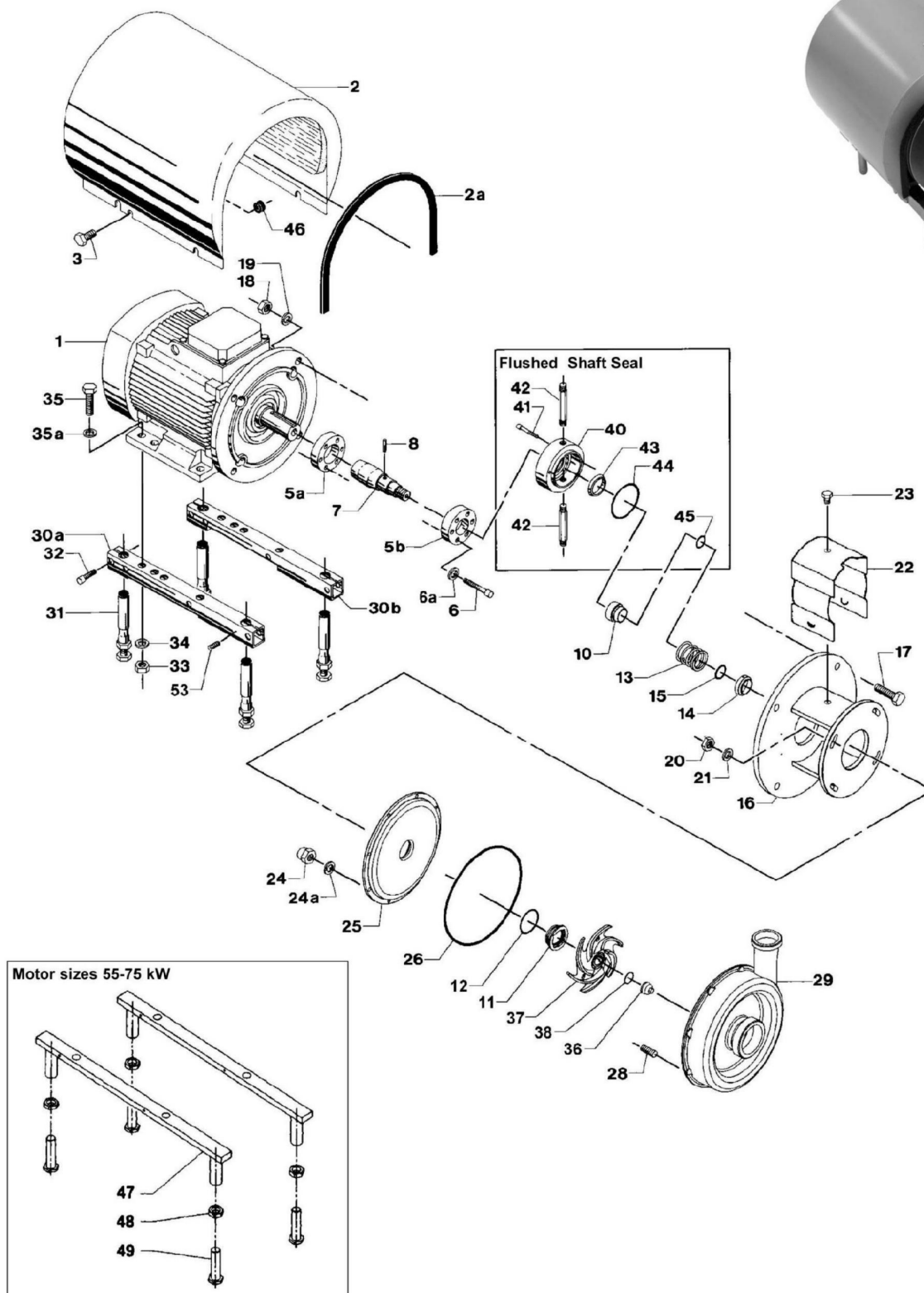


Centrifugal Pump, Type LKH-70 Single and Flushed Shaft Seal



Centrifugal Pump, Type LKH-70
Single and Flushed Shaft Seal

Pos.	Qty.	Denomination	11-18.5 kW	22 kW	30-37 kW	45 kW	55-75 kW	Pos.	Qty.	Denomination	11-75 kW
3	4	Screw	9611-99-3241	9611-99-3242	9611-99-3243	9611-99-3243	9611-99-3243	Parts for flushed shaft seal			
5a	1	Compression ring with thread	9612-1336-03	9612-1336-04	9612-1336-07	9612-1336-07	9612-1336-08	40	1	Seal housing	9612-5144-01
5b	1	Compression ring without thread	9612-1337-03	9612-1337-04	9612-1337-07	9612-1337-07	9612-1337-08	41	2	Screw for seal housing	9611-99-3232
6	6	Screw	9611-99-3198	9611-99-3198	9611-99-3198	9611-99-3198	9611-99-3266	42	2	Tube	9612-3589-03
6a	6	Washer	9611-99-3199	9611-99-3199	9611-99-3199	9611-99-3199	9611-99-3199	Accessories			
7	1	Shaft with pin (pos 8)	9612-5126-01	9612-5123-01	9612-5122-01	9612-5122-01	9612-5010-01	1	Tool complete	9612-1371-02	
10	1	Drive ring	9612-5149-01	9612-5149-01	9612-5149-01	9612-5149-01	9612-5149-01	Service kit for single shaft seal			
16	1	Adaptor	9612-5119-01	9612-5119-01	9612-5118-01	9612-5118-01	9612-5008-01	☐	Service kit, EPDM	9611-92-2238	
17	4	Screw for adaptor	9611-99-2163	9611-99-2164	9611-99-2164	9611-99-2164	9611-99-2164	☐	Service kit, NBR	9611-92-2239	
18	4	Nut for adaptor	9611-99-2160	9611-99-2160	9611-99-2160	9611-99-2160	9611-99-2160	☐	Service kit, FPM	9611-92-2240	
19	4	Washer for adaptor	9611-99-1886	9611-99-1886	9611-99-1886	9611-99-1886	9611-99-1886	☐	Service kit, FEP	9611-92-2241	
20	4	Nut	9611-99-0353	9611-99-0353	9611-99-0353	9611-99-0353	9611-99-0353	Service kit for flushed shaft seal			
21	4	Washer	9611-99-2559	9611-99-2559	9611-99-2559	9611-99-2559	9611-99-2559	◆	Service kit, EPDM	9611-92-2242	
22	1	Safety guard	9612-5145-03	9612-5145-03	9612-5145-03	9612-5145-03	9612-5145-04	◆	Service kit, NBR	9611-92-2243	
23	1	Screw for safety guard	9611-99-3239	9611-99-3239	9611-99-3239	9611-99-3239	9611-99-3239	◆	Service kit, FPM	9611-92-2244	
24	8	Cap nut	9611-99-2593	9611-99-2593	9611-99-2593	9611-99-2593	9611-99-2593	◆	Service kit, FEP	9611-92-2245	
24a	8	Spring washer	9611-99-1887	9611-99-1887	9611-99-1887	9611-99-1887	9611-99-1887	Parts marked with ☐/◆ are included in the service kits.			
25	1	Back plate	9612-5146-01	9612-5146-01	9612-5146-01	9612-5146-01	9612-5146-01	Conversion kit, single to flushed shaft seal 9611-92-2246 =			
26◆ ☐	1	O-ring EPDM (standard)	9611-99-3211	9611-99-3211	9611-99-3211	9611-99-3211	9611-99-3211	Pos 40+41+42+43+44+45			
26	1	O-ring NBR	9611-99-3212	9611-99-3212	9611-99-3212	9611-99-3212	9611-99-3212				
26	1	O-ring FPM	9611-99-3213	9611-99-3213	9611-99-3213	9611-99-3213	9611-99-3213				
26	1	O-ring FEP	9611-99-3214	9611-99-3214	9611-99-3214	9611-99-3214	9611-99-3214				
28	8	Pin bolt	9611-99-2169	9611-99-2169	9611-99-2169	9611-99-2169	9611-99-2169				
29	1	Pump casing, IDF	9612-5147-01	9612-5147-01	9612-5147-01	9612-5147-01	9612-5147-01				
29	1	Pump casing, SMS	9612-5147-02	9612-5147-02	9612-5147-02	9612-5147-02	9612-5147-02				
29	1	Pump casing, DIN	9612-5147-03	9612-5147-03	9612-5147-03	9612-5147-03	9612-5147-03				
29	1	Pump casing, ISO	9612-5147-04	9612-5147-04	9612-5147-04	9612-5147-04	9612-5147-04				
29	1	Pump casing, BS	9612-5147-05	9612-5147-05	9612-5147-05	9612-5147-05	9612-5147-05				
29	1	Pump casing, flange DN100/DN80	9612-1380-12	9612-1380-12	9612-1380-12	9612-1380-12	9612-1380-12				
36	1	Impeller nut	9612-5011-01	9612-5011-01	9612-5011-01	9612-5011-01	9612-5011-01				
37	1	Impeller	9612-4994-08	9612-4994-08	9612-4994-08	9612-4994-01	9612-4994-01				
38◆ ☐	1	O-ring EPDM	9611-99-3215	9611-99-3215	9611-99-3215	9611-99-3215	9611-99-3215				
38	1	O-ring NBR	9611-99-3216	9611-99-3216	9611-99-3216	9611-99-3216	9611-99-3216				
38	1	O-ring FPM	9611-99-3217	9611-99-3217	9611-99-3217	9611-99-3217	9611-99-3217				
38	1	O-ring FEP	9611-99-3218	9611-99-3218	9611-99-3218	9611-99-3218	9611-99-3218				
Legs											
30a	1	Support bar, right	9612-1322-03	9612-1322-04	9612-3422-01	9612-3422-01	9612-3422-01				
30b	1	Support bar, left	9612-1323-03	9612-1323-04	9612-3422-01	9612-3422-01	9612-3422-01				
31	4	Leg	9612-3967-01	9612-3967-01	9612-3967-01	9612-3967-01	9612-3967-01				
32	4	Screw (Period 9711-)	9611-99-1126	9611-99-1126	9611-99-1907	9611-99-1907	9611-99-1907				
32	4	Screw (Period -9711)	9611-99-1907	9611-99-1907	9611-99-1907	9611-99-1907	9611-99-1907				
33	4	Nut	9611-99-0587	9611-99-0587	9611-99-0587	9611-99-0587	9611-99-0935				
34	4	Spring washer	9611-99-0676	9611-99-0676	9611-99-0676	9611-99-0676	9611-99-3267				
35	4	Screw	9611-99-1834	9611-99-1834	2210463-07	2210463-07	9611-99-3268				
35a	4	Washer	9611-99-0706	9611-99-0706	9611-99-0703	9611-99-0703	9611-99-3269				
46	4	Distance sleeve	31438-0390-2	31438-0390-1	31438-0390-3	31438-0390-3	9612-5184-01				
47	2	Leg bracket					9611-99-3260				
48	4	Nut for leg					9612-5185-01				
49	4	Screw for leg									
53	4	Pivot screw			9611-99-1763	9611-99-1763					
Pos.	Qty.	Denomination	11kW	15 kW	18.5 kW	22 kW	30 kW	37 kW	45 kW	55 kW	75 kW
1	1	Motor ¹⁾ ABB	9611-3454-18	9611-3454-20	9611-3454-14	9611-3454-15	9612-3454-04 ²⁾	9612-3454-06 ³⁾	9612-3454-08 ³⁾	9612-3454-10 ³⁾	9612-3454-12 ³⁾
	1	Motor ²⁾ ABB	9611-3454-17	9611-3454-19	9611-3454-13	9611-3454-15	9612-3454-03 ³⁾	9612-3454-05 ³⁾	9612-3454-07 ³⁾	9612-3454-09 ³⁾	9612-3454-11 ³⁾
		Motor ³⁾ BROOK					9612-6055-02	9612-6055-04	9612-6055-06	9612-6055-08	9612-6055-10
		Motor ²⁾ BROOK					9612-6055-01	9612-6055-03	9612-6055-05	9612-6055-07	9612-6055-09
2	1	Shroud ABB	9612-1390-05	9612-1390-05	9612-1390-05	9612-1390-06	9612-1390-07 ³⁾	9612-1390-07 ³⁾	9612-1390-07 ³⁾	9612-1390-16 ³⁾	9612-1390-16 ³⁾
	1	Shroud BROOK (Period 9907-)					9612-5938-01	9612-5938-01	9612-5938-01	9612-5938-04	9612-5938-04
2a	1	Edge list (included in pos. 2)									
¹⁾ 3~ 50Hz, 380-420VD/660-690VY -standard ²⁾ 3~ 50Hz, 220-240VD/380-420VY -Option 3~ 60Hz, 440-480VD -standard ³⁾ Motor ABB (Period -9907) 3~ 60Hz, 250-280VD/440-480VY -Option											

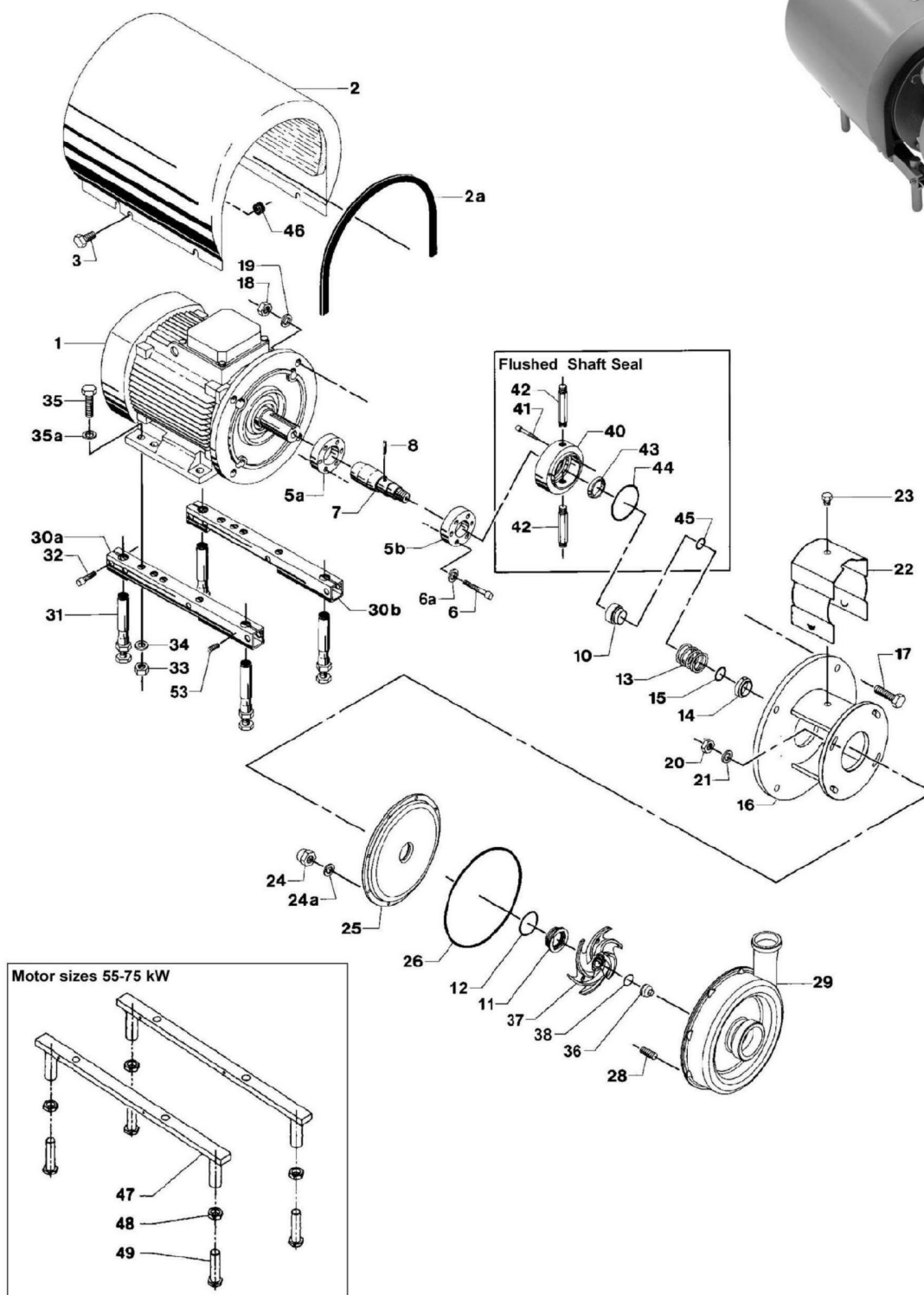
Recommended Spare Parts: Service kits.

900020/0

Surface roughness, product wetted parts: Ra ≤ 0.8 μm

Pos.	Qty.	Denomination	11-37 kW	45-75 kW
25	1	Back plate	9612-5146-07	9612-5146-07
27	1	Impeller	9612-4994-12	9612-4994-03
29	1	Pump casing, IDF	9612-5147-06	9612-5147-06
1	1	Pump casing, SMS	9612-5147-07	9612-5147-07
1	1	Pump casing, DIN	9612-5147-08	9612-5147-08
1	1	Pump casing, ISO	9612-5147-09	9612-5147-09
1	1	Pump casing, BS	9612-5147-10	9612-5147-10
36	1	Impeller nut	9612-5011-02	9612-5011-02

Centrifugal Pump, Type LKH-70 and LKH-80 Shaft Seals



Centrifugal Pump, Type LKH-80
Single and Flushed Shaft Seal

Pos.	Qty.	Denomination	11-18.5 kW	22 kW	30-37 kW	45 kW	55-75 kW	Pos.	Qty.	Denomination	11-75 kW
3	4	Screw	9611-99-3241	9611-99-3242	9611-99-3243	9611-99-3243	9611-99-3243	Parts for flushed shaft seal			
5a	1	Compression ring with thread	9612-1336-03	9612-1336-04	9612-1336-07	9612-1336-07	9612-1336-08	40	1	Seal housing	9612-5144-01
5b	1	Compression ring without thread	9612-1337-03	9612-1337-04	9612-1337-07	9612-1337-07	9612-1337-08	41	2	Screw for seal housing	9611-99-3232
6	6	Screw	9611-99-3198	9611-99-3198	9611-99-3198	9611-99-3198	9611-99-3266	42	2	Tube	9612-3589-03
6a	6	Washer	9611-99-3199	9611-99-3199	9611-99-3199	9611-99-3199	9611-99-3199	Accessories			
7	1	Shaft with pin (pos.8)	9612-5126-01	9612-5123-01	9612-5122-01	9612-5122-01	9612-5010-01	1		Tool complete	9612-1371-02
10	1	Drive ring	9612-5149-01	9612-5149-01	9612-5149-01	9612-5149-01	9612-5149-01	Service kit for single shaft seal			
16	1	Adaptor	9612-5119-01	9612-5119-01	9612-5118-01	9612-5118-01	9612-5008-01	☐		Service kit, EPDM	9611-92-2327
17	4	Screw for adaptor	9611-99-2163	9611-99-2164	9611-99-2164	9611-99-2164	9611-99-2164	☐		Service kit, NBR	9611-92-2328
18	4	Nut for adaptor	9611-99-2160	9611-99-2160	9611-99-2160	9611-99-2160	9611-99-2160	☐		Service kit, FPM	9611-92-2329
19	4	Washer for adaptor	9611-99-1886	9611-99-1886	9611-99-1886	9611-99-1886	9611-99-1886	☐		Service kit, FEP	9611-92-2330
20	4	Nut	9611-99-0353	9611-99-0353	9611-99-0353	9611-99-0353	9611-99-0353	Service kit for flushed shaft seal			
21	4	Washer	9611-99-2559	9611-99-2559	9611-99-2559	9611-99-2559	9611-99-2559	◆		Service kit, EPDM	9611-92-2331
22	1	Safety guard	9612-5145-03	9612-5145-03	9612-5145-03	9612-5145-03	9612-5145-04	◆		Service kit, NBR	9611-92-2332
23	1	Screw for safety guard	9611-99-3239	9611-99-3239	9611-99-3239	9611-99-3239	9611-99-3239	◆		Service kit, FPM	9611-92-2333
24	8	Cap nut	9611-99-2593	9611-99-2593	9611-99-2593	9611-99-2593	9611-99-2593	◆		Service kit, FEP	9611-92-2334
24a	8	Spring washer	9611-99-1887	9611-99-1887	9611-99-1887	9611-99-1887	9611-99-1887	Parts marked with □◆ are included in the service kits.			
25	1	Back plate	9612-5146-02	9612-5146-02	9612-5146-02	9612-5146-02	9612-5146-02	Conversion kit, single to flushed shaft seal 9611-92-2246 = Pos 40+41+42+43+44+45			
26□◆	1	O-ring, EPDM (standard)	9611-99-3396	9611-99-3396	9611-99-3396	9611-99-3396	9611-99-3396				
26	1	O-ring, NBR	9611-99-3397	9611-99-3397	9611-99-3397	9611-99-3397	9611-99-3397				
26	1	O-ring, FPM	9611-99-3398	9611-99-3398	9611-99-3398	9611-99-3398	9611-99-3398				
26	1	O-ring, FEP	9611-99-3399	9611-99-3399	9611-99-3399	9611-99-3399	9611-99-3399				
28	8	Pin bolt	9611-99-2169	9611-99-2169	9611-99-2169	9611-99-2169	9611-99-2169				
29	1	Pump casing, ISO-clamp	9612-5147-22	9612-5147-22	9612-5147-22	9612-5147-22	9612-5147-22				
29	1	Pump casing, DIN	9612-5147-23	9612-5147-23	9612-5147-23	9612-5147-23	9612-5147-23				
36	1	Pump casing, flange DN150/DN100	9612-1380-15	9612-1380-15	9612-1380-15	9612-1380-15	9612-1380-15				
36	1	Impeller nut	9612-5011-01	9612-5011-01	9612-5011-01	9612-5011-01	9612-5011-01				
37	1	Impeller	9612-5197-03	9612-5197-03	9612-5197-03	9612-5197-03	9612-5197-01				
38□◆	1	O-ring EPDM	9611-99-3215	9611-99-3215	9611-99-3215	9611-99-3215	9611-99-3215				
38	1	O-ring NBR	9611-99-3216	9611-99-3216	9611-99-3216	9611-99-3216	9611-99-3216				
38	1	O-ring FPM	9611-99-3217	9611-99-3217	9611-99-3217	9611-99-3217	9611-99-3217				
38	1	O-ring FEP	9611-99-3218	9611-99-3218	9611-99-3218	9611-99-3218	9611-99-3218				
Legs											
30a	1	Support bar, right	9612-1322-03	9612-1322-04	9612-3422-01	9612-3422-01					
30b	1	Support bar, left	9612-1323-03	9612-1323-04	9612-3422-01	9612-3422-01					
31	4	Leg	9612-3967-01	9612-3967-01	9612-3967-01	9612-3967-01					
32	4	Screw	9611-99-1126	9611-99-1126	9611-99-1907	9611-99-1907					
33	4	Nut	9611-99-0587	9611-99-0587	9611-99-0587	9611-99-0587	9611-99-0935				
34	4	Spring washer	9611-99-0676	9611-99-0676	9611-99-0676	9611-99-0676	9611-99-3267				
35	4	Screw	9611-99-1834	9611-99-1834	2210463-07	2210463-07	9611-99-3268				
35a	4	Washer	9611-99-0706	9611-99-0706	9611-99-0703	9611-99-0703	9611-99-3269				
46	4	Distance sleeve	31438-0390-2	31438-0390-1	31438-0390-3	31438-0390-3	9612-5184-01				
47	2	Leg bracket					9611-99-3260				
48	4	Nut for leg					9612-5185-01				
49	4	Screw for leg									
53	4	Pivot screw			9611-99-1763	9611-99-1763					
Pos.	Qty.	Denomination	11kW	15 kW	18.5 kW	22 kW	30 kW	37 kW	45 kW	55 kW	75 kW
1	1	Motor ¹ ABB	9611-3454-18	9611-3454-20	9611-3454-14	9611-3454-16					
	1	Motor ² ABB	9611-3454-17	9611-3454-19	9611-3454-13	9611-3454-15					
		Motor ³ BROOK									
		Motor ³ BROOK									
2	1	Shroud ABB	9612-1390-05	9612-1390-05	9612-1390-05	9612-1390-06	9612-8055-02	9612-8055-04	9612-8055-06	9612-8055-08	9612-8055-10
	1	Shroud BROOK					9612-8055-01	9612-8055-03	9612-8055-05	9612-8055-07	9612-8055-09
2a	1	Edge list (included in pos. 2)					9612-5938-01	9612-5938-01	9612-5938-01	9612-5938-04	9612-5938-04
¹ 3~50Hz, 380-420V/D/660-690VY - standard 3~60Hz, 440-480V - standard											
² 3~50Hz, 220-240V/D/380-420VY -Option 3~60Hz, 250-280V/D/440-480VY -Option											

Recommended Spare Parts: Service kits.
00058/0

Surface roughness, product wetted parts: Ra ≤ 0.8 μm

Pos.	Qty.	Denomination	11-37 kW	45-75 kW
25	1	Back plate	9612-5146-06	9612-5146-08
27	1	Impeller	9612-5197-05	9612-5197-02
29	1	Pump casing, ISO-clamp	9612-5147-24	9612-5147-24
1	1	Pump casing, DIN	9612-5147-25	9612-5147-25
1	1	Impeller nut	9612-5011-02	9612-5011-02

This diagram shows the exploded view of a ballpoint pen assembly. The components are numbered as follows: 11 (Ballpoint tip), 12 (Tip holder), 13 (Spring), 14 (Spring cap), 15 (Spring cap), 16 (Spring cap), 17 (Spring cap), 18 (Spring cap), 19 (Spring cap), 20 (Spring cap), 21 (Spring cap), 22 (Spring cap), 23 (Spring cap), 24 (Spring cap), 25 (Spring cap), 26 (Spring cap), 27 (Spring cap), 28 (Spring cap), 29 (Spring cap), 30 (Spring cap), 31 (Spring cap), 32 (Spring cap), 33 (Spring cap), 34 (Spring cap), 35 (Spring cap), 36 (Spring cap), 37 (Spring cap), 38 (Spring cap), 39 (Spring cap), 40 (Spring cap), 41 (Spring cap), 42 (Spring cap), 43 (Spring cap).