

# Technical Data

Pump Name

MD 50-125/4.06

|          |            |                                       |           |
|----------|------------|---------------------------------------|-----------|
| Customer | Date       | 2024-07-02                            | Company   |
| Contact  | Item no.   |                                       | Issued by |
| Phone    | Project    |                                       | Phone     |
| E-mail   | Project ID | Proiect redenumit 2024-07-02 22:34:28 | 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 50-125/4.06                 | Frequency Hz                         | 60               |
| 10 | Design                    | CENTRIFUGAL PUMPS              | Installation type                    | STANDARD         |
| 11 | Manufacturer              | EBARA                          | Impeller Diameter                    | Max. mm 125      |
| 12 | Speed rpm                 | 3450                           |                                      | Designed mm 125  |
| 13 | No. of Stage              | 1                              |                                      | Min. mm 125      |
| 14 | Connection Suction side   | DIN 2532                       | Flow                                 | Operating m³/h   |
| 15 | Connection Discharge side | DIN 2532                       |                                      | Max- m³/h 66     |
| 16 | Max Working Pressure bar  |                                |                                      | Min- m³/h 24     |
| 17 | Shut-off head bar         | 2.64                           | Head                                 | Operating m      |
| 18 | Total weight kg           | See the table of "Dimensions". |                                      | - (Qmax.) m 16.0 |
| 19 | Shaft power kW            |                                |                                      | - (Qmin.) m 26.0 |
| 20 |                           |                                | Max. Shaft Power at max. impeller kW | 4.03             |
| 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 50-125/4.06_380_Three Phase | Phases             | 3~  |
| 30 | Specific design      | - / 60 Hz / Pole pairs 1            | Frame size         |     |
| 31 | Rated power kW       | 4                                   | Weight kg          |     |
| 32 | Number of poles      | 2                                   | Electric voltage V | 380 |
| 33 | Speed rpm            | 3450                                | Electric current A | 8.5 |
| 34 | Degree of protection | IP 55                               |                    |     |
| 35 |                      |                                     |                    |     |

## Remarks

# Performance Curve

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## Requested data

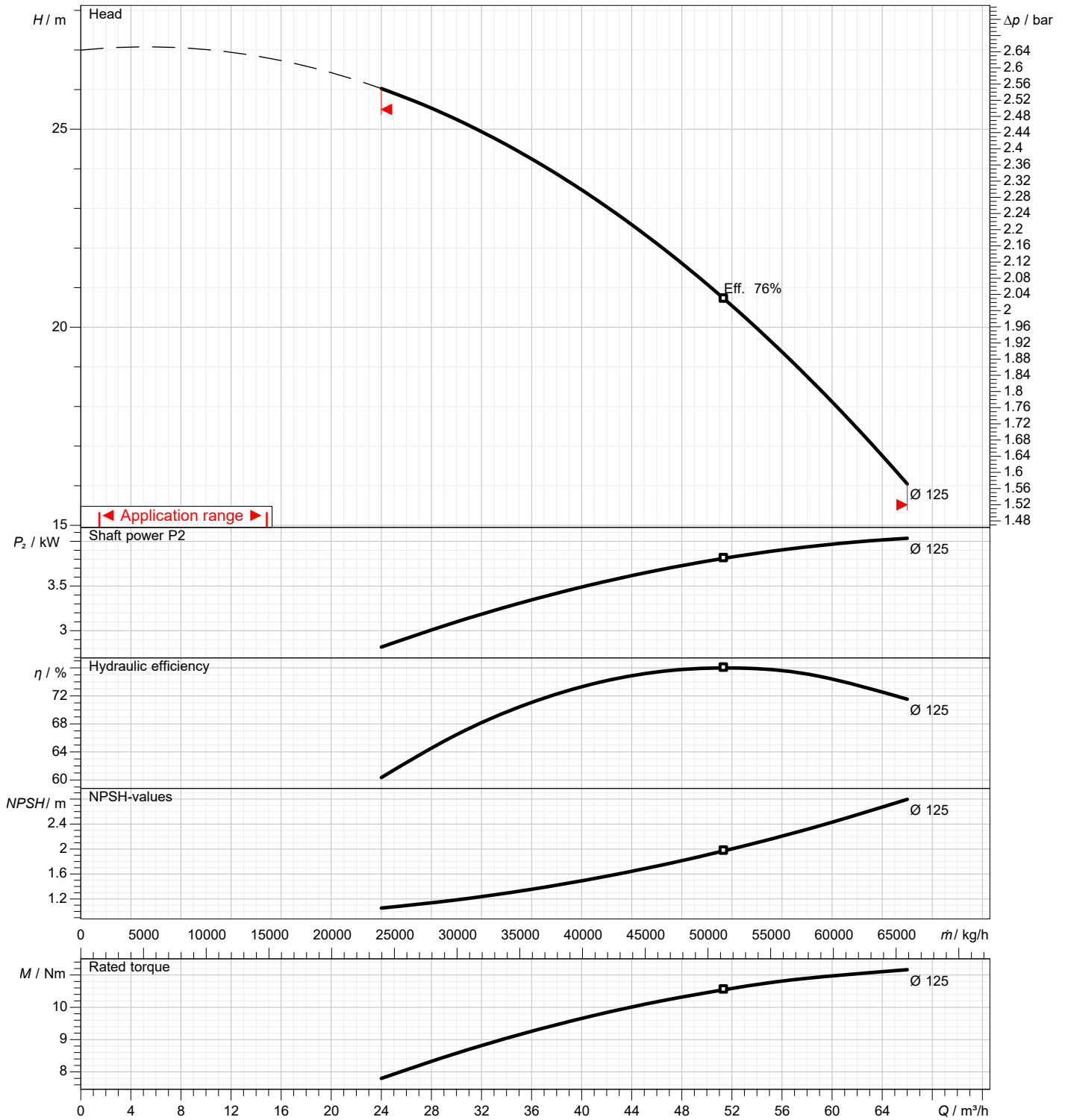
|   |               |      |  |
|---|---------------|------|--|
| 1 | Flow          | m³/h |  |
| 2 | Head          | m    |  |
| 3 | Geodetic head | m    |  |

## Pump

|                            |      |     |                 |     |      |
|----------------------------|------|-----|-----------------|-----|------|
| Operating flow             | m³/h |     | Frequency       | Hz  | 60   |
| Operating head             | m    |     | Number of poles |     | 2    |
| Impeller diameter designed | mm   | 125 | Speed           | rpm | 3450 |

Test standard: ISO 9906:2012 - Grade3B

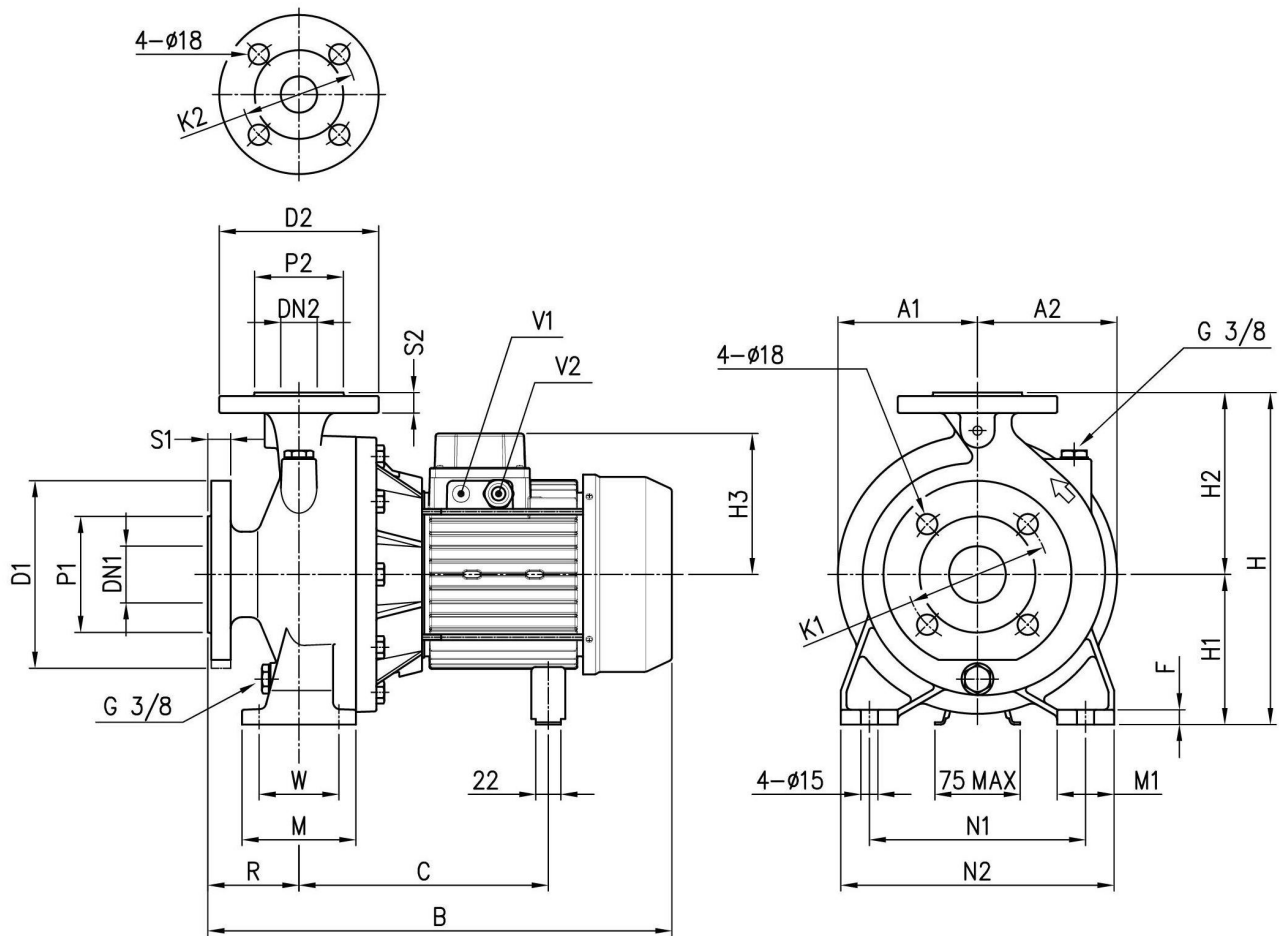
Water; 20°C; 998.3kg/m³; 1mm²/s



# Dimensions

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|          |                                                  |           |
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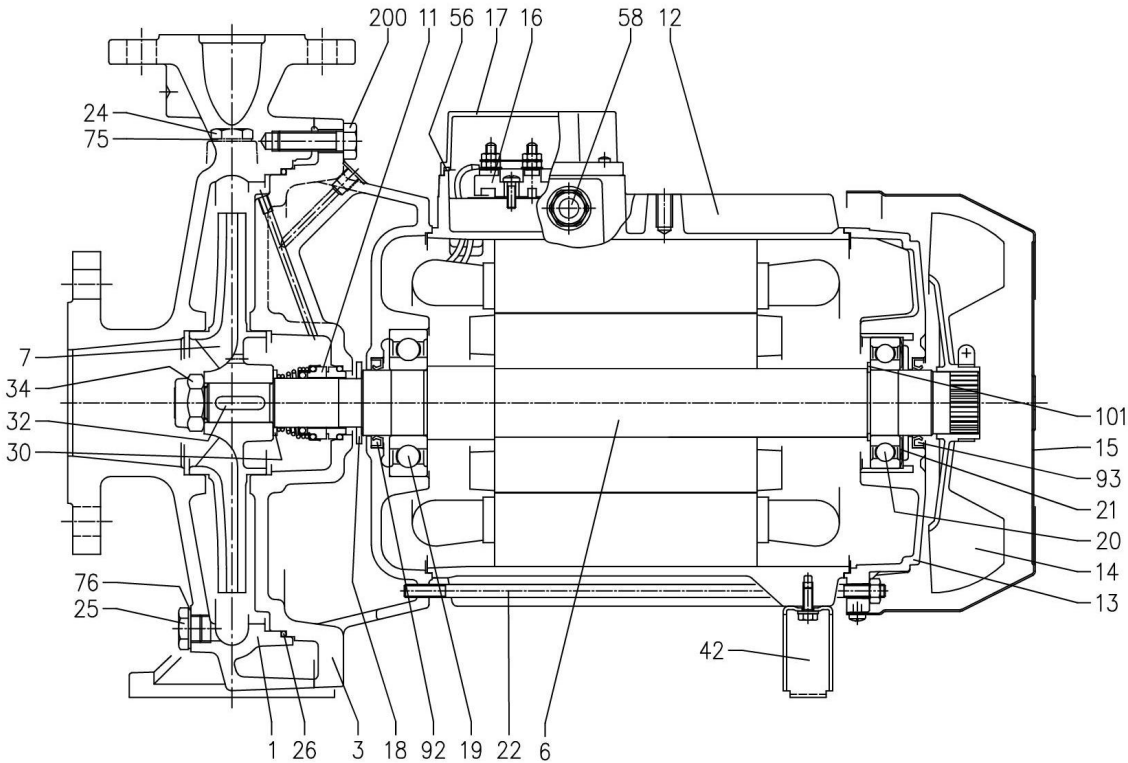
| Dimensions in mm |     |     |           |       |  |  |  |
|------------------|-----|-----|-----------|-------|--|--|--|
| 1                | A1  | 104 | M         | 100   |  |  |  |
| 2                | A2  | 124 | M1        | 50    |  |  |  |
| 3                | B   | 514 | N1        | 190   |  |  |  |
| 4                | C   | 253 | N2        | 240   |  |  |  |
| 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   | 292 | V2        | PG 16 |  |  |  |
| 11               | H1  | 132 | W         | 70    |  |  |  |
| 12               | H2  | 160 | Weight kg | 47.5  |  |  |  |
| 13               | H3  | 141 |           |       |  |  |  |
| 14               | K1  | 145 |           |       |  |  |  |
| 15               | K2  | 125 |           |       |  |  |  |

(1/2)  
Construction

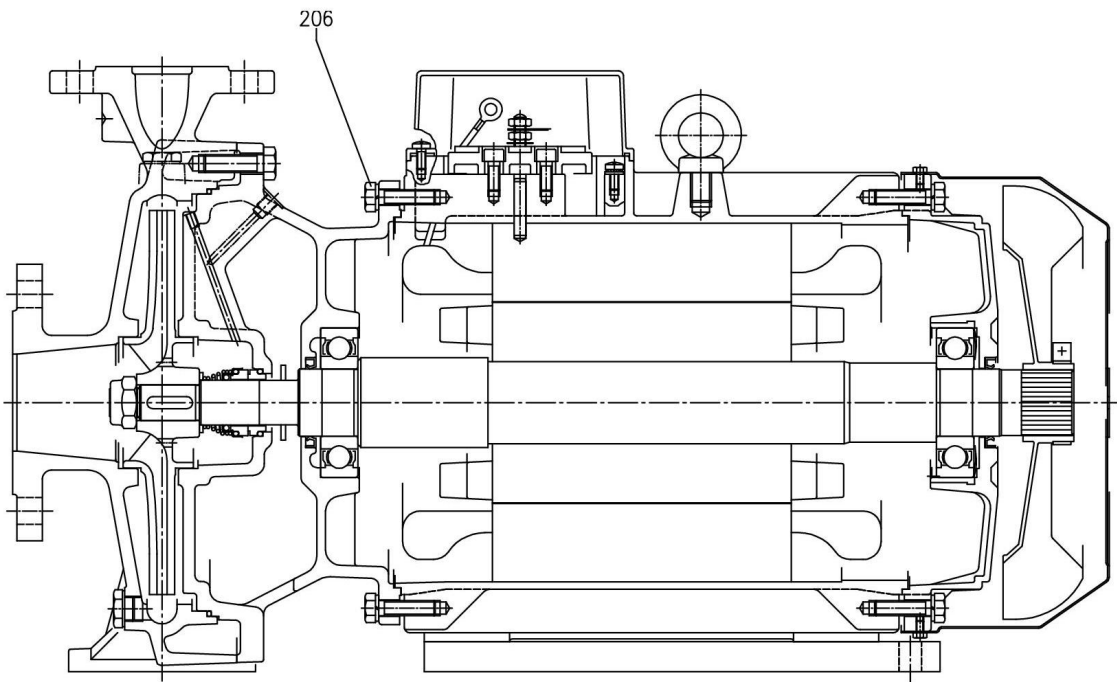
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UP TO 13 kW



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



(2/2)

## Construction

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| E-mail   | Project ID | Project redenumit 2024-07-02 22:34:28 | 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, Mdx-200<br>Md xx-250                                              | Cast iron EN-GJL-200-EN 1561                                  |                         | 1                   |
| 11  | Mechanical seal                   | Bronze                                                                                  |                                                               |                         | 1                   |
| 12  | Motor frame with stator           | Carbon/Ceramic/NBR                                                                      |                                                               |                         | 1                   |
| 13  | Motor cover                       | -                                                                                       |                                                               |                         | 1                   |
| 14  | Fan                               | Aluminium                                                                               |                                                               |                         | 1                   |
| 15  | Fan cover                         | PP                                                                                      |                                                               |                         | 1                   |
| 16  | Terminal box                      | Fe P04 Zincate                                                                          |                                                               |                         | 1                   |
| 17  | Terminal box cover                | -                                                                                       |                                                               |                         | 1                   |
| 18  | Splash ring                       | Up to 7.5 kW<br>9.2 kW and above                                                        | 40x21.5x3<br>50x29.5x3                                        | EPE DRAWING             | 1                   |
| 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                   |
| 24  | Screw                             | 15kW and above                                                                          | Zn. steel 8.8 strenght class ISO 898/1                        | UNI 5739                | 1                   |
| 25  | Priming plug                      | Brass                                                                                   |                                                               | EPE DRAWING             | 1                   |
| 26  | Drain plug                        | Brass                                                                                   |                                                               | EPE DRAWING             | 1                   |
| 26  | O-ring                            | Md xx-125<br>Md xx-160<br>Md xx-200<br>Md xx-250                                        | 147x3,53<br>176x3,53<br>220x3,53<br>277x3,53                  | EPE DRAWING             | 1                   |
| 30  | Spacer                            | AISI 304                                                                                | 22,5x26,9x2,5 (up to 7,5kW)<br>30,5x40x2,5 (9,2 kW and above) | EPE DRAWING             | 1                   |
| 32  | Key                               | AISI 316                                                                                | 6x6x25 (up to 7,5kW)<br>8x7x30 (9,2 kW and above)             | UNI 6604                | 1                   |
| 34  | Impeller nut                      | AISI 304                                                                                | M16x1,5 (up to 7,5kW)<br>M20x1,5 (9,2 kW and above)           | UNI 7474                | 1                   |
| 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<br>Screw for flange<br>Gasket                                                    | Zincate steel<br>AISI 304<br>EPDM                             | EPE DRAWING<br>UNI 5737 | 2<br>8<br>2         |
| 92  | Lip seal                          | Up to 3 kW<br>From 4 to 7,5 kW<br>From 9,2 to 13 kW and 65-160/15<br>From 15 to 22 kW   | 25x40x7<br>30x47x7<br>40x55x7<br>45x60x7                      | DIN 3760 without spring | 1                   |
| 93  | Lip seal                          | Up to 4 kW<br>From 5,5 to 7,5 kW<br>From 9,2 to 13 kW and 65-160/15<br>From 15 to 22 kW | 25x40x7<br>30x47x7<br>40x55x7<br>45x60x7                      | DIN 3760 without spring | 1                   |
| 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<br>Md xx-160<br>Md xx-200<br>Md xx-250                                        | M8x30<br>M10x35<br>M12x40                                     | UNI 5739                | 8<br>10<br>12<br>12 |
| 206 | Screw                             | From 15kW and above (no 65-160/15)                                                      | Zn. steel 8.8 strenght class ISO 898/1<br>M10x40              | UNI 5739                | 4                   |

[1] Only for single-phase

[2] Only for three-phase

\*On request