

Spectrum® 625 X-TREME™

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**Air Plasma
Cutting and Gouging** 

Quick Specs

Industrial Applications Process

Maintenance
Light Construction
Prototyping
Body Shops
Fabrication

Rated Output

40 A at 140 VDC, 50% Duty Cycle
27 A at 91 VDC, 20% Duty Cycle

Cutting Capability

Rated: 5/8 in. (16 mm)

Weight

With 12-ft. torch: 21 lb. (9.5 kg)
With 20-ft. torch: 23 lb. (10.4 kg)

Required Input Pressure/Flow

6 SCFM (170 L/min.) at
90 PSI minimum (621 kPa)
120 PSI maximum (828 kPa)

The Power of Blue.®

X-TREME Versatility — Auto-Line™ provides state-of-the-art flexibility to the end user. The Auto-Line circuitry automatically connects to 120–240 VAC, single-phase power, 60 Hz, without removing the covers to relink the power source. (Output amperage is automatically reduced to 27 A for 120 V input.)

X-TREME Protection — X-CASE™ provides ultimate protection during transport and storage. Additional space ideal for MVP Adapters, consumable box, as well as gloves, eye protection, etc.

X-TREME Portability — Portable in the shop or at the jobsite — at 21 pounds the shoulder strap allows the end user to easily move from location to location.

Auto-Refire™ 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.

Heavy-duty clamp included.

High-performance cooling system with Fan-On-Demand.™ Thermal management system features new high-speed fan which only operates when torch trigger is engaged for improved reliability.

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

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



XT40 torch with ergonomic handle to help prevent operator fatigue while the flexible cable makes maneuvering easier (see page 4 for more detail).



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

Comes Complete With:

- XT40 hand-held torch with 12-ft. (3.7 m) or 20-ft. (6.1 m) cable. Includes a complete set of 40 A consumables
- Heavy-duty work clamp with 12-ft. (3.7 m) or 20-ft. (6.1 m) cable
- X-CASE™ provides protection in transport and storage
- 12-ft. (3.7 m) power cord with 240 V L6-30P twist lock plug for MVP™ adapters
- MVP™ adapters with 240 V, 50A (6-50P) plug and 120 V, 15 A (5-15P) plug
- Shoulder strap
- Consumables box with 2 electrodes, 2 tips (40 A), 1 tip (30 A), drag shield (30 A), deflector, and air fitting

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

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

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

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

MVP™ adapters allow connection to 120 or 240 V receptacles without tools — choose the adapter cord with the right plug that fits the receptacle and connect it to the power cord with the L6-30R twist lock.

Automatic air regulation. The unit automatically compensates for input pressure variation to provide constant recommended torch pressure for optimum cutting performance.

Automatic gouging consumable detection. Detects gouging consumable and adjusts gas pressure to optimize performance, eliminating the need for a manual regulator.



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Specifications (Subject to change without notice.)

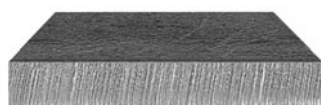


Input Power	Rated Output	Amps Input at Rated Output, 60 Hz, 1-Phase	KVA	KW	Plasma Gas	Dimensions	System Weight
240 V	40 A at 140 VDC, 50% Duty Cycle	27	6.4	6.3	Air or Nitrogen only	H: 9 in. (229 mm) W: 5.5 in. (140 mm) D: 13.25 in. (337 mm)	With 12-ft. (3.7 m) Torch Net: 21 lb. (9.5 kg) Ship: 39 lb. (18.5 kg) With 20-ft. (6.1 m) Torch Net: 23 lb. (10.5 kg) Ship: 42 lb. (19 kg)
120 V (20 A)	27 A at 91 VDC, 20% Duty Cycle	26	3.0	2.9			
120 V (15 A)	20 A at 88 VDC, 35% Duty Cycle	18	2.2	2.1			

Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

Mild Steel Cutting Capability (Thickness to scale.)

Cutting at 40 Amps (240 V)



1/4 in. (6.4 mm) at 64 IPM



5/8 in. (15.9 mm) at 13 IPM

Note: Recommended maximum piercing capacity for hand-held applications is 5/16 inch (7.9 mm).
 Maximum sever cut of 7/8 inch (22.2 mm) at approximately 5 IPM.
 For aluminum and other metals with high thermal conductivity, cutting capacities may be reduced as much as 30%.

Mild Steel Recommended Cut Speeds at 40 Amps

Thickness	Approximate Travel Speeds*
1/8 in. (3.2 mm)	156 IPM (3963 mm/min.)
1/4 in. (6.4 mm)	64 IPM (1626 mm/min.)
3/8 in. (9.5 mm)	36 IPM (915 mm/min.)
1/2 in. (12.7 mm)	22 IPM (559 mm/min.)
5/8 in. (15.9 mm)	13 IPM (330 mm/min.)

*Travel speeds are approximately 80% of maximum.

Cutting at 27 Amps (120 V)

Output amperage is automatically reduced to 27 A for 120 V input.



1/8 in. (3.2 mm) at 88 IPM



3/8 in. (9.5 mm) at 15 IPM

Note: Recommended maximum piercing capacity for hand-held applications is 1/8 inch (3.2 mm).
 For aluminum and other metals with high thermal conductivity, cutting capabilities will be derated as much as 30%.

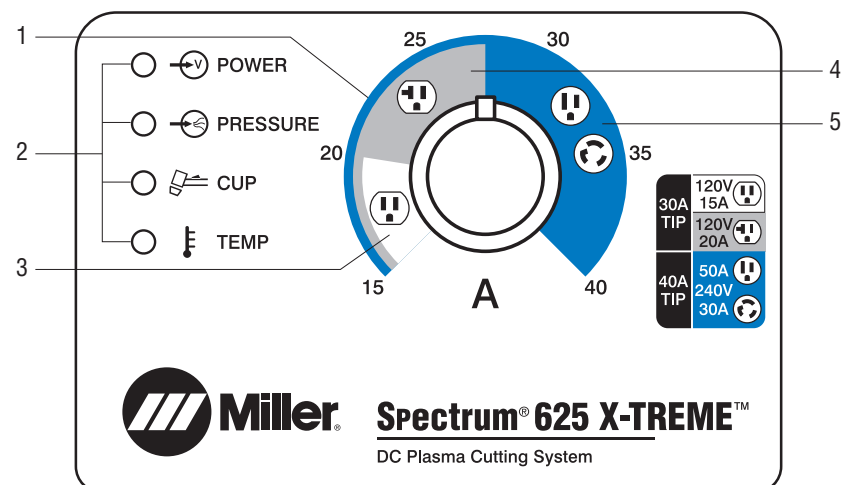
Mild Steel Recommended Cut Speeds at 27 Amps

Thickness	Approximate Travel Speeds*
12 ga. (2.8 mm)	115 IPM (2921 mm/min.)
1/8 in. (3.2 mm)	88 IPM (2235 mm/min.)
3/16 in. (4.8 mm)	50 IPM (1280 mm/min.)
1/4 in. (6.4 mm)	28 IPM (711 mm/min.)
3/8 in. (9.5 mm)	15 IPM (386 mm/min.)
1/2 in. (12.7 mm)	8 IPM (203 mm/min.)
5/8 in. (15.9 mm)	5 IPM (126 mm/min.)

*Travel speeds are approximately 80% of maximum.

Rated cut capacity is based on traveling approximately 15 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. Status and Troubleshooting Lights
3. Range for 30 A Tip, 120 V/15 A, 5-15P MVP™ Adapter
4. Range for 30 A Tip, 120 V/20 A, 5-20P MVP™ Adapter
5. Range for 40 A Tip, 240 V/30 A/50 A, 6-50P MVP™ Adapter

Engine Drive Compatibility

Equipment	Generator Power	Steel Quality Cut (Approximate)	Spectrum Output Amp Setting
Wildcat® 200	6.5 kW	3/8 in.	30 A (240 V full KVA adapter cord)
Bobcat™, Trailblazer®	11 kW	5/8 in.	40 A (240 V full KVA adapter cord)
Big Blue® 300 Pro, Big Blue® 350 PipePro®	12 kW	5/8 in.	40 A (240 V full KVA adapter cord)
Big 40® CC/CV	15 kW (optional)	5/8 in.	40 A (240 V full KVA adapter cord)
Big Blue® 500 CC/CV	20 kW (optional)	5/8 in.	40 A (240 V full KVA adapter cord)

Genuine Miller® Accessories



X-CASE™
#300 184
 Sturdy case provides ultimate protection for transport and storage. Also

features convenient top carrying handle and side recessed hand grips. Store the Spectrum® 625 X-TREME™, accessories and gear in this generous case to be ready to go at any time. Dimensions (H x W x D): 13 x 10.5 x 30.625 in. (330 x 267 x 778 mm).



Female Receptacle

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

Miller Service Parts Accessories

The following accessories must be ordered from Miller Service Parts.



XT40 Consumable Kit #253 521
 Consumable kit includes 5 electrodes, 5 tips (40 A), 3 tips (30 A),

1 drag shield (40 A), 1 drag shield (30 A), 1 deflector, 1 o-ring, 1 swirl ring, 1 retaining cup, 1 gouge tip (40 A), 1 gouge shield and silicone grease.



Plasma Standoff Roller Guide #253 054
 Helps maintain recommended standoff distance to maximize

cutting performance and improve tip life.



Plasma Circle-Cutting Guide #253 055
 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.



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-inch NPT quick disconnect fittings and hose for easy on/off connection. The replaceable filter element filters to .85 microns for removal of 99.9 percent of water, dirt and oil.

In-Line Air Filter Replacement Element #228 928
 For in-line filter #228 926.



Torch Cable Covers #239 642
 20 ft. (6.1 m)



Safety Glasses
#235 662 Blk, shade 3.0
#235 661 Blue, shade 3.0
#235 663 Orng, shade 3.0
#235 658 Blk, shade 5.0
#235 657 Blue, shade 5.0
#235 659 Orng, shade 5.0

Form-fitting orbital eye coverage with increased comfort and style. Choice of black, blue or orange frame. Meets ANSI Z87.1 standards.



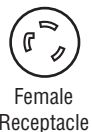
MIG Gloves
#249 175 Medium
#249 176 Large
#249 177 X-Large
 Breathable pigsplit back with genuine American deerskin palm for ultimate comfort. Moisture-wicking fleece lining provides additional protection.



Multi-Purpose Gloves
#249 184 Medium
#249 185 Large
#249 186 X-Large
 Breathable pigsplit back with top grain cowhide palm for excellent heat protection. Moisture-wicking mesh lining and padded palm.

MVP™ Adapters

Order from Miller Service Parts.



Female Receptacle



#254 328 For connection to 6-50P receptacle (240 V/50 A). Included with machine.



#254 330 For connection to 5-15P receptacle (120 V/15 A). Included with machine.



#254 331 For connection to 5-20P receptacle (120 V/20 A). Optional.

XT Torch and Consumables



Laser-etched tip for easy identification.

O-ring
#249 969

Swirl Ring
#249 931

Electrode
#249 926

Tip
#249 928 (40 A)
#249 927 (30 A)

Retaining Cup
#249 932

Drag Shield
#251 960 (40 A)
#249 930 (30 A)

Deflector
#249 933

Gouge Tip
#249 934

Gouge Shield
#249 936

Note: The XT40 can be configured for cutting at either 30 A or 40 A by installing the appropriate cutting tip and drag shield. For gouging, replace the tip and drag shield with gouge tip and gouge shield. The rest of the XT40 consumables are common. Replacing drag shield with deflector offers improved arc visibility while maintaining 1/16-inch standoff.



XT40 Hand-Held Torch
#249 951 12 ft. (3.7 m)
#249 952 20 ft. (6.1 m)

Strain relief is durable and corrosion resistant and **exclusive flexible cable** has improved bend radius.



Trigger guard protects against inadvertent arc initiation.

80-degree handle provides natural arm and elbow positioning while cutting.

Robust tip front end design optimizes arc performance and tip life.

New retaining cup design provides increased cutting visibility and quick turn for easy consumable change.

No-slip grip for easy control and torch dexterity.

Ergonomic design with unique thumb guide and finger grip contours.

Ordering Information

Power Source	Stock No.	Description	Qty.	Price
Spectrum® 625 X-TREME™ with X-CASE™	#907 531	120–240 VAC, 60 Hz, with XT40 12-ft. (3.7 m) Hand-Held Torch and X-CASE™		
	#907 531-00-1	120–240 VAC, 60 Hz, with XT40 20-ft. (6.1 m) Hand-Held Torch and X-CASE™		
Replacement Torch and Consumables				
XT40 Hand-Held Torch	#249 951	12 ft. (3.7 m). <i>Order from Miller Service Parts</i>		
	#249 952	20 ft. (6.1 m). <i>Order from Miller Service Parts</i>		
Consumables		See above. <i>Order from Miller Service Parts</i>		
Accessories				
X-CASE™ (only)	#300 184	Carrying case for Spectrum® 625 X-TREME™		
Adapter Cord, Full KVA	#300 517	Adapts engine drive 120/240 V plug to Spectrum® 240 V plug		
XT40 Consumable Kit	#253 521	Includes 5 electrodes, 5 tips (40 A), 3 tips (30 A), 1 drag shield (40 A), 1 drag shield (30 A), 1 deflector, 1 o-ring, 1 swirl ring, 1 retaining cup, 1 gouge tip (40 A), 1 gouge shield, and silicone grease. <i>Order from Miller Service Parts</i>		
Silicone Grease	#252 951	<i>Order from Miller Service Parts</i>		
Plasma Standoff Roller Guide	#253 054	<i>Order from Miller Service Parts</i>		
Plasma Circle-Cutting Guide	#253 055	<i>Order from Miller Service Parts</i>		
Suction/Magnetic Pivot Base	#195 979	<i>Order from Miller Service Parts</i>		
Torch Cable Covers	#239 642	20 ft. (6.1 m). <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>		
Safety Glasses		See page 3. <i>Order from Miller Service Parts</i>		
MIG Gloves		See page 3. <i>Order from Miller Service Parts</i>		
Multipurpose Gloves		See page 3. <i>Order from Miller Service Parts</i>		
MVP™ Adapters		See page 3. <i>Order from Miller Service Parts</i>		

Date:

Total Quoted Price:

Distributed by:

