

Spare parts for SMC 104-106-108 & TSMC 108 Mk3 Type S-L и E

Spare parts for SMC 104-106-108 & TSMC 108 Mk3 Type S-L and E							
Relevant drawings for compressor		SMC	TSMC				
SMC 100 Mk 3, S-L-E (delivered after 89 - 10)		0661-521	0661-522				
Cylinder liner ect. SMC - TSMC 104,106, 108 Mk 3 (after 89.10)		0661-520					
SMC 100 M k3		0661-755	0661-756				
Cylinder liner ect. SMC - TSMC 100 Mk3		0661-605					
*) If the compressor runs as heat pump, this must be mentioned when ordering, to ensure a correct delivery							
Pos.	Designation	Weight each in kg	Number each compressor				Part No
			SMC 104	SMC 106	SMC 108	TSMC 108	
	Compressor frame						
1A-1	Frame SMC 104	240.000	1				3111-065
1A-2	Frame SMC 106	274.000		1			3111-066
1A-3	Frame SMC 108	285.000			1		3111-067
1 A-4	Frame TSMC 108	290.000				1	3111-068
1B-1	Oil level glass dia. 80	0.230	1	1	1	1	1226-015
1C-1	O-ring PRP 137 - 52,07 x 2,62 *)	0.002	1	1	1	1	1331-140
1D-1	Hexagon head MS x 16	0.010	4	4	4	4	1424-148
	Top cover - air cooled						
2A-1	Top cover S-L,	19.000	1	2	3	2	3113-191
2A-2	Top cover with flange S-L	20.500	1	1	1	2	3113-192
2A-3	Top cover E	19.000	1	2	3	2	3113-177
2A-4	Top cover with flange E	20.500	1	1	1	2	3113-176
2C-1	Gasket for top cover	0.020	2	3	4	4	2353-151
2D-1	Hexagon head M14x90	0.120	30	46	62	60	1424-083

2F-1	Hexagon head M14 x 120	0.165	2	2	2	4	1424-090
2G-1	Washer for M14 dia- 28/15 x 2,5	0.010	32	48	64	64	1436-037
	Top cover-water cooled (see sketch below)						
2A-1	Top cover S-L	19.000	1	2	3	2	3113-191
2A-2	Top cover with flange S-L	20.500	1	1	1	2	3113-192
2A-3	Top cover E	19.000	1	2	3	2	3113-177
2A-4	Top cover with flange E	20.500	1	1	1	2	3113-176
2B-1	Water cover for cover with flange	5.800	1	1	1	2	3113-195
2B-2	Water cover left	5.800	1	1	2	2	3113-193
2B-3	Water cover right	5.800		1	1		3113-194
2C-1	Gasket for top cover	0.020	2	3	4	4	2353-151
2D-1	Gasket for water cover pos. 2B-1	0.020	1	1	1	2	2353-176
2D-2	Gasket for water cover pos, 2B-2/2B-3	0.020	1	2	3	2	2353-175
2E-2	Hexagon head screw M14 x 110	0.150	30	46	62	60	1424-087
2F-1	Hexagon head screw M14 x 120	0.165	2	2	2	4	1424-090
2G-1	Washer for Mt4, dia, 28/15 x 2,5	0.010	32	48	64	64	1436-037
2H-1	Hexagon head screw Mi 0 x 35	0.050	4	5	8	9	1424-193
2J-1	Washer for M10, dia. 21/10,5 x 2	0.008	4	6	8	8	1436-035
	Side cover o sir cooled						
3A-1	Side cover	10.900	2	2	2	2	3113-148
3C-1	Gasket for side cover	0.020	2	2	2	2	2353-151
3E-1	Hexagon head screw M14 x 65	0,045	32	32	32	32	1424-246
3G-1	Washer for M14, dia. 28/15 x 2.5	0.010	32	32	32	32	1436-037
	Side cover - water cooled						
3A-2	Side cover t 15,000	15.000	2	2	2	2	3113-140
3B-1	Water cover	5.800	2	2	2	2	3113-

							138
3C-1	Gasket for side cover	0.020	2	2	2	2	2353-151
3D-1	Gasket for water cover	0.020	2	2	2	2	2353-154
3E-2	Hexagon head screw M14 x 55	0.065	28	28	28	28	1424-244
3F-1	Hexagon head screw M14 x 35	0.045	4	4	4	4	1424-240
3G-1	Washer for M14, dia. 28/15 x 2,5	0.010	32	32	32	32	1436-037
3H-1	Hexagon head screw M 12 x 40	0.050	2	2	2	2	1424-217
3J-1	Washer for M12. dia. 24/13 x 2,5	0.008	2	2	2	2	1436-036
	End cover at pump end						
4A-1	End cover	17.950	1	1	1	1	3113-028
4B-1	Gasket	0.020	1	1	1	1	2353-011
4C-1	Hexagon head screw M14 x 100	0.150	14	14	14	14	1424-085
40-1	Washer for M14 dia. 28/15x2,5	0.010	14	14	14	14	1436-037
	Bearing cover at pump end						
5A-1	Bearing cover	9.100	1	1	1	1	3113-031
58-1	Hexagon head screw M14 x 35	0,055	6	6	6	6	1424-240
5C-1	Bushing	1.200	1	1	1	1	2132-021
5C-2	Bushing for repair (0,5 mm underside)	1.220	1	1	1	1	2132-022
5D-1	Gascet-0,3 mm	0,005	1	1	1	1	2353-013
5D-2	Gascet-0,5 mm	0,006	1	1	1	1	2353-100
5D-3	Gasket - 0,75 mm	0.010	1	1	1	1	2353-014
5D-4	Gasket -1.0 mm	0.015	1	1	1	1	2353-015
	Bearing cover at shaft seal end						
6A-1	Bearing cover	23.000	1	1	1	1	3113-124
6B-1	Hexagon head screw M14 x 60	0,085	14	14	14	14	1424-245
6C-3	Bushing	1.200	1	1	1	1	2132-021

6C-4	Bushing for repair (0,5 mm undersize)	1.200	1	1	1	1	2132-022
6D-1	Gasket	0.020	1	1	1	1	2353-011
6E-1	Washer for M14, dia. 28/15 x 2,5	0.010	14	14	14	14	1436-037
6F	Valve for prelubrication		1	1	1	1	2412-585
6G	Nut		1	1	1	1	2313-045
6H	Speciai joint		1	1	1	1	2334-027
6J	Cap		1	1	1	1	2313-027
6K	Joint 3/8"		1	1	1	1	1349-053
6L	Alu gasket		1	1	1	1	2356-123
	Shaft seal cover for type SB100						
8A-2	Shaft seal cover Δ		1	1	1	1	3113-215
8B-1	Gasket for shaft seal Δ		1	1	1	1	2353-005
8C-1	Hexagon head screw M10 x 40 Δ		6	6	6	6	1424-194
8D-1	Hose connection G 1/4" Δ		1	1	1	1	1345-143
8E-1	Plastic hose 3/16" x 300 Δ		1	1	1	1	1241-190
8F-1	Splash ring Δ		1	1	1	1	1437-295
8G-1	Locking ring dia. 111/105 x 3		1	1	1	1	3126-169
8H-1	Groover pin dia. 4x20		1	1	1	1	1446-081
	Shaft seat type SB 100						
10-3	Shaft seal complete,includes all parts		1	1	1	1	3126-177
	marked Δ						
	for compressor nos,after 98379 incl.						
10-4	Shaft seal to replace incl.part nos		1	1	1	1	3126-170
	10E-2, 10F-1. 10D-1, 10G-1. 10J-1,						
	10L-2						
	for compressor nos.up to 98378 incl.						
10-5	Shaft seal to replace incl.part nos		1	1	1	1	3126-178
	10E-2. 10F-1, 10D-1, 10G-2, 10L-2,						

	10J-1				1		
	for compressor nos.up to 98379 incl.						
10A-1	Retaining flange Δ		1	1	1	1	3126-166
10B-1	Spring Δ		10	10	10	10	2142-058
10D-1	O-ring dia. 75,6 X 3,5 *) Δ		1		1	1	1331-075
10E-2	Slide ring(cast iron) Δ		1	1	I	1	3126-175
10F-1	Slide ring (special carbon) Δ		1	1	I	1	3126-168
10G-1	O-ring dia. 82.15 X 3.5 *)		1	1	1	1	1331-077
10G-2	Seating ring Δ		1	1	1	1	1332-124
10H-1	Locking ring Δ		1	1	1	1	3126-153
10J-1	Socket cap screw M 5x 16 Δ		4	4	4	4	1413-329
10L-2	Back-up ring Δ		1	1	1	1	1332-125
10M-2	Locking ring Δ		1	1	1	1	1437-046
	Oil pump						
11-1	Oil pump	2.400	1	1	1	1	3141-004
11A-1	Housing	0.800	1	1	1	1	
11B-1	Cover	0.800	1	1	1	1	
11E -1	Gear wheel	0.330	1	1	1	1	
11F-1	Gear wheel	0.400	1	1	1	1	
11G-1	Gear wheli for pump pinion	0.660	1	1	1	1	3141-046
11H-1	Gear wheel	0.530	1	1	1	1	3141-047
11J-1	Lock nut M10 x 10,7	0.015	1	1	1	1	1433-080
11K-1	Gasket - paper - 0.2 mm	0.001	1	1	1	1	2353-021
11L-1	Washer for M 10dia. 21/10,5 x 2	0.005	1	1	1	1	1436-035
11M-1	Hexagon head screw M 6 x 30	0.010	4	4	4	4	1424-153
11N -1	Key - 5 x 5 x 12	0.002	1	1	1	1	1526-050
11P-1	Gasket dia. 32/27 x 1,5	0.005	1	1	1	1	2356-139
11Q-1	Hexagon head screw M12 x 25	0.040	2	2	2	2	1424-

							215
11R-1	Spring washer dia. 12	0.002	2	2	2	2	1437-081
11 S-1	Threaded nipple - 3/4" x 7/8" BSP	0.230	1	1	1	1	2311-007
11T-1	Spring washer - dia- 11,1 /6.1 x 1,6	0.005	8	8	8	8	1437-022
11U-1	Hexagon head screw M 6 x 35	0.012	4	4	4	4	1424-155
11V -1	Guide pin		2	2	2	2	1445-066
	Unloading cylinder						
12-1	Unloading cylinder	1,765	1	1	1		3135-149
	Complete L=75, S=21.5						
12-2	Unloading cylinder	1.790	1	1	1	1	3135-150
	Complete L=100. S=46,5						
12-3	Unloading cylinder	1.815		1	1	1	3135-151
	Complete L=125, S=71,5						
12-4	Unloading cylinder	1.840			1	1	3135-152
	Complete L=150, S=96,5						
12-5	Unloading cylinder (HP)	1,8				1	3135-161
	Complete L=82, S=24,5						
12A-1	Unloading cylinder	1.700	2	3	4	3	3135-147
	(SMC and TSMC LP)						
12A-2	Unloading cylinder	1.800				1	3135-148
	(TSMC HP)						
12B-1	Piston	0.220	2	3	4	4	3135-034
12C-1	Piston rod 75 mm (SMC only)	0.065	1	1	1		3135-041
12C-2	Piston rod 100 mm	0.090	1	1	1	1	3135-042
12C-3	Piston rod 125 mm	0.115		1	1	1	3135-043
12C-4	Piston rod 150 mm	0.140			1	1	3135-044
12C-5	Piston rod 82 mm,grounded	0.090				1	3135-140
	(TSMC HP only)						
12D-1	Threaded plug - 3/8" BSP	0.065	2	3	4	4	2314-

							025
12E-1	Gasket dia. 25/17 x 1,5	0.002	2	3	4	4	2356-130
12F-1	Seeger ring dia. 52 (SMC and TSMC LP)	0.008	2	3	4	3	1437-155
12G-1	Spring guide	0.040	2	3	4	4	2145-004
12H-1	Spring retainer (SMC and TSMC LP)	0.110	2	3	4	3	3135-057
12J-1	Spring (outer)	0.065	2	2	4	4	2142-056
12J-2	Spring (inner)	0.035	2	3	4	4	2142-055
12K-1	Benzing ring - dia. 9 mm	0,002	2	3	4	4	1437-105
12K-2	Benzing ring - dia. 7 mm (SMC and TSMC LP)	0.001	2	3	4	3	1437-103
12L-1	Hexagon head screw M10 x 30	0.030	8	12	16	16	1424-192
12M-1	Cover (TSMC HP only)	0.800				1	3135-105
12N-1	Gasket for cover (TSMC HP only)	0.010				1	2353-025
12P-1	Look nut - UNF 3/8" (TSMC HP only)	0.010				1	1433-100
12Q-1	Socket cap screw M4 x 16 (TSMC HP only)	0.010				6	1413-007
12R-1	O-ring PRP n 2 12.37x2,62 (TSMC HP only)"	0.001				1.	1331-013
12S-1	Oasket 100 x 100x2	0.010	2	3	4	4	2354-023
	Frame for unloading mechanism						
	Frame complete incl. pos. 13E-1						3184-216
13A-1	Suspension rod	0.290	2	3	4	4	
13B-1	Suspension rod	0.290	2	3	4	4	
13C-1	Cross piece	0.330	2	3	4	4	
13D-1	Cross piece	0.330	2	3	4	4	3135-188
13E-1	Countersunk screw M6 x 16	0,020	8	12	16	16	1413-092
	Bracket for unloading mechanism						
14A-1	Bracket with pin	0.065	4	6	8	7	3135-060
14B.1	Spacing ring	0.005	8	12	16	14	2124-003
14C-1	Hexagon head screw M6 x 30	0.010	8	12	16	14	1424-154

14D-1	Spring washer - dia. 6	0.005	8	12	16	14	1437-022
	Rocker for unloading mechanism						
15A-1	Rocker	0.050	8	12	16	16	3135-096
15B-1	Bearing for SMC and TSMC LP	0.006	8	12	16	12	3135-099
15B-2	Bearing for TSMC HP	0.006				4	3135-101
15C-1	Spring retainer	0.001	8	12	16	16	2145-001
15D-1	Spring	0.007	8	12	16	16	2142-061
15E-1	Washer for bearing cup - 0.5 mm	0.001					2114-003
	Crankshaft -all without certificate						
16A-1	Crankshaft for SMC 104S,complete	42.400	1				3121-018
16A -2	Crankshaft for SMC 106S, complete	45.400		1			3121-019
16A -3	Crankshaft for SMC 108S and TSMC 108S, complete	47.600			1	1	3121-020
16A -4	Crankshaft for SMC 104L, complete	45.600	1				3121-104
16A -5	Crankshaft for SMC 106L, compieie	47.800		1			3121-105
16A -6	Crankshaft for SMC 108L and TSMC 108L, complete	50.600			1	1	3121-106
16A-11	Crankshaft for SMC 104E, complete		1				3121-213
16A -12	Crankshaft for SMC 106E, complete			1			3121-214
16A -13	Crankshaft for SMC 108E and TSMC 108E. complete						3121-215
16B-1	Plain washer with pin	0.800	1	1	1	1	2125-084
16C-1	Key- 18 x 11 x 55	0.080	1	1	1	1	2123-005
16D-1	Hexagon head screw M16 x. 55	0.050	1	1	1	1	1424-104
16E-1	Spring washer-dia. 16	0.004	1	1	1	1	1437-027
16F-1	Plug M12 S-type	0.010	1	1	1	1	1413-260
16F-2	Plug 1/4" L-type	0.010	3	3	3	3	1343-141
	Connecting rod						
17-1	Connecting rod, compieie SMC and TSMC LP	2.700	4	6	8	6	3123-

							004
17-2	Connecting rod, complete TSMC HP	2.700				2	3123-006
17A-1	Half-section of bearing	0.080	8	12	16	16	2133-003
17A-2	Half-section of bearing [0.5 mm undersize)	0.080	8	12	16	16	2133-004
17B-1	Bushing for piston pin SMC and TSMC LP	0.200	4	6	8	6	2132-004
17B-2	Needle roller bearing TSMC HP	0.200				2	1511-275
17C-1	Bolt for connecting rod	0.055	8	12	16	16	2111-068
17D-1	Lock nut-3/8" UNF	0.010	8	12	16	16	1433-116
	Piston with pin and rings						
18-1	Piston with pin and rings S	1.320	4	6	8	8	3124-002
18-2	Piston with pin and rings L	1.320	4	6	8	8	3124-052
18-3	Piston with pin and rings E	1.320	4	6	8	8	3124-065
18A-1	Piston pin	0.500	4	6	8	8	3125-084
18B-1	Piston ring	0.025	8	12	16	16	3125-130
18C-1	OH scraper rings	0.030	4	6	8	8	3125-065
18D-1	Seeger-ring - dia- 40 (inside diameter)	0.005	8	12	16	16	1437-150
	Cylinder Uner with sction valve						
19-1	Cylinder liner with suction valve R717, SMC - TSMC LP, S and L	4.100	4	6	8	6	3112-085
19-2	Cylinder liner with suction valve HFC/HCFC, SMC - TSMC LP, S and L	4.100	4	6	8	6	3112-086
19-3	Cylinder liner with suction valve R717, SMC-TSMC HP, and L	4.100				2	3112-087
19-4	Cylinder liner with suction valve HFC/HCFC, TSMC HP. S and L	4.100				2	3112-088
19-5	Cylinder liner with suction valve R717, SMC - TSMC LP,E	4.500	4	6	8	6	3112-081
19-6	Cylinder liner with suction valve R717. SMC-TSMC HP. E	4.500				2	3112-097
19A-1	Cylinder liner S and L	3.500	4	6	8	8	3112-065
19A-2	Cylinder liner, E	4.000	4	6	8	8	3112-080
19B-1	Unloading rings with pins, S and L	0.400	4	6	8	8	3135-

							054
19B-2	Unloading'rings with pins, E	0.500	4	6	8	8	3135-173
19C-1	Washer - dia. 8/4,3 x 0,5	0.001	24	36	48	48	2114-001
19D-1	Spring for unloading ring	0.001	24	36	48	48	2142-034
19E-1	Tension spring - 342 mm	0.015	4	6	8	8	2142-048
19F-1	Ring plate for suction valve	0.035	4	6	8	8	3131-021
19G-1	Valve spring	0.001	24	36	48	48	2141-047
19H-1	Suction vaive retaining plate R717	1.400	4	6	8	8	3132-083
19H-2	Suction vaive retaining plate R12/R22	1.400	4	6	8	8	3132-095
19J-1	Guide ring for discharge valve	0.450	4	6	8	8	3134-008
19K-1	Gasket for cylinder liner - 0,5 mm	0.005	4	6	8	8	2356-111
19K-2	Gasket for cylinder liner - 0,8 mm	0.006	4	6	8	8	2356-233
19M-1	O-ring 107,55 x 3,53') TSMC HP	0.002				2	1331-085
19N-1	Socket cap screw M6 x 30	0.010	24	36	48	48	1413-343
19T-1	Gasket - dia. 163/141 x 0,2 mm	0.001	4	6	8	8	2353-140
	Discharge valve**)						
20-1	Discharge valve - R717 - HP	1.200	4	6	8	2	3136-089
20-2	Discharge valve-R717-LP	1.200	4	6	8	6	3136-087
20-3	Discharge valve - HFC/HCFC - HP	1.200	4	6	8	2	3136-088
20-4	Discharge valve - HFC/HCFC - LP	1.200	4	6	8	6	3136-086
20-5	Discharge valve - HFC/HCFC - VHP	1.200	4	6	8		3136-085
20A-1	Discharge valve seat	0.250	4	6	8	8	3133-027
20B-1	Retaining plate - R717 - HP	1.000	4	6	S	2	3132-092
20B-2	Retaining plate - R717-LP	1.000	4	6	8	6	3132-085
20B-3	Retaining plate - HFC/HCPC - HP	1.000	4	6	8	2	3132-093

20B-4	Retaining plate - HFC/HCFC - LP	1.000	4	6	8	6	3132-091
20B-5	Retaining plate - HFC/HCFC - VHP	1.000	4	6	8	-	3132-082
20C-1	Ring plate	0.030	4	6	8	8	3131-015
20D-1	Special screw M 12x 60	0.055	4	6	8	8	1413-121
20E-1	Nut M12x 1,25	0.015	8	12	16	16	1432-075
20F-1	Spring guide	0.015	4	6	8	8	2145-008
20G-1	Valve spring-R717- HP	0,001	32	48	64	16	2141-047
20G-1	Valve spring-R717-LP	1.000	24	36	48	36	2141-047
20G-1	Valve spring - HFC/HCFC - HP	0.001	43	72	56	24	2141-047
20G-1	Valve spring - HFC/HCFC - LP	0.001	24	36	48	36	2141-047
20G-1	Valve spring - HFC/HCFC - VHP	0.001	64	96	128		2141-047

Compressors are fitted with discharge valves depending on the working conditions.

The valve is selected on the basis of the refrigerant and the condensing/intermediate pressure temperature of the plant, indicated in the table in °C. For inst, R22 at TC=53°C=>VHP discharge valve.

Refrigerant	Conditions	Valve type
R717	TC < 15°C	LP
	TC ≥ 15°C	HP
HFC/ HCFC	TC < 15°C	LP
	45°C R404A-R507 15°C ≤ TC < 50°C R22 70°C R134a	HP
	15°C ≤ TC < 50°C R22	
	70°C R134a	
	45°C R404A-R507	VHP
	TC ≥ 50°C R22	
70°C R134a		

Pos.	Designation	Weight each in kg	Number each compressor				Part No
			SMC 104	SMC 106	SMC 108	TSMC 108	
	Spring for safety head						

21A-1	Spring	0.400	4	6	8	8	2142-060
	Oil pressure valve						
22A-1	Oil pressure valve, complete	0.450	1	1	1	1	3142-150
22B-1	Gasket 90 x 44 x 1	0.001	1	1	1	1	2354-075
22C-1	Hexagon head screw M12 x 35	0.040	2	2	2	2	1424-216
	Oil charging valve						
23A-1	Oil charging valve, complete	0.300	1	1	1	1	2412-585
23B-1	Threaded reducing nipple	0.155	1	1	1	1	2311-059
23C-1	Socket	0.075	1	1	1	1	2313-035
23D-1	Gasket	0.001	1	1	1	1	2356-123
23E-1	Gasket	0.001	1	1	1	1	2356-140
23F-1	Gasket	0.001	1	1	1	1	2356-283
23G-1	Nut	0.060	1	1	1	1	2313-027
	By-pass valves						
24-1	By-pass valve dia. 20 22 bar TSMC108HP	2.400				1	3137-033
24-2	By-pass vaive dia. 20 24 bar TSMC 108 HP	2.400				1	3137-010
24-4	By-pass valve dia. 28 12 bar TSMC 108LP	3.600				1	3137-046
24-5	By-pass vaive dia. 28 22 bar SMC	3.600	1	1	1		3137-007
24-7	By-pass valve dia, 28 24 bar SMC	3.600	1	1	1		3137-009
24B-1	O-ring for cylinder*)	0.001				1	1331-065
24B-4	O-ring for cylinder*)	0.002	1	1	1	1	1331-067
24C-1	O-ring for cover*)	0.002				1	1331-069
24C-4	O-ring for cover *)	0.003	1	1	1	1	1331-071
24D-1	Hexagon head screw M8 x 25	0.015	4	4	4	8	1424-168
24E-1	Spring washer dia-14,2/8,2 x2	0.002	4	4	4	8	1437-023

Pos.	Designation	Weight each in kg	Valve dim.	Number each compressor				Part No
				SMC 104	SMC 106	SMC 108	TSMC 108	
	Stop valves							
25-1	Complete valve, discharge KP		50				1	2414-073
25-2	Complete valve, inlet HP		50				1	2411-261
25-3	Complete valve, discharge LP		65	1	1	1	1	2414-069
25-4	Complete valve, inlet LP		100	1	1	1	1	2414-070
25A-1	Valve housing		50				1	2432-141
25A-2	Valve housing		50				1	2432-141
25A-3	Valve housing		65	1	1	1	1	2432-159
25A-4	Valve housing		100	1	1	1	1	2432-160-
25B-1	Valve bonnet	1.740	50-65	1	1	1	3	2433-028
25B-4	Valve bonnet	4.500	100	1	1	1	1	2433-030
25C-1	Front part for cone	0.095	50-65	1	1	1	3	2444-090
25C-3	Front part for cone	0.520	100	1	1	1	1	2444-094
25D-1	Rear part for cone	0.185	50-65	1	1	1	3	2444-091
25D-4	Rear part for cone	1.000	100	1	1	1	1	2444-095
25E-1	Screw for valve cone	0.020	50-65	1	1	1	3	2444-017
25E-4	Screw for valve cone	0.120	100	1	1	1	1	2444-018
25F-1	Gasket for screw dia.31/24 x1,5	0.0001	50-65	1	1	1	3	2356-138
25F-4	Gasket for screw dia, 36/28 x 1,5	0.001	100	1	1	1	1	2356-141
25G-1	Threaded connection	0.180	50-65	1	1	1	3	2445-053
25G-4	Threaded connection	0.400	100	1	1	1	1	2445-061
25H-1	Sealing ring dia. 62/45 x 3	0.004	50-65	1	1	1	3	2354-003

25H-4	Sealing ring dia. 110/90 x 3	0.020	100	1	1	1	1	2354-117
25J-1	Gasket for bonnet dia. 72,39 x 5.33	0.010	50-65	1	1	1	3	1331-154
25J-4	Gasket for bonnet dia. 116,84 x 7	0.015	100	1	1	1	1	1331-198
25K-1	Spindle	0.250	50-65	1	1	1	3	2442-023
25K-4	Spindle	0.480	100	1	1	1	1	2442-028
25L-1	Lock washer for spindle	0.010	50-65	1	1	1	3	2445-019
25L-4	Lock washer for spindle	0.015	100	1	1	1	1	2445-020
25M-1	Packing gland Compl. with o-rings pos. 25R-1	0.120	50-65	1	1	1	3	2452-132
25M-4	Packing gland Compl. with o-rings pos- 25R-4	0.250	100	1	1	1	1	2452-133
25N-1	Guide pin	0.002	50-65	1	1	1	3	1445-085
25N-4	Guide pin	0.002	100	1	1	1	1	1445-085
25P-1	O-ring dia. 21,8 x 3,5*)	0.002	50-65	1	1	1	1	1331-020
25P-4	O-ring dia. 28,2 x 3,5*)	0.002	100					1331-024
25Q-1	Nylon washer dia. 28.5/28 x 1,5	0.001	50-65	1	1	1	3	2354-018
25Q-4	Nylon washer dia. 48/34 y. 1,5	0.002	100	1	1	1	1	2354-017
25R-1	O-ring dia.17,12 x 3,5*)	0,001	50-65	2	2	2	2	1331-016
25R-4	O-ring dia.21.8 x 3,5	0.002	100	2	2	2	2	1331-020
25S-1	Hand wheel dia. 120	0.160	50-65	1	1	1	3	1365-036
25S-4	Hand wheel dia. 180	0.800	100	1	1	1	1	1365-035
25T-1	Screw for hand wheel M5 x 10	0.002	50-65	1	1	1	3	1424-140
25T-4	Screw for hand wheel M8 x 16	0.010	100	1	1	1	1	1424-166
25U-1	Washer for hand wheel	0.001	50-65	1	1	1	3	1436-024
25U-4	Washer for hand wheel	0.003	100	1	1	1	1	1436-026
25Y-3	Gasket for welding nipple	0.015	50-65	1	1	1	1	2356-087
25Y-4	Gasket for welding nipple	0.025	100	1	1	1	1	2356-

								104
25Z-1	Screw valve/compr. M14 x 40	0.050	50	4	4	4	4	1424-241
25Z-3	Screw vaive/cornpr. M14 x 45	0.050	65	4	4	4	4	1424-242
25Z-4	Screw vaive/cornpr. M16 x 45	0.095	100	4	4	4	4	1424-102
25AC-3	Counter flange		65	1	1	1	1	2344-019
25AC-4	Counter flange		100	1	1	1	1	2344-020
25AD-3	Welding nipple dia. 65		65	1	1	1	1	2322-103
25AD-4	Welding nipple dia. 100		100	1	1	1	1	2322-108
25AF-3	Threaded plug 3/4" BSP		65	1	1	1	1	2314-065
25AF-4	Threaded plug 3/4" BSP		100	1	1	1	1	2314-065
25AG-1	Gasket for valve/cornpr.	0.016	50					2354-105
25AG-3	Gasket for valve/compr.	0.016	65	1	1	1	1	2354-105
25AG-4	Gasket for valvs/compr	0.020	100					2354-106
25AH-3	Gasket for plug	0.002	65	1	1	1	1	2356-139
25AH-4	Gasket for piug	0,002	100	1	1	1	1	2356-139
25AJ-1	Screw bonnet/valve M10 x 25		50				8	1424-191
25AJ-2	Screw bonnet/valve M10 x 25		50				8	1424-191
25AJ-3	Screw bonnet/valve M10 x 25		65	8	8	8	8	1424-191
25AJ-4	Screw bonnet/valve M12 x 30	0.040	100	8	8	8	8	1424-215
25AK-3	Screw for counter flange M10 x 40	0.030	65	6	6	6	6	1424-194
25AK-4	Screw for counter flange M12 x 50	50	100	6	6	6	6	1424-219

Pos.	Designation	Weight each in kg	Number each compressor				Part No
			SMC 104	SMC 106	SMC 108	TSMC 108	
	Pressure gauges						

	Suction and pressure gauge						
30A-1	R717	1.640	1	1	1	1	1541-108
30A-2	RI2,R22 and R502	1.620	1	1	1	1	1541-232
30A-3	R22.R134a and R404A	1.620	1	1	1	1	1541-074
30B-1	Nozzle and gasket dia.14/0,8 x 1,5	0.001	1	1	1	1	3146-013
30C-1	Gasket dia. 11/4x 1,5	0.001	1	1	1	1	2356-119
	SMC: discharge pressure gauge						
31A-1	R717	1.380	1	1	1		1541-029
31A-2	R12,R22 and R502	1.400	1	1	1		1541-160
31A-3	R22,R134a and R404A	1.400	1	1	1		1541-075
31B-1	Nozzle and gasket dia. 14/0,8 x 1,5	0.001	1	1	1		3146-013
	TSMC: discharge pressure gauge						
31A-3	R717	1.600				1	1541-101
31A-4	R12, R22 and R502	1.660				1	1541-161
31A-5	R22,RI34aandR404A	1.660				1	1541-076
31B-1	Nozzle and gasket dia. 14/0,8 x 1,5	0.001				2	3146-013
31C-1	Screws for gauges M4 x 20		6	6	6	6	1412-350
	Oil filter						
33-1	Oil filter complete		1	1	1	1	4524-039
33A-1	Filter element		1	1	1	1	1517-129
33B-1	Gasket		2	2	2	2	2356-202
33C-1	End cover		1	1	1	1	3422-150
33D-1	Rod for filler		1	1	1	1	2112-145
33E-1	Shield for oil filter		1	1	1	1	2158-209
33F-1	Bracket with connection		1	1	1	1	3422-152
33G-1	Distance piece		1	1	1	1	2212-136

33H-1	Rubber gasket		1	1	1	1	1334-012
33J-1	Magnet		3	3	3	3	1517-022
33K-1	iron ring		3	3	3	3	2114-038
33L-1	Washer dia, 17/8.4		1	1	1	1	1436-034
33M-1	Nut M 8		1	1	1	1	1433-073
33N-1	Washer dia-24/13		1	1	1	1	1436-036
33O-1	Nut M12		1	1	1	1	1433-075
33P-1	O-ring *)		1	1	1	1	1331-009
33Q-1	O-ring *)		1	1	1	1	1331-008
33R-1	Cutting ring joint		1	1	1	1	1349-131
	Suction filter						
34A-1	Suction filter open, complete	0.365	2	2	2	1	3425-082
34A-2	Suction filter closed, complete	0.365				1	3425-084
34B-1	Filter bag	0.035	2	2	2	2	3425-083
34C-1	Inset for lifter bag	0.025	2	2	2	2	3424-058
34D-1	O-ring PRP 337 - 75,56 x 5,33 *)	0.008	2	2	2	3	1331-042
34E-1	Cover for suction filter	2.400	2	2	2	1	3422-103
34F-1	O-ring PRP 239 - 91,67 x 3,53 *)	0.003	2	2	2	1	1331-080
34G-1	Hexagon head screw M 12 x 40	0.050	8	6	8	4	1424-217
34H-1	Spring washer dia. 12	0.005	8	8	8	4	1437-026
	Discharge pipe for oil filter						
38A-1	Discharge pipe for oil pump	0.500	1	1	1	1	3141-110
38B-1	Inside pipe connection to control system (compr. without oil cooler)	0.090	1	1	1	1	3141-162
38B-2	Inside pipe connection to control system (compr. with OSSI oil cooler)	0.090	1	1	1	1	3141-163

	R717)						
38B-3	Inside pipe connection to control system (compr. with HE8 oH cooler HCFC)	0.090	1	1	1	1	3141-164
38C-1	Connection for discharge pipe - SMC 104	0.120	1				2333-025
38C-2	Connection for discharge pipe - SMC 106	0.190		1			2333-025
38C-3	Connection for discharge pipe - SMC 108 and TSMC 108	0.180			1	1	2333-026
38D-1	O-ring PRP 212 - 21,80 x 3.53*)	0.002	2	2	2	2	1331-020
38E-1	O-ring PRP 321 - 29.51 x 5,33*)	0.004	1	1	1	1	1331-039
38F-1	Gasket dia- 27/21 x 1,5	0.001	1	1	1	1	2356-133
38G-1	O-ring dia. 26.58 x 3,5*)	0.002	1	1	1	1	1331-023
	Analogous control and safety equipment						
39A-1	Gauge panel	0.070	1	1	1	1	3146-042
39B-1	Socket cap screw M10 x 60	0.045	2	2	2	2	1413-382
39C-1	Console		1	1	1	1	2213-142
39D-1	Bar for controls (4 controls)		1	1	1		2213-143
39D-2	Bar for controls (5 controls)		1	1	1	1	2213-144
39D-3	Bar for controls (6 controls)		1	1	1	1	2213-145
39D-4	Bar for controls (7 controls)		1	1	1	1	2213-154
39D-5	Bar for controls (US, SMC)		1	1	1		2213-368
39D-6	Bar for controls (US, TSMC)					1	2213-369
39E-1	Hexagon head screw M6 x 12		2	2	2	2	1424-150
39F-1	Spring washer dia. 11/6		2	2	2	2	1437-022
39G-1	Socket cap screw M4 x 6						1412-200

39H-1	Spring washer dia. 7/4						1437-020
39J-1	Socket cap screw M5 x 10		4	4	4	4	1413-330
39K-1	Spring washer dia. 9/5		4	4	4	4	1437-021
	Cooling water connection See section: Water cooling oi reciprocating compressor						
40A-1	Set of hoses for cooling water SMC104	0.940	1				3185-154
40A-2	Set of hoses for cooling water SMC 106	1.000		1		1	3185-155
40A-3	Set of hoses for cooling water SMC I08 and TSMC108	1.400			1	1	3185-156
40B-1	Hose connection - 3/8" - straight	0.004	12	14	16	16	2334-025
40C-1	Anote - 3/8"	0.009	8	10	10	10	1341-090
40D-1	T-piece	0.015	2	2	2	2	1341-141
40E-1	Hose clamp	0.015	12	14	16	16	1345-168
40F-1	Cable binder		3	3	3	3	1554-062
	Purge valve						
42A-1	Purge valve	0.300	1	1	1	2	2412-585
42B-1	Threaded nipple		1	1	1	1	1349-078
42C-1	Cutting ring	0.135	1	1	1	2	1349-062
42D-1	Nut						
42E-1	Nut	0.070	1	1	1	2	2313-045
42F-1	Connection pipe with collar	0.025	1	1	1	2	2334-027
42G-1	Gasket	0.001	2	2	2	4	2356-123
42H-1	Nut	0.060	1	1	1	2	2313-027
	Pressure and temperature controls Pressure controls for R717						
45A-1	KP5A	0.300	1	1	1	1	1373-125
45B-1	KP15A	0.460	1	1	1	1	1373-142
45C-1	MP55A	0.900	1	1	1	1	1373-162

42F-1	Connection pipe with collar	0.025	1	1	1	1	2334-027
42G-1	Gasket	0.001	2	2	2	2	2356-123
42H-1	Nut	0.060	1	1	1	1	2313-027
	Pressure controls for R22, R134a and R404A						
45D-1	KP5	0,3	1	1	1	1	1373-123
45E-1	KP15	0.460	1	1	1	1	1373-135
45F-1	MP55	0.800	1	1	1	1	1373-159
	Temperature controls:						
45G-1	KP98	0.720	1	1	1	1	1373-043
45H-1	KP77	0.350	1	1	1	1	1373-044
45J-1	Phail pocket for temperature controls	0.770	1	1	1	1	1377-171
45K-1	Gasket		1	1	1	1	2356-133
	AMR 312 S coupling						
48A-4	Disc pack	1.132	2	2	2	2	1524-157
48B-4	Bolt	0.054	16	16	16	16	1524-165
48C4	Bevel washer	0.010	4	4	4	4	1524-187
48D-4	Lock nut	0.018	16	16	16	16	1524-173
48E-4	Washer	0.008	16	16	16	16	1524-181
	Capacity regulation						
50A-1	Valve body with 1 solenoid valve without coil		1				3143-383
50A-2	Valve body with 2 solenoid valves without coils			1		1	3143-384
50A-3	Valve body with 3 solenoid valves without coils				1		3143-385
50A-4	Valve body with 4 solenoid valves without coils					1	3143-386
50B-1	Coil 220/230V, 50/60 Hz. 10 W	0.260					1372-537
50B-2	Coil 110V, 50/60 Hz, 10W	0.260					1372-538
50B-3	Cod 240V, 50 Hz, 10 W	0.062					1372-539

50C	Solenoid valve (service kit for one solenoid valve)						1372-424
	Crankcase heater						
57A-1	Crankcase heater - 270 W - 115 V, 1 1/4" BSP		1	1	1	1	3181-034
57A-2	Crankcase heater - 270 W - 230 V, 1 1/4" BSP		1	1	1	1	3181-035
57A-3	Crankcase heater - 270 W - 250 V, 1 1/4" BSP		1	1	1	1	3181-036
57B-1	Gasket dia- 50/43 x 1,5 for 1 1/4" BSP	0.002	1	1	1	1	2356-150
80	Solenoid valve block, complete with 0.6 mm orifice for oil return. Excl. coil	2.040	1	1	1	1 or 2	1372-179
	Strainer kit consist of:		1	1	1	1 or 2	1372-089
80E	Strainer						
80G	Al-gasket						
	Service kit consist of:		1	1	1	1 or 2	1372-086
80P	Armature tube						
80H	Armature						
80K	O-ring						
80M	O-ring						
80L	Al-gasket						
80N	Snap fastener						
	Seal kit consist of:		1	1	1	1 or 2	1372-091
80G	Al-gasket						
80K	O-ring						
80M	O-ring						
80L	Al-gasket						
80Q	Al-gasket						
	Orifice kit 0,6 mm consist of:		1	1	1	1 or 2	1371-034
80L	Al-gasket						
80Q	Al-gasket						
80I	Orifice 0,6 mm						
	Orifice kit 0,8 mm consist of:		1	1	1	1 or 2	1371-035
80L	Al-gasket						
80Q	Al-gasket						
80I	Orifice 0.8 mm						
	Orifice kit 1,0 mm consist of:		1	1	1	1 or 2	1371-036
80L	Al-gasket						

80Q	Al-gasket						
80I	Orifice 1,0 mm						
	Orifice kit 3.3 mm(for thermopump only) consist of:		1	1	1	1 or 2	1371-037
80L	Al-gasket						
80Q	Al-gasket						
80I	Orifice 3.3 mm						
80J-1	Coil 220/230V, 50/60 H2, 10 W	0.285					1372-537
80J-2	Coil 110V, 50/60 Hz, 10W	0.285					1372-538
80J-3	Coil 240 V, 50 Hz, 10W	0.285					1372-539
80J-4	Coil 24 V. 50 Hz, 10 W	0.285					1372-541
	Intermediate pressure connections						
90A-1	Mixing chamber with flange	9.500				1	3114-095
90B-1	Counter flange for mixing chamber	1.700				1	3115-084
90C-1	Intermediate ring	0.392				1	3422-100
90D-1	O-ring PRP 236 - 82,15 3.53 ')	0.002				1	1331-077
90E-1	O-ringPRP241 -98.02x3,5')	0.002				1	1331-081
90F-1	Hexagon head screw M12 x 65	0.065				4	1424-222
90G-1	Hexagon head screw M1 4 x 55	0.065				4	1424-246
90H-1	Hexagon head screw M1 4 x 55	0.005				4	1437-026
90J-1	Spring washer dia. 12	0.004				4	1437-030
90K-1	Spring washer dia. 14	0.025				4	1432-066
90L-1	Nut M14	0.003				1	1331-080
90M-1	O-ring PRP 239-91 ,67 x 3,53 *)	0.065				1	2313-027
90N-1	CapGasket dia. 18/10 x 1.5	0.002				1	2356-123
	Oil cooling - type HE8 S for R22						
92A-1	Oil cooler		1	1	1	1	4242-038
92B-1	Stop valve 8MSL 10	0.300	1	1	1	1	1374-171
92C-1	Thermostatic expansion valve TX 2 - 0,5	0.400	1	1	1	1	1371-

							305
92D-1	Solenoid valve without coil	0.346	1	1	1	1	1372-422
92N-1	Coil 220/230V, 50/60 Hz, -10 W	0.260					1372-537
92N-2	Coil 110V, 50/60 Hz, 10W	0.260					1372-538
92N-3	Coil 240V, 50 Hz, 10W	0.260					1372-539
92E-1	Filter	0.320	1	1	1	1	4522-002
90F-1	Screwed connection GE 10-LR 1/4"	0.050	6	6	6	6	1349-051
92G-1	Single banjo connector DSVW 10-LR	0.160	1	1	1	1	1349-089
92H-1	Threaded nipple	0.110	1	1	1	1	2314-056
92J-1	Threaded plug for 8/6 mm pipe	0.015	2	2	2	2	2314-053
92K-1	Gasket dia. 19/14 x 1,5 - aluminium	0.001	2	2	2	2	2356-124
92L-1	Connection piece for 1 pipe dia. 8 mm	0.030	2	2	2	2	2333-021
92M-1	Gasket- dia. 27/21 x 1,5 - aluminium	0,001	3	3	3	3	2356-133
	Oil cooling - type OOSI for R717						
93A-1	Oil cooler		1	1	1	1	4242-029
93B-1	Stop valve SN 6		1	1	1	1	2413-010
93C-1	Thermostatic injection TEAT 20-2	0.400	1	1	1	1	1371-240
93D-1	Solenoid valve without coil	0.346	1	1	1	1	1372-422
93N-1	Coil 220/230V. 50/60 Hz, 10 W	0.260					1372-537
93N-2	Coil 110V, 50/60 Hz, 10W	0.260					1372-538
93N-3	Coil 240V, 50Hz.Tow	0.260					1372-539
93E-1	Filter	0.320	1	1	1	1	4522-002
93F-1	Screwed connection GE 10-LR 1/4"	0.050	6	6	6	6	1349-051
93G-1	Single banjo connector DSVW 10-LR	0.160	1	1	1	1	1349-089
93H-1	Threaded nipple	0.110	1	1	1	1	2314-056

93J-1	Threaded piug for dia. 8/6 mm pipe	0.015	4	4	4	4	2314-053
93K-1	Gasket dia. 19/14 x 1.5 - alunimium	0.001	8	8	8	8	2356-124
93L-1	Connection piece for 1 pipe dia. 8 mm	0.030	4	4	4	4	2333-021
93M-1	Gasket dia. 27/21 x 1,5 - aluminium	0.001	3	3	3	3	2356-133
	Chain drive for oil pump						
96A-1	Hub for chain wheel (chranshaft)		1	1	1	1	2126-020
96B-1	Hub for chain wheel (oil pump)		1	1	1	1	2126-019
96C-1	Chain wheel (crankshaft)		1	1	1	1	2126-018
96D-1	Chain wheel (oi! pump)		1	1	1	1	2126-017
96E-1	Chain		1	1	1	1	1521-102
96F-1	Hexagon head screw		5	5	5	5	1424-150
96G-1	Spring washer		5	5	5	5	1437-022
96H-1	Shield for oil		1	1	1	1	3141-128
98	Thermo pump						
98A-1	Side cover for thermo pump		1	1	1	1	3113-145
98B-1	Monitor box		1	1	1	1	1553-215
	Alien screw M4 x 16		2	2	2	2	1412-204
	Spring washer dia. 4		2	2	2	2	1437-020
98C-1	Level indicator		2	2	2	2	3185-038
98D-1	Outer part for level indicator		2	2	2	2	3185-034
98E-1	Washer dia. 20/13x1.5		2	2	2	2	2356-125
98F-1	Rubber cap		2	2	2	2	1554-194
98G-1	Solenoid valve without coil		1	1	1	1	1372-422
98H-1	Solenoid valve without coil		1	1	1	1	1372-423
98J-1	Coil 220/230V, 50/60 Hz, 10 W	0,285					1372-537

98J-2	Coil 110V, 50/60 H2. 10W	0.285					1372-538
98J-3	Coil 240V. 50 Hz, 10W	0,285					1372-539
98K-1	Check valve		2	2	2	2	1364-008
	Straight joint 10 mm BSP		6	6	8	5	1349-051
	Socket 10 mm BSP		5	5	4	4	1349-101
	T-joint 10 mm		3	4	5	1	1349-041
	Strap for stop valve		1	1	1	1	2212-059
	Cable binder no. 10		1	1	1	1	1554-054
	Allen screw M4 x 12		2	2	2	2	1412-203
	Nut M4		2	2	2	2	1432-035
98L-1	Washer dia. 29/21 x 1,5		2	2	2	2	2356-136
98M-1	VA-joint with nozzle 1,2 mm		3	4	5		2314-097
98M-2	VA-joint with nozzle 0,6 mm					1	2314-100
	Angle joint		3	3	2	1	1349-033
	Angle swivel joint 8 mm		4	4	4		1349-087
	Angle swivel joint 10 mm		3	3	2	1	1349-089
	Angle joint 10 mm				1		1349-112
	Bushing 1/4" x 1/2" RG		2	1	1		2312-013
	Threaded nipple		1	1			2314-056
	Gasket dia. 27/21 x 1,5 Al		2	2	2		2356-133
	Gasket dia. 19/14 x 4 Al		3	3	3	1	2356-283
	Pipe strap dia. 10x15		2			1	1377-117
	Hexagon set screw M6 x 12		1			1	1424-150
	Nut M6		1				1432-061
	Allen screw M5 x 10					1	1413-

							330
	Washer dia. 12,5/6,4 x 1,6		2				1436-033
	Spring washer for M6					1	1437-021
98N-1	Filter		1	1	1	1	4522-002
98P-1	Stop valve.		1	1	1	1	2412-277
98Q-1	Cooling cover		1	1	1	1	3113-143
98R-1	Gasket for side cover		1	1	1	1	2353-189
98S-1	Hexagon head screw M14 x 80		16	16	16	16	1424-081
98T-1	Oil cooler OSSI		1	1	1	1	4242-029
	Socket 1/4"		1	1	1	1	1349-101
98U	Solenoid valve without coil		1	1	1		1372-422
98V	Solenoid valve without coii		1	1	1	1	1372-422
98AB-1	Coil 220/230V, 50/60 Hz, 10 W	0.285					1372-537
98AB-2	Coi 110V, 50/60 Hz. 10W	0.285					1372-538
98AB-3	Coil 240V, 50 Hz, 10 W	0.285					1372-539
98X	PT100 sensor		1	1	1	1	1373-253
98Y	Stop valve		1	1	1	1	2412-277
98Z	Non-return valve		1	1	1	1	1364-022
98AA	Screw joint		1	1	1	1	2314-105
	UNISAB						
99A-1	Support for UNISAB		1	1	1	1	2213-500
99B-3	Distance washers		4	4	4	4	2212-130
99C-1	Screw for support M10 x 20		2	2	2	2	1424-190
99D-1	Screw for UNISAB M6 x 20		4	4	4	4	1424-152
99E-1	Washers dia, 22/7 x 1,5		4	4	4	4	1436-025

Toots set for compressor
SMC 104-116 Mk3 & TSMC 108-116 Mk3. type S-L-E
Line no. A600 = Normal set, tools set no 3183-109
Line no. A601 = Extended set, tools set no 3183-110
Line no. A602A = Tools for coupling (SMC 104-108)
Line no. A602B =Toots for coupling (SMC 112-116)
Line no. A603 = Toots for alignment of coupling

Pos.No	Designation	Dimension	Line No				Part No	
			A600	A601	A602			A603
					A	B		
1-1	Clamp with screw, compr. type S and L		4	4			3183-144	
1-2	Clamp with screw, compr. type E		4	4			3183-145	
2	Tools for shaft seal		1	1			3183-139	
3	Tommy screw for cylinder liner		2	2			3183-041	
4	Theaded plug for unloading cylinder	3/8"BSP	2	2			2314-017	
5	Supporting plate for pistons		8	8			3183-115	
6	Spanner for heating cartridge	NV 55	1	1			3183-060	
7	Trigger for coupling or belt pulley		1	1			3183-059	
8	Adjusting jig for coupling					1	3183-105	
9-1	Wrench for cylinder screw	NV 4		1				
9-2	Wrench for cylinder screw	NV 5		1				
9-3	Wrench for cylinder screw	NV 8		1				
9-4	Wrench for cylinder screw	NV 10		1				
9-5	Special wrench for shaft seal	NV 4		1			1612-392	
10-1	Retaining-ring plier	J21/G		1				
10-2	Retaining-ring plier	A11/G		1				
11-1	Open end and ring spanner	NV 10		1				
11-2	Open end and ring spanner	NV 17		1				
11-3	Open end and ring spanner	NV 19		1				
11-4	Open end and ring spanner	NV 22		1				
11-5	Open end and ring spanner	NV 24		1				
11-6	Open end and ring spanner	NV 27		1				
13-1	Socket wrench	NV10		1				
13-2	Socket wrench	NV13		1				
13-3	Socket wrench	NV17		1				
13-4	Socket wrench	NV19		1				

13-5	Socket wrench	NV22		1				
13-6	Socket wrench	NV24		1	1	1		
13-7	Socket wrench	NV27		1				
13-8	Socket wrench	NV30		1				
13-9	Socket wrench	NV32		1				
13-10	Socket wrench	NV9/16"		1				
13-11	Socket wrench	NV 3/4"		1		1		
13-12	Socket wrench	NV11/16"		1	1			
14	Ratchet handle			1				
15	Speed handle			1				
16	Universal joint for socket wrench			1				
17-1	Extension rod for socket wrench			1				
17-2	Extension rod for socket wrench			1				
19-1	Torque wrench 15-90 Nm			1				
19-2	Torque wrench 40-200 Nm			1	1	1		
20	Coupler for torque wrench 1/2			2	1	1		
21-1	Open spanner for torque wrench	NV 11/16"		1	1			
21-2	Open spanner for torque wrench	NV 3/4"		1		1		
22	Feeler gauge						1	1