

Welding & Plasma Cutting - Manual Plasma Cutter

A plasma cutter is a tool that cuts conductive metals like steel, aluminum, and copper. It uses a high-speed jet of ionized gas to melt and blow away the metal. It is used in fabrication to create custom cuts on sheet metals.

- [Manual\(s\)](#)
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Manual(s)

- [hf-manual-plasma.pdf](#)

Member Notes

Resources

Consumables:

- [45A plasma cutting tips](#)
- [plasma electrodes](#) (Note: title is for 65A electrodes, but these are compatible with the 45A cutter)

Warranty:

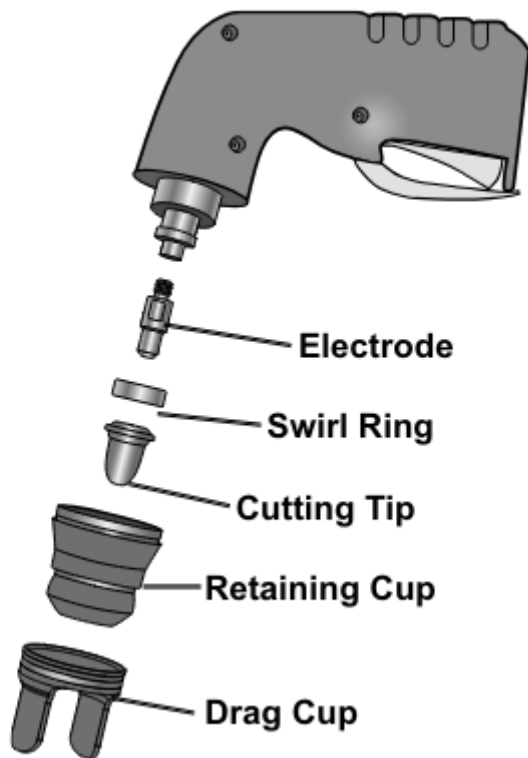
<https://www.harborfreight.com/extended-service-protection> - 2 years, order #129523914 placed on Feb 3 2026

Tool Tutorial





Figure A



Specifications

		120V / 15A Circuit	120V / 20A Circuit	240V
Rated Input		120VAC / 60Hz / 15A	120VAC / 60Hz / 20A	240VAC / 60Hz / 30A
Open Circuit Voltage (OCV)		340V		
Output Range		15-16A	15-20A	15-45A
Rated Output Voltage		140VDC		
Rated Duty Cycle		35% @ 16A	35% @ 20A	50% @ 45A
Maximum Cutting Thickness	Mild Steel	1/8" @ 11 IPM	1/4" @ 11 IPM	5/8" @ 15 IPM(Rated) 1" @ 5 IPM (Severance)
	Stainless Steel / Galvanized Steel / Aluminum	5/64"	5/32"	5/8"
	Brass / Copper	5/64"	1/8"	15/32"
Arc Striking System		3 second pilot arc		
Gas Type		Clean, dry, oil-free air, or nitrogen gas		
Air Requirements		4.2 CFM @ 80-110 PSI		
Air Inlet		1/4"–18 NPT		

Fault Code List

Code	Description	Cause and Solution
F01	Overheated	<ol style="list-style-type: none"> 1. The machine has reached its duty cycle limit. 2. Allow the machine to cool down. Keep the machine plugged in and turned on to allow the fan to continue to run. Additionally, check for any obstructions blocking air flow into the machine and ensure proper clearance between any obstacles and the vents on all sides of the machine.
F02	Incorrect input voltage	<ol style="list-style-type: none"> 1. The input voltage is too high or too low. 2. Check the service voltage at the outlet and ensure it is within the specified range.
F03	Shield cup loose or missing	Install the shield cup properly and ensure it is tightened properly.
F04	Insufficient input air pressure	<ol style="list-style-type: none"> 1. The input compressed air/gas pressure is lower than the specified range. 2. Check the air inlet connection and ensure the air pressure supplied meets the minimum criteria of machine.
F05	Torch triggered before machine is turned on	<ol style="list-style-type: none"> 1. The torch trigger is stuck or is triggered when turning on the machine. 2. Turn OFF the machine, and ensure the torch trigger is reset.
F06	Electrode and nozzle stuck together	Disassemble the torch consumables, check electrode and nozzle condition and replace as necessary, and reset them in place.
F07	Electrode or nozzle failed to reset	<ol style="list-style-type: none"> 1. Disassemble the torch consumables, check electrode and nozzle condition and replace as necessary, and reset them in place. 2. Additionally, use clean, compressed air to remove any debris within torch head.