connection:</td> <td data-bbox="564 1948 612 1975">DIN</td> </tr> <tr> <td data-bbox="201 1977 480 2004">Type of outlet connection:</td> <td data-bbox="564 1977 612 2004">DIN</td> </tr> <tr> <td data-bbox="201 2007 459 2033">Size of inlet connection:</td> <td data-bbox="564 2007 651 2033">DN 125</td> </tr> <tr> <td data-bbox="201 2036 472 2063">Size of outlet connection:</td> <td data-bbox="564 2036 651 2063">DN 100</td> </tr> <tr> <td data-bbox="201 2065 531 2092">Pressure rating for connection:</td> <td data-bbox="564 2065 635 2092">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 ³	Pump speed on which pump data are based:	2982 rpm	Rated flow:	320 m ³ /h	Pump with motor (Yes/No):	Y	Rated head:	101.5 m	Actual impeller diameter:	284 mm	Nominal impeller diameter:	315	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: 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: 132 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-420D/660-725Y V Rated current: 220/127 A Starting current: 720-720 % Cos phi - power factor: 0.91 Rated speed: 2982 rpm Efficiency: IE3 95,4% Motor efficiency at full load: 95.4-95.4 % Motor efficiency at 3/4 load: 95.5-95.5 % Motor efficiency at 1/2 load: 95.2-95.2 % Number of poles: 2 Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Motor No: 98943383 Bearing insulation type N-end: STEEL BEARING</p> <p data-bbox="204 911 675 1111">Others: Minimum efficiency index, MEI ≥: 0.56 Net weight: 1360 kg Gross weight: 1460 kg Shipping volume: 2.96 m³ Country of origin: HU Custom tariff no.: 84137059</p>

98972891 NK 100-315/284 AA2F2AESBQQE2W1 50 Hz

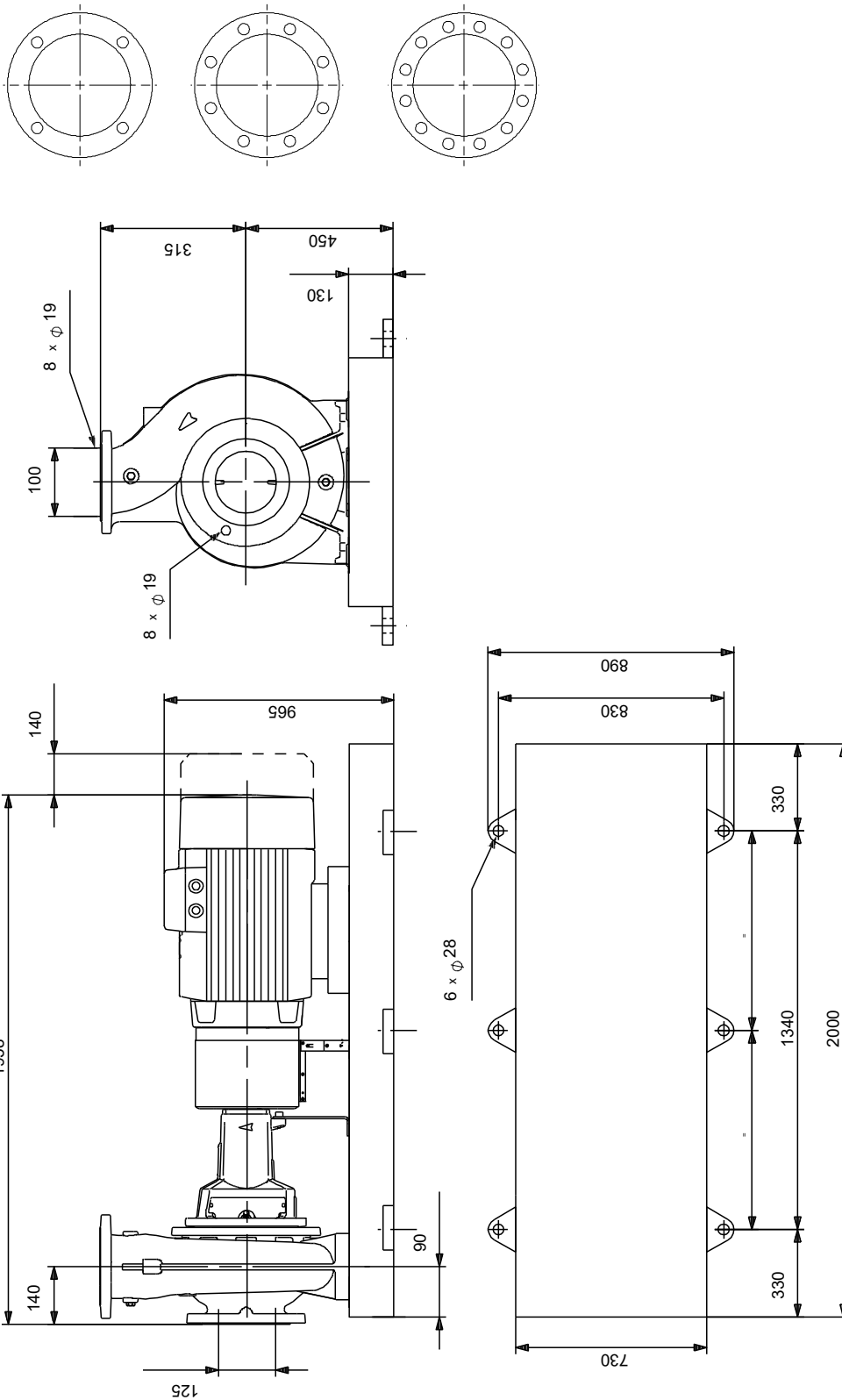


Description	Value
General information:	
Product name:	NK 100-315/284 AA2F2AESBQQE2W1
Product No:	98972891
EAN number:	5712604494233
Technical:	
Pump speed on which pump data are based:	2982 rpm
Rated flow:	320 m ³ /h
Pump with motor (Yes/No):	Y
Rated head:	101.5 m
Actual impeller diameter:	284 mm
Nominal impeller diameter:	315
Shaft diameter:	32 mm
Code for shaft seal:	BQQE
Mechanical seal type:	Single
Curve tolerance:	ISO9906:2012 3B
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:	E
Shaft:	Stainless steel
Shaft:	EN 1.4301
Shaft:	AISI 304
Installation:	
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
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m ³
Electrical data:	
Motor type:	SIEMENS
IE Efficiency class:	IE3
Rated power - P2:	132 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-420D/660-725Y V
Rated current:	220/127 A
Starting current:	720-720 %
Cos phi - power factor:	0.91
Rated speed:	2982 rpm
Efficiency:	IE3 95,4%
Motor efficiency at full load:	95.4-95.4 %



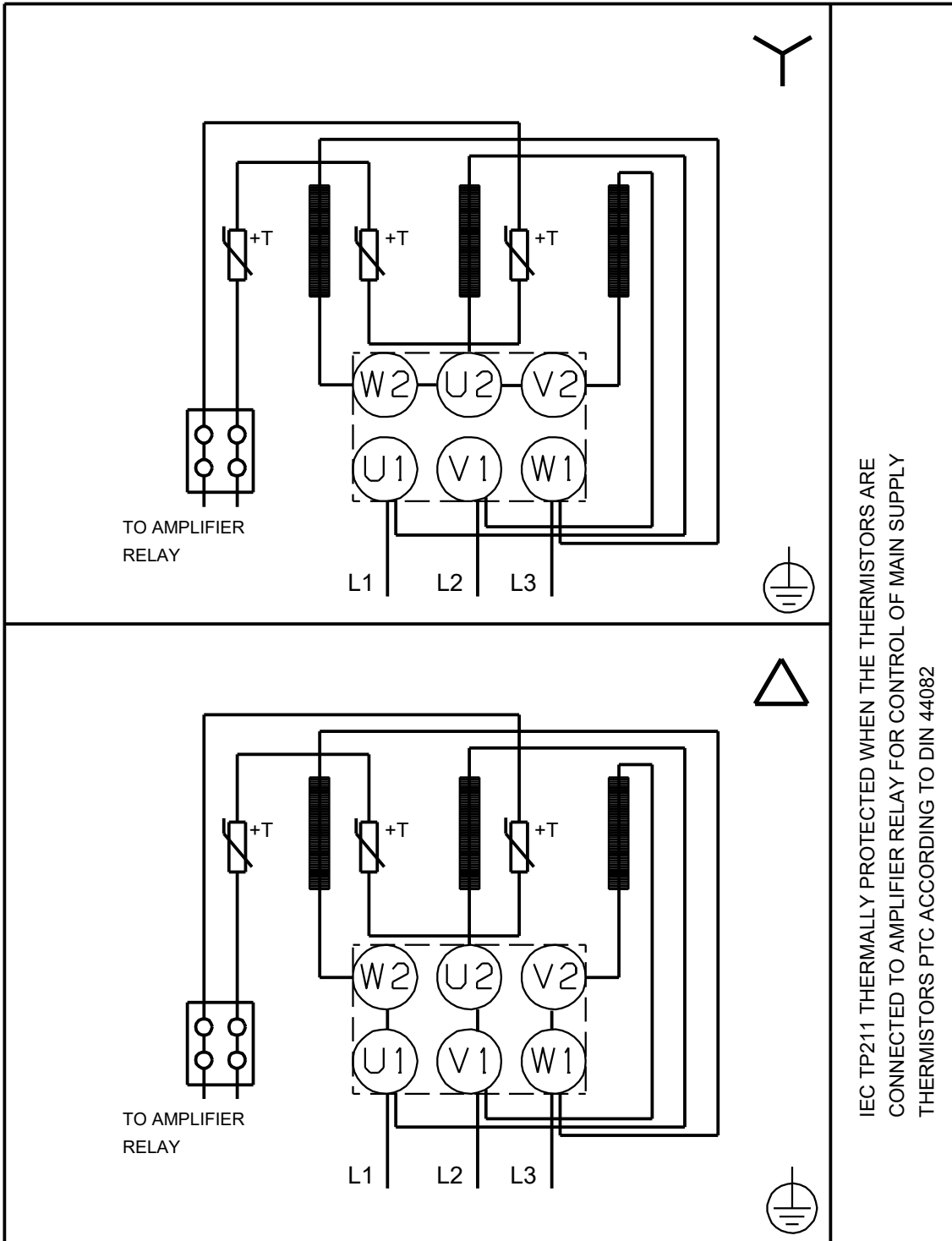
Description	Value
Motor efficiency at 3/4 load:	95.5-95.5 %
Motor efficiency at 1/2 load:	95.2-95.2 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	98943383
Bearing insulation type N-end:	STEEL BEARING
Controls:	
Frequency converter:	NONE
Pressure sensor:	N
Others:	
Minimum efficiency index, MEI ≥:	0.56
Net weight:	1360 kg
Gross weight:	1460 kg
Shipping volume:	2.96 m³
Country of origin:	HU
Custom tariff no.:	84137059

98972891 NK 100-315/284 AA2F2AESBQQE2W1 50 Hz



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

98972891 NK 100-315/284 AA2F2AESBQQE2W1 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.

