Dross

Low-speed dross forms when the torch's cutting speed is too slow and the arc shoots ahead. It forms as a heavy, bubbly deposit at the bottom of the cut and can be removed easily. Increase the speed to reduce the dross.

High-speed dross forms when the cutting speed is too fast and the arc lags behind. It forms as a thin, linear bead of solid metal attached very closely to the cut. It is welded to the bottom of the cut and is difficult to remove. To reduce high-speed dross:

- Decrease the cutting speed.
- Decrease arc voltage to decrease the torch-to-work distance.

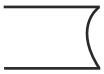
Notes:

- Dross is more likely to form on warm or hot metal than on cool metal. The first cut in a series of cuts will likely produce the least dross. As the workpiece heats up, more dross may form during subsequent cuts.
- Dross is more likely to form on mild steel than on stainless steel or aluminum.
- Worn or damaged consumables may produce intermittent dross.

Straightness of the cut surface

A typical plasma cut surface is slightly concave.

The cut surface may become more concave, or convex. Correct torch height is required to keep the cut surface acceptably close to straight.



A strongly concave cut surface occurs when the torch-to-work distance is too low. Increase the arc voltage to increase the torch-to-work distance and straighten the cut surface.

A convex cut surface occurs when the cut height is too great or the cutting current is too high. First, reduce the arc voltage, then reduce the cutting current. If there is overlap between different cutting currents for that thickness, try the consumables designed for the lower current.

How to increase cutting speed

To increase cutting speed, you can decrease the torch-to-work distance. However, decreasing this distance will increase the negative cut angle.

For mechanized applications the torch must not touch the workpiece while piercing or cutting.

For hand held applications the shield can be touching the workpiece to provide stability during cutting.

Estimated kerf-width compensation

The kerf widths in the following charts are for reference. Differences between installations and material composition may cause actual results to vary from those shown in the tables.

Metric

	Thickness (mm)																				
Mild steel	**0.5**	**0.8**	**1**	**1.2**	**1.5**	**2**	**2.5**	**3**	**4**	**5**	**6**	**8**	**10**	**12**	**15**	**20**	**25**	**32**	**38**	**44**	**50**
50A Air / Air	1.72	1.51	1.46	1.52	1.62	1.58	1.53	1.47	1.44		1.57										
50A O_2 / Air	1.36	1.35	1.36	1.37	1.39	1.41	1.42	1.44	1.51		1.52										
130A Air / Air								2.08	2.21		2.38		2.45	2.48	2.68	3.08	3.46	3.98			
130A O_2 / Air								2.29	2.35		2.40		2.56	2.63	2.92	3.45	3.82	4.33	4.78		
200A Air / Air											2.68	2.90	2.98	2.95	3.12	3.53	3.98	4.20	4.37	5.02	5.69
200A O_2 / Air											2.55	2.95	3.11	3.04	3.13	3.44	3.96	4.60	5.15	5.77	6.40
	Thickness (mm)																				
Stainless steel	**0.5**	**0.8**	**1**	**1.2**	**1.5**	**2**	**2.5**	**3**	**4**	**5**	**6**	**8**	**10**	**12**	**15**	**20**	**25**	**32**	**38**	**44**	**50**
50A Air / Air	1.45	1.71	1.77	1.68	1.56	1.52	1.50	1.55	1.66		1.71										
130A Air / Air											2.57		2.70	2.74	2.90	3.19					
130A N_2 / N_2										2.56	2.40		2.43	2.40	2.59	2.97					
200A Air / Air									3.03		2.76		2.76	2.76	2.98	3.35	3.42	3.64	3.85		4.67
200A N_2 / N_2										3.36	3.20		2.94	2.95	3.32	3.92	3.71	4.22	4.70		
	Thickness (mm)																				
Aluminum	**0.5**	**0.8**	**1**	**1.2**	**1.5**	**2**	**2.5**	**3**	**4**	**5**	**6**	**8**	**10**	**12**	**15**	**20**	**25**	**32**	**38**	**44**	**50**
50A Air / Air	1.40	1.40	1.40	1.40	1.40	1.47	1.50	1.52	1.55		1.58										
130A Air / Air											2.84		2.80	2.78	2.76	2.77	2.88				
130A N_2 / N_2										2.73	2.57		2.62	2.46	2.61	3.00					
200A Air / Air									3.73		3.94		3.44	3.42	3.51	3.73	4.03	4.29	5.38		
200A N_2 / N_2										3.55	3.35		3.04	3.02	3.16	3.52	4.00	4.57	5.04		

English

	Thickness (inches)																						
Mild steel	**0.018**	**0.020**	**0.024**	**0.030**	**0.036**	**0.048**	**0.060**	**0.075**	**0.105**	**0.125**	**0.135**	**3/16**	**1/4**	**5/16**	**3/8**	**1/2**	**5/8**	**3/4**	**7/8**	**1**	**1-1/4**	**1-1/2**	**1-3/4**	**2**
50A Air / Air	0.069		0.065	0.061	0.056	0.060	0.064	0.063	0.059		0.056	0.058	0.063											
50A O_2 / Air	0.054		0.053	0.053	0.053	0.054	0.055	0.055	0.056		0.057	0.063	0.059											
130A Air / Air											0.085	0.090	0.095		0.096	0.098	0.108	0.119		0.137	0.156			
130A O_2 / Air											0.092	0.093	0.095		0.100	0.105	0.119	0.133		0.151	0.170	0.188		
200A Air / Air													0.111	0.114	0.118	0.116	0.126	0.135	0.147	0.158	0.165	0.172	0.200	0.227
200A O_2 / Air													0.109		0.123	0.119	0.125	0.132	0.145	0.157	0.180	0.203	0.229	0.255
Stainless steel	**Thickness (inches)**																							
	.018	**.020**	**.024**	**.030**	**.036**	**.048**	**.060**	**.075**	**.105**	**.125**	**.135**	**3/16**	**1/4**	**5/16**	**3/8**	**1/2**	**5/8**	**3/4**	**7/8**	**1**	**1-1/4**	**1-1/2**	**1-3/4**	**2**
50A Air / Air	0.056		0.061	0.066	0.071	0.066	0.061	0.060	0.059	N/A	0.063	0.068	0.067											
130A Air / Air													0.104		0.106	0.108	0.116	0.124						
130A N_2 / N_2												0.101	0.093		0.096	0.094	0.105	0.116						
200A Air / Air												0.119	0.105		0.109	0.109	0.120	0.131	0.135	0.134	0.143	0.152		0.184
200A N_2 / N_2												0.132	0.124		0.116	0.116	0.136	0.156	0.151	0.145	0.165	0.185		
Aluminum	**Thickness (inches)**																							
	.018	**.020**	**.024**	**.030**	**.036**	**.048**	**.060**	**.075**	**.105**	**.125**	**.135**	**3/16**	**1/4**	**5/16**	**3/8**	**1/2**	**5/8**	**3/4**	**7/8**	**1**	**1-1/4**	**1-1/2**	**1-3/4**	**2**
50A Air / Air	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.061	0.061		0.062	0.062											
130A Air / Air													0.112		0.110	0.109	0.109	0.108		0.114				
130A N_2 / N_2												0.107	0.099		0.105	0.095	0.106	0.117						
200A Air / Air												0.151	0.157		0.136	0.134	0.140	0.145	0.152	0.159	0.167	0.213		
200A N_2 / N_2												0.140	0.130		0.120	0.119	0.127	0.135	0.147	0.159	0.179	0.199		

Cut charts

The following cut charts for the MAXPRO200 show the consumable parts, cutting speeds, and the gas and torch settings required for each process, allowing for differences in the lead length. While you can use these parameters for cutting with both mechanized and handheld torches, the consumable part numbers listed with each cut chart are specific to mechanized torches. Refer to *Hand held cutting and gouging consumable selection on page 87* for the consumables to use for handheld torches for each process.

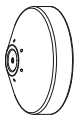
The cut chart values in this document are recommended to provide high quality cuts with minimal dross. Because of differences between installations and material composition, adjustments may be required to obtain desired results.

Mild steel

Air Plasma / Air Shield

50 A Cutting

Flow rates – lpm/scfh	
Air (Plasma)	Air (Shield)
12/25	103/218



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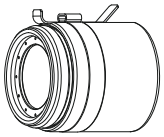

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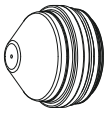

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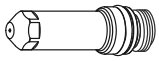


220528

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
62	63	63	63	39	42	45	47	**0.5**	112	1.5	9400	3.0	200	0.0
								0.8	111	1.5	8510	3.0	200	0.0
								1.0	111	1.5	8050	3.0	200	0.1
								1.2	110	1.8	7625	3.6	200	0.1
								1.5	110	1.8	7370	3.6	200	0.1
								2.0	110	1.8	6735	3.6	200	0.1
								2.5	111	2.0	5080	4.0	200	0.2
								3.0	111	2.0	3760	4.0	200	0.3
								4.0	113	2.3	2415	4.6	200	0.4
								6.0	118	2.5	1600	5.0	200	0.5

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
62	63	63	63	39	42	45	47	**0.018**	112	0.06	375	0.12	200	0.0
								0.024	112	0.06	350	0.12	200	0.0
								0.030	111	0.06	340	0.12	200	0.0
								0.036	111	0.06	325	0.12	200	0.1
								0.048	110	0.07	300	0.14	200	0.1
								0.060	110	0.07	290	0.14	200	0.1
								0.075	110	0.07	275	0.14	200	0.1
								0.105	111	0.08	180	0.16	200	0.2
								0.135	111	0.08	110	0.16	200	0.3
								3/16	116	0.09	75	0.18	200	0.4
								1/4	118	0.10	60	0.20	200	0.5

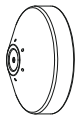
*with IHS tab / **without IHS tab

Mild steel

O_2 Plasma / Air Shield

50 A Cutting

Flow rates – lpm/scfh	
O_2 (Plasma)	Air (Shield)
12/25	73/155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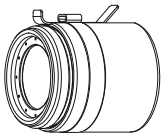
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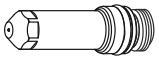

220528

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead length.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
68	68	69	69	25	27	29	31	**0.5**	98	1.5	7550	3.0	200	0.0
								0.8	96	1.5	7050	3.0	200	0.0
								1.0	90	1.5	6775	3.0	200	0.1
								1.2	94	1.5	6600	3.6	200	0.1
								1.5	99	1.5	6150	3.6	200	0.1
								2.0	99	1.5	5400	3.6	200	0.1
								2.5	99	1.8	4300	4.0	200	0.2
								3.0	99	1.8	3650	4.0	200	0.3
								4.0	101	2.0	2800	4.6	200	0.4
								6.0	103	2.5	1750	5.0	200	0.5

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
68	68	69	69	25	27	29	31	**0.018**	98	0.06	300	0.12	200	0.0
								0.024	98	0.06	290	0.12	200	0.0
								0.030	98	0.06	280	0.12	200	0.0
								0.036	89	0.06	270	0.12	200	0.1
								0.048	94	0.06	260	0.12	200	0.1
								0.060	99	0.06	240	0.12	200	0.1
								0.075	99	0.06	220	0.12	200	0.1
								0.105	99	0.07	160	0.14	200	0.2
								0.135	99	0.07	130	0.14	200	0.3
								3/16	103	0.09	85	0.15	150	0.4
								1/4	103	0.10	65	0.15	150	0.5

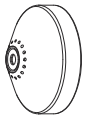
*with IHS tab / **without IHS tab

Mild steel

Air Plasma / Air Shield

130 A Cutting

Flow rates – lpm/scfh	
Air (Plasma)	Air (Shield)
33/70	68/145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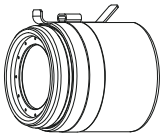
220936* / 220935**


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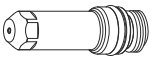

220487

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
68	69	70	71	22	24	26	28	**3.0**	149	3.0	5350	6.0	200	0.1
								4.0	147	3.0	4630	6.0	200	0.2
								6.0	142	2.4	3865	7.2	300	0.3
								10.0	152	4.1	2445	8.2	200	0.5
								12.0	154	4.1	2045	8.2	200	0.5
								15.0	155	4.4	1445	8.8	200	0.8
								20.0	158	4.6	815	9.6	210	1.2
								25.0	166	4.6	415	Edge start		
								32.0	178	5.1	250			

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
68	69	70	71	22	24	26	28	**0.135**	149	0.12	220	0.24	200	0.1
								3/16	145	0.12	160	0.24	200	0.2
								1/4	141	0.10	150	0.28	300	0.3
								3/8	151	0.16	100	0.32	200	0.5
								1/2	154	0.16	75	0.32	200	0.5
								5/8	155	0.18	50	0.36	200	0.8
								3/4	156	0.18	35	0.38	210	1.2
								1	167	0.18	15	Edge start		
								1-1/4	178	0.20	10			

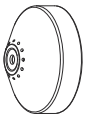
*with IHS tab / **without IHS tab

Mild steel

O_2 Plasma / Air Shield

130 A Cutting

Flow rates – lpm/scfh	
O_2 (Plasma)	Air (Shield)
20/42	86/183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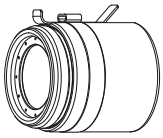
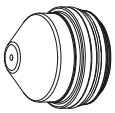

220936* / 220935**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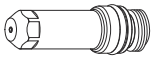
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Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
62	62	64	64	30	32	35	37	**3.0**	130	2.6	5900	5.2	200	0.1
								4.0	131	2.7	5325	5.4	200	0.2
								6.0	134	2.8	3925	5.6	200	0.3
								10.0	136	3.0	2680	6.0	200	0.4
								12.0	138	3.0	2200	6.0	200	0.5
								15.0	140	3.6	1665	7.2	200	0.7
								20.0	145	3.9	1195	7.8	200	1.0
								25.0	151	4.1	685	Edge start		
								32.0	158	4.6	515			
								38.0	163	4.6	310			

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
62	62	64	64	30	32	35	37	**0.135**	130	0.10	240	0.20	200	0.1
								3/16	132	0.11	190	0.22	200	0.2
								1/4	134	0.11	150	0.22	200	0.3
								3/8	136	0.12	110	0.24	200	0.3
								1/2	138	0.12	80	0.24	200	0.5
								5/8	141	0.15	60	0.30	200	0.7
								3/4	144	0.15	50	0.30	200	1.0
								1	151	0.16	25	Edge start		
								1-1/4	158	0.18	20			
								1-1/2	163	0.18	12			

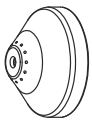
*with IHS tab / **without IHS tab

Mild steel

Air Plasma / Air Shield

200 A Cutting

Flow rates – lpm/scfh	
Air (Plasma)	Air (Shield)
32/68	123/260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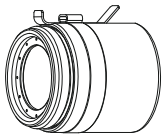
220936* / 220935**


420044


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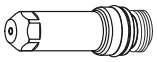

220937

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
52	54	55	56	48	50	54	58	**6.0**	147	1.0	4885	3.0	300	0.3
								8.0	148	1.3	4515	3.9	300	0.5
								10.0	151	3.0	3556	5.2	200	0.8
								12.0	153	3.0	2794	6.0	200	0.9
								15.0	158	4.3	2265	8.6	200	1.0
								20.0	165	4.8	1415	9.6	200	1.4
								25.0	172	6.4	940	12.8	200	1.7
								32.0	176	6.4	630	12.8	200	2.3
								38.0	179	6.4	510	Edge start		
								44.0	189	6.4	320			
								50.0	199	6.4	215			

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
52	54	55	56	48	50	54	58	**1/4**	145	0.04	190	0.12	300	0.3
								5/16	148	0.05	180	0.15	300	0.5
								3/8	151	0.10	140	0.20	200	0.8
								1/2	154	0.13	110	0.25	200	0.9
								5/8	159	0.19	85	0.38	200	1.0
								3/4	164	0.19	60	0.38	200	1.2
								7/8	169	0.19	50	0.38	200	1.4
								1	173	0.25	35	0.45	180	1.7
								1-1/4	176	0.25	25	0.45	180	2.3
								1-1/2	179	0.25	20	Edge start		
								1-3/4	190	0.25	12			
								2	200	0.25	8			

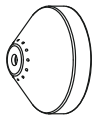
*with IHS tab / **without IHS tab

Mild steel

O_2 Plasma / Air Shield

200 A Cutting

Flow rates – lpm/scfh	
O_2 (Plasma)	Air (Shield)
32/67	123/260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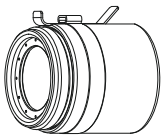
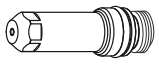

220936* / 220935**


220831


220834


220937

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
68	69	70	71	48	50	54	58	**6.0**	146	1.5	6210	3.0	200	0.3
								8.0	150	3.4	4850	5.1	150	0.4
								10.0	156	4.6	3735	6.9	150	0.4
								12.0	154	3.8	3415	9.5	250	0.6
								15.0	153	3.1	2845	7.8	250	0.7
								20.0	154	3.0	1920	7.5	250	0.8
								25.0	154	3.2	1430	8.0	250	1.0
								32.0	161	3.1	805	7.8	250	1.3
								38.0	168	4.4	570	Edge start		
								44.0	175	4.4	395			
								50.0	180	4.4	270			

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
68	69	70	71	48	50	54	58	**1/4**	143	0.08	235	0.15	200	0.3
								3/8	157	0.19	150	0.28	150	0.3
								1/2	153	0.14	130	0.28	200	0.3
								5/8	153	0.12	105	0.28	250	0.5
								3/4	154	0.12	80	0.28	250	0.6
								7/8	154	0.13	65	0.31	250	0.7
								1	154	0.13	55	0.31	250	0.8
								1-1/4	161	0.13	32	0.35	280	1.5
								1-1/2	168	0.18	22	Edge start		
								1-3/4	175	0.18	15			
								2	181	0.18	10			

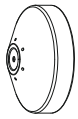
*with IHS tab / **without IHS tab

Stainless steel

Air Plasma / Air Shield

50 A Cutting

Flow rates – lpm/scfh	
Air (Plasma)	Air (Shield)
12/25	103/218



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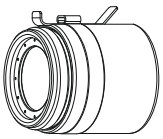
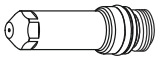


220936* / 220935**

220890

220529



220528

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
62	63	63	63	39	42	45	47	**0.5**	101	1.5	8000	3.0	200	0.0
								0.8	102	1.6	7750	3.2	200	0.0
								1.0	102	1.8	7115	3.6	200	0.1
								1.2	103	1.8	6350	3.6	200	0.1
								1.5	106	1.8	5335	3.6	200	0.1
								2.0	108	2.0	4200	4.0	200	0.1
								2.5	111	2.0	3300	4.0	200	0.2
								3.0	112	2.0	2800	4.0	200	0.3
								4.0	116	2.2	2300	4.4	200	0.4
								6.0	123	2.5	1400	5.0	200	0.5

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
62	63	63	63	39	42	45	47	**0.018**	101	0.06	300	0.12	200	0.0
								0.024	101	0.06	275	0.12	200	0.0
								0.030	102	0.06	265	0.12	200	0.0
								0.036	102	0.06	250	0.12	200	0.1
								0.048	103	0.07	225	0.14	200	0.1
								0.060	106	0.07	190	0.14	200	0.1
								0.075	107	0.07	165	0.14	200	0.1
								0.105	112	0.08	125	0.16	200	0.2
								0.135	113	0.08	85	0.16	200	0.3
								3/16	119	0.09	55	0.18	200	0.4
								1/4	124	0.10	45	0.20	200	0.5

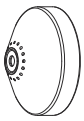
*with IHS tab / **without IHS tab

Stainless steel

Air Plasma / Air Shield

130 A Cutting

Flow rates – lpm/scfh	
Air (Plasma)	Air (Shield)
33/70	69/145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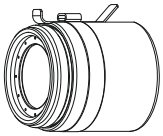
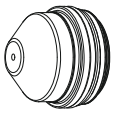
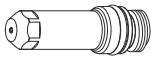

220936* / 220935**


220892


220488


220487

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
68	69	70	71	22	24	26	28	**6.0**	147	3.5	2625	7.0	200	0.3
								10.0	153	4.1	1700	8.2	200	0.5
								12.0	155	4.1	1380	8.2	200	0.8
								15.0	160	4.4	900	Edge start		
								20.0	170	4.6	430			

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
68	69	70	71	22	24	26	28	**1/4**	148	0.14	100	0.28	200	0.3
								3/8	152	0.16	70	0.32	200	0.5
								1/2	156	0.16	50	0.32	200	0.8
								5/8	162	0.18	30	Edge start		
								3/4	168	0.18	20			

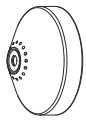
*with IHS tab / **without IHS tab

Stainless steel

N_2 Plasma / N_2 Shield

130 A Cutting

Flow rates – lpm/scfh	
N_2 (Plasma)	N_2 (Shield)
32/68	104/218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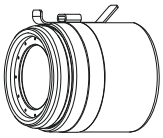
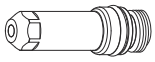

220936* / 220935**


220892


220529


020415

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
68	69	70	71	36	39	42	44	**5.0**	148	3.0	3140	6.1	200	0.3
								6.0	151	3.0	2980	6.1	200	0.3
								10.0	152	3.3	1830	6.6	200	0.5
								12.0	154	3.3	1510	6.6	200	0.8
								15.0	158	3.6	1120	Edge start		
								20.0	166	3.8	470			

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
68	69	70	71	36	39	42	44	**3/16**	149	0.12	125	0.24	200	0.3
								1/4	151	0.12	115	0.24	200	0.3
								3/8	152	0.13	75	0.26	200	0.5
								1/2	154	0.13	55	0.26	200	0.8
								5/8	159	0.14	40	Edge start		
								3/4	165	0.15	25			

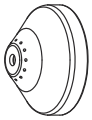
*with IHS tab / **without IHS tab

Stainless steel

Air Plasma / Air Shield

200 A Cutting

Flow rates – lpm/scfh	
Air (Plasma)	Air (Shield)
32/68	123/260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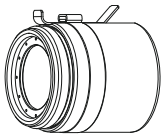
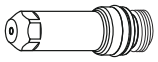

220936* / 220935**


420044


220488


220937

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
52	54	55	56	48	50	54	58	**4.0**	148	2.7	5695	5.4	200	0.4
								6.0	150	3.0	3105	6.0	200	0.4
								10.0	150	3.2	2485	6.4	200	0.5
								12.0	152	3.2	2245	6.4	200	0.8
								15.0	157	3.8	1700	7.6	200	0.8
								20.0	164	4.9	1155	9.8	200	1.0
								25.0	168	5.6	670	11.8	210	1.6
								32.0	174	5.6	515	Edge start		
								38.0	180	5.6	310			
								50.0	188	5.6	203			

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
52	54	55	56	48	50	54	58	**3/16**	149	0.11	240	0.22	200	0.4
								1/4	150	0.12	210	0.24	200	0.4
								3/8	150	0.13	170	0.25	200	0.5
								1/2	153	0.13	120	0.25	200	0.8
								5/8	159	0.16	85	0.32	200	0.8
								3/4	163	0.19	60	0.38	200	1.0
								7/8	166	0.21	50	0.42	200	1.4
								1	168	0.22	40	0.45	210	1.6
								1-1/4	174	0.22	20	Edge start		
								1-1/2	180	0.22	12			
								2	188	0.22	8			

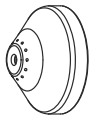
*with IHS tab / **without IHS tab

Stainless steel

N_2 Plasma / N_2 Shield

200 A Cutting

Flow rates – lpm/scfh	
N_2 (Plasma)	N_2 (Shield)
37/79	107/225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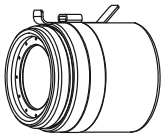
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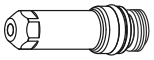
220529


020415

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
69	70	71	72	42	45	48	51	**5.0**	156	3.2	4460	6.4	200	0.4
								6.0	159	3.2	3980	6.4	200	0.4
								10.0	160	3.2	2900	6.4	200	0.5
								12.0	162	3.2	2260	6.4	200	0.8
								15.0	165	3.4	1760	7.9	230	0.9
								20.0	172	4.2	1190	10.1	240	1.1
								25.0	185	6.4	790	11.4	180	2.0
								32.0	191	6.4	520	Edge start		
								38.0	197	6.4	310			

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
69	70	71	72	42	45	48	51	**3/16**	159	0.13	180	0.25	200	0.4
								1/4	159	0.13	150	0.25	200	0.4
								3/8	160	0.13	120	0.25	200	0.5
								1/2	163	0.13	80	0.25	200	0.8
								5/8	166	0.14	65	0.32	230	0.9
								3/4	170	0.16	50	0.38	240	1.0
								7/8	178	0.19	40	0.38	200	1.5
								1	186	0.25	30	0.45	180	2.0
								1-1/4	191	0.25	21	Edge start		
								1-1/2	197	0.25	12			

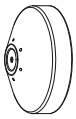
*with IHS tab / **without IHS tab

Aluminum

Air Plasma / Air Shield

50 A Cutting

Flow rates – lpm/scfh	
Air (Plasma)	Air (Shield)
12/25	104/218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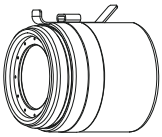
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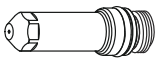
220528

Note: Gas pressure values are set automatically by the system when the process is chosen. The arc voltage settings in these cut charts were measured with a lead length of 30.5 meters (100 feet). Adjustments to arc voltage settings may be needed for shorter lead lengths.

Metric

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
7.6 m Lead	15.3 m Lead	22 9 m Lead	30.5 m Lead	7.6 m Lead	15.3 m Lead	22.9 m Lead	30.5 m Lead	**mm**	Volts	mm	mm/min	mm	Factor %	Seconds
62	63	63	63	39	42	45	47	**0.5**	112	1.5	8000	3.0	200	0.0
								0.8	113	1.6	7750	3.2	200	0.0
								1.0	114	1.8	7115	3.6	200	0.1
								1.2	114	1.8	6350	3.6	200	0.1
								1.5	115	1.8	5335	3.6	200	0.1
								2.0	120	2.0	4200	4.0	200	0.1
								2.5	123	2.0	3300	4.0	200	0.2
								3.0	124	2.0	2800	4.0	200	0.3
								4.0	125	2.2	2300	4.4	200	0.4
								6.0	130	2.5	1400	5.0	200	0.5

English

Plasma Cutflow				Shield Cutflow				**Material Thickness**	Arc Voltage	Cut Height	Cutting Speed	Pierce Height		Pierce Delay
25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	25 ft Lead	50 ft Lead	75 ft Lead	100 ft Lead	**in**	Volts	in	ipm	in	Factor %	Seconds
62	63	63	63	39	42	45	47	**0.018**	112	0.06	325	0.12	200	0.0
								0.020	112	0.06	315	0.12	200	0.0
								0.024	112	0.06	305	0.12	200	0.0
								0.030	113	0.06	295	0.12	200	0.1
								0.036	114	0.07	280	0.14	200	0.1
								0.048	114	0.07	230	0.14	200	0.2
								0.060	115	0.07	195	0.14	200	0.2
								0.075	120	0.08	160	0.16	200	0.2
								0.105	123	0.08	120	0.16	200	0.3
								0.125	124	0.08	100	0.16	200	0.3
								3/16	126	0.09	75	0.18	200	0.4
								1/4	131	0.10	50	0.20	200	0.5

*with IHS tab / **without IHS tab