

Spectrum[®] 875/875 Auto-Line[™]

Issued July 2010 • Index No. PC/9.8

**Air Plasma Cutting
and Gouging**



Quick Specs

Industrial Applications

Construction
Maintenance/Repair
Fabrication

Process

Air Plasma Cutting
and Gouging

Rated Input

875: 208 or 230 V, 1-Phase
875 Auto-Line: 208–575 V, 1- or 3-Phase

Rated Output at 40°C (104°F)

100% Duty Cycle (see page 2)
875: 1-Phase: 60 A at 140 VDC,
Duty Cycle: 50% (230 V), 40% (208 V)
875 Auto-Line: 1-Phase: 60 A at 140 VDC,
Duty Cycle: 40% (208–230 V)
875 Auto-Line: 3-Phase: 60 A at 140 VDC,
Duty Cycle: 50% (208–230 V), 60% (380–575 V)

Cutting Capability

Rated: 7/8 in (22.2 mm)
Sever: 1-1/4 in (31.8 mm)

System Weight

875: With 20 ft torch: 51 lb (23.1 kg)
With 50 ft torch: 62 lb (28.1 kg)
875 Auto-Line with hand-held torch:
With 20 ft torch: 56 lb (25.5 kg)
With 50 ft torch: 67 lb (30.5 kg)

Required Input Pressure/Flow

6.75 SCFM
(191 L/min) at
90 PSI MIN
(621 kPa)
120 PSI MAX
(828 kPa)

The Power of Blue.[®]

NEW! 875 Auto-Line[™] unit automatically connects to any primary input voltage from 208–575 volts single- or three-phase, 50 or 60 Hz.

LVC[™] line voltage compensation provides peak performance power under variable input voltage conditions ($\pm 15\%$) for steady and cleaner ending cuts.

Consumables storage compartment provides convenient access to consumables and parts.

Wind Tunnel Technology[™] prevents abrasive dust and particles from damaging internal components.

Fan-On-Demand[™] cooling system operates only when needed. In dirty or dusty environments, this feature reduces the amount of airborne dust/dirt pulled through the unit.

Auto Postflow calculates the length of postflow time based on the amount of cutting time to optimize consumable life and eliminate excessive air usage.

Patented Ultra-Quick Connect[™] torch and work cable offers the fastest plasma torch and work cable connection and removal in the industry.

ICE-60T/TM torch offers improved plasma flow characteristics for increased cutting speeds and longer consumable set life.

CNC/Robotic machine interface is standard on Spectrum 875 Auto-Line only, allowing automated control and rapid changeover to mechanized operation.



Can be powered by any Miller engine drive with generator power at or above 10 kW (e.g. Bobcat[™]) or equivalent competitive equipment. See page 3 for engine drive compatibility and recommended settings.



Power source is warranted for 3 years, parts and labor.
ICE torch is warranted for 1 year, parts and labor.

SIZE DOES MATTER

Big cutting power in a small package! See more at MillerWelds.com/sizematters

Comes Complete With:

- ICE-60T hand-held torch with 20 ft (6 m) or 50 ft (15.2 m) cable; or ICE-60TM machine-held torch (Auto-Line model only) with 25 ft (7.6 m) or 50 ft (15.2 m) cable. Extra consumables supplied
- Heavy-duty work clamp with 20 ft (6 m) or 50 ft (15.2 m) cable
- 10 ft (3 m) power cord
- CNC/Robotic remote cable kit (included with machine-held torch package)

Starts without high-frequency so it will not interfere with or damage controls or computers.

Auto-Retire[™] Technology provides ultimate customer convenience by automatically controlling the pilot arc when cutting expanded metal or multiple pieces of metal. The pilot arc will switch in and out as fast as needed when cutting expanded metal and provides maximum power for cutting thicker metal—all automatically! No need for manual re-triggering which reduces user hand fatigue.

Automatic Air Regulation—For end user convenience, the unit has no pressure gauge or manual regulator knob. The unit automatically adjusts the air pressure to the torch for optimum cutting and gouging. No adjustments necessary.



Miller Electric Mfg. Co.

An Illinois Tool Works Company
1635 West Spencer Street
Appleton, WI 54914 USA

Equipment Sales US and Canada

Phone: 866-931-9730
FAX: 800-637-2315
International Phone: 920-735-4554
International FAX: 920-735-4125

Web Site

www.MillerWelds.com



MADE IN USA
APPLETON, WI

Specifications (Subject to change without notice.)



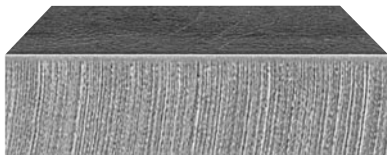
Non-Auto-Line model is 1-Phase only.

Model	Rated Output at 40°C (104°F)*	Amps Input at Rated Output, 50/60 Hz 208 V 230 V 380 V 460 V 575 V KVA KW	Max. Open-Circuit Voltage	Plasma Gas	Dimensions	Net Weight**
875	1-Phase: 60 A at 140 VDC, 50% duty cycle (230 V) 40% duty cycle (208 V)	47 42 — — — 9.9 9.8	400 VDC	Air or Nitrogen only	H: 13-1/2 in (343 mm) W: 8-3/4 in (222 mm)	With Hand-Held Torch 20 ft (6.1 m): 51 lb (23.1 kg) 50 ft (15.2 m): 62 lb (28.1 kg)
875 Auto-Line™	1-Phase: 60 A at 140 VDC, 40% duty cycle (208–230 V)	47.4 42.2 — — — 9.9 9.7	400 VDC	Air or Nitrogen only	D: 18-1/2 in (470 mm)	With Hand-Held Torch 20 ft (6.1 m): 56 lb (25.5 kg) 50 ft (15.2 m): 67 lb (30.5 kg)
	3-Phase: 60 A at 140 VDC, 50% duty cycle (208–230 V), 60% duty cycle (380–575 V)	27.5 25 15 12.4 9.8 9.9 9.4				With Machine-Held Torch 25 ft (7.6 m): 59 lb (26.8 kg) 50 ft (15.2 m): 68 lb (31 kg)

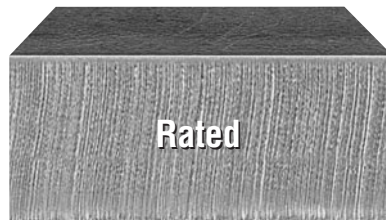
*100% duty cycle rated output (Spectrum 875 Auto-Line only): 50 A at 140 VDC (208–230 V, 1-Phase) or (208–575 V, 3-Phase). **Add 8.5 lb (3.9 kg) for shipping weight.

Certified to both the Canadian and U.S. Standards for welding and plasma cutting equipment.

Mild Steel Cutting Capability (Thickness to scale.)



1/2 in (12.7 mm) at 27 IPM



7/8 in (22.2 mm) at 10 IPM

Mild Steel Recommended Cut Speed

Thickness	Approximate Travel Speeds*
1/4 in (6.4 mm)	86 IPM (2184 mm/min)
3/8 in (9.5 mm)	41 IPM (1041 mm/min)
1/2 in (12.7 mm)	27 IPM (686 mm/min)
3/4 in (19.0 mm)	14 IPM (363 mm/min)
7/8 in (22.2 mm)	10 IPM (254 mm/min)

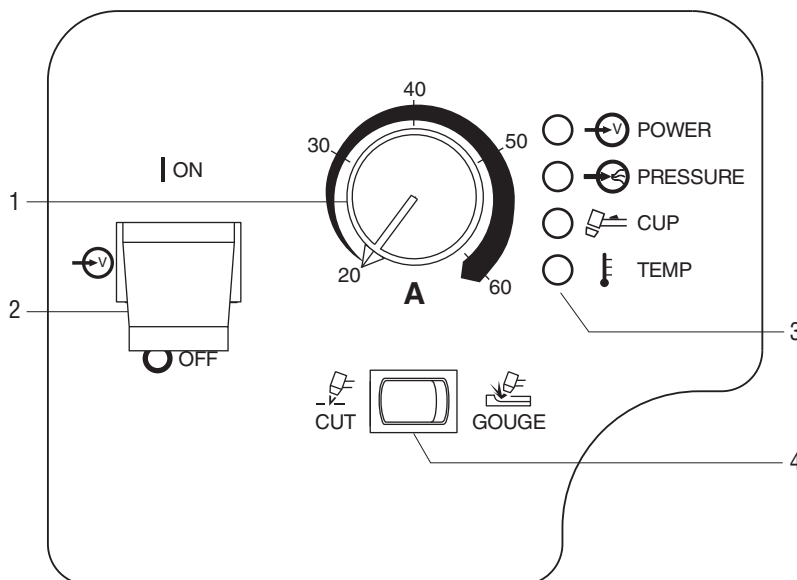
Note: Recommended maximum piercing capacity for hand-held and automated applications is 7/16 in (11 mm). Maximum Sever cut of 1-1/4 in (32 mm) at 3 IPM.

For aluminum and other metals with high thermal conductivity, cutting capabilities will be derated as much as 30%.

*Travel speeds are approximately 80% of maximum.

Rated cut capacity is based on traveling approximately 10 inches per minute to achieve a steady, precise cut. This is the key rating that should meet or exceed your typical cutting thickness requirements.

Control Panel



1. Output Control
2. Power Switch
3. Status and Troubleshooting Lights
4. Process Control

Engine Drive Compatibility

Equipment	Generator Power	Mild Steel Cut Capacity (Approximate)	Spectrum Output Amp Setting
Bobcat™, Trailblazer®	11 kW	1/2 in	45 A, 240 V, full KVA plug
PipePro® 304, Big Blue® 300 Pro	12 kW	5/8 in	50 A, 240 V, full KVA plug
Big 40® CC/CV	15 kW (optional)	7/8 in	60 A, 240 V, full KVA plug
Big Blue® 500 CC/CV	20 kW (optional)	7/8 in	60 A, 240 V, full KVA plug

Note: LP powered machines need to be derated by 15%.

Genuine Miller Accessories



No. 30B Economy Running Gear and Cord Wrap #300 511

Economical running gear with angle for easy front panel access provides storage for gloves and tools.



Protective Cover #300 388

Mildew-resistant, odor-free, waterproof cover protects your machine's finish. Cable management pouches provide storage for 20 ft (6.1 m) torch and work cables.



Female Receptacle



Adapter Cord, Full KVA #300 517 Field NEMA 14-50P to NEMA 6-50R. Adapts engine drive 120/240 V plug to common Millermatic® and Spectrum® 240 V plug.



RTI Filter and Bracket Kit #300 491

Dryer will remove water, dirt and oil as small as one micron with 99.9% efficiency. Can be mounted on plasma cutter or on wall. Install as close as possible to point of air consumption.

Miller Service Parts Accessories

The following accessories must be ordered from Miller Service Parts.

RTI Replacement Filter Element #212 771

For kit #300 491.



ICE-60T Consumable Kit #239 086

Consumable kit includes 3 standard

electrodes, 3 standard tips, 2 extended tips, 1 gouge tip, 1 gouge shield, 1 drag shield, 1 retaining cup, 3 o-rings and silicone grease.



Plasma Standoff Roller Guide #194 883

Helps maintain recommended standoff distance

to maximize cutting performance and improve tip life.



Plasma Circle-Cutting Guide #195 981

Cut straight lines or circles up to 12 inch diameter with ease.



Suction/Magnetic Pivot Base #195 979

Add this to your cutting guide for convenient attachment to all flat surfaces. The extended arm accommodates holes up to 30 inch diameter.



Torch Cable Cover Kits

#239 642 20 ft (6.1 m)
#231 867 25 ft (7.6 m)
#231 868 50 ft (15.2 m)



In-Line Air Filter Kit #228 926

Mounts to the back of the Spectrum® 375 X-TREME™, 375, 625 X-TREME™, 875 and 875 Auto-Line™. Includes male and female 1/4 in NPT quick

disconnect fittings and hose for easy on/off connection. The replaceable filter element filters to .85 microns.

In-Line Air Filter Replacement Element #228 928

For in-line filter #228 926.



Miller MIG Gloves

#227 821 Small
#227 822 Medium
#227 823 Large
#227 824 X-Large

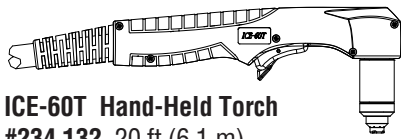
For medium-duty MIG welding and metalworking tasks. Combination of durable top grain cowhide

and abrasion-resistant pig split back sewn with Kevlar® thread.

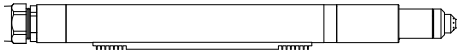
Remote Pendant Control #195 513

Provides remote start and stop of the arc for the ICE-60TM machine-held torch.

Replacement Torch and Consumables



ICE-60T Hand-Held Torch
#234 132 20 ft (6.1 m)
#234 134 50 ft (15.2 m)

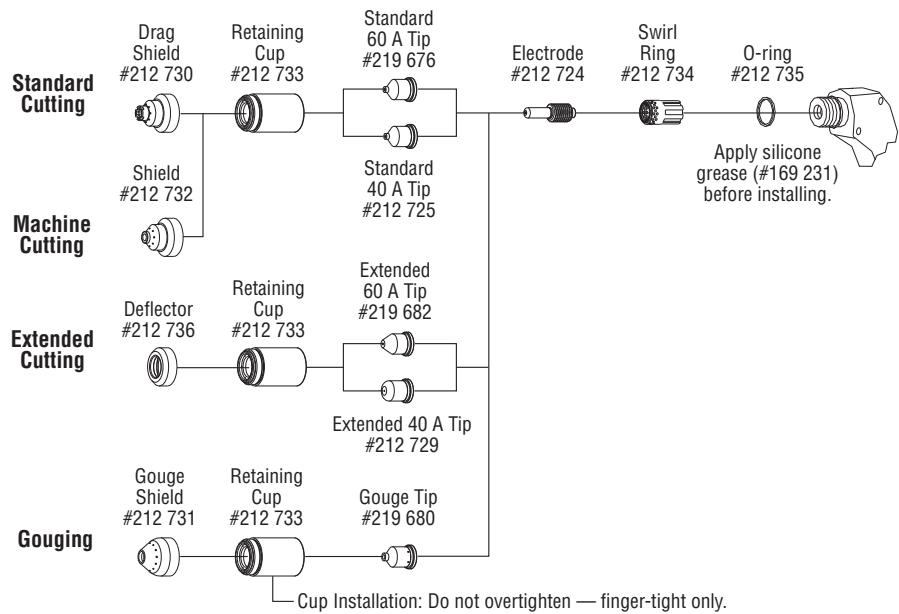


ICE-60TM Machine-Held Torch*
#234 136 25 ft (7.6 m)
#234 138 50 ft (15.2 m)

ICE-60TM Machine-Held Torch Package*

#300 759 25 ft (7.6 m)
#300 760 50 ft (15.2 m)
 Package includes ICE-60TM machine-held torch, remote control cable (#220 240), remote voltage sense cable (#246 285), machine torch sense tab (#226 763), remote pendant control (#195 513) and internal control harness.

Note: Call Miller Service Parts for info. *For Spectrum 875 Auto-Line only.



Ordering Information

Power Source and Options	Stock No.	Description	Qty.	Price
Spectrum® 875 208/230 V, 1-phase	#907 390-01-1	With ICE-60T, 20 ft (6.1 m) hand-held torch		
	#907 390-01-2	With ICE-60T, 50 ft (15.2 m) hand-held torch		
Spectrum® 875 Auto-Line™ 208–575 V, 1- or 3-phase	#907 396	With ICE-60T, 20 ft (6.1 m) hand-held torch		
	#907 396-00-1	With ICE-60T, 50 ft (15.2 m) hand-held torch		
	#907 396-00-2	With ICE-60TM, 25 ft (7.6 m) machine-held torch		
	#907 396-00-3	With ICE-60TM, 50 ft (15.2 m) machine-held torch		

Note: Each Spectrum unit includes extra consumables (2 standard electrodes, 2 standard tips, 1 extended tip and 1 deflector).

Replacement Torches	Stock No.	Description	Qty.	Price
ICE-60T Hand-Held Torch	#234 132	20 ft (6.1 m). Order from Miller Service Parts		
	#234 134	50 ft (15.2 m). Order from Miller Service Parts		
ICE-60TM Machine-Held Torch For Spectrum 875 Auto-Line only	#234 136	25 ft (7.6 m). Order from Miller Service Parts		
	#234 138	50 ft (15.2 m). Order from Miller Service Parts		
ICE-60TM Machine-Held Torch Package For Spectrum 875 Auto-Line only	#300 759	See contents above. 25 ft (7.6 m). Order from Miller Service Parts		
	#300 760	See contents above. 50 ft (15.2 m). Order from Miller Service Parts		

Accessories	Stock No.	Description	Qty.	Price
No. 30B Economy Cart	#300 511			
Protective Cover	#300 388			
Adapter Cord, Full KVA	#300 517	Adapts engine drive 120/240 V plug to Spectrum® 240 V plug		
RTI Filter and Bracket	#300 491			
RTI Filter Replacement Element	#212 771	For RTI filter #300 491. Order from Miller Service Parts		
ICE-60T Consumable Kit	#239 086	Order from Miller Service Parts		
Plasma Standoff Roller Guide	#194 883	Order from Miller Service Parts		
Plasma Circle-Cutting Guide	#195 981	Order from Miller Service Parts		
Suction/Magnetic Pivot Base	#195 979	Order from Miller Service Parts		
Torch Cable Cover Kits		See page 3. Order from Miller Service Parts		
In-Line Air Filter Kit	#228 926	Order from Miller Service Parts		
In-Line Air Filter Replacement Element	#228 928	For in-line filter #228 926. Order from Miller Service Parts		

Date: _____ Total Quoted Price: _____

Distributed by:

