

VEVOR[®]

PLASMA CUTTING MACHINE

USER MANUAL

VEVOR®

PLASMA CUTTING MACHINE

Instruction Manual



NEED HELP? CONTACT US!





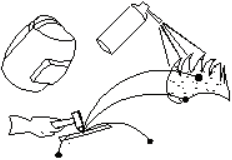
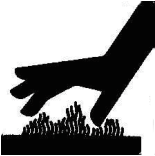
Have product questions? Need technical support? Please feel free to contact us:

✉ CustomerService@vevor.com

This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there is any technology or software updates on our product.

SAFETY

Plasma cutting is dangerous, and may cause damage to you and others, so take good protection when cutting. For details, please refer to the manufacturer's safety guidelines for accident prevention.

	<p>Professional training is needed before operating the machine.</p> <ul style="list-style-type: none"> • Use labor protection welding supplies authorized by national security supervision department. • Operators should have valid work permits for metal welding/cutting operations. • Cut off power before maintenance or repair.
	<p>Electric shock may lead to serious injury or even death.</p> <ul style="list-style-type: none"> • Install earthing device according to the user specification. • Never touch the live parts when skin bared or wearing wet gloves/clothes. • Make sure that you are insulated from the ground and workpiece. Make sure that your working position is safe.
	<p>Smoke & gas may be harmful to health.</p> <ul style="list-style-type: none"> • Keep your head away from smoke and gas to avoid inhalation of exhaust gas from welding. • Keep the working environment well ventilated with exhaust or ventilation equipment when welding.
	<p>Arc radiation may damage eyes or burn skin.</p> <ul style="list-style-type: none"> • Wear suitable welding masks and protective clothing to protect your eyes and body. • Use suitable masks or screens to protect spectators from harm.
	<p>Improper operation may cause fire or explosion.</p> <ul style="list-style-type: none"> • Welding sparks may result in a fire, so please make sure no combustible materials nearby and pay attention to fire hazard. • A fire extinguisher should be nearby and it should be used by a trained person. • Do not weld in a confined space. • Do not use this machine for pipe thawing from harm.
	<p>Hot workpiece may cause severe scalding.</p> <ul style="list-style-type: none"> • Do not touch hot workpiece with bare hands. • Cooling is needed during continuous use of the welding torch.



Magnetic fields affect cardiac pacemaker.

- Pacemaker users should be away from the welding area before medical consultation.



Please seek professional help when encountering machine failure.

- Refer to the relevant contents of this manual if you encounter any difficulties in installation and operation.
- Contact the service center of your supplier to seek professional help if you can not fully understand the manual or solve the problem according to the manual.

INTRODUCTION

CUT-50/CUT50P Air plasma cutting technology. Plasma cutters work by passing an electric arc through air/gas which is passing through the narrow opening. The gas can be air, nitrogen, argon, oxygen, and etc. The electric arc elevates the temperature of the gas to the point that make it enters a 4th state of matter. We all are familiar with the first three state: solid, liquid, and gas. Scientists call the fourth state plasma. As the metal being cut is part of the circuit, the electrical conductivity of the plasma causes the arc to be transferred to the work. The gas passes through the restricted opening (nozzle) which make it be squeezed at a high speed, like air passing through a venturi in a carburettor. This high speed gas cuts through the molten metal. Plasma cutting was invented as the result of trying to develop a better welding process. Many improvements have made the technology what it is today. Plasma cutters provide the best combination of accuracy and speed, and the ability of producing a variety of flat metal shapes. They can cut much finer and faster than oxyacetylene torches.

FUNCTIONAL DIAGRAM



1. Current display meter

The digital ammeter is used to display the actual output current of the power source.

2. Power indicator light

Turn on the power, and this light will be on.

3. Fault light

When the welding load is overloaded and the output current of the machine is too large, this light will be on. This situation is normal and the machine can recover itself. When there is damage inside the machine, this light will be on. In this case, the machine is abnormal and requires maintenance.

4. Adjust the value knob

Clockwise rotate the knob to enlarge the current, and anti-clockwise rotate the knob to reduce the current.

5. Cutting gun cable and gas connection seat

Remove the black cap and connect the cutting gun.

6. Cutting gun control socket









That is two-core aviation socket. The cutting gun triggers switch to control connection.

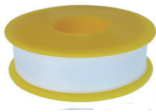
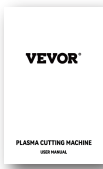
7. Negative Welding Terminal

Welding current flows from the power source to heavy duty bayonet type terminals. It is essential that the male plug is securely inserted and turned to achieve a sound electrical connection.

INTRODUCTION TO THE PRODUCT AND CONFIGURATION LIST

NO.	Picture	Name	Qty	Remark
1		CUT50/CUT50P	1	Please check the exterior of the whole machine to ensure there is no scratch or damage, and the machine can be started normally.
2		SG55/AG-60 Cutting gun	1	CUT50:L=4m SG55 Cutting gun. CUT50P:L=5m AG-60 Cutting gun.
3		Ground Clamp	1	L=2M , 10mm ² Copper Clad Aluminum Wire; Rubber Jacket + 300A Ground Clamp

NO.	Picture	Name	Qty	Remark
4		Transparent hose	1	3m 8*12 transparent network hose
5		Hose clamp	4	Used to fix the trachea to prevent air leakage
6		Electrode	2	These are spare parts, which need to be replaced frequently. Please keep stock.
7		Copper Nozzle	2	These are spare parts, which need to be replaced frequently. Please keep stock.
8		Pressure Reducing Valve	1	Adjust cutting air pressure.
9		Pressure Reducing Valve Outlet Connector	2	Quick gas connector ensures direct plug-in.
10		Adapter	1	<ul style="list-style-type: none"> • NOT a voltage converter; compatible with dual voltage devices (does not convert voltage from 220V to 110V or vice versa) • Check your device's voltage to ensure it is compatible with the country
11		Screw	4	M4 screws are used to fix the cable support to the machine.
12		Cable Holder	2	The cable holder needs to be fixed to the machine. It can store the power cable, ground wire or welding torch.

NO.	Picture	Name	Qty	Remark
13		Teflon Tape	1	Used to seal the joint of threaded air pipe to prevent air leakage.
14		Manual	1	This is a English manual, if you need other language like French, German, Italian, Spanish, and Russian please contact us to get electronic version documents.

TECHNICAL SPECIFICATIONS

TYPE	CUT50	CUT50P
Input power voltage (V)	AC110±10%/AC220±10%	AC110±10%/AC220±10%
Frequency (HZ)	50/60Hz	50/60Hz
Rated input current (A)	110V:50A 220V:37A	110V:50A 220V:37A
Rated power capacity (KVA)	110V: 6.6KVA 220V: 5.5KVA	110V: 6.6KVA 220V: 5.5KVA
Current adjustment range (A)	20-50A	20-50A
USB	5V/1A	\
Voltage adjustment range (V)	88-100V	88-100V
No-load voltage (V)	300±30V	300±30V
Rated duty cycle	30%	30%
Efficiency (%)	80%	80%
Power factor	0.7	0.7
Protection class	IP21S	IP21S
Insulation class	F	F
Size (mm)	360*150*300	360*150*300
Weight (Kg)	5.76	6.26

MACHINE OPERATION GUIDANCE

Tips:

1. Wear a welding helmet with appropriate filters to protect your face and eyes when welding or watching.
2. Wear approved safety glasses. Side shields are recommended.
3. Use protective screens or barriers to protect others from flash and bright lights and warn others not to watch the arc.
4. Wear protective clothing made from durable, flame-resistant material (wool and leather) and foot protection.
5. If there is too much noise, use approved earplugs or earmuffs.

SIMPLE TEST FOR POWERING ON THE MACHINE

CUT50 Plasma cutting machines will be subjected to various strict tests before leaving the factory. This is for ensuring that each welding machine that reaches the user is of high quality. Because our machines have to go through tens of thousands of kilometers of long-distance transportation from the factory to your hands. In this process, it's inevitable that some uncontrollable factors will lead to the loosening or even damage of some components inside machine. We recommend that you check its external as soon as you get the welder, and turn on the power to check if you have received a qualified product.

2 PRECAUTIONS FOR POWER-ON INSPECTION:

1. Please make sure your power supply voltage is $110V \pm 10\%$ / $220V \pm 10\%$.
2. It is recommended to choose 50A circuit breaker protection.
3. Please choose the power plug that suits your local electrical law requirements for this machine.
4. Extension cord: Choose #12 AWG or larger one; choose 25' (8m) or shorter one.



Turn on the power switch of the machine, and the fan on the back of the machine rotates, and the digital display on the panel indicates that the power is normal.

Note:

1. Normal phenomena: The digital display shows irregular changes at the beginning, and then returns to the digital display after 3 seconds.
2. In order to reduce the working temperature of the machine, the inside fan would continue to rotate for a few seconds after the power is turned off.
3. Normal phenomena: Machine protection may occur during high strength continuous welding. After continuous heat dissipation, the machine would return to normal state.

Attached table:

Self-examination of abnormal conditions when turning on the machine:

1. The machine's power switch is not turned on.
2. The power input voltage is wrong.
3. The power plug is loose.
4. The internal circuit is loose (due to long-distance transportation, bumps), and you need to open the cover and check the internal connection.

OPERATION

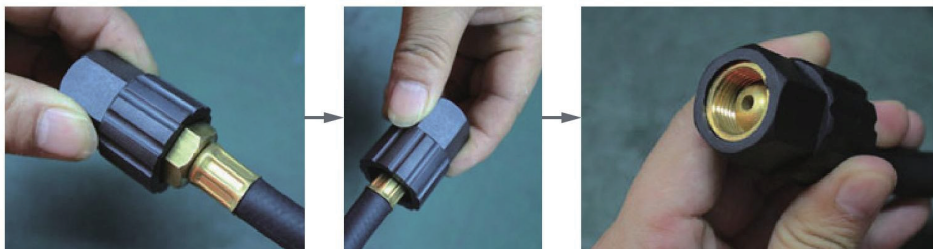
CUT mode

If you want to cut any metal objects, please use this plasma cutting machine.

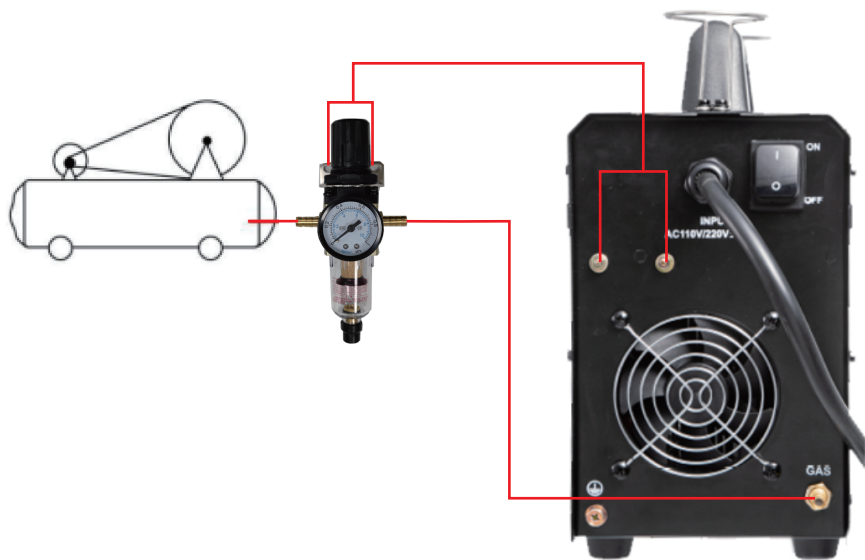
1. Connect welding holder and ground clamp.



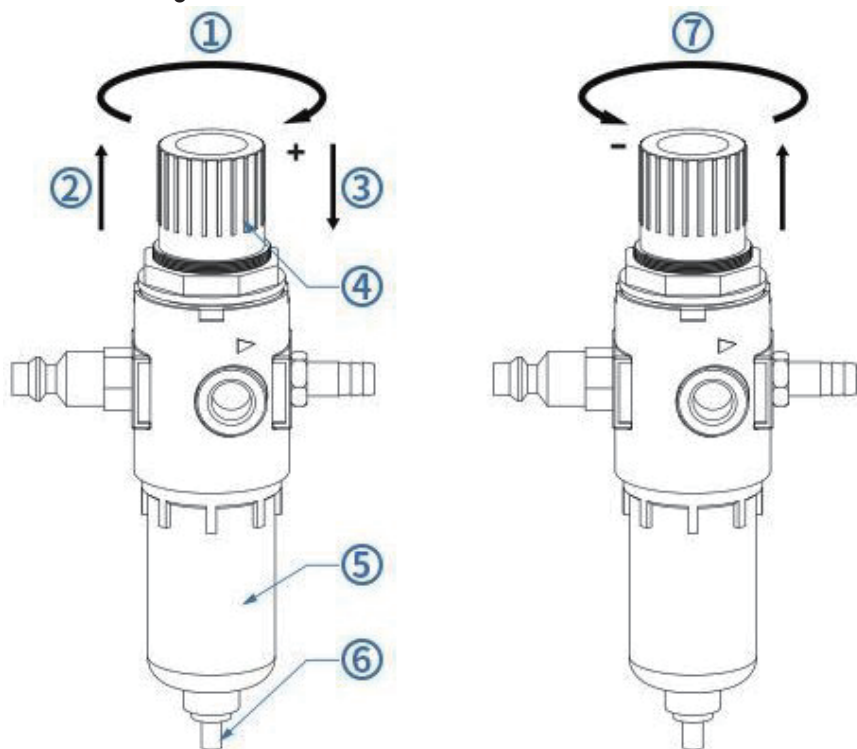
2. Connector cover.



3. Connect compressed air.



4. How to use air regulator.



1. Turn clockwise to increase the pressure

4. Air regulator

7. Rotate counterclockwise to lower the pressure

2. Pull up

5. Air/Water filter

3. Pull down

6. Release Water

5. Adjust the current, and only the current can be adjusted.

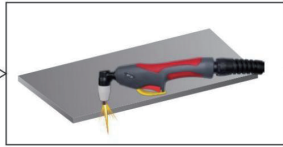


Cutting operation

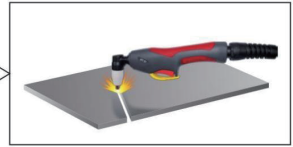
1. Start Cutting.



Hold the torch vertically at the edge of the workpiece.



Pull the trigger to start the arc. The cutting arc will start working when the torch tip is close enough to the workpiece. Begin cutting the edges until the arc passes through the metal plate.



Then continue the cutting.

2. Hand torch cutting technique.



Make sure the spark flows out of the bottom of the workpiece when cutting.



If sparks erupt from the top of the workpiece, you are moving the torch too fast or you are not setting enough amperes.



Hold the torch vertically and watch the arc as it cuts along the line.

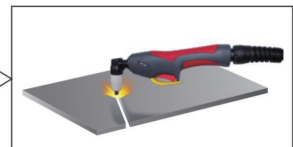
3. Piercing.



Hold the torch at an certain angle to the workpiece, and pull the trigger to start the arc, and slowly rotate it to the position perpendicular to the workpiece.



By the time the spark is shot from the bottom of the workpiece, the electric arc has already penetrated the material.



When the pierce is complete, continue cutting.

Amperage

As a rule of thumb, the thicker the material, the greater the current required. Set the machine to full output and vary your moving speed when you are cutting thick material. Turn down the amperage and change it to a lower-amperage tip to maintain a narrow kerf when you are cutting thin material. The kerf is the width of the cut material that is removed during cutting.

Speed

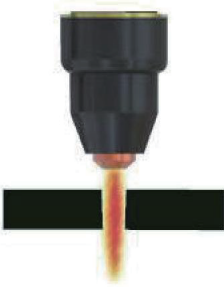
Current and speed are key to producing good quality cuts. The faster you move (especially aluminium) the workpieces, the cleaner cut you will get. To determine if you're moving too fast or too slow, you can look at the arc that comes from the bottom of the cut. The arc should move away from the material at an angle away from the direction of motion. If the arc going straight down, that means you're moving too slow, and you'll get the buildup of dross or slag. If you are moving too fast, the arc will start spraying back onto the surface of the material without cutting through it. Because the arc trails at an angle, slow your cutting speed at the end of a cut and it will cut through the last bit of metal.

Direction

It is easier to pull the torch towards you than push it. The plasma stream swirls as it exits the tip, biting one side and finishing off on the other side, and it will leave a bevelled edge and a straight edge. Bevel cutting is more obvious on thicker materials. If you want the straight edge to be on the finished product, you need to consider this point before cutting.

Torch tip height & position

The distance and relative position between the plasma torch tip and the workpiece will affect the cutting quality and the cutting bevel. The easiest way to reduce the slope is to cut at the right speed and height and current.



This is correct height and square between the torch and the material. Minimum bevel & equal bevel ensure longest consumable life.



This is unequal bevel, and one side may be excessively beveled.



Torch is too far from the workpiece. The plasma stream may not cut through the material with excessive bevel.



Torch is too close to workpiece. The tip of the torch may contact the work piece and will be short out or damaged when there is reverse bevel.

Tip size and condition

The tip orifices focus the plasma stream to the work piece. It is important to use the correct size of tip for the appropriate amperage. For example a tip with a 3/64" orifice is good for 0-40 amps whereas a 1/16" orifice is good for 40-80 amps.

The low-amp tip has a smaller orifice which maintains a narrow plasma stream at lower settings and it is used for thin-gauge material. Using a 25 amp tip at an 60 amp setting will blow out and distort the tip orifice. And it may require a replacement.

Conversely, using an 80-amp tip on the lower settings will not allow you to focus on the plasma stream and create a wide kerf. The condition of the tip orifice is critical to the quality of the cut result. A worn or damaged tip orifice will produce a distorted plasma stream, resulting in a poor cutting quality.

Electrode condition

A fixed gap is established between the electrode and the inside of the cutting tip. Electrons arc comes across the gap to ionize and super heat the air, creating the plasma stream. The electrode contains an insert in the end which is made of a highly conductive material called hafnium. This insert erodes with use and develops a pit in the end of the electrode. When the pit becomes too much, the cuts will be poor quality. And it is necessary to replace a new electrode.

Air pressure and volume

Air pressure, flow rate and air quality are critical to the quality of plasma cutting and the life span of consumable. The required air pressure and volume can vary from model to model and the manufacturer will provide the specs. The CUT35 air pressure is preset at 4.5 psi and requires a flow rate of 6.0 CF/M. The volume capacity of your compressor is important, if you have a small compressor with exactly the same l/min rating as the plasma, then the compressor will run continuously. When you are doing plasma cutting, a compressor with a l/min rating slightly higher than the plasma is more appropriate. If you are doing a lot of cutting and you are cutting thick plate (same air consumption but slower cut speeds = longer cut time), choose a compressor at 1.5 to 2 times is enough.

Air quality

Good air quality is essential to the quality of plasma cutting and the life span of consumable. Compressors take in air at atmospheric pressure and increase the pressure to store it in a tank. The humidity in the air condenses in the tank and creates moisture in the airline, especially in humid conditions. Moisture that forms in air lines has a tendency to condense into larger drops when the air pressure decreases and enters the plasma torch. When these droplets enter into the (as much as 19832°f) torch with high temperature, they immediately break down into oxygen and hydrogen, which alters the normal chemical content of air in the torch. These elements will then dramatically change the plasma arc which causes the quick abrasion of torch consumable parts. And it also alters the shape of the nozzle orifice, dramatically affecting cut quality in terms of edge squareness, dross formation, and edge smoothness. Minimizing the moisture in the air supply is absolutely critical to the quality of plasma cuts and the longevity of consumable parts. Be sure to drain the receiver (tank) on the air compressor at least daily. Most air plasma systems comes from reputable manufacturers have a particulate filter or a coalescing filter with an auto drain that will remove some moisture from the air supply. For home workshop and light industrial users the on board air filter is adequate. However most situations will require additional filtration to prevent moisture from affecting the quality of the plasma cutter. And in most cases it is recommended to install a sub micron particulate filter which is designed to trap water through absorption. This style of filter has a replaceable filter cartridge that absorbs water and it must be changed after it is near the saturation. And it should be installed as close as possible to the air intake of the plasma cutter.

Technique Tips

- It is easier to pull the torch through the cut than to push it.
- To reduce the amperage when you are cutting thin material until you get the best quality cut.
- Use the correct size of tip orifice for the appropriate amperage.
- Use a straight edge or cutting buggy as a guide for straight cutting. Use a template or circle cutting attachment for a template or circle cutting.
- Check whether the vulnerable parts at the front of the plasma cutting torch are intact.

SAFETY PRECAUTIONS

CAUTION

Working Environment

1. The installation environment of the welding equipment must be free of grinding dust, corrosive chemicals, flammable gases or materials etc, and the humidity shall not exceed 80%.
2. When using the machine outdoors, please avoid direct sunlight, rain, snow, etc to our machine. The operating ambient temperature shall be maintained at -14°F to +104°F.
3. Keep this equipment away from the wall.
4. Ensure that the working environment is well ventilated.

Safety Tips

1. Ventilation

This equipment is small-sized and compact in structure, and it has excellent performance in amperage output. The fan is used to dissipate heat during operation.

Important: Maintain good ventilation of equipment louvers.

The minimum distance between this equipment and any other objects should be 1ft. Good ventilation is important for the normal performance and the service life of this equipment.

2. Thermal Overload protection

If the machine is overused or it is used in high temperature environments or poorly ventilated areas, or the fan is damaged, the thermal overload switch will be activated and the machine will stop running.

In this case, keep the power on and the built-in fan would working to lower the temperature inside the device. And the machine will be ready for use again when the internal temperature reaches to a safe level.

3. Over-Voltage Supply

See table "Main Parameters" for the range of supply voltage.

This device has automatic voltage compensation function to keep the voltage range within a given range.

If the voltage of input power supply amperage exceeds the stipulated value, it is possible to cause damage to the components of this equipment. Please ensure your primary power supply is correct.

4. Do not touch the output terminals while the machine is in operation.

An electric shock may occur.

Maintenance

A dusty, damp or corrosive environment can cause damage to the welder. In order to prevent any possible failure or fault of this welding equipment, clean the dust regularly with clean and dry compressed air with required pressure.

Please note that: Lack of maintenance may result in warranty cancellation. The guarantee of this welding equipment will be void if the machine has been modified, or you attempt to take apart the machine or open the factory-made sealing of the machine without the consent of an authorized representative of the manufacturer.

Trouble shooting

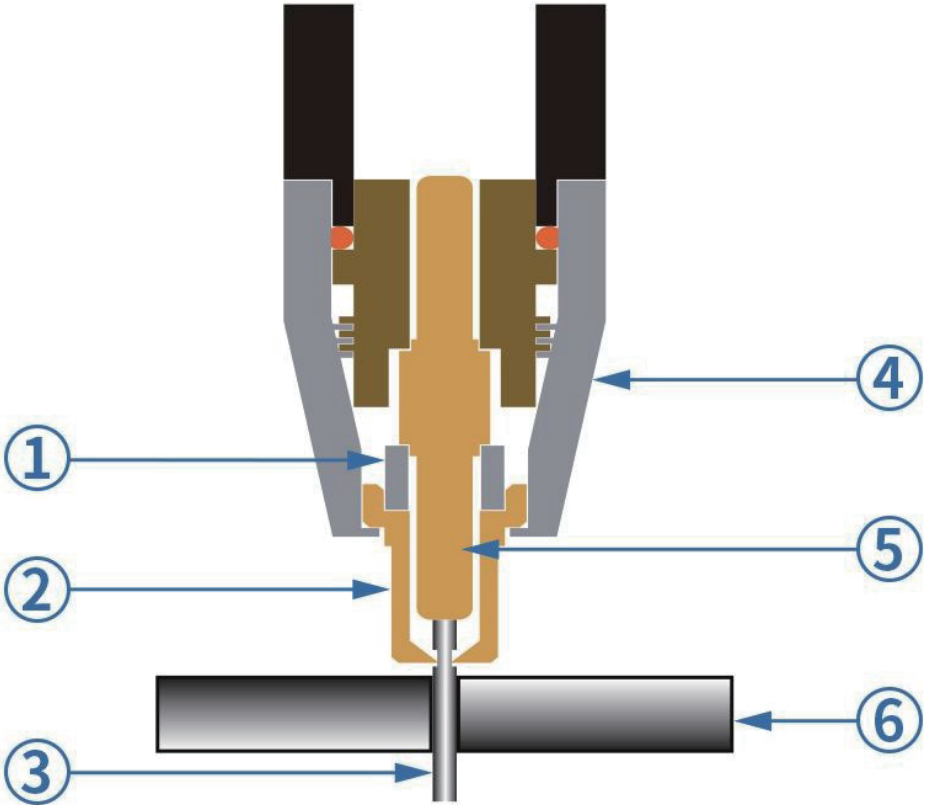
Caution: Only qualified technicians are authorized to undertake the repair of this plasma cutter equipment. For your safety and to avoid electrical shock, please observe all safety notes, precautions, and details in this manual.

How dose a plasma cutter work?

Basic plasma cutters use electricity to superheat air and let it enters into plasma state(the 4th state of matter), which is then blown through the metal. Plasma cutters require a compressed air supply and AC power during operation.

Operation

1. When the trigger is squeezed, DC current flows through the torch into the nozzle.
2. Next, the compressed air flows through the torch head and the air diffuser which spirals the air flow around the electrode with last flows through the hole of the cutting nozzle.
3. A fixed gap is established between the electrode and the nozzle. (The power supply increases voltage in order to maintain a constant current.) The electrons form an arc in the void, and then ionize and heat the air to form a plasma stream.
4. Finally, the regulating DC current is switched so it does not flow to the nozzle but flow from the electrode to the workpiece. Current and airflow would continue run until the cutting is stopped.



- | | | |
|----------------------|---------------------|-------------------------|
| 1. Ring | 2. Nozzle | 3. Plasma Stream |
| 4. Shield Cup | 5. Electrode | 6. Steel |

Notes:

1. The nozzle and electrode require periodic replacement. The electrode has an insert of tough high conductive material such as hafnium and cerium. The insert will corrode with use, as will the nozzle hole.
2. The quality of air is critical to the life of electrodes and nozzles; in short, clean and dry air provides longer component life. We recommend using a plasma air filter.
3. It is recommended to cut from the edge of the workpiece.

What kinds of materials can the plasma cut?

Virtually any metal can be plasma cut including steel, stainless steel, aluminium, brass, copper, etc. Depending on the power of the plasma cutter, you can cut any thickness from 30" to 9/16".

How does plasma cutting compare to oxy-fuel (gas) cutting?

Plasma cutting can be performed on any type of conductive metal, such as mild steel, aluminium and stainless. Compared with alloys, the operators will experience faster, thicker cuts with mild steel. Oxy-fuel cuts by burning, or oxidizing the metal. It is therefore limited to steel and other ferrous metals which support the oxidizing process. Metals like aluminium and stainless steel form an oxide that inhibits further oxidization, and this making conventional oxy-fuel cutting impossible. Plasma cutting does not rely on oxidation and thus it can cut aluminium, stainless and any other conductive material. While different gasses can be used for plasma cutting, now most people use compressed air for the plasma gas. In most shops, compressed air is readily available, and plasma does not require fuel gas or compressed oxygen for operation. Plasma cutting is typically easier for the novice master, and plasma cutting is much faster than oxy-fuel cutting for thinner materials. For heavier steel sections (1" or larger), oxygen fuels are still preferred because oxygen fuels are generally faster. For heavy plate applications, high power plasma cutting machines are required for plasma cutting applications.

What are the limitations to plasma cutting? When is oxy-fuel preferred?

The plasma cutting machines are usually more expensive than oxy/acetylene. In addition, oxy/acetylene does not require electricity or compressed air, making it a more convenient method for some users. Generally, oxyfuel cuts thicker steel plates (>63/64 inch) faster than plasma cutting.

Plasma Introduction

The plasma cutting process involves creating electrical channels for superheated ionized gas. That is, the plasma starts from the plasma cutter itself, and forms a complete electric circuit through the workpiece and the grounding clamp, and then returns to the plasma cutter. This is done by compressing gases (oxygen, air, inert gases and other gases depending on the material being cut) through a concentrated nozzle and then blowing them at high speed towards the workpiece. The electrical arc is formed in the gas, or integrated into the gas nozzle. The electrical arc ionizes some of the gas and produces a conductive channel of the plasma. As the electricity spreads the plasma from the cutter torch, it also provides enough heat to melt the workpiece. At the same time, many high-speed plasma and compressed gases blow away the hot molten metal, thus it can separate and cut the workpiece.

NOTE: This machine is designed to use only compressed air as gas.

TROUBLESHOOTING

Problems	Analysis	Solution
1. The power indicator does not light when power up, and the fan does not work, and the torch also does not work while press torch trigger.	1. No power supply enters the machine through cable. 2. The power cable, switch or other wire is loose. 3. Power cable inside of machine are not connected well. 4. There is a problem with the power board.	1. Check the power input. 2. Check the power cable, power switch, power plug and all wires inside of machine. And Check whether the cable between the power switch and the motherboard is loose. 3. Change the board.

Problems	Analysis	Solution
2. The power indicator dose not light up after switch on, and the fan only works some seconds, and the machine stops working once the torch touch the metal and get arc starting.	<ol style="list-style-type: none"> 1. There is a problem with the starting circuit or the relay. 2. Switching on and off too many times causes the machine to overheat and fail to work. 	<ol style="list-style-type: none"> 1. Check the power components or change the main board. 2. Let the machine rest for a while and then restart it.
3. The power indicator lights after switch on machine, and the fan also works. But the machine stop working when you press the torch trigger.	<ol style="list-style-type: none"> 1. Check whether the welding torch switch is loose. 2. The torch switch is loose or any wires are loose. 3. The switch wires inside of the torch is loose. 	<ol style="list-style-type: none"> 1. Check if any torch wires are loose. 2. Check if any wires of the torch is loose. 3. Check if any wires inside of machine is loose.
4. The power indicator lights and the fan works.HF sparks while press torch trigger but no air blow out of torch head(or the air keep blowing out). The electric valve does not work.	<ol style="list-style-type: none"> 1. Check whether the welding torch switch is loose. 2. The torch switch is loose or any wires are loose. 3. The switch wires inside of the torch is loose. 	<ol style="list-style-type: none"> 1. Check if any torch wires are loose. 2. Check if any wires of the torch is loose. 3. Check if any wires inside of machine is loose.
5. Power indicator lights up, but O.C indicator does not light. The fan works and the gas blow out of torch after pressing torch trigger (gas valve works). There is no HF. There is arc between metal and electrode.	<ol style="list-style-type: none"> 1. Arc striking coil is loose. 2. HF capacitor 102-10KV is broken. 	<ol style="list-style-type: none"> 1. Check if any wires are loose. 2. Replace the HF capacitor.
6. The power indicator lights up, and the fan works. The gas blow out of torch while pressing trigger, and O.C lights while pressing torch trigger.	<ol style="list-style-type: none"> 1. There is a problem with the diode. 2. There is a problem with the IGBT. 	<ol style="list-style-type: none"> 1. Check every diode, and replace it if there is any damage. 2. Check IGBT, resistor, and diode to see if there is any damage, replacing it if any one is damaged.
7. The power indicator lights, and the fan works. Air can blow out of torch head after pressing torch trigger. The O.C indicator does not light, but it is lighting up while cutting.	<ol style="list-style-type: none"> 1. There is a problem with the circuit . Check IC3140 and other components to see if there is any problem. 	<ol style="list-style-type: none"> 1. Check the coil 5:5, and fix it if any wires are loose. 2. Replace the board.
8. The cutting current can not be adjusted.	<ol style="list-style-type: none"> 1. The wires are loose or the potentiometer is damaged. 2. There is a problem with the setting circuit. 	<ol style="list-style-type: none"> 1. Check the potentiometer if the middle pin to earth gets 0~5V voltage. Replace it if there is any damage. 2. Check if any wires are loose from front board to main board. 3. There is a problem with the boards.

Problems	Analysis	Solution
9. The machine shuts down automatically after startup.	<ol style="list-style-type: none"> 1. The power cable or circuit board may be short-circuited. 2. There is a problem with the silicon. 	<ol style="list-style-type: none"> 1. Fix or replace it. 2. Check and replace it. 3. Replace the silicon bridge.
10. After pressing the torch trigger, there is a HF sound and sparks, but the arc cannot be started.	<ol style="list-style-type: none"> 1. The welding torch is broken or loose; Or there is poor connection of the earth clamp and cable to the earth and metal parts. 2. The positive or negative terminal of the connector is loose. 	<ol style="list-style-type: none"> 1. Check and fix them.
11. The HF works fine, but the arc start is not good enough.	<ol style="list-style-type: none"> 1. Improper clearance between tip and metal. The tip and electrode is damaged or oxidized. 2. The HF is weak because of the board leakage. 3. The GAS/AIR connector is damaged, and there is power leakage between the connector and the front panel. 	<ol style="list-style-type: none"> 1. Adjust the tip to the metal at the correct gap. 2. Check and fix them. 3. Check and fix them.
12. The HF keeps sparking after pressing the torch switch.	<ol style="list-style-type: none"> 1. The HF signal is transmitted to the torch switch board and disturbed it. 	<ol style="list-style-type: none"> 1. Check the GAS/AIR torch connector, earth female socket and torch switch connector to see if there is any HF sparks between them and the front metal.

CUTTING THICKNESS CHART

The current and air pressure need to be adjusted under the metal thickness to obtain the best cutting surface.

Cutting Material Type	Thickness		Current	
	Inch	MM	Ampere: below 240V	Ampere: below 120V
Mild Steel	10 Gauge	3	15A-50A	15A-35A
	1/4	6	25A-50A	30A-35A
	3/10	8	35A-50A	35A
	3/8	10	45A-50A	45A-50A
	1/2	12	50A	Nonsupport
Stainless Steel	10 Gauge	3	15A-50A	15A-35A
	1/4	6	25A-50A	30A-35A
	3/10	8	35A-50A	35A-50A
	3/8	10	45A-50A	Nonsupport
	1/2	12	50A	Nonsupport
Aluminum	10 Gauge	3	15A-50A	15A-35A
	1/4	6	25A-50A	30A-35A
	3/10	8	35A-50A	35A-50A
	3/8	10	45A-50A	Nonsupport
	1/2	12	50A	Nonsupport

Manufacturer: Zhongshan Kingnow Technology.,Co.,Ltd

Add: 4F, A Building, No.20 Changsheng Road, South Area, Zhongshan City, Guangdong, P.R.China

VEVOR[®]

E-mail: CustomerService@vevor.com