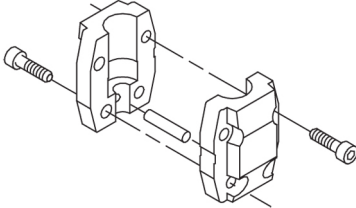
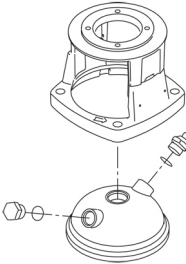
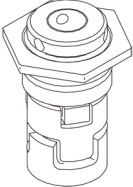
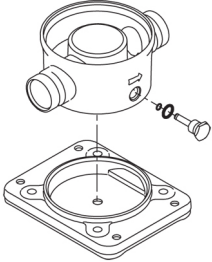
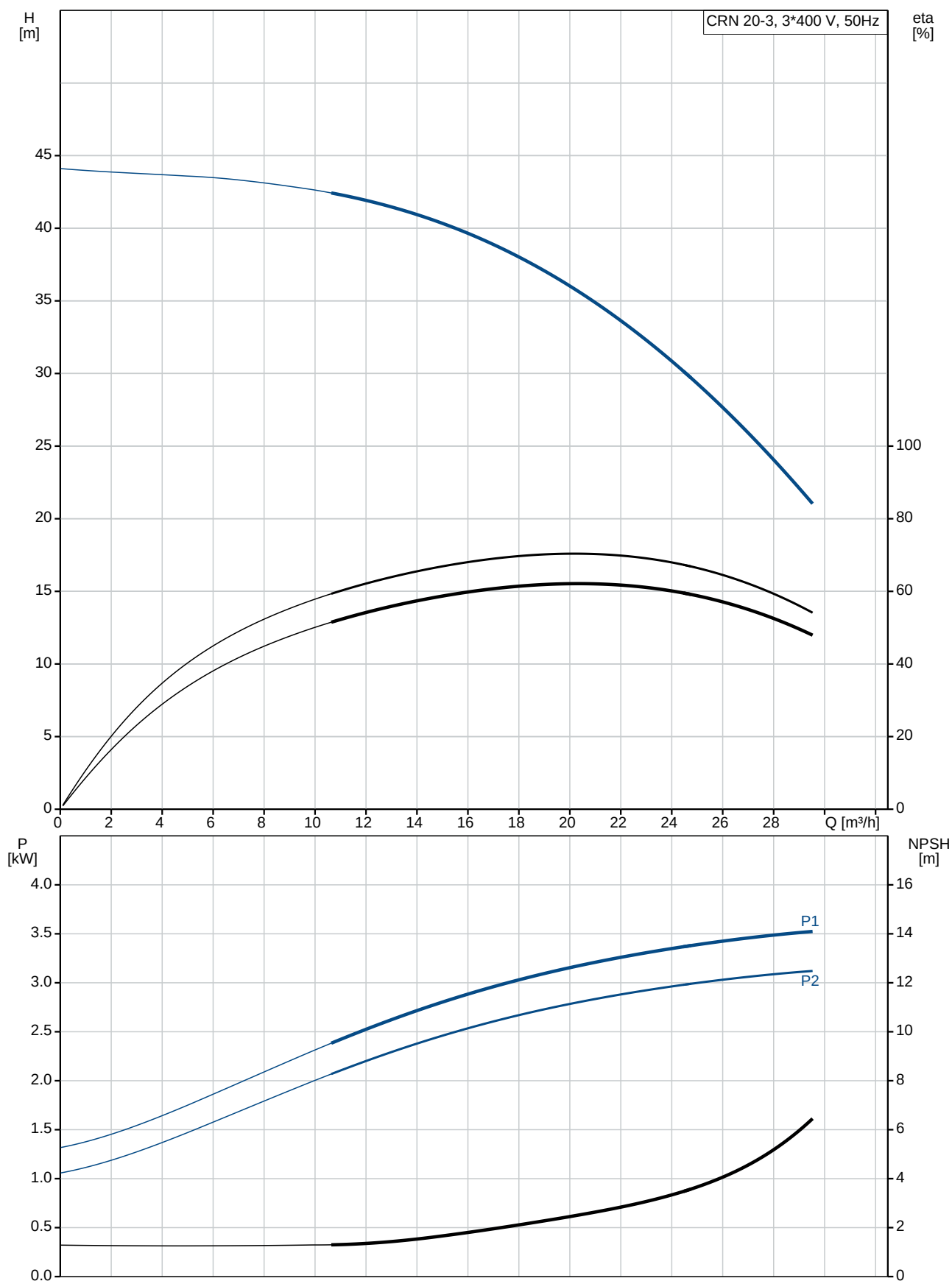


| Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p data-bbox="204 338 496 369"><b>CRN 20-3 A-P-A-E-HQQE</b></p>  <p data-bbox="204 660 467 687">Product No.: <a href="#">96500559</a></p> <p data-bbox="204 719 1453 822">Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). Pump materials in contact with the liquid are in high-grade 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 PJE (Victaulic®) couplings.</p> <p data-bbox="204 862 935 889">The pump is fitted with a 3-phase, fan-cooled asynchronous motor.</p> <p data-bbox="204 922 520 954"><b>Further product details</b></p> <p data-bbox="204 958 1430 1059">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:</p> <ol data-bbox="204 1070 695 1189" 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="204 1189 908 1216">The colour code for the finished product is NCS 9000/RAL 9005.</p> <p data-bbox="204 1249 284 1281"><b>Pump</b></p> <p data-bbox="204 1285 1390 1337">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.</p>  <p data-bbox="204 1583 1366 1635">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.</p>  <p data-bbox="204 1935 1453 2036">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.</p> <p data-bbox="204 2047 347 2074">Primary seal:</p> <ul data-bbox="240 2078 799 2105" style="list-style-type: none"> <li>• Rotating seal ring material: silicon carbide (SiC)</li> </ul> |

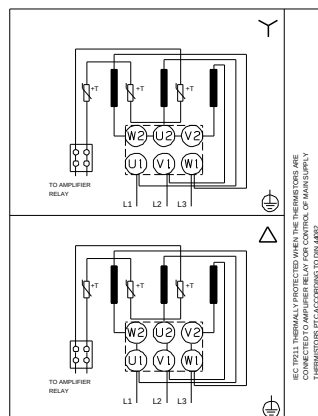
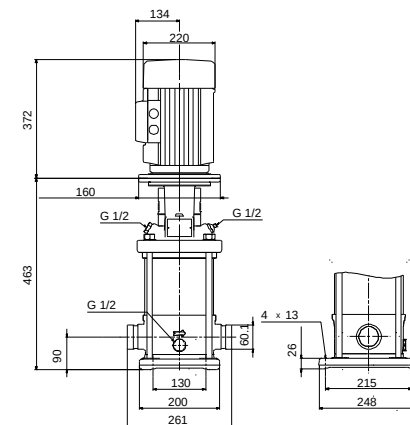
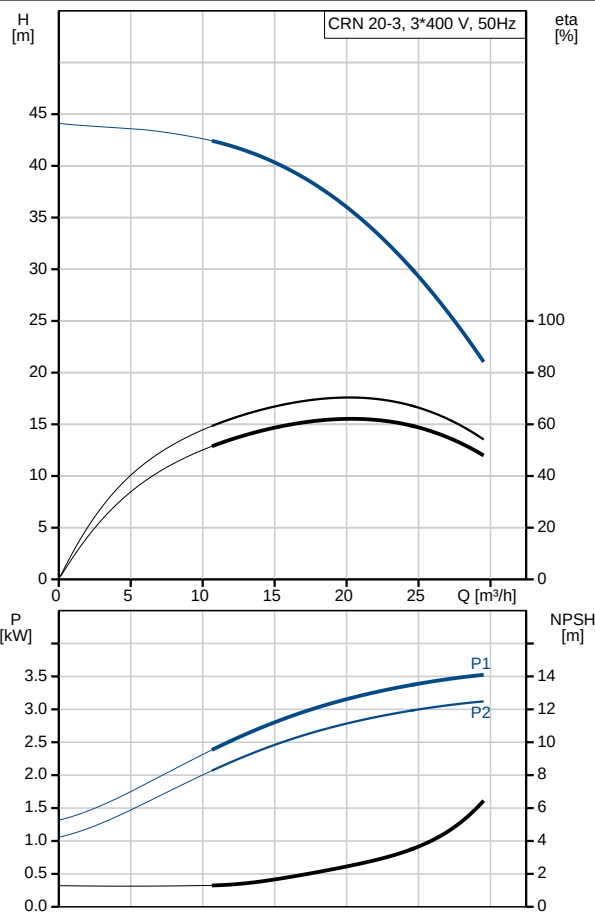
| Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <ul style="list-style-type: none"> <li>Stationary seat material: silicon carbide (SiC)<br/>This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.</li> <li>Secondary seal material: EPDM (ethylene-propylene rubber)<br/>EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</li> </ul>  <p>The shaft seal is screwed into the pump head.</p> <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 PJE (Victualic®) 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 IE3 in accordance with IEC 60034-30-1.</p> <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>Technical data</b></p> <p><b>Controls:</b></p> <p>Frequency converter: NONE</p> <p><b>Liquid:</b></p> <p>Pumped liquid: Water</p> <p>Liquid temperature range: -20 .. 120 °C</p> <p>Liquid temperature during operation: 20 °C</p> <p>Density: 998.2 kg/m<sup>3</sup></p> |

| Qty. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <p><b>Technical:</b></p> <p>Pump speed on which pump data are based: 2917 rpm</p> <p>Rated flow: 21 m<sup>3</sup>/h</p> <p>Rated head: 34.6 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: Stainless steel<br/>EN 1.4408<br/>AISI 316</p> <p>Impeller: Stainless steel<br/>EN 1.4401<br/>AISI 316</p> <p>Bearing: SIC</p> <p><b>Installation:</b></p> <p>Maximum ambient temperature: 60 °C</p> <p>Maximum operating pressure: 25 bar</p> <p>Max pressure at stated temp: 25 bar / 120 °C<br/>25 bar / -20 °C</p> <p>Type of connection: PJE</p> <p>Size of inlet connection: DN 50<br/>2 inch</p> <p>Size of outlet connection: DN 50<br/>2 inch</p> <p>Pressure rating for pipe connection: PN 50</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>: 0.70</p> <p>Net weight: 63 kg</p> <p>Gross weight: 67 kg</p> <p>Shipping volume: 0.13 m<sup>3</sup></p> <p>Danish VVS No.: 385915030</p> |

## 96500559 CRN 20-3 A-P-A-E-HQQE 50 Hz



| Description                              | Value                                    |
|------------------------------------------|------------------------------------------|
| <b>General information:</b>              |                                          |
| Product name:                            | CRN 20-3<br>A-P-A-E-HQQE                 |
| Product No:                              | 96500559                                 |
| EAN number:                              | 5700396204246                            |
| <b>Technical:</b>                        |                                          |
| Pump speed on which pump data are based: | 2917 rpm                                 |
| Rated flow:                              | 21 m³/h                                  |
| Rated head:                              | 34.6 m                                   |
| Head max:                                | 43.9 m                                   |
| Stages:                                  | 3                                        |
| Impellers:                               | 3                                        |
| 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:                                    | Stainless steel<br>EN 1.4408<br>AISI 316 |
| Impeller:                                | Stainless steel<br>EN 1.4401<br>AISI 316 |
| Material code:                           | A                                        |
| Code for rubber:                         | E                                        |
| Bearing:                                 | SIC                                      |
| <b>Installation:</b>                     |                                          |
| Maximum ambient temperature:             | 60 °C                                    |
| Maximum operating pressure:              | 25 bar                                   |
| Max pressure at stated temp:             | 25 bar / 120 °C<br>25 bar / -20 °C       |
| Type of connection:                      | PJE                                      |
| Size of inlet connection:                | DN 50<br>2 inch                          |
| Size of outlet connection:               | DN 50<br>2 inch                          |
| Pressure rating for pipe connection:     | PN 50                                    |
| Flange size for motor:                   | FT130                                    |
| Connect code:                            | P                                        |
| <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                                    |





Company name:

Created by:

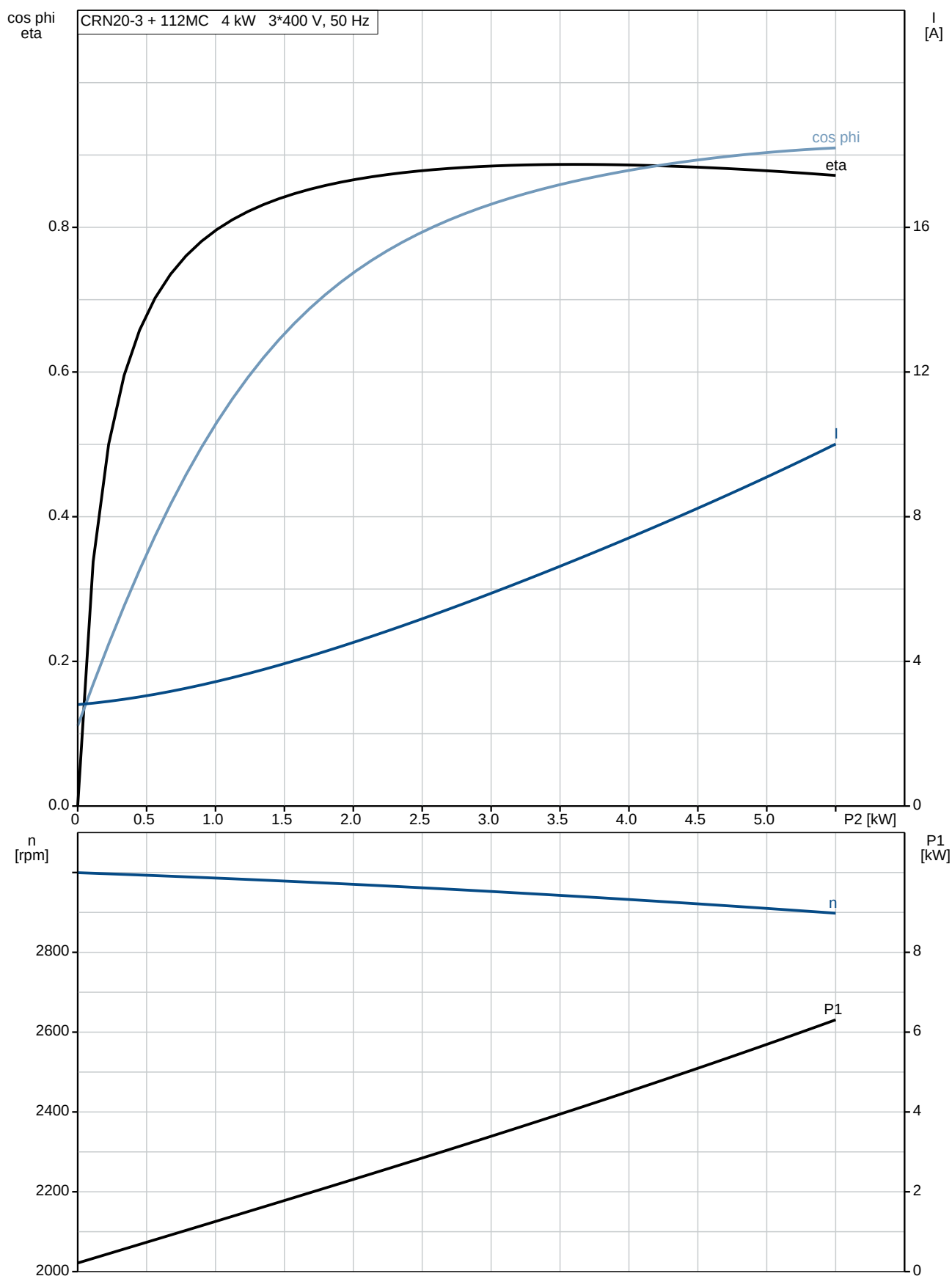
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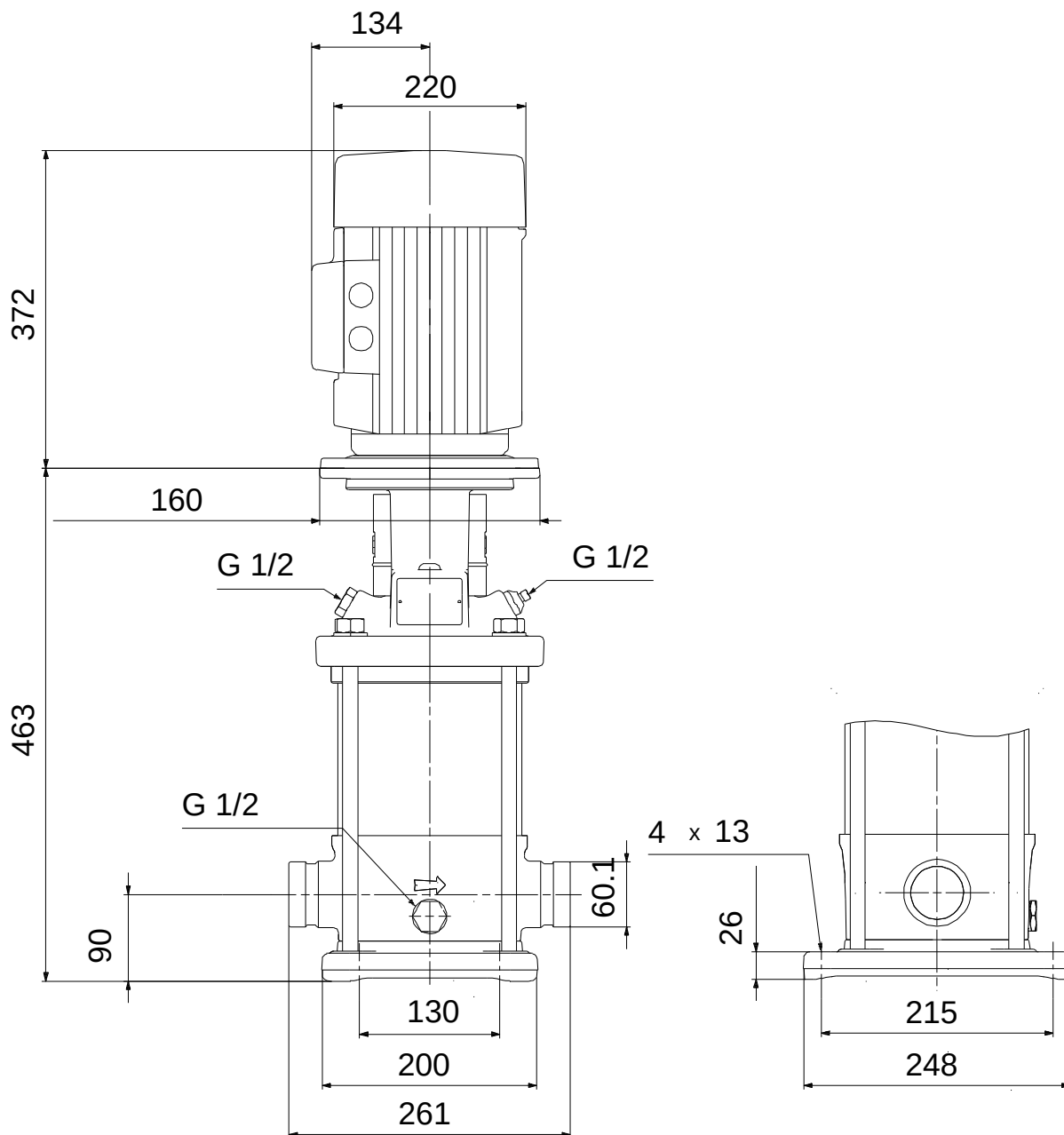
16/02/2019

| Description                                  | Value               |
|----------------------------------------------|---------------------|
| Starting current:                            | 1000-1110 %         |
| Cos phi - power factor:                      | 0.87-0.87           |
| 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 $\eta_{min}$ : | 0.70                |
| Net weight:                                  | 63 kg               |
| Gross weight:                                | 67 kg               |
| Shipping volume:                             | 0.13 m <sup>3</sup> |
| Danish VVS No.:                              | 385915030           |

## 96500559 CRN 20-3 A-P-A-E-HQQE 50 Hz



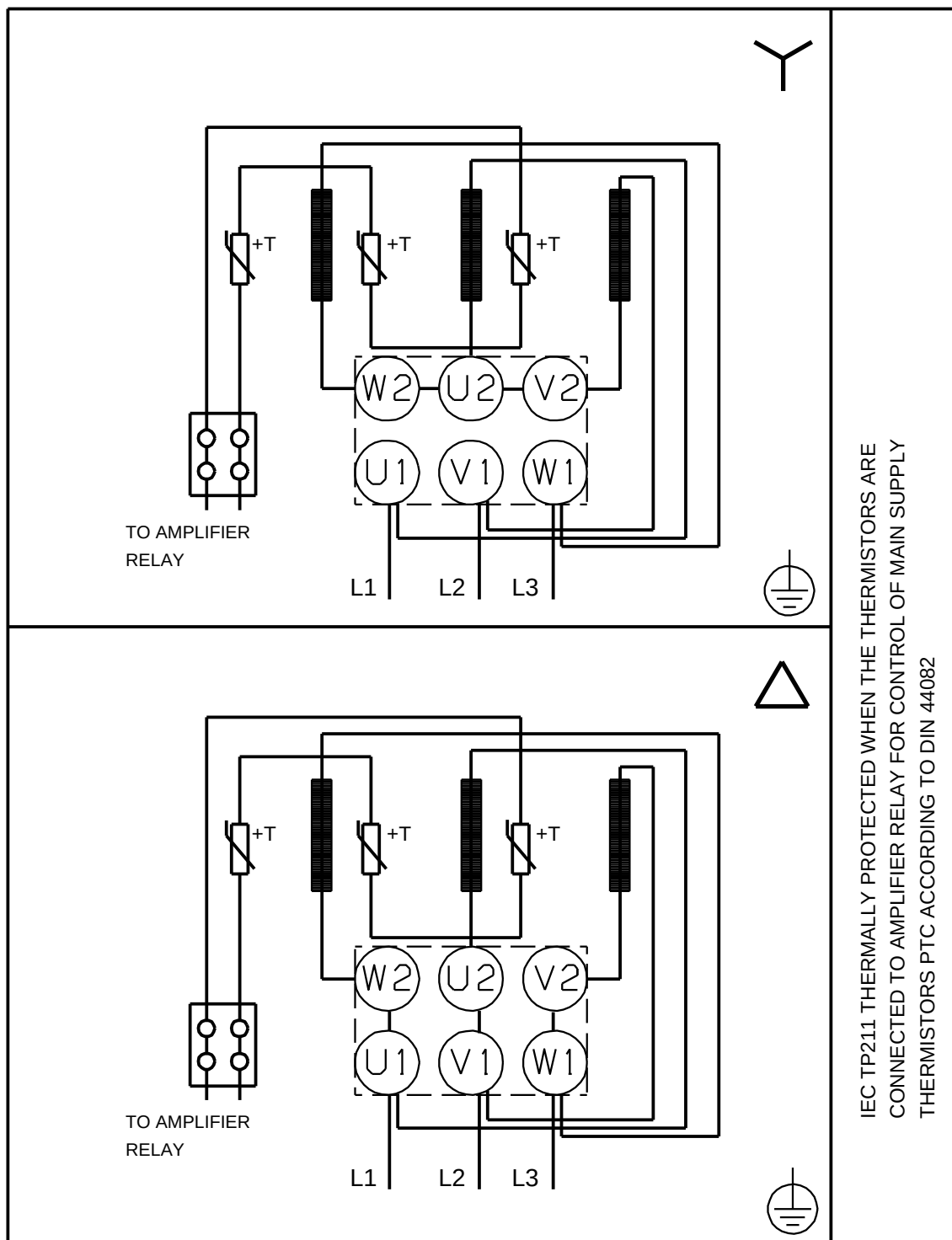
## 96500559 CRN 20-3 A-P-A-E-HQQE 50 Hz



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

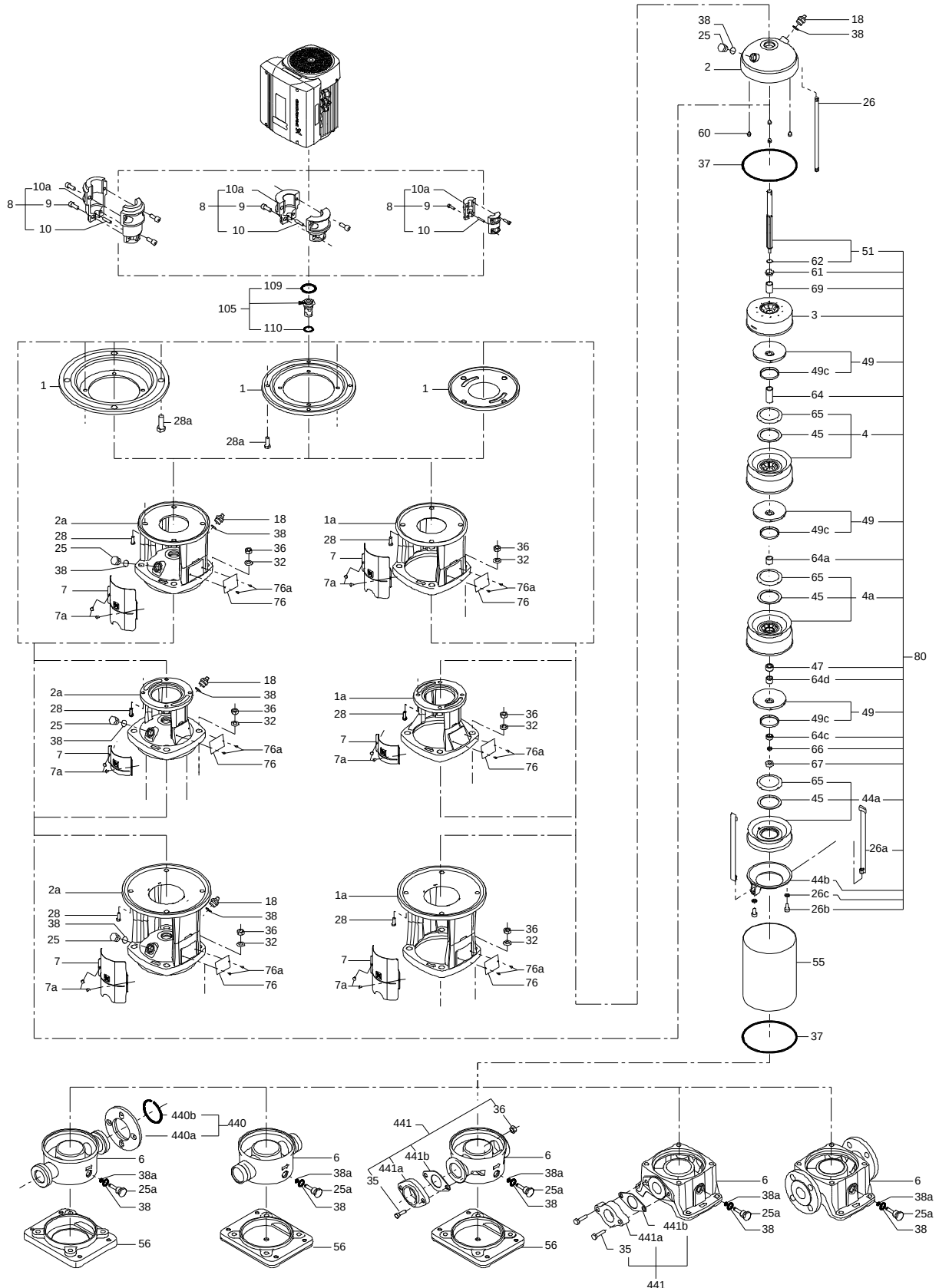


## 96500559 CRN 20-3 A-P-A-E-HQQE 50 Hz

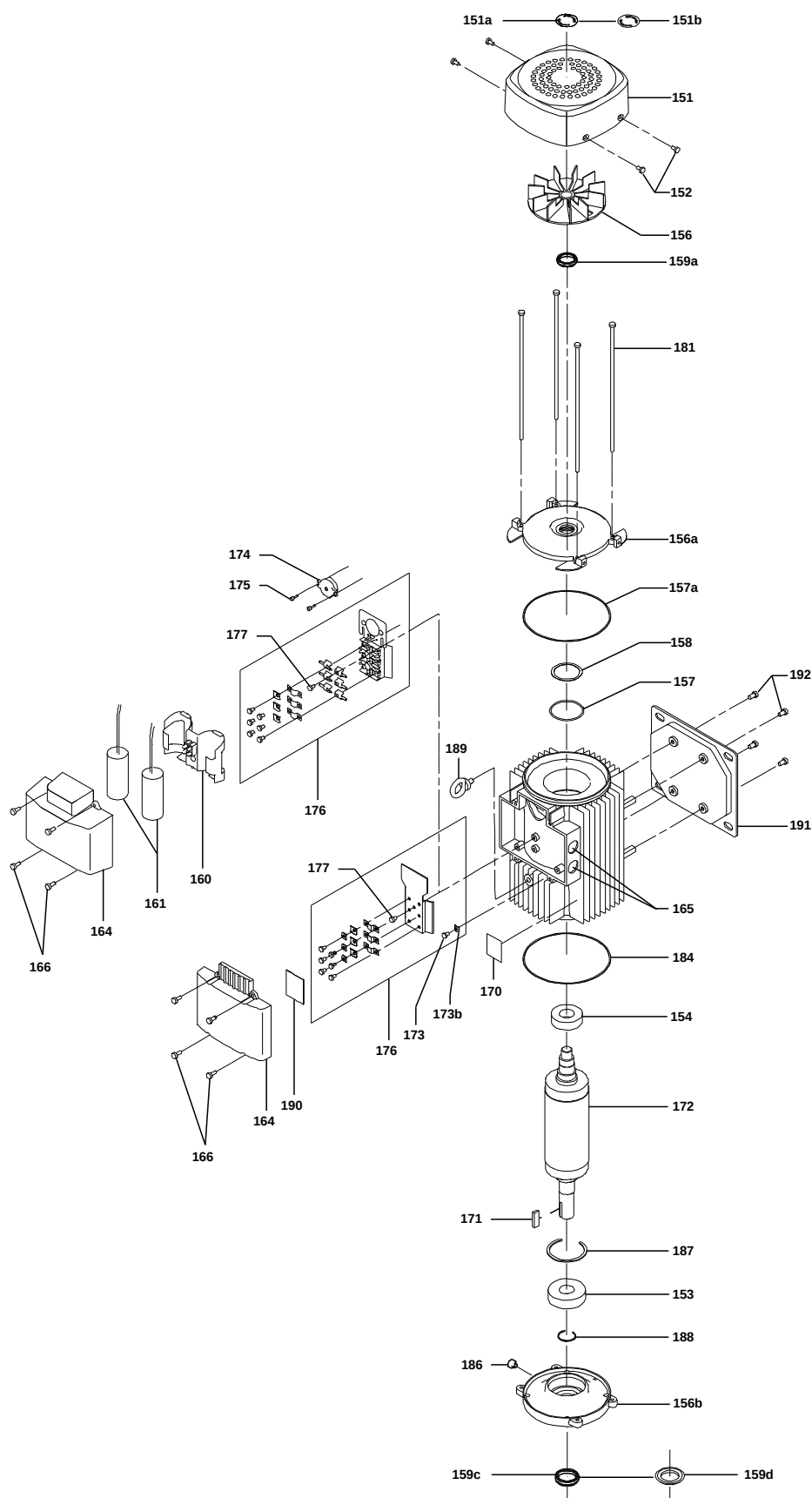


Note! All units are in [mm] unless others are stated.

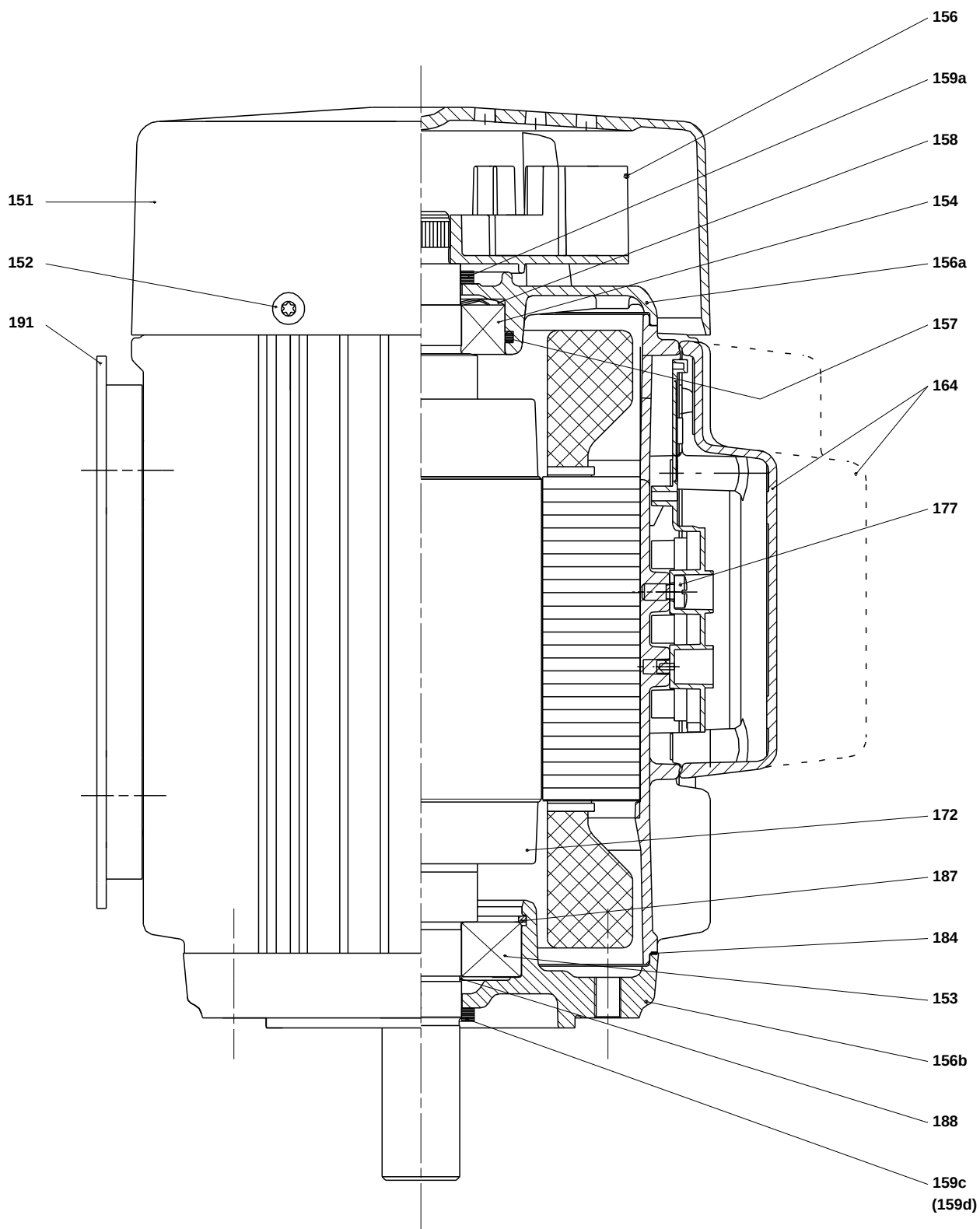
( tm069469 for MECR15,20 standard)



(tm029184 0505)



(tm029178 2004)



**Spare parts CRN 20-3, Product No. 96500559**

**Valid from 1.1.2011 (1152)**

| Pos   | Description               | Annotation | Classification Data                     | Part no. | Qty. | Unit |
|-------|---------------------------|------------|-----------------------------------------|----------|------|------|
| -     | Kit, chamber stack        |            |                                         | 96491786 | 1    | pcs  |
| - 80  | Chamber stack             |            |                                         |          | 1    |      |
| - 3   | Top intermediate chamber  |            |                                         |          |      |      |
|       | Guide vane                |            |                                         |          |      |      |
|       | Cover plate               |            |                                         |          |      |      |
| 3     | Intermediate chamber      |            |                                         |          |      |      |
| - 4a  | Intermediate chamber cpl. |            |                                         |          |      |      |
|       | Sand Lifter               |            |                                         |          |      |      |
|       | Guide cup                 |            |                                         |          |      |      |
|       | Bearing plate             |            |                                         |          |      |      |
|       | Guide vane                |            |                                         |          |      |      |
| 3     | Intermediate chamber      |            |                                         |          |      |      |
| 45a   | Neck ring cpl.            |            |                                         |          |      |      |
| 47    | Bearing bush              |            |                                         |          |      |      |
| 65    | Retainer                  |            |                                         |          |      |      |
| - 4   | Intermediate chamber cpl. |            |                                         |          |      |      |
| 3     | Intermediate chamber      |            |                                         |          |      |      |
| 45a   | Neck ring cpl.            |            |                                         |          |      |      |
| 65    | Retainer                  |            |                                         |          |      |      |
| 26a   | Strap cpl.                |            |                                         |          |      |      |
| 26.c  | Washer                    |            | Designation: DIN 125A<br>Thickness: 1,6 |          |      |      |
| 26.b  | Hex head screw            |            |                                         |          |      |      |
| 44b   | Inlet part                |            |                                         |          |      |      |
| - 44a | Inlet part cpl.           |            |                                         |          |      |      |
| 45a   | Neck ring cpl.            |            |                                         |          |      |      |
| 65    | Retainer                  |            |                                         |          |      |      |
| 47    | Bearing ring              |            |                                         |          |      |      |
| - 49  | Impeller cpl.             |            |                                         |          |      |      |
| 49c   | Wear ring                 |            |                                         |          |      |      |
| 49    | Impeller                  |            |                                         |          |      |      |
| - 51  | Shaft, spline, cpl.       |            |                                         |          |      |      |
|       | Bar                       |            |                                         |          |      |      |
| 62    | Stop ring                 |            |                                         |          |      |      |
| 64d   | Spacing bush              |            |                                         |          |      |      |
| 64c   | Spacing pipe              |            | Length (mm): 12.7                       |          |      |      |
| 64a   | Spacing pipe              |            | Internal diameter: 17,5                 |          |      |      |
|       |                           |            | Length (mm): 17                         |          |      |      |
| 64    | Spacing pipe              |            | Length (mm): 43.6                       |          |      |      |
| 66    | Wedge lock washer         |            |                                         |          |      |      |
| 67    | Lock nut                  |            | Thread: M8                              |          |      |      |
| 69    | Spacing bush              |            |                                         |          |      |      |
| -     | Kit, coupling             |            |                                         | 96511350 | 1    | pcs  |
|       | Adjusting fork            |            |                                         |          | 1    |      |
| 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       |            |                                         | 96509612 | 1    | pcs  |
| 7.a   | Combi Slot Torx screw     |            |                                         |          | 4    |      |
| 7     | Coupling guard            |            |                                         |          | 2    |      |

| Pos  | Description               | Annotation | Classification Data   | Part no. | Qty. | Unit |
|------|---------------------------|------------|-----------------------|----------|------|------|
| -    | Kit, gaskets              |            |                       | 96509609 | 1    | pcs  |
|      | Gasket                    |            |                       |          | 2    |      |
| 24   | O-ring                    |            |                       |          | 2    |      |
| 37   | O-ring                    |            |                       |          | 2    |      |
| 38a  | O-ring                    |            | Diameter: 5,3         |          | 1    |      |
|      |                           |            | Material type: EPDM   |          |      |      |
|      |                           |            | 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        |          |      |      |
| 60   | Spring                    |            |                       |          | 4    |      |
| 415  | Gasket                    |            |                       |          | 2    |      |
| 441b | Gasket                    |            | Internal diameter: 49 |          | 2    |      |
|      |                           |            | Outer diameter: 92    |          |      |      |
|      |                           |            | Thickness: 2          |          |      |      |
| -    | Kit, plug                 |            |                       | 96511312 | 1    | pcs  |
| - 18 | Air vent screw            |            |                       |          | 1    |      |
|      | Spindle                   |            |                       |          |      |      |
|      | Plug                      |            |                       |          |      |      |
| 25a  | Drain plug                |            |                       |          | 1    |      |
| 25   | Plug                      |            |                       |          | 1    |      |
| 38a  | O-ring                    |            | Diameter: 5,3         |          | 1    |      |
|      |                           |            | Material type: FKM    |          |      |      |
|      |                           |            | Thickness: 2,4        |          |      |      |
| 38a  | O-ring                    |            | Diameter: 5,3         |          | 1    |      |
|      |                           |            | Material type: EPDM   |          |      |      |
|      |                           |            | Thickness: 2,4        |          |      |      |
| 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      |            |                       | 96511844 | 1    | pcs  |
|      | Emery cloth               |            |                       |          | 1    |      |
|      | Grinding device           |            |                       |          | 1    |      |
| 105  | Shaft seal                |            | Material type: HQQE   |          | 1    |      |
| -    | Kit, wear parts           |            |                       | 96511824 | 1    | pcs  |
| - 4a | Intermediate chamber cpl. |            |                       |          | 1    |      |
|      | Sand Lifter               |            |                       |          |      |      |
|      | Guide cup                 |            |                       |          |      |      |
|      | Bearing plate             |            |                       |          |      |      |
|      | Guide vane                |            |                       |          |      |      |
| 3    | Intermediate chamber      |            |                       |          |      |      |
| 45a  | Neck ring cpl.            |            |                       |          |      |      |
| 47   | Bearing bush              |            |                       |          |      |      |
| 65   | Retainer                  |            |                       |          |      |      |
| 26.c | Washer                    |            | Designation: DIN 125A |          | 2    |      |
|      |                           |            | Thickness: 1,6        |          |      |      |
| 26.b | Hex head screw            |            |                       |          | 2    |      |

| Pos   | Description                   | Annotation | Classification Data         | Part no. | Qty. | Unit |
|-------|-------------------------------|------------|-----------------------------|----------|------|------|
| 45a   | Neck ring cpl.                |            |                             |          | 5    |      |
| 47    | Bearing ring                  |            |                             |          | 1    |      |
| 49c   | Wear ring                     |            |                             |          | 6    |      |
| 62    | Retaining ring                |            |                             |          | 1    |      |
| 64d   | Spacing bush                  |            |                             |          | 1    |      |
| 64c   | Spacing pipe                  |            | Length (mm): 12.7           |          | 1    |      |
| 64b   | Spacing bush                  |            | Length (mm): 5.00           |          | 1    |      |
| 64a   | Spacing pipe                  |            | Internal diameter: 17,5     |          | 1    |      |
|       |                               |            | Length (mm): 17             |          |      |      |
| 65    | Retainer                      |            |                             |          | 5    |      |
| 66    | Wedge lock washer             |            |                             |          | 1    |      |
| 67    | Lock nut                      |            | Thread: M8                  |          | 1    |      |
| -     | 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                       |            |                             |          |      |      |
| -     | 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   |            |                             |          |      |      |

| Pos   | Description                              | Annotation | Classification Data                                     | Part no. | Qty. | Unit |
|-------|------------------------------------------|------------|---------------------------------------------------------|----------|------|------|
| 166   | Pan head thread forming screw            |            |                                                         |          |      |      |
| 1a    | Pump head                                |            |                                                         | 98824712 | 1    | pcs  |
| 2     | Pump cover                               |            |                                                         | 98481138 | 1    | pcs  |
| + 3   | Bulk, Top intermediate chamber (3 pcs)   |            |                                                         | 98371113 | 1    | pcs  |
| + 3   | Top intermediate chamber                 |            |                                                         | 98734577 | 1    | pcs  |
| + 4a  | Bulk, Intermediate chamber cpl. (10 pcs) |            |                                                         | 96538853 | 1    | pcs  |
| + 4a  | Intermediate chamber cpl.                |            |                                                         | 98371117 | 1    | pcs  |
| - 4   | Bulk, Intermediate chamber cpl. (10 pcs) |            |                                                         | 96538840 | 1    | pcs  |
| 3     | Intermediate chamber                     |            |                                                         | 98371143 | 1    |      |
| 65    | Retainer                                 |            |                                                         | 96547341 | 1    |      |
| + 4   | Intermediate chamber cpl.                |            |                                                         | 98371115 | 1    | pcs  |
| 6     | Base                                     |            |                                                         | 98654159 | 1    | pcs  |
| 7.a   | Bulk, Combi Slot Torx screw (1000 pcs)   |            |                                                         | 96886324 | 4    | pcs  |
| 10    | Bulk, Shaft pin (10 pcs)                 |            | Diameter: 5<br>Length (mm): 26                          | 96536473 | 1    | pcs  |
| + 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  |
| 26a   | Strap cpl.                               |            |                                                         | 98952934 | 2    | pcs  |
| 26.c  | Bulk, Washer (4 pcs)                     |            | Designation: DIN 125A<br>Thickness: 1,6                 | 99262704 | 2    | pcs  |
| 26.c  | Washer                                   |            | Designation: DIN 125A<br>Thickness: 1,6                 | 96586880 | 2    | pcs  |
| 26    | Staybolt                                 |            |                                                         | 98902653 | 4    | pcs  |
| 37.a  | Bulk, O-ring (20 pcs)                    |            |                                                         | 96538857 | 1    | pcs  |
| 38a   | Bulk, O-ring (10 pcs)                    |            | Diameter: 5,3<br>Material type: EPDM<br>Thickness: 2,4  | 99198791 | 1    | 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  |
| 44b   | Inlet part                               |            |                                                         | 98814593 | 1    | pcs  |
| + 44a | Inlet part cpl.                          |            |                                                         | 98818922 | 1    | pcs  |
| 47    | Bulk, Bearing ring (10 pcs)              |            |                                                         | 96538795 | 1    | pcs  |
| - 49  | Bulk, Impeller cpl. (5 pcs)              |            |                                                         | 98394310 | 3    | pcs  |
| 49c   | Bulk, Wear ring (10 pcs)                 |            |                                                         | 96547340 | 1    |      |
| + 49  | Impeller cpl.                            |            |                                                         | 98394459 | 3    | pcs  |
| + 51  | Shaft, spline, cpl.                      |            |                                                         | 98368628 | 1    | pcs  |
| 55    | Outer sleeve                             |            |                                                         | 98812634 | 1    | pcs  |
| 56    | Base plate                               |            |                                                         | 98481136 | 1    | pcs  |
| 60    | Bulk, Spring (20 pcs)                    |            |                                                         | 96538963 | 4    | pcs  |
| 64d   | Bulk, Spacing bush (20 pcs)              |            |                                                         | 96538947 | 1    | pcs  |
| 64c   | Bulk, Spacing pipe (5 pcs)               |            | Length (mm): 12.7                                       | 97980241 | 1    | pcs  |
| 64a   | Bulk, Spacing pipe (10 pcs)              |            | Internal diameter: 17,5<br>Length (mm): 17              | 98417487 | 1    | pcs  |
| 64    | Bulk, Spacing pipe (20 pcs)              |            | Length (mm): 43.6                                       | 96535107 | 1    | 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 bush (20 pcs)              |            |                                                         | 96538949 | 1    | pcs  |
| 76a   | Bulk, Rivet (100 pcs)                    |            |                                                         | 96620489 | 1    | pcs  |
| 105   | Bulk, Shaft seal (11 pcs)                |            | Material type: HQQE                                     | 96538914 | 1    | pcs  |