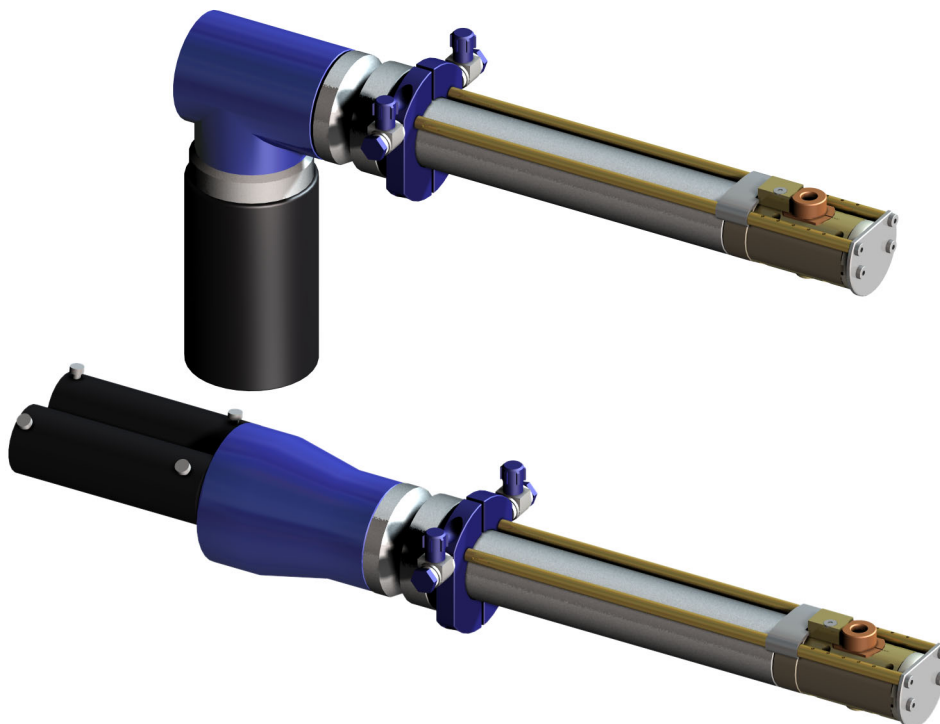


SM-F100 CONNEX Spray Gun

Plasma Spraying

Parts List
PL 40867 EN 09



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Spare Parts Categories

C = Consumable Parts

Parts subjected to major wear during normal operation. These parts require replacement on a regular basis.

Recommended in order to avoid downtimes.

W = Wear Parts

Parts used for maintenance service. These parts are likely and expected to wear out during the life of the product.

Wear parts are not subject to warranty.

K = Critical Parts

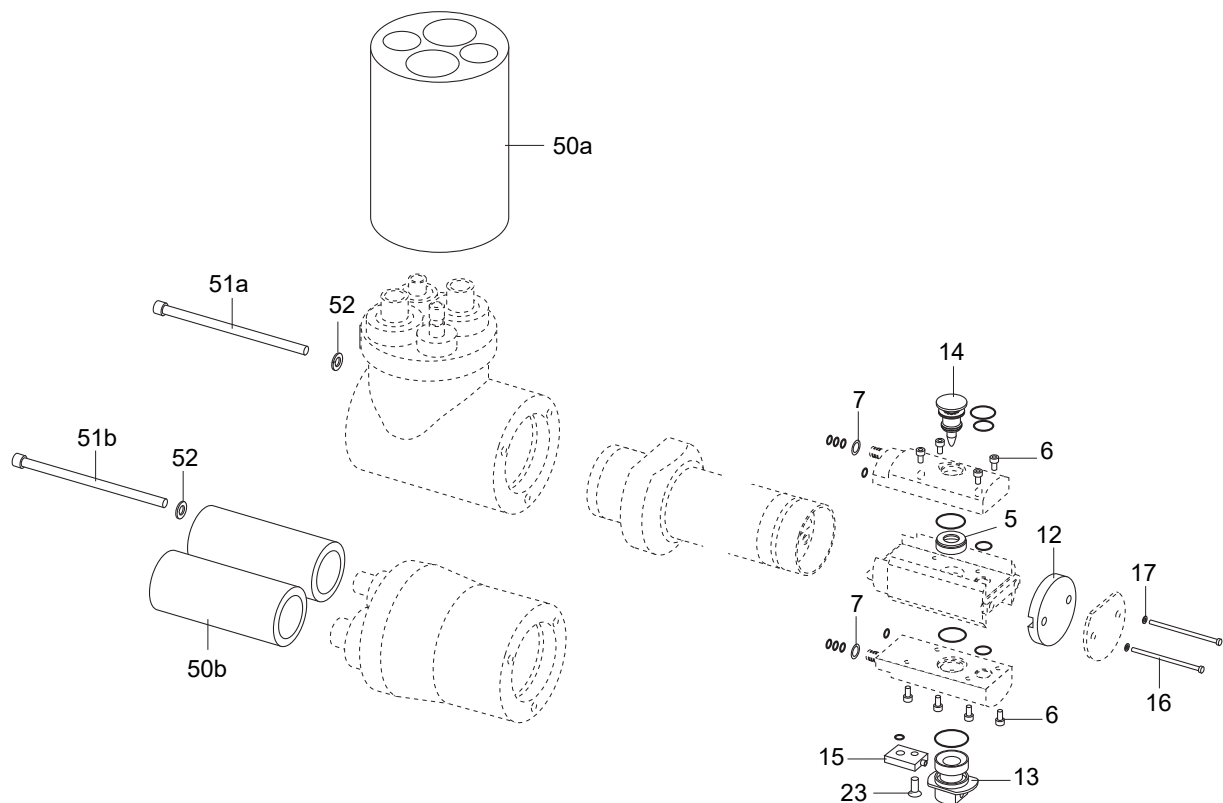
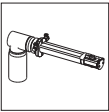
Parts recommended in order to guarantee maximum availability of component. This prevents downtime caused by delay in procurement.



Warranty Disclaimer

Installing non-Oerlikon Metco spare parts on Oerlikon Metco equipment voids the product warranty.

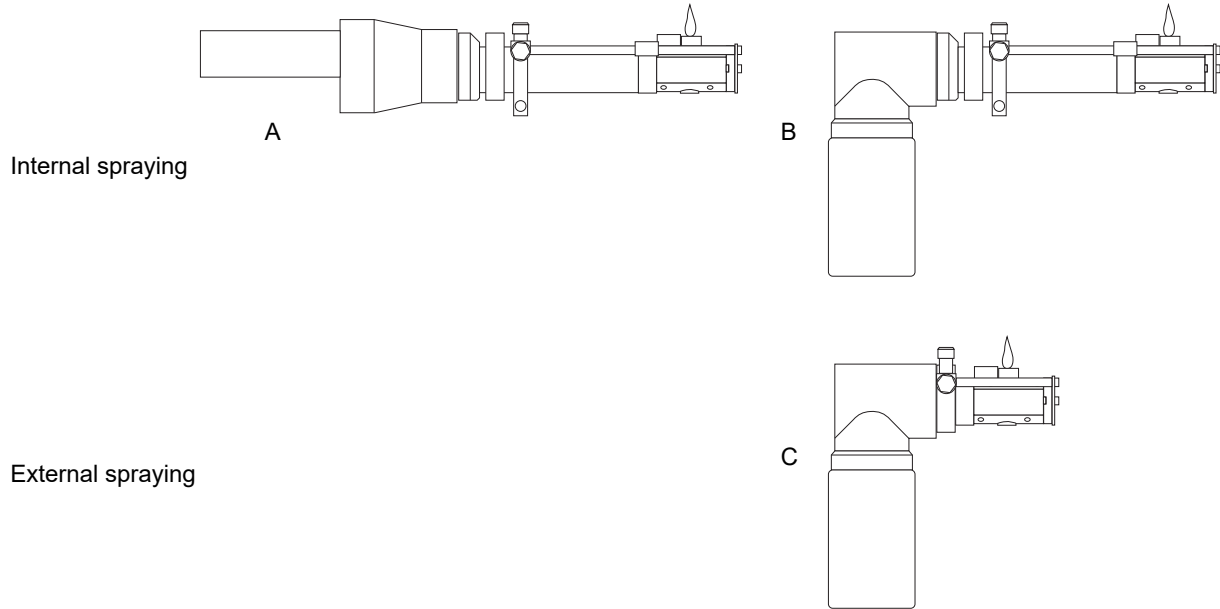
1 List of recommended spare parts



Pos.	Designation	Qty.	Cat.	Art. no.
1	Gun head (without nozzle, electrode, injector) includes Pos. 2 - 11 (illustration page 5)	1	W	1003674
5	Insulating ring ceramic	1	W	1003655
6	Cylindrical screw M3x6	8	W	1003532
7	Contact ring (silver)	2	W	1003656
12	Insulating disc ceramic	1	W	1003654
13	Nozzle type 618H-15	1	C	1003649
14	Electrode standard	1	C	1003645
	Electrode standard (replacement for 1003645)	1	C	1091133
15	Injector type 620H Ø 2 mm	1	C	1003688
16	Hexagonal screw special M4x98	2	W	1003663
17	Lock washer Ø 4 mm	2	W	1003530
23	Countersunk screw M4x12 for injector	1	W	1003533
50a	Insulation for 90° connection piece	1	W	1006762
50b	Insulation to 180° connection piece	1	W	1009031
51a	Screw M5x90 for 90° connection piece	3	W	1003662
51b	Screw M5x100 for 180° connection piece	3	W	1003664
52	Lock washer Ø 5 mm	1	W	1003531
66	Protective shield	1	K	1003680
--	Set nozzle 618	1	C	1018766
--	Set nozzle 600 A / electrode (TF) / o-ring	1	C	1091134
--	Set of o-rings	1	C	1018772
--	Set of screws	1	W	1003673

2 Parts list for SM-F100 CONNEX spray gun

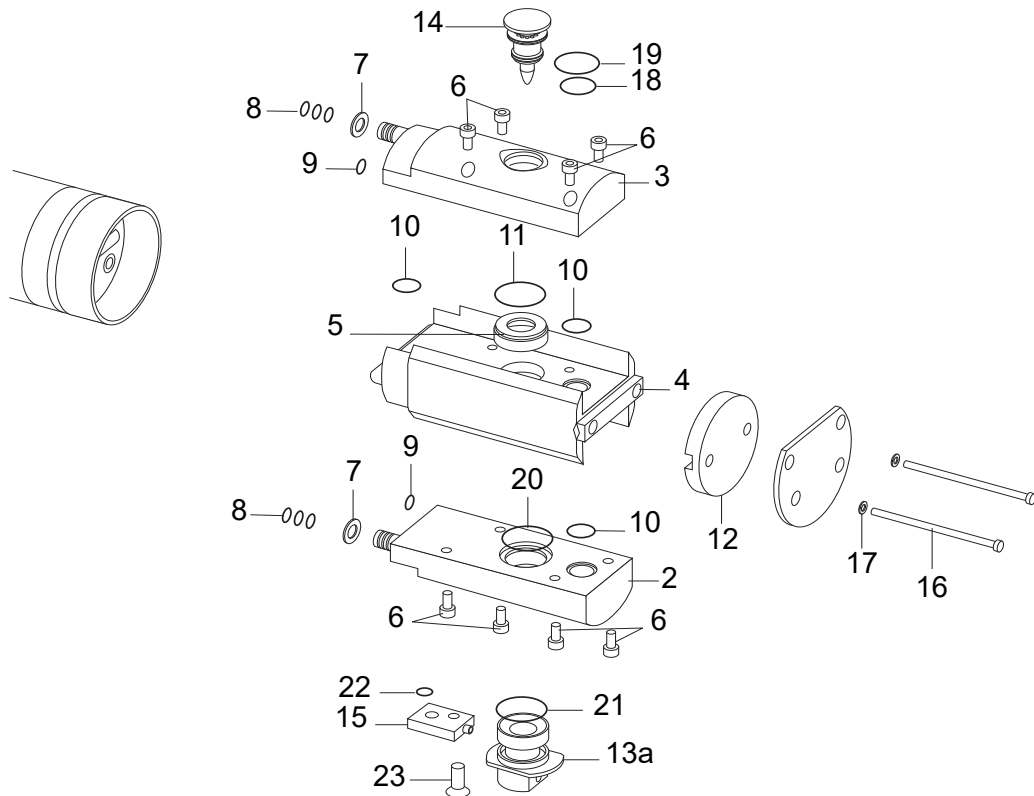
2.1 Spray gun types



Pos.	Designation	Art. no.
A	SM-F100 CONNEX type 280 mm, standard 180°	1008987
	SM-F100 CONNEX type 560 mm, standard 180°	1008990
B= 90° + shaft*	SM-F100 CONNEX type 280 mm, standard 90°	1008988
	SM-F100 CONNEX type 560 mm, standard 90°	1003643
C= 90° + SM-F100	SM-F100 CONNEX type 280 mm, universal 90°	1003642
	SM-F100 CONNEX type 560 mm, universal 90°	1008991

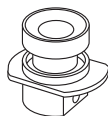
* See "Spray gun shafts" on page 7 for corresponding shaft lengths.
(Special length upon request)

2.2 Spray gun head



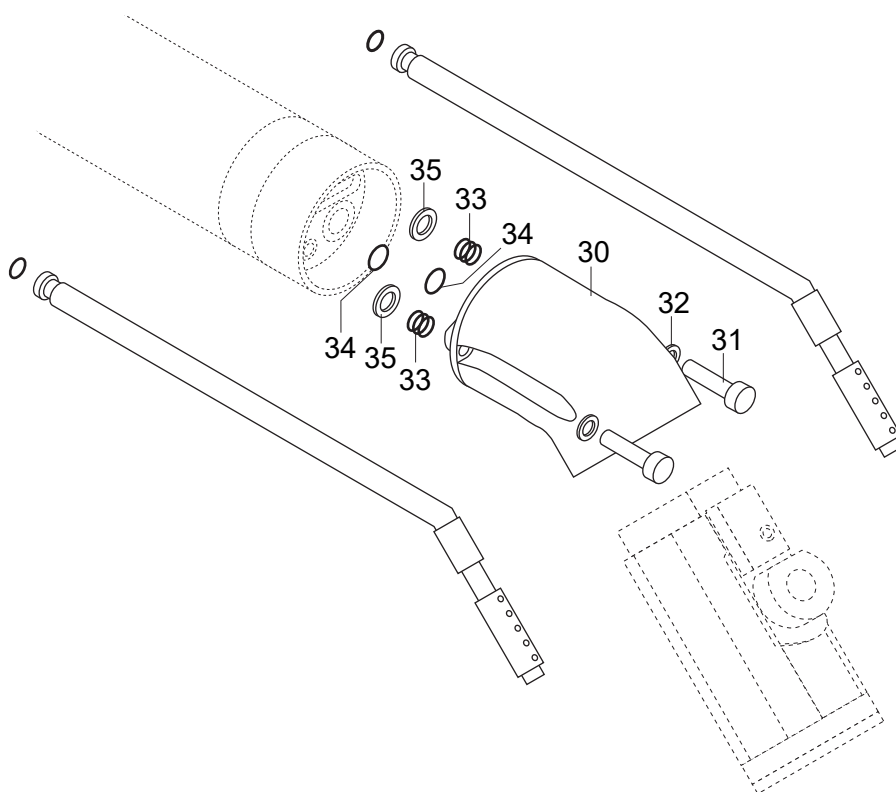
Pos.	Designation	Qty.	Art. no.
1	Spray gun head	1	1003674
	includes Pos. 2 - 11		
2	Anode section	1	1003676
3	Cathode section	1	1003677
4	Insulating intermediate body	1	1003652
5	Insulating ring ceramic	1	1003655
6	Socket head cap screw M3x6	8	1003532
7	Contact ring (silver)	2	1003656
8	O-ring Viton 6 x 1	6	1003666
9	O-ring 5.28 x 1.78 (powder / gas)	2	1003456
10	O-ring viton 10 x 1.5 (water)	2	1003394
11	O-ring viton 18 x 1.5 (ceramic ring)	1	1003669
12	Insulating disc ceramic	1	1003654
13a	Nozzle type 618H-15	1	1003649
	Electrode standard	1	1003645
14	Electrode standard (replacement for 1003645)	1	1091133
15	Powder injector type 620H Ø 2 mm	1	1003688
16	Hexagon screw special M4x98	2	1003663
17	Lock washer Ø 4 mm	2	1003530
18	O-ring viton 10 x 1 (green)	1	1003393
19	O-ring viton 11 x 1	1	1003668
20	O-ring viton 18 x 2 (green)	1	1003745
21	O-ring viton 20 x 1.5	1	1003670
22	O-ring viton 4 x 1.5	1	1003665
23	Countersunk screw M4x12 for injector	1	1003533

2.2.1 Nozzles versions



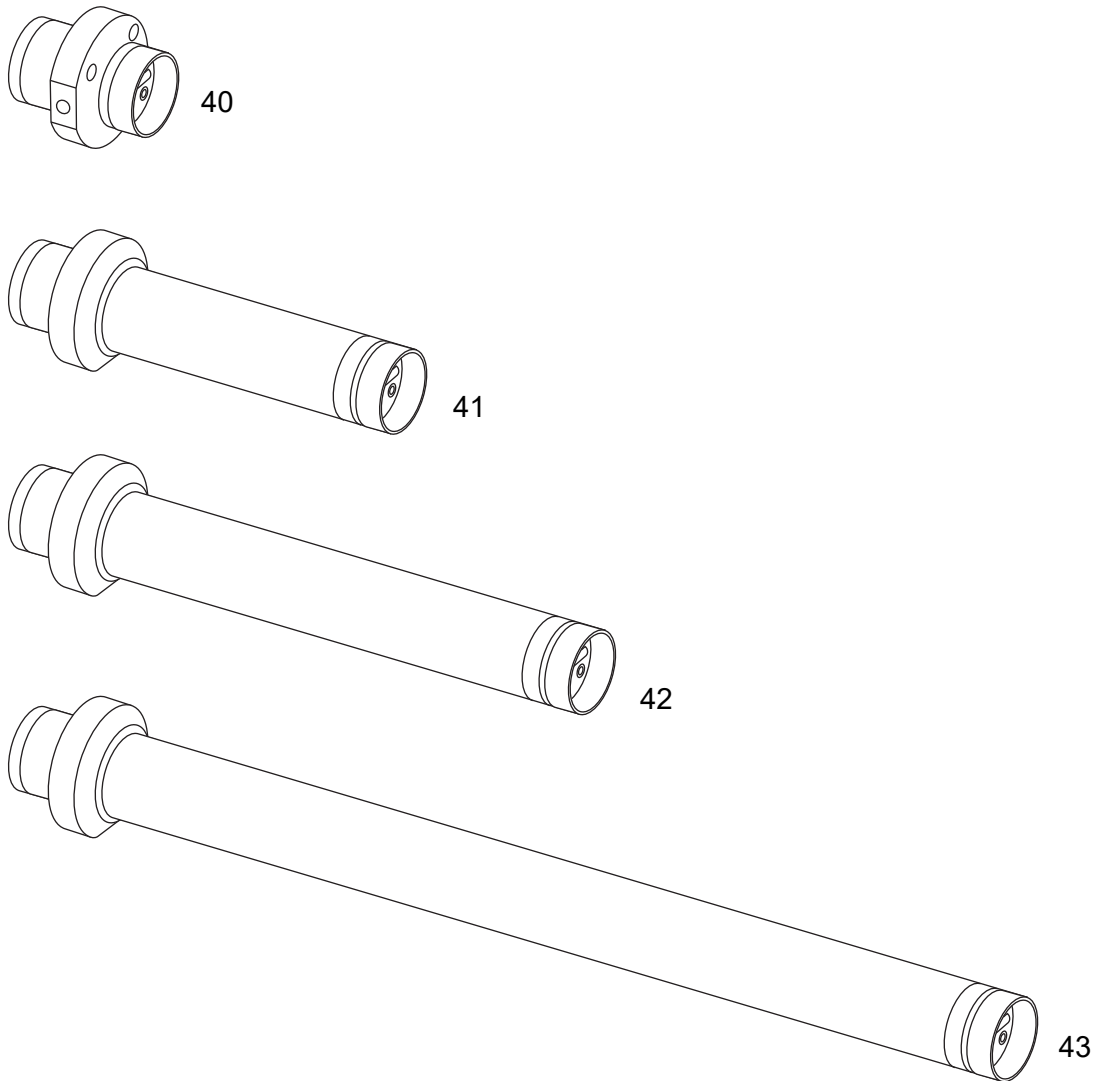
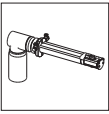
Pos.	Designation		Art. no.
13a	Nozzle Type 618H-15	Standard	1003649
13b	Nozzle Type 6301	Vacuum	1003647
13c	Nozzle Type 600 A	With tungsten insert	1051129

2.3 Intermediate part 45° (optional)



Pos.	Designation		Qty.	Art. no.
30	Intermediate part 45°	includes Pos. 31 - 35	--	1003659
31	Hex screw M4x25 CrNi-steel		2	1003514
32	Washer for M4 CrNi-steel		2	1008790
33	O-ring viton 6x1		6	1003666
34	O-ring viton 5.28 x 1.78		2	1003456
35	Contact ring (silver)		2	1003656

2.4 Spray gun shafts

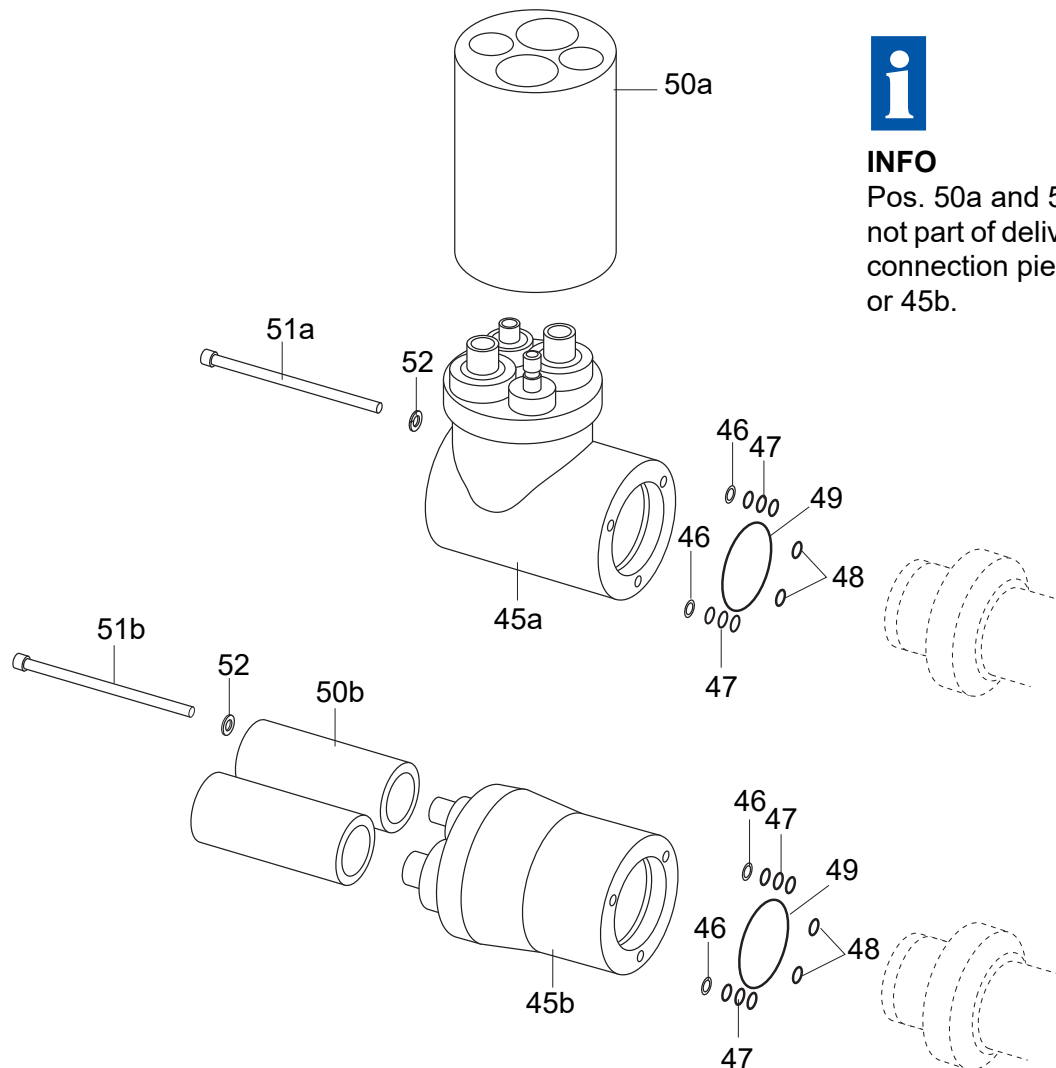


Pos.	Designation	Art. no.
40	Spray gun shaft type 50 for universal spray gun	1003660
41	Spray gun shaft type 140 *	1003661
42	Spray gun shaft type 280	1009021
43	Spray gun shaft type 560	1006379

(Other shaft lengths upon request)

* This length may be ordered as a spare part. SM-F100 CONNEX Type 140 is obsolete.

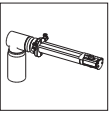
2.5 Connection piece



INFO

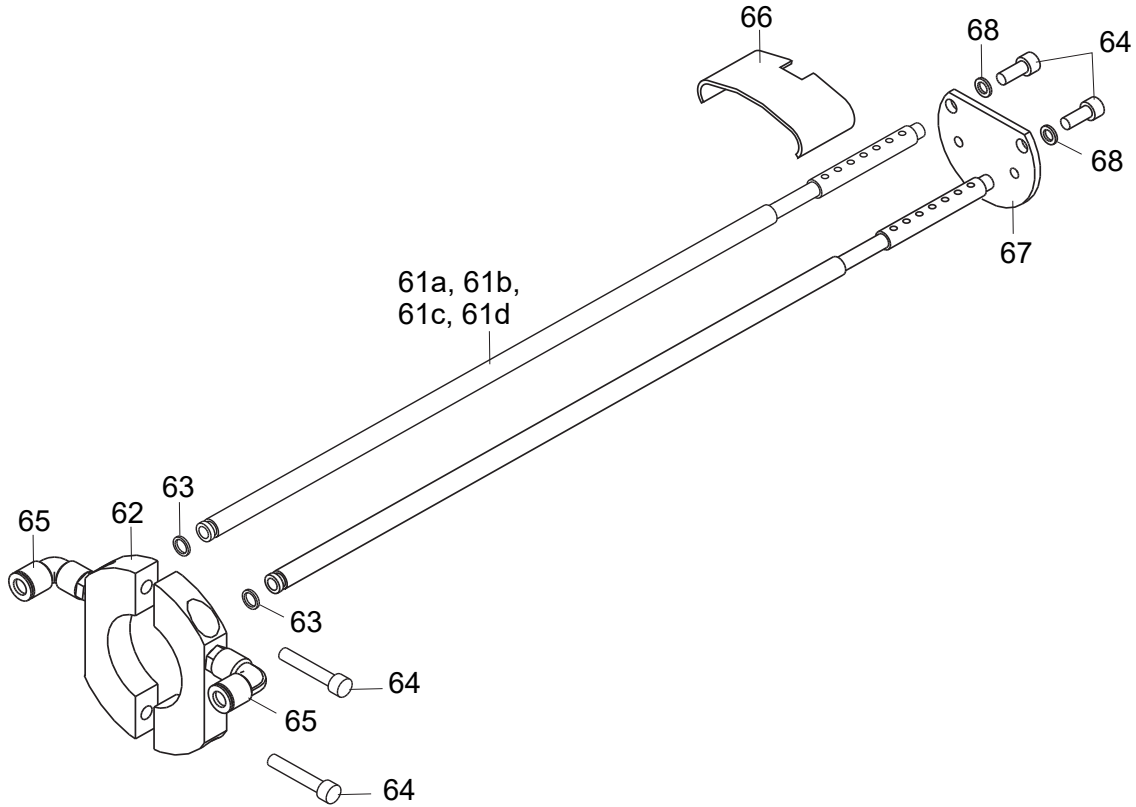
Pos. 50a and 50b are not part of delivery of the connection pieces 45a or 45b.

Pos.	Designation		Qty.	Art. no.
45a	Connection piece 90°	includes Pos. 46 - 49	1	1006760
45b	Connection piece 180°	includes Pos. 46 - 49	1	1003678
46	Contact ring (silver)		2	1003656
47	O-ring viton 6 x 1		6	1003666
48	O-ring viton 5.28 x 1.78		2	1003456
49	O-ring viton 40 x 2		1	1003671
50a	Connection insulator for 90° connection piece		1	1006762
50b	Connection insulator for 180° connection piece		2	1009031
51a	Screw M5x90 to 90° connection piece		3	1003662
51b	Screw M5x100 to 180° connection piece		3	1003664
52	Lock washer Ø 5 mm		3	1003531



2.6 Cooling

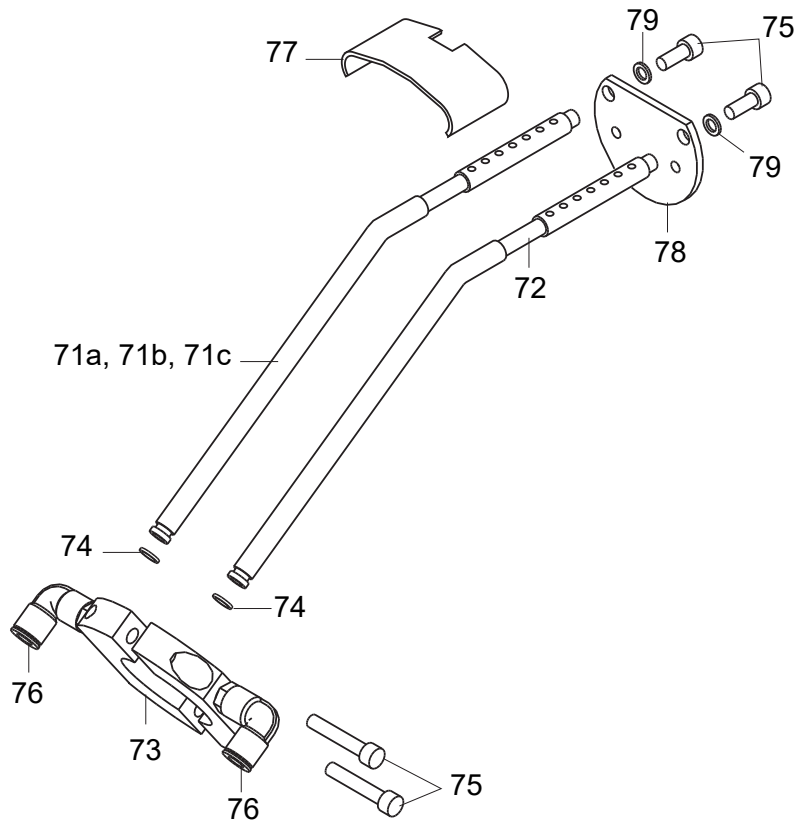
2.6.1 Standard cooling



Pos.	Designation		Qty.	Art. no.
60a	Cooling standard, type 50	includes Pos. 61a, 63, 67, 68		1009034
60b	Cooling standard, type 140*	includes Pos. 61b - 68		1009035
60c	Cooling standard, type 280	includes Pos. 61c - 68		1009037
60d	Cooling standard, type 560	includes Pos. 61d - 68		1009039
61a	Cooling tube 50		2	1009046
61b	Cooling tube 140*		2	1003682
61c	Cooling tube 280		2	1009049
61d	Cooling tube 560		2	1003683
62	Cooling nozzle holder complete		1	1009019
63	O-ring 6 x 1		2	1003666
64	Hexagon socket screw M5x16		4	1008743
65	Connection		2	1020156
66	Protection shield		1	1003680
67	Pressure disc for cooling jet		1	1009018
68	Spring washer		2	1008789

* This length may be ordered as a spare part. SM-F100 CONNEX Type 140 is obsolete.

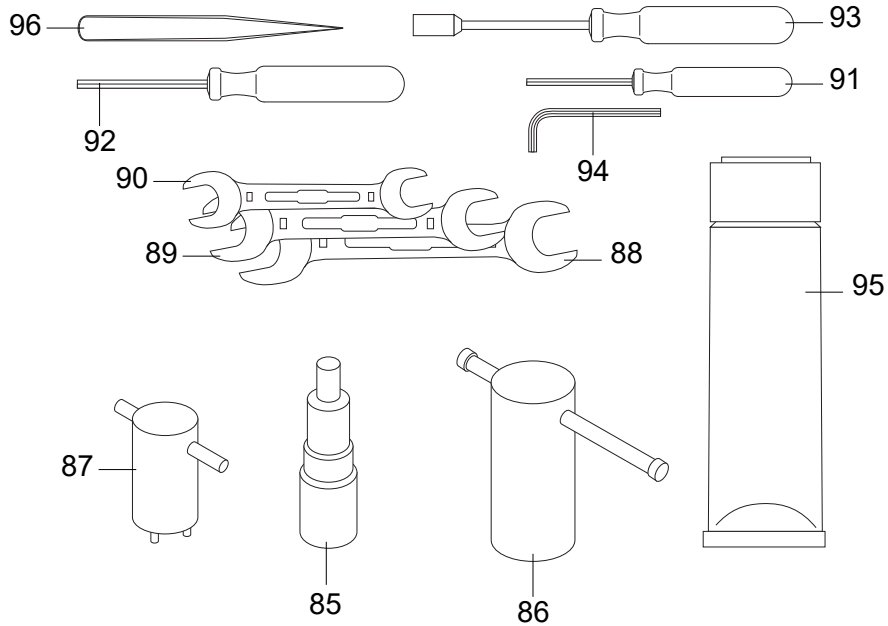
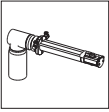
2.6.2 Cooling 45° (optional)



Pos.	Designation		Qty.	Art. no.
70a	Cooling 45°, type 140*	includes Pos. 71a - 79	--	1009036
70b	Cooling 45°, type 280	includes Pos. 71b - 79	--	1009038
70c	Cooling 45°, type 560	includes Pos. 71c - 79	--	1003681
71a	Cooling tube 140*		2	1009048
71b	Cooling tube 280		2	1009050
71c	Cooling tube 560		2	1003684
72	Cooling tube front		2	1009047
73	Cooling nozzle holder complete		1	1009019
74	O-ring 6 x 1		2	1003666
75	Hexagonal socket screw M5x16		4	1008743
76	Connection		2	1020156
77	Protection shield		1	1003680
78	Pressure disc for cooling jet		1	1009018
79	Spring washer		2	1008789

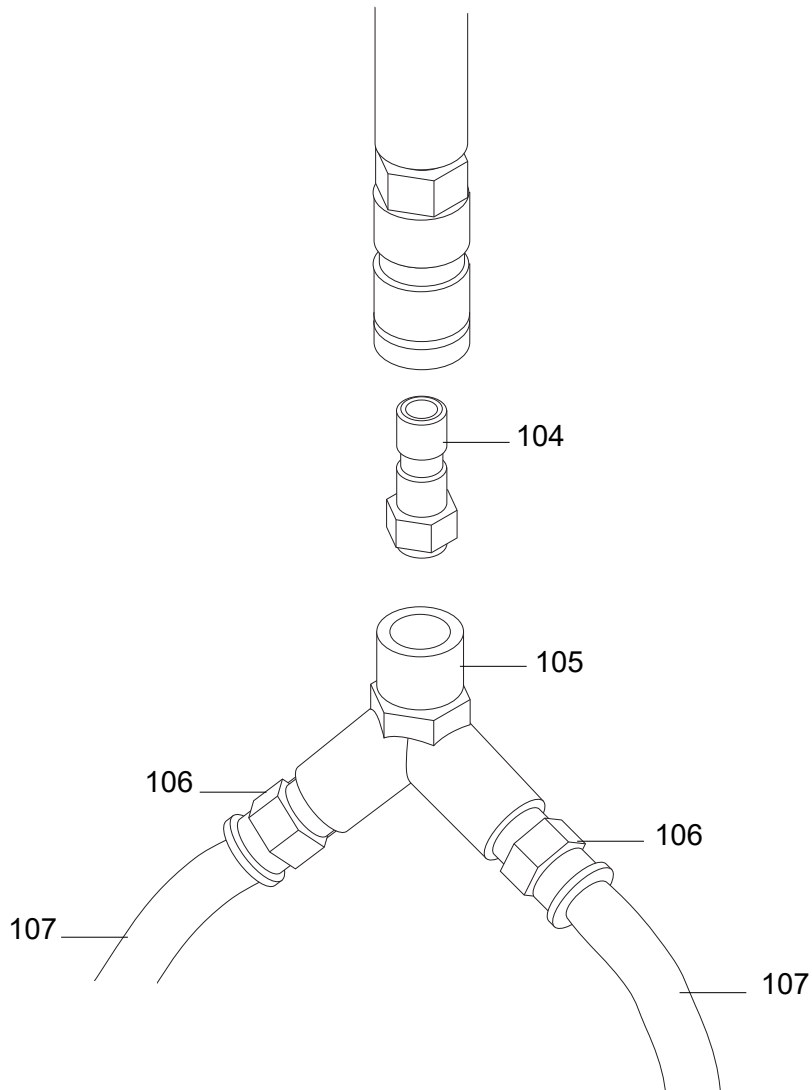
* This length may be ordered as a spare part. SM-F100 CONNEX Type 140 is obsolete.

2.7 Tools and accessories



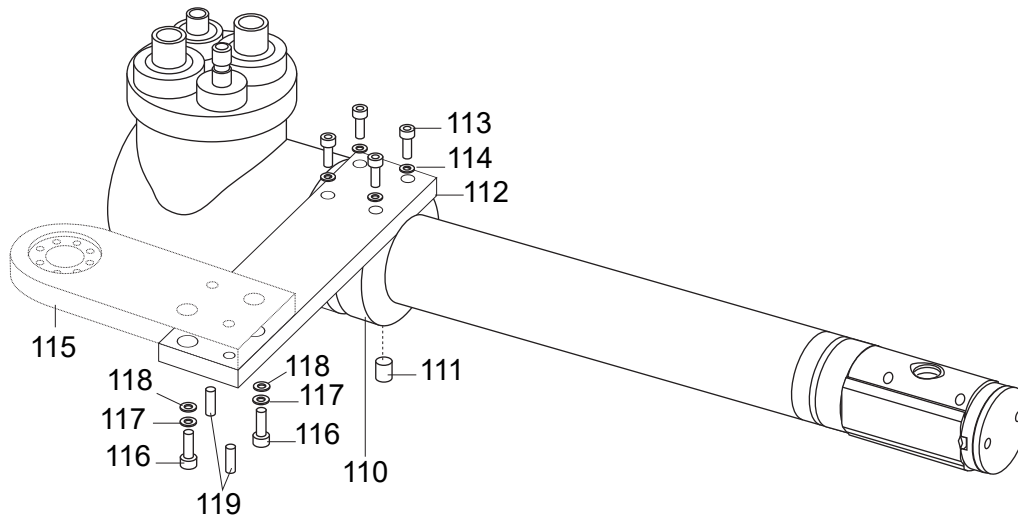
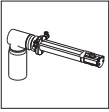
Pos.	Designation	Qty.	Art. no.
85	Nozzle tool	1	1009009
86	Centering tool for spray gun head	1	1003675
87	Electrode mounting tool	1	1009003
88	Spanner 21 / 23	1	1009372
89	Spanner 17 / 19	1	1009373
90	Spanner 12 / 14	1	1009375
91	Hexagon socket screw key, size 2.5	1	1009393
92	Hexagon socket pin spanner, size 4	1	1009395
93	Key for spray gun head module	1	1009385
94	Allen wrench size 5	1	1009412
95	O-ring grease	1	1003770
96	Tweezers	1	1009416
Not illustrated:			
97	Adapter set +/- (APS hose to VPS connection)	1	1003465
98	Sealing coupling gas G1/4	1	1004354
99	Rapid screw joint for powder hose	1	1004366
100	Spray gun case	1	1009359
101	Foam rubber for gun case	1	1009362

2.8 Cooling air distribution



Pos.	Designation		Qty.	Art. no.
103	Cooling air distribution, complete	includes:	1	1009032
104	Nipple		1	1003392
105	Y piece		1	1011286
106	Fitting QS-1/4-6		2	1011221
107	Hose PUN (6 x 1)		-	1011264

2.9 Gun holder for mounting on spray gun manipulator

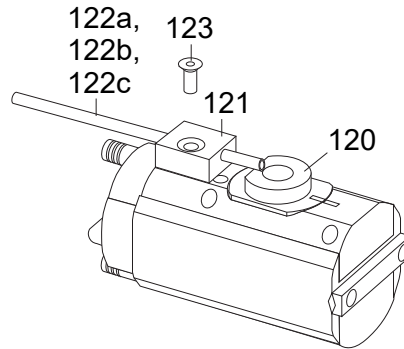


Pos.	Designation	Qty.	Art. no.
110	Back-up ring for spray gun holder* includes Pos. 111	1	1003679
111	Fixing screw M8x1 for back-up ring*	1	1003512
112	Insulating plate*	1	1004247
113	Socket head cap screw M6x30*	4	1003540
114	Washer Ø 6 mm*	4	1003545
115	Holder plate for IRB robot**	1	1004246
116	Hex screw M8x35	2	1003535
117	Lock washer Ø 8 mm	2	1008788
118	Washer Ø 8 mm	2	1003546
119	Stud Ø 5x30	2	1003536

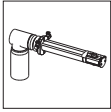
* Part of delivery of the spray gun.

** Not part of the delivery of the holder. The holder plate must be ordered separately.

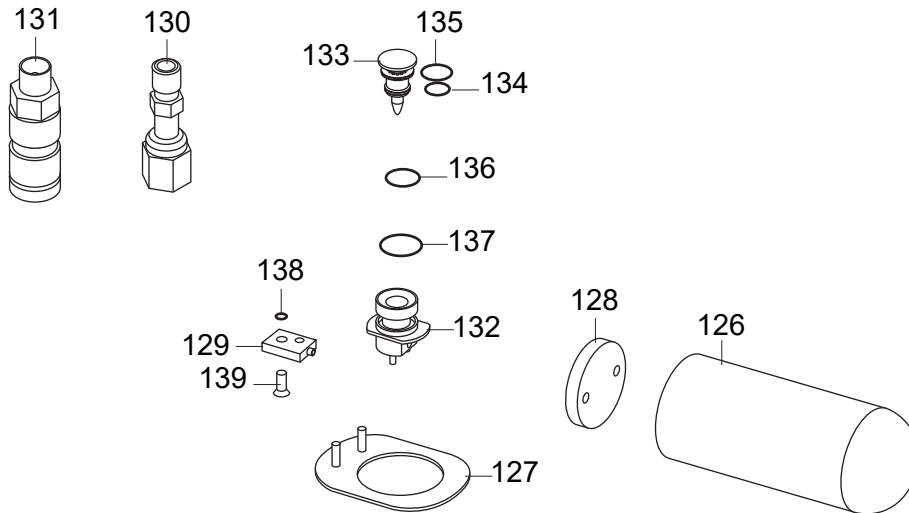
2.10 External powder injection kit (optional)



Pos.	Designation	Qty.	Art. no.
--	External injection kit, powder injector Ø 1.5 includes:		1018845
120	Nozzle 600 A Ø 6 mm for external injection	1	1003650
121	Powder injector holder for external injection	1	1003689
122a	Powder injector Ø 1.5 mm for external injection	1	1003690
123	Countersunk screw M4x16	1	1003534
--	External injection kit, powder injector Ø 1.8 includes:		1009016
120	Nozzle 600 A Ø 6 mm for powder injection	1	1003650
121	Injector holder for external injection	1	1003689
122b	Injector Ø 1.8 mm for external injektion	1	1003691
123	Countersunk screw M4x16	1	1003534
--	External injection kit, powder injector Ø 2.0 includes:		1009017
120	Nozzle 600 A Ø 6 mm for powder injection	1	1003650
121	Injector holder for external injection	1	1003689
122c	Injector Ø 2.0 mm for external injection	1	1003692
123	Countersunk screw M4x16	1	1003534



2.11 VPS kit (optional)



Pos.	Designation		Qty.	Art. no.
125	VPS kit	includes Pos. 126 - 138	1	1009014
126	Ceramic protection*		1	1006761
127	Protective shield*		1	1003653
128	Pressure disc		1	1003657
129	Injector type 630 Ø 3 mm		1	1003687
130	VPS connection for gas swagelok 9.5		1	1009179
131	Connection for VPS powder hose		1	1009180
132	VPS-nozzle 6301 with sputter pins		1	1003647
133	Electrode standard		1	1003645
	Electrode standard (replacement for 1003645)		1	1091133
134	O-ring viton 10 x 1 (green)		1	1003393
135	O-ring viton 11 x 1		1	1003668
136	O-ring viton 18 x 2 (green)		1	1003745
137	O-ring viton 20 x 1.5		1	1003670
138	O-ring viton 4 x 1.5		1	1003665
139	Countersunk screw M4x8 for injector VPS**		1	1008725

* 126 and 127 insulate the spray gun from thermal and electrical energy when used in vacuum.
Using these parts prevents using the cooling jet unit.

** 139 is not in the VPS kit. This screw must be used with the injector type 630.

2.12 Sets

Pos.	Designation	Qty.	Art. no.
Internal powder injection			
--	Set nozzle 618 / electrode / o-ring includes:	--	1018766
13	Nozzle type 618H-15	1	1003649
14	Electrode standard	1	1003645
	Electrode standard (replacement for 1003645)	1	1091133
18	O-Ring viton 10 x 1	1	1003393
19	O-Ring viton 11 x 1	1	1003668
20	O-Ring viton 18 x 2	1	1003745
21	O-Ring viton 20 x 1.5	1	1003670
External powder injection			
--	Set nozzle 600 A / electrode (TF) / o-ring includes:	--	1091134
14	Electrode standard	1	1003645
	Electrode standard (replacement for 1003645)	1	1091133
18	O-Ring viton 10 x 1	1	1003393
19	O-Ring viton 11 x 1	1	1003668
20	O-Ring viton 18 x 2	1	1003745
21	O-Ring viton 20 x 1.5	1	1003670
120	Nozzle type 600 A for external injection	1	1003650
--	Set of O-rings includes:		1018772
8, 33, 47, 63, 74	O-ring viton 6x1	12	1003666
9, 34, 48	O-ring viton 5.28 x 1.78	4	1003456
10	O-ring viton 10 x 1.5	2	1003394
11	O-ring viton 18 x 1.5	1	1003669
18	O-ring viton 10 x 1 (green)	1	1003393
19	O-ring viton 11 x 1	1	1003668
20	O-ring viton 18 x 2 (green)	1	1003745
21	O-ring viton 20 x 1.5	1	1003670
22	O-ring viton 4 x 1.5	1	1003665
49	O-ring viton 40 x 2	1	1003671
--	Set of screws includes:		1003673
6	Cylindrical screw M3x6	8	1003532
16	Hex screw special M4x98 spray gun head	2	1003663
17	Lock washer Ø 4 mm	2	1003530
23	Countersunk screw M4x12 for injector	1	1003533
51a	Screw M5x90 to 90° connection piece	3	1003662
51b	Screw M5x100 to 180° connection piece	3	1003664
52	Lock washer Ø 5 mm	3	1003531
113	Screw M6x30 for spray gun holder	4	1003540
114	Washer Ø 6 mm for spray gun holder	4	1003545