

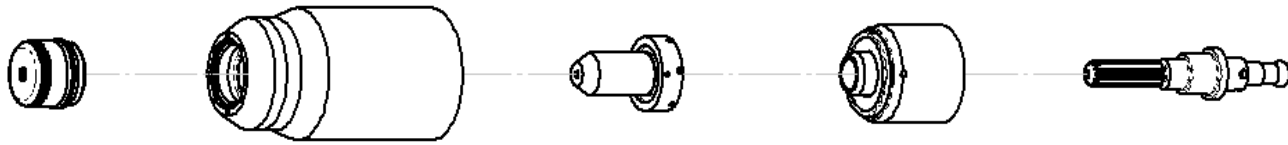
# CUTMASTER A120

## 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	9-8215

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	<b>0.500</b>		<b>128</b>	<b>0.16</b>	<b>18</b>	<b>0.16</b>	<b>2.0</b>	<b>0.08</b>
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				<b>127</b>	<b>4.1</b>	<b>485</b>	<b>4.1</b>	<b>2.0</b>	<b>1.9</b>

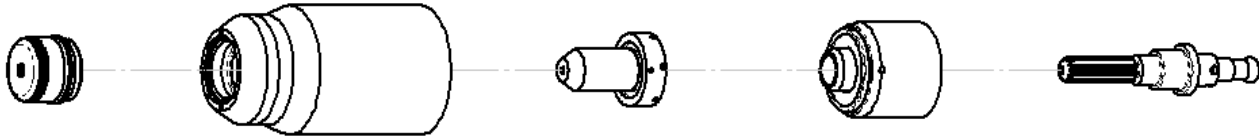
**BOLD TYPE** indicates maximum piercing parameters.

# CUTMASTER A120

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	9-8215

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')	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	<b>Edge Start</b>		0.10
	3/4	0.750		145	0.19	14	<b>Edge Start</b>		0.10
	1	1.000	160	0.19	4	<b>Edge Start</b>		0.12	

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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	<i>Edge Start</i>		2.6
20		147	4.8	318	<i>Edge Start</i>		2.7
25		159	4.8	118	<i>Edge Start</i>		3.0

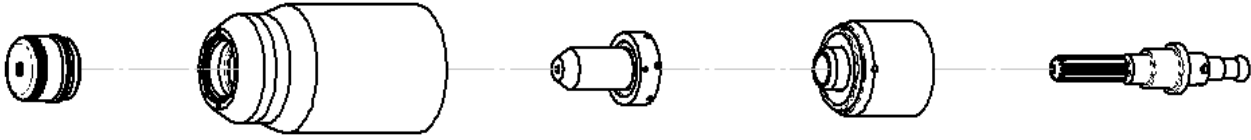
**BOLD TYPE** indicates maximum piercing parameters. **BOLD ITALIC** indicates edge starts only.

# CUTMASTER A120

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	9-8215

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	<i>Edge Start</i>		0.11
	3/4	0.750		147	0.19	14	<i>Edge Start</i>		0.11
	7/8	0.875		146	0.19	10	<i>Edge Start</i>		0.12
	1.000	1.000		152	0.187	8	<i>Edge Start</i>		0.13

# CUTMASTER A120

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		<b>136</b>	<b>4.8</b>	<b>935</b>	<b>5.1</b>	<b>0.60</b>	<b>2.6</b>
15		<b>143</b>	<b>4.8</b>	<b>580</b>	<b>5.1</b>	<b>0.80</b>	<b>2.8</b>
20		<b>147</b>	<b>4.8</b>	<b>325</b>	<b><i>Edge Start</i></b>		<b>2.9</b>
25		<b>151</b>	<b>4.8</b>	<b>210</b>	<b><i>Edge Start</i></b>		<b>3.2</b>

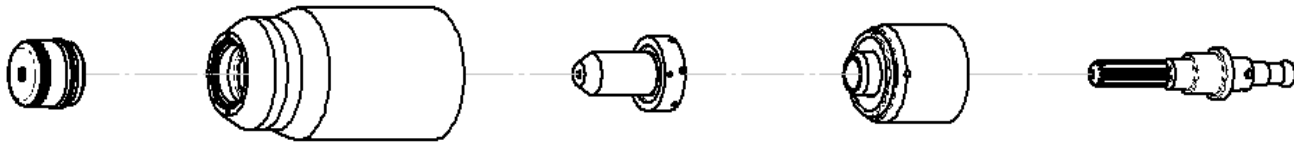
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# CUTMASTER A120

Mild Steel

100A

Air Plasma / Air Shield

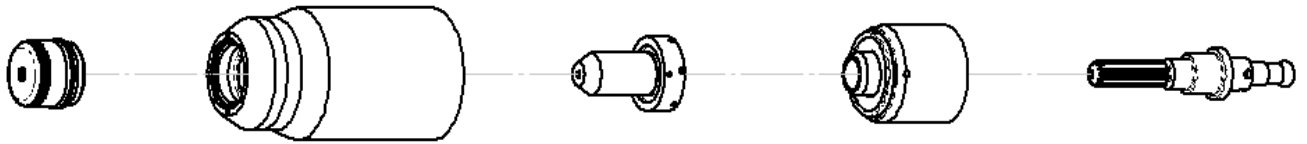


Shield Cap	Maximum Life Shield Cup	Tip	Starter Cartridge	Electrode
9-8239	9-8237	9-8253	9-8213	9-8215

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)
	1/4	0.250	75 (25') 75 (50')	114	0.16	85	0.18	0.00	0.08
	3/8	0.375		112	0.16	70	0.18	0.20	0.09
	1/2	0.500		115	0.16	40	0.18	0.30	0.10
	5/8	0.625		123	0.16	30	0.18	0.40	0.10
	<b>3/4</b>	<b>0.750</b>		<b>127</b>	<b>0.16</b>	<b>20</b>	<b>0.18</b>	<b>0.80</b>	<b>0.11</b>
	<b>1</b>	<b>1.000</b>		<b>133</b>	<b>0.16</b>	<b>12</b>	<b>Edge Start</b>		<b>0.12</b>
	<b>1-1/4</b>	<b>1.250</b>		<b>135</b>	<b>0.16</b>	<b>8</b>	<b>Edge Start</b>		<b>0.12</b>
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)
6				114	4.1	2210	4.6	0.00	2.0
8				113	4.1	1960	4.6	0.10	2.2
10				112	4.1	1665	4.6	0.20	2.3
12				114	4.1	1185	4.6	0.30	2.4
15				121	4.1	830	4.6	0.40	2.5
20				128	4.1	475	5.0	0.80	2.8
25				133	4.1	315	<b>Edge Start</b>		<b>2.9</b>
30				134	4.1	230	<b>Edge Start</b>		<b>3.1</b>

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

**Mild Steel  
120A  
Air Plasma / Air Shield**



Shield Cap	Maximum Life Shield Cup	Tip	Starter Cartridge	Electrode
9-8256	9-8237	9-8253	9-8213	9-8215

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)
	1/4	0.250	80 (25') 80 (50')	139	0.125	160	0.20	0.20	0.11
	3/8	0.375		140	0.125	85	0.20	0.20	0.11
	1/2	0.500		142	0.125	75	0.20	0.50	0.10
	5/8	0.625		144	0.125	45	0.20	0.70	0.11
	<b>3/4</b>	<b>0.750</b>		<b>150</b>	<b>0.125</b>	<b>30</b>	<b>0.25</b>	<b>1.50</b>	<b>0.12</b>
	<b>7/8</b>	<b>0.875</b>		<b>158</b>	<b>0.175</b>	<b>25</b>	<b>Edge Start</b>		<b>0.13</b>
	<b>1</b>	<b>1.000</b>		<b>160</b>	<b>0.175</b>	<b>22</b>	<b>Edge Start</b>		<b>0.14</b>
	<b>1-1/4</b>	<b>1.250</b>		<b>165</b>	<b>0.175</b>	<b>15</b>	<b>Edge Start</b>		<b>0.17</b>
	<b>1-1/2</b>	<b>1.500</b>		<b>171</b>	<b>0.175</b>	<b>8</b>	<b>Edge Start</b>		<b>0.15</b>

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)
6	5.5 (7.6m) 5.5 (15.2m)	5.5 (7.6m) 5.5 (15.2m)	139	4.8	4270	5.08	0.20	2.8
8			140	4.8	3070	5.1	0.2	2.8
10			140	6.4	2120	5.08	0.30	2.8
12			142	6.4	1960	5.08	0.50	2.8
15			143	4.8	1355	5.08	0.70	2.8
<b>20</b>			<b>152</b>	<b>4.8</b>	<b>725</b>	<b>6.4</b>	<b>1.6</b>	<b>3.1</b>
<b>25</b>			<b>160</b>	<b>4.8</b>	<b>570</b>	<b>Edge Start</b>		<b>3.6</b>
<b>30</b>			<b>164</b>	<b>4.8</b>	<b>430</b>	<b>Edge Start</b>		<b>4.0</b>
<b>35</b>			<b>168</b>	<b>4.8</b>	<b>290</b>	<b>Edge Start</b>		<b>4.3</b>
<b>40</b>			<b>173</b>	<b>4.45</b>	<b>150</b>	<b>Edge Start</b>		<b>4.4</b>

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