Cutting Charts

The cutting charts shown on the following pages are intended to give the operator the best starting point to use when making a cut on a particular material type and thickness. Small adjustments may have to be made to achieve the best cut. Also, remember that the arc voltage must be increased as the electrode wears in order to maintain the correct cutting height.

Cutting Chart Index

Material	Process	Current	Plasma Gas	Shield Gas	Copper Electrode
Mild Steel	Cutting	30 Amps	Oxygen	Oxygen	4-8
Mild Steel	Cutting	50 Amps	Oxygen	Oxygen or Air	4-9
Mild Steel	Cutting	70 Amps	Oxygen	Air	4-10
Mild Steel	Cutting	100 Amps	Oxygen	Air	4-11
Mild Steel	Cutting	150 Amps	Oxygen	Air	4-12
Stainless Steel	Cutting	30 Amps	Air	Air	4-13
Stainless Steel	Cutting	50 Amps	Air	Nitrogen	4-14
Stainless Steel	Cutting	70 Amps	H17	Nitrogen	4-15
Stainless Steel	Cutting	70 Amps	Air	Nitrogen	4-16
Stainless Steel	Cutting	100 Amps	H17	Nitrogen	4-17
Stainless Steel	Cutting	100 Amps	Air	Nitrogen	4-18
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Aluminum	Cutting	30 Amps	Air	Nitrogen	4-21
Aluminum	Cutting	50 Amps	Air	Nitrogen	4-22
Aluminum	Cutting	70 Amps	Air	Nitrogen	4-23
Aluminum	Cutting	100 Amps	Air	Nitrogen	4-24
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Mild Steel	Marking	10 Amps	Nitrogen	Nitrogen	4-26
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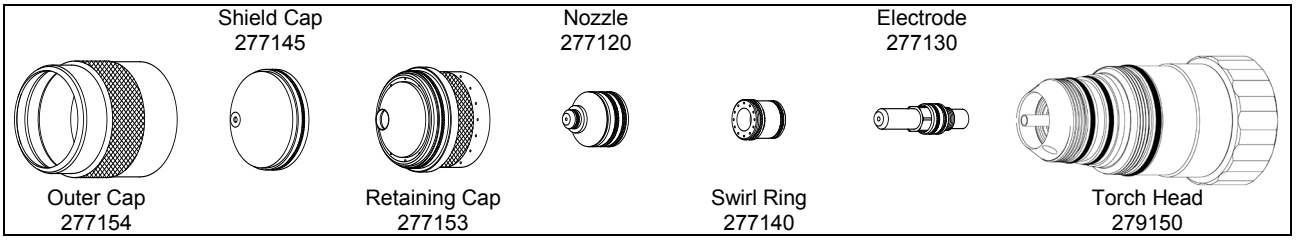
Aluminum	Marking	10 Amps	Nitrogen	Nitrogen	4-27

Mild Steel - 30 Amps – Oxygen Plasma / Oxygen Shield
Copper Electrode



Imperial

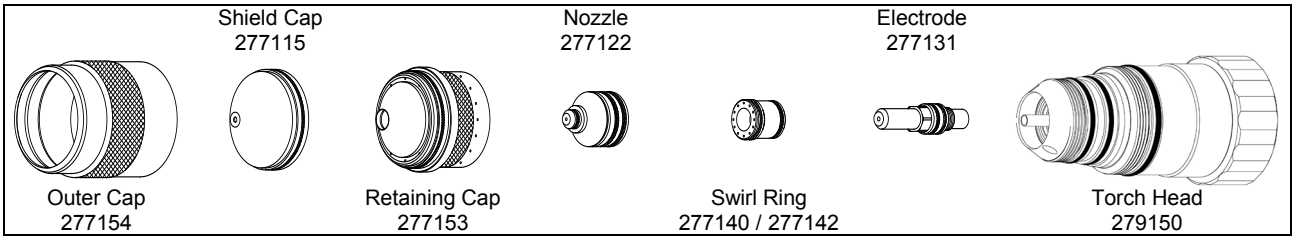
Material Thickness		Preflow Air	Plasma Oxygen	Shield Oxygen	Postflow Air	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(ga)	(in)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(in)	(in)	(msec)	(in)
20	.036	35	85	6	2	120	105	.080	.110	100	.062
18	.048					121	97	.090			
16	.060					125	78	.105		200	.065
14	.075					126	65				
12	.105					127	55				.070
11	.120					129	50	.120	.125	300	
10	.135					131	40				

Metric

Material Thickness	Preflow Air	Plasma Oxygen	Shield Oxygen	Postflow Air	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(mm/m)	(mm)	(mm)	(msec)	(mm)
1	35	85	6	2	120	2615	2.0	2.8	100	1.6
1.5					124	2020	2.6		200	1.7
2					126	1615	2.7			
2.5						1455				1.8
3					128	1285	2.9	3.1	300	

1. Revised on 01/18/2011

Mild Steel - 50 Amps – Oxygen Plasma / Oxygen or Air Shield
Copper Electrode



Imperial

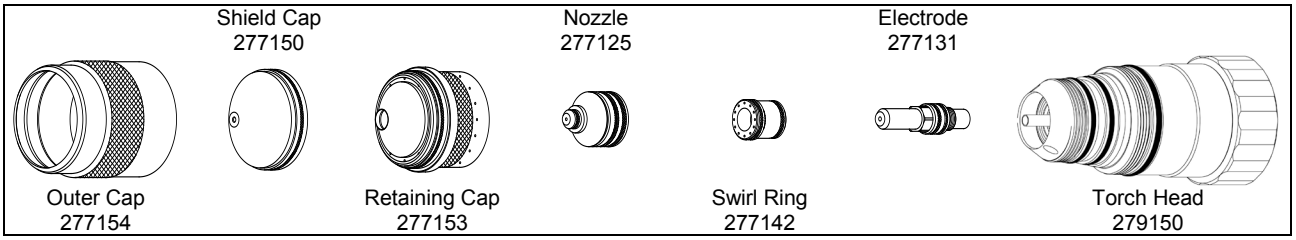
Material Thickness (ga)	Material Thickness (in)	Preflow Air (psi)	Plasma Oxygen (psi)	Shield O_2 or Air (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
Cold-Rolled Steel – Oxygen Shield – Swirl Ring 277140											
12	.105	25	74	12	1	123	70	.120	.135	100	.075
11	.120					126	60	.125		200	.078
10	.135					128	50	.135			
Hot-Rolled Steel – Air Shield – Swirl Ring 277142											
14	.075	25	74	19	1	106	200	.100	.135	100	.075
12	.105						190				
	.125						180			200	.080
10	.135					110	170	.110			
	3/16					113	105	.140	.200	300	.085
	1/4					117	75		.225	400	.087

Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Oxygen (psi)	Shield O_2 or Air (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
Cold-Rolled Steel – Oxygen Shield – Swirl Ring 277140										
2.5	25	74	12	1	121	1895	2.9	3.4	100	1.9
3					125	1555	3.1		200	2.0
Hot-Rolled Steel – Air Shield – Swirl Ring 277142										
2.5	25	74	19	1	106	4885	2.5	3.4	100	1.9
3						4660			200	2.0
5					113	2555	3.6	5.1	400	2.2
6					116	2075		5.5		

1. Revised on 01/18/2011

Mild Steel - 70 Amps – Oxygen Plasma / Air Shield
Copper Electrode



Imperial

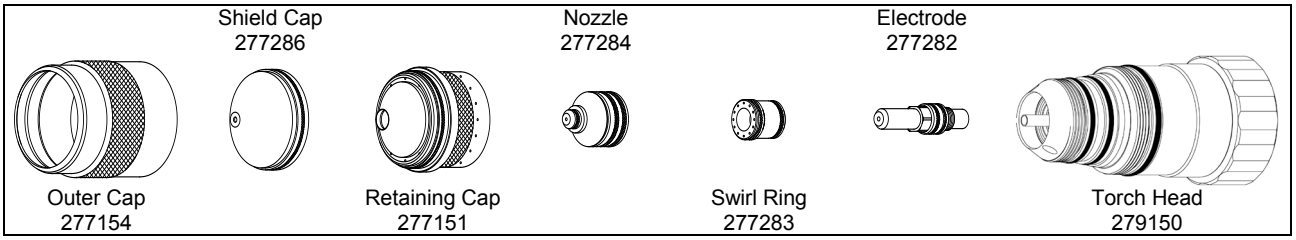
Material Thickness (in)	Preflow Air (psi)	Plasma Oxygen (psi)	Shield Air (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/8	25	80	35	2	110	190	.100	.150	100	.080
3/16			40		113	130		.200	200	
1/4					116	120	.110	.225	300	.085
3/8					122	75	.140	.250	400	

Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Oxygen (psi)	Shield Air (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
3	25	80	35	2	109	4995	2.5	3.6	100	2.0
5			40		113	3265		5.1	300	
6					115	3105	2.7	5.5		2.2

1. Revised on 01/18/2011

Mild Steel - 100 Amps – Oxygen Plasma / Air Shield
Copper Electrode



Imperial

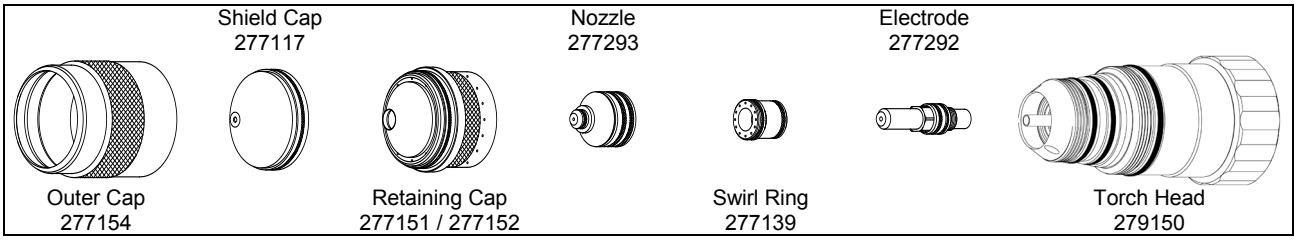
Material Thickness (in)	Preflow Air (psi)	Plasma Oxygen (psi)	Shield Air (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	25	94	26	0	125	150	.090	.200	300	.090
3/8					130	100	.130	.250	400	
1/2						65	.155	.300	500	
5/8					143	47	.185	.325	800	.095
3/4					145	35		.350	1000	

Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Oxygen (psi)	Shield Air (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	25	94	26	0	124	3950	2.1	4.9	300	2.3
10					130	2405	3.3	6.5	500	
12						1850	3.7	7.3		
16					143	1180	4.7	8.3	1000	2.4
20					145	800		9.0		

* Use an arc transfer height (ignition height) of .200" (4.9 mm)
1. Revised on 01/18/2011

Mild Steel - 150 Amps – Oxygen Plasma / Air Shield
Copper Electrode



Imperial

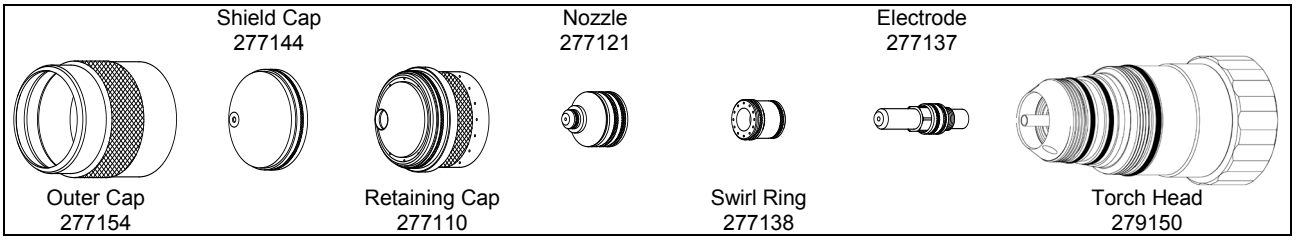
Material Thickness (in)	Preflow Air (psi)	Plasma Oxygen (psi)	Shield Air (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
Retaining Cap 277151										
1/4	20	74	30	0	118	165	.105	.200	300	.125
3/8					123	125	.135	.250	400	
1/2					125	90	.140	.300	500	.130
Retaining Cap 277152										
5/8	20	74	45	0	127	70	.140	.325	600	.130
3/4					130	55		.350	1000	.135
1					134	40	.150	.400	1500	.140
1.25 **					145	25	.200	.350		
1.5 **					155	15	.225			

Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Oxygen (psi)	Shield Air (psi)	Postflow Air (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	74	30	0	117	4305	2.6	4.9	300	3.2
10					123	3040	3.4	6.5	500	
12					124	2485	3.5	7.3		3.3
Retaining Cap 277152										
16	20	74	45	0	127	1760	3.6	8.3	1000	3.3
20					130	1340		9.0	1500	3.4
25					133	1040	3.7	10.1		3.6
32 **					145	625	5.1	8.9		
38 **					154	385	5.6	8.9		

* Use an arc transfer height (ignition height) of .200" (4.9 mm)
** Edge start recommended
1. Revised on 01/18/2011

Stainless Steel - 30 Amps – Air Plasma / Air Shield
Copper Electrode



Imperial

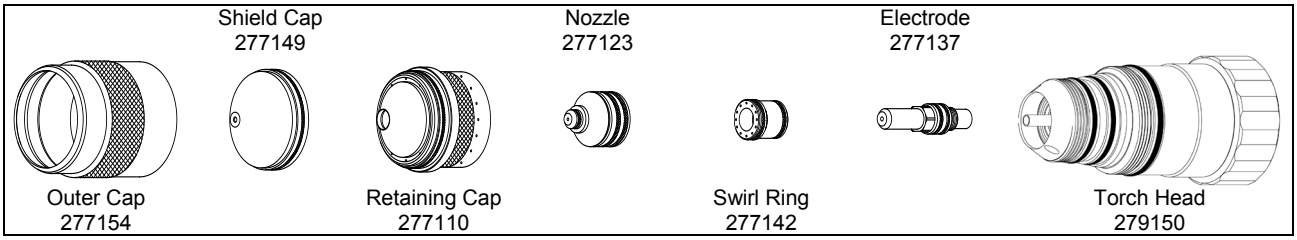
Material Thickness		Preflow Air	Plasma Air	Shield Air	Postflow Air	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(ga)	(in)	(psi)	(psi)	(psi)	(psi)	(volts)	(ipm)	(in)	(in)	(msec)	(in)
20	.036	30	80	30	14	71	200	.020	.050	100	.065
18	.048						165	.035			
16	.060					74	125			200	.068
14	.075					75	90	.025			.070

Metric

Material Thickness	Preflow Air	Plasma Air	Shield Air	Postflow Air	Arc Voltage	Travel Speed	Cutting Height	Pierce Height	Pierce Time	Kerf Width
(mm)	(psi)	(psi)	(psi)	(psi)	(volts)	(mm/m)	(mm)	(mm)	(msec)	(mm)
1	30	80	30	14	71	4855	0.6	1.3	100	1.7
1.5					73	3260	0.9		200	

* Use an arc transfer height (ignition height) of .050" (1.3 mm)
1. Revised on 01/18/2011

Stainless Steel - 50 Amps – Air Plasma / Nitrogen Shield
Copper Electrode



Imperial

Material Thickness (ga)	Material Thickness (in)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
14	.075	30	70	40	4	87	105	.035	.070	100	.105
12	.105					88	75				
11	.120					89	65			200	
10	.135					90	55				.110
	3/16					94	50	.040	.080	300	
	1/4					100	40	.060	.125	400	.115

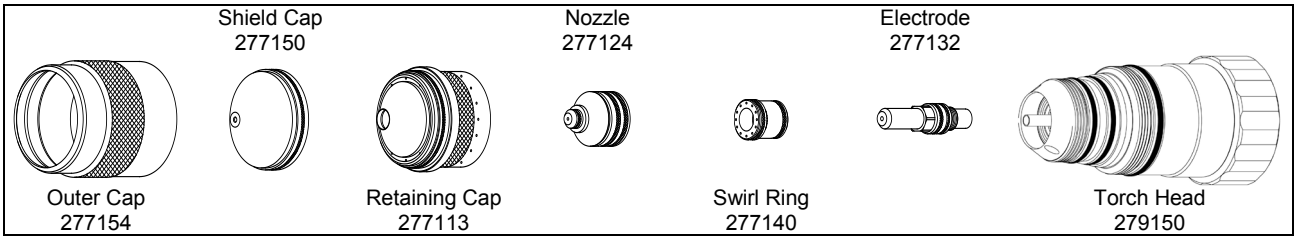
Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
2	30	70	40	4	87	2565	.9	1.8	100	2.7
2.5						2080				
3					88	1685			200	
5					94	1235	1.0	2.1	400	2.8
6					98	1075	1.3	2.9		2.9

* Use an arc transfer height (ignition height) of .070" (1.8 mm)
1. Revised on 01/18/2011

Stainless Steel - 70 Amps – H17 Plasma / Nitrogen Shield
Copper Electrode

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



Imperial

Material Thickness (in)	Preflow Nitrogen (psi)	Plasma H17 (psi)	Shield Nitrogen (psi)	Postflow Nitrogen (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	300	.090

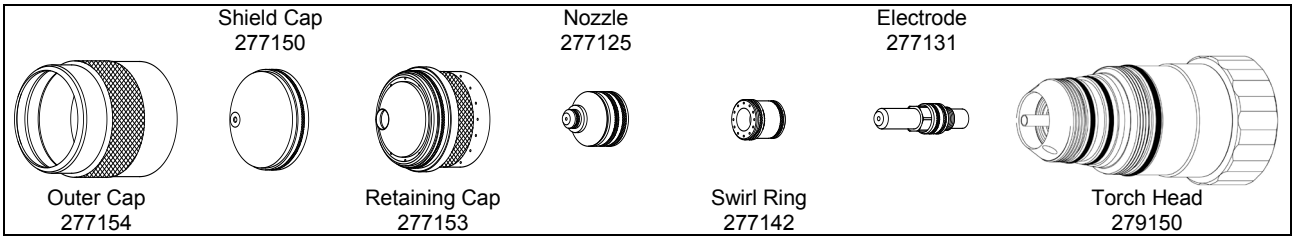
Metric

Material Thickness (mm)	Preflow Nitrogen (psi)	Plasma H17 (psi)	Shield Nitrogen (psi)	Postflow Nitrogen (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	300	2.3

H17=17.5% Hydrogen / 32.5% Argon / 50.0% Nitrogen
* Use an arc transfer height (ignition height) of .150" (3.8 mm)
1. Revised on 01/18/2011

Stainless Steel - 70 Amps – Air Plasma / Nitrogen Shield
Copper Electrode

This gas combination gives medium cut quality and minimum dross levels



Imperial

Material Thickness (ga)	Material Thickness (in)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
10	.135	25	80	25	2	132	120	.060	.150	200	.085
	3/16					134	100	.070	.200	300	
	1/4					140	75	.090	.225	400	.090
	3/8					148	50	.120	.250	500	

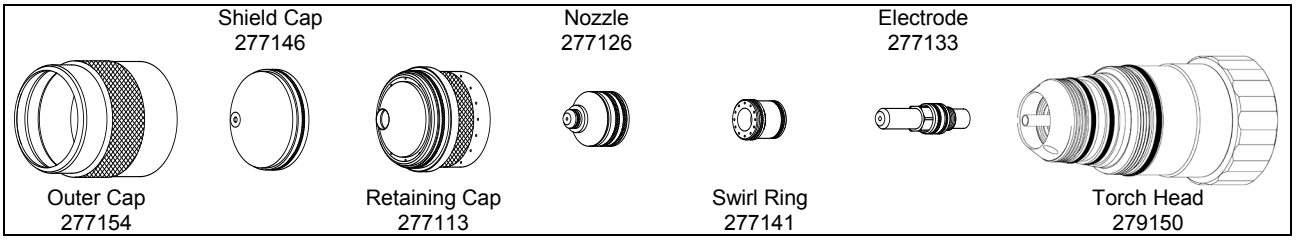
Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
3	25	80	25	2	131	3210	1.4	3.3	200	2.2
5					134	2445	1.8	5.1	400	
6					138	2050	2.1	5.5		2.3

* Use an arc transfer height (ignition height) of .150" (3.3 mm)
1. Revised on 01/18/2011

Stainless Steel - 100 Amps – H17 Plasma / Nitrogen Shield
Copper Electrode

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



Imperial

Material Thickness (in)	Preflow Nitrogen (psi)	Plasma H17 (psi)	Shield Nitrogen (psi)	Postflow Nitrogen (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
3/16	28	67	46	13	138	115	.105	.200	300	.100
1/4					140	100	.125	.225	400	.105
3/8					152	65	.180	.250	500	

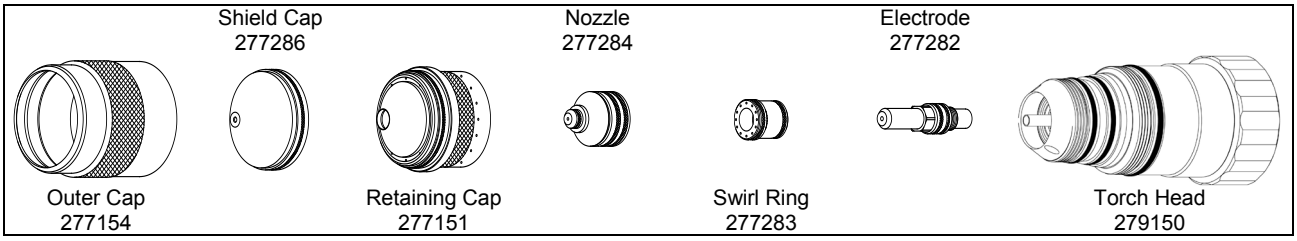
Metric

Material Thickness (mm)	Preflow Nitrogen (psi)	Plasma H17 (psi)	Shield Nitrogen (psi)	Postflow Nitrogen (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
5	28	67	46	13	138	2865	2.7	5.1	400	2.5
6					139	2625	3.0	5.5		2.7

H17=17.5% Hydrogen / 32.5% Argon / 50.0% Nitrogen
* Use an arc transfer height (ignition height) of .200" (5.1 mm)
1. Revised on 01/18/2011

Stainless Steel - 100 Amps – Air Plasma / Nitrogen Shield
Copper Electrode

This gas combination gives medium cut quality and minimum dross levels



Imperial

Material Thickness (in)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	25	94	35	0	141	100	.135	.225	400	.092
3/8					147	80	.170	.250	500	.095
1/2					154	55	.210	.300	600	

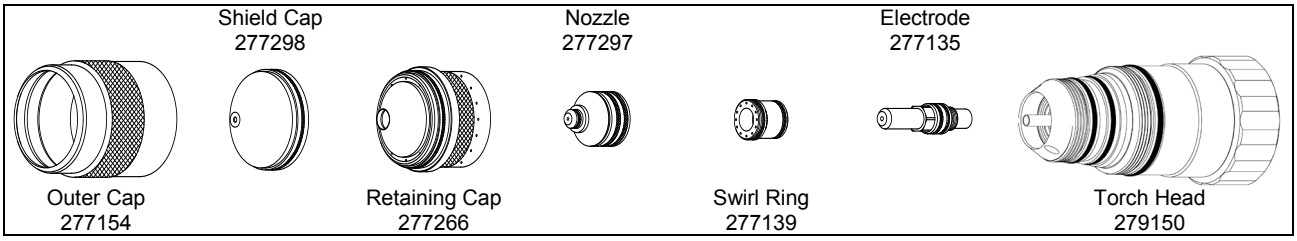
Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	25	94	35	0	140	2595	3.2	5.6	400	2.3
10					148	1935	4.4	6.5	600	2.4
12					152	1540	5.0	7.3		

* Use an arc transfer height (ignition height) of .200" (5.1 mm)
1. Revised on 01/18/2011

Stainless Steel - 150 Amps – H17 Plasma / Nitrogen Shield
Copper Electrode

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



Imperial

Material Thickness (in)	Preflow Nitrogen (psi)	Plasma H17 (psi)	Shield Nitrogen (psi)	Postflow Nitrogen (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	25	81	75	13	165	95	.250	.250	400	.135
3/8						75	.150	.275	500	
1/2						60	.165	.300	600	.140
5/8						50	.185	.325	800	
3/4						40	.250	.350	1200	.145

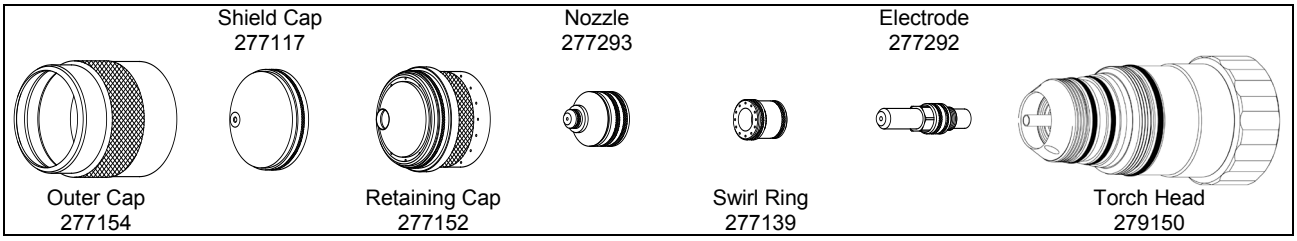
Metric

Material Thickness (mm)	Preflow Nitrogen (psi)	Plasma H17 (psi)	Shield Nitrogen (psi)	Postflow Nitrogen (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
10	25	81	75	13	155	1845	3.8	7.0	600	3.4
12						1610	4.1	7.4		3.6
16						1260	4.7	8.3	800	
20					167	940	6.9	9.0	1200	3.7

H17=17.5% Hydrogen / 32.5% Argon / 50.0% Nitrogen
* Use an arc transfer height (ignition height) of .200" (5.1 mm)
1. Revised on 01/18/2011

Stainless Steel - 150 Amps – Air Plasma / Nitrogen Shield
Copper Electrode

This gas combination gives medium cut quality and minimum dross levels



Imperial

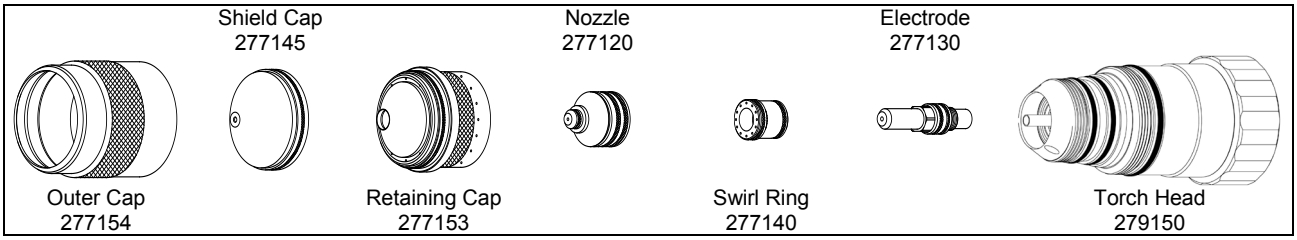
Material Thickness (in)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	25	75	70	0	145	150	.160	.250	400	.125
3/8					150	115	.180	.275	500	
1/2					155	85	.210	.300	600	.130
5/8					160	60	.220	.325	800	
3/4					168	45	.240	.350	1200	.135

Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	25	75	70	0	144	3910	4.0	6.3	400	3.2
10					150	2805	4.7	7.0	600	
12					153	2330	5.1	7.4		3.3
16					160	1510	5.6	8.3	800	
20					170	1030	6.2	9.0	1200	3.4

* Use an arc transfer height (ignition height) of .200" (5.1 mm)
1. Revised on 01/18/2011

Aluminum - 30 Amps – Air Plasma / Nitrogen Shield
Copper Electrode



Imperial

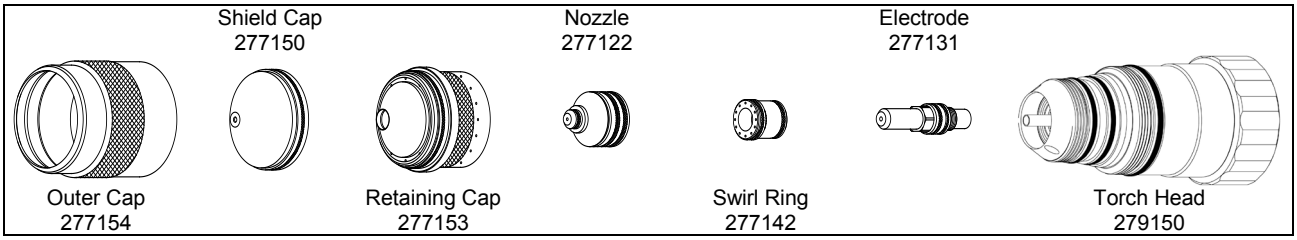
Material Thickness (in)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
.040	30	92	20	2	135	150	.030	.100	100	.065
.050						120				
.063						90		.150	200	.070

Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
1	30	92	20	2	135	3885	0.8	2.5	100	1.7
1.5						2520		3.4	200	1.8

* Use an arc transfer height (ignition height) of .100" (2.5 mm)
1. Revised on 01/18/2011

Aluminum - 50 Amps – Air Plasma / Nitrogen Shield
Copper Electrode



Imperial

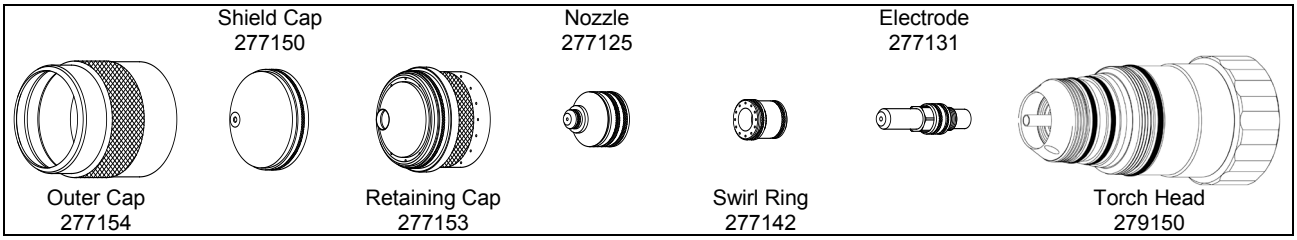
Material Thickness (in)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
.050	25	74	19	1	135	180	.050	.100	100	.080
.063					138	140	.065		150	.082
.080					143	90	.075	.150	200	.085

Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
1.5	25	74	19	1	137	3870	1.5	2.5	150	2.1
2.0					142	2360	1.8	3.7	200	2.2

* Use an arc transfer height (ignition height) of .100" (2.5 mm)
1. Revised on 01/18/2011

Aluminum - 70 Amps – Air Plasma / Nitrogen Shield
Copper Electrode



Imperial

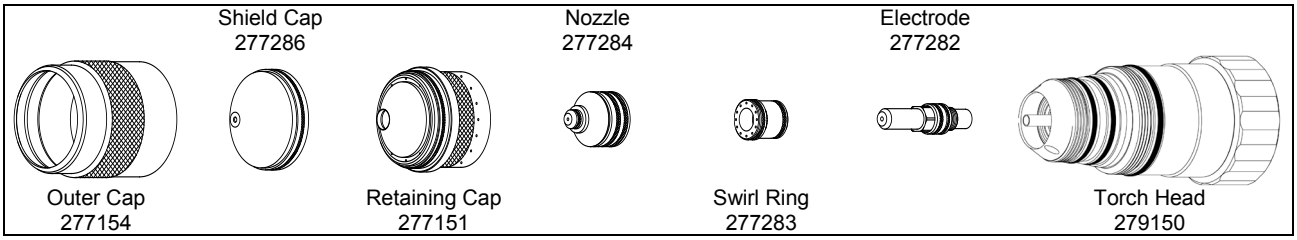
Material Thickness (in)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
.080	25	80	25	2	130	250	.050	.150	100	.080
1/8					135	160	.070	.175		
3/16					145	80	.100	.200	200	.085
1/4					150	50	.060	.250	300	
3/8					155	40	.075	.275	400	.090
1/2					162	30	.115	.300	500	

Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
2	25	80	25	2	129	6400	1.2	3.7	100	2.0
3					134	4420	1.7	4.3		
5					145	1920	2.3	5.2	300	2.2
6					148	1440	1.7	6.1		
10					156	975	2.0	7.0	500	2.3
12					160	820	2.6	7.4		

* Use an arc transfer height (ignition height) of .150" (3.7 mm)
1. Revised on 01/18/2011

Aluminum - 100 Amps – Air Plasma / Nitrogen Shield
Copper Electrode



Imperial

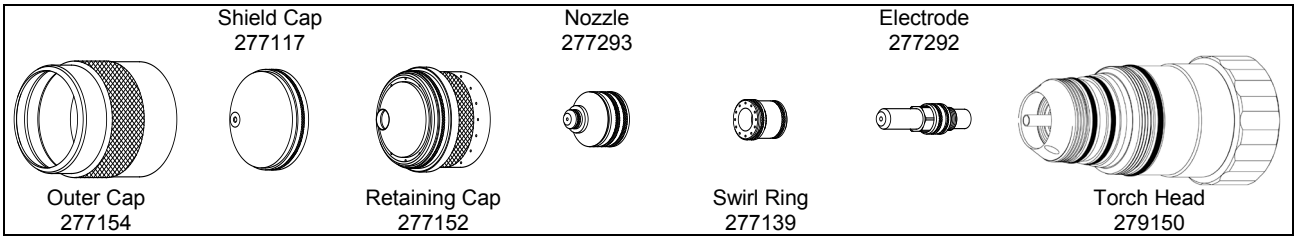
Material Thickness (in)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	25	94	26	0	158	105	.155	.250	300	.095
3/8					162	90	.180	.275	400	.098
1/2					165	70	.195	.300	500	.100

Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	25	94	26	0	158	2710	3.8	6.3	300	2.4
10					162	2210	4.6	7.0	500	2.5
12					165	1890	4.9	7.4		

* Use an arc transfer height (ignition height) of .250" (6.3 mm)
1. Revised on 01/18/2011

Aluminum - 150 Amps – Air Plasma / Nitrogen Shield
Copper Electrode



Imperial

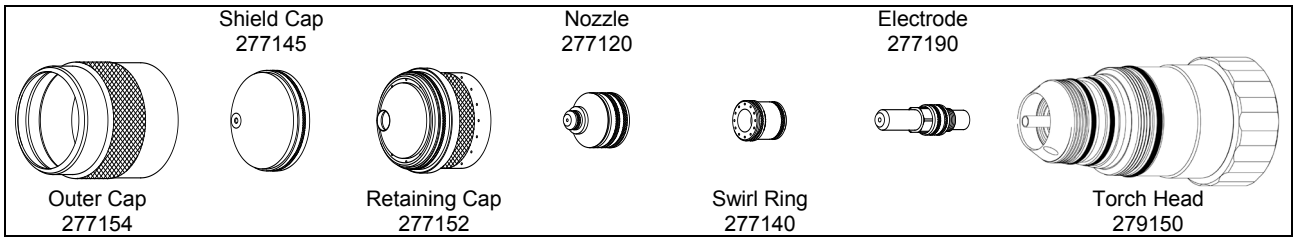
Material Thickness (in)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Cutting Height (in)	Pierce Height (in)	Pierce Time (msec)	Kerf Width (in)
1/4	25	75	50	1	145	145	.130	.250	400	.125
3/8					155	115	.185	.275	500	
1/2					165	90	.230	.300	600	.130
5/8					170	65	.250	.325	800	.135
3/4						45		.350	1200	.140

Metric

Material Thickness (mm)	Preflow Air (psi)	Plasma Air (psi)	Shield Nitrogen (psi)	Postflow Air (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Cutting Height (mm)	Pierce Height (mm)	Pierce Time (msec)	Kerf Width (mm)
6	25	75	50	1	143	3770	3.1	6.3	400	3.2
10					156	2825	4.8	7.0	600	
12					162	2430	5.5	7.4		3.3
16					170	1630	6.4	8.3	1200	3.4
20					170	990		9.0		3.6

* Use an arc transfer height (ignition height) of .250" (6.3 mm)
1. Revised on 01/18/2011

Mild Steel Marking - 10 Amps – Nitrogen Plasma / Nitrogen Shield Copper Electrode



Imperial

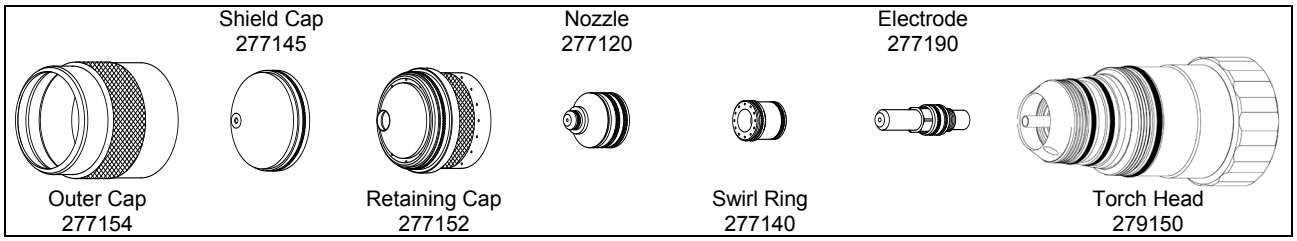
Material Thickness (in)	Preflow (Air) (psi)	Plasma (Nitrogen) (psi)	Shield (Nitrogen) (psi)	Postflow (Air) (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Marking Height (in)	Initial Height (in)	Pierce Time (msec)
All Thicknesses	28	28	28	2	145	250	.177	.100	0

Metric

Material Thickness (mm)	Preflow (Air) (psi)	Plasma (Nitrogen) (psi)	Shield (Nitrogen) (psi)	Postflow (Air) (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Marking Height (mm)	Initial Height (mm)	Pierce Time (msec)
All Thicknesses	28	28	28	2	145	6350	4.5	2.5	0

1. Revised on 10/12/07

Stainless Steel Marking - 10 Amps – Nitrogen Plasma / Nitrogen Shield Copper Electrode



Imperial

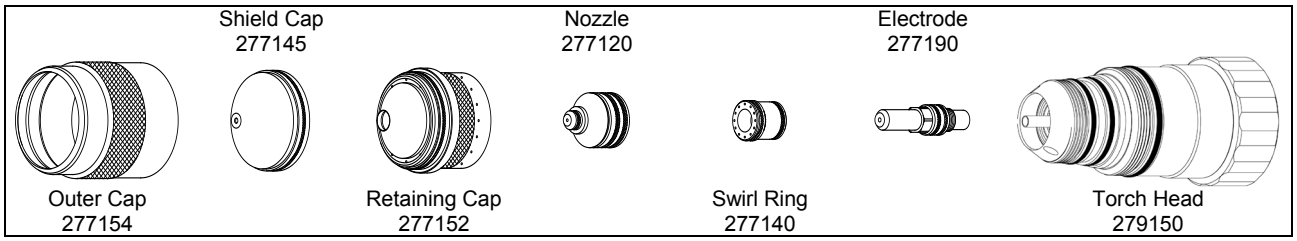
Material Thickness (in)	Preflow (Air) (psi)	Plasma (Nitrogen) (psi)	Shield (Nitrogen) (psi)	Postflow (Air) (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Marking Height (in)	Initial Height (in)	Pierce Time (msec)
All Thicknesses	28	28	28	2	145	250	.177	.100	0

Metric

Material Thickness (mm)	Preflow (Air) (psi)	Plasma (Nitrogen) (psi)	Shield (Nitrogen) (psi)	Postflow (Air) (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Marking Height (mm)	Initial Height (mm)	Pierce Time (msec)
All Thicknesses	28	28	28	2	145	6350	4.5	2.5	0

1. Revised on 10/12/07

Aluminum Marking - 10 Amps – Nitrogen Plasma / Nitrogen Shield Copper Electrode



Imperial

Material Thickness (in)	Preflow (Air) (psi)	Plasma (Nitrogen) (si)	Shield (Nitrogen) (psi)	Postflow (Air) (psi)	Arc Voltage (volts)	Travel Speed (ipm)	Marking Height (in)	Initial Height (in)	Pierce Time (msec)
All Thicknesses	28	28	28	2	145	250	.177	.100	0

Metric

Material Thickness (mm)	Preflow (Air) (psi)	Plasma (Nitrogen) (psi)	Shield (Nitrogen) (psi)	Postflow (Air) (psi)	Arc Voltage (volts)	Travel Speed (mm/m)	Marking Height (mm)	Initial Height (mm)	Pierce Time (msec)
All Thicknesses	28	28	28	2	145	6350	4.5	2.5	0

1. Revised on 10/12/07

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