

# HOBART®

MADE IN THE  
USA

**5/3/1**  
INDUSTRIAL  
WARRANTY

# AirForce™ 500i

## 115/230V Portable Air Plasma Cutter



244395  
April 2011



#500548

### Includes:

- 16.5-ft. (5 m) HP-50 hand-held torch
- 16.5-ft. (5 m) work cable with clamp
- Extra consumables (2 electrodes, 2 tips and 1 air fitting)
- 10-ft. (3 m) power cord with 5-15P (115 V, 15 A) and 6-50P (230 V, 50 A) MVP plugs
- Easy-to-connect, built-in gas/air filter and regulator for extra protection

**N**eed to cut steel? Thinking about an oxy acetylene cutting torch to do the job? Consider a plasma cutter. This simple technology uses an electrical arc and compressed air to cut steel, aluminum, and other conductive metals.

The AirForce™ 500i is powered by standard household voltage (115 or 230 VAC) using the MVP™ (multi-voltage plug) which allows no-tool voltage changes. It excels at cutting sheet metal and 3/8-inch mild steel, and can even sever 5/8-inch mild steel. The MVP plug and lightweight inverter power supply make this plasma cutter the most convenient, portable system available with a larger cutting capacity.

Compared to the complexities of an oxy fuel cutting torch system, plasma cutting is easy:

- Cuts faster than oxy fuel
- More precise cut, thinner kerf, less slag to clean up
- Smaller heat-affected zone for less warping
- No gas pressure settings or flame tuning needed
- No preheating of metal prior to cutting

Features	Benefits
<b>Dual-voltage capability with MVP™ (Multi-Voltage Plug)</b>	Allows you to connect to common 115 or 230 V power receptacles without the use of any tools—simply choose the plug that fits the receptacle.
<b>HP-50 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 ( $\pm 15\%$ ) 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>Cable management strap</b>	Secures torch, work cable and power cord to make transporting easy and convenient.
<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 with a 240 V generator power outlet of 6 kW or more.
<b>Hobart's 5/3/1 Industrial Warranty</b>	Five-year warranty on transformers, stabilizers and generators; three years on electronics (drive motors, rectifiers); and one year on guns (MIG and plasma torches).

## Specifications (SUBJECT TO CHANGE WITHOUT NOTICE.)



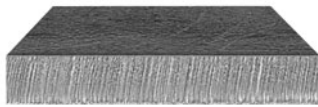
Input Power	Rated Output	Amps Input at Rated Output, 50/60 Hz, 1-Phase	Max. Open-Circuit Voltage	Plasma Gas Flow/Pressure	Dimensions	Net Weight w/Torch
240 V	27 A with 92 VDC, 35% Duty Cycle	13.9	400 VDC	3.0 CFM (85 L/min) at 90–120 PSI (621–827 kPa) recommended	H: 11-1/4 in. (286 mm) W: 8-1/4 in. (210 mm) D: 14-1/4 in. (362 mm)	27.8 lb. (12.6 kg)
120 V (20 A)	27 A with 92 VDC, 20% Duty Cycle	28.8				
120 V (15 A)	20 A with 88 VDC, 35% Duty Cycle	20.6				

Note: Recommended 30 A branch circuit for maximum performance. Performance on 20 A branch service may be limited due to breaker/line fuse. Reducing unit output amperage will minimize nuisance breaker/line fuse tripping.

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

## Mild Steel Cutting Capability (THICKNESS TO SCALE.)

**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).

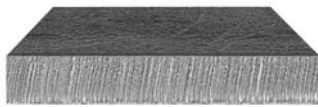
For aluminum and other metals with high thermal conductivity, cutting capabilities will be derated as much as 30%.

Maximum Cutting Speeds at **27 Amps** Output

Thickness	Approximate Travel Speeds*
16 ga (1.5 mm)	192 IPM (4877 mm/min)
1/8 in. (3.2 mm)	71 IPM (1808 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.

**Cutting at 20 Amps** (115 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. (10 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 (3414 mm/min)
1/8 in. (3.2 mm)	44 IPM (1118 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)

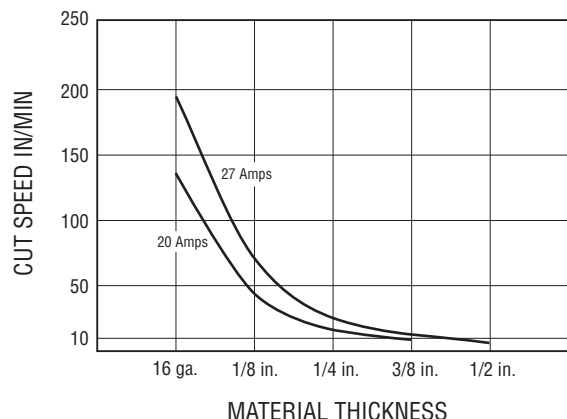
\*Travel speeds are approximately 80% of maximum.

**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.



## Accessories



**HP-50 Replacement Torch #244121**  
16.5 ft. (5 m)



**Plastic Consumables Box with Compartments #127493**  
For storing additional parts and accessories.

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

### MVP™ Adapter Plugs



**#219258**  
For Power Cable 6-50P (230 V/50 A).  
Included with machine.



**#219261**  
For Power Cable 5-15P (115 V/15 A).  
Included with machine.



**#219259**  
For Power Cable 5-20P (115 V/20 A). Optional.



**In-Line Air Filter Kit #228926**  
Mounts to the back of the AirForce™ 250ci, 500i and 700i. 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.

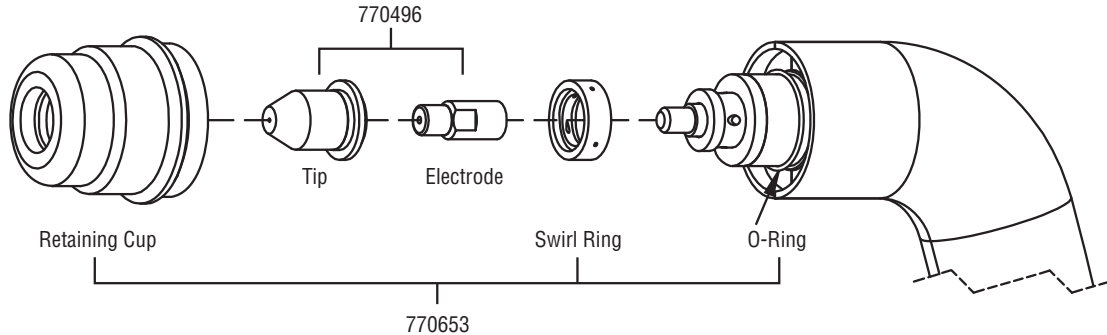
### In-Line Air Filter Replacement Element #228928

Includes 1 replacement filter for in-line filter #228926.



**Full KVA Plug Kit #119172**  
240 VAC, 50 amp plug (NEMA 14-50P) to fit full KVA receptacle with a minimum of 8 KVA generator power.

## Torch Consumables (ORDER FROM HOBART SERVICE PARTS.)





**Hobart Welders** An Illinois Tool Works Company

Hobart Welding Products Service 800-332-3281 Sales 800-626-9420

Litho in USA

[hobartwelders.com](http://hobartwelders.com)

