

Thermal Spray Consumables Guide

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PARTICLES SIZE Conversion Chart	
MICRON	MESH
38	400
45	325
53	270
63	230
75	200
90	170
106	140
125	120
150	100

BOND STRENGTH Conversion Chart	
MPA	Psi
10	1450
25	3626
30	4351
35	5076
40	5802
50	7252
60	8702
70	10153

COATING THICKNESS Conversion Chart	
MICRON	mil
10	0.4
20	0.8
50	2.0
100	3.9
200	7.9
300	11.8

HOSE LENGTH Conversion Chart	
Metric	Imperial
4.5m	15ft
5m	16ft
6m	20ft
9m	30ft
15m	50ft

Note: conversions are approximations only

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Tungsten Carbide	23
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Powders

CROSS REFERENCE LIST (chemistry only)						
Powder Type	FST p/n	Metco	Praxair	Amperit	PAC	Page Nr.
Abradables						8
AlSi-Polyester	M-111	601	AL 228 AL 229	–	905-3	8
ZrO ₂ -Y ₂ O ₃ -Poly-hBN	M-113	2395	–	–	–	8
ZrO ₂ -Y ₂ O ₃ -Poly	M-114	2460	–	–	–	8
Ni Graphite 75/25	M-390	307	–	–	–	8
Aluminum Oxide						8
Al ₂ O ₃	C-506/507	105 6103	ALO 101 ALO 114	740	705	8
Al ₂ O ₃ -TiO ₂ 97/3	C-328	101 6203	ALO 105 ALO 159	742	701	8
Al ₂ O ₃ -TiO ₂ 87/13	C-338	130 6221	ALO 187 ALO 188	744	730	9
Al ₂ O ₃ -TiO ₂ 87/13	C-339	130 6221	ALO 187 ALO 188	744	730	9
Al ₂ O ₃ -TiO ₂ 60/40	C-342	131	ALO 121	745	731	9
Al ₂ O ₃ -MgO 74/26	C-351	–	–	–	–	10
Chrome Carbide						10
CrC-NiCr 80/20	K-804	7101 7107 7102 7103 7105	–	578	-	10
CrC-NiCr 75/25	K-854	7201 7202 7203 7205	1375 CRC 300	588 584	-	10
CrC-CoNiCrAlY	K-880	–	–	594	-	10
Chrome Oxide						11
Cr ₂ O ₃	C-604/607	106 6156	Metco 6445 6155, 6156, 6416 Amdry 6415 ,6420	704 707	1106	11
Cr ₂ O ₃ /SiO ₂ /TiO ₂	C-650	136 6462	CRO 192	716	732	11
Cr ₂ O ₃ TiO ₂ 97/3	C-667	–	–	–	–	11
Cr ₂ O ₃ TiO ₂ 75/25	C-670	6485	–	712	-	12
Cr ₂ O ₃ TiO ₂ 60/40	C-677	6483	–	–	–	12
Cobalt Based Alloys						12

CROSS REFERENCE LIST (chemistry only)						
Powder Type	FST p/n	Metco	Praxair	Amperit	PAC	Page Nr.
T-800	M-499	68 3001 4800	CO 111 1248	342	T800	12
T-400	M-494	66 3002	CO 109 1247	340	T400	12
Alloy 12	M-481	8102	–	–	–	13
Alloy 6	M-484	4060 8101	CO 106 1256	344	6 46	13
Alloy 1	M-487	8100	–	–	–	13
Copper Based Alloys						14
Pure Copper	M-901 M-901P	55 1007	CU 105 CU 159	–	10	14
CuAlFe (Al-Bronze)	M-950	51 1004	CU 114 CU 104	–	16	14
CuAl (Al-Bronze)	M-952	–	–	–	–	14
Iron Based Alloys						15
316L Stainless	M-684	41 1003	FE 101 1236	377	96	15
431 Stainless	M-687	42	–	–	97	15
420 Stainless	M-642	1002	–	–	–	15
Ultra Hard Steel	M-688	–	–	–	–	15
Molybdenum Based Alloys						16
Mo	M-801	63 4063	MO 102 MO 103 1293	105 106 109	118	16
Mo-25NiS/F	M-855	1371	–	–	902	16
MB NiCr	M-880	–	–	–	–	16
Nickel Based Alloys						16
Pure Ni	M-300	56	NI 101 NI 118 1166	175	900	16
NiCr 80/20	M-301	43 5640 4535	NI 105 NI 106 NI 107 1262	250 251	98	17
NiAl 95/5	M-358	480	NI 185 Ni 970	280 281	906	17
Alloy 625	M-325	1005	NI 328 1265	380	625	17

Powders

CROSS REFERENCE LIST (chemistry only)						
Powder Type	FST p/n	Metco	Praxair	Amperit	PAC	Page Nr.
Alloy 718	M-328	1006	NI 202 1278	407	718	17
Alloy C-276	M-341	4276	NI 544 1269	409	C276	18
Alloy C-22	M-342	–	–	–	–	18
Alloy X	M-344	–	–	–	–	18
Nickel S/F Alloys						19
NiCrSiB (59-64 HRC)	M-771	15 2001	–	–	–	19
NiCrSiB (50-55 HRC)	M-770	14	–	–	–	19
NiCrSiB (35-40 HRC)	M-772	12	–	–	–	19
NiCrSiBCuMo (58-64 HRC)	M-778	16	–	–	–	20
NiCrSiB (30-35 HRC)	M-774	–	–	–	–	19
NiCrSiB (35-43 HRC)	M-775	–	–	–	–	19
NiCrSiB (45-50 HRC)	M-776					20
NiCrSiB (55-60 HRC)	M-773					19
NiCrSiBW (55-58 HRC)	M-781					20
NiCrSiBW (57-61 HRC)	M-782					20
NiCr/SF WC	M-733					20
NiCr/SF WC-Co	M-735	31C				21
NiCr/SF WC	M-737					21
Titanium						21
Pure Ti	M-222	4010	-	155	-	21
Ti 6Al 4V	M-223					21
Pure Ti	M-224					22
Ti 6Al 4V	M-225					22
Titanium Oxide						22
TiO ₂	C-408	102	-	782	702	22
Tungsten Carbide						23
WC-Co 88/12	K-624	3101 3106 3102 3103 5105	1342 WC 727	518	125 126 127	23

CROSS REFERENCE LIST (chemistry only)						
Powder Type	FST p/n	Metco	Praxair	Amperit	PAC	Page Nr.
WC-Co 83/17	K-674	3201 3202 3203 5143	1343 WC 729	526	200	24
WC-Co-Cr 86/10/4	K-647 K-648	5847 3652 3653 3655 3654	1350 WC 731	558 557	–	24
WC-Co-Cr 86/10/4	K-646	5843 3903	WC 496	554	–	24
WC-Ni 88/12	K-611	330...	1310 WC 791	547	–	23
WC-Ni 83/17	K-612	3501 3502 3503 3505	1310 WC 724	547	–	23
WC-CoCrNi 85/9/5/1	K-665	3601 3602 3603 3604				25
WC-CrC-Ni 73/20/7	K-607	3701 3707 3702-1 3703	1356 WC 733	551		26
Yttrium Oxide						26
Y ₂ O ₃	C-200	6035 6015	YO 118 YO 125	849	2100	26
Zirconium Oxide						26
ZrO ₂ -Y ₂ O ₃	C-297			825		26
ZrO ₂ -Y ₂ O ₃	C-295	204 231 234	ZRO 182 AI 1075 1484	827 831 832	2008	27
ZrO ₂ -22MgO	C-234	210	ZRO 103		810	27
ZrO ₂ -5CaO	C-241	201				27

Powders

ABRADABLES				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
AlSi-Polyester	Si 12.0% Polyester 40.0% Al Bal. Blend	M-111.92	-125 +12 µm	<ul style="list-style-type: none"> • Plasma. • Premium Silicon Aluminum and Polyester powder. • Quality abradable coatings for clearance control coatings in aircraft engines. • Application can also be found in turbo charges and land based turbines. • Useful up to 325°C (620°F).
ZrO ₂ Y ₂ O ₃ Polyester	ZrO ₂ Bal. Y ₂ O ₃ 7,5% Polyester 4.0% Blend	M-114.985	-180 +10 µm Average: 70 µm	<ul style="list-style-type: none"> • Coatings of these materials can be applied with high porosity levels. • Sprayable to higher levels than normal Zirconia Coatings.
ZrO ₂ Y ₂ O ₃ Polyester hBN	ZrO ₂ Bal. Y ₂ O ₃ 7,5% Polyester 4.5% hBN 0.7% Blend	M-113.985	-180 +10 µm Average: 70 µm	<ul style="list-style-type: none"> • Coatings of these materials can be applied with high porosity levels. • Sprayable to higher levels than normal Zirconia Coatings.
Ni Graphite 75/25	Ni Bal. C 25.0%	M-390.91	-106 +45 µm	<ul style="list-style-type: none"> • Coating service temperature capability approaching 480 °C. • Suitable for abradable coatings to rub against nickel alloy and steel. • Used in the glass industry as a low friction protective coating.

ALUMINUM OXIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Al ₂ O ₃	Al ₂ O ₃ > 99.5% Fused & Crushed	C-506.01	-25 +5 µm	<ul style="list-style-type: none"> • Good for abrasion, erosion and sliding wear applications • Good in alkalis and acid environments • Excellent dielectric properties • Useful up to 1600°C (3000°F) • Grind only with silicon carbide or diamond wheels.
		C-506.21	-45 +5 µm	
		C-506.25	-45 +22 µm	

ALUMINUM OXIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Al ₂ O ₃	Al ₂ O ₃ > 99.9% Spheridized	C-507.02	-20 +5 µm	<ul style="list-style-type: none"> • High Purity Aluminium Oxide. • Good for abrasion, erosion and sliding wear applications. • Good in alkalis and acid environments. • Excellent dielectric properties. • Useful up to 1600°C (3000°F). • Grind only with silicon carbide or diamond wheels.
		C-507.17	-38 +10 µm	
		C-507.23	-45 +15 µm	
		C-507.32	-53 +15 µm	
Al ₂ O ₃ -TiO ₂ 97/3	Al ₂ O ₃ 97.0% TiO ₂ 3.0% Fused & Crushed	C-328.01	-25 +5 µm	<ul style="list-style-type: none"> • Coatings are recommended for resistance to wear by abrasive grains, hard surfaces, fiber and thread, fretting, cavitation and particle erosion. • Resistance top cavitation, and to the effects of molten zinc, aluminium and copper. • Useful in the textile industry on any machine element application which comes in contact with fibers and threads.
		C-328.25	-45 +22 µm	
Al ₂ O ₃ -TiO ₂ 87/13	Al ₂ O ₃ 87.0% TiO ₂ 13.0% Fused & Crushed	C-338.01	-25 +5 µm	<ul style="list-style-type: none"> • Similar to C-328, but less hard and less brittle
		C-338.25	-45 +22 µm	
Al ₂ O ₃ -TiO ₂ 87/13	Al ₂ O ₃ 87.0% TiO ₂ 13.0% Blend	C-339.01	-25 +5 µm	<ul style="list-style-type: none"> • Similar to C-338 • Different morphology
		C-339.25	-45 +22 µm	
Al ₂ O ₃ -TiO ₂ 60/40	Al ₂ O ₃ 60.0% TiO ₂ 40.0% Fused & Crushed	C-342.01	-22 +5 µm	<ul style="list-style-type: none"> • Chemical processing industry to resist weak acidic environments • Textile manufacturing equipment and tooling • Pump components, shaft sleeves and mechanical seals used in a variety of industries.
		C-342.25	-45 +22 µm	

Powders

ALUMINUM OXIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Al ₂ O ₃ -MgO 74/26	Al ₂ O ₃ 74.0%	C-351.45	-63 +10 µm	<ul style="list-style-type: none"> • Spinel • High thermal shock resistance. • Because of resistance to wetting by molten aluminium many applications in the aluminium industry can be found. Commonly used for the coating of oxygen sensors for gas erosion resistance and gas permeability control.
	MgO 26.0%		-75 +20 µm	
	HOSP			

CHROME CARBIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
CrC-NiCr 80/20	NiCr 20.0%	K-804.17	-38 +10 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Useful up to 870°C (1600°F) • Higher hardness than K-854.23 • Good corrosion, abrasion, particle erosion, fretting and cavitation resistance • Good hot gas corrosion resistance • Excellent for high temperature wear applications • Best finished by wet grinding.
	CrC Bal.		-45 +15 µm	
	Agglomerated & Sintered	K-804.23		
WC-CrC-NiCrCo 45/37/18	W Bal.	K-810.17	-38+10 µm	<ul style="list-style-type: none"> • HVOF • Usefull up to 700 C • Dense, oxidation and erosion resistant coatings • Good hot gas corrosion resistance • Cost efficient due to lower density then WC based materials
	Cr 41.0%			
	Ni 11,5%			
	Co 7.0%			
	C 8.0%			
	Agglomerated & Sintered			
CrC-NiCr 75/25	NiCr 25.0%	K-854.17	-38 +10 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Useful up to 870°C (1600°F) • Good corrosion, abrasion, particle erosion, fretting and cavitation resistance • Good hot gas corrosion resistance • Excellent for high temperature wear applications • Higher DE than K-804.22 • Best finished by wet grinding.
	CrC Bal.		-45 +15 µm	
	Agglomerated & Sintered	K-854.23		

CHROME CARBIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
CrC-CoNiCrAlY 75/25	Co 9.0%	K-880.17	-38 +10 µm	<ul style="list-style-type: none"> • HVOF • Useful up to 1000°C (1800°F) • Excellent wear and erosion resistance up to 1000°C (1800°F) • Better oxidation resistance than CrC-NiCr • Used for furnace roll in steel industry and turbine components.
	Ni 8.0%	K-880.23	-45 +15 µm	
Al 2.0%				
Y 0.15%				
C 9.5%				
	Cr Bal.			
	Agglomerated & Sintered			
CHROME OXIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Cr ₂ O ₃	Cr ₂ O ₃ > 99.8%	C-604.03	-25 +10 µm	<ul style="list-style-type: none"> • Plasma • Hard, dense wear resistant coating • Insoluble in acids, alkalis and alcohol • Useful up to 540°C (1000°F) • Excellent engraving properties • Used for anilox rolls, pump seal areas, wear rings etc. • Grind only, use silicon carbide or diamond wheels.
	Reaction Sintered	C-604.151	-30 +10 µm	
		C-604.25	-45 +22 µm	
Cr ₂ O ₃	Cr ₂ O ₃ > 99.5%	C-607.01	-25 +5 µm	
	Fused & Crushed	C-607.25	-45 +22 µm	
Cr ₂ O ₃ /SiO ₂ /TiO ₂	Cr ₂ O ₃ Bal.	C-650.01	-25 +5 µm	<ul style="list-style-type: none"> • Similar to C-604 • Better impact resistant than C-604 • Good low friction features • Grind only, use silicon carbide or diamond wheels.
	SiO ₂ 5.0%	C-650.25	-45 +22 µm	
	TiO ₂ 3.0%			
	Fused & Crushed	C-650.45	-63 +15 µm	
Cr ₂ O ₃ TiO ₂ 97/3	Cr ₂ O ₃ Bal.	C-667.151	-30 +10 µm	<ul style="list-style-type: none"> • Similar to C-604 • Lower Hardness than C-604 but better toughness than C-604 • Used in wear applications where more toughness is needed • Grind only, use silicon carbide or diamond wheels.
	TiO ₂ 3.0%	C-667.25	-45 +22 µm	
Reaction Sintered				

Powders

CHROME OXIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Cr ₂ O ₃ TiO ₂ 75/25	Cr ₂ O ₃ Bal. TiO ₂ 25.0% Reaction Sintered	C-670.151	-30 +10 µm	<ul style="list-style-type: none"> • Similar to C-667 • Lower Hardness than C-667 but better toughness than C-667 • Used in wear applications where more toughness is needed • Grind only, use silicon carbide or diamond wheels.
		C-670.25	-45 +22 µm	
Cr ₂ O ₃ TiO ₂ 60/40	Cr ₂ O ₃ Bal. TiO ₂ 40.0% Reaction Sintered	C-677.151	-30 +10 µm	<ul style="list-style-type: none"> • Similar to C-670 • Lower Hardness than C-670 but better toughness than C-670 • Used in wear applications where more toughness is needed • Grind only, use silicon carbide or diamond wheels.
		C-677.25	-45 +22 µm	
COBALT BASED ALLOYS				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
T-800	Mo 28.0% Cr 17.0% Si 3.5% Co Bal. Gas Atomized	M-499.22	-45 +10 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Excellent sliding wear properties from room temperature up to 810°C (1500°F) • Good hot hardness, oxidation and corrosion properties • Low coefficient of friction • Suitable where there is low lubrication • Machines readily with Silicon Carbide tools. • Similar to Tribaloy® 800
		M-499.33	-53 +20 µm	
T-400	Mo 28.0% Cr 8.0% Si 2.5% Co Bal. Gas Atomized	M-494.25	-45 +22 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Excellent wear properties from room temperature up to 810°C (1500°F) • Good hot hardness, oxidation and corrosion properties • Low coefficient of friction • Wet grinding with Silicon Carbide tools • Similar to Tribaloy® 400
		M-494.33	-53 +20 µm	

COBALT BASED ALLOYS					
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications	
Alloy 12	Cr	29.0%	M-481.25	-45 +22 µm	<ul style="list-style-type: none"> • Equivalent to Stellite® 12 • Resistant to wear, galling and corrosion and retain these properties at high temperatures. • It is regarded as the industry standard for general-purpose wear resistance applications. • Good resistance to impact and cavitation erosion. • Examples include valve seats and gates; pump shafts and bearings, erosion shields and rolling couples.
	W	8.0%	M-481.33	-53 +20 µm	
	C	1.5%	M-481.71	-90 +45 µm	
	Co	Bal.	M-481.93	-125 +45 µm	
	Gas Atomized				
Alloy 6	Cr	29.0%	M-484.25	-45 +22 µm	<ul style="list-style-type: none"> • Equivalent to Stellite® 6 • Resistant to wear, galling and corrosion and retain these properties at high temperatures. • It is regarded as the industry standard for general-purpose wear resistance applications. • Good resistance to impact and cavitation erosion. • Examples include valve seats and gates; pump shafts and bearings, erosion shields and rolling couples.
	W	4.5%	M-484.33	-53 +20 µm	
	C	1.2%	M-484.71	-90 +45 µm	
	Co	Bal.	M-484.93	-125 +45 µm	
	Gas Atomized				
Alloy 1	Cr	29,0%	M-487.25	-45 +22 µm	<ul style="list-style-type: none"> • Equivalent to Stellite® 1 • Resistant to wear, galling and corrosion and retain these properties at high temperatures. • It is regarded as the industry standard for general-purpose wear resistance applications. • Good resistance to impact and cavitation erosion. • Examples include valve seats and gates; pump shafts and bearings, erosion shields and rolling couples.
	W	13.0%	M-487.33	-53 +20 µm	
	C	2.5%	M-487.71	-90 +45 µm	
	Co	Bal	M-487.93	-125 +45 µm	
	Gas Atomized				

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Powders

COPPER BASED ALLOYS				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Pure Copper	Cu Gas Atomized P=High Purity	M-901.17	-38 +10 µm	<ul style="list-style-type: none"> • HVOF, Plasma, Cold Gas • Good electrical and thermal conductivity • Non Magnetic • Used for build-up and repair of copper based alloys • Applications can be found in printing industry. Resistance against corrosive effects of inks • Dense coatings • Machine with high speed steel or carbide tools.
		M-901P.17	-38 +10 µm	
		M-901.25	-45 +22 µm	
		M-901P.25	-45 +22 µm	
		M-901.33	-53 +20 µm	
		M-901.71	-90 +45 µm	
Al-Bronze	Al 9.5% Fe 1.0% Cu Bal. Gas Atomized	M-950.33	-53 +20 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Good bearing material • Resistant to fretting and galling at low temperatures • Easily machined coatings • Typical applications include: pump parts, piston guides, seal area's (soft bearing surfaces) • Good cavitation resistance • Machines with high speed steel or carbide tools.
		M-950.71	-90 +45 µm	
Al-Bronze	Al 10.0% Cu Bal. Gas Atomized	M-952.33	-53 +20 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Good bearing material • Resistant to fretting and galling at low temperatures • Easily machined coatings • Typical applications include: pump parts, piston guides, seal area's (soft bearing surfaces) • Good cavitation resistance • Machines with high speed steel or carbide tools.
		M-952.71	-90 +45 µm	

IRON BASED ALLOYS				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
316L Stainless	Cr 17.00%	M-684.23	-45 +15 µm	<ul style="list-style-type: none"> • Good corrosion properties • Smooth and easy to machine coatings • Good against fretting, cavitation and erosion • Good for dimensional restoration and build-up • Easily machined with carbide or tool steel.
	Ni 12.00%	M-684.33	-53 +20 µm	
	Mo 2.5%	M-684.71	-90 +45 µm	
	Si <0.75%			
	C <0.03%			
	Fe Bal.			
	Gas Atomized			
431 Stainless	Cr 16.0%	M-687.23	-45 +15 µm	<ul style="list-style-type: none"> • Corrosion resistant coating used mostly for repair and wear applications, requiring a hard ground finish • The coating may contain martensitic phases • Easily machined with carbide or tool steel.
	Ni 2.0%	M-687.33	-53 +20 µm	
	C 0.03%	M-687.71	-90 +45 µm	
	Fe Bal.			
	Gas Atomized			
420 Stainless	Cr 13.00%	M-642.23	-45 +15 µm	<ul style="list-style-type: none"> • Martensitic Stainless Steel • Repair and Wear resistance Application
	C 0.08%	M-642.33	-53 +20 µm	
	Fe Bal.	M-642.71	-90 +45 µm	
	Gas Atomized			
Ultra Hard Steel	Cr 32.0%	M-688.23	-45 +15 µm	<ul style="list-style-type: none"> • Hard bearing surfaces: bearing journals, fuel pump rotors, sleeves • Resist abrasive grains: cylinder liners, pistons, pump plungers, hydraulic rams, crankshaft bearings • Resist fretting (intended or non-intended motion): machine bedways, wear rings, press fits, bearing seats • Resist particle erosion (low temperature): exhaust fans, hydroelectric valves • Salvage and buildup on grindable steel: mis-machine parts, worn parts • High temperature environments to resist oxidation
	Ni 8.0%	M-688.33	-53 +20 µm	
	B 4.1%			
	C 0.6%			
	Gas Atomized			

Powders

MOLYBDENUM BASED ALLOYS				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Mo	Mo >99.0%	M-801.23	-45 +15 µm	<ul style="list-style-type: none"> • Plasma • Tough coatings with fair hardness and excellent sliding properties. • Useful up to 320°C • Fret resistant • Bonds well to steel • Used for pump parts, piston rings, synchronizing rings, press fits, valves, gears and other similar applications.
	Agglomerated & Sintered	M-801.52	-75 +25 µm	
		M-801.71	-90 +45 µm	
Mo-25NiS/F	Mo 75.0% NiCrSiB 25.0% Blend	M-855.691	-90 +15 µm	<ul style="list-style-type: none"> • Plasma • Useful up to 350°C • Low coefficient of friction • Wear resistant coating with excellent sliding properties • Bonds well to steel • Used for pump parts, piston rings, synchronizing rings, press fits, valves • Can be finished by wet grinding.
MoB-NiCr	Mo Bal. B 7.5% Ni 20% Cr 5%	M-880.25	-45 +22 µm	<ul style="list-style-type: none"> • Resistant to high temperature erosion and sliding wear • Thermal shock resistance is fair • High temperature corrosion is good • Excellent non-stick properties • Excellent resistance to molten metals such and Aluminum and Zinc

NICKEL BASED ALLOYS				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Pure Ni	Ni >99.8%	M-300.25	-45 +25 µm	<ul style="list-style-type: none"> • Plasma, HVOF • Can be used for salvage and build-up of Nickel based alloys that have been damaged or mis-machined • Easily machined • Coatings with dense and moderate hardness • Machines with most grades of cutting tools.
	Gas Atomized	M-300.71	-90 +45 µm	

NICKEL BASED ALLOYS				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
NiCr 80/20	Cr 20.0% Ni Bal. Gas Atomized	M-301.25	-45 +22 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Good to resist oxidation and corrosion gases up to 980°C (1800°F) • Good for general repair and build-up • Suitable as ceramic bondcoat • Good bonding • Easily machined with all grades of cutting tools.
		M-301.33	-53 +20 µm	
		M-301.71	-90 +45 µm	
NiAl 95/5	Al 5.0% Ni 95.0% Gas Atomized	M-358.33	-53 +20 µm	<ul style="list-style-type: none"> • Plasma • Self bonding to most metallic surfaces • Good oxidation and abrasion resistant • Recommended for use as oxidation resistant bond coats which can be used below 800°C (1470°F) • Good for general repair and build-up • Thick coatings are possible.
		M-358.71	-90 +45 µm	
Alloy 625	Cr 21.0% Mo 9.0% Nb 3.7% Ni Bal. Gas Atomized	M-325.25	-45 +22 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Excellent high temperature oxidation and corrosion properties • Good for repair and build-up of similar chemistry super alloy components • Useful up to 980°C (1800°F) • Machines ready with Silicon-Carbide tools. • Similar to Inconel® 625
		M-325.33	-53 +20 µm	
		M-325.71	-90 +45 µm	
Alloy 718	Cr 19.0% Fe 18.0% Mo 3.0% Nb+Ta 5.0% Ti 1.0% Ni Bal. Gas Atomized	M-328.25	-45 +22 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Excellent high temperature oxidation and corrosion properties • Good for repair and build-up of similar chemistry super alloy components • Useful up to: 980°C (1800°F) • Machines ready with Silicon-Carbide tools. • Similar to Inconel® 718
		M-328.33	-53 +20 µm	
		M-328.71	-90 +45 µm	

Powders

NICKEL BASED ALLOYS				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Alloy C-276	Cr 15.5%	M-341.23	-45 +15 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Excellent high temperature oxidation and corrosion properties • Good for repair and build-up of similar chemistry super alloy components. • Equivalent to Hastelloy C276
	Mo 16.0%	M-341.33	-53 +20 µm	
W 4.0%				
Fe 4.0%				
Ni Bal.				
	Gas Atomized			
Alloy C-22	Cr 21.0%	M-342.23	-45 +15 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Excellent high temperature oxidation and corrosion properties • Good for repair and build-up of similar chemistry super alloy components. • Equivalent to Hastelloy C22
	Mo 13.5%	M-342.33	-53 +20 µm	
W 3.0%				
Fe 4.0%				
Ni Bal.				
	Gas Atomized			
Alloy X	Cr 22.0%	M-344.23	-45 +15 µm	<ul style="list-style-type: none"> • HVOF, Plasma • Excellent high temperature oxidation and corrosion properties • Good for repair and build-up of similar chemistry super alloy components. • Equivalent to Hastelloy X
	Mo 9.0%	M-344.33	-53 +20 µm	
W 0.6%				
Ni Bal.				
	Gas Atomized			

NICKEL S/F ALLOYS					
Powder Type	Nom.Composition		FST p/n	Size Range	Typical Properties and Applications
NiCrSiB (50-55HRC)	Ni	Bal.	M-770.23	-45 +15 µm	<ul style="list-style-type: none"> • Self Fluxing type alloy • Excellent corrosion and wear resistance • Serviceable up to 820°C (1500°F) • Coatings are dense and essentially oxide free • Machine with carbide tools or grind.
	Cr	12.0%	M-770.33	-53 +20 µm	
	B	3.0%			
	Si	4.0%	M-770.91	-106 +45 µm	
	C	0.6%			
	Fe	3.75%			
NiCrSiB (59-64HRC)	Ni	Bal.	M-771.23	-45 +15 µm	<ul style="list-style-type: none"> • Self Fluxing type alloy • Excellent corrosion and wear resistance • Serviceable up to 820°C (1500°F) • Coatings are dense and essentially oxide free • Machine with carbide tools or grind.
	Cr	17.0%	M-771.33	-53 +20 µm	
	B	3.3%			
	Si	4.3%	M-771.91	-106 +45 µm	
	C	0.9%			
	Fe	4.0%			
NiCrSiB (35-40HRC)	Ni	Bal.	M-772.23	-45 +15 µm	<ul style="list-style-type: none"> • Self Fluxing type alloy • Excellent corrosion and wear resistance • Serviceable up to 820°C (1500°F) • Coatings are dense and essentially oxide free • Machine with carbide tools or grind.
	Cr	8.0%	M-772.33	-53 +20 µm	
	B	1.9%			
	Si	3.1%	M-772.91	-106 +45 µm	
	C	0.5%			
	Fe	2.5%			
NiCrSiB (55-60HRC)	Ni	Bal.	M-773.23	-45 +15 µm	<ul style="list-style-type: none"> • Self Fluxing type alloy • Excellent corrosion and wear resistance • Serviceable up to 820°C (1500°F) • Coatings are dense and essentially oxide free • Machine with carbide tools or grind.
	Cr	15.0%	M-773.33	-53 +20 µm	
	B	3.0%			
	Si	4.6%	M-773.91	-106 +45 µm	
	C	0.7%			
	Fe	4.5%			
NiCrSiB (30-35HRC)	Ni	Bal.	M-774.23	-45 +15 µm	<ul style="list-style-type: none"> • Self Fluxing type alloy • Excellent corrosion and wear resistance • Serviceable up to 820°C (1500°F) • Coatings are dense and essentially oxide free • Machine with carbide tools or grind.
	Cr	6.3%	M-774.33	-53 +20 µm	
	B	1.2%			
	Si	4.0%	M-774.91	-106 +45 µm	
	C	0.4%			
	Fe	1.75%			
NiCrSiB (35-43HRC)	Ni	Bal.	M-775.23	-45 +15 µm	<ul style="list-style-type: none"> • Self Fluxing type alloy • Excellent corrosion and wear resistance • Serviceable up to 820°C (1500°F) • Coatings are dense and essentially oxide free • Machine with carbide tools or grind.
	Cr	10.0%	M-775.33	-53 +20 µm	
	B	1.8%			
	Si	3.2%	M-775.91	-106 +45 µm	
	C	0.45%			
	Fe	2.5%			

Powders

NICKEL S/F ALLOYS					
Powder Type	Nom.Composition		FST p/n	Size Range	Typical Properties and Applications
NiCrSiB (45-50HRC)	Cr	13.0%	M-776.23	-45 +15 µm	<ul style="list-style-type: none"> • Self Fluxing type alloy • Excellent corrosion and wear resistance • Serviceable up to 820°C (1500°F) • Coatings are dense and essentially oxide free • Machine with carbide tools or grind.
	B	2.5%	M-776.33	-53 +20 µm	
	Si	3.4%			
	C	0.45%			
	Fe	4.5%	M-776.91	-106 +45 µm	
NiCrSiB (58-64HRC)	Ni	Bal.	M-778.23	-45 +15 µm	<ul style="list-style-type: none"> • Self Fluxing type alloy • Excellent corrosion and wear resistance • Serviceable up to 820°C (1500°F) • Coatings are dense and essentially oxide free • Machine with carbide tools or grind.
	Cr	17.0%			
	B	3.8%	M-778.33	-53 +20 µm	
	Si	4.0%			
	C	0.6%	M-778.91	-106 +45 µm	
	Fe	3.0%			
	Cu	2.5%			
Mo	3,3%				
NiCrSiB (55-58HRC)	Ni	Bal.	M-781.23	-45 +15 µm	<ul style="list-style-type: none"> • Self Fluxing type alloy • Excellent corrosion and wear resistance • Serviceable up to 820°C (1500°F) • Coatings are dense and essentially oxide free • Machine with carbide tools or grind.
	Cr	13.7%			
	B	2.6%	M-781.33	-53 +20 µm	
	Si	3.7%			
	C	0.6%	M-781.91	-106 +45 µm	
	Fe	3.5%			
W	15.0%				
NiCrSiB (57-61HRC)	Ni	Bal.	M-782.23	-45 +15 µm	<ul style="list-style-type: none"> • Self Fluxing type alloy • Excellent corrosion and wear resistance • Serviceable up to 820°C (1500°F) • Coatings are dense and essentially oxide free • Machine with carbide tools or grind.
	Cr	12.5%			
	B	3.0%	M-782.33	-53 +20 µm	
	Si	3.0%			
	C	0.5%	M-782.91	-106 +45 µm	
	Fe	3.8%			
W	12.5%				
NiCr-SF + WC	WC (CTC)	35%	M-733.91	-106 +45 µm	<ul style="list-style-type: none"> • Blend with Fused Tungsten Carbide • Coatings are extremely wear resistant to abrasive grains, hard surfaces, fretting and particle erosion. • The most wear resistant of all self fluxing coatings • Essentially Cobalt free for stain resistance.
	NiCr-S/F (60Rc)	65%			
	Blend				

NICKEL S/F ALLOYS				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
NiCr-SF + WC-Co	WC-Co (A/S) 35% NiCr-S/F 65% (60Rc) Blend	M-735.93	-125 +45 µm	<ul style="list-style-type: none"> • Blend with Agglomerated WC-Co Tungsten Carbide • Coatings are extremely wear resistant to abrasive grains, hard surfaces, fretting and particle erosion. • The most wear resistant of all self fluxing coatings • Essentially Cobalt free for stain resistance.
NiCr-SF + WC	WC (CTC) 35% NiCr-S/F 65% (50Rc) Blend	M-737.91	-106 +45 µm	<ul style="list-style-type: none"> • Blend with Fused Tungsten Carbide • Coatings are extremely wear resistant to abrasive grains, hard surfaces, fretting and particle erosion. • The most wear resistant of all self fluxing coatings • Essentially Cobalt free for stain resistance.

TITANIUM				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Pure Ti	Ti HDH CP (Blocky)	M-222.91	-106 +45 µm	<ul style="list-style-type: none"> • In accordance with ASTM F1580-12 • VPS, LPPS • Good corrosion resistance against salt water, Cl containing solutions and oxidizing acid solutions • Material for biomedical applications.
		M-222.995	-180 +75 µm	
Pure Ti 6Al 4V	Al 6.0% V 4.0% Ti Bal. HDH CP (Blocky)	M-223.91	-106 +45 µm	<ul style="list-style-type: none"> • In accordance with ASTM F1580-12 • VPS, LPPS • Good corrosion resistance against salt water, Cl containing solutions and oxidizing acid solutions • Material for biomedical applications.
		M-223.995	-180 +75 µm	

Powders

Pure Ti	Ti PREP (Spherical)	M-224.23 M-224.91	-45 +15 µm -106 +45 µm	<ul style="list-style-type: none"> • In accordance with ASTM F1580-12 • VPS, LPPS • Good corrosion resistance against salt water, Cl containing solutions and oxidizing acid solutions • Material for biomedical applications.
Pure Ti 6Al 4V	Al 6.0% V 4.0% Ti Bal. PREP (Spherical)	M-225.23 M-225.91	-45 +15 µm -106 +45 µm	<ul style="list-style-type: none"> • In accordance with ASTM F1580-12 • VPS, LPPS • Good corrosion resistance against salt water, Cl containing solutions and oxidizing acid solutions • Material for biomedical applications.

TITANIUM OXIDE

Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
TiO ₂	TiO ₂ > 99.5%	C-408.01	-25 +5 µm	<ul style="list-style-type: none"> • Moderate abrasive wear resistance • Lower hardness than Al₂O₃-TiO₂ coatings • Decorative "black" coatings • Slightly conductive; Static electricity does not build-up on coating surface • Soluble in alkalis and sulfuric acid • Coatings can be ground and/or lapped to very smooth finishes.
	Fused & Crushed	C-408.25	-45 +22 µm	
		C-408.45	-63 +15 µm	

TUNGSTEN CARBIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
WC-Ni 88/12	Ni 12.0% WC Bal. Agglomerated & Sintered	K-611.17	-38 +10 µm	<ul style="list-style-type: none"> • Plasma, HVOF • Hard, tough, dense coatings with good abrasion, erosion and sliding wear resistance. • Very fine as sprayed surfaces possible • Better corrosion resistance the WC-Co coatings • Useful up to 480°C (900°F) • Excellent low temperature wear properties • Diamond wet grinding.
		K-611.23	-45 +15 µm	
WC-Ni 83/17	Ni 17.0% WC Bal. Agglomerated & Sintered	K-612.17	-38 +10 µm	<ul style="list-style-type: none"> • Plasma, HVOF • Hard, tough, dense coatings with good abrasion, erosion and sliding wear resistance. • 17% Ni Coatings have better toughness than 12% Ni coatings • Very fine as sprayed surfaces possible • Better corrosion resistance the WC-Co coatings • Useful up to 480°C (900°F) • Excellent low temperature wear properties • Diamond wet grinding.
		K-612.23	-45 +15 µm	
WC-NiCr 85/10/5	Ni 10.0% Cr 5.0% WC Bal. Agglomerated & Sintered	K-617.23	-45 +15 µm	<ul style="list-style-type: none"> • Coatings made from K-617 protect against fretting, abrasion and hammer (impact) wear and sliding wear. • K-617 has been designed to produce coatings that are wear resistant in a seawater environment. • The use above 500 °C (930 °F) is not recommended. • As K-617 is cobalt-free, it can also be used in radioactive environments. • K-617 coatings have a higher hardness than tungsten carbide – nickel coatings as a consequence of the hardening effect of chromium in the binder alloy, but toughness is reduced. • The hardness of a K-617 coating is slightly lower than that of a tungsten carbide-cobalt-chromium coating.

Powders

TUNGSTEN CARBIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
WC-Co 88/12	Co 12.0% W Bal. Agglomerated & Sintered	K-624.15	-30 +5 µm	<ul style="list-style-type: none"> • Plasma, HVOF • Medium WC • Hard, dense coatings with good abrasion, erosion and sliding wear resistance. • Low oxidation and corrosion resistance • Useful up to 480°C (900°F) • Excellent low temperature wear properties • Diamond wet grinding.
		K-624.17	-38 +10 µm	
		K-624.23	-45 +15 µm	
		K-624.33	-53 +20 µm	
WC-Co 83/17	Co 17.0% WC Bal. Agglomerated & Sintered	K-674.15	-30 +5 µm	<ul style="list-style-type: none"> • HVOF • Course WC • Higher Co level then K-624 results is improved toughness, impact strength and ductility • Useful up to 480°C (900°F) • Low oxidation and corrosion resistance • Diamond wet grinding.
		K-674.17	-38 +10 µm	
		K-674.23	-45 +15 µm	
WC-Co-Cr 86/10/4	Co 10.0% Cr 4.0% WC Bal. Sintered & Crushed	K-646.17	-38 +10 µm	<ul style="list-style-type: none"> • HVOF and APS • The CoCr matrix shows higher corrosion and abrasion resistance that the Co matrix materials • Usable in wet corrosive environments • Dense, smooth coatings with fine microstructure and high bond strengths • Used for Hard Chrome Replacement • Diamond wet grinding.
		K-646.23	-45 +15 µm	
WC-Co-Cr 86/10/4	Co 10.0% Cr 4.0% WC Bal. Agglomerated & Sintered	K-647.15	-30 +5 µm	<ul style="list-style-type: none"> • HVOF • Medium WC • The CoCr matrix shows higher corrosion and abrasion resistance that the Co matrix materials • Usable in wet corrosive environments • Dense, smooth coatings with fine microstructure and high bond strengths • Used for Hard Chrome Replacement • Diamond wet grinding.
		K-647.17	-38 +10 µm	
		K-647.23	-45 +15 µm	
		K-647.33	-53 +20 µm	

TUNGSTEN CARBIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
WC-Co-Cr 86/10/4	Co 10.0%	K-648.15	-30 +5 µm	<ul style="list-style-type: none"> • HVOF • Fine WC • The CoCr matrix shows higher corrosion and abrasion resistance than the Co matrix materials • Usable in wet corrosive environments • Dense, smooth coatings with fine microstructure and high bond strengths • Used for Hard Chrome Replacement • Diamond wet grinding.
	Cr 4.0%	K-648.17	-38 +10 µm	
	W Bal.	K-648.23	-45 +15 µm	
WC-Co-Cr 86/10/4	Co 10.0%	K-649.15	-30 +5 µm	<ul style="list-style-type: none"> • HVOF • Sub-Micron WC • The CoCr matrix shows higher corrosion and abrasion resistance than the Co matrix materials • Usable in wet corrosive environments • Dense, smooth coatings with fine microstructure and high bond strengths • Used for Hard Chrome Replacement • Diamond wet grinding.
	Cr 4.0%	K-649.17	-38 +10 µm	
	W Bal.	K-649.23	-45 +15 µm	
WC-CoCrNi 85/9/5/1	Co 9.0%	K-665.17	-38 +10 µm	<ul style="list-style-type: none"> • HVOF • Medium WC • The CoCrNi matrix shows higher corrosion and abrasion resistance than the Co and CoCr matrix materials • Usable in wet corrosive environments • Dense, smooth coatings with fine microstructure and high bond strengths • Used for Hard Chrome Replacement • Diamond wet grinding.
	Cr 5.0%	K-665.23	-45 +15 µm	
	Ni 1.0%			
	WC Bal.			

Powders

TUNGSTEN CARBIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
WC-CrC-Ni 73/20/7	Ni 7.0%	K-607.15	-30 +5 µm	<ul style="list-style-type: none"> • HVOF • Fine WC • Useful up to 700°C • Higher corrosion, oxidation and chemical resistance than other WC based coatings • Smooth coating with fine micro structure • High bond strength • Diamond wet grinding.
	CrC 20.0%	K-607.17	-38 +10 µm	
	W Bal.	K-607.23	-45 +15 µm	
	Agglomerated & Sintered	K-607.33	-53 +20 µm	

YTTRIUM OXIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
Y ₂ O ₃	Y ₂ O ₃ 99,5%	C-200.45	-65+15 µm	<ul style="list-style-type: none"> • Stable at high temperatures • Plasma etch and erosion resistance on surfaces exposed to reactive plasma gases in semiconductor manufacturing systems, such as vacuum chamber walls and other components. • Used for protection of graphite sheets in the hard metal industry • Max. operating temperature in air 2200 °C (on graphite 1550 °)
	Agglomerated and Sintered	C-200.71	-90+45 µm	

ZIRCONIUM OXIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
ZrO ₂ -Y ₂ O ₃	ZrO ₂ Bal.	C-295.45	-63 +15 µm	<ul style="list-style-type: none"> • Excellent thermal barrier properties • Stabilizes during spray process • Useful up to 1300°C (2450°F) • Very good thermal shock resistance • Thick, high porosity coating possible.
	Y ₂ O ₃ 8.0%	C-295.71	-90 +15 µm	
	Spray Dried	C-295.92	-125 +45 µm	

ZIRCONIUM OXIDE				
Powder Type	Nom.Composition	FST p/n	Size Range	Typical Properties and Applications
ZrO ₂ -Y ₂ O ₃	ZrO ₂ Bal. Y ₂ O ₃ 8.0% Fused & Crushed	C-297.02	-22 +5 μm	<ul style="list-style-type: none"> • Excellent thermal barrier properties • Stabilizes during spray process • Useful up to 1300°C (2450°F) • Very good thermal shock resistance. • Used for DVC (Dense Vertically Cracked) Coatings
		C-297.23	-45 +15 μm	
ZrO ₂ -22MgO	ZrO ₂ Bal. MgO 24.0% Fused & Crushed	C-234.25	-45 +22 μm	<ul style="list-style-type: none"> • Good thermal barrier properties • Resistant to molten metals • Good particle erosion resistance • Useful up to 900°C .
		C-234.71	-90 +45 μm	
ZrO ₂ -5CaO	ZrO ₂ Bal. CaO 5.0% Fused & Crushed	C-241.25	-45 +22 μm	<ul style="list-style-type: none"> • Thermal barrier coatings used in rocket and turbine engine combustion chambers and other hot section components. • Lining for special purpose crucibles to prevent contamination of the molten contents. • Abrasive wear resistant coatings for diesel engine pistons, valves, cylinder heads and coatings for casting molds and troughs up to approximately 900 °C. Coatings resist wetting and the corrosive effects of molten metal.
		C-241.71	-90 +45 μm	

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Wires

CROSS REFERENCE LIST (chemistry only)				
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Pure Aluminum	W-200	01T	Aluminum	31
Alloy C-276	W-322	77T	8276	31
NiCrTi	W-345	45CT	8452	31
Alloy 625	W-365	71T	8625	31
NiCrAlY	W-372	76MXC	–	31
NiCrAl	W-373	73MXC	8443	32
NiAlMo	W-374	74MXC	8447	32
NiAl 95/5	W-375	75B	8400	32
NiAl 80/20	W-377	–	405	32
NiCr 80/20	W-385	06C	8450	32
Molybdenum	W-400	13T	Sprabond	32
Stainless Steel 420	W-504	60T	2	33
Stainless Steel 316L	W-510	88T	4	33
Stainless Steel 307	W-515	55T	5	33
High C-Steel	W-550	38T	Sprasteel 80	33
Low C-Steel	W-555	30T	Metco 8230	33
Ni-Base WC	W-610	–	–	33
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FeCrSiB	W-663	90MXC	–	35
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FeCrSiB	W-665	98MXC	–	35
FeCrSiB	W-667	97MXC	–	36
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Stellite 12 Equivalent	W-866	–	–	37
T400 Equivalent	W-850	–	–	37
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WIRES				
Wire Type	Composition	FST p/n	Diameter (mm)	Typical Properties and Applications
Pure Aluminum	Al > 99.0%	W-200.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Coatings are resistant to atmospheric, chemical and heat corrosion • Electrical and heat conductive.
	AW1350	W-200.3	3.2 mm (1/8")	
	AW1100	W-201.1	1.6 mm (1/16")	
		W-201.3	3.2mm (1/8")	
Alloy C-276	Ni Bal. Cr 15.0% Fe 5.0% Mo 16.0% W 4.0%	W-322.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Excellent high temperature oxidation and corrosion properties • Good for repair and build-up of similar chemistry super alloy components.
NiCrTi	Cr 45.0% Ti 1.0% Ni Bal.	W-345.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Specially designed for Boiler applications • Titanium pre-alloyed, resulting in superior bondstrengths • W-345.1 produces coatings which are extremely resistant to corrosive vanadium and sulfur gases in boiler atmospheres.
Alloy 625	Ni Bal. Cr 22.0% Fe 2.0% Mo 9.0% Nb/Ta 3.5%	W-365.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Excellent high temperature oxidation and corrosion properties • Good for repair and build-up of similar chemistry super alloy components • Useful up to 980°C (1800°F)
NiCrAl	Cr 20.0% Al 7.0% Ni Bal. Cored Wire	W-373.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Resistant to oxidation and corrosion at high temperature • Undercoat for ceramics topcoat • Recommended for salvage and build-up of mis-machined or worn machine parts.

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Wires

WIRES				
Wire Type	Composition	FST p/n	Diameter (mm)	Typical Properties and Applications
NiAlMo	Mo 5.0% Al 5.5% Ni Bal. Cored Wire	W-374.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Recommended for salvage and build-up of both machinable and grindable carbon steels • Good resistance against wear and particles • Used for high strength and low shrink coatings.
NiAl 95/5	Al 5.0% Ni 95.0%	W-375.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Excellent bonding • Oxidation and abrasion resistant at elevated temperatures • Self bonding material. • Suitable for dimensional restoration.
NiAl 80/20	Al 20.0% Ni 80.0% Cored Wire	W-377.3	3.2 mm (1/8")	<ul style="list-style-type: none"> • Self bonding material. • Coatings are dense, resistant to oxidation and high temperature and temperatures changes • Mainly used for Flame Wire Spraying.
NiCr 80/20	Ni 80.0% Cr 20.0% Cored Wire	W-385.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Produces coatings which resist corrosive gasses and oxidation temperatures up to 980°C (1800°F) • Used as bond coat for ceramic materials • Coatings are machinable.
NiCrAlY	Ni Bal. Cr 19.5% Al 10,5% Y 0,8%	W-372.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Resistant to oxidation and corrosion at high temperature • Undercoat for ceramics topcoat • Recommended for salvage and build-up of mis-machined or worn machine parts.
Molybdenum	Mo 99.9%	W-400.3	3.2 mm (1/8")	<ul style="list-style-type: none"> • Galling and Scuffing resistance • Typical applications include synchroniser rings, selector forks and piston rings.

WIRES					
Wire Type	Composition		FST p/n	Diameter (mm)	Typical Properties and Applications
Stainless Steel 420	13%	Cr-Steel	W-504.1	1.6 mm (1/16")	<ul style="list-style-type: none"> The best all purpose material for general engineering applications Excellent wear properties and fair corrosion resistance Typically used for reclamation Low shrinkage, allows for thick build-up.
			W-504.3	3.2 mm (1/8")	
Stainless Steel 316L	Cr	17.5%	W-510.1	1.6 mm (1/16")	<ul style="list-style-type: none"> Type 316L Austenitic Stainless Steel Good corrosion resistance Dimensional restoration.
			Ni	12.0%	
	Mo	2.2%			
				C	
Stainless Steel 307	Cr	18.5%			W-515.1
			Ni	8.5%	W-515.3
Mn	6.5%				
			C	<0,12%	
High C-Steel	Si	0.20%			W-550.1
			C	0,80%	W-550.3
	Mn	0,65%			
			Fe	Bal.	
Low C-Steel	Si	0.12%			W-555.1
			C	<0,15%	W-555.3
	Mn	1,10%			
			Fe	Bal.	
Ni-WC Ni-Hardcore™	Ni	Bal			W-610.1
	Si	5.0%			
	B	2.0%			
	C	0,7%			
	WC	>50%			

Wires

WIRES				
Wire Type	Composition	FST p/n	Diameter (mm)	Typical Properties and Applications
NiCrSiBW Ni-Hardcore™	Ni Bal. Si 3.0% B 2.8% Cr 16.0% W 15.0%	W-612.1	1.6mm (1/16")	<ul style="list-style-type: none"> • Wire equivalent to Colmonoy® 88. • W-612 is a hard surfacing alloy. This alloy consists of NiCrSiBFe and WC. The combination of complex borides and carbide with the Ni-Cr-B matrix offers excellent hardness (500-600 HV0.3)) and extends the service life of parts exposed to high temperature abrasion, erosion, corrosion, galling and fretting.
NiCrW Ni-Hardcore™	Ni Bal. Si 2.5% B 2.7% Cr 24.0% W 22.0%	W-614.1	1.6mm (1/16")	<ul style="list-style-type: none"> • Very similar material to W-612, but due to it higher content of WC has a higher hardness (800-900 HV0.3) and is typically used for the toughest abrasion applications.
Ni-Ceramic	Ni Bal. ZrO ₂ Al ₂ O ₃ Cr ₂ O ₃ 30%	W-615.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • W-615 is a unique ceramic filled cored wire. A customized oxide blend had been developed for optimum wear resistance. Good oxidation and corrosion resistance and withstand hot erosion. It is recommend to use W-372 a NiCrAlY cored wire a bond coat. A typical Application: Cooling panels of fume extraction units of electric arc furnaces
NiCrSiBW Ni-Hardcore™	Ni Bal. Si 4.5% B 1.6% Cr 20.0% W 2.0%	W-618.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • A NiCrBSi cored wire used for wear resistant and corrosion resistant protective coatings. Coatings can be fused after application (self-fluxing). They reach hardness of 500 - 800 HV0,1 and show porosity of below 2%. The coatings can be machined by grinding and polishing. Made exclusively for arc spraying, W-618 is used for high loaded components of chemical plants or food industry, plunger.

WIRES				
Wire Type	Composition	FST p/n	Diameter (mm)	Typical Properties and Applications
FeCrMnSiB Fe-Hardcore™	Cr 26.0% Si 1.5% Mn 1.6% B 3.3% C 0.25 % Fe Bal. Cored Wire	W-662.1	1.6 mm (1/16")	<ul style="list-style-type: none"> Hardness approx 55 HRC Equivalent to 95MXC(*) Produces a hard, abrasive and corrosion resistant coating Material has unique feature to increase hardness while in service Conventional machining provide hard chrome like finish Low coefficient of friction.
FeCrMnSiB Fe-Hardcore™	Ni 9.0% Cr 23.0% Mo 4.0% Si 1.0% Mn 1.3% Cu 2.0% B 2.3% Fe Bal.	W-663.1	1.6 mm (1/16")	<ul style="list-style-type: none"> Hardness approx 45 HRC Equivalent to 90MXC(*) Produces a hard, abrasive and corrosion resistant coating Material has unique feature to increase hardness while in service Conventional machining provide hard chrome like finish Low coefficient of friction.
FeCrMnSiB Fe-Hardcore™	Ni 8.0% Cr 21.0% Mo 3.2% Si 1.1% Mn 1.2% Cu 2.0% B 2.3% Fe Bal. Cored Wire	W-664.1	1.6 mm (1/16")	<ul style="list-style-type: none"> Hardness approx 50 HRC Equivalent to 96MXC(*) Good abrasive and corrosion resistant coating at high temperature Material has unique feature to increase hardness while in service Low coefficient of friction.
Fe-Base CrC Fe-Hardcore™	Ni 3.0% Cr 26.0% Mo 0.8% Si 1.6% Mn 1.6% C 1.7% Fe Bal. Cored Wire	W-665.1		<ul style="list-style-type: none"> Hardness approx 40 HRC Equivalent to 98MXC(*) Produces a hard, abrasive and corrosion resistant coating Material has unique feature to increase hardness while in service Conventional machining provide hard chrome like finish Low coefficient of friction.

Fe-Hardcore™ is a Trade name of Praxair

Wires

WIRES				
Wire Type	Composition	FST p/n	Diameter (mm)	Typical Properties and Applications
Fe-Base WC Fe-Hardcore™	Ni 4.5% Cr 14.0% Si 1.3% Mn 0.6% B 1.9% TiC 6.0% WC 26.0% Fe Bal. Cored Wire	W-667.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Hardness approx 65 HRC • Equivalent to 97MXC(*) • Excellent abrasion resistance • Typical applications include: mining equipment, pump equipment etc.
Pure Copper	Cu 99.9%	W-700.1 W-700.3	1.6 mm (1/16") 3.2 mm (1/8")	<ul style="list-style-type: none"> • Used for electrical conductivity applications, copper reclamation and decorative coatings.
CuAl	Al 10.0% Cu Bal.	W-710.1 W-710.3	1.6 mm (1/16") 3.2 mm (1/8")	<ul style="list-style-type: none"> • Produces dense, wear resistant coatings which are very machinable.
CuAlFe	Al 9.0% Fe 1.0% Cu Bal.	W-712.1 W-712.3	1.6 mm (1/16") 3.2 mm (1/8")	<ul style="list-style-type: none"> • Produces dense, wear resistant coatings which are very machinable.
Monel	Cu 30.0% Ni Bal.	W-717.1 W-717.3	1.6 mm (1/16") 3.2 mm (1/8")	<ul style="list-style-type: none"> • Used for corrosion protection against brine or lye solutions;. however should not be used in acidic environments. • Marine corrosion protection • Excellent finishing.
Alloy 6 Co-Hardcore™	C 0,95% Si 1.4% Mn 0.8% Cr 30% Fe 3.0% W 4.20% Co Bal.	W-856.1	1.6 mm (1/16")	<ul style="list-style-type: none"> • Equivalent to Alloy 6 • To be used when excellent resistance to metal to metal wear, oxidation,. High temperatures and corrosive environments • Valves in power industry • Forging and mixing tools • Risers

Fe-Hardcore™ is a Trade name of Praxair

WIRES					
Wire Type	Composition		FST p/n	Diameter (mm)	Typical Properties and Applications
Alloy 12 Co-Hardcore™	C	1.15%	W-866.1	1.6 mm (1/16")	<ul style="list-style-type: none"> Equivalent to Alloy 12 To be used when excellent resistance to metal to metal wear, oxidation,. High temperatures and corrosive environments Valves in power industry Forging and mixing tools Risers
	Si	1.8%			
	Mn	0.9%			
	Cr	29%			
	Fe	3.0%			
	W	6.50%			
	Co	Bal.			
Alloy T-400 Co-Hardcore™	Mo	28.0%	W-850.1	1.6 mm (1/16")	<ul style="list-style-type: none"> Excellent sliding wear properties up to 800 C Good hardness, oxidation and corrosion properties Low coefficient of friction Suitable for applications with low lubrication Similar to Triballoy 400
	Cr	8.0%			
	Si	2.0%			
	Fe	3.0%			
	Co	Bal.			
Babbitt	Sb	7.5%	W-970.2	2.0 mm	<ul style="list-style-type: none"> Produces dense coatings which are suitable for high speed and heavy duty bearings Bearing reclamation.
	Cu	3.5%	W-970.3	3.2 mm (1/8")	
	Sn	Bal.			

NOTE: in this Consumable Guide the most generally industrial used wire products are listed. If products other than listed in this catalogue are required, please contact our customer support team.

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MASKING TAPES			
FST p/n	Size Range	Applications	Description
DW 500-10.0	10.0 mm x 33 m	Plasma Tape	<ul style="list-style-type: none"> DW 500 is a one step plasma masking tape constructed of a silicone rubber/glass cloth backing coated with an aggressive high-temperature silicone adhesive. It will withstand grit blast and plasma spray process yet will remove cleanly. DW 500 has a higher tack than most other plasma masking tapes which allows it to easily conform to the most complex shapes of the Aircraft Industry. DW 500 & DW 500R (red color for identification) plasma masking tape have a CCS13 (Rolls-Royce) approval.
DW 500-12.5	12.5 mm x 33 m		
DW 500-25.0	25.0 mm x 33 m		
DW 500-38.0	38.0 mm x 33 m		
DW-500-50.0	50.0 mm x 33 m		
DW 501-10.0	10.0 mm x 16.5 m	HVOF Tape	<ul style="list-style-type: none"> DW 501 is a laminate of blue silicone rubber, glass fabric, 4 mil aluminum and glass fabric designed for severe duty including HVOF applications. The Silicone adhesive will release cleanly. This tape is used as a masking tape for HVOF spraying. The double-ply construction provides superior protection in this demanding high velocity spray environment.
DW 501-12.5	12.5 mm x 16.5 m		
DW 501-25.0	25.0 mm x 16.5 m		
DW 501-38.0	38.0 mm x 16.5 m		
DW-501-50.0	50.0 mm x 16.5 m		
DW 411-10.0	10.0 mm x 33 m	Plasma/HVOF Tape	<ul style="list-style-type: none"> DW 411 is a heavy (4 mil) aluminum foil/glass laminate with a high temperature silicone adhesive. The aluminum foil provides excellent and conductive characteristics in high temperature applications. The silicone adhesive provides excellent adhesion at high temperatures yet will remove cleanly.
DW 411-12.5	12.5 mm x 33 m		
DW 411-25.0	25.0 mm x 33 m		
DW 411-38.0	38.0 mm x 33 m		
DW-411-50.0	50.0 mm x 33 m		

Masking

MASKING TAPES			
FST p/n	Size	Applications	Description
170-10S Yellow	10mm x 33m 12,5mm x 33m 25mm x 33m 38mm x 33m 50mm x 33m	Plasma Spray Arc Spray Flame Spray Grit Blast	<ul style="list-style-type: none"> Our standard thermal spray masking tape withstands both grit blasting and thermal spray, and releases clean from metal surfaces
170-20S Yellow	10mm x 33m 12,5mm x 33m 25mm x 33m 38mm x 33m 50mm x 33m	Plasma Spray Arc Spray Flame Spray Grit Blast	<ul style="list-style-type: none"> Similar to 170-10S Yellow, but offers double layered protection for added strength and resilience.
170-10S Green	10mm x 33m 12,5mm x 33m 25mm x 33m 38mm x 33m 50mm x 33m	Plasma Spray Arc Spray Flame Spray Grit Blast	<ul style="list-style-type: none"> In most cases a single layer of this premium tape is sufficient to withstand both grit blast and various thermal spray processes.
170-20S Green	10mm x 33m 12,5mm x 33m 25mm x 33m 38mm x 33m 50mm x 33m	Plasma Spray Arc Spray Flame Spray Grit Blast	<ul style="list-style-type: none"> Similar to 170-10S Green, but offers double layered protection for added strength and resilience.
170-10S Red	10mm x 33m 12,5mm x 33m 25mm x 33m 38mm x 33m 50mm x 33m	Plasma Spray Flame Spray Grit Blast	<ul style="list-style-type: none"> Well suited for plasma spray coating and applications involving higher temperatures. This tape resists burning and scorching while leaving clean lines and no adhesive residue.
170-20S Red	10mm x 33m 12,5mm x 33m 25mm x 33m 38mm x 33m 50mm x 33m	Plasma Spray Flame Spray Grit Blast	<ul style="list-style-type: none"> Similar to 170-10S red, but offers double layered protection for added strength and resilience.
160 5S HT	10mm x 33m 12,5mm x 33m 25mm x 33m 38mm x 33m 50mm x 33m	'Plasma Spray Flame Spray Grit Blast'	<ul style="list-style-type: none"> Fiberglass. Constructed with tightly woven, high tensile uncoated glass cloth, and silicone adhesive. This tape is ideal for secondary masking. It is highly conformable and leaves no adhesive residue upon removal

MASKING TAPES			
FST p/n	Size	Applications	Description
HVMT Orange	10mm x 33m 12,5mm x 33m 25mm x 33m 38mm x 33m 50mm x 33m	Plasma Spray HVOF Gas Fuel HVOF Liquid Fuel Arc Spray Flame Spray Grit Blast	<ul style="list-style-type: none"> Engineered for Gas Fueled HVOF. This tape is well suited for some of the most demanding thermal spray applications. Highly conformable for precision masking it withstands extreme heat and abrasion and releases quickly and cleanly after use
190 Aluminum	10mm x 33m 12,5mm x 33m 25mm x 33m 38mm x 33m 50mm x 33m	Plasma Spray HVOF Gas Fuel HVOF Liquid Fuel Arc Spray Flame Spray	<ul style="list-style-type: none"> Made with Aluminum foil and fiber glass cloth laminate. This specialized tape offers dual masking protection. It is highly conformable, releases cleanly from metal surface and leave clean edge lines
900.020-25 900.020-50	25mm x 33m 50mm x 33m	HVOF Gas Fuel HVOF Liquid Fuel	<ul style="list-style-type: none"> FST High Temperature Copper Foil masking tape has been specially designed for extreme applications such as HVOF. FST's copper tape is a heavy duty glasscloth/ copper foil combination which has been coated with a proprietary adhesive.'

Note: Other tapes widths are available upon request

MASKING COMPOUND			
FST p/n	Size Range	Applications	Description
901.000 901.001 901.002	0,5kg 1,0kg 2,0kg	Plasma Spray HVOF Gas Fuel HVOF Liquid Fuel Arc Spray Flame Spray Grit Blast	<ul style="list-style-type: none"> Compound Releases cleanly from metal surfaces. Quick cure time at room temperature (6 – 7 minutes) Ideal for masking holes (threaded or standard), key-ways, grooves, depressions etc. Resistant to burning Conformable to virtually any dimension Putty should be mixed until consistent light blue colour (roughly 50/50). Masks against: Grit blast, Flame Spray, Wire Arc Spray, Plasma Spray and HVOF

OTHERS & APPROVALS

In this Consumable Guide the most generally industrial used masking products are listed. If products other than listed in this catalogue or Approved (GE, Pratt & Whitney, Rolls Royce, etc..) are required, please contact our customer support team.

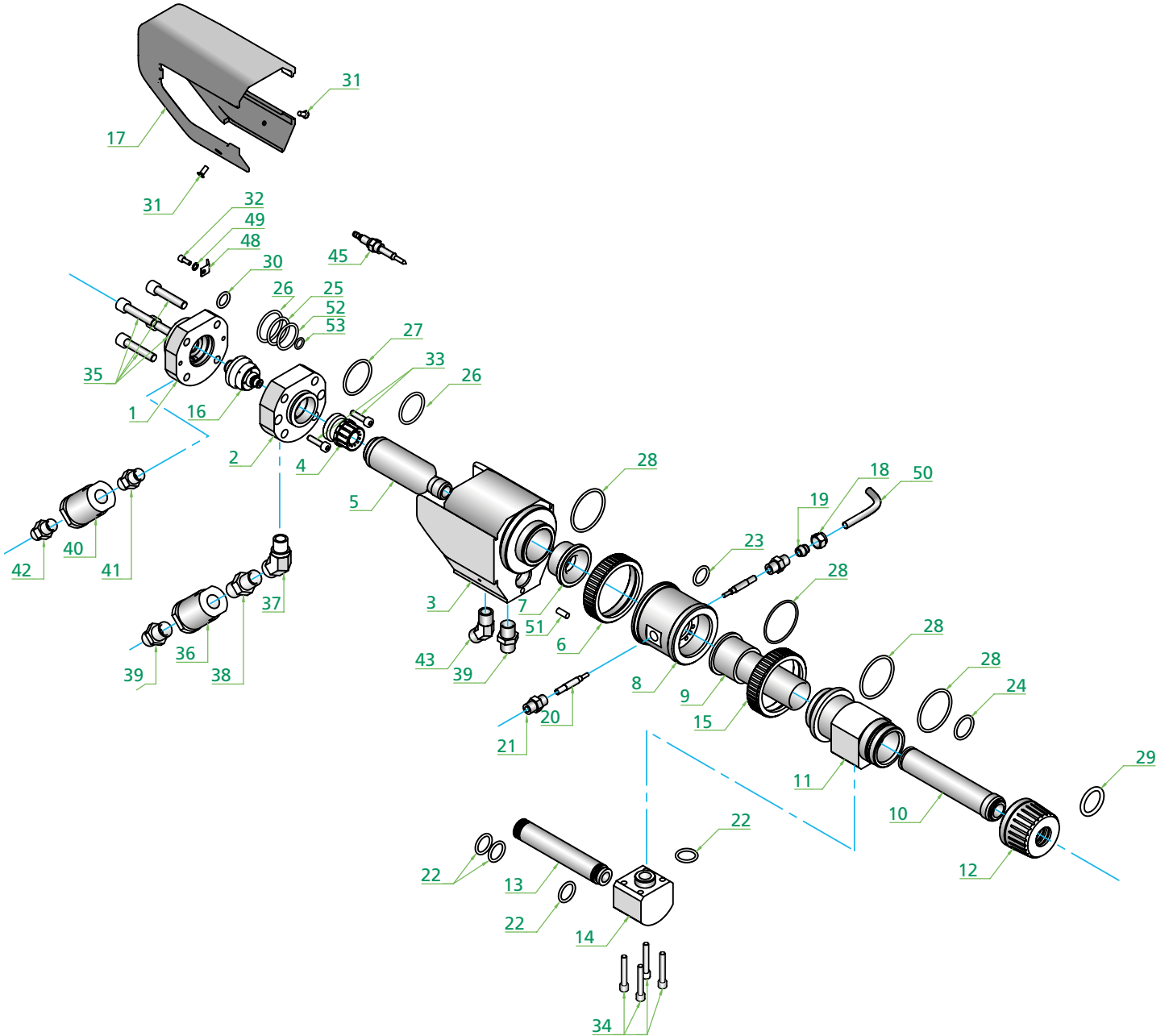
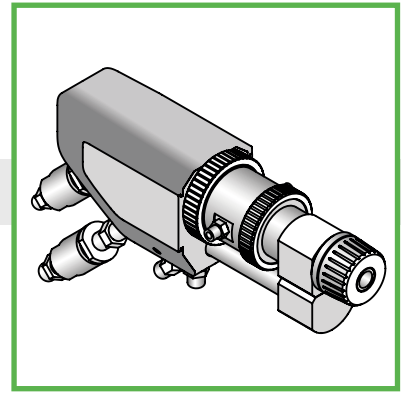
- Notes: **A.** For detail go to SprayTech **FST-TS-SEALERS**
B. For shipment, please note that sealers are considered **Hazardous Good**

SEALERS			
FST p/n	Type	Volume	Typical Properties
TS-Sealer D	Standard Sealer	1 liter – 5 liter ½ Gallon (USA)	<ul style="list-style-type: none"> • HVOF, APS, VPS, Arc, Flame • Porosity size (mm): 0-0,1 • Temp. Resistance: -40/300°C
TS-Sealer P	High Porosity Sealer	1 liter – 5 liter ½ Gallon (USA)	<ul style="list-style-type: none"> • APS, Arc, Flame • Porosity size (mm): 0,1-0,5 • Temp. Resistance: -40/300°C
TS-Sealer HT	High Temp Sealer	1 liter – 5 liter ½ Gallon (USA)	<ul style="list-style-type: none"> • HVOF, APS, VPS, Arc, Flame • Porosity size (mm): 0-0,1 • Temp. Resistance: -40/500°C
TS-Sealer SR	Solvent Resistant	1 liter – 5 liter ½ Gallon (USA)	<ul style="list-style-type: none"> • HVOF, APS, VPS, Arc, Flame • Porosity size (mm): 0-0,5 • Temp. Resistance: -40/200°C
TS-Sealer HS	High Solid Body. Hot	1 liter – 5 liter ½ Gallon (USA)	<ul style="list-style-type: none"> • HVOF, APS, VPS, Arc, Flame • Porosity size (mm): 0-0,5 • Temp. Resistance: -40/200°C

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eGun™ HVOF Gun

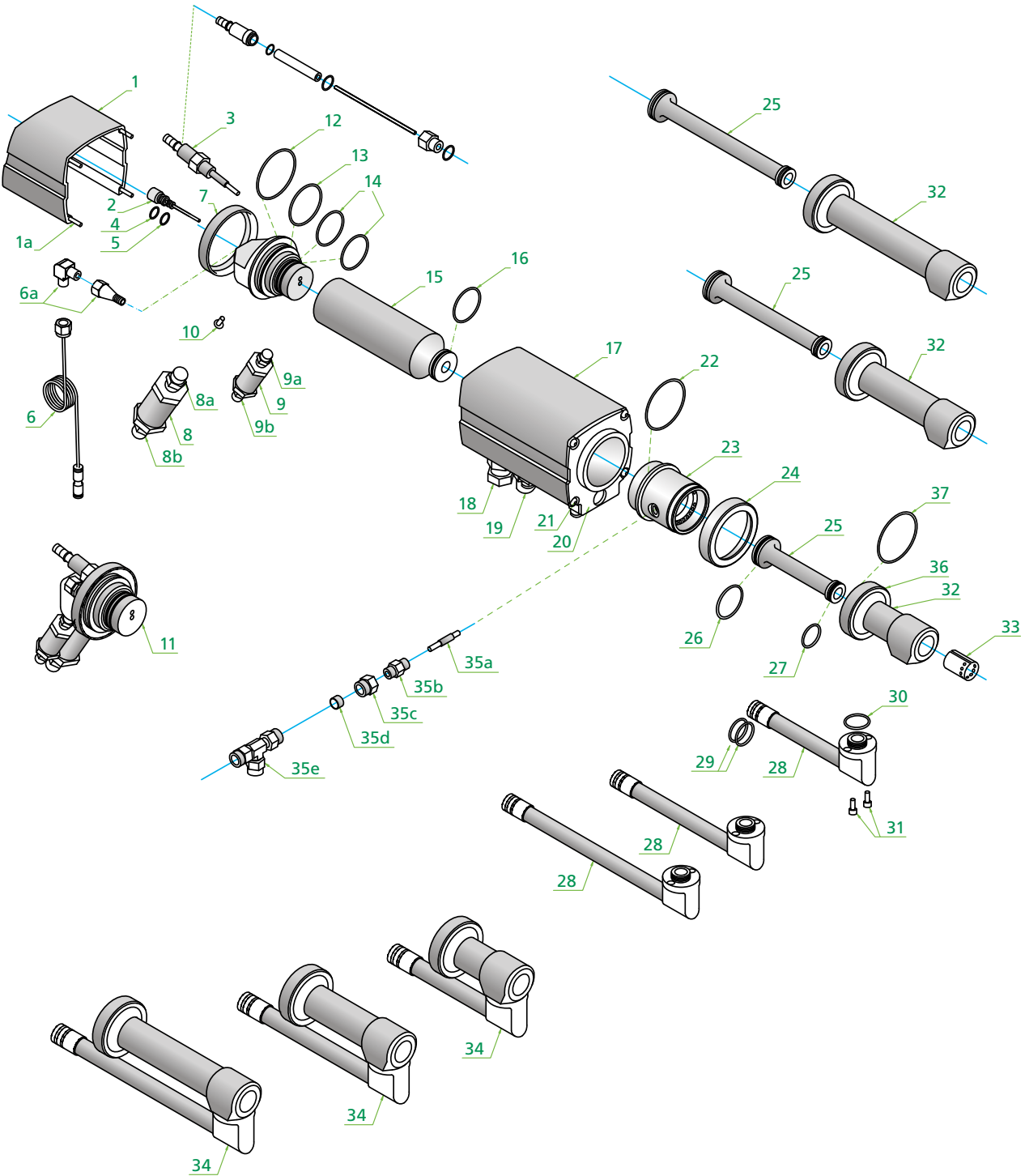
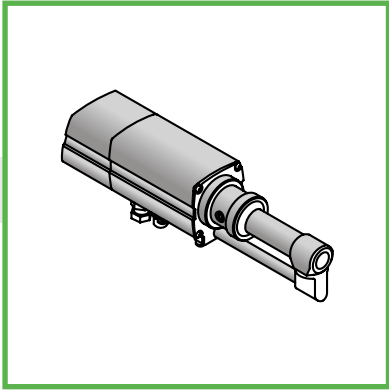


eGun™ HVOF Gun		
Pos.	FST p/n	Product Description
1	311.001	F-Housing
2	311.002	O-Housing
3	311.003	Chamber housing
4	311.004-02	Pre-chamber HE ^{s-1}
5	311.005-01	Combustion chamber ^{s-2}
6	311.006	Interconnector nut #1
7	311.007	Adapter
8	311.008-01	Interconnector ^{s-2}
9	311.009	4" Deflector
10	311.010-22	4" Barrel ^{s-10}
11	311.011	4" Barrel housing
12	311.012	Barrel nut
13	311.013	4" Water out tube
14	311.014	Water out fitting
15	311.015	Interconnector nut #2
16	311.016-01	Fuel injector assembly HE incl. 4x O-rings
17	311.017	Rear cover
18	311.018	Nut 1/4" tube ^{*4 / s-20} , incl. Ferrule plastic ^{*4 / s-20}
19	311.019	Ferrule plastic ^{*10 / s-20}
20	311.020-02	Powder injector ^{*10 / s-20}
21	311.029	Fitting Powder Port ^{*4 / s-20}
36	311.036	Oxygen Check Valve ^{s-1}
37	311.037	Adapter oxygen 45° 1/4" NPT to O-Housing
38	311.038	Nipple, 1/8" Oxygen check valve ^{s-1}
39	311.039	Adapter, 1/4" NPT
40	311.040	Fuel Check Valve ^{s-1}
41	311.041	Nipple, 1/8" Fuel check valve to F- housing
42	311.042	Adapter, 1/8" NPT
43	311.043	Adapter W45°, 1/4" NPT
45	311.045	Spark plug assembly
48	311.048	AMP Connector (M)
49	311.049	AMP Washer
51	311.062	Dowel pin

eGun™ HVOF Gun		
Pos.	FST p/n	Product Description
O-RINGS		
	311.800	eGun™ O-ring Set ^{s-1} / including:
22	311.021	O-ring Water tube ^{*10} , Water out fitting ^{*10}
23	311.022	O-ring Interconnector ^{*10}
24	311.023	O-ring Barrel ^{*10}
25	311.024	O-ring Fuel assy 1 ^{*10}
26	311.025	O-ring Fuel assy, Comb. chamber 2 ^{*10}
27	311.026	O-ring O-Housing ^{*10}
28	311.027	O-ring Chamber housing, Barrel housing and Deflector ^{*10}
29	311.028	O-ring Front Barrel Nut ^{*10}
30	311.030	O-ring F-Housing ^{*10}
52	311.060	O-ring Fuel assy 3 ^{*10}
53	311.061	O-ring Fuel assy front ^{*10}
BOLTS		
	311.900	Set of eGun™ Bolts
31	311.031	Bolts rear cover ^{*2}
32	311.032	Bolt AMP Connector
33	311.033	Bolts O-Housing ^{*2}
34	311.034	Bolts Barrel housing - Water out fitting ^{*4}
35	311.035	Bolts F-Housing ^{*4}
CABLES & HOSES**		
	311.050-01	Hose & cable set, 20 ft
	311.050-02	Hose & cable set, 30 ft
	311.050-03	Hose & cable set, 50 ft
50	500.001	Power feed hose
ROBOT eGun FIXTURES		
A	259.061	Robot fixplate eGun™
B	259.001	Robot intermediate insulator
C	259.002	Robot intermediate connector
D		Robot adapters for certain types of robots are available upon request
OTHER		
	311.051	Toolkit eGun™
	500.029	O-ring lube

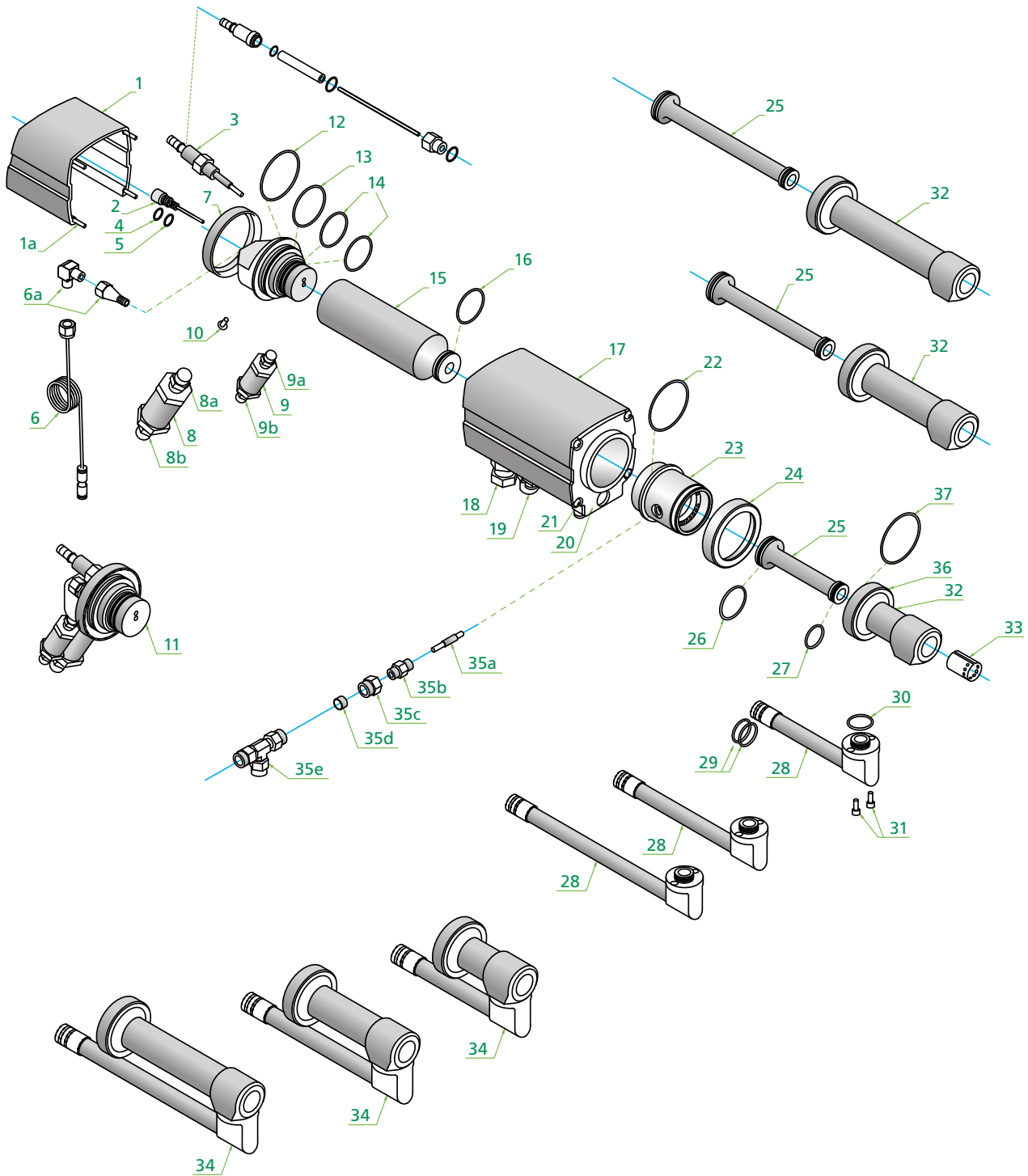
*n : Minimum Order Quantity / s-n : Recommended stock
 ** : Individual hoses on request: 311.052-xx for Oxygen
 311.053-xx for Ethanol
 311.054-xx for water In
 311.055-xx for Water out

JP-5000 HVOF Gun



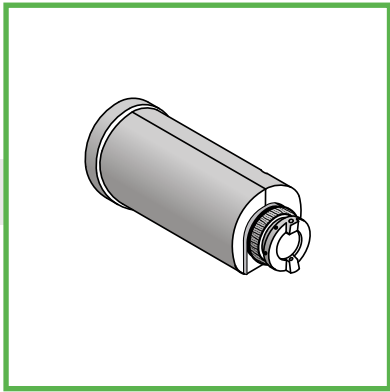
JP-5000 HVOF GUN			
Pos.	FST p/n	Product Description	OEM / Remark
	310.000-01	JP 5000 HP/HVOF Gun	including 4"/6"/8" barrel assembly
	310.000-02	JP 5000 HP/HVOF Gun	including 4" barrel assembly
1	310.062	Rear cover	450926
1a	310.004	Rear cover dowel pin	200596
2	310.082	Coaxial fuel tube assembly	600464
3	310.074	Spark plug assembly	600408
4	310.025	O-Ring, coaxial fuel tube, rear	230013
5	310.034	O-Ring, coaxial fuel tube, front	230248
6	310.086	Combustion pressure tube assembly	600628
6a	310.090	Elbow tube / nipple assembly	620178
7	310.045	Nut, stabilizer to water jacket	450780
8	310.103	Oxygen check valve	410165
8a	310.010	Nipple, 1/4" Oxygen check valve to stabilizer	210081
8b	310.013	Adapter, 1/4" NPT	210145
9	310.042	Fuel check valve	410113
9a	310.009	Nipple, 1/8" Fuel check valve to stabilizer	210077
9b	310.007	Adapter 1/8" NPT	210010
10	310.005	Screw, ground cable	200816
11	310.069	Coaxial stabilizer assembly	600392
12	310.030	O-Ring, stabilizer, back	230094
13	310.101	O-Ring, comb. chamber to stab. spacer	230059
14	310.033	O-Ring, stabilizer, front	230212
15	310.060	Combustion chamber	450924
16	310.031	O-Ring, combustion chamber	230209
17	310.058	Water jacket	450879
18	310.018	Fitting, swivel, water in, 3/8" MNPT	210359
19	310.017	Fitting, water out	210358
20	310.063	Front cover plate	-
21	310.002	Screw, front cover plate	200063
22	310.102	O-Ring, interconnector	230092
23	310.059	Interconnector	450922
24	310.044	Nut, interconnector to water jacket	450779
25	310.078	4" Barrel w/O-Rings	600460
	310.079	6" Barrel w/O-Rings	600461
	310.080	8" Barrel w/O-Rings	600462

JP-5000 HVOF Gun

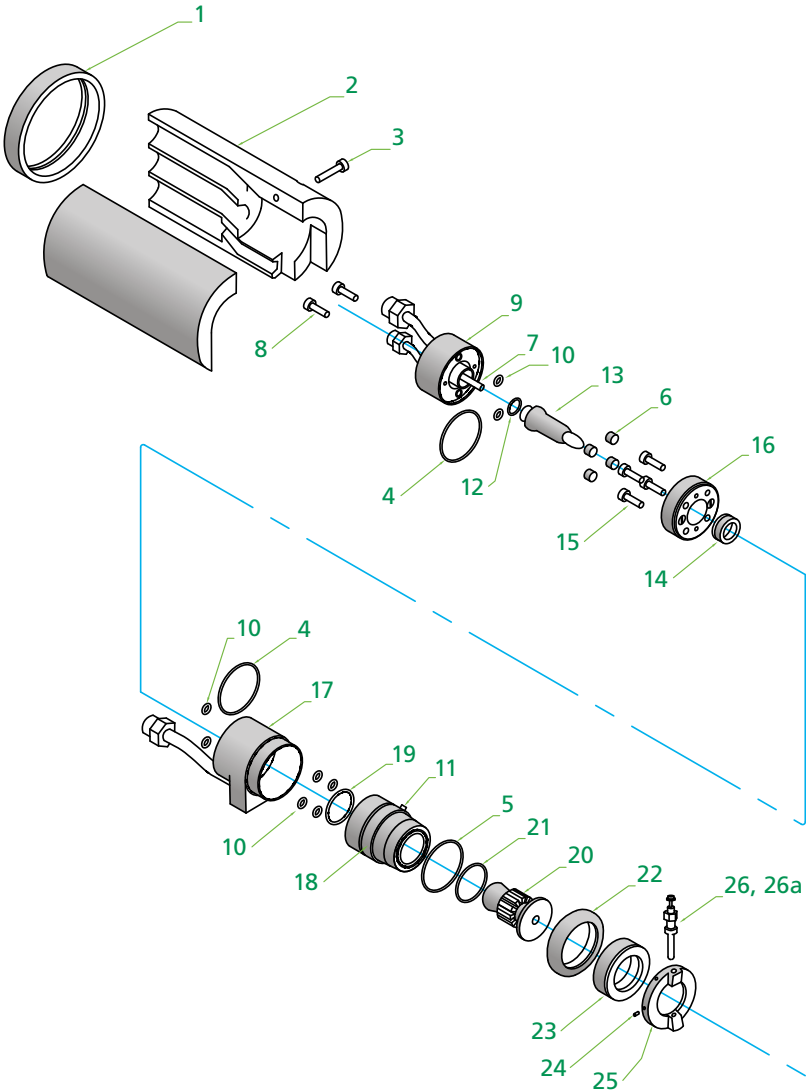


JP-5000 HVOF GUN			
Pos.	FST p/n	Product Description	OEM / Remark
26	310.032	O-Ring, barrel, back	230211
27	310.035	O-Ring, barrel, front	230261
28	310.052	4" Water return tube	450869
	310.053	6" Water return tube	450870
	310.054	8" Water return tube	450871
29	310.026	O-Ring, water return tube to water jacket	230027
30	310.100	O-Ring, water return tube/barrel holder	230046
31	310.003	Screw, water return to barrel holder	200418
32	310.047	4" Barrel holder	450863
	310.048	6" Barrel holder	450864
	310.049	8" Barrel holder	450865
33	310.065	Water baffle	450936
34	310.070	4" Barrel assembly	600401
	310.071	6" Barrel assembly	600402
	310.072	8" Barrel assembly	600403
35a	310.061-01	Feed tube insert	450925
35b	310.091-01	Fitting, powder port 1/4"	620180
35c	310.019	Nut, 1/4" tube	210364
35d	310.008	Ferrule, plastic, 1/4" tube	210042
35e	310.016	Powder feed splitter	210286
36	310.043	Nut, barrel holder to interconnector	450778
37	310.029	O-Ring, barrel holder	230086
OTHERS			
	310.107	2.5" Barrel w/O-Ring	600480
	310.081	12" Barrel w/O-Rings	600463
	310.106	2.5" Barrel assembly	600479
	310.073	12" Barrel assembly	600404
CABLES AND HOSES**			
	310.094-01	Hose & cable set, 20 ft	800386-20
	310.094-02	Hose & cable set, 30 ft	800386-30
	310.094-03	Hose & cable set, 50 ft	800386-50
	113.269	Tubing 1/4"	220021
	113.273	Tubing, 1/8" OD, comb. chamber pressure	220098

** : Individual hoses on request: 310.105-xx for oxygen
 310.108-xx for kerosen
 310.109-xx for Water

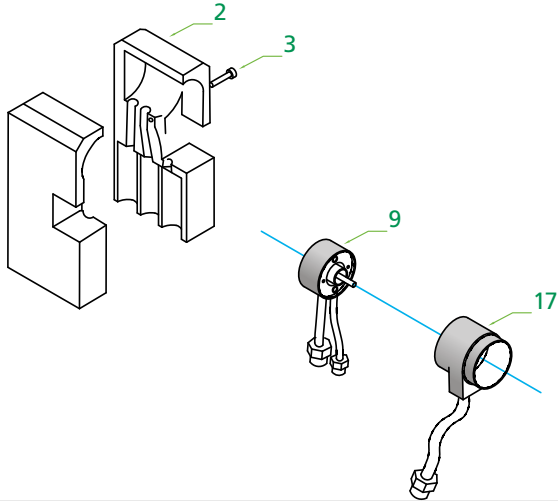


F4-MB Plasma Gun



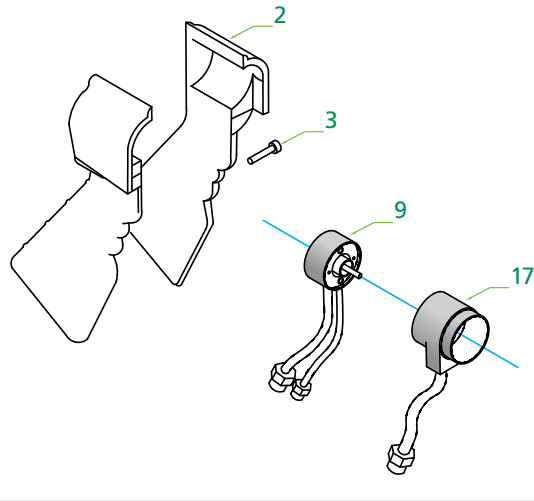
F4-HBS Model

all other parts identical to F4-MB



F4-HB Model

all other parts identical to F4-MB

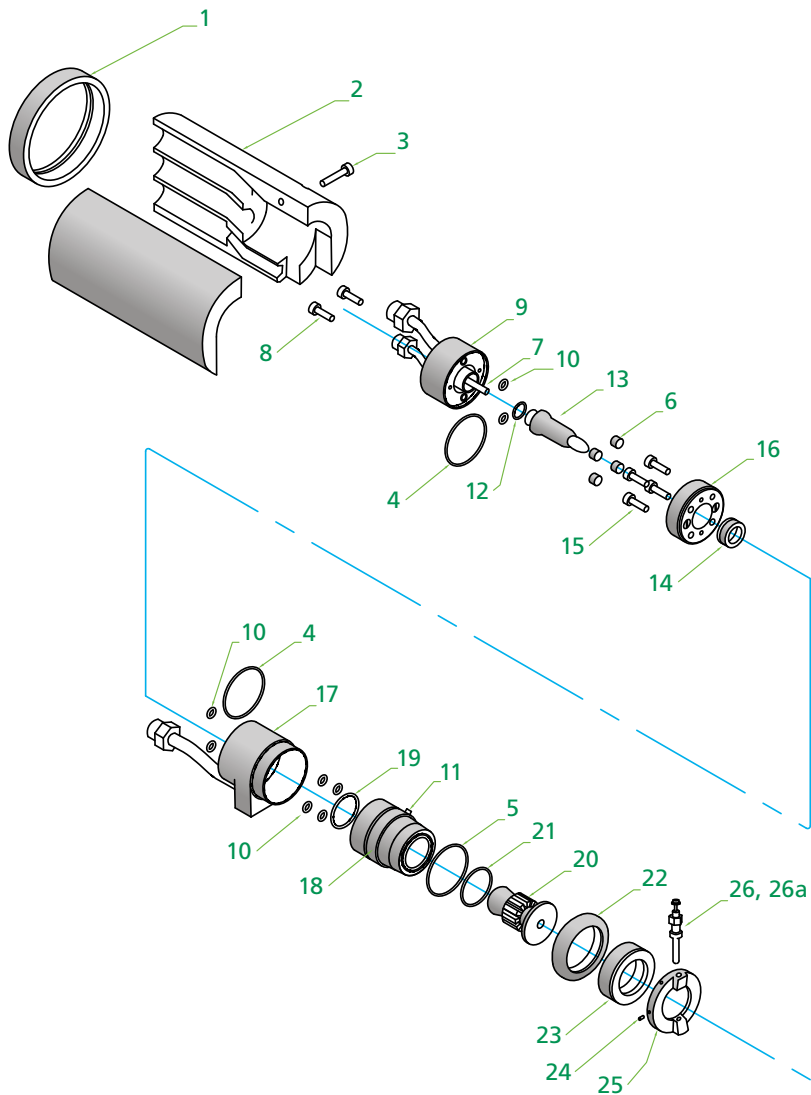


F4-MB PLASMA GUN			
Pos.	FST p/n	Product Description	OEM / Remark
	300.000-01	F4-MB Plasma gun complete	–
	300.000-02	F4-HB Plasma gun complete	–
	300.000-04	F4-VB Plasma gun complete	–
1	300.001	Secure ring	310017
2	300.002-01	Gun cover F4-MB (shell halves)	310013
	300.002-02	Gun cover F4-HB (shell halves)	300013
	300.002-03	Gun cover F4-HBS (shell halves)	301013
3	300.003-01	Screw	300142
	300.003-02	Screw, for F4-HB Gun	300014
	300.003-03	Screw, for F4-HBS Gun	300145
4	300.061	O-Ring, 44 x 1 mm	300005
5	300.060	O-Ring, 42 x 1.5 mm	300041
6	300.010	Insulating screws	300140
7	300.006	Cooling water tube	300009
8	300.003-01	Screw	300142
9	300.004-01	Rear gun body, for F4-MB	310010
	300.004-02	Rear gun body, for F4-HB	300010
	300.004-03	Rear gun body, for F4-HBS	301010
10	300.005	O-Ring (gun body)	300031
11	300.021	Set screw for anode holder	300139
12	300.007	O-Ring electrode	300032
13*	300.008	Electrode, for N2	300001
	300.056	Electrode, 'short' for N2	300056
14	300.018	Gas distribution ring	300081
15	300.013	Screws M4x10	300141
16	300.015	Intermediate body	300080
17	300.020-01	Center Body, for F4-MB	310007
	300.020-02	Center Body, for F4-HB	300007
	300.020-03	Center Body, for F4-HBS	301007
18	300.022	Anode Body	300006
	300.023	Anode Body, 'short' for N2	300023
19	300.024	O-Ring nozzle rear	300034
20**	300.025	Nozzle F4, 5 mm	300022
	300.027	Nozzle F4, 6mm	300002

* : All electrodes include O-Ring 300.007

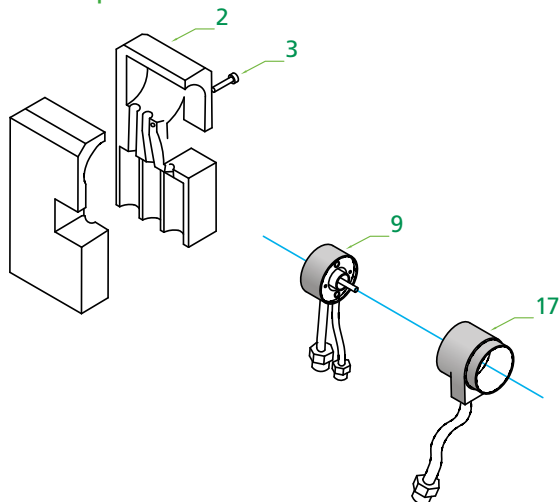
** : All nozzles include O-Rings 300.024 + 300.033

F4-MB Plasma Gun



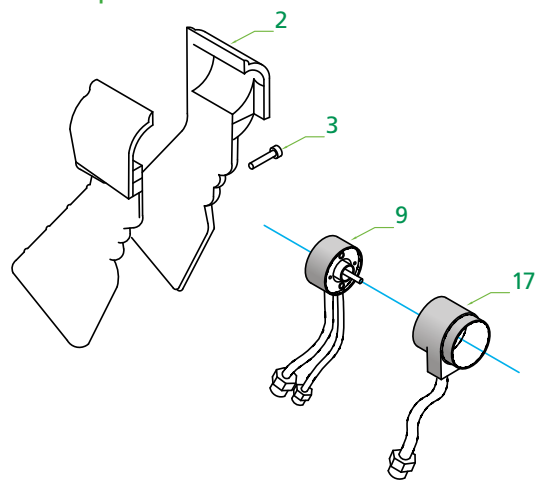
F4-HBS Model

all other parts identical to F4-MB



F4-HB Model

all other parts identical to F4-MB

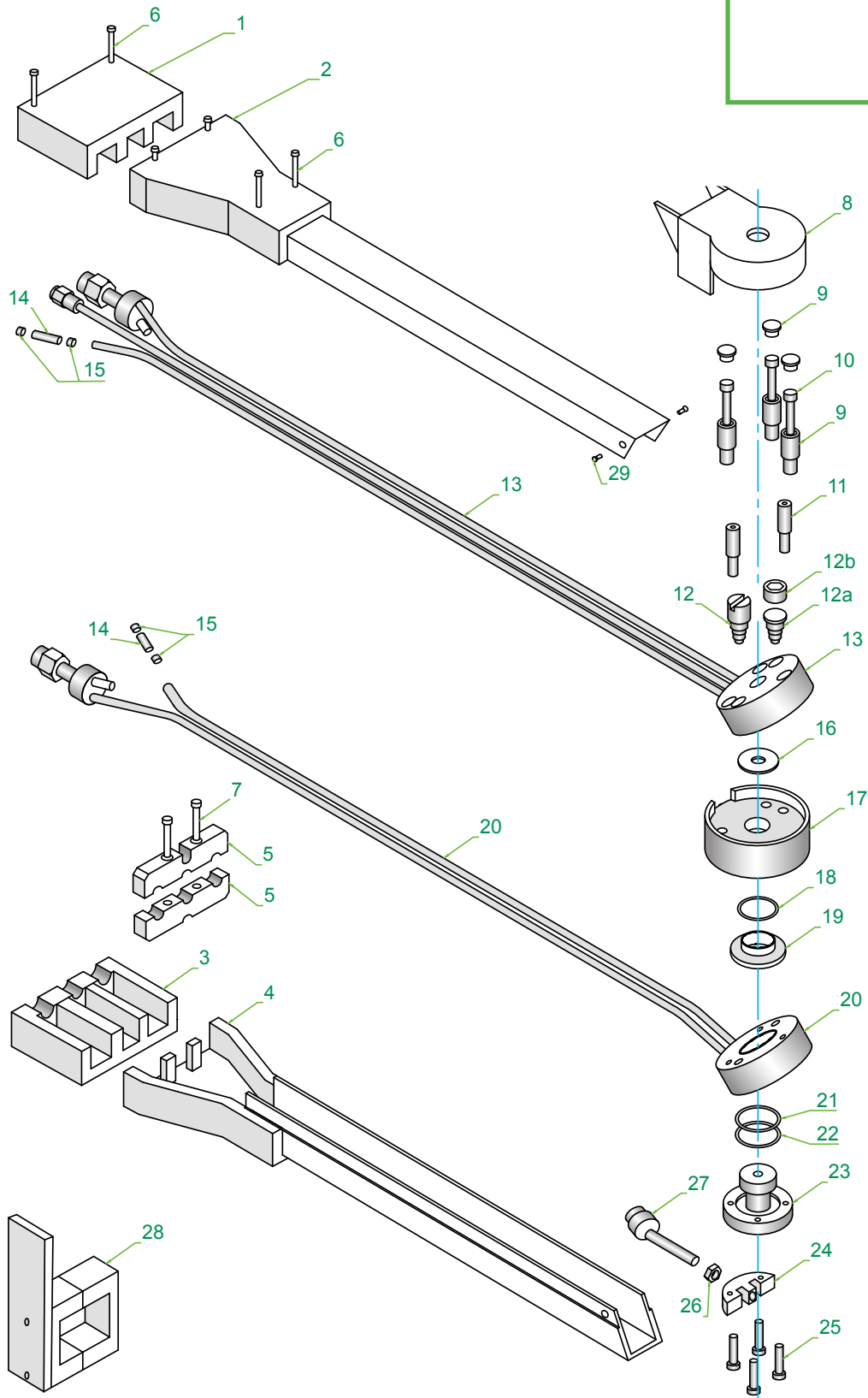
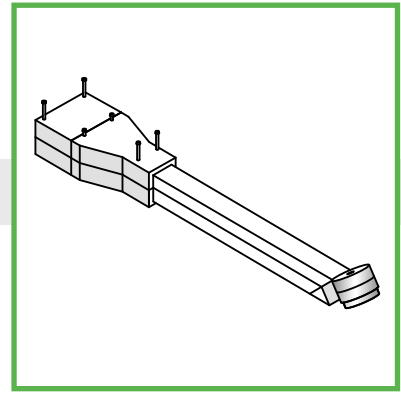


F4-MB PLASMA GUN			
Pos.	FST p/n	Product Description	OEM / Remark
20**	300.029	Nozzle F4, 7 mm	300002-10
	300.031	Nozzle F4, 8mm	300002-20
	300.057	Nozzle F4, 6mm, 'short' for N2	300046
	300.059	Nozzle F4, 8mm, 'short' for N2	-
21	300.033	O-Ring nozzle front	300033
22	300.034	Rear secure ring	300012
23	300.035	Front secure ring	300004
24	300.036	Screws M3x5	300143
25	300.037-01	Injector holder, 90/75, standard	300015
	300.037-02	Injector holder, 90/105	300050
	300.037-03	Double injector holder, 90/90	300016
	300.037-04	Injector holder, 105/90/75	-
26	380.001	Powder injector 1.5 mm	300019
	380.002	Powder injector 1.8 mm	300020
	380.003	Powder injector 2.0 mm	300021
26a	380.042	Nut M5	300144
OTHERS			
	300.054	Nozzle/Electrode set, 6mm	300003
	300.055	Nozzle/Electrode set, 6mm, 'short' for N2	300072
	300.065	Complete O-Ring set	-
	300.063	Electrode centering tool w/gauge	300060
	300.066	Cooling jet holder complete	300090-06
CABLES, HOSES, FITTINGS			
	380.022-01	Plasma gun power cable set	for F1/F4 gun, length 5 m
	380.020-01	Plasma gun power cable (negative)	for F1/F4 gun, length 5 m
	380.021-01	Plasma gun power cable (positive)	for F1/F4 gun, length 5 m
	380.023-01	Plasma gas hose	for F1/F4 gun, length 5 m
	380.022-02	Plasma gun power cable set	for F1/F4 gun, length 6 m
	380.020-02	Plasma gun power cable (negative)	for F1/F4 gun, length 6 m
	380.021-02	Plasma gun power cable (positive)	for F1/F4 gun, length 6 m
	380.023-02	Plasma gas hose	for F1/F4 gun, length 6 m
	500.001	Powder feed hose	-
	500.021	Powder feed hose screw fitting	for powder hose 500.001

* : All electrodes include O-Ring 300.007

** : All nozzles include O-Rings 300.024 + 300.033

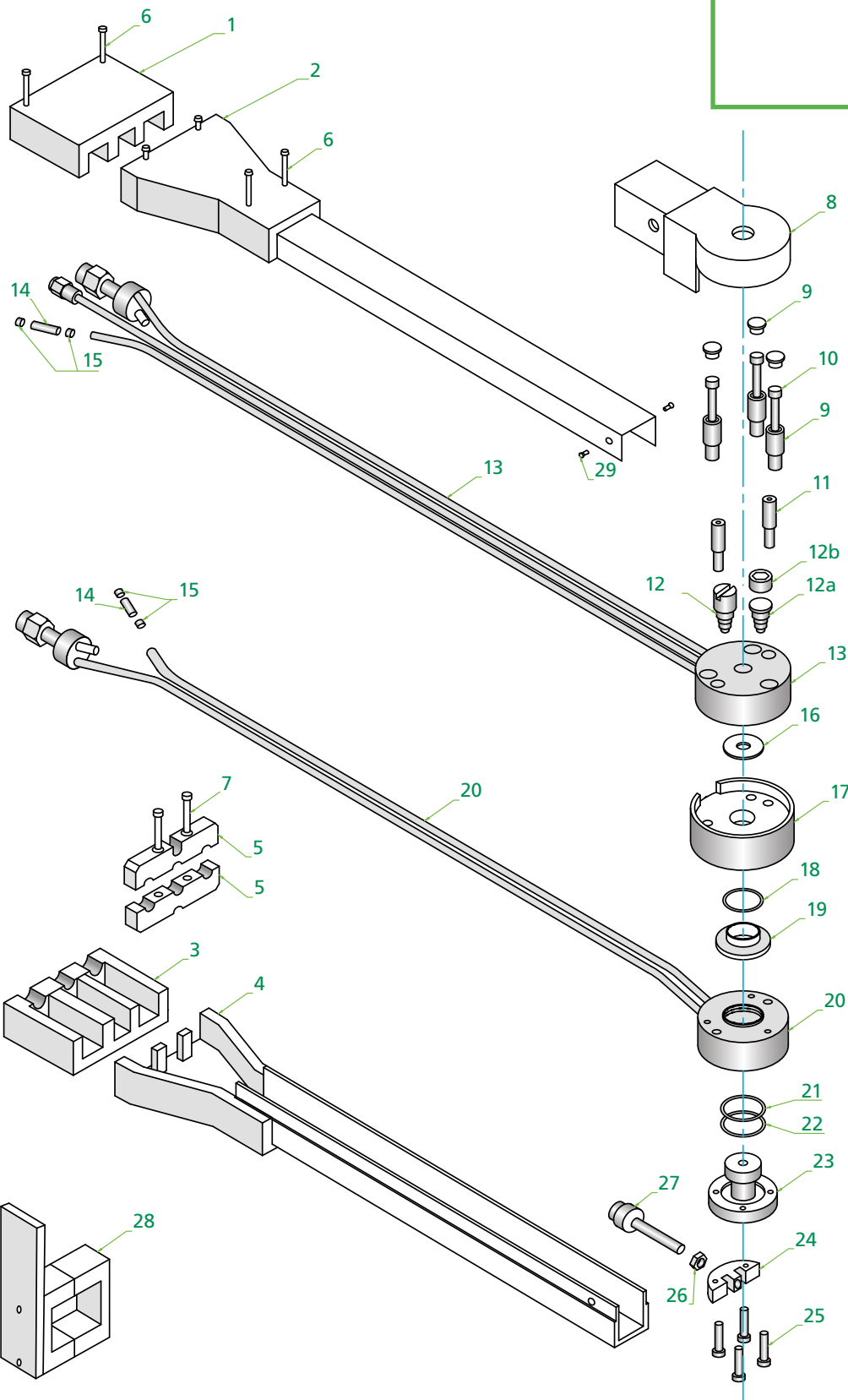
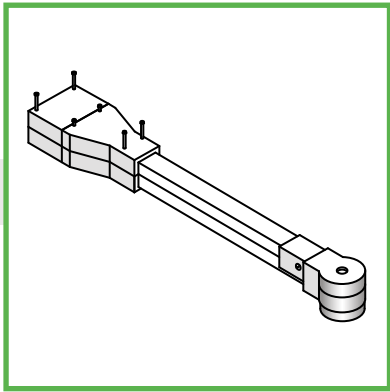
F1-45° Plasma Gun



F1-45° / F1-90° PLASMA GUNS			
Pos.	FST p/n	Product Description	OEM / Remark
	301.000-01	F1-45 Gun	344000
	301.000-02	F1-90 Gun	340000
1,2,3,4	301.001-01	Shells complete for F1-45 gun	344011, for F1-45 Gun
	301.001-02	Shells complete for F1-90 gun	340011, for F1-90 Gun
5	301.006	Holder	340015
6	301.028	Socket head cap screw	for F1 gun shells
7	301.029	Socket head cap screw for holder	for F1 gun holder
8	301.002-01	Cover	344012, for F1-45 Gun
	301.002-02	Cover	340012, for F1-90 Gun
9	301.007	Insulating sleeves and covers	340005
10	301.008	Screw, M3x16	300146
11	301.009	Centering pin	340060
12	301.010-02	Electrode, screw type	340001, for F1-90 Gun
12a	301.010-01	Electrode, plug type	343001, for F1-45 Gun
12b	301.011	Screw for electrode	343010, for F1-45 Gun
13	301.012-01	Rear section complete	344010, for F1-45 Gun
	301.012-02	Rear section complete	340010, for F1-90 Gun
14	301.005	Connecting hose	300138
15	301.004	Connecting hose clamp	300137
16	301.013	Gas distribution ring	340020
17,18,19	301.014-00	Intermediate section complete	344017-00
20	301.015-01	Front section	344009, for F1-45 Gun
	301.015-02	Front section	340009, for F1-90 Gun
21	301.016	O-Ring, 18 x 2 mm	343007
22	301.017	O-Ring, 19 x 1.5 mm	340008
23*	301.018	Nozzle, 5 mm	340002
	301.019	Nozzle, 6 mm	343002
	301.020	Nozzle, 7 mm	–
24	301.022	Injector support standard	340050
25	301.023	Nozzle screws, M3x10	300147
26	301.021	Locknut, M5	300144
27	380.001	Powder injector 1.5 mm	300019
	380.002	Powder injector 1.8 mm	300020
	380.003	Powder injector 2.0 mm	300021
	380.004	Powder injector 1.5 mm	344019, bent

* : All nozzles include O-Rings 301.016 + 301.017

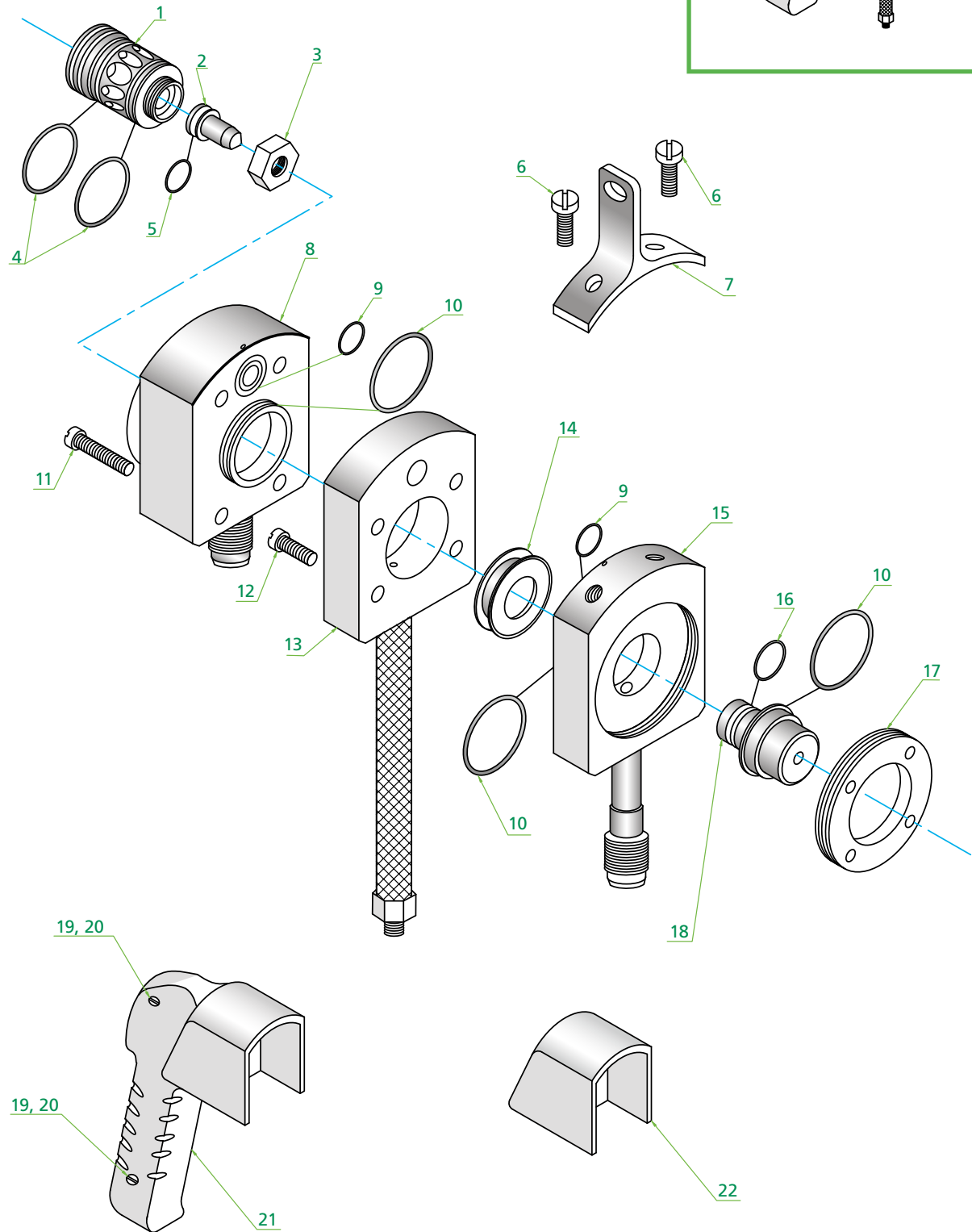
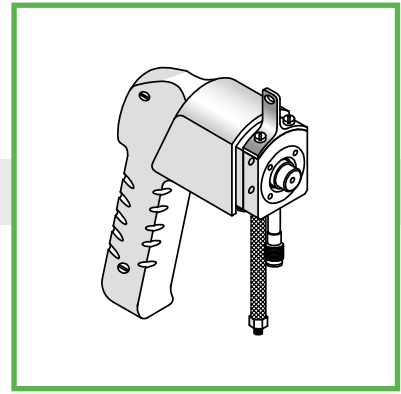
F1-90° Plasma Gun



F1-45° / F1-90° PLASMA GUNS			
Pos.	FST p/n	Product Description	OEM / Remark
	380.005	Powder injector 1.8 mm	344020, bent
	380.006	Powder injector 2.0 mm	344021, bent
28	301.024	Gun holder complete	340016
29	301.003	Screws, M3x6	300148
OTHERS*			
	301.014-00	Intermediate section complete	344017-00, incl. 301.014-01, -02, -03
	301.025-01	Nozzle/Electrode/O-Ring set, 5 mm, plug type	340003-05
	301.025-02	Nozzle/Electrode/O-Ring set, 5 mm, screw type	340003-05
	301.026-01	Nozzle/Electrode/O-Ring set, 6 mm, plug type	343003-06
	301.026-02	Nozzle/Electrode/O-Ring set, 6 mm, screw type	343003-06
	301.027-01	Nozzle/Electrode/O-Ring set, 7 mm, plug type	–
	301.027-02	Nozzle/Electrode/O-Ring set, 7 mm, screw type	–
CABLES, HOSES, FITTINGS			
	380.022-01	Plasma gun power cable set	for F1/F4 gun, length 5 m
	380.020-01	Plasma gun power cable (negative)	for F1/F4 gun, length 5 m
	380.021-01	Plasma gun power cable (positive)	for F1/F4 gun, length 5 m
	380.023-01	Plasma gas hose	for F1/F4 gun, length 5 m
	380.022-02	Plasma gun power cable set	for F1/F4 gun, length 6 m
	380.020-02	Plasma gun power cable (negative)	for F1/F4 gun, length 6 m
	380.021-02	Plasma gun power cable (positive)	for F1/F4 gun, length 6 m
	380.023-02	Plasma gas hose	for F1/F4 gun, length 6 m
	500.001	Powder feed hose	–
	500.021	Powder feed hose screw fitting	for powder hose 500.001
	500.032-01	4MP Powder Hose (15ft)	
	500.032-02	4MP Powder Hose (20ft)	
	500.032-03	4MP Powder Hose (30ft)	
	500.032-05	4MP Powder Hose Orange(15ft)	
	500.032-06	4MP Powder Hose Orange(25ft)	
		Other lengths available on request	

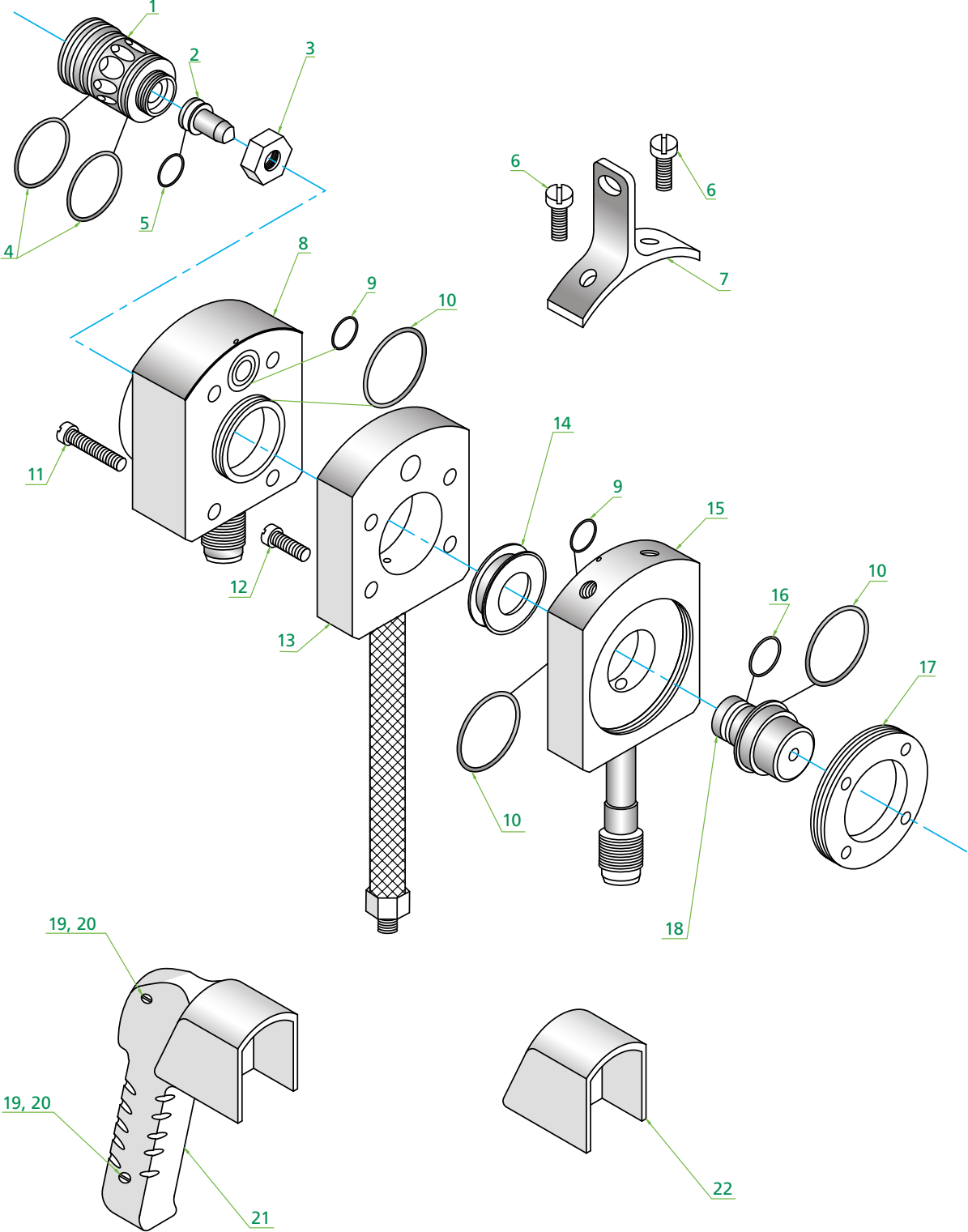
* : All nozzles include O-Rings 301.016 + 301.017

3MB Plasma Gun



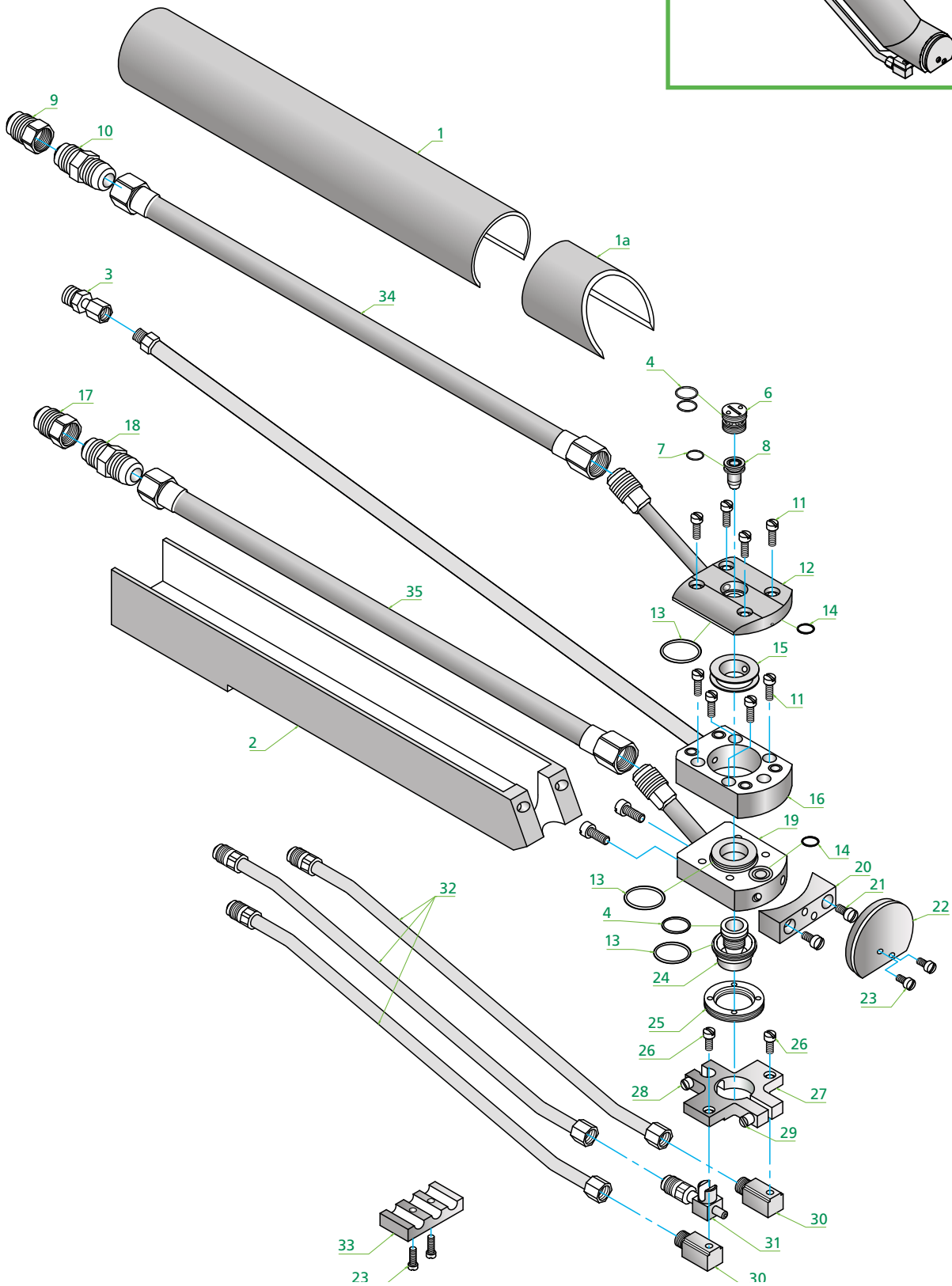
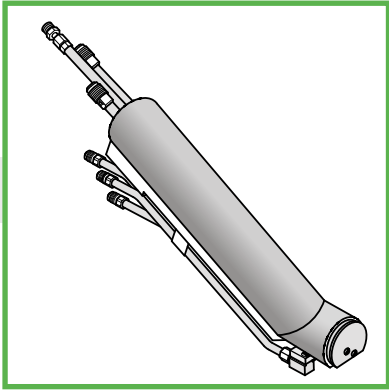
3MB PLASMA GUN			
Pos.	FST p/n	Product Description	OEM / Remark
	304.000-01	3MB gun complete, machine mounted	–
	304.000-02	3MB gun complete, hand held	–
1	304.006	Electrode holder	3M184A
2	304.001	Electrode assembly	3M11A
3	304.034	Electrode locking nut-black	3M276A
4	304.017	O-Ring, electrode holder	3M198A
5	304.018	O-Ring, electrode assembly	3M199A
6	304.007	Mounting bracket mounting screw	3M185A
7	304.005	Mounting bracket	3M183A
8	304.009	Rear gun body assembly	3M188A
9	304.014	O-Ring, front and rear gun body	3M195A
10	304.015	O-Ring, gun bodies and nozzle	3M196A
11	304.012	Screw-rear gun body	3M192A
12	304.002	Screw front gun body	3M168A
13	304.010	Insulator and hose assembly	3M189A
	304.010-01	Insulator hose 6" (hose only)	–
14	304.033-01	Distribution ring, 1-hole argon	3M275A
	304.033-02	Distribution ring, 2-hole nitrogen	–
15	304.008	Front gun body assembly	3M187A
16	304.016	O-Ring, nozzle, rear	3M197A
17	304.011	Nozzle locking ring	3M190A
18	380.100-01	"G" nozzle	3M7A-G
	380.100-02	"G" nozzle with tungsten insert	3M7A-G
	380.101-01	"GE" nozzle	3M7A-GE
	380.101-02	"GE" nozzle with tungsten insert	3M7-GE
	380.102-01	"GH" nozzle	3M7A-GH
	380.102-02	"GH" nozzle with tungsten insert	3M7-GH
	380.103-01	"GP" nozzle	3M7A-GP
19	304.046	Handle screw	3M43A
20	304.003	Handle nut	3M176A
21	304.019	Handle assembly, hand held	3M200A
22	304.086	Handle assembly, machine mounted	3M200A-1

3MB Plasma Gun



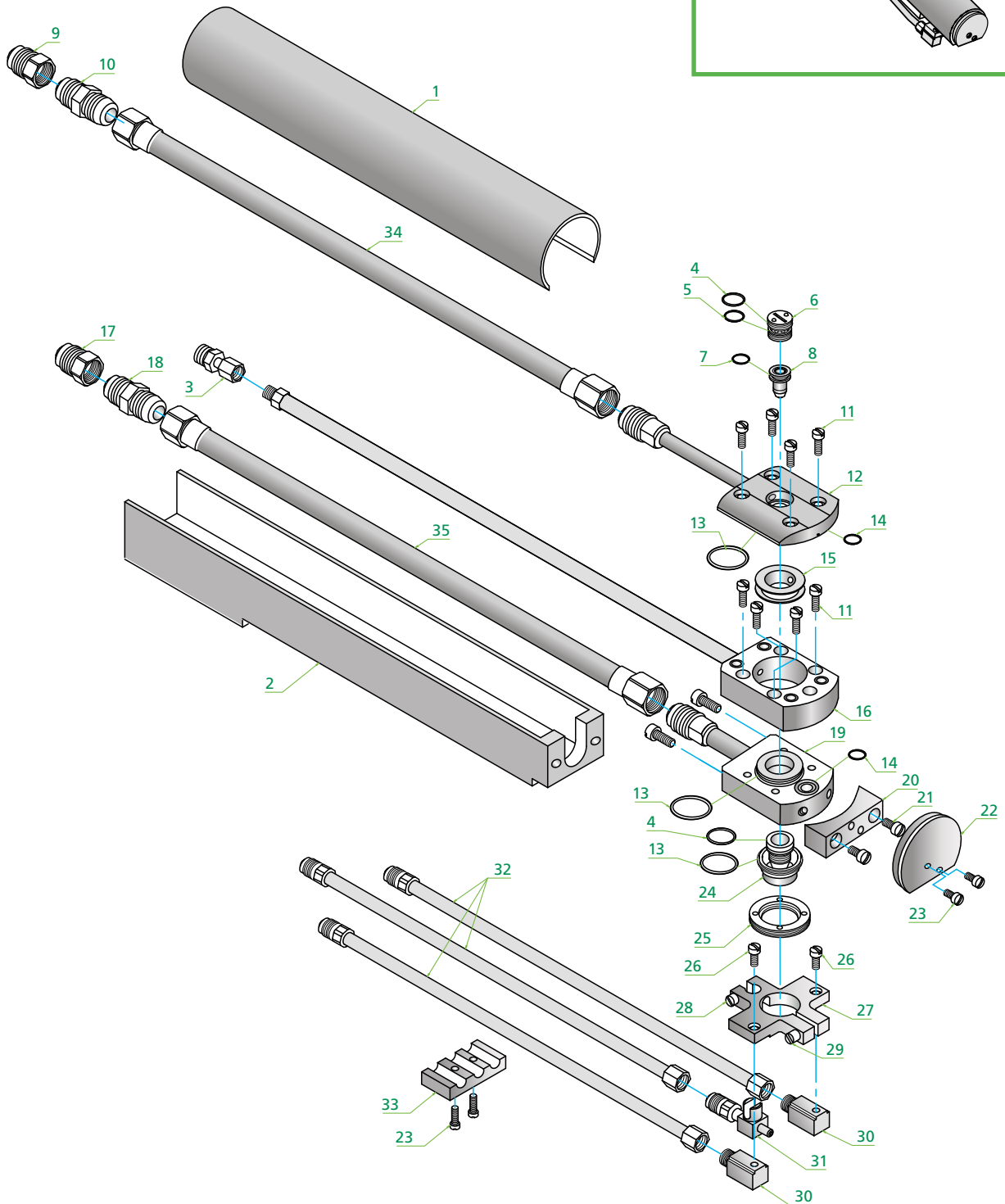
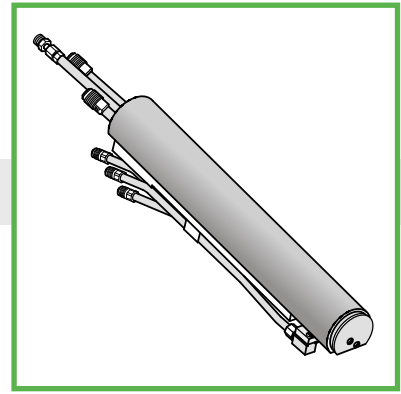
3MB PLASMA GUN			
Pos.	FST p/n	Product Description	OEM / Remark
OTHERS			
	304.013	Wrench for nozzle locking ring	3M193A
	304.023	Spare O-Rings	3M206A
	304.031	Mounting bracket	3M268
	304.032	Tool post stud assembly	3M269
	304.042	Plug	3M340
	304.043	Switch	3M341
CABLES, HOSES, FITTINGS			
	304.053-01	Plasma gas hose assembly, 20 ft.	3M336
	304.053-02	Plasma gas hose assembly, 15 ft.	3M336
	304.054-01	Nozzle hose & cable assembly, positive, 20 ft.	3M-394
	304.054-02	Nozzle hose & cable assembly, positive, 15 ft.	3M-394
	304.055-01	Electrode hose & cable assembly, negative, 20 ft.	3M-395
	304.055-02	Electrode hose & cable assembly, negative, 15 ft.	3M-395
	304.080	Adapter, 3MB gun - 7M/9M hose (left hand)	3M-797
	304.081	Adapter, 3MB gun - 7M/9M hose (right hand)	3M-798
	500.032-01	4MP Powder Hose (15ft)	
	500.032-02	4MP Powder Hose (20ft)	
	500.032-03	4MP Powder Hose (30ft)	
	500.032-05	4MP Powder Hose Orange(15ft)	
	500.032-06	4MP Powder Hose Orange(25ft)	
		Other lengths available on request	

3MBT-30° Plasma Gun



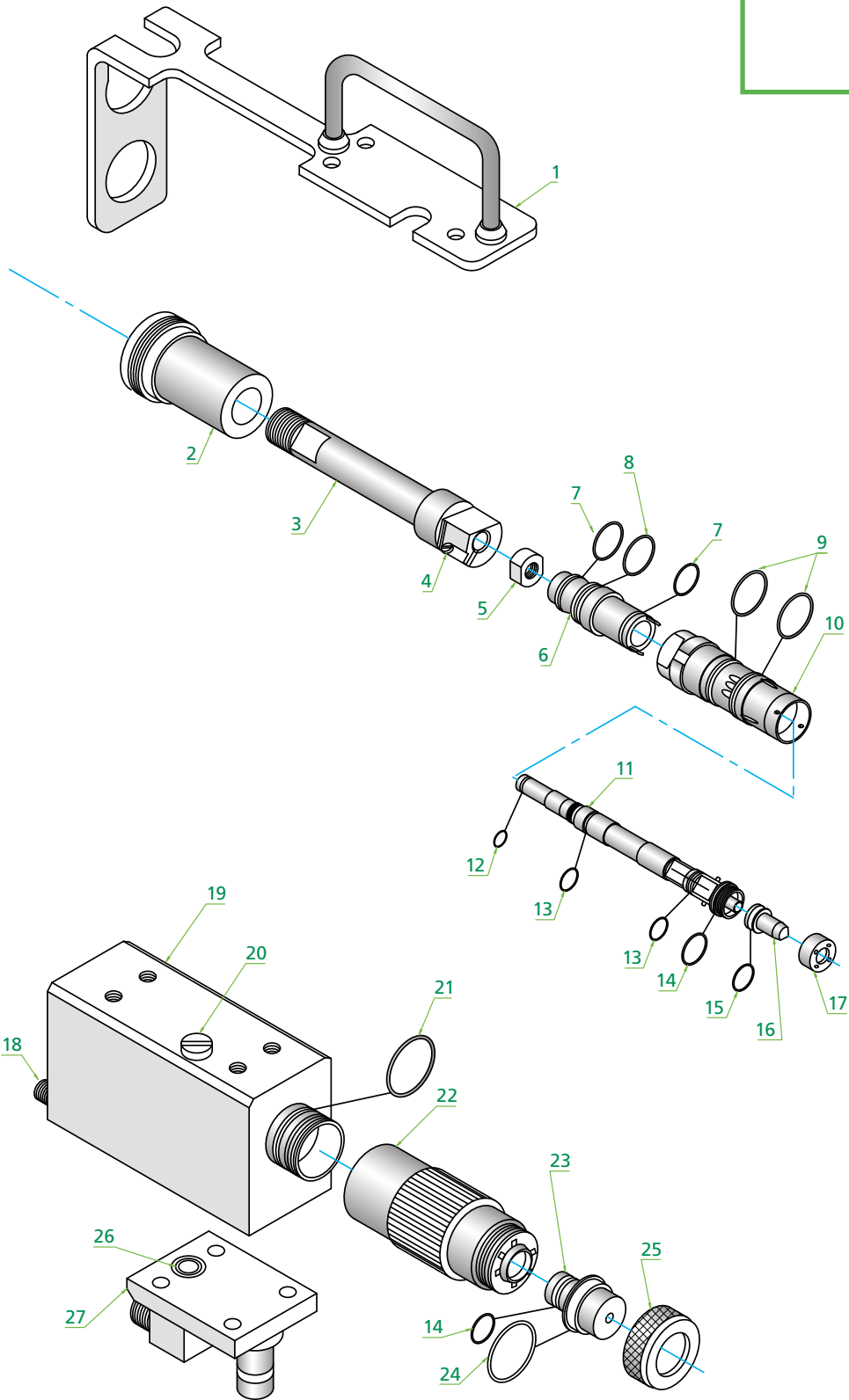
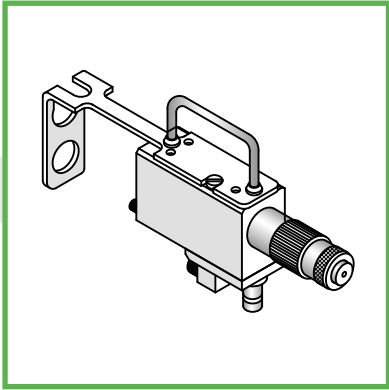
3MBT-30° / 3MBT-90° PLASMA GUNS			
Pos.	FST p/n	Product Description	OEM / Remark
	304.000-03	3MBT ID Plasma gun complete	24", 30 degrees
	304.000-04	3MBT ID Plasma gun complete	24", 90 degrees
1	304.101-01	Gun cover, 18"	
	304.101-02	Gun cover, 24"	
1a	304.102	Gun cover front, 30 degrees	
2	304.103-01	Extension arm, 18"	
	304.103-02	Extension arm, 24"	
	304.104-01	Extension arm, 18", 30 degrees	
	304.104-02	Extension arm, 24", 30 degrees	
3	304.105	Insulator hose adaptor, gas	3M 794
4	304.016	O-Ring, nozzle, rear + electrode holder 2x	3M 197
6	304.107	Electrode holder	
7	304.018	O-Ring, electrode assembly	3M 199
8	304.001	Electrode	3M 11
9	304.080	Adapter, 3MB gun - 7M/9M hose (left hand)	3M-797
10	304.108	Cable connector, negative	
11	304.002	Screw front gun body (4 ea. req)	3M 168
12	304.109-01	Gun body, rear, 90 degrees	3M 392
	304.109-02	Gun body, rear, 30 degrees	3M 392
13	304.015	O-Ring, front gun body and nozzle	3M 196
14	304.014	Cooling water O-Ring	3M 195
15	304.033-01	Distribution ring, 1-hole argon	3M 275A
	304.033-02	Distribution ring, 2-hole nitrogen	3M 275N
16	304.110-01	Insulator assembly, 90 degrees, 18"	
	304.110-02	Insulator assembly, 30 degrees, 18"	
	304.110-03	Insulator assembly, 90 degrees, 24"	
	304.110-04	Insulator assembly, 30 degrees, 24"	
17	304.081	Adapter, 3MB gun - 7M/9M hose (right hand)	3M 798
18	304.111	Cable connector, positive	
19	304.008	Front gun body assembly, 90 degrees	3M 187
	304.112	Front gun body assembly, 30 degrees	
20	304.113	Adapter block	3M 744
21	304.007	Mounting bracket mounting screw	3M 185
22	304.114	Cap cover, front shield	
23	304.115	Screw, cap mount	3M 397
24	380.100-01	"G" nozzle	3M7-G
	380.101-01	"GE" nozzle	3M7-GE
	380.102-01	"GH" nozzle	3M7-GH
	380.103-01	"GP" nozzle	3M7-GP

3MBT-90° Plasma Gun



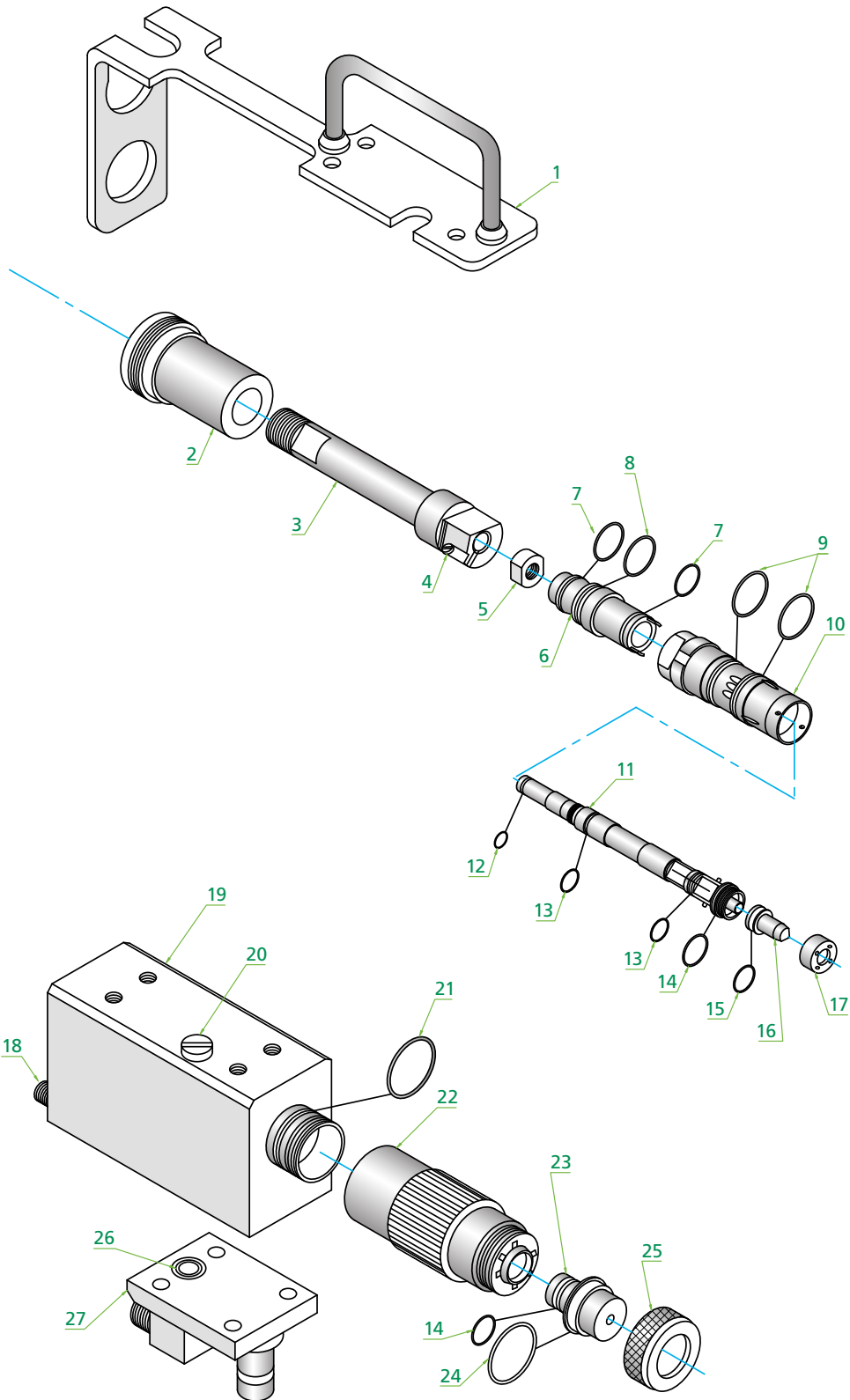
3MBT-30° / 3MBT-90° PLASMA GUNS			
Pos.	FST p/n	Product Description	OEM / Remark
25	304.011	Nozzle locking ring	3M 190
26	304.116	Screw	
27	304.117	Clamp, single powder port, with air jet	
28	304.012	Screw, rear gun body	3M 192
29	381.136	Locking screw	3M 327
30	304.118	Air jet nozzle	
31	381.020-01	#2 Powder port assembly	3M325
	381.001	Powder port stem	3M202
	381.021	#2 Tip	3M210A
	381.022-01	#2 Mounting block	3M211A
32	304.119-01	Air tube / Powder tube, 18"	
	304.119-02	Air tube / Powder tube, 24"	
	304.120-01	Air tube / Powder tube, 18", 30 degrees	
	304.120-02	Air tube / Powder tube, 24", 30 degrees	
33	304.121	Tube mounting bracket	
34	304.055-04	Electrode hose & cable assembly, negative, 5 ft.	3M-395
35	304.054-04	Nozzle hose & cable assembly, positive, 5 ft.	3M-394
OTHERS			
	381.010-01	#1 Powder Port Assembly	3M320
	381.030-01	#3 Powder Port Assembly	3M330
	381.040-01	#4 Powder Port Assembly	3M350
	381.050-01	#5 Powder Port Assembly	3M245
	381.060-01	#6 Powder Port Assembly	3M285
		Clamp, single powder port, no air jet	
		Clamp, dual powder port, no air jet	
CABLES, HOSES, FITTINGS			
	304.053-01	Plasma gas hose assembly, 20 ft.	3M 336
	304.053-02	Plasma gas hose assembly, 15 ft.	3M 336
	304.054-01	Nozzle hose & cable assembly, positive, 20 ft.	3M-394
	304.054-02	Nozzle hose & cable assembly, positive, 15 ft.	3M-394
	304.055-01	Electrode hose & cable assembly, negative, 20 ft.	3M-395
	304.055-02	Electrode hose & cable assembly, negative, 15 ft.	3M-395
	500.032-01	4MP Powder Hose (15ft)	
	500.032-02	4MP Powder Hose (20ft)	
	500.032-03	4MP Powder Hose (30ft)	
	500.032-05	4MP Powder Hose Orange(15ft)	
	500.032-06	4MP Powder Hose Orange(25ft)	
		Other lengths available on request	

9MB Plasma Gun (machine mounted)



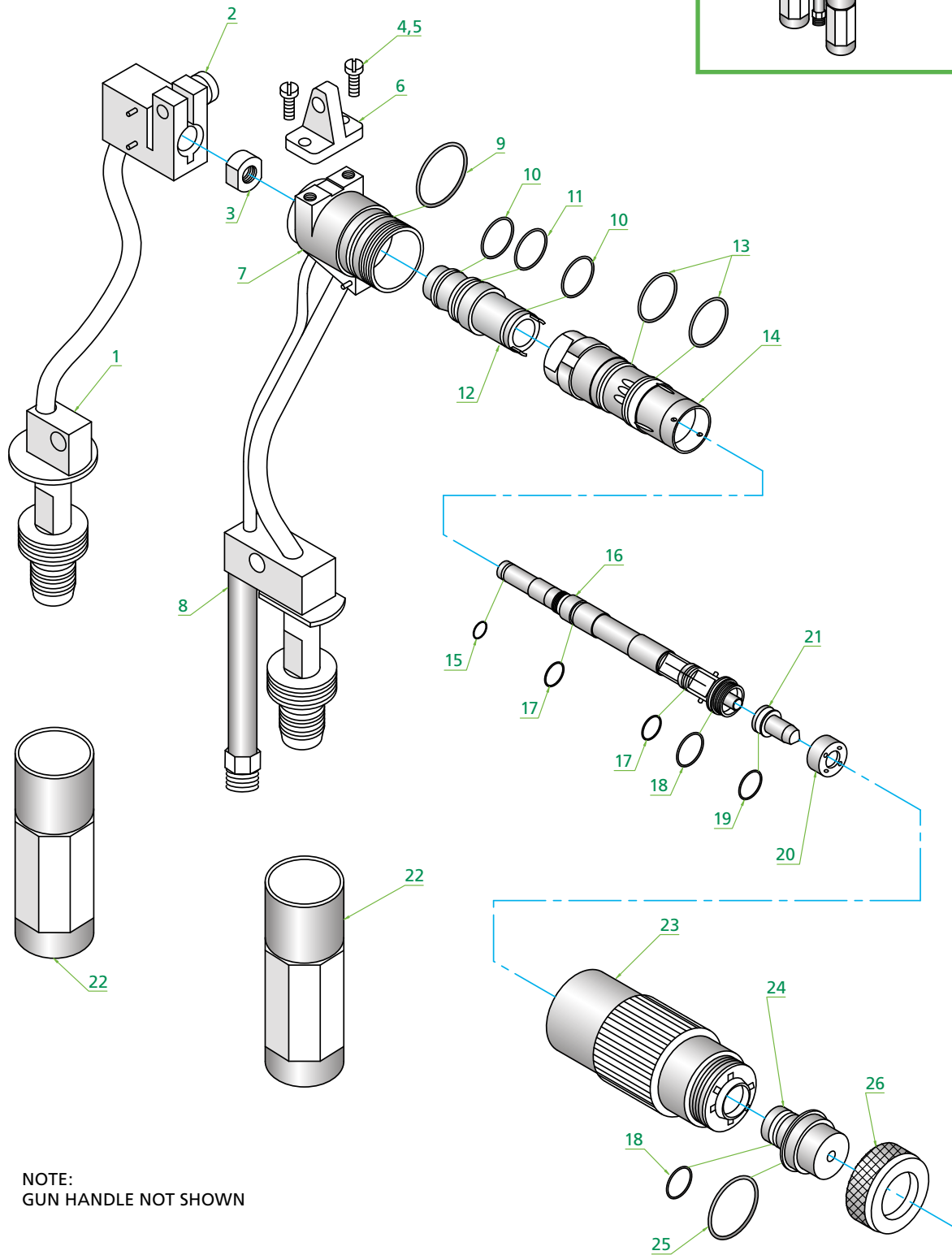
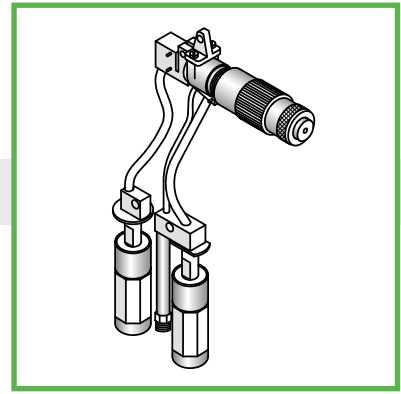
9MB PLASMA GUN (machine mounted)			
Pos.	FST p/n	Product Description	OEM / Remark
	306.000-01	Complete 9MB Plasma gun, machine mounted	Machine mounted version
1	306.090	Cable support strap assembly	9MB 301
2	306.067	Locking ring assembly	9MB 142
3	306.064	Electrode holder clamp & hose fitting	9MB 135
4	306.065	Screw, electrode holder clamp	9MB 138
5	306.018	Electrode holder nut	9MB 17
6	306.069	Rear insulator	9MB 166
7	306.021	O-Ring, rear insulator	9MB 21
8	306.033	O-Ring, insulator, rear	9MB 46
9	306.087	O-Ring, front insulator	9MB 296
10	306.035	Front insulator assembly, 2-hole argon	9MB 50, including O-Rings
	306.039	Front insulator assembly, nitrogen	9MB 55, including O-Rings
	306.155	Front insulator assembly, 6-hole argon	9MB 60, including O-Rings
11	306.019	Electrode holder assembly	9MB 18
12	306.043	O-Ring, electrode holder	9MB 56
13	306.038	O-Ring, electrode holder	9MB 52
14	306.060	O-Ring, electrode holder, rear insulator, nozzle	9MB 111
15	306.037	O-Ring, electrode	9MB 51
16	306.047	Electrode	9MB 63, including O-Ring
17	306.016	Electrode locking nut	9MB 14
18	306.074	Hose fitting (plasma gas)	9MB 208
19	306.030	Base Sub. assembly, machine mount	9MB 37
20	306.031	Plug screw	9MB 38
21	306.025	O-Ring, machine mount base	9MB 29
22	306.017	Gun water channeling head	9MB 15, including 9MB 297
23	380.100-01	"G" nozzle	3M7-G, 7M7-G, 9MB7-G
	380.100-02	"G" nozzle with tungsten insert	3M7-G, 7M7-G, 9MB7-G
	380.101-01	"GE" nozzle	3M7-GE, 7M7-GE, 9MB7-GE
	380.101-02	"GE" nozzle with tungsten insert	3M7-GE, 7M7-GE, 9MB7-GE
	380.102-01	"GH" nozzle	3M7-GH, 7M7-GH, 9MB7-GH
	380.102-02	"GH" nozzle with tungsten insert	3M7-GH, 7M7-GH, 9MB7-GH
	380.103-01	"GP" nozzle	3M7-GP, 7M7-GP, 9MB7-GP
	306.005	700 Nozzle assembly, std	9MB 700
	306.164	703 nozzle assembly	9MB 703
	306.165	704 nozzle assembly	9MB 704

9MB Plasma Gun (machine mounted)



9MB PLASMA GUN (machine mounted)			
Pos.	FST p/n	Product Description	OEM / Remark
	306.166	705 nozzle assembly	9MB 705
	306.167	706 nozzle assembly	9MB 706
	306.168	707 nozzle assembly	9MB 707
24	306.044	O-Ring, nozzle, large	9MB 57
25	306.015	Nozzle nut	9MB 8
26	306.086	O-Ring, valve, small	9MB 295
27	306.097	Hose fitting & mounting stud assembly	9MB 335
OTHERS			
	306.088	O-Ring, water channeling head	9MB 297
	306.106	Electrode & Insulator assembly	9MB 693, 2-hole argon
	306.107	Electrode & Insulator assembly	9MB 694, nitrogen
	306.079	Lock washer, cable support strap assembly	9MB 221
	306.099	Screw, cable support strap assembly	9MB 453
CABLES, HOSES, FITTINGS			
	380.024-01	Plasma gun power cable (negative), 20 ft	7MH20-20, for 7M/9M gun, length 20 ft
	380.024-02	Plasma gun power cable (negative), 15 ft	7MH20-15, for 7M/9M gun, length 15 ft
	380.026-01	Plasma gun power cable (positive), 20 ft	7MH10-20, for 7M/9M gun, length 20 ft
	380.026-02	Plasma gun power cable (positive), 15 ft	7MH10-15, for 7M/9M gun, length 15 ft
	380.025-01	Plasma gas hose assembly 20 ft	7MH50-20, for 7M/9M gun, length 20 ft
	380.025-02	Plasma gas hose assembly 15 ft	7MH50-15, for 7M/9M gun, length 15 ft
	380.027-01	Plasma gun power cable set (positive/negative)	length 5 m
	380.027-02	Plasma gun power cable set (positive/negative)	length 6 m
	380.027-03	Plasma gun power cable set (positive/negative)	length 10 m
	380.027-04	Plasma gun power cable set (positive/negative)	length 8 m
	500.032-01	4MP Powder Hose (15ft)	
	500.032-02	4MP Powder Hose (20ft)	
	500.032-03	4MP Powder Hose (30ft)	
	500.032-05	4MP Powder Hose Orange(15ft)	
	500.032-06	4MP Powder Hose Orange(25ft)	
		Other lengths available on request	

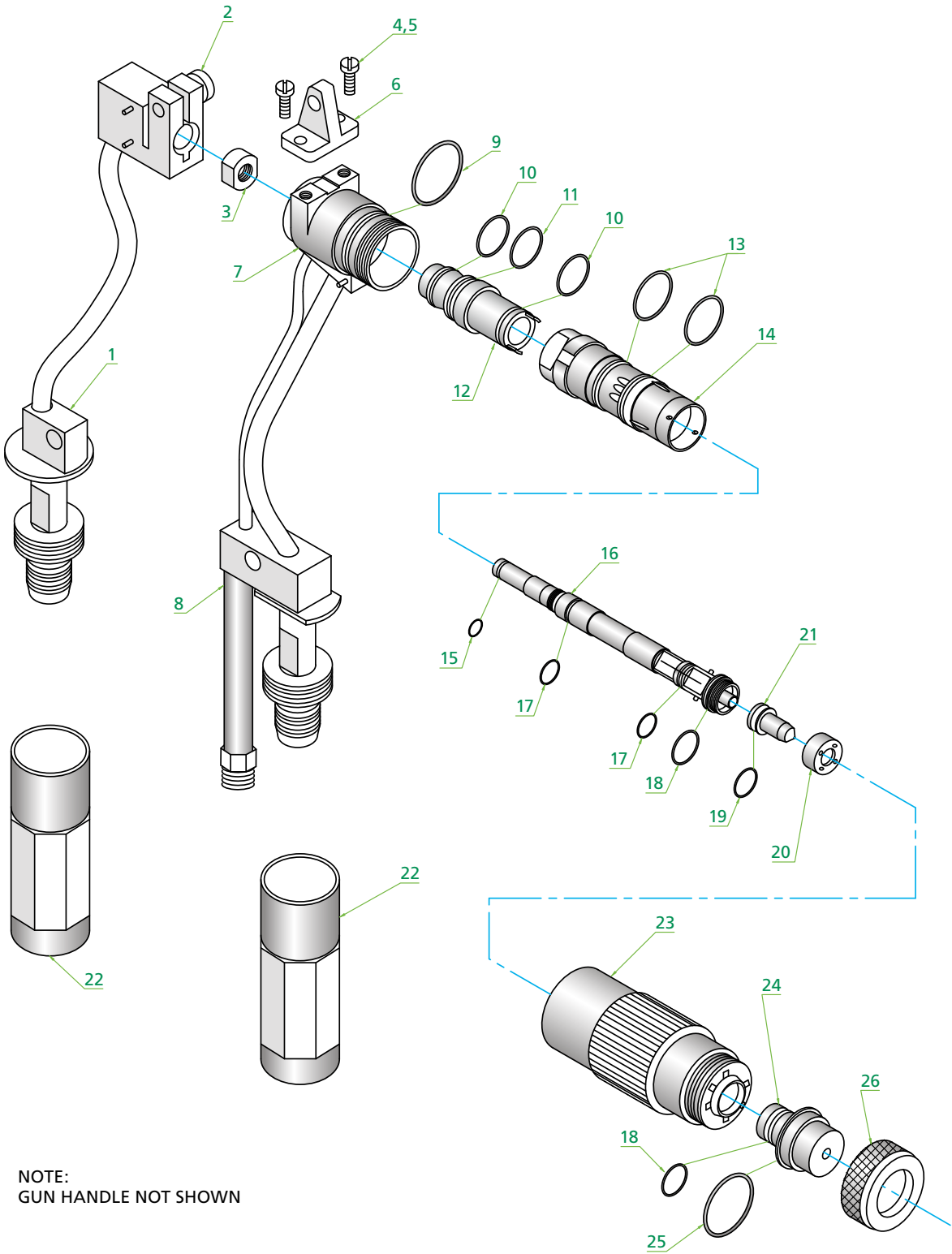
9MB Plasma Gun (hand held)



NOTE:
GUN HANDLE NOT SHOWN

9MB PLASMA GUN (hand held)			
Pos.	FST p/n	Product Description	OEM / Remark
	306.000-02	Complete 9MB Plasma gun, hand held	Handheld version
1	306.026	Rear gun body assembly	9MB 30
2	305.015	Screw, clamp	9MB 670
3	306.018	Electrode holder nut	9MB 17
4	306.169	Screw, support bracket mounting	9MB 115
5	306.062	Lock washer, support bracket screw	9MB 121
6	306.057	Support bracket	9MB 95
7	306.024	Front gun body assembly	9MB 25, for handheld version
8	306.045	Hose assembly, front gun body	9MB 58
9	306.025	O-Ring, front gun body	9MB 29
10	306.021	O-Ring, rear insulator	9MB 21
11	306.033	O-Ring, insulator, rear	9MB 46
12	306.069	Rear insulator	9MB 166
13	306.087	O-Ring, front insulator	9MB 296
14	306.035	Front insulator assembly, 2-hole argon	9MB 50, including O-Rings
	306.039	Front insulator assembly, nitrogen	9MB 55, including O-Rings
	306.155	Front insulator assembly, 6-hole argon	9MB 60, including O-Rings
15	306.043	O-Ring, electrode holder	9MB 56
16	306.019	Electrode holder assembly	9MB 18
17	306.038	O-Ring, electrode holder	9MB 52
18	306.060	O-Ring, electrode holder, rear insulator, nozzle	9MB 111
19	306.037	O-Ring, electrode	9MB 51
20	306.016	Electrode locking nut	9MB 14
21	306.047	Electrode	9MB 63, including O-Ring
22	306.027	Insulator, water cooled cable	9MB 32
23	306.017	Gun water channeling head	9MB 15, including O-Ring
24	380.100-01	"G" nozzle	3M7-G, 7M7-G, 9MB7-G
	380.100-02	"G" nozzle with tungsten insert	3M7-G, 7M7-G, 9MB7-G
	380.101-01	"GE" nozzle	3M7-GE, 7M7-GE, 9MB7-GE
	380.101-02	"GE" nozzle with tungsten insert	3M7-GE, 7M7-GE, 9MB7-GE
	380.102-01	"GH" nozzle	3M7-GH, 7M7-GH, 9MB7-GH
	380.102-02	"GH" nozzle with tungsten insert	3M7-GH, 7M7-GH, 9MB7-GH
	380.103-01	"GP" nozzle	3M7-GP, 7M7-GP, 9MB7-GP
	306.005	700 Nozzle assembly	9MB 700
	306.164	703 nozzle assembly	9MB 703
	306.165	704 nozzle assembly	9MB 704

9MB Plasma Gun (hand held)

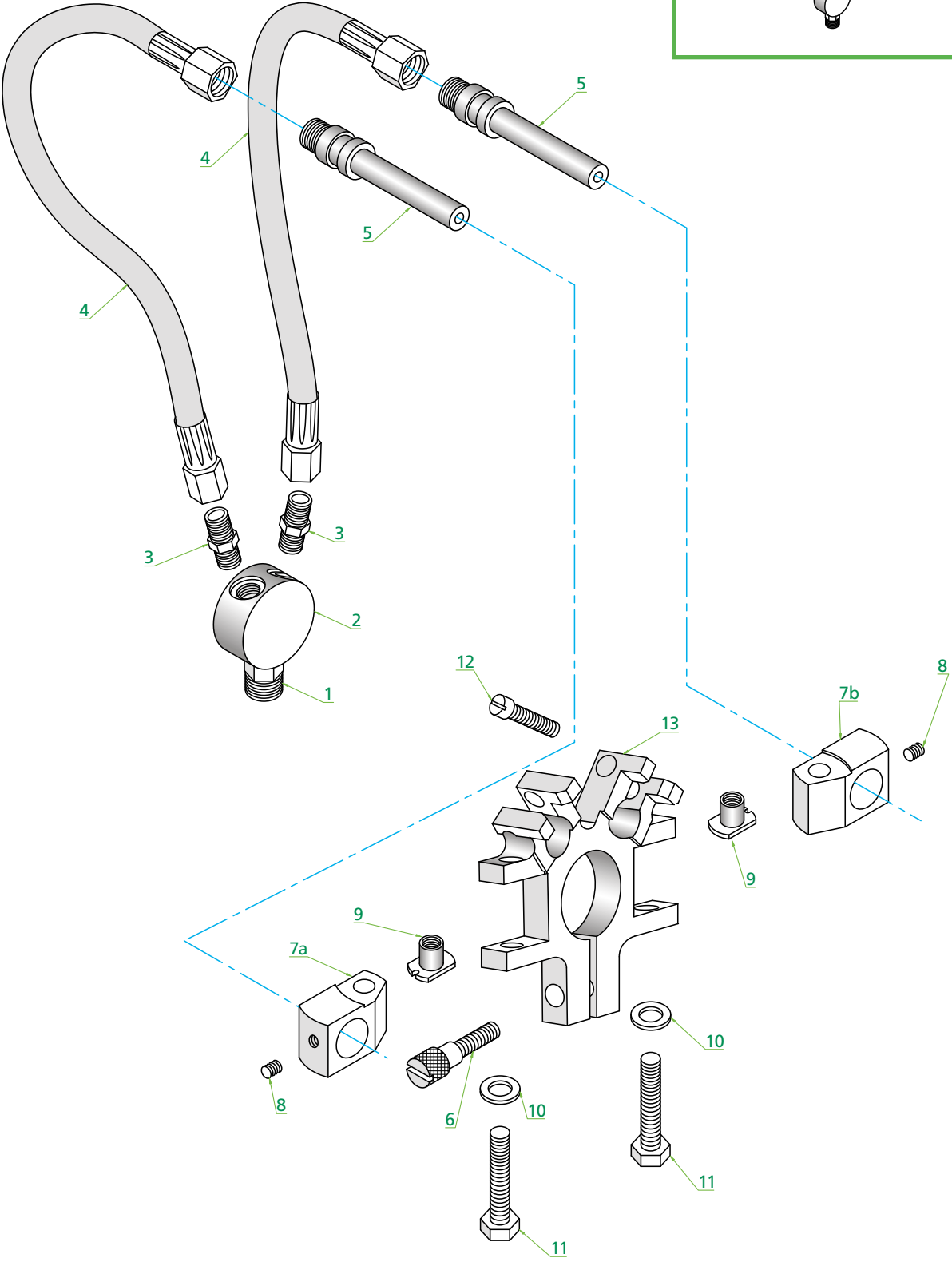
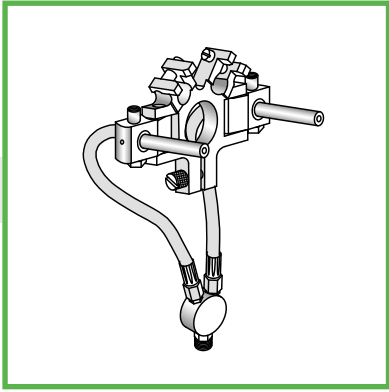


NOTE:
GUN HANDLE NOT SHOWN

9MB PLASMA GUN (hand held)			
Pos.	FST p/n	Product Description	OEM / Remark
	306.166	705 nozzle assembly	9MB 705
	306.167	706 nozzle assembly	9MB 706
	306.168	707 nozzle assembly	9MB 707
25	306.044	O-Ring, nozzle, large	9MB 57
26	306.015	Nozzle nut	9MB 8
OTHERS			
	306.148	Gun handle assembly	9MB 575
	306.088	O-Ring, water channeling head	9MB 297
	306.106	Electrode & Insulator assembly	9MB 693, 2-hole argon
	306.107	Electrode & Insulator assembly	9MB 694, nitrogen
CABLES, HOSES, FITTINGS			
	380.024-01	Plasma gun power cable (negative), 20 ft	7MH20-20, for 7M/9M gun, length 20 ft
	380.024-02	Plasma gun power cable (negative), 15 ft	7MH20-15, for 7M/9M gun, length 15 ft
	380.026-01	Plasma gun power cable (positive), 20 ft	7MH10-20, for 7M/9M gun, length 20 ft
	380.026-02	Plasma gun power cable (positive), 15 ft	7MH10-15, for 7M/9M gun, length 15 ft
	380.025-01	Plasma gas hose assembly 20 ft	7MH50-20, for 7M/9M gun, length 20 ft
	380.025-02	Plasma gas hose assembly 15 ft	7MH50-15, for 7M/9M gun, length 15 ft
	380.027-01	Plasma gun power cable set (positive/negative)	length 5 m
	380.027-02	Plasma gun power cable set (positive/negative)	length 6 m
	380.027-03	Plasma gun power cable set (positive/negative)	length 10 m
	380.027-04	Plasma gun power cable set (positive/negative)	length 8 m
	500.032-01	4MP Powder Hose (15ft)	
	500.032-02	4MP Powder Hose (20ft)	
	500.032-03	4MP Powder Hose (30ft)	
	500.032-05	4MP Powder Hose Orange(15ft)	
	500.032-06	4MP Powder Hose Orange(25ft)	
		Other lengths available on request	

Dual Powder Feed Assembly - Type 1

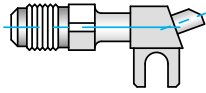
(with air jet)



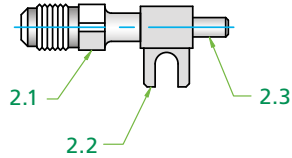
DUAL POWDER FEED ASSEMBLY (WITH AIR JET) – Type 1			
Pos.	FST p/n	Product Description	OEM / Remark
	381.121	Dual powder feed assembly (with air jet)	3M780A / 7M80 / 9MB80
1	381.131	Hose connection, large	3M42A / 7M20 / 9MB20
2	381.132	Wye, body only	3M41A
3	381.133	Hose connection, small	7M22 / 9MB22
4	381.134	Jet hose assembly	3M35A / 7M140 / 9MB140
5	381.135	Jet air nozzle	3M30A / 7M85 / 9MB85
6	381.136	Locking screw	3M327A / 7M327 / 9MB327
7a	381.137-01	Pivot block, left	7M82 / 9MB82
7b	381.137-02	Pivot block, right	7M83 / 9MB83
8	381.138	Jet set screw	3M31A / 7M87
9	381.139	Pivot block nut	3M86A / 7M86 / 9MB86
10	381.140	Pivot block washer	7M146
11	381.141	Screw, pivot block	3M5A / 7M84
12	381.143	Screw, powder port lock	3M43A / 7M45 / 9MB45
13	381.101	Dual powder port clamp (with air jet)	3M781A / 7M81 / 9MB81
	381.130	Wye assembly	7M35 / 9MB35
	381.137	Pivot block set	3M26A

Powder Port Assemblies - Type 1

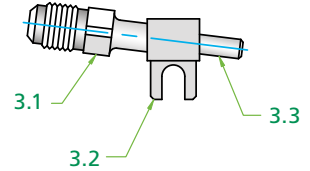
#1 Powder Port Assembly



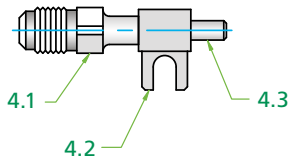
#2 Powder Port Assembly



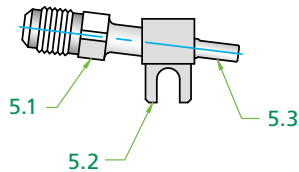
#3 Powder Port Assembly



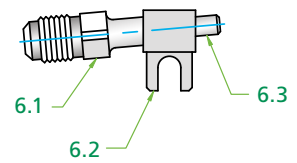
#4 Powder Port Assembly



#5 Powder Port Assembly

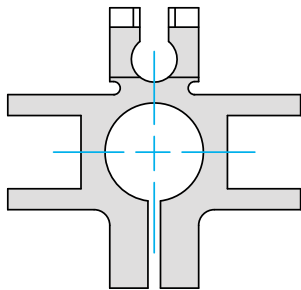


#6 Powder Port Assembly



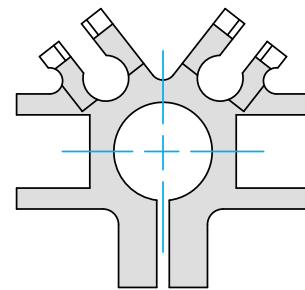
Clamps - Type 1

SINGLE CLAMP WITH AIR JET



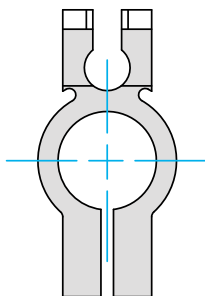
381.100

DUAL CLAMP WITH AIR JET



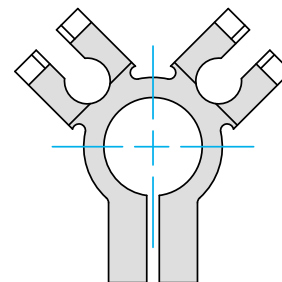
381.101

SINGLE CLAMP NO AIR JET



381.102

DUAL CLAMP NO AIR JET

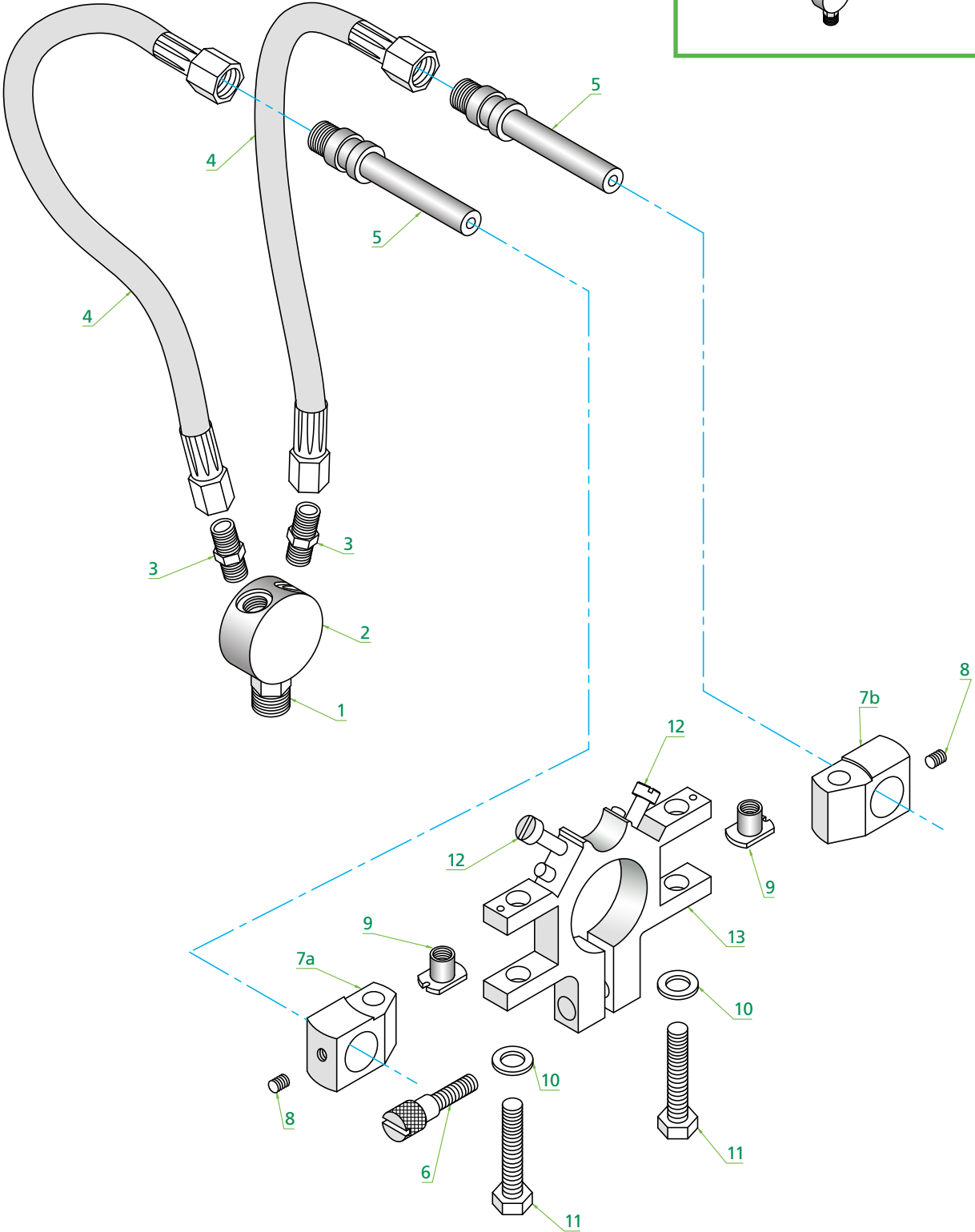
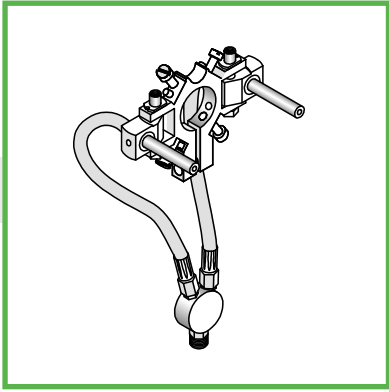


381.103

POWDER PORT ASSEMBLIES - Type 1			
Pos.	FST p/n	Product Description	OEM / Remark
#1	381.010-01	#1 Powder Port Assembly	3M320A / 7M320 / 9MB320
#2	381.020-01	#2 Powder Port Assembly	3M325A / 7M325 / 9MB325
2.1	381.001	Powder Port Stem	3M202 / 7M202 / 9MB202
2.2	381.022-01	#2 Mounting Block	3M211A / 7M211 / 9MB211
2.3	381.021	#2 Tip	3M210A / 7M210 / 9MB210
#3	381.030-01	#3 Powder Port Assembly	3M330A / 7M330 / 9MB330
3.1	381.001	Powder Port Stem	3M202 / 7M202 / 9MB202
3.2	381.032-01	#3 Mounting Block	3M204A / 7M204 / 9MB204
3.3	381.031	#3 Tip	3M203A / 7M203 / 9MB203
#4	381.040-01	#4 Powder Port Assembly	3M350A / 7M300 / 9MB300
4.1	381.001	Powder Port Stem	3M202 / 7M202 / 9MB202
4.2	381.042-01	#4 Mounting Block	3M216A / 7M216 / 9MB216
4.3	381.041	#4 Tip	3M215A / 7M215 / 9MB215
#5	381.050-01	#5 Powder Port Assembly	3M245A / 7M245 / 9MB245
5.1	381.001	Powder Port Stem	3M202 / 7M202 / 9MB202
5.2	381.052-01	#5 Mounting Block	3M247A / 7M247 / 9MB247
5.3	381.051	#5 Tip	3M246A / 7M246 / 9MB246
#6	381.060-01	#6 Powder Port Assembly	3M285A / 7M285 / 9MB285
6.1	381.001	Powder Port Stem	3M202 / 7M202 / 9MB202
6.2	381.062-01	#6 Mounting Block	3M287A / 7M287 / 9MB287
6.3	381.061	#6 Tip	3M286A / 7M286 / 9MB288
CLAMPS - Type 1			
	381.100	Single powder port clamp (with air jet)	3M661A / 7M661 / 9MB661
	381.101	Dual powder port clamp (with air jet)	3M781A / 7M81 / 9MB81
	381.102	Single powder port clamp (no air jet)	3M315A / 7M315 / 9MB315
	381.103	Dual powder port clamp (no air jet)	3M342A / 7M302 / 9MB302

Dual Powder Feed Assembly - Type 2

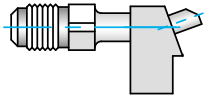
(with air jet)



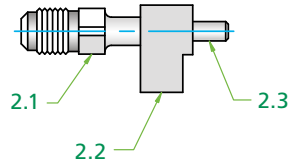
DUAL POWDER FEED ASSEMBLY (WITH AIR JET) – Type 2			
Pos.	FST p/n	Product Description	OEM / Remark
	381.122	Dual powder feed assembly (with air jet)	9MB952
1	381.131	Hose connection, large	3M42A / 7M20 / 9MB20
2	381.132	Wye, body only	3M41A
3	381.133	Hose connection, small	7M22 / 9MB22
4	381.134	Jet hose assembly	3M35A / 7M140 / 9MB140
5	381.135	Jet air nozzle	3M30A / 7M85 / 9MB85
6	381.136	Locking screw	3M327A / 7M327 / 9MB327
7a	381.137-01	Pivot block, left	7M82 / 9MB82
7b	381.137-02	Pivot block, right	7M83 / 9MB83
8	381.138	Jet set screw	3M31A / 7M87
9	381.139	Pivot block nut	3M86A / 7M86 / 9MB86
10	381.140	Pivot block washer	7M146
11	381.141	Screw, pivot block	3M5A / 7M84
12	381.142	Screw, mounting block	9MB962
13	381.112	Dual powder port clamp (with air jet)	9MB953
	381.130	Wye assembly	7M35 / 9MB35
	381.137	Pivot block set	3M26A

Powder Port Assemblies - Type 2

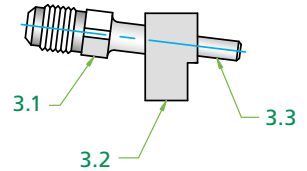
#1 Powder Port Assembly



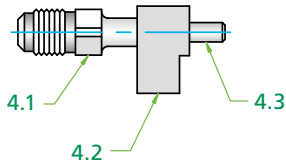
#2 Powder Port Assembly



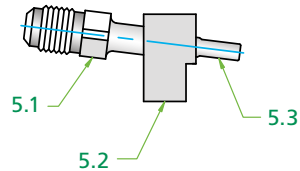
#3 Powder Port Assembly



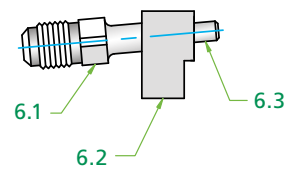
#4 Powder Port Assembly



#5 Powder Port Assembly

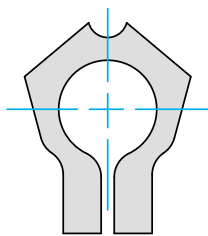


#6 Powder Port Assembly



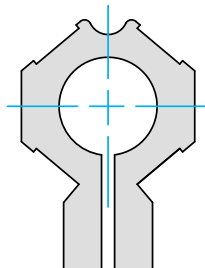
Clamps - Type 2

DUAL CLAMP NO AIR JET



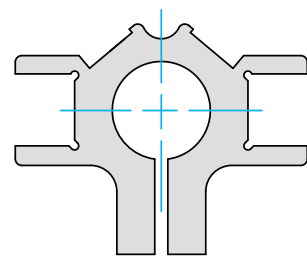
381.110

QUAD CLAMP NO AIR JET



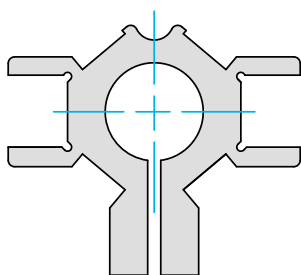
381.111

DUAL CLAMP WITH AIR JET



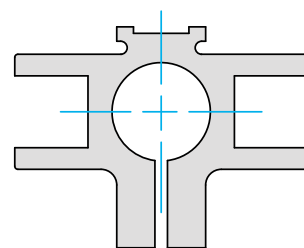
381.112

QUAD CLAMP WITH AIR JET



381.113

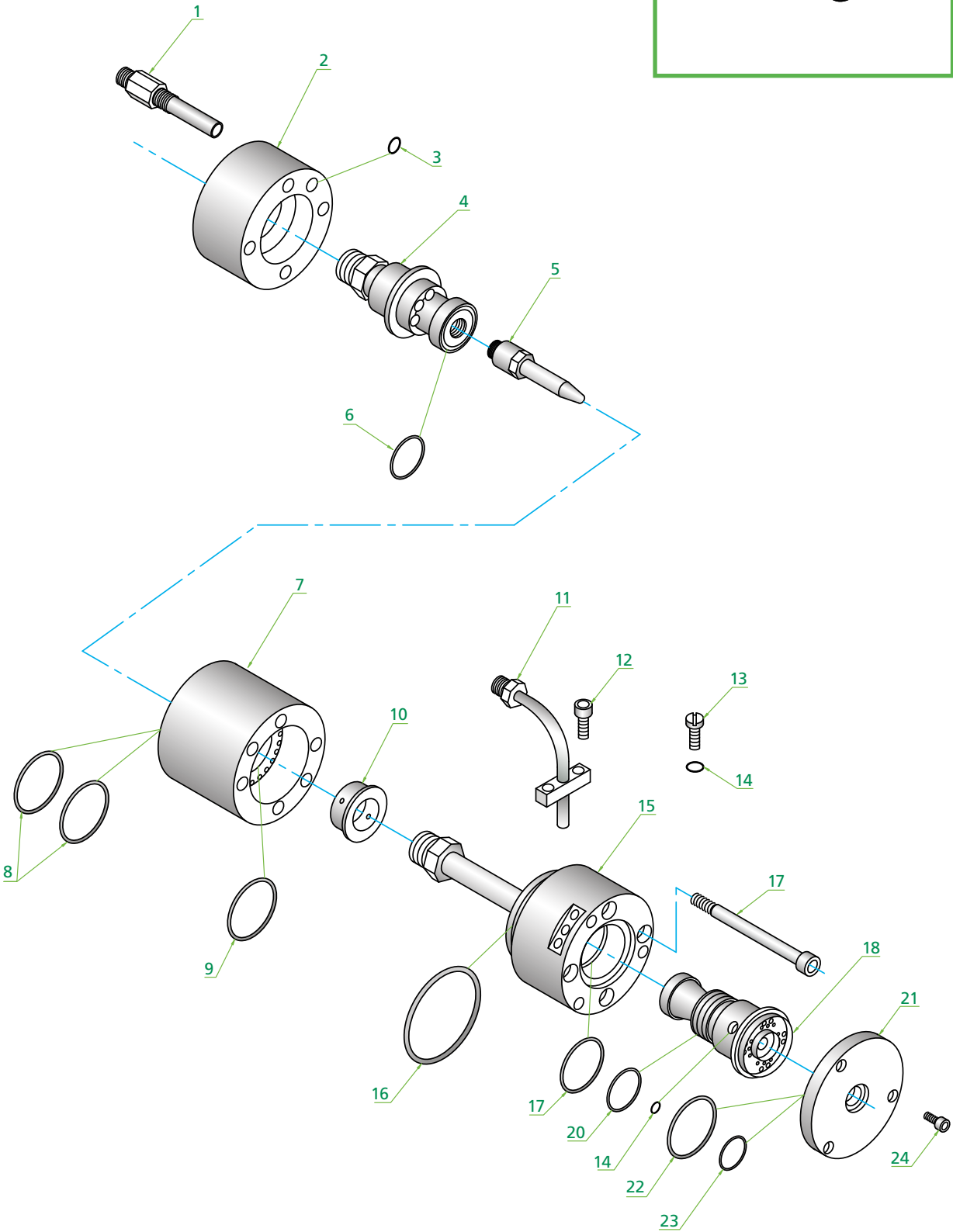
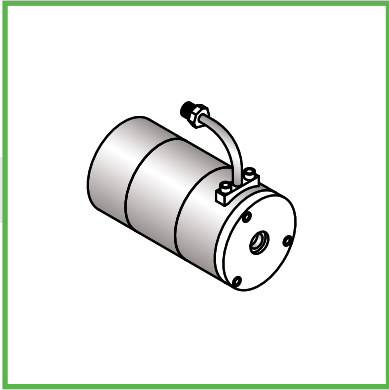
SINGLE CLAMP WITH AIR JET



381.114

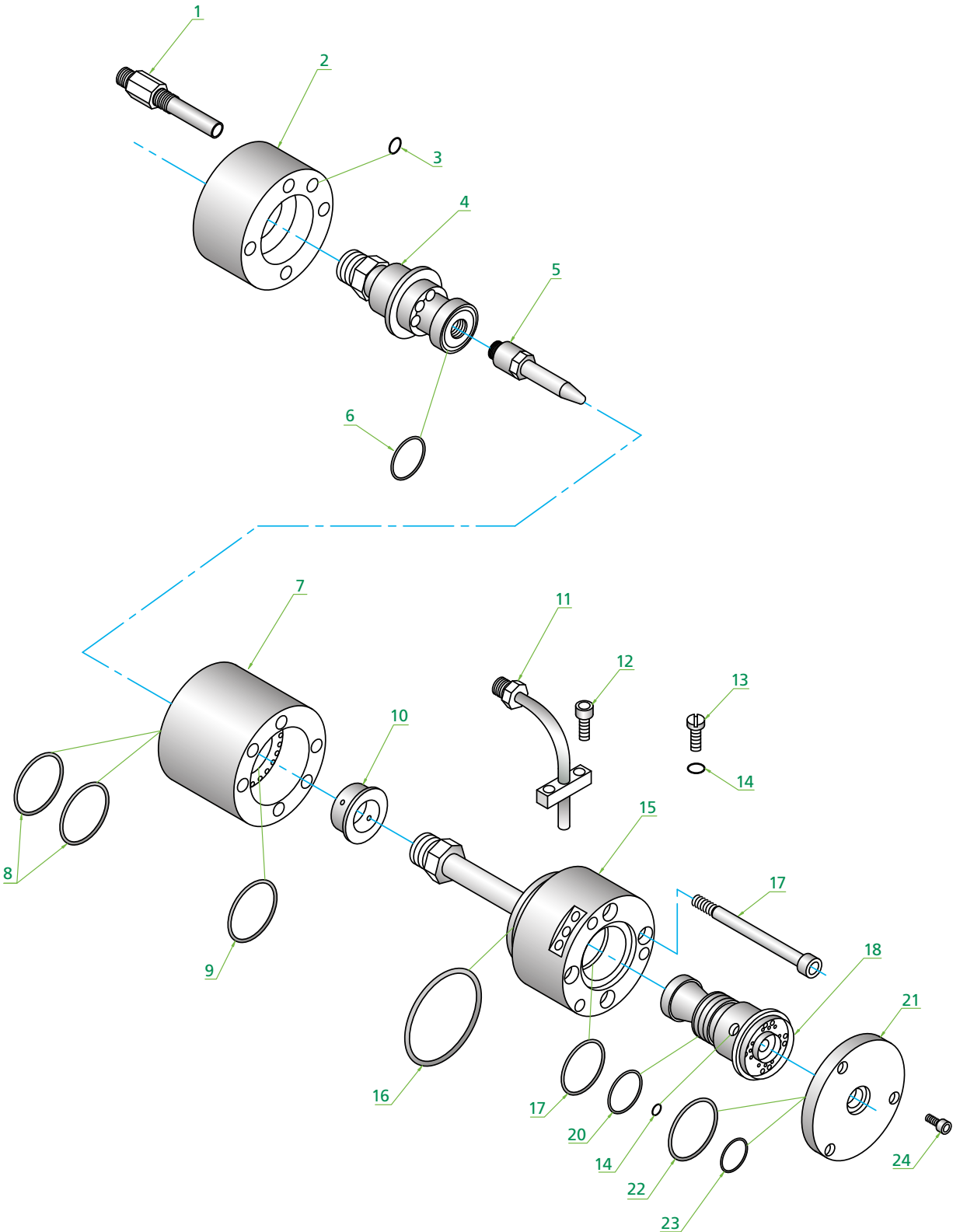
POWDER PORT ASSEMBLIES - Type 2			
Pos.	FST p/n	Product Description	OEM / Remark
#1	381.010-02	#1 Powder Port Assembly	9MB971
#2	381.020-02	#2 Powder Port Assembly	9MB972
2.1	381.001	Powder Port Stem	3M202 / 7M202 / 9MB202
2.2	381.022-02	#2 Mounting Block	9MB982
2.3	381.021	#2 Tip	3M210A / 7M210 / 9MB210
#3	381.030-02	#3 Powder Port Assembly	9MB973
3.1	381.001	Powder Port Stem	3M202 / 7M202 / 9MB202
3.2	381.032-02	#3 Mounting Block	9MB983
3.3	381.031	#3 Tip	3M203A / 7M203 / 9MB203
#4	381.040-02	#4 Powder Port Assembly	9MB974
4.1	381.001	Powder Port Stem	3M202 / 7M202 / 9MB202
4.2	381.042-02	#4 Mounting Block	9MB984
4.3	381.041	#4 Tip	3M215A / 7M215 / 9MB215
#5	381.050-02	#5 Powder Port Assembly	9MB975
5.1	381.001	Powder Port Stem	3M202 / 7M202 / 9MB202
5.2	381.052-02	#5 Mounting Block	9MB985
5.3	381.051	#5 Tip	3M246A / 7M246 / 9MB246
#6	381.060-02	#6 Powder Port Assembly	9MB976
6.1	381.001	Powder Port Stem	3M202 / 7M202 / 9MB202
6.2	381.062-02	#6 Mounting Block	9MB986
6.3	381.061	#6 Tip	3M286A / 7M286 / 9MB288
CLAMPS - Type 2			
	381.110	Dual powder port clamp (no air jet)	9MB961
	381.111	Quad powder port clamp (no air jet)	9MB964
	381.112	Dual powder port clamp (with air jet)	9MB953
	381.113	Quad powder port clamp (with air jet)	9MB951
	381.114	Single powder port clamp (with air jet)	9MB954

SG-100 Plasma Gun



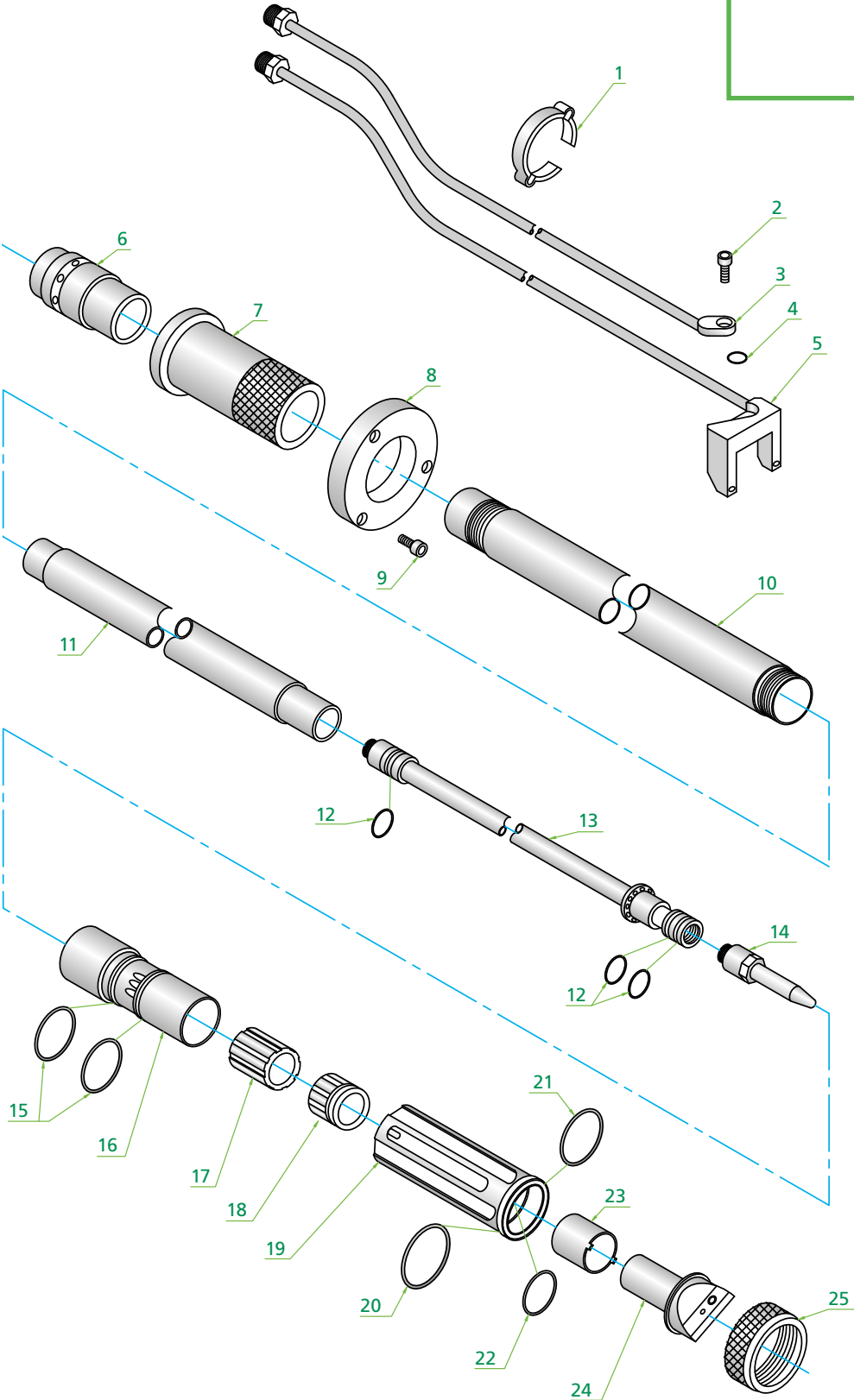
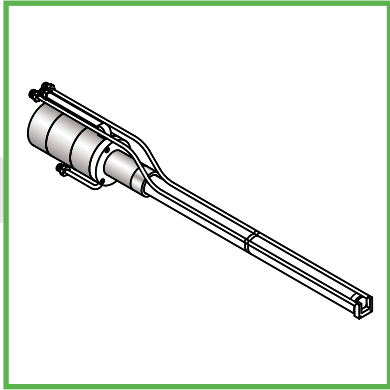
SG-100 PLASMA GUN			
Pos.	FST p/n	Product Description	OEM / Remark
	307.000	SG-100 Plasma Gun	–
1	307.039	Tube, arc gas port, assembly	1083-10
2	307.038	Gun housing, rear	1083B-205
3	307.046	O-Ring, rear housing	2-010S
4	307.028	Cathode holder	1083A-108, fine thread
5	307.026	Cathode, NVS	1083A-720, non-vortex stabilized
	307.025	Cathode, sub-sonic	3083-129
	307.001	Cathode, Mach 1	1083A-112
	307.027	Cathode, Mach 2	1083A-104
6	307.065	O-Ring, cathode holder	2-017S
7	307.002	Gun housing, middle, insulator	1083A-122N
8	307.066	O-Ring, middle housing	2-022S
9	307.042	O-Ring, middle housing	2-024S
10	307.029	Gas injector NVS, 4 Holes, all gases.	3083-112, non-vortex stabilized
	307.007	Gas Injector, Sub-sonic/Mach 1, CW vortex, 4 Holes, all gases	3083-113
	307.030	Gas injector, Mach 2, std (brown), CW vortex, 16 holes, all gases	3083-110
	307.032	Gas injector, Mach 2, CW vortex, 16 Holes, Ar-He only	1083A-110
	307.033	Gas injector, 8 hole, Laminar, put s at Hole(s), all gases	2083-112-8
	307.031	Gas injector, 8 hole, Laminar, put s at Hole(s), all gases	5003644
11	307.036	Tube, powder, straight	1083B-210
	307.035	Tube, powder, 90 deg.	5004378
12	307.067	Screw, powder tube	7000611
13	307.040	Plug, powder port	1083A-107A
14	307.048	O-Ring, nozzle / powder port plug	2-006S
15	307.037	Gun housing, front	1083B-200
16	307.044	O-Ring, front housing	2-128S
17	307.068	Screw, insulator housing	7000435
18	307.013	Anode, forward injection, NVS	2083-730, 20° front, non-vortex stabilized
	307.023	Anode, forward injection, sub-sonic	3083-145, 10° front
	307.008	Anode, backward injection, sub-sonic	3083-165, 10° back
	307.021	Anode, straight injection, sub-sonic	3083-175, 90°
	307.022	Anode, Mach 1	2083-355
	307.014	Anode, Mach 1	2083-358
	307.005	Anode, backward injection, Mach 1	2083-155, 10° back
	307.017	Anode, Mach 2, forward injection	2083-100, 10° front

SG-100 Plasma Gun



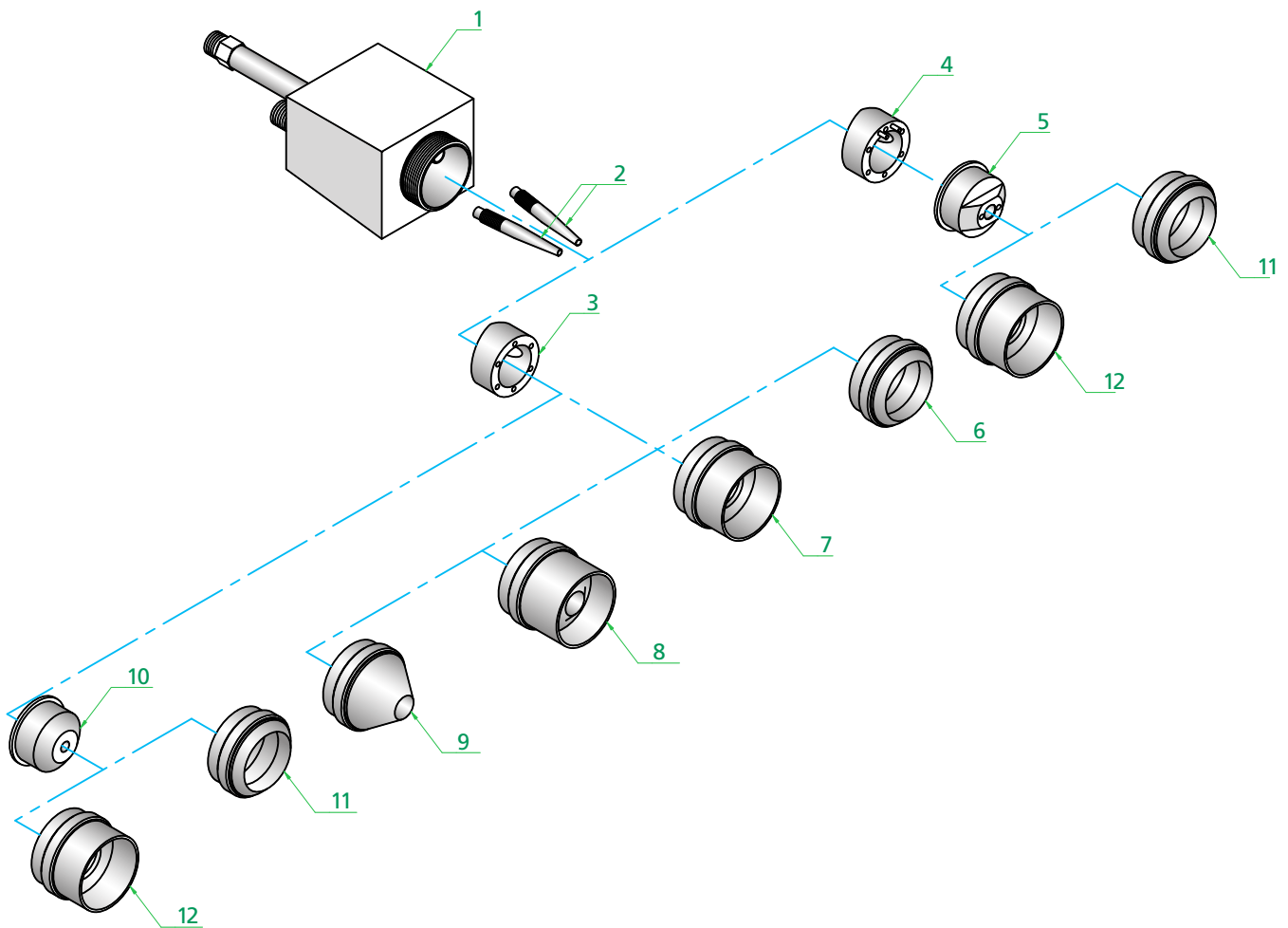
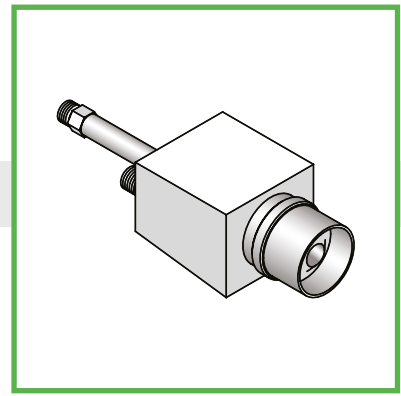
SG-100 PLASMA GUN			
Pos.	FST p/n	Product Description	OEM / Remark
	307.016	Anode, Mach 1, backward injection	2083-611, 10° back
	307.024	Anode, sub-sonic	2083-484
19	307.043	O-Ring, front housing	2-025S
20	307.047	O-Ring, nozzle	2-020S
21	307.034	Plate, front cover, standard	2083-123
22	307.049	O-Ring, front cover plate	2-026S
23	307.045	O-Ring, front cover plate	2-014S
24	307.069	Screw, front cover plate	7000422
OTHERS			
	307.041	O-Ring kit for SG-100	2083-601
	307.081	Anode hook	
	307.082	Cathode removal tool	
	307.083	Maintenance kit	
CABLES AND HOSES			
	307.054-01	Cable, water cooled, negative, 12 ft	987-7-12
	307.055-01	Cable, water cooled, positive, 12 ft	987-8-12
	307.058-01	Hose, gas powder, 12 ft	985-4-12
	307.070-01	Hose, gas, 12 ft	985-2-12
	307.537	Kit fittings SG100 to Metco	

2086 SG-100 Plasma Gun Extension



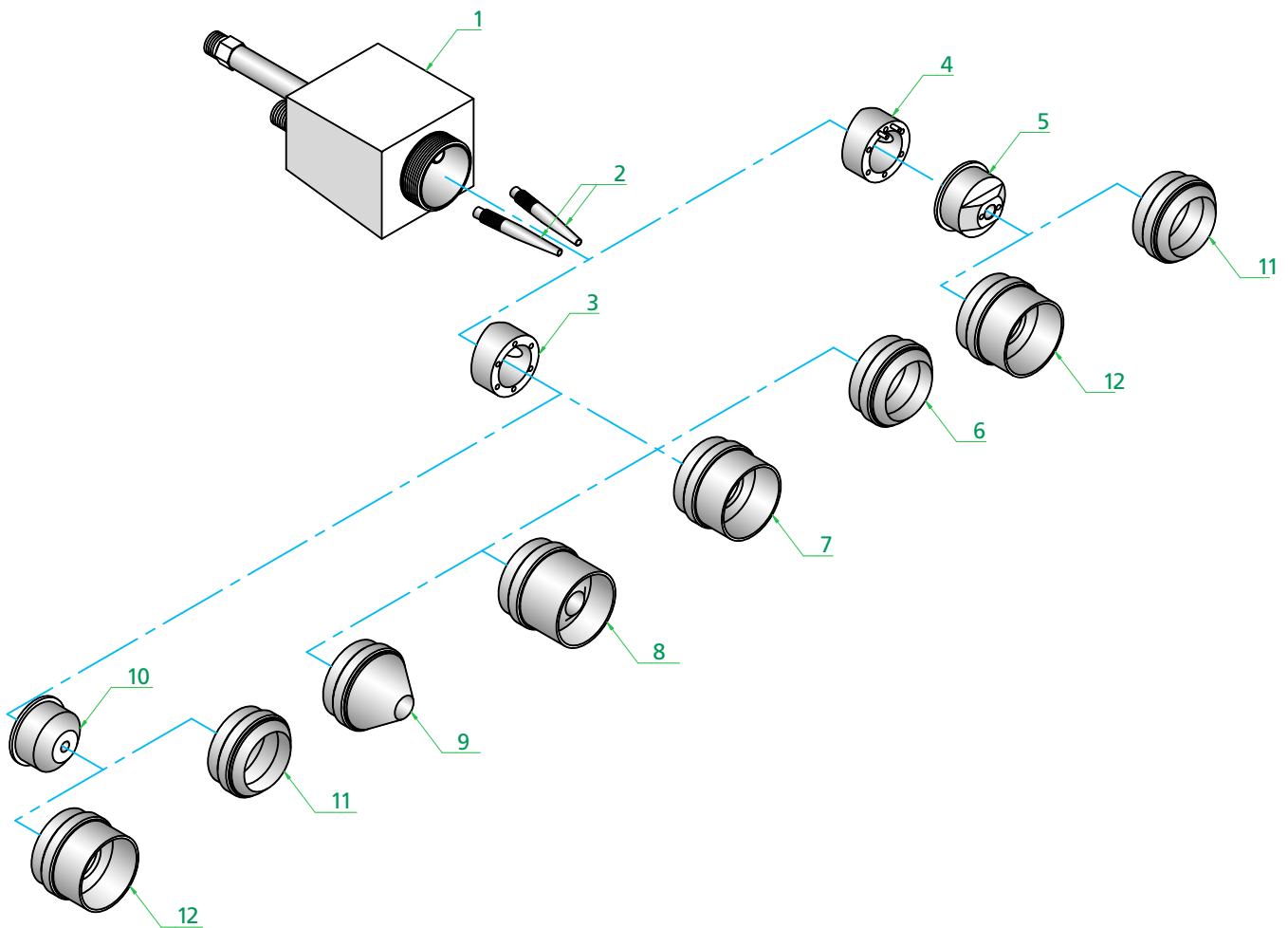
2086 SG-100 PLASMA GUN EXTENSION			
Pos.	FST p/n	Product Description	OEM / Remark
	307.200-01	2086 SG-100 extension, 12"	–
	307.200-02	2086 SG-100 extension, 24"	–
	307.201-01	SG-100 with 12" 2086 extension	–
	307.201-02	SG-100 with 24" 2086 extension	–
1	307.202	Tube clips	2084-95
2	307.223	Screw	–
3	307.203-01	Powder tube assembly, 12"	2084A-83-12
	307.203-02	Powder tube assembly, 24"	2084A-83-24
4	307.048	O-Ring, 006S	2-006S
5	307.204-01	Tube, air cap assembly, 12"	2084A-85-12
	307.204-02	Tube, air cap assembly, 24"	2084A-85-24
6	307.205	Insulator, rear	2084A-70
7	307.206-01	Collar, locking	2084-82
8	307.207	Plate, front	2084-81
9	307.224	Screw	–
10	307.208-01	Tube, outside, 12"	2084A-74-12
	307.208-02	Tube, outside, 24"	2084A-74-24
11	307.209-01	Tube, divider, 12"	2084A-75-12
	307.209-02	Tube, divider, 24"	2084A-75-24
12	307.210	O-Ring, 013S	2-013S
13	307.211-01	Cathode holder extension, 12"	2084A-76-12
	307.211-02	Cathode holder extension, 24"	2084A-76-24
14	307.025	Cathode, sub-sonic	3083-129, for SG-100/2086
15	307.212	O-Ring, 019S	2-019S
16	307.213	Gun housing, middle	2084B-100
17	307.214	Gas distributor	2084B-102
18	307.215	Gas injector	2084B-103
19	307.216	Water divider, outer	2084B-101
20	307.066	O-Ring, 022S	2-022S
21	307.217	O-Ring, 021S	2-021S
22	307.065	O-Ring, 017S	2-017S
23	307.218	Tube divider	2084-77
24	307.219-01	Anode, 45 deg.	2084-F45
	307.219-02	Anode, 60 deg.	2084-F60
25	307.220	Ring, locking, anode	2084-80
OTHERS			
	307.221	O-Ring kit for 2086 plasma gun	–

AWS-400 Arc Wire Gun



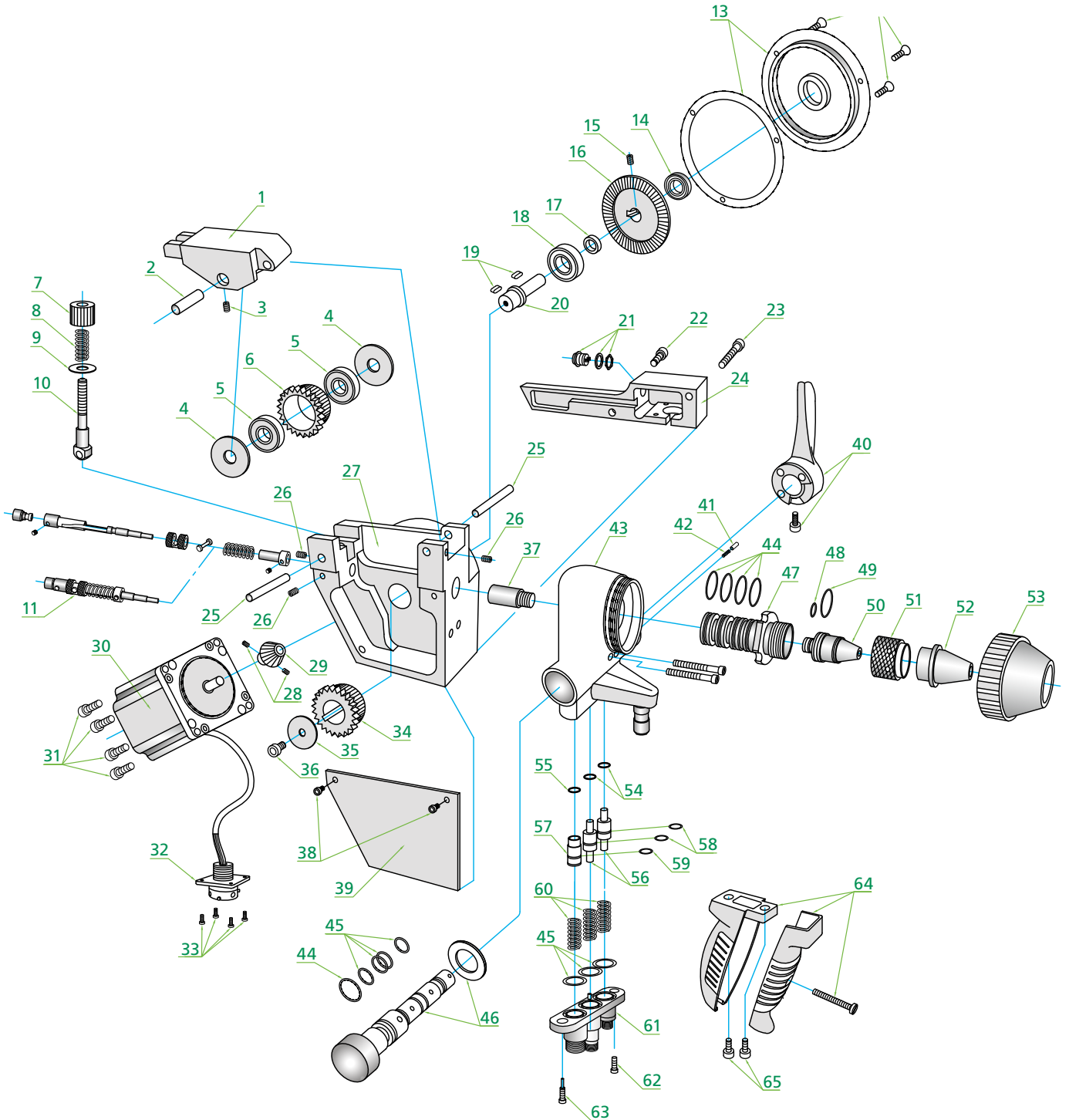
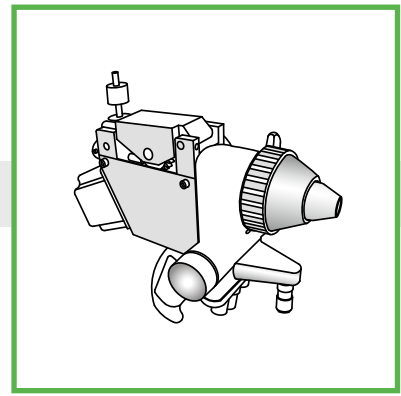
AWS-400 Arc Wire Gun			
Pos.	FST p/n	Product Description	OEM / Remark
	148.032	Gunhead assembly standard	861000081-FAAA (only for 1,6-2,0-2,3 mm)
1	148.031	Gunhead, No Hardware 14-11GA	861000081-F (only for 1.6-2.0-2.3 mm)
2	148.026	Guide, wire, 14GA, 1,6 mm	840000308
	148.014	Guide, wire, 14GA, 1,6 mm, 85/15	840000282
	148.027	Guide, wire, 2 mm	840000375
	148.015	Guide, wire, 2 mm, 85/15	840000376
	148.025	Guide, wire, 11GA, 2,3 mm	840000243
	148.065	Guide, wire, 11GA, 2,3 mm, 85/15	840000377
3	148.040	Retainer, wire guide, standard	845000312
4	148.041	Retainer, wire guide, with pins	840000480
5	148.003	Air Cap, fan spray, 14GA, 1.6mm	840000381
5	148.004	Air Cap, fan spray 11GA, 2.3 mm	840000340
6	148.011	Air Cap, Open without Shield	840000953
7	148.009	Air Cap, Open with Shield	840000954
8	148.002	Air Cap, high velocity w/arc shield	845004734
9	148.001	Air Cap, high velocity w/out Arc shield	840000222
10	148.005	Air Cap, fan spray 11GA, 2.3 mm, corrosion	840000941
11	148.007	Lock ring, fan spray ring w/o shield	840000380
12	148.006	Lock ring, fan spray w/arc shield	840000379
WIRE FEEDER			
	148.018	Drive roll, 14 Gauge, U-groove, 1.6 mm	881000005
	148.012	Drive roll, 2 mm, U-groove	881000167
	148.013	Drive roll, 2 mm, VK-groove	881000297
	148.016	Drive roll, 11GA (2.3mm), U-groove	885000346
	148.017	Drive roll, 11GA (2.3mm), VK-groove	881000173
	148.029	Intermediate wire guide	845000352
CABLES & HOSES			
	148.008-03	Cable, coaxial, length 10 ft.	861000003-10
	148.010	Cable, Ctrl, Trigger, 10 ft.	861000005-10
	148.033-02	Hose, atomizing, length 10 ft.	861000004-10
	148.035	Liner, nylon, black, 1/8" ID	880000008
	148.067-01	Cable, POWER, 2/0, negative 10 ft.	861000007-10
	148.068-01	Cable, POWER, 2/0, positive 10 ft.	861000006-10
	148.069-01	Cable, control, power supply, 10 ft.	861000008-10
	148.057	Switch box assembly, 20 ft.	861000139-20
		Other lengths on request	

AWS-400 Arc Wire Gun



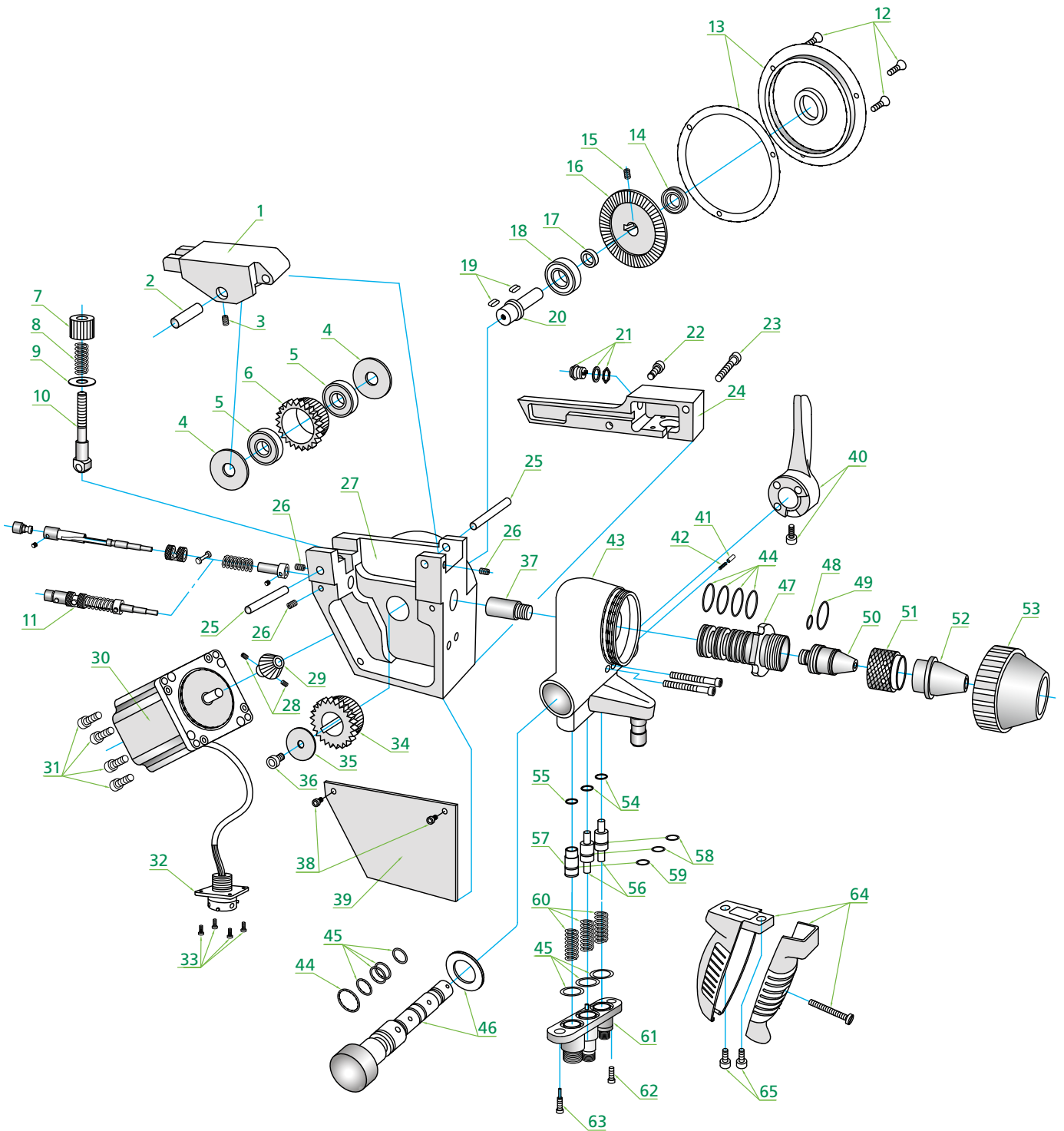
AWS-400 Arc Wire Gun			
Pos.	FST p/n	Product Description	OEM / Remark
OTHERS			
	148.022	Guide, wire, coaxial cable, 14-11 GA (1,6-2,3 mm)	845001166
	148.023	Guide, wire, coaxial cable, 1/8" (3,2 mm)	840000524
	148.048	O-ring, B, 112, on coaxial cable	886000137
	148.049	Circuit breaker, 1 Amp	881000093
	148.050	Circuit breaker, 2 Amp	881000094
	148.051	Circuit breaker, 5 Amp	881000095
	148.052	Fuse, cartridge 5 Amp	156-065
	148.073	Fuse 20 Amp	886000793, -3AB
	148.070	Kit, Cable Conn, Remote RC2	861000241
	148.071	Kit, Cable Conn, Trigger RC3	incl. 148.334, 148.335, 209.158
	148.072	Air supply connection, assembly	
	148.100-01	AWS-400 extension 6" str.	861000051-6
	148.100-02	AWS-400 extension 12" 90°	861000098-12
	148.100-03	AWS-400 extension 24" 90°	861000098-24
	148.100-04	AWS-400 extension 36" 90°	861000098-36

FWS-20 Flame Wire Gun



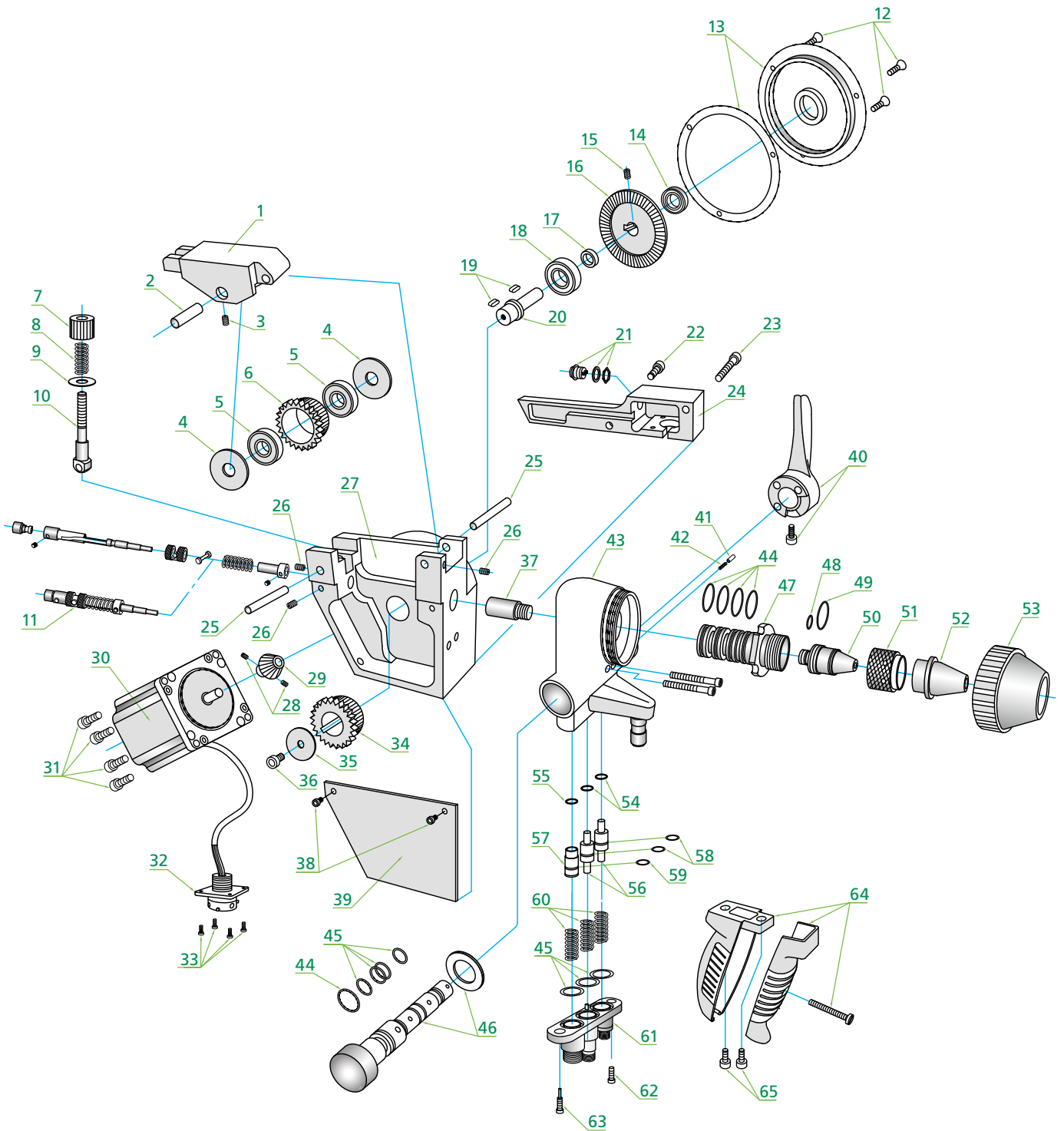
FWS-20 FLAME WIRE GUN			
Pos.	FST p/n	Product Description	OEM / Remark
1	320.003	Wire feed roll cover	–
2	320.039	Wire drive roll shaft	–
3	320.025	Set screw, wire drive roll shaft	–
4	320.038	Washer (teflon)	Included in 320.046-01, -02
5	320.044	Wire drive roll bearing	Included in 320.046-01, -02
6	320.012-01	Wire feed roll without bearing, 1/8"	Included in 320.046-01
	320.012-02	Wire feed roll without bearing 3/16"	Included in 320.046-02
7	320.007	Grip regulator	Included in 320.126
8	320.005	Grip regulator spring	Included in 320.126
9	320.034	Washer	Included in 320.126
10	320.004	Grip regulator pin	Included in 320.126
11	320.048-01	Back wire kit for 1/8"	–
	320.048-02	Back wire kit for 3/16"	–
12	320.037	Screw	–
13	320.016	Gear cover plate	–
14	320.043	Main shaft bearing	–
15	320.035	Set screw, gear	Included in 320.047
16	320.018	Gear	Included in 320.047
17	320.020	Washer	Included in 320.047
18	320.042	Main shaft central bearing	–
19	320.036	Main shaft key	Included in 320.047
20	320.017	Main drive shaft	Included in 320.047
21	320.023	Push button	Included in 320.051
22	320.031	Bolt, connector support, back	–
23	320.032	Bolt, connector support, front	–
24	320.015	Connector support	Included in 320.051
25	320.033	Shaft	–
26	320.029	Set screw, shaft	–
27	320.014	Gun body	–
28	320.041	Set screw, driving gear	Included in 320.047
29	320.019	Driving gear	Included in 320.047
30	320.013	Electrical wire drive motor	Included in 320.051
31	320.024	Allen Screw, E-motor	–
32	320.022	Connector	Included in 320.051, including 320.030
33	320.030	Connector mounting screw	Included in 320.051

FWS-20 Flame Wire Gun



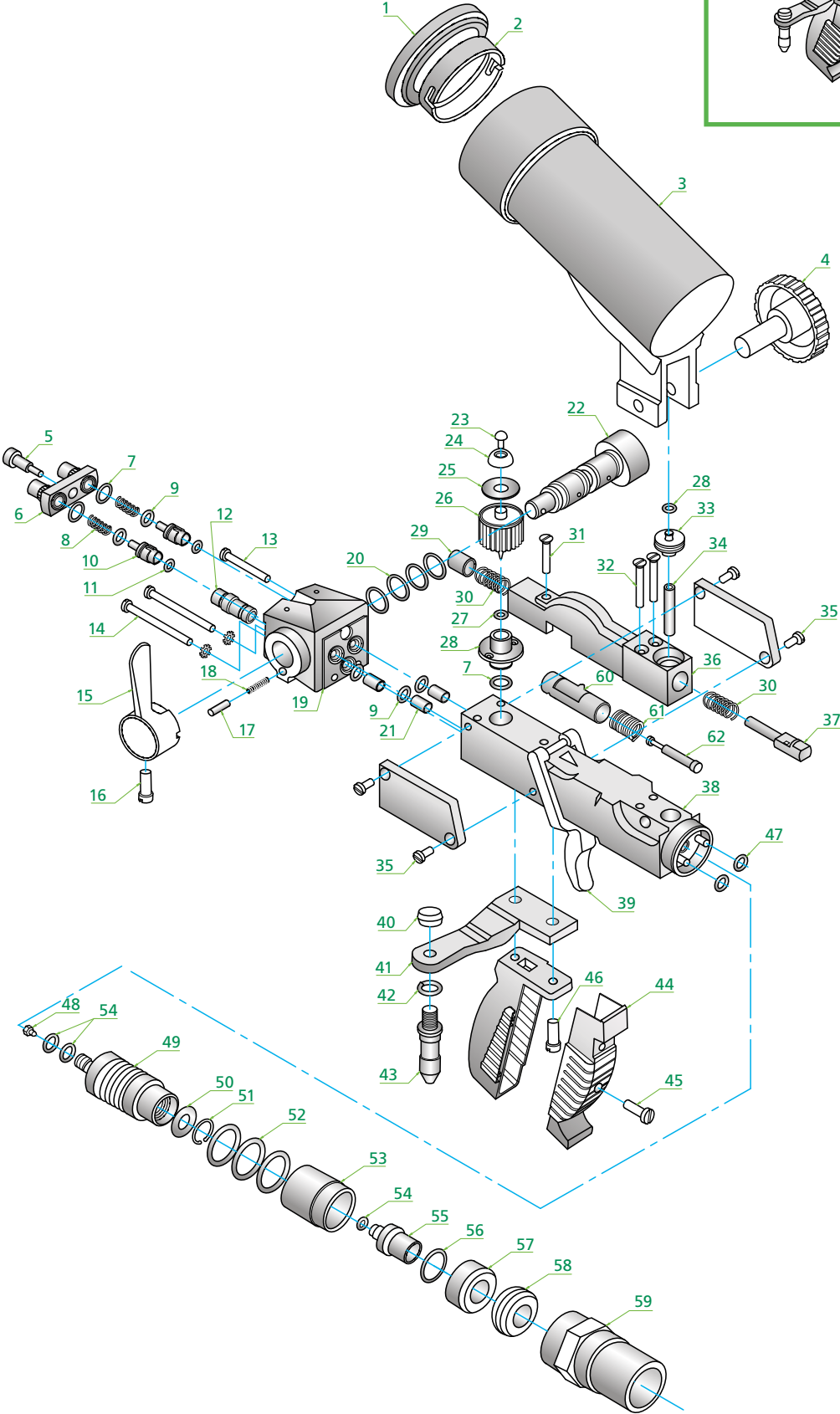
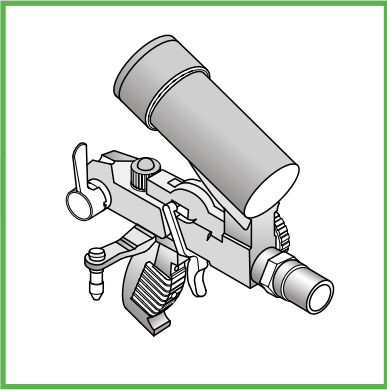
FWS-20 FLAME WIRE GUN					
Pos.	FST p/n	Product Description	OEM / Remark		
34	320.008-01	Wire drive roll (driving) for 1/8"	Included in 320.046-01		
	320.008-02	Wire drive roll (driving) for 3/16"	Included in 320.046-02		
35	320.006	Washer main shaft	Included in 320.046-01, -02		
36	320.040	Screw, main shaft	Included in 320.046-01, -02		
37	320.011-01	Front wire guide 1/8"	-		
	320.011-02	Front wire guide for 3/16"	-		
38	320.026	Bolt, cover plate	-		
39	320.021	Cover plate (wire drive roll side)	-		
40	320.097	Valve handle assembly	12E 45	14E45	5K512
41	320.109	Detent pin	12E 173	14E173	5K309
42	320.110	Spring (detent pin)	12E 174	14E174	5K317
43	320.088	Gas head sub-assembly	12E 15	14E15	
44	320.087	O-Ring (valve core, siphon plug)	12E 14	14E14	5K14
45	320.096	O-Ring	12E 44	14E44	5K195
46	320.095	Valve core	12E 43	14E43	
47	320.055	Siphon plug (Acetylene-large)	12E 2-5	14E2-5	5K2-5
	320.056	Siphon plug (Propane/MPS-large)	12E 2-6	14E2-6	5K2-6
	320.057	Siphon plug (Acetylene-small)	12E 2-7	14E2-7	5K2-7
48	320.100	O-Ring, nozzle small	12E 109	14E109	5K509
49	320.099	O-Ring, nozzle large	12E 108	14E108	5K508
50	320.071	Nozzle (non-load) (Acetylene) (1/8)	12E 7-26	14E7-26	5K7-26
	320.072	Nozzle (non-load) (Propane) (1/8)	12E 7-27	14E7-27	5K7-27
	320.073	Nozzle (Acetylene) (15 gauge)	12E 7-29	14E7-29	5K7-29
	320.074	Nozzle (non-load) (Acetylene) (15 gauge)	12E 7-30	14E7-30	5K7-30
	320.075	Nozzle (Propane) (15 gauge)	12E 7-31	14E7-31	5K7-31
	320.076	Nozzle (non-load) (Propane) (15 gauge)	12E 7-32	14E7-32	5K7-32
	320.077	Nozzle (Acetylene) (11 gauge)	12E 7-35	14E7-35	5K7-35
	320.078	Nozzle (non-load) (Acetylene) (11 gauge)	12E 7-36	14E7-36	5K7-36
	320.079	Nozzle (Propane) (11 gauge)	12E 7-37	14E7-37	5K7-37
	320.080	Nozzle (non-load) (Propane) (11 gauge)	12E 7-38	14E7-38	5K7-38
	320.081	Nozzle (Acetylene) (3/16)	12E 7-42	14E7-42	5K7-42
	320.082	Nozzle (Propane) (3/16)	12E 7-43	14E7-43	5K7-43
	320.083	Nozzle (non-load) (Acetylene) (3/16)	12E 7-45	14E7-45	5K7-45
	320.084	Nozzle (non-load) (Propane) (3/16)	12E 7-46	14E-46	5K7-46
	320.085	Nozzle (Acetylene) (1/8)	12E 7-48	14E7-48	5K7-48
	320.086	Nozzle (Propane) (1/8)	12E 7-49	14E7-49	5K7-49
51	320.069	Wire nozzle nut	12E 6	14E6	5K606
52	320.058	"AH" Air cap	12E 3-AH	3K3-AH	5K3-AH

FWS-20 Flame Wire Gun



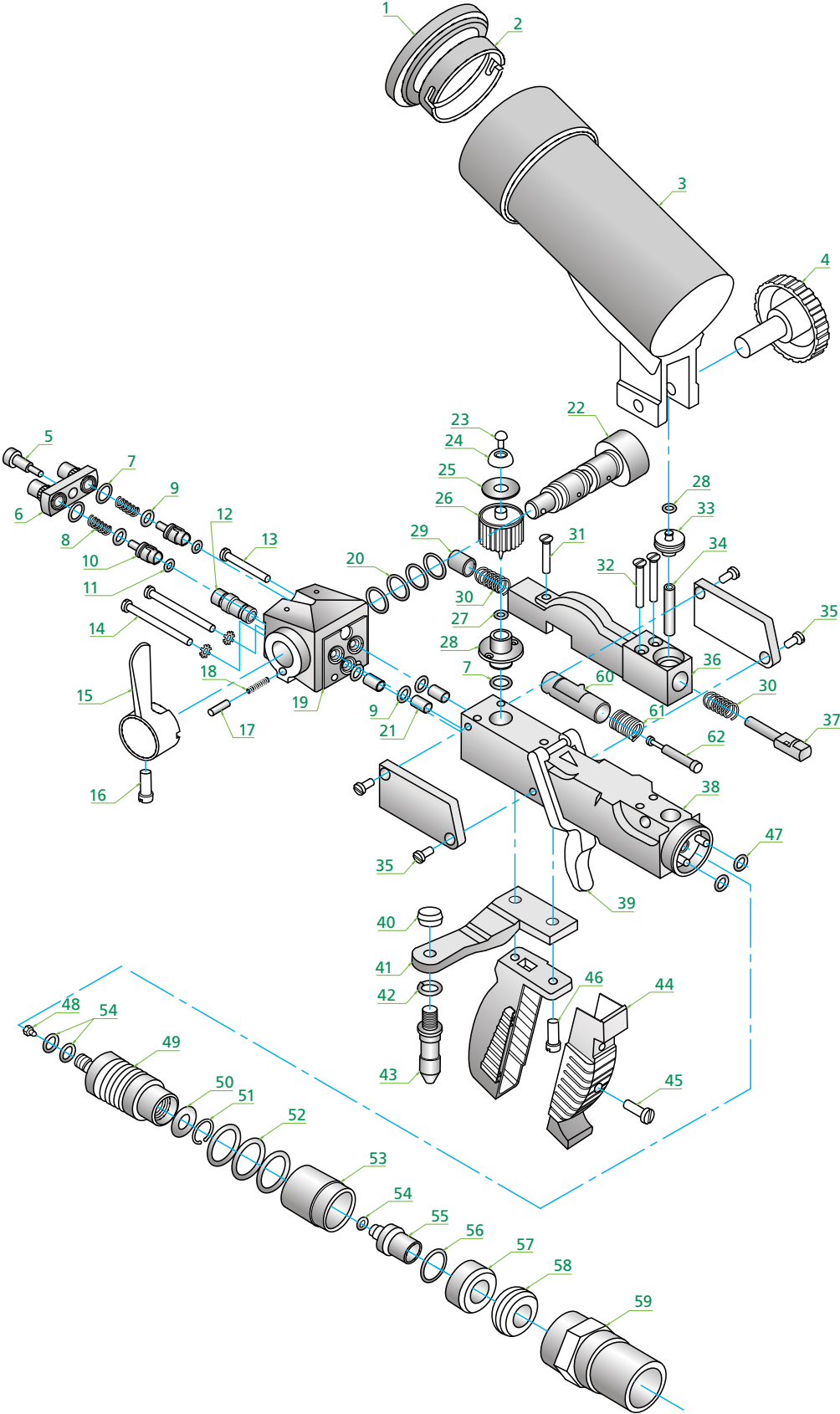
FWS-20 FLAME WIRE GUN					
Pos.	FST p/n	Product Description	OEM / Remark		
	320.059	"C" Air cap	12E 3-C	Y3-C	5K3-C
	320.060	"CH" Air cap	12E 3-CH	3K3-CH	5K3-CH
	320.061	"EA" Air cap	12E 3-EA	3K3-EA	5K3-EA
	320.062	"EC" Air cap	12E 3-EC	8E3-EC	5K3-EC
	320.063	"J" Air cap	12E 3-J	4E3-J	5K3-J
53	320.053	Air cap body	12E 1	14E1	5K701
54	320.107	Plunger seal O-Ring (fuel gas and oxygen)	12E 170	14E170	
55	320.106	Plunger seal O-Ring (air)	12E 169	14E169	
56	320.104	Plunger (fuel gas and oxygen)	12E 165	14E165	5K303
57	320.120	Plunger (air)	12E 166	14E166	5K304
58	320.105	O-Ring, plunger (fuel gas and oxygen)	12E 168	14E168	
59	320.114	O-Ring, plunger (air)	12E 186	14E186	5K226
60	320.108	Plunger spring	12E 171	14E171	5K307
61	320.111	Hose connection block	12E 176	14E176	
62	320.103	Screw, mounting, hose connection block	12E 157	14E157	
63	320.112	Screw, valve core stop	12E 179	14E179	
64	320.002	Gun handle	12E 27	14E27	
65	320.027	Bolt, gun handle	-		
OTHERS					
	320.001	Gas head assembly	12E 5, 1/8" Acetylene		
	320.065	Gas head assy (3/16) (Acetylene)	12E 5-1		
	320.066	Gas head assy (11 Gage)	12E 5-3		
	320.067	Gas head assy (3/16) (Propane)	12E 5-1P		
	320.068	Gas head assy (1/8) (Propane)	-		
	320.046-01	Drive roll kit for 1/8"	Including 320.006, 008-01, 012-01, 038, 040, 044		
	320.046-02	Drive roll kit for 3/16"	Including 320.006, 008-02, 012-02, 038, 040, 044		
	320.047	Transmission kit	Including 320.017, 018, 019, 020, 035, 036, 041		
	320.051	Motor & push button assembly	Including 320.013, 015, 022, 023, 030		
	320.126	Wire feed pressure regulator assembly	incl. 320.004, 005, 007, 034		
CABLES AND HOSES					
	120.200-01	FWS-20 Gun hoses Ace/Oxy/Air	Length 6 meter		
	120.200-02	FWS-20 Gun hoses Ace/Oxy/Air	Length 10 meter		
	120.201-01	FWS-20 Electrical gun control cable	Length 8 meter		
	320.160	Set of hoses, with quick connector	-		

5P-II Flame Powder Gun



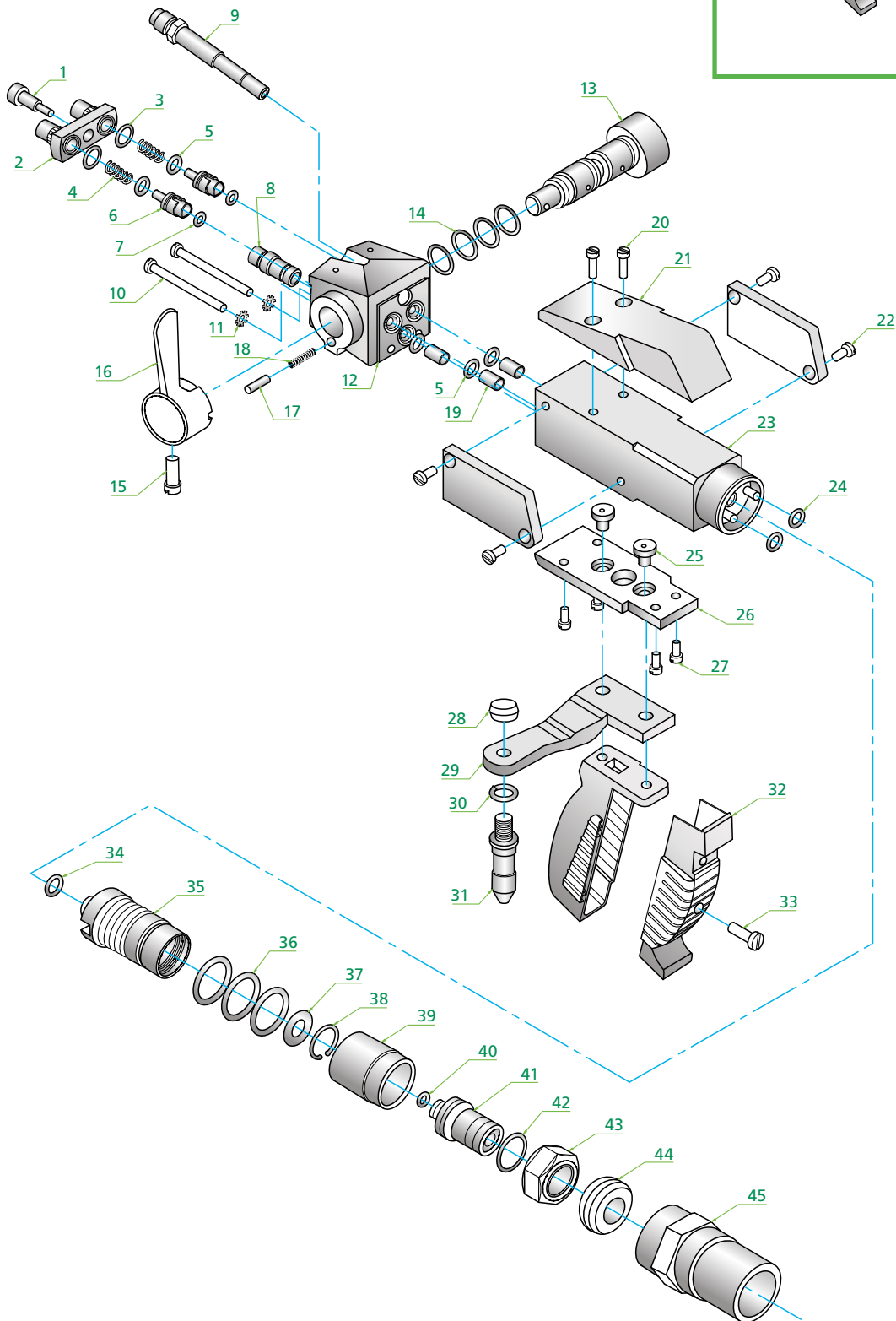
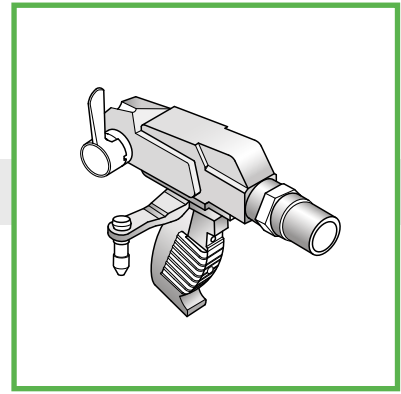
5P-II FLAME POWDER GUN			
Pos.	FST p/n	Product Description	OEM / Remark
	331.000	5P-II Flame powder spray gun complete	
	331.000-01	5P-II Flame powder spray gun	incl. vibrator and transformer
	331.100	Air jet	2PSA
1	331.030	Canister cover	5P 590
2	331.031	U-Cup	5P 91
3	331.010-01	Canister	5P 581
4	331.032	Canister clamp handle	5P 66
5	331.033	Connection block mounting screw	5P 199
6	331.018	Hose connection block	5P 197
7	331.034	Connection block O-Ring	5P 137
8	331.035	Plunger spring	5P 194
9	331.036	Plunger O-Ring	5P 80
10	331.037	Plunger	5P 192
11	331.028	Plunger seal O-Ring	5P 191, fuel gas and oxygen
12	331.038	Air hose connection	5P 98
13	331.039	Mounting screw, short	5P 102
14	331.040	Mounting screw, long	5P 103
15	331.041	Valve handle	5P 189
16	331.042	Valve handle screw	5P 68
17	331.043	Detent pin	5P 188
18	331.044	Detent pin spring	5P 196
19	331.045	Valve block	5P 186
20	331.027	Valve core O-Ring	5P 195
21	331.046	Gas connecting tube	5P 34
22	331.047	Valve core	5P 187
23	331.048	Knob set screw	5P 541
24	331.049	Retainer	5P 39
25	331.050	Dial plate	5P 38
26	331.051	Valve knob	5P 552
27	331.052	Knob stem O-Ring	5P 135
28	331.053	Flow control valve	5P 526
29	331.054	Detent pin	5P 36
30	331.055	Detent spring	5P 37
31	331.056	Bolt housing mounting screw, back	5P 49
32	331.057	Bolt housing mounting screw, front	5P 64
33	331.006	Metering Valve #11	5P-8-11
	331.058	Metering Valve #12	5P-8-12

5P-II Flame Powder Gun



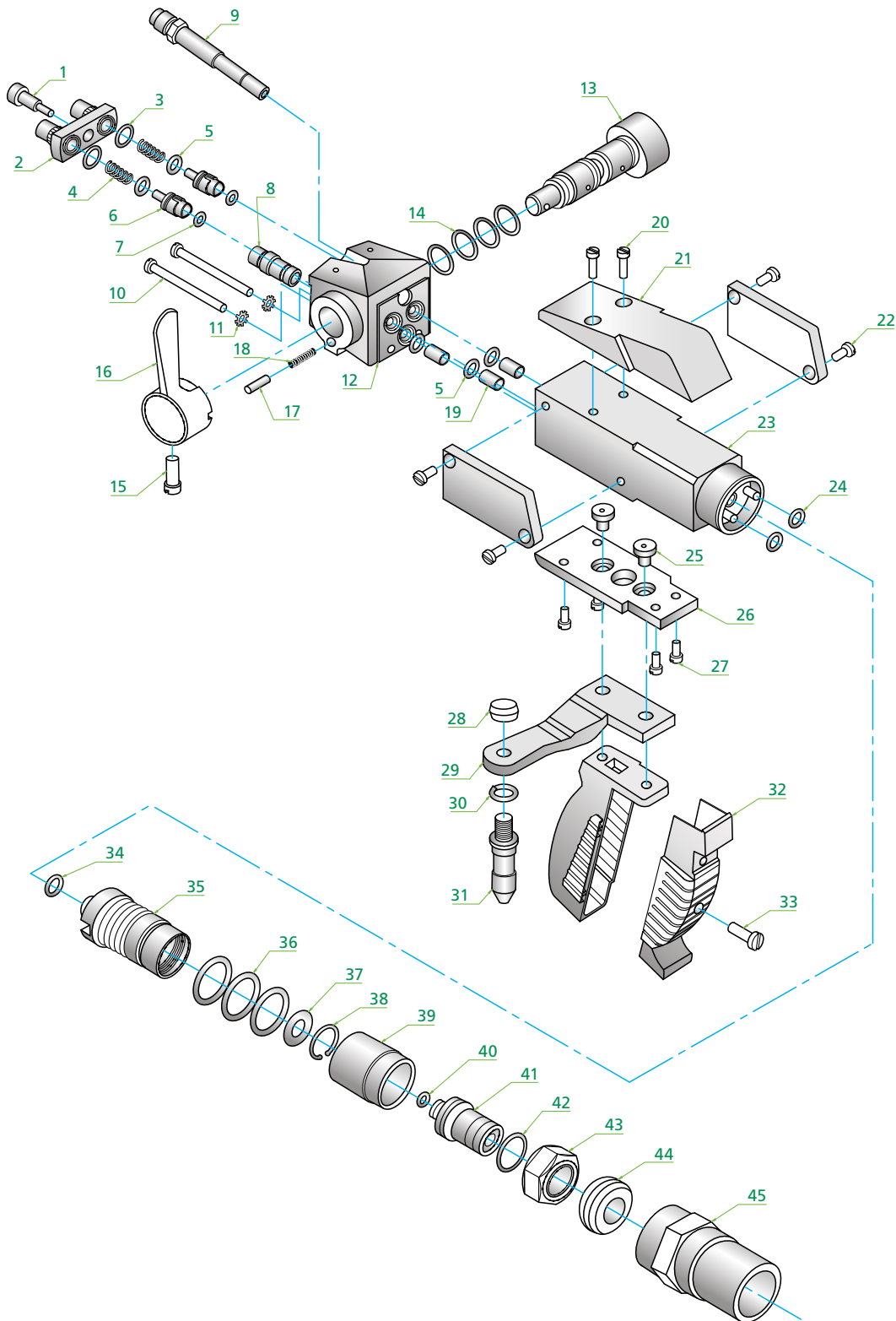
5P-II FLAME POWDER GUN			
Pos.	FST p/n	Product Description	OEM / Remark
	331.059	Metering Valve #15	5P-8-15M
	331.012	Vibrator unit complete, incl. transformer	5P 803
34	331.004	Valve tube	5P 141
35	331.061	Plate mounting screw	5P 62
36	331.062	Bolt housing	5P 46
37	331.063	Valve bolt	5P 40
38	331.064	Gun body assembly	5P 625
39	331.065	Trigger	5P 30
40	331.066	Stud nut	5P 123
41	331.067	Tool post bracket	5P 121
42	331.068	Lockwasher	5P 124
43	331.069	Mounting stud	5P 122
44	331.070	Handle	5P 627
45	331.071	Handle assembly screw	5P 28
46	331.072	Handle mounting screw	5P 67
47	331.021	Gas tube O-Ring	5P 184
48	331.073	Aspirator jet screw	5P 1
49	331.007	Standard Spray Siphon plug	5P 585
50	331.015	Baffle	5P 266
51	331.016	Baffle retaining ring	5P 167
52	331.022	Siphon plug O-Ring	5P 516
53	331.074	Sleeve	5P 519
54	331.023	Aspirator O-Ring	5P 515
55	331.075	"B" nozzle	5P 7B-B
	331.029	"D" nozzle	5P 7B-D
	331.017	"F" Nozzle	5P 7B-F
	331.003	"G" Nozzle	5P 7B-G
	331.076	"N" Nozzle	5P 7B-N
	331.077	"K" Nozzle	5P 7B-K
	331.078	"M" nozzle	5P 7B-M
56	331.085	O-Ring	5P 108
57	331.086	Nozzle nut	5P 575
58	331.087	Air cap	5P 576
	331.088	Air bleeder cap	5P 577
59	331.081	Air cap body	5P 501
60	331.082	Ratchet	5P 53
61	331.083	Override spring	5P 51
62	331.084	Override bar	5P 50

6P-II Flame Powder Gun



6P-II FLAME POWDER GUN			
Pos.	FST p/n	Product Description	OEM / Remark
	330.000	6P-II Flame powder spray gun complete	
1	330.041	Screw, connection block mounting	6P 199
2	330.040	Hose connection block	6P 197
3	330.030	O-Ring, connection block	6P 137
4	330.037	Spring, plunger	6P 194
5	330.019	O-Ring, plunger	6P 80
6	330.036	Plunger	6P 192
7	330.035	O-Ring, plunger seal	6P 191
8	330.025	Air hose connection	6P 98
9	330.026	Powder feed tube	6P 101
10	330.016	Screw, mounting	6P 77
11	330.017	Lock washer	6P 78
12	330.024	Gas valve block	6P 92
13	330.032	Valve core assembly	6P 187
14	330.038	O-Ring, valve core	6P 195
15	330.014	Screw, valve handle mounting	6P 68
16	330.034	Valve handle assembly	6P 189
17	330.033	Detent pin	6P 188
18	330.039	Spring, detent pin	6P 196
19	330.015	Gas connection tube	6P 72
20	330.013	Screw, top plate mounting	6P 67
21	330.031	Top plate	6P 169
22	330.011	Screw, plate mounting	6P 29
23	330.012	Gun body assembly	6P 40
24	330.001	O-Ring, connection tube	6P 24
25	330.049	Screw, handle assembly mounting	6P 287
26	330.047	Handle mounting plate	6P 285
27	330.023	Screw, mounting plate	6P 88
28	330.074	Nut	6P 283
29	330.045	Tool post bracket	6P 281
30	330.046	Lock washer, mounting stud	6P 284
31	330.073	Mounting stud	6P 282
32	331.070	Handle	5P 627
33	330.050	Screw, handle assembly	6P 288
34	330.018	O-Ring, siphon plug, small	6P 79
35	330.058	Siphon plug, 2 jet	6P 600

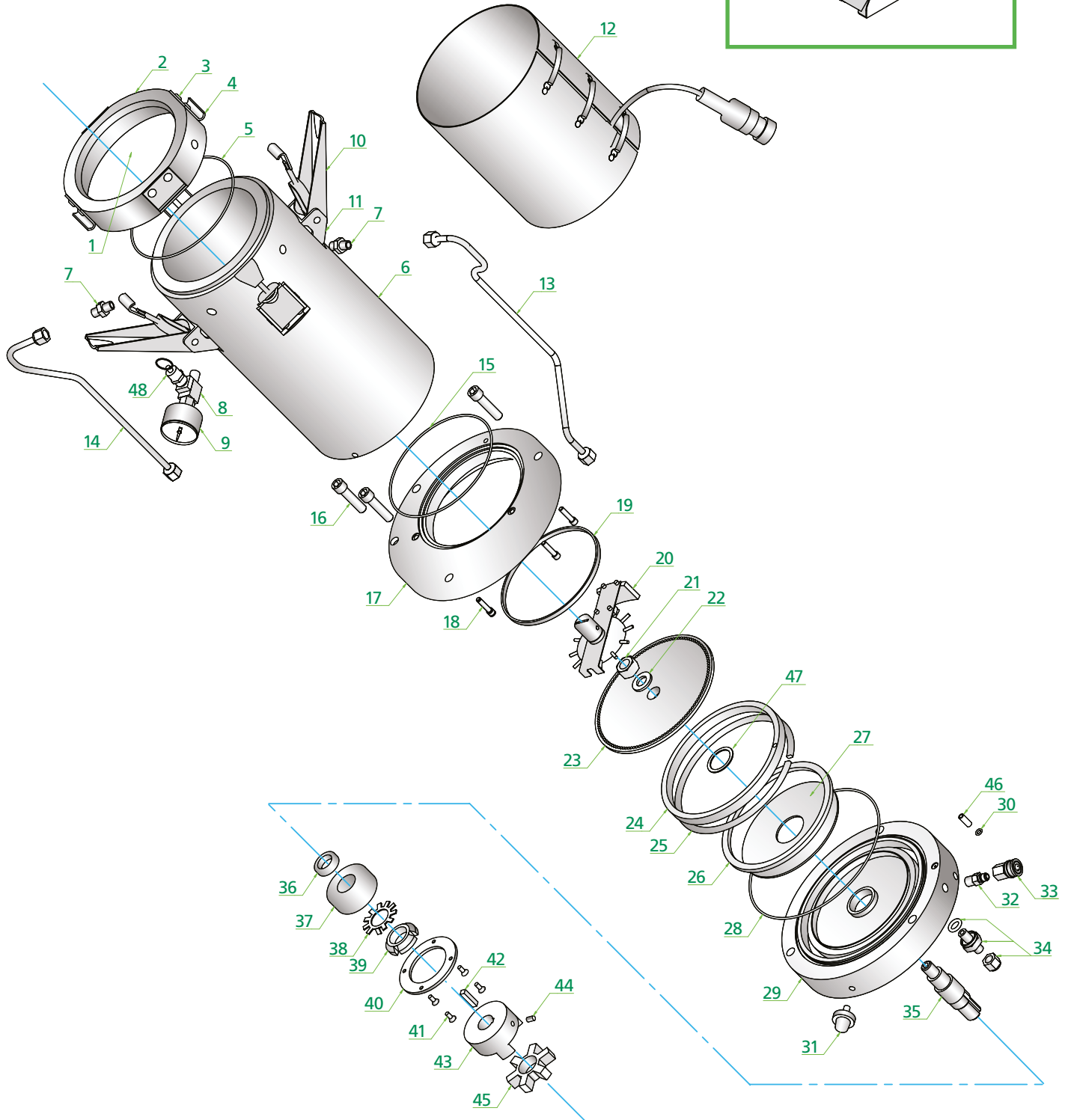
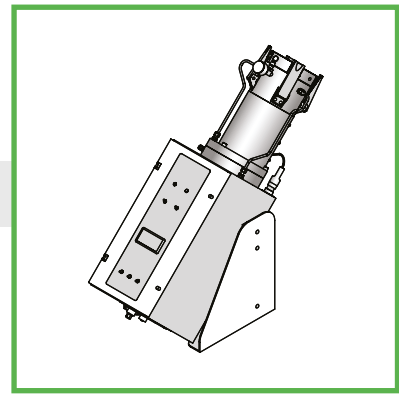
6P-II Flame Powder Gun



6P-II FLAME POWDER GUN			
Pos.	FST p/n	Product Description	OEM / Remark
	330.060	Siphon plug, 4 jet	6P 605
36	330.020	O-Ring, siphon plug, large	6P 81
37	330.055	Baffle, brass	6P 518
38	330.022	Baffle retaining ring	6P 84
39	330.021	Sleeve	6P 82
40	330.042	O-Ring, nozzle, small	6P 217
41	330.004	"D" nozzle	6P 7C-D
	330.005	"F" nozzle	6P 7C-F
	330.006	"K" nozzle	6P 7C-K
	330.007	"M" nozzle	6P 7C-M
	330.008	"MH" nozzle	6P 7C-MH
42	330.043	O-Ring, nozzle, large	6P 218
43	330.057	Nozzle nut	6P 525
44	330.002	Air cap, gun cooling	6P 4
	330.009	Air cap, pinch-cool	6P 3
45	330.028	Air cap body	6P 117
OTHERS			
	120.410	Dual Gas flow tubes	
	330.003	Gas valve assembly	6P 5
	330.044	O-Ring package, gas valve	6P 280, incl. 330.019, 030, 035, 038
	330.054	Control handle assembly	6P 510
	330.072	Siphon plug spare parts	6P 855, incl. 330.018, 020, 022, 055
	330.100	Gas/Air panel complete	

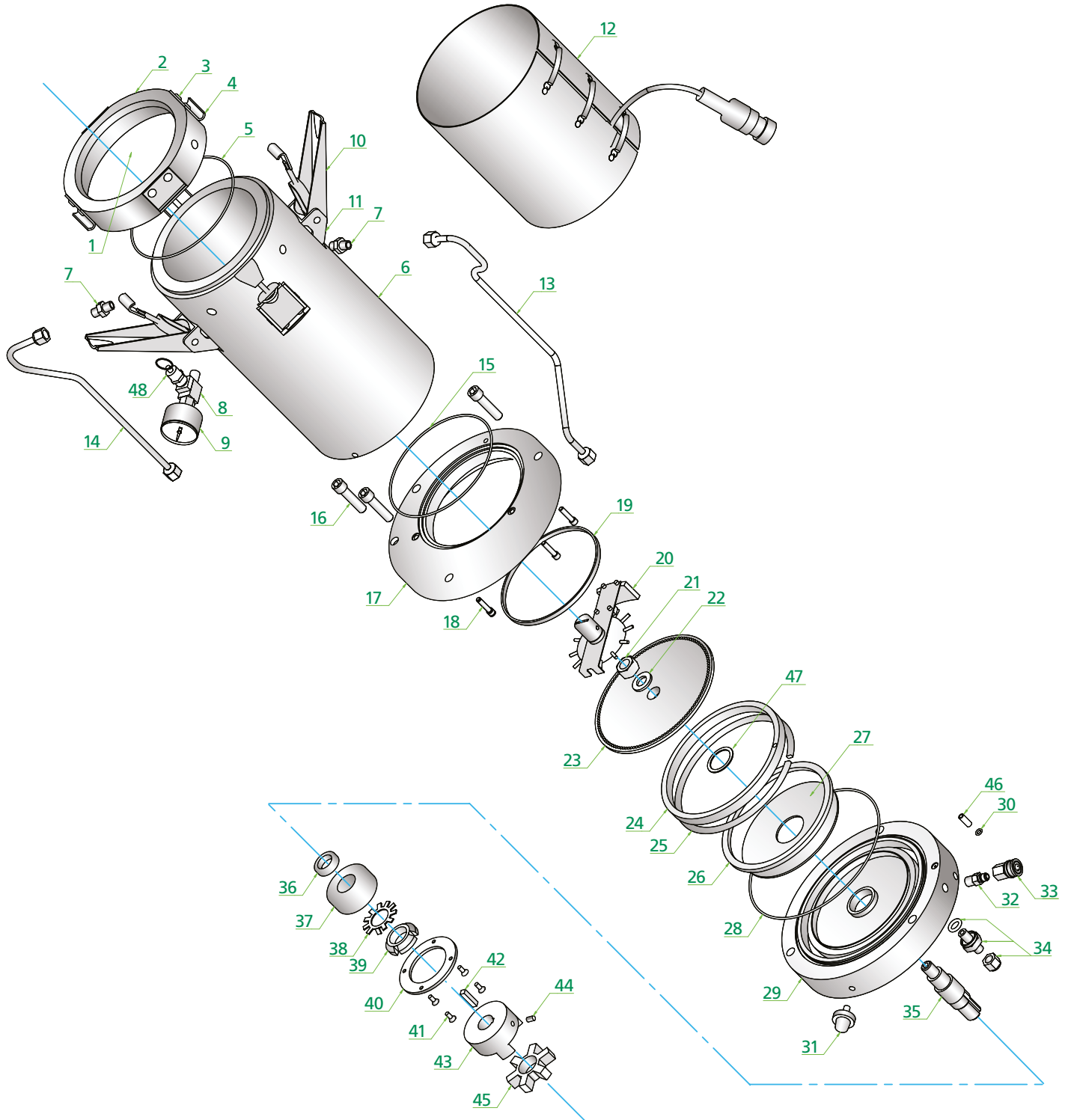
NOTE: in this Consumable Guide the most generally industrial used spare parts are listed. If products other than listed in this catalogue are required, please contact our customer support team.

PF-50 Powder feeder



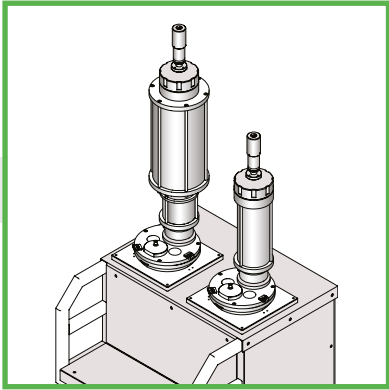
PF-50 Powder feeder			
Pos.	FST p/n	Product Description	OEM / Remark
	209.000	PF-50 Powder Feeder	861000142
1	209.009	Powder feeder canister window	841250152
2	209.012	Window ring	841270101
3	209.138	Screw, BTN HD, 10-32 x 0.375 LG	886000209
4	209.079	Strike, Canister latch	881270403
5	209.181	O-ring, B, 250	886000107
6	209.013	Canister	841270102
7	209.044	Fitting, Tube STR, 1/4" Tube x 1/8" MPT, SST	881000334
8	209.018	Valve, pop off, 90 psi	880000148
9	209.050	Gauge, 2", 1/8" CBM, Dual scale 30-0-160 PSI	881000340
10	209.078	Canister latch	881270402
11	209.138	Screw, BTN HD, 10-32 x 0.375 LG	886000209
12	209.099	Heater blanket, Std.	840000437
13	209.083	Tube, Pressure relief	840000430
14	209.014	Tube, Pressure balance	840000429
15	209.179	O-ring, B, 159	886000105
16	209.133	Screw, SHCS, 3/8-16 x 1.50 LG	886000204
17	209.010	Upper housing	841250512
18	209.134	Screw, SHCS, 10-32 x 0.75	886000205
19	209.023	Wiper ring	880015910
20	209.005	Tamper assembly	841250044
21	209.017	Nut, hex jam, 1/2-13 SST	886000217
22	209.081	Washer, flat, 1/2", SST 316	886000221
23	209.073	Powder wheel, Std. slotted (Comes W/ STD Assy.)	881250109
	209.073-1	Powder wheel, 120 hole	881250120
	209.073-2	Powder wheel, Std. slotted	881250141
	209.073-3	Powder wheel, 240 Hole	881250240
	209.073-4	Powder wheel, High volume feed	881253109
	209.073-5	Powder wheel, 320 Hole	881250320
24	209.007	Surface Ring	841250106
25	209.072	Ring, Back up	881250108
26	209.074	Felt ring	881250114
27	209.075	Ring, felt pad	881250308
28	209.180	O-ring, B, 164	886000106
29	209.011	Lower housing	841250520
30	209.182	O-ring, 0085	886000108
31	209.093	Bumper, rubber, 1/4-20 x 0.500	881000378
32	209.021	Fitting, Coupling, 1/8" MPT x Plug quick connect	880000369

PF-50 Powder feeder

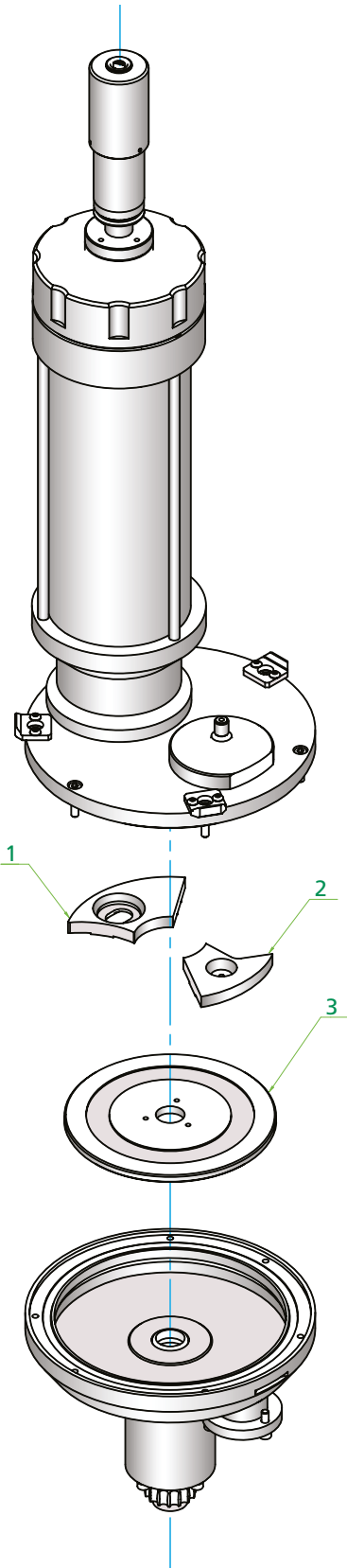


PF-50 Powder feeder			
Pos.	FST p/n	Product Description	OEM / Remark
33	209.020	Fitting, Coupling, 1/8" FPT x Socket quick connect	880000368
34	209.049	FTG, Tube STR, 1/4 Tube x 7/16-20 W/O-ring, SST	881000339
35	209.076	Feeder Drive shaft	881250515
36	209.167	Quad ring Q-4022	886000020
37	209.015	Bearing, lower housing	880000067
38	209.019	Washer, locking, feeder drive shaft	880000153
39	209.016	Feeder drive shaft nut	880000146
40	209.006	Bearing retainer plate	841250105
41	209.142	Screw, FHSCS, 8-32 x 0.375 LG, Zinc plated	886000213
42	209.085	LoveJoy coupling spider	881000330
43	209.086	LoveJoy coupling, 0.625 Dia shaft	881000328
44	209.082	Key, 0.187 x 0.187 x 1.0 Long	886000251
45	209.087	LoveJoy coupling, 0.75 Dia shaft	881000329
46	209.008	Powder port sleeve	841250107
47	209.080	Ring, barrier (felt)	881224107
48	209.043	Fitting, Street tee, 1/8", Brass	881000333
	209.156	Maintenance ring kit	881251113
	209.077	O-Ring kit for powder feeder	881251102

FST 10-20 powder feeder hopper

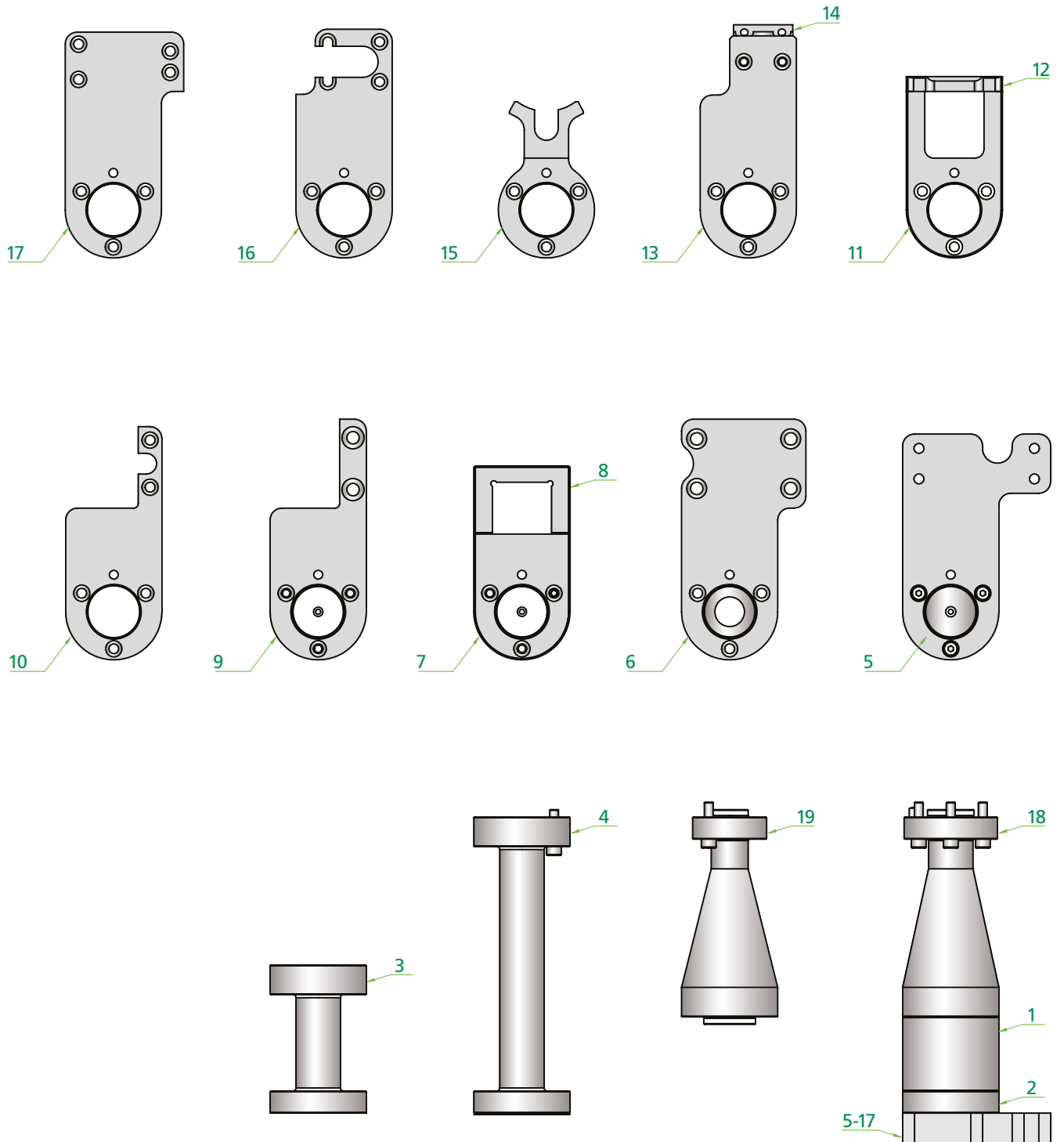


Left: HOPPER - 5 liter
Right: HOPPER - 1.5 liter



FST 10-20 powder feeder hopper			
Pos.	FST p/n	Product Description	OEM / Remark
	206.100-01	Hopper, 1.5 liter complete	
	206.100-02	Hopper, 1.5 liter complete (HP)	
	206.200-01	Hopper 5 liter complete	
	206.106	Stirrer 1,5L hopper complete	
	206.206	Stirrer 5L hopper complete	
	206.207	Stirrer 5L hopper with pins complete	
1	206.108-01	Spreader "601"	
	206.108-07	Spreader "601-55°"	
	206.108-02	Spreader "L"	
	206.108-03	Spreader "L-55°" (standard)	
	206.108-04	Spreader "NL"	
	206.108-05	Spreader "NL-55°" (standard)	
	206.108-06	Spreader "NL" Laser	
2	206.109-01	Suction unit "601"	
	206.109-02	Suction unit "L"	
	206.109-04	Suction unit "NL"	
	206.109-05	Suction unit "NL" Laser	
	206.190-01	Set spreader "601" / suction "601"	
	206.190-07	Set spreader "601" / suction "601-55°"	
	206.190-02	Set spreader "L" / suction "L"	
	206.190-03	Set spreader "L55" / suction "L" (standard)	
	206.190-04	Set spreader "NL" / suction "NL"	
	206.190-05	Set spreader "NL55" / suction "NL" (standard)	
	206.190-06	Set spreader "NL" / suction "NL" Laser	
3	206.111-01	Powder disc 16/1,2 steel	
	206.111-03	Powder disc 5/0,6 steel Laser	
	206.111-05	Powder disc 16/1,2 arnit	

Robot Gun Fixtures



FST Robot - Gun fixtures		
Pos.	FST p/n	Product Description
1	259.001	Robot Intermediate Insulator
2	259.002	Robot Intermediate Connector
3	259.003	Robot Intermediate Extension L=100mm
4	259.004	Robot Intermediate Extension L=200mm
5	259.050	Robot Fixplate 9MB Gun
6	259.051	Robot Fixplate JP5000 Gun
7	259.052	Robot Fixplate F1 Gun
8	259.053	Robot Holder F1 Gun
9	259.054	Robot Fixplate F4 Gun
10	259.055	Robot Fixplate 3MB Gun
11	259.056	Robot Fixplate 3MBT Gun
12	259.057	Robot Holder 3MBT Gun
13	259.058	Robot Fixplate SG100 Gun
14	259.059	Robot Holder SG100 Gun
15	259.060	Robot Fixplate 2086+2700 (SG100)
16	259.061	Robot Fixplate eGun
17	259.062	Robot Fixplate DJ2600+2700 Gun
18	259.101	Robot Adapter ABB-IRB2400+2600+4600
19	259.151	Robot Adapter Motoman-HP20D



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