# Technical Data

**Pump Name** MD 50-200/116

| | | | |
|---|---|---|---|
| Customer | Date | 2024-07-02 | Company |
| Contact | Item no. | | Issued by |
| Phone | Project | | Phone |
| E-mail | Project ID | Proiect redenumit 2024-07-02 22:34:23 | E-mail |

**Requested data**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Pump type | CENTRIFUGAL PUMPS | Fluid | | Water |
| 2 | Number of pumps / Reserve | 1 / 0 | Liquid temperature | °C | 20 |
| 3 | Flow m³/h | | Kin. viscosity | mm²/s | 1.005 |
| 4 | Head m | | Vapour pressure | bar | 0.0234 |
| 5 | Geodetic head m | | PH value | | |
| 6 | Inlet pressure (pin) bar | 0 | Density | kg/m³ | 998.3 |
| 7 | Available system NPSH | | Solids | Weight % | 0 |
| 8 | Ambient temperature °C | 20 | | | |

**Pump**

| | | | | | | |
|---|---|---|---|---|---|---|
| 9 | Pump Name | MD 50-200/116 | Frequency | | Hz | 60 |
| 10 | Design | CENTRIFUGAL PUMPS | Installation type | | | STANDARD |
| 11 | Manufacturer | EBARA | Impeller Diameter | Max. | mm | 200 |
| 12 | Speed rpm | 3520 | | Designed | mm | 200 |
| 13 | No. of Stage | 1 | | Min. | mm | 200 |
| 14 | Connection Suction side | DIN 2532 | Flow | Operating | m³/h | |
| 15 | Connection Discharge side | DIN 2532 | | Max- | m³/h | 72 |
| 16 | Max Working Pressure bar | | | Min- | m³/h | 24 |
| 17 | Shut-off head bar | 5.83 | Head | Operating | m | |
| 18 | Total weight kg | See the table of "Dimensions". | | - (Qmax.) | m | 37.9 |
| 19 | Shaft power kW | | | - (Qmin.) | m | 58.9 |
| 20 | | | Max. Shaft Power at max. impeller | | kW | 11.67 |
| 21 | Required pump NPSH m | | Efficiency | | % | |

**Materials**

| | | | | |
|---|---|---|---|---|
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |
| 26 | | | | |
| 27 | | | | |

**Motor**

| | | | | | |
|---|---|---|---|---|---|
| 28 | Manufacturer | EPE Standard | Insulation class | | F |
| 29 | Type | TEFC_MD 50-200/116_380_Three Phase | Phases | | 3~ |
| 30 | Specific design | - / 60 Hz / Pole pairs 1 | Frame size | | |
| 31 | Rated power kW | 11 | Weight | kg | |
| 32 | Number of poles | 2 | Electric voltage | V | 380 |
| 33 | Speed rpm | 3450 | Electric current | A | 18.3 |
| 34 | Degree of protection | IP 55 | | | |
| 35 | | | | | |

**Remarks**

EBARA

# Performance Curve

**Pump Name** MD 50-200/116

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| E-mail | | Project ID | Proiect redenumit 2024-07-02 22:34:23 | E-mail | |

**Requested data**

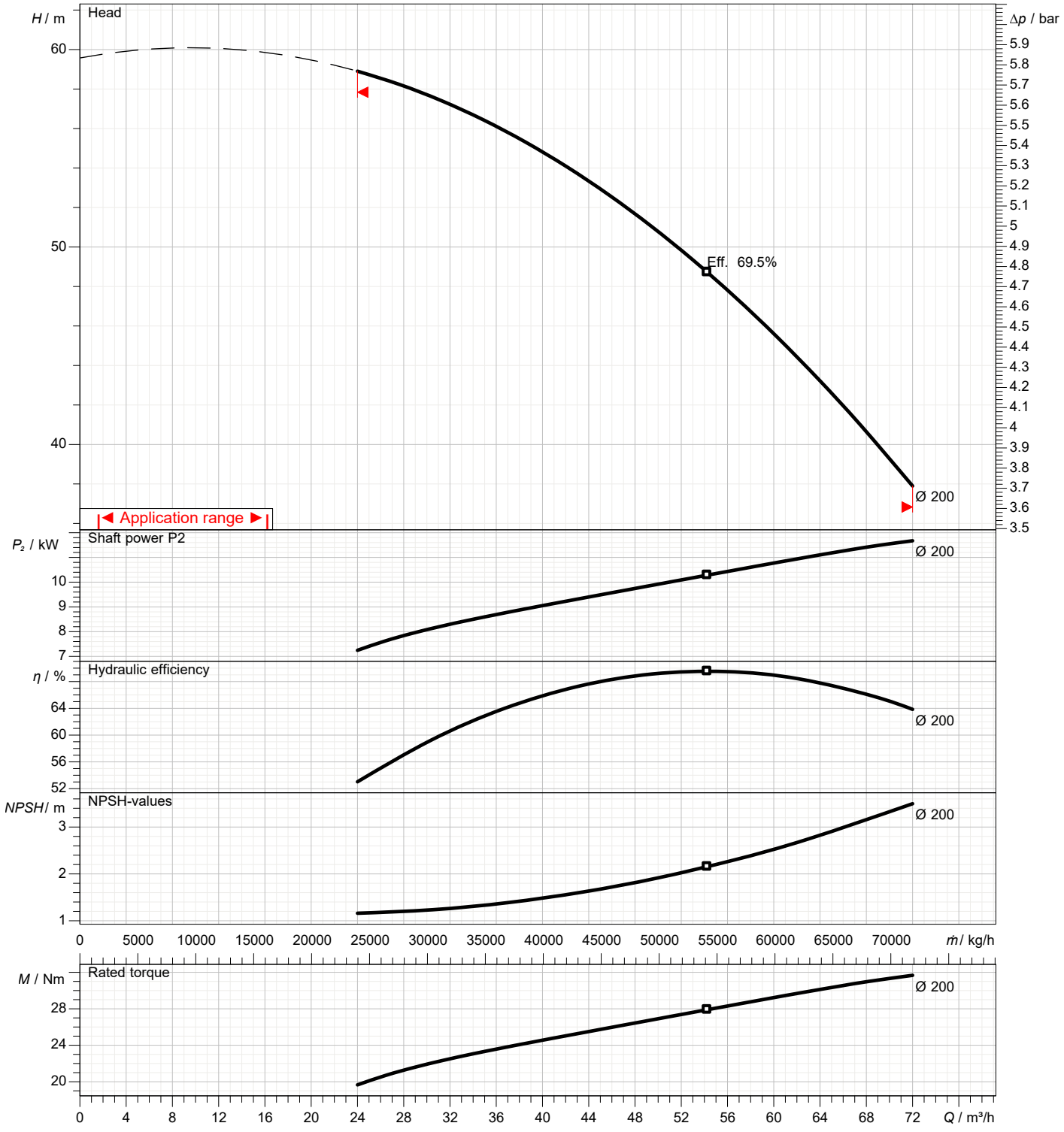
| | | | |
|---|---|---|---|
| 1 | Flow | m³/h | |
| 2 | Head | m | |
| 3 | Geodetic head | m | |

**Pump**

| | | | | | |
|---|---|---|---|---|---|
| Operating flow | m³/h | | Frequency | Hz | 60 |
| Operating head | m | | Number of poles | | 2 |
| Impeller diameter designed | mm | 200 | Speed | rpm | 3520 |

Test standard: ISO 9906:2012 - Grade3B

Water; 20°C; 998.3kg/m³; 1mm²/s



# Dimensions

**Pump name** MD 50-200/116

| | | | | | |
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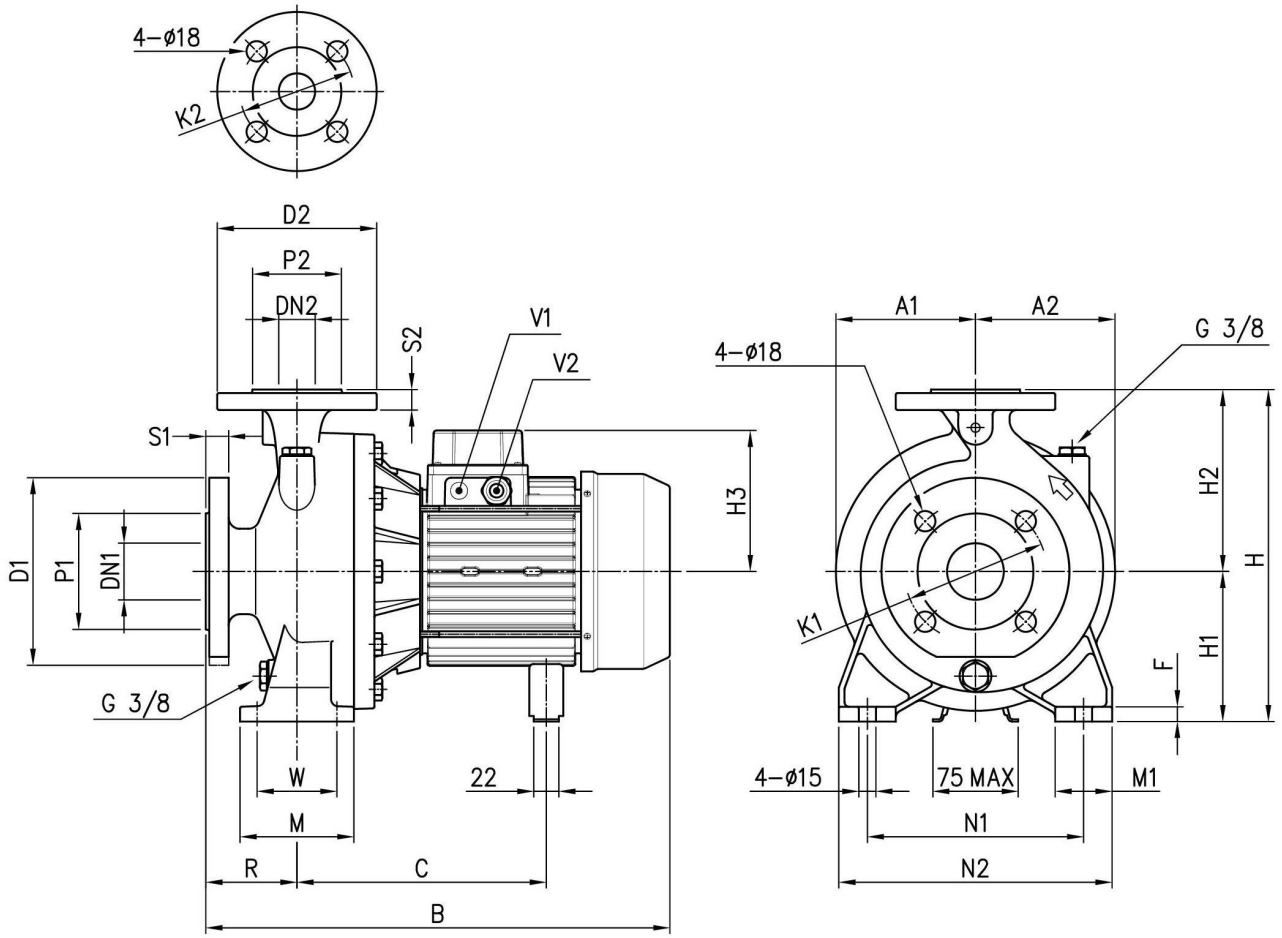
| Phone | | Project | | Phone | |
| E-mail | | Project ID | Proiect redenumit 2024-07-02 22:34:23 | E-mail | |




| Dimensions in | mm | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | A1 | 144 | M | 100 | | | | |
| 2 | A2 | 154 | M1 | 50 | | | | |
| 3 | B | 590 | N1 | 212 | | | | |
| 4 | C | 354 | N2 | 265 | | | | |
| 5 | D1 | 185 | P1 | 122 | | | | |
| 6 | D2 | 165 | P2 | 102 | | | | |
| 7 | DN1 | 65 | R | 100 | | | | |
| 8 | DN2 | 50 | S1 | 20 | | | | |
| 9 | F | 13 | S2 | 20 | | | | |
| 10 | H | 360 | V1 | [PG 13].5 | | | | |
| 11 | H1 | 160 | V2 | PG 21 | | | | |
| 12 | H2 | 200 | W | 70 | | | | |
| 13 | H3 | 178 | Weight kg | 80.7 | | | | |
| 14 | K1 | 145 | | | | | | |
| 15 | K2 | 125 | | | | | | |

EBARA

# (1/2)
# Construction

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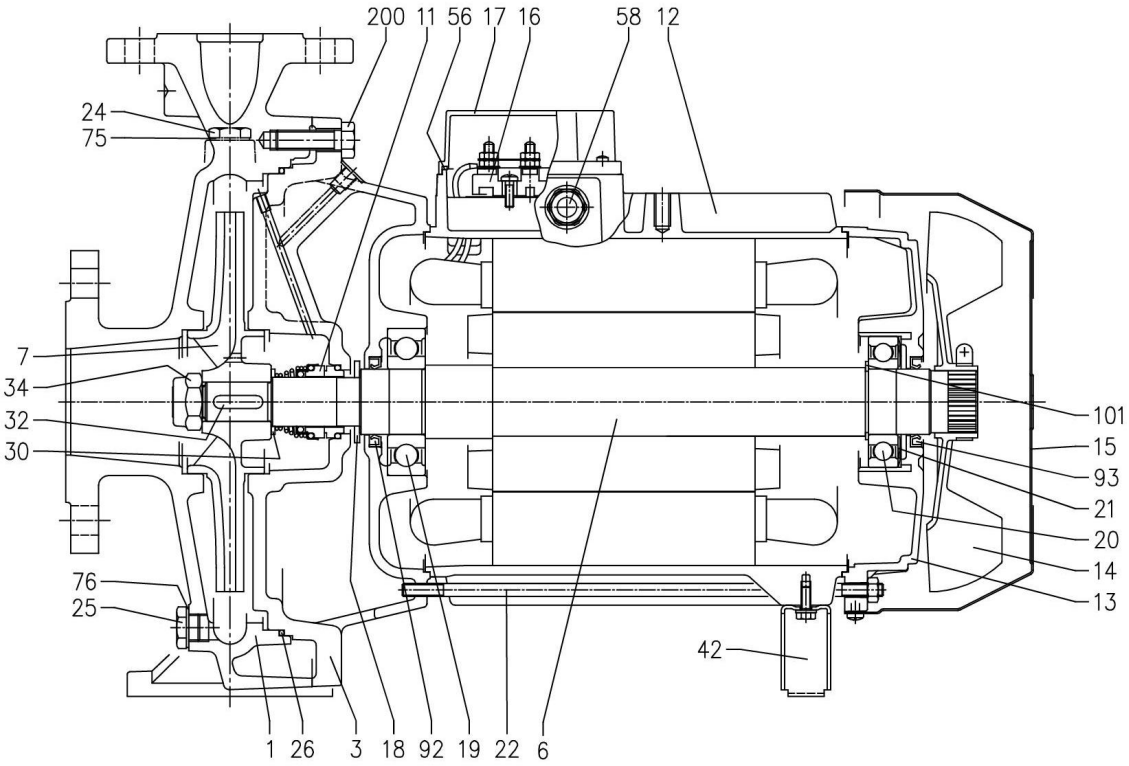
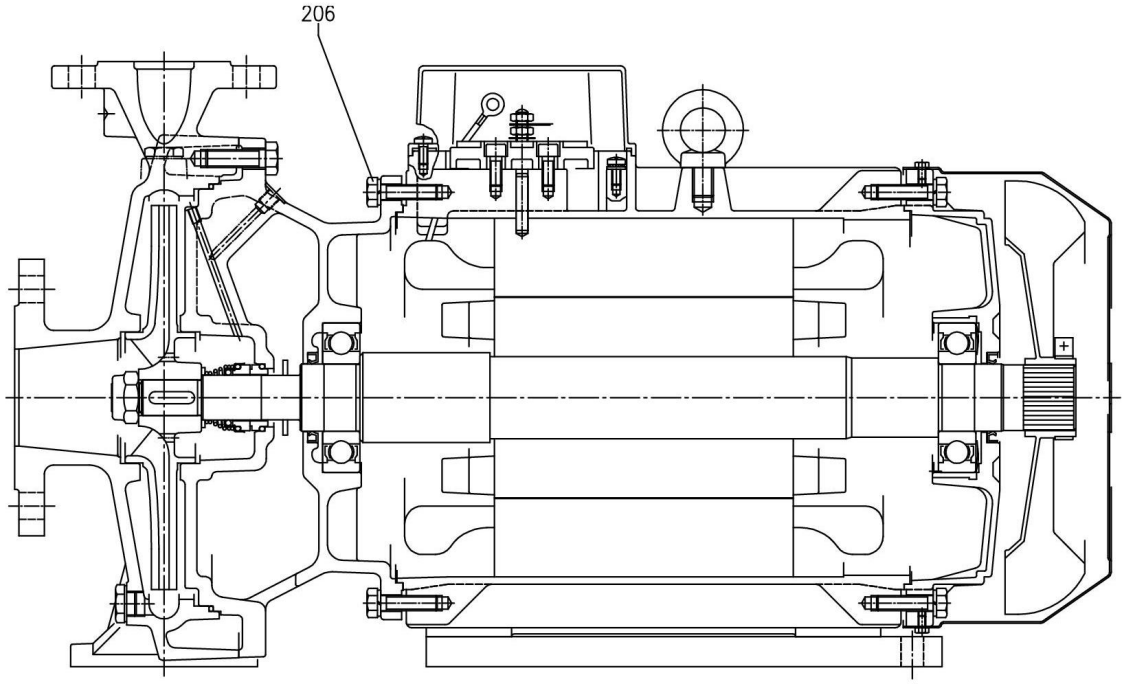
UP TO 13 kW




15 kW AND ABOVE (NO 65-160/156)



# (2/2)
# Construction

**Pump name** MD 50-200/116

| | | | |
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| Customer | Date | 2024-07-02 | Company |
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| Phone | Project | | Phone |
| E-mail | Project ID | Proiect redenumit 2024-07-02 22:34:23 | E-mail |

| N° | PART NAME | | MATERIAL | DIMENSIONS | STANDARD | N. FOR 1 UNIT |
|---|---|---|---|---|---|---|
| 1 | Casing | | Cast iron EN-GJL-200-EN 1561 | | | 1 |
| 3 | Motor bracket | | Cast iron EN-GJL-200-EN 1561 | | | 1 |
| 6 | Shaft with rotor | | AISI 304 (Part in contact with liquid) | | | 1 |
| 7 | Impeller | Md xx-125, Md xx-160, Mdxx-200 | Cast iron EN-GJL-200-EN 1561 | | | 1 |
| | | Md xx-250 | Bronze | | | |
| 11 | Mechanical seal | | Carbon/Ceramic/NBR | | | 1 |
| 12 | Motor frame with stator | | - | | | 1 |
| 13 | Motor cover | | Aluminium | | | 1 |
| 14 | Fan | | PP | | | 1 |
| 15 | Fan cover | | Fe P04 Zincate | | | 1 |
| 16 | Terminal box | | - | | | 1 |
| 17 | Terminal box cover | | Plastic [1] - Aluminium [2] | | | 1 |
| 18 | Splash ring | Up to 7.5 kW | NBR | 40x21.5x3 | EPE DRAWING | 1 |
| | | 9.2 kW and above | | 50x29.5x3 | | |
| 19 | Pump side ball bearing | | - | | | 1 |
| 20 | Fan side ball bearing | | - | | | 1 |
| 21 | Adjusting ring | | Steel C70 | | | 1 |
| 22 | Tie rod | Up to 13 kW and MD 65-160/15 | Fe 42 Zincate | | EPE DRAWING | 4 |
| | Screw | 15kW and above | Zn. steel 8.8 strenght class ISO 898/1 | | UNI 5739 | |
| 24 | Priming plug | | Brass | | EPE DRAWING | 1 |
| 25 | Drain plug | | Brass | | EPE DRAWING | 1 |
| 26 | O-ring | Md xx-125 | NBR | 147x3,53 | EPE DRAWING | 1 |
| | | Md xx-160 | | 176x3,53 | | |
| | | Md xx-200 | | 220x3,53 | | |
| | | Md xx-250 | | 277x3,53 | | |
| 30 | Spacer | | AISI 304 | 22,5x26,9x2,5 (up to 7,5kW) | EPE DRAWING | 1 |
| | | | | 30,5x40x2,5 (9,2 kW and above) | | |
| 32 | Key | | AISI 316 | 6x6x25 (up to 7,5kW) | UNI 6604 | 1 |
| | | | | 8x7x30 (9,2 kW and above) | | |
| 34 | Impeller nut | | AISI 304 | M16x1,5 (up to 7,5kW) | UNI 7474 | 1 |
| | | | | M20x1,5 (9,2 kW and above) | | |
| 42 | Foot | | Fe P04 | | EPE DRAWING | 1 |
| 56 | Box gasket | | NBR | | | 1 |
| 58 | Cable entry[2] | | - | | | 1 |
| 75 | Washer | | Aluminium | Ø 17 - G3/8 | | 1 |
| 76 | Washer | | Aluminium | Ø 17 - G3/8 | | 1 |
| 85* | Kit counterflange | Flange | Zincate steel | | EPE DRAWING | 2 |
| | | Screw for flange | AISI 304 | M16x55 | UNI 5737 | 8 |
| | | Gasket | EPDM | | | 2 |
| 92 | Lip seal | Up to 3 kW | - | 25x40x7 | DIN 3760 without spring | 1 |
| | | From 4 to 7,5 kW | | 30x47x7 | | |
| | | From 9,2 to 13 kW and 65-160/15 | | 40x55x7 | | |
| | | From 15 to 22 kW | | 45x60x7 | | |
| 93 | Lip seal | Up to 4 kW | - | 25x40x7 | DIN 3760 without spring | 1 |
| | | From 5,5 to 7,5 kW | | 30x47x7 | | |
| | | From 9,2 to 13 kW and 65-160/15 | | 40x55x7 | | |
| | | From 15 to 22 kW | | 45x60x7 | | |
| 101 | Snap ring (only for 9,2-11-13 kW) | | Carbon tool steels TC 80 | Ø 40 | UNI 7435 | 1 |
| 200 | Screw | Md xx-125 | Zn. steel 8.8 strenght class ISO 898/1 | M8x30 | UNI 5739 | 8 |
| | | Md xx-160 | | M10x35 | | 10 |
| | | Md xx-200 | | | | 12 |
| | | Md xx-250 | | M12x40 | | 12 |
| 206 | Screw | From 15kW and above (no 65-160/15) | Zn. steel 8.8 strenght class ISO 898/1 | M10x40 | UNI 5739 | 4 |

[1] Only for single-phase
[2] Only for three-phase

*On request