

## TORCH SETUP

**85A Shielded  
Mild Steel**

Air flow rate - slpm/scfh	
Hot	190 / 400
Cold	235 / 500

**Metric**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings		
					Cut Speed	Voltage	Cut Speed	Voltage	
mm	mm	mm	%	seconds	(mm/min)	Volts	(mm/min)	Volts	
3	1.5	3.8	250	0.1	6800	122	9200	120	
4				0.2	5650	122	7300	122	
6				0.5	3600	123	4400	125	
8					2500	125	3100	127	
10					1680	127	2070	128	
12		4.5	300	0.7	1280	130	1600	130	
16				1.0	800	134	930	133	
20		6.0	400	1.5	500	137	680	136	
25		Edge Start				350	142	450	141
30						200	146	300	144

**English**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings		
					Cut Speed	Voltage	Cut Speed	Voltage	
	in	in	%	seconds	ipm	Volts	ipm	Volts	
10GA	0.06	0.15	250	0.0	250	122	336	121	
3/16 in				0.2	185	123	220	123	
1/4 in				0.5	130	123	160	126	
3/8 in					0	126	86	127	
1/2 in					45	131	56	131	
5/8 in		0.18	300	1.0	35	134	37	133	
3/4 in				0.24	400	1.5	24	136	29
7/8 in		Edge Start				19	139	22	138
1 in						13	142	17	141
1-1/8 in						9	145	13	143
1-1/4 in						148	10	146	

## TORCH SETUP

85A Shielded  
Stainless Steel

Air flow rate - slpm/scfh	
Hot	190 / 400
Cold	235 / 500

### Metric

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
mm	mm	mm	%	seconds	(mm/min)	Volts	(mm/min)	Volts
3	1.5	3.8	250	0.1	500	122	9200	120
4				0.2	6100	122	500	120
6				0.5	3700	122	4600	122
8					2450	124	3050	124
10		4.5	300	1550	127	1900	126	
12				0.7	1100	131	1400	130
16				1.0	00	135	60	134
20				Edge Start		480	138	5 0
25		Edge Start		300	143	370	141	

### English

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings		
					Cut Speed	Voltage	Cut Speed	Voltage	
	in	in	%	seconds	ipm	Volts	ipm	Volts	
10GA	0.06	0.15	250	0.2	275	122	336	120	
3/16 in					200	122	240	121	
1/4 in				0.5	130	122	164	122	
3/8 in					65	126	80	125	
1/2 in		0.18	300	36	132	48	131		
5/8 in				1.0	28	135	30	134	
3/4 in				Edge Start		20	137	24	136
7/8 in				Edge Start		16	140	19	139
1 in		Edge Start		11	143	14	141		

## TORCH SETUP

**85A Shielded  
Aluminum**

Air flow rate - slpm/scfh	
Hot	190 / 400
Cold	235 / 500

**Metric**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
mm	mm	mm	%	seconds	(mm/min)	Volts	(mm/min)	Volts
3	1.5	3.8	250	0.1	8000	122	9400	121
4				0.2	6500	123	8000	123
6				0.5	3800	126	4900	126
8					2650	130	3470	129
10		4.5	300	1920	132	2500	131	
12				0.7	1450	134	1930	133
16				1.0	950	139	1200	137
20				Edge Start		600	143	880
25		Edge Start		380	146	540	144	

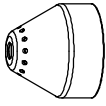
**English**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings		
					Cut Speed	Voltage	Cut Speed	Voltage	
	in	in	%	seconds	ipm	Volts	ipm	Volts	
1/8 in	0.06	0.15	250	0.2	300	122	360	121	
1/4 in				0.5	130	127	172	127	
3/8 in					80	132	104	131	
1/2 in				0.18	300	50	135	68	133
5/8 in		1.0	38			139	48	137	
3/4 in		Edge Start				25	142	37	140
7/8 in		Edge Start				20	144	29	142
1 in		Edge Start		14	146	20	144		

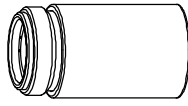
## TORCH SETUP

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### 65 A shielded consumables



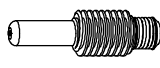
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Shield



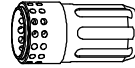
220854  
Retaining cap



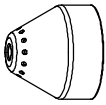
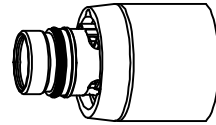
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Nozzle



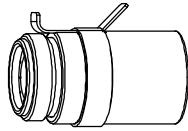
220842  
Electrode



220857  
Swirl ring



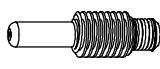
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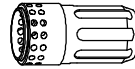
220953  
Ohmic-sensing  
retaining cap



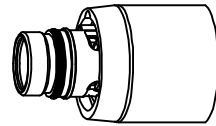
220819  
Nozzle



220842  
Electrode



220857  
Swirl ring



## TORCH SETUP

**65A Shielded**

**Mild Steel**

Air flow rate - slpm/scfh	
Hot	160 / 340
Cold	220 / 470

**Metric**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
mm	mm	mm	%	seconds	(mm/min)	Volts	(mm/min)	Volts
2	1.5	3.8	250	0.1	6050	124	000	121
3				0.2	5200	125	6100	123
4				0.5	4250	125	5100	124
6					2550	127	3240	127
8					1700	129	2230	128
10		4.5	300	0.7	1100	131	1500	129
12				1.2	850	134	1140	131
16		6.0	400	2.0	560	138	650	136
20		Edge Start			350	142	450	142
25		Edge Start			210	145	270	145

**English**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
	in	in	%	seconds	ipm	Volts	ipm	Volts
16GA	0.06	0.15	250	0.1	260	123	294	121
10GA					190	125	224	123
3/16 in				0.2	140	126	168	125
1/4 in				0.5	90	127	116	127
3/8 in					0.7	45	130	62
1/2 in		0.18	300		1.2	30	135	40
5/8 in		0.24	400	2.0	23	138	26	136
3/4 in		Edge Start			15	141	19	141
7/8 in		Edge Start			12	143	14	143
1 in		Edge Start			8	145	10	145

## TORCH SETUP

65A Shielded  
Stainless Steel

Air flow rate - slpm/scfh	
Hot	160 / 340
Cold	220 / 470

Metric

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
mm	mm	mm	%	seconds	(mm/min)	Volts	(mm/min)	Volts
2	1.5	3.8	250	0.1	8100	125	10000	121
3				0.2	6 00	125	8260	123
4				0.5	5200	125	6150	124
6					2450	126	2850	126
8				0.7	1500	129	1860	129
10		4.5	300		960	132	1250	132
12					50	135	920	134
16		Edge Start			500	139	500	139
20		Edge Start			300	143	370	143

English

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
	in	in	%	seconds	ipm	Volts	ipm	Volts
16GA	0.06	0.15	250	0.1	345	124	426	121
10GA					240	125	296	123
3/16 in				0.2	155	126	168	125
1/4 in					0.5	80	126	96
3/8 in				0.7		40	131	52
1/2 in		0.18	300			26	136	32
5/8 in				Edge Start			20	139
3/4 in		Edge Start			14	142	15	142

## TORCH SETUP

**65A Shielded  
Aluminum**

Air flow rate - slpm/scfh	
Hot	160 / 340
Cold	220 / 470

**Metric**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings			
					Cut Speed	Voltage	Cut Speed	Voltage		
mm	mm	mm	%	seconds	(mm/min)	Volts	(mm/min)	Volts		
2	1.5	3.8	250	0.1	8800	121	10300	122		
3				0.2	7400	124	8800	124		
4				0.5	6000	126	7350	125		
6					3200	130	4400	128		
8				0.7	1950	133	2750	130		
10		1200	136		1650	132				
12		1000	138		1330	136				
16		4.5	300	1.2	Edge Start		650	143	800	141
20					380	147	560	145		

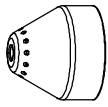
**English**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
	in	in	%	seconds	ipm	Volts	ipm	Volts
1/16 in	0.06	0.15	250	0.1	365	121	428	121
1/8 in					280	124	336	124
1/4 in				0.5	105	131	152	128
3/8 in					50	135	68	131
1/2 in		0.18	300	1.2	35	139	48	138
5/8 in		Edge Start		26	143	32	141	
3/4 in		16	146	24	144			

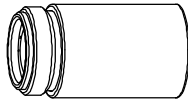
## TORCH SETUP

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### 45 A shielded consumables



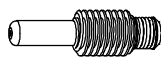
220817  
Shield



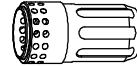
220854  
Retaining cap



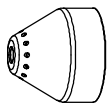
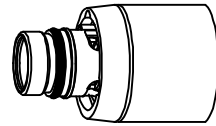
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Nozzle



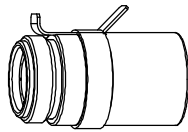
220842  
Electrode



220857  
Swirl ring



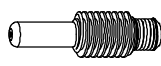
220817  
Shield



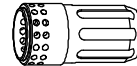
220953  
Ohmic-sensing  
retaining cap



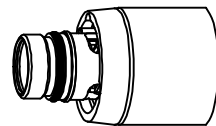
220941  
Nozzle



220842  
Electrode



220857  
Swirl ring





## TORCH SETUP

**45A Shielded  
Mild Steel**

Air flow rate - slpm/scfh	
Hot	150 / 310
Cold	210/ 450

**Metric**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
mm	mm	mm	%	seconds	(mm/min)	Volts	(mm/min)	Volts
0.5	1.5	3.8	250	0.0	9000	128	12500	126
1					9000	128	10800	128
1.5				0.1	9000	130	10200	129
2					6600	130	800	129
3				0.4	3850	133	4900	131
4					2200	134	3560	131
6				0.5	1350	137	2050	132

**English**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
	in	in	%	seconds	ipm	Volts	ipm	Volts
26GA	0.02	0.08	400	0.0	350	128	500	128
22GA					350	128	450	128
18GA				0.1	350	129	400	128
16GA					350	130	400	129
14GA	0.06	0.15	250	0.2	270	130	320	129
12GA				0.4	190	133	216	131
10GA					100	134	164	131
3/16 in				0.5	0	135	108	132
1/4 in				0.6	48	137	73	132

## TORCH SETUP

45A Shielded  
Stainless Steel

Air flow rate - slpm/scfh	
Hot	150 / 310
Cold	210/ 450

Metric

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
mm	mm	mm	%	seconds	(mm/min)	Volts	(mm/min)	Volts
0.5	1.5	3.8	250	0.0	9000	130	12500	129
1					9000	130	10800	130
1.5				0.1	9000	130	10200	130
2					6000	132	8660	131
3				0.4	3100	132	4400	132
4					2000	134	2600	134
6				0.5	900	140	1020	139

English

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
	in	in	%	seconds	ipm	Volts	ipm	Volts
26GA	0.02	0.08	400	0.0	350	130	500	129
22GA					350	130	450	129
18GA				0.1	350	130	400	130
16GA					350	130	400	130
14GA	0.06	0.15	250	0.2	250	132	360	131
12GA				0.4	140	132	206	131
10GA					100	133	134	134
3/16 in				0.5	52	135	58	135
1/4 in				0.6	30	141	35	140

## TORCH SETUP

**45A Shielded  
Aluminum**

Air flow rate - slpm/scfh	
Hot	150 / 310
Cold	210/ 450

**Metric**

Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
mm	mm	mm	%	seconds	(mm/min)	Volts	(mm/min)	Volts
1	1.5	3.8	250	0.0	8250	136	11000	136
2				0.1	6600	136	9200	135
3				0.2	3100	139	6250	134
4				0.4	2200	141	4850	135
6				0.5	1500	142	2800	137

**English**

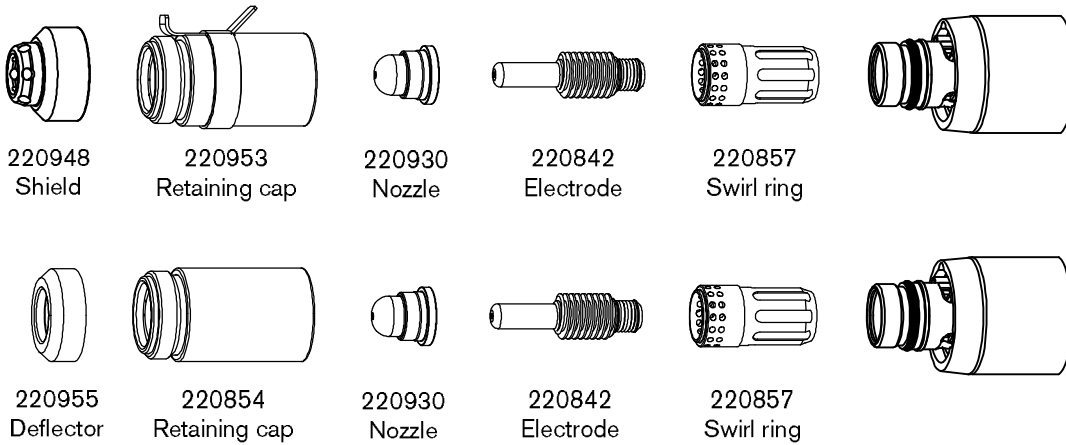
Material Thickness	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		Production Settings	
					Cut Speed	Voltage	Cut Speed	Voltage
	in	in	%	seconds	ipm	Volts	ipm	Volts
1/32 in	0.06	0.15	250	0.0	325	136	450	136
1/16 in				0.1	325	136	400	136
3/32 in				0.2	200	136	328	134
1/8 in				0.4	100	140	224	134
1/4 in				0.5	54	142	96	137

## TORCH SETUP

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### FineCut® consumables

Note: The cut charts in this section apply to both shielded and unshielded consumables.



## TORCH SETUP

**FineCut  
Mild Steel**

Air flow rate - slpm/scfh	
Hot	155 / 330
Cold	215 / 460

**Metric**

Material Thickness	Amps	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		
			mm	%		Cut Speed	Voltage	
mm	A	mm	mm	%	seconds	(mm/min)	Volts	
0.5	40	1.5	3.8	250	0.0	8250	8	
0.6						8250	8	
0.8						8250	8	
1	45				0.1	8250	8	
1.5						0.2	6400	8
2							5250	82
3						2750	83	
4	0.5				1900	84		
		0.6						

**English**

Material Thickness	Amps	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings		
			in	%		Cut Speed	Voltage	
	A	in	in	%	seconds	ipm	Volts	
26GA	40	0.06	0.15	250	0.0	325	8	
24GA						325	8	
22GA					0.1	325	8	
20GA						325	8	
18GA	45				0.2	325	8	
16GA						0.4	250	8
14GA							220	82
12GA						0.5	120	83
10GA		95	84					

## TORCH SETUP

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**FineCut**  
**Stainless Steel**

Air flow rate - slpm/scfh	
Hot	155 / 330
Cold	215 / 460

**Metric**

Material Thickness	Amps	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings					
						Cut Speed	Voltage				
mm	A	mm	mm	%	seconds	(mm/min)	Volts				
0.5	40	0.5	2.0	400	0.0	8250	68				
0.6						8250	68				
0.8						8250	68				
1	45				0.1	0.2	8250	68	68		
1.5									0.4	6150	0
2										4800	71
3									0.5	2550	81
4										1050	84

**English**

Material Thickness	Amps	Torch-to-Work Distance	Initial Pierce Height		Pierce Delay Time	Best Quality Settings					
						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	0.2	325	68	
16GA									0.4	240	0
14GA										200	0
12GA									0.5	120	80
10GA		5	83								