

Spectrum® 1000

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**Air Plasma
Cutting and Gouging** 

Quick Specs

Industrial Applications

Heavy Fabrication
Manufacturing

Processes

Air Plasma Cutting
and Gouging

Rated Output

80 A at 150 VDC,
60% Duty Cycle (230–575 V),
50% Duty Cycle (208 V), 3-Phase

80 A at 150 VDC,
40% Duty Cycle (230 V),
30% Duty Cycle (208 V), 1-Phase

Cutting Capability

Rated: 1 in (25.4 mm)
Quality: 1-1/4 in (32 mm)
Sever: 1-1/2 in (38 mm)

Weight

With torch: 92 lb (41.7 kg)

Required Input Pressure/Flow

7.8 SCFM (222 L/min) at
90 PSI MIN (621 kPa)
120 PSI MAX (828 kPa)

The Power of Blue.®

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

LVC™ line voltage compensation provides peak performance power under variable input voltage conditions (176–630 V) for steady cuts and cleaner ending cuts.

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.

Consumables storage compartment provides convenient access to consumables and parts.

Wind Tunnel Technology™ prevents abrasive dust and particles from damaging internal components. Also, the **Fan-On-Demand™** cooling system only operates when needed, reducing the amount of airborne dust/dirt pulled through the unit.

Superior gouging capability provides an extremely long gouging arc for those hard-to-reach, heavy applications. Plasma arc gouging produces less dust, smoke and other harmful environmental hazards compared to carbon arc gouging.

CNC/Robotic machine interface is standard on all units, allowing automated control and rapid changeover to mechanized operation.

Portable powerful package that cuts up to 1-1/2 in (38 mm) but weighs only 92 lb (41.7 kg).



TRUE BLUE®
3YR. WARRANTY

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

Comes Complete With:

- ICE-80T hand-held torch with 25 ft (7.6 m) or 50 ft (15.2 m) cable, or ICE-80TM machine-held torch with 25 ft (7.6 m) or 50 ft (15.2 m) cable. Extra consumables supplied
- Heavy-duty work clamp with 25 ft (7.6 m) or 50 ft (15.2 m) cable
- 10 ft (3 m) power cord
- CNC/Robotic remote cable kit (included w/machine-held torch pkg)

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

Postflow cooling circuit cools the consumables and torch with postflow air after you release the trigger. This feature extends life of torch and consumables.

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



Miller's rugged **ICE-80T torch** provides an increased rated cut of 1 in, longer consumable life, and a torch cable that is more resistant to burns and cuts.

The ICE-80T torch includes a **drag shield** that attaches to the cup and holds the tip 1/8 in (3.2 mm) off the workpiece. This permits the operator to drag the torch on the workpiece while cutting at full output, which increases operator comfort and makes template cutting easier.

The ICE-80T/TM utilizes the same consumables as the ICE-80CX.

MADE IN USA
APPLETON, WI 

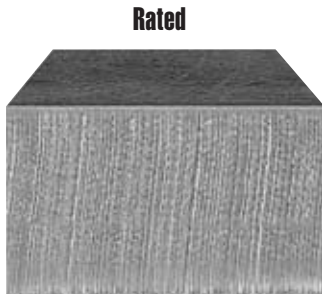
ISO 9001:2000
REGISTERED
QUALITY SYSTEM

Specifications (Subject to change without notice.)



Input Power	Rated Output	Duty Cycle	Amps Input at Rated Output, 50/60 Hz							Plasma Gas	Dimensions	Net Weight with Torch
			208 V	230 V	400 V	460 V	575 V	KVA	KW			
3-phase	80 A at 150 VDC	230–575 V at 60% 208 V at 50%	41	36	21	18	14	14.6	13.7	Air or Nitrogen only	H: 17 in (432 mm) W: 12-1/2 in (318 mm) D: 20-1/2 in (521 mm)	Net: 92 lb (41.7 kg)
1-phase	80 A at 150 VDC	230 V at 40% 208 V at 30%	69	62	—	—	—	14.3	14.4			

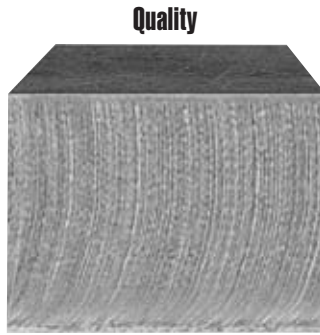
Mild Steel Cutting Capability (Thickness to scale.)



Rated
1 in (25.4 mm)

Rated Cutting Capacity

10 inches per minute (minimum speed at which an operator achieves a smooth, steady cut using a hand-held torch).

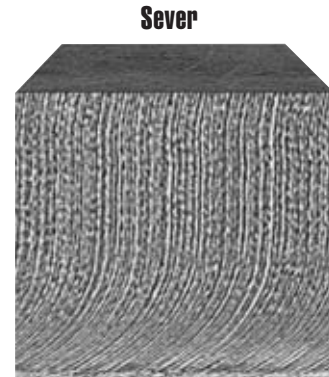


Quality
1-1/4 in (32 mm)

Maximum Quality Cutting Capacity

Good-quality cut achieved at lower speeds.

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



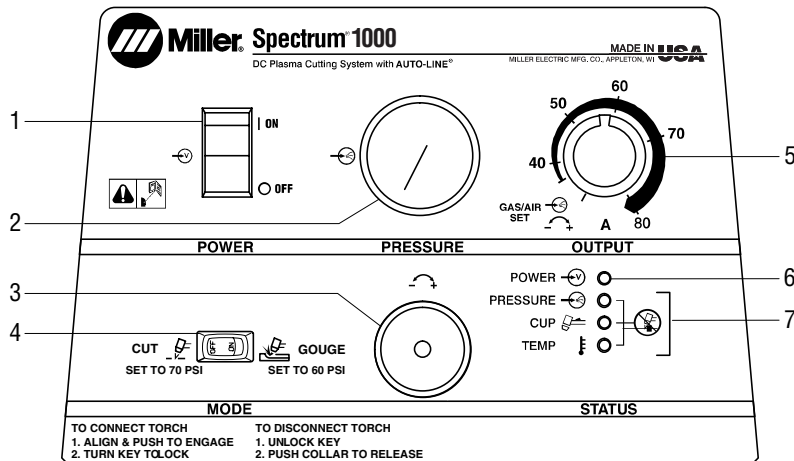
Sever
1-1/2 in (38 mm)

Sever Cut Capacity

Maximum cut achieved in ideal conditions.

Note: Recommended maximum piercing capacity for hand-held applications is 1/2 in (12.7 mm).

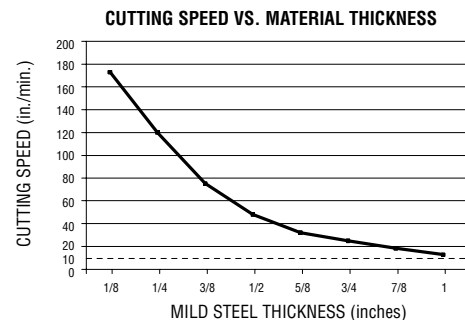
Control Panel



1. Power Switch
2. Gas/Air Pressure Gauge
3. Gas/Air Pressure Control
4. Cut/Gouge Switch
5. Output Control
6. Power Light
7. Trouble Lights

Cutting Performance

To determine the maximum rated cutting thickness, follow the dashed line from the 10 IPM (inches per minute) point on the cutting chart. The point at which this line intersects the cutting curve determines the maximum recommended production cutting thickness of the unit.



Note: The rating is based on 10 IPM because this is the minimum speed at which the operator achieves a smooth, steady cut when using a hand-held torch.

Genuine Miller Accessories

CNC/Robotic Remote Cable Kit

#195 432 with 25 ft (7.6 m) torch
#300 027 with 50 ft (15.2 m) torch
 Consists of an ICE-80TM mechanized torch and cable assemblies for CNC/Robotic interface for remote start and okay-to-move functions as well as voltage-sensing. Includes remote pendant control with cable. Order from Miller Service Parts.

Remote Pendant Control #195 513

Provides remote start and stop of the arc for the ICE-80TM machine-held torch. Order from Miller Service Parts.



ICE-80T Consumable Kit #222 942

Consumable kit includes 6 standard electrodes, 3 tips (80 A), 2 ext tips (80 A), 1 gouge tip, 1 gouge shield, 1 retaining cup, 1 drag shield and 3 o-rings. Order from Miller Service Parts.



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" diameter.



Torch Cable Covers

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

Motor Guard Air Filter #042 306

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.

Replacement Filter Element #042 312

Carton of four filters for use with motor guard air filter **#042 306**. Order from Miller Service Parts.



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.

RTI Replacement Filter Element #212 771

Order from Miller Service Parts.



No. 30A Economy Cart with Cord Wrap #195 093

This economical running gear provides mobility with an angle for easy front panel access and extra storage space.



No. 50HD Cart #300 026

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



Protective Cover #195 424

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



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



ICE-80T Hand-Held Torch

#195 223 25 ft (7.6 m)
 #195 225 50 ft (15.2 m)



The ICE-80TM Machine-Held Torch

is also available for the Spectrum 1000.

#195 221 25 ft (7.6 m)
 #223 535 50 ft (15.2 m)

Note: Call Miller Service Parts for info.

#907 162-01-3 with 25 ft (7.6 m) torch
 #907 162-01-5 with 50 ft (15.2 m) torch

Packages include Spectrum 1000 power source, ICE-80TM machine-held torch, CNC/Robotic remote cable kit, and remote pendant control.

Standard Cutting 80 Amp

Drag Shield
#212 730



Retaining Cup
#212 733



Tip
#212 726



Electrode
#212 724



Swirl Ring
#212 734



O-Ring
#212 735



Apply silicone grease (#169 231) before installing.

Machine Cutting

Shield
#212 732



40 Amp Cutting

Drag Shield
#212 730



Retaining Cup
#212 733



Tip
#212 725



Extended Cutting 80 Amp

Deflector
#212 736



Retaining Cup
#212 733



Tip
#212 728



Extended Cutting 40 Amp

Deflector
#212 736



Retaining Cup
#212 733



Tip
#212 729



Gouging 80 Amp

Shield
#212 731



Retaining Cup
#212 733



Tip
#212 727

