

Estimated Kerf-width Compensation - Metric (mm)

Process	Thickness (mm)										
	0.5	1	2	3	6	8	10	12	16	20	25
	Mild Steel										
85 A Shielded				1.7	1.8	1.9	2.0	2.2	2.4	2.6	
65 A Shielded			1.6	1.6	1.8	1.9	2.0	2.2	2.3		
45 A Shielded	1.1	1.1	1.4	1.5	1.7						
FineCut	0.9	0.7	0.5	0.6							
FineCut Low Speed	0.6	0.7	0.7	0.6							
85 A Unshielded			1.7	1.8	1.9	2.0	2.1	2.1	2.3		
65 A Unshielded			1.6	1.6	1.7	1.8	1.9	2.0			
45 A Unshielded	0.5	0.9	1.3	1.3							
Stainless Steel											
85 A Shielded				1.6	1.8	1.9	2.1	2.3	2.4	2.5	
65 A Shielded			1.4	1.5	1.8	1.9	2.0	2.2	2.4		
45 A Shielded	0.9	1.1	1.5	1.6	1.8						
FineCut	0.2	0.5	0.4	0.5							
FineCut Low Speed	0.6	0.5	0.6	0.5							
85 A Unshielded			1.7	1.7	1.8	1.9	2.1	2.2	2.4		
65 A Unshielded			1.6	1.6	1.8	1.8	1.9	2.0			
45 A Unshielded	0.5	1.0	1.3	1.5	1.5						
Aluminum											
85 A Shielded				2.0	1.9	2.0	2.1	2.2	2.4	2.6	
65 A Shielded			1.9	1.9	1.9	2.0	2.1	2.3	2.5		
45 A Shielded		1.5	1.5	1.6	1.5						
85 A Unshielded			1.9	1.9	1.9	2.0	2.0	2.1	2.2		
65 A Unshielded			1.8	1.8	1.8	1.8	1.9	2.0			
45 A Unshielded		1.6	1.5	1.4	1.5						

Estimated Kerf-width Compensation - English (inches)

Process	Thickness (inches)										
	22GA	18GA	14GA	10GA	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	1"
	Mild Steel										
85 A Shielded				0.068	0.071	0.073	0.078	0.090	0.095	0.100	
65 A Shielded			0.062	0.065	0.068	0.070	0.076	0.088	0.090	0.091	
45 A Shielded	0.035	0.054	0.055	0.061	0.065	0.066					
FineCut	0.028	0.026	0.016	0.023							
FineCut Low Speed	0.026	0.030	0.027	0.023							
85 A Unshielded				0.070	0.073	0.075	0.080	0.085	0.090		
65 A Unshielded			0.062	0.064	0.066	0.068	0.075	0.081			
45 A Unshielded	0.020	0.050	0.051	0.054	0.057	0.059					
Stainless Steel											
85 A Shielded				0.065	0.068	0.070	0.080	0.094	0.095	0.096	
65 A Shielded			0.056	0.062	0.068	0.073	0.076	0.090	0.093		
45 A Shielded	0.032	0.055	0.058	0.067	0.069	0.069					
FineCut	0.025	0.019	0.014	0.027							
FineCut Low Speed	0.025	0.023	0.021	0.027							
85 A Unshielded			0.066	0.068	0.070	0.072	0.080	0.090	0.095		
65 A Unshielded			0.061	0.064	0.067	0.070	0.072	0.080			
45 A Unshielded	0.020	0.054	0.052	0.060	0.058	0.058					

Aluminum											
		1/32"	1/16"	1/8"	3/16"	1/4"	3/8"	1/2"	5/8"	3/4"	1"
85 A Shielded				0.080	0.078	0.075	0.080	0.090	0.095	0.100	
65 A Shielded			0.073	0.074	0.075	0.076	0.083	0.091	0.100		
45 A Shielded		0.059	0.061	0.065		0.060					
85 A Unshielded				0.075	0.075	0.075	0.080	0.082	0.088		
65 A Unshielded			0.070	0.070	0.070	0.070	0.072	0.079			
45 A Unshielded		0.062	0.058	0.057		0.061					

Low Speed FineCut Stainless Steel

Air flow rate - slpm/scfh	
Hot	181 / 384
Cold	191 / 404

Metric

Material Thickness	Current	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Recommended			
			mm	%		Cut Speed	Voltage		
mm	A	mm	mm	%	seconds	(mm/min)	Volts		
0.5	30	0.5	2.0	400	0	3800	69		
0.6						3800	69		
0.8					3800	69			
1	40						0.15	2900	69
1.5							0.4	2750	69
2	45				0.5	2550	80		
3					0.6	1050	80		
4									

English

Material Thickness	Current	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Recommended	
			in	%		Cut Speed	Voltage
	A	in	in	%	seconds	ipm	Volts
26GA	30	0.02	0.08	400	0.0	150	69
24GA						150	69
22GA					0.1	150	69
20GA	150					69	
18GA	40				0.2	145	69
16GA					0.4	115	69
14GA						110	69
12GA	45				0.5	120	80
10GA		0.6	75	80			

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Material Thickness	Current	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Recommended				
			mm	%		Cut Speed	Voltage			
mm	A	mm	mm	%	seconds	(mm/min)	Volts			
0.5	30	1.5	3.8	250	0	3800	69			
0.6						3800	68			
0.8					40	0.1	3800	70		
1 *	0.2					3800	72			
1.5 *						3800	75			
2	45				1.5	3.8	250	0.4	3700	76
3								0.5	2750	78
4									0.6	1900

English

Material Thickness	Current	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Recommended							
			in	%		Cut Speed	Voltage						
	A	in	in	%	seconds	ipm	Volts						
26GA	30	0.06	0.15	250	0.0	150	70						
24GA						150	68						
22GA					0.1	150	70						
20GA	150					71							
18GA *	40				0.06	0.15	250	0.2	150	73			
16GA *									0.4	150	75		
14GA	45							0.06		0.15	250	0.5	150
12GA									120				78
10GA		95	78										

Note: * indicating not dross free cut

**FineCut
Stainless Steel**

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Metric

Material Thickness	Current	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Recommended	
			mm	%		Cut Speed	Voltage
mm	A	mm	mm	%	seconds	(mm/min)	Volts
0.5	40	0.5	2.0	400	0	8250	68
0.6						8250	68
0.8					45	0.1	8250
1	0.15					8250	68
1.5	0.4					6150	70
2	4800					71	
3	0.5					2550	80
4	0.6					1050	80

English

Material Thickness	Current	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Recommended	
			in	%		Cut Speed	Voltage
	A	in	in	%	seconds	ipm	Volts
26GA	40	0.02	0.08	400	0.0	325	68
24GA						325	68
22GA					0.1	325	68
20GA						325	68
18GA	45				0.2	325	68
16GA					0.4	240	70
14GA						200	70
12GA					0.5	120	80
10GA		0.6	75	80			

**FineCut
Mild Steel**

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Metric

Material Thickness	Current	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Recommended				
			mm	%		Cut Speed	Voltage			
mm	A	mm	mm	%	seconds	(mm/min)	Volts			
0.5	40	1.5	3.8	250	0	8250	78			
0.6						8250	78			
0.8					0.1	8250	78			
1	45				1.5	3.8	250	0.2	8250	78
1.5								0.4	6400	78
2								0.4	4800	78
3								0.5	2750	78
4								0.6	1900	78

English

Material Thickness	Current	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Recommended				
			in	%		Cut Speed	Voltage			
	A	in	in	%	seconds	ipm	Volts			
26GA	40	0.06	0.15	250	0.0	325	78			
24GA						325	78			
22GA					0.1	325	78			
20GA					0.1	325	78			
18GA	45				0.06	0.15	250	0.2	325	78
16GA								0.4	250	78
14GA								0.4	200	78
12GA								0.5	120	78
10GA									95	78