

**Qty. Description**

1 NK 150-500/513 AA2F1AESBQQEUW5



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

Product No.: [98972488](#)

Non-self-priming, single-stage, centrifugal pump designed according to ISO 5199 with dimensions and rated performance according to EN 733. Flanges are PN 10 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)

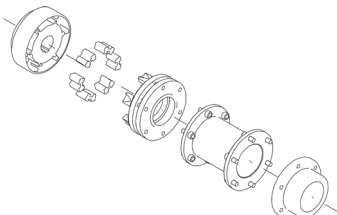
This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

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 60 mm where the coupling is mounted.

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

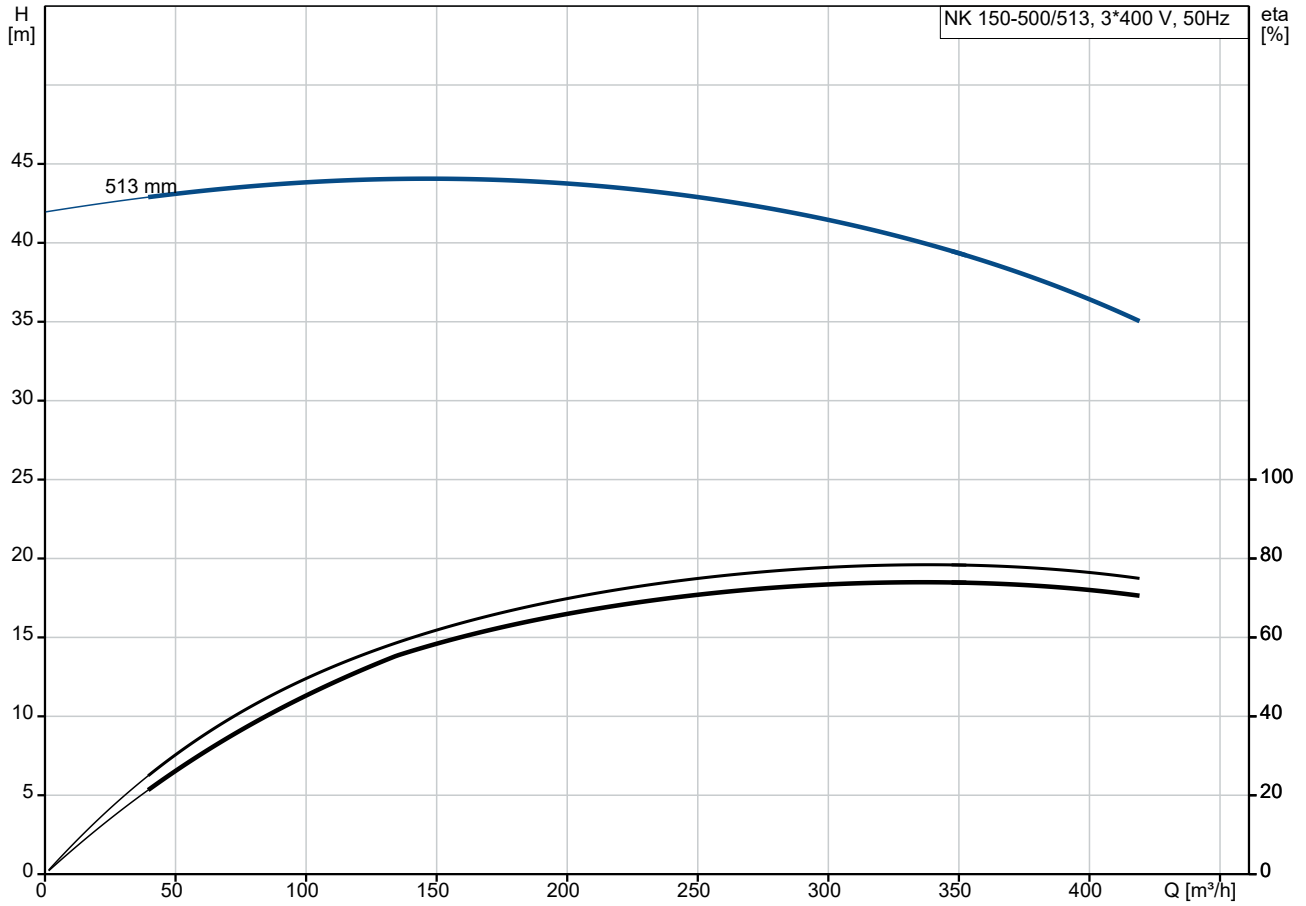


Qty.	Description																																														
1	<p data-bbox="201 338 284 371"><b>Motor</b></p> <p data-bbox="201 376 1476 427">The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.</p> <p data-bbox="201 432 1018 465">The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.</p> <p data-bbox="201 468 1476 519">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="201 521 1476 600">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="201 604 1476 656">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="201 723 512 757"><b>Further product details</b></p> <p data-bbox="201 761 1476 840">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="201 907 400 940"><b>Technical data</b></p> <p data-bbox="201 969 300 1003">Controls:</p> <table data-bbox="201 1005 638 1057"> <tr> <td>Frequency converter:</td> <td>NONE</td> </tr> <tr> <td>Pressure sensor:</td> <td>N</td> </tr> </table> <p data-bbox="201 1086 276 1120">Liquid:</p> <table data-bbox="201 1122 702 1238"> <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="201 1267 316 1301">Technical:</p> <table data-bbox="201 1303 805 1592"> <tr> <td>Pump speed on which pump data are based:</td> <td>988 rpm</td> </tr> <tr> <td>Rated flow:</td> <td>336.1 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>39.84 m</td> </tr> <tr> <td>Actual impeller diameter:</td> <td>513 mm</td> </tr> <tr> <td>Nominal impeller diameter:</td> <td>500</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="201 1621 309 1655">Materials:</p> <table data-bbox="201 1657 730 1977"> <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="201 2007 325 2040">Installation:</p> <table data-bbox="201 2042 638 2094"> <tr> <td>t max amb:</td> <td>55 °C</td> </tr> <tr> <td>Maximum operating pressure:</td> <td>10 bar</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:	988 rpm	Rated flow:	336.1 m <sup>3</sup> /h	Pump with motor (Yes/No):	Y	Rated head:	39.84 m	Actual impeller diameter:	513 mm	Nominal impeller diameter:	500	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:	10 bar
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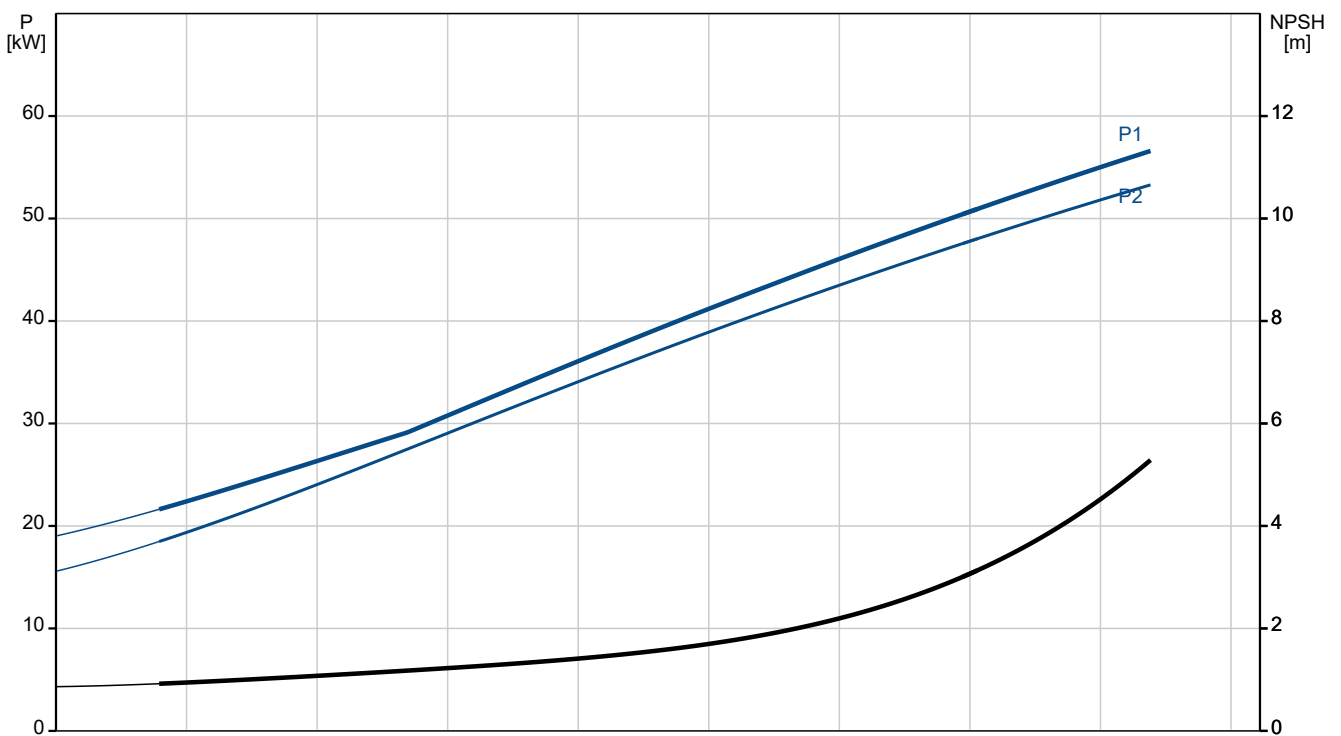
**Qty. Description**

1	<p>Pipe connection standard: EN 1092-2</p> <p>Type of inlet connection: DIN</p> <p>Type of outlet connection: DIN</p> <p>Size of inlet connection: DN 200</p> <p>Size of outlet connection: DN 150</p> <p>Pressure rating for connection: PN 10</p> <p>Coupling type: Flexible w/spacer</p> <p>Base frame design: EN/ISO</p> <p>Code for base frame: 10</p> <p>Grouting (Yes/No): N</p> <p>Electrical data:</p> <p>Motor type: SIEMENS</p> <p>IE Efficiency class: IE3</p> <p>Rated power - P2: 55 kW</p> <p>Mains frequency: 50 Hz</p> <p>Rated voltage: 3 x 380-420D/660-725Y V</p> <p>Rated current: 99.0/58.0 A</p> <p>Starting current: 720-720 %</p> <p>Cos phi - power factor: 0.85</p> <p>Rated speed: 988 rpm</p> <p>Efficiency: IE3 94,1%</p> <p>Motor efficiency at full load: 94.1-94.1 %</p> <p>Motor efficiency at 3/4 load: 94.5-94.5 %</p> <p>Motor efficiency at 1/2 load: 94.4-94.4 %</p> <p>Number of poles: 6</p> <p>Enclosure class (IEC 34-5): IP55</p> <p>Insulation class (IEC 85): F</p> <p>Motor No: 98957469</p> <p>Bearing insulation type N-end: STEEL BEARING</p> <p>Others:</p> <p>Minimum efficiency index, MEI ≥: 0.61</p> <p>Net weight: 1300 kg</p> <p>Gross weight: 1340 kg</p> <p>Shipping volume: 2.52 m<sup>3</sup></p>
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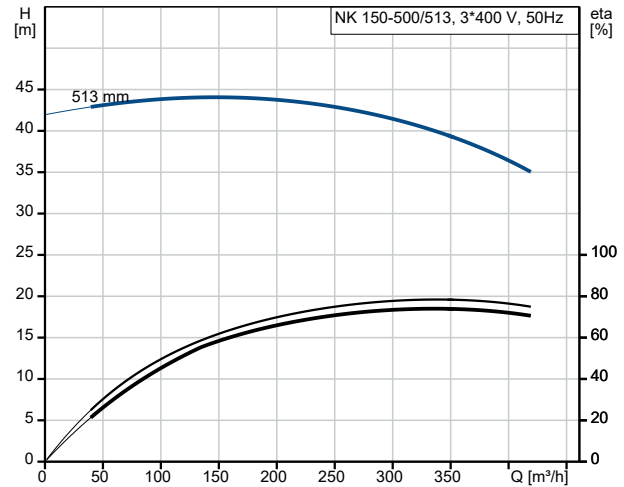
## 98972488 NK 150-500/513 AA2F1AESBQQEUW5 50 Hz



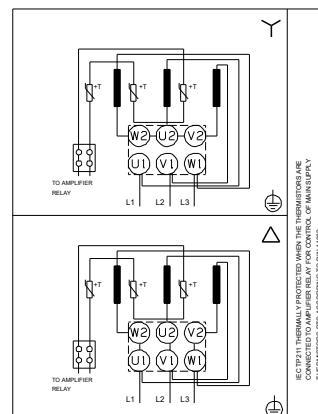
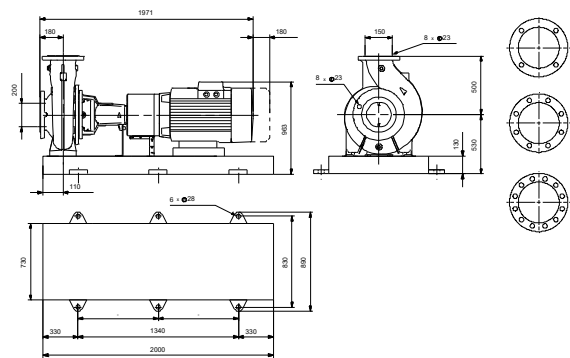
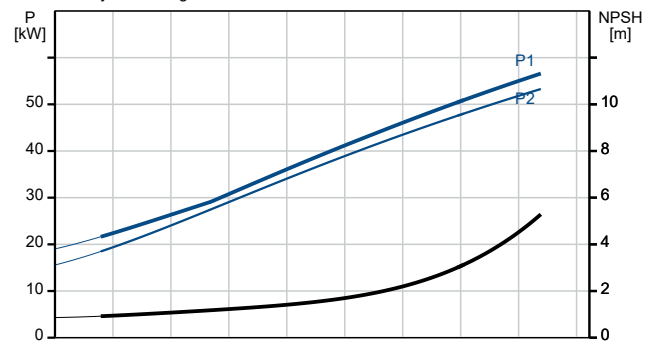
Pumped liquid = Water  
Liquid temperature during operation = 20 °C  
Density = 998.2 kg/m³



Description	Value
<b>General information:</b>	
Product name:	NK 150-500/513 AA2F1AESBQQEUW5
Product No:	98972488
EAN number:	5712604486290
<b>Technical:</b>	
Pump speed on which pump data are based:	988 rpm
Rated flow:	336.1 m <sup>3</sup> /h
Pump with motor (Yes/No):	Y
Rated head:	39.84 m
Actual impeller diameter:	513 mm
Nominal impeller diameter:	500
Shaft diameter:	60 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:	10 bar
Pipe connection standard:	EN 1092-2
Type of inlet connection:	DIN
Type of outlet connection:	DIN
Size of inlet connection:	DN 200
Size of outlet connection:	DN 150
Pressure rating for connection:	PN 10
Coupling type:	Flexible w/spacer
Base frame design:	EN/ISO
Code for base frame:	10
Grouting (Yes/No):	N
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:	99.0/58.0 A



Pumped liquid = Water  
Liquid temperature during operation = 20 °C  
Density = 998.2 kg/m<sup>3</sup>





Company name:

Created by:

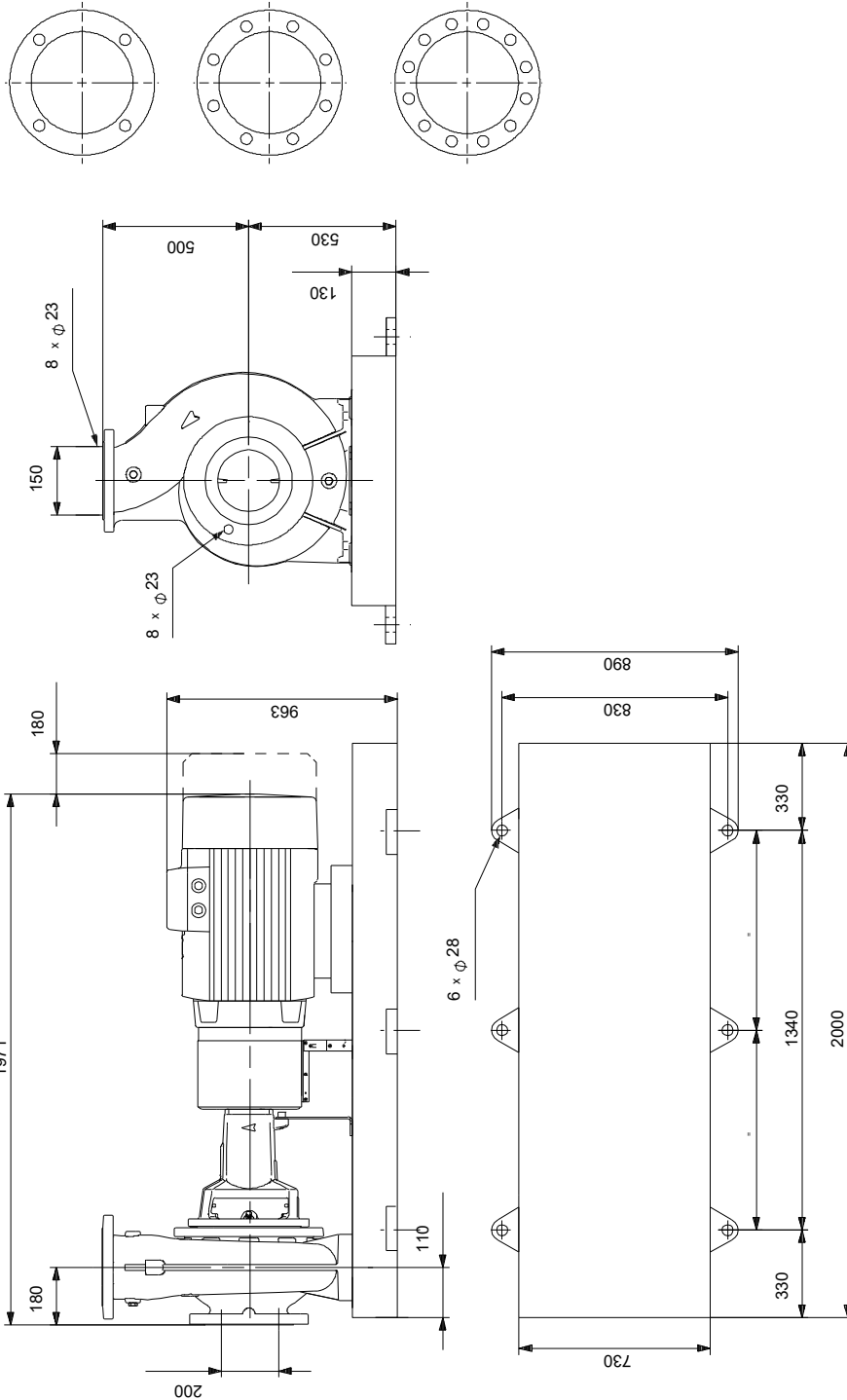
Phone:

Date:

28/12/2022

Description	Value
Starting current:	720-720 %
Cos phi - power factor:	0.85
Rated speed:	988 rpm
Efficiency:	IE3 94,1%
Motor efficiency at full load:	94.1-94.1 %
Motor efficiency at 3/4 load:	94.5-94.5 %
Motor efficiency at 1/2 load:	94.4-94.4 %
Number of poles:	6
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	98957469
Bearing insulation type N-end:	STEEL BEARING
<b>Controls:</b>	
Frequency converter:	NONE
Pressure sensor:	N
<b>Others:</b>	
Minimum efficiency index, MEI ≥:	0.61
Net weight:	1300 kg
Gross weight:	1340 kg
Shipping volume:	2.52 m <sup>3</sup>

## 98972488 NK 150-500/513 AA2F1AESBQQEUW5 50 Hz



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

## 98972488 NK 150-500/513 AA2F1AESBQQEUW5 50 Hz



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



