



*LOTOS*®

# **LOTOS MIG175**

---

**MIG Welder**



*LOTOS*®



*LOTOS*®

# TABLE OF CONTENTS

|   |    |
|---|----|
| <b>SAFETY</b> .....                                     | 4  |
| <b>SPECIFICATIONS</b> .....                             | 9  |
| General Description.....                                | 9  |
| What's Included.....                                    | 9  |
| Power Supply Ratings.....                               | 10 |
| Machine Rear.....                                       | 11 |
| Front Control Panel.....                                | 11 |
| Side Components.....                                    | 12 |
| <b>INSTALLATION</b> .....                               | 13 |
| Before Installation.....                                | 13 |
| Environmental Area.....                                 | 13 |
| Wire Feeder Installation.....                           | 14 |
| Welding Wire Installation.....                          | 14 |
| How to Thread Welding Wire Through the Wire Feeder..... | 15 |
| Shielding Gas Installation.....                         | 16 |
| <b>OPERATION</b> .....                                  | 17 |
| Welding Operations.....                                 | 17 |
| Welding Steps.....                                      | 17 |
| Welding Process.....                                    | 18 |
| Spool Gun Operation.....                                | 18 |
| Overload Protection.....                                | 19 |
| Overload Protection to Wire Feeder.....                 | 19 |
| Welding Label.....                                      | 20 |
| <b>OTHER ACCESSORIES</b> .....                          | 21 |

## **Save This Manual**

You will need the manual for safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write invoice number and date of purchase on the inside of the manual. Keep the manual and invoice in a safe and dry place for future

## **Operation Manual**

Carefully read the operation manual prior to using, installing and maintaining the electric welding machine for the purpose of preventing damages such as fire, electric shock and etc from occurring. Please keep the manual for the reference in the future.

---

# SAFETY WARNINGS AND PRECAUTIONS

---



**PLEASE READ AND UNDERSTAND THE FOLLOWING SAFETY HIGHLIGHTS. BE SURE THAT ALL INSTALLATION, OPERATION, MAINTENANCE AND REPAIR PROCEDURES ARE PERFORMED ONLY BY QUALIFIED INDIVIDUALS. ARC AND TIG WELDING CAN BE HAZARDOUS. PROTECT YOURSELF AND OTHERS FROM POSSIBLE SERIOUS INJURY OR DEATH. KEEP CHILDREN AWAY. PACEMAKER WEARERS SHOULD CONSULT WITH THEIR DOCTOR BEFORE OPERATING.**

---

## **⚠ WARNING**

WHEN USING THE WELDER, ALL BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF PERSONAL INJURY AND DAMAGE TO EQUIPMENT.

**READ ALL INSTRUCTIONS BEFORE USING THIS WELDER.**

**Keep work area clean.** Cluttered areas invite injuries.

**Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Do not expose to rain. Keep work area well-lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.

**Keep children away.** Children must be never be allowed in the work area. Do not let them handle machines, tools or extension cords.

**Store idol equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep them out of the reach of children.

**Do not force tool.** It will do the job better and safer at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool capacity.

**Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this welder was designed. Do not modify this welder and do not use this welder for any other purposes for which it was not intended.

**Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, flame retardant, electrically non-conductive clothing and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.

**Use eye and ear protection.** Always wear ANSI approved, arc shaded, impact safety face shield (welding helmet). Always use a full-face shield when welding. Always wear ANSI approved eyewear under face shield and while in the workplace. Wear a NIOSH approved dust mask or respirator when working around metal, chemical dusts, fumes and mists.

**Do not over reach.** Keep proper footing and balance at all times. Do not reach over or across running machines.

**Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grase at all times.

**Disconnect power.** Unplug tool when not in use.

**Remove adjusting keys and wrenches.** Check that keys and adjustment wrenches are removed from the welder and work area before plugging in.

**Avoid starting unintentionally.** Be sure the switch is in the off position when not in use and

before plugging in. Do not carry any tool with your finger on the trigger, whether it is plugged in or not.

**Stay alert.** Watch what you are doing. Use common sense. Do not operate any tool when tired.

**Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it would operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn on and off properly.

**Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.

**Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void warranty. Only use accessories intended for use with this welder. Approved accessories are available from [www.uwelding.com](http://www.uwelding.com).

**Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the welder.

**Maintenance.** For your safety, service and maintenance should be performed regularly by a qualified technician.

**Use proper size and type extension cord.** If an extension cord is required, it must be of the proper size and type to supply the correct current to the welder without heating up. Otherwise, the extension cord could melt and catch fire, or cause electrical damage to the welder. This welder requires use of an extension cord of 20 amps minimum capability up to 30 feet, with a wire size rated at 12 AWG. Longer extension cords require larger size wire. If you are using the welder outdoors, use an extension cord rated for outdoor use, signified by "WA" on the jacket. Performance of this welder may vary depending on condition in local line voltage. Extension cord usage may also affect welder performance.

## **⚠ WARNING**

**The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood, by the operator, that common sense and caution are factors, which cannot be built into this product, but must be supplied by the operator.**

### **ARC WELDER SAFETY WARNINGS AND PRECAUTIONS**

**Warning: This product, when used for welding and similar applications, produces chemicals to cause cancer and birth defects (or other reproductive harm).**

## ❖ **ELECTRIC SHOCK can be fatal**



- The electrode and work (or ground) circuits are electrically “hot” when the machine is on. Do not touch these “hot” parts with your bare skin or wet clothing. Protective clothing should be hole free, dry and ANSI approved. Wear dry, hole-free gloves to insulate hands.
- Do not permit electrically live parts, cables, or electrodes to contact skin, clothing or gloves.
- This unit draws enough current to cause serious injury and or death.
- Before turning the welder on, check the welder gun to be sure that there are no protruding screw heads and that all insulation is secure.
- Insulate yourself from work and ground using dry insulation. Make certain the insulation is large enough to cover your full area of physical contact with work and ground.
  - Always be sure the work cable makes a good electrical connection with the metal being cut. The connection should be as close as possible to the area being cut.
  - Ground the work metal to be cut to a good electrical (earth) ground.
  - Maintain the welding torch, work clamp, power cable and cutting machine in good, safe operating condition. Replace damaged insulation.
  - Never dip the electrode in water for cooling.
  - When working above floor level, use a safety belt to protect yourself from a fall should you get a shock.

## ❖ **FUMES AND GASES can be dangerous**



- Plasma cutting may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. When cutting, keep your head out of the fume. Use enough ventilation and/or exhaust at the arc to keep fumes and gases away from the breathing zone. In confined spaces or in some circumstances, outdoors, a respirator may be required. Additional precautions are also required when cutting on galvanized steel.
- Do not cut in locations near chlorinated hydrocarbon vapors coming from degreasing, cleaning or spraying operations. The heat and rays of the arc can react with solvent vapors to form phosgene, a highly toxic gas, and other irritating products.
- Read and understand the manufacturer’s instructions for this equipment and the consumables to be used, including the material safety data sheet (MSDS) and follow your employer’s safety practices. MSDS forms are available from your welding distributor or from the manufacturer.

## ❖ **ELECTRIC AND MAGNETIC FIELDS may be dangerous**



are not known.

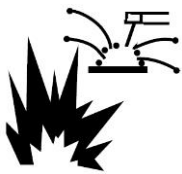
- ❖ The EMF field that is generated during arc welding may interfere with various electrical and electronic devices such as cardiac pacemakers.
- ❖ Anyone using such devices should consult with their physician prior to performing any electric welding operations.
- ❖ Exposure to EMF fields while welding may have other health effects, which

### ❖ **ARC RAYS can burn**



- Avoid eye and body damage. Arc rays and infrared radiation can cause injury to the eyes and burn the skin. Wear ANSI approved eye and body protection. Do not allow viewing by visitors without proper eye and body protection.
- Use a shield with the proper filter and cover plates to protect your eyes from sparks and the rays of the arc when plasma cutting or observing open arc plasma cutting.
- Use suitable clothing made from durable flame-resistant material to protect your skin and that of your helpers from the arc rays.
- Protect other nearby personnel with suitable, non-flammable screening and/or warn them not to watch the arc nor expose themselves to the arc rays or to hot spatter or metal.

### ❖ **WELDING SPARKS can cause fire or explosion**



- Remove fire hazards from the cutting area. If this is not possible, cover them to prevent the welding sparks from starting a fire. Remember that welding sparks and hot materials from cutting can easily go through small cracks and openings to adjacent areas. Avoid cutting near hydraulic lines. Have a fire extinguisher readily available. Do not operate the electric arc welder in areas where flammable or explosive vapors are present.
- Where compressed gases are to be used at the job site, special precautions should be used to prevent hazardous situations.
  - Do not heat, cut or weld tanks, drums or containers until the proper steps have been taken to insure that such procedures will not cause flammable or toxic vapors from substances inside. They can cause an explosion even though they have been “cleaned”.
  - Always keep a fire extinguisher nearby while welding.
  - Use welding blankets to protect painted surfaces, dashboards, engines, etc.
  - Please make sure there are no combustible items around your welding area.

### ❖ **CYLINDER may explode if damaged**



- Use only compressed gas cylinders containing the correct shielding gas for the process used and properly operating regulators designed for the gas and pressure used. All hoses, fittings, etc. should be suitable for the application and maintained in good condition.
- Always keep cylinders in an upright position securely chained to an undercarriage or fixed support.
- Cylinders should be located:
  - Away from areas where they may be struck or subjected to physical damage.
  - A safe distance from arc welding or cutting operations and any other source of heat, sparks, or flame.
- Never allow any electrically “hot” parts to touch a cylinder.
- Keep your head and face away from the cylinder valve outlet when opening the cylinder valve.
- Valve protection caps should always be in place and hand tight except when the cylinder is in use or connected for use.

❖ **ELECTRICALLY POWERED EQUIPMENT can be dangerous**



- Turn off input power using the disconnect switch at the fuse box before working on the equipment.
- Install equipment in accordance with the local codes and the manufacturer's recommendations.
- Ground the equipment in accordance with the manufacturer's recommendations.

❖ **MOVING PARTS can cause injury**



- Keep away from moving parts such as fans.
- Keep all doors, panels, covers, and guards closed and securely in place.

.....  
Please read this Operation Manual carefully and thoroughly before attempting to operate this machine. Keep this manual handy for quick reference. Pay close attention to the safety instructions provided for your own protection.  
.....



# SPECIFICATIONS

## ❖ GENERAL DESCRIPTION

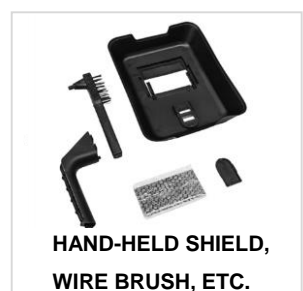
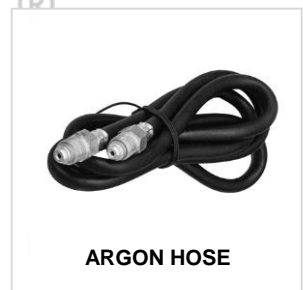
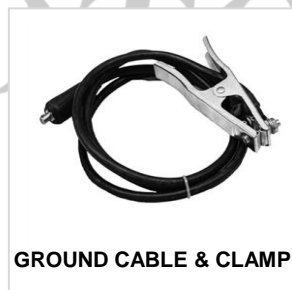
The LOTOS MIG175 is one of the most versatile welders. It is able to weld aluminum with the spool gun. Its transformer technology has been proven to be reliable and durable. MIG175 can easily connected to your existing 220V wall outlet and can be setup quickly within 10 minutes. It handles industrial standard 4" or 6" wire spools and incorporates resettable overload protection to assure long operating life.

- ✓ 175-amp MIG Welder with spool gun and mask, etc.
- ✓ Operates on 200-240V, automatic dual frequency (50/60Hz)
- ✓ Suitable for welding stainless steel, mild steel, aluminum, and other metal materials

## ❖ WHAT'S INCLUDED



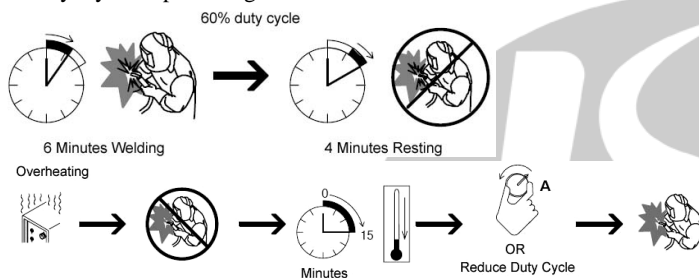
- Power Supply
- MIG Torch
- MIG Spool Gun
- Ground Clamp and Cable
- Argon Hose
- Argon Regulator
- 2lb. of 0.023" Spool Wire
- Hand-Held Shield, Wire Brush, Etc.



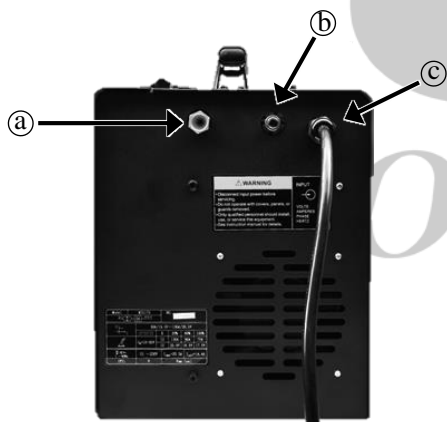
## ❖ POWER SUPPLY RATINGS

| MIG175  |  |   |
|---|--|---|
| General Specification                                 | Output Power                               | DC  |
|   | Input Voltages                             | 200-240V, 1-PH, 50/60 Hz  |
|   | Input Current                              | 22A @220V   |
|   | Power Factor                               | 0.73  |
|   | Power Efficiency                           | 80%   |
|   | Duty cycle <sup>1</sup> @ 40°C (104°F)     | 20% @ 175A<br>30% @ 135A  |
|   | Dimensions with handle                     | 18" (457mm) L<br>10.5" (267mm) W<br>12.5" (318mm) H   |
|   | Weight w/ 8'11" (2.7 m) torch              | 85lbs (38.6kg)  |
|   | Gas Supply                                 | Steel: clean, dry, oil-free 75% argon and 25% CO <sub>2</sub><br>Aluminum: clean, dry, oil-free argon |
|   | Recommended gas inlet flow rate / pressure | 12 – 14L/min  |
| Input power cable length                              | 6' (1.8m)                                  |   |
| <b>MaterialError!</b><br><b>Bookmark not defined.</b> | Mild Steel                                 | 18 Gauge – 1/4"   |
|   | Stainless Steel                            | 18 Gauge – 1/4"   |
|   | Aluminum                                   | 1/8" Plate or Thicker   |
| Warranty  | New Unit                                   | 1-Year Warranty   |
|   | Refurbished Unit                           | 60-Day Warranty   |

<sup>1</sup> Duty Cycle is percentage of 10 minutes that unit can weld at rated load without overheating.



## ❖ MACHINE REAR

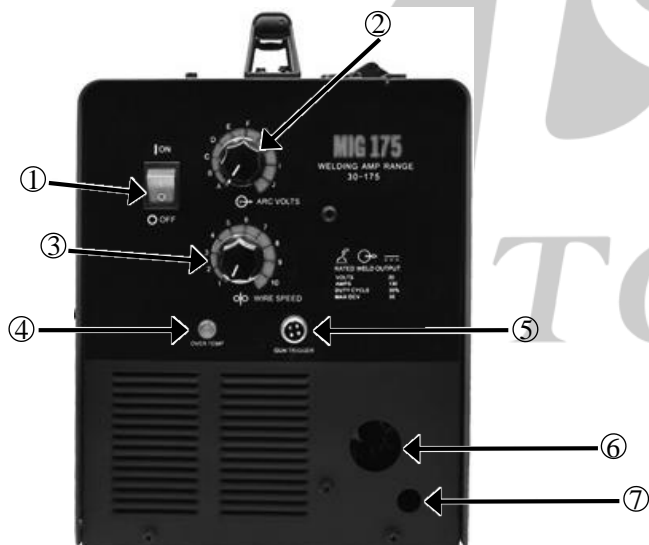


The unit is connected to the supply even if the Power Switch is in the “OFF” position, and therefore there are electrically live parts inside the power source. Carefully follow the instructions given in this manual.

### REAR COMPONENTS

|   |   |
|---|---|
| a | Shielding gas inlet fitting                   |
| b | Reset overload protective device <sup>1</sup> |
| c | Power cord                                    |

## ❖ FRONT CONTROL PANEL

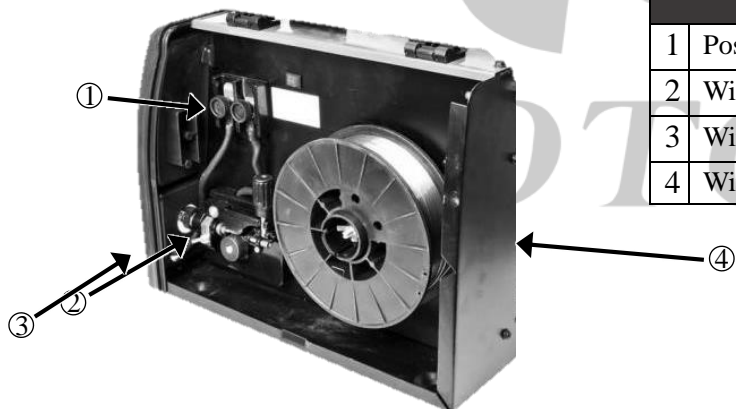


### FRONT CONTROL PANEL

|   |                                   |
|---|-----------------------------------|
| 1 | Power switch                      |
| 2 | Potentiometer knob                |
| 3 | Wire speed, feed rate adjust knob |
| 4 | Overheat light indicator          |
| 5 | Gun trigger                       |
| 6 | Gun torch access hole             |
| 7 | Opening for ground cable          |

<sup>1</sup> The protector will cut off the circuit if the welding machine is in excess of the maximum load, after which the switch must be manually reset.

❖ **SIDE COMPONENTS**



| <b>SIDE COMPONENTS</b> |  |
|------------------------|--|
| 1                      | Positive (+) and negative (-) output terminals |
| 2                      | Wing screw to fasten the welding torch cable   |
| 3                      | Wire feed tension roller                       |
| 4                      | Wire spool mount spindle                       |

  
**LOTOS<sup>®</sup>**

  
**LOTOS<sup>®</sup>**

# INSTALLATION



**PLEASE READ ENTIRE INSTALLATION SECTION BEFORE STARTING INSTALLATION. BE SURE THAT ONLY QUALIFIED PERSONNEL SHOULD PERFORM THIS INSTALLATION.**

## ❖ BEFORE INSTALLATION

### WARNING

#### **ELECTRIC SHOCK can be fatal**

- Have a qualified electrician install and service this equipment.
- Turn the input power OFF and unplug the machine from the receptacle before working on this equipment.
- Allow machine to sit for 5 minutes minimum to allow the power capacitors to discharge before working inside this equipment.
- Do not touch electrically hot parts.
- Machine must be plugged into a receptacle that is grounded according to the National Electrical Code and local codes.
- Do not remove or defeat the purpose of the power cord ground pin.



## ➤ ENVIRONMENTAL AREA

Keep the machine dry. Do not place it on wet ground or in puddles. Avoid rainwater. Operating in rain is not allowed.

### ○ SELECT SUITABLE LOCATION

The machine will operate in harsh environments. Even so, it is important that standard measures are followed in order to assure the machine is long lasting and reliable operation.

- The machine must be located where there is open space such that the air circulation in the back and out the front will not be restricted.
- Avoid getting dirt and dust in the machine. Failure to observe these precautions can result in excessive operating temperatures and shutdown by itself.

## ➤ WIRE FEEDER INSTALLATION

The wire feed drive roller attached to MIG175 has two wire grooves, one for 0.023" (0.6 mm) welding wire and another for 0.030 (0.8 mm) welding wire or 0.035" (0.9 mm) flux-cored wire. The factory default is the 0.023" (0.6 mm) wire groove. In the event that the 0.030" or 0.035" welding wire is to be used, the wire feed roller should be switched around.

1. Ensure that the MIG175 welding machine is powered "OFF" and the power cord is unplugged.
2. Unlock the tension bar (1) and lift up the rocker arm (2) of the wire feeder.
3. Unscrew the Allen set screws (3) holding the wire Feed roller with inner Allen wrench.

**NOTE:** Turn feed roller with pliers to access allen bolt.

4. Take out wire feed roller (4) and flip the wire feed roller so that the 0.8mm mark is towards you.
5. Reinstall by putting back the wire feed roller and tightening the Allen set screw.

## ➤ WELDING WIRE INSTALLATION

The MIG175 welding machine can be used with wire spools of either 8" (200 mm ) in diameter or 4"(100mm) in diameter. The depth of either spool should not exceed 2.2" (56 mm). There is a 50mm plastic barrel attached to the welding machine. The swing screw can adjust the resistance of the welding wire spool to keep the wire from loosening.

For installing (See Figure D-2) a wire spool 8"(200 mm) in diameter, attach the spool (1) to the plastic barrel (2).The position fixing pole of the plastic barrel should be aligned with the locating hole of the welding wire spool.

(NOTE: the wire spool will rotate clockwise when wire is in use.)

To install the welding wire spool 4"(100 mm) in diameter, remove "plastic barrel" and install wire spool with stop block and wing screw. Loosen the wing screw (5) and remove the rotation-stop block (6). Then remove the plastic barrel (2).Install the welding wire spool onto the metal shaft (7).

(NOTE: the wire spool will rotate clockwise when wire is in use). Finally, reinstall the rotation-stop block and the wing screw.

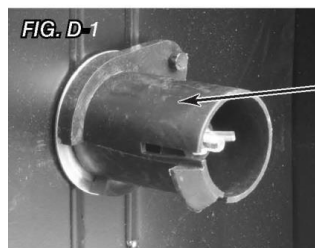


Figure D-1  
Use the welder wire board  
with 8" (200 mm) in dia.

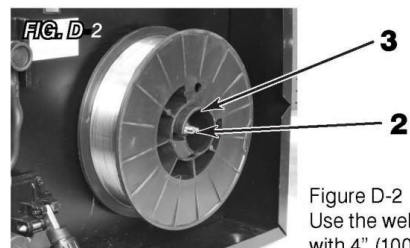


Figure D-2  
Use the welder wire board  
with 4" (100 mm) in dia.

## ➤ HOW TO THREAD WELDING WIRE THROUGH THE WIRE FEEDER

1. Unlock the tension bar (1) on the wire tensioner and lift up the rocker arm (2). Insure that the wire drive wheel is appropriate to the welding wire size, see above describing the installation to wire feed roller installation.

2. Pull out the welding wire (3) from the welding wire spool carefully.

**NOTE: Do not let go of the wire prior to step 5 or the entire spool will unravel and be useless.**

3. Cut off the small piece of the curved segment at the front of welding wire and straighten the welding wire approximately 3.0 long.

4. Thread the welding wire through the guide pipe (4) and over the wire feed roller (5) and into the torch hole (6).

5. Reattach the rocker arm (2) and reset the presser bar (1) of the wire feeder (now the welding wire can be fed smoothly).

6. Remove the contact tip and nozzle from the Mig torch.

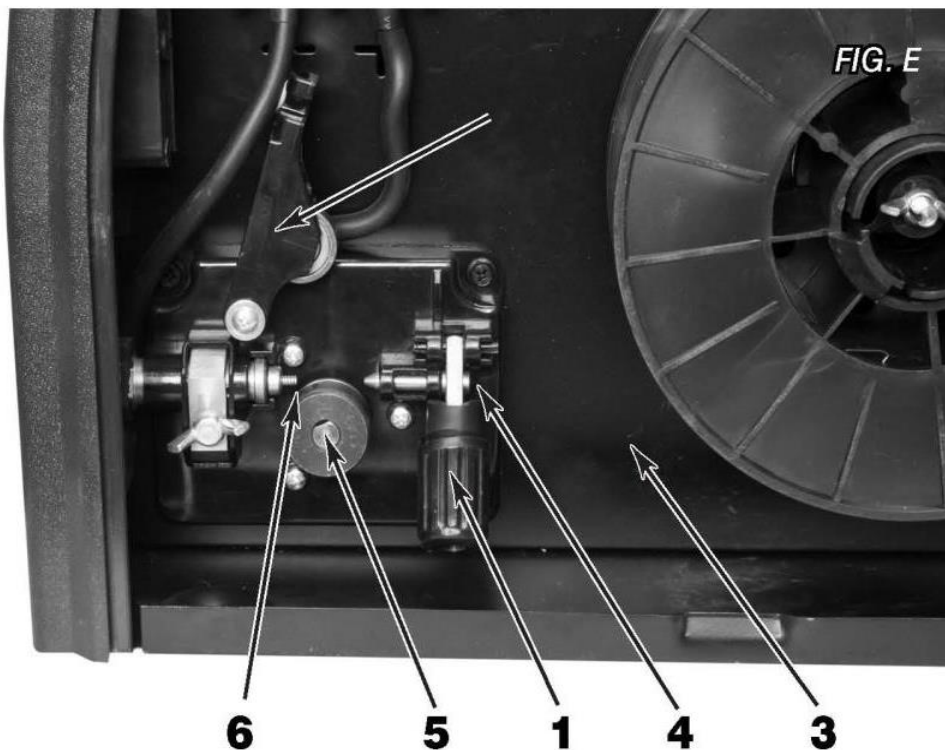
7. Turn on the machine and set the wire speed about  $\frac{1}{2}$  on the scale.

8. With the gun pointed away from you and others, depress the trigger to begin feeding wire.

**NOTE: Watch the drive roller to see if any slipping is occurring between the roller and the wire- if so **turn the machine off** and tighten the tension wing nut  $\frac{1}{4}$  turn and test again.**

9. You do not want too much tension on the tension roller as it will tend to deform the wire. Just enough to feed the wire without slipping

10. Once the wire has emerged from the tip of the gun, turn the machine OFF and replace the tip and nozzle.

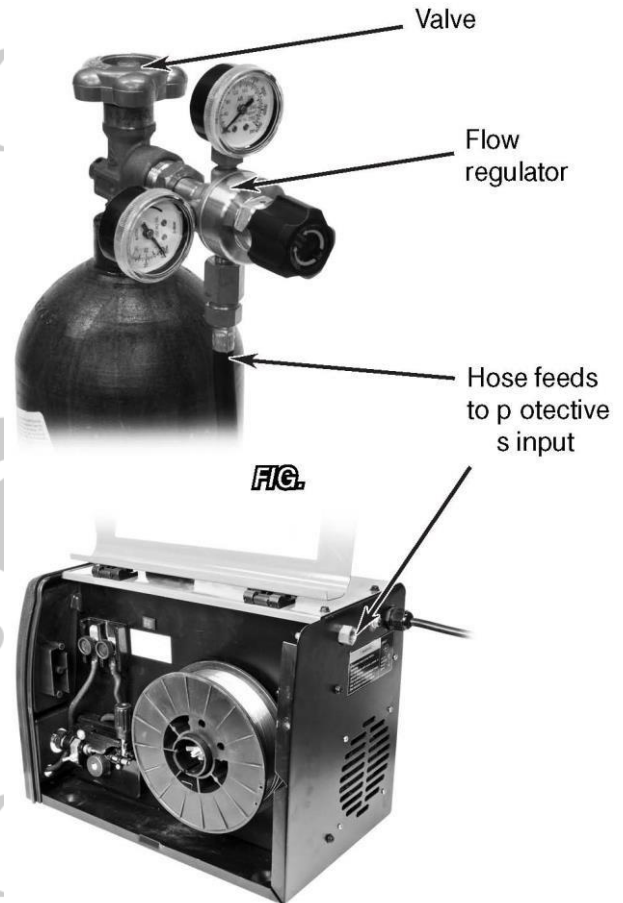


## ➤ SHIELDING GAS INSTALLATION

A compressed gas cylinder containing 75% Argon and 25% CO<sub>2</sub> should be used when using the MIG (GMAW - GAS Metal Arc Welding) on steel. Use pure argon when welding aluminum. The flow regulator and supply hose is included with your welder. Compressed gas can be obtained from your local welding supplier.

1. Attach the compressed gas cylinder with a chain to a wall or other secure object, to prevent the cylinder from falling.
2. After securing the tank, remove the cylinder cap if your cylinder has one.
3. Install flow regulator to the supply valve on the cylinder and tighten it with a wrench.
4. Install one end of the gas supply hose into the outlet of the flow regulator and tighten. Connect the other end of the hose to the gas inlet located at the rear of the MIG175 welding machine (The connector nipple 5/8-18 adapts to CGA-032). Ensure that the hose is not twisted or knotted.
5. Slowly turn on the gas cylinder valve.
6. Depress gun trigger switch and adjust the flow regulator to 25-30 cubic ft per hour (CFH), (12-14 l/min).

Shut off the bottle valve when not in use. Power off your unit when you are done welding. NOTE: Always keep the valve of the gas cylinder closed when it is not in use.





# OPERATION



**PLEASE READ AND UNDERSTAND THIS ENTIRE SECTION BEFORE OPERATING YOUR MACHINE. ONLY QUALIFIED PERSONNEL SHOULD OPERATE THIS EQUIPMENT. OBSERVE ALL SAFETY INFORMATION THROUGHOUT THIS MANUAL.**

## ❖ WELDING OPERATIONS

### ⚠ WARNING

#### **ELECTRIC SHOCK can be fatal**

- ◆ Have an electrician install and service this equipment.
- ◆ Turn the input power off at the fuse box, disconnect or unplug supply lines and allow machine to sit for five minutes minimum to allow the power capacitors to discharge before working inside this equipment.
- ◆ Do not touch electrically hot parts. Turn the input power OFF and unplug the machine from the receptacle before working on this equipment.



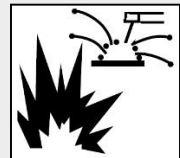
#### **FUMES AND GASES can be dangerous**

- ◆ Keep your head out of fumes.
- ◆ Use ventilation or exhaust to remove fumes from breathing zone.



#### **WELDING SPARKS can cause fires or explosions**

- ◆ Keep flammable material away.
- ◆ Do not weld, cut or gouge on containers that have held combustibles.



#### **ARC RAYS can burn**

- ◆ Wear eye, ear and body protection.



### ➤ WELDING STEPS

1. Plug in the MIG175 Welding Machine.
2. Straighten out the welding torch.
3. Turn ON the unit and depress the gun trigger. Feed wire and cut 1/4" from the end of the nozzle.
4. Place the ground clamp as close to the welding zone as possible and remove any paint corrosion, grease and oils before welding.

## ➤ WELDING PROCESS

1. Please refer to “Welding Label” in the unit and select proper setting based on the variety of metals and their thickness.
2. Adjust output polarity according to the welding wire and to ensure whether or not the protective gases are needed.
3. Connect the ground clamp to work pieces that are to be welded. This connection should be good and secure. Your welding torch should have clear access to the work piece.
4. Wearing your welding helmet, gloves and long sleeve shirt and pants, press the trigger of the welding gun and begin to weld. Keep the nozzle of the welding torch approximately 1/4” away from the work piece.
5. Use a “Push” technique, which means you will be holding the gun in your right hand with the nozzle and gun tilted back about 10-20 degrees and pushing the gun or moving from right to left.
6. Once you depress the trigger the wire will arc and you will notice a molten puddle form. You want to “move” this puddle to the left following the seam or areas to be welded.
7. If you “burn through” the material you are moving too slowly or your heat setting is too high.
8. Start with the initial setting on the chart and increase or decrease wire speed to obtain the best weld. Release the trigger of the welding torch to stop welding.
9. After welding, close valve of the gas bottle (if gas is used) and then press trigger of the welding torch to release any gasses left in the hose. Finally, power off the welding machine.
10. If you’re welding patch panels or quarter panels on use the “stitch” type method. Depress the trigger momentarily to form a small puddle or single bead. Then depress again to form another bead aside of the first. Continue until you have 4 or 5 small beads connected about 1/2-3/4” in length.
11. Move to the other end of the panel and repeat the process. Now go to the middle and repeat. Continue this process moving to different areas of the panel to eliminate heat warping the material.

## ➤ SPOOL GUN OPERATION

Your MIG175 can operate a hand-held spool gun. This will allow you weld both Aluminum and Steel.

1. NOTE: for use on steel 18ga - 1/4”; aluminum 1/8” plate or thicker.
2. Turn the power off and remove plug from AC outlet.
3. Change the internal switch from MIG to Spool Gun.
4. Plug spool gun into outlet on the front panel of the unit.
5. Install 4” roll of steel or aluminum (4043) wire NOTE: Spool gun with Mig will only weld aluminum plate 1/8” and thicker.
6. Use 100% pure Argon shielding gas.
7. Clean the aluminum and weld area with a new stainless steel brush to remove all oxides from surface.
8. Use a “push” gun movement technique.
9. Keep the contact tip 3/4” from work piece.
10. Set voltage setting to E/F and wire speed to 5 for 1/8” thick material.
11. Set voltage setting to H/I and wire speed to 8/9 for materials over 1/8”

**NOTE: these are initial start settings you will have to fine tune to meet materials thicknesses and welding techniques.**

## ➤ **OVERLOAD PROTECTION**

### **Overload protection for power supply to welding**

Your MIG175 is equipped with a temperature controller as well as an overload breaker. These two protection devices will protect the welding machine whenever the output exceeds the maximum out-put. If the output is exceeded, the unit will not supply voltage and the wire feeder will shut down (the fan will continue to run to cool the unit).

If the shutdown resulted from output overload, the circuit breaker button will extend out if it has been tripped. The circuit breaker must be reset manually. Before resetting the circuit breaker button, wait several minutes to allow the welding machine to cool down.

If there is no voltage and circuit breaker was not tripped, the internal thermal protector may have shut off the machine until it cools to a reasonable operating temperature. This is an automatic function and does not require the user to manually reset anything. The fan will continue to run while the unit is cooling.

If the unit is still “ON” but neither the output nor fan is working, either an overload fuse or a power supply circuit fuse has been blown.

## ➤ **OVERLOAD PROTECTION TO WIRE FEEDER**

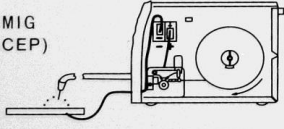
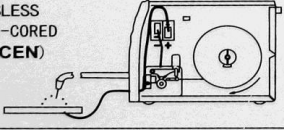
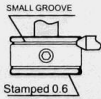


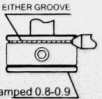
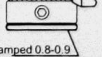
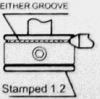
The MIG175 model has two automatic circuits to protect motor of the wire feeder, if there is fault occurred to the motor, the circuit will power off wire feeder as well as the output.

When the trigger is released again, the circuit will be automatically reset.

➤ WELDING LABEL

**Suggested Settings for Welding MIG 175**

| Process                          | Shielding Gas             | Wire Type          | Wire Size (Diameter) | Thickness               |                         |                         |                |                 |                |
|----------------------------------|---------------------------|--------------------|----------------------|-------------------------|-------------------------|-------------------------|----------------|-----------------|----------------|
|                                  |                           |                    |                      | 24ga<br>.030in<br>.80mm | 20ga<br>.040in<br>1.0mm | 16ga<br>.060in<br>1.6mm | 1/8in<br>3.2mm | 3/16in<br>4.8mm | 1/4in<br>6.4mm |
| <b>MIG (DCEP)</b>                | C25<br>(75% Ar / 25% CO2) | Solid Wire ER70S-6 | 0.25in (0.6mm)       | B-4                     | E-5                     | D-7                     | E-8            | F-10            | J-10           |
|                                  |                           |                    | 0.30in (0.8mm)       | B-3                     | B-4                     | C-5                     | E-6            | F-7             | J-8            |
|                                  |                           |                    | 0.35in (0.9mm)       | ---                     | B-3                     | C-4                     | E-5            | F-6             | J-7            |
|                                  | 100% CO2                  | Solid Wire ER70S-6 | 0.25in (0.6mm)       | ---                     | C-3                     | D-4                     | G-7            | J-7             | ---            |
|                                  |                           |                    | 0.30in (0.8mm)       | ---                     | C-3                     | D-4                     | F-5            | H-6             | J-6            |
|                                  |                           |                    | 0.35in (0.9mm)       | ---                     | C-2                     | D-3                     | F-4            | H-5             | J-5            |
| 100% Ar                          | Aluminum Welding Wire     | 0.35in (0.9mm)     | C-5                  | D-7                     | E-8                     | G-10                    | J-10           | ---             |                |
| <b>Gasless Flux-Cored (DCEN)</b> | None                      | Flux Core E71T-11  | 0.25in (0.6mm)       | ---                     | ---                     | A-5                     | C-6            | D-7             | F-8            |
|                                  |                           |                    | 0.30in (0.8mm)       | ---                     | ---                     | A-4                     | C-5            | D-6             | F-7            |
|                                  |                           |                    | 0.35in (0.9mm)       | ---                     | ---                     | ---                     | C-4            | F-4             | G-4            |

| OUTPUT POLARITY  |  | DRIVE ROLL ORIENTATION  |  |  |  |
|--|--|---|--|--|--|
| <p><b>MIG (DCEP)</b></p>                  |  | <p>INSTALL DRIVE ROLL WITH THE REQUIRED STENCILED SIZE FACING OUT</p>   |  |  |  |
| <p><b>GASLESS FLUX-CORED (DCEN)</b></p>  |  | <p><b>MIG (DCEP)</b></p>  |  | <p><b>GASLESS FLUX-CORED (DCEN)</b></p>  |  |
|  |  | <p>0.6mm (.025in) DIA. SOLID STEEL WIRE</p>   | <p>0.8mm (.030in) or 0.9mm (.035in) DIA. SOLID STEEL WIRE</p>  | <p>0.8mm (.030in) or 0.9mm (.035in) DIA Flux Cored</p>   | <p>1.2mm (.045in) DIA Flux Cored</p>   |
|  |  | <p>SMALL GROOVE<br/>Stamped 0.6</p>  | <p>LARGER GROOVE<br/>Stamped 0.8-0.9</p>  | <p>LARGER GROOVE<br/>Stamped 0.8-0.9</p>  | <p>EITHER GROOVE<br/>Stamped 0.8-0.9</p>  |
|  |  |   |  | <p>OR</p>                               | <p>OR</p>                                 |

LOTOS®



20  
LOTOS®

## OTHER ACCESSORIES

---

The following accessories and consumables can be purchased on [www.uwelding.com](http://www.uwelding.com), or call 408-739-2329 to order.

### CONSUMABLES



### ACCESSORIES



AND MORE...  
ON  
[www.uwelding.com](http://www.uwelding.com)