

# SinplexPro™ Plasma Spray Gun

## Plasma Spraying

Parts List  
PL 115252 EN 11



**SinplexPro™-180**




**SinplexPro™-90**


US Patent Nos.: D545851, D545853, D681706, D714372, D721110, D721749, D728647, D755864, 7759599, 9142390

## Oerlikon Metco (US) Inc.

1101 Prospect Avenue

Westbury NY 11590

 +1 516 334 1300

 +1 516 338 2414

[www.oerlikon.com/metco](http://www.oerlikon.com/metco)

## 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**

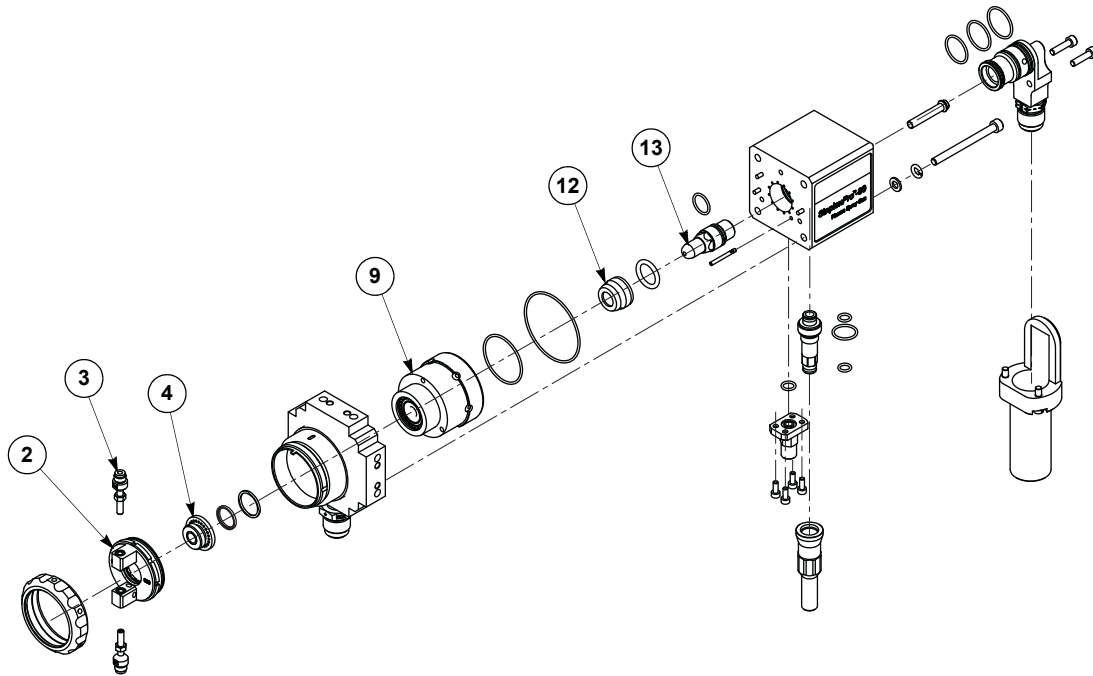
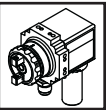
Parts recommended in order to guarantee maximum availability of component. This prevents downtime caused by delay in procurement.



## Warranty Disclaimer

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

# 1 List of Recommended Spare Parts, SinplexPro™ Plasma Spray Gun



sinplex\_spare

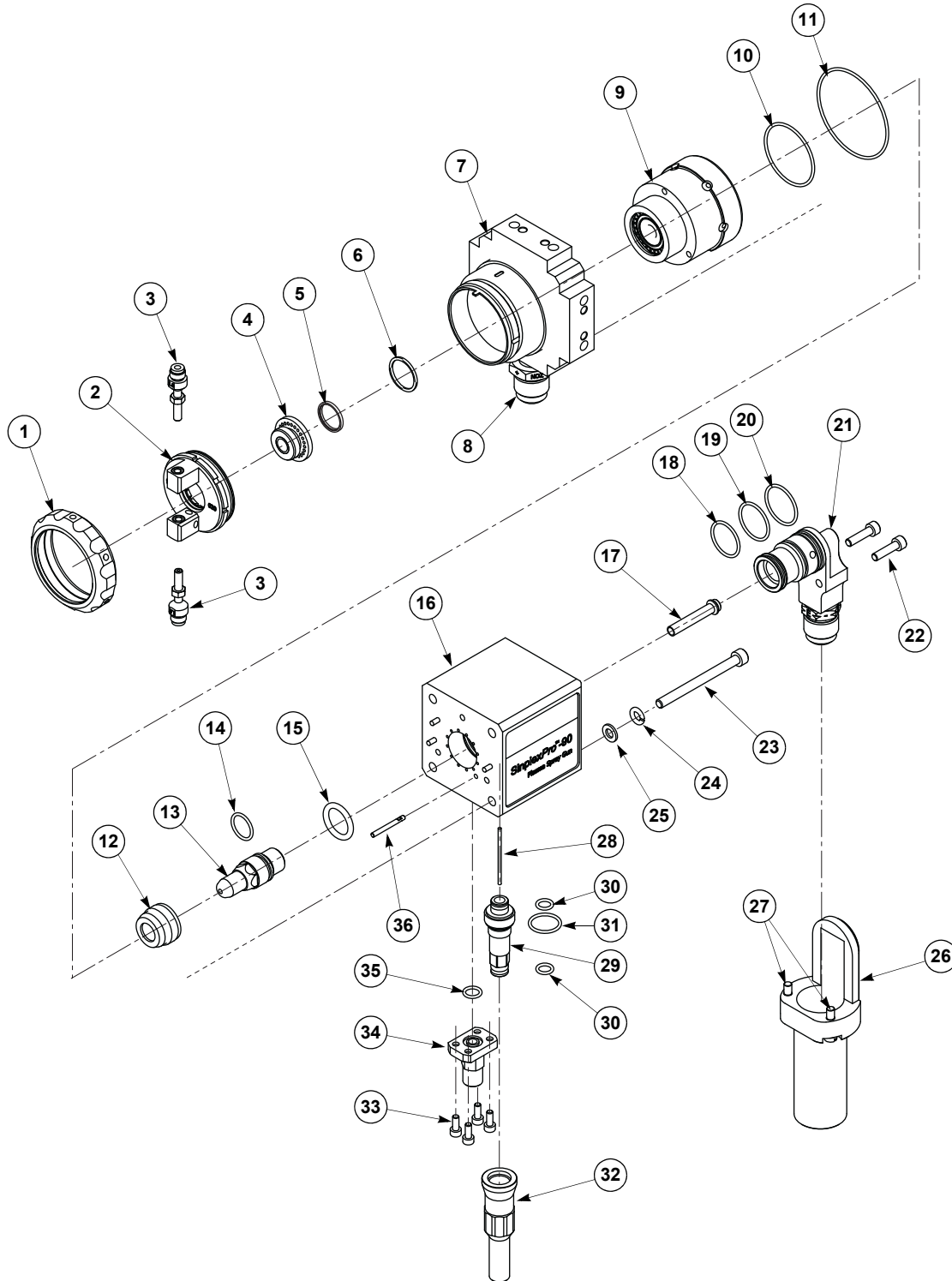
Item No.	Designation	Cat.	Qty.	Order No.
2	Injector Ring	K	1	(See page 8.)
3	Powder Injector	C	2	(See page 9.)
4	Nozzle	C	1	(See page 8.)
9	Neutrode Stack Assembly	K	1	1079904
12	Electrode Insulator	W	1	1079909
13	Electrode	C	1	1079897
76	Ringlube	C	1	1000508
77	Silver Conductive Grease	C	1	1086603
79	Reseal Kit for SinplexPro™-90	W	1	1080651
80	Reseal Kit for SinplexPro™-180	W	1	1080652
82	SinplexPro™-90, 9 mm Nozzle Service Kit	W	1	1083271
83	SinplexPro™-180, 9 mm Nozzle Service Kit	W	1	1083272

PL 115252 EN 11 Released on: 11/22/2019

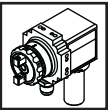
## 2 Parts List for SinplexPro™ Plasma Spray Gun

SinplexPro™-90 Plasma Spray Gun	1079889
SinplexPro™-180 Plasma Spray Gun	1081632

### 2.1 SinplexPro™-90 Complete Gun Assembly

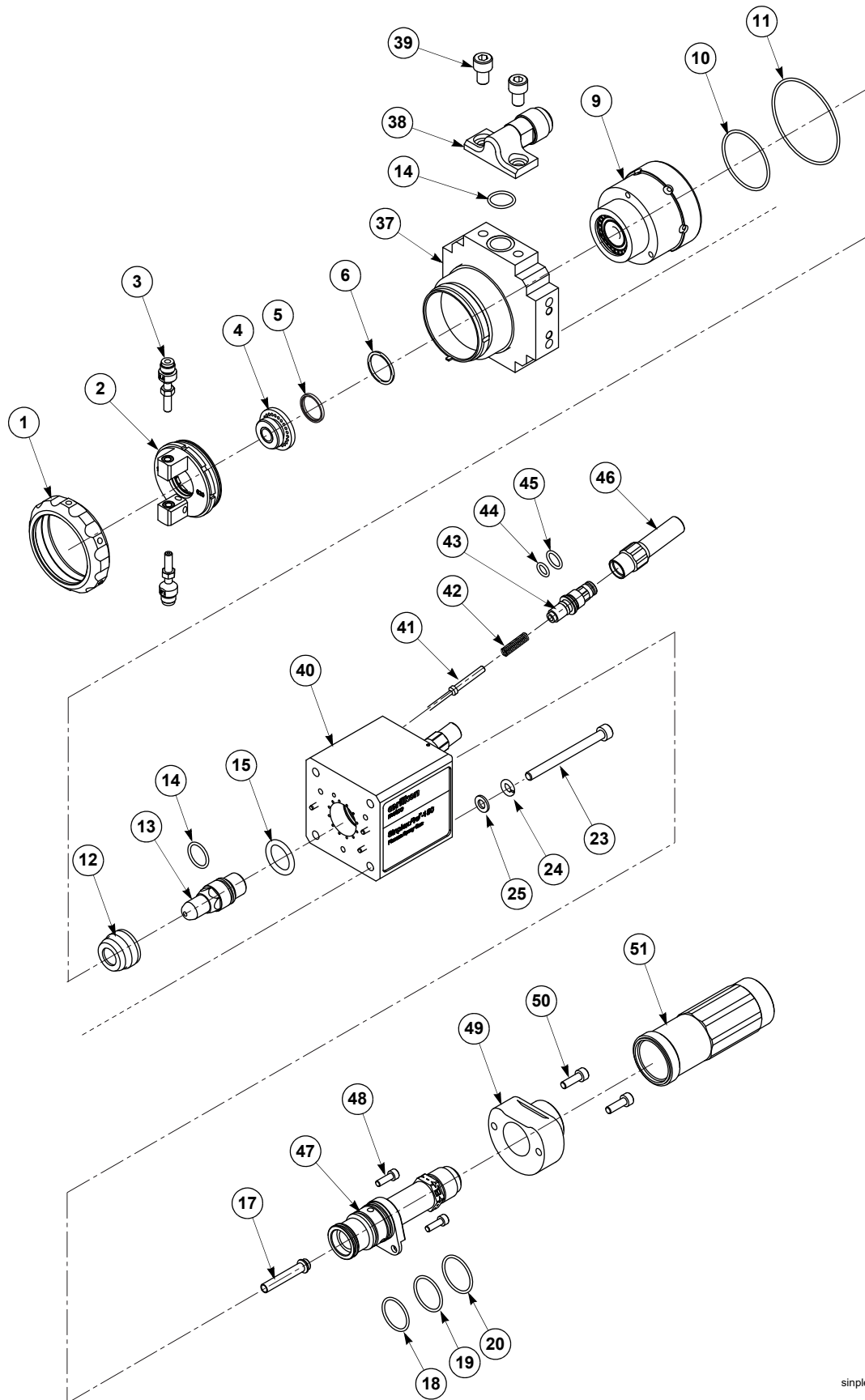


sinplex-90\_complete

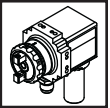


Item No.	Designation	Qty.	Order No.
1	Nozzle Nut	1	1060231
2	Injector Ring	1	(See page 8.)
3	Powder Injector	3	(See page 9.)
4	Nozzle Assembly (includes items 5 & 6)	1	(See page 8.)
5	Insulator Ring	1	1081770
6	O-ring, (Quad Ring) 0.801 X 0.070	1	1061036
7	Front Gun Body Assembly (includes item 8)	1	1079905
8	Water ( <b>NOZ +</b> ) Hose Fitting	1	1000103
9	Neutrode Stack Assembly	1	1079904
10	O-ring, 1.614 x 0.070 Black Viton	1	1059685
11	O-ring, 2.364 x 0.070 Viton	1	1000366
12	Electrode Insulator	1	1079909
13	Electrode	1	1079897
14	O-Ring, Black Viton 0.614 x 0.07 in. (pkg. of 6)	1	1001462
15	O-Ring, Buna 0.734 x 0.139 in.	1	1017527
16	Rear Gun Body	1	1079907
17	Cooling Water Tube	1	1003423
18	O-Ring, Black Viton 0.864 x 0.07 in.	1	1015536
19	O-Ring, Buna 0.926 x 0.07 in. (pkg. of 3)	1	1001624
20	O-Ring, Black Viton 0.989 x 0.07 in. (pkg. of 2)	1	1000225
21	Electrode Holder	1	1079908
22	Screw, M5 x 20 mm	2	1089684
23	Screw, M6 x 70mm	4	1059687
24	Lock Washer, M6	4	1089683
25	Flat Washer, M6	4	1089682
26	Hose Cover (includes item 27)	1	1081771
27	Captive Screw	2	1081772
28	Ignition Spring	1	1079913
29	Ignition Fitting (includes items 30 & 31)	1	1079911
30	O-Ring, Black Viton 0.301 x 0.07 in.	2	1015535
31	O-Ring, Black Viton 0.676 x 0.07 in. (pkg. of 4)	1	1000143
32	Ignition Insulator	1	1081773
33	Screw, M4 x 10	4	1003513
34	Plasma Gas Fitting	1	1079910
35	O-Ring, Black Viton, 0.344 x 0.07 in. (pkg. of 4)	1	1002073
36	Ignition Pin	1	1079912

## 2.2 SinplexPro™-180 Complete Gun Assembly

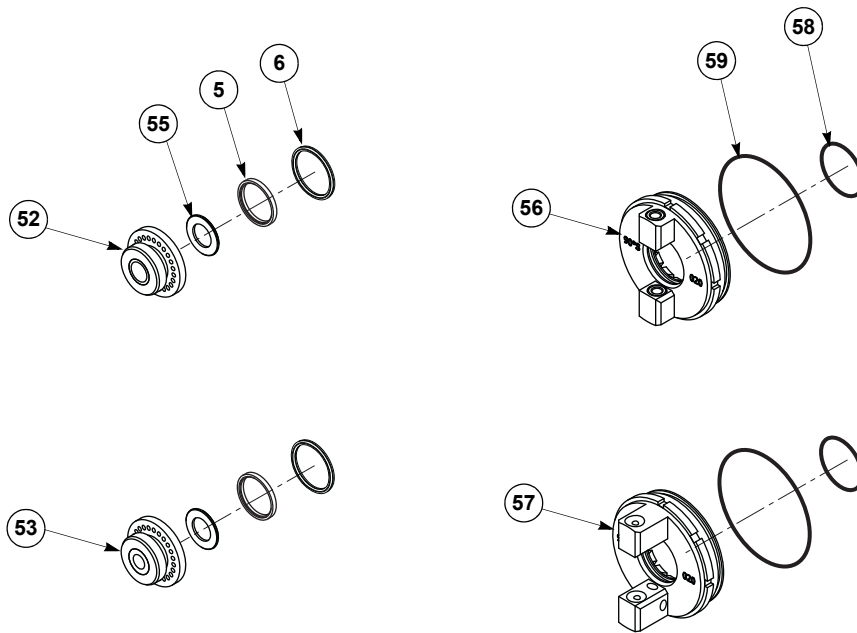


sinplex-180\_complete



Item No.	Designation	Qty.	Order No.
1	Nozzle Nut	1	1060231
2	Injector Ring	1	(See page 8.)
3	Powder Injector	3	(See page 9.)
4	Nozzle Assembly (includes item 6)	1	(See page 8.)
5	Insulator Ring	1	1081770
6	O-ring, (Quad Ring) 0.801 X 0.070	1	1061036
9	Neutrode Stack Assembly	1	1079904
10	O-ring, 1.614 x 0.070 Black Viton	1	1059685
11	O-ring, 2.364 x 0.070 Viton	1	1000366
12	Electrode Insulator	1	1079909
13	Electrode	1	1079897
14	O-Ring, Black Viton 0.614 x 0.07 in. (pkg. of 6)	2	1001462
15	O-Ring, Buna 0.734 x 0.139 in.	1	1017527
17	Cooling Water Tube	1	1003423
18	O-Ring, Black Viton 0.864 x 0.07 in.	1	1015536
19	O-Ring, Buna 0.926 x 0.07 in. (pkg. of 3)	1	1001624
20	O-Ring, Black Viton 0.989 x 0.07 in. (pkg. of 2)	1	1000225
23	Screw, M6 x 70mm	4	1059687
24	Lock Washer, M6	4	1089683
25	Flat Washer, M6	4	1089682
37	Front Gun Body	1	1079905
38	Hose Fitting Block	1	1081774
39	Screw, M8 x 12 mm	2	1081775
40	Rear Gun Body	1	1081776
41	Contact Pin	1	1081777
42	Compression Spring	1	1059000
43	Ignition Fitting (includes items 44 & 45)	1	1081778
44	O-Ring, Black Viton 0.270 x 0.07 in. (pkg. of 2)	1	1004714
45	O-Ring, Black Viton 0.426 x 0.07 in. (pkg. of 2)	1	1001493
46	Ignition Insulator	1	1081779
47	Electrode Holder	1	1081781
48	Screw, M5 x 12 mm	2	1072299
49	Hose Insulator Base	1	1081782
50	Socket Head Screw, M5 x 16 mm	2	1066144
51	Hose Insulator Cover	1	1081783

## 2.3 Nozzles and Injector Rings



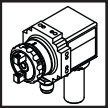
sinplex\_noz\_injrings

Item No.	Designation	Qty.	Order No.
<b>Nozzles</b>			
52	Nozzle Assembly, 9 mm (includes items 5, 6 & 55)	1	1082606
53	Nozzle Assembly, 6.5 mm (includes items 5, 6 & 55)	1	1082605
54	Nozzle Assembly, 8 mm (optional; not shown) (includes items 5, 6 & 55)	—	1302081
55 <sup>(1)</sup>	BN Insulator Ring (18 mm OD / 10.5 mm ID)	1	1008803
5	Insulator Ring	1	1081770
6	O-ring, (Quad Ring) 0.801 X 0.070	1	1061036
<b>Injector Rings<sup>(2)</sup></b>			
56	Short Injector Ring Assembly (includes items 58 & 59)	1	1080091
57	Long Injector Ring Assembly (includes items 58 & 59)	1	1079906
58	O-ring, 0.801 X 0.070 Black Viton (pkg. of 2)	1	1000549
59	O-ring, 1.86 X 0.070 Silicone	1	1017675

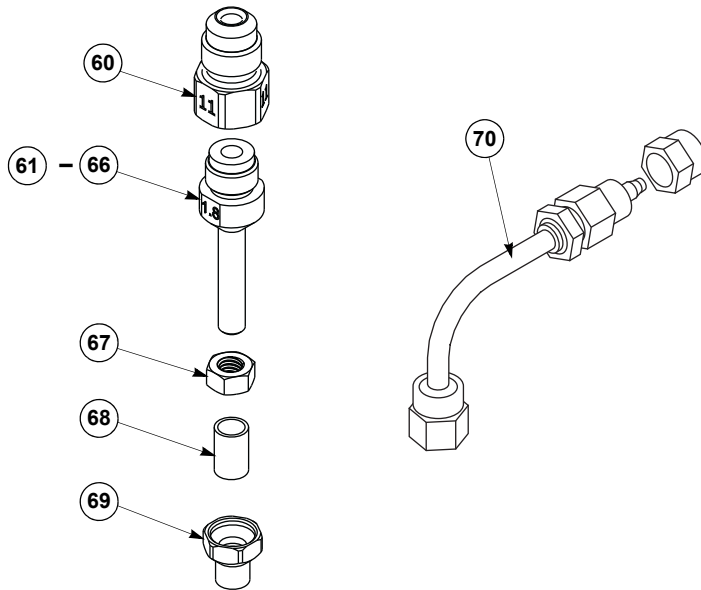
1. BN (boron-nitride) Insulator Ring (55) is glued onto Nozzle Assembly.

2. The SinplexPro can also use TriplexPro-210 injector rings. Refer to PL 105134.





## 2.4 Powder Injectors



sinplex\_powder

Item No.	Designation	Qty.	Order No.
60 <sup>(1)</sup>	Powder Fitting Adapter	2	1002329
61	Powder Injector 1.8	2	1003436
62 <sup>(1)</sup>	Powder Injector 2.0	2	1003439
63 <sup>(2)</sup>	Powder Injector 1.5	—	1003434
64 <sup>(2)</sup>	Powder Injector 1.8 (with hard metal insert; long-life)	—	1003437
65 <sup>(2)</sup>	Powder Injector 2.0 (with hard metal insert; long-life)	—	1003440
66 <sup>(2)</sup>	Powder Injector 1.5 (with hard metal insert; long-life)	—	1003435
67 <sup>(1)</sup>	Lock Nut, M5 (supplied with all injectors)	1	1003518
68 <sup>(1)</sup>	Powder Injector Sleeve (pkg. of 3)	2	1059512
69 <sup>(3)</sup>	Powder Injector Lock Nut (pkg. of 3)	—	1093600
70 <sup>(1)</sup>	Powder Elbow Fitting Assembly, 90°	2	1003759

1. Standard; supplied with spray gun.
2. Optional; ordered separately.
3. Optional. Use instead of Lock Nut (67) and Powder Injector Sleeve (68) when using Short Injector Ring (56).

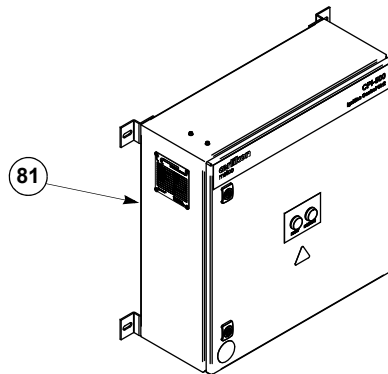
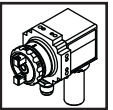
### 3 Additional Equipment

#### 3.1 Standard Equipment

The following items are supplied with the spray gun:

Item No.	Designation	Qty.	Order No.
71	Gun Case	1	—
72	Torque-Spanner Wrench	1	1078860
73	Electrode Removal Socket (5/8")	1	1035111
74	Driver Handle, 3/8" Drive	1	1035112
75	Hex Wrench, 5 mm	1	—
76	Ringlube	1	1000508
77	Silver Conductive Grease	1	1086603
78 (1)	Heat Shield	1	1063405
79 (1)	Reseal Kit for SinplexPro™-90 (includes the following items:)	—	1080651
6	O-ring, (Quad Ring) 0.801 X 0.070	1	1061036
10	O-ring, 1.614 x 0.070 Black Viton	1	1059685
11	O-ring, 2.364 x 0.070 Viton	1	1000366
14	O-Ring, Black Viton 0.614 x 0.07 in.	1	1001462
15	O-Ring, Buna 0.734 x 0.139 in.	1	1017527
18	O-Ring, Black Viton 0.864 x 0.07 in.	1	1015536
19	O-Ring, Buna 0.926 x 0.07 in.	1	1001624
20	O-Ring, Black Viton 0.989 x 0.07 in.	1	1000225
30	O-Ring, Black Viton 0.301 x 0.07 in.	2	1015535
31	O-Ring, Black Viton 0.676 x 0.07 in.	1	1000143
35	O-Ring, Black Viton, 0.344 x 0.07 in.	1	1002073
58	O-ring, 0.801 X 0.070 Black Viton	1	1000549
59	O-ring, 1.86 X 0.070 Silicone	1	1017675
80 (2)	Reseal Kit for SinplexPro™-180 (includes the following items:)	—	1080652
6	O-ring, (Quad Ring) 0.801 X 0.070	1	1061036
10	O-ring, 1.614 x 0.070 Black Viton	1	1059685
11	O-ring, 2.364 x 0.070 Viton	1	1000366
14	O-Ring, Black Viton 0.614 x 0.07 in.	2	1001462
15	O-Ring, Buna 0.734 x 0.139 in.	1	1017527
18	O-Ring, Black Viton 0.864 x 0.07 in.	1	1015536
19	O-Ring, Buna 0.926 x 0.07 in.	1	1001624
20	O-Ring, Black Viton 0.989 x 0.07 in.	1	1000225
44	O-Ring, Black Viton 0.270 x 0.07 in.	1	1004714
45	O-Ring, Black Viton 0.426 x 0.07 in.	1	1001493
58	O-ring, 0.801 X 0.070 Black Viton	1	1000549
59	O-ring, 1.86 X 0.070 Silicone	1	1017675

1. SinplexPro™-90
2. SinplexPro™-180



CPI-500

Item No.	Designation	Qty.	Order No.
81 (1)(2)	CPI-500 Ignition Control Unit (Refer to MAN 118139.)	—	1081745
	1. Included with SinplexPro™-90 in complete package 1084663.		
	2. Included with SinplexPro™-180 in complete package 1084664.		

### 3.2 Options and Accessories

Items in this section are ordered separately.

#### 3.2.1 Spare Parts Packages

Item No.	Designation	Qty.	Order No.
82	SinplexPro™-90, 9 mm Nozzle Service Kit (includes the following items:)	—	1083271
9	Neutrode Stack Assembly	1	1079904
12	Electrode Insulator	1	1079909
13	Electrode	2	1079897
52	Nozzle Assembly, 9 mm	6	1082606
79	Reseal Kit for SinplexPro™-90	2	1080651
83	SinplexPro™-180, 9 mm Nozzle Service Kit (includes the following items:)	—	1083272
9	Neutrode Stack Assembly	1	1079904
12	Electrode Insulator	1	1079909
13	Electrode	2	1079897
52	Nozzle Assembly, 9 mm	6	1082606
80	Reseal Kit for SinplexPro™-180	2	1080652

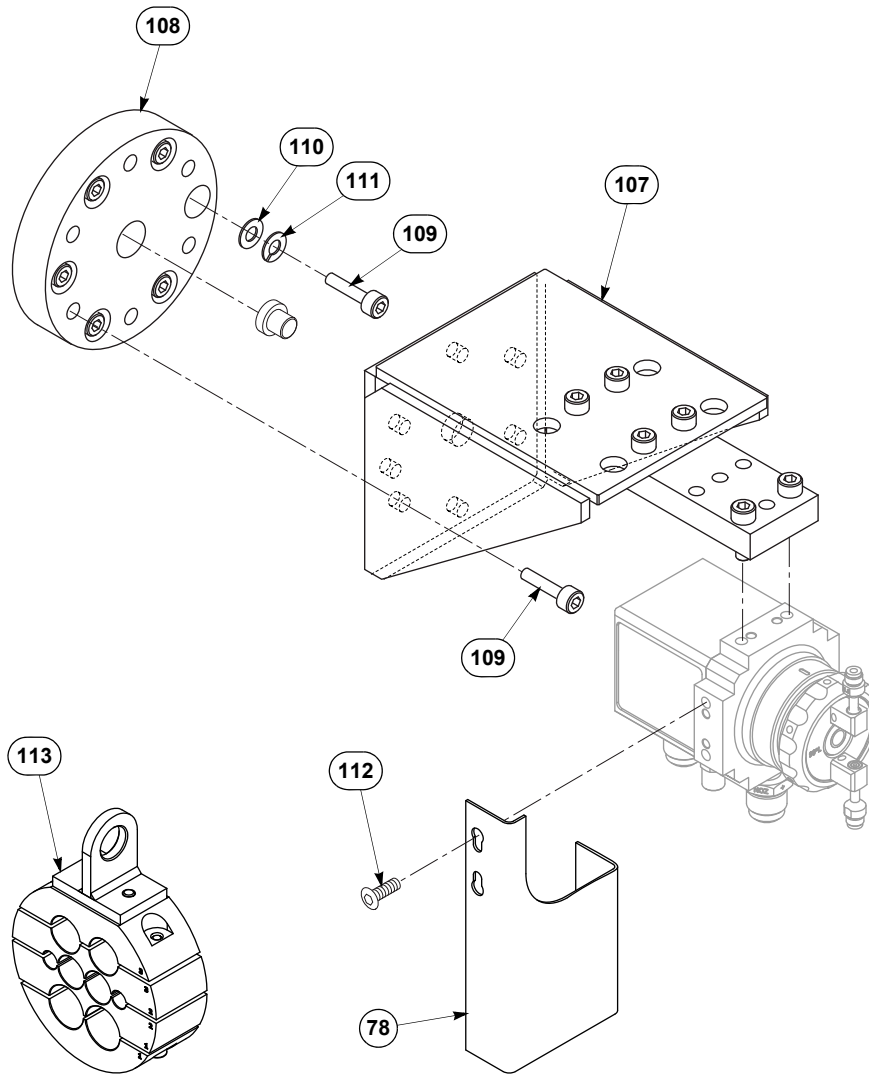
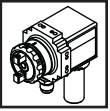
### 3.2.2 Hoses and Cables

Water-cooled power cables (supplied separately) are listed below. The plasma gas hose is supplied with the controller. Powder hoses are supplied with the powder feeder or selected based on the spraying application. (See powder feeder instructions.)

Item No.	Description	Qty.	Catalog. No.	Order No.
84	Hose and Cable Assembly, 5 m (16.4') (incl. items 85-87)	—	8MH	1034011
85	Hose Assembly, Plasma Gas	1	7MH50	1001561
86	Electric Cable, Water Cooled (Red) 5 m (16.4')	1	8MH57586	1034012
87	Electric Cable, Water Cooled (Blue) 5 m (16.4')	1	8MH57587	1034013
88	Hose and Cable Assembly, 8 m (26') (incl. items 89-92)	—	8MH-8	1034014
89	Hose Assembly, Plasma Gas 9.1 m (30')	1	7MH116	1001553
90	Electric Cable, Water Cooled (Red) 8 m (26')	1	8MH57568	1034470
91	Electric Cable, Water Cooled (Blue) 8 m (26')	1	8MH57567	1034471
92	T-Clip Fastener	3	—	—
<b>Adapters</b>				
93	Gun Hose Adapter Package (incl. items 94-96)	—	PTM300	1028806
94	Hose Adapter ( <b>EL-</b> )	1	PTM8	1002339
95	Hose Adapter ( <b>NOZ+</b> )	1	PTM9	1002340
96	Plasma Gas Hose Adapter	1	PTM15	1002331
97	Adapter Package (Praxair)	—	8MH97360	1070059
<b>Made-to-Order Lengths</b> (Minimum 1.5 m / 5' to maximum 10.5 m / 35'.)				
98	Hose and Cable Assembly (incl. items 92, 99-101)	—	8MHCTO	1034390
99	Hose Assembly, Plasma	1	7MH50MTO	1034352
100	Electric Cable, Water Cooled (Red)	1	8MH20CTO	1034543
101	Electric Cable, Water Cooled (Blue)	1	8MH10CTO	1034542
<b>Ignition Cable</b>				
102	Sinplex Ignition Cable (12 m / 40') (includes items 103-105)	—	SYX121775	1085659
103 <sup>(1)</sup>	Ignition Cable, 20 m (66') (includes item 104)	1	TRPP111932	1078927
104	O-Ring, Buna, 0.070 x 0.070 in	1	TRPP58728	1083088
105	Ignition Cable Protection Socket	1	SYX120723	1097846
<b>Water Conditioning</b>				
106	Water Quality Filter Kit (Refer to AI 121114.)	—	SYX120873	1085035

1. Cut Ignition Cable to 12 m (40') length, or shorter, for CPI-500 / SinplexPro ignition.

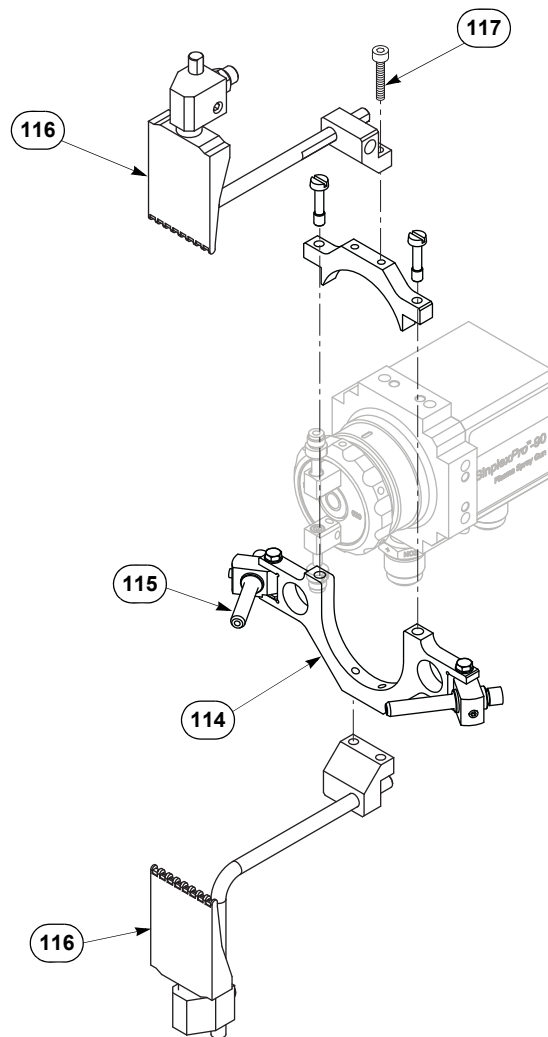
### 3.2.3 Mounting Equipment



sinplex\_mount

Item No.	Designation	Qty.	Order No.
107	Robot Mounting Bracket Assembly (includes items 108 - 111)	—	1064196
108	Robot Insulator Plate	1	1064198
109	Screw, M8 X 25 mm (pkg. of 2)	18	1030603
110	Washer, M8	6	—
111	Lock Washer, M8	6	—
78	Heat Shield (includes item 112)	1	1063405
112	Button Head Screw, M8 X 12 mm (pkg. of 4)	2	1030554
113	Hose and Cable Holder / Strain Relief (AR100)	—	1100938

### 3.2.4 Work Piece Cooling Equipment



sinplex\_cooling

Item No.	Designation	Qty.	Order No.
114	Air Jet Assembly <i>(includes item 115)</i>	1	1064200
115	Air Nozzle	2	1000540
116	Silvent Air Jet Assembly <i>(includes item 117)</i>	1	1064201
117	Cap Screw, M5 X 20 mm, Stainless Steel	4	—
118 <sup>(1)</sup>	2PSA40 Air Nozzle Hose Assembly, 38 cm (15")	2	1000543
119 <sup>(1)</sup>	2PSA35 Wye Assembly <i>(includes items 120 &amp; 121)</i>	1	1000541
120	2E22 Hex Nipple	2	1000464
121	4E20 Hex Nipple	1	1000824
122 <sup>(1)</sup>	7M150 Air Supply Hose Assembly, 5.8 m (19')	1	1001473
123	PS43 Hex Key Wrench (3/32")	1	1002327

1. Required (but not supplied) with Air Jet Assembly (114) and Silvent Air Jet Assembly(116).