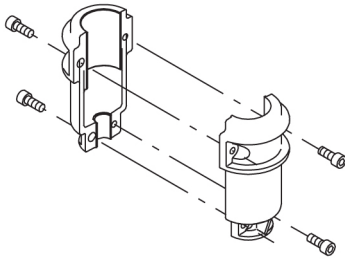
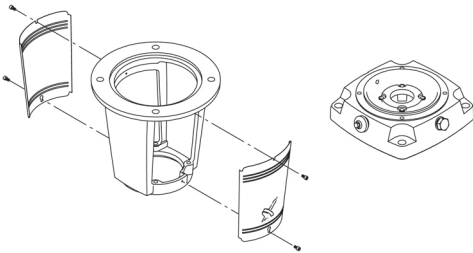


| Qty. | Description   |
|------|---|
| 1    | <p data-bbox="87 226 391 246"><b>CRE 64-2-1 N-F-A-E-HQQE</b></p> <div data-bbox="215 257 343 593" style="text-align: center;">  </div> <p data-bbox="478 571 949 593" style="text-align: center;">Note! Product picture may differ from actual product</p> <p data-bbox="87 604 351 627">Product No.: <a href="#">96124000</a></p> <p data-bbox="87 660 1564 739">Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts 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 DIN flanges.</p> <p data-bbox="87 772 798 795">The pump is fitted with a 3-phase, fan-cooled asynchronous motor.</p> <p data-bbox="87 806 1516 862">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="87 862 1548 918">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 operating panel has indicator lights for "Operation" and "Fault".</p> <p data-bbox="87 918 1556 974">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="87 974 678 996">The terminal box holds terminals for these connections:</p> <ul data-bbox="119 1008 1412 1332" style="list-style-type: none"> <li>• pump start/stop input (potential-free contact)</li> <li>• remote setpoint setting via analog signal, 0-10 V, 0(4)-20 mA</li> <li>• 10 V voltage supply for setpoint potentiometer, I<sub>max</sub> = 5 mA</li> <li>• three analog sensor inputs, 0-10 V, 0(4)-20 mA; the factory-fitted pressure sensor is connected to one of these inputs</li> <li>• 24 V voltage supply for sensor, I<sub>max</sub> = 40 mA</li> <li>• one analog output</li> <li>• three digital inputs</li> <li>• two Pt100 inputs</li> <li>• two potential-free fault signal relays with changeover contact, reporting "Fault", "Operation" or "Ready"</li> <li>• RS-485 GENIbus connection</li> <li>• interface for Grundfos CIM fieldbus module.</li> </ul> <p data-bbox="87 1366 399 1400"><b>Further product details</b></p> <p data-bbox="87 1400 1572 1456">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="87 1456 1548 1512">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 operating panel has indicator lights for "Operation" and "Fault".</p> <p data-bbox="87 1512 1556 1568">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="87 1568 1452 1601">Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process.</p> <p data-bbox="87 1601 1516 1657">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="87 1657 606 1691">An integral part of the process is a pretreatment.</p> <p data-bbox="87 1691 590 1713">The entire process consists of these elements:</p> <ol data-bbox="103 1713 590 1848" style="list-style-type: none"> <li>1) Alkaline-based cleaning.</li> <li>2) Zinc phosphating.</li> <li>3) Cathodic electro-deposition.</li> <li>4) Curing to a dry film thickness 18-22 my m.</li> </ol> <p data-bbox="87 1836 782 1870">The colour code for the finished product is NCS 9000/RAL 9005.</p> <p data-bbox="87 1892 167 1926"><b>Pump</b></p> <p data-bbox="87 1926 1508 1982">A long split coupling connects the pump and motor shaft. It is enclosed in the motor stool by means of two coupling guards. The long coupling makes it possible to replace the shaft seal without removing the motor from the pump.</p> |



The motor stool connects the pump head and motor. 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.

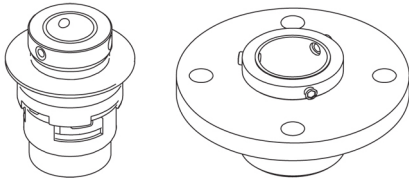
Primary seal:

- 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)

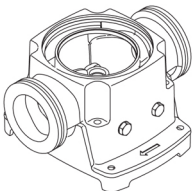
EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.



The shaft seal is retained in the pump head by a cover and screws. It can be replaced without removing the motor.

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.

The base is made of cast iron. Both the inlet and the outlet side of the base have two pressure gauge tappings. The pump is secured to the foundation by four bolts through the base plate. The flanges are fastened to the base by means of locking rings.



## Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with free-hole flange (FF).

Motor-mounting designation in accordance with IEC 60034-7: IM B 5 (Code I) / IM 3001 (Code II).

Electrical tolerances comply with IEC 60034.

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

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.

## Technical data

Liquid:

Pumped liquid:

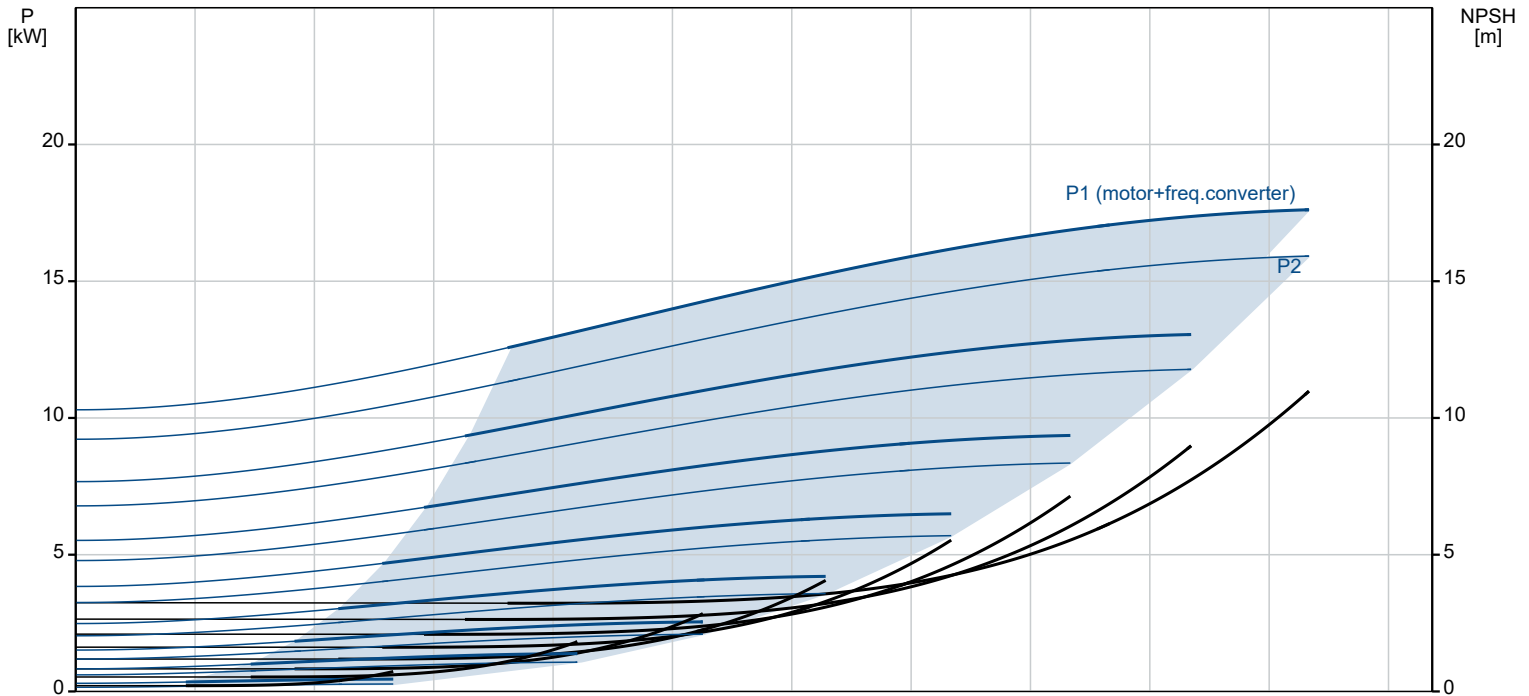
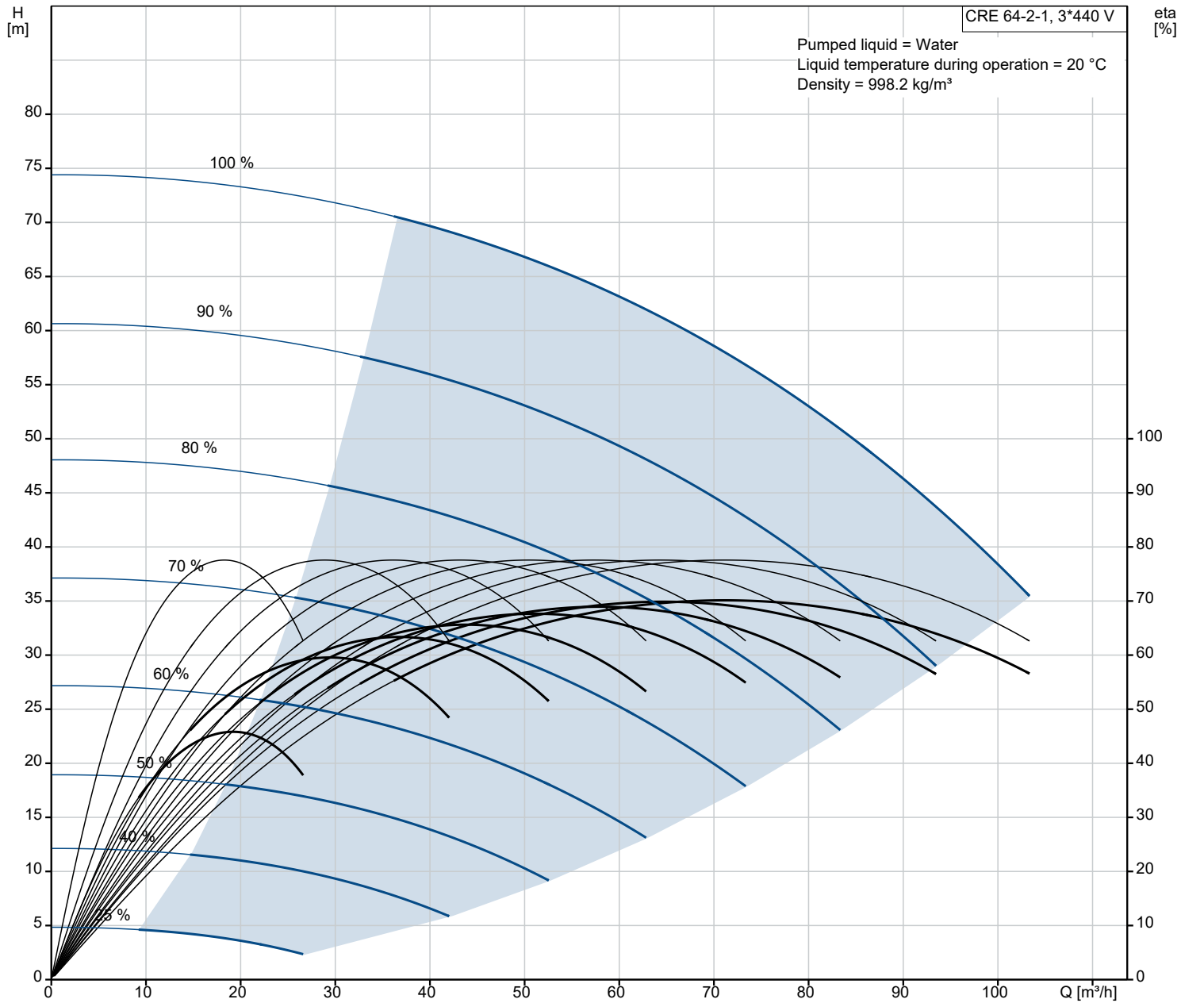
Water

Liquid temperature range:

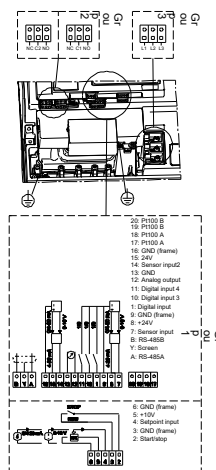
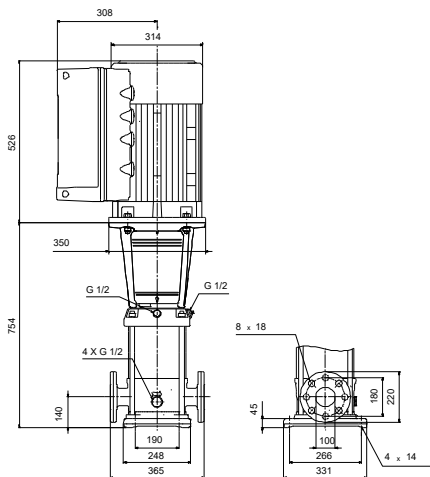
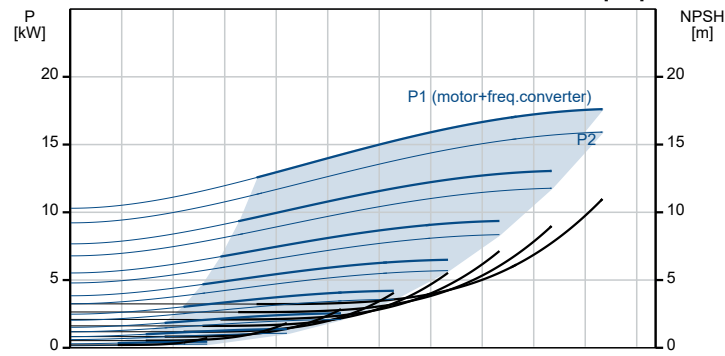
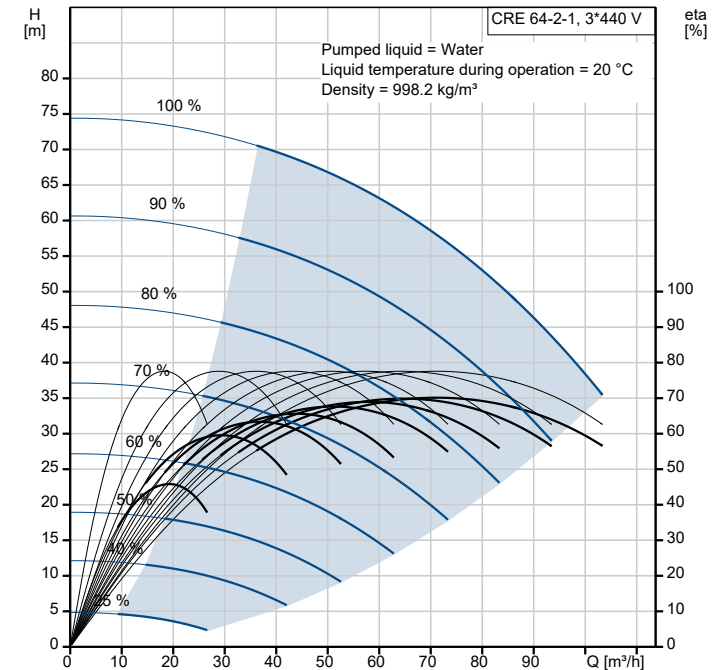
-30 .. 120 °C

| Qty. | Description  |
|------|--|
|      | <p>Selected liquid temperature: 20 °C<br/> Density: 998.2 kg/m<sup>3</sup></p> <p>Technical:</p> <p>Pump speed on which pump data are based: 3540 rpm<br/> Rated flow: 77 m<sup>3</sup>/h<br/> Rated head: 53.8 m<br/> Pump orientation: Vertical<br/> Shaft seal arrangement: Single<br/> Code for shaft seal: HQQE<br/> Approvals: CE,EAC,UKCA<br/> Approvals for drinking water: WRAS,ACS<br/> Curve tolerance: ISO9906:2012 3B</p> <p>Materials:</p> <p>Base: Cast iron<br/> EN 1563 EN-GJS-500-7<br/> ASTM A536 80-55-06</p> <p>Impeller: Stainless steel<br/> EN 1.4301<br/> AISI 304</p> <p>Bearing: SIC<br/> Support bearing: Graflon</p> <p>Installation:</p> <p>t max amb: 40 °C<br/> Maximum operating pressure: 16 bar<br/> Max pressure at stated temp: 16 bar / 120 °C<br/> 16 bar / -30 °C</p> <p>Type of connection: DIN<br/> Size of inlet connection: DN 100<br/> Size of outlet connection: DN 100<br/> Pressure rating for connection: PN 16<br/> Flange size for motor: FF300</p> <p>Electrical data:</p> <p>Motor standard: IEC<br/> Motor type: 160LB<br/> IE Efficiency class: IE3<br/> Rated power - P2: 18.5 kW<br/> Power (P2) required by pump: 18.5 kW<br/> Mains frequency: 50 / 60 Hz<br/> Rated voltage: 3 x 380-480 V<br/> Rated current: 37.0-31.0 A<br/> Cos phi - power factor: 0.91-0.88<br/> Rated speed: 480-3540 rpm<br/> Efficiency: IE3 92,4%<br/> Motor efficiency at full load: 92.4 %<br/> Number of poles: 2<br/> Enclosure class (IEC 34-5): IP55<br/> Insulation class (IEC 85): F<br/> Motor No: 85901026</p> <p>Controls:</p> <p>Frequency converter: Built-in<br/> Pressure sensor: Y</p> <p>Others:</p> <p>Minimum efficiency index, MEI ≥: 0.70<br/> Net weight: 219 kg<br/> Gross weight: 270 kg<br/> Shipping volume: 0.82 m<sup>3</sup><br/> Danish VVS No.: 385948521</p> |

## 96124000 CRE 64-2-1 N-F-A-E-HQQE

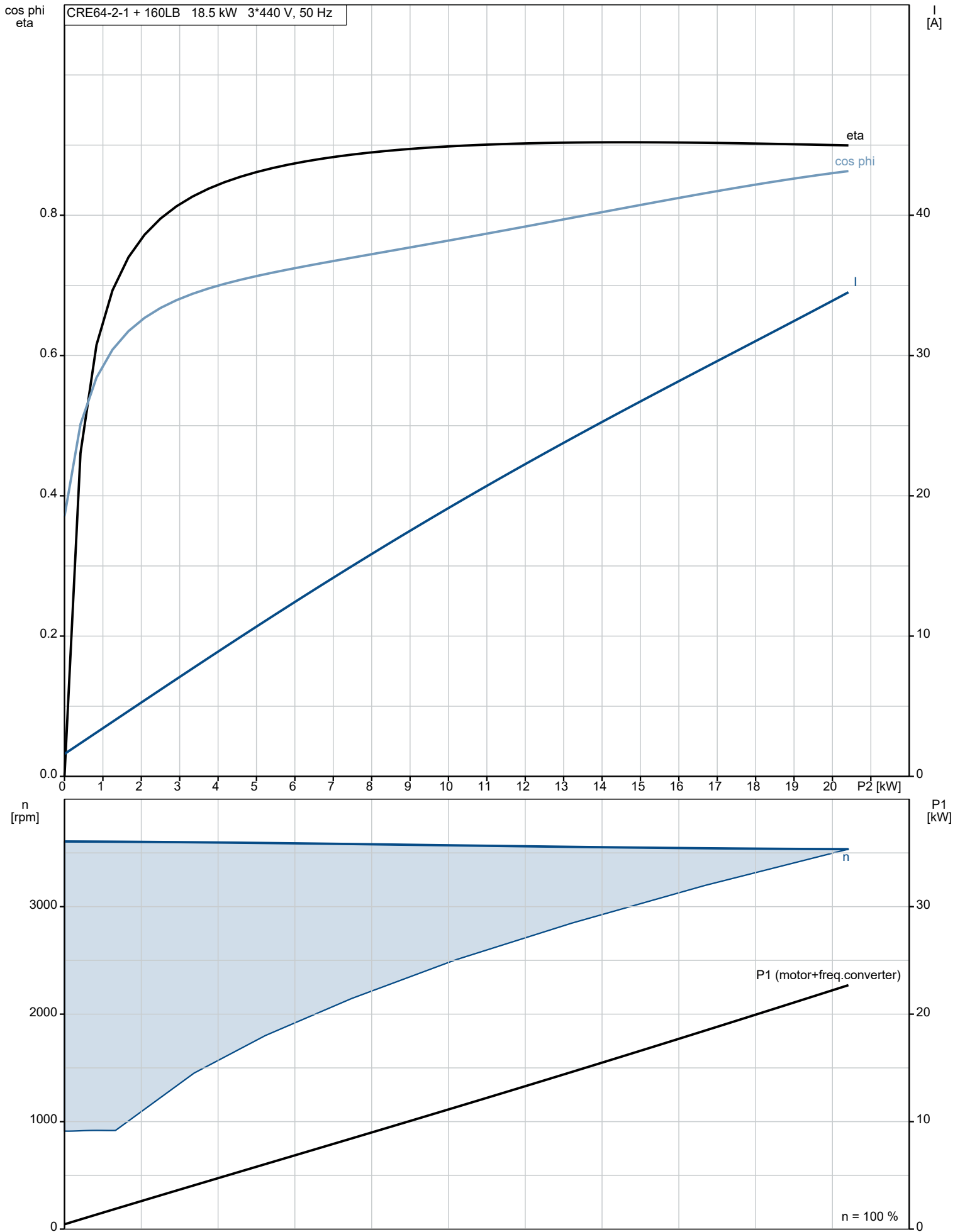


| Description                              | Value                   |
|--|-------------------------|
| <b>General information:</b>              |                         |
| Product name:                            | CRE 64-2-1 N-F-A-E-HQQE |
| Product No:                              | 96124000                |
| EAN number:                              | 5700396703039           |
| Price:                                   |                         |
| <b>Technical:</b>                        |                         |
| Pump speed on which pump data are based: | 3540 rpm                |
| Rated flow:                              | 77 m <sup>3</sup> /h    |
| Rated head:                              | 53.8 m                  |
| Maximum head:                            | 74 m                    |
| Stages:                                  | 2                       |
| Impellers:                               | 2                       |
| Number of reduced-diameter impellers:    | 1                       |
| Low NPSH:                                | N                       |
| Pump orientation:                        | Vertical                |
| Shaft seal arrangement:                  | Single                  |
| Code for shaft seal:                     | HQQE                    |
| Approvals:                               | CE,EAC,UKCA             |
| Approvals for drinking water:            | WRAS,ACS                |
| Curve tolerance:                         | ISO9906:2012 3B         |
| Pump version:                            | N                       |
| Model:                                   | B                       |
| <b>Materials:</b>                        |                         |
| Base:                                    | Cast iron               |
| Base:                                    | EN 1563 EN-GJS-500-7    |
| Base:                                    | ASTM A536 80-55-06      |
| Impeller:                                | Stainless steel         |
| Impeller:                                | EN 1.4301               |
| Impeller:                                | AISI 304                |
| Material code:                           | A                       |
| Code for rubber:                         | E                       |
| Bearing:                                 | SIC                     |
| Support bearing:                         | Graflon                 |
| <b>Installation:</b>                     |                         |
| t max amb:                               | 40 °C                   |
| Maximum operating pressure:              | 16 bar                  |
| Max pressure at stated temp:             | 16 bar / 120 °C         |
| Max pressure at stated temp:             | 16 bar / -30 °C         |
| Type of connection:                      | DIN                     |
| Size of inlet connection:                | DN 100                  |
| Size of outlet connection:               | DN 100                  |
| Pressure rating for connection:          | PN 16                   |
| Flange size for motor:                   | FF300                   |
| Connect code:                            | F                       |
| <b>Liquid:</b>                           |                         |
| Pumped liquid:                           | Water                   |
| Liquid temperature range:                | -30 .. 120 °C           |
| Selected liquid temperature:             | 20 °C                   |
| Density:                                 | 998.2 kg/m <sup>3</sup> |
| <b>Electrical data:</b>                  |                         |
| Motor standard:                          | IEC                     |
| Motor type:                              | 160LB                   |
| IE Efficiency class:                     | IE3                     |
| Rated power - P2:                        | 18.5 kW                 |
| Power (P2) required by pump:             | 18.5 kW                 |
| Mains frequency:                         | 50 / 60 Hz              |
| Rated voltage:                           | 3 x 380-480 V           |
| Rated current:                           | 37.0-31.0 A             |
| Cos phi - power factor:                  | 0.91-0.88               |
| Rated speed:                             | 480-3540 rpm            |
| Efficiency:                              | IE3 92,4%               |
| Motor efficiency at full load:           | 92.4 %                  |
| Number of poles:                         | 2                       |
| Enclosure class (IEC 34-5):              | IP55                    |
| Insulation class (IEC 85):               | F                       |
| Built-in motor protection:               | YES                     |

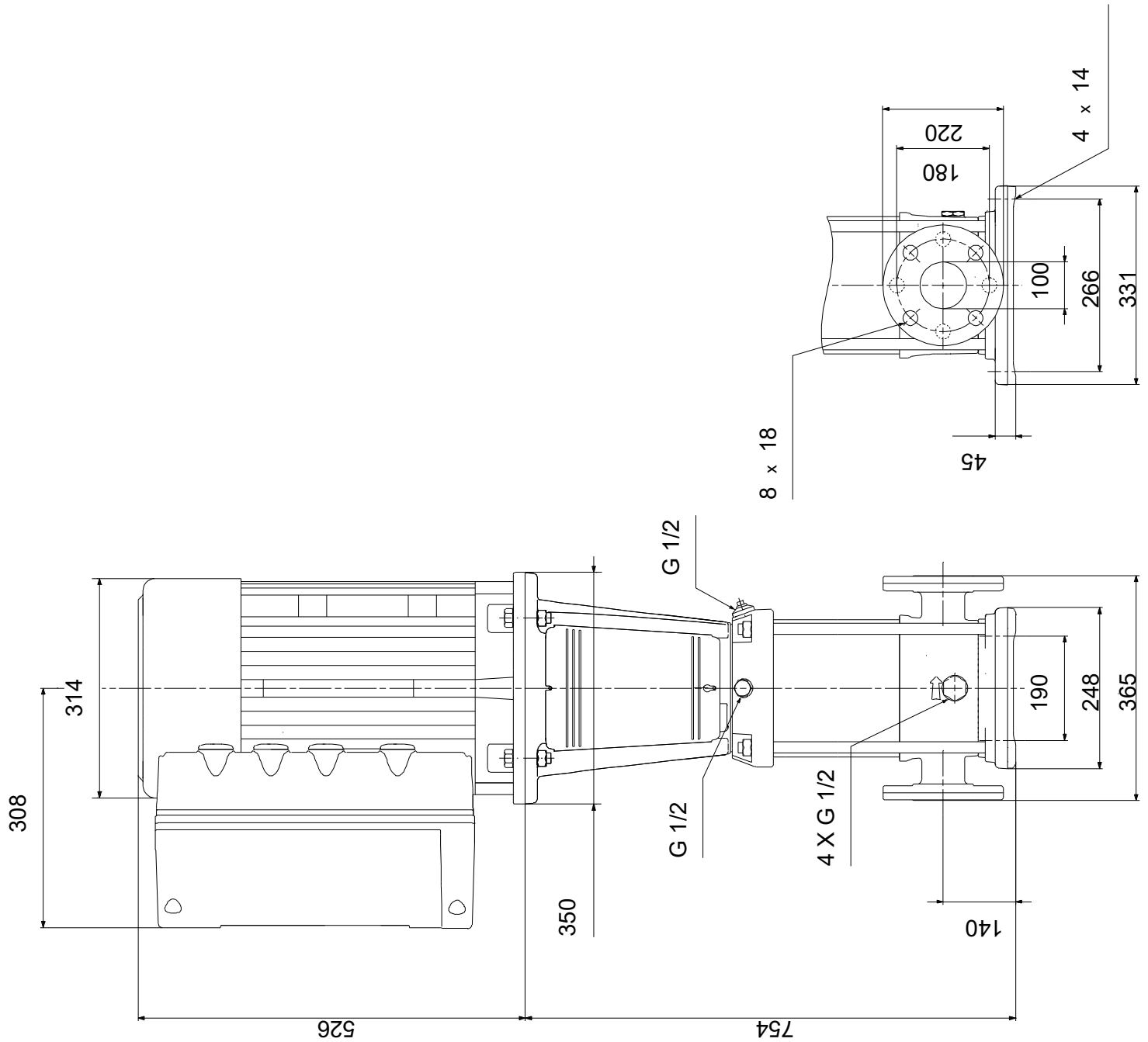


| Description                            | Value               |
|--|---------------------|
| Motor No:                              | 85901026            |
| <b>Controls:</b>                       |                     |
| Function Module:                       | ADVANCED I/O        |
| Frequency converter:                   | Built-in            |
| Pressure sensor:                       | Y                   |
| <b>Others:</b>                         |                     |
| Minimum efficiency index, MEI $\geq$ : | 0.70                |
| Net weight:                            | 219 kg              |
| Gross weight:                          | 270 kg              |
| Shipping volume:                       | 0.82 m <sup>3</sup> |
| Config. file no:                       | 95139534            |
| Danish VVS No.:                        | 385948521           |

## 96124000 CRE 64-2-1 N-F-A-E-HQQE



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