

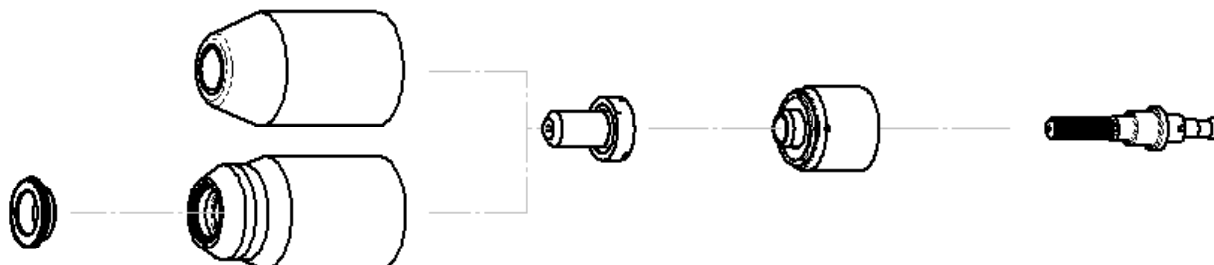
CUTMASTER A40, A60

4T.08 Recommended Cutting Speeds for Machine and Automated Torches With Exposed Tip

Mild Steel

40A

Air Plasma / Air Shield



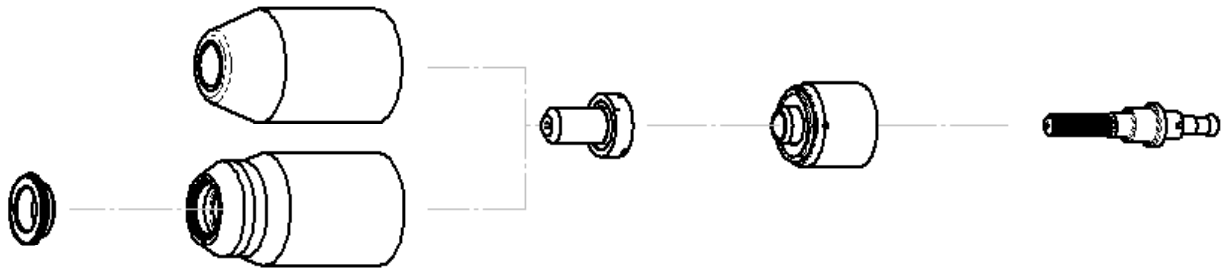
Deflector	Standard Shield Cup Maximum Life Shield Cup	Tip	Starter Cartridge	Electrode
9-8243	9-8218 9-8237	9-8208	9-8213	9-8232

Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)
20		0.036	70 (25') 75 (50')	101	0.14	160	0.18	0.0	0.05
16		0.060		103	0.14	140	0.18	0.0	0.05
14		0.075		105	0.14	120	0.18	0.1	0.06
12		0.105		108	0.14	80	0.18	0.2	0.06
10		0.135		110	0.14	60	0.18	0.3	0.06
	3/16	0.188		111	0.14	55	0.18	0.4	0.06
	1/4	0.250		117	0.14	40	0.18	0.5	0.07
	3/8	0.375		119	0.14	25	0.18	1.2	0.07
	1/2	0.500		120	0.14	15	0.2	2.0	0.07

Material Thickness		Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(mm)		Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1	4.8 (7.6m) 5.2 (15.2m)	4.8 (7.6m) 5.2 (15.2m)	101	3.6	3990	4.6	0.0	1.1
2			105	3.6	2920	4.6	0.1	1.4
3			109	3.6	1810	4.6	0.3	1.5
4			110	3.6	1470	4.6	0.3	1.6
5			112	3.6	1345	4.6	0.4	1.6
6			116	3.6	1100	4.6	0.5	1.7
8			118	3.6	815	4.6	1.0	1.7
10			119	3.6	595	4.6	1.5	1.8
12			120	3.6	435	5.1	2.0	1.8

BOLD TYPE indicates maximum piercing parameters.

**Stainless Steel
40A
Air Plasma / Air Shield**



Deflector			Standard Shield Cup Maximum Life Shield Cup		Tip	Starter Cartridge	Electrode		
9-8243			9-8218 9-8237		9-8208	9-8213	9-8232		
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)
18		0.050	75 (25') 80 (50')	110	0.19	60	0.20	0.00	0.07
16		0.063		100	0.19	50	0.20	0.00	0.07
14		0.078		105	0.19	45	0.20	0.10	0.07
12		0.109		110	0.19	40	0.20	0.20	0.07
10		0.141		108	0.19	35	0.20	0.30	0.07
	3/16	0.188		110	0.19	30	0.20	0.40	0.07
	1/4	0.250		120	0.19	18	0.20	0.50	0.08
	3/8	0.375		126	0.19	10	0.20	2.00	0.08
	1/2	0.500		118	0.19	8	Edge start		0.09
Material Thickness				Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.2 (7.6) 5.5 (15.2)	112	4.8	1670	4.8	0.0	1.7
2				105	4.8	1140	5.1	0.1	1.8
3				109	4.8	980	5.1	0.2	1.8
4				109	4.8	845	5.1	0.3	1.8
5				111	4.8	715	5.1	0.4	1.8
6				118	4.8	525	5.1	0.5	2.0
8				123	4.8	350	5.1	1.5	2.0
10				125	4.8	245	5.1	2.0	2.0
12				120	4.8	215	Edge Start		2.2

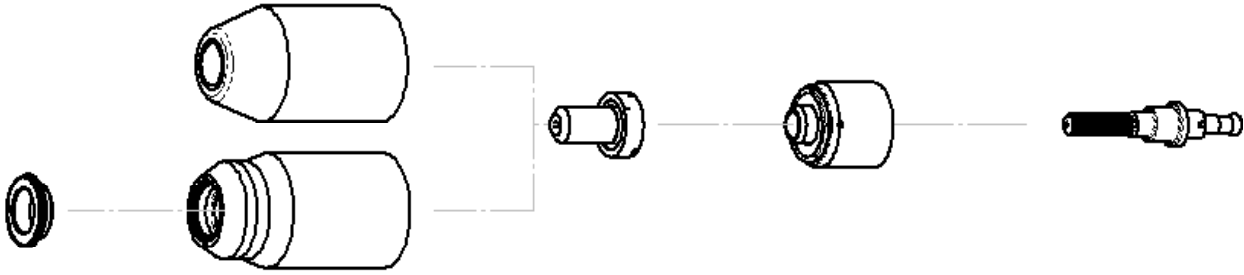
BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

Aluminum

CUTMASTER A40, A60

40A

Air Plasma / Air Shield



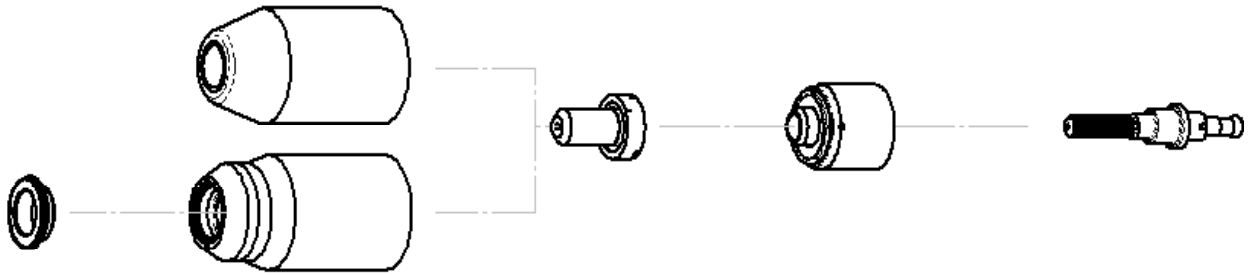
Deflector	Standard Shield Cup Maximum Life Shield Cup		Tip	Starter Cartridge	Electrode				
9-8243	9-8218 9-8237		9-8208	9-8213	9-8232				

Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed	
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)	
20		0.040	70 (25')	95	0.16	300	0.16	0.0	0.06	
16		0.063		97	0.16	170	0.16	0.0	0.06	
12		0.097		113	0.16	100	0.16	0.2	0.07	
11		0.125		115	0.16	90	0.18	0.3	0.07	
9		0.160		75 (50')	113	0.18	85	0.18	0.4	0.07
	3/16	0.188		116	0.18	75	0.18	0.5	0.07	
	1/4	0.250		128	0.18	30	0.18	1.0	0.08	
	3/8	0.375		150	0.18	10	Edge Start		0.09	

Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed	
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)	
1.0			4.8 (7.6m)	95	4.1	7620	4.1	0.0	1.5	
2.0				104	4.1	3500	4.1	0.2	1.6	
3.0				115	4.1	2350	4.6	0.3	1.7	
4.0				113	4.6	2170	4.6	0.4	1.7	
5.0				118	4.6	1740	4.6	0.5	1.8	
6.0				5.2 (15.2m)	125	4.6	1015	4.6	0.8	1.9
8.0				139	4.6	500	Edge Start		2.0	
10.0				153	4.6	180	Edge Start		2.2	

BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

**Mild Steel
60A
Air Plasma / Air Shield**



Deflector	Standard Shield Cup Maximum Life Shield Cup	Tip	Starter Cartridge	Electrode
9-8243	9-8218 9-8237	9-8210	9-8213	9-8232

Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)
16		0.060	85 (25') 90 (50')	118	0.19	290	0.19	0.00	0.08
14		0.075		120	0.19	285	0.19	0.10	0.08
11		0.120		118	0.19	180	0.19	0.10	0.08
10		0.135		119	0.19	176	0.19	0.10	0.07
	3/16	0.188		121	0.19	100	0.19	0.20	0.08
	1/4	0.250		122	0.19	80	0.19	0.30	0.08
	3/8	0.375		124	0.19	50	0.19	0.50	0.09
	1/2	0.500		132	0.19	26	0.19	0.75	0.10
	<i>5/8</i>	<i>0.625</i>		135	0.19	19	Edge Start		0.10
	<i>3/4</i>	<i>0.750</i>		136	0.19	14	Edge Start		0.08
	1	1.000	150	0.19	6	Edge Start		0.11	
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.9 (7.6m) 6.2 (15.2m)	115	4.8	7540	4.8	0	2.1
2				120	4.8	7015	4.0	0.10	1.9
3				118	4.8	4570	4.8	0.10	0.1
4				120	4.8	3650	4.8	0.20	1.9
5				121	4.8	2465	4.8	0.20	2.1
6				122	4.8	2145	4.8	0.30	2.0
8				123	4.8	1635	4.8	0.40	2.2
10				125	4.8	1180	4.8	0.60	2.4
12				130	4.8	795	4.8	0.75	2.4
15				134	4.8	530	Edge Start		2.4
20			138	4.8	325	Edge Start		2.2	
25			149	4.8	165	Edge Start		2.7	

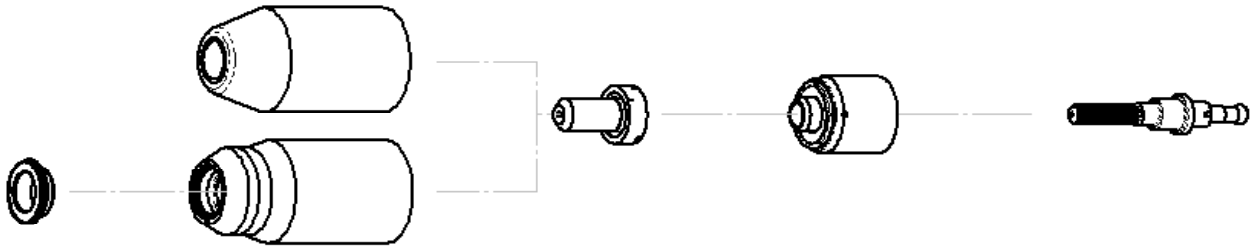
BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

CUTMASTER A40, A60

Stainless Steel

60A

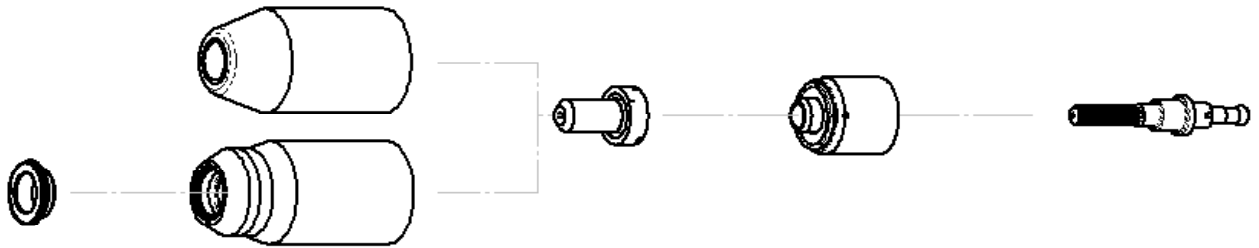
Air Plasma / Air Shield



Deflector	Standard Shield Cup Maximum Life Shield Cup		Tip	Starter Cartridge	Electrode					
9-8243	9-8218 9-8237		9-8210	9-8213	9-8232					
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed	
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)	
16		0.063	85 (25')	119	0.19	350	0.20	0.00	0.05	
14		0.078		116	0.19	300	0.20	0.10	0.07	
11		0.125		123	0.19	150	0.20	0.10	0.07	
10		0.141		118	0.19	125	0.20	0.10	0.08	
	3/16	0.188		122	0.19	90	0.20	0.20	0.08	
	1/4	0.250		90 (50')	123	0.19	65	0.20	0.30	0.09
	3/8	0.375		130	0.19	30	0.20	0.50	0.09	
	1/2	0.500		132	0.19	21	0.20	0.90	0.08	
	5/8	0.625		132	0.19	14	Edge Start		0.11	
	3/4	0.750		135	0.19	10	Edge Start		0.10	
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed	
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)	
1			5.9 (7.6m) 6.2 (15.2m)	124	4.8	10890	5.1	0.00	0.8	
2				116	4.8	7560	5.1	0.10	1.7	
3				122	4.8	4365	5.1	0.10	1.7	
4				119	4.8	2865	5.1	0.20	2.1	
5				122	4.8	2195	5.1	0.20	2.1	
6				123	4.8	1790	5.1	0.30	2.2	
8				127	4.8	1190	5.1	0.40	2.2	
10				130	4.8	725	5.1	0.50	2.2	
12				132	4.8	580	5.1	0.90	2.1	
15				132	4.8	405	Edge Start		2.6	
20			136	4.8	230	Edge Start		2.5		

BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

**Aluminum
60A
Air Plasma / Air Shield**



Deflector	Standard Shield Cup Maximum Life Shield Cup	Tip	Starter Cartridge	Electrode
9-8243	9-8218 9-8237	9-8210	9-8213	9-8232

Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)
16		0.064	85 (25') 90 (50')	123	0.25	440	0.25	0.00	0.08
14		0.079		126	0.25	300	0.25	0.10	0.09
11		0.120		128	0.25	250	0.25	0.10	0.09
	3/16	0.188		132	0.25	170	0.25	0.20	0.09
	1/4	0.250		132	0.25	85	0.25	0.30	0.09
	3/8	0.375		141	0.25	45	0.25	0.50	0.10
	1/2	0.500		148	0.25	30	0.25	0.80	0.09
	<i>5/8</i>	<i>0.625</i>		<i>145</i>	<i>0.19</i>	<i>18</i>	<i>Edge Start</i>		<i>0.08</i>
	3/4	0.750		147	0.19	12	<i>Edge Start</i>		0.10
Material Thickness				Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.9 (7.6m) 6.2 (15.2m)	118	6.4	17010	6.4	0.00	1.8
2				126	6.4	7680	6.4	0.10	2.3
3				128	6.4	6410	6.4	0.10	2.3
4				130	6.4	5230	6.4	0.20	2.3
5				132	6.4	4010	6.4	0.20	2.4
6				132	6.4	2640	6.4	0.30	2.4
8				137	6.4	1630	6.4	0.40	2.4
10				142	6.4	1085	6.4	0.60	2.4
12				146	6.4	845	6.4	0.70	2.3
15				<i>146</i>	<i>4.8</i>	<i>540</i>	<i>Edge Start</i>		<i>2.1</i>
20				148	4.8	260	<i>Edge Start</i>		2.5

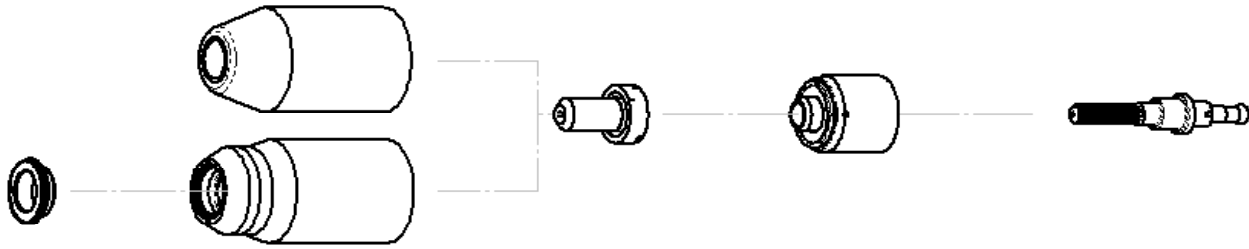
BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

CUTMASTER A40, A60

Mild Steel

80A

Air Plasma / Air Shield

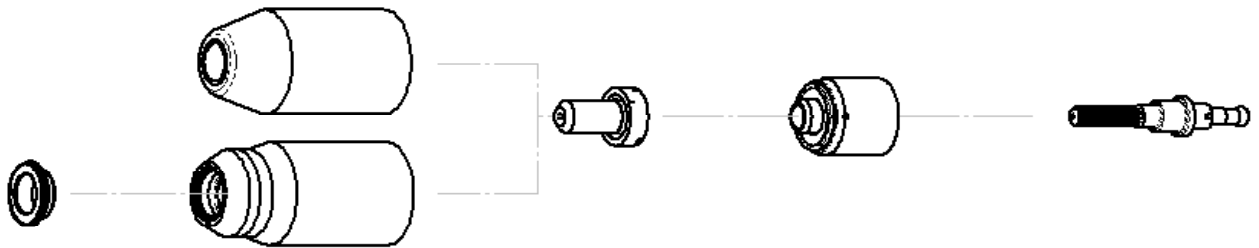


Deflector	Standard Shield Cup Maximum Life Shield Cup	Tip	Starter Cartridge	Electrode
9-8243	9-8218 9-8237	9-8211	9-8213	9-8232

Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)
16		0.060	85 (25') 90 (50')	110	0.19	320	0.20	0.00	0.06
11		0.120		113	0.19	230	0.20	0.10	0.07
10		0.135		110	0.19	180	0.20	0.20	0.07
	3/16	0.188		110	0.19	136	0.20	0.30	0.07
	1/4	0.250		115	0.19	100	0.20	0.40	0.09
	3/8	0.375		125	0.19	42	0.20	0.50	0.09
	1/2	0.500		123	0.19	40	0.20	0.60	0.09
	5/8	0.625		133	0.19	18	0.20	0.75	0.10
	3/4	0.750		140	0.25	18	Edge Start		0.11
	7/8	0.875		150	0.25	10	Edge Start		0.11
	1	1.000		152	0.25	8	Edge Start		0.13
Material Thickness				Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.9 (7.6m) 6.2 (15.2m)	109	4.8	8915	5.1	0.00	1.5
2				111	4.8	7415	5.1	0.10	1.7
3				113	4.8	5915	5.1	0.10	1.8
4				110	4.8	4095	5.1	0.30	1.7
5				111	4.8	3325	5.1	0.30	1.8
6				114	4.8	2745	5.1	0.40	2.2
8				120	4.8	1775	5.1	0.50	2.3
10				125	4.8	1060	5.1	0.50	2.3
12				123	4.8	1025	5.1	0.60	2.3
15				130	4.8	610	5.1	0.75	2.5
20				143	6.4	395	Edge Start		2.7
25				152	6.4	210	Edge Start		3.2

BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

**Stainless Steel
80A
Air Plasma / Air Shield**



Deflector			Standard Shield Cup Maximum Life Shield Cup		Tip	Starter Cartridge	Electrode			
9-8243			9-8218 9-8237		9-8211	9-8213	9-8232			
Material Thickness			Gas Pressure (Air)		Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)		Volts	(in)	(ipm)	(in)	(sec)	(in)
16		0.063	85 (25') 90 (50')		110	0.19	340	0.25	0.00	0.06
11		0.125			115	.0.19	300	0.25	0.10	0.06
10		0.141			115	0.19	280	0.25	0.10	0.06
	3/16	0.188			115	0.19	140	0.25	0.20	0.07
	1/4	0.250			118	0.19	100	0.25	0.30	0.08
	3/8	0.375			119	0.19	45	0.25	0.40	0.08
	1/2	0.500			124	0.19	26	0.25	0.80	0.10
	5/8	0.625			133	0.19	16	Edge Start		0.10
	3/4	0.750			136	0.19	10	Edge Start		0.11
Material Thickness					Gas Pressure (Air)		Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height
(mm)			Bar (torch lead length)		Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.9 (7.6m) 6.2 (15.2m)		108	4.8	9020	6.4	0.00	1.5
2					111	4.8	8380	6.4	0.00	1.5
3					114	4.8	7730	6.4	0.10	1.5
4					115	4.8	5865	6.4	0.20	1.6
5					115	4.8	3410	6.4	0.20	1.8
6					117	4.8	2765	6.4	0.30	1.9
8					119	4.8	1815	6.4	0.40	2.0
10					120	4.8	1070	6.4	0.60	2.1
12					123	4.8	765	6.4	0.80	2.3
15					131	4.8	475	Edge Start		2.5
20			137	4.8	205	Edge Start		3.0		

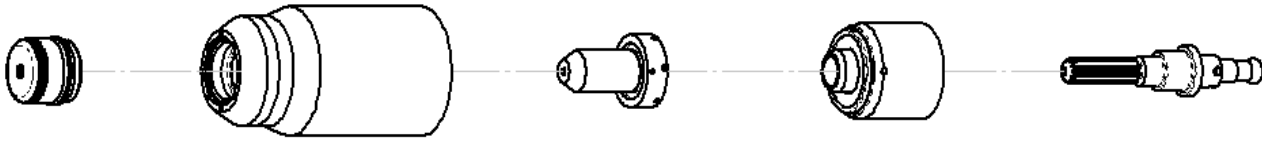
BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

CUTMASTER A40, A60

Aluminum

80A

Air Plasma / Air Shield



Deflector	Standard Shield Cup Maximum Life Shield Cup	Tip	Starter Cartridge	Electrode
9-8243	9-8218 9-8237	9-8211	9-8213	9-8232

Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)
16		0.064	85 (25') 90 (50')	116	0.25	350	0.25	0.00	0.10
11		0.120		120	0.25	280	0.25	0.10	0.10
	3/16	0.188		124	0.25	180	0.25	0.20	0.10
	1/4	0.250		130	0.25	110	0.25	0.30	0.09
	3/8	0.375		136	0.25	55	0.25	0.40	0.11
	1/2	0.500		139	0.25	38	0.25	0.60	0.11
	5/8	0.625		136	0.19	26	0.25	0.75	0.10
	3/4	0.750		150	0.19	14	Edge Start		0.12
	7/8	0.875		153	0.19	10	Edge Start		0.11
Material Thickness				Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.9 (7.6m) 6.2 (15.2m)	114	6.4	8890	6.4	0.00	2.4
2				117	6.4	8420	6.4	0.00	2.5
3				120	6.4	7170	6.4	0.10	2.5
4				122	6.4	5710	6.4	0.20	2.5
5				125	6.4	4315	6.4	0.20	2.5
6				129	6.4	3190	6.4	0.30	2.4
8				133	6.4	2070	6.4	0.40	2.5
10				136	6.4	1330	6.4	0.50	2.7
12				138	6.4	1060	6.4	0.50	2.9
15				137	4.8	745	6.4	0.75	2.5
20			151	4.8	325	Edge Start		3.0	

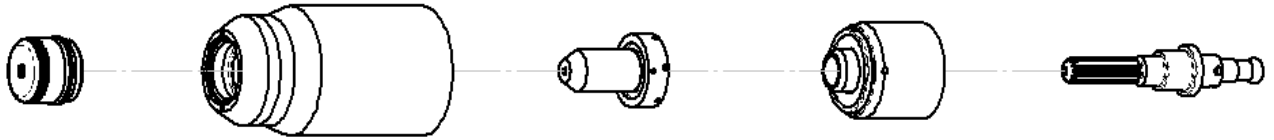
BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

4T.09 Recommended Cutting Speeds for Machine and Automated Torches With Shielded Tip

Mild Steel

40A

Air Plasma / Air Shield



Shield Cap			Maximum Life Shield Cup		Tip	Starter Cartridge		Electrode	
9-8245			9-8237		9-8208	9-8213		9-8232	
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)
20		0.036	75 (25') 80 (50')	107	0.16	130	0.16	0.0	0.06
16		0.060		113	0.16	120	0.16	0.0	0.06
14		0.075		108	0.16	90	0.16	0.1	0.06
12		0.105		111	0.16	75	0.16	0.2	0.06
10		0.135		114	0.16	65	0.16	0.3	0.07
	3/16	0.188		115	0.16	65	0.16	0.4	0.07
	1/4	0.250		118	0.16	45	0.16	0.5	0.07
	3/8	0.375		123	0.16	23	0.16	1.2	0.08
	1/2	0.500		128	0.16	18	0.16	2.0	0.08
Material Thickness				Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.2 (7.6) 5.5 (15.2)	108	4.1	3266	4.1	0.0	1.4
2				108	4.1	2239	4.1	0.0	1.5
3				112	4.1	1794	4.1	0.1	1.7
4				114	4.1	1651	4.1	0.2	1.7
5				115	4.1	1578	4.1	0.3	1.7
6				117	4.1	1256	4.1	0.4	1.7
8				121	4.1	853	4.1	0.5	1.7
10				124	4.1	565	4.1	1.2	1.8
12				127	4.1	485	4.1	2.0	1.9

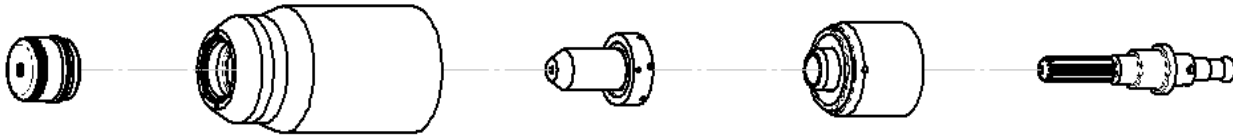
BOLD TYPE indicates maximum piercing parameters.

CUTMASTER A40, A60

Stainless Steel

40A

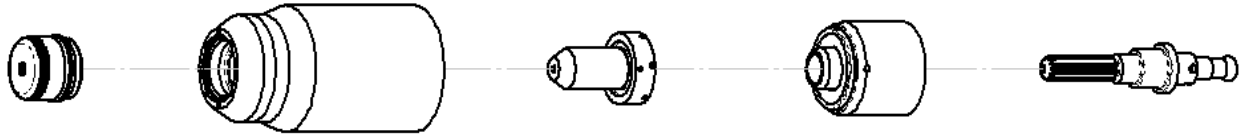
Air Plasma / Air Shield



Shield Cap			Maximum Life Shield Cup		Tip	Starter Cartridge		Electrode		
9-8245			9-8237		9-8208	9-8213		9-8232		
Material Thickness			Gas Pressure (Air)		Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)		Volts	(in)	(ipm)	(in)	(sec)	(in)
18		0.050	75 (25') 80 (50')		110	0.16	60	4.1	0.0	0.06
16		0.063			108	0.16	50	4.1	0.1	0.07
14		0.078			114	0.16	45	4.1	0.1	0.07
12		0.109			113	0.16	40	4.1	0.2	0.07
10		0.141			116	0.16	35	4.1	0.3	0.07
	3/16	0.188			115	0.16	30	4.1	0.4	0.07
	1/4	0.250			118	0.16	20	4.1	1.2	0.07
	3/8	0.375			125	0.16	15	4.1	1.8	0.08
	1/2	0.500			127	0.16	10	4.1	2.0	0.08
Material Thickness					Gas Pressure (Air)		Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height
(mm)			Bar (torch lead length)		Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.2 (7.6) 5.5 (15.2)		109	4.1	1670	4.1	0.0	1.7
2					114	4.1	1140	4.1	0.1	1.8
3					114	4.1	980	4.1	0.2	1.8
4					116	4.1	845	4.1	0.3	1.8
5					115	4.1	725	4.1	0.4	1.8
6					117	4.1	565	4.1	0.5	2.0
8					122	4.1	440	4.1	1.5	2.0
10					125	4.1	360	4.1	1.8	2.0
12					127	4.1	280	4.1	2.0	2.2

BOLD TYPE indicates maximum piercing parameters.

**Aluminum
40A
Air Plasma / Air Shield**



Shield Cap			Maximum Life Shield Cup		Tip	Starter Cartridge		Electrode	
9-8245			9-8237		9-8208	9-8213		9-8232	
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)
20		0.040	75 (25') 80 (50')	110	0.19	300	0.20	0.0	0.06
16		0.063		113	0.19	170	0.20	0.1	0.07
12		0.097		120	0.19	100	0.20	0.2	0.07
11		0.125		125	0.19	90	0.20	0.3	0.07
9		0.160		126	0.19	85	0.20	0.4	0.07
	3/16	0.188		128	0.19	70	0.20	0.5	0.07
	1/4	0.250		137	0.19	30	0.20	1.0	0.08
	3/8	0.375		145	0.19	10	0.20	2.0	0.09
Material Thickness				Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1.0			5.2 (7.6) 5.5 (15.2)	110	4.8	7660	5.1	0.0	1.6
2.0				116	4.8	3490	5.1	0.2	1.8
3.0				124	4.8	2350	5.1	0.3	1.8
4.0				126	4.8	2170	5.1	0.4	1.8
5.0				129	4.8	1630	5.1	0.6	1.8
6.0				135	4.8	990	5.1	1.0	1.9
8.0				141	4.8	500	5.1	1.6	2.0
10.0				146	4.8	180	5.1	2.1	2.3

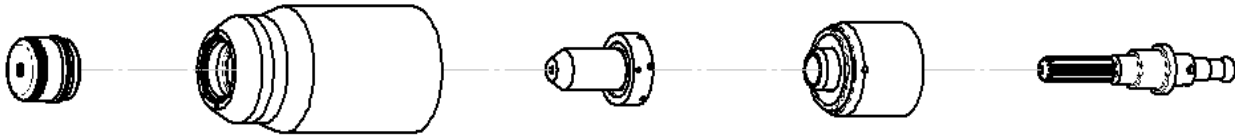
BOLD TYPE indicates maximum piercing parameters.

CUTMASTER A40, A60

Mild Steel

60A

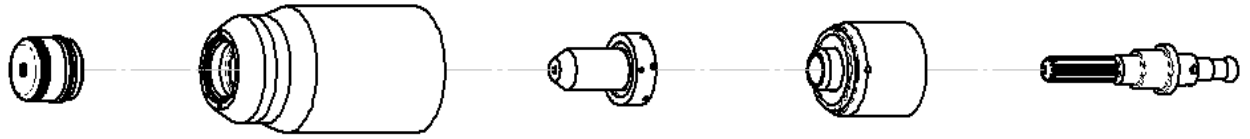
Air Plasma / Air Shield



Shield Cap			Maximum Life Shield Cup			Tip	Starter Cartridge		Electrode		
9-8238			9-8237			9-8210	9-8213		9-8232		
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed		
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)		
16		0.060	85 (25') 90 (50')	128	0.19	250	0.20	0.00	0.09		
14		0.075		129	0.19	237	0.20	0.10	0.09		
11		0.120		126	0.19	200	0.20	0.10	0.08		
10		0.135		128	0.19	142	0.20	0.10	0.09		
	3/16	0.188		132	0.19	115	0.20	0.20	0.09		
	1/4	0.250		134	0.19	80	0.20	0.30	0.08		
	3/8	0.375		132	0.19	34	0.20	0.70	0.10		
	1/2	0.500		144	0.19	23	0.20	0.75	0.10		
	5/8	0.625		150	0.19	14	Edge Start		0.10		
	3/4	0.750		145	0.19	14	Edge Start		0.10		
	1	1.000		160	0.19	4	Edge Start		0.12		
Material Thickness				Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed	
(mm)				Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)	
1				5.9 (7.6m) 6.2 (15.2m)	127	4.8	6804	5.1	0	2.2	
2			129		4.8	5942	5.1	0.10	2.2		
3			126		4.8	5080	5.1	0.10	0.1		
4			130		4.8	3316	5.1	0.20	2.3		
5			132		4.8	2794	5.1	0.20	2.2		
6			134		4.8	2230	5.1	0.30	2.1		
8			133		4.8	1425	5.1	0.40	2.3		
10			134		4.8	822	5.1	0.60	2.5		
12			141		4.8	646	5.1	0.75	2.5		
15			148		4.8	419	Edge Start		2.6		
20			147		4.8	318	Edge Start		2.7		
25			159		4.8	118	Edge Start		3.0		

BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

**Stainless Steel
60A
Air Plasma / Air Shield**



Shield Cap			Maximum Life Shield Cup		Tip	Starter Cartridge		Electrode		
9-8238			9-8237		9-8210	9-8213		9-8232		
Material Thickness			Gas Pressure (Air)		Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)		Volts	(in)	(ipm)	(in)	(sec)	(in)
16		0.063	85 (25') 90 (50')		110	0.13	165	0.20	0.00	0.06
14		0.078			116	0.13	155	0.20	0.10	0.07
11		0.125			118	0.13	125	0.20	0.10	0.07
10		0.141			126	0.13	80	0.20	0.10	0.09
	3/16	0.188			125	0.13	75	0.20	0.20	0.09
	1/4	0.250			127	0.13	60	0.20	0.30	0.08
	3/8	0.375			134	0.13	28	0.20	0.50	0.08
	1/2	0.500			136	0.19	17	0.25	0.75	0.09
	5/8	0.625			131	0.13	14	Edge Start		0.08
	3/4	0.750			142	0.19	10	Edge Start		0.11
Material Thickness			Gas Pressure (Air)		Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(mm)			Bar (torch lead length)		Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.9 (7.6m) 6.2 (15.2m)		101	3.3	4590	5.1	0.00	1.2
2					116	3.3	3925	5.1	0.10	1.7
3					118	3.3	3285	5.1	0.10	1.7
4					126	3.3	1985	5.1	0.20	2.2
5					125	3.3	1850	5.1	0.20	2.1
6					127	3.3	1605	5.1	0.30	2.1
8					131	3.3	1100	5.1	0.40	2.1
10					134	3.3	670	5.1	0.50	2.1
12					136	4.8	490	6.4	0.90	2.2
15					132	3.3	375	Edge Start		2.6
20					144	4.8	230	Edge Start		2.5

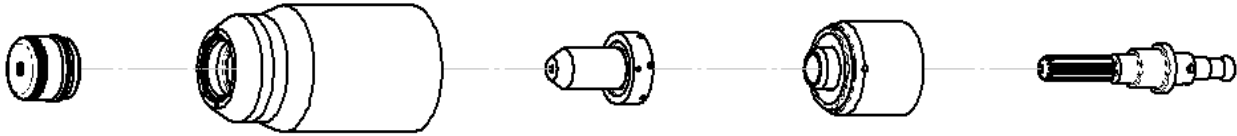
BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

CUTMASTER A40, A60

Aluminum

60A

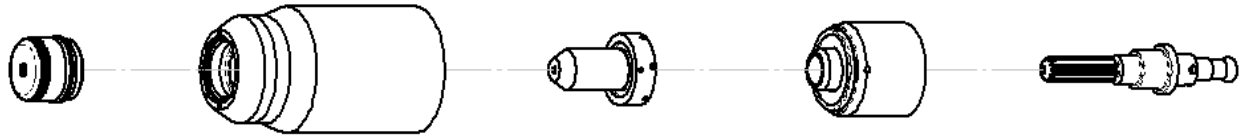
Air Plasma / Air Shield



Shield Cap		Maximum Life Shield Cup		Tip	Starter Cartridge	Electrode			
9-8238		9-8237		9-8210	9-8213	9-8232			
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)
16		0.064	85 (25') 90 (50')	118	0.13	350	0.20	0.00	0.07
14		0.079		118	0.13	350	0.20	0.10	0.08
11		0.120		123	0.13	275	0.20	0.10	0.08
	3/16	0.188		125	0.13	140	0.20	0.20	0.08
	1/4	0.250		132	0.13	80	0.20	0.30	0.08
	3/8	0.375		135	0.13	45	0.20	0.50	0.08
	1/2	0.500		140	0.13	26	0.20	0.80	0.08
	5/8	0.625		148	0.19	18	Edge start		0.10
	3/4	0.750		155	0.19	12	Edge start		0.11
Material Thickness				Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.9 (7.6m) 6.2 (15.2m)	118	6.4	8890	6.4	0.00	2
2				118	6.4	8890	6.4	0.10	2.0
3				123	6.4	7070	6.4	0.10	2.1
4				124	6.4	5095	6.4	0.20	2.0
5				126	6.4	3335	6.4	0.20	2.0
6				130	6.4	2370	6.4	0.30	2.0
8				134	6.4	1570	6.4	0.40	2.0
10				136	6.4	1070	6.4	0.60	2.0
12				139	6.4	765	6.4	0.70	2.0
15				146	4.8	515	Edge start		2.4
20				157	4.8	260	Edge start		2.7

BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

**Mild Steel
80A
Air Plasma / Air Shield**



Shield Cap			Maximum Life Shield Cup			Tip	Starter Cartridge		Electrode		
9-8239			9-8237			9-8211	9-8213		9-8232		
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed		
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)		
16		0.060	85 (25') 90 (50')	115	0.13	280	0.20	0.00	0.06		
11		0.120		112	0.13	190	0.20	0.10	0.06		
10		0.135		110	0.13	176	0.20	0.20	0.06		
	3/16	0.188		122	0.19	135	0.20	0.30	0.08		
	1/4	0.250		127	0.19	100	0.20	0.40	0.09		
	3/8	0.375		134	0.19	40	0.20	0.50	0.10		
	1/2	0.500		136	0.19	36	0.20	0.60	0.10		
	5/8	0.625		145	0.19	18	Edge Start		0.11		
	3/4	0.750		147	0.19	14	Edge Start		0.11		
	7/8	0.875		146	0.19	10	Edge Start		0.12		
	1.000	1.000		152	0.187	8	Edge Start		0.13		
Material Thickness				Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed	
(mm)				Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)	
1				5.9 (7.6m) 6.2 (15.2m)	116	3.3	7895	5.1	0.00	1.6	
2			114		3.3	6395	5.1	0.10	1.6		
3			112		3.3	4895	5.1	0.10	1.5		
4			115		4.8	4025	5.1	0.30	1.7		
5			123		4.8	3300	5.1	0.30	2.0		
6			126		4.8	2735	5.1	0.40	2.2		
8			131		4.8	1745	5.1	0.50	2.5		
10			134		4.8	1000	5.1	0.50	2.6		
12			136		4.8	935	5.1	0.60	2.6		
15			143		4.8	580	5.1	0.80	2.8		
20			147		4.8	325	Edge Start		2.9		
25			151		4.8	210	Edge Start		3.2		

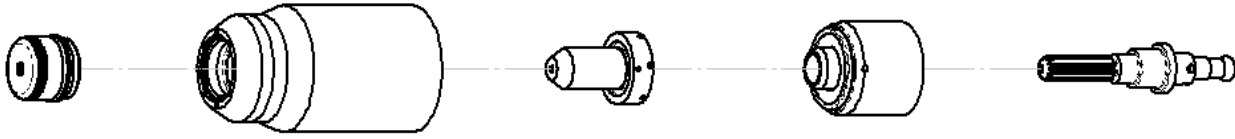
BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

CUTMASTER A40, A60

Stainless Steel

80A

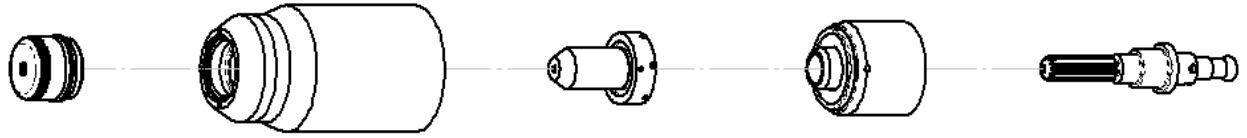
Air Plasma / Air Shield



Shield Cap			Maximum Life Shield Cup		Tip	Starter Cartridge		Electrode	
9-8239			9-8237		9-8211	9-8213		9-8232	
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)
16		0.063	85 (25') 90 (50')	114	0.125	340	0.2	0.00	0.06
11		0.125		115	0.125	260	0.2	0.10	0.06
10		0.141		116	0.125	250	0.2	0.10	0.06
	3/16	0.188		115	0.125	170	0.2	0.20	0.07
	1/4	0.250		118	0.125	85	0.2	0.30	0.08
	3/8	0.375		127	0.19	45	0.25	0.40	0.09
	1/2	0.500		136	0.19	16	0.25	0.75	0.11
	5/8	0.625		143	0.19	10	Edge Start		0.12
	3/4	0.750		146	0.19	8	Edge Start		0.11
Material Thickness				Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)
1			5.9 (7.6m) 6.2 (15.2m)	114	3.2	9410	5.1	0.00	1.5
2				114	3.2	8120	5.1	0.00	1.4
3				115	3.2	6830	5.1	0.10	1.4
4				116	3.2	5635	5.1	0.20	1.5
5				115	3.2	4010	5.1	0.20	1.8
6				117	3.2	2640	5.1	0.30	2.0
8				123	4.8	1630	6.4	0.40	2.1
10				128	4.8	1030	6.4	0.60	2.2
12				134	4.8	565	6.4	0.75	2.6
15				141	4.8	295	Edge Start		3.0
20			147	4.8	185	Edge Start		2.8	

BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

**Aluminum
80A
Air Plasma / Air Shield**



Shield Cap		Maximum Life Shield Cup		Tip	Starter Cartridge	Electrode				
9-8239		9-8237		9-8211	9-8213	9-8232				
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed	
(GA)	(in)	inch	PSI (torch lead length)	Volts	(in)	(ipm)	(in)	(sec)	(in)	
16		0.064	85 (25')	115	0.13	320	0.2	0.00	0.09	
11		0.120		120	0.13	240	0.2	0.10	0.08	
	3/16	0.188		122	0.13	165	0.2	0.20	0.08	
	1/4	0.250		124	0.13	100	0.2	0.30	0.10	
	3/8	0.375		90 (50')	140	0.19	60	0.2	0.40	0.09
	1/2	0.500		142	0.19	36	0.2	0.60	0.11	
	5/8	0.625		148	0.19	26	0.2	0.75	0.11	
	3/4	0.750		155	0.19	16	Edge Start		0.12	
Material Thickness			Gas Pressure (Air)	Arc Voltage	Torch Working Height	Travel Speed	Initial Piercing Height	Pierce Delay	Kerf Width @ Rec. Speed	
(mm)			Bar (torch lead length)	Volts	(mm)	(mm/min)	(mm)	(sec)	(mm)	
1			5.9 (7.6m) 6.2 (15.2m)	113	3.3	9020	5.1	0.00	2.4	
2				116	3.3	7595	5.1	0.00	2.2	
3				120	3.3	6165	5.1	0.10	2.0	
4				121	3.3	5045	5.1	0.20	2.1	
5				122	3.3	3955	5.1	0.20	2.2	
6				124	3.3	2905	5.1	0.30	2.3	
8				132	4.8	2010	5.1	0.40	2.3	
10				140	4.8	1430	5.1	0.50	2.3	
12				142	4.8	1045	5.1	0.60	2.6	
15				146	4.8	730	5.1	0.75	2.7	
20				157	4.8	330	Edge Start		3.2	

BOLD TYPE indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.