


Qty.	Description
1	<p data-bbox="204 338 512 365"><b>CRIE 10-6 N-CA-A-E-HQQE</b></p> <div data-bbox="323 376 459 712" style="text-align: center;">  </div> <p data-bbox="592 685 1062 707" style="text-align: center;"><b>Note! Product picture may differ from actual product</b></p> <p data-bbox="204 719 480 741">Product No.: On request</p> <p data-bbox="204 779 1465 853">Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). Pump materials in contact with the liquid are in stainless steel. A cartridge shaft seal ensures high reliability, safe handling, and easy access and service. Power transmission is via a rigid split coupling. Pipe connection is via FlexiClamps.</p> <p data-bbox="204 891 1126 913">The pump is fitted with a 3-phase, fan-cooled, permanent-magnet, synchronous motor.</p> <p data-bbox="204 920 1015 943">The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.</p> <p data-bbox="204 949 1398 1003">The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement.</p> <p data-bbox="204 1010 1465 1084">An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The Grundfos Eye indicator on the operating panel provides visual indication of pump status:</p> <ul data-bbox="240 1093 1465 1234" style="list-style-type: none"> <li>• "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)</li> <li>• "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)</li> <li>• "Alarm": Motor has stopped (flashing red indicator lights).</li> </ul> <p data-bbox="204 1240 1430 1317">Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".</p> <p data-bbox="204 1323 1445 1377">The terminal box has a number of inputs and outputs enabling the motor to be used in advanced applications where many inputs and outputs are required:</p> <ul data-bbox="240 1384 1445 1765" style="list-style-type: none"> <li>• two dedicated digital inputs</li> <li>• three analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 - 3.5 V; the factory-fitted pressure sensor is connected to one of these inputs</li> <li>• 5 V voltage supply to potentiometer and sensor</li> <li>• one analog output, 0-10 V, 0(4)-20 mA</li> <li>• two configurable digital inputs or open-collector outputs</li> <li>• two Pt100/Pt1000 inputs</li> <li>• LiqTec, dry-running protection sensor input</li> <li>• Grundfos Digital Sensor input and output</li> <li>• 24 V voltage supply for sensors</li> <li>• two signal-relay outputs (potential-free contacts)</li> <li>• GENIbus connection</li> <li>• interface for Grundfos CIM fieldbus module.</li> </ul> <p data-bbox="204 1794 512 1825"><b>Further product details</b></p> <p data-bbox="204 1832 1366 1886">The pump is equipped with a pressure sensor registering pump outlet pressure and enabling controlled pump operation based on constant pressure.</p> <p data-bbox="204 1892 1465 1968">An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The Grundfos Eye indicator on the operating panel provides visual indication of pump status:</p> <ul data-bbox="240 1975 1465 2085" style="list-style-type: none"> <li>• "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)</li> <li>• "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)</li> </ul>

**Qty. Description**

- "Alarm": Motor has stopped (flashing red indicator lights).

Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

Steel, cast iron and aluminium components 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.

An integral part of the process is a pretreatment.

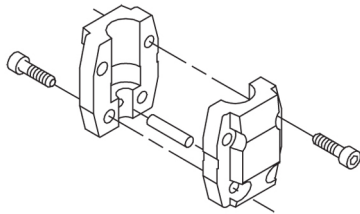
The entire process consists of these elements:

- 1) Alkaline-based cleaning.
- 2) Zinc phosphating.
- 3) Cathodic electro-deposition.
- 4) Curing to a dry film thickness 18-22 my m.

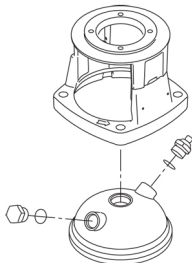
The colour code for the finished product is NCS 9000/RAL 9005.

## Pump

A standard split coupling connects the pump and motor shaft. It is enclosed in the pump head/motor stool by means of two coupling guards.



The pump head and flange for motor mounting is made in one piece (cast iron). The pump head cover is a separate component (stainless steel). The pump head has a combined 1/2" priming plug and vent screw.



The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system.

This seal type is assembled in a cartridge unit which makes replacement safe and easy.

Due to the balancing, this seal type is suitable for high-pressure applications.

The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.

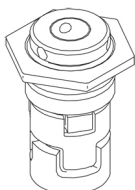
Seal faces:

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

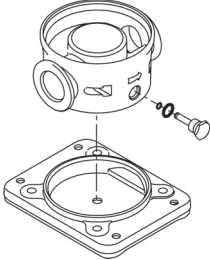
This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.



The shaft seal is screwed into the pump head.

Qty.	Description
	<p>The chambers and impellers are made of stainless-steel sheet. The chambers are provided with a PTFE neck ring offering improved sealing and high efficiency. The impellers have smooth surfaces, and the shape of the blades ensure a high efficiency.</p> <p>The pump has a stainless-steel base mounted on a separate base plate. The base and base plate are kept in position by the tension of the staybolts which hold the pump together. The outlet side of the base has a drain plug. The pump is secured to the foundation by four bolts through the base plate. The base is prepared for connection by means of FlexiClamp-couplings.</p>  <p><b>Motor</b></p> <p>The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with tapped-hole flange (FT).</p> <p>Motor-mounting designation in accordance with IEC 60034-7: IM B 14 (Code I) / IM 3601 (Code II).</p> <p>Electrical tolerances comply with IEC 60034.</p> <p>The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.</p> <p>The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.</p> <p><b>Technical data</b></p> <p>Liquid:</p> <p>Pumped liquid: Water</p> <p>Liquid temperature range: -20 .. 120 °C</p> <p>Selected liquid temperature: 20 °C</p> <p>Density: 998.2 kg/m<sup>3</sup></p> <p>Technical:</p> <p>Pump speed on which pump data are based: 3514 rpm</p> <p>Rated flow: 12.1 m<sup>3</sup>/h</p> <p>Rated head: 71.1 m</p> <p>Pump orientation: Vertical</p> <p>Shaft seal arrangement: Single</p> <p>Code for shaft seal: HQQE</p> <p>Approvals: CE,EAC,UKCA,SEPRO</p> <p>Approvals for drinking water: WRAS,ACS</p> <p>Curve tolerance: ISO9906:2012 3B</p> <p>Materials:</p> <p>Base: Stainless steel EN 1.4408 AISI 316</p> <p>Impeller: Stainless steel EN 1.4301 AISI 304</p> <p>Bearing: SIC</p> <p>Installation:</p> <p>t max amb: 50 °C</p>

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	<p>Maximum operating pressure: 16 bar            Max pressure at stated temp: 16 bar / 120 °C            16 bar / -20 °C</p> <p>Type of connection: FlexiClamp            Size of inlet connection: DN 50            Size of outlet connection: DN 50            Pressure rating for connection: PN 25            Flange size for motor: FT130</p> <p>Electrical data:            Motor standard: IEC            Motor type: 112MC            IE Efficiency class: IE5            Rated power - P2: 4 kW            Power (P2) required by pump: 4 kW            Mains frequency: 50 / 60 Hz            Rated voltage: 3 x 380-500 V            Rated current: 7.60-6.20 A            Cos phi - power factor: 0.92-0.87            Rated speed: 360-4000 rpm            Efficiency: 92.2%            Motor efficiency at full load: 92.2 %            Enclosure class (IEC 34-5): IP55            Insulation class (IEC 85): F            Motor No: 98971050</p> <p>Controls:            Frequency converter: Built-in            Pressure sensor: Y</p> <p>Others:            Minimum efficiency index, MEI ≥: 0.70            Net weight: 57 kg            Gross weight: 79 kg            Shipping volume: 0.234 m<sup>3</sup>            Country of origin: GB            Custom tariff no.: 84137075</p>





Company name:

Created by:

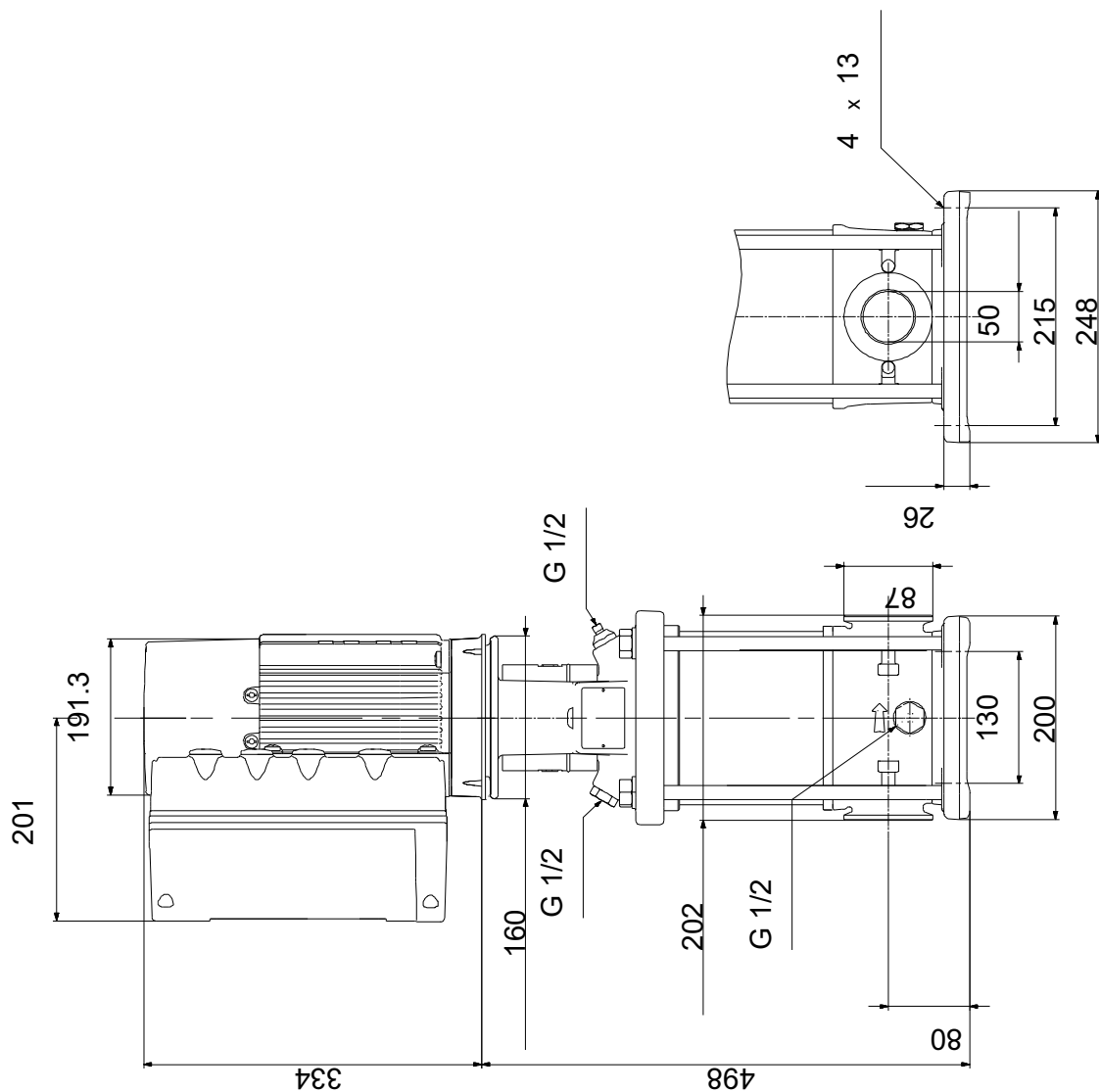
Phone:

Date:

16/06/2022

Description	Value
Rated speed:	360-4000 rpm
Efficiency:	92.2%
Motor efficiency at full load:	92.2 %
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	ELEC
Motor No:	98971050
<b>Controls:</b>	
Control panel:	Standard
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Pressure sensor:	Y
<b>Others:</b>	
Minimum efficiency index, MEI $\geq$ :	0.70
Net weight:	57 kg
Gross weight:	79 kg
Shipping volume:	0.234 m <sup>3</sup>
Config. file no:	99058960
Country of origin:	GB
Custom tariff no.:	84137075

**On request CRIE 10-6 N-CA-A-E-HQQE**



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



Company name:

Created by:

Phone:

Date:

16/06/2022

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**Order Data:**

Product name: CRIE 10-6

Amount: 1

Product No: On request

Total: Price on request

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