

# AirForce® 27i

## 120/240-Volt Portable Air Plasma Cutter



272164  
March 2018

120 V   
240 V



500565

### Includes

- 12 ft. (3.7 m) XT30R hand-held torch
- 12 ft. (3.7 m) work cable with clamp
- 10 ft. (3 m) power cord with 5-15P (120 V, 15 A) and 6-50P (240 V, 50 A) MVP™ plugs
- Easy-to-connect, built-in gas/air filter and regulator for extra protection
- Extra consumables (2 tips, shield deflector, and electrode)

### Quick Specs

DC 1 Phase

5/3/1  
INDUSTRIAL  
WARRANTY

#### Rated Output

120 V (15 A): 20 A at 88 VDC, 35% duty cycle  
120 V (20 A): 27 A at 92 VDC, 20% duty cycle  
240 V: 27 A at 92 VDC, 35% duty cycle

#### Mild Steel Cutting Capacity

Rated: At 20 amps: 5/16 in. (8 mm)  
Max. Cut: At 20 amps: 3/8 in. (9.5 mm)  
Rated: At 27 amps: 3/8 in. (9.5 mm)  
Max. Cut: At 27 amps: 5/8 in. (15.9 mm)

### Versatile, powerful cutting in a lightweight power source.

Inverter-based design and reliable technology pack a lot of performance into a very portable package. The Airforce 27i features a multi-voltage plug (MVP™) that allows you to connect to common 120- or 240-volt power receptacles without using any tools. You can easily transport this plasma cutter to the job, connect to power and begin cutting up to 5/8-inch material on 240-volt power quickly.

#### Applications

- Maintenance
- Light Construction
- Prototyping
- Body Shops
- HVAC

Features	Benefits
<b>Dual-voltage capability with MVP (multi-voltage plug)</b>	Allows you to connect to common 120 or 240 V power receptacles without the use of any tools — simply choose the plug that fits the receptacle.
<b>XT30R torch</b>	Designed for increased comfort with an ergonomic trigger safety, more efficient cooling and economical replacement cutting tips.
<b>Wind Tunnel Technology™</b>	Prevents abrasive dust and particles from damaging internal components.
<b>Fan-On-Demand™</b>	Cooling system operates only when needed reducing power consumption and contaminants drawn into the machine.
<b>Power factor correction (PFC) circuitry</b>	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.
<b>LVC™ line voltage compensation</b>	Provides peak performance power under variable input voltage conditions (±15%) for steady and cleaner-ending cuts.
<b>Internal gas/air filter and regulator</b>	Controls amount of usage and flow of air or gas.
<b>Starts without high frequency</b>	Protects unit by not interfering with or damaging controls or computers.
<b>Diagnostic lights</b>	LED lights for quick troubleshooting of pressure, power and cup situations.
<b>Postflow cooling circuit</b>	Extends life of consumables and torch by cooling them with postflow air after trigger is released.
<b>Compatible with engine-driven welders</b>	Complete cutting capability when powered by an engine-driven welder/generator with a 240 V receptacle of 6 kW or more.
<b>Hobart 5/3/1 industrial warranty</b>	Five-year warranty on transformers, stabilizers and main rectifiers; three years on generators, PC boards and drive systems; and one year on guns (MIG, plasma and TIG torches).



### Hobart Welding Products

An ITW Welding Company  
Sales: 800-626-9420  
Service: 800-332-3281

### HobartWelders.com



## Specifications (Subject to change without notice.)



Input Power	Rated Output	Amps Input at Rated Output, 50/60 Hz	Max. Open Circuit Voltage	Plasma Gas Flow/Pressure	Dimensions (H x W x D)	Net Weight with Torch
120 V (15 A)	20 A at 88 VDC, 35% duty cycle	20.6	400 VDC	3.0 cfm (85 L/min.) at 90–120 psi (621–827 kPa) recommended	11.25 x 8.25 x 14.25 in. (286 x 210 x 362 mm)	27.6 lb. (12.5 kg)
120 V (20 A)	27 A at 92 VDC, 20% duty cycle	28.8				
240 V	27 A at 92 VDC, 35% duty cycle	13.9				

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

## Mild Steel Cutting Capacity (Thickness to scale.)

### Cutting at 20 Amps (120 V, 15 A service with 5-15P MVP)



1/4 in. (6.4 mm) at 16 ipm



5/16 in. (8 mm) at 10 ipm

Note: Recommended maximum piercing capacity for hand-held applications is 1/8 in. (3.2 mm). Maximum sever cut of 3/8 in. (9.5 mm).

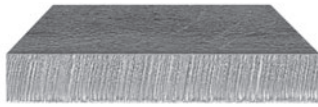
For aluminum and other metals with high thermal conductivity, cutting capabilities will be derated as much as 30%.

### Maximum Cutting Speeds at 20 Amps Output

Thickness	Approximate Travel Speeds*
16 ga. (1.5 mm)	134 ipm (3,414 mm/min.)
1/8 in. (3.2 mm)	44 ipm (1,118 mm/min.)
1/4 in. (6.4 mm)	16 ipm (406 mm/min.)
5/16 in. (8 mm)	10 ipm (254 mm/min.)
3/8 in. (9.5 mm)	8 ipm (203 mm/min.)

\* Travel speeds are approximately 80% of maximum.

### Cutting at 27 Amps (115 V, 20 A service with 5-20P MVP or 230 V 6-50P MVP)



1/4 in. (6.4 mm) at 25 ipm



3/8 in. (9.5 mm) at 14 ipm

Note: Recommended maximum piercing capacity for hand-held applications is 3/16 in. (4.8 mm). Maximum sever cut of 5/8 in. (15.9 mm).

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

### Maximum Cutting Speeds at 27 Amps Output

Thickness	Approximate Travel Speeds*
16 ga. (1.5 mm)	192 ipm (4,877 mm/min.)
1/8 in. (3.2 mm)	71 ipm (1,808 mm/min.)
1/4 in. (6.4 mm)	25 ipm (630 mm/min.)
3/8 in. (9.5 mm)	14 ipm (345 mm/min.)
1/2 in. (12.7 mm)	6 ipm (152 mm/min.)

\* Travel speeds are approximately 80% of maximum.

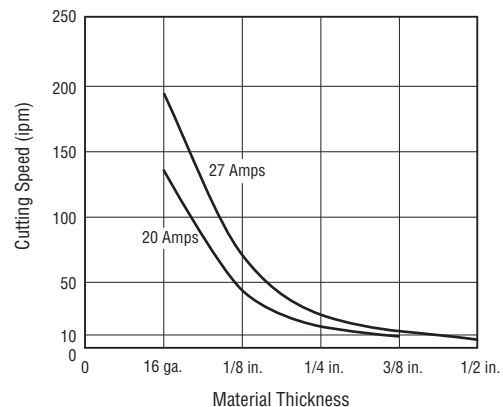
**Rated cut capacity is based on traveling approximately 10 inches per minute to achieve a steady, precise cut. This is the key rating that should meet or exceed your typical cutting thickness requirements.**

## 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.

### Cutting Speed vs. Material Thickness



## Accessories



**XT30R Replacement Torch 268921**  
12 ft. (3.7 m)



**Protective Cover 770771**  
Weather-resistant nylon resists stains and mildew while protecting the finish of your plasma cutter.



**Shade 5.0 Safety Glasses**  
**770726** Mirrored lens with black frame  
**770727** Black lens with orange frame  
Stylish protection that meets ANSI Z87.1 standards.

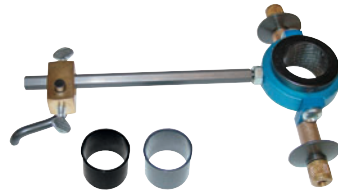
The following accessories are available through Miller/Hobart Service Distributors.



**Plasma Standoff Roller Guide 253054**  
Helps maintain recommended standoff distance to maximize cutting performance and improve tip life.



**In-Line Air Filter Kit 228926**  
Mounts to the back of the AirForce® 27i and 40i. 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.



**Plasma Circle-Cutting Guide 253055**  
Cut straight lines or circles up to 12-inch diameter with ease.



**Suction/Magnetic Pivot Base 195979**  
Add this to your cutting guide for convenient attachment to all flat surfaces. The extended arm accommodates holes up to 30-inch diameter.

**230-Volt Extension Cord 770644**  
20-foot (6.1 m) NEMA 6-50P to NEMA 6-50R heavy-duty extension cord. 8-gauge cord has lighted ends that show power is on and a molded integrated strain relief.

**In-Line Air Filter Replacement Element 228928**  
Includes one replacement filter for in-line filter kit **228926**.

### MVP™ Adapter Plugs



**219261**  
For power cable 5-15P (115 V/15 A).  
Included with machine.

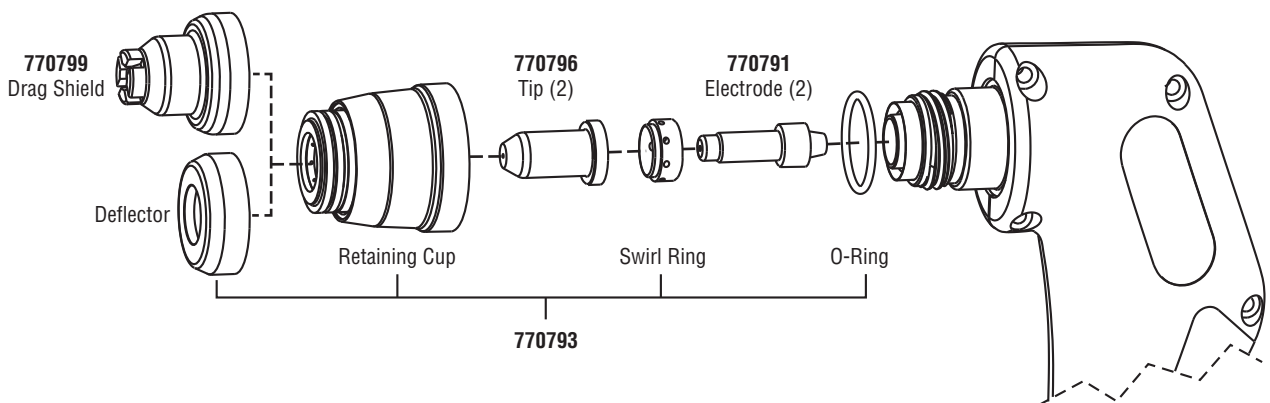


**219259**  
For power cable 5-20P (115 V/20 A). Optional.



**219258**  
For power cable 6-50P (230 V/50 A).  
Included with machine.

## Torch Consumables (Order from Hobart Service Parts.)



**HobartWelders.com**



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