

PT-37 Torch

The patented PT-37 torch cuts up to 1.25" (32 mm) material using air as the plasma and shielding gas. Utilizing a blowback start and an electronically controlled pilot arc the PT-37 sets a new standard for starting reliability, cutting characteristics and consumable life.

- *100% Duty Cycle for enhanced productivity allowing for continuous operation even at maximum thickness.*
- *Utilizes a "drawn arc" to initiate the cut which eliminates high frequency interference from the starting circuits.*
- *An optional remote starting system allows the torch to be located up to 150' (45m) away from the power supply.*
- *Machined torch body with 1 3/8" (35mm) metal handle, available with and without 32-pitch rack to fit industry standard torch holders.*
- *Robust machined torch components provide for reliability, durability and ease of maintenance.*
- *Metal nozzle and shield stand up to the toughest cutting conditions.*
- *Wear parts are available individually, in sets and in value packs which eases ordering and saves money.*



Specifications

Cut capacity
 Up To 1.25" (32 mm) for Carbon Steel, Stainless Steel, 1" (25.4 mm) Aluminum
 3 phase Input at rated load 20KVA, 50/60 Hz
 208/230/380/400/46
 0/475/575 Volts
 4/49/29/28/25/24/20 A
 Output..... 100 A @ 100% duty cycle
 Minimum Air Requirements
 500 cfm @ 80 psig(236 l/min @ 5.5 bars)

Consoles

PowerCut® 1300, PowerCut® 1600, ESP-101

Ordering Information

PT-37 Torch with rack 4.5' (1.3m)..... 0558004860
 PT-37 Torch with rack 17' (5.2m)..... 0558004861
 PT-37 Torch with rack 25' (7.6m)..... 0558004862
 PT-37 Torch with rack 50' (15.2m)..... 0558004863
 PT-37 Torch without rack 4.5' (1.3m)..... 0558004894
 PT-37 Torch without rack 17' (5.2m)..... 0558004895
 PT-37 Torch without rack 25' (7.6m)..... 0558004896
 PT-37 Torch without rack 50' (15.2m)..... 0558004897
 Start-Up Kit, 100 amp, PT-37..... 0558004883
Optional Remote Junction Box and Extension Hoses & Cables
 Remote Junction Box PT-37 0558004887
 Hose/Cable Bundle RJB 50' (15m)..... 0558004888

Hose/Cable Bundle RJB 100' (30m)..... 0558004889

Optional Accessories

Torch holder, manually adjustable, 32 pitch rack 0558005926
 Plate Rider assembly..... 2238229
PT-37 Consumables & Wear parts
 Electrode PT-37, Long Life 0558004875
 Electrode PT-37/38, Standard 0558005220
 Swirl Baffle 30-70 Amp PT-37 0558005217
 Swirl Baffle 100 Amp PT-37 0558004870
 Nozzle 30A PT-37 0558005218
 Nozzle 50A PT-37 0558004878
 Nozzle 70A PT-37 0558005219
 Nozzle 100A PT-37 0558004879
 Nozzle Retainer PT-37 0558006600
 Shield 30-40 Amp PT-37 0558006603
 Shield 100 Amp PT-37 0558006601
 Shield 50-70 Amp PT-37 0558006602
PT-37 Consumable Kits & Sets
 Consumable Set 50A PT-37 (1 nozzle, 1 electrode)..... 0558004884
 Consumable Set 100A PT-37 (1 nozzle, 1 electrode)..... 0558004885
 Value Pack 100A PT-37 (12 nozzles, 8 electrodes) 0558004886

Material: Carbon Steel
Amperes: 50
Plasma Gas: Air@70 psi (4.8 bar)

Thickness in (mm)	Initial Height in (mm)	Pierce Height in (mm)	Cutting Height (standoff) in (mm)	Arc voltage	Pierce Delay (milliseconds)	Kerf Width in (mm)	Optimum IPM (mm/min)	Maximum IPM (mm/min)
0.062 (16 ga)	0.200 (5.1)	0.200 (5.1)	0.062 (1.6)	118	0	0.040 (1.0)	375 (9525)	350 (10160)
0.125 (3.2)	0.200 (5.1)	0.200 (5.1)	0.090 (2.3)	127	100	0.058 (1.5)	150 (3810)	194 (4928)
0.188 (4.8)	0.200 (5.1)	0.200 (5.1)	0.094 (2.4)	129	100	0.062 (1.6)	90 (2286)	130 (3302)
0.250 (6.4)	0.200 (5.1)	0.200 (5.1)	0.125 (3.2)	133	150	0.068 (1.7)	65 (1651)	85 (2159)
0.375 (9.5)	0.200 (5.1)	0.250 (6.4)	0.120 (3.0)	139	200	0.068 (1.7)	35 (889)	45 (1143)
0.500 (12.7)	0.200 (5.1)	0.250 (6.4)	0.077 (1.8)	145	400	0.072 (1.8)	20 (508)	27 (686)
0.625 (15.9)	0.200 (5.1)	0.275 (7.0)	0.075 (1.9)	151	950	0.075 (1.9)	10 (254)	12 (305)

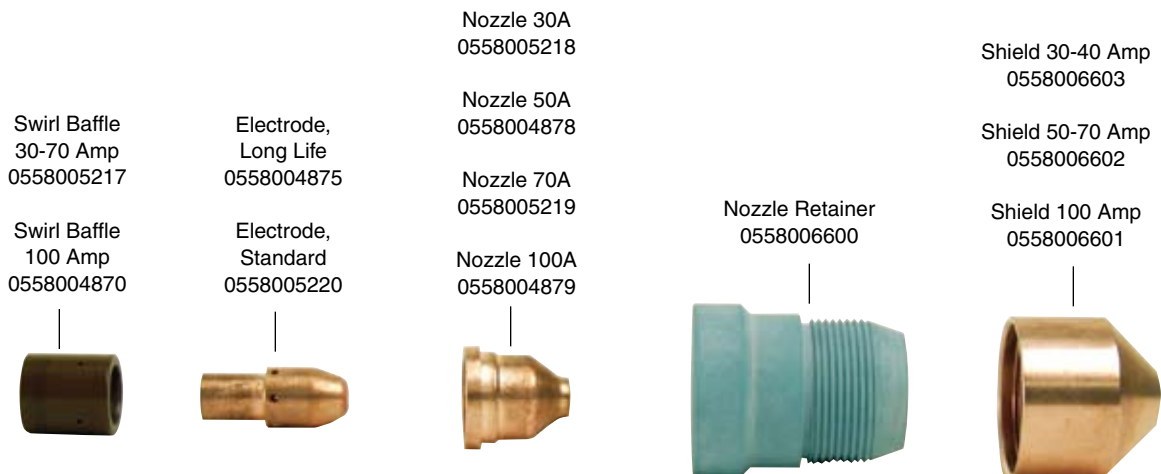
Material: Carbon Steel
Amperes: 70
Plasma Gas: Air@80 psi (5.5 bar)

Thickness in (mm)	Initial Height in (mm)	Pierce Height in (mm)	Cutting Height (standoff) in (mm)	Arc voltage	Pierce Delay (milliseconds)	Kerf Width in (mm)	Optimum IPM (mm/min)	Maximum IPM (mm/min)
0.125 (3.2)	0.200 (5.1)	0.200 (5.1)	0.093 (2.4)	125	0	0.051 (1.3)	225 (5715)	275 (6985)
0.250 (6.4)	0.200 (5.1)	0.240 (6.1)	0.156 (4.0)	139	250	0.066 (1.7)	93 (2362)	128 (3251)
0.375 (9.5)	0.200 (5.1)	0.240 (6.1)	0.215 (5.5)	146	350	0.076 (1.9)	50 (1270)	65 (1651)
0.500 (12.7)	0.200 (5.1)	0.280 (7.1)	0.200 (5.1)	152	450	0.088 (2.2)	32 (813)	45 (1143)
0.625 (15.9)	0.200 (5.1)	0.280 (7.1)	0.188 (4.8)	160	900	0.093 (2.4)	22 (559)	27 (686)
0.750 (19.1)	0.200 (5.1)	Nr	0.156 (4.0)	160	Nr	0.107 (2.7)	12 (305)	16 (406)

Material: Carbon Steel
Amperes: 100
Plasma Gas: Air@80 psi (5.5 bar)

Thickness in (mm)	Initial Height in (mm)	Pierce Height in (mm)	Cutting Height (standoff) in (mm)	Arc voltage	Pierce Delay (milliseconds)	Kerf Width in (mm)	Optimum IPM (mm/min)	Maximum IPM (mm/min)
0.250 (6.4)	0.188 (4.8)	0.188 (4.8)	0.092 (2.3)	138	100	0.075 (1.9)	77 (1956)	100 (2540)
0.375 (9.5)	0.188 (4.8)	0.188 (4.8)	0.156 (4.0)	149	300	0.090 (2.3)	44 (1118)	56 (1422)
0.500 (12.7)	0.188 (4.8)	0.240 (6.1)	0.156 (4.0)	153	300	0.100 (2.5)	57 (1448)	70 (1778)
0.625 (15.9)	0.188 (4.8)	0.240 (6.1)	0.156 (4.0)	156	400	.110 (2.8)	40 (1016)	45 (1143)
0.750 (19.1)	0.200 (5.1)	0.300 (7.6)	0.125 (3.2)	155	1200	0.105 (2.7)	26 (660)	35 (889)
1.000 (25.4)	0.250 (6.4)	Nr	0.080 (2.0)	155	Nr	0.120 (3.0)	16 (406)	20 (508)
1.250 (31.8)	0.250 (6.4)	Nr	0.062 (1.6)	159	Nr	0.120 (3.0)	10 (254)	13 (330)

Note: NR = Not Recommended





Plasmarc™ Package Selection Guide

Model	See Page	Output Current	Cycle	Torch Compatibility											Cut Capacity Carbon Steel	
				Duty PT-34	PT-31 XL	PT-31 XLPC	PT-32 EH	PT-37	PT-38	PT-251	PT-26	PT-35	PT-20AMX PT-21AMX	PT-19XLS PT600		
Handy Plasma® 125	8	11 A	30%	●												1/8 inch 3.18 mm
Handy Plasma® 250	9	18 A	20%		●											1/4 inch 6.35 mm
Handy Plasma® 380	10	15-30 A	35%		●											3/8 inch 9.5 mm
Handy Plasma® 550	11	15-35 A	40%		●											1/2 inch 12.7mm
PowerCut® 650	13	22-40 A	100%			●										5/8 inch 15.9 mm
PowerCut® 875	15	10-60 A	60%				●									7/8 inch 22 mm
PowerCut® 1300	17	20-70 A	60%					●	●							1 1/4 inch 32 mm
PowerCut® 1600	19	20-90 A	40%					●	●							1 1/2 inch 38 mm
ESP-50	21	20-50 A	100%									●				1/2 inch 12.7 mm
ESP-101	23	25-100 A	100%					●								1 1/4 inch 32 mm
ESP-150	24	30-150 A	90%								●			●		2 inch 50.8 mm
ESP-200	28	50-200 A	100%									●		●		2 inch 50.8 mm
Deuce Pack 150	26	30-300 A	90%							●	●				Special Order	4 inch 101.6mm

Plasmarc™ Torch Selection Guide

Torch	See Page	Output	Torch Type	Cutting Gas	Shielding Gas	Cooling Method	Torch Head Angle	Lengths Available	Power Supply Compatibility
PT-34	8	11 A	Man	Air	N/A	Gas	75°	15 ft.	HandyPlasma® 125
PT-31XL	32	50 A	Man	Air	N/A	Gas	75°	25 & 50 ft.	PCM-500i HandyPlasma® 550, HandyPlasma® 380
PT-31XLPC	32	50 A	Man	Air	N/A	Gas	75°	25 & 50 ft.	PowerCut® 650
PT-27	41	80 A	Man	Air	N/A	Gas	75°	25 & 50 ft.	PCM-875, PCM-1125
PT-32EH	34	90 A	Man	Air	N/A	Gas	90°	25 & 50 ft.	PowerCut® 875, PowerCut® 1125, PowerCut® 1250, PowerCut® 1500
PT-37	37	100	Mech	Air	N/A	Gas	In Line	4-1/2, 17, 25, 50 ft.	PowerCut® 1300, PowerCut® 1600, ESP-101
PT-38	39	90	Man	Air	N/A	Gas	90°	25, 50 ft.	PowerCut® 1300, PowerCut® 1600, ESP101
PT-25	45	100 A Air 150 A N ₂ ,H-35	Man	Air, N ₂ , H-35	Air, N ₂ ,CO ₂	Gas	90°	25 & 50 ft.	ESP-100i
PT-251		300 A	Man &	H-35 Mech	N/A	Water	70° & 90°	25 & 50 ft.	Deuce Pack 150
PT-26	47	300 A	Man & Mech	Air, N ₂ , H-35	Air, N ₂ , CO ₂	Water	70°, 90° & 180°	25 & 50 ft.	Deuce Pack 150, ESP-150, ESP-200
PT-20AMX PT-21AMX	51	100 A	Mech	Air	N/A	Gas	Inline	4-1/2, 17, 50 ft.	ESP-100i, PCM-150, (w/adaptor): PCM-875, PCM-1125, (PC-1250, PC-1500 w/PT-2 AMX only)
PT-35	21	50 A	Mech	Air	N/A	Gas	Inline	25 & 50 ft.	ESP-50

Recommended Cutting Gases

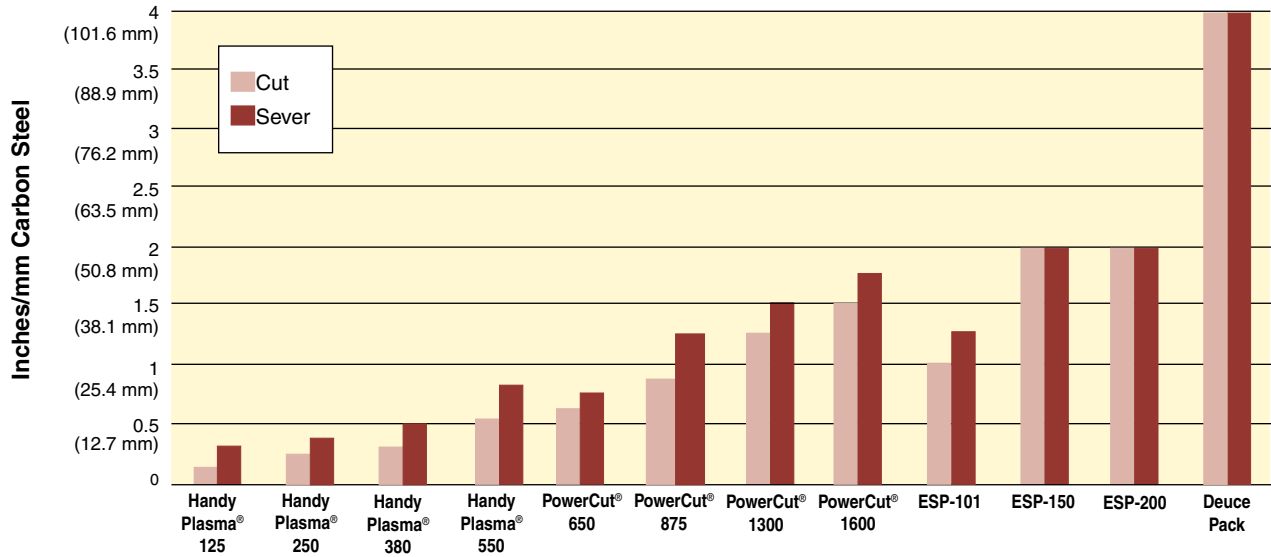
Compressed Air is the most commonly used gas for lower current plasma cutting and works well for most metals from gauge thickness to 1 in. (25.4 mm). It leaves an oxidized cut surface. Compressed air can also be used for plasma gouging on carbon steel.

Nitrogen is often used for higher current plasma systems and for cutting materials up to 3 in. (76.2 mm) thick. It produces excellent quality cuts on most materials.

Oxygen is used when the highest quality mechanized cuts are desired on carbon steel up to 1-1/4 in. (31.75 mm) thick. The cut face is smooth, and dross is easy to remove. Oxygen can also be used on stainless steel and aluminum, but it produces a rougher cut face.

Argon-Hydrogen Mixtures are generally used for cutting stainless steel and aluminum. They produce a clean, high quality cut face. Argon-Hydrogen is required for mechanized cutting of any material more than 3 in. (76.2 mm) thick. This mixture also provides an excellent gas for plasma gouging on all materials.

Plasmarc™ Cutting Package Capabilities



Torch Guide Kits

- Includes attachments for circle and straight line cutting on ferrous and non-ferrous metals
- For additional information, order literature number EMB-1074 (Deluxe Kit) and/or EMB-1075 (Basic Kit)

Adaptor for PT-17AM and PT-20AMX Torches

- Adapts PT-17AM torch to PCM-875 and PCM-1125 console for manual cutting
- Adapts PT-17AM/PT-20AM torches to PCM-875 and PCM-1125 consoles for mechanized cutting

90° Head Angle Converter Kit for PT-27/23 Torch

- Fits between handle and head of torch
- Gives the effect of a 90° angle torch head

Plasma Flow Measuring Kit

- Valuable troubleshooting tool
- Allows measurement of actual plasma gas flow through torch

Remote Hand Switch

- Allows the operator to start and stop the cutting process with a remote switch.
- Used primarily for mechanized cutting and is included in the mechanized Plasmarc packages

Torch Retrofit Kits

- Allow select ESAB Plasmarc torches to be retrofitted to other brand plasma consoles
- Do not include the torch, which must be purchased separately

Leather Sheath

- A 10 ft. (3 m) leather sheath to protect torch leads from abrasion and molten metal
- Particularly recommended for plasma gouging

Plasmits

- Special flexible shields attach around the head of a plasma cutting torch to provide added protection against heat and molten metal
- Recommended for heavy duty plasma gouging applications

Torch Wrap & Kit Holder

- This enables operator to store spare parts kit, wrap torch and work cable for easy transport and storage

Wheel Kit

- This enables easy transport of the PCM-500i, PCM-875 and PCM-1125 Series; and PowerCut® 875/1125 and PowerCut® 1250/1500 Series Machines



**Deluxe
Torch Guide
Kit**



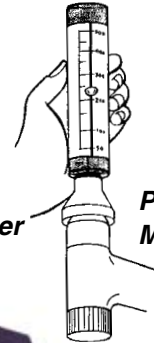
**Plasmit
w/Torch**



**Basic Torch
Guide Kit**



**Torch Wrap and Kit Holder
PowerCut® Machines**



**Plasma Flow
Measuring Kit**



**Wheel Kit
PowerCut® Machines**

Ordering Information

Torch Wrap and Kit Holder, PCM Series.....	33952GY
Torch Wrap and Kit Holder, PowerCut® 875/1125.....	0558003013
Torch Wrap and Kit Holder, PowerCut® 1250/1500.....	0558003059
Torch Wrap & Kit Holder PowerCut® 650.....	0558003398
Wheel Kit PowerCut® 650.....	0558003399
Wheel Kit, PCM Series.....	34324
Wheel Kit, PowerCut® 875/1125.....	0558003014
Wheel Kit, PowerCut® 1250/1500.....	0558003060
Torch Guide Kit for PT-17, 23/27, 25, 31/34 & PT-32EH Torches (Deluxe: 1-3/4 in. (44.45 mm) - 42 in. (106.7 cm) Radius)	0558003258
PT-17 Bushing.....	TJ2226
PT-23/27 Bushing.....	TJ2225
PT-25 Bushing.....	TJ2230
PT-31XL Bushing.....	TJ2228
PT-32 Bushing.....	0558003257
Torch Guide Kit for PT-27/31XL/34/32 Torch (Basic: 1-3/4 in. (44.45 mm) - 28 in. (71 cm) Radius).....	0558002675
90° Angle Converter Kit for PT-27.....	000222
Plasma Flow Measuring Kit.....	19765
Remote Hand Switch PT-20AMX.....	680982
Remote Hand Switch ESP-150 and ESP-200.....	2075600
Remote Hand Switch PT-21AMX.....	0558003612
Retrofit Kit to adapt PT-17A to PAK5XR/PAK10XR.....	31548
Retrofit Kit to adapt PT-31XL/ PT-27 to MAX-40.....	18228
10 Ft. Leather Sheath with Snaps (For use with any ESAB Plasmarc torch).....	20812
Plasmit for PT-17A Manual Torch.....	20803
Plasmit for PT-121, 75° Torch.....	20742
Plasmit for PT-121/PT-25, 90° Torch.....	20801
Plasmit for PT-121, Mechanical Torch.....	20802
Plasmit for PT-251, 75° Torch.....	20805
Plasmit for PT-26 70° Torch.....	0558006717
Plasmit for PT-26 90° Torch.....	0558006718
Plasmit for PT-251 Mechanical Torch.....	20807
Adaptor for PT-17A & PT-20AMX on PCM-875 & PCM-1125.....	19500