

# ***EVERLAST***

## **SUPERULTRA SERIES**

***MULTIPROCESS PULSE TIG/SMAW/PLASMA CUTTER UNITS***

**CC**

**GTAW-P**

**SMAW**

**PAC**

**1  
~  
PHASE**

**DC**



### ***Operator's Manual For DC Output SuperUltra Series Units Safety, Setup and General Use Guide***

Rev. 1      0 00714-14

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



**1-877-755-9353**

329 Littlefield Ave. South San Francisco, CA 94080 USA

Specifications and Accessories subject to change without notice.

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**NOTE:** Product Specifications and features are subject to change without notice. While every attempt has been made to provide the most accurate and current information possible at the time of publication, this manual is intended to be a general guide and not intended to be exhaustive in its content regarding safety, welding, or the operation/maintenance of this unit. Everlast Power Equipment INC. does not guarantee the accuracy, completeness, authority or authenticity of the information contained within this manual. The owner of this product assumes all liability for its use and maintenance. Everlast Power Equipment INC. does not warrant this product or this document for fitness for any particular purpose, for performance/accuracy or for suitability of application. Furthermore, Everlast Power Equipment INC. does not accept liability for injury or damages, consequential or incidental, resulting from the use of this product or resulting from the content found in this document or accept claims by a third party of such liability.

**Dear Customer,**

**THANKS!** You had a choice, and you bought an Everlast. We appreciate you as a customer and hope that you will enjoy years of use from your welder.

Please go directly to the Everlast website to register your unit and receive your warranty information. Your unit registration is important should any information such as product updates or recalls be issued. It is also important so that we may track your satisfaction with Everlast products and services. If you are unable to register by website, contact Everlast directly through the sales department through the main customer service number in your country. Your unit will be registered and warranty will be issued and in full effect. Keep all information regarding your purchase. **In the event of a problem you must contact technical support before your welder can be a candidate for warranty service and returned.**

**Please review the current online warranty statement and information found on the website of the Everlast division located in or nearest to your country. Print it for your records and become familiar of its terms and conditions.**

Everlast offers full technical support, in several different forms. We have online support available through email, and a welding support forum designed for customers and noncustomer interaction. Technical advisors are active on the forum daily. We also divide our support into two divisions: technical and welding performance. Should you have an issue or question concerning your unit, please contact performance/technical support available through the main company headquarters available in your country. For best service call the appropriate support line and follow up with an email, particularly during off hours, or in the event you cannot reach a live person. In the event you do not reach a live person, particularly during heavy call volume times, holidays, and off hours, leave a message and your call will normally be returned within 24 hours. Also, for quick answers to your basic questions, join the company owned forum available through the website. You'll find knowledgeable, helpful people and staff available to answer your questions, and perhaps find a topic that already addresses your question at <http://www.everlastgenerators.com/forums/>.

Should you need to call or write, always know your model name, purchase date and welder manufacturing inspection date. This will assure the quick and accurate customer service. **REMEMBER: Be as specific and informed as possible. Technical and performance advisors rely upon you to carefully describe the conditions and circumstances of your problem or question. Take notes of any issues as best you can. You may be asked many questions by the advisors to clarify problems or issues that may seem very basic. However, diagnosis procedures MUST be followed to begin the warranty process. Advisors can't assume anything, even with experienced users, and must cover all aspects to properly diagnose the problem. Depending upon your issue, it is advisable to have basic tools handy such as screwdrivers, wrenches, pliers, and even an inexpensive test meter with volt/ohm functions before you call.**

Let us know how we may be of service to you should you have any questions.

Sincerely,

Everlast Customer Service

Serial number: \_\_\_\_\_

Model number: \_\_\_\_\_

Date of Purchase \_\_\_\_\_

***EVERLAST***

Contact Information

Everlast US:

Everlast consumer satisfaction email: [sales@everlastwelders.com](mailto:sales@everlastwelders.com)

Everlast Website: [everlastwelders.com](http://everlastwelders.com)

Everlast Technical Support: [support@everlastwelders.com](mailto:support@everlastwelders.com)

Everlast Support Forum: <http://www.everlastgenerators.com/forums/index.php>

Main toll free number: 1-877-755 WELD (9353) 9am—5pm PST M-F

11am-4pm PST Sat.

FAX: 1-650-588-8817

Everlast Canada:

Everlast consumer satisfaction email: [sales@everlastwelders.ca](mailto:sales@everlastwelders.ca)

Everlast Website: [everlastwelders.ca](http://everlastwelders.ca)

Everlast Technical Support: [sales@everlastwelders.ca](mailto:sales@everlastwelders.ca)

Telephone: 905-637-1637 9am-4:30pm EST M-F

10am-1pm EST Sat.

FAX: 1-905-639-2817

Everlast Australia:

Sydney: 5A Karloo Parade Newport NSW 2106

(02) 9999 2949

Port Macquarie: 2B Pandorea Place Port Macquarie

(02) 8209 3389

After hours support: 0413 447 492

Everlast Technical Support: [support@pickproducts.com](mailto:support@pickproducts.com)

## SAFETY PRECAUTIONS

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Everlast is dedicated to providing you with the best possible equipment and service to meet the demanding jobs that you have. We want to go beyond delivering a satisfactory product to you. That is the reason we offer technical support to assist you with your needs should an occasion occur. With proper use and care your product should deliver years of trouble free service.



Safe operation and proper maintenance is your responsibility.

We have compiled this operator's manual, to instruct you in basic safety, operation and maintenance of your Everlast product to give you the best possible experience. Much of welding and cutting is based upon experience and common sense. As thorough as this welding manual may be, it is no substitute for either. Exercise extreme caution and care in all activities related to welding or cutting. Your safety, health and even life depends upon it. While accidents are never planned, preventing an accident requires careful planning.

**Please carefully read this manual before you operate your Everlast unit.** This manual is not only for the use of the machine, but to assist in obtaining the best performance out of your unit. Do not operate the unit until you have read this manual and you are thoroughly familiar with the safe operation of the unit. If you feel you need more information please contact Everlast Support.

The warranty does not cover improper use, maintenance or consumables. **Do not attempt to alter or defeat any piece or part of your unit, particularly any safety device.** Keep all shields and covers in place during unit operation should an unlikely failure of internal components result in the possible presence of sparks and explosions. If a failure occurs, discontinue further use until malfunctioning parts or accessories have been repaired or replaced by qualified personnel.



***Note on High Frequency electromagnetic disturbances:***

Certain welding and cutting processes generate High Frequency (HF) waves. These waves may disturb sensitive electronic equipment such as televisions, radios, computers, cell phones, and related equipment. High Frequency may also interfere with fluorescent lights. Consult with a ***licensed*** electrician if disturbance is noted. Sometimes, improper wire routing or poor shielding may be the cause.



HF can interfere with pacemakers. See EMF warnings in following safety section for further information. Always consult your physician before entering an area known to have welding or cutting equipment if you have a pacemaker.

## SAFETY PRECAUTIONS



These safety precautions are for protection of safety and health. Failure to follow these guidelines may result in serious injury or death. Be careful to read and follow all cautions and warnings. Protect yourself and others.



**Welding and cutting processes produce high levels of ultraviolet (UV) radiation that can cause severe skin burn and damage.** There are other potential hazards involved with welding such as severe burns and respiratory related illnesses. Therefore observe the following to minimize potential accidents and injury:



**Use appropriate safety glasses with wrap around shields while in the work area, even under welding helmets to protect your eyes from flying sparks and debris.** When chipping slag or grinding, goggles and face shields may be required.



**When welding or cutting, always use an approved shielding device, with the correct shade of filter installed.** Always use a welding helmet in good condition. Discard any broken or cracked filters or helmets. Using broken or cracked filters or helmets can cause severe eye injury and burn. Filter shades of no less than shade 5 for cutting and no less than shade 9 for welding are highly recommended. Shades greater than 9 may be required for high amperage welds. Keep filter lenses clean and clear for maximum visibility. It is also advisable to consult with your eye doctor should you wear contacts for corrective vision before you wear them while welding.



**Do not allow personnel to watch or observe the welding or cutting operation unless fully protected by a filter screen, protective curtains or equivalent protective equipment.** If no protection is available, exclude them from the work area. Even brief exposure to the rays from the welding arc can damage unprotected eyes.



**Always wear hearing protection because welding and cutting can be extremely noisy. Ear protection is necessary to prevent hearing loss.** Even prolonged low levels of noise has been known to create long term hearing damage. Hearing protection also further protects against hot sparks and debris from entering the ear canal and doing harm.



**Always wear personal protective clothing.** Flame proof clothing is required at all times. Sparks and hot metal can lodge in pockets, hems and cuffs. Make sure loose clothing is tucked in neatly. Leather aprons and jackets are recommended. Suitable welding jackets and coats may be purchased made from fire proof material from welding supply stores. Discard any burned or frayed clothing. Keep clothing away from oil, grease and flammable liquids.



**Leather boots or steel toed leather boots with rubber bottoms are required for adequate foot protection.** Canvas, polyester and other man made materials often found in shoes will either burn or melt. Rubber or other non conductive soles are necessary to help protect from electrical shock.



**Flame proof and insulated gauntlet gloves are required whether welding or cutting or handling metal.** Simple work gloves for the garden or chore work are not sufficient. Gauntlet type welding gloves are available from your local welding supply companies. Never attempt to weld with out gloves. Welding with out gloves can result in serious burns and electrical shock. If your hand or body parts comes into contact with the arc of a plasma cutter or welder, instant and serious burns will occur. **Proper hand protection is required at all times when working with welding or cutting machines!**

## SAFETY PRECAUTIONS



**WARNING!** Persons with pacemakers should not weld, cut or be in the welding area until they consult with their physician. Some pacemakers are sensitive to EMF radiation and could severely malfunction while welding or while being in the vicinity of someone welding. *Serious injury or death may occur!*



**Welding and plasma cutting processes generate electro-magnetic fields and radiation.** While the effects of EMF radiation are not known, it is suspected that there may be some harm from long term exposure to electromagnetic fields. Therefore, certain precautions should be taken to minimize exposure:

- Lay welding leads and lines neatly away from the body.
- Never coil cables around the body.
- Secure cables with tape if necessary to keep from the body.
- Keep all cables and leads on the same side the body.
- Never stand between cables or leads.
- Keep as far away from the power source (welder) as possible while welding.
- Never stand between the ground clamp and the torch.
- Keep the ground clamp grounded as close to the weld or cut as possible.



**Welding and cutting processes pose certain inhalation risks.** Be sure to follow any guidelines from your chosen consumable and electrode suppliers regarding possible need for respiratory equipment while welding or cutting. Always weld with adequate ventilation. Never weld in closed rooms or confined spaces. Fumes and gases released while welding or cutting may be poisonous. Take precautions at all times. Any burning of the eyes, nose or throat are signs that you need to increase ventilation.

- Stop immediately and relocate work if necessary until adequate ventilation is obtained.
- Stop work completely and seek medical help if irritation and discomfort persists.



**WARNING!** Do not weld on galvanized steel, stainless steel, beryllium, titanium, copper, cadmium, lead or zinc without proper respiratory equipment and or ventilation.



**WARNING!** This product when used for welding or cutting produces fumes and gases which contains chemicals known to the State of California to cause birth defects and in some cases cancer. (California Safety and Health Code §25249.5 *et seq.*)



**WARNING!** Do not weld or cut around Chlorinated solvents or degreasing areas. Release of Phosgene gas can be deadly. Consider all chemicals to have potential deadly results if welded on or near metal containing residual amounts of chemicals.



**Keep all cylinders upright and chained to a wall or appropriate holding pen.** Certain regulations regarding high pressure cylinders can be obtained from OSHA or local regulatory agency. Consult also with your welding supply company in your area for further recommendations. The regulatory changes are frequent so keep informed.



**All cylinders have a potential explosion hazard.** When not in use, keep capped and closed. Store chained so that overturn is not likely. Transporting cylinders incorrectly can lead to an explosion. Do not attempt to adapt regulators to fit cylinders. Do not use faulty regulators. Do not allow cylinders to come into contact with work piece or work. Do not weld or strike arcs on cylinders. Keep cylinders away from direct heat, flame and sparks.

## SAFETY PRECAUTIONS

continued



**WARNING! Electrical shock can kill.** Make sure all electrical equipment is properly grounded. Do not use frayed, cut or otherwise damaged cables and leads. Do not stand, lean or rest on ground clamp. Do not stand in water or damp areas while welding or cutting. Keep work surface dry. Do not use welder or plasma cutter in the rain or in extremely humid conditions. Use dry rubber soled shoes and dry gloves when welding or cutting to insulate against electrical shock. Turn machine on or off only with gloved hand. Keep all parts of the body insulated from work, and work tables. Keep away from direct contact with skin against work. If tight or close quarters necessitates standing or resting on work piece, insulate with dry boards and rubber mats designed to insulate the body from direct contact.



**All work cables, leads, and hoses pose trip hazards.** Be aware of their location and make sure all personnel in area are advised of their location. Taping or securing cables with appropriate restraints can help reduce trips and falls.



**WARNING! Fire and explosions are real risks while welding or cutting.** Always keep fire extinguishers close by and additionally a water hose or bucket of sand. Periodically check work area for smoldering embers or smoke. It is a good idea to have someone help watch for possible fires while you are welding. Sparks and hot metal may travel a long distance. They may go into cracks in walls and floors and start a fire that would not be immediately visible. Here are some things you can do to reduce the possibility of fire or explosion:

- Keep all combustible materials including rags and spare clothing away from area.
- Keep all flammable fuels and liquids stored separately from work area.
- Visually inspect work area when job is completed for the slightest traces of smoke or embers.
- If welding or cutting outside, make sure you are in a cleared off area, free from dry tender and debris that might start a forest or grass fire.
- Do not weld on tanks, drums or barrels that are closed, pressurized or anything that held flammable liquid or material.



**Metal is hot after welding or cutting!** Always use gloves and or tongs when handling hot pieces of metal. Remember to place hot metal on fire-proof surfaces after handling. Serious burns and injury can result if material is improperly handled.

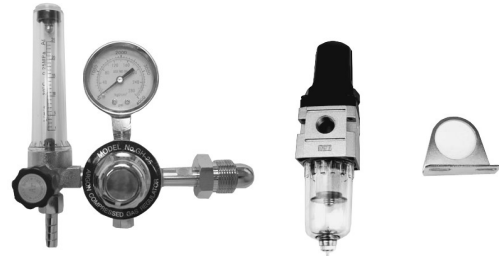


**WARNING! Faulty or poorly maintained equipment can cause injury or death.** Proper maintenance is your responsibility. Make sure all equipment is properly maintained and serviced by qualified personnel. Do not abuse or misuse equipment. Keep all covers in place. A faulty machine may shoot sparks or may have exploding parts. Touching uncovered parts inside machine can cause discharge of high amounts of electricity. **Do not allow employees to operate poorly serviced equipment.** Always check condition of equipment thoroughly before start up. Disconnect unit from power source before any service attempt is made and for long term storage or electrical storms.



Further information can be obtained from The American Welding Society (AWS) that relates directly to safe welding and plasma cutting. Additionally, your local welding supply company may have additional pamphlets available concerning their products. Do not operate machinery until you are comfortable with proper operation and are able to assume inherent risks of cutting or welding.





Argon and Air Regulator



26 series TIG torch



Stick Electrode Holder



Work Clamp



AG60 Plasma Torch



Foot Pedal



Consumable Starter Kit

NOTE: Accessory and consumable style and quantities are subject to change without notice. Consumable starter kits provide only enough consumables to get started. Extra consumables can be purchased through Everlast or almost any local welding supply store.

## DC SUPERULTRA INPUT/OUTPUT SPECIFICATIONS

FEATURE/SPEC.	SUPERULTRA 205P
INVERTER TYPE	MOSFET
INPUT VOLTAGE $\pm 10\%$ ; PHASE/FREQUENCY	110/220V; 1PH/50-60Hz
MAXIMUM INPUT AMPS ( $I_{i,MAX}$ )	31A @110V/ 27A @ 220V
MAXIMUM INPUT RUNNING AMPS ( $I_{i,eff}$ )	19A @ 110V/ 17 A @ 220V
DUTY CYCLE % @ AMPS	TIG: [110V] 35%@120A/14.8V 60%@ 93A/13.7V 100%@72A /12.9V [220V] 35%@200A/18V 60%@160A/16.4V 100%@130A/15.2V Plasma: [110V] 60%@27A/90.8V 100%@21A/88.4V [220V] 35%@50A/100V 60%@40A/96V 100% @ 30A/92V Stick: [110V] 35%@120A/24.8V 60%@93A/23.7V 100%@72A/22.9V [220V] 35%@160A/26.4V 60%@130A/25.2V 100%@100A/24V
OUTPUT RANGE : AMPS/VOLTS	TIG: [110V] 10-120A/10.4-14.8V [220V] 10-200A/10.4-18V Stick: [110V] 10-160A/120A, 20.4-24.8V [220V] 10-160A/20.4-26.4V PLASMA: [110] 10-27A/84-94V [220] 10-50A/84V-100V
OPEN CIRCUIT VOLTAGE	TIG: 70 V STICK: 70V PLASMA: 220 V
TIG TORCH	26 SERIES (economy)
PLASMA TORCH	AG60 High Frequency Torch
CONSTANT CURRENT (CC) OUTPUT TYPE	DC ( $\pm$ )
STICK CELLULOSE ROD CAPABLE 6010,6011	6011 ONLY (DC+)
INCLUDES	WORK CLAMP WITH CABLE (8 FT), STICK TORCH WITH CABLE (8FT), TIG TORCH: 12 FT, PLASMA AG60 12 FT, CONSUMABLE STARTER KIT FOR TIG AND PLASMA (NO TUNGSTEN)
DINSE CONNECTOR TYPE	50 Series
POST FLOW	ADJUSTABLE 0-60Seconds
PROTECTION CLASS	IP21S
INSULATION GRADE	F

## SECTION 1

## INTRODUCTION AND SPECIFICATIONS

**General overview:** The SuperUltra 205 from Everlast is entry level DC TIG, stick and plasma multi-purpose unit, designed for occasional portable repair work and small project use. It is recommended for the welding enthusiast or hobbyist with occasional repair needs and/or light duty welding requirements. The SuperUltra series features a lightweight MOFSET inverter design and can provide capable service if used within its intended limits. These are not intended for use in production or intensive fabrication duties. **NOTE: This unit is not suitable for welding aluminum.**

**General Use and Care:** Care should be taken to keep the unit out of direct contact with water spray. The unit is rated IP21S, which rates it for light contact with dripping water but should never be used in the presence of water for safety. It is a good idea to remove the welder from the vicinity of any water or moisture source to reduce the possibility of electrocution or shock. Never operate in standing water.


Every 1-2 months, depending upon use, the welder should be unplugged, opened up and carefully cleaned with compressed air. Regular maintenance will extend the life of the unit.

**IMPORTANT: Before opening the unit for any reason, make sure the unit has been unplugged for at least 10 minutes to allow time for the capacitors to fully discharge. Severe shock and/or death can occur.**

Do not restrict air flow or movement of air around the welder. Allow a buffer distance of 2 ft from all sides if possible, with a minimum distance of at least 18" clearance. Do not operate the welder immediately in the weld area or the force of the fan will cause welding issues such as unstable arc, or porosity.

Do not mount in areas that are prone to severe shock or vibration. Lift and carry the welder by the handle.

Do not direct metallic dust or any dirt intentionally toward the machine, particularly in grinding and welding operations. Make sure the panel is protected from damage during welding and cutting operations by flipping down the clear protective cover.

 **Duty Cycle.** This unit is described as a light, entry level unit. Although it has a duty cycle limit, care should be taken not to exceed this limit for maximum life. Once the duty cycle has been exceeded, heat may continue to build in the electronics. The duty cycle is based off a 10 minute duty cycle rating at 40° C. This means that the unit is ca-

pable of being operated at the max amps for the stated percent of time out of 10 minutes without a break to cool down the unit. For the remainder of the 10 minute time period, the welder should rest for maximum life. The temperature light will come on and the welder will automatically stop welding when an overheat condition has occurred. Stop welding immediately. Heat will continue to be generated by and transferred to the electronics after welding has ceased. Welding in humid, or hot conditions can affect duty cycle as well. Do not shut down an overheated welder until it has safely cooled. Once the overheated condition has cleared, welding can resume. Do not operate the welder with the covers removed. Only cycle the power switch to reset the unit IF the light has not gone out after 10 minutes. The duty cycle for each process varies according to the voltage input. The duty cycles at maximum rated amps of each process are as follows:

120V:

TIG @ 35%

Stick@ 35%

Plasma@ 60%

220V:

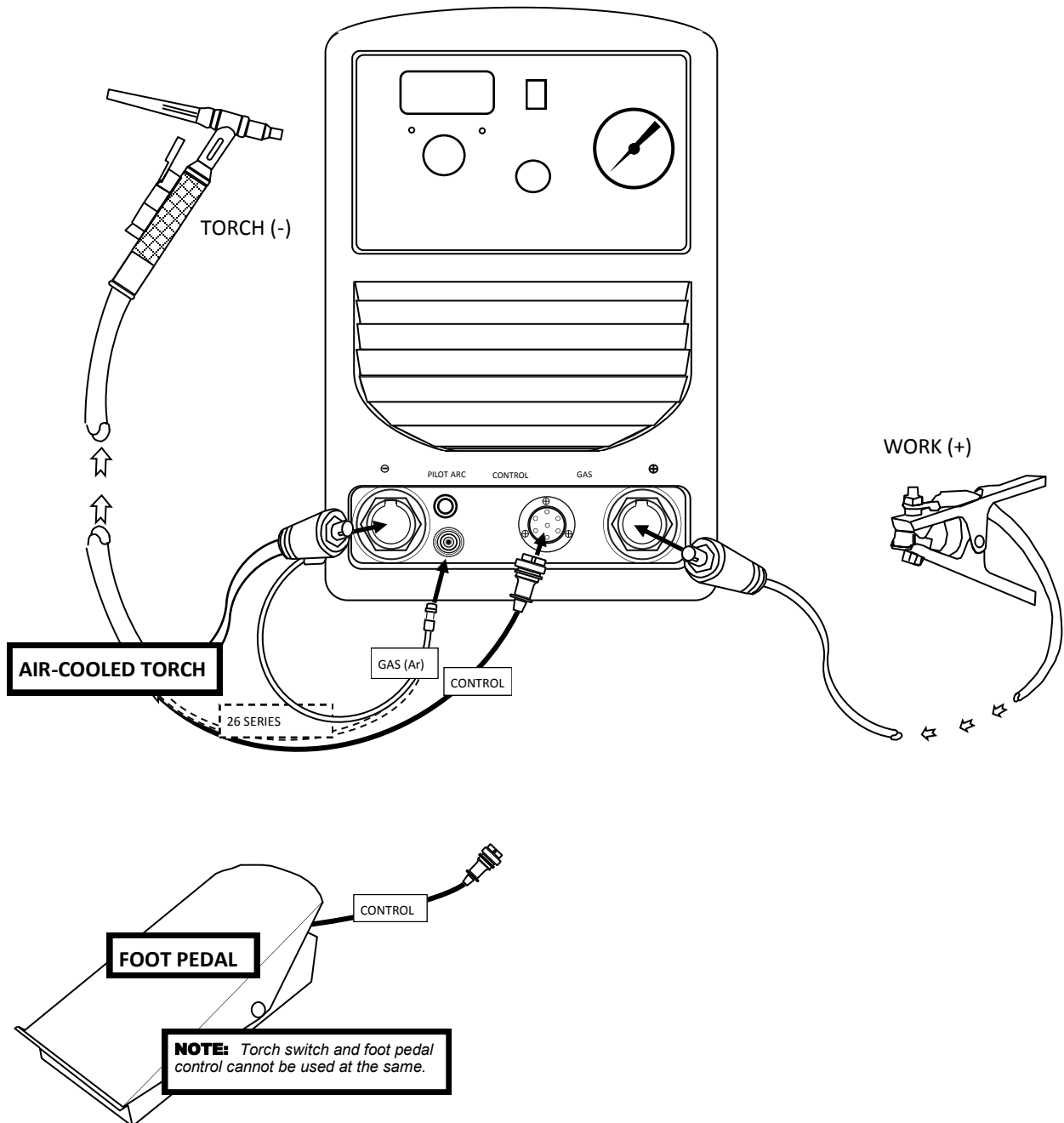
TIG@35%

Stick@35%

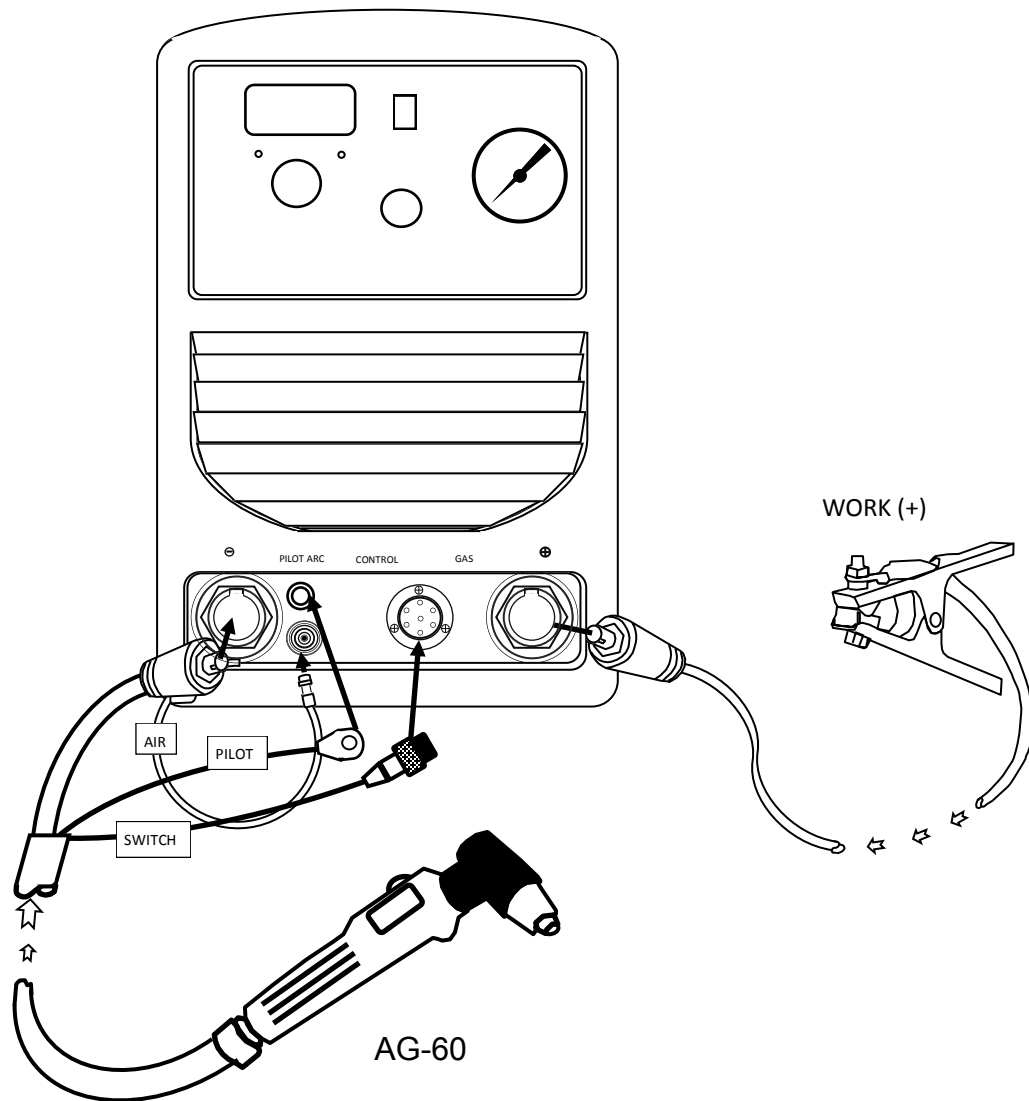
Plasma@35%

**HF Start.** The welder uses High Frequency to start the-TIG arc and plasma cutter arc. HF is generated by a point gap system similar to an older automotive point/coil system. A slight buzz, or hiss may be heard immediately upon start as the HF energizes. A bright blue light may be emitted from the front or side panel as the spark energizes. This is normal and safe as long as the covers are in place. Do not activate the HF unless you are in position and ready to weld to minimize point gap wear. Point gap should measure between .030-.045". Contact Everlast for adjustment instructions if HF appears to malfunction while either in Plasma or TIG mode.

**This manual has been compiled to give an overview of operation and is designed to offer information centered around safe, practical use of the welder.** Welding is inherently dangerous. Only YOU, the operator of this welder, can ensure that safe operating practices are followed, through the exercise of common sense practices and training. Do not operate this machine until you have fully read the manual, including the safety section. If you think that you do not have the skill or knowledge to safely operate this welder, do not use this welder until formal training is received.

**QUICK SETUP GUIDE: TIG CONNECTIONS**

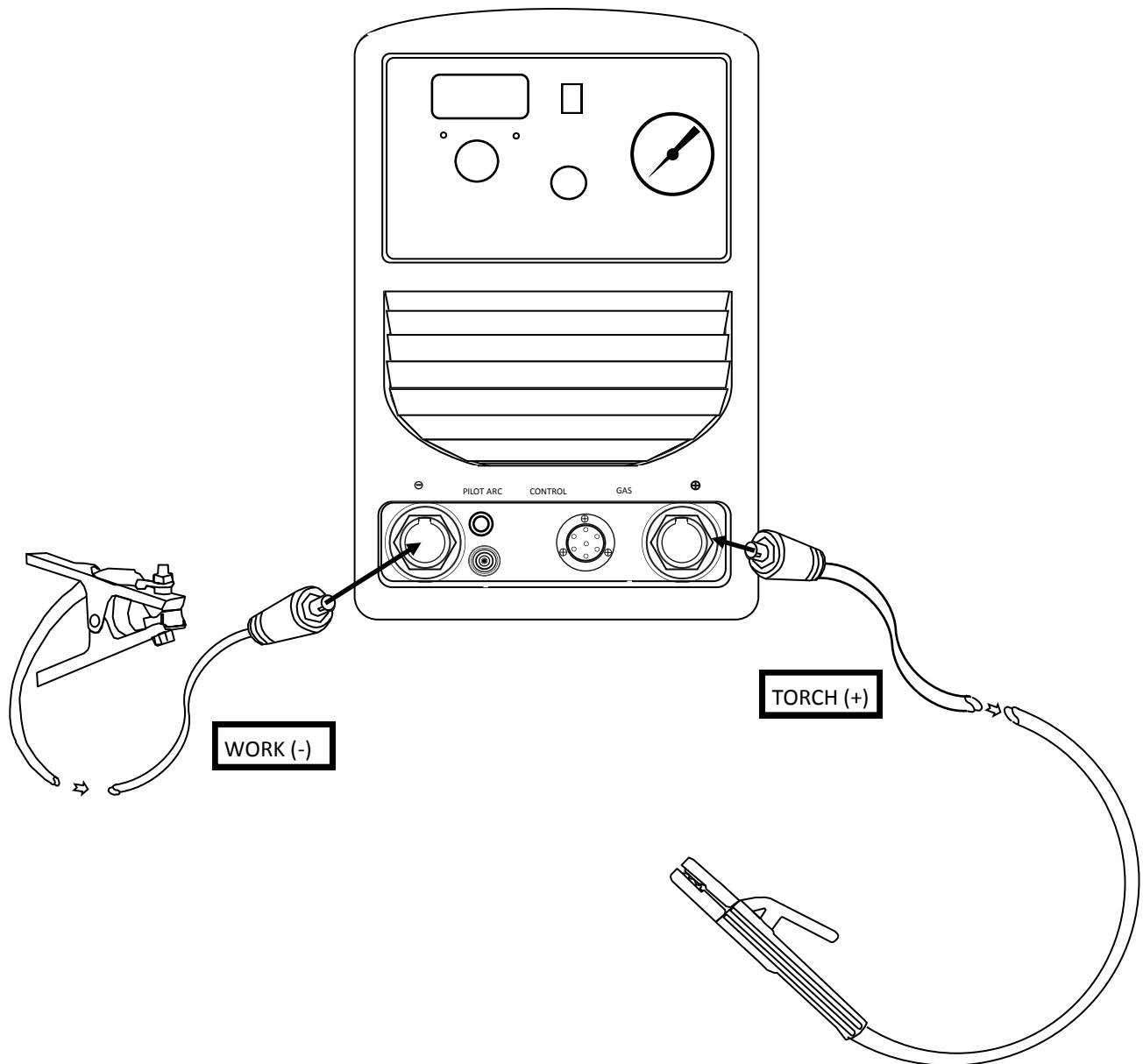
## QUICK SETUP GUIDE: PLASMA CONNECTIONS



### NOTES:

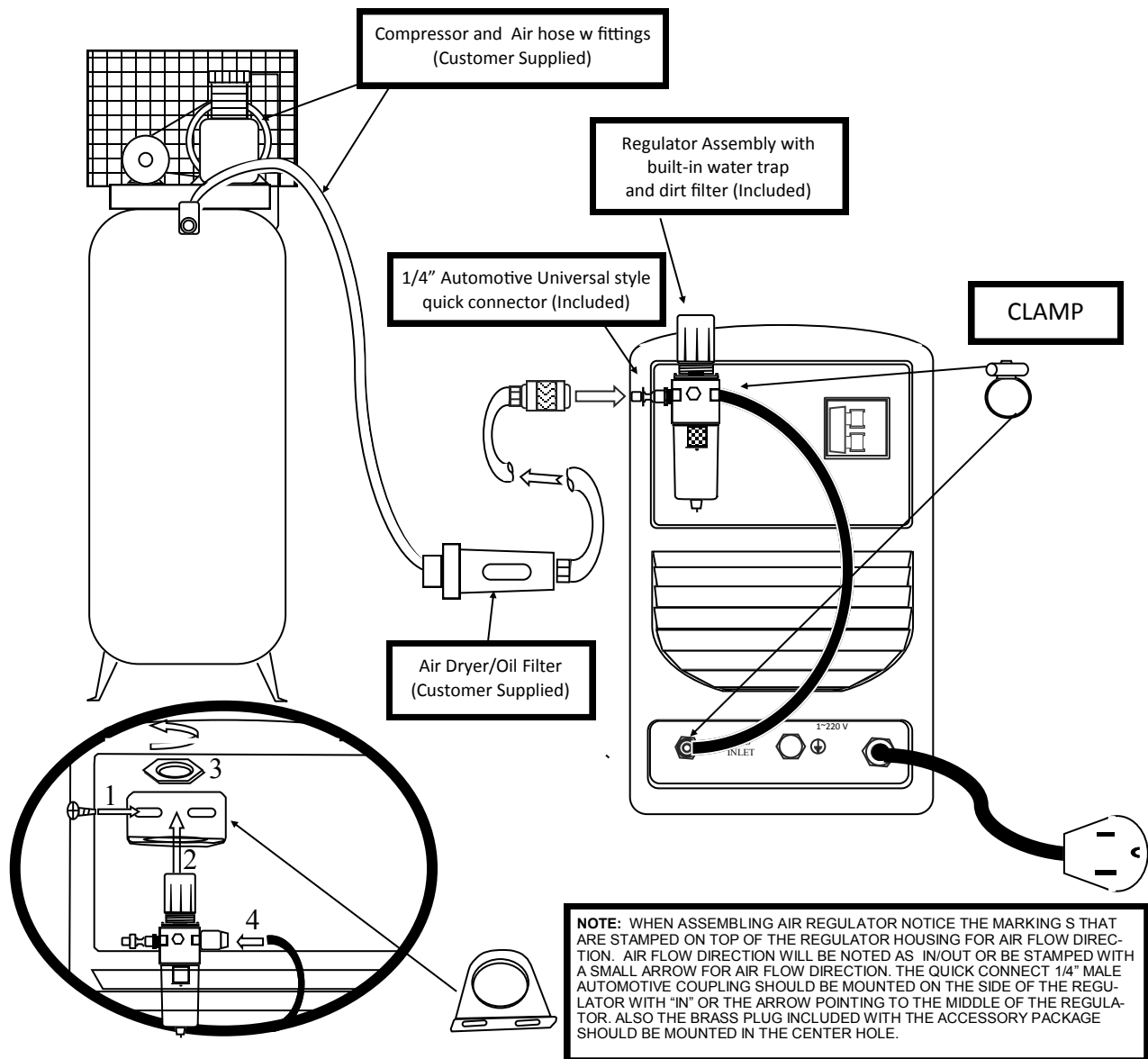
- 1) Do not attempt to use the foot pedal to control the amps.
- 2) Do not flip the process switch while cutting or unit failure may result.
- 3) Attempt to cut only when air pressure is being supplied. Always check gauge to confirm air pressure is present before cut.
- 4) Do not exceed 85 psi air supply pressure from the compressor or failure of components may result.
- 5) Adjust torch operation pressure to 55-65 psi for best results while post flow is flowing. (Increase post flow time to maximum to allow enough time to set pressure.)
- 6) When using the lower amp range, the nozzles will need to be changed out for ones with a smaller diameter orifice. Everlast is the OEM supplier of the torch but not the manufacturer. Low amp cuts may be unstable unless the size is matched to the amps being used. Although the unit can be adjusted as low as 10 amps, this does not guarantee stable cutting at this amperage. Minimum suggested cutting amps is 25-30 amps for the AG 60 torch with the smallest available consumable. Other torches with smaller consumables may be fitted to supply better low end cutting capability.
- 7) Do not use the pilot arc continuously. It is designed for momentary use. Do not fire the torch unless ready to cut or adjust the cutting pressure. Excessive use creates point gap wear, and can also damage surrounding electronics. **ALWAYS CUT WITH THE WORK CLAMP ATTACHED.**
- 8) If the pilot arc does not transfer and only a shallow cut or gouge is noticed, check the work clamp to make sure it is attached directly to clean rust free area of the work piece and that the cable is secure to both the torch and work clamp. Make sure that the cables are located securely in the connectors.

**QUICK SETUP GUIDE: STICK POLARITY AND CONNECTIONS**



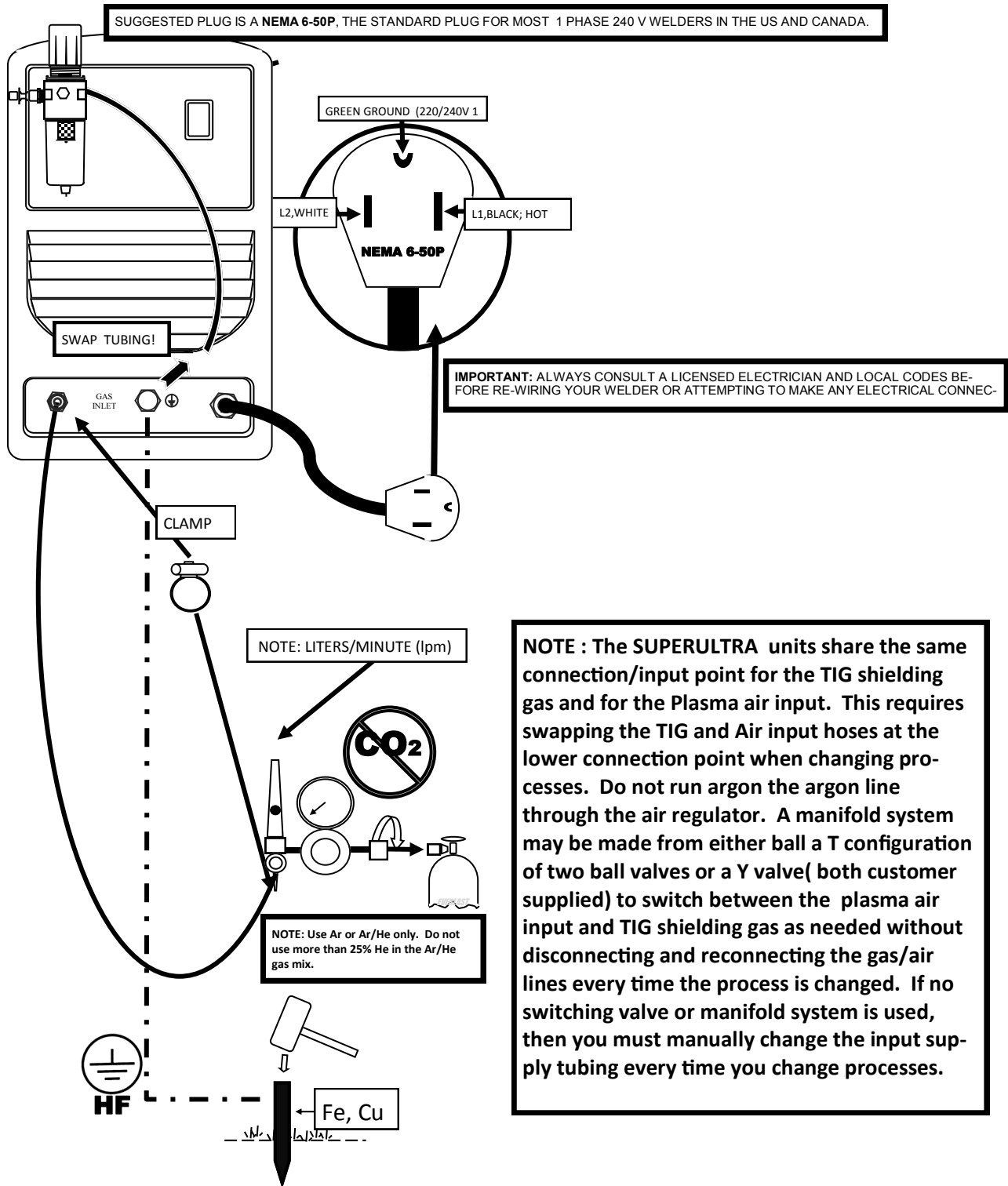
## QUICK SETUP GUIDE: REAR CONNECTIONS FOR PLASMA OPERATION

### Compressor and Dryer Diagram



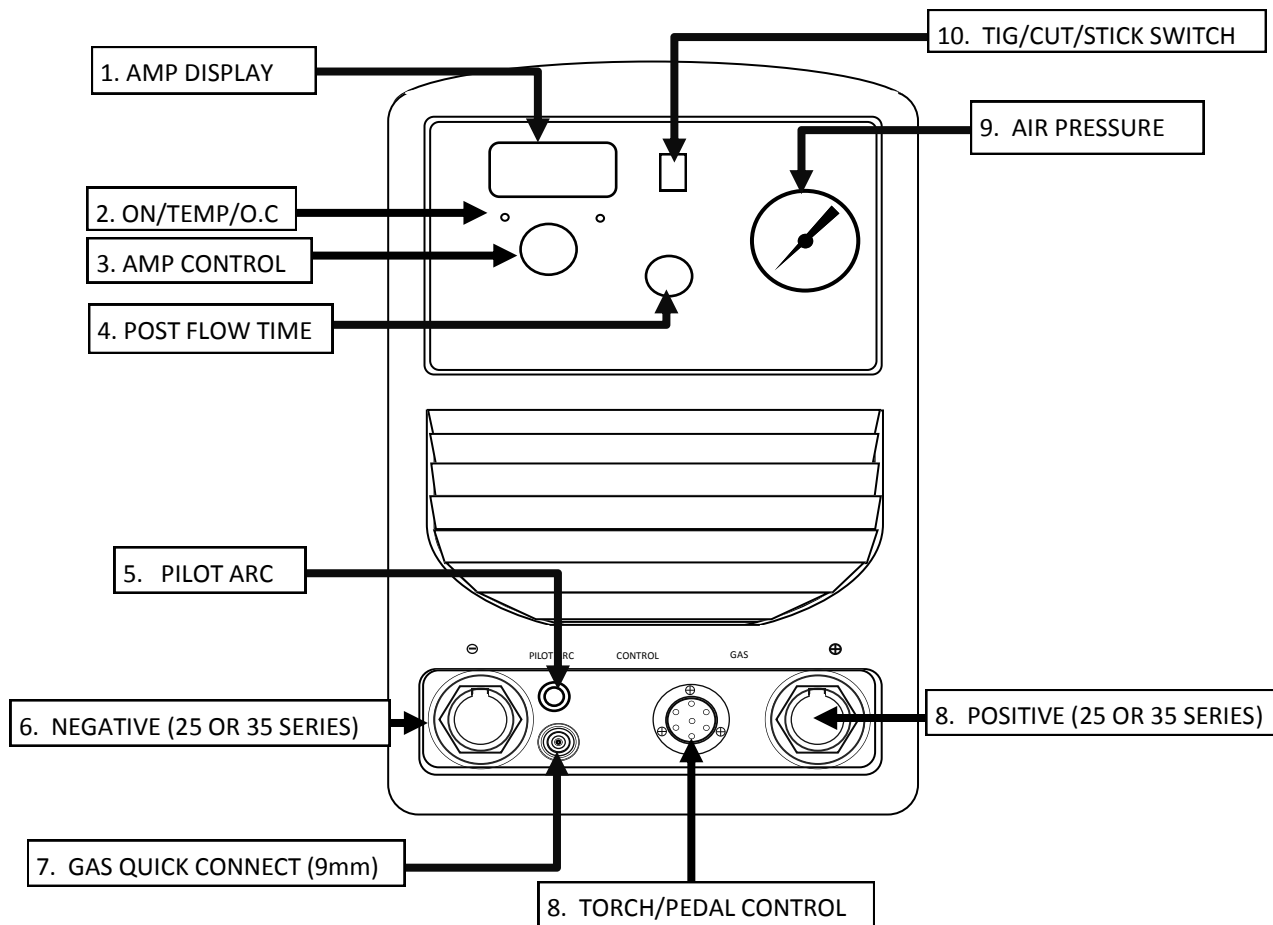
**NOTE:** A SEPARATE AIR DRYER BETWEEN THE AIR COMPRESSOR AND REGULATOR ASSEMBLY MUST BE INSTALLED. IT SHOULD BE INSTALLED AS CLOSE TO THE UNIT AS PRACTICAL. THIS IS A CUSTOMER SUPPLIED ITEM. THIS WILL REDUCE CUTTING ISSUES SUCH AS SPITTING, POPPING AND RAPID CONSUMABLE WEAR. THE REGULATOR/FILTER THAT IS INCLUDED IS NOT SUFFICIENT TO REMOVE ALL MOISTURE. IT SERVES ONLY AS A WATER TRAP AND FINE SEDIMENT FILTER. ANY AIR COMPRESSOR SYSTEM PRODUCES MOISTURE IN ALMOST ANY ENVIRONMENT REGARDLESS OF HUMIDITY LEVELS. DAILY DRAINING OF THE AIR COMPRESSOR IS RECOMMENDED AS WELL. THE AIR SUPPLIED TO THE PLASMA CUTTER SHOULD BE OF SIMILAR QUALITY USED FOR AUTOMOTIVE PAINTING. DIFFERENT STYLES OF DRYERS ARE AVAILABLE. THE MOST INEXPENSIVE AND COMMONLY AVAILABLE IS THE REPLACEABLE DESSICANT TYPE USED FOR AUTOMOTIVE PAINTING. DAMAGE DONE TO THE TORCH AND THE PLASMA CUTTER (INCLUDING BUT NOT LIMITED TO: SHORTING, CORROSION AND DETERIORATION OF INTERNAL LINES AND COMPONENTS) AS A RESULT OF EXCESS MOISTURE IS NOT COVERED UNDER WARRANTY. ADDITIONALLY, A FILTER SHOULD BE INSTALLED IN-LINE OR AT THE COMPRESSOR THAT WILL FILTER ANY EXCESS OIL OR OIL BLOW-BY FROM THE LINE IF NECESSARY. DO NOT USE WITH OILING SYSTEMS DESIGNED TO AUTOMATICALLY LUBRICATE AIR TOOLS. IT IS ADVISABLE TO USE THE PLASMA CUTTER WITH A NEW AIR HOSE/LINE THAT IS FRESH WITHOUT MOISTURE OR LUBE CONTAMINATION. IF AIR PRESSURE DROPS FROM THE COMPRESSOR TO THE CUTTER MORE THAN 5-10 PSI, OR AIR FLOW IS INSUFFICIENT, INCREASE TO A LARGER SIZE DRYER/FILTER. FAILURE TO USE THE PROPER DRYER/FILTER IS THE NUMBER ONE CAUSE OF CUTTING ISSUES.

## QUICK SETUP GUIDE: REAR CONNECTIONS FOR TIG / WIRING (US/Canada)





## FRONT PANEL FEATURES AND CONTROLS

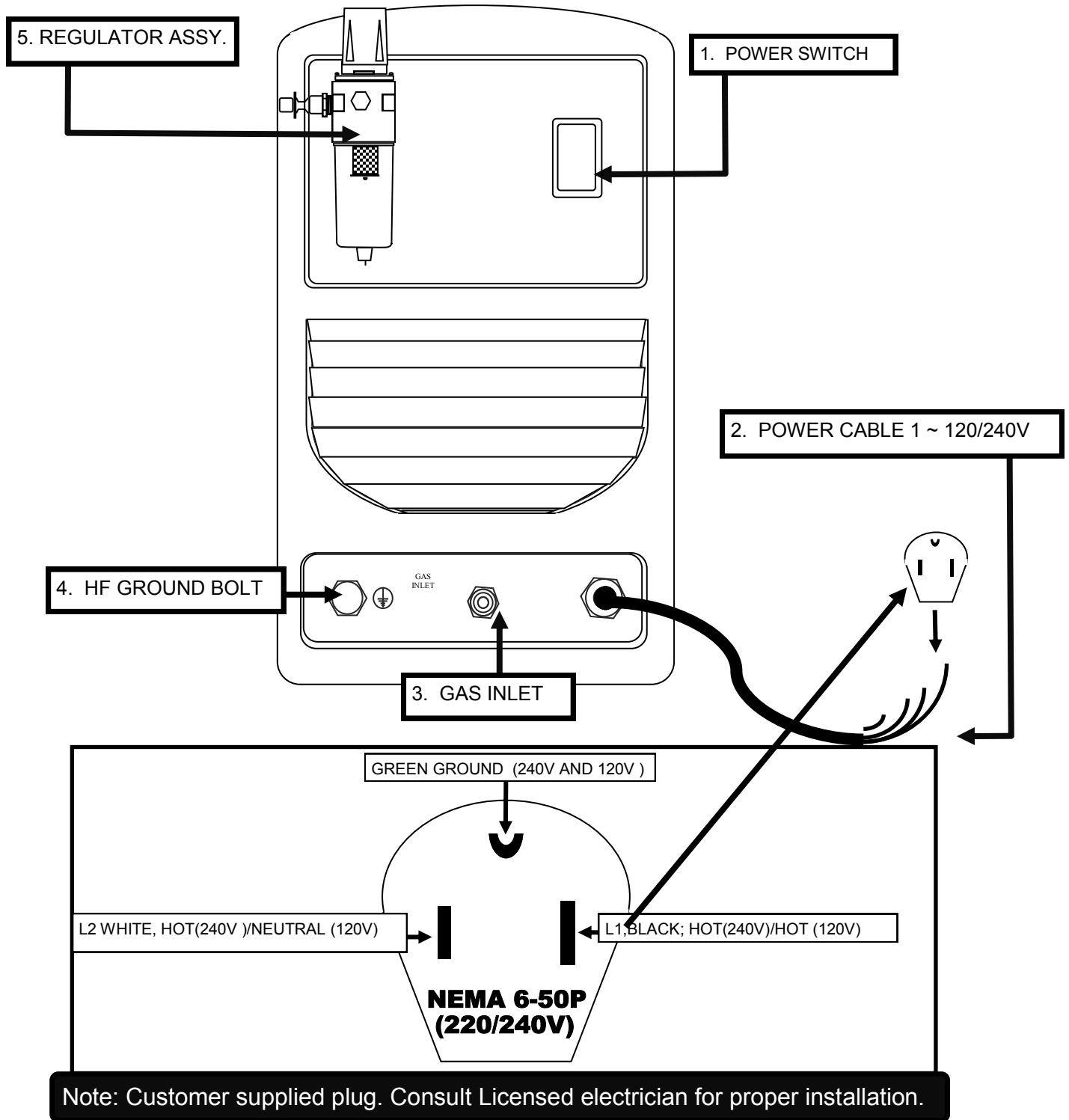


NOTE: PowerPRO 256S panel shown. PowerPRO 205S panel layout, appearance and function is identical, with the exception of the pulse frequency range, and the amp ranges being smaller.

## FRONT PANEL FEATURES AND CONTROLS CONTINUED

SUPERULTRA FEATURES	PARAMETERS	PURPOSE
1. Amp Display	N/A	Indicates amperage while welding. While adjusting the amperage with the torch switch connected relays selected amperage. Remains static while foot pedal is plugged in until the pedal is pressed, then displays active amps.
2. On/Temp/ Duty Cycle	On/Off	On indicator should always be on while the unit is plugged in and the power switch is switched on. The Duty Cycle light is an amber color. The Overcurrent light is lit, turn the unit off and check for possible causes including undersized cables, poor connections and over-heating cables. If the Duty cycle is lit, Do not turn off the unit until it has had sufficient time to cool (10-15 minutes). Cycle the power switch to reset the machine only after the machine has had time to cool. The duty cycle and overcurrent warning lights should go off after cycling the power switch on the machine. If it does not, and will not weld, contact Everlast.
3. Amp Control	N/A	Controls amperage output. While using the torch switch with TIG and Plasma this amp control switch sets the amperage. While using the foot pedal, however, this control becomes inactive and the full range of amps from the minimum up to the maximum output of the machine is available.
4. Post Flow Control	0-25 Seconds	Sets the post flow time of the shielding gas while welding in TIG mode. While in plasma (cut) mode, it sets the post flow time of the air. Time is approximate only and can vary somewhat from the maximum limit posted from unit to unit. The air or shielding gas may stop flowing before full maximum time is reached. Consider the maximum setting mark a reference guide only.
5. Pilot Arc	N/A	Pilot Arc Wire connection. To be used only with plasma torch. The small ringed wire connects here. Unscrew the plastic thumb nut and attach the wire to the post. Reinstall the thumb nut over the wire with finger pressure only.
6. Negative Connector (Torch on some models)	DINSE 50	Location of the negative terminal connection. Dinse-style. (35 series) For Stick: Work Clamp Connection. For TIG: Torch Connection For Plasma: Torch Connection
7. Quick Connect Gas Outlet	9 mm	Connects the gas to the TIG torch. To connect: Push the torch fitting into the connector until the collar slides forward with a click. To Release: Slide the collar back.
8. Control Connector	7 Pin	Connect the foot pedal or torch switch to this socket to control the welder. Only the foot pedal or torch control connector can be plugged in at one time. If the torch has a torch switch feature, tie the loose connector back and leave it unconnected while using the pedal.
9. Positive Connector (Work Piece on some models)	DINSE 50	Location of the positive terminal connection. Dinse-style connector. For Stick: Torch connection. For TIG, Plasma: Work Clamp Connection.
9. Air Pressure Gauge.	85 psi max supply 55-65 psi operating	Use to measure air supply pressure for plasma only. This gauge is irrelevant while being used for TIG, although some pressure may register while the gas is actively flowing. Supply air pressure should not exceed 85 psi. Adjust operating pressure while air is flowing with gauge provided, or adjust to 55-65 psi and increase or decrease pressure from there to achieve optimum cutting results. To adjust air pressure with torch, briefly fire torch with post flow set to maximum. Adjust air flow while the air is still flowing. Use air only for cutting.
10. TIG/CUT/STICK	N/A	This switch selects processes. Do not switch this switch while welding or cutting, or with the improper torch connected or unit failure may result. Improper polarity can lead to unit failure as well. Make sure all connections are installed properly before cutting or welding.

## REAR PANEL FEATURES AND CONTROLS



To wire plug for 240V or possible use with 120V, use the industry standard NEMA 6-50 plug which is designed for 240V operation and use with welders. You may then either create an 240V to 120V pigtail adapter for 120V operation, or purchase one directly from Everlast for use on 120V. For use with 120V input only, remember output will be reduced. Be sure to maintain polarity when wiring for 120V use, with white as the neutral, and green as the ground. Black will always be hot in both 240V and 120V welder circuits. For 240V welder circuits, note that 3 wire 240V welder circuits use different standard colors than for 4 wire 240V.

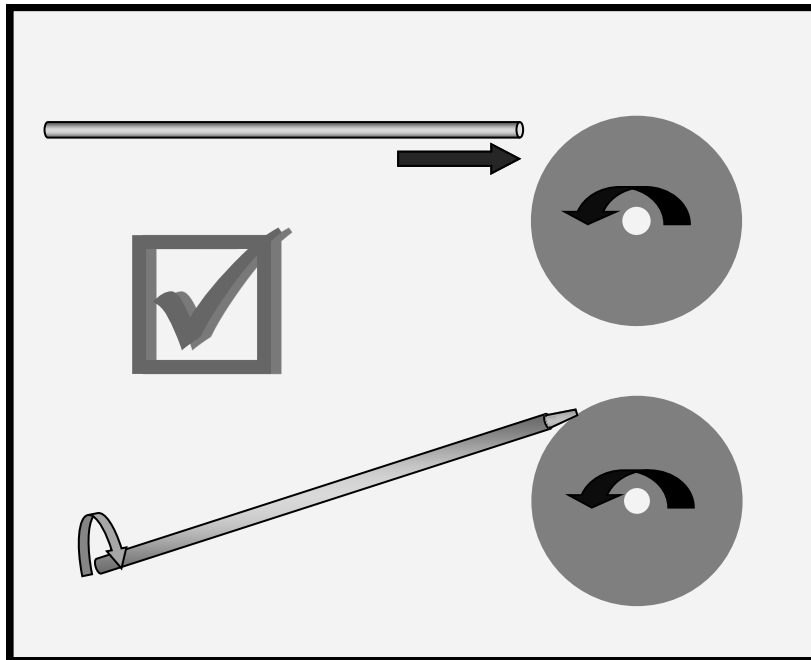
## REAR PANEL FEATURES AND

SUPER ULTRA FEATURES	PARAMETERS	PURPOSE
1. 2-Pole Power switch	On/Off	The breaker switch has 2 poles. It serves as the On/Off switch for the welder. Always turn the welder on and off by the switch first before using any disconnect. The Water cooler outlet on the rear remains live after the switch is turned off.
3. Power Cord	120/240 V 1 phase, 50/60 Hz.	The unit is prewired with a standard NEMA 6-50 plug. This is the standard plug for welders in the US and Canada. Other countries vary plug configuration as well as input. As a dual voltage unit, when used with 120V supply connect the pigtail adapter to reduce the input. When using on 120V, make sure the breaker and wiring is sized properly for use or damage to the machine can result. NOTE: Maximum operation, on 120V is not recommended for long periods of time as high breaker amperage are required along with heavier than normal wiring ampacity, not normally found on most household 120V wiring. Consult licensed electrician before operating on 120V to confirm wiring and breaker suitability.
4. Gas Input Connection	1/4-5/16"	This is the point where the shielding gas from the regulator connects. The unit is supplied with tubing and clamps which connect this fitting to the regulator. The hose barb design allows universal connection of the welder to almost any regulator or setup found throughout the world. Make sure the tubing slides fully over the connector, then thoroughly tighten the clamp. Use an additional clamp if necessary to prevent leaking. If you suspect leaking, test the connection with a solution of mild soapy water. If bubbles are seen, retighten or reinstall the tubing. While changing processes, the tubing must be swapped. Do not run the Argon gas through the air regulator/filter. A T-fitting or Y-fitting may be placed inline at the connection to leave both argon and air hooked up without having to swap out the lines. This is not supplied by Everlast.
5. HF Ground Bolt	N/A	HF energy can be devastating to surrounding electronic equipment. If the operating environment includes electronic equipment, this connection can serve as a direct path to an outdoor grounded metal rod that is isolated from the main electrical circuit to help bleed off excess HF circuit. All metal parts inside the building should be grounded as well, including pipes, tables, and even metal siding. HF energy has been known to bleed back into the power grid and disrupt electronic devices further down the grid. If the point gap becomes out of adjustment, more HF energy may build up, or even jump across circuitry within the welder. It is recommended that a small, separate ground wire (minimum 14 gauge) be attached at this point while in use.
6. Air Regulator Assembly	85 psi maximum Supply pressure. 55-65psi operating pressure while cutting	The regulator serves a dual purpose. 1) It controls air pressure for plasma. 2) It filters fine particulates and large drops of water. The regulator is not designed to regulate Argon flow or have argon flowing through it. A separate air dryer must be installed inline to prevent rapid torch and consumable wear (Customer supplied). The regulator assembly is not designed to remove moisture from the air, only large drops of water that may be created in the coupling and uncoupling process. Everlast does not warranty damage caused to torches or consumables by moisture. Residual moisture in the line also can contaminate the system, causing problems while TIG welding. The number one issue experienced with Plasma cutting, with many different symptoms is the presence of moisture in the air line. To adjust the pressure, for cutting, simply pull the knob up until it clicks and rotate it clockwise to increase the pressure, and rotate it counter clockwise to decrease the pressure. To adjust the pressure correctly, adjust the pressure while the air is flowing in post flow mode. If a flow tube for the torch is provided, adjust it so the ball floats in the window as depicted in the torch manual. Do not fire torch with the flow tube installed on the torch. Turn Post flow to maximum, fire the torch, then install the flow meter and make adjustments to the air pressure while it is flowing. If no flow tube is provide, adjust pressure to 55-65 psi.

### NOTES

- The gas input connection should be checked for tightness periodically, especially if the machine is moved or when changing process.
- Never operate welder on a generator that is not certified by its manufacturer to be "clean" power, which is less than 10% total harmonic distortion. Less than 5% is preferred. Operating the unit on square wave output or modified sine wave generator is strictly prohibited. Contact the manufacturer of the generator for this information. Everlast does not have an "approved" list of generators. But, if the generator is not listed as clean power by its manufacturer, then operation is prohibited. Generators that do not at least meet the operating input requirements of the welder are also forbidden to be used with the welders. Surge amp capability of the generator should equal or exceed the maximum inrush demand of the welder. But the surge capability should not be used as the only factor. The regular, running output of the generator should match or exceed the running or "rated" demand of the welder. Any damage done by operating the welder on a generator not specified by its manufacturer to be "clean", will not be covered under warranty. This also includes suspect power sources where voltage is below 208 V and above 250 V.

## TUNGSTEN PREPARATION

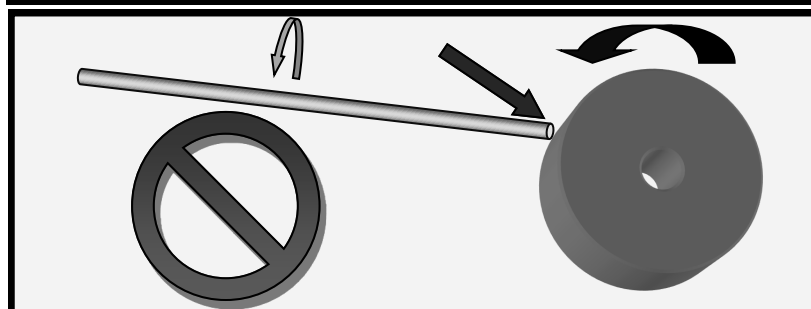


1. Use a dedicated grinding wheel or contamination may result. Do not breath grinding dust! Wear eye protection and gloves.

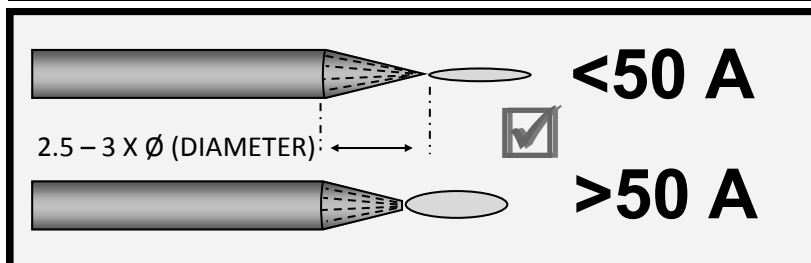
2. Hold Tungsten firmly.

3. Grind perpendicular to grinding wheel face. Allow tungsten to grind away slowly, creating point.

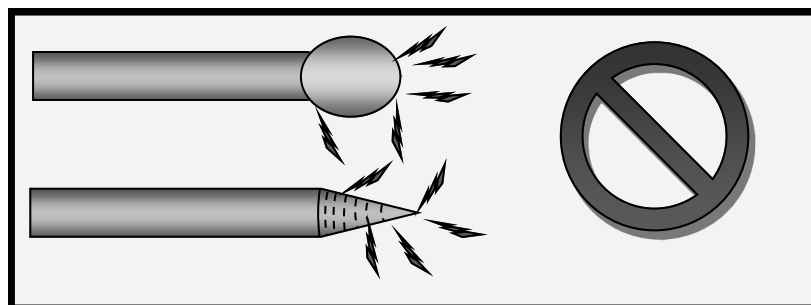
4. Rotate tungsten quickly as it is being ground to keep point even and symmetrical.



DO NOT GRIND TUNGSTEN PARALLEL TO WHEEL FACE OR AN UNSTABLE ARC WILL RESULT.



Use a point for low amp use to help control arc. Create a slight truncation on the tip for higher amp use for best arc stability. Grind the tip so that it is 2.5- 3 times longer than the tungsten is wide (Diameter).

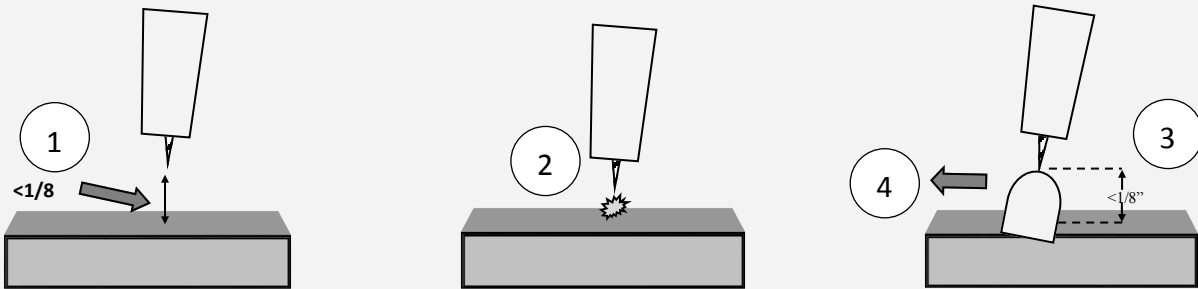


DO NOT BALL TUNGSTEN. ERRATIC ARC WILL RESULT. MAKE SURE GRINDING MARKS RUN PARRALEL TO TIP. CONCENTRIC MARKS WILL CAUSE ERRATIC ARC.

NEVER USE PURE (GREEN) TUNGSTEN IN AN INVERTER.

SEE FOLLOWING RECOMMENDATIONS ABOUT TUNGSTEN SELECTION FOUND IN THIS MANUAL ON NEXT PAGE.

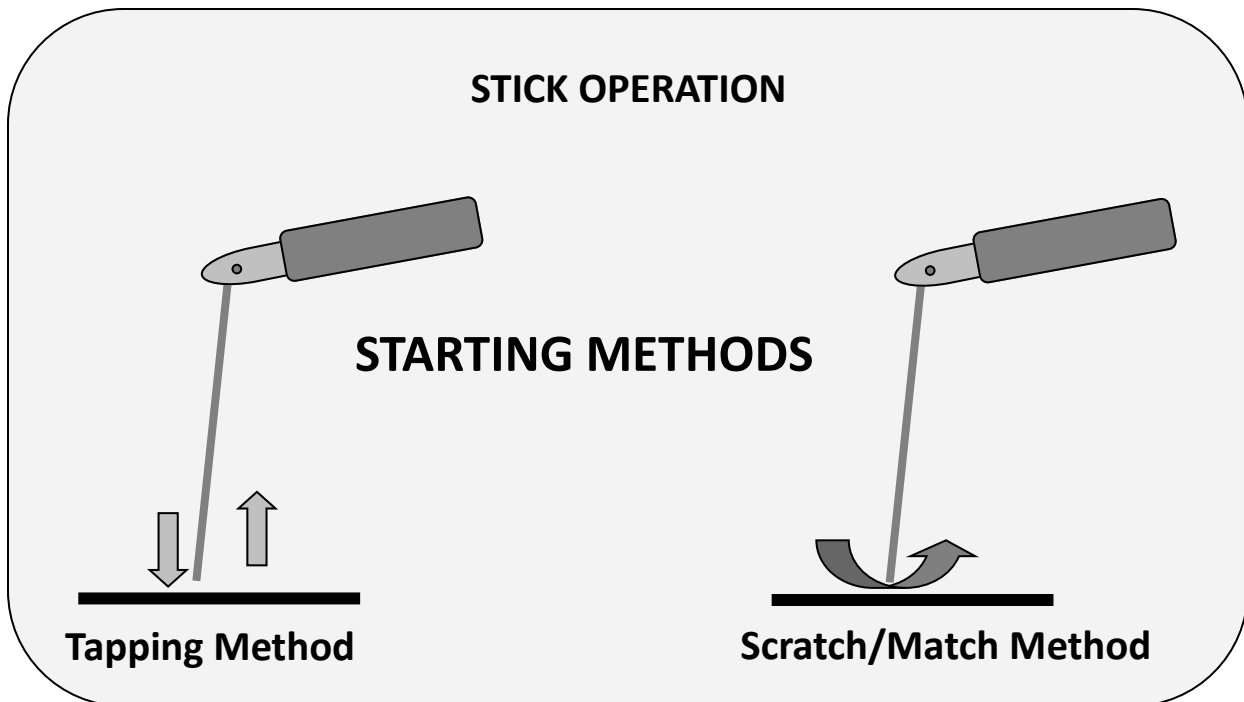
## HIGH FREQUENCY START TIG OPERATION



1. Position the point of the sharpened tungsten about  $1/8$ " or less above the metal.
2. Press the torch trigger or press the foot pedal to initiate the arc. The HF arc will be initiated. It may appear briefly as a blue spark.
3. An arc should form, almost immediately after the pre-flow cycle is completed. HF arc initiation will be delayed by the amount of pre-flow time used. If arc does not start after the pre-flow interval, and the HF is creating a spark, then check the work clamp contact with the work piece. Move the tungsten closer to the work. Repeat steps 1 and 2.
4. Leave  $1/8$ " or less gap between the tungsten tip and the metal and proceed with welding, leaving the torch inclined at a  $15^\circ$  angle.

## General TIG Arc Starting Steps

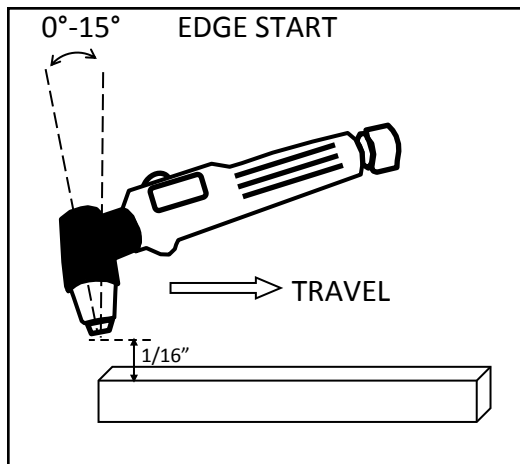
1. Turn unit on, allow time for power up cycle to complete its start up process.
2. Select either TIG with TIG /CUT/Stick selector switch.
3. Plug in Torch and select panel mode with the selector switch **OR** plug in foot pedal and select Pedal.
4. If using the torch switch, Post Flow time by rotating the knob to increase/decrease.
5. Adjust amps with amp control knob.
6. Start arc as depicted above.
7. If using panel mode, continue to hold the torch switch until you are ready to stop welding. Release the switch. The Arc will then cease.  
If using pedal raise foot fully off the pedal and arc will stop automatically.



1. Turn on the power switch on the rear of the unit. Allow unit to cycle through its start up program.
2. Select the Stick mode with the HF/Lift Start/Stick selector switch.
3. Make sure electrode holder is hooked into the positive connector and the work clamp is hooked the negative connector. This will require the torch to actually be placed in the WORKPIECE connector and the work clamp to be in the Torch connector for proper operation.
4. Select the amps desired. Use the electrode diameter selection chart in this manual to determine the approximate range of amps suitable for the rod size selected. Consult the welding electrode manufacturer's recommendation for proper amperage range. Each manufacturer has specific recommendations for its electrodes.
5. Strike the arc with either the tapping method or the match strike method. Beginners usually find that the match strike method yields best results. Professionals tend to gravitate toward the tapping method because of its placement accuracy which helps prevent arc striking outside of the weld zone.

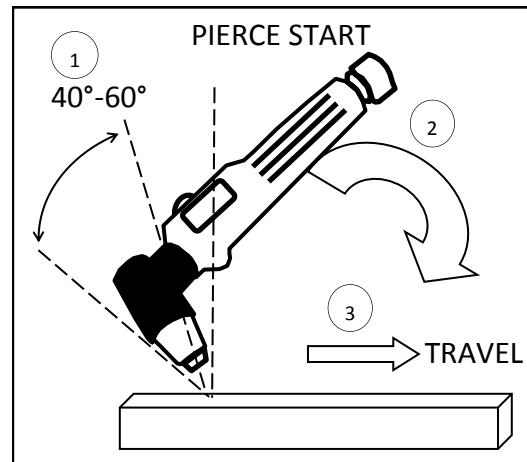
**IMPORTANT:** Do not weld in the TIG mode with the stick electrode holder still attached.

**Helpful Hint:** If difficulty is observed in starting the arc, it may be time to readjust the point gap setting found inside. The HF points tend to wear and get dirty over time. This is a normal maintenance item and not something for warranty consideration. Proper point gap adjustment is .035 "to .045". Before attempting to adjust the point gap, be sure to unplug the unit for 15 minutes before removing the rear plastic panel, and the steel case to access the points located near the front of the unit. Do not remove the front panel! Use a feeler gauge to adjust the points to the proper setting. Another possibility is that the air pressure is too low or too high. Worn/loose consumables may cause this as well.



Edge Starts are the best type of start if possible to promote consumable and torch life. This reduces blow back of molten material and allows a smooth gradual start of the cut.

1. Line up the hole on the tip of the electrode on the edge of the cut. Hold torch perpendicular to the cut initially, about 1/16" off the metal.
2. Once the arc starts, wait for the arc to penetrate all the way through the metal.
3. As the torch penetrates its flame all the way through the metal, tilt the torch so there is a slight lead in the flame if metal is thin. If it is thick, keep holding torch in a nearly vertical position.
4. Begin moving the torch in the direction of the cut. Maintain 1/16" standoff height.
5. Move the torch fast enough so the sparks and flame trail from the bottom edge at an angle of no more than 30° and no less than 10° from perpendicular to the metal. Excess angle of sparks/flame indicate too fast of travel speed or practical cut capacity has been reached. Little or no angle indicates too slow of travel speed.



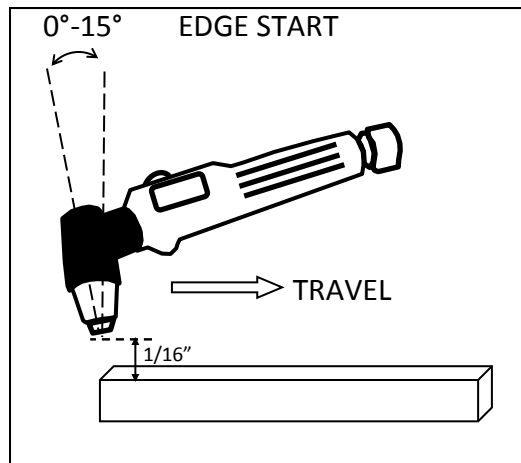
Piercing starts often result in rapid consumable wear and excess blow back of molten metal deposited onto torch and consumables. This should be done only as necessary.

1. Tilt the torch in the direction of travel or toward the side of the metal to be discarded or wasted at a 40° to 60° angle. Slide the yellow safety lock and squeeze the trigger.
2. Once the arc starts, wait for the arc to transfer from pilot arc to the cutting arc.
3. As the torch penetrates its flame at an angle rotate the torch slowly to the vertical position, as the arc penetrates the metal. Tilt the torch from 0°-15° for thin metal cuts, or hold it nearly perpendicular for thicker metal cuts.
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**IMPORTANT:** If you use a standoff guide with the torch, it must be adjusted or bent to provide no more than 1/8" standoff, less if possible. Long standoff heights reduce cut capacity and quality. It also promotes rapid consumable wear and can prevent the pilot arc from transferring.

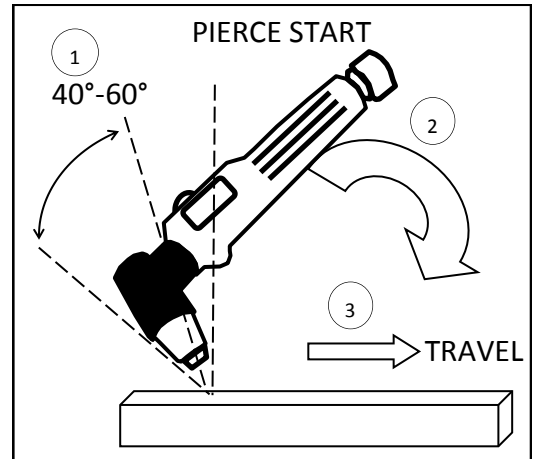


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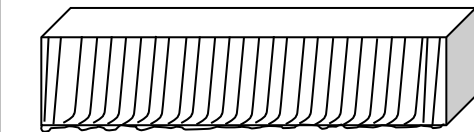
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**RESULTS OF CUT AT CORRECT SPEED,  
AIR PRESSURE AND TORCH ANGLE**

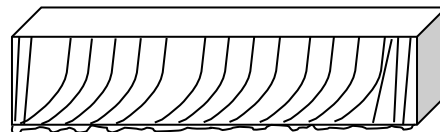
SMOOTH, EVEN CUT LINES WITH A S REARWARD SWEEP



MINIMAL EASY TO CLEAN DROSS

**RESULTS OF CUT AT FAST SPEED**

ROUGH, DISTINCT CUT LINES SPACED FAR APART



NOTICEABLE SMALL, HARD DROSS

**RESULTS OF CUT AT SLOW SPEED**

VERTICAL CUT LINES



SIGNIFICANT SOFT, POROUS DROSS

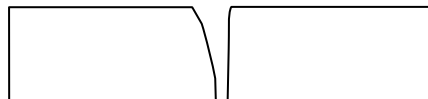
**RESULTS OF TOO MUCH CURRENT OR  
TOO MUCH STAND OFF HEIGHT  
(SIDE VIEW)**

MELTED TOP EDGE

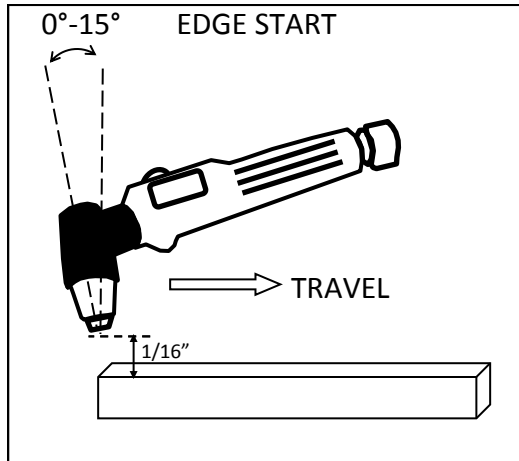


**RESULTS OF WORN CONSUMABLE OR  
LOW AIR PRESSURE  
(SIDE VIEW)**

SEVERLY ANGLED CUT AT TOP

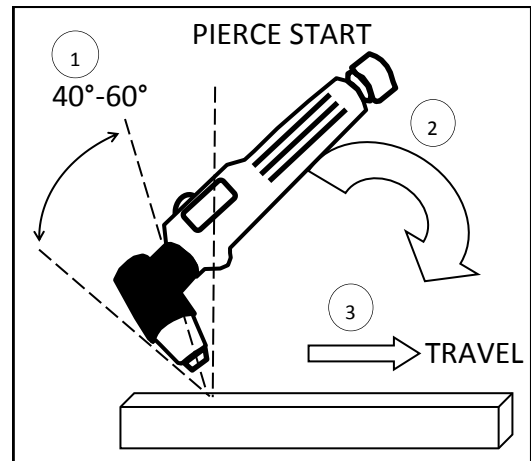


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## GENERAL POLARITY RECOMMENDATIONS\*

\*Follow manufacturer of stick electrode for complete polarity recommendations

PROCESS	TORCH POLARITY	WORK POLARITY
TIG (GTAW)	-	+
STICK (SMAW)	+	-

## TIG (GTAW) OPERATION GUIDE FOR STEEL (ALUMINUM)\*

\*As a general rule, set amperage using 1 amp for every .001" of metal thickness for aluminum. Less is required for DC.

METAL THICKNESS	WELDING AMPS (A)	TUNGSTEN DIA.	Ar FLOW RATE
1-3 mm/.040"-1/8"	40-80 (60-125)	1-2 mm/.040"-3/32"	8-15 CFH /4-7 lpm
3-6 mm/ 1/8"-1/4"	80-200 (125-200)	2-3 mm/ 3/32"-1/8"	15-25 CFH/ 7-14 lpm
6-10 mm 1/4"-3/8"	150-200 (200-250)	3-6 mm/ 1/8"-1/4"	20+ CFH/10-15 lpm.

## STICK (SMAW) OPERATION GUIDE

METAL THICKNESS	ELECTRODE SIZE	WELDING AMPS
< 1 mm/.040"	1.5 mm/ 1/16"	20-40
2 mm/.080"	2 mm/3/32"	40-50
3 mm/ 1/8"	3.2 mm/1/8"	90-110
4-5 mm/ 3/16"	3.2-4 mm/ 1/8"	90-130
6-10 mm/ 1/4"-3/8"	4-5 mm/ 1/8"-5/32"	130-200

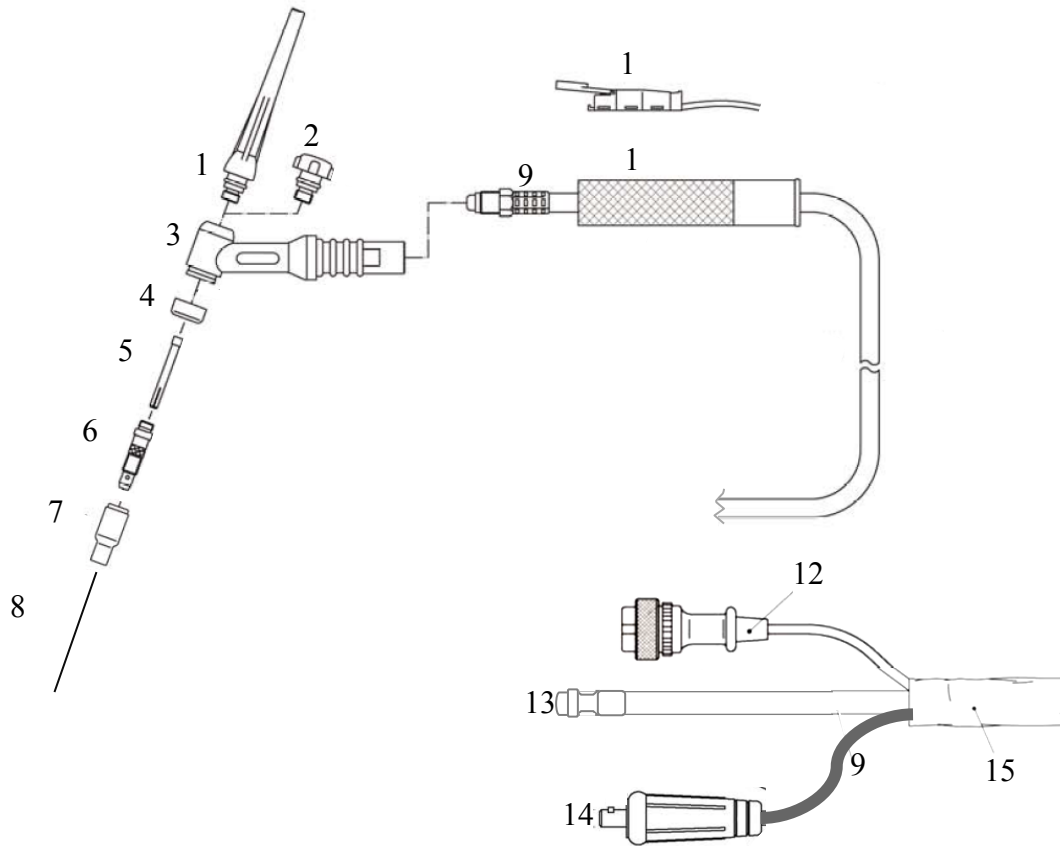
## TUNGSTEN SELECTION GUIDE FOR AN INVERTER

TYPE	PERCENT	COLOR	PROCESS	RECOMMENDATION
Pure	100% Tungsten	Green	AC	NOT RECOMMENDED! Do not use in an inverter.
Thoriated (slightly radioactive)	2% Thorium	Red	AC/DC	YES. Great for all purpose welding. Most economical.
Ceriated	2% Ceria	Orange	AC/DC	YES. Good for low amp use.
Lanthanated	1.5% Lanthanum	Gold	AC/DC	YES. Best alternative to 2% Thoriated. Tough performer.
Lanthanated	2% Lanthanum	Blue	AC/DC	YES. Slight advantage over 1.5% Lanthanated.
Zirconiated	1% Zirconia	Brown	AC	NOT RECOMMENDED! Do not use in an inverter.

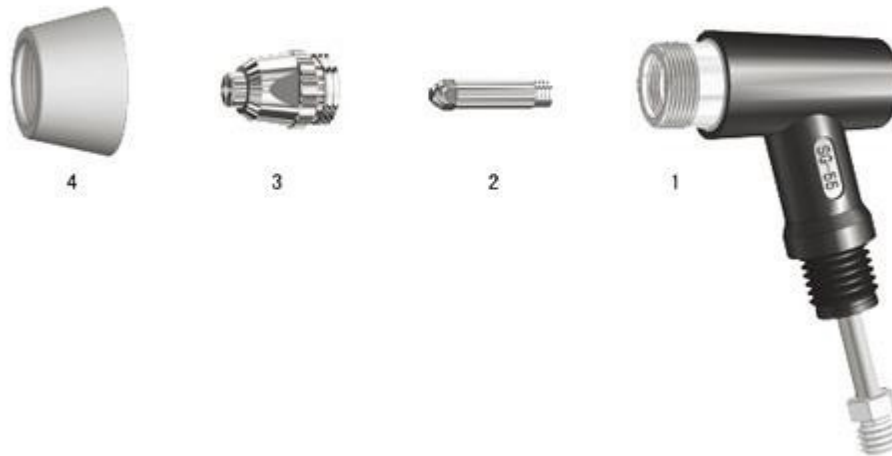
NOTE: Thoriated tungsten is slightly radioactive, but is commonly used in the US. Care should be used when grinding so as not to breath the dust. If you have concerns about Thoriated (red) tungsten, choose from Lanthanated or Ceriated tungsten.

## EXPANDED VIEW OF TIG TORCH

(Actual appearance may vary slightly from what is listed.)

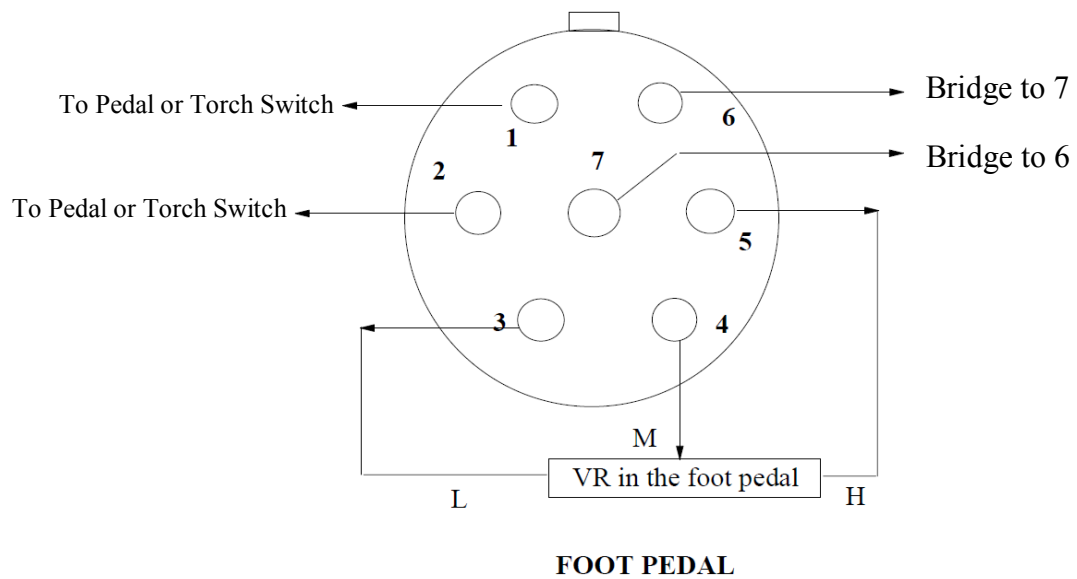


NO.	Parts for Standard 26 Series Torch ( 18 series uses same consumables and basic design is similar, except water cooler line plumbing)	QTY.
1	Long Back Cap with O-Ring	1
2	Short Back Cap	Opt.
3	Torch Head	1
4	Insulator	1
5	Collet 1/16 or 3/32	1
6	Collet Holder	1
7	Ceramic Cup #5,6, or 7	1
8	Tungsten (customer supplied)	0
9	Torch Cable	1
10	Torch Handle (Blue ergo handle std, not pictured)	1
11	Torch Switch (Built into ergo handle, separate on straight handle)	1
12	Torch Switch Connector	1
13	9mm (1/8") b quick connect coupling (male)	1
14	Power Connector	1
15	Protective Synthetic Rubber Cover	1

**AG60/SG 55 PLASMA TORCH**

ITEM	DESCRIPTION	PART NUMBER/SKU
1	Torch Head/Body	E-WSD-061
2	Electrode 1.0mm	E-AG60-TIP
3	Tip/Nozzle	E-AG60-EL
4	Shielding Cup	E-AG60-CUP

## 7 PIN CONNECTOR FOR FOOT PEDAL



<b>TIG/Stick Trouble shooting:</b>	<b>CAUSE/SOLUTION</b>
Machine will not turn on.	Check cords and wiring in the plug. Check circuit breaker.
Machine runs, but will not weld in either mode.	Check for sound work clamp and cable connections. Make sure work cable and TIG Torch are securely fastened to the Dinse style connector. Reset main power switch if overcurrent light is on. Contact Technical Support.
Arc will not start unless lift started.	Check HF point gap. Set to .035" See addendum or contact Technical Support. Make sure unit is set to HF
Tungsten is rapidly consumed.	Inadequate gas flow. Too small of tungsten. Wrong shielding gas. Use only Ar. Using green tungsten. Use red thoriated or other color. Wrong polarity. Too much AC cleaning.
Tungsten is contaminated, arc changes to a green color.	Tungsten is dipping into weld. Check and adjust stick out to minimum 1/8 inch. Tungsten is melting. Reduce amperage or increase tungsten size.
Porosity of the Weld. Discolored weld color. Tungsten is discolored.	Low flow rate of shielding gas. High flow rate of shielding gas. Too short of post flow period. Wrong TIG cup size. Possible gas leaks internally or externally due to loose fittings. Base metal is contaminated with dirt or grease.
Weld quality is poor. Weld is dirty/oxidized.	Eliminate drafts. Check if there is sufficient shielding gas left in tank. Check gas flow. Adjust for higher flow of gas. Listen for audible click of gas solenoid. If no click is heard, then contact Everlast Support. Clean weld properly, especially in Aluminum. Too short of post flow. Check tungsten stick out.
Over current/Duty cycle LED illuminates. Machine runs, but no output.	Duty cycle exceeded or Over current. Allow machine to cool. Reset main power switch after full cool down period. Make sure fan is not blocked. Check wiring.
Unstable Arc.	Poorly ground or shaped tungsten. Regrind to proper point. Too much AC positive polarity. Reduce balance to 30% or less. Increase AC Frequency.
Other issues.	Contact Everlast support.



**SECTION 4****TROUBLE SHOOTING**

<b>PLASMA TROUBLE SHOOTING:</b>	<b>CAUSE/SOLUTION</b>
Air Flows but arc does not start.	Check consumables for wear and tightness. Check fuse. Check Air Pressure. Check point gap. Release trigger and try again. Postflow turned on too long or air pressure is too high.
Air Flows but arc does not start or spark when nozzle is rubbed on the metal.	Fuse blown. Missing swirl ring. Worn or loose consumables. IGBT issue. PCB issue.
OK to cut light is not on. Will not start arc.	Increase air Pressure. Make sure air is connected.
Pilot arc will not light.	Point Gap adjustment incorrect or dirty. Adjust to .030-.045"
Pilot arc will not transfer and amps read approximately 25-27 amps while switch is held. (Arc barely cuts or only "scratches" the surface of the metal or cut is extremely slow on thin materials.)	Check work clamp connection. Make sure rust is removed from work clamp contact area. Faulty Clamp. Arc continuity is not being sensed. If these steps do not correct the issue, contact Everlast.
Arc Sputters.	Inadequate air flow or air pressure. Improperly sized nozzle. Decrease size as amps are lowered. Increase air pressure to 55-75 psi while air is flowing through torch. Loose consumables. Check tightness.
Consumables are dirty, smutty looking upon inspection. Premature wear on consumables. Shortened consumable life.	Moisture, oil contamination of consumable. Wrong consumables. Poor quality aftermarket consumables.
Premature wear on consumables. Short consumable life. Uneven wear of consumables, melting of cup.	Moisture, oil contamination of consumable. Excessive pilot arc time. Improper cutting technique. Wrong piercing technique.
Arc will not start. Air will not flow. Machine runs.	Torch cup is loose, safety contact pins dirty or not making contact with cup face. Torch switch wire is loose. Problem with connector. Torch is not properly connected.
Amperage changes constantly, "bouncing" back and forth wildly, randomly.	Some variance is normal. When Pilot arc lights, amps drop until arc is transferred. Check connections.
Unstable Arc at lower amps.	Consumable orifice size is too large. Reduce orifice size.
Arc tries to start but irregular, dancing arc and/or arc melts through side of nozzle.	Missing swirl ring, or worn electrode or both. Check and replace. Make sure swirl ring is not cracked.
Arc will try to start if touched to the metal, but no air flow while switch is pressed.	Stuck or dirty solenoid valve. Contact Everlast. Wrong Process selected.
Air flows continuously.	Post flow turned set too long. Preflow is turned on. Solenoid is stuck. Contact Everlast.
Excessively Beveled Cut.	Worn consumables, too high of stand-off height.
Cup and/or nozzle is melting or cracking.	Improper cutting technique/excessive piercing.
Power input circuit breaker trips repeatedly.	Improperly sized circuit. Internal issue. Contact Everlast.
Arc "Blows Out" when ready to cut.	Too high of air pressure. Reduce to 55-65 psi.
Arc will not stop when switch is released.	Torch trigger is stuck.

