

Qty. Description

1 CR 185-3-3 A-F-A-V-HQQV



Note! Product picture may differ from actual product

Product No.: [99143727](#)

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. The Grundfos 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.

The pump is fitted with a 3-phase, fan-cooled asynchronous motor.

Further product details

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.

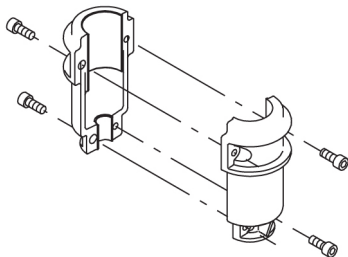
The entire process consists of these elements:

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

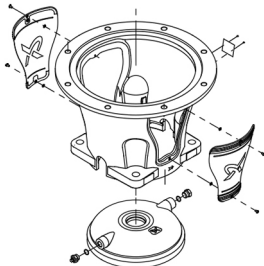
The colour code for the finished product is NCS 9000/RAL 9005.

Pump

A 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.



The motor stool connects the pump head and motor. The pump head has a combined 1/2" priming plug and vent screw.

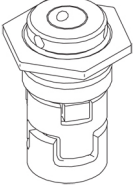
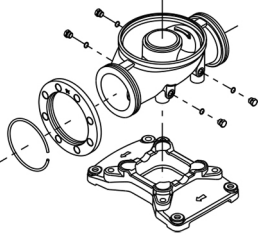


The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system.

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

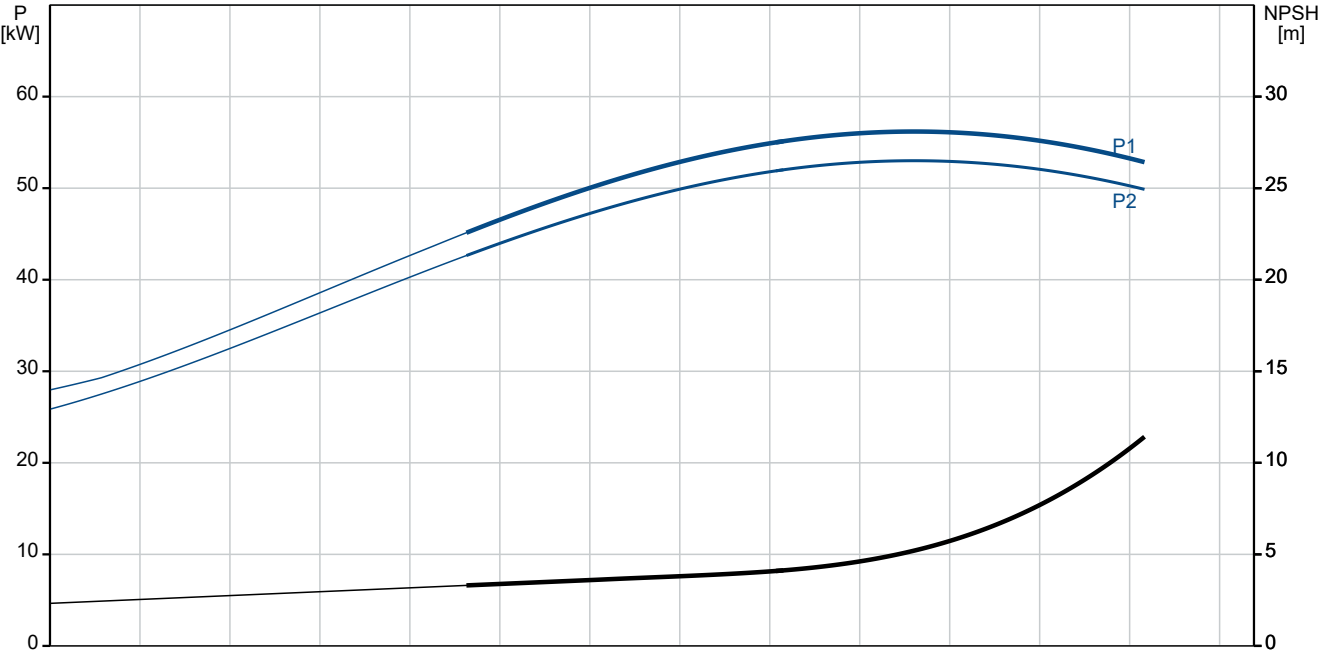
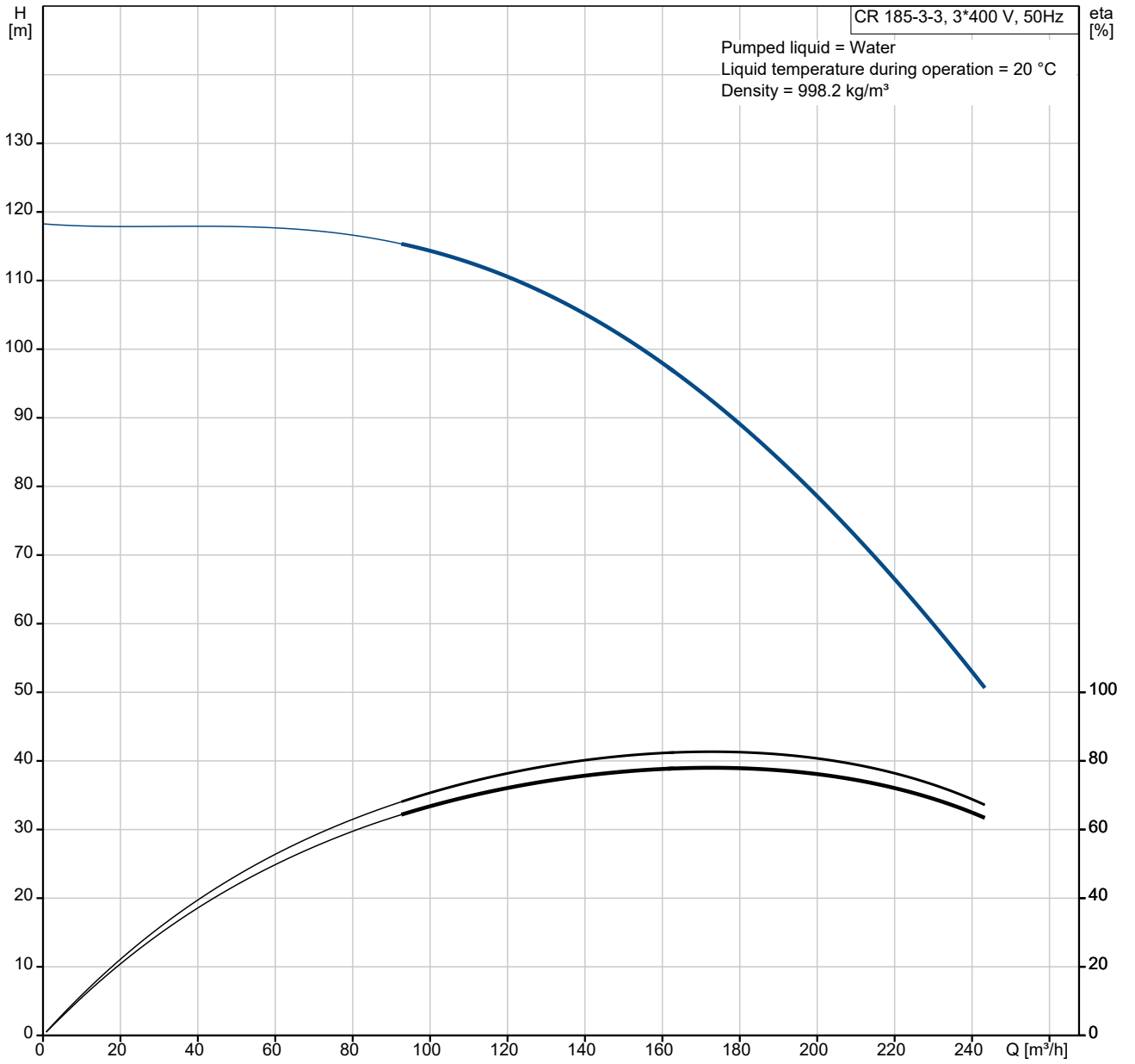
Due to the balancing, this seal type is suitable for high-pressure applications.

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

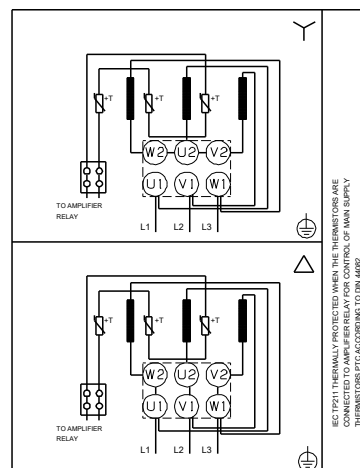
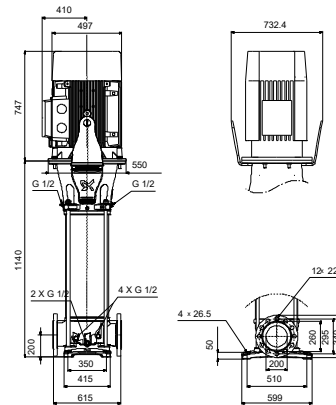
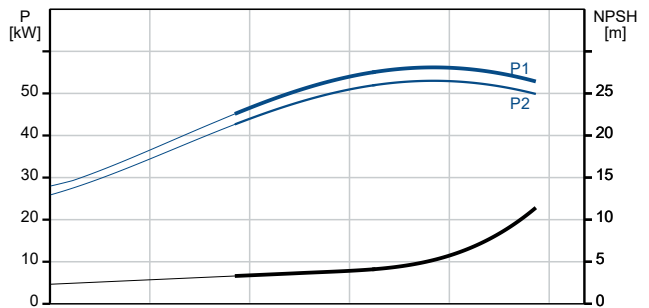
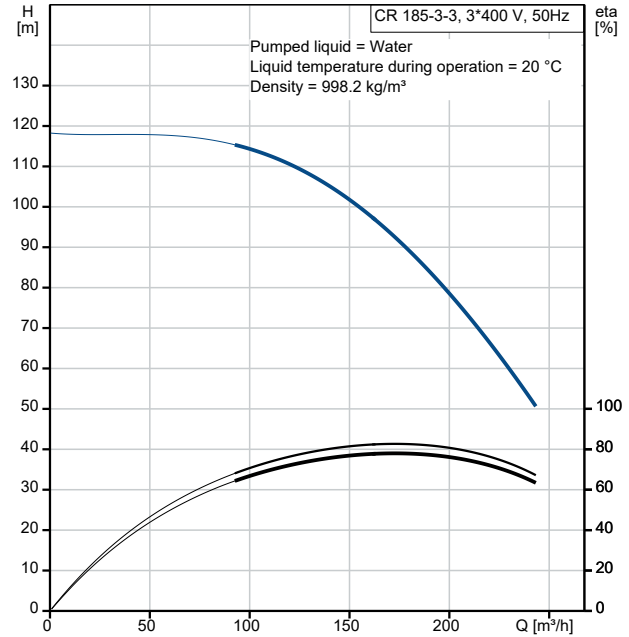
| Qty. | Description | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------|--|----------------|-------|---------------------------|--------------|------------------------------|-------|----------|-------------------------|------------|--|--|----------|-------------|-----------------------|-------------|--------|-------------------|----------|-------------------------|--------|----------------------|------|-------------------------|-------------------|
| 1 | <p data-bbox="204 165 323 188">Seal faces:</p> <ul data-bbox="240 194 788 250" style="list-style-type: none"> <li data-bbox="240 194 788 219">• Rotating seal ring material: silicon carbide (SiC) <li data-bbox="240 224 788 250">• Stationary seat material: silicon carbide (SiC) <p data-bbox="204 255 1452 304">This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.</p> <p data-bbox="204 309 759 336">Secondary seal material: FKM (fluorocarbon rubber)</p> <p data-bbox="204 340 1437 367">FKM has excellent resistance to oils and chemicals. Above 90 °C, FKM should only be used in media without water.</p>  <p data-bbox="204 618 695 645">The shaft seal is screwed into the pump head.</p> <p data-bbox="204 649 1425 723">The chambers and impellers are made of stainless-steel sheet. The chambers are provided with a PEEK 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 data-bbox="204 763 1046 790">The base is made of cast iron and mounted on a separate cast-iron base plate.</p> <p data-bbox="204 795 1054 822">Both the inlet and the outlet side of the base have two pressure gauge tapings.</p> <p data-bbox="204 826 1007 853">The pump is secured to the foundation by four bolts through the base plate.</p> <p data-bbox="204 857 882 884">The flanges are fastened to the base by means of locking rings.</p>  <p data-bbox="204 1189 284 1216">Motor</p> <p data-bbox="204 1225 1431 1276">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).</p> <p data-bbox="204 1281 1243 1308">Motor-mounting designation in accordance with IEC 60034-7: IM B 5 (Code I) / IM 3001 (Code II).</p> <p data-bbox="204 1312 679 1339">Electrical tolerances comply with IEC 60034.</p> <p data-bbox="204 1344 1015 1370">The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.</p> <p data-bbox="204 1375 1434 1424">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="204 1429 1422 1503">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="204 1514 1382 1565">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="204 1574 400 1601">Technical data</p> <table data-bbox="204 1666 695 1814"> <tr> <td data-bbox="204 1666 272 1693">Liquid:</td> <td></td> </tr> <tr> <td data-bbox="204 1697 363 1724">Pumped liquid:</td> <td data-bbox="568 1697 632 1724">Water</td> </tr> <tr> <td data-bbox="204 1729 480 1756">Liquid temperature range:</td> <td data-bbox="568 1729 691 1756">-20 .. 90 °C</td> </tr> <tr> <td data-bbox="204 1760 504 1787">Selected liquid temperature:</td> <td data-bbox="568 1760 632 1787">20 °C</td> </tr> <tr> <td data-bbox="204 1792 288 1818">Density:</td> <td data-bbox="568 1792 695 1818">998.2 kg/m³</td> </tr> </table> <table data-bbox="204 1845 820 2083"> <tr> <td data-bbox="204 1845 312 1872">Technical:</td> <td></td> </tr> <tr> <td data-bbox="204 1877 683 1904">Pump speed on which pump data are based:</td> <td data-bbox="715 1877 820 1904">2976 rpm</td> </tr> <tr> <td data-bbox="204 1908 320 1935">Rated flow:</td> <td data-bbox="568 1908 663 1935">185 m³/h</td> </tr> <tr> <td data-bbox="204 1939 336 1966">Rated head:</td> <td data-bbox="568 1939 647 1966">86.5 m</td> </tr> <tr> <td data-bbox="204 1971 392 1998">Pump orientation:</td> <td data-bbox="568 1971 647 1998">Vertical</td> </tr> <tr> <td data-bbox="204 2002 459 2029">Shaft seal arrangement:</td> <td data-bbox="568 2002 632 2029">Single</td> </tr> <tr> <td data-bbox="204 2033 411 2060">Code for shaft seal:</td> <td data-bbox="568 2033 639 2060">HQQV</td> </tr> <tr> <td data-bbox="204 2065 472 2092">Approvals and markings:</td> <td data-bbox="568 2065 820 2092">CE,EAC,UKCA,SEPRO</td> </tr> </table> | Liquid: | | Pumped liquid: | Water | Liquid temperature range: | -20 .. 90 °C | Selected liquid temperature: | 20 °C | Density: | 998.2 kg/m ³ | Technical: | | Pump speed on which pump data are based: | 2976 rpm | Rated flow: | 185 m ³ /h | Rated head: | 86.5 m | Pump orientation: | Vertical | Shaft seal arrangement: | Single | Code for shaft seal: | HQQV | Approvals and markings: | CE,EAC,UKCA,SEPRO |
| Liquid: | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pumped liquid: | Water | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Liquid temperature range: | -20 .. 90 °C | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Selected liquid temperature: | 20 °C | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Density: | 998.2 kg/m ³ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Technical: | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pump speed on which pump data are based: | 2976 rpm | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated flow: | 185 m ³ /h | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated head: | 86.5 m | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pump orientation: | Vertical | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shaft seal arrangement: | Single | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code for shaft seal: | HQQV | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approvals and markings: | CE,EAC,UKCA,SEPRO | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Qty. | Description |
|------|---|
| 1 | <p>Approvals for drinking water: ACS Curve tolerance: ISO9906:2012 3B</p> <p>Materials: Base: Ductile cast iron EN 1563 EN-GJS-500-7 ASTM A536-84 65-45-12</p> <p>Impeller: Stainless steel EN 1.4401 AISI 316</p> <p>Bearing arrangement: WC/WC Support bearing: Graflon Material certified according to: European standards</p> <p>Installation: t max amb: 55 °C Maximum operating pressure: 16 bar Max pressure at stated temp: 16 bar / 90 °C Type of connection: DIN Size of inlet connection: DN 200 Size of outlet connection: DN 200 Pressure rating for connection: PN 16 Flange size for motor: FF500</p> <p>Electrical data: Motor standard: IEC Motor type: SIEMENS IE Efficiency class: IE3 Rated power - P2: 55 kW Power (P2) required by pump: 55 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-420D/660-725Y V Rated current: 95/55 A Starting current: 670-670 % Cos phi - power factor: 0.89 Rated speed: 2975 rpm Efficiency: IE3 94,3% Motor efficiency at full load: 94.3-94.3 % Motor efficiency at 3/4 load: 94.5-94.5 % Motor efficiency at 1/2 load: 93.9-93.9 % Number of poles: 2 Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Motor No: 81U15338</p> <p>Controls: Frequency converter: NONE</p> <p>Others: Minimum efficiency index, MEI ≥: 0.70 Net weight: 722 kg Gross weight: 867 kg Shipping volume: 2.04 m³ Thrust handling device: N</p> |

99143727 CR 185-3-3 A-F-A-V-HQQV 50 Hz

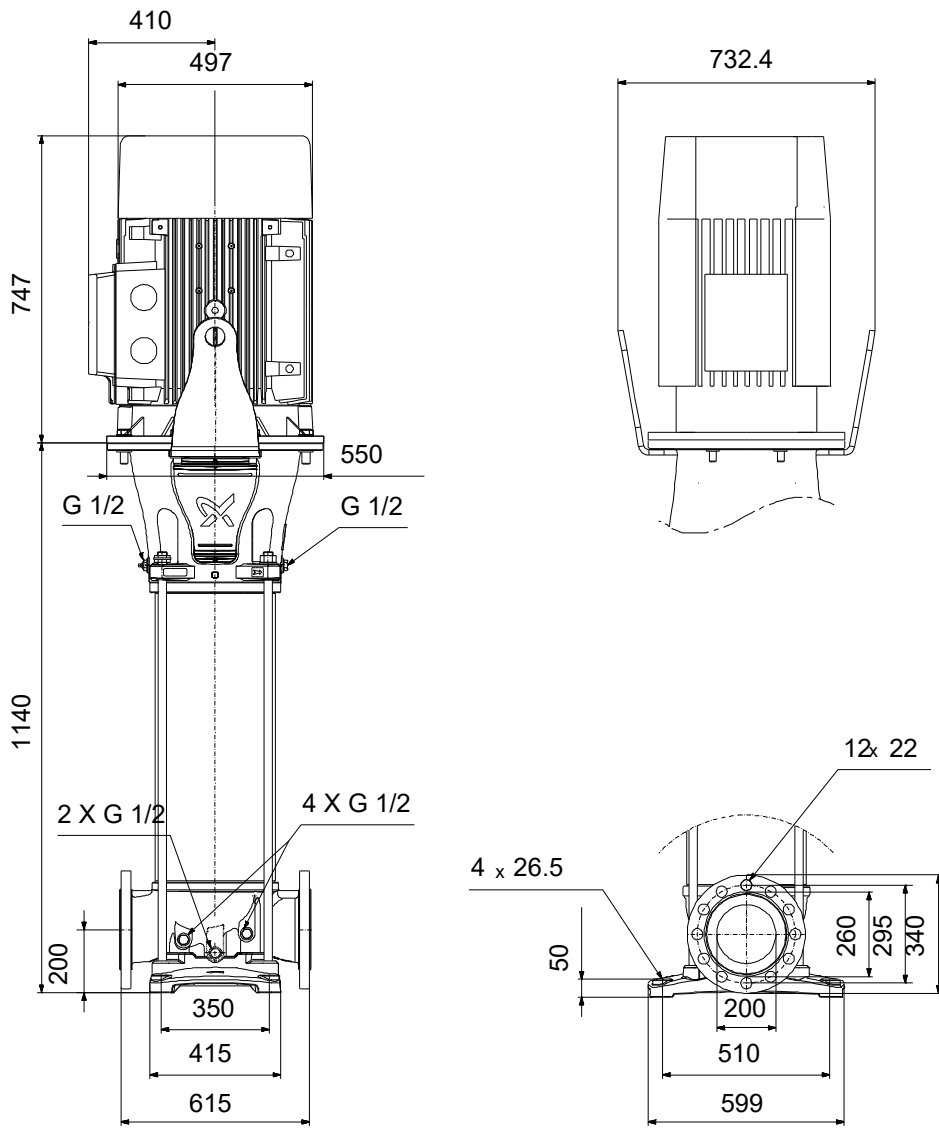


| Description | Value |
|---|----------------------------|
| General information: | |
| Product name: | CR 185-3-3 A-F-A-V-HQQV |
| Product No: | 99143727 |
| EAN number: | 5712607561727 |
| Technical: | |
| Pump speed on which pump data are based: | 2976 rpm |
| Rated flow: | 185 m ³ /h |
| Rated head: | 86.5 m |
| Maximum head: | 118.2 m |
| Number of stages: | 3 |
| Impellers: | 3 |
| Number of reduced-diameter impellers: | 3 |
| Low NPSH: | N |
| Pump orientation: | Vertical |
| Shaft seal arrangement: | Single |
| Code for shaft seal: | HQQV |
| Approvals and markings: | CE,EAC,UKCA,SEPRO |
| Approvals for drinking water: | ACS |
| Curve tolerance: | ISO9906:2012 3B |
| Pump version: | A |
| The first model is called A which is followed by model B, C etc.: | A |
| Cooling according to IEC 34-6: | IC 411 |
| Materials: | |
| Base: | Ductile cast iron |
| Base: | EN 1563 EN-GJS-500-7 |
| Base: | ASTM A536-84 65-45-12 |
| Impeller: | Stainless steel |
| Impeller: | EN 1.4401 |
| Impeller: | AISI 316 |
| Material code: | A |
| Code for rubber: | V |
| Bearing arrangement: | WC/WC |
| Support bearing: | Graffon |
| Material certified according to: | European standards |
| Installation: | |
| t max amb: | 55 °C |
| Maximum operating pressure: | 16 bar |
| Max pressure at stated temp: | 16 bar / 90 °C |
| Type of connection: | DIN |
| Size of inlet connection: | DN 200 |
| Size of outlet connection: | DN 200 |
| Pressure rating for connection: | PN 16 |
| Flange size for motor: | FF500 |
| Connect code: | F |
| Liquid: | |
| Pumped liquid: | Water |
| Liquid temperature range: | -20 .. 90 °C |
| Selected liquid temperature: | 20 °C |
| Density: | 998.2 kg/m ³ |
| Electrical data: | |
| Motor standard: | IEC |
| Motor type: | SIEMENS |
| IE Efficiency class: | IE3 |
| Rated power - P2: | 55 kW |
| Power (P2) required by pump: | 55 kW |
| Mains frequency: | 50 Hz |
| Rated voltage: | 3 x 380-420D/660-725Y V |
| Rated current: | 95/55 A |
| Starting current: | 670-670 % |
| Cos phi - power factor: | 0.89 |



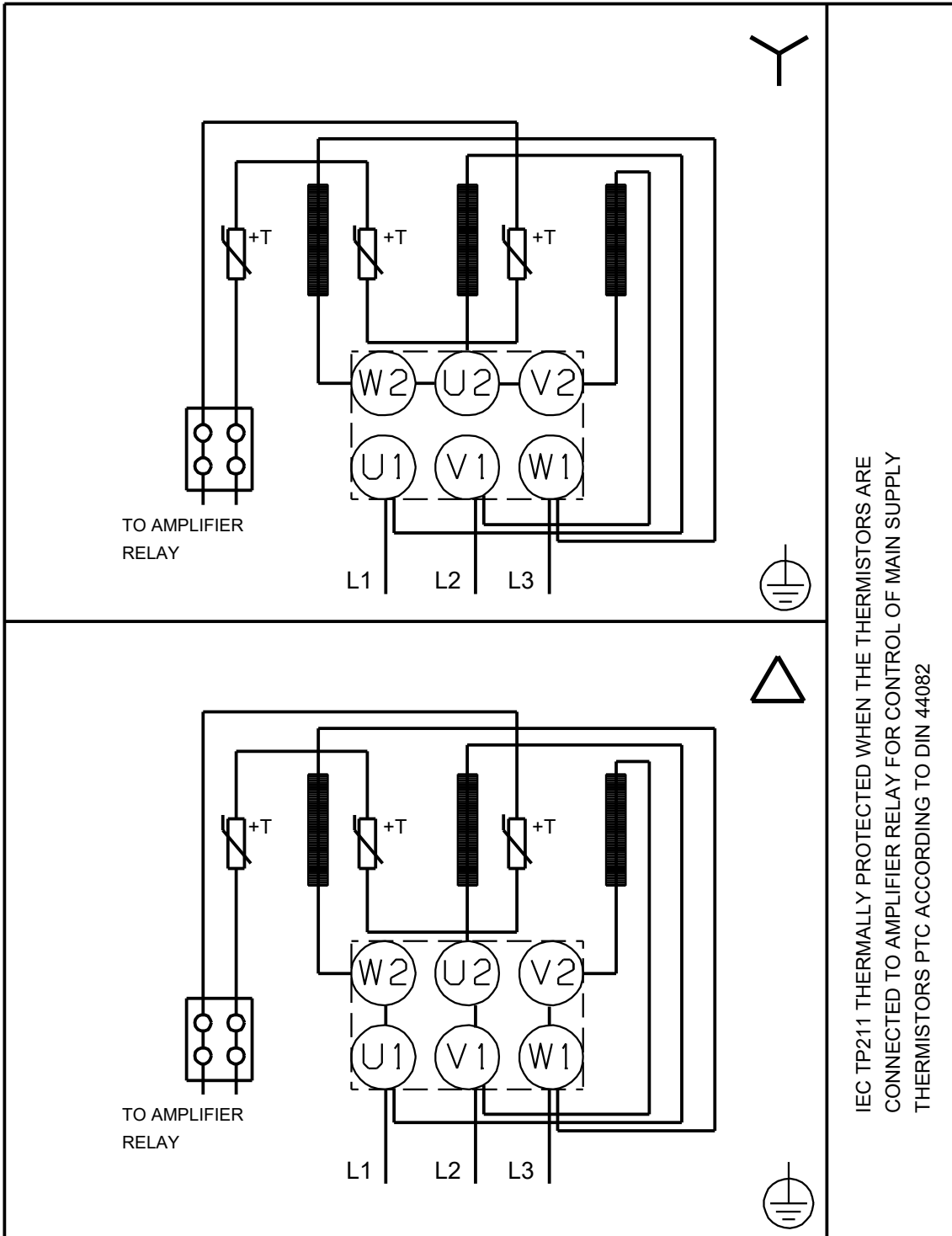
| Description | Value |
|----------------------------------|---------------------|
| Rated speed: | 2975 rpm |
| Efficiency: | IE3 94,3% |
| Motor efficiency at full load: | 94.3-94.3 % |
| Motor efficiency at 3/4 load: | 94.5-94.5 % |
| Motor efficiency at 1/2 load: | 93.9-93.9 % |
| Number of poles: | 2 |
| Enclosure class (IEC 34-5): | IP55 |
| Insulation class (IEC 85): | F |
| Built-in motor protection: | PTC |
| Motor No: | 81U15338 |
| Controls: | |
| Frequency converter: | NONE |
| Others: | |
| Minimum efficiency index, MEI ≥: | 0.70 |
| Net weight: | 722 kg |
| Gross weight: | 867 kg |
| Shipping volume: | 2.04 m ³ |
| Thrust handling device: | N |

99143727 CR 185-3-3 A-F-A-V-HQQV 50 Hz



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

99143727 CR 185-3-3 A-F-A-V-HQQV 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.

