

Spectrum® 625

Issued April 2008 • Index No. PC/9.5

**Air Plasma
Cutting and Gouging** 

Quick Specs

Industrial Applications

Maintenance
Light Construction
Prototyping
Body Shops
Fabrication

Process

Air Plasma Cutting
and Gouging

Rated Output

40 A at 140 VDC,
50% Duty Cycle at
40° C/104° F

Cutting Capability

Rated: 5/8 in (15.9 mm)
Sever: 7/8 in (22.2 mm)

Weight

With torch: 60 lb (27 kg)

Required Input Pressure/Flow

6 SCFM (170 L/min) at
90 PSI MIN (621 kPa)
120 PSI MAX (828 kPa)

The Power of Blue.®

LVC™ line voltage compensation provides peak performance power under variable input voltage conditions (187–264 V) for steady and cleaner ending cuts.

Wind Tunnel Technology™ prevents abrasive dust and particles from damaging internal components. Also, the Fan-On-Demand™ cooling system only operates when needed. In dirty or dusty environments, this feature reduces the amount of airborne dust/dirt pulled through the unit.

Consumables storage compartment provides convenient access to consumables and parts.

Power Factor Correction (PFC) circuitry draws up to 30% less amperage for the same cutting range as compared to the competition. PFC expands operators work area via extension cord, while minimizing nuisance circuit breaker trips caused by voltage drops.

Pilot Arc Controller improves tip life and maintains uninterrupted operation when cutting expanded metal or grating.

LED indicators for pressure, power, cup and temperature allow faster troubleshooting, eliminating unnecessary downtime.



Spectrum Plasma Cutters offer reliability and performance that others can't match! See more at MillerWelds.com/reliable

Comes Complete With:

- ICE-40C hand-held torch with 25 ft (7.6 m) or 50 ft (15.2 m) cable
- Heavy-duty work clamp with 25 ft (7.6 m) or 50 ft (15.2 m) cable
- Extra consumables (3 electrodes, 3 tips and 1 air fitting)
- 12 ft (3.7 m) industrial power cord and plug

Gas/air filter/regulator inside the power source provides added protection during transportation. Standard air connection on back panel provides easy gas or air hookup.

Postflow cooling circuit extends the life of the consumables and torch by cooling them with postflow air after the trigger is released.

Ergonomically designed ICE-40C handle provides increased comfort while cutting. Safety trigger prevents accidental starts.

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

Can be powered by any Miller engine drive with generator power (e.g. Bobcat) or equivalent competitive equipment. See page 2 for engine drive compatibility and recommended settings.

TRUE BLUE®
3YR. WARRANTY

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

MADE IN **USA**
APPLETON, WI **USA**



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An Illinois Tool Works Company
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Web Site
www.MillerWelds.com



Specifications (Subject to change without notice.)



Rated Output	Max. Open-Circuit Voltage	Amps Input at Rated Output, 50/60 Hz, 1-Phase				Plasma Gas	Dimensions	Weight with Torch
		208 V	230 V	KVA	KW			
40 A at 140 VDC, 50% duty cycle	260 VDC	33	30	6.9	6.7	Air or Nitrogen only	H: 15-1/4 in (387 mm) W: 10-3/8 in (264 mm) D: 17-1/4 in (438 mm)	Net: 60 lb (27 kg) Ship: 67.5 lb (30.6 kg)

Mild Steel Cutting Capability (Thickness to scale.)



1/4 in (6.4 mm) at 65 IPM

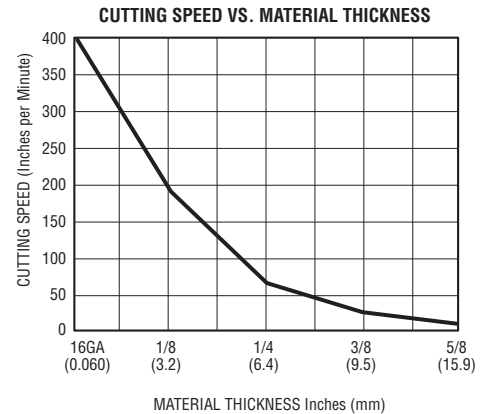


5/8 in (15.9 mm) at 10 IPM

Note: Recommended maximum piercing capacity for hand-held applications is 1/4 in (6.4 mm). Maximum Sever cut of 7/8 in (22.2 mm) at 4 IPM
For aluminum and other metals with high thermal conductivity, cutting capacities may be derated as much as 30%.

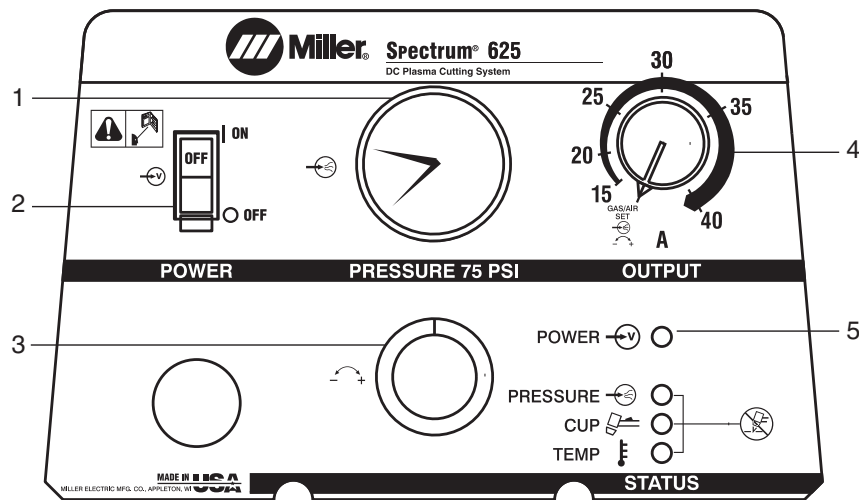
Rated cut capacity is based on traveling approximately 10 inches per minute to achieve a steady, precise cut. This is the key rating that should meet or exceed your typical cutting thickness requirements.

Rated Cutting Performance



Control Panel

1. Gas/Air Pressure Gauge
2. Power Switch
3. Gas/Air Pressure Adjustment Control
4. Output Control
5. Status and Troubleshooting Lights



Engine Drive Compatibility

Equipment	Generator Power	Steel Quality Cut (Approximate)	Spectrum Output Amp Setting
Bobcat™ 250, Trailblazer® 302 & 275 DC	11 kW	5/8 in	40 A, 240 V, full KVA plug
Bobcat™ 225	10.5 kW	5/8 in	40 A, 240 V, full KVA plug
Miller Legend® 302	5 kW	3/8 in while not welding	30 A, 240 V, full KVA plug
PipePro® 304, PRO 300	12 kW	5/8 in	40 A, 240 V, full KVA plug
Big 40® CC/CV	15 kW (optional)	5/8 in	40 A, 240 V, full KVA plug
Big Blue® 500 CC/CV	20 kW (optional)	5/8 in	40 A, 240 V, full KVA plug

Genuine Miller Accessories



No. 50HD Cart #300 026

This heavy-duty cart accommodates the Spectrum 125C, 375, 625, 2050, 1000 and 1251.



No. 30A Economy Running Gear and Cord Wrap #195 093

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



Protective Cover #195 145

Mildew-resistant, odor-free, waterproof cover protects your machine's finish.



Female Receptacle



Adapter Cord, Full KVA #300 158

NEMA 14-50P to NEMA 6-50R. Adapts engine drive 120/240 V plug to Spectrum® 240 V plug.



RTI Filter and Bracket #195 425

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.

Motor Guard Air Filter #042 306

This filter is equipped with a mounting bracket that allows installation on the top, side, or rear panel of most plasma cutters. The filter is equipped with a 1/4 in NPT port to match the fittings on most plasma systems; it has a rated airflow of over 45 SCFM.

Miller Service Parts Accessories

The following accessories must be ordered from Miller Service Parts.

RTI Replacement Filter Element #212 771
Replacement Filter for #195 425

Motor Guard Replacement Filter Element #042 312

Carton of four filters for use with motor guard air filter #042 306.



ICE-40C Consumable Kit #222 940

Consumable kit includes 3 standard electrodes, 3 standard tips, 1 ext electrode, 1 ext tip, 1 gouge tip, 1 gouge shield, 1 swirl ring, 1 retaining cup, 1 o-ring 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 in 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 in diameter.



Torch Cable Covers
#231 867 25 ft (7.6 m)
#231 868 50 ft (15.2 m)

Full KVA Plug Kit #119 172

240 VAC, 50 amp plug (NEMA 14-50P) to fit full KVA receptacle with a minimum of 8 KVA generator power.



**In-Line Air Filter Kit
#228 926**

Mounts to the back of the Spectrum® 375 X-TREME™, 375, 625, 2050, 1000, 1251. 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

Includes 1 replacement filter for in-line filter #228 926.



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

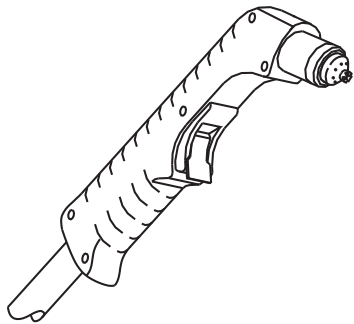


Metalworker Gloves

#227 817 Small
#227 818 Medium
#227 819 Large
#227 820 X-Large
Designed for the daily demands of the

metalworker and material handler. Padded, goatskin palm with textured G-Grip™ patch for excellent grip. Neoprene wrist with Velcro® closure for improved fit. NOT intended for use while welding.

Replacement Torch and Consumables

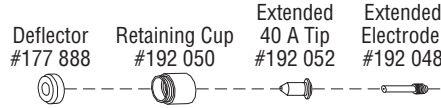


Standard Cutting



Extended Cutting

1/8 in (3 mm) stand-off recommended



Gouging



Apply very light coating of silicone grease (#169 231) before installing.

For best gouging results, set machine air pressure at 55 PSI.

ICE-40C Hand-Held Torch
#195 110 25 ft (7.6 m)
#195 111 50 ft (15.2 m)

Ordering Information

Power Source and Options	Stock No.	Description	Qty.	Price
Spectrum® 625	#907 058*	208/230 VAC, 50/60 Hz, with ICE-40C 25 ft (7.6 m) Hand-Held Torch		
	#907 058-01-1*	208/230 VAC, 50/60 Hz, with ICE-40C 50 ft (15.2 m) Hand-Held Torch		
Replacement Torch and Consumables				
ICE-40C Hand-Held Torch	#195 110	25 ft (7.6 m). <i>Order from Miller Service Parts</i>		
	#195 111	50 ft (15.2 m). <i>Order from Miller Service Parts</i>		
Consumables		See above. <i>Order from Miller Service Parts</i>		
Accessories				
No. 50HD Cart	#300 026			
No. 30A Economy Running Gear and Cord Wrap	#195 093			
Protective Cover	#195 145			
Adapter Cord, Full KVA	#300 158	Adapts engine drive 120/240 V plug to Spectrum® 240 V plug		
RTI Filter and Bracket	#195 425			
Motor Guard Air Filter	#042 306			
RTI Filter Replacement Element	#212 771	For RTI filter #195 425. <i>Order from Miller Service Parts</i>		
Motor Guard Replacement Filter Element	#042 312	For air filter #042 306. <i>Order from Miller Service Parts</i>		
ICE-40C Consumable Kit	#222 940	Includes 3 standard electrodes, 3 standard tips, 1 ext electrode, 1 ext tip, 1 gouge tip, 1 gouge shield, 1 swirl ring, 1 retaining cup, 1 o-ring and silicone grease. <i>Order from Miller Service Parts</i>		
Silicone Grease	#169 231	<i>Order from Miller Service Parts</i>		
Plasma Standoff Roller Guide	#194 883	<i>Order from Miller Service Parts</i>		
Plasma Circle-Cutting Guide	#195 981	<i>Order from Miller Service Parts</i>		
Suction/Magnetic Pivot Base	#195 979	<i>Order from Miller Service Parts</i>		
Torch Cable Covers		See page 3. <i>Order from Miller Service Parts</i>		
Full KVA Plug Kit	#119 172	<i>Order from Miller Service Parts</i>		
In-Line Air Filter Kit	#228 926	<i>Order from Miller Service Parts</i>		
In-Line Air Filter Replacement Element	#228 928	<i>Order from Miller Service Parts</i>		
MIG Gloves		See page 3. <i>Order from Miller Service Parts</i>		
Metalworker Gloves		See page 3. <i>Order from Miller Service Parts</i>		

Date:

Total Quoted Price:

*  Certified by Canadian Standards Association to both Canadian and U.S. standards.



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