PLASMA CUTTING MACHINE

INSTRUCTION MANUAL

MODEL:

PowerEdge 80

NOTE: IF USE OF ANY OTHER CABLES OTHER THAN GENUINE GOFABCNC CABLES OR PLASMA CONSUMABLES, MAY CAUSE DAMAGE TO YOUR MACHINE, YOUR MACHINES WARRANTY MAYBE VOID IF WE HAVE FOUND THIS TO HAVE CAUSED THE DAMAGE TO YOUR MACHINE. PLEASE CALL AND GET ANY CHANGES APPROVED BEFORE USE OF NON GENUINE GOFABCNC CABLES OR PLASMA CONSUMABLES. WITH PLASMA CONSUMABLES, THERE IS JUST A MM OF MEASUREMENT TO HAVE A FAILURE WITH IN THE PLASMA TORCH HEAD WHEN AMPERAGE AND AIR IS APPLIED AS MUCH POWER TO CUT AS IT PRODUCES.VERY IMPORTANT TO HAVE THE PROPER TIP ASSEMBLIES FROM GOFABCNC.

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Contact Us:

To order consumables,torches,please call: 877-640-3131;
Any question please feel free to call 512-944-2051.
Website: WWW.GOFABCNC.COM

Performance and Characteristics of GOFABCNC Plasma Cutter PowerEdge 80

Features

- IGBT Inverter technology can guarantee stable welding voltage and more accurate amperage regulation.
- The Plasma Cutter cut with minimal spatter. Lines form good joints.
- Human-machine interface (HMI) is friendly, and easy to provide precise adjustments.
- Protection functions.
- Cutting amperage can be adjusted.
- The machine is light weight and compact in size, for ease of movement.
- Energy saving and environmental protection features allow this machine to operate efficiently.

Safety Alert!

The process of arc welding and cutting is very dangerous. Please take proper precautions for cutting protection. Please wear **certified eye protection, welding helmets and gloves** designed for high temperatures of plasma cutting devices. Please refer to the details of accident prevention in line with the requirements of manufacturers of safety guidelines for operators.

Electric shock - may lead to death!
In accordance with the application of standards, grounding devices must be installed. **DO NOT** cut with exposed skin. **DO NOT** cut while wearing wet gloves or wet clothes. **DO NOT** contacts with live parts. **DO** ensure that you and the machine are in a properly grounded state. **DO** ensure that you and the workplace are insulated from electrical shock. Make sure that your position is safe to state.

Arc radiation -may damage your eyes, burn skin!
Use a suitable **mask** and filter, put on protective clothing, footwear and **gloves** to protect your eyes and body.

Fire
Cutting sparks may cause a fire. **DO NOT** weld or cut near combustible items. Keep cylinders in an upright position securely chained to an undercarriage or fixed support. Cylinder may explode if touch with the electrode, electrode holder or any other electrically “hot” parts.

Noise - excessive noise may harmful to human hearing.
Protect your ears, use ear shields, ear plugs or wear hearing protection devices. The noise would cause potential harm to hearing to others people near the machine when in operation. Please provide proper protection or clear the area.

Interference - may cause radio, TV and electronic equipment interference problems.
These problems may be the result of radiated interference.
Proper grounding methods can reduce or eliminate radiated interference.

1. Keep the welder power supply lines as short as possible and enclose as much of them as possible in rigid metallic conduit or equivalent shielding for a distance of 50 ft. (15.2m). There should be good electrical contact between this conduit and the welder case ground. Both ends of the conduit should be connected to a driven ground and the entire length should be continuous.

2. Keep the work and electrode leads as short as possible and as close together as possible. Lengths should not exceed 25 ft. (7.6m). Tape the electrode and work leads together into one bundle when practical.

3. Be sure the torch and work cable rubber coverings are free of cuts and cracks that allow high frequency leakage.
4. Keep the torch in good repair and all connections tight to reduce high frequency leakage.
5. The work terminal must be connected to a ground within 10 ft. of the welder, using one of the following methods.
   a) A metal underground water pipe in direct contact with the earth for 10 ft. or more.
   b) A 3/4” (19mm) galvanized pipe or a 5/8” (16mm) solid galvanized iron, steel or copper rod driven at least eight feet into the ground. The ground should be securely made and the grounding cable

should be as short as possible using cable of the same size as the work cable, or larger. Grounding to the building frame electrical conduit or a long pipe system can result in re-radiation, effectively making these members radiating antennas.

6. Keep all panels securely in place.
7. All electrical conductors within 50 ft (15.2m) of the welder should be enclosed in grounded, rigid metallic conduit or equivalent shielding. Flexible metallic conduit is generally not suitable.
8. When the welder is enclosed in a metal building, several earth driven electrical grounds connected around the periphery of the building are recommended.

Fault – seek professional help.

If you encounter difficulties in the installation and operation, refer to the operator's manual for proper operating instructions. If you still cannot understand the instructions, or the instruction will not solve the problem, you should immediately contact an authorized service center.

Installation:

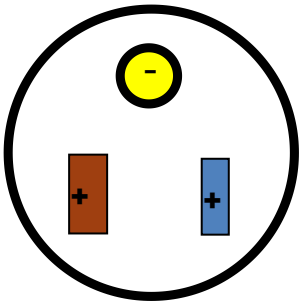
Wiring the Power Cable to a 220V/60Amp Plug

The power wire at the back of the welder is connected to the 220V AC power supply. Please confirm correct connection before use.

Connect Ground Wire

Connect the case to earth ground with cable whose size that is no less than **#14 gauge wire copper wire** from the earth ground screw at the back of the machine to earth ground. This ground is best if setting the welder on a cart or steel table the case ground is already wired to your cable power chords ground cable.

220V Wiring Diagram



220V/50Amp PLUG – WIRE A PLUG TO THE END OF POWER CABLE FROM PLASMA CUTTER.

If connected to a breaker circuit with lower Amp rating, lower welding amperage and duty cycle must be used duty cycles will be shortened. In wall wire should be 6-3 or 6-4 depending wire code depending length of run and wire size needed, also the length of run from your main breaker box to your work location for plasma cutter, If not sure consult a local electrician for local codes for your area to be legal and properly wired for your safety.

8-3 wire for extension chord upto 100 foot or better

60A breaker circuit

Can use 8-4 wire for extension chord

CAUTION: Please contact a licensed electrical contractor to install any 220V power outlet, the correct size wiring, earth ground wire, correct size breaker or 220V plugs to power this device.

In all cases, the green or green/yellow grounding wire must be connected to the grounding pin of the plug, usually identified by a green screw.

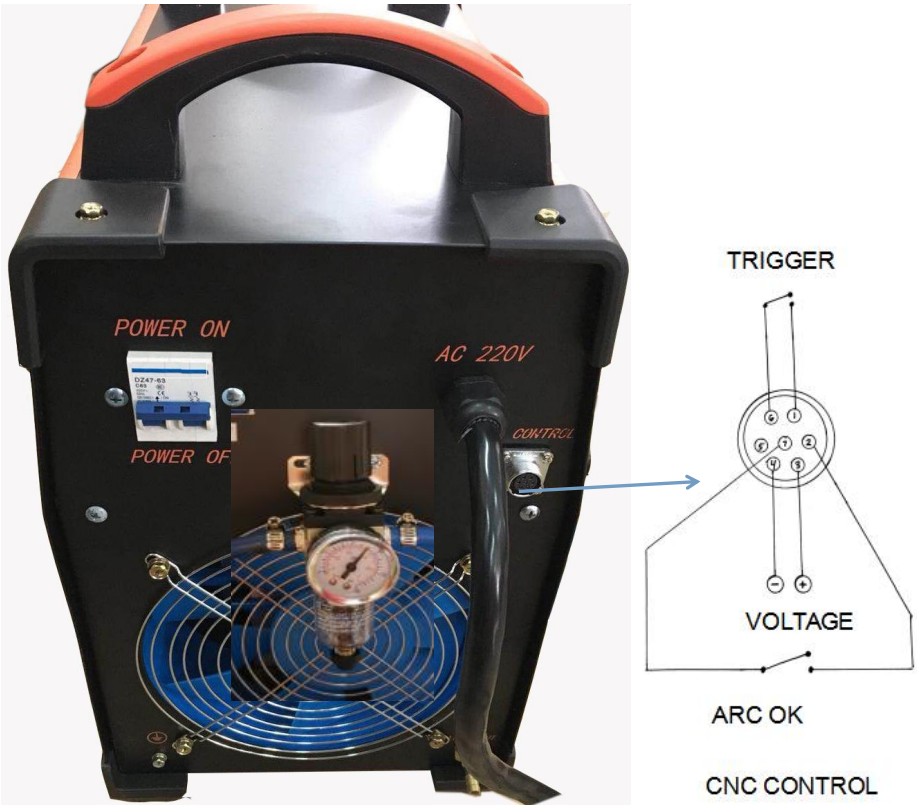
Accessories And Control Panel

PowerEdge 80.

Control Panel

Rear Control Panel

The PowerEdge 80 is connected to the supply even if the Power Switch is in the “OFF” position, and therefore there are electrically live parts inside the power. Carefully follow the instructions given in this manual.



Operation:

1. Connect the air compressor air to quick-connect on the air filter/pressure regulator on the AIR IN side.

(1) Pull up air pressure knob on the air filter/pressure regulator – PULL UP and turn CLOCKWISE to set air pressure to between 85-95Psi.with at least 2.8CFM. THIS PRESSURE CAN VARY BY ALTITUDE, TEMP OF AIR BEING USED AND DRYNESS OF AIR BEING USED. ADJUST FOR YOUR WORK NEEDS AND CUT NEEDED DEPTH TO WIDTH OF CUT.

2. Connect the cutting torch cable and ground cable on the front panel, and tighten it in the clockwise direction. (SEE CONTROL PANEL DIAGRAM)

3. Turn power on,the cooling fan should be on at the same time, the low air pressure light will light up, if there is no air or not enough air pressure,make sure you have enough air first,then switch the function switch in the position of AIR FLOW TEST,the air spouts from the cutting torch,then switch to CUT mode.

NOTE: Start with at least 85Psi of air pressure to see if that amount of air works best and increase pressure if needed.

(2) Set The AMPERAGE - According to the thickness of the work piece you want to cut change the APMERAGE knob to set the corresponding cutting amperage Amps up to 40-80 Amps.

NOTE: Start with a lower 40 Amps setting to see if that setting works best and increase if needed to a 80Amps setting for thicker or difficult to cut metals.

(3) Put on your welding helmet and adjust for plasma cutting. Wear gloves and other protective gear.

(4) To operate the plasma torch – Point the plasma torch at the metal you want to cut. Press the button switch on the plasma torch; you will activate the plasma cutter create a electronic blow back ignition discharge. After the cutting arc-discharges,you can start cutting. Hold the plasma torch nozzle near the metal you are going to cut, approximately 1/16” above the metal. THE TORCH SHOULD ARC, THE AIR FLOW AND PILOT ARC WILL IGNITE THEN CUTTING WILL IGNITE when you PRESS THE ELECTRONIC TORCH TRIGGER SWITCH **(TRY HOLD THE TORCH TIP ABOVE THE METAL YOU ARE CUTTING TO PREVENT**

DAMAGE TO THE TORCH TIP. IF THE TIP IS BLACK AND WORN FROM CUTTING REPLACE THE TIP OR INNER ELCTRODE. MAKE SURE TO SECURELY TIGHTEN THE TORCH TIPS AND INNER ECLECTRODE EVERYTIME THEY ARE REPLACED FOR PROPER OPERATION AND LONGER TORCH TIP LIFE).

Move the plasma torch in a slow consistent line while maintaining a consistent distance above the metal to cut the metal.

(5) To Stop Cutting - Release the button on the plasma torch to stop cutting.

(6) After cutting and have slag build up on the tip take a wire brush and remove the slag or blow back from the tip of the plasma torch this will assure the plasma tips last longer and cut properly.

(7) To shut off the machine – Flip the power BREAKER SWITCH to turn off the machine.

Note: If you encounter difficulties igniting the plasma cutter torch with Amps set at 60Amps, please raise the air pressure at least to 85Psi, also look to see if inner tip is tight and secure, if loose can cause damage to tips assembly and isolator.

Maintenance

(1) Clear the dust at regular intervals with clean and dry compressed air; if the working condition has heavy smoke and pollution, the plasma cutter should be cleaned once a month.

(2) The compressed air should be reduced to the required pressure to prevent the little parts in the machine from being damaged.

(3) Check whether the inner gas-electricity connection is in good condition and secure (esp. the plugs), and tighten the loose connection; if there is oxidization, remove it with sand paper and then re-connect.

(4) The operator is supposed to have a learned knowledge of electricity. Keep the machine away from water and rain. If there is water, dry it immediately, and check the insulation with a multi-meter (including that between the connection and that between the case and the connection).

(5) If the machine is not to be used for long time, put it into the original packing and store in dry condition.

Troubleshooting

Problem	Causes	Solution
1. work indication light is not on,cutting machine will not work after start machine.	1.lack of phases for power supply 2. fuse is broken (3A) inside the machine. 3.broken circuit	1. Check whether the unit is plugged in and power is on from the wall outlet. Check whether the power cable is short circuited or replace. 2.check whether fan,transformer,main-control board is ok. 3.check the line
2.over heat indication light is on	1.the temperature is too high 2.temperature relay is damaged. 3. low air pressure.	1. wait and keep the machine turned on to cool down. 2. Replace relay 3. Check for low air pressure.
3. no air when air check	1.Magnet valve is damaged 2.gas route is blocked. 3.switch k1 is damaged. 4.Output pressure is too high for air filter	1.check and replace. 2.check gas route. 3.replace 4.turn air pressure lower.
4. control switch on torch is not working.	1.switch is damaged. 2.broken circuit. 3.control board is damaged	1.replace cable. 2.connect the wire. 3.replace.
5. cutting incision is too wide	1.cutting speed is too low. 2.cutting nozzle is burned down. 3.air pressure is too low or too high	1.improve welding speed 2.replace. 3.adjust air pressure and retest.

If the unit still does not work after you check or maintain as instructed, please contact an authorized GOFABCNC dealer.

WARNING

DO NOT ATTEMPT TO SERVICE THIS MACHINE. If the machine is not performing as specified, for your safety, please do not attempt to service the machine yourself. Contact an authorized dealer for support. Please read the manual carefully before operating.

DO NOT operate the equipment without proper eye, hand, and clothing protection, or serious injury may result.

Please maintain and operate the unit as instructed. Failure to follow the instructions may result in serious injury and may void the manufacturer's warranty.

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Product Warranty Card

NOTE:

PLEASE KEEP THIS PAGE FOR WARRANTY,THANK YOU VERY MUCH!

WARRANTY CARD

THIS CERTIFICATE EXTENDS THE WARRANTY OF THE MODEL DESCRIBED_____FOR A PERIOD OF _____YEARS;
THIS WARRANTY COVERS THE REPAIR OR REPLACEMENT INTERNAL WORKING COPONENTS OF THIS MACHINE UNDER PROPER USE.THIS CERTIFICATE DOES NOT PROVIDE COVERAGE FOR LOST OR DESTROYED MACHINE WITHOUT FOLLOWING THE INSTRUCTIONS, SHIPPING COST IS NOT COVERED. NO WARRANTY IF REMOVED THE VOID LABLE.
PLEASE KEEP THIS CARD FOR WARRANTY.THANK YOU VERY MUCH!

_____	_____	_____
DATE OF PURCHASE (MM/DD/YEAR)	MODEL	SERIAL NUMBER