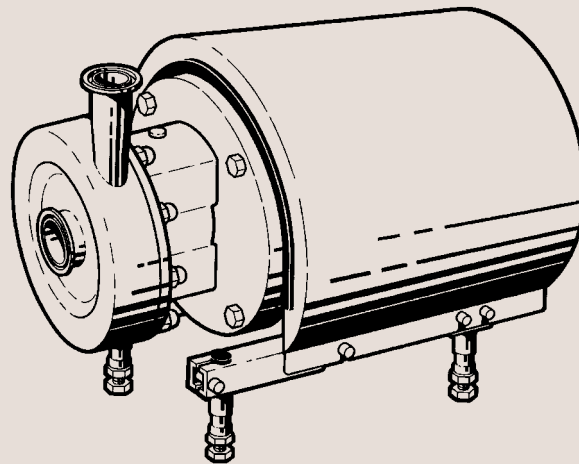




## Spare Parts

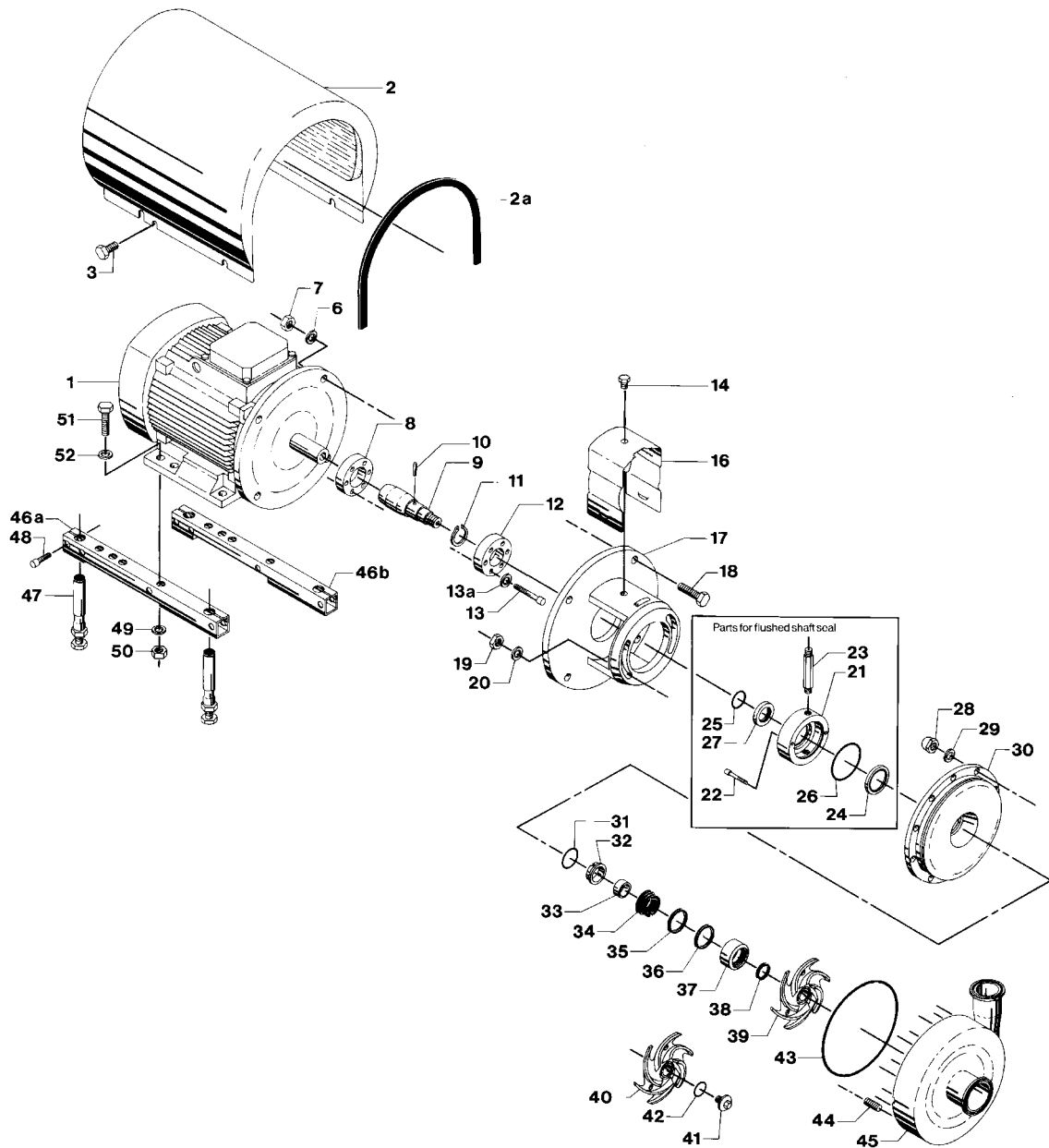
LKHP Pump for High Inlet Pressure



SP70796-GB4 2002-11

# Pump for High Inlet Pressure, Type LKHP-10 Single and Flushed Shaft Seal

2



## Pump for High Inlet Pressure, Type LKHP-10 Single and Flushed Shaft Seal

| Pos.                | Qty. | Denomination   | 1.5-2.2 kW   | 4 kW         |
|---------------------|------|--|--------------|--------------|
| 3                   | 4    | Screw .....  | 9611-99-3240 | 9611-99-3240 |
| 6                   | 4    | Washer for adaptor .....   | 9611-99-1887 | 9611-99-0676 |
| 7                   | 4    | Nut for adaptor .....  | 9611-99-0353 | 9611-99-0587 |
| 8                   | 1    | Compression ring with thread .....   | 9612-1336-01 | 9612-1336-02 |
| 9                   | 1    | Shaft with internal/external thread<br>and pin (pos.10) .....                          |              | 9612-1325-02 |
|                     | 1    | Shaft with internal/external thread,<br>pin (pos.10) and retaining ring (pos.11) ..... | 9612-1324-02 |              |
| 10                  | 1    | Connex pin .....   | 9611-99-0622 | 9611-99-0622 |
| 11                  | 1    | Retaining ring .....   | 9611-99-2307 |              |
| 12                  | 1    | Compression ring without thread .....  | 9612-1337-01 | 9612-1337-02 |
| 13                  | 6    | Screw .....  | 9611-99-3196 | 9611-99-3196 |
| 13a                 | 6    | Washer .....   | 9611-99-3199 | 9611-99-3199 |
| 14                  | 1    | Screw for safety guard .....   | 9611-99-3239 | 9611-99-3239 |
| 16                  | 1    | Safety guard .....   | 9612-1311-05 | 9612-1311-06 |
| 17                  | 1    | Adaptor .....  | 9612-3423-01 | 9612-3424-01 |
| 18                  | 4    | Screw for adaptor .....  | 9611-99-2161 | 9611-99-1834 |
| 19                  | 2    | Nut .....  | 9611-99-0353 | 9611-99-0353 |
| 20                  | 2    | Washer .....   | 9611-99-2559 | 9611-99-2559 |
| 28                  | 10   | Cap nut .....  | 9611-99-2592 | 9611-99-2592 |
| 29                  | 10   | Washer .....   | 9611-99-1888 | 9611-99-1888 |
| 30                  | 1    | Back plate .....   | 9612-4837-01 | 9612-4837-01 |
| 33                  | 1    | Spacing ring .....   | 9612-3625-02 | 9612-3625-02 |
| 37                  | 1    | Rotating seal housing .....  | 9612-3624-01 | 9612-3624-01 |
| 39                  | 1    | Impeller .....   | 9612-4081-07 | 9612-4081-01 |
| 43                  | 1    | Joint ring, EPDM, (standard) .....   | 9611-99-2137 | 9611-99-2137 |
|                     | 1    | Joint ring, NBR .....  | 9611-99-2139 | 9611-99-2139 |
|                     | 1    | Joint ring, FPM .....  | 9611-99-2138 | 9611-99-2138 |
| 44                  | 10   | Bolt .....   | 9611-99-2168 | 9611-99-2168 |
| 45                  | 1    | Pump casing, Flange .....  | 9612-4840-01 | 9612-4840-01 |
|                     | 1    | Pump casing, Clamp .....   | 9612-4840-06 | 9612-4840-06 |
| <b>Legs</b>         |      |  |              |              |
| 46a                 | 1    | Support bar, right .....   | 9612-1322-01 | 9612-1322-05 |
| 46b                 | 1    | Support bar, left .....  | 9612-1323-01 | 9612-1323-05 |
| 47                  | 4    | Leg .....  | 9612-3967-01 | 9612-3967-01 |
| 48                  | 4    | Screw (Period 9711-) .....   | 9611-99-1126 | 9611-99-1126 |
|                     | 4    | Screw (Period -9711) .....   | 9611-99-1907 | 9611-99-1907 |
| 49                  | 4    | Spring washer .....  | 9611-99-1888 | 9611-99-1887 |
| 50                  | 4    | Nut .....  | 9611-99-0360 | 9611-99-0353 |
| 51                  | 4    | Screw .....  | 9611-99-3241 | 9611-99-1911 |
| 52                  | 4    | Washer .....   |              | 9611-99-0786 |
| <b>Alternatives</b> |      |  |              |              |
| 40                  | 1    | Impeller for impeller screw .....  | 9612-4081-08 | 9612-4081-02 |
| 41                  | 1    | Impeller screw .....   | 9612-1396-01 | 9612-1396-01 |
| 42                  | 1    | O-ring, EPDM .....   | 9611-99-2145 | 9611-99-2145 |
|                     | 1    | O-ring, NBR .....  | 9611-99-2147 | 9611-99-2147 |
|                     | 1    | O-ring, FPM .....  | 9611-99-2146 | 9611-99-2146 |

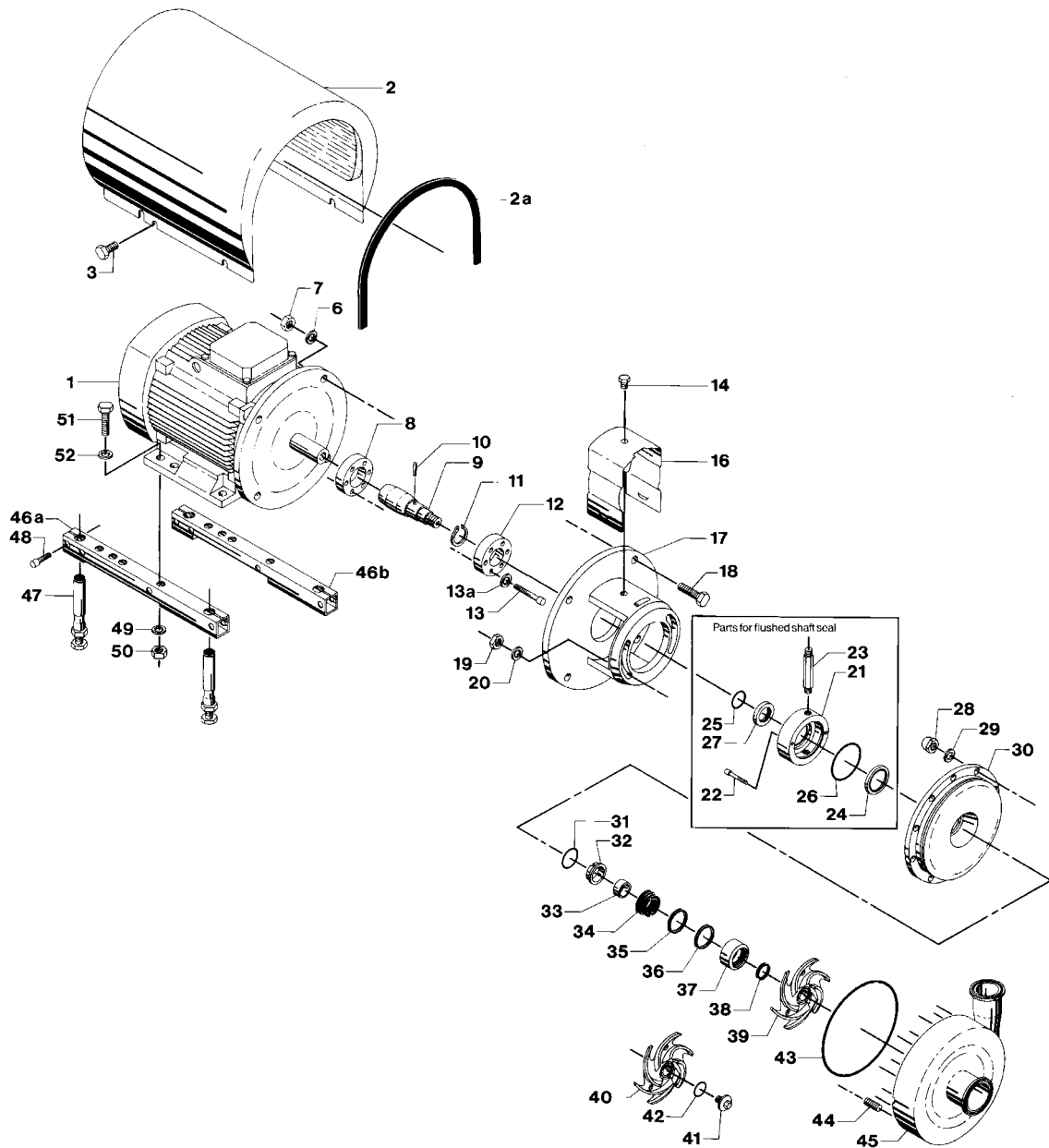
**Recommended Spare Parts: Service kits.**

900036/0

# Pump for High Inlet Pressure, Type LKHP-10 Single and Flushed Shaft Seal

(Same drawing as on page 2)

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# Pump for High Inlet Pressure, Type LKHP-10 Single and Flushed Shaft Seal

| Pos.  | Qty. | Denomination                       | 1.5-4 kW     | Pos.  | Qty. | Denomination       | 1.5-4 kW     |
|---|------|------------------------------------|--------------|---|------|--------------------|--------------|
| <b>Parts for flushed shaft seal</b>                       |      |                                    |              | ◆* Shaft seal complete, NBR ..... 9612-3622-11                      |      |                    |              |
| 21  | 1    | Seal housing for flushed seal .... | 9612-3626-02 | 24  | 1    | Lip seal .....     | 9611-99-2860 |
| 22  | 2    | Screw .....                        | 9611-99-4038 | 25  | 1    | O-ring, EPDM ..... | 9611-99-2754 |
| 23  | 2    | Tube .....                         | 9612-3589-01 | 26  | 1    | O-ring, EPDM ..... | 9611-99-2753 |
| 27  | 1    | Sleeve .....                       | 9612-3629-02 | 31  | 1    | O-ring .....       | 9611-99-2728 |
| <b>Single shaft seal</b>                                  |      |                                    |              | 32 1 Stationary seal ring, SiC. .... 9612-3633-01                   |      |                    |              |
| □○ Shaft seal complete, EPDM (Standard) .... 9612-3622-04 |      |                                    |              | 34 1 Rotating seal ring, SiC. .... 9612-3634-02                     |      |                    |              |
| 31  | 1    | O-ring .....                       | 9611-99-2727 | 34 1 Rotating seal ring, SiC. .... 9612-3634-02                     |      |                    |              |
| 32  | 1    | Stationary seal ring, SiC. ....    | 9612-3633-01 | 35 1 Quad ring .....  |      |                    |              |
| 34  | 1    | Rotating seal ring, SiC. ....      | 9612-3634-02 | 36 1 PTFE support ring .....  |      |                    |              |
| 35  | 1    | Quad ring .....                    | 9611-99-2730 | 38 1 Quad ring .....  |      |                    |              |
| 36  | 1    | PTFE support ring .....            | 9612-4571-01 | ◆* Shaft seal complete, FPM ..... 9612-3622-12                      |      |                    |              |
| 38  | 1    | Quad ring .....                    | 9611-99-2733 | 24  | 1    | Lip seal .....     | 9611-99-2860 |
| □○ Shaft seal complete, NBR ..... 9612-3622-05            |      |                                    |              | 25 1 O-ring, EPDM .....   |      |                    |              |
| 31  | 1    | O-ring .....                       | 9611-99-2728 | 26 1 O-ring, EPDM .....   |      |                    |              |
| 32  | 1    | Stationary seal ring, SiC. ....    | 9612-3633-01 | 31 1 O-ring .....   |      |                    |              |
| 34  | 1    | Rotating seal ring, SiC. ....      | 9612-3634-02 | 32 1 Stationary seal ring, SiC. ....                                |      |                    |              |
| 35  | 1    | Quad ring .....                    | 9611-99-2731 | 34 1 Rotating seal ring, SiC. ....                                  |      |                    |              |
| 36  | 1    | PTFE support ring .....            | 9612-4571-01 | 35 1 Quad ring .....  |      |                    |              |
| 38  | 1    | Quad ring .....                    | 9611-99-2734 | 36 1 PTFE support ring .....  |      |                    |              |
| □○ Shaft seal complete, FPM ..... 9612-3622-06            |      |                                    |              | 38 1 Quad ring .....  |      |                    |              |
| 31  | 1    | O-ring .....                       | 9611-99-2729 | <b>Service kit for single shaft seal</b>                            |      |                    |              |
| 32  | 1    | Stationary seal ring, SiC. ....    | 9612-3633-01 | □ <b>Service kit, EPDM. .... 9611-92-2139</b>                       |      |                    |              |
| 34  | 1    | Rotating seal ring, SiC. ....      | 9612-3634-02 | □ <b>Service kit, NBR. .... 9611-92-2140</b>                        |      |                    |              |
| 35  | 1    | Quad ring .....                    | 9611-99-2732 | □ <b>Service kit, FPM. .... 9611-92-2141</b>                        |      |                    |              |
| 36  | 1    | PTFE support ring .....            | 9612-4571-01 | <b>Service kit for single shaft seal and impeller screw</b>         |      |                    |              |
| 38  | 1    | Quad ring .....                    | 9611-99-2735 | ○ <b>Service kit, EPDM. .... 9611-92-2142</b>                       |      |                    |              |
| <b>Flushed shaft seal</b>                                 |      |                                    |              | ○ <b>Service kit, NBR. .... 9611-92-2143</b>                        |      |                    |              |
| ◆* Shaft seal complete, EPDM (Standard) .... 9612-3622-10 |      |                                    |              | ○ <b>Service kit, FPM. .... 9611-92-2144</b>                        |      |                    |              |
| 24  | 1    | Lip seal .....                     | 9611-99-2860 | <b>Service kit for flushed shaft seal</b>                           |      |                    |              |
| 25  | 1    | O-ring, EPDM .....                 | 9611-99-2754 | ◆ <b>Service kit, EPDM. .... 9611-92-2145</b>                       |      |                    |              |
| 26  | 1    | O-ring, EPDM .....                 | 9611-99-2753 | ◆ <b>Service kit, NBR. .... 9611-92-2146</b>                        |      |                    |              |
| 31  | 1    | O-ring .....                       | 9611-99-2727 | ◆ <b>Service kit, FPM. .... 9611-92-2147</b>                        |      |                    |              |
| 32  | 1    | Stationary seal ring, SiC. ....    | 9612-3633-01 | <b>Service kit for flushed shaft seal and impeller screw</b>        |      |                    |              |
| 34  | 1    | Rotating seal ring, SiC. ....      | 9612-3634-02 | * <b>Service kit, EPDM. .... 9611-92-2148</b>                       |      |                    |              |
| 35  | 1    | Quad ring .....                    | 9611-99-2730 | * <b>Service kit, NBR. .... 9611-92-2149</b>                        |      |                    |              |
| 36  | 1    | PTFE support ring .....            | 9612-4571-01 | * <b>Service kit, FPM. .... 9611-92-2150</b>                        |      |                    |              |
| 38  | 1    | Quad ring .....                    | 9611-99-2733 | Parts marked with □/○/◆/* are included in the <b>service kits</b> . |      |                    |              |
| <b>Conversion kit, single to flushed shaft seal</b>       |      |                                    |              | 9611-92-2177 = Pos. 21, 22, 23, 24, 25, 26 and 27.                  |      |                    |              |

| Pos. | Qty. | Denomination                   | 1.5 kW       | 2.2 kW       | 4 kW         |
|------|------|--------------------------------|--------------|--------------|--------------|
| 1    | 1    | *Motor 220/240 VD .....        | 9612-4189-01 | 9612-4189-03 | 9612-4189-07 |
|      | 1    | *Motor 380/420 VD .....        | 9612-4189-02 | 9612-4189-04 | 9612-4189-08 |
| 2    | 1    | Shroud .....                   | 9612-1390-01 | 9612-1390-01 | 9612-1390-03 |
| 2a   | 1    | Edge list (Included in pos. 2) |              |              |              |

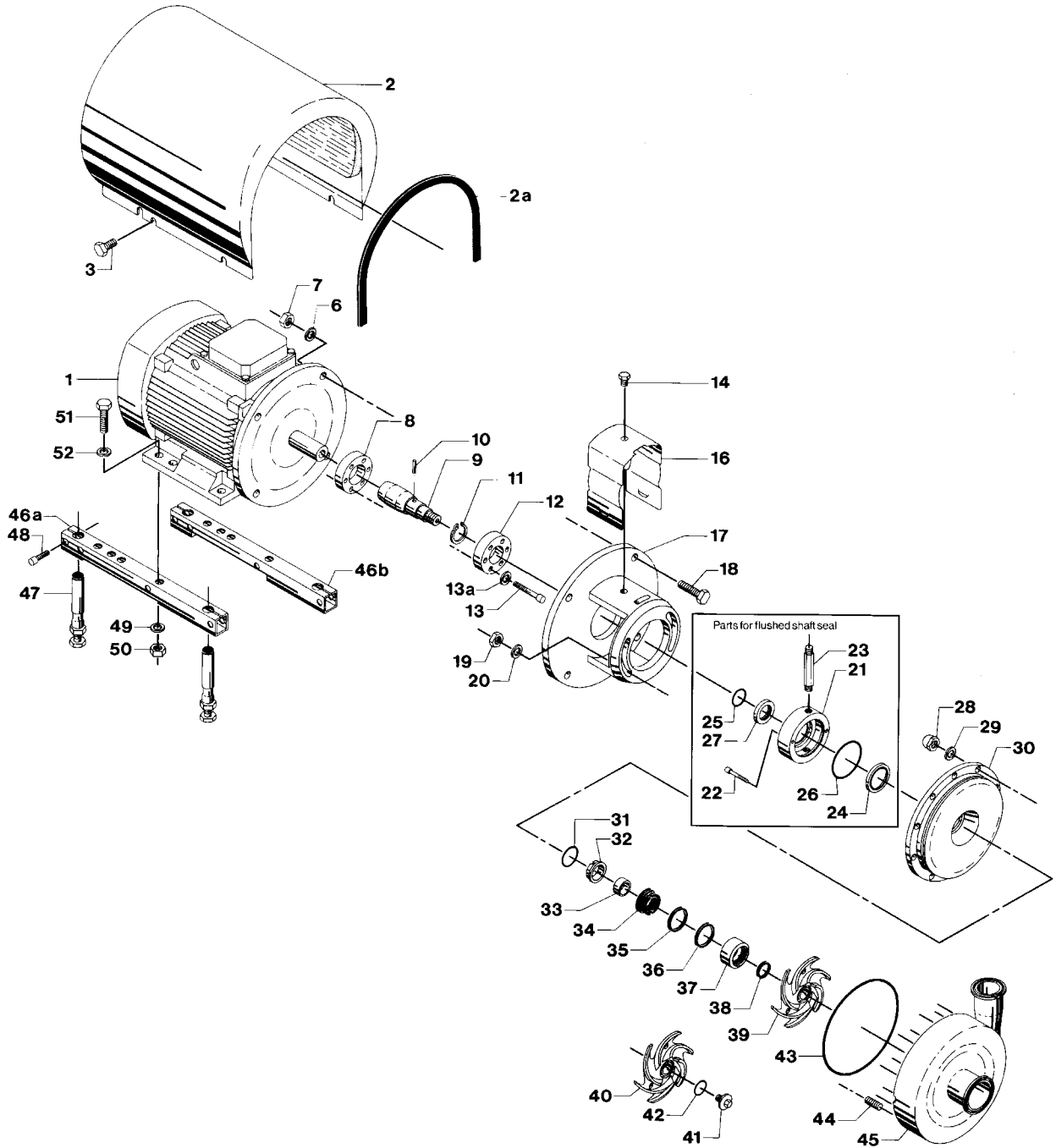
\*Motors are with special ball bearing.

## Surface roughness, product wetted parts: Ra ≤ 0.8 μm

| Pos.                | Qty. | Denomination                      | 1.5-2.2 kW   | 4 kW         |
|---------------------|------|-----------------------------------|--------------|--------------|
| 30                  | 1    | Back plate .....                  | 9612-4837-10 | 9612-4837-10 |
| 39                  | 1    | Impeller .....                    | 9612-4081-15 | 9612-4081-05 |
| 45                  | 1    | Pump casing, Flange .....         | 9612-4840-16 | 9612-4840-16 |
|                     | 1    | Pump casing, Clamp .....          | 9612-4840-21 | 9612-4840-21 |
| <b>Alternatives</b> |      |                                   |              |              |
| 40                  | 1    | Impeller for impeller screw ..... | 9612-4081-16 | 9612-4081-06 |
| 41                  | 1    | Impeller screw .....              | 9612-1396-03 | 9612-1396-03 |

# Pump for High Inlet Pressure, Type LKHP-15 Single and Flushed Shaft Seal

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## Pump for High Inlet Pressure, Type LKHP-15 Single and Flushed Shaft Seal

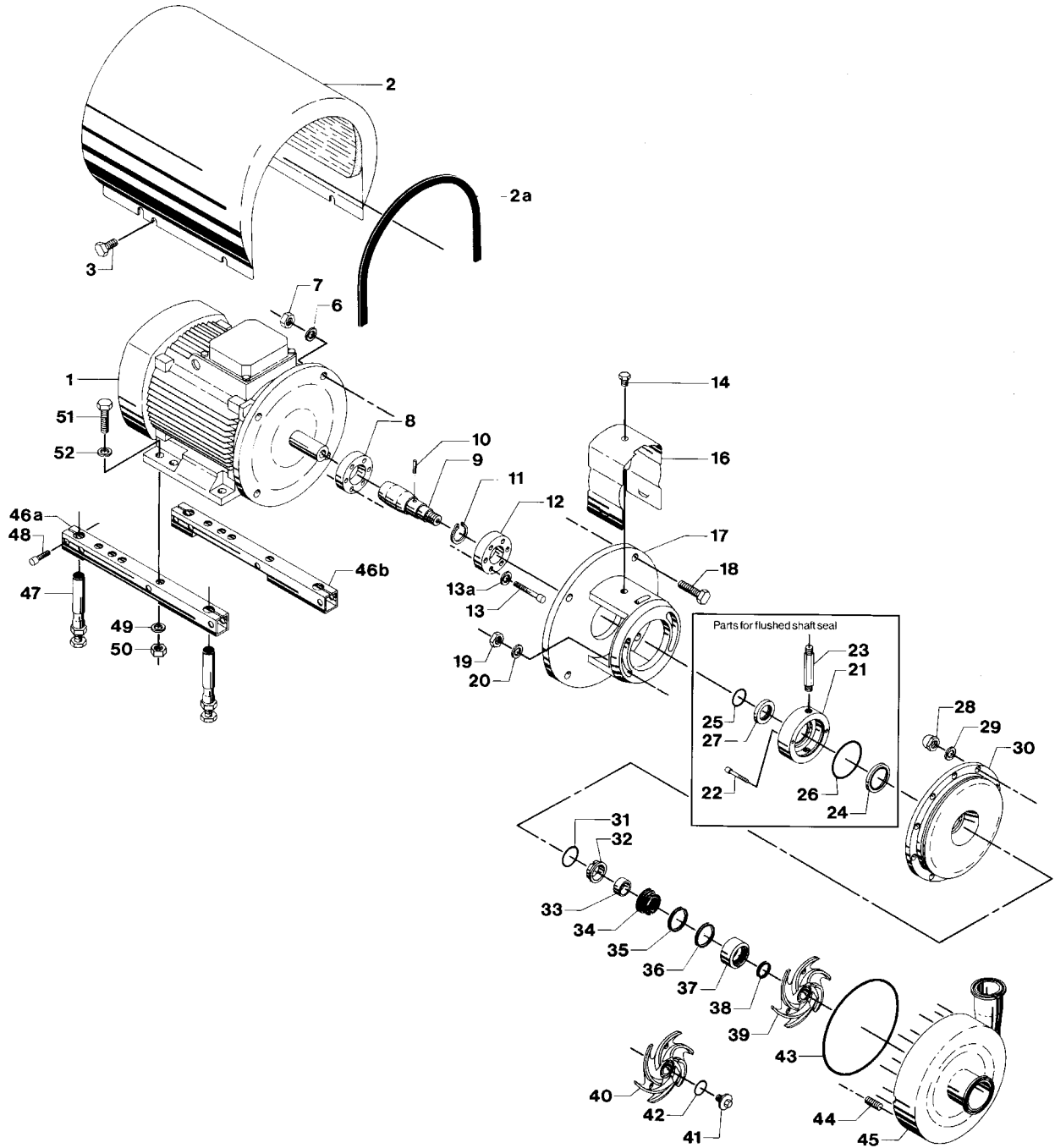
| Pos.                | Qty.   | Denomination   | 1.5-2.2 kW   | 4 kW         |
|---------------------|--------|--|--------------|--------------|
| 3                   | 4      | Screw .....  | 9611-99-3240 | 9611-99-3240 |
| 6                   | 4      | Washer for adaptor .....   | 9611-99-1887 | 9611-99-0676 |
| 7                   | 4      | Nut for adaptor .....  | 9611-99-0353 | 9611-99-0587 |
| 8                   | 1      | Compression ring with thread .....   | 9612-1336-01 | 9612-1336-02 |
| 9                   | 1      | Shaft with internal/external thread<br>and pin (pos.10) .....                          |              | 9612-1325-02 |
|                     | 1      | Shaft with internal/external thread,<br>pin (pos.10) and retaining ring (pos.11) ..... | 9612-1324-02 |              |
| 10                  | 1      | Connex pin .....   | 9611-99-0622 | 9611-99-0622 |
| 11                  | 1      | Retaining ring .....   | 9611-99-2307 |              |
| 12                  | 1      | Compression ring without thread .....  | 9612-1337-01 | 9612-1337-02 |
| 13                  | 6      | Screw .....  | 9611-99-3196 | 9611-99-3196 |
| 13a                 | 6      | Washer .....   | 9611-99-3199 | 9611-99-3199 |
| 14                  | 1      | Screw for safety guard .....   | 9611-99-3239 | 9611-99-3239 |
| 16                  | 1      | Safety guard .....   | 9612-1311-05 | 9612-1311-06 |
| 17                  | 1      | Adaptor .....  | 9612-3423-01 | 9612-3424-01 |
| 18                  | 4      | Screw for adaptor .....  | 9611-99-2161 | 9611-99-1834 |
| 19                  | 2      | Nut .....  | 9611-99-0353 | 9611-99-0353 |
| 20                  | 2      | Washer .....   | 9611-99-2559 | 9611-99-2559 |
| 28                  | 10     | Cap nut .....  | 9611-99-2592 | 9611-99-2592 |
| 29                  | 10     | Washer .....   | 9611-99-1888 | 9611-99-1888 |
| 30                  | 1      | Back plate .....   | 9612-4837-01 | 9612-4837-01 |
| 33                  | 1      | Spacing ring .....   | 9612-3625-02 | 9612-3625-02 |
| 37                  | 1      | Rotating seal housing .....  | 9612-3624-01 | 9612-3624-01 |
| 39                  | 1      | Impeller .....   | 9612-5102-07 | 9612-5102-01 |
| 43                  | □○◆★ 1 | Joint ring, EPDM, (standard) .....   | 9611-99-2137 | 9611-99-2137 |
|                     | 1      | Joint ring, NBR .....  | 9611-99-2139 | 9611-99-2139 |
|                     | 1      | Joint ring, FPM .....  | 9611-99-2138 | 9611-99-2138 |
| 44                  | 10     | Bolt .....   | 9611-99-2168 | 9611-99-2168 |
| 45                  | 1      | Pump casing, Flange .....  | 9612-5117-01 | 9612-5117-01 |
|                     | 1      | Pump casing, Clamp .....   | 9612-5117-05 | 9612-5117-05 |
| <b>Legs</b>         |        |  |              |              |
| 46a                 | 1      | Support bar, right .....   | 9612-1322-01 | 9612-1322-05 |
| 46b                 | 1      | Support bar, left .....  | 9612-1323-01 | 9612-1323-05 |
| 47                  | 4      | Leg .....  | 9612-3967-01 | 9612-3967-01 |
| 48                  | 4      | Screw (Period 9711-) .....   | 9611-99-1126 | 9611-99-1126 |
|                     | 4      | Screw (Period -9711) .....   | 9611-99-1907 | 9611-99-1907 |
| 49                  | 4      | Spring washer .....  | 9611-99-1888 | 9611-99-1887 |
| 50                  | 4      | Nut .....  | 9611-99-0360 | 9611-99-0353 |
| 51                  | 4      | Screw .....  | 9611-99-1176 | 9611-99-1911 |
| 52                  | 4      | Washer .....   | 9611-99-0786 | 9611-99-0786 |
| <b>Alternatives</b> |        |  |              |              |
| 40                  | 1      | Impeller for impeller screw .....  | 9612-5102-08 | 9612-5102-02 |
| 41                  | 1      | Impeller screw .....   | 9612-1396-01 | 9612-1396-01 |
| 42                  | ○★ 1   | O-ring, EPDM .....   | 9611-99-2145 | 9611-99-2145 |
|                     | 1      | O-ring, NBR .....  | 9611-99-2147 | 9611-99-2147 |
|                     | 1      | O-ring, FPM .....  | 9611-99-2146 | 9611-99-2146 |

**Recommended Spare Parts: Service kits.**

# Pump for High Inlet Pressure, Type LKHP-15 Single and Flushed Shaft Seal

(Same drawing as on page 6)

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# Pump for High Inlet Pressure, Type LKHP-15 Single and Flushed Shaft Seal

| Pos.   | Qty. | Denomination                         | 1.5-4 kW     | Pos.   | Qty. | Denomination               | 1.5-4 kW     |
|--|------|--------------------------------------|--------------|--|------|----------------------------|--------------|
| <b>Parts for flushed shaft seal</b>  |      |                                      |              |  |      |                            |              |
| 21   | 1    | Seal housing for flushed seal        | 9612-3626-02 | ◆*   | 1    | Shaft seal complete, NBR   | 9612-3622-11 |
| 22   | 2    | Screw                                | 9611-99-4038 | 24   | 1    | Lip seal                   | 9611-99-2860 |
| 23   | 2    | Tube                                 | 9612-3589-01 | 25   | 1    | O-ring, EPDM               | 9611-99-2754 |
| 27   | 1    | Sleeve                               | 9612-3629-02 | 26   | 1    | O-ring, EPDM               | 9611-99-2753 |
| <b>Single shaft seal</b>   |      |                                      |              |  |      |                            |              |
| □○   |      | Shaft seal complete, EPDM (Standard) | 9612-3622-04 | 31   | 1    | O-ring                     | 9611-99-2728 |
| 31   | 1    | O-ring                               | 9611-99-2727 | 32   | 1    | Stationary seal ring, SiC. | 9612-3633-01 |
| 32   | 1    | Stationary seal ring, SiC.           | 9612-3633-01 | 34   | 1    | Rotating seal ring, SiC.   | 9612-3634-02 |
| 34   | 1    | Rotating seal ring, SiC.             | 9612-3634-02 | 35   | 1    | Quad ring                  | 9611-99-2730 |
| 35   | 1    | Quad ring                            | 9611-99-2730 | 36   | 1    | PTFE support ring          | 9612-4571-01 |
| 36   | 1    | PTFE support ring                    | 9612-4571-01 | 38   | 1    | Quad ring                  | 9611-99-2734 |
| 38   | 1    | Quad ring                            | 9611-99-2733 | <b>◆*</b> Shaft seal complete, FPM ..... 9612-3622-12        |      |                            |              |
| □○   |      | Shaft seal complete, NBR             | 9612-3622-05 | 24   | 1    | Lip seal                   | 9611-99-2860 |
| 31   | 1    | O-ring                               | 9611-99-2728 | 25   | 1    | O-ring, EPDM               | 9611-99-2754 |
| 32   | 1    | Stationary seal ring, SiC.           | 9612-3633-01 | 26   | 1    | O-ring, EPDM               | 9611-99-2753 |
| 34   | 1    | Rotating seal ring, SiC.             | 9612-3634-02 | 31   | 1    | O-ring                     | 9611-99-2729 |
| 35   | 1    | Quad ring                            | 9611-99-2731 | 32   | 1    | Stationary seal ring, SiC. | 9612-3633-01 |
| 36   | 1    | PTFE support ring                    | 9612-4571-01 | 34   | 1    | Rotating seal ring, SiC.   | 9612-3634-02 |
| 38   | 1    | Quad ring                            | 9611-99-2734 | 35   | 1    | Quad ring                  | 9611-99-2732 |
| □○   |      | Shaft seal complete, FPM             | 9612-3622-06 | 36   | 1    | PTFE support ring          | 9612-4571-01 |
| 31   | 1    | O-ring                               | 9611-99-2729 | 38   | 1    | Quad ring                  | 9611-99-2735 |
| 32   | 1    | Stationary seal ring, SiC.           | 9612-3633-01 | <b>Service kit for single shaft seal</b>                     |      |                            |              |
| 34   | 1    | Rotating seal ring, SiC.             | 9612-3634-02 | □  |      | Service kit, EPDM          | 9611-92-2139 |
| 35   | 1    | Quad ring                            | 9611-99-2732 | □  |      | Service kit, NBR           | 9611-92-2140 |
| 36   | 1    | PTFE support ring                    | 9612-4571-01 | □  |      | Service kit, FPM           | 9611-92-2141 |
| 38   | 1    | Quad ring                            | 9611-99-2735 | <b>Service kit for single shaft seal and impeller screw</b>  |      |                            |              |
| <b>Flushed shaft seal</b>  |      |                                      |              |  |      |                            |              |
| ◆*   |      | Shaft seal complete, EPDM (Standard) | 9612-3622-10 | ○  |      | Service kit, EPDM          | 9611-92-2142 |
| 24   | 1    | Lip seal                             | 9611-99-2860 | ○  |      | Service kit, NBR           | 9611-92-2143 |
| 25   | 1    | O-ring, EPDM                         | 9611-99-2754 | ○  |      | Service kit, FPM           | 9611-92-2144 |
| 26   | 1    | O-ring, EPDM                         | 9611-99-2753 | <b>Service kit for flushed shaft seal</b>                    |      |                            |              |
| 31   | 1    | O-ring                               | 9611-99-2727 | ◆  |      | Service kit, EPDM          | 9611-92-2145 |
| 32   | 1    | Stationary seal ring, SiC.           | 9612-3633-01 | ◆  |      | Service kit, NBR           | 9611-92-2146 |
| 34   | 1    | Rotating seal ring, SiC.             | 9612-3634-02 | ◆  |      | Service kit, FPM           | 9611-92-2147 |
| 35   | 1    | Quad ring                            | 9611-99-2730 | <b>Service kit for flushed shaft seal and impeller screw</b> |      |                            |              |
| 36   | 1    | PTFE support ring                    | 9612-4571-01 | *  |      | Service kit, EPDM          | 9611-92-2148 |
| 38   | 1    | Quad ring                            | 9611-99-2733 | *  |      | Service kit, NBR           | 9611-92-2149 |
| Parts marked with □/○/◆/* are included in the service kits.  |      |                                      |              |  |      |                            |              |
| Conversion kit, single to flushed shaft seal<br>9611-92-2177 = Pos. 21, 22, 23, 24, 25, 26 and 27. |      |                                      |              |  |      |                            |              |

| Pos. | Qty. | Denomination                   | 1.5 kW       | 2.2 kW       | 4 kW         |
|------|------|--------------------------------|--------------|--------------|--------------|
| 1    | 1    | *Motor 220/240 VD              | 9612-4189-01 | 9612-4189-03 | 9612-4189-07 |
|      | 1    | *Motor 380/420 VD              | 9612-4189-02 | 9612-4189-04 | 9612-4189-08 |
| 2    | 1    | Shroud                         | 9612-1390-01 | 9612-1390-01 | 9612-1390-03 |
| 2a   | 1    | Edge list (Included in pos. 2) |              |              |              |

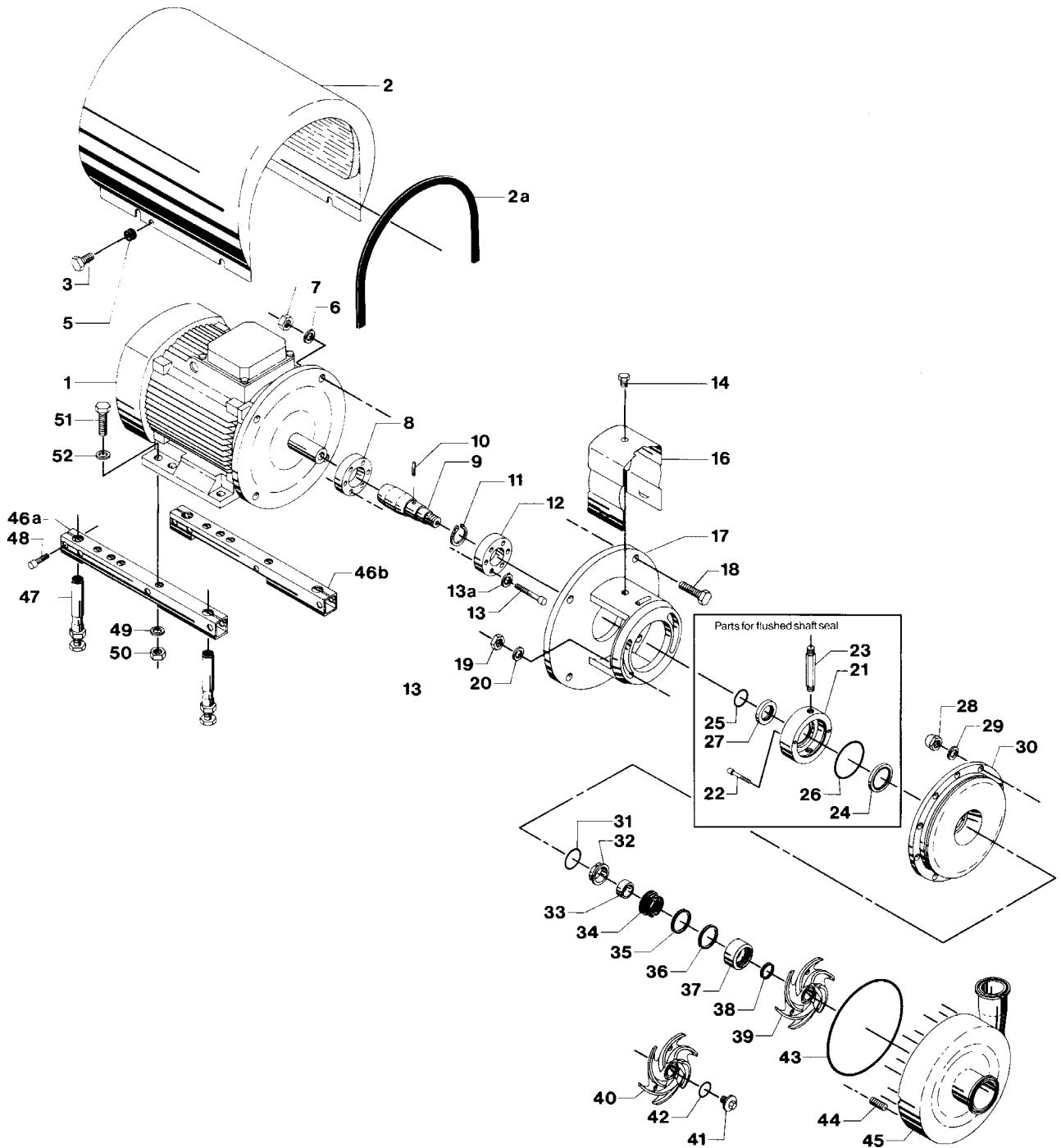
\*Motors are with special ball bearing.

## Surface roughness, product wetted parts: Ra ≤ 0.8 μm

| Pos.                | Qty. | Denomination                | 1.5-2.2 kW   | 4 kW         |
|---------------------|------|-----------------------------|--------------|--------------|
| 30                  | 1    | Back plate                  | 9612-4837-10 | 9612-4837-10 |
| 39                  | 1    | Impeller                    | 9612-5102-09 | 9612-5102-05 |
| 45                  | 1    | Pump casing, Flange         | 9612-5117-13 | 9612-5117-13 |
|                     | 1    | Pump casing, Clamp          | 9612-5117-17 | 9612-5117-17 |
| <b>Alternatives</b> |      |                             |              |              |
| 40                  | 1    | Impeller for impeller screw | 9612-5102-10 | 9612-5102-06 |
| 41                  | 1    | Impeller screw              | 9612-1396-03 | 9612-1396-03 |

# Pump for High Inlet Pressure, Type LKHP-20 Single and Flushed Shaft Seal

10



## Pump for High Inlet Pressure, Type LKHP-20 Single and Flushed Shaft Seal

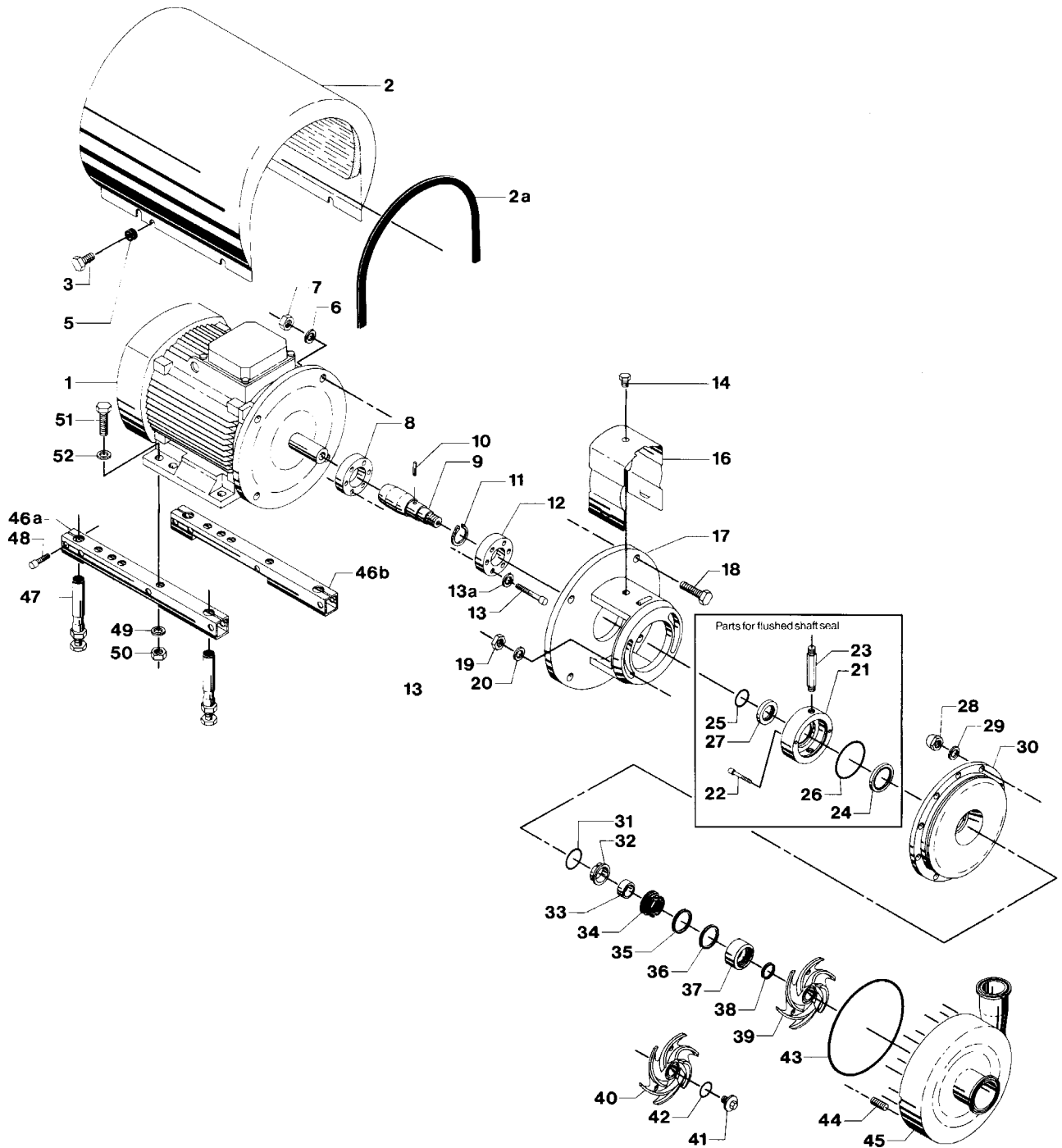
| Pos.                | Qty.      | Denomination   | 1.5-2.2 kW   | 4 kW         | 5.5-7.5 kW   |
|---------------------|-----------|--|--------------|--------------|--------------|
| 3                   | 4         | Screw .....  | 9611-99-3240 | 9611-99-3240 | 9611-99-3240 |
| 5                   | 4         | Distance sleeve .....  |              |              | 9611-99-2737 |
| 6                   | 4         | Washer for adaptor .....   | 9611-99-1887 | 9611-99-0676 | 9611-99-0676 |
| 7                   | 4         | Nut for adaptor .....  | 9611-99-0353 | 9611-99-0587 | 9611-99-0587 |
| 8                   | 1         | Compression ring with thread .....   | 9612-1336-01 | 9612-1336-02 | 9612-1336-05 |
| 9                   | 1         | Shaft with internal/external thread and pin<br>(pos.10) .....                          |              | 9612-1325-02 | 9612-1326-02 |
|                     | 1         | Shaft with internal/external thread, pin<br>(pos.10) and retaining ring (pos.11) ..... | 9612-1324-02 |              |              |
| 10                  | 1         | Connex pin .....   | 9611-99-0622 | 9611-99-0622 | 9611-99-0622 |
| 11                  | 1         | Retaining ring .....   | 9611-99-2307 |              |              |
| 12                  | 1         | Compression ring without thread .....  | 9612-1337-01 | 9612-1337-02 | 9612-1337-05 |
| 13                  | 6         | Screw .....  | 9611-99-3196 | 9611-99-3196 | 9611-99-3197 |
| 13a                 | 6         | Washer .....   | 9611-99-3199 | 9611-99-3199 | 9611-99-3199 |
| 14                  | 1         | Screw for safety guard .....   | 9611-99-3239 | 9611-99-3239 | 9611-99-3239 |
| 16                  | 1         | Safety guard .....   | 9612-1311-05 | 9612-1311-06 | 9612-1311-07 |
| 17                  | 1         | Adaptor .....  | 9612-3423-01 | 9612-3424-01 | 9612-3425-01 |
| 18                  | 4         | Screw for adaptor .....  | 9611-99-2161 | 9611-99-1834 | 9611-99-2162 |
| 19                  | 2         | Nut .....  | 9611-99-0353 | 9611-99-0353 | 9611-99-0353 |
| 20                  | 2         | Washer .....   | 9611-99-2559 | 9611-99-2559 | 9611-99-2559 |
| 28                  | 10        | Cap nut .....  | 9611-99-2592 | 9611-99-2592 | 9611-99-2592 |
| 29                  | 10        | Washer .....   | 9611-99-1888 | 9611-99-1888 | 9611-99-1888 |
| 30                  | 1         | Back plate .....   | 9612-4837-02 | 9612-4837-02 | 9612-4837-02 |
| 33                  | 1         | Spacing ring .....   | 9612-3625-02 | 9612-3625-02 | 9612-3625-02 |
| 37                  | 1         | Rotating seal housing .....  | 9612-3624-01 | 9612-3624-01 | 9612-3624-01 |
| 39                  | 1         | Impeller .....   | 9612-4082-07 | 9612-4082-01 | 9612-4082-01 |
| 43                  | □ ○ ◆ ★ 1 | Joint ring, EPDM (standard) .....  | 9611-99-2141 | 9611-99-2141 | 9611-99-2141 |
|                     | 1         | Joint ring, NBR .....  | 9611-99-2143 | 9611-99-2143 | 9611-99-2143 |
|                     | 1         | Joint ring, FPM .....  | 9611-99-2142 | 9611-99-2142 | 9611-99-2142 |
| 44                  | 10        | Bolt .....   | 9611-99-2168 | 9611-99-2168 | 9611-99-2168 |
| 45                  | 1         | Pump casing, Flange .....  | 9612-4840-02 | 9612-4840-02 | 9612-4840-02 |
|                     | 1         | Pump casing, Clamp .....   | 9612-4840-07 | 9612-4840-07 | 9612-4840-07 |
| <b>Legs</b>         |           |  |              |              |              |
| 46a                 | 1         | Support bar, right .....   | 9612-1322-01 | 9612-1322-05 | 9612-1322-06 |
| 46b                 | 1         | Support bar, left .....  | 9612-1323-01 | 9612-1323-05 | 9612-1323-06 |
| 47                  | 4         | Leg .....  | 9612-3967-01 | 9612-3967-01 | 9612-3967-01 |
| 48                  | 4         | Screw (Period 9711-) .....   | 9611-99-1126 | 9611-99-1126 | 9611-99-1126 |
|                     | 4         | Screw (Period -9711) .....   | 9611-99-1907 | 9611-99-1907 | 9611-99-1907 |
| 49                  | 4         | Spring washer .....  | 9611-99-1888 | 9611-99-1887 | 9611-99-1887 |
| 50                  | 4         | Nut .....  | 9611-99-0360 | 9611-99-0353 | 9611-99-0353 |
| 51                  | 4         | Screw .....  | 9611-99-1176 | 9611-99-1911 | 9611-99-1911 |
| 52                  | 4         | Washer .....   | 9611-99-0786 | 9611-99-0786 | 9611-99-0786 |
| <b>Alternatives</b> |           |  |              |              |              |
| 40                  | 1         | Impeller for impeller screw .....  | 9612-4082-08 | 9612-4082-02 | 9612-4082-02 |
| 41                  | 1         | Impeller screw .....   | 9612-1396-01 | 9612-1396-01 | 9612-1396-01 |
| 42                  | ○ ★ 1     | O-ring, EPDM .....   | 9611-99-2145 | 9611-99-2145 | 9611-99-2145 |
|                     | 1         | O-ring, NBR .....  | 9611-99-2147 | 9611-99-2147 | 9611-99-2147 |
|                     | 1         | O-ring, FPM .....  | 9611-99-2146 | 9611-99-2146 | 9611-99-2146 |

**Recommended Spare Parts: Service kits.**

# Pump for High Inlet Pressure, Type LKHP-20 Single and Flushed Shaft Seal

(Same drawing as on page 10)

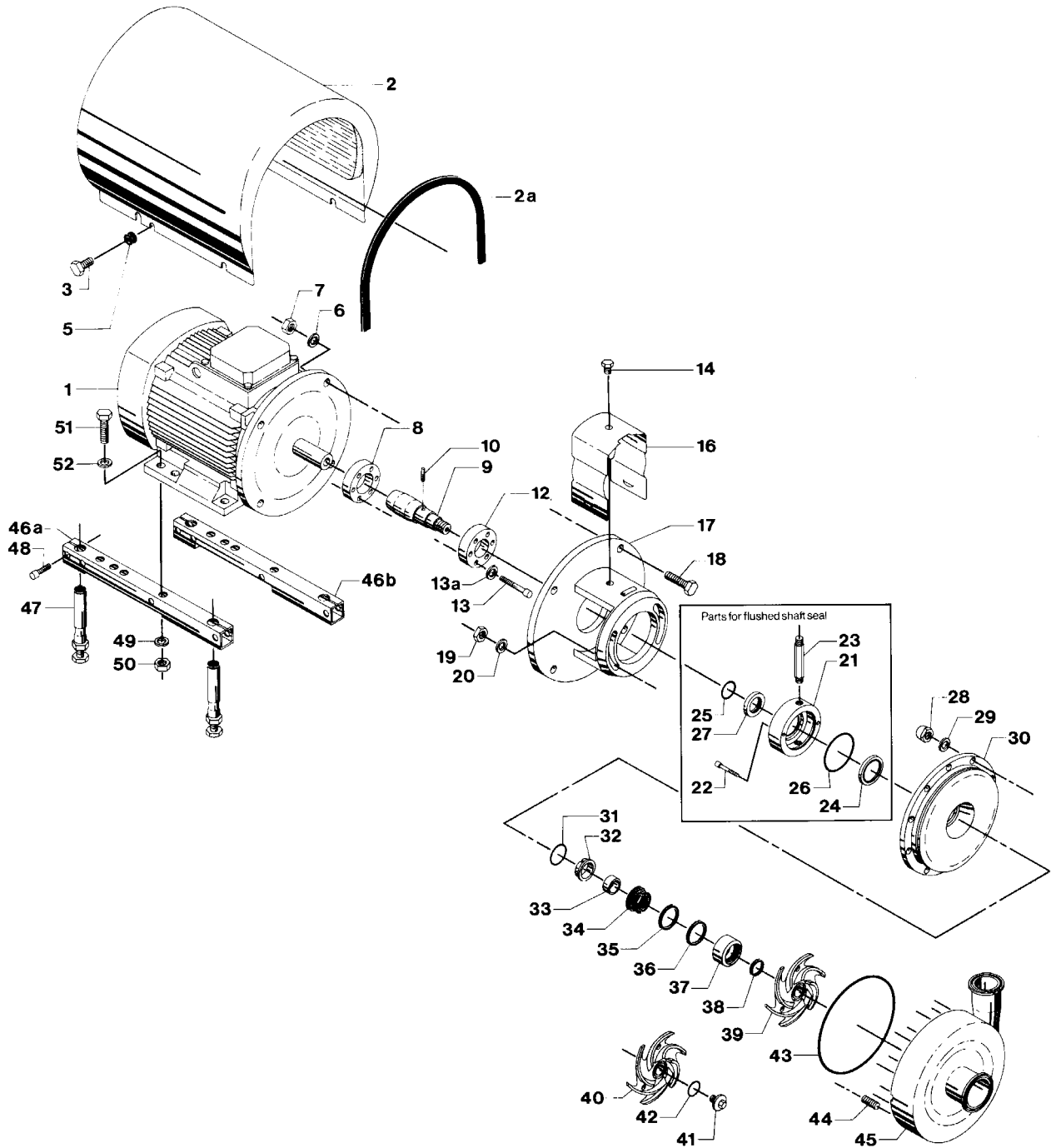
12





# Pump for High Inlet Pressure, Type LKHP-25 Single and Flushed Shaft Seal

14



# Pump for High Inlet Pressure, Type LKHP-25 Single and Flushed Shaft Seal

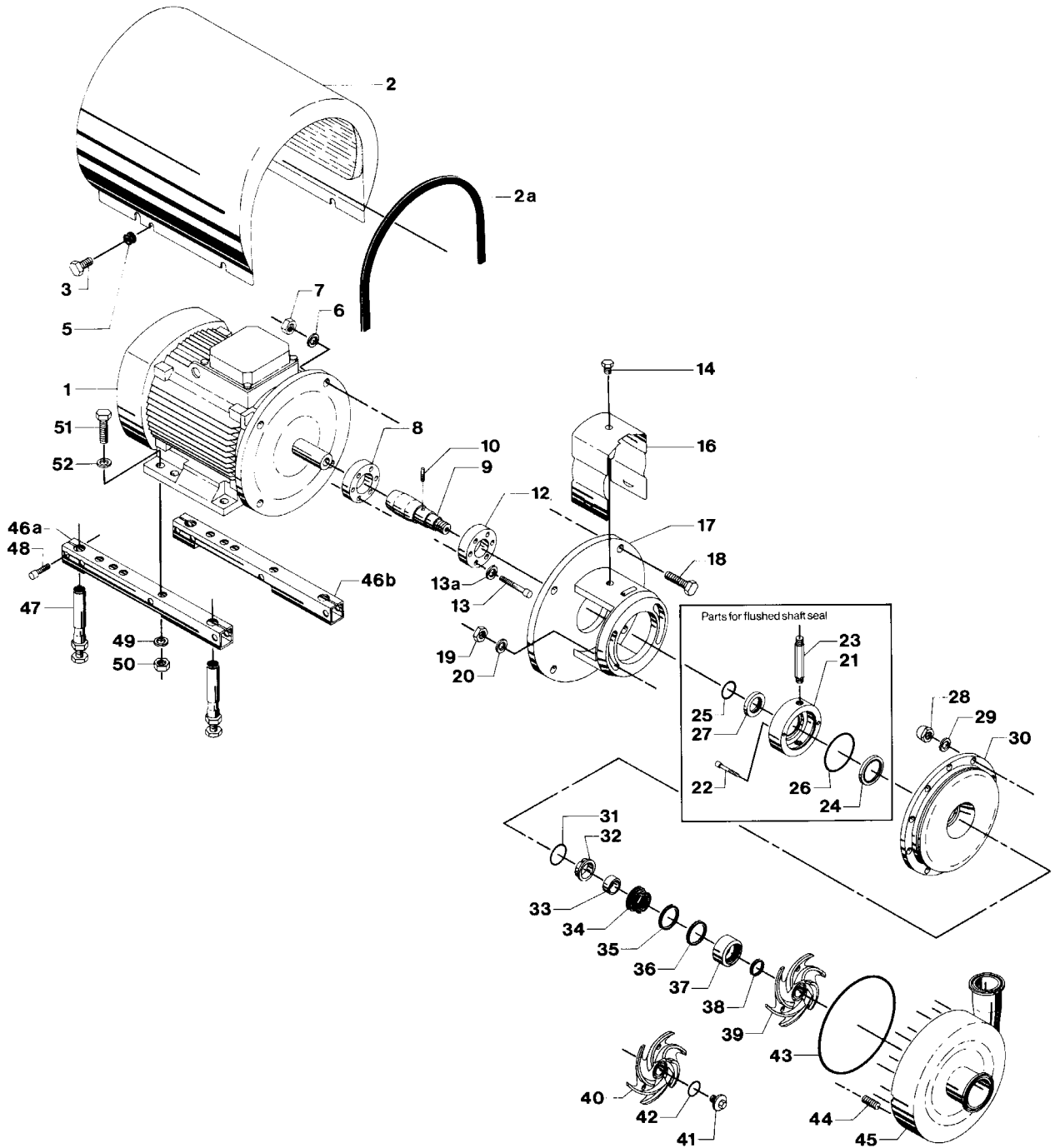
| Pos.                | Qty.      | Denomination  | 4 kW         | 5.5-7.5 kW   | 11-15 kW     |
|---------------------|-----------|---|--------------|--------------|--------------|
| 3                   | 4         | Screw .....   | 9611-99-3240 | 9611-99-3240 | 9611-99-3241 |
| 5                   | 4         | Distance sleeve .....   |              | 9611-99-2737 | 31438-0390-2 |
| 6                   | 4         | Washer for adaptor .....                                      | 9611-99-0676 | 9611-99-0676 | 9611-99-1886 |
| 7                   | 4         | Nut for adaptor .....   | 9611-99-0587 | 9611-99-0587 | 9611-99-2160 |
| 8                   | 1         | Compression ring with thread .....                            | 9612-1336-02 | 9612-1336-05 | 9612-1336-03 |
| 9                   | 1         | Shaft with internal/external thread and<br>pin (pos.10) ..... | 9612-1325-02 | 9612-1326-02 | 9612-1327-02 |
| 10                  | 1         | Connex pin .....  | 9611-99-0622 | 9611-99-0622 | 9611-99-0622 |
| 12                  | 1         | Compression ring without thread .....                         | 9612-1337-02 | 9612-1337-05 | 9612-1337-03 |
| 13                  | 6         | Screw .....   | 9611-99-3196 | 9611-99-3197 | 9611-99-3198 |
| 13a                 | 6         | Washer .....  | 9611-99-3199 | 9611-99-3199 | 9611-99-3199 |
| 14                  | 1         | Screw for safety guard .....                                  | 9611-99-3239 | 9611-99-3239 | 9611-99-3239 |
| 16                  | 1         | Safety guard .....  | 9612-1311-06 | 9612-1311-07 | 9612-1311-08 |
| 17                  | 1         | Adaptor .....   | 9612-3424-01 | 9612-3425-01 | 9612-3426-01 |
| 18                  | 4         | Screw for adaptor .....                                       | 9611-99-1834 | 9611-99-2162 | 9611-99-2163 |
| 19                  | 2         | Nut .....   | 9611-99-0353 | 9611-99-0353 | 9611-99-0353 |
| 20                  | 2         | Washer .....  | 9611-99-2559 | 9611-99-2559 | 9611-99-2559 |
| 28                  | 10        | Cap nut .....   | 9611-99-2593 | 9611-99-2593 | 9611-99-2593 |
| 29                  | 10        | Washer .....  | 9611-99-1887 | 9611-99-1887 | 9611-99-1887 |
| 30                  | 1         | Back plate .....  | 9612-4837-14 | 9612-4837-14 | 9612-4837-14 |
| 33                  | 1         | Spacing ring .....  | 9612-3625-02 | 9612-3625-02 | 9612-3625-02 |
| 37                  | 1         | Rotating seal housing .....                                   | 9612-3624-01 | 9612-3624-01 | 9612-3624-01 |
| 39                  | 1         | Impeller .....  | 9612-5103-07 | 9612-5103-07 | 9612-5103-01 |
| 43                  | □ ○ ◆ * 1 | Joint ring, EPDM (standard) .....                             | 9611-99-2983 | 9611-99-2983 | 9611-99-2983 |
|                     | 1         | Joint ring, NBR .....   | 9611-99-2984 | 9611-99-2984 | 9611-99-2984 |
|                     | 1         | Joint ring, FPM .....   | 9611-99-2985 | 9611-99-2985 | 9611-99-2985 |
| 44                  | 10        | Bolt .....  | 9611-99-2169 | 9611-99-2169 | 9611-99-2169 |
| 45                  | 1         | Pump casing, Flange .....                                     | 9612-5117-02 | 9612-5117-02 | 9612-5117-02 |
|                     | 1         | Pump casing, Clamp .....                                      | 9612-5117-06 | 9612-5117-06 | 9612-5117-06 |
| <b>Legs</b>         |           |   |              |              |              |
| 46a                 | 1         | Support bar, right .....                                      | 9612-1322-05 | 9612-1322-06 | 9612-1322-03 |
| 46b                 | 1         | Support bar, left .....                                       | 9612-1323-05 | 9612-1323-06 | 9612-1323-03 |
| 47                  | 4         | Leg .....   | 9612-3967-01 | 9612-3967-01 | 9612-3967-01 |
| 48                  | 4         | Screw (Period 9711-) .....                                    | 9611-99-1126 | 9611-99-1126 | 9611-99-1126 |
|                     | 4         | Screw (Period -9711) .....                                    | 9611-99-1907 | 9611-99-1907 | 9611-99-1907 |
| 49                  | 4         | Spring washer .....   | 9611-99-1887 | 9611-99-1887 | 9611-99-0676 |
| 50                  | 4         | Nut .....   | 9611-99-0353 | 9611-99-0353 | 9611-99-0587 |
| 51                  | 4         | Screw .....   | 9611-99-1911 | 9611-99-1911 | 9611-99-1834 |
| 52                  | 4         | Washer .....  | 9611-99-0786 | 9611-99-0786 | 9611-99-0706 |
| <b>Alternatives</b> |           |   |              |              |              |
| 40                  | 1         | Impeller for impeller screw .....                             | 9612-5103-08 | 9612-5103-08 | 9612-5103-02 |
| 41                  | 1         | Impeller screw .....  | 9612-1396-01 | 9612-1396-01 | 9612-1396-01 |
| 42                  | ○ * 1     | O-ring, EPDM .....  | 9611-99-2145 | 9611-99-2145 | 9611-99-2145 |
|                     | 1         | O-ring, NBR .....   | 9611-99-2147 | 9611-99-2147 | 9611-99-2147 |
|                     | 1         | O-ring, FPM .....   | 9611-99-2146 | 9611-99-2146 | 9611-99-2146 |

**Recommended Spare Parts: Service kits.**

# Pump for High Inlet Pressure, Type LKHP-25 Single and Flushed Shaft Seal

(Same drawing as on page 14)

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# Pump for High Inlet Pressure, Type LKHP-25 Single and Flushed Shaft Seal

| Pos.   | Qty. | Denomination                  | 4-15 kW      | Pos.  | Qty. | Denomination               | 4-15 kW      |
|--|------|-------------------------------|--------------|---|------|----------------------------|--------------|
| <b>Parts for flushed shaft seal</b>                    |      |                               |              | <b>◆ * Shaft seal complete, NBR</b> ..... 9612-3622-11              |      |                            |              |
| 21   | 1    | Seal housing for flushed seal | 9612-3626-02 | 24  | 1    | Lip seal                   | 9611-99-2860 |
| 22   | 2    | Screw                         | 9611-99-4038 | 25  | 1    | O-ring, EPDM               | 9611-99-2754 |
| 23   | 2    | Tube                          | 9612-3589-07 | 26  | 1    | O-ring, EPDM               | 9611-99-2753 |
| 27   | 1    | Sleeve                        | 9612-3629-02 | 31  | 1    | O-ring                     | 9611-99-2728 |
| <b>Single shaft seal</b>                               |      |                               |              | 32 1 Stationary seal ring, SiC. .... 9612-3633-01                   |      |                            |              |
| □○ Shaft seal complete, EPDM (Standard) . 9612-3622-04 |      |                               |              | 34 1 Rotating seal ring, SiC. .... 9612-3634-02                     |      |                            |              |
| 31   | 1    | O-ring                        | 9611-99-2727 | 35 1 Quad ring ..... 9611-99-2730                                   |      |                            |              |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 36 1 PTFE support ring ..... 9612-4571-01                           |      |                            |              |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | 38 1 Quad ring ..... 9611-99-2734                                   |      |                            |              |
| 35   | 1    | Quad ring                     | 9611-99-2730 | <b>◆ * Shaft seal complete, FPM</b> ..... 9612-3622-12              |      |                            |              |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | 24  | 1    | Lip seal                   | 9611-99-2860 |
| 38   | 1    | Quad ring                     | 9611-99-2733 | 25  | 1    | O-ring, EPDM               | 9611-99-2754 |
| □○ Shaft seal complete, NBR ..... 9612-3622-05         |      |                               |              | 26  | 1    | O-ring, EPDM               | 9611-99-2753 |
| 31   | 1    | O-ring                        | 9611-99-2728 | 31  | 1    | O-ring                     | 9611-99-2729 |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 32  | 1    | Stationary seal ring, SiC. | 9612-3633-01 |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | 34  | 1    | Rotating seal ring, SiC.   | 9612-3634-02 |
| 35   | 1    | Quad ring                     | 9611-99-2731 | 35  | 1    | Quad ring                  | 9611-99-2732 |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | 36  | 1    | PTFE support ring          | 9612-4571-01 |
| 38   | 1    | Quad ring                     | 9611-99-2734 | 38  | 1    | Quad ring                  | 9611-99-2735 |
| □○ Shaft seal complete, FPM ..... 9612-3622-06         |      |                               |              | <b>Service kit for single shaft seal</b>                            |      |                            |              |
| 31   | 1    | O-ring                        | 9611-99-2729 | □ <b>Service kit, EPDM</b> ..... 9611-92-2194                       |      |                            |              |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | □ <b>Service kit, NBR</b> ..... 9611-92-2195                        |      |                            |              |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | □ <b>Service kit, FPM</b> ..... 9611-92-2196                        |      |                            |              |
| 35   | 1    | Quad ring                     | 9611-99-2732 | <b>Service kit for single shaft seal and impeller screw</b>         |      |                            |              |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | ○ <b>Service kit, EPDM</b> ..... 9611-92-2197                       |      |                            |              |
| 38   | 1    | Quad ring                     | 9611-99-2735 | ○ <b>Service kit, NBR</b> ..... 9611-92-2198                        |      |                            |              |
| <b>Flushed shaft seal</b>                              |      |                               |              | ○ <b>Service kit, FPM</b> ..... 9611-92-2199                        |      |                            |              |
| ◆* Shaft seal complete, EPDM (Standard) . 9612-3622-10 |      |                               |              | <b>Service kit for flushed shaft seal</b>                           |      |                            |              |
| 24   | 1    | Lip seal                      | 9611-99-2860 | ◆ <b>Service kit, EPDM</b> ..... 9611-92-2200                       |      |                            |              |
| 25   | 1    | O-ring, EPDM                  | 9611-99-2754 | ◆ <b>Service kit, NBR</b> ..... 9611-92-2201                        |      |                            |              |
| 26   | 1    | O-ring, EPDM                  | 9611-99-2753 | ◆ <b>Service kit, FPM</b> ..... 9611-92-2202                        |      |                            |              |
| 31   | 1    | O-ring                        | 9611-99-2727 | <b>Service kit for flushed shaft seal and impeller screw</b>        |      |                            |              |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | * <b>Service kit, EPDM</b> ..... 9611-92-2203                       |      |                            |              |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | * <b>Service kit, NBR</b> ..... 9611-92-2204                        |      |                            |              |
| 35   | 1    | Quad ring                     | 9611-99-2730 | * <b>Service kit, FPM</b> ..... 9611-92-2205                        |      |                            |              |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | Parts marked with □/○/◆/* are included in the <b>service kits</b> . |      |                            |              |
| 38   | 1    | Quad ring                     | 9611-99-2733 | <b>Conversion kit, single to flushed shaft seal</b>                 |      |                            |              |
|  |      |                               |              | 9611-92-2177 = Pos. 21, 22, 23, 24, 25, 26 and 27.                  |      |                            |              |

| Pos. | Qty. | Denomination                  | 4 kW         | 5.5 kW       | 7.5 kW       | 11 kW        | 15 kW        |
|------|------|-------------------------------|--------------|--------------|--------------|--------------|--------------|
| 1    | 1    | *Motor 220/240 VD             | 9612-4189-07 | 9612-4189-09 | 9612-4189-11 | 9612-4189-13 | 9612-4189-15 |
|      | 1    | *Motor 380/420 VD             | 9612-4189-08 | 9612-4189-10 | 9612-4189-12 | 9612-4189-14 | 9612-4189-16 |
| 2    | 1    | Shroud                        | 9612-1390-03 | 9612-1390-08 | 9612-1390-08 | 9612-1390-05 | 9612-1390-05 |
| 2a   | 1    | Edge list (Included in pos 2) |              |              |              |              |              |

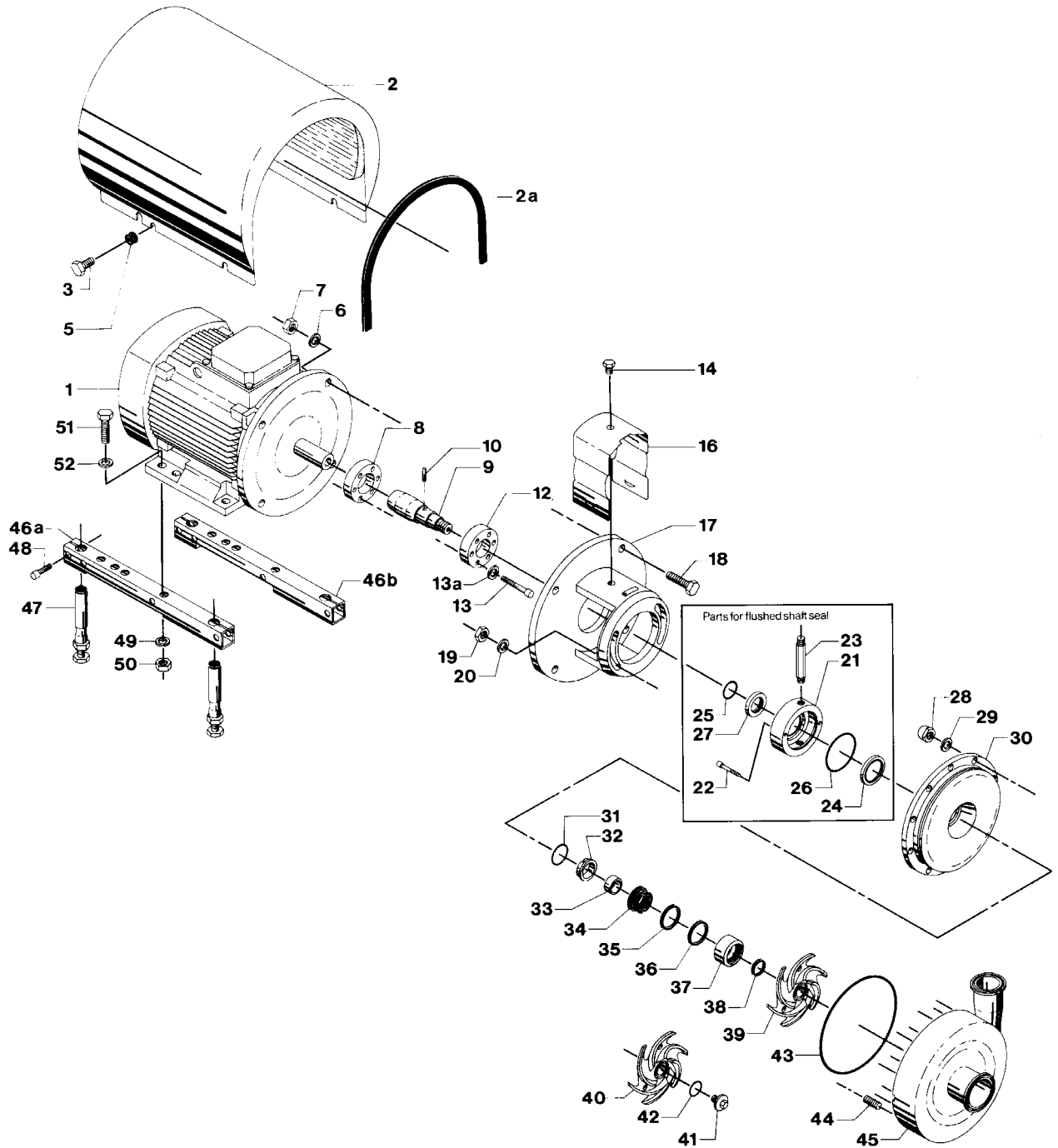
\* Motors are with special ball bearing.

## Surface roughness, product wetted parts: Ra ≤ 0.8 μm

| Pos.                | Qty. | Denomination                | 4 kW         | 5.5-7.5 kW   | 11-15 kW     |
|---------------------|------|-----------------------------|--------------|--------------|--------------|
| 30                  | 1    | Back plate                  | 9612-4837-16 | 9612-4837-16 | 9612-4837-16 |
| 39                  | 1    | Impeller                    | 9612-5103-09 | 9612-5103-09 | 9612-5103-05 |
| 45                  | 1    | Pump casing, Flange         | 9612-5117-14 | 9612-5117-14 | 9612-5117-14 |
|                     | 1    | Pump casing, Clamp          | 9612-5117-18 | 9612-5117-18 | 9612-5117-18 |
| <b>Alternatives</b> |      |                             |              |              |              |
| 40                  | 1    | Impeller for impeller screw | 9611-5103-10 | 9612-5103-10 | 9612-5103-06 |
| 41                  | 1    | Impeller screw              | 9612-1369-03 | 9612-1396-03 | 9612-1396-03 |

# Pump for High Inlet Pressure, Type LKHP-35 Single and Flushed Shaft Seal

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# Pump for High Inlet Pressure, Type LKHP-35 Single and Flushed Shaft Seal

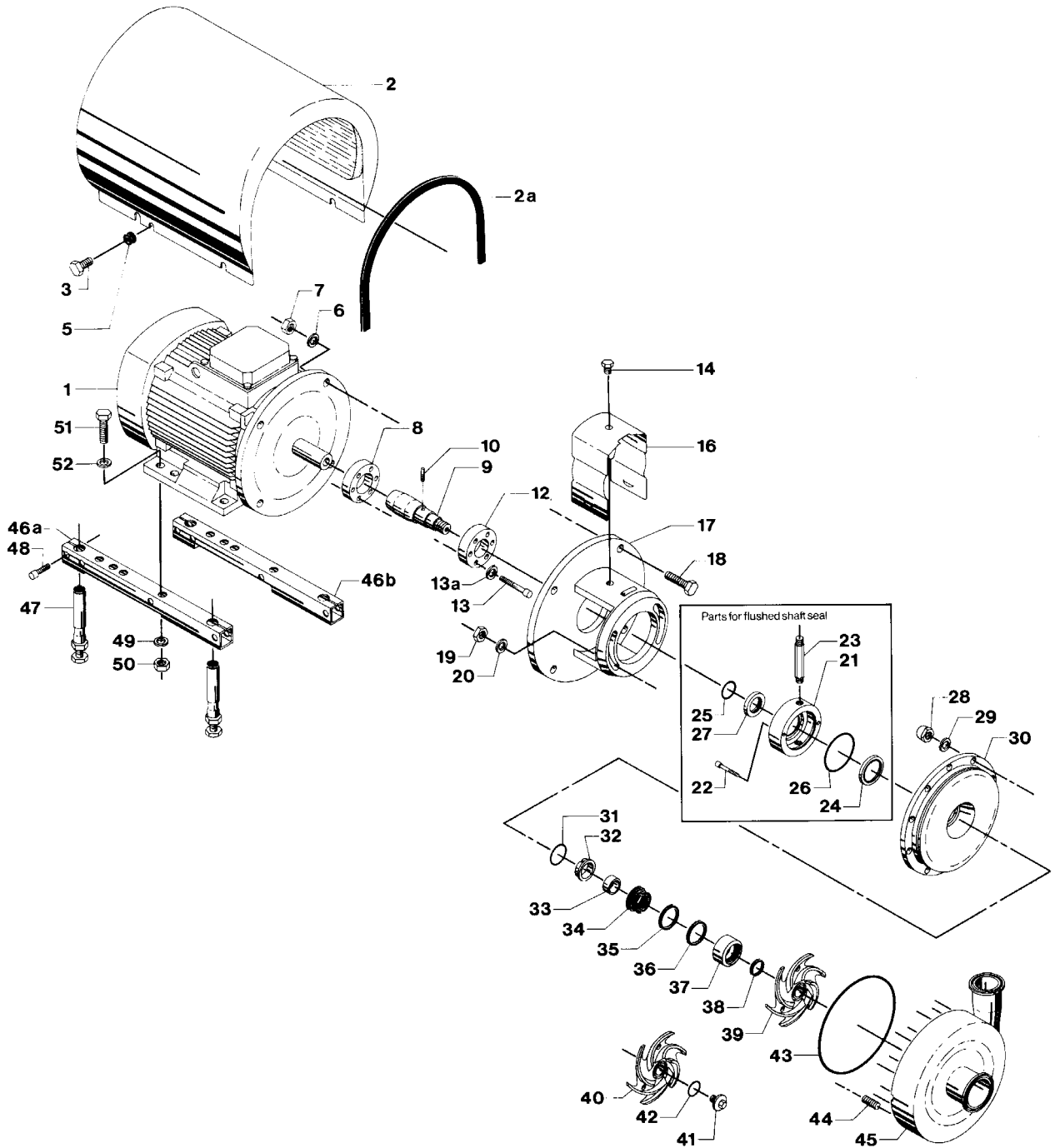
| Pos.                | Qty.      | Denomination  | 4 kW         | 5.5-7.5 kW   | 11-15 kW     |
|---------------------|-----------|---|--------------|--------------|--------------|
| 3                   | 4         | Screw .....   | 9611-99-3240 | 9611-99-3240 | 9611-99-3241 |
| 5                   | 4         | Distance sleeve .....   |              | 9611-99-2737 | 31438-0390-2 |
| 6                   | 4         | Washer for adaptor .....                                      | 9611-99-0676 | 9611-99-0676 | 9611-99-1886 |
| 7                   | 4         | Nut for adaptor .....   | 9611-99-0587 | 9611-99-0587 | 9611-99-2160 |
| 8                   | 1         | Compression ring with thread .....                            | 9612-1336-02 | 9612-1336-05 | 9612-1336-03 |
| 9                   | 1         | Shaft with internal/external thread and<br>pin (pos.10) ..... | 9612-1325-02 | 9612-1326-02 | 9612-1327-02 |
| 10                  | 1         | Connex pin .....  | 9611-99-0622 | 9611-99-0622 | 9611-99-0622 |
| 12                  | 1         | Compression ring without thread .....                         | 9612-1337-02 | 9612-1337-05 | 9612-1337-03 |
| 13                  | 6         | Screw .....   | 9611-99-3196 | 9611-99-3197 | 9611-99-3198 |
| 13a                 | 6         | Washer .....  | 9611-99-3199 | 9611-99-3199 | 9611-99-3199 |
| 14                  | 1         | Screw for safety guard .....                                  | 9611-99-3239 | 9611-99-3239 | 9611-99-3239 |
| 16                  | 1         | Safety guard .....  | 9612-1311-06 | 9612-1311-07 | 9612-1311-08 |
| 17                  | 1         | Adaptor .....   | 9612-3424-01 | 9612-3425-01 | 9612-3426-01 |
| 18                  | 4         | Screw for adaptor .....                                       | 9611-99-1834 | 9611-99-2162 | 9611-99-2163 |
| 19                  | 2         | Nut .....   | 9611-99-0353 | 9611-99-0353 | 9611-99-0353 |
| 20                  | 2         | Washer .....  | 9611-99-2559 | 9611-99-2559 | 9611-99-2559 |
| 28                  | 10        | Cap nut .....   | 9611-99-2593 | 9611-99-2593 | 9611-99-2593 |
| 29                  | 10        | Washer .....  | 9611-99-1887 | 9611-99-1887 | 9611-99-1887 |
| 30                  | 1         | Back plate .....  | 9612-4837-14 | 9612-4837-14 | 9612-4837-14 |
| 33                  | 1         | Spacing ring .....  | 9612-3625-02 | 9612-3625-02 | 9612-3625-02 |
| 37                  | 1         | Rotating seal housing .....                                   | 9612-3624-01 | 9612-3624-01 | 9612-3624-01 |
| 39                  | 1         | Impeller .....  | 9612-5104-07 | 9612-5104-07 | 9612-5104-01 |
| 43                  | □ ○ ◆ * 1 | Joint ring, EPDM (standard) .....                             | 9611-99-2983 | 9611-99-2983 | 9611-99-2983 |
|                     | 1         | Joint ring, NBR .....   | 9611-99-2984 | 9611-99-2984 | 9611-99-2984 |
|                     | 1         | Joint ring, FPM .....   | 9611-99-2985 | 9611-99-2985 | 9611-99-2985 |
| 44                  | 10        | Bolt .....  | 9611-99-2169 | 9611-99-2169 | 9611-99-2169 |
| 45                  | 1         | Pump casing, Flange .....                                     | 9612-5117-03 | 9612-5117-03 | 9612-5117-03 |
|                     | 1         | Pump casing, Clamp .....                                      | 9612-5117-07 | 9612-5117-07 | 9612-5117-07 |
| <b>Legs</b>         |           |   |              |              |              |
| 46a                 | 1         | Support bar, right .....                                      | 9612-1322-05 | 9612-1322-06 | 9612-1322-03 |
| 46b                 | 1         | Support bar, left .....                                       | 9612-1323-05 | 9612-1323-06 | 9612-1323-03 |
| 47                  | 4         | Leg .....   | 9612-3967-01 | 9612-3967-01 | 9612-3967-01 |
| 48                  | 4         | Screw (Period 9711-) .....                                    | 9611-99-1126 | 9611-99-1126 | 9611-99-1126 |
|                     | 4         | Screw (Period -9711) .....                                    | 9611-99-1907 | 9611-99-1907 | 9611-99-1907 |
| 49                  | 4         | Spring washer .....   | 9611-99-1887 | 9611-99-1887 | 9611-99-0676 |
| 50                  | 4         | Nut .....   | 9611-99-0353 | 9611-99-0353 | 9611-99-0587 |
| 51                  | 4         | Screw .....   | 9611-99-1911 | 9611-99-1911 | 9611-99-1834 |
| 52                  | 4         | Washer .....  | 9611-99-0786 | 9611-99-0786 | 9611-99-0706 |
| <b>Alternatives</b> |           |   |              |              |              |
| 40                  | 1         | Impeller for impeller screw .....                             | 9612-5104-08 | 9612-5104-08 | 9612-5104-02 |
| 41                  | 1         | Impeller screw .....  | 9612-1396-01 | 9612-1396-01 | 9612-1396-01 |
| 42                  | ○ * 1     | O-ring, EPDM .....  | 9611-99-2145 | 9611-99-2145 | 9611-99-2145 |
|                     | 1         | O-ring, NBR .....   | 9611-99-2147 | 9611-99-2147 | 9611-99-2147 |
|                     | 1         | O-ring, FPM .....   | 9611-99-2146 | 9611-99-2146 | 9611-99-2146 |

**Recommended Spare Parts: Service kits.**

# Pump for High Inlet Pressure, Type LKHP-35 Single and Flushed Shaft Seal

(Same drawing as on page 18)

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# Pump for High Inlet Pressure, Type LKHP-35 Single and Flushed Shaft Seal

| Pos.  | Qty. | Denomination                  | 4-15 kW      | Pos.  | Qty. | Denomination               | 4-15 kW      |
|---|------|-------------------------------|--------------|---|------|----------------------------|--------------|
| <b>Parts for flushed shaft seal</b>                       |      |                               |              | <b>◆* Shaft seal complete, NBR</b> ..... 9612-3622-11               |      |                            |              |
| 21  | 1    | Seal housing for flushed seal | 9612-3626-02 | 24  | 1    | Lip seal                   | 9611-99-2860 |
| 22  | 2    | Screw                         | 9611-99-4038 | 25  | 1    | O-ring, EPDM               | 9611-99-2754 |
| 23  | 2    | Tube                          | 9612-3589-07 | 26  | 1    | O-ring, EPDM               | 9611-99-2753 |
| 27  | 1    | Sleeve                        | 9612-3629-02 | 31  | 1    | O-ring                     | 9611-99-2728 |
| <b>Single shaft seal</b>                                  |      |                               |              | 32 1 Stationary seal ring, SiC. .... 9612-3633-01                   |      |                            |              |
| □○ Shaft seal complete, EPDM (Standard) . 9612-3622-04    |      |                               |              | 34 1 Rotating seal ring, SiC. .... 9612-3634-02                     |      |                            |              |
| 31  | 1    | O-ring                        | 9611-99-2727 | 35 1 Quad ring ..... 9611-99-2730                                   |      |                            |              |
| 32  | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 36 1 PTFE support ring ..... 9612-4571-01                           |      |                            |              |
| 34  | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | 38 1 Quad ring ..... 9611-99-2734                                   |      |                            |              |
| 35  | 1    | Quad ring                     | 9611-99-2730 | <b>◆* Shaft seal complete, FPM</b> ..... 9612-3622-12               |      |                            |              |
| 36  | 1    | PTFE support ring             | 9612-4571-01 | 24  | 1    | Lip seal                   | 9611-99-2860 |
| 38  | 1    | Quad ring                     | 9611-99-2733 | 25  | 1    | O-ring, EPDM               | 9611-99-2754 |
| □○ Shaft seal complete, NBR ..... 9612-3622-05            |      |                               |              | 26  | 1    | O-ring, EPDM               | 9611-99-2753 |
| 31  | 1    | O-ring                        | 9611-99-2728 | 31  | 1    | O-ring                     | 9611-99-2729 |
| 32  | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 32  | 1    | Stationary seal ring, SiC. | 9612-3633-01 |
| 34  | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | 34  | 1    | Rotating seal ring, SiC.   | 9612-3634-02 |
| 35  | 1    | Quad ring                     | 9611-99-2731 | 35  | 1    | Quad ring                  | 9611-99-2732 |
| 36  | 1    | PTFE support ring             | 9612-4571-01 | 36  | 1    | PTFE support ring          | 9612-4571-01 |
| 38  | 1    | Quad ring                     | 9611-99-2734 | 38  | 1    | Quad ring                  | 9611-99-2735 |
| □○ Shaft seal complete, FPM ..... 9612-3622-06            |      |                               |              | <b>Service kit for single shaft seal</b>                            |      |                            |              |
| 31  | 1    | O-ring                        | 9611-99-2729 | □ <b>Service kit, EPDM</b> ..... 9611-92-2194                       |      |                            |              |
| 32  | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | □ <b>Service kit, NBR</b> ..... 9611-92-2195                        |      |                            |              |
| 34  | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | □ <b>Service kit, FPM</b> ..... 9611-92-2196                        |      |                            |              |
| 35  | 1    | Quad ring                     | 9611-99-2732 | <b>Service kit for single shaft seal and impeller screw</b>         |      |                            |              |
| 36  | 1    | PTFE support ring             | 9612-4571-01 | ○ <b>Service kit, EPDM</b> ..... 9611-92-2197                       |      |                            |              |
| 38  | 1    | Quad ring                     | 9611-99-2735 | ○ <b>Service kit, NBR</b> ..... 9611-92-2198                        |      |                            |              |
| <b>Flushed shaft seal</b>                                 |      |                               |              | ○ <b>Service kit, FPM</b> ..... 9611-92-2199                        |      |                            |              |
| ◆* Shaft seal complete, EPDM (Standard) .... 9612-3622-10 |      |                               |              | <b>Service kit for flushed shaft seal</b>                           |      |                            |              |
| 24  | 1    | Lip seal                      | 9611-99-2860 | ◆ <b>Service kit, EPDM</b> ..... 9611-92-2200                       |      |                            |              |
| 25  | 1    | O-ring, EPDM                  | 9611-99-2754 | ◆ <b>Service kit, NBR</b> ..... 9611-92-2201                        |      |                            |              |
| 26  | 1    | O-ring, EPDM                  | 9611-99-2753 | ◆ <b>Service kit, FPM</b> ..... 9611-92-2202                        |      |                            |              |
| 31  | 1    | O-ring                        | 9611-99-2727 | <b>Service kit for flushed shaft seal and impeller screw</b>        |      |                            |              |
| 32  | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | * <b>Service kit, EPDM</b> ..... 9611-92-2203                       |      |                            |              |
| 34  | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | * <b>Service kit, NBR</b> ..... 9611-92-2204                        |      |                            |              |
| 35  | 1    | Quad ring                     | 9611-99-2730 | * <b>Service kit, FPM</b> ..... 9611-92-2205                        |      |                            |              |
| 36  | 1    | PTFE support ring             | 9612-4571-01 | Parts marked with □/○/◆/* are included in the <b>service kits</b> . |      |                            |              |
| 38  | 1    | Quad ring                     | 9611-99-2733 | <b>Conversion kit, single to flushed shaft seal</b>                 |      |                            |              |
|   |      |                               |              | 9611-92-2177 = Pos. 21, 22, 23, 24, 25, 26 and 27.                  |      |                            |              |

| Pos. | Qty. | Denomination                  | 4 kW         | 5.5 kW       | 7.5 kW       | 11 kW        | 15 kW        |
|------|------|-------------------------------|--------------|--------------|--------------|--------------|--------------|
| 1    | 1    | *Motor 220/240 VD             | 9612-4189-07 | 9612-4189-09 | 9612-4189-11 | 9612-4189-13 | 9612-4189-15 |
|      | 1    | *Motor 380/420 VD             | 9612-4189-08 | 9612-4189-10 | 9612-4189-12 | 9612-4189-14 | 9612-4189-16 |
| 2    | 1    | Shroud                        | 9612-1390-03 | 9612-1390-08 | 9612-1390-08 | 9612-1390-05 | 9612-1390-05 |
| 2a   | 1    | Edge list (Included in pos 2) |              |              |              |              |              |

\* Motors are with special ball bearing.

## Surface roughness, product wetted parts: Ra ≤ 0.8 μm

| Pos. | Qty. | Denomination        | 4 kW         | 5.5-7.5 kW   | 11-15 kW     |
|------|------|---------------------|--------------|--------------|--------------|
| 30   | 1    | Back plate          | 9612-4837-16 | 9612-4837-16 | 9612-4837-16 |
| 39   | 1    | Impeller            | 9612-5104-09 | 9612-5104-09 | 9612-5104-05 |
| 45   | 1    | Pump casing, Flange | 9612-5117-15 | 9612-5117-15 | 9612-5117-15 |
|      | 1    | Pump casing, Clamp  | 9612-5117-19 | 9612-5117-19 | 9612-5117-19 |

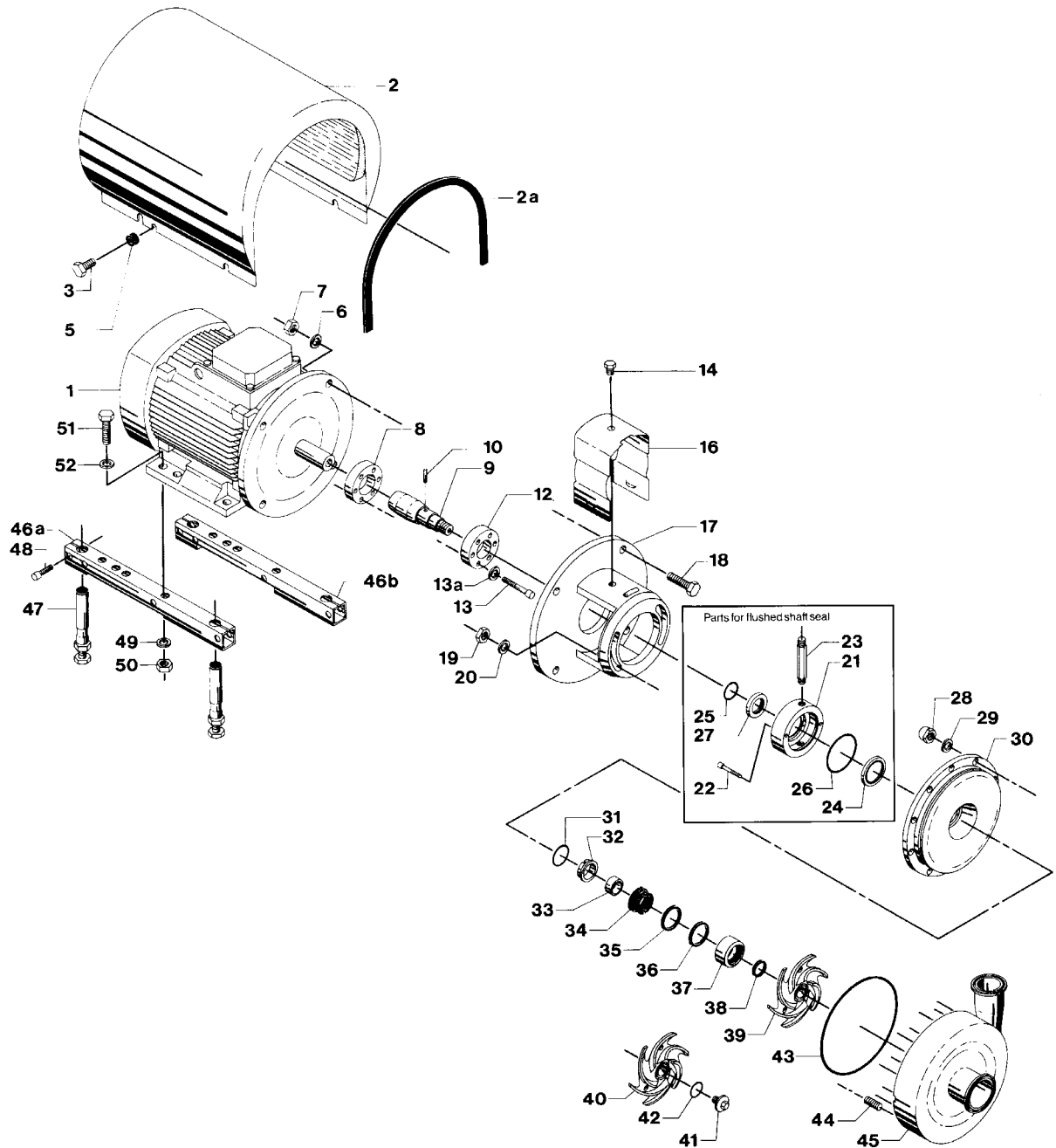
### Alternatives

|    |   |                             |              |              |              |
|----|---|-----------------------------|--------------|--------------|--------------|
| 40 | 1 | Impeller for impeller screw | 9611-5104-10 | 9612-5104-10 | 9612-5104-06 |
| 41 | 1 | Impeller screw              | 9612-1369-03 | 9612-1369-03 | 9612-1369-03 |

900040/0

# Pump for High Inlet Pressure, Type LKHP-40 Single and Flushed Shaft Seal

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## Pump for High Inlet Pressure, Type LKHP-40 Single and Flushed Shaft Seal

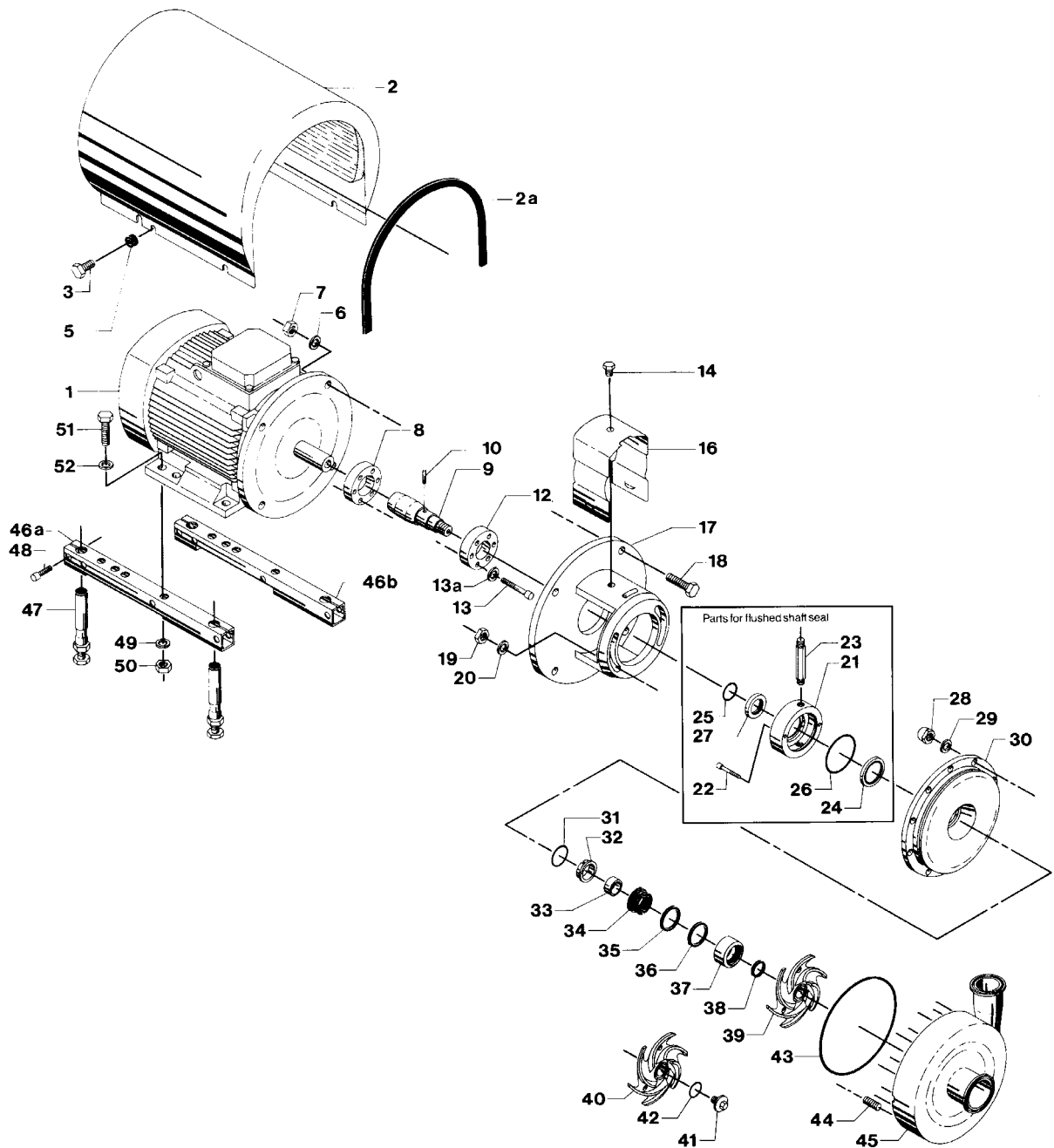
| Pos.                | Qty.   | Denomination   | 7.5 kW       | 11 kW        | 15-18.5 kW   | 22 kW        |
|---------------------|--------|--|--------------|--------------|--------------|--------------|
| 3                   | 4      | Screw .....  | 9611-99-3240 | 9611-99-3241 | 9611-99-3241 | 9611-99-3242 |
| 5                   | 4      | Distance sleeve .....  | 9611-99-2737 | 31438-0390-2 | 31438-0390-2 | 31438-0390-1 |
| 6                   | 4      | Washer for adaptor .....                                       | 9611-99-0676 | 9611-99-1886 | 9611-99-1886 | 9611-99-1886 |
| 7                   | 4      | Nut for adaptor .....  | 9611-99-0587 | 9611-99-2160 | 9611-99-2160 | 9611-99-2160 |
| 8                   | 1      | Compression ring with thread .....                             | 9612-1336-05 | 9612-1336-03 | 9612-1336-03 | 9612-1336-04 |
| 9                   | 1      | Shaft with internal/external thread<br>and pin (pos. 10) ..... | 9612-1326-02 | 9612-1327-02 | 9612-1327-02 | 9612-1328-02 |
| 10                  | 1      | Connex pin .....   | 9611-99-0622 | 9611-99-0622 | 9611-99-0622 | 9611-99-0622 |
| 12                  | 1      | Compression ring without thread ..                             | 9612-1337-05 | 9612-1337-03 | 9612-1337-03 | 9612-1337-04 |
| 13                  | 6      | Screw and pin (pos.8) .....                                    | 9611-99-3197 | 9611-99-3198 | 9611-99-3198 | 9611-99-3198 |
| 13a                 | 6      | Washer .....   | 9611-99-3199 | 9611-99-3199 | 9611-99-3199 | 9611-99-3199 |
| 14                  | 1      | Screw for safety guard .....                                   | 9611-99-3239 | 9611-99-3239 | 9611-99-3239 | 9611-99-3239 |
| 16                  | 1      | Safety guard .....   | 9612-1311-07 | 9612-1311-08 | 9612-1311-08 | 9612-1311-08 |
| 17                  | 1      | Adaptor .....  | 9612-3425-01 | 9612-3426-01 | 9612-3426-01 | 9612-3426-01 |
| 18                  | 4      | Screw for adaptor .....  | 9611-99-2162 | 9611-99-2163 | 9611-99-2163 | 9611-99-2164 |
| 19                  | 2      | Nut .....  | 9611-99-0353 | 9611-99-0353 | 9611-99-0353 | 9611-99-0353 |
| 20                  | 2      | Washer .....   | 9611-99-2559 | 9611-99-2559 | 9611-99-2559 | 9611-99-2559 |
| 28                  | 12     | Cap nut .....  | 9611-99-2593 | 9611-99-2593 | 9611-99-2593 | 9611-99-2593 |
| 29                  | 12     | Washer .....   | 9611-99-1887 | 9611-99-1887 | 9611-99-1887 | 9611-99-1887 |
| 30                  | 1      | Back plate .....   | 9612-4837-03 | 9612-4837-03 | 9612-4837-03 | 9612-4837-03 |
| 33                  | 1      | Spacing ring .....   | 9612-3625-02 | 9612-3625-02 | 9612-3625-02 | 9612-3625-02 |
| 37                  | 1      | Rotating seal housing .....                                    | 9612-3624-01 | 9612-3624-01 | 9612-3624-01 | 9612-3624-01 |
| 39                  | 1      | Impeller .....   | 9612-4084-07 | 9612-4084-07 | 9612-4084-01 | 9612-4084-01 |
| 43                  | □○◆* 1 | Joint ring, EPDM (standard) .....                              | 9611-99-2171 | 9611-99-2171 | 9611-99-2171 | 9611-99-2171 |
|                     | 1      | Joint ring, NBR .....  | 9611-99-2173 | 9611-99-2173 | 9611-99-2173 | 9611-99-2173 |
|                     | 1      | Joint ring, FPM .....  | 9611-99-2172 | 9611-99-2172 | 9611-99-2172 | 9611-99-2172 |
| 44                  | 12     | Bolt .....   | 9611-99-2169 | 9611-99-2169 | 9611-99-2169 | 9611-99-2169 |
| 45                  | 1      | Pump casing, Flange .....                                      | 9612-4840-03 | 9612-4840-03 | 9612-4840-03 | 9612-4840-03 |
|                     | 1      | Pump casing, Clamp .....                                       | 9612-4840-08 | 9612-4840-08 | 9612-4840-08 | 9612-4840-08 |
| <b>Legs</b>         |        |  |              |              |              |              |
| 46a                 | 1      | Support bar, right .....                                       | 9612-1322-06 | 9612-1322-03 | 9612-1322-03 | 9612-1322-04 |
| 46b                 | 1      | Support bar, left .....  | 9612-1323-06 | 9612-1323-03 | 9612-1323-03 | 9612-1323-04 |
| 47                  | 4      | Leg .....  | 9612-3967-01 | 9612-3967-01 | 9612-3967-01 | 9612-3967-01 |
| 48                  | 4      | Screw (Period 9711-) .....                                     | 9611-99-1126 | 9611-99-1126 | 9611-99-1126 | 9611-99-1126 |
|                     | 4      | Screw (Period -9711) .....                                     | 9611-99-1907 | 9611-99-1907 | 9611-99-1907 | 9611-99-1907 |
| 49                  | 4      | Spring washer .....  | 9611-99-1887 | 9611-99-0676 | 9611-99-0676 | 9611-99-0676 |
| 50                  | 4      | Nut .....  | 9611-99-0353 | 9611-99-0587 | 9611-99-0587 | 9611-99-0587 |
| 51                  | 4      | Screw .....  | 9611-99-1911 | 9611-99-1834 | 9611-99-1834 | 9611-99-1834 |
| 52                  | 4      | Washer .....   | 9611-99-0786 | 9611-99-0706 | 9611-99-0706 | 9611-99-0706 |
| <b>Alternatives</b> |        |  |              |              |              |              |
| 40                  | 1      | Impeller for impeller screw .....                              | 9612-4084-08 | 9612-4084-08 | 9612-4084-02 | 9612-4084-02 |
| 41                  | 1      | Impeller screw .....   | 9612-1396-01 | 9612-1396-01 | 9612-1396-01 | 9612-1396-01 |
| 42                  | ○* 1   | O-ring, EPDM .....   | 9611-99-2145 | 9611-99-2145 | 9611-99-2145 | 9611-99-2145 |
|                     | 1      | O-ring, NBR .....  | 9611-99-2147 | 9611-99-2147 | 9611-99-2147 | 9611-99-2147 |
|                     | 1      | O-ring, FPM .....  | 9611-99-2146 | 9611-99-2146 | 9611-99-2146 | 9611-99-2146 |

**Recommended Spare Parts: Service kits.**

# Pump for High Inlet Pressure, Type LKHP-40 Single and Flushed Shaft Seal

(Same drawing as on page 22)

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# Pump for High Inlet Pressure, Type LKHP-40 Single and Flushed Shaft Seal

| Pos.   | Qty. | Denomination                  | 7.5-22 kW    | Pos.  | Qty. | Denomination               | 7.5-22 kW    |
|--|------|-------------------------------|--------------|---|------|----------------------------|--------------|
| <b>Parts for flushed shaft seal</b>                    |      |                               |              | <b>◆* Shaft seal complete, NBR</b> ..... 9612-3622-11               |      |                            |              |
| 21   | 1    | Seal housing for flushed seal | 9612-3626-02 | 24  | 1    | Lip seal                   | 9611-99-2860 |
| 22   | 2    | Screw                         | 9611-99-4038 | 25  | 1    | O-ring, EPDM               | 9611-99-2754 |
| 23   | 2    | Tube                          | 9612-3589-07 | 26  | 1    | O-ring, EPDM               | 9611-99-2753 |
| 27   | 1    | Sleeve                        | 9612-3629-02 | 31  | 1    | O-ring                     | 9611-99-2728 |
| <b>Single shaft seal</b>                               |      |                               |              | 32 1 Stationary seal ring, SiC. .... 9612-3633-01                   |      |                            |              |
| □○ Shaft seal complete, EPDM (Standard) . 9612-3622-04 |      |                               |              | 34 1 Rotating seal ring, SiC. .... 9612-3634-02                     |      |                            |              |
| 31   | 1    | O-ring                        | 9611-99-2727 | 35  | 1    | Quad ring                  | 9611-99-2730 |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 36  | 1    | PTFE support ring          | 9612-4571-01 |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | 38  | 1    | Quad ring                  | 9611-99-2734 |
| 35   | 1    | Quad ring                     | 9611-99-2730 | <b>◆* Shaft seal complete, FPM</b> ..... 9612-3622-12               |      |                            |              |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | 24  | 1    | Lip seal                   | 9611-99-2860 |
| 38   | 1    | Quad ring                     | 9611-99-2733 | 25  | 1    | O-ring, EPDM               | 9611-99-2754 |
| □○ Shaft seal complete, NBR ..... 9612-3622-05         |      |                               |              | 26  | 1    | O-ring, EPDM               | 9611-99-2753 |
| 31   | 1    | O-ring                        | 9611-99-2728 | 31  | 1    | O-ring                     | 9611-99-2729 |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 32  | 1    | Stationary seal ring, SiC. | 9612-3633-01 |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | 34  | 1    | Rotating seal ring, SiC.   | 9612-3634-02 |
| 35   | 1    | Quad ring                     | 9611-99-2731 | 35  | 1    | Quad ring                  | 9611-99-2732 |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | 36  | 1    | PTFE support ring          | 9612-4571-01 |
| 38   | 1    | Quad ring                     | 9611-99-2734 | 38  | 1    | Quad ring                  | 9611-99-2735 |
| □○ Shaft seal complete, FPM ..... 9612-3622-06         |      |                               |              | <b>Service kit for single shaft seal</b>                            |      |                            |              |
| 31   | 1    | O-ring                        | 9611-99-2729 | □ <b>Service kit, EPDM</b> ..... 9611-92-2163                       |      |                            |              |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | □ <b>Service kit, NBR</b> ..... 9611-92-2164                        |      |                            |              |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | □ <b>Service kit, FPM</b> ..... 9611-92-2165                        |      |                            |              |
| 35   | 1    | Quad ring                     | 9611-99-2732 | <b>Service kit for single shaft seal and impeller screw</b>         |      |                            |              |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | ○ <b>Service kit, EPDM</b> ..... 9611-92-2166                       |      |                            |              |
| 38   | 1    | Quad ring                     | 9611-99-2735 | ○ <b>Service kit, NBR</b> ..... 9611-92-2167                        |      |                            |              |
| <b>Flushed shaft seal</b>                              |      |                               |              | ○ <b>Service kit, FPM</b> ..... 9611-92-2168                        |      |                            |              |
| ◆* Shaft seal complete, EPDM (Standard) . 9612-3622-10 |      |                               |              | <b>Service kit for flushed shaft seal</b>                           |      |                            |              |
| 24   | 1    | Lip seal                      | 9611-99-2860 | ◆ <b>Service kit, EPDM</b> ..... 9611-92-2169                       |      |                            |              |
| 25   | 1    | O-ring, EPDM                  | 9611-99-2754 | ◆ <b>Service kit, NBR</b> ..... 9611-92-2170                        |      |                            |              |
| 26   | 1    | O-ring, EPDM                  | 9611-99-2753 | ◆ <b>Service kit, FPM</b> ..... 9611-92-2171                        |      |                            |              |
| 31   | 1    | O-ring                        | 9611-99-2727 | <b>Service kit for flushed shaft seal and impeller screw</b>        |      |                            |              |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | * <b>Service kit, EPDM</b> ..... 9611-92-2172                       |      |                            |              |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | * <b>Service kit, NBR</b> ..... 9611-92-2173                        |      |                            |              |
| 35   | 1    | Quad ring                     | 9611-99-2730 | * <b>Service kit, FPM</b> ..... 9611-92-2174                        |      |                            |              |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | Parts marked with □/○/◆/* are included in the <b>service kits</b> . |      |                            |              |
| 38   | 1    | Quad ring                     | 9611-99-2733 | <b>Conversion kit, single to flushed shaft seal</b> 9611-92-2177    |      |                            |              |
| = Pos. 21, 22, 23, 24, 25, 26 and 27.                  |      |                               |              |   |      |                            |              |

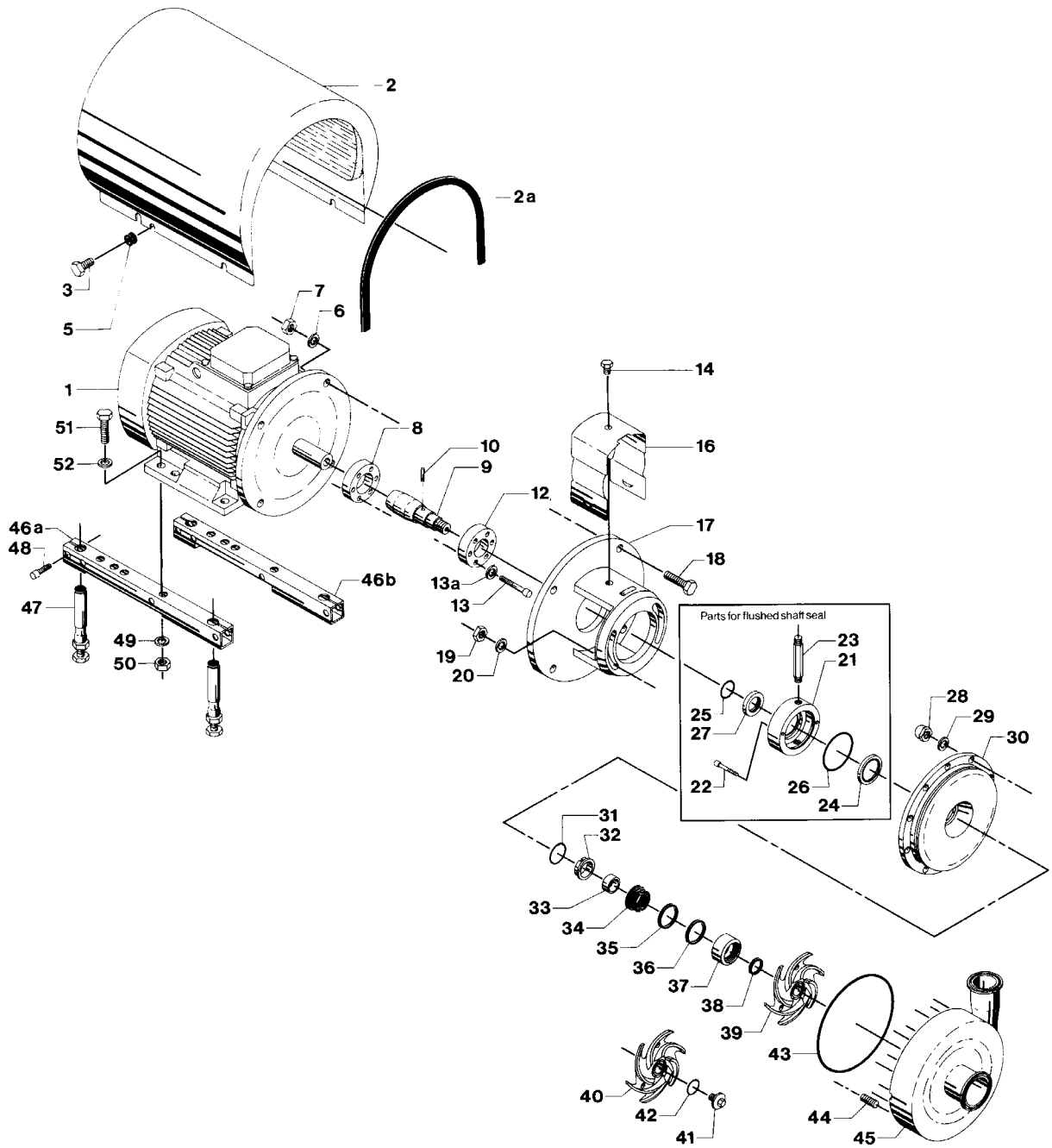
| Pos.                                    | Qty. | Denomination                  | 7.5 kW       | 11 kW        | 15 kW        | 18.5 kW      | 22 kW        |
|---|------|-------------------------------|--------------|--------------|--------------|--------------|--------------|
| 1                                       | 1    | *Motor 220/240 VD             | 9612-4189-11 | 9612-4189-13 | 9612-4189-15 | 9612-4189-17 | 9612-4189-19 |
|   | 1    | *Motor 380/420 VD             | 9612-4189-12 | 9612-4189-14 | 9612-4189-16 | 9612-4189-18 | 9612-4189-20 |
| 2                                       | 1    | Shroud                        | 9612-1390-08 | 9612-1390-05 | 9612-1390-05 | 9612-1390-05 | 9612-1390-06 |
| 2a                                      | 1    | Edge list (Included in pos 2) |              |              |              |              |              |
| * Motors are with special ball bearing. |      |                               |              |              |              |              |              |

## Surface roughness, product wetted parts: Ra ≤ 0.8 μm

| Pos.                | Qty. | Denomination                | 7.5 kW       | 11-18.5 kW   | 22 kW        |
|---------------------|------|-----------------------------|--------------|--------------|--------------|
| 30                  | 1    | Back plate                  | 9612-4837-12 | 9612-4837-12 | 9612-4837-12 |
| 39                  | 1    | Impeller                    | 9612-4084-09 | 9612-4084-09 | 9612-4084-05 |
| 45                  | 1    | Pump casing, Flange         | 9612-4840-18 | 9612-4840-18 | 9612-4840-18 |
|                     | 1    | Pump casing, Clamp          | 9612-4840-23 | 9612-4840-23 | 9612-4840-23 |
| <b>Alternatives</b> |      |                             |              |              |              |
| 40                  | 1    | Impeller for impeller screw | 9612-4084-10 | 9612-4084-10 | 9612-4084-06 |
| 41                  | 1    | Impeller screw              | 9612-1396-03 | 9612-1396-03 | 9612-1396-03 |

# Pump for High Inlet Pressure, Type LKHP-45 Single and Flushed Shaft Seal

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# Pump for High Inlet Pressure, Type LKHP-45 Single and Flushed Shaft Seal

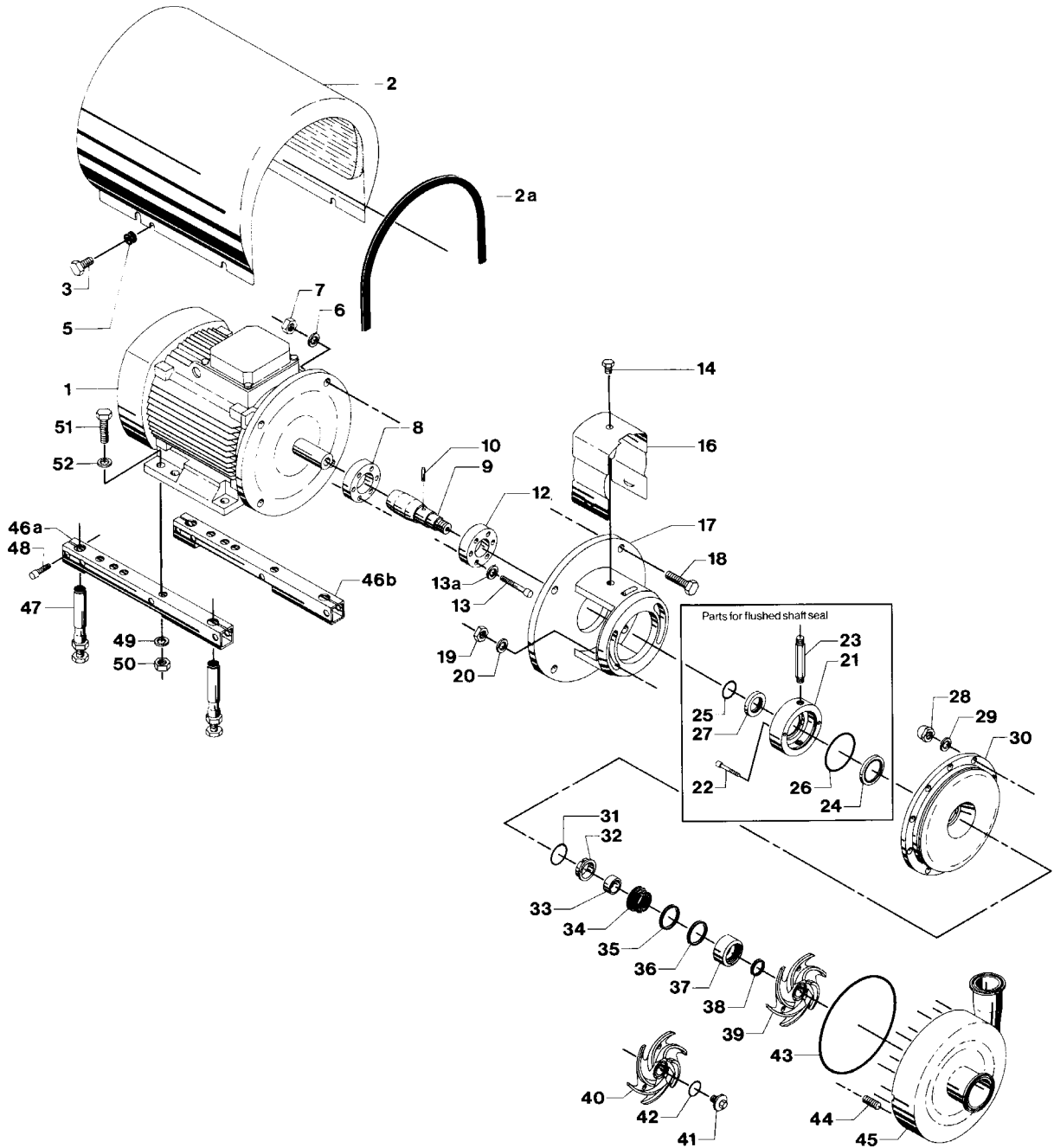
| Pos.                | Qty.      | Denomination  | 4 kW         | 5.5-7.5 kW   | 11-15 kW     |
|---------------------|-----------|---|--------------|--------------|--------------|
| 3                   | 4         | Screw .....   | 9611-99-3240 | 9611-99-3240 | 9611-99-3241 |
| 5                   | 4         | Distance sleeve .....   |              | 9611-99-2737 | 31438-0390-2 |
| 6                   | 4         | Washer for adaptor .....                                      | 9611-99-0676 | 9611-99-0676 | 9611-99-1886 |
| 7                   | 4         | Nut for adaptor .....   | 9611-99-0587 | 9611-99-0587 | 9611-99-2160 |
| 8                   | 1         | Compression ring with thread .....                            | 9612-1336-02 | 9612-1336-05 | 9612-1336-03 |
| 9                   | 1         | Shaft with internal/external thread and<br>pin (pos.10) ..... | 9612-1325-02 | 9612-1326-02 | 9612-1327-02 |
| 10                  | 1         | Connex pin .....  | 9611-99-0622 | 9611-99-0622 | 9611-99-0622 |
| 12                  | 1         | Compression ring without thread .....                         | 9612-1337-02 | 9612-1337-05 | 9612-1337-03 |
| 13                  | 6         | Screw .....   | 9611-99-3196 | 9611-99-3197 | 9611-99-3198 |
| 13a                 | 6         | Washer .....  | 9611-99-3199 | 9611-99-3199 | 9611-99-3199 |
| 14                  | 1         | Screw for safety guard .....                                  | 9611-99-3239 | 9611-99-3239 | 9611-99-3239 |
| 16                  | 1         | Safety guard .....  | 9612-1311-06 | 9612-1311-07 | 9612-1311-08 |
| 17                  | 1         | Adaptor .....   | 9612-3424-01 | 9612-3425-01 | 9612-3426-01 |
| 18                  | 4         | Screw for adaptor .....                                       | 9611-99-1834 | 9611-99-2162 | 9611-99-2163 |
| 19                  | 2         | Nut .....   | 9611-99-0353 | 9611-99-0353 | 9611-99-0353 |
| 20                  | 2         | Washer .....  | 9611-99-2559 | 9611-99-2559 | 9611-99-2559 |
| 28                  | 10        | Cap nut .....   | 9611-99-2593 | 9611-99-2593 | 9611-99-2593 |
| 29                  | 10        | Washer .....  | 9611-99-1887 | 9611-99-1887 | 9611-99-1887 |
| 30                  | 1         | Back plate .....  | 9612-4837-14 | 9612-4837-14 | 9612-4837-14 |
| 33                  | 1         | Spacing ring .....  | 9612-3625-02 | 9612-3625-02 | 9612-3625-02 |
| 37                  | 1         | Rotating seal housing .....                                   | 9612-3624-01 | 9612-3624-01 | 9612-3624-01 |
| 39                  | 1         | Impeller .....  | 9612-5105-07 | 9612-5105-07 | 9612-5105-01 |
| 43                  | □ ○ ◆ * 1 | Joint ring, EPDM (standard) .....                             | 9611-99-2983 | 9611-99-2983 | 9611-99-2983 |
|                     | 1         | Joint ring, NBR .....   | 9611-99-2984 | 9611-99-2984 | 9611-99-2984 |
|                     | 1         | Joint ring, FPM .....   | 9611-99-2985 | 9611-99-2985 | 9611-99-2985 |
| 44                  | 10        | Bolt .....  | 9611-99-2169 | 9611-99-2169 | 9611-99-2169 |
| 45                  | 1         | Pump casing, Flange .....                                     | 9612-5117-04 | 9612-5117-04 | 9612-5117-04 |
|                     | 1         | Pump casing, Clamp .....                                      | 9612-5117-08 | 9612-5117-08 | 9612-5117-08 |
| <b>Legs</b>         |           |   |              |              |              |
| 46a                 | 1         | Support bar, right .....                                      | 9612-1322-05 | 9612-1322-06 | 9612-1322-03 |
| 46b                 | 1         | Support bar, left .....                                       | 9612-1323-05 | 9612-1323-06 | 9612-1323-03 |
| 47                  | 4         | Leg .....   | 9612-3967-01 | 9612-3967-01 | 9612-3967-01 |
| 48                  | 4         | Screw (Period 9711-) .....                                    | 9611-99-1126 | 9611-99-1126 | 9611-99-1126 |
|                     | 4         | Screw (Period -9711) .....                                    | 9611-99-1907 | 9611-99-1907 | 9611-99-1907 |
| 49                  | 4         | Spring washer .....   | 9611-99-1887 | 9611-99-1887 | 9611-99-0676 |
| 50                  | 4         | Nut .....   | 9611-99-0353 | 9611-99-0353 | 9611-99-0587 |
| 51                  | 4         | Screw .....   | 9611-99-1911 | 9611-99-1911 | 9611-99-1834 |
| 52                  | 4         | Washer .....  | 9611-99-0786 | 9611-99-0786 | 9611-99-0706 |
| <b>Alternatives</b> |           |   |              |              |              |
| 40                  | 1         | Impeller for impeller screw .....                             | 9612-5105-08 | 9612-5105-08 | 9612-5105-02 |
| 41                  | 1         | Impeller screw .....  | 9612-1396-01 | 9612-1396-01 | 9612-1396-01 |
| 42                  | ○ * 1     | O-ring, EPDM .....  | 9611-99-2145 | 9611-99-2145 | 9611-99-2145 |
|                     | 1         | O-ring, NBR .....   | 9611-99-2147 | 9611-99-2147 | 9611-99-2147 |
|                     | 1         | O-ring, FPM .....   | 9611-99-2146 | 9611-99-2146 | 9611-99-2146 |

**Recommended Spare Parts: Service kits.**

# Pump for High Inlet Pressure, Type LKHP-45 Single and Flushed Shaft Seal

(Same drawing as on page 26)

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# Pump for High Inlet Pressure, Type LKHP-45 Single and Flushed Shaft Seal

| Pos.  | Qty. | Denomination                  | 4-15 kW      | Pos.  | Qty. | Denomination               | 4-15 kW      |
|---|------|-------------------------------|--------------|---|------|----------------------------|--------------|
| <b>Parts for flushed shaft seal</b>   |      |                               |              | <b>◆* Shaft seal complete, NBR</b> ..... 9612-3622-11                 |      |                            |              |
| 21  | 1    | Seal housing for flushed seal | 9612-3626-02 | 24  | 1    | Lip seal                   | 9611-99-2860 |
| 22  | 2    | Screw                         | 9611-99-4038 | 25  | 1    | O-ring, EPDM               | 9611-99-2754 |
| 23  | 2    | Tube                          | 9612-3589-07 | 26  | 1    | O-ring, EPDM               | 9611-99-2753 |
| 27  | 1    | Sleeve                        | 9612-3629-02 | 31  | 1    | O-ring                     | 9611-99-2728 |
| <b>Single shaft seal</b>  |      |                               |              | <b>32 1 Stationary seal ring, SiC.</b> ..... 9612-3633-01             |      |                            |              |
| <input type="checkbox"/> Shaft seal complete, EPDM (Standard)   |      |                               |              | 9612-3622-04  |      |                            |              |
| 31  | 1    | O-ring                        | 9611-99-2727 | 34  | 1    | Rotating seal ring, SiC.   | 9612-3634-02 |
| 32  | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 35  | 1    | Quad ring                  | 9611-99-2730 |
| 34  | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | 36  | 1    | PTFE support ring          | 9612-4571-01 |
| 35  | 1    | Quad ring                     | 9611-99-2730 | 38  | 1    | Quad ring                  | 9611-99-2734 |
| 36  | 1    | PTFE support ring             | 9612-4571-01 | <b>◆* Shaft seal complete, FPM</b> ..... 9612-3622-12                 |      |                            |              |
| 38  | 1    | Quad ring                     | 9611-99-2733 | 24  | 1    | Lip seal                   | 9611-99-2860 |
| <input type="checkbox"/> Shaft seal complete, NBR   |      |                               |              | 9612-3622-05  |      |                            |              |
| 31  | 1    | O-ring                        | 9611-99-2728 | 25  | 1    | O-ring, EPDM               | 9611-99-2754 |
| 32  | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 26  | 1    | O-ring, EPDM               | 9611-99-2753 |
| 34  | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | 31  | 1    | O-ring                     | 9611-99-2729 |
| 35  | 1    | Quad ring                     | 9611-99-2731 | 32  | 1    | Stationary seal ring, SiC. | 9612-3633-01 |
| 36  | 1    | PTFE support ring             | 9612-4571-01 | 34  | 1    | Rotating seal ring, SiC.   | 9612-3634-02 |
| 38  | 1    | Quad ring                     | 9611-99-2734 | 35  | 1    | Quad ring                  | 9611-99-2732 |
| <input type="checkbox"/> Shaft seal complete, FPM   |      |                               |              | 9612-3622-06  |      |                            |              |
| 31  | 1    | O-ring                        | 9611-99-2729 | 36  | 1    | PTFE support ring          | 9612-4571-01 |
| 32  | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 38  | 1    | Quad ring                  | 9611-99-2735 |
| 34  | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | <b>Service kit for single shaft seal</b>                              |      |                            |              |
| 35  | 1    | Quad ring                     | 9611-99-2732 | <input type="checkbox"/> <b>Service kit, EPDM.</b> ..... 9611-92-2194 |      |                            |              |
| 36  | 1    | PTFE support ring             | 9612-4571-01 | <input type="checkbox"/> <b>Service kit, NBR.</b> ..... 9611-92-2195  |      |                            |              |
| 38  | 1    | Quad ring                     | 9611-99-2735 | <input type="checkbox"/> <b>Service kit, FPM.</b> ..... 9611-92-2196  |      |                            |              |
| <b>Flushed shaft seal</b>   |      |                               |              | <b>Service kit for single shaft seal and impeller screw</b>           |      |                            |              |
| <b>◆* Shaft seal complete, EPDM (Standard)</b>  |      |                               |              | 9612-3622-10  |      |                            |              |
| 24  | 1    | Lip seal                      | 9611-99-2860 | <input type="radio"/> <b>Service kit, EPDM.</b> ..... 9611-92-2197    |      |                            |              |
| 25  | 1    | O-ring, EPDM                  | 9611-99-2754 | <input type="radio"/> <b>Service kit, NBR.</b> ..... 9611-92-2198     |      |                            |              |
| 26  | 1    | O-ring, EPDM                  | 9611-99-2753 | <input type="radio"/> <b>Service kit, FPM.</b> ..... 9611-92-2199     |      |                            |              |
| 31  | 1    | O-ring                        | 9611-99-2727 | <b>Service kit for flushed shaft seal</b>                             |      |                            |              |
| 32  | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | <b>◆ Service kit, EPDM.</b> ..... 9611-92-2200                        |      |                            |              |
| 34  | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | <b>◆ Service kit, NBR.</b> ..... 9611-92-2201                         |      |                            |              |
| 35  | 1    | Quad ring                     | 9611-99-2730 | <b>◆ Service kit, FPM.</b> ..... 9611-92-2202                         |      |                            |              |
| 36  | 1    | PTFE support ring             | 9612-4571-01 | <b>Service kit for flushed shaft seal and impeller screw</b>          |      |                            |              |
| 38  | 1    | Quad ring                     | 9611-99-2733 | <b>* Service kit, EPDM.</b> ..... 9611-92-2203                        |      |                            |              |
|   |      |                               |              | <b>* Service kit, NBR.</b> ..... 9611-92-2204                         |      |                            |              |
|   |      |                               |              | <b>* Service kit, FPM.</b> ..... 9611-92-2205                         |      |                            |              |
| Parts marked with <input type="checkbox"/> / <input type="radio"/> /◆/* are included in the <b>service kits</b> . |      |                               |              |   |      |                            |              |
| <b>Conversion kit, single to flushed shaft seal</b><br>9611-92-2177 = Pos. 21, 22, 23, 24, 25, 26 and 27.         |      |                               |              |   |      |                            |              |

| Pos. | Qty. | Denomination                  | 4 kW         | 5.5 kW       | 7.5 kW       | 11 kW        | 15 kW        |
|------|------|-------------------------------|--------------|--------------|--------------|--------------|--------------|
| 1    | 1    | *Motor 220/240 VD             | 9612-4189-07 | 9612-4189-09 | 9612-4189-11 | 9612-4189-13 | 9612-4189-15 |
|      | 1    | *Motor 380/420 VD             | 9612-4189-08 | 9612-4189-10 | 9612-4189-12 | 9612-4189-14 | 9612-4189-16 |
| 2    | 1    | Shroud                        | 9612-1390-03 | 9612-1390-08 | 9612-1390-08 | 9612-1390-05 | 9612-1390-05 |
| 2a   | 1    | Edge list (Included in pos 2) |              |              |              |              |              |

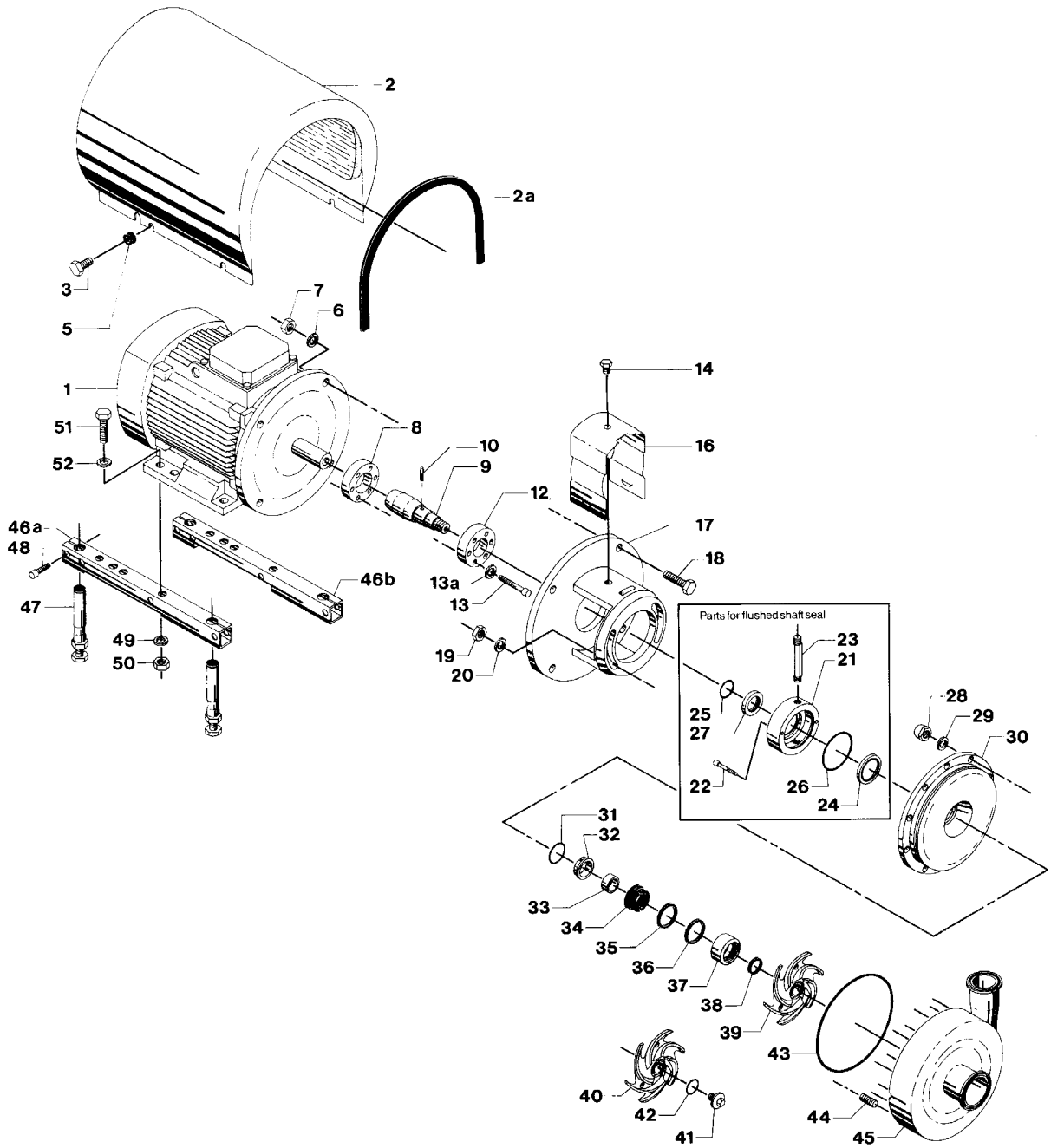
\* Motors are with special ball bearing.

## Surface roughness, product wetted parts: Ra ≤ 0.8 μm

| Pos.                | Qty. | Denomination                | 4 kW         | 5.5-7.5 kW   | 11-15 kW     |
|---------------------|------|-----------------------------|--------------|--------------|--------------|
| 30                  | 1    | Back plate                  | 9612-4837-16 | 9612-4837-16 | 9612-4837-16 |
| 39                  | 1    | Impeller                    | 9612-5105-09 | 9612-5105-09 | 9612-5105-05 |
| 45                  | 1    | Pump casing, Flange         | 9612-5117-16 | 9612-5117-16 | 9612-5117-16 |
|                     | 1    | Pump casing, Clamp          | 9612-5117-20 | 9612-5117-20 | 9612-5117-20 |
| <b>Alternatives</b> |      |                             |              |              |              |
| 40                  | 1    | Impeller for impeller screw | 9611-5105-10 | 9612-5105-10 | 9612-5105-06 |
| 41                  | 1    | Impeller screw              | 9612-1369-03 | 9612-1369-03 | 9612-1369-03 |

# Pump for High Inlet Pressure, Type LKHP-50 Single and Flushed Shaft Seal

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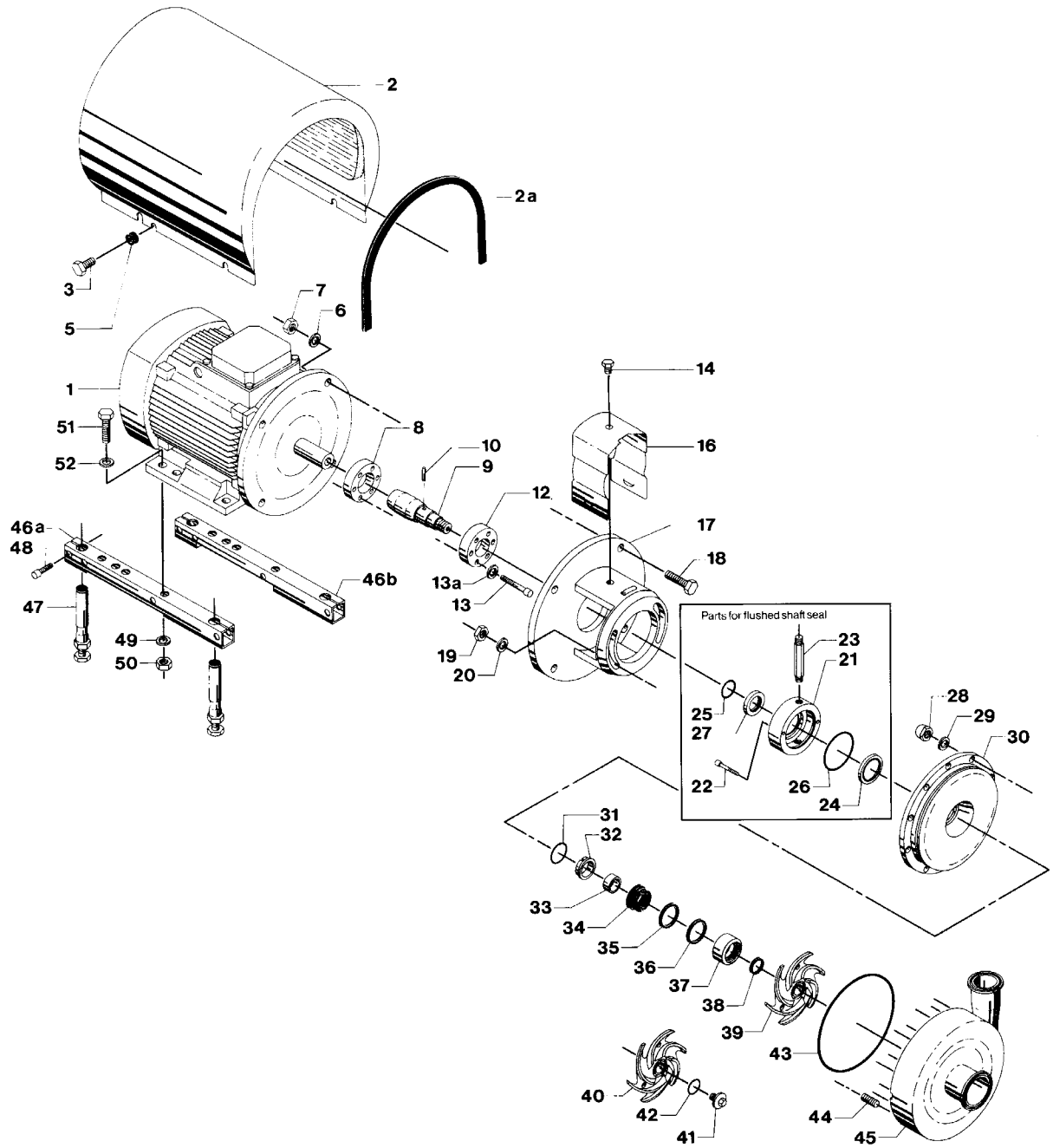
## Pump for High Inlet Pressure, Type LKHP-50 Single and Flushed Shaft Seal

| Pos.                | Qty.   | Denomination  | 5.5-7.5 kW   | 11-18.5 kW   | 22 kW        |
|---------------------|--------|---|--------------|--------------|--------------|
| 3                   | 4      | Screw .....   | 9611-99-3240 | 9611-99-3241 | 9611-99-3242 |
| 5                   | 4      | Distance sleeve .....   | 9611-99-2737 | 31438-0390-2 | 31438-0390-1 |
| 6                   | 4      | Washer for adaptor .....                                      | 9611-99-0676 | 9611-99-1886 | 9611-99-1886 |
| 7                   | 4      | Nut for adaptor .....   | 9611-99-0587 | 9611-99-2160 | 9611-99-2160 |
| 8                   | 1      | Compression ring with thread .....                            | 9612-1336-05 | 9612-1336-03 | 9612-1336-04 |
| 9                   | 1      | Shaft with internal/external thread and pin<br>(pos.10) ..... | 9612-1326-02 | 9612-1327-02 | 9612-1328-02 |
| 10                  | 1      | Connex pin .....  | 9611-99-0622 | 9611-99-0622 | 9611-99-0622 |
| 12                  | 1      | Compression ring without thread .....                         | 9612-1337-05 | 9612-1337-03 | 9612-1337-04 |
| 13                  | 6      | Screw .....   | 9611-99-3197 | 9611-99-3198 | 9611-99-3198 |
| 13a                 | 6      | Washer .....  | 9611-99-3199 | 9611-99-3199 | 9611-99-3199 |
| 14                  | 1      | Screw for safety guard .....                                  | 9611-99-3239 | 9611-99-3239 | 9611-99-3239 |
| 16                  | 1      | Safety guard .....  | 9612-1311-07 | 9612-1311-08 | 9612-1311-08 |
| 17                  | 1      | Adaptor .....   | 9612-3425-01 | 9612-3426-01 | 9612-3426-01 |
| 18                  | 4      | Screw for adaptor .....                                       | 9611-99-2162 | 9611-99-2163 | 9611-99-2163 |
| 19                  | 2      | Nut .....   | 9611-99-0353 | 9611-99-0353 | 9611-99-0353 |
| 20                  | 2      | Washer .....  | 9611-99-2559 | 9611-99-2559 | 9611-99-2559 |
| 28                  | 12     | Cap nut .....   | 9611-99-2593 | 9611-99-2593 | 9611-99-2593 |
| 29                  | 12     | Washer .....  | 9611-99-1887 | 9611-99-1887 | 9611-99-1887 |
| 30                  | 1      | Back plate .....  | 9612-4837-03 | 9612-4837-03 | 9612-4837-03 |
| 33                  | 1      | Spacing ring .....  | 9612-3625-02 | 9612-3625-02 | 9612-3625-02 |
| 37                  | 1      | Rotating seal housing .....                                   | 9612-3624-01 | 9612-3624-01 | 9612-3624-01 |
| 39                  | 1      | Impeller .....  | 9612-4085-07 | 9612-4085-01 | 9612-4085-01 |
| 43                  | □○◆★ 1 | Joint ring, EPDM (standard) .....                             | 9611-99-2171 | 9611-99-2171 | 9611-99-2171 |
|                     | 1      | Joint ring, NBR .....   | 9611-99-2173 | 9611-99-2173 | 9611-99-2173 |
|                     | 1      | Joint ring, FPM .....   | 9611-99-2172 | 9611-99-2172 | 9611-99-2172 |
| 44                  | 12     | Bolt .....  | 9611-99-2169 | 9611-99-2169 | 9611-99-2169 |
| 45                  | 1      | Pump casing, Flange .....                                     | 9612-4840-04 | 9612-4840-04 | 9612-4840-04 |
|                     | 1      | Pump casing, Clamp .....                                      | 9612-4840-09 | 9612-4840-09 | 9612-4840-09 |
| <b>Legs</b>         |        |   |              |              |              |
| 46a                 | 1      | Support bar, right .....                                      | 9612-1322-06 | 9612-1322-03 | 9612-1322-04 |
| 46b                 | 1      | Support bar, left .....                                       | 9612-1323-06 | 9612-1323-03 | 9612-1323-04 |
| 47                  | 4      | Leg .....   | 9612-3967-01 | 9612-3967-01 | 9612-3967-01 |
| 48                  | 4      | Screw (Period 9711-) .....                                    | 9611-99-1126 | 9611-99-1126 | 9611-99-1126 |
|                     | 4      | Screw (Period -9711) .....                                    | 9611-99-1907 | 9611-99-1907 | 9611-99-1907 |
| 49                  | 4      | Spring washer .....   | 9611-99-1887 | 9611-99-0676 | 9611-99-0676 |
| 50                  | 4      | Nut .....   | 9611-99-0353 | 9611-99-0587 | 9611-99-0587 |
| 51                  | 4      | Screw .....   | 9611-99-1911 | 9611-99-1834 | 9611-99-1834 |
| 52                  | 4      | Washer .....  | 9611-99-0786 | 9611-99-0706 | 9611-99-0706 |
| <b>Alternatives</b> |        |   |              |              |              |
| 40                  | 1      | Impeller for impeller screw .....                             | 9612-4085-08 | 9612-4085-02 | 9612-4085-02 |
| 41                  | 1      | Impeller screw .....  | 9612-1396-01 | 9612-1396-01 | 9612-1396-01 |
| 42                  | ○★ 1   | O-ring, EPDM .....  | 9611-99-2145 | 9611-99-2145 | 9611-99-2145 |
|                     | 1      | O-ring, NBR .....   | 9611-99-2147 | 9611-99-2147 | 9611-99-2147 |
|                     | 1      | O-ring, FPM .....   | 9611-99-2146 | 9611-99-2146 | 9611-99-2146 |

**Recommended Spare Parts: Service kits.**

# Pump for High Inlet Pressure, Type LKHP-50 Single and Flushed Shaft Seal

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# Pump for High Inlet Pressure, Type LKHP-50 Single and Flushed Shaft Seal

| Pos.   | Qty. | Denomination                  | 5.5-22 kW    | Pos.   | Qty. | Denomination               | 5.5-22 kW    |
|--|------|-------------------------------|--------------|--|------|----------------------------|--------------|
| <b>Parts for flushed shaft seal</b>                    |      |                               |              | <b>◆* Shaft seal complete, NBR</b> ..... 9612-3622-11              |      |                            |              |
| 21   | 1    | Seal housing for flushed seal | 9612-3626-02 | 24   | 1    | Lip seal                   | 9611-99-2860 |
| 22   | 2    | Screw                         | 9611-99-4038 | 25   | 1    | O-ring, EPDM               | 9611-99-2754 |
| 23   | 2    | Tube                          | 9612-3589-07 | 26   | 1    | O-ring, EPDM               | 9611-99-2753 |
| 27   | 1    | Sleeve                        | 9612-3629-02 | 31   | 1    | O-ring                     | 9611-99-2728 |
| <b>Single shaft seal</b>                               |      |                               |              | 32 1 Stationary seal ring, SiC. .... 9612-3633-01                  |      |                            |              |
| □○ Shaft seal complete, EPDM (Standard) . 9612-3622-04 |      |                               |              | 34 1 Rotating seal ring, SiC. .... 9612-3634-02                    |      |                            |              |
| 31   | 1    | O-ring                        | 9611-99-2727 | 35 1 Quad ring ..... 9611-99-2730                                  |      |                            |              |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 36 1 PTFE support ring ..... 9612-4571-01                          |      |                            |              |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | 38 1 Quad ring ..... 9611-99-2734                                  |      |                            |              |
| 35   | 1    | Quad ring                     | 9611-99-2730 | <b>◆* Shaft seal complete, FPM</b> ..... 9612-3622-12              |      |                            |              |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | 24   | 1    | Lip seal                   | 9611-99-2860 |
| 38   | 1    | Quad ring                     | 9611-99-2733 | 25   | 1    | O-ring, EPDM               | 9611-99-2754 |
| □○ Shaft seal complete, NBR ..... 9612-3622-05         |      |                               |              | 26   | 1    | O-ring, EPDM               | 9611-99-2753 |
| 31   | 1    | O-ring                        | 9611-99-2728 | 31   | 1    | O-ring                     | 9611-99-2729 |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | 32   | 1    | Stationary seal ring, SiC. | 9612-3633-01 |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | 34   | 1    | Rotating seal ring, SiC.   | 9612-3634-02 |
| 35   | 1    | Quad ring                     | 9611-99-2731 | 35   | 1    | Quad ring                  | 9611-99-2732 |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | 36   | 1    | PTFE support ring          | 9612-4571-01 |
| 38   | 1    | Quad ring                     | 9611-99-2734 | 38   | 1    | Quad ring                  | 9611-99-2735 |
| □○ Shaft seal complete, FPM ..... 9612-3622-06         |      |                               |              | <b>Service kit for single shaft seal</b>                           |      |                            |              |
| 31   | 1    | O-ring                        | 9611-99-2729 | □ <b>Service kit, EPDM.</b> ..... 9611-92-2163                     |      |                            |              |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | □ <b>Service kit, NBR.</b> ..... 9611-92-2164                      |      |                            |              |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | □ <b>Service kit, FPM.</b> ..... 9611-92-2165                      |      |                            |              |
| 35   | 1    | Quad ring                     | 9611-99-2732 | <b>Service kit for single shaft seal and impeller screw</b>        |      |                            |              |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | ○ <b>Service kit, EPDM.</b> ..... 9611-92-2166                     |      |                            |              |
| 38   | 1    | Quad ring                     | 9611-99-2735 | ○ <b>Service kit, NBR.</b> ..... 9611-92-2167                      |      |                            |              |
| <b>Flushed shaft seal</b>                              |      |                               |              | ○ <b>Service kit, FPM.</b> ..... 9611-92-2168                      |      |                            |              |
| ◆* Shaft seal complete, EPDM (Standard) . 9612-3622-10 |      |                               |              | <b>Service kit for flushed shaft seal</b>                          |      |                            |              |
| 24   | 1    | Lip seal                      | 9611-99-2860 | ◆ <b>Service kit, EPDM.</b> ..... 9611-92-2169                     |      |                            |              |
| 25   | 1    | O-ring, EPDM                  | 9611-99-2754 | ◆ <b>Service kit, NBR.</b> ..... 9611-92-2170                      |      |                            |              |
| 26   | 1    | O-ring, EPDM                  | 9611-99-2753 | ◆ <b>Service kit, FPM.</b> ..... 9611-92-2171                      |      |                            |              |
| 31   | 1    | O-ring                        | 9611-99-2727 | <b>Service kit for flushed shaft seal and impeller screw</b>       |      |                            |              |
| 32   | 1    | Stationary seal ring, SiC.    | 9612-3633-01 | * <b>Service kit, EPDM.</b> ..... 9611-92-2172                     |      |                            |              |
| 34   | 1    | Rotating seal ring, SiC.      | 9612-3634-02 | * <b>Service kit, NBR.</b> ..... 9611-92-2173                      |      |                            |              |
| 35   | 1    | Quad ring                     | 9611-99-2730 | * <b>Service kit, FPM.</b> ..... 9611-92-2174                      |      |                            |              |
| 36   | 1    | PTFE support ring             | 9612-4571-01 | Parts marked with □/○/◆/* are included in the <b>service kits.</b> |      |                            |              |
| 38   | 1    | Quad ring                     | 9611-99-2733 | <b>Conversion kit, single to flushed shaft seal</b>                |      |                            |              |
|  |      |                               |              | 9611-92-2177 = Pos. 21, 22, 23, 24, 25, 26 and 27.                 |      |                            |              |

| Pos. | Qty. | Denomination                   | 5.5 kW       | 7.5 kW       | 11 kW        | 15 kW        | 18.5 kW      | 22 kW        |
|------|------|--------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1    | 1    | *Motor 380/420 VD              | 9612-4189-09 | 9612-4189-11 | 9612-4189-13 | 9612-4189-15 | 9612-4189-17 | 9612-4189-19 |
|      | 1    | *Motor 380/420 VD              | 9612-4189-10 | 9612-4189-12 | 9612-4189-14 | 9612-4189-16 | 9612-4189-18 | 9612-4189-20 |
| 2    | 1    | Shroud                         | 9612-1390-08 | 9612-1390-08 | 9612-1390-05 | 9612-1390-05 | 9612-1390-05 | 9612-1390-06 |
| 2a   | 1    | Edge list (Included in pos. 2) |              |              |              |              |              |              |

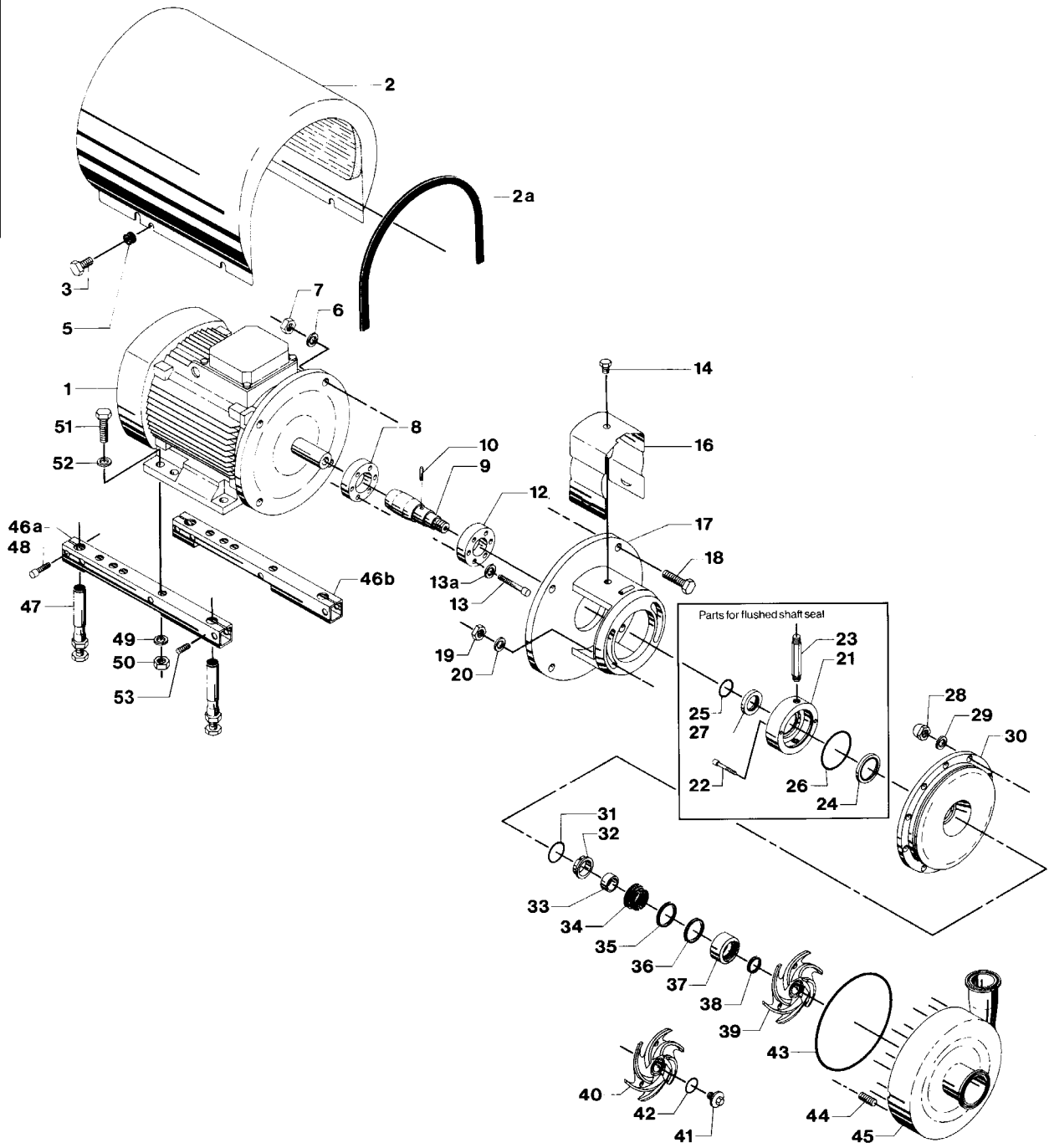
\* Motors are with special ball bearing

## Surface roughness, product wetted parts: Ra ≤ 0.8 μm

| Pos.                | Qty. | Denomination                | 5.5-7.5 kW   | 11 kW        | 15-18.5 kW   | 22 kW        |
|---------------------|------|-----------------------------|--------------|--------------|--------------|--------------|
| 30                  | 1    | Back plate                  | 9612-4837-12 | 9612-4837-12 | 9612-4837-12 | 9612-4837-12 |
| 39                  | 1    | Impeller                    | 9612-4085-09 | 9612-4085-05 | 9612-4085-05 | 9612-4085-05 |
| 45                  | 1    | Pump casing, Flange         | 9612-4840-19 | 9612-4840-19 | 9612-4840-19 | 9612-4840-19 |
|                     | 1    | Pump casing, Clamp          | 9612-4840-24 | 9612-4840-24 | 9612-4840-24 | 9612-4840-24 |
| <b>Alternatives</b> |      |                             |              |              |              |              |
| 40                  | 1    | Impeller for impeller screw | 9612-4085-10 | 9612-4085-06 | 9612-4085-06 | 9612-4085-06 |
| 41                  | 1    | Impeller screw              | 9612-1396-03 | 9612-1396-03 | 9612-1396-03 | 9612-1396-03 |

# Pump for High Inlet Pressure, Type LKHP-60 Single and Flushed Shaft Seal

34



## Pump for High Inlet Pressure, Type LKHP-60 Single and Flushed Shaft Seal

35

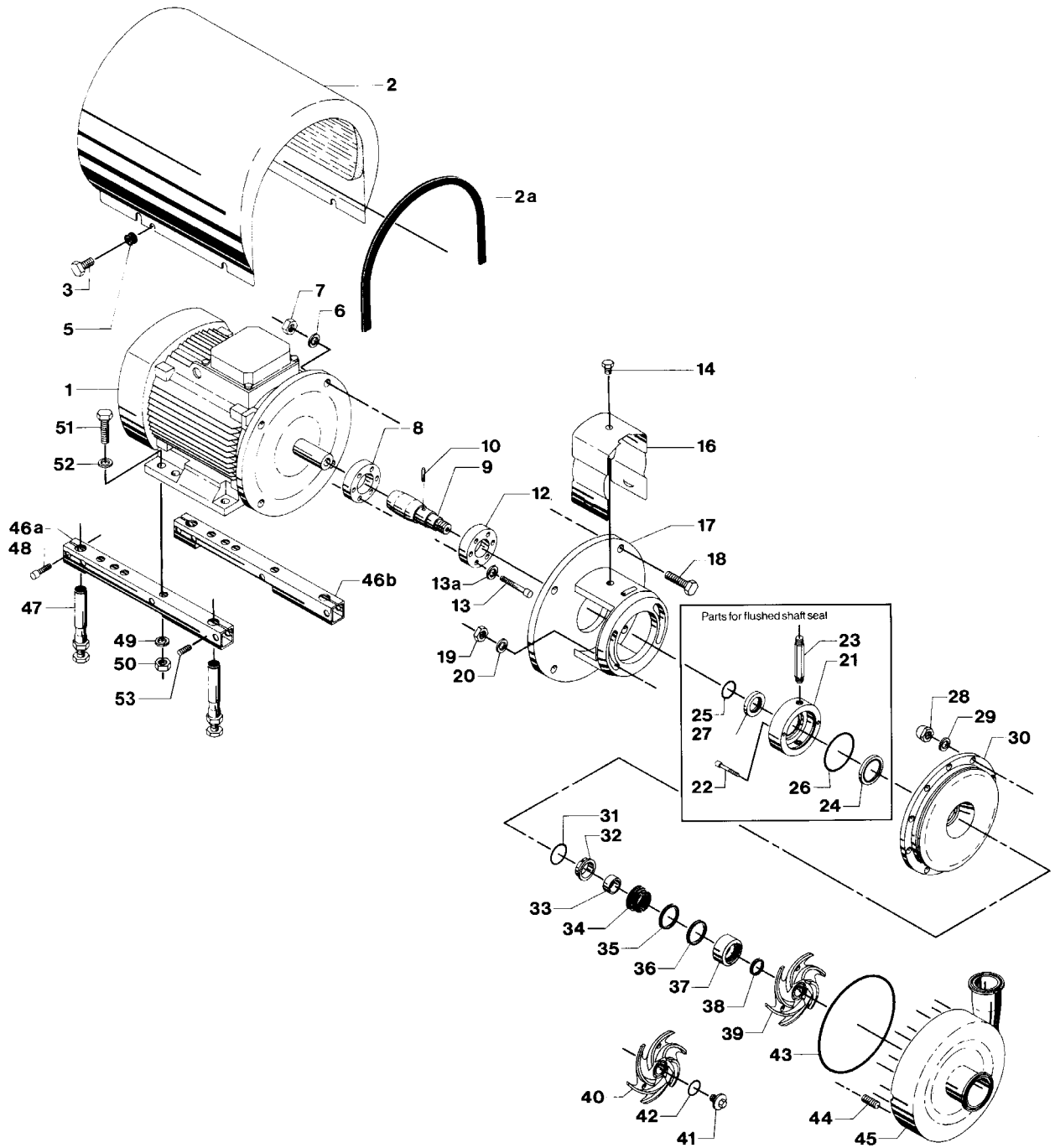
| Pos.                | Qty. | Denomination  | 5.5-7.5 kW   | 11-15 kW     | 18.5 kW      | 22 kW        | 30 kW        |
|---------------------|------|---|--------------|--------------|--------------|--------------|--------------|
| 3                   | 4    | Screw .....   | 9611-99-3240 | 9611-99-3241 | 9611-99-3241 | 9611-99-3242 | 9611-99-3243 |
| 5                   | 4    | Distance sleeve .....   | 9611-99-2737 | 31438-0390-2 | 31438-0390-2 | 31438-0390-1 | 31438-0390-3 |
| 6                   | 4    | Washer for adaptor .....                                      | 9611-99-0676 | 9611-99-1886 | 9611-99-1886 | 9611-99-1886 | 9611-99-1886 |
| 7                   | 4    | Nut for adaptor .....   | 9611-99-0587 | 9611-99-2160 | 9611-99-2160 | 9611-99-2160 | 9611-99-2160 |
| 8                   | 1    | Compression ring with thread .....                            | 9612-1336-05 | 9612-1336-03 | 9612-1336-03 | 9612-1336-04 | 9612-1336-07 |
| 9                   | 1    | Shaft with internal/external<br>thread and pin (pos.10) ..... | 9612-1326-02 | 9612-1327-02 | 9612-1327-02 | 9612-1328-02 | 9612-2329-02 |
| 10                  | 1    | Connex pin .....  | 9611-99-0622 | 9611-99-0622 | 9611-99-0622 | 9611-99-0622 | 9611-99-0622 |
| 12                  | 1    | Compression ring without thread .....                         | 9612-1337-05 | 9612-1337-03 | 9612-1337-03 | 9612-1337-04 | 9612-1337-07 |
| 13                  | 6    | Screw .....   | 9611-99-3197 | 9611-99-3198 | 9611-99-3198 | 9611-99-3198 | 9611-99-3198 |
| 13a                 | 6    | Washer .....  | 9611-99-3199 | 9611-99-3199 | 9611-99-3199 | 9611-99-3199 | 9611-99-3199 |
| 14                  | 1    | Screw for safety guard .....                                  | 9611-99-3239 | 9611-99-3239 | 9611-99-3239 | 9611-99-3239 | 9611-99-3239 |
| 16                  | 1    | Safety guard .....  | 9612-1311-07 | 9612-1311-08 | 9612-1311-08 | 9612-1311-08 | 9612-1311-08 |
| 17                  | 1    | Adaptor .....   | 9612-3425-01 | 9612-3426-01 | 9612-3426-01 | 9612-3426-01 | 9612-3427-01 |
| 18                  | 4    | Screw for adaptor .....                                       | 9611-99-2162 | 9611-99-2163 | 9611-99-2163 | 9611-99-2164 | 9611-99-2164 |
| 19                  | 2    | Nut .....   | 9611-99-0353 | 9611-99-0353 | 9611-99-0353 | 9611-99-0353 | 9611-99-0353 |
| 20                  | 2    | Washer .....  | 9611-99-2559 | 9611-99-2559 | 9611-99-2559 | 9611-99-2559 | 9611-99-2559 |
| 28                  | 12   | Cap nut .....   | 9611-99-2593 | 9611-99-2593 | 9611-99-2593 | 9611-99-2593 | 9611-99-2593 |
| 29                  | 12   | Spring washer .....   | 9611-99-1887 | 9611-99-1887 | 9611-99-1887 | 9611-99-1887 | 9611-99-1887 |
| 30                  | 1    | Back plate .....  | 9612-4837-03 | 9612-4837-03 | 9612-4837-03 | 9612-4837-03 | 9612-4837-03 |
| 33                  | 1    | Spacing ring .....  | 9612-3625-02 | 9612-3625-02 | 9612-3625-02 | 9612-3625-02 | 9612-3625-02 |
| 37                  | 1    | Rotating seal housing .....                                   | 9612-3624-01 | 9612-3624-01 | 9612-3624-01 | 9612-3624-01 | 9612-3624-01 |
| 39                  | 1    | Impeller .....  | 9612-4086-07 | 9612-4086-07 | 9612-4086-01 | 9612-4086-01 | 9612-4086-01 |
| 43                  | 1    | Joint ring, EPDM (standard) .....                             | 9611-99-2171 | 9611-99-2171 | 9611-99-2171 | 9611-99-2171 | 9611-99-2171 |
|                     | 1    | Joint ring, NBR .....   | 9611-99-2173 | 9611-99-2173 | 9611-99-2173 | 9611-99-2173 | 9611-99-2173 |
|                     | 1    | Joint ring, FPM .....   | 9611-99-2172 | 9611-99-2172 | 9611-99-2172 | 9611-99-2172 | 9611-99-2172 |
| 44                  | 12   | Bolt .....  | 9611-99-2169 | 9611-99-2169 | 9611-99-2169 | 9611-99-2169 | 9611-99-2169 |
| 45                  | 1    | Pump casing, Flange .....                                     | 9612-4840-05 | 9612-4840-05 | 9612-4840-05 | 9612-4840-05 | 9612-4840-05 |
|                     | 1    | Pump casing, Clamp .....                                      | 9612-4840-10 | 9612-4840-10 | 9612-4840-10 | 9612-4840-10 | 9612-4840-10 |
| <b>Legs</b>         |      |   |              |              |              |              |              |
| 46a                 | 1    | Support bar, right .....                                      | 9612-1322-06 | 9612-1322-03 | 9612-1322-03 | 9612-1322-04 | 9612-3422-01 |
| 46b                 | 1    | Support bar, left .....                                       | 9612-1323-06 | 9612-1323-03 | 9612-1323-03 | 9612-1323-04 | 9612-3422-01 |
| 47                  | 4    | Leg .....   | 9612-3967-01 | 9612-3967-01 | 9612-3967-01 | 9612-3967-01 | 9612-3967-01 |
| 48                  | 4    | Screw (Period 9711-) .....                                    | 9611-99-1126 | 9611-99-1126 | 9611-99-1126 | 9611-99-1126 | 9611-99-1907 |
|                     | 4    | Screw (Period -9711) .....                                    | 9611-99-1907 | 9611-99-1907 | 9611-99-1907 | 9611-99-1907 | 9611-99-1907 |
| 49                  | 4    | Spring washer .....   | 9611-99-1887 | 9611-99-0676 | 9611-99-0676 | 9611-99-0676 | 9611-99-0676 |
| 50                  | 4    | Nut .....   | 9611-99-0353 | 9611-99-0587 | 9611-99-0587 | 9611-99-0587 | 9611-99-0587 |
| 51                  | 4    | Screw .....   | 9611-99-1911 | 9611-99-1834 | 9611-99-1834 | 9611-99-1834 | 9611-99-3680 |
| 52                  | 4    | Washer .....  | 9611-99-0786 | 9611-99-0706 | 9611-99-0706 | 9611-99-0706 | 9611-99-0703 |
| 53                  | 4    | Pivot screw .....   |              |              |              |              | 9611-99-1763 |
| <b>Alternatives</b> |      |   |              |              |              |              |              |
| 40                  | 1    | Impeller for impeller screw .....                             | 9612-4086-08 | 9612-4086-08 | 9612-4086-02 | 9612-4086-02 | 9612-4086-02 |
| 41                  | 1    | Impeller screw .....  | 9612-1396-01 | 9612-1396-01 | 9612-1396-01 | 9612-1396-01 | 9612-1396-01 |
| 42                  | 1    | O-ring, EPDM .....  | 9611-99-2145 | 9611-99-2145 | 9611-99-2145 | 9611-99-2145 | 9611-99-2145 |
|                     | 1    | O-ring, NBR .....   | 9611-99-2147 | 9611-99-2147 | 9611-99-2147 | 9611-99-2147 | 9611-99-2147 |
|                     | 1    | O-ring, FPM .....   | 9611-99-2146 | 9611-99-2146 | 9611-99-2146 | 9611-99-2146 | 9611-99-2146 |

### Surface roughness, product wetted parts: Ra ≤ 0.8 μm

| Pos.                | Qty. | Denomination                      | 5.5-7.5 kW   | 11-15 kW     | 18.5 kW      | 22 kW        | 30 kW        |
|---------------------|------|-----------------------------------|--------------|--------------|--------------|--------------|--------------|
| 30                  | 1    | Back plate .....                  | 9612-4837-12 | 9612-4837-12 | 9612-4837-12 | 9612-4837-12 | 9612-4837-12 |
| 39                  | 1    | Impeller .....                    | 9612-4086-09 | 9612-4086-09 | 9612-4086-05 | 9612-4086-05 | 9612-4086-05 |
| 45                  | 1    | Pump casing, Flange .....         | 9612-4840-20 | 9612-4840-20 | 9612-4840-20 | 9612-4840-20 | 9612-4840-20 |
|                     | 1    | Pump casing, Clamp .....          | 9612-4840-25 | 9612-4840-25 | 9612-4840-25 | 9612-4840-25 | 9612-4840-25 |
| <b>Alternatives</b> |      |                                   |              |              |              |              |              |
| 40                  | 1    | Impeller for impeller screw ..... | 9612-4086-10 | 9612-4086-10 | 9612-4086-06 | 9612-4086-06 | 9612-4086-06 |
| 41                  | 1    | Impeller screw .....              | 9612-1396-03 | 9612-1396-03 | 9612-1396-03 | 9612-1396-03 | 9612-1396-03 |

# Pump for High Inlet Pressure, Type LKHP-60 Single and Flushed Shaft Seal

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# Pump for High Inlet Pressure, Type LKHP-60 Single and Flushed Shaft Seal

| Pos.  | Qty. | Denomination                       | 5.5-30 kW    | Pos.   | Qty. | Denomination                    | 5.5-30 kW    |
|---|------|------------------------------------|--------------|--|------|---------------------------------|--------------|
| <b>Parts for flushed shaft seal</b>                   |      |                                    |              | <b>◆□ Shaft seal complete, NBR ..... 9612-3622-11</b>              |      |                                 |              |
| 21  | 1    | Seal housing for flushed seal .... | 9612-3626-02 | 24   | 1    | Lip seal .....                  | 9611-99-2860 |
| 22  | 2    | Screw .....                        | 9611-99-4038 | 25   | 1    | O-ring, EPDM .....              | 9611-99-2754 |
| 23  | 2    | Tube .....                         | 9612-3589-07 | 26   | 1    | O-ring, EPDM .....              | 9611-99-2753 |
| 27  | 1    | Sleeve .....                       | 9612-3629-02 | 31   | 1    | O-ring .....                    | 9611-99-2728 |
| <b>Single shaft seal</b>                              |      |                                    |              | <b>◆□ Shaft seal complete, FPM ..... 9612-3622-12</b>              |      |                                 |              |
| <b>↔○ Shaft seal complete, EPDM (Standard)</b>        |      |                                    |              | <b>24 1 Lip seal ..... 9611-99-2860</b>                            |      |                                 |              |
| <b>9612-3622-04</b>                                   |      |                                    |              | <b>25 1 O-ring, EPDM ..... 9611-99-2754</b>                        |      |                                 |              |
| 31  | 1    | O-ring .....                       | 9611-99-2727 | 26   | 1    | O-ring, EPDM .....              | 9611-99-2753 |
| 32  | 1    | Stationary seal ring, SiC. ....    | 9612-3633-01 | 31   | 1    | O-ring .....                    | 9611-99-2729 |
| 34  | 1    | Rotating seal ring, SiC. ....      | 9612-3634-02 | 32   | 1    | Stationary seal ring, SiC. .... | 9612-3633-01 |
| 35  | 1    | Quad ring .....                    | 9611-99-2730 | 34   | 1    | Rotating seal ring, SiC. ....   | 9612-3634-02 |
| 36  | 1    | PTFE support ring .....            | 9612-4571-01 | 35   | 1    | Quad ring .....                 | 9611-99-2732 |
| 38  | 1    | Quad ring .....                    | 9611-99-2733 | 36   | 1    | PTFE support ring .....         | 9612-4571-01 |
| <b>↔○ Shaft seal complete, NBR ..... 9612-3622-05</b> |      |                                    |              | <b>38 1 Quad ring ..... 9611-99-2735</b>                           |      |                                 |              |
| 31  | 1    | O-ring .....                       | 9611-99-2728 | <b>Service kit for single shaft seal</b>                           |      |                                 |              |
| 32  | 1    | Stationary seal ring, SiC. ....    | 9612-3633-01 | ↔ <b>Service kit, EPDM. .... 9611-92-2163</b>                      |      |                                 |              |
| 34  | 1    | Rotating seal ring, SiC. ....      | 9612-3634-02 | ↔ <b>Service kit, NBR. .... 9611-92-2164</b>                       |      |                                 |              |
| 35  | 1    | Quad ring .....                    | 9611-99-2731 | ↔ <b>Service kit, FPM. .... 9611-92-2165</b>                       |      |                                 |              |
| 36  | 1    | PTFE support ring .....            | 9612-4571-01 | <b>Service kit for single shaft seal and impeller screw</b>        |      |                                 |              |
| 38  | 1    | Quad ring .....                    | 9611-99-2734 | ○ <b>Service kit, EPDM. .... 9611-92-2166</b>                      |      |                                 |              |
| <b>↔○ Shaft seal complete, FPM ..... 9612-3622-06</b> |      |                                    |              | ○ <b>Service kit, NBR. .... 9611-92-2167</b>                       |      |                                 |              |
| 31  | 1    | O-ring .....                       | 9611-99-2729 | ○ <b>Service kit, FPM. .... 9611-92-2168</b>                       |      |                                 |              |
| 32  | 1    | Stationary seal ring, SiC. ....    | 9612-3633-01 | <b>Service kit for flushed shaft seal</b>                          |      |                                 |              |
| 34  | 1    | Rotating seal ring, SiC. ....      | 9612-3634-02 | ◆ <b>Service kit, EPDM. .... 9611-92-2169</b>                      |      |                                 |              |
| 35  | 1    | Quad ring .....                    | 9611-99-2732 | ◆ <b>Service kit, NBR. .... 9611-92-2170</b>                       |      |                                 |              |
| 36  | 1    | PTFE support ring .....            | 9612-4571-01 | ◆ <b>Service kit, FPM. .... 9611-92-2171</b>                       |      |                                 |              |
| 38  | 1    | Quad ring .....                    | 9611-99-2735 | <b>Service kit for flushed shaft seal and impeller screw</b>       |      |                                 |              |
| <b>Flushed shaft seal</b>                             |      |                                    |              | □ <b>Service kit, EPDM. .... 9611-92-2172</b>                      |      |                                 |              |
| <b>◆□ Shaft seal complete, EPDM (Standard)</b>        |      |                                    |              | □ <b>Service kit, NBR. .... 9611-92-2173</b>                       |      |                                 |              |
| <b>9612-3622-10</b>                                   |      |                                    |              | □ <b>Service kit, FPM. .... 9611-92-2174</b>                       |      |                                 |              |
| 24  | 1    | Lip seal .....                     | 9611-99-2860 | <b>Parts marked with ↔/○/◆/□ are included in the service kits.</b> |      |                                 |              |
| 25  | 1    | O-ring, EPDM .....                 | 9611-99-2754 | <b>Conversion kit, single to flushed shaft seal</b>                |      |                                 |              |
| 31  | 1    | O-ring .....                       | 9611-99-2727 | <b>9611-92-2177 = Pos. 21, 22, 23, 24, 25, 26 and 27.</b>          |      |                                 |              |
| 32  | 1    | Stationary seal ring, SiC. ....    | 9612-3633-01 |  |      |                                 |              |
| 34  | 1    | Rotating seal ring, SiC. ....      | 9612-3634-02 |  |      |                                 |              |
| 35  | 1    | Quad ring .....                    | 9611-99-2730 |  |      |                                 |              |
| 36  | 1    | PTFE support ring .....            | 9612-4571-01 |  |      |                                 |              |
| 38  | 1    | Quad ring .....                    | 9611-99-2733 |  |      |                                 |              |

| Pos.   | Qty. | Denomination                                   | 5.5 kW   | 7.5 kW       | 11 kW        | 15 kW  | 18.5 kW      | 22 kW        | 30 kW                      |
|--|------|--|--|--------------|--------------|--|--------------|--------------|----------------------------|
| 1  | 1    | Motor ABB <sup>1)2)</sup> .....                | 9612-4189-09   | 9612-4189-11 | 9612-4189-13 | 9612-4189-15   | 9612-4189-17 | 9612-4189-19 | 9612-4189-21 <sup>4)</sup> |
|  | 1    | Motor ABB <sup>1)3)</sup> .....                | 9612-4189-10   | 9612-4189-12 | 9612-4189-14 | 9612-4189-16   | 9612-4189-18 | 9612-4189-20 | 9612-4189-22 <sup>4)</sup> |
|  | 1    | Motor BROOK <sup>2)</sup> ..<br>(Period 9907-) |  |              |              |  |              |              | 9612-6055-01               |
|  | 1    | Motor BROOK <sup>3)</sup> ..<br>(Period 9907-) |  |              |              |  |              |              | 9612-6055-02               |
| 2  | 1    | Shroud ABB .....                               | 9612-1390-08   | 9612-1390-08 | 9612-1390-05 | 9612-1390-05   | 9612-1390-05 | 9612-1390-06 | 9612-1390-07 <sup>4)</sup> |
|  | 1    | Shroud BROOK .<br>(Period 9907-)               |  |              |              |  |              |              | 9612-5938-01               |
| 2a   | 1    | Edge list (Included in pos. 2)                 |  |              |              |  |              |              |                            |
| <sup>1)</sup> Motors are with special bearing. |      |  | <sup>2)</sup> 3~, 50Hz, 220-240VD/380-420VY - Option |              |              | <sup>3)</sup> 3~, 50Hz, 380-420VD/660-690VY - Standard |              |              |                            |
| <sup>4)</sup> Motors ABB (-9907)               |      |  | 3~, 60Hz, 250-280VD/440-480VY - Option               |              |              | 3~, 60Hz, 440-480VD - Standard                         |              |              |                            |

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