

Spectrum® 2050

Portable Air Plasma Cutting and Gouging

Featuring:

- 55-Amp Output
- New ICE-55C Torch
- Auto-Line™ Technology

Index No. PC/7.0
Issued Sept. 2000



Process



Air Plasma Cutting
and Gouging

TRUE BLUE
3YR. WARRANTY

1 year warranty on the torch.



Innovative technology and versatile design combine in this industrial plasma cutting and gouging system. Miller's exclusive **Auto-Line™** input voltage technology allows for any input voltage hookup (208–575 V) with no manual linking, providing convenience in any job setting. The addition of the new ICE-55C torch offers improved plasma flow characteristics for increased cutting speeds and longer consumable set life. The portable, easy-to-carry unit is an excellent choice for cutting jobs on all conductive metals including mild carbon or stainless steel up to 7/8 in (22 mm) and aluminum to 3/4 in (19 mm). A unique protective drag shield allows you to drag cut at full 55 amp output. The drag shield increases operator comfort, makes template cutting easier, and improves consumable life—even in piercing work.

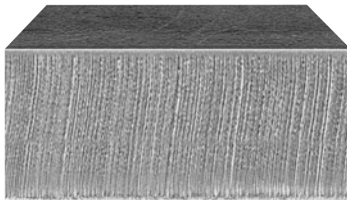
Comes Complete with:

- ICE-55C hand-held torch with 25 ft (7.6 m) or 50 ft (15.2 m) cable, or ICE-55CM machine-held torch with 50 ft (15.2 m) cable. Extra consumables supplied.
- 20 ft (6.1 m) work cable with clamp
- 10 ft (3 m) power cord

Cutting Capability *(Thickness to scale.)*

MILD STEEL

Rated

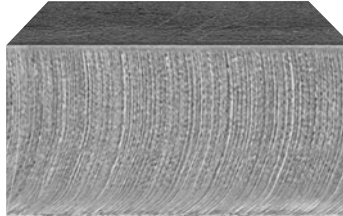


7/8 in (22 mm)*

Rated Cutting Capacity

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

Quality

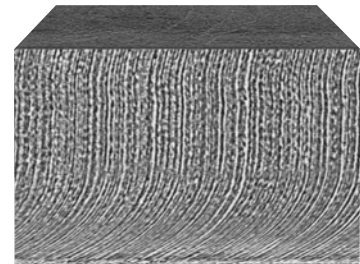


1 in (25 mm)*

Maximum Quality Cutting Capacity

Good-quality cut achieved at lower speeds.

Sever



1-1/4 in (32 mm)*

Sever Cut Capacity

Maximum cut achieved in ideal conditions.

*Using non-shielded consumables.

Specifications *(Subject to change without notice.)*

Industrial **DC** **3** Phase **1** Phase

Rated Output	Max. Open-Circuit Voltage	Amps Input at Rated Output								Rated Cutting Capacity	Plasma Gas	Plasma Gas Flow/Pressure	Dimensions	Net Weight	
		208 V	230 V	380 V	400 V	415 V	460 V	575 V	KVA						KW
55 A at 110 VDC, 60% duty cycle, 3-Phase	280 VDC	21	20	10	10	10	9	8	7.6 (7.9 @ 575 V)	7.4	0.875 in (22 mm) at 10 IPM	Air or Nitrogen only	6.0 CFM (172 L/min) at 70 PSI (483 kPa)	H: 17 in (432 mm) W: 12½ in (318 mm) D: 24 in (610 mm)	70 lb (32 kg)
55 A at 110 VDC, 50% duty cycle, 1-Phase		36	33	—	—	—	16	13	7.5	7.4					

Note: For any single- or three-phase voltage from 208 V to 575 V, the Amps Input at Rated Output is the same for 50 or 60 Hertz input power.

Ordering Information See back page.



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Features

Auto-Line™

Benefits

Automatically links the Spectrum® 2050 to any primary input voltage from 208 to 575 volts, single- or three-phase, 50 or 60 Hz. Have a problem with inconsistent input power? Not a problem with Auto-Line because the Spectrum 2050 automatically adapts to voltage spikes from 190 to 630 volts. Compare before you buy — other manufacturers claim their product is “universal” but their product requires a manual change of links inside the product when changing input voltage. Some typical input voltages that Auto-Line is capable of automatically adjusting to are: 208/230/380/400/415/460/575.

Compatible welding generator auxiliary power

The Spectrum 2050 can be powered by any Miller welding generator with auxiliary power output of 8 KW or more — such as the Bobcat™ 225 NT, and Trailblazer™ 251 NT. As well as equivalent competitive equipment. Recommendation: **8,000 watts**, set Spectrum 2050 at 45 A for cutting 5/8 in mild steel
10,000 watts, set Spectrum 2050 at 50 A for cutting 3/4 in mild steel
12,000 watts, set Spectrum 2050 at 55 A for cutting 7/8 in mild steel

ICE-55C Torch

The ICE-55C torch offers improved plasma flow characteristics for increased cutting speeds and longer consumable set life.

Wind Tunnel Technology™ and Fan-On-Demand™

Miller's patented 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. These two features lead to increased productivity as maintenance is reduced and downtime is virtually eliminated.

Consumables storage compartment

For time savings when changing parts and easy access to consumables, the Spectrum 2050 includes a convenient built-in storage compartment.

Pilot arc switch

The expanded metal mode allows operator to cut grates, chain link fence, and other perforated metals without retriggering the gun. This feature is standard on the Spectrum 2050.

Portability

If weight and size are important for your application, the Spectrum 2050 weighs only 70 lb (32 kg).

Drag shield

The ICE-55C 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.

Postflow cooling circuit

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

No high-frequency starts

High frequency can interfere with controls or computers. The Spectrum 2050 unit starts without high frequency.

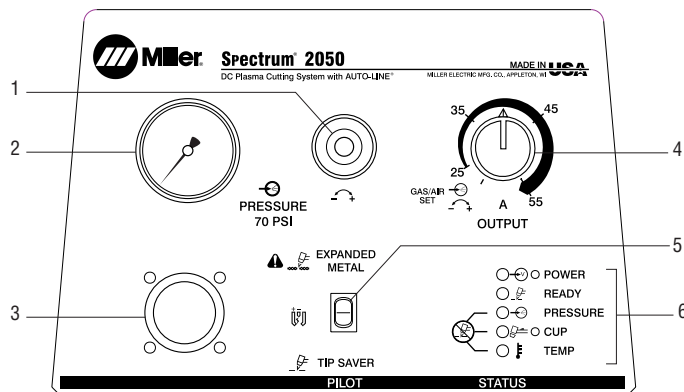
Built-in gas/air filter/regulator

The Spectrum 2050 has its regulator housed inside the power source to protect it from transportation damage. A standard air connection is also provided on the back panel for easy gas or air hookup.

Miller's True Blue® Warranty

No other manufacturer offers a better warranty than Miller. Power source is warranted for **three years**, parts and labor. Original rectifier parts have a five-year warranty and the ICE torches have a **one-year** parts and labor warranty.

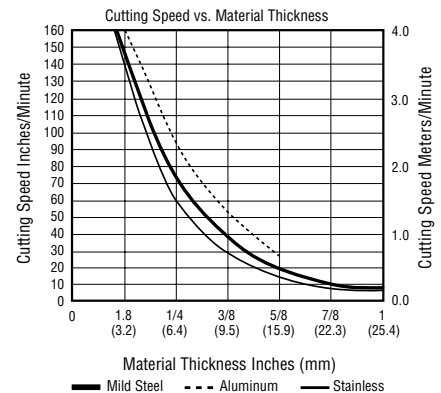
Control Panel



1. Gas/Air Pressure Adjustment Control
2. Gas/Air Pressure Gauge
3. Torch Connection Receptacle
4. Output Control
5. Pilot Arc Mode Switch
6. Status and Troubleshooting Lights

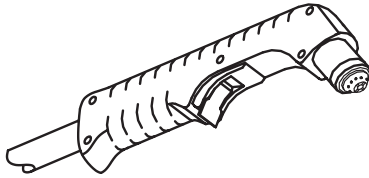
Cutting Performance

To determine the maximum rated cutting thickness of mild steel, follow the 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.

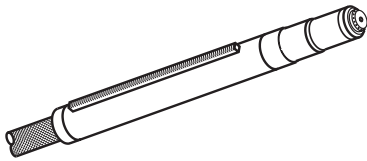


Note: The rating is based on 10 IPM because this is the minimum speed at which the operator achieves a smooth, steady cut when using a hand-held torch.

Replacement Torches

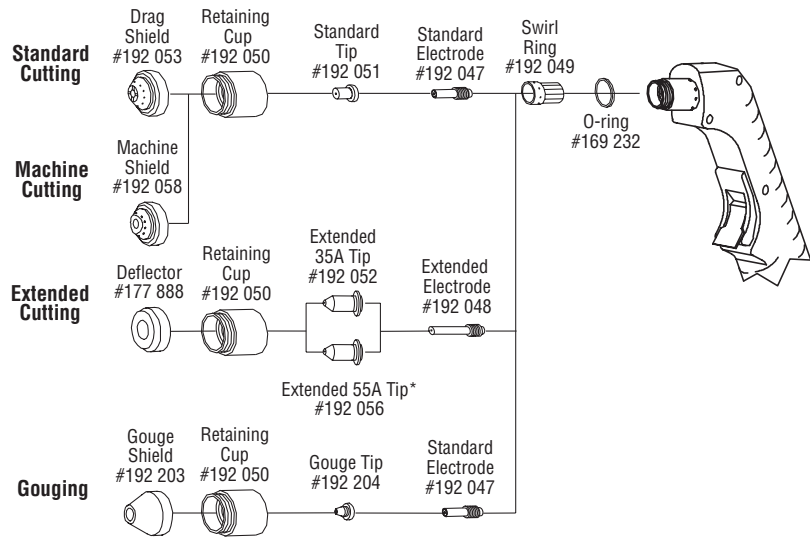


ICE-55C Hand-held Torch
 #193 347 25 ft (7.6 m)
 #193 348 50 ft (15.2 m)



ICE-55CM Machine-held Torch
 #193 349 50 ft (15.2 m)

Torch Consumables (Order from Miller Service Parts.)



*For drag cutting with extended parts, recommended 40 amp maximum output. A 1/8 in (3 mm) standoff is required for output over 40 amps.

Options and Accessories

Cable Covers

- #118 677 15 ft (4.6 m) torch
 - #118 678 30 ft (9 m) torch
- Protect hose and cables. Feature nonconductive zipper and are easily removed if necessary.

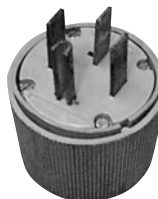
Remote Pendant Control #180 605
 Provides remote start and stop of the arc for the ICE-55CM machine-held torch.



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.

Replacement Filter Element #042 312
 Carton of four filters for use with motor guard air filter #042 306.



240 V Plug #119 172
 For connection to Bobcat, Trailblazer or Hobart Champion 10,000 with a minimum of 8 KVA auxiliary power.



Plasma Circle-Cutting Guide #195 981 ICE 25C, 50C, 55C, 80C
 Cut straight lines or circles up to 12" 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.



No. 30 Economy Cart #195 963
No. 30 Running Gear Cord Wrap #195 978
 This economical running gear provides mobility with an angle for easy front panel access and extra storage space. Cord wrap sold separately.



Plastic Consumables Box with Compartments #127 493
 For storing additional parts and accessories.

Ordering Information and System Checklist

Equipment and Options	Stock No.	Description	Qty.	Price
Spectrum® 2050 Single-/three-phase, 208–575 VAC, 50/60 Hz <i>Note: Each Spectrum unit includes extra consumables (2 standard electrodes, 2 standard tips, 1 ext. electrode, 1 ext. tip and 1 deflector).</i>	#950 701*	With ICE-55C, 25 ft (7.6 m) hand-held torch		
	#950 702*	With ICE-55C, 50 ft (15.2 m) hand-held torch		
	#950 703*	With ICE-55CM, 50 ft (15.2 m) machine-held torch Machine torch package includes remote pendant control #180 605		
Accessories				
Cable Covers	#118 677	15 ft (4.6 m)		
	#118 678	30 ft (9 m)		
Remote Pendant Control	#180 605			
Motor Guard Air Filter	#042 306			
Replacement Filters	#042 312			
240 V Plug	#119 172			
Plasma Circle-Cutting Guide	#195 981	ICE 25C, 50C, 55C, 80C		
Suction/Magnetic Pivot Base	#195 979			
No. 30 Economy Cart	#195 963			
No. 30 Running Gear Cord Wrap	#195 978			
Plastic Consumables Box	#127 493			
Miscellaneous				
Bottled Air				
3/8 in Diameter Air Hose				
Air Hose Fittings				
Date:	Total Quoted Price:			

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



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