

**Qty. Description**

1 CR 5-22 A-A-A-E-HQQE



Note! Product picture may differ from actual product

Product No.: [96578133](#)

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 oval flanges with internal Rp threads.

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

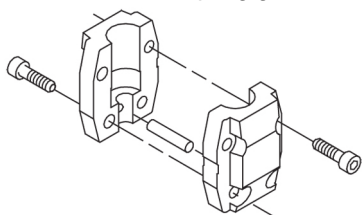
### Further product details

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:

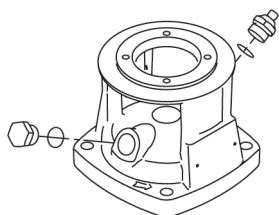
- 1) Alkaline-based cleaning.
  - 2) Zinc phosphating.
  - 3) Cathodic electro-deposition.
  - 4) Curing to a dry film thickness 18-22 my m.
- The colour code for the finished product is NCS 9000/RAL 9005.

### Pump

A 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, pump head cover and flange for motor mounting is made in one piece. 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:

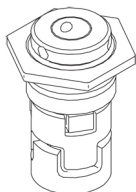
- Rotating seal ring material: silicon carbide (SiC)
- Stationary seat material: silicon carbide (SiC)

## Qty. Description

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)

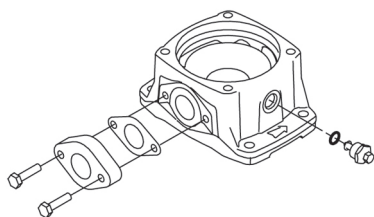
EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.



The shaft seal is screwed into the pump head.

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. The oval flanges are bolted to the base. The outlet side of the base has a combined drain plug and bypass valve. The pump is secured to the foundation by four bolts through the base plate.



## Motor

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).

Motor-mounting designation in accordance with IEC 60034-7: IM B 14 (Code I) / IM 3601 (Code II).

Electrical tolerances comply with IEC 60034.

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

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.

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.

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.

## Technical data

### Controls:

Frequency converter: NONE

### Liquid:

Pumped liquid: Water

Liquid temperature range: -20 .. 120 °C

Liquid temperature during operation: 20 °C

Density: 998.2 kg/m<sup>3</sup>

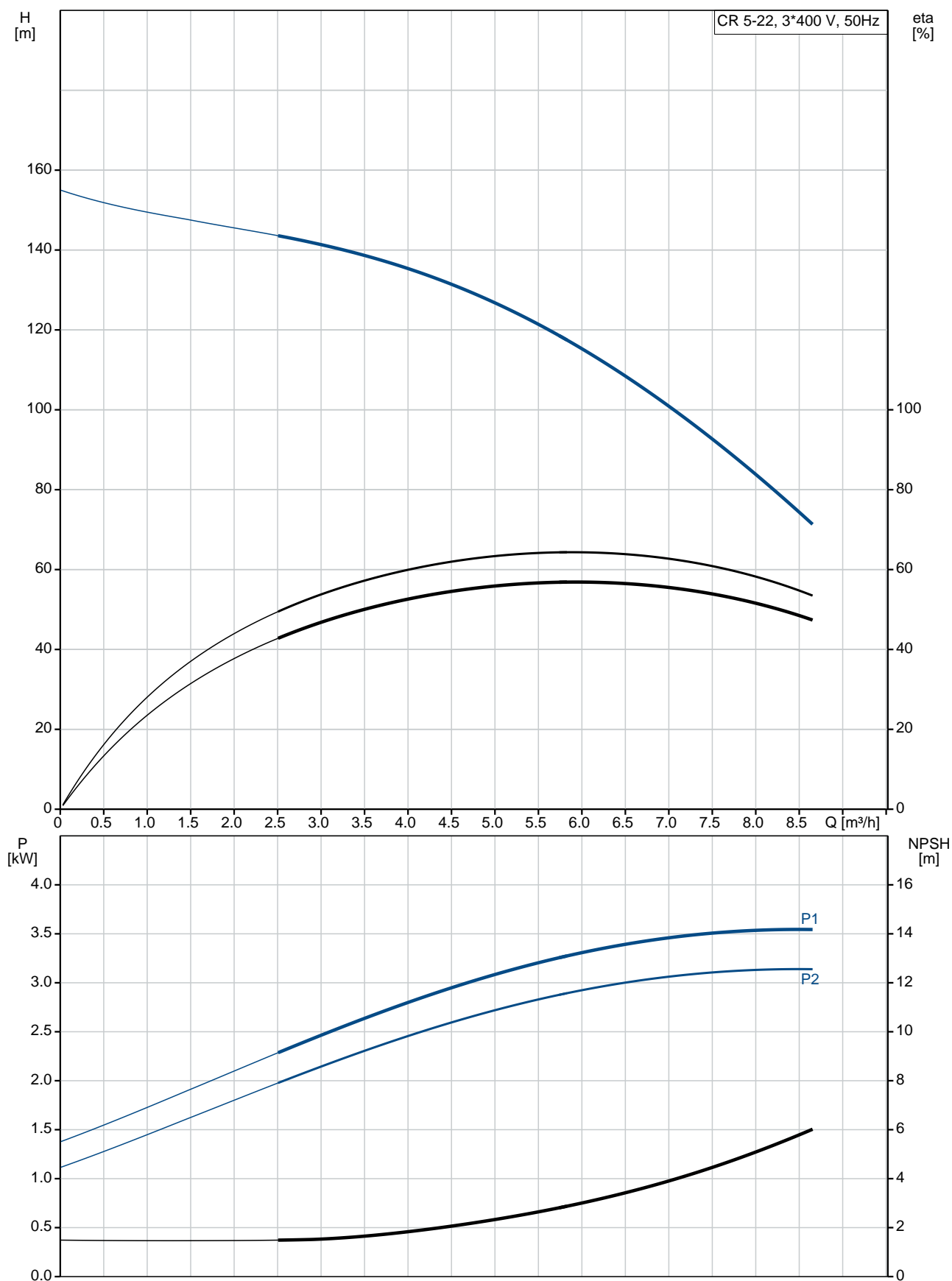
### Technical:

Pump speed on which pump data are based: 2917 rpm

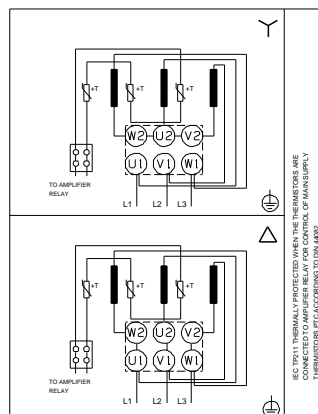
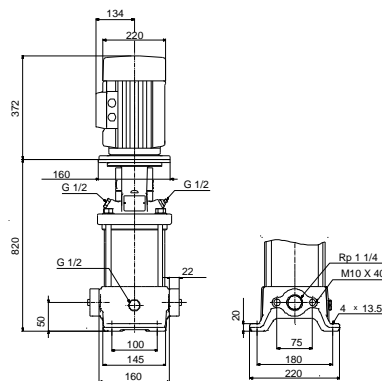
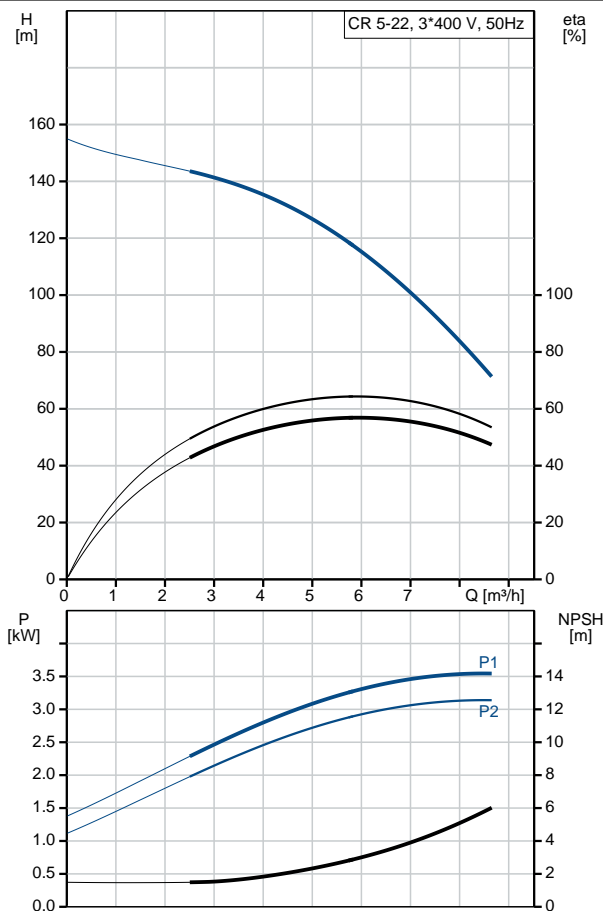
Rated flow: 5.8 m<sup>3</sup>/h

| Qty. | Description  |
|------|--|
|      | <p>Rated head: 115.3 m</p> <p>Pump orientation: Vertical</p> <p>Shaft seal arrangement: Single</p> <p>Code for shaft seal: HQQE</p> <p>Approvals on nameplate: CE, EAC, ACS</p> <p>Curve tolerance: ISO9906:2012 3B</p> <p><b>Materials:</b></p> <p>Base: Cast iron<br/>EN 1561 EN-GJL-200<br/>ASTM A48-25B</p> <p>Impeller: Stainless steel<br/>EN 1.4301<br/>AISI 304</p> <p>Bearing: SIC</p> <p><b>Installation:</b></p> <p>Maximum ambient temperature: 60 °C</p> <p>Maximum operating pressure: 16 bar</p> <p>Max pressure at stated temp: 16 bar / 120 °C<br/>16 bar / -20 °C</p> <p>Type of connection: Oval / Rp</p> <p>Size of inlet connection: 1 1/4 inch</p> <p>Size of outlet connection: 1 1/4 inch</p> <p>Pressure rating for pipe connection: PN 16</p> <p>Flange size for motor: FT130</p> <p><b>Electrical data:</b></p> <p>Motor standard: IEC</p> <p>Motor type: 112MC</p> <p>IE Efficiency class: IE3</p> <p>Rated power - P2: 4 kW</p> <p>Power (P2) required by pump: 4 kW</p> <p>Mains frequency: 50 Hz</p> <p>Rated voltage: 3 x 380-415D V</p> <p>Rated current: 7.9 A</p> <p>Starting current: 1000-1110 %</p> <p>Cos phi - power factor: 0.87-0.87</p> <p>Rated speed: 2920-2940 rpm</p> <p>Efficiency: IE3 88,1%</p> <p>Motor efficiency at full load: 88.1 %</p> <p>Motor efficiency at 3/4 load: 88.6 %</p> <p>Motor efficiency at 1/2 load: 85.2 %</p> <p>Number of poles: 2</p> <p>Enclosure class (IEC 34-5): 55 Dust/Jetting</p> <p>Insulation class (IEC 85): F</p> <p><b>Others:</b></p> <p>Minimum efficiency index, MEI <math>\eta_{\text{me}}</math>: 0.57</p> <p>Net weight: 61.7 kg</p> <p>Gross weight: 66.3 kg</p> <p>Shipping volume: 0.148 m<sup>3</sup></p> |

## 96578133 CR 5-22 A-A-A-E-HQQE 50 Hz



| Description                              | Value   |
|--|---|
| <b>General information:</b>              |   |
| Product name:                            | CR 5-22<br>A-A-A-E-HQQE                         |
| Product No:                              | 96578133  |
| EAN number:                              | 5700830808726                                   |
| <b>Technical:</b>                        |   |
| Pump speed on which pump data are based: | 2917 rpm  |
| Rated flow:                              | 5.8 m³/h  |
| Rated head:                              | 115.3 m   |
| Head max:                                | 150.4 m   |
| Stages:                                  | 22  |
| Impellers:                               | 22  |
| Number of reduced-diameter impellers:    | 0   |
| Low NPSH:                                | N   |
| Pump orientation:                        | Vertical  |
| Shaft seal arrangement:                  | Single  |
| Code for shaft seal:                     | HQQE  |
| Approvals on nameplate:                  | CE, EAC, ACS                                    |
| Curve tolerance:                         | ISO9906:2012 3B                                 |
| Pump version:                            | A   |
| Model:                                   | A   |
| <b>Materials:</b>                        |   |
| Base:                                    | Cast iron<br>EN 1561 EN-GJL-200<br>ASTM A48-25B |
| Impeller:                                | Stainless steel<br>EN 1.4301<br>AISI 304        |
| Material code:                           | A   |
| Code for rubber:                         | E   |
| Bearing:                                 | SIC   |
| <b>Installation:</b>                     |   |
| Maximum ambient temperature:             | 60 °C   |
| Maximum operating pressure:              | 16 bar  |
| Max pressure at stated temp:             | 16 bar / 120 °C<br>16 bar / -20 °C              |
| Type of connection:                      | Oval / Rp                                       |
| Size of inlet connection:                | 1 1/4 inch                                      |
| Size of outlet connection:               | 1 1/4 inch                                      |
| Pressure rating for pipe connection:     | PN 16   |
| Flange size for motor:                   | FT130   |
| Connect code:                            | A   |
| <b>Liquid:</b>                           |   |
| Pumped liquid:                           | Water   |
| Liquid temperature range:                | -20 .. 120 °C                                   |
| Liquid temperature during operation:     | 20 °C   |
| Density:                                 | 998.2 kg/m³                                     |
| <b>Electrical data:</b>                  |   |
| Motor standard:                          | IEC   |
| Motor type:                              | 112MC   |
| IE Efficiency class:                     | IE3   |
| Rated power - P2:                        | 4 kW  |
| Power (P2) required by pump:             | 4 kW  |
| Mains frequency:                         | 50 Hz   |
| Rated voltage:                           | 3 x 380-415D V                                  |
| Rated current:                           | 7.9 A   |
| Starting current:                        | 1000-1110 %                                     |
| Cos phi - power factor:                  | 0.87-0.87                                       |





Company name:

Created by:

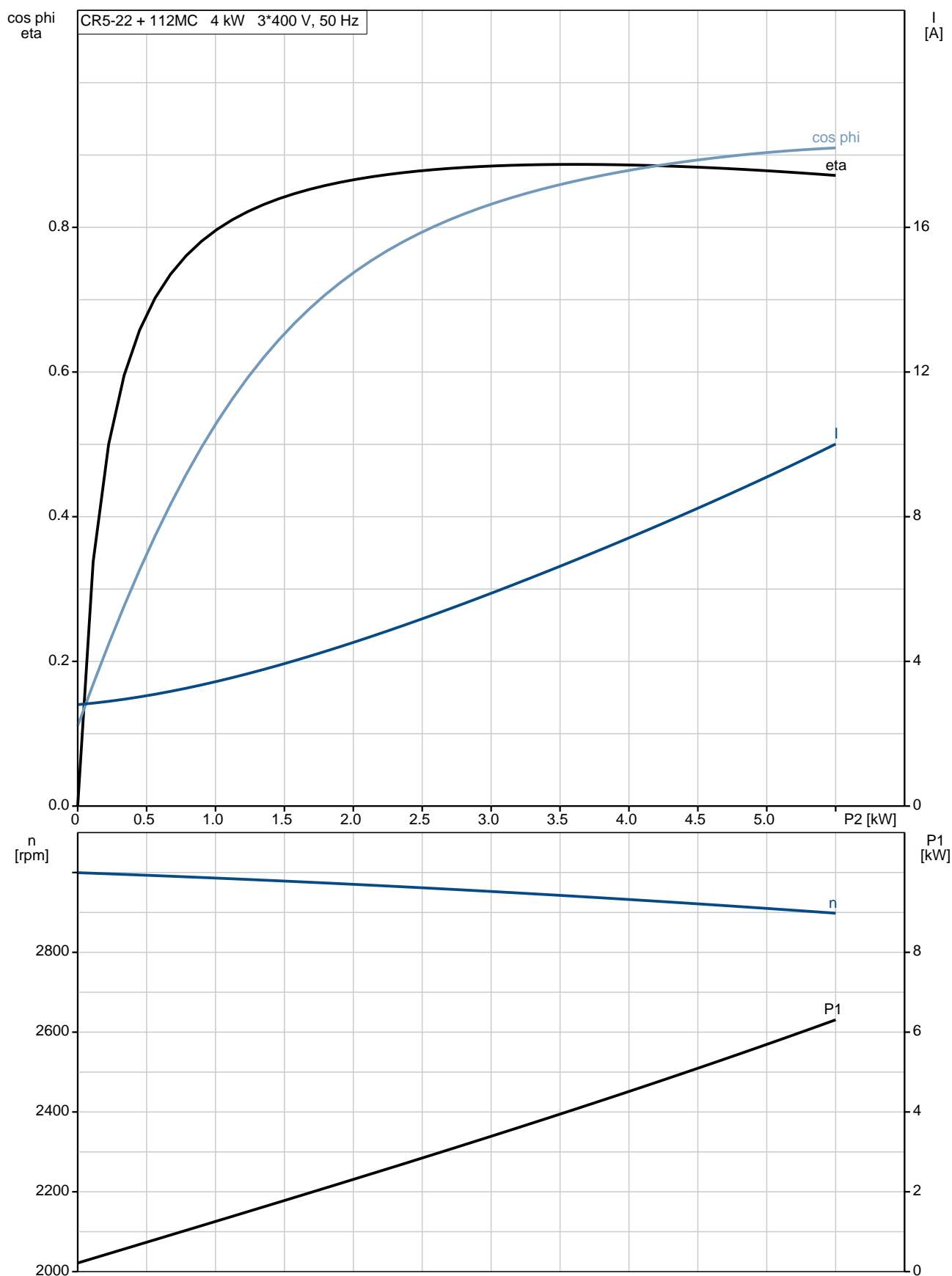
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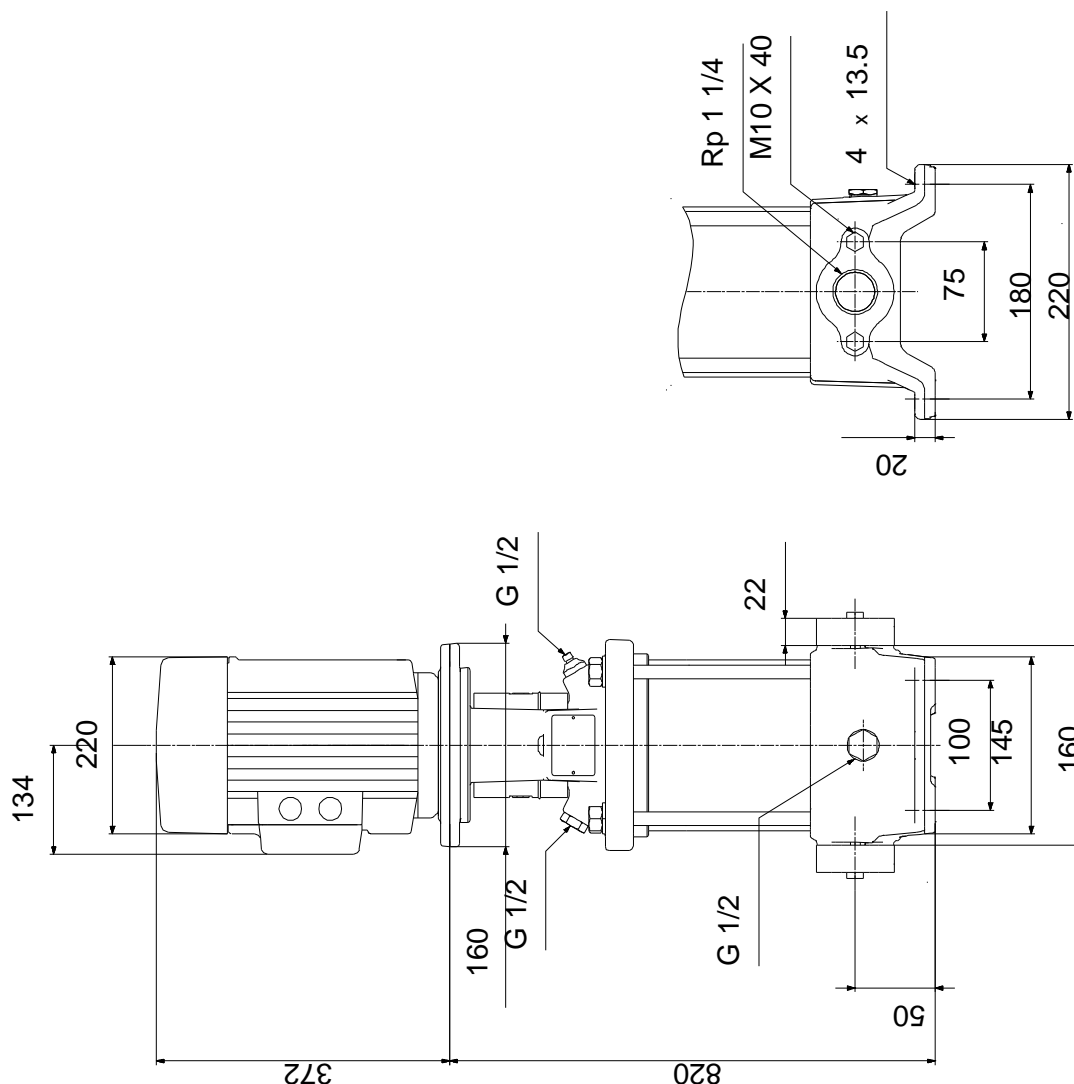
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| Description                                 | Value                |
|---|----------------------|
| Rated speed:                                | 2920-2940 rpm        |
| Efficiency:                                 | IE3 88,1%            |
| Motor efficiency at full load:              | 88.1 %               |
| Motor efficiency at 3/4 load:               | 88.6 %               |
| Motor efficiency at 1/2 load:               | 85.2 %               |
| Number of poles:                            | 2                    |
| Enclosure class (IEC 34-5):                 | 55 Dust/Jetting      |
| Insulation class (IEC 85):                  | F                    |
| Motor protec:                               | PTC                  |
| Motor No:                                   | 85U15413             |
| <b>Controls:</b>                            |                      |
| Frequency converter:                        | NONE                 |
| <b>Others:</b>                              |                      |
| Minimum efficiency index, MEI $\eta_{\%}$ : | 0.57                 |
| Net weight:                                 | 61.7 kg              |
| Gross weight:                               | 66.3 kg              |
| Shipping volume:                            | 0.148 m <sup>3</sup> |

## 96578133 CR 5-22 A-A-A-E-HQQE 50 Hz



## 96578133 CR 5-22 A-A-A-E-HQQE 50 Hz



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

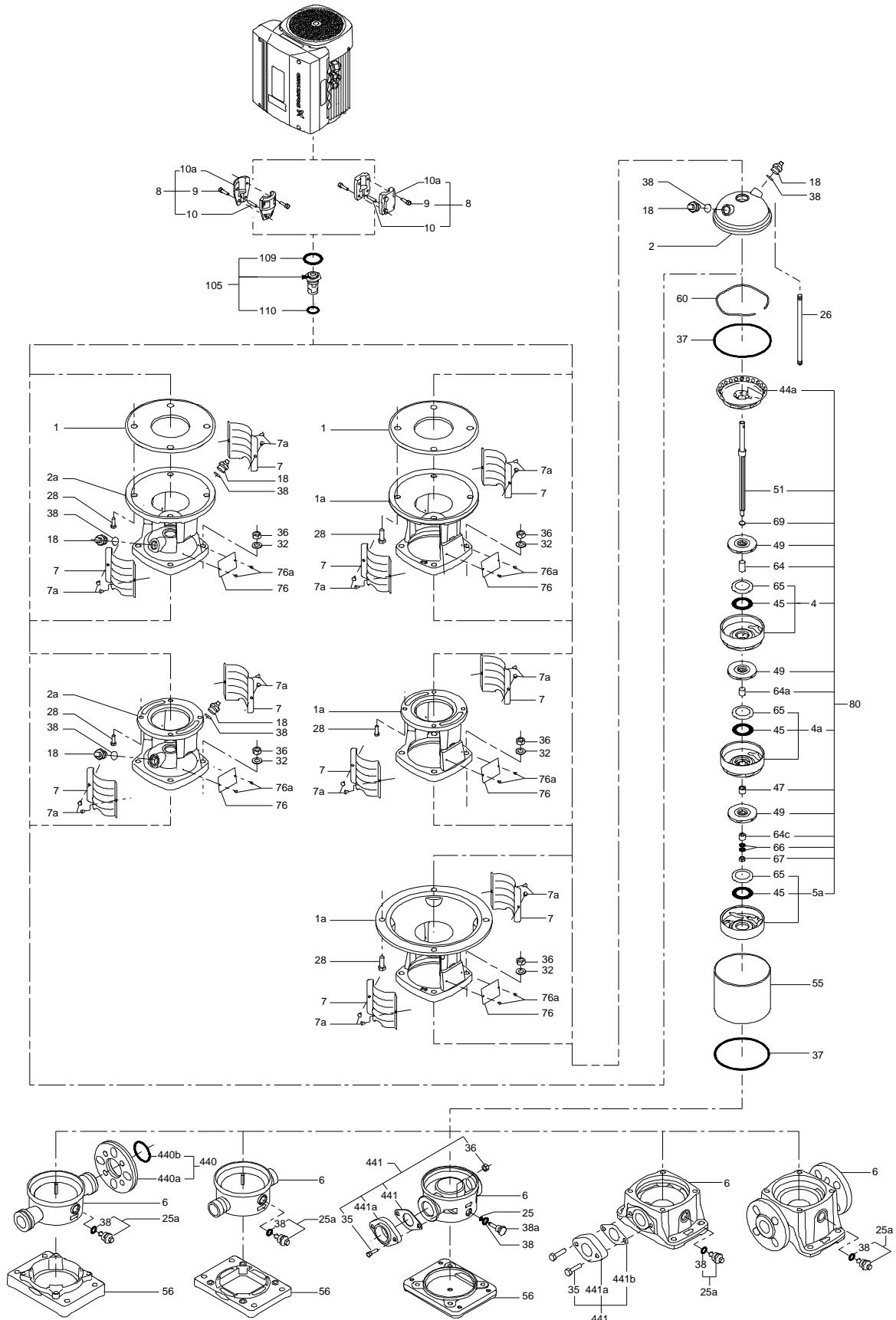


## 96578133 CR 5-22 A-A-A-E-HQQE 50 Hz

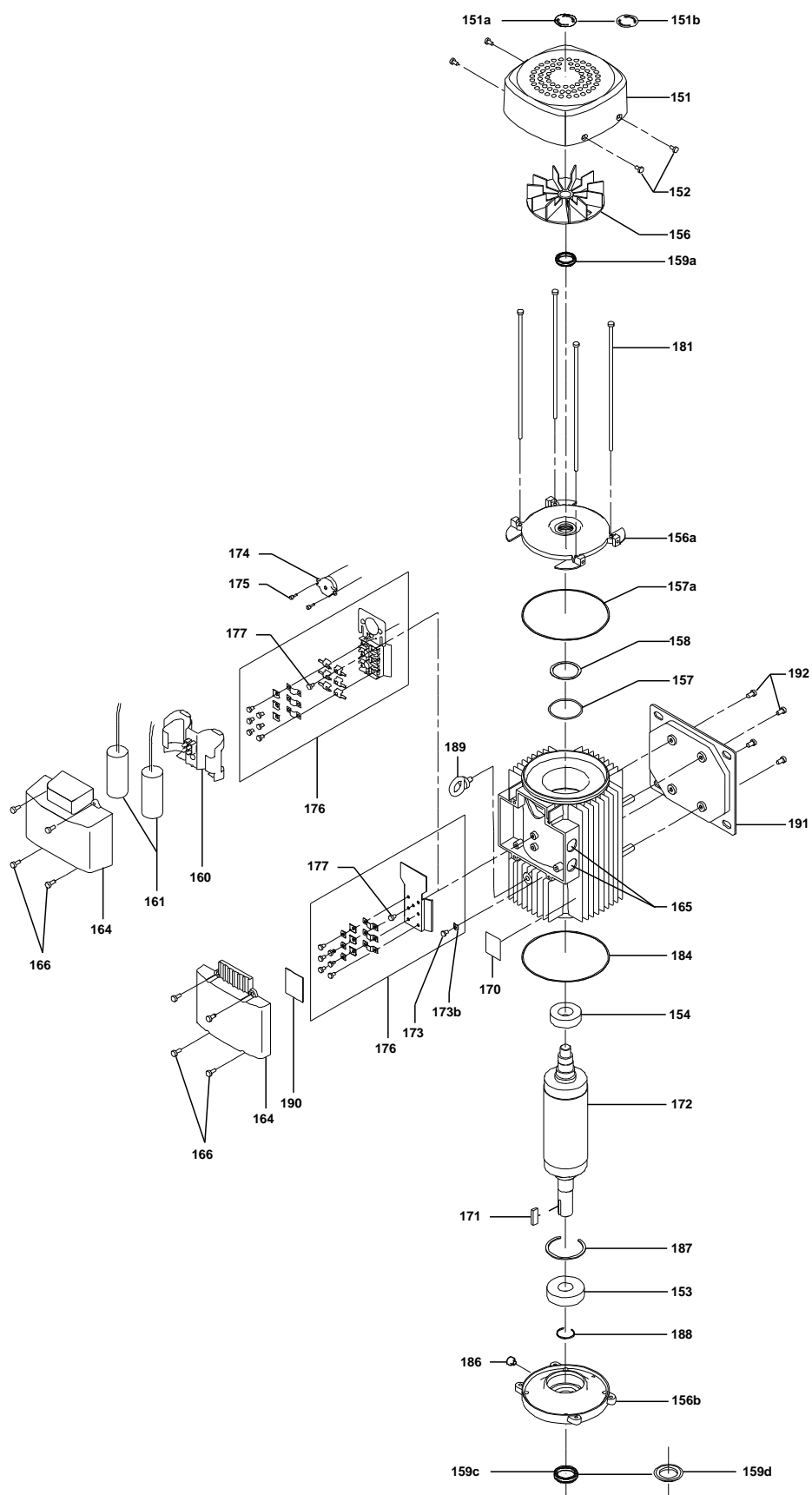


Note! All units are in [mm] unless others are stated.

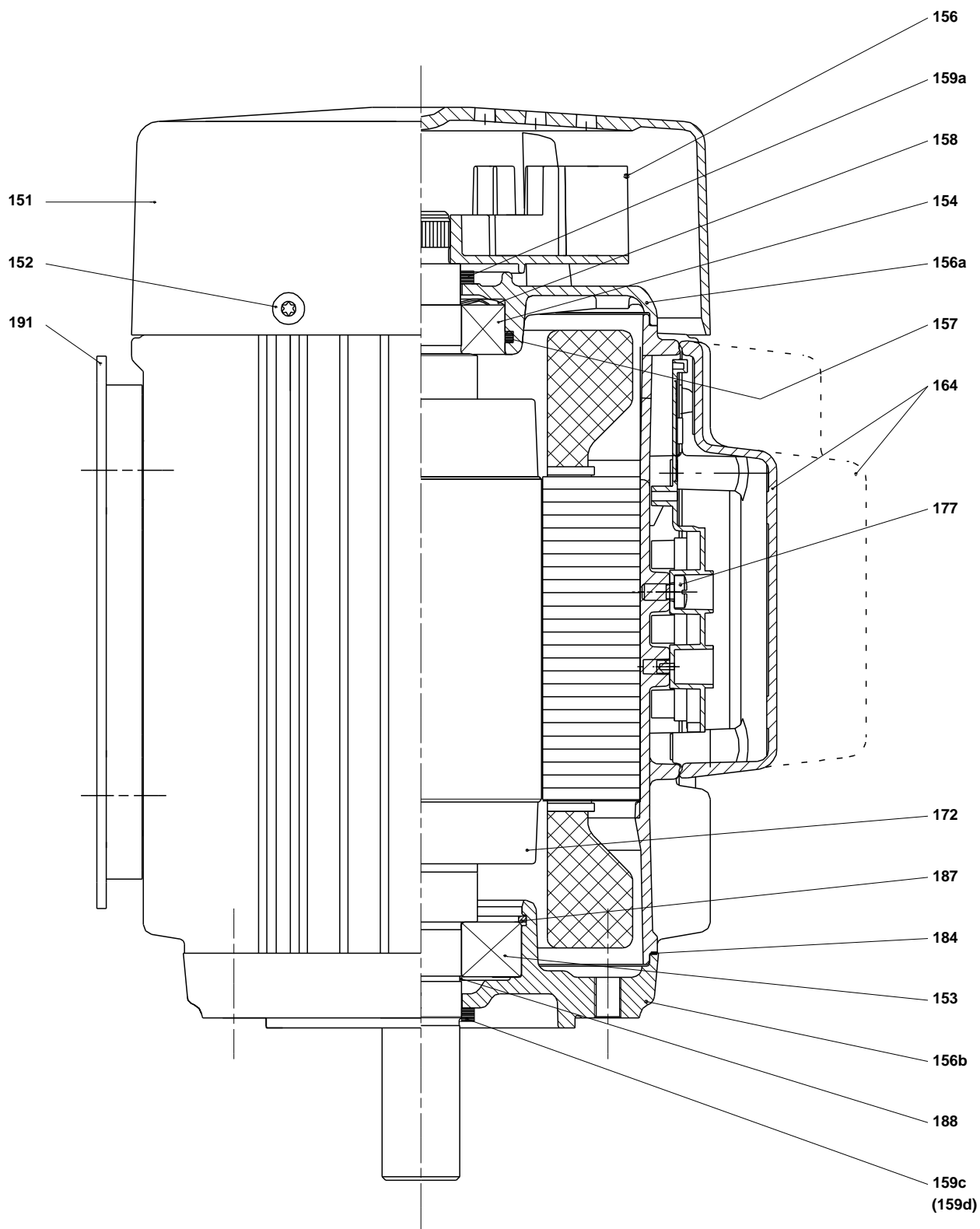
( TM069451 for SMCR standard)



(tm029184 0505)



(tm029178 2004)



**Spare parts CR 5-22, Product No. 96578133**
**Valid from 1.1.2011 (1152)**

| Pos   | Description               | Annotation | Classification Data           | Part no. | Qty. | Unit |
|-------|---------------------------|------------|-------------------------------|----------|------|------|
| - 80  | Kit, chamber stack        |            | Bearing type: SILICON CARBIDE | 96453592 | 1    | pcs  |
| - 4a  | Chamber w. bearing cpl.   |            |                               |          | 4    |      |
|       | Vane                      |            |                               |          |      |      |
|       | Retainer for bearing      |            |                               |          |      |      |
|       | Guide vane                |            |                               |          |      |      |
|       | Chamber                   |            |                               |          |      |      |
| 45    | Neck ring                 |            |                               |          |      |      |
| 47    | Bearing bush              |            |                               |          |      |      |
| 65    | Retainer                  |            |                               |          |      |      |
| 65    | Retainer for seal ring    |            |                               |          |      |      |
| - 4   | Chamber cpl.              |            |                               |          | 17   |      |
|       | Vane                      |            |                               |          |      |      |
|       | Plate                     |            |                               |          |      |      |
|       | Guide vane                |            |                               |          |      |      |
| 5a    | Chamber                   |            |                               |          |      |      |
| 45    | Neck ring                 |            |                               |          |      |      |
| 65    | Retainer                  |            |                               |          |      |      |
| 65    | Retainer for seal ring    |            |                               |          |      |      |
| - 5a  | Chamber cpl.              |            |                               |          | 1    |      |
| 5a    | Chamber                   |            |                               |          |      |      |
| 45    | Neck ring                 |            |                               |          |      |      |
| 65    | Retainer                  |            |                               |          |      |      |
| - 44a | Guide vane cpl.           |            |                               |          | 1    |      |
|       | Plate                     |            |                               |          |      |      |
|       | Guide vane                |            |                               |          |      |      |
| 50    | Top plate                 |            |                               |          |      |      |
| 47    | Bearing ring, rotating    |            |                               |          | 4    |      |
| 49    | Impeller cpl.             |            |                               |          | 22   |      |
| 51    | Shaft, spline, cpl.       |            |                               |          | 1    |      |
| 64d   | Spacing pipe              |            | Internal diameter: 12,85      |          | 1    |      |
|       |                           |            | Outer diameter: 15,85         |          |      |      |
|       |                           |            | Length (mm): 4,50             |          |      |      |
| 64c   | Clamp, splined            |            | Internal diameter: 8,5        |          | 1    |      |
|       |                           |            | Outer diameter: 15            |          |      |      |
| 64a   | Spacing pipe              |            | Length (mm): 13.00            |          | 4    |      |
| 64    | Spacing pipe              |            | Length (mm): 26.0             |          | 17   |      |
| 66    | Wedge lock washer         |            |                               |          | 1    |      |
| 67    | Lock nut                  |            | Thread: M8                    |          | 1    |      |
| 69    | Spacing pipe              |            | Length (mm): 2.00             |          | 1    |      |
| -     | Kit, coupling             |            |                               | 00415063 | 1    | pcs  |
| 9     | Hex socket head cap screw |            | Designation: DIN 912          |          | 4    |      |
|       |                           |            | Length (mm): 25               |          |      |      |
|       |                           |            | Thread: M8                    |          |      |      |
| 10a   | Coupling half             |            |                               |          | 2    |      |
| 10    | Shaft pin                 |            | Diameter: 5                   |          | 1    |      |
|       |                           |            | Length (mm): 26               |          |      |      |
| -     | Kit, coupling guard       |            |                               | 96505131 | 1    | pcs  |
| 7.a   | Combi Slot Torx screw     |            |                               |          | 4    |      |
| 7     | Coupling guard            |            |                               |          | 2    |      |
| -     | Kit, gaskets              |            |                               | 96455090 | 1    | pcs  |
| 37    | O-ring                    |            |                               |          | 2    |      |
| 38    | O-ring                    |            | Diameter: 16,3                |          | 1    |      |
|       |                           |            | Material type: EPDM           |          |      |      |

| Pos   | Description             | Annotation | Classification Data         | Part no. | Qty. | Unit |
|-------|-------------------------|------------|-----------------------------|----------|------|------|
|       |                         |            | Thickness: 2,4              |          |      |      |
| 38    | O-ring                  |            | Diameter: 16,3              |          | 2    |      |
|       |                         |            | Material type: EPDM         |          |      |      |
|       |                         |            | Thickness: 2,4              |          |      |      |
| 109   | O-ring                  |            | Diameter: 22,00             |          | 1    |      |
|       |                         |            | Material type: EPDM         |          |      |      |
|       |                         |            | Thickness: 2,75             |          |      |      |
| -     | Kit, plug               |            |                             | 96505133 | 1    | pcs  |
| - 18  | Air vent screw          |            |                             |          | 1    |      |
|       | Spindle                 |            |                             |          |      |      |
|       | Plug                    |            |                             |          |      |      |
| 23b   | Spindle                 |            |                             |          | 1    |      |
| 25    | Plug                    |            |                             |          | 1    |      |
| 25    | Plug                    |            |                             |          | 1    |      |
| 38    | O-ring                  |            | Diameter: 16,3              |          | 1    |      |
|       |                         |            | Material type: FKM          |          |      |      |
|       |                         |            | Thickness: 2,4              |          |      |      |
| 38    | O-ring                  |            | Diameter: 16,3              |          | 2    |      |
|       |                         |            | Material type: FKM          |          |      |      |
|       |                         |            | Thickness: 2,4              |          |      |      |
| 38    | O-ring                  |            | Diameter: 16,3              |          | 1    |      |
|       |                         |            | Material type: EPDM         |          |      |      |
|       |                         |            | Thickness: 2,4              |          |      |      |
| 38    | O-ring                  |            | Diameter: 16,3              |          | 2    |      |
|       |                         |            | Material type: EPDM         |          |      |      |
|       |                         |            | Thickness: 2,4              |          |      |      |
| -     | Kit, shaft seal HQQE    |            |                             | 96455086 | 1    | pcs  |
| + 105 | Shaft seal              |            | Material type: HQQE         |          | 1    |      |
| -     | Kit, wear parts         |            | Material type: SIC          | 96455099 | 1    | pcs  |
| - 4a  | Chamber w. bearing cpl. |            |                             |          | 4    |      |
|       | Chamber                 |            |                             |          |      |      |
| 45    | Neck ring               |            |                             |          |      |      |
| 65    | Neck ring retainer      |            |                             |          |      |      |
| 45    | Neck ring               |            |                             |          | 18   |      |
| 47    | Bearing ring, rotating  |            |                             |          | 4    |      |
| 64c   | Clamp, splined          |            | Internal diameter: 8,5      |          | 1    |      |
|       |                         |            | Outer diameter: 15          |          |      |      |
| 64a   | Spacing pipe            |            | Length (mm): 13.00          |          | 4    |      |
| 65    | Neck ring retainer      |            |                             |          | 18   |      |
| 66    | Wedge lock washer       |            |                             |          | 1    |      |
| 67    | Lock nut                |            | Thread: M8                  |          | 1    |      |
| 441b  | Gasket                  |            |                             |          | 2    |      |
| -     | Motor                   |            |                             | 85903740 | 1    | pcs  |
| -     | Kit, bearing cpl.       |            |                             | 96279802 | 1    |      |
| 111   | Ball bearing            |            | Designation: 6206.2Z.C3.SYN |          |      |      |
| 153   | Angular-contact bearing |            |                             |          |      |      |
| 157   | O-ring                  |            | Diameter: 62                |          |      |      |
|       |                         |            | Material type: NBR          |          |      |      |
|       |                         |            | Thickness: 3                |          |      |      |
| 158   | Waved washer            |            |                             |          |      |      |
| -     | Kit, end shield         |            |                             | 96279790 | 1    |      |
| 156a  | End shield              |            |                             |          |      |      |
| 157   | O-ring                  |            | Diameter: 62                |          |      |      |
|       |                         |            | Material type: NBR          |          |      |      |
|       |                         |            | Thickness: 3                |          |      |      |
| 158   | Waved washer            |            |                             |          |      |      |
| 159a  | Seal ring               |            |                             |          |      |      |
| -     | Kit, eyebolt            |            |                             | 96279825 | 1    |      |
| 189   | Eyebolt                 |            |                             |          |      |      |

| Pos   | Description                            | Annotation | Classification Data         | Part no. | Qty. | Unit |
|-------|--|------------|-----------------------------|----------|------|------|
| -     | Kit, fan                               |            |                             | 96279758 | 1    |      |
| 156   | Fan                                    |            |                             |          |      |      |
| 159c  | Seal ring                              |            |                             |          |      |      |
| 159a  | Seal ring                              |            |                             |          |      |      |
| -     | Kit, fan cover                         |            |                             | 96279756 | 1    |      |
| 151b  | Label                                  |            |                             |          |      |      |
| 151   | Fan cover                              |            |                             |          |      |      |
| 152   | Pan head thread forming screw          |            |                             |          |      |      |
| -     | Kit, flange                            |            |                             | 96279779 | 1    |      |
| 156b  | Flange                                 |            |                             |          |      |      |
| 159.c | Seal ring                              |            |                             |          |      |      |
| 186   | Drain plug                             |            |                             |          |      |      |
| -     | Kit, shaft seal                        |            |                             | 96279763 | 1    |      |
| 159c  | Seal ring                              |            |                             |          |      |      |
| 159a  | Seal ring                              |            |                             |          |      |      |
| -     | Kit, staybolts                         |            |                             | 96279793 | 1    |      |
| 181   | Pan head staybolt                      |            |                             |          |      |      |
| -     | Kit, terminal board                    |            |                             | 96279769 | 1    |      |
| 173a  | Base                                   |            |                             |          |      |      |
| 173   | Pan head thread forming screw          |            | Designation: COMBI TORX T25 |          |      |      |
| 176   | Slot cheese head screw                 |            | Designation: COMBI TORX T25 |          |      |      |
|       |  |            | Length (mm): 10             |          |      |      |
|       |  |            | Thread: M5                  |          |      |      |
| 176   | Terminal                               |            |                             |          |      |      |
| 176   | Connecting piece                       |            |                             |          |      |      |
| 176   | Wire clamp                             |            |                             |          |      |      |
| 176   | Terminal board                         |            |                             |          |      |      |
| 177   | Pan head screw                         |            |                             |          |      |      |
| -     | Kit, terminal box                      |            |                             | 96279772 | 1    |      |
| 164   | Terminal box cover w/gasket            |            |                             |          |      |      |
| 166   | Pan head thread forming screw          |            |                             |          |      |      |
| 2a    | Pump head                              |            |                             | 98681106 | 1    | pcs  |
| + 4a  | Bulk, Chamber w. bearing cpl. (24 pcs) |            |                             | 96547652 | 4    | pcs  |
| + 4a  | Chamber w. bearing cpl.                |            |                             | 98371274 | 4    | pcs  |
| - 4   | Bulk, Chamber cpl. (24 pcs)            |            |                             | 96547651 | 17   | pcs  |
| 45    | Bulk, Neck ring (24 pcs)               |            |                             | 96547603 | 1    |      |
| 65    | Bulk, Retainer (10 pcs)                |            |                             | 97911446 | 1    |      |
| + 4   | Chamber cpl.                           |            |                             | 98371271 | 17   | pcs  |
| + 5a  | Chamber cpl.                           |            |                             | 98371269 | 1    | pcs  |
| 6     | Base                                   |            |                             | 96588138 | 1    | pcs  |
| 7.a   | Bulk, Combi Slot Torx screw (1000 pcs) |            |                             | 96886324 | 4    | pcs  |
| 7     | Bulk, Coupling guard (10 pcs)          |            |                             | 96603690 | 2    | pcs  |
| 10    | Bulk, Shaft pin (10 pcs)               |            | Diameter: 5                 | 96536473 | 1    | pcs  |
|       |  |            | Length (mm): 26             |          |      |      |
| + 18  | Bulk, Air vent screw (5 pcs)           |            |                             | 96547461 | 1    | pcs  |
| + 18  | Air vent screw                         |            |                             | 95061351 | 1    | pcs  |
| 25    | Bulk, Plug (10 pcs)                    |            |                             | 96536013 | 1    | pcs  |
| - 25a | Drain plug w/bypass valve              |            |                             | 96588242 | 1    | pcs  |
| 38    | Bulk, O-ring (10 pcs)                  |            | Diameter: 16,3              | 99198815 | 1    |      |
|       |  |            | Material type: EPDM         |          |      |      |
|       |  |            | Thickness: 2,4              |          |      |      |
| 38    | Bulk, O-ring (50 pcs)                  |            | Diameter: 16,3              | 99412727 | 1    |      |
|       |  |            | Material type: EPDM         |          |      |      |
|       |  |            | Thickness: 2,4              |          |      |      |
| 26    | Bulk, Staybolt (4 pcs)                 |            | Length (mm): 616            | 98698637 | 4    | pcs  |
|       |  |            | Thread: M12                 |          |      |      |
| 26    | Staybolt                               |            | Length (mm): 616            | 98986335 | 4    | pcs  |
|       |  |            | Thread: M12                 |          |      |      |

| Pos    | Description                           | Annotation | Classification Data                                     | Part no. | Qty. | Unit |
|--------|---------------------------------------|------------|---|----------|------|------|
| 28     | Bulk, Hex head screw (4 pcs)          |            | Length (mm): 25<br>Thread: M8                           | 99335941 | 4    | pcs  |
| 36     | Bulk, Nut (20 pcs)                    |            | Thread: M12   | 96620479 | 4    | pcs  |
| 37     | Bulk, O-ring (24 pcs)                 |            |   | 96547656 | 2    | pcs  |
| 38     | Bulk, O-ring (10 pcs)                 |            | Diameter: 16,3<br>Material type: EPDM<br>Thickness: 2,4 | 99198815 | 2    | pcs  |
| 38     | Bulk, O-ring (50 pcs)                 |            | Diameter: 16,3<br>Material type: EPDM<br>Thickness: 2,4 | 99412727 | 2    | pcs  |
| + 44a  | Bulk, Guide vane cpl. (5 pcs)         |            |   | 96547658 | 1    | pcs  |
| + 44a  | Guide vane cpl.                       |            |   | 98681144 | 1    | pcs  |
| 47     | Bulk, Bearing ring, rotating (10 pcs) |            |   | 97905743 | 4    | pcs  |
| 47     | Bearing ring, rotating                |            |   | 96547649 | 4    | pcs  |
| 49     | Bulk, Impeller cpl. (10 pcs)          |            |   | 98394283 | 22   | pcs  |
| 49     | Bulk, Impeller cpl. (24 pcs)          |            |   | 96547648 | 22   | pcs  |
| 49     | Impeller cpl.                         |            |   | 98394422 | 22   | pcs  |
| 51     | Shaft, spline, cpl.                   |            |   | 98368528 | 1    | pcs  |
| 55     | Outer sleeve                          |            |   | 98811263 | 1    | pcs  |
| 60     | Formed wire spring                    |            |   | 96547664 | 1    | pcs  |
| 64c    | Bulk, Clamp, splined (5 pcs)          |            | Internal diameter: 8,5<br>Outer diameter: 15            | 98496968 | 1    | pcs  |
| 64a    | Bulk, Spacing pipe (24 pcs)           |            | Length (mm): 13.00                                      | 96536452 | 4    | pcs  |
| 64a    | Spacing pipe                          |            | Length (mm): 13.00                                      | 98520104 | 4    | pcs  |
| 64     | Bulk, Spacing pipe (24 pcs)           |            | Length (mm): 26.0                                       | 96536304 | 17   | pcs  |
| 66     | Bulk, Wedge lock washer (10 pcs)      |            |   | 96536157 | 1    | pcs  |
| 67     | Bulk, Lock nut (10 pcs)               |            | Thread: M8  | 98277008 | 1    | pcs  |
| 69     | Bulk, Spacing pipe (10 pcs)           |            | Length (mm): 2.00                                       | 96536451 | 1    | pcs  |
| + 105  | Bulk, Shaft seal (15 pcs)             |            | Material type: HQQE                                     | 96983415 | 1    | pcs  |
| 441b   | Bulk, Gasket (24 pcs)                 |            |   | 96536206 | 2    | pcs  |
| + 441a | Flange                                |            | Thread: RP 1  | 96547454 | 2    | pcs  |