100 HE Plasma Parameters

Alloys and PM				Hardware		Gas SCFH			Power	Powder Feed		Torch
Powder	Composition	Particle Size	Nozzle	Pwdr Ports	Ext Attach	Ar	N2	H2	GV/KW	Gr/min	Cr Gas	Stnd Off
SM 52 CNS	AlSi 88/12	45-90 micron	866695	841151	3-Port	180	90	70	213/70	150	70	4.5 in
SM 58 NS	CuNiIn	45-75 micron	868648	867750	3-Port	180	100	140	262/95	50	25	7.0 in
SM 58 NS	CuNiIn	45-75 micron	841121	N/A	N/A	300	100	40	233/55	50	16	4.5 in
SM 404 NS	NiAl 80/20	53-90 micron	866695	841149	3-Port	200	100	120	235/90	150	54	6.0 in
SM 404 NS	NiAl 80/20	53-90 micron	866695	841149	3-Port	180	100	140	225/90	80	54	6.0 in
SM 450 NS	NiAl 95/5	45-90 micron	866695	841149	3-Port	180	120	140	236/95	120	42	6.0 in
SM 450 NS	NiAl 95/5	45-90 micron	841143	841149	2-Port	200	100	80	214/90	95	15	4.5 in
HC 281.863	NiAl 95/5	45-90 micron	841143	841149	2-Port	180	100	140	240/95	80	18	6.0 in
SM 443 NS	NiCrAl	45-125 micron	866695	841149	3-Port	180	120	140	238/95	120	48	6.0 in
SM 447 NS	NiMoAl	45-90 micron	866695	841149	3-Port	160	120	140	234/95	120	45	6.0 in
Carp 718	CoNiCrAlY	45-106 micron	841121	N/A	N/A	240	90	40	200/65	85	18	4.5 in
Carp 718	CoNiCrAlY	45-106 micron	841121	N/A	N/A	300	100	60	231/45	70	22	4.5 in
HC 415.220	CoNiCrAlY	5-45 micron	866695	841151	3-Port	220	100	100	224/85	80	12	6.0 in
SM 995 C	CoNiCrAlY	45-75 micron	841121	N/A	N/A	250	100	60	234/75	85	15	4.5 in
SM 461	NiCrAlCoY	45-106 micron	841143	841149	2-Port	220	100	60	220/70	100	25	4.5 in
SM 9625 F	NiCrAlY	22-45 micron	868648	841151	2-Port	180	100	150	250/95	75	22	5.5 in
SM 66 F T-400	CoMoCr	15-45 micron	868648	841151	2-Port	200	100	150	250/95	100	22	6.0 in
Stellite T-400	CoMoCr	5-44 micron	866695	841149	2-Port	240	100	140	250/95	50	18	5.0 in
PX T-800	CoMoCrSi	10-45 micron	841121	N/A	N/A	300	100	60	227/60	60	35	4.5 in
Stellite T-800	CoMoCrSi	5-44 micron	868648	867750	2-Port	200	100	150	350/95	100	35	4.5 in
Carp 316 SS	FeCrNiMo	22-53 micron	841121	NA	N/A	320	95	60	227/75	100	15	4.5 in
Carp 316 SS	FeCrNiMo	22-53 micron	868648	867750	2-Port	200	100	120	242/95	85	22	5.5 in
Hog 316 SS	FeCrNiMo	5-45 micron	841121	NA	NA	320	95	60	205/40	90	25	4.5 in
Hog 316 SS	FeCrNiMo	5-45 micron	841143	841149	2-Port	240	100	90	225/90	105	20	4.5 in
SM 41 C	FeCrNiMo	45-106 micron	841121	NA	NA	240	90	40	200/75	85	15	5.5 in
WC 63 HV	NiCrBSi/CrC	15-45 micron	868648	867750	2-Port	160	120	140	265/95	80	22	6.0 in
Armacor C	CrNiBMoCuSi	15-45 micron	868648	867750	2-Port	240	120	100	254/95	100	30	4.5 in
Armacor M	FeCrNiBMoCuSi	15-45 micron	868648	867750	2-Port	240	120	100	254/95	100	25	4.5 in
Nano SHS	Proprietary	15-45 micron	841121	NA	NA	350	100	60	230/50	75	25	4.5 in
HC Mo B4273	Pure Molybdenum	5-44 micron	866695	841151	3-Port	220	120	120	243/95	70	20	6.0 in
HC Mo Bond	Pure Molybdenum	30-45 micron	866695	841151	3-Port	160	80	50	211/40	70	12	6.0 in

100 HE Disclaimer and Coating Parameter Legend

Coating parameters contained in this manual should be considered starting points. The parameters published in this manual were developed under laboratory conditions. Field results may vary.

Progressive Technologies, Inc. is constantly striving to improve coating characteristics and properties through parameter and 100 HE hardware development. **Contact your Sales Engineer or the Application Manager at PTI for the latest developments and parameter that best fits your requirements.** A complete coating report will be supplied upon request.

The Two Port and Three Port External attachments are interchangeable for all coatings listed as 2-Port or 3-Port injection in the Parameter Guide. In most cases the Three Port Injection shows slight improvement in density and deposition efficiency over the Two Port injection method.

Material Selection Guide

*Sulzer Metco, Inc. (SM)
*Sulzer Metco, Inc. (Amdry)
*HC Starck, Inc. (HC)
*Saint-Gobain, LLC. (SG)
*Praxair Surface Technologies, Inc. (PX)
*Powder Alloy Corporation (PAC)
*Deloro Stellite, Inc. (Stellite)
*Carpenter Alloys, Inc. (Carp)
*Hoganas International, Inc. (Hog)
*Wall Colmonoy, Inc. (WC)
*Liquid Metals, Inc. (Armacor)
*Nano Steel Corporation (Nano)
*Montreal Carbide, Ltd. (MC)
*Lineage Alloys, Inc. (LA)
*Atlantic Minerals Corporation. (Hochrhein).

***Materials outlined in the Parameter Guidelines are registered trade marks of the aforementioned companies**.