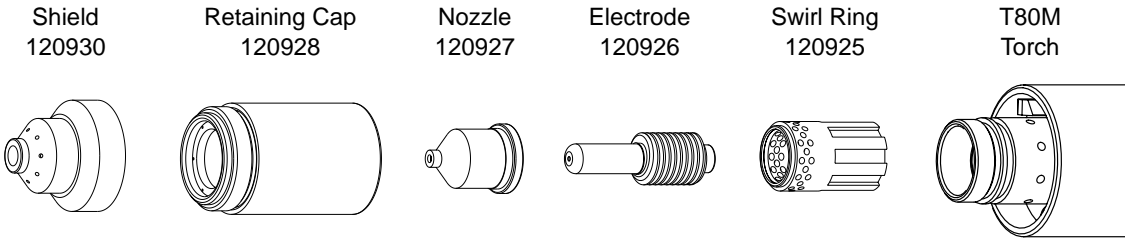


# OPERATION

## Cut Charts

### 80 Amp Mechanized Shielded Consumables

- Torch-to-work distance for the following cut chart is 1/16 inch (1.5 mm) for all cuts.



#### Mild Steel

Arc Current	Arc Voltage	Pierce Delay	Material Thickness		Maximum Travel Speeds		Optimum Travel Speeds	
			Inches	mm	IPM	mm/min	IPM	mm/min
80	132	0.25	3/16"	4.8	216	5486	140	3556
	134	0.50	1/4"	6.4	161	4089	105	2667
	137		3/8"	9.5	94	2388	61	1549
	140		1/2"	12.7	60	1524	39	991
	145	1.00	5/8"	15.9	40	1016	26	660
	148	N/A	3/4"	19.0	31	787	20	508
	150		7/8"	22.2	23	584	15	381
	156		1"	25.4	16	406	10	254

#### Stainless

Arc Current	Arc Voltage	Pierce Delay	Material Thickness		Maximum Travel Speeds		Optimum Travel Speeds	
			Inches	mm	IPM	mm/min	IPM	mm/min
80	134	0.25	3/16"	4.8	216	5486	140	3556
	136	0.50	1/4"	6.4	158	4013	103	2616
	139	0.75	3/8"	9.5	83	2108	54	1372
	142		1/2"	12.7	50	1270	33	838
	145	N/A	5/8"	15.9	34	864	22	559
	150		3/4"	19.0	24	610	16	406
	153		1"	25.4	14	356	9	229

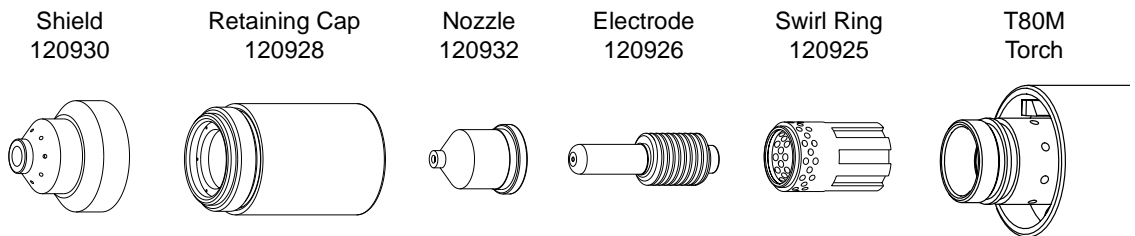
#### Aluminum

Arc Current	Arc Voltage	Pierce Delay	Material Thickness		Maximum Travel Speeds		Optimum Travel Speeds	
			Inches	mm	IPM	mm/min	IPM	mm/min
80	134	0.25	1/8"	3.2	454	11532	295	7493
	139		1/4"	6.4	176	4470	114	2896
	143	0.75	3/8"	9.5	121	3073	60	1524
	146		1/2"	12.7	75	1905	37	940
	154	N/A	3/4"	19.0	37	940	19	483

Maximum travel speeds are the fastest travel speeds possible to cut the material without regard to cut quality. Optimum travel speeds provide the best cut angle, least dross and best cut surface finish. **Remember that cut charts are intended to provide a good starting point for each different cut assignment.** Every cutting system requires "fine tuning" for each cutting application in order to obtain the desired cut quality.

### 40 Amp Mechanized Shielded Consumables

- Torch-to-work distance for the following cut chart is 1/16 inch (1.5 mm) for all cuts.



#### Mild Steel

Arc Current	Arc Voltage	Pierce Delay	Material Thickness		Maximum Travel Speeds		Optimum Travel Speeds	
			Inches	mm	IPM	mm/min	IPM	mm/min
25	147	0	26 GA	0.5	638	16205	415	10541
	148		22 GA	0.8	500	12700	325	8255
	149		18 GA	1.3	312	7925	203	5156
	152		16 GA	1.5	176	4470	114	2896
40	144	0.25	14 GA	1.9	640	16256	221	5613
	146	0.50	10 GA	3.4	151	3835	98	2489
	147	0.75	3/16	4.7	97	2464	63	1600
	149	1.00	1/4	6.4	74	1880	48	1219

#### Stainless

Arc Current	Arc Voltage	Pierce Delay	Material Thickness		Maximum Travel Speeds		Optimum Travel Speeds	
			Inches	mm	IPM	mm/min	IPM	mm/min
25	139	0	26 GA	0.5	631	16027	410	10414
	139		22 GA	0.8	496	12598	322	8179
40	142	0.25	18 GA	1.3	592	15037	335	8509
	144		16 GA	1.5	374	9500	243	6172
	144		14 GA	1.9	221	5613	144	3658
	147	0.50	10 GA	3.4	107	2718	70	1778
	149	0.75	3/16	4.7	67	1702	44	1118
	149	1.00	1/4	6.4	47	1194	31	787

#### Aluminum

Arc Current	Arc Voltage	Pierce Delay	Material Thickness		Maximum Travel Speeds		Optimum Travel Speeds	
			Inches	mm	IPM	mm/min	IPM	mm/min
25	150	0	1/32	0.8	610	15494	397	10084
	152		1/16	1.5	268	6807	174	4420
40	146	0.25	3/32	2.4	293	7442	190	4826
	149	0.50	1/8	3.2	204	5182	133	3378
	151	1.00	1/4	6.4	76	1930	49	1245

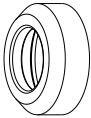
Maximum travel speeds are the fastest travel speeds possible to cut the material without regard to cut quality. Optimum travel speeds provide the best cut angle, least dross and best cut surface finish. **Remember that cut charts are intended to provide a good starting point for each different cut assignment.** Every cutting system requires "fine tuning" for each cutting application in order to obtain the desired cut quality.

# OPERATION

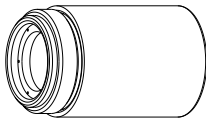
## 40 Amp Unshielded Consumables

- Torch-to-work distance for the following cut chart is 1/16 inch (1.5 mm) for all cuts.

Deflector  
120979



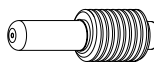
Retaining Cap  
120928



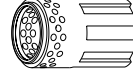
Nozzle  
220006



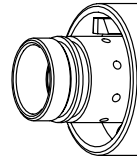
Electrode  
120926



Swirl Ring  
120925



T80M  
Torch



### Mild Steel

Arc Current	Arc Voltage	Pierce Delay	Material Thickness		Maximum Travel Speeds		Optimum Travel Speeds	
			Inches	mm	IPM	mm/min	IPM	mm/min
25	125	0	<b>26 GA</b>	<b>0.5</b>	550	13970	353	8966
	128		<b>22 GA</b>	<b>0.8</b>	484	12294	315	8001
	130		<b>18 GA</b>	<b>1.3</b>	238	6045	155	3937
	131		<b>16 GA</b>	<b>1.5</b>	167	4242	109	2769
40	129	0.25	<b>14 GA</b>	<b>1.9</b>	326	8280	212	5385

### Stainless

Arc Current	Arc Voltage	Pierce Delay	Material Thickness		Maximum Travel Speeds		Optimum Travel Speeds	
			Inches	mm	IPM	mm/min	IPM	mm/min
25	127	0	<b>26 GA</b>	<b>0.5</b>	561	14249	365	9271
	127		<b>22 GA</b>	<b>0.8</b>	453	11506	295	7493
40	123	0.25	<b>18 GA</b>	<b>1.3</b>	500	12700	325	8255
	127		<b>16 GA</b>	<b>1.5</b>	367	9322	239	6071
	128		<b>14 GA</b>	<b>1.9</b>	220	5588	143	3632

### Aluminum

Arc Current	Arc Voltage	Pierce Delay	Material Thickness		Maximum Travel Speeds		Optimum Travel Speeds	
			Inches	mm	IPM	mm/min	IPM	mm/min
25	125	0	<b>1/32</b>	<b>0.8</b>	564	14326	366	9296
	127		<b>1/16</b>	<b>1.5</b>	236	5994	153	3886
40	127	0.25	<b>3/32</b>	<b>2.4</b>	261	6629	170	4318

Maximum travel speeds are the fastest travel speeds possible to cut the material without regard to cut quality.

Optimum travel speeds provide the best cut angle, least dross and best cut surface finish. **Remember that cut charts are intended to provide a good starting point for each different cut assignment.** Every cutting system requires "fine tuning" for each cutting application in order to obtain the desired cut quality.