

**Qty. Description**

1 **NK 100-200/178 AA2F2AESBQQEKW3**



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

Product No.: [98973513](#)

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.

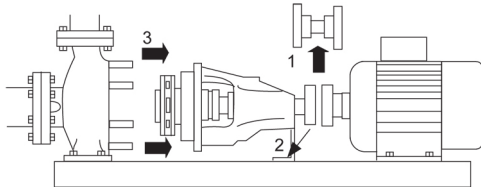
The pump is fitted with a foot-mounted, fan-cooled asynchronous motor. Pump and motor are mounted on a common base frame.

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)

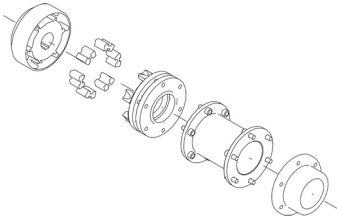
This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

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.



**Motor**

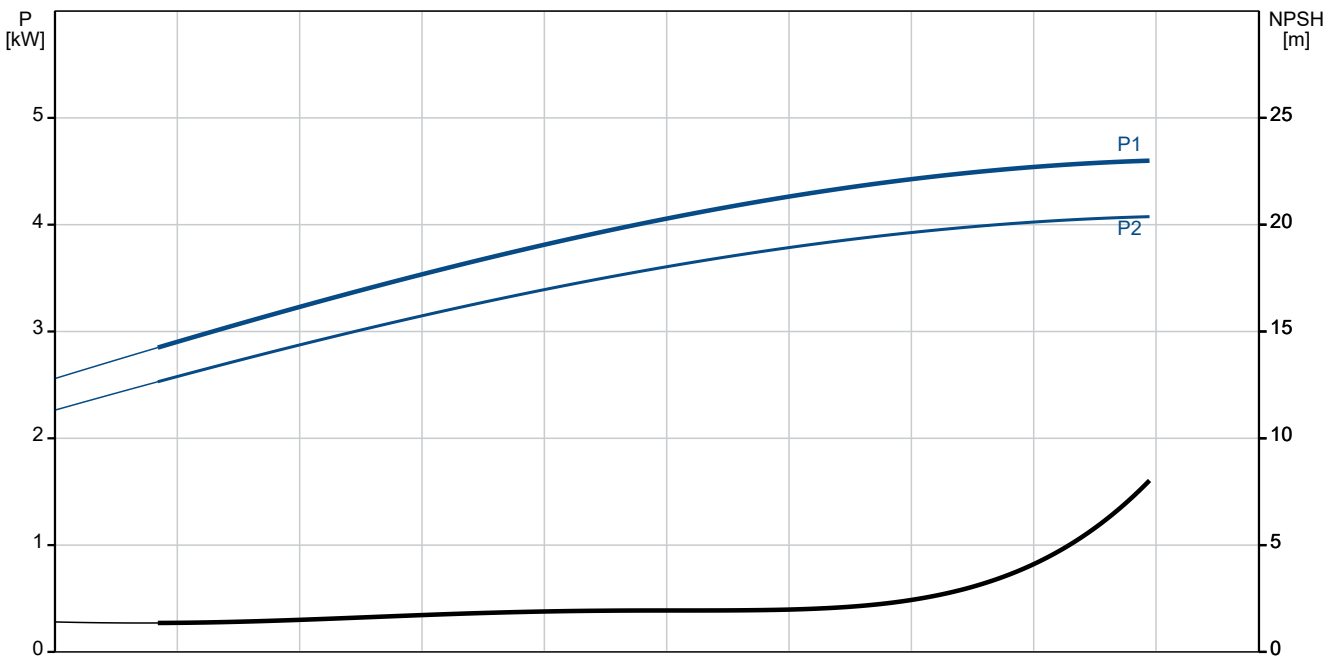
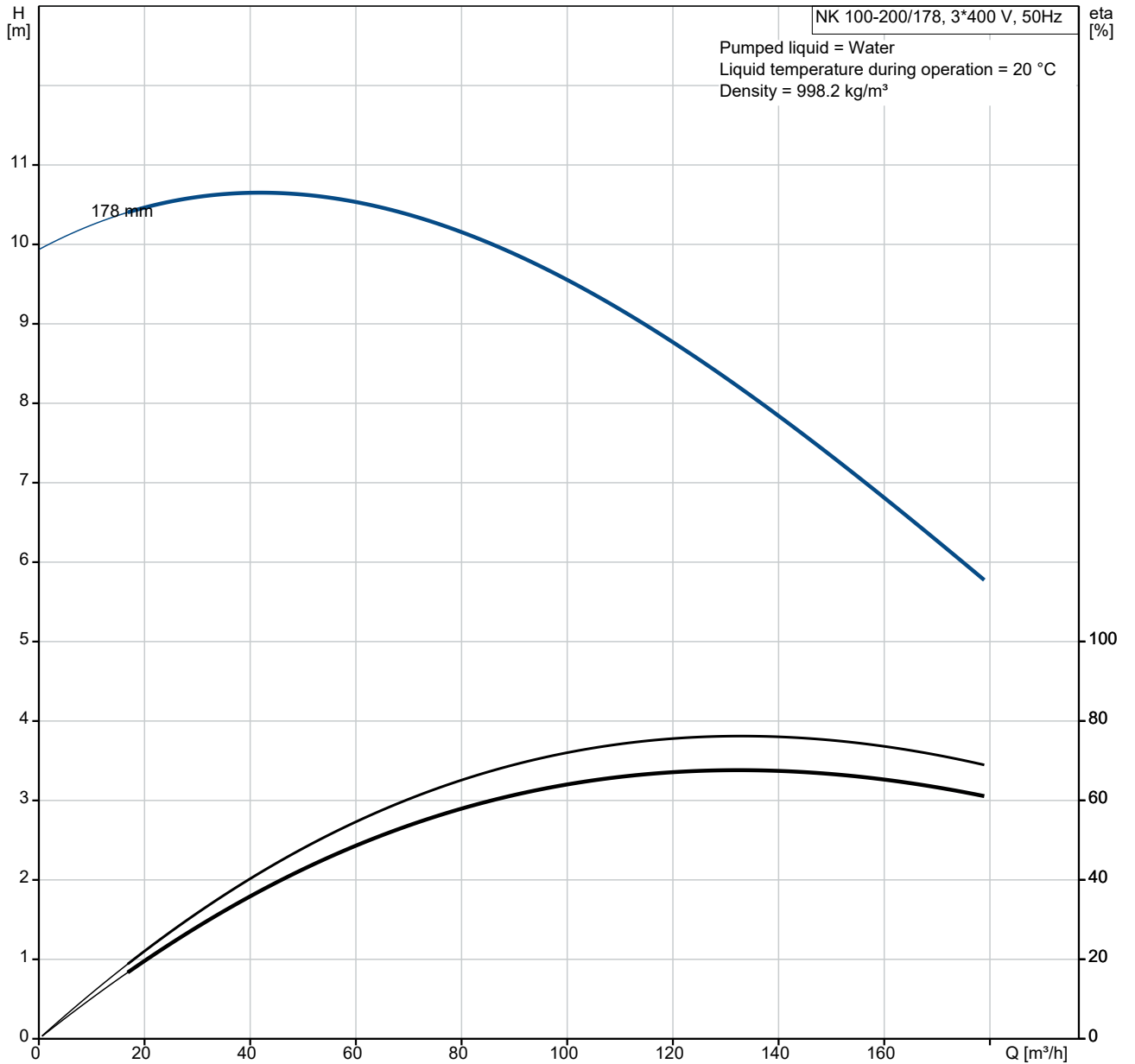
The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.

The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.

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1	<p>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>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>The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.</p> <p><b>Further product details</b></p> <p>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><b>Technical data</b></p> <p>Controls:</p> <p>Frequency converter: NONE  Pressure sensor: N</p> <p>Liquid:</p> <p>Pumped liquid: Water  Liquid temperature range: -25 .. 120 °C  Selected liquid temperature: 20 °C  Density: 998.2 kg/m<sup>3</sup></p> <p>Technical:</p> <p>Pump speed on which pump data are based: 1460 rpm  Rated flow: 135.4 m<sup>3</sup>/h  Pump with motor (Yes/No): Y  Rated head: 8.009 m  Actual impeller diameter: 178 mm  Nominal impeller diameter: 200  Code for shaft seal: BQQE  Mechanical seal type: Single  Curve tolerance: ISO9906:2012 3B2  Bearing design: Standard</p> <p>Materials:</p> <p>Pump housing: Cast iron  EN-GJL-250  ASTM class 35</p> <p>Wear ring: Brass</p> <p>Impeller: Cast iron  EN-GJL-200  ASTM class 30</p> <p>Internal pump house coating: CED</p> <p>Shaft: Stainless steel  EN 1.4301  AISI 304</p> <p>Installation:</p> <p>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: 6  Grouting (Yes/No): N</p>

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1	<p>Electrical data:</p> <p>Motor type: SIEMENS</p> <p>IE Efficiency class: IE3</p> <p>Rated power - P2: 4 kW</p> <p>Mains frequency: 50 Hz</p> <p>Rated voltage: 3 x 380-420D/660-725Y V</p> <p>Rated current: 7.9/4.6 A</p> <p>Starting current: 710-710 %</p> <p>Cos phi - power factor: 0.82</p> <p>Rated speed: 1460 rpm</p> <p>Efficiency: IE3 88,6%</p> <p>Motor efficiency at full load: 88.6-88.6 %</p> <p>Motor efficiency at 3/4 load: 89.2-89.2 %</p> <p>Motor efficiency at 1/2 load: 88.6-88.6 %</p> <p>Number of poles: 4</p> <p>Enclosure class (IEC 34-5): IP55</p> <p>Insulation class (IEC 85): F</p> <p>Motor No: 98957789</p> <p>Bearing insulation type N-end: N</p> <p>Others:</p> <p>Minimum efficiency index, MEI <math>\geq</math>: 0.61</p> <p>Net weight: 212 kg</p> <p>Gross weight: 227 kg</p> <p>Shipping volume: 0.554 m<sup>3</sup></p> <p>Country of origin: HU</p> <p>Custom tariff no.: 84137059</p>

# 98973513 NK 100-200/178 AA2F2AESBQQEKW3 50 Hz





Description	Value
Motor efficiency at 3/4 load:	89.2-89.2 %
Motor efficiency at 1/2 load:	88.6-88.6 %
Number of poles:	4
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	98957789
Bearing insulation type N-end:	N
<b>Controls:</b>	
Frequency converter:	NONE
Pressure sensor:	N
<b>Others:</b>	
Minimum efficiency index, MEI ≥:	0.61
Net weight:	212 kg
Gross weight:	227 kg
Shipping volume:	0.554 m <sup>3</sup>
Country of origin:	HU
Custom tariff no.:	84137059



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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.



