





TORCH SETUP

Choose the consumables (cut charts)

		<p style="text-align: center;">WARNING INSTANT-ON TORCHES PLASMA ARC CAN CAUSE INJURY AND BURNS</p>
		<p>The plasma arc comes on immediately when the torch trigger is activated. Make sure the power is OFF before changing consumables.</p>

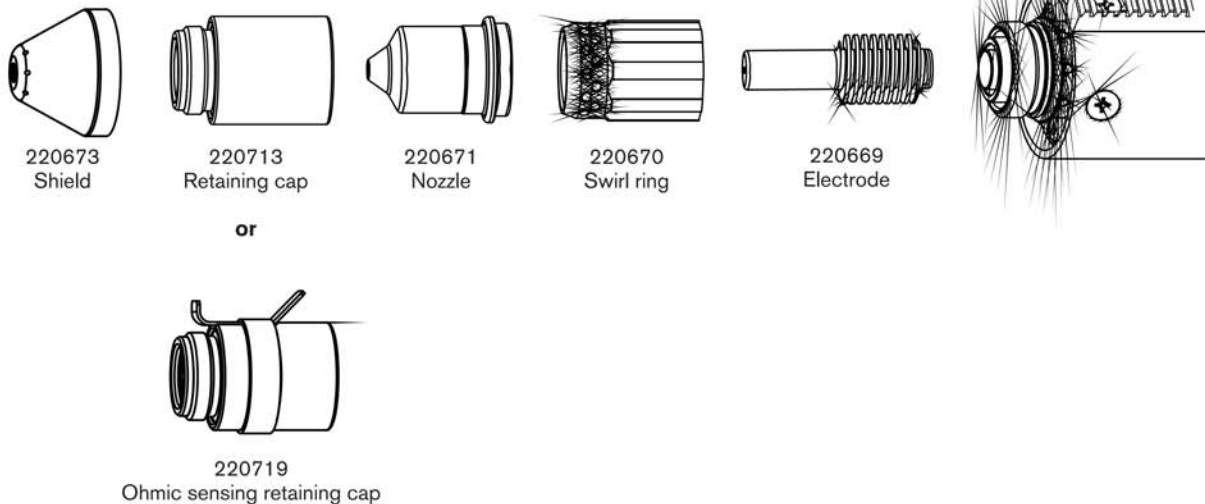
A complete set of shielded consumables is shipped with the T45m machine torch. In addition, an ohmic sensing retaining cap is available for use with the T45m shielded consumables. Unshielded consumables and the T30v (Powermax30) 30 A consumables are also available for use with the T45m.

Using the cut charts

The following sections provide illustrations of the consumable sets and cut charts for each set. Maximum cut speeds are the fastest speeds possible to cut material without regard to cut quality. Recommended cut speeds are a good starting point for finding the best quality cut (best angle, least dross, and best cut surface finish). You will need to adjust the speeds for your application and your table to obtain the desired cut quality.

When cutting thin metal (3 mm/10 Ga or thinner), you may achieve a higher cut quality by using the T30v (Powermax30) 30 A consumables and cut charts.

T45m shielded consumables



The cut charts for these consumables are shown on the following pages.

T45m shielded consumables

**Mild steel
Metric**

Air flowrate (lpm)	
Hot	151
Cold	165.2

Arc current (amps)	Material thickness (mm)	Torch-to-work distance (mm)	Initial pierce height		Pierce time delay (sec)	Recommended		Maximum	
						Cut Speed (mm/min)	Voltage (V)	Cut Speed (mm/min)	Voltage (V)
30	0.5	1.5	3.8 mm	250%	0.0	9150	117	10160*	118
	0.8					8650	116	10160*	117
	0.9					8100	115	10160*	117
	1.5				0.2	5650	111	7100	115
45	0.9	1.5	3.8 mm	250%	0.0	9652	115	10160*	112
	1.5					8890	116	10160*	115
	1.9				0.1	7100	117	9144	115
	2.7				0.3	4800	117	6096	115
	3.4				0.4	3550	117	4445	115
	4.8				0.5	2150	118	2794	115
	6.4				0.6	1500	120	1905	116
	9.5				0.9	510	122	1016	116
	12.7				Edge start recommended				510
	15.9	280	138	356					127
	19.1	200	140	254					131
	25.4	100	146	127					142

*Maximum cut speed is limited by the test table's maximum speed (10160 mm/min).

TORCH SETUP

T45m shielded consumables

Mild steel
English

Air flowrate (scfh)	
Hot	320
Cold	360

Arc current (amps)	Material thickness	Torch-to-work distance (in)	Initial pierce height		Pierce time delay (sec)	Recommended		Maximum	
						Cut Speed (ipm)	Voltage (V)	Cut Speed (ipm)	Voltage (V)
30	0.018 in (26 Ga)	0.06	0.15 in	250%	0.0	360	117	400*	118
	0.030 in (22 Ga)					340	116	400*	117
	0.036 in (20 Ga)					320	115	400*	117
	0.060 in (16 Ga)				0.2	225	111	280	115
45	0.036 in (20 Ga)	0.06	0.15 in	250%	0.0	380	115	400*	112
	0.060 in (16 Ga)					350	116	400*	115
	0.075 in (14 Ga)					280	117	360	115
	0.105 in (12 Ga)				0.3	190	117	240	115
	0.135 in (10 Ga)				0.4	140	117	175	115
	0.188 in (3/16 in)				0.5	85	118	110	115
	0.250 in (1/4 in)				0.6	60	120	75	116
	0.375 in (3/8 in)				0.9	32	122	40	116
	0.500 in (1/2 in)				Edge start recommended	20	132	25	125
	0.625 in (5/8 in)					11	138	14	127
	0.750 in (3/4 in)					8	140	10	131
	1.000 in (1 in)					4	146	5	142

*Maximum cut speed is limited by the test table's maximum speed (400 ipm).

T45m shielded consumables

**Stainless steel
Metric**

Air flowrate (lpm)	
Hot	151
Cold	165.2

					Recommended		Maximum					
Arc current (amps)	Material thickness (mm)	Torch-to-work distance (mm)	Initial pierce height		Pierce time delay (sec)	Cut Speed (mm/min)	Voltage (V)	Cut Speed (mm/min)	Voltage (V)			
30	0.5	1.5	3.8 mm	250%	0.0	9150	119	10160*	123			
	0.8					8650	117	10160*	121			
	0.9					8100	115	10160*	119			
	1.5				0.2	3750	113	4700	118			
45	0.9	1.5	3.8 mm	250%	0.0	7600	112	10160*	109			
	1.5					8100	112	10160*	125			
	1.9				0.1	7100	118	9144	115			
	2.7				0.3	4050	118	5080	116			
	3.4				0.4	3050	121	3810	118			
	4.8				0.5	1780	122	2159	118			
	6.4				0.6	1100	124	1397	120			
	9.5				0.8	760	126	813	121			
	12.7				Edge start recommended				350	132	457	128
	19.1				Edge start recommended				175	136	229	131

*Maximum cut speed is limited by the test table's maximum speed (10160 mm/min).

TORCH SETUP

T45m shielded consumables

Stainless steel
English

Air flowrate (scfh)	
Hot	320
Cold	360

					Recommended		Maximum			
Arc current (amps)	Material thickness	Torch-to-work distance (in)	Initial pierce height		Pierce time delay (sec)	Cut Speed (ipm)	Voltage (V)	Cut Speed (ipm)	Voltage (V)	
30	0.018 in (26 Ga)	0.06	0.15 in	250%	0.0	360	117	400*	123	
	0.030 in (22 Ga)					340	116	400*	121	
	0.036 in (20 Ga)					320	115	400*	119	
	0.060 in (16 Ga)				0.2	145	111	185	118	
45	0.036 in (20 Ga)	0.06	0.15 in	250%	0.0	300	115	400*	109	
	0.060 in (16 Ga)					320	116	400*	125	
	0.075 in (14 Ga)				0.1	280	117	360	115	
	0.105 in (12 Ga)				0.3	160	117	200	116	
	0.135 in (10 Ga)				0.4	120	117	150	118	
	0.188 in (3/16 in)				0.5	70	118	85	118	
	0.250 in (1/4 in)				0.6	44	120	55	120	
	0.375 in (3/8 in)				0.8	30	122	32	121	
	0.500 in (1/2 in)				Edge start recommended		14	132	18	128
	0.750 in (3/4 in)						7	140	9	131

*Maximum cut speed is limited by the test table's maximum speed (400 ipm).

T45m shielded consumables

**Aluminum
Metric**

Air flowrate (lpm)	
Hot	151
Cold	165.2

Arc current (amps)	Material thickness (mm)	Torch-to-work distance (mm)	Initial pierce height		Pierce time delay (sec)	Recommended		Maximum				
						Cut Speed (mm/min)	Voltage (V)	Cut Speed (mm/min)	Voltage (V)			
30	1.2	1.5	3.8 mm	250%	0.0	9150	117	10160*	120			
	1.5				0.2	8650	118	10160*	121			
	1.9					5450	118	6860	121			
45	1.5	1.5	3.8 mm	250%	0.0	9150	116	10160*	114			
	1.9					8650	117	10160	116			
	2.7					7100	120	9144	119			
	3.4				0.1	5600	122	7112	120			
	4.8					2550	123	3302	120			
	6.4					2050	123	2540	120			
	9.5					840	130	1067	125			
	12.7				Edge start recommended				510	134	635	130
	19.1				Edge start recommended				200	143	254	138

*Maximum cut speed is limited by the test table's maximum speed (10160 mm/min).

TORCH SETUP

T45m shielded consumables

Aluminum
English

Air flowrate (scfh)	
Hot	320
Cold	360

					Recommended		Maximum			
Arc current (amps)	Material thickness	Torch-to-work distance (in)	Initial pierce height		Pierce time delay (sec)	Cut Speed (ipm)	Voltage (V)	Cut Speed (ipm)	Voltage (V)	
30	0.018 in (26 Ga)	0.06	0.15 in	250%	0.0	360	117	400*	120	
	0.2				340	118	400*	121		
					215	118	270	121		
45	0.060 in (16 Ga)	0.06	0.15 in	250%	0.0	360	116	400*	114	
	0.075 in (14 Ga)					340	117	400*	116	
	0.105 in (12 Ga)					280	120	360	119	
	0.135 in (10 Ga)				0.1	220	122	280	120	
	0.188 in (3/16 in)				0.2	100	123	130	120	
	0.250 in (1/4 in)				0.3	80	123	100	120	
	0.375 in (3/8 in)				0.5	33	130	42	125	
	0.500 in (1/2 in)				Edge start recommended		20	134	25	130
	0.750 in (3/4 in)						8	143	10	138

*Maximum cut speed is limited by the test table's maximum speed (400 ipm).