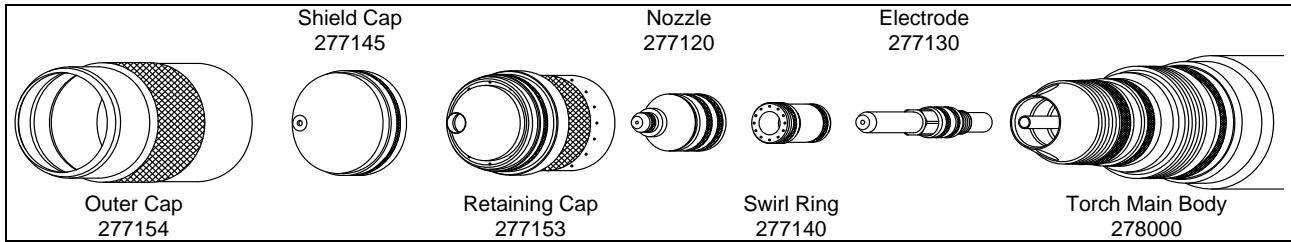


Mild Steel
30 Amps – Oxygen Plasma / Oxygen Shield



Imperial

Material Thickness		Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(ga)	(in)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(in)	(in)	(msec)	(in)
20	.036	35	77	6	75	120	105	.080	.110	100	.062
18	.048					121	97	.090			
16	.060					125	78	.105			
14	.075					126	65	.105	.125		.065
12	.105					127	55	.120			
11	.120					129	50	.120	.125		.070
10	.135					131	40	.120			

Metric

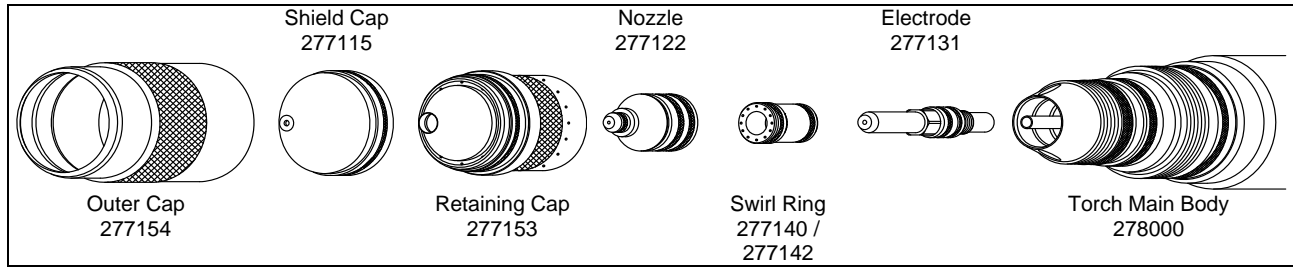
Material Thickness		Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(mm)	(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(mm/m)	(mm)	(mm)	(msec)	(mm)
1		35	77	6	75	120	2615	2.0	2.8	100	1.6
1.5						124	2020	2.6			1.7
2						126	1615	2.7			1.8
2.5						1455					
3						128	1285	2.9	3.1		

Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Travel Speed		Marking Height		Initial Height		Pierce Time
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)
All Thicknesses			N/A	25	25	N/A	250	6350	.177	4.5	.100	2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
(Revised 2/25/08)

Mild Steel
50 Amps – Oxygen Plasma / Oxygen or Air Shield



Imperial

Material Thickness		Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width		
(ga)	(in)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(in)	(in)	(msec)	(in)		
Cold-Rolled Steel – Oxygen Shield – Swirl Ring 277140													
12	.105	25	74	12	72	123	70	.120	.135	100	.075		
11	.120					126	60	.125			.078		
10	.135					128	50	.135					
Hot-Rolled Steel – Air Shield – Swirl Ring 277142													
14	.075	25	74	19	72	106	200	.100	.135	100	.075		
12	.105						190				.080		
	.125						180						
10	.135					110	170	.110			.085		
	3/16					113	105	.140			.145	200	.087
	1/4					117	75	.165			250		

Metric

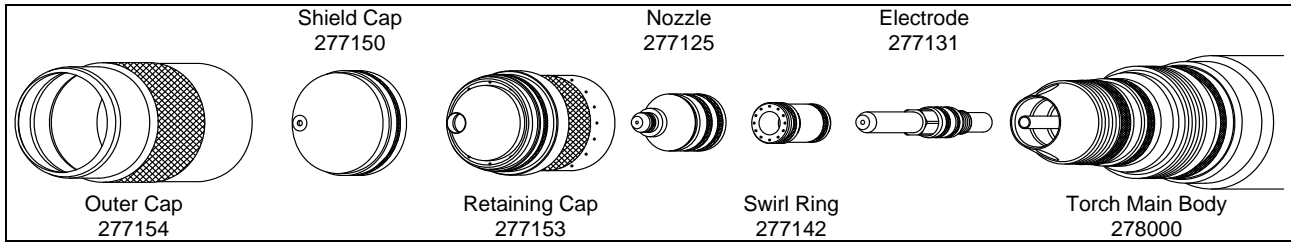
Material Thickness		Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width		
(mm)	(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(mm/m)	(mm)	(mm)	(msec)	(mm)		
Cold-Rolled Steel – Oxygen Shield – Swirl Ring 277140													
2.5		25	74	12	72	121	1895	2.9	3.4	100	1.9		
3						125	1555	3.1			2.0		
Hot-Rolled Steel – Air Shield – Swirl Ring 277142													
2.5		25	74	19	72	106	4885	2.5	3.4	100	1.9		
3							4660				2.0		
5						113	2555	3.6			3.7	250	2.2
6						116	2075				4.0		

Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed		Marking Height		Initial Height	Pierce Time	
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)
All Thicknesses			N/A	25	25	N/A	145	250	6350	.147	3.7	.100	2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
(Revised 2/25/08)

Mild Steel
70 Amps – Oxygen Plasma / Air Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/8	25	76	35	74	110	190	.100	.100	100	.080
3/16			25		113	130				
1/4			25		116	120	.110	.125	200	
3/8			25		122	75	.140	.150	250	

Metric

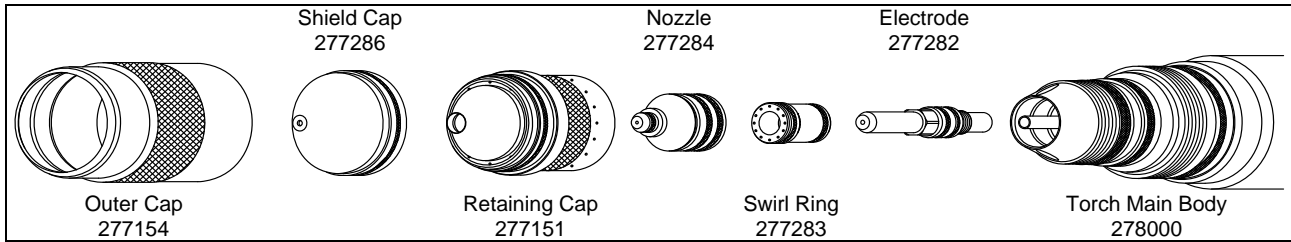
Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
3	25	76	35	74	109	4995	2.5	2.5	100	2.0
5			25		113	3265		2.6	200	
6			25		115	3105	2.7	3.0	200	2.2

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	135	250 6350	.096 2.4	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking (Revised 2/25/08)

Mild Steel
100 Amps – Oxygen Plasma / Air Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	25	83	26	81	125	150	.090	.125	150	.090
3/8					130	100	.130	.175	200	
1/2					65	.155	.200	400		
5/8					143	47	.185	900	.095	
3/4					145	35				

Metric

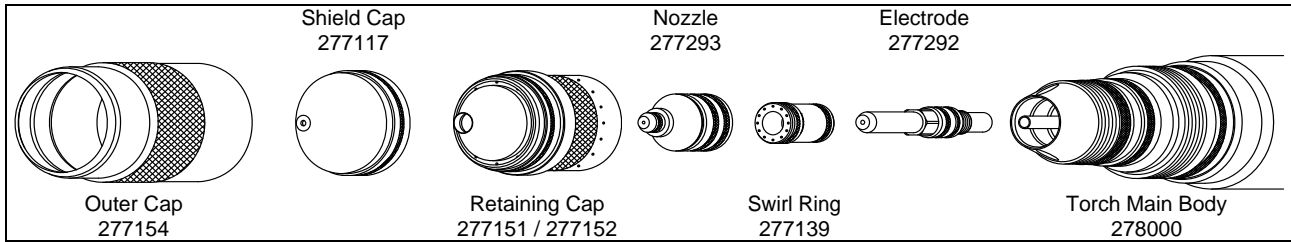
Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	25	83	26	81	124	3950	2.1	3.0	150	2.3
10					130	2405	3.3	4.5	400	
12					1850	3.7	4.9			
16					143	1180	4.7	5.1	900	2.4
20					145	800				

Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Travel Speed		Marking Height		Initial Height		Pierce Time	
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)	
All Thicknesses			N/A	25	25	N/A	130	250	6350	.100	2.5	.100	2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
(Revised 2/25/08)

Mild Steel
150 Amps – Oxygen Plasma / Air Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
Retaining Cap 277151										
1/4	20	71	30	69	118	165	.105	.200	300	.125
3/8					123	125	.135	.225	400	
1/2					125	90	.140	.250		.130
Retaining Cap 277152										
5/8	20	71	45	69	127	70	.140	.275	600	.130
3/4					130	55		.300	900	.135
1					134	40	.150	1200 **	.140	
1.25 ***					145	25	.200	.200		1000 **
1.5 ***					155	15	.225	.225		

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
Retaining Cap 277151										
6	20	71	30	69	117	4305	2.6	5.0	300	3.2
10					123	3040	3.4	5.8	400	
12					124	2485	3.5	6.2		3.3
Retaining Cap 277152										
16	20	71	45	69	127	1760	3.6	7.0	900	3.3
20					130	1340		7.6	1200 **	3.4
25					133	1040	3.7		3.6	
32 ***					145	625	5.1	5.1		1000 **
38 ***					154	385	5.6	5.6		

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	135	250 6350	.100 2.5	.100 2.5	0

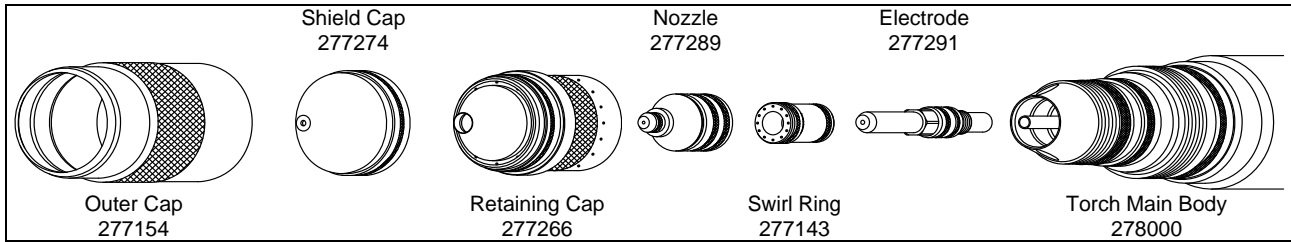
* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

** See "Piercing Thick Materials" in Section 4

*** Edge start recommended

(Revised 2/25/08)

Mild Steel
200 Amps – Oxygen Plasma / Air Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	20	74	58	72	125	230	.040	.200	300	.150
3/8					130	140	.090	.225		
1/2					133	120	.115	.250	500	.152
5/8					137	100	.130			
3/4					140	75	.150	.300	700	.153
1					147	50	.175			
1.25					155	25	.240	.350	1400 **	158
1.5 ***					165	17	.300	.300	1000 **	
1.75 ***					175	12	.350	.350		
2.0 ***					185	7	.500	.500		

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	20	74	58	72	124	6100	.8	5.0	300	3.8
10					130	3480	2.3	5.8	500	
12					132	3160	2.7	6.2		700
16					137	2515	3.3	6.4		
20					141	1810	3.8	7.6	1000	
25					146	1310	4.3			
32					155	610	6.1	8.9	1400 **	4.0
38 ***					164	435	7.5	7.6	1000 **	
45 ***					175	295	9.2	9.2		
50 ***					183	195	12.2	12.2		

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	120	250 6350	.100 2.5	.100 2.5	0

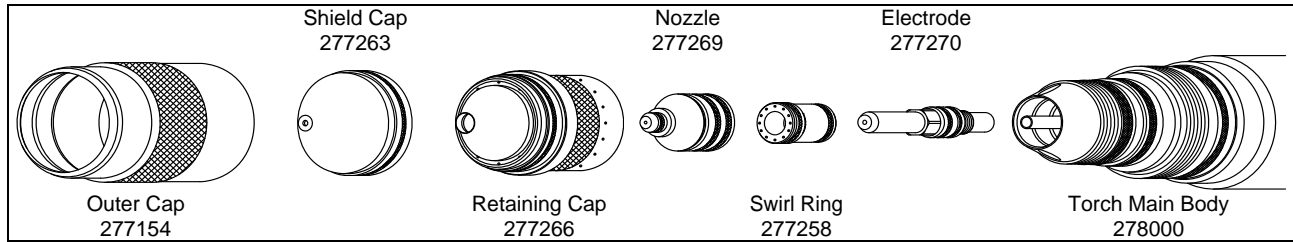
* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

** See "Piercing Thick Materials" in Section 4

*** Edge start recommended

(Revised 2/25/08)

Mild Steel
275 Amps – Oxygen Plasma / Air Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)						
1/2	20	81	70	79	139	125	.140	.275	300	.165						
5/8						105	.135		500							
3/4					138	90	.120	.300	700	.170						
1						65	.160		900							
1.25					150	25	.175	.350	1200	.185						
1.5 ***											45	.175	.350	1200		
1.75 ***											170	20	.290	.290	1000 **	.190
2.0 ***																

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)				
12	20	81	70	79	139	3290	3.6	7.0	300	4.2				
16						2650	3.3		700					
20					138	2190	3.1	7.6	900	4.3				
25						1690	4.0		1200					
32					150	645	5.9	6.0	1000 **	4.8				
38 ***											1120	4.4	8.9	
45 ***											170	495	7.5	7.5
50 ***														

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	108	250 6350	.100 2.5	.100 2.5	0

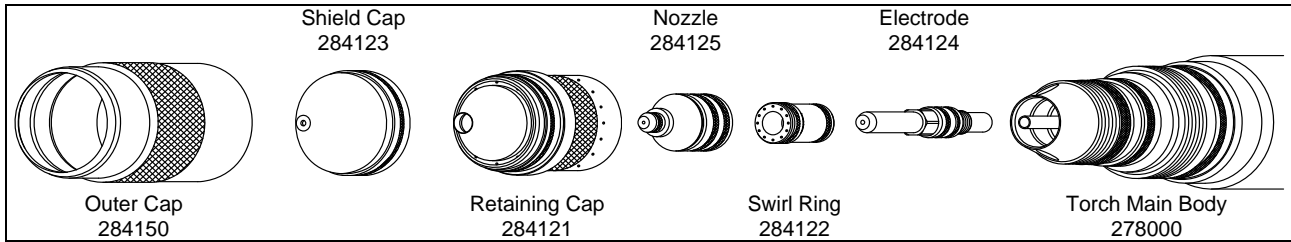
* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

** See "Piercing Thick Materials" in Section 4

*** Edge start recommended

(Revised 2/25/08)

Mild Steel
400 Amps – Oxygen Plasma / Air Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/2	30	79	70	76	140	160	.140	.300	500	.150
5/8					145	135	.130	.325	600	.190
3/4						110			700	
1					150	85	.160	.350	1000	.180
1.25					155	60	.175	.400	1200 **	.200
1.5					160	50	.225	.600	1600 **	
1.75					162	40	.260	.650	2300 **	
2.0 ***					165	33	.270	.700	4500 **	.210

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
12	30	79	70	76	138	4205	3.6	7.4	500	3.8
16					145	3405	3.3	8.3	700	3.9
20						2700	3.4		1000	
25					149	2200	4.0	8.8	4.8	
32					155	1500	4.4	10.2		1200 **
38					159	1275	5.6	15.1		1600 **
45					162	995	6.6	16.6	2300 **	5.1
50 ***					164	860	6.8	17.6	4500 **	5.3

Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Travel Speed		Marking Height		Initial Height		Pierce Time
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)
All Thicknesses			N/A	25	25	N/A	112	250 6350	.100	2.5	.100	2.5	0

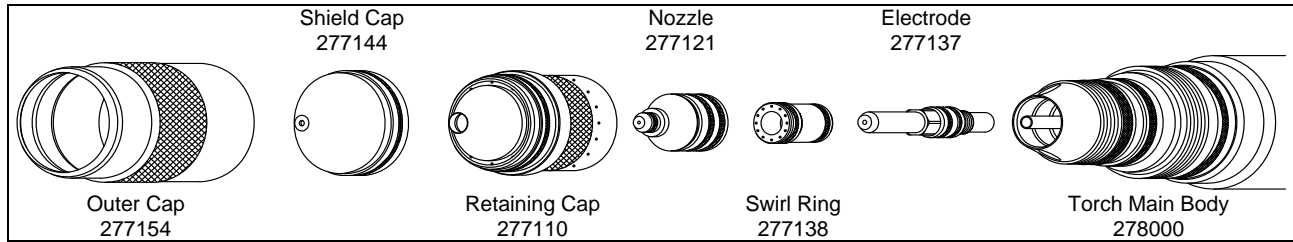
* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

** See "Piercing Thick Materials" in Section 4

*** Edge start or moving pierce recommended. For an edge start, set the Pierce Time to 1000 and the Pierce Height to the same value as the Cutting Height

(Revised 2/25/08)

**Stainless Steel
30 Amps – Air Plasma / Air Shield**



Imperial

Material Thickness		Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(ga)	(in)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(in)	(in)	(msec)	(in)
20	.036	35	81	30	85	71	200	.020	.050	100	.065
18	.048					74	165	.035			
16	.060					74	125	.025			
14	.075					75	90	.025			

Metric

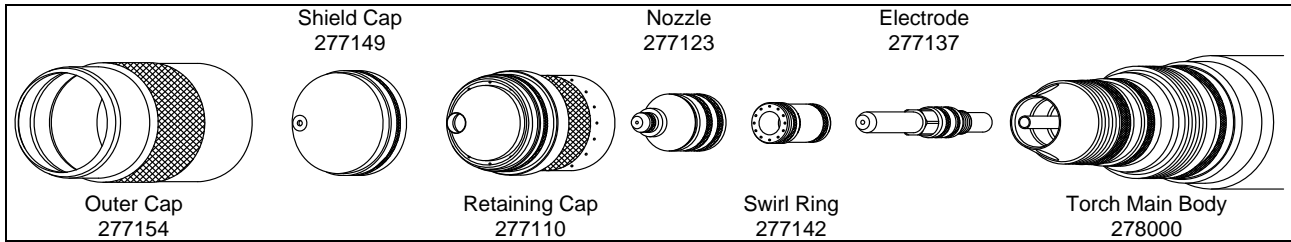
Material Thickness		Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(mm)	(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(mm/m)	(mm)	(mm)	(msec)	(mm)
1		35	81	30	85	71	4855	0.6	1.3	100	1.7
1.5						73	3260	0.9			

Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed		Marking Height		Initial Height		Pierce Time
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)
All Thicknesses			N/A	25	25	N/A	145	250	6350	.177	4.5	.100	2.5	0

* Use an arc transfer height (ignition height) of .050" (1.3 mm) for cutting and .100" (2.5 mm) for marking
(Revised 2/25/08)

**Stainless Steel
50 Amps – Air Plasma / Nitrogen Shield**



Imperial

Material Thickness		Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(ga)	(in)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(in)	(in)	(msec)	(in)
14	.075	25	66	40	67	87	105	.035	.060	100	.105
12	.105					88	75				
11	.120					89	65				
10	.135					90	55	.040	.075	200	.110
	3/16					94	50				
	1/4					100	40	.060	.085	300	.115

Metric

Material Thickness		Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(mm)	(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(mm/m)	(mm)	(mm)	(msec)	(mm)
2		25	66	40	67	87	2565	.9	1.5	100	2.7
2.5	2080										
3	88					1685					
5	94					1235	1.0	1.9	300	2.8	
6	98					1075	1.3	2.1			2.9

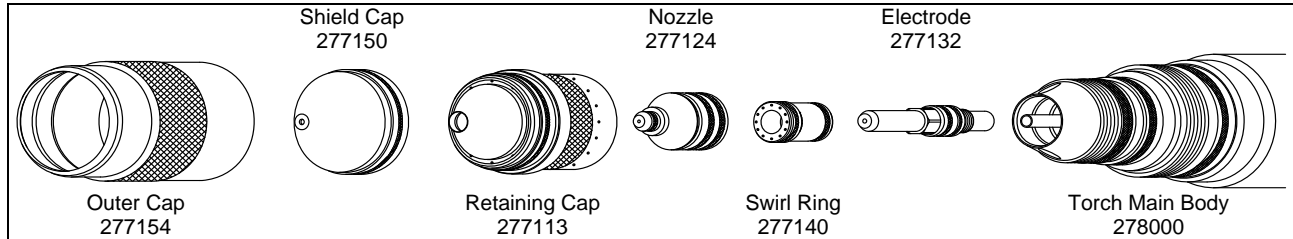
Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Travel Speed		Marking Height		Initial Height		Pierce Time	
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)	
All Thicknesses			N/A	25	25	N/A	145	250	6350	.147	3.7	.100	2.5	0

* Use an arc transfer height (ignition height) of .050" (1.3 mm) for cutting and .100" (2.5 mm) for marking
(Revised 2/25/08)

Stainless Steel
70 Amps – H17 Plasma / Nitrogen Shield
 (H17 = 17.5% Hydrogen / 32.5% Argon / 50% Nitrogen)

This gas combination gives the best cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
3/16	35	60	36	13	135	80	.100	.200	200	.090

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
5	35	60	36	13	135	2030	2.5	5.1	200	2.3

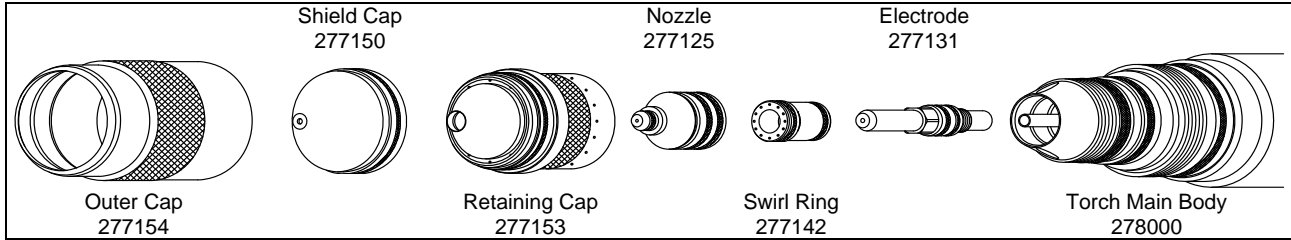
Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Travel Speed		Marking Height		Initial Height		Pierce Time
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)
All Thicknesses			N/A	25	25	N/A	250	6350	.096	2.4	.100	2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
 (Revised 2/25/08)

Stainless Steel 70 Amps – Air Plasma / Nitrogen Shield

This gas combination gives medium cut quality and minimum dross levels



Imperial

Material Thickness		Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(ga)	(in)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(in)	(in)	(msec)	(in)
10	.135	25	76	25	76	132	120	.060	.150	200	.085
	3/16					134	100	.070	.175		
	1/4					140	75	.090	.200	300	.090
	3/8					148	50	.120	.225	450	

Metric

Material Thickness		Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(mm)	(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(mm/m)	(mm)	(mm)	(msec)	(mm)
3		25	76	25	76	131	3210	1.4	3.6	200	2.2
5	134					2445	1.8	4.5	300		
6	138					2050	2.1	4.9	300	2.3	

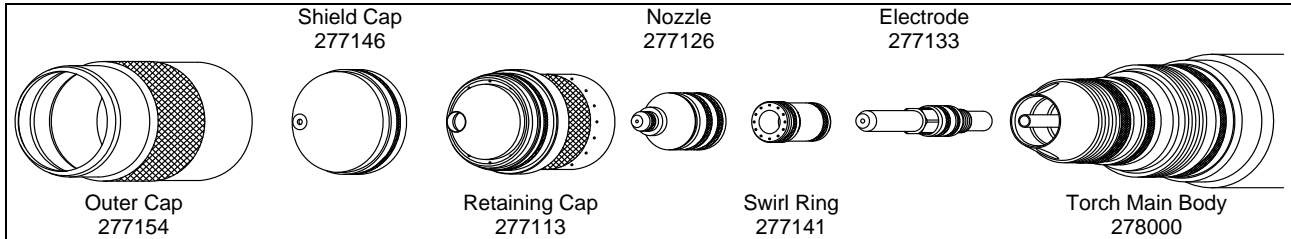
Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed		Marking Height		Initial Height		Pierce Time
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)
All Thicknesses			N/A	25	25	N/A	135	250	6350	.096	2.4	.100	2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
(Revised 2/25/08)

Stainless Steel
100 Amps – H17 Plasma / Nitrogen Shield
 (H17 = 17.5% Hydrogen / 32.5% Argon / 50% Nitrogen)

This gas combination gives the best cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
3/16	28	67	46	67	138	115	.105	.200	200	.105
1/4					140	100	.125	.225	300	
3/8					152	65	.180	.250	400	

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
5	28	67	46	67	138	2865	2.7	5.1	300	2.5
6					139	2625	3.0	5.5		2.7

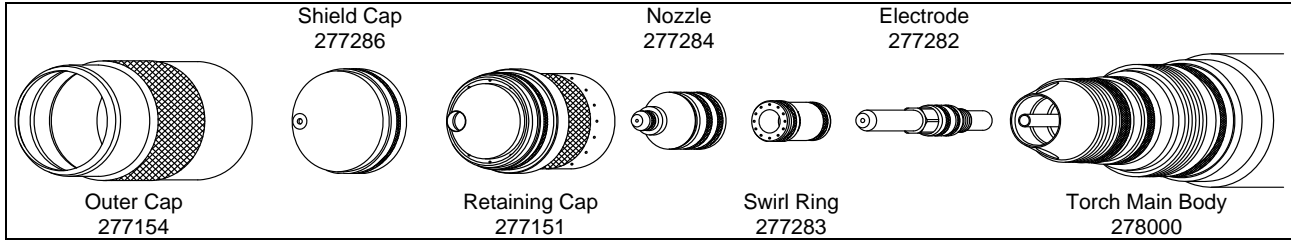
Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	130	250 6350	.100 2.5	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
 (Revised 2/25/08)

**Stainless Steel
100 Amps – Air Plasma / Nitrogen Shield**

This gas combination gives medium cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	25	80	35	80	141	100	.135	.200	250	.092
3/8					147	80	.170	.225	350	
1/2					154	55	.210	.250	450	

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	25	80	35	80	140	2595	3.2	5.0	250	2.3
10					148	1935	4.4	5.8	450	2.4
12					152	1540	5.0	6.2		

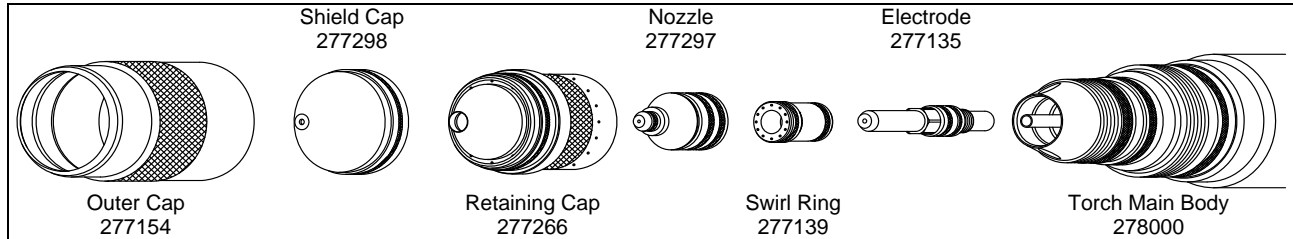
Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	130	250 6350	.100 2.5	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking (Revised 2/25/08)

Stainless Steel
150 Amps – H17 Plasma / Nitrogen Shield
 (H17 = 17.5% Hydrogen / 32.5% Argon / 50% Nitrogen)

This gas combination gives the best cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	25	81	75	81	165	95	.250	.250	400	.135
3/8					75	.150	500			
1/2					60	.165	600	.140		
5/8					50	.185	800			
3/4					165	40	.250	.300	1000	.145

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
10	25	81	75	81	155	1845	3.8	7.0	600	3.4
12						1610	4.1			
16						1260	4.7	7.6	1000	3.7
20					167	940	6.9			

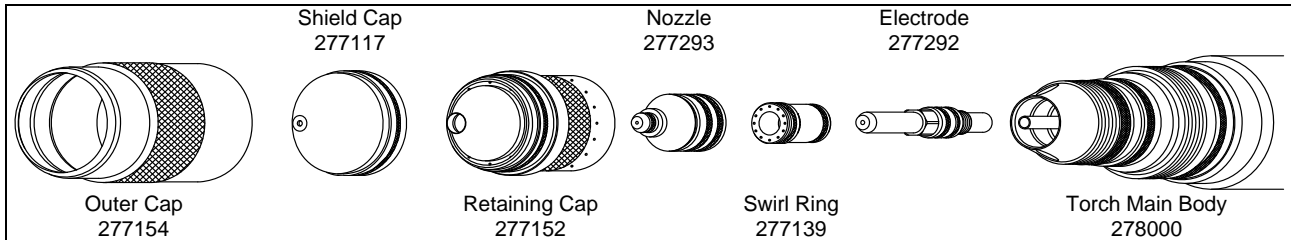
Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	135	250 6350	.100 2.5	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
 (Revised 2/25/08)

Stainless Steel 150 Amps – Air Plasma / Nitrogen Shield

This gas combination gives medium cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	20	71	70	69	145	150	.160	.225	400	.125
3/8					150	115	.180	.275	500	
1/2					155	85	.210	.300	600	.130
5/8					160	60	.220		800	
3/4					168	45	.240		1000	

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	20	71	70	69	144	3910	4.0	5.5	400	3.2
10					150	2805	4.7	7.0	600	
12					153	2330	5.1	7.6	1000	3.3
16					160	1510	5.6			
20					170	1030	6.2			

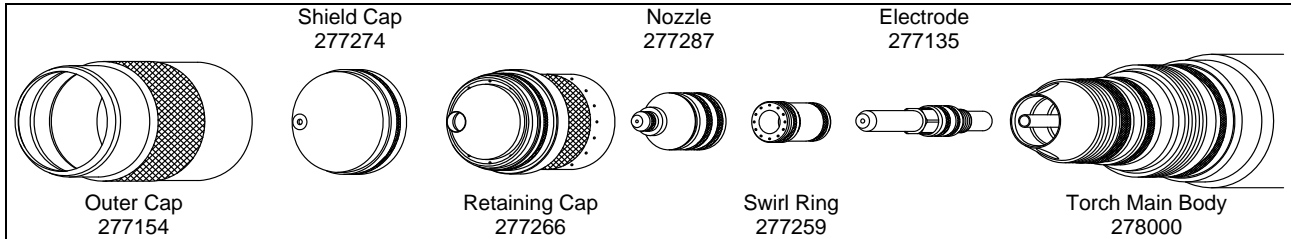
Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Travel Speed		Marking Height		Initial Height		Pierce Time	
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)	
All Thicknesses			N/A	25	25	N/A	135	250	6350	.100	2.5	.100	2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
(Revised 2/25/08)

Stainless Steel
200 Amps – H17 Plasma / Nitrogen Shield
 (H17 = 17.5% Hydrogen / 32.5% Argon / 50% Nitrogen)

This gas combination gives the good cut quality and minimum cross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
3/8	37	68	85	68	156	80	.195	.250	300	.150
1/2					148	75	.130	.275	500	
5/8					155	60	.190		700	.155
3/4					160	50	.200	.300	900	
1.0					170	35	.240	.325	1300 **	

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
10	37	68	85	68	154	2010	4.7	6.4	500	3.8
12					149	1935	3.6	6.8		
16					155	1515	4.8	7.0	900	3.9
20					161	1215	5.2	7.7		
25					169	915	6.0	8.2		

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	120	250 6350	.100 2.5	.100 2.5	0

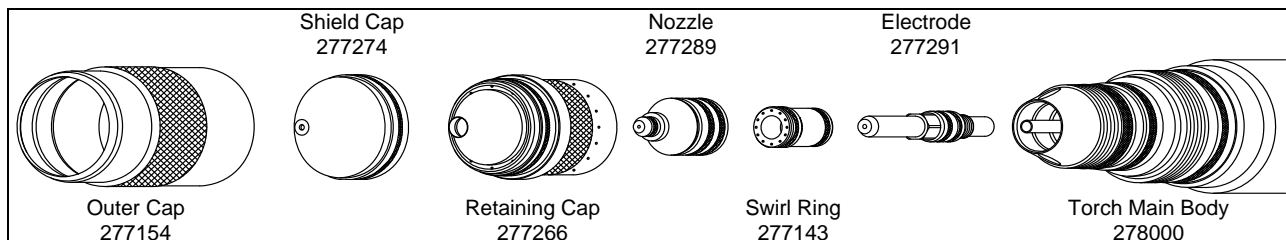
* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

** See "Piercing Thick Materials" in Section 4

(Revised 2/25/08)

Stainless Steel 200 Amps – Air Plasma / Nitrogen Shield

This gas combination gives medium cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	20	74	58	72	130	200	.070	.200	200	.150
3/8					133	150		.225		
1/2					140	110	.115	.250	300	.152
5/8					146	75	.150	.300		
3/4					153	60	.190	.325	800	.155
1.0					158	40	.210	.250	1200 **	
1.25 ***					170	20	.250	.275	1000 **	.165
1.5 ***					180	10	.275	.275		

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	20	74	58	72	129	5220	1.8	5.0	200	3.8
10					134	3655	1.9	5.8	300	
12					138	3020	2.6	6.2		800
16					146	1890	3.8	7.6	1200 **	
20					153	1450	4.8	7.7		1000 **
25					157	1050	5.2	8.2	4.2	
32 ***					170	495	6.4	6.4		4.4
38 ***					179	260	6.9	6.9		

Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Travel Speed		Marking Height		Initial Height		Pierce Time
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)
All Thicknesses			N/A	25	25	N/A	250	6350	.100	2.5	.100	2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

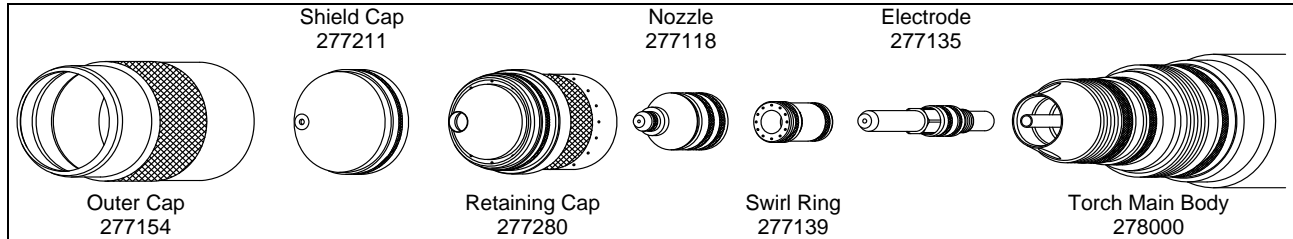
** See "Piercing Thick Materials" in Section 4

*** Edge start recommended

(Revised 2/25/08)

Stainless Steel
260 Amps – H17 Plasma / Nitrogen Shield
 (H17 = 17.5% Hydrogen / 32.5% Argon / 50% Nitrogen)

This gas combination gives the best cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)	
3/8	40	63	70	63	145	85	.160	.275	500	.190	
1/2					142	80	.140				
5/8					145	65	.185				
3/4					150	55	.225	.300	800	.195	
1.0					160	33	.250	.325	1000 **		.200
1.25 ***					170	26	.280	.280			

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)	
10	40	63	70	63	144	2140	4.0	7.0	500	4.8	
12					142	2060	3.7				
16					145	1640	4.7				
20					151	1315	5.8	7.7	1000 **	5.0	
25					159	875	6.3	8.2			5.1
32 ***					170	650	7.1	7.0			

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	108	250 6350	.100 2.5	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

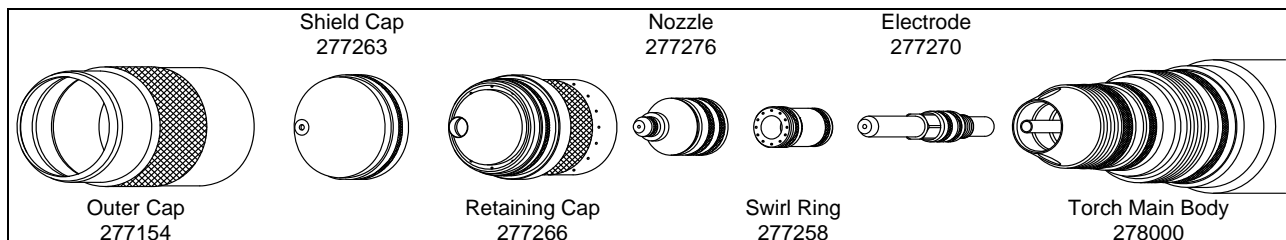
** See "Piercing Thick Materials" in Section 4

*** Edge start recommended

(Revised 2/25/08)

Stainless Steel 275 Amps – Air Plasma / Nitrogen Shield

This gas combination gives medium cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/2	20	73	70	75	143	120	.125	.250	400	.165
5/8					148	90	.140	.275	600	
3/4					152	80	.180	.300	800	.170
1.0					165	55	.210	.325	1000 **	
1.25 ***					175	35	.250	.250		
1.5 ***					185	25	.300	.300		.180

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
12	20	73	70	75	141	3220	3.1	6.2	400	4.2
16					148	2275	3.6	7.0	800	
20					153	1940	4.7	7.7	1000 **	4.3
25					164	1435	5.2	8.2		
32 ***					175	880	6.4	6.4		
38 ***					184	640	7.5	7.5		4.6

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	108	250 6350	.100 2.5	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

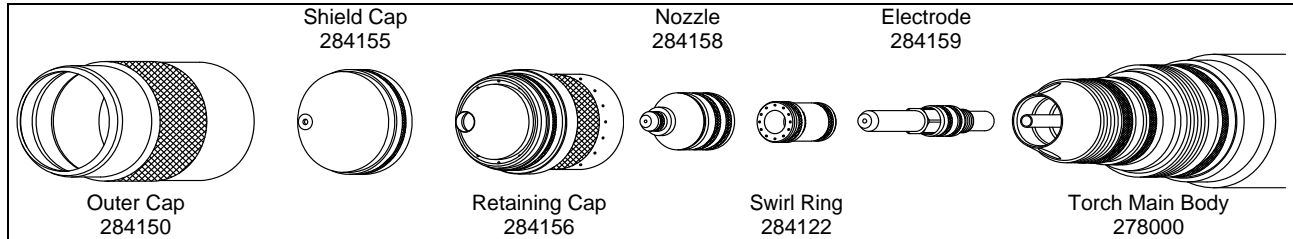
** See "Piercing Thick Materials" in Section 4

*** Edge start recommended

(Revised 2/25/08)

Stainless Steel
400 Amps – H17 Plasma / Nitrogen Shield
 (H17 = 17.5% Hydrogen / 32.5% Argon / 50% Nitrogen)

This gas combination gives the best cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/2	30	80	82	96	165	105	.190	.275	600	.165
5/8						90	.180	.300	700	.175
3/4						75	.170	.325	800	.200
1					170	.185	.500	1200 **		
1.25					175	.210	.550	1500 **	.225	
1.5					185	.270	.750	2500 **		
1.75 ***					193	.300	.300	1000 **		.235
2.0 ***					200	.350	.350		.250	

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
12	30	80	82	96	165	2750	4.8	6.8	600	4.2
16						2270	4.5	7.6	800	4.4
20						1810	4.3	8.9	1200 **	5.1
25					169	1310	4.6	12.4		
32					175	1005	5.3	14.0	1500 **	5.7
38					184	765	6.8	19.0	2500 **	
45 ***					193	570	7.7	7.7	1000 **	
50 ***					199	470	8.7	8.7		6.4

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	100	250 6350	.100 2.5	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

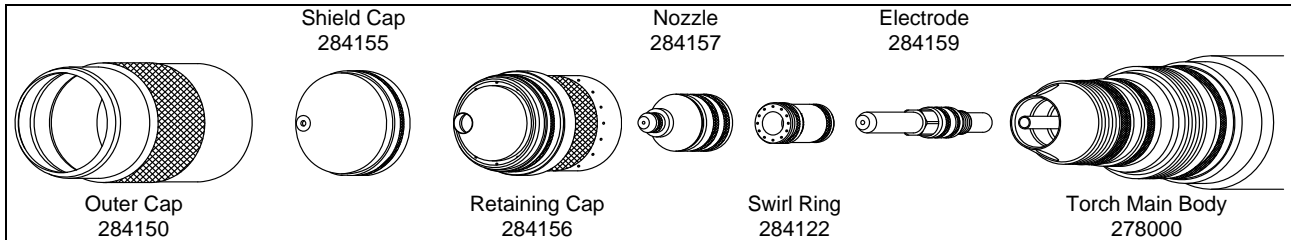
** See "Piercing Thick Materials" in Section 4

*** Edge start recommended

(Revised 2/25/08)

Stainless Steel 400 Amps – Nitrogen Plasma / Air Shield

This gas combination gives medium cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/2	30	85	63	96	175	130	.210	.275	600	.165
5/8					170	110	.170	.300	700	
3/4					165	90	.150	.325	800	.200
1					170	65	.150	.500	1200 **	
1.25					175	45	.160	.650	1700 **	
1.5					.205	180	35	.170	.750	2500 **
1.75 ***						190	25	.190	.190	1000 **
2.0 ***						205	15	.210	.210	

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
12	30	85	63	96	176	3415	5.5	6.8	600	4.2
16					169	2775	4.2	7.6	800	
20					165	2190	3.8	8.9	1200 **	5.1
25					169	1690		12.4		
32					175	1120	4.1	16.6		
38					5.2	179	895	4.2	19.0	2500 **
45 ***						190	610	4.8	4.8	1000 **
50 ***						203	410	5.2	5.2	

Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Travel Speed		Marking Height		Initial Height		Pierce Time
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)
All Thicknesses			N/A	25	25	N/A	250	6350	.100	2.5	.100	2.5	0

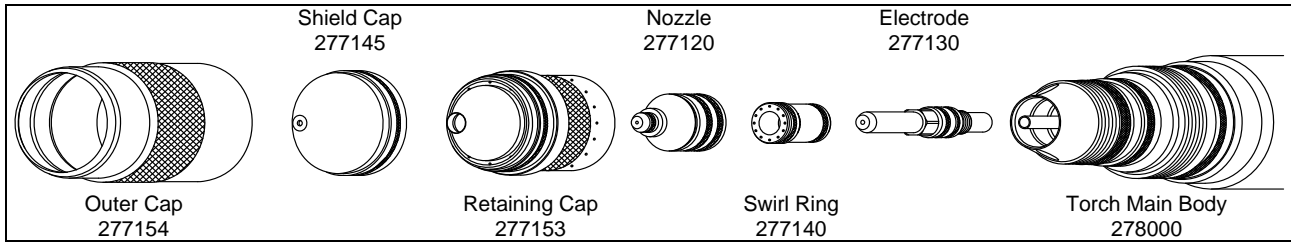
* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

** See "Piercing Thick Materials" in Section 4

*** Edge start recommended

(Revised 2/25/08)

Aluminum
30 Amps – Air Plasma / Nitrogen Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
.040	35	81	20	85	135	150	.030	.065	100	.065
.050						120		.075		
.063						90		.085		

Metric

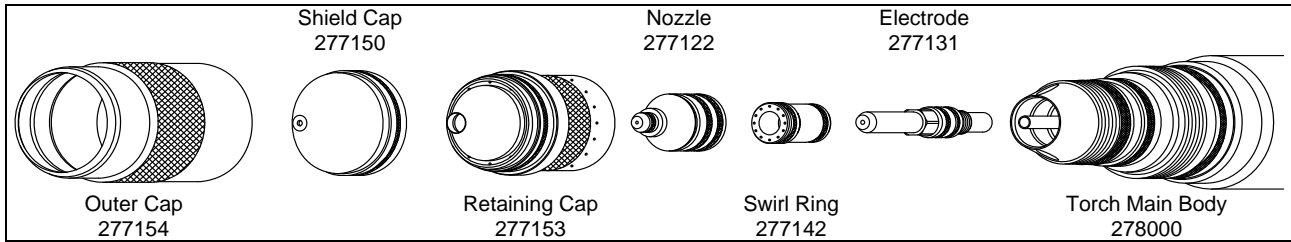
Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
1	35	81	20	85	135	3885	0.8	1.6	100	1.7
1.5					135	2520		2.1		1.8

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	145	250 6350	.177 4.5	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
(Revised 2/25/08)

Aluminum
50 Amps – Air Plasma / Nitrogen Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
.050	25	66	19	67	135	180	.050	.100	100	.080
.063					138	140	.065			.082
.080					143	90	.075			.085

Metric

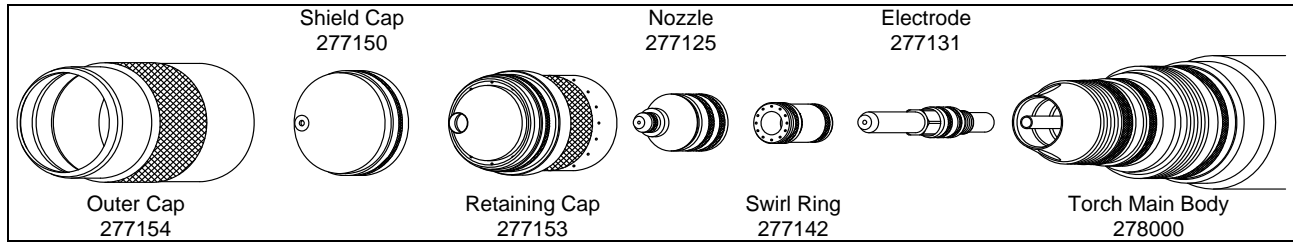
Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
1.5	25	66	19	67	137	3870	1.5	2.5	100	2.1
2.0					142	2360	1.8			2.2

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	145	250 6350	.147 3.7	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
(Revised 2/25/08)

Aluminum 70 Amps – Air Plasma / Nitrogen Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
.080	25	76	25	76	130	250	.050	.100	100	.080
1/8					135	160	.070			
3/16					145	80	.100	.125	200	.085
1/4					150	50	.060	.150		
3/8					155	40	.075	.175		
1/2					162	30	.115	.200	400	.090

Metric

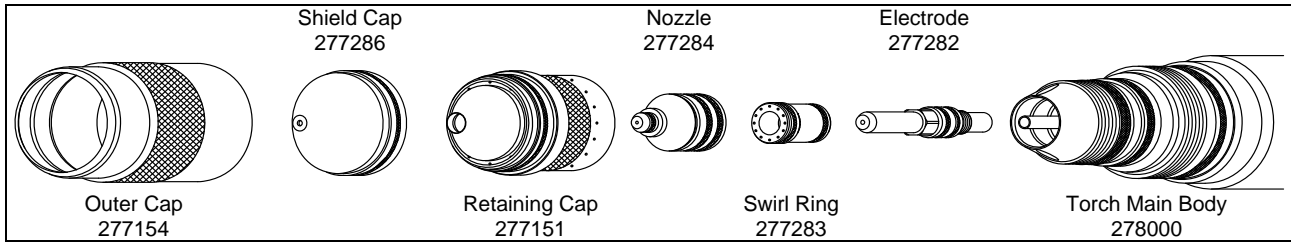
Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
2	25	76	25	76	129	6400	1.2	2.5	100	2.0
3					134	4420	1.7			
5					145	1920	2.3	3.2	200	2.2
6					148	1440	1.7	3.6		
10					156	975	2.0	4.5		
12					160	820	2.6	4.9	400	2.3

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	135	250 6350	.096 2.4	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
(Revised 2/25/08)

Aluminum
100 Amps – Air Plasma / Nitrogen Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	25	80	26	80	145	105	.155	.200	200	.095
3/8					156	90	.180	.250	300	.098
1/2					157	70	.195	.275	400	.100

Metric

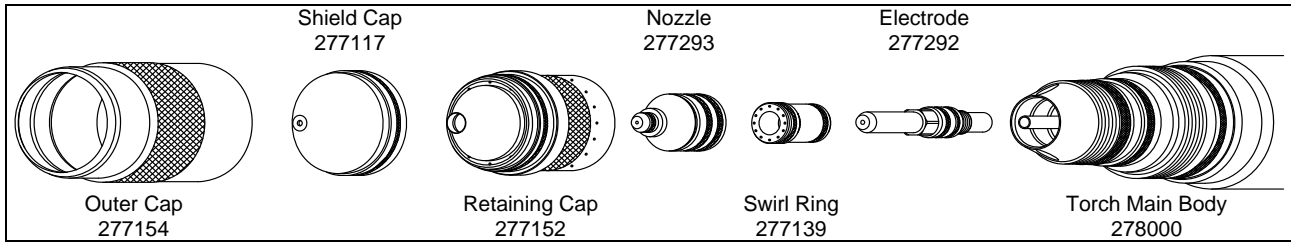
Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	25	80	26	80	143	2710	3.8	4.9	200	2.4
10					156	2210	4.6	6.4	400	2.5
12					156	1890	4.9	6.8		

Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Travel Speed		Marking Height		Initial Height		Pierce Time	
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)	
All Thicknesses			N/A	25	25	N/A	130	250	6350	.100	2.5	.100	2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
(Revised 2/25/08)

Aluminum
150 Amps – Air Plasma / Nitrogen Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	20	71	50	69	145	145	.130	.225	400	.125
3/8					155	115	.185		500	
1/2					165	90	.230	.275	600	.130
5/8					170	65	.250		800	
3/4					45	.250	.325	1000	.140	

Metric

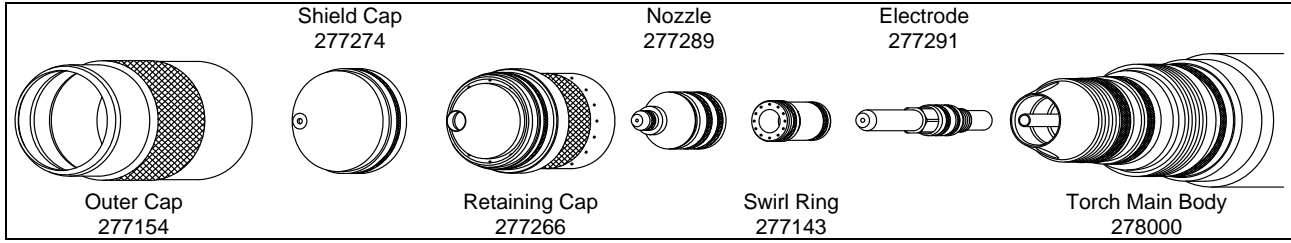
Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	20	71	50	69	143	3770	3.1	5.5	400	3.2
10					156	2825	4.8	7.0	600	
12					162	2430	5.5		6.4	1000
16					170	1630	8.6	3.6		
20					170	990				

Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Travel Speed		Marking Height		Initial Height		Pierce Time	
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)	
All Thicknesses			N/A	25	25	N/A	135	250	6350	.100	2.5	.100	2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
(Revised 2/25/08)

Aluminum
200 Amps – Air Plasma / Nitrogen Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	20	74	58	72	150	190	.135	.200	200	.150
3/8					155	145	.140	.250	300	
1/2						110	.135	.300	400	.155
5/8					95	.150	.350	500		
3/4					65	.150	.350	600	.160	
1.0 ***					175	35	.200	.200	1000 **	.170

Metric

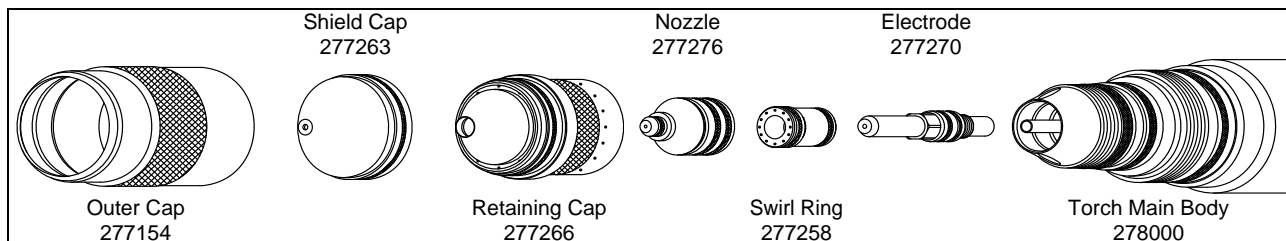
Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	20	74	58	72	149	4955	3.3	4.9	200	3.8
10					155	3545	3.5	6.5	400	
12						2995	3.4	7.3		
16					160	2380	3.9	8.9	600	3.9
20					162	1575	3.9	8.9		
25 ***					174	940	5.0	5.3	1000 **	4.3

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	120	250 6350	.100 2.5	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
 ** See "Piercing Thick Materials" in Section 4
 *** Edge start recommended
 (Revised 2/25/08)

Aluminum 275 Amps – Air Plasma / Nitrogen Shield



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)	
3/8	20	73	65	75	160	160	.160	.250	400	.160	
1/2					165	125	.180	.275	500		
5/8					168	105	.190	.300	600		
3/4					172	85	.200	.325	800	.165	
1 ***					180	60	.240	.240	1000 **		.170
1.25 ***					185	45	.260	.260			
1.5 ***	190	25	.270	.270	.180						

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
10	20	73	65	75	160	3930	4.1	6.4	500	4.1
12					163	3375	4.4	6.8		
16					168	2645	4.8	7.6		
20					173	2055	5.3	8.3	800	4.2
25 ***					179	1565	6.0	6.2		
32 ***					185	1120	6.6	6.6		
38 ***					189	645	6.8	6.8	4.6	

Marking

Material Thickness			Preflow	Plasma	Shield	Postflow	Arc Voltage	Travel Speed		Marking Height		Initial Height		Pierce Time
(ga)	(in)	(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(mm/min)	(in)	(mm)	(in)	(mm)	(msec)
All Thicknesses			N/A	25	25	N/A	108	250	6350	.100	2.5	.100	2.5	0

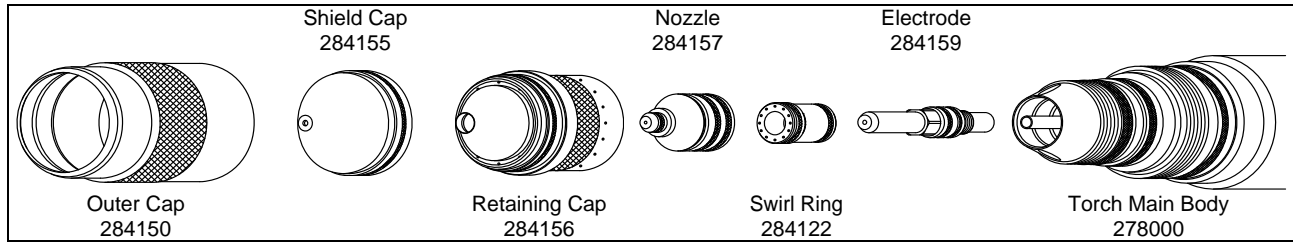
* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking

** See "Piercing Thick Materials" in Section 4

*** Edge start recommended

(Revised 2/25/08)

**Aluminum
400 Amps – Nitrogen Plasma / Air Shield**



Imperial

Material Thickness (in)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/2	30	85	63	96	175	150	.170	.300	600	.200
5/8					180	125	.190	.325	700	.205
3/4					185	100	.205	.350	800	.210
1					190	75	.215	.500	1200 **	
1.25					200	55	.220	.625	1500 **	.225
1.5					205	35	.225	.650	1800 **	.240

Metric

Material Thickness (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
12	30	85	63	96	173	3950	4.1	7.4	600	.200
16					180	3150	4.8	8.3	800	.210
20					185	2445	5.2	9.4	1200 **	
25					189	1945	5.4	12.4	1500 **	.225
32					200	1375	5.6	16.0	1800 **	.240
38					204	895	5.6	16.4	1800 **	

Marking

Material Thickness (ga) (in) (mm)	Preflow (psi)	Plasma (psi)	Shield (psi)	Postflow (psi)	Arc Voltage (volts)	Travel Speed (ipm) (mm/min)	Marking Height (in) (mm)	Initial Height (in) (mm)	Pierce Time (msec)
All Thicknesses	N/A	25	25	N/A	106	250 6350	.100 2.5	.100 2.5	0

* Use an arc transfer height (ignition height) of .100" (2.5 mm) for cutting and marking
 ** See "Piercing Thick Materials" in Section 4
 (Revised 2/25/08)