

# Spectrum® 2050

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**Portable Air Plasma  
Cutting and Gouging**



## Quick Specs

### Industrial Applications

Construction  
Maintenance/Repair  
Fabrication

### Processes

Air Plasma Cutting  
and Gouging

**Rated Output** 55 A at 110 VDC, 60% Duty Cycle, 3-Phase  
55 A at 110 VDC, 50% Duty Cycle, 1-Phase

**Cutting Capability** Rated — 7/8 in (22 mm)  
Quality — 1 in (25 mm)  
Sever — 1-1/4 in (32 mm)

**Plasma Gas Flow/Pressure** 6.0 CFM (172 L/min) at 70 PSI (483 kPa)

**Weight** 70 lb (32 kg)

## The Power of Blue.®

Can be powered by any Miller welding generator with auxiliary power output of 8 KW or more — such as the Bobcat™, or Trailblazer™, or 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

**Consumables storage compartment** provides convenient access to consumables and parts.

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

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.

**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.



### 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

A standard feature, the **pilot arc switch** in expanded metal mode allows operator to cut grates, chain link fence, and other perforated metals without retriggering the gun.

**Portable**, easy-to-carry unit weighs only 70 lb (32 kg).

**Auto-Line™** automatically links the Spectrum® 2050 to any primary input voltage from 208 to 575 V, single- or three-phase, 50 or 60 Hz.

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

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

**Built-in gas/air filter/regulator** is housed inside the power source for protection from transportation damage. A standard air connection is also provided on the back panel for easy gas or air hookup.

**TRUE BLUE®**  
3 YR. WARRANTY

Power source is warranted for 3 years, parts and labor.  
ICE torches are warranted for one year, parts and labor.

MADE IN **USA**  
APPLETON, WI



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# Specifications (Subject to change without notice.)

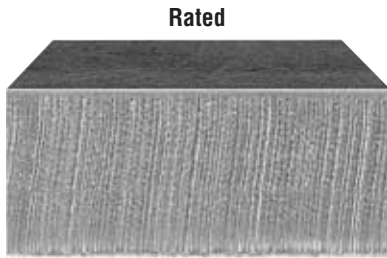
DC 3 Phase 1 Phase

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					
55 A at 110 VDC, 60% duty cycle, 3-Phase	280 VDC	21	20	10	10	10	9	8	7.6	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: 12-1/2 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					

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.

## Cutting Capability (Thickness to scale.)

### MILD STEEL



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

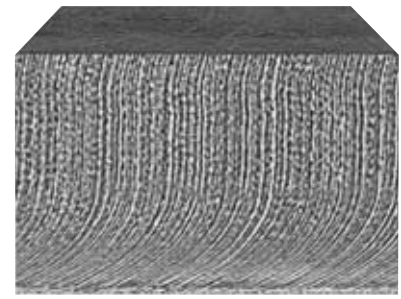


1 in (25 mm)\*

#### Maximum Quality Cutting Capacity

Good-quality cut achieved at lower speeds.

### Sever



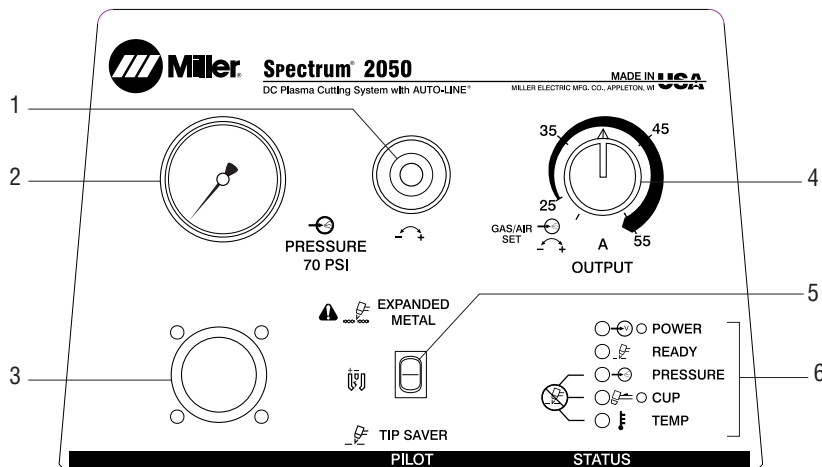
1-1/4 in (32 mm)\*

#### Sever Cut Capacity

Maximum cut achieved in ideal conditions.

\*Using non-shielded consumables.

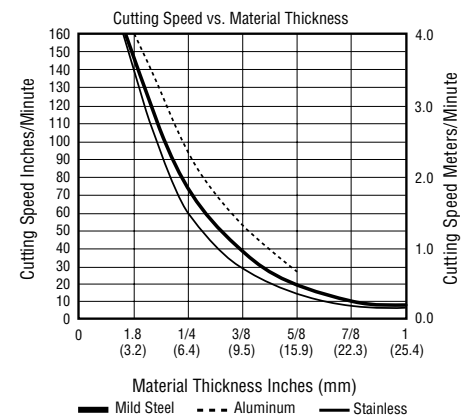
## Control Panel



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.

## Engine Drive Compatibility

Equipment	Generator Power	Steel Quality Cut	Spectrum Output Amp Setting
Legend NT	5 kW	1/2 in	35 A
Bobcat 225 NT	8 kW	5/8 in	45 A
Trailblazer 280 NT	8 kW	5/8 in	45 A
Bobcat 250 NT	10 kW	3/4 in	50 A
Trailblazer 301 G	10 kW	3/4 in	50 A
Trailblazer DC	10 kW	3/4 in	50 A
Trailblazer Pro 350	12 kW	3/4 in	50 A
Pipe Pro CC/CV	12 kW	3/4 in	55 A
Big 40 CAT CC/CV	15 kW	3/4 in	55 A
Big Blue 402 CC/CV	20 kW	5/8 in	55 A

Includes Spectrum 2050 models manufactured after (and including) serial number KJ283702.

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

## Genuine Miller 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. Order from Miller Service Parts.



### 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. 30A Economy Cart with Cord Wrap #195 093

For Spectrum Thunder, 375 Cutmate, 2050 and 3080. This economical running gear provides mobility with an angle for easy front panel access and extra storage space.

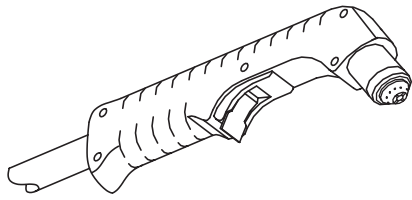
### RTI Filter/Air Dryer #195 188

Mounts to the back of most plasma cutters. Features include a heavy-duty metal bowl, automatic drain and easy spin-off of elements. Filter is equipped with a 1/4 in NPT port to match the fittings on most plasma systems.

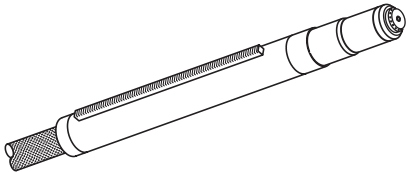
### RTI Replacement Filter Element #212 771

Order from Miller Service Parts.

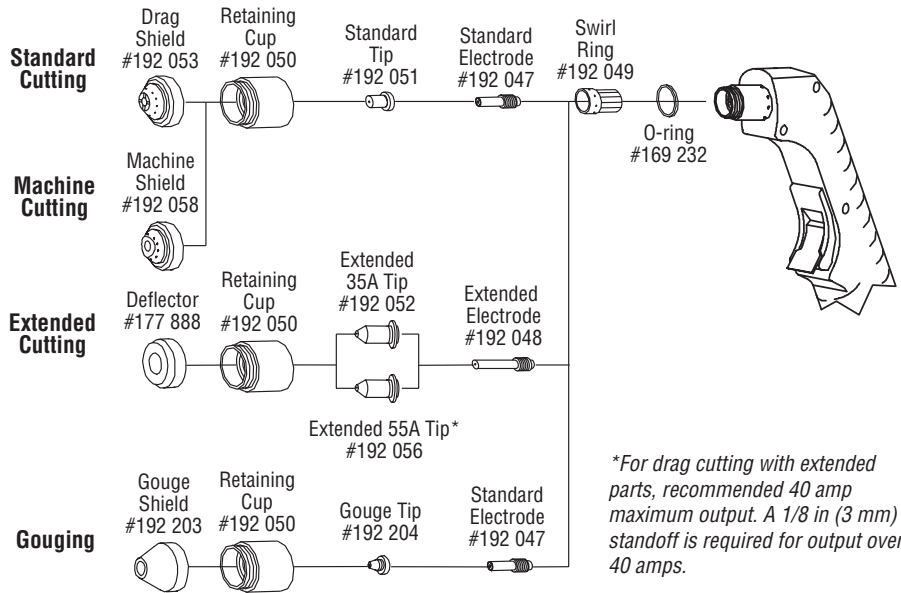
# Replacement Torch and Consumables



**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)



# Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
<b>Spectrum® 2050</b> 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>	<b>#903 777-01-2*</b> <b>#903 777-01-3*</b> <b>#903 777-02-2*</b>	With ICE-55C, 25 ft (7.6 m) hand-held torch With ICE-55C, 50 ft (15.2 m) hand-held torch With ICE-55CM, 50 ft (15.2 m) machine-held torch Machine torch package includes remote pendant control #180 605		
<b>Accessories</b>				
Cable Covers	<b>#118 677</b> <b>#118 678</b>	15 ft (4.6 m) 30 ft (9 m)		
Remote Pendant Control	<b>#180 605</b>			
Motor Guard Air Filter	<b>#042 306</b>			
Replacement Filter Element	<b>#042 312</b>	<i>Order from Miller Service Parts</i>		
240 V Plug	<b>#119 172</b>			
Plasma Circle-Cutting Guide	<b>#195 981</b>	ICE 25C, 50C, 55C, 80C		
Suction/Magnetic Pivot Base	<b>#195 979</b>			
No. 30A Economy Cart	<b>#195 093</b>			
RTI Filter/Air Dryer	<b>#195 188</b>			
RTI Filter Replacement Element	<b>#212 771</b>	<i>Order from Miller Service Parts</i>		
<b>Miscellaneous</b>				
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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