



# CobraMig<sup>®</sup> 350P CONTROLLER

<b>Product</b>	CobraMig <sup>®</sup> 350P Controller
<b>Manual</b>	091-0787
<b>Serial</b>	U1251001951
<b>Voltage Rating</b>	115V
<b>Revision</b>	A - January 2026
<b>Model</b>	150-101



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# Thank you!

*Thank you for selecting a quality product. We want you to take pride in operating this product—just as we take pride in delivering quality solutions from Tec Welding since 1955 and MK Products since 1966.*

## **BEFORE USING THIS EQUIPMENT, PLEASE READ THE IMPORTANT SAFETY CONSIDERATIONS PROVIDED FOR YOUR PROTECTION**

We strongly recommend reading the Owner's Manual in its entirety before using this equipment.

For assistance with your equipment, contact our Sales and Technical Department via email at [sales@mkprod.com](mailto:sales@mkprod.com), or call 1-800-787-9707 M-F 7am to 5pm PST.

### **Please examine carton and equipment for damage immediately**

All merchandise is sold FOB MK Products® Inc., Irvine, California, or our facilities in Escondido, California or Kansas City, Missouri. Title to the merchandise transfers to the receiving party at the time carrier accepts shipment. In the event of loss or damage, it is the receiving party's responsibility to file a claim.

***For assistance in reporting and filing a claim, contact MK Products/Tec Welding Products Customer Service Department at 1-800-787-9707, M-F 7am to 5pm within 15 calendar days from date of shipment.***

Please record your equipment information below. This information can be found on your machine nameplate. Whenever you request replacement parts for, or information on this equipment always supply the information you have recorded below.

**Date Purchased** \_\_\_\_\_

**Serial Number** \_\_\_\_\_

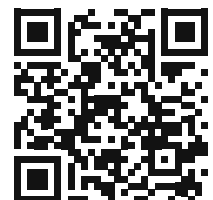
**Distributor & Location** \_\_\_\_\_

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# **SAFETY CONSIDERATIONS**

## **ELECTRIC ARC WELDING EQUIPMENT**

### **CAUTION: READ BEFORE ATTEMPTING INSTALLATION, OPERATION OR MAINTENANCE OF THIS EQUIPMENT**

#### **1-1 INTRODUCTION**

This equipment is intended for ultimate application by commercial/industrial users and for operation by persons trained and experienced in the use and maintenance of welding equipment. Operation should not be undertaken without adequate training in the use of such equipment. Training is available from many public and private schools or similar facilities.

Safe practices in the installation, operation and maintenance of this equipment requires proper training in the art, a careful study of the information provided with the equipment, and the use of common sense. Rules for safe use are generally provided by suppliers of welding power sources, compressed gas suppliers, and electrode suppliers. Careful compliance with these rules will promote safe use of this equipment.

The following Safety Rules cover some of the more generally found situations. READ THEM CAREFULLY. In case of any doubt, obtain qualified help before proceeding.

#### **1-2 GENERAL PRECAUTIONS**

##### **A. Burn Prevention**

**ELECTRIC ARC WELDING PRODUCES HIGH INTENSITY HEAT AND ULTRAVIOLET RADIANT ENERGY WHICH MAY CAUSE SERIOUS AND PERMANENT EYE DAMAGE AND WHICH MAY DAMAGE ANY EXPOSED SKIN AREAS.**

Wear a helmet with safety goggles or glasses with side shields underneath, appropriate filter lenses or plates (protected by clear cover glass). This is a must for welding or cutting (and chipping) to protect the eyes from radiant energy and flying metal. Replace cover glass when broken, pitted, or spattered.

Medical first aid and eye treatment. First aid facilities and a qualified first aid person should be available for each shift unless medical facilities are close by for immediate treatment of flash burns of the eyes and skin burns.

Wear protective clothing - leather (or asbestos) gauntlet gloves, hat, and high safety-toe shoes. Button shirt collar and pocket flaps, and wear cuffless trousers to avoid entry of sparks and slag.

Avoid oily or greasy clothing. A spark may ignite them.

Flammable hair preparations should not be used by persons intending to weld or cut.

Hot metal such as electrode stubs and work pieces should never be handled without gloves.

Ear plugs should be worn when working on overhead or in a confined space. A hard hat should be worn when others work overhead.

##### **B. Toxic Fume Prevention**

**WARNING:** The use of this product may result in exposure to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Adequate ventilation. Severe discomfort, illness or death can result from fumes, vapors, heat, or oxygen enrichment or depletion that welding (or cutting) may produce. Prevent them with adequate ventilation. NEVER ventilate with oxygen.

Lead-, cadmium-, zinc-, mercury-, beryllium-bearing and similar materials, when welded or cut, may produce harmful concentrations of toxic fumes. Adequate local exhaust ventilation must be used, or each person in the area, as well as the operator, must wear an air-supplied respirator. For beryllium, both must be used.

Metals coated with or containing materials that emit toxic fumes should not be heated unless coating is removed from the work surface, the area is well ventilated, or the operator wears an air-supplied respirator.

Work in a confined space only while it is being ventilated and, if necessary, while wearing an air-supplied respirator.

Gas leaks in a confined space should be avoided. Leaked gas in large quantities can change oxygen concentration dangerously. Do not bring gas cylinders into a confined space.

Leaving confined space, shut OFF gas supply at source to prevent possible accumulation of gases in the space if downstream valves have been accidentally opened or left open. Check to be sure that the space is safe before reentering it.

Vapors from chlorinated solvents can be decomposed by the heat of the arc (or flame) to form PHOSGENE, a highly toxic gas, and other lung and eye irritating products. The ultraviolet (radiant) energy of the arc can also decompose trichloroethylene and perchloroethylene vapors to form phosgene. DO NOT WELD or cut where solvent vapors can be drawn into the welding or cutting atmosphere or where the radiant energy can penetrate to atmospheres containing even minute amounts of trichloroethylene or perchloroethylene.

##### **C. Fire and Explosion Prevention**

Causes of fire and explosion are: combustibles reached by the arc, flame, flying sparks, hot slag, or heated material, misuse of compressed gases and cylinders, and short circuits.

BE AWARE THAT flying sparks or falling slag can pass through cracks, along pipes, through windows or doors, and through wall or floor openings, out of sight of the goggled operator. Sparks can fly many feet.

##### **To prevent fires and explosion:**

Keep equipment clean and operable, free of oil, grease, and (in electrical parts) of metallic particles that can cause short circuits.

If combustibles are in area, do NOT weld or cut. Move the work if practicable, to an area free of combustibles. Avoid paint spray rooms, dip tanks, storage areas, ventilators. If the work cannot be moved, move combustibles at least 35 feet away, out of reach of sparks and heat; or protect against ignition with suitable and snug-fitting, fire-resistant covers or shields.

Walls touching combustibles on opposite sides should not be welded on (or cut). Walls, ceilings, and floor near work should be protected by heat-resistant covers or shields.

Fire watcher must be standing by with suitable fire extinguishing equipment during and for some time after welding or cutting if:

1. Appreciable combustibles (including building construction) are within 35 feet.
2. Appreciable combustibles are further than 35 feet, but can be ignited by sparks.
3. Openings (concealed or visible) in floors or walls within 35 feet may expose combustibles to sparks.
4. Combustibles adjacent to walls, ceilings, roofs, or metal partitions can be ignited by radiant or conducted heat.

Hot work permit should be obtained before operation to ensure supervisor's approval that adequate precautions have been taken.

After work is done, check that area is free of sparks, glowing embers, and flames.

An empty container that held combustibles, or that can produce flammable or toxic vapors when heated, must never be welded on or cut, unless container has first been cleaned in accordance with industry standards.

This includes: a thorough steam or caustic cleaning (or a solvent of water washing, depending on the combustible's solubility), followed by purging and inerting with nitrogen or carbon dioxide, and using protective equipment.

Water-filling just below working level may substitute for inerting.

A container with unknown contents should be cleaned (see paragraph above). Do NOT depend on sense of smell or sight to determine if it is safe to weld or cut.

Hollow castings or containers must be vented before welding or cutting. They can explode.

Explosive atmospheres. NEVER weld or cut where the air may contain flammable dust, gas, or liquid vapors (such as gasoline).

#### **D. Compressed Gas Equipment**

The safe handling of compressed gas equipment is detailed in numerous industry publications. The following general rules cover many of the most common situations.

##### **Pressure Regulators**

Regulator relief valve is designed to protect only the regulator from overpressure; it is not intended to protect any downstream equipment. Provide such protection with one or more relief devices.

Never connect a regulator to a cylinder containing gas other than that for which the regulator was designed.

Remove faulty regulator from service immediately for repair (first close cylinder valve). The following symptoms indicate a faulty regulator:

Leaks - if gas leaks externally.

Excessive Creep - if delivery pressure continues to rise with downstream valve closed.

Faulty Gauge - if gauge pointer does not move off stop pin when pressurized, nor returns to stop pin after pressure release.

Repair. Do NOT attempt repair. Send faulty regulators for repair to manufacturer's designated repair center, where special techniques and tools are used by trained personnel.

##### **Cylinders**

Cylinders must be handled carefully to prevent leaks and damage to their walls, valves, or safety devices:

Avoid electrical circuit contact with cylinders including third rails, electrical wires, or welding circuits. They can produce short circuit arcs that may lead to a serious accident. (See 1-3C)

ICC or DOT marking must be on each cylinder. It is an assurance of safety when the cylinder is properly handled.

Identifying gas content. Use only cylinders with name of gas marked on them; do not rely on color to identify gas content. Notify supplier if unmarked. NEVER DEFACE or alter name, number, or other markings on a cylinder. It is illegal and hazardous.

Empties: Keep valves closed, replace caps securely; mark MT; keep them separate from FULLS, and return promptly.

Prohibited use. Never use a cylinder or its contents for other than its intended use, NEVER as a support or roller.

Locate or secure cylinders so they cannot be knocked over.

Passageways and work areas. Keep cylinders clear of areas where they may be stuck.

Transporting cylinders. With a crane, use a secure support such as a platform or cradle. Do NOT lift cylinders off the ground by their valves or caps, or by chains, slings, or magnets.

Do NOT expose cylinders to excessive heat, sparks, slag, and flame, etc. that may cause rupture. Do not allow contents to exceed 55 degrees C (130 degrees F.) Cool with water spray where such exposure exists.

Protect cylinders, particularly valves from bumps, falls, falling objects, and weather. Replace caps securely when moving cylinders.

Stuck valve. Do NOT use a hammer or wrench to open a cylinder valve that cannot be opened by hand. Notify your supplier.

Mixing gases. NEVER try to mix any gases in a cylinder.

NEVER refill any cylinder.

Cylinder fittings should never be modified or exchanged.

##### **Hose**

Prohibited use. Never use hose other than that designed for the specified gas. A general hose identification rule is: red for fuel gas, green for oxygen, and black for inert gases.

Use ferrules or clamps designed for the hose (not ordinary wire or other substitute) as a binding to connect hoses to fittings.

No copper tubing splices. Use only standard brass fittings to splice hose.

Avoid long runs to prevent kinks and abuse. Suspend hose off ground

to keep it from being run over, stepped on, or otherwise damaged.

Coil excess hose to prevent kinks and tangles.

Protect hose from damage by sharp edges, and by sparks, slag, and open flame.

Examine hose regularly for leaks, wear, and loose connections. Immerse pressured hose in water; bubbles indicate leaks

Repair leaky or worn hose by cutting area out and splicing. Do NOT use tape.

##### **Proper Connections**

Clean cylinder valve outlet of impurities that may clog orifices and damage seats before connecting regulator. Except for hydrogen, crack valve momentarily, pointing outlet away from people and sources of ignition. Wipe with a clean, lintless cloth.

Match regulator to cylinder. Before connecting, check that the regulator label and cylinder marking agree, and that the regulator inlet and cylinder outlet match. NEVER Connect a regulator designed for a particular gas or gases to a cylinder containing any other gas.

Tighten connections. When assembling threaded connections, clean and smooth seats where necessary. Tighten. If connection leaks, disassemble, clean, and re-tighten, using properly fitting wrench.

Adapters. Use a CGA adapter (available from your supplier) between cylinder and regulator, if one is required. Use two wrenches to tighten adapter marked RIGHT and LEFT HAND threads.

Regulator outlet (or hose) connections may be identified by right hand threads for oxygen and left hand threads (with grooved hex on nut or shank) for fuel gas.

##### **Pressurizing Steps:**

Drain regulator of residual gas through suitable vent before opening cylinder (or manifold valve) by turning adjusting screw in (clockwise). Draining prevents excessive compression heat at high pressure seat by allowing seat to open on pressurization. Leave adjusting screw engaged slightly on single-stage regulators.

Stand to side of regulator while opening cylinder valve.

Open cylinder valve slowly so that regulator pressure increases slowly. When gauge is pressurized (gauge reaches regulator maximum) leave cylinder valve in following position: for oxygen and inert gases, open fully to seal stem against possible leak; for fuel gas, open to less than one turn to permit quick emergency shut-off.

Use pressure charts (available from your supplier) for safe and efficient recommended pressure settings on regulators.

Check for leaks on first pressurization and regularly thereafter. Brush with soap solution. Bubbles indicate leaks. Clean off soapy water after test; dried soap is combustible.

#### **E. User Responsibilities**

Follow all Safety Rules.

Remove leaky or defective equipment from service immediately for repair. Read and follow user manual instructions.

#### **F. Leaving Equipment Unattended**

Close gas supply at source and drain gas.

#### **G. Rope Staging-Support**

Rope staging-support should not be used for welding or cutting operation; rope may burn.

#### **1-3 ARC WELDING**

Comply with precautions in 1-1, 1-2, and this section. Arc Welding, properly done, is a safe process, but a careless operator invites trouble. The equipment carries high currents at significant voltages. The arc is very bright and hot. Sparks fly, fumes rise, ultraviolet and infrared energy radiates, weldments are hot, and compressed gases may be used. The wise operator avoids unnecessary risks and protects himself and others from accidents.

##### **A. Burn Protection**

Comply with precautions in 1-2.

The welding arc is intense and visibly bright. Its radiation can damage eyes, penetrate lightweight clothing, reflect from light-colored surfaces, and burn the skin and eyes. Skin burns resemble acute sunburn; those from gas-shielded arcs are more severe and painful. **DON'T GET BURNED; COMPLY WITH PRECAUTIONS.**

### 1. Protective Clothing

Wear long-sleeve clothing in addition to gloves, hat, and shoes. As necessary, use additional protective clothing such as leather jacket or sleeves, flameproof apron, and fire-resistant leggings. Avoid outer garments of untreated cotton.

Bare skin protection. Wear dark, substantial clothing. Button collar to protect chest and neck, and button pockets to prevent entry of sparks.

### 2. Eye and Head Protection

Protect eyes from exposure to arc. Eyes may be damaged by radiant energy when exposed to the electric arc, even when not looking in the direction of the arc. Never look at an electric arc without protection.

Welding helmet or shield containing a filter plate shade no. 12 or denser must be used when welding. Place over face before striking arc.

Protect filter plate with a clear cover plate.

Cracked or broken helmet or shield should NOT be worn; radiation can be passed through to cause burns.

Cracked, broken, or loose filter plates must be replaced IMMEDIATELY. Replace clear cover plate when broken, pitted, or spattered.

Flash goggles with side shields MUST be worn under the helmet to give some protection to the eyes should the helmet not be lowered over the face before an arc is struck. Looking at an arc momentarily with unprotected eyes (particularly a high intensity gas-shielded arc) can cause a retinal burn that may leave a permanent dark area in the field of vision.

### 3. Protection of Nearby Personnel

Enclose the welding area. For production welding, a separate room or enclosed bay is best. In open areas, surround the operation with low-reflective, noncombustible screens or panels. Allow for free air circulation, particularly at floor level.

Viewing the weld. Provide face shields for all persons who will be looking directly at the weld.

Others working in area. See that all persons are wearing flash goggles.

Before starting to weld, make sure that screen flaps or bay doors are closed.

### B. Toxic Fume Prevention

Comply with precautions in 1-2B.

Generator engine exhaust must be vented to the outside air. Carbon monoxide can kill.

### C. Fire and Explosion Prevention

Comply with precautions in 1-2C.

Equipment's rated capacity. Do not overload arc welding equipment. It may overheat cables and cause a fire.

Loose cable connections may overheat or flash and cause a fire.

Never strike an arc on a cylinder or other pressure vessel. It creates a brittle area that can cause a violent rupture or lead to such a rupture later under rough handling.

### D. Compressed Gas Equipment

Comply with precautions in 1-2D.

### E. Shock Prevention

Exposed electrically hot conductors or other bare metal in the welding circuit, or in ungrounded, electrically - HOT equipment can fatally shock a person whose body becomes a conductor. DO NOT STAND, SIT, LIE, LEAN ON, OR TOUCH a wet surface when welding without suitable protection.

#### To protect against shock:

Keep body and clothing dry. Never work in damp area without adequate insulation against electrical shock. Stay on a dry duckboard, or rubber mat when dampness or sweat cannot be avoided. Sweat, sea water, or moisture between body and an electrically HOT part - or grounded metal - reduces the body surface electrical resistance, enabling dangerous and possibly lethal currents to flow through the body.

#### 1. Grounding the Equipment

When installing, connect the frames of each unit such as welding power source, control, work table, and water circulator to the building ground. Conductors must be adequate to carry ground currents safely. Equipment made electrically HOT by stray currents may shock, possibly fatally. Do NOT GROUND to electrical conduit, or to a pipe carrying ANY gas or a flammable liquid such as oil or fuel.

Three-phase connection. Check phase requirement of equipment before

installing. If only three-phase power is available, connect single-phase equipment to only two wires of the three-phase line. Do NOT connect the equipment ground lead to the third (live) wire, or the equipment will become electrically HOT - a dangerous condition that can shock, possibly fatally.

Before welding, check ground for continuity. Be sure conductors are touching bare metal of equipment frames at connections.

If a line cord with a ground lead is provided with the equipment for connection to a switch box, connect the ground lead to the grounded switch box. If a three-prong plug is added for connection to a grounded mating receptacle, the ground lead must be connected to the ground prong only. If the line cord comes with a three-prong plug, connect to a grounded mating receptacle. Never remove the ground prong from a plug, or use a plug with a broken ground prong.

#### 2. Connectors

Fully insulated lock-type connectors should be used to join welding cable lengths.

#### 3. Cables

Frequently inspect cables for wear, cracks, and damage. IMMEDIATELY REPLACE those with excessively worn or damaged insulation to avoid possibly lethal shock from bared cable. Cables with damaged areas may be taped to give resistance equivalent to original cable.

Keep cable dry, free of oil and grease, and protected from hot metal and sparks.

#### 4. Terminals and Other Exposed Parts

Terminals and other exposed parts of electrical units should have insulating covers secured before operation.

#### 5. Electrode Wire

Electrode wire becomes electrically HOT when the power switch of gas metal-arc welding equipment is ON and welding gun trigger is pressed. Keep hands and body clear of wire and other HOT parts.

#### 6. Safety Devices

Safety devices such as interlocks and circuit breakers should not be disconnected or shunted out.

Before installation, inspection, or service of equipment, shut OFF all power, and remove line fuses (or lock or red-tag switches) to prevent accidental turning ON of power. Disconnect all cables from welding power source, and pull all 115 volts line-cord plugs.

Do not open power circuit or change polarity while welding. If, in an emergency, it must be disconnected, guard against shock burns or flash from switch arcing.

Leaving equipment unattended. Always shut OFF, and disconnect all power to equipment.

Power disconnect switch must be available near the welding power source.

## Section B - Installation

### TECHNICAL SPECIFICATIONS

#### INPUT - SINGLE PHASE:

- Power Input Voltage = +/- 10%
- 40V DC

#### PHYSICAL DIMENSIONS:

- Height: 8.9" (226mm)
- Width: 8" (203.2mm)
- Depth: 4" (101.6mm)
- Weight 5.1lbs

#### TEMPERATURE RANGES:

- Operating Temperature Range: -14°F to 104°F (-10°C to 40°C)
- Storage Temperature Range: -40°F to 122°F (-40°C to 50°C)

### DESIGN FEATURES

- Large Digital Displays with dedicated voltage knobs.

### MOUNTING LOCATION

- Do not submerge the CobraMig® Controller.
- The CobraMig® Controller is rated IP23 and is suitable for outdoor use. Not for use in rain.
- The EMC or RF classification of this equipment is Class A of IEC 60974-10.

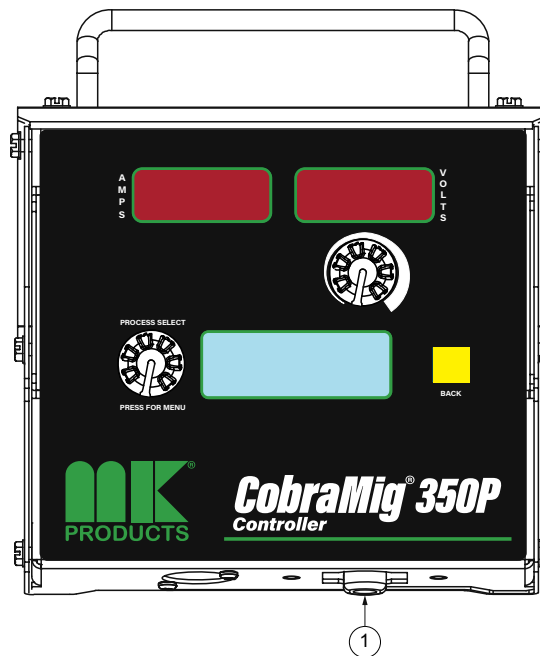
### HIGH FREQUENCY PROTECTION

Locate the CobraMig® Controller away from radio controlled machinery. The normal operation of the CobraMig® Controller may adversely affect the operation of the RF controlled equipment, which may result in bodily injury or damage to the equipment.

### COMPATIBLE EQUIPMENT

CobraMig® 350P FEEDER

### CONNECTOR PIN LAYOUTS



REMOTE OUTPUT CONTROL (12-PIN UNIVERSAL CONNECTOR)			
1		A	CAN
	B	CAN	
	C	NOT USED	
	D	NOT USED	
	E	NOT USED	
	F	NOT USED	
	G	NOT USED	
	H	NOT USED	
	J	40VDC COMMON	
	K	40VDC COMMON	
	L	NOT USED	
	M	NOT USED	

## Section C - Operation

### RECOMMENDED PROCESSES

- GMAW with Push-Pull Gun
- GMAW-P with Push-Pull Gun
- Pulse-On-Pulse GMAW

### PROCESS LIMITATIONS

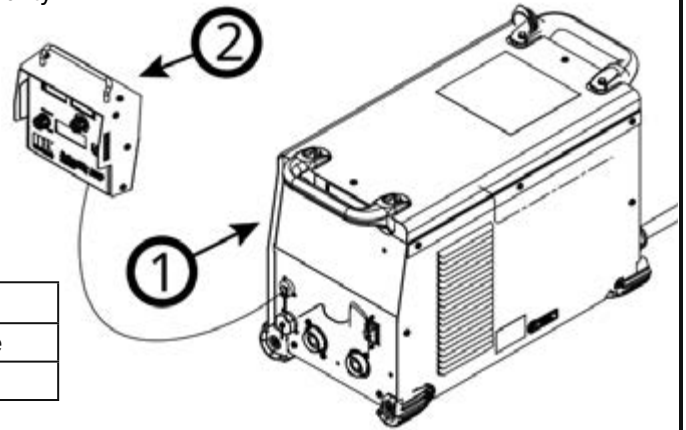
CobraMig® Controller weld modes are limited to only the weld modes and output range available in the connected power source.

### DEFINITION OF WELDING TERMS

- WFS: Wire Feed Speed
- CC: Constant Current
- CV: Constant Voltage
- GMAW: Gas Metal Arc Welding
- GMAW-P: Gas Metal Arc Welding - (Pulse Arc)

### TYPICAL SET-UP

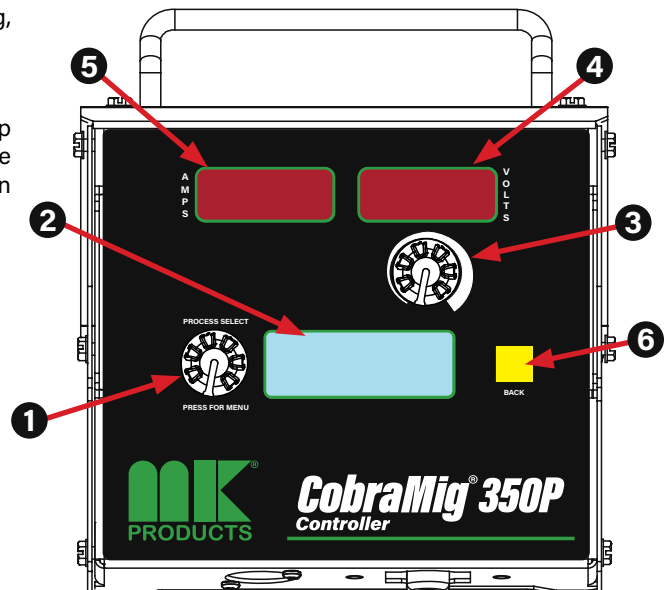
1. Connect 4-foot CobraMig® Controller connector to the 12-pin ArcLink receptacle on the front of the power source.
2. Connect feeder power lug to desired polarity output stud of power source. \*\*\*Voltage CANNOT be adjusted at the wire feeder. All voltage adjustments MUST be made at the wire feeder.
3. Connect the work lead to power source output stud for the desired polarity.



Item No.	Part No.	Description
1	187-350	CobraMig®350P Power Source
2	150-101	CobraMig®350P Controller

### CASE FRONT ORIENTATION

1. **Process Select/Menu Knob** - Allows the operator to select the weld mode. Weld modes are arranged by wire type, wire diameter, and transfer mode. To cycle through weld modes, turn the knob right to search for larger diameter wire modes. Return left for smaller diameter modes. To change parameters of the weld modes such as pinch, modulation or offset, press down on the knob. Once the settings are selected, press the knob again to save your selection.
2. **Process Menu Display** - Displays the selected weld mode.
3. **Voltage Knob** - Displays the selected weld mode.
4. **Voltage Display** - Displays voltage set by the user. When welding, this display shows the realtime voltage of the welding arc.
5. **Current Display** - Shows current only when welding.
6. **Back Button** - Allows the operator to return from advanced setup menu or return. Holding this button for one second will toggle between locking and unlocking the voltage and process selection knobs.

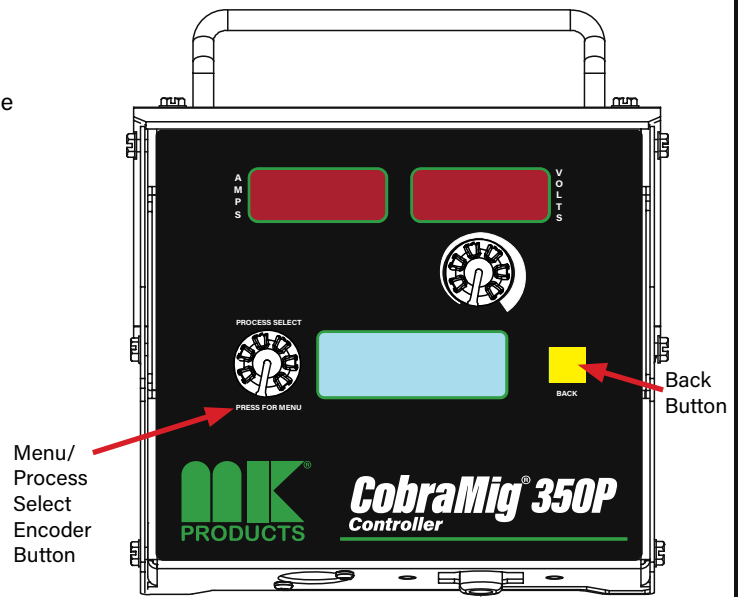


## Section C - Operation

### DIGITAL METER DISPLAYS

**While Idle** - The right display shows the preset voltage.

**While Welding** - The value in the left display will be amps. The value on the right display will show actual voltage.



### PRESET VOLTAGE DISPLAY

Preset voltage below ideal (lower bar displayed for 1 second).

**Note:** Changing the WFS will result in the preset voltage following the set wire feed speed as a synergic setting.

### DIGITAL METER OPERATION

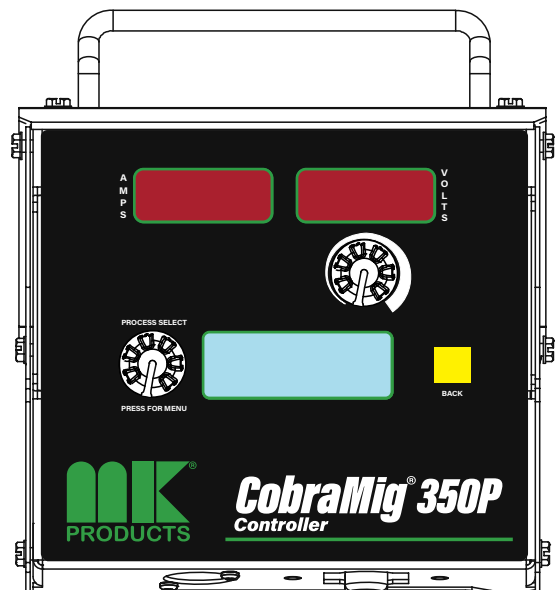
**Operation While Idle** - The left display shows the preset wire feed speed while the right display shows the preset voltage or trim when it is connected to a power source that supports the CobraMig® Controller (See Digital Meter Displays) It will display dashes when connected to an incompatible power source (the lower display will show "Error 262").

Otherwise, the lower display will show the following welding process info:

- Process Name
- Wire Type
- Wire Size

#### Operation While Welding

While welding, arc current and voltage will be shown in real-time on there respective displays.



## Section C – Operation

### **ADVANCED SETUP MENU SETTINGS**

#### **Software Version:**

The advanced setup menu can be selected by pressing and releasing the back button and the process selection knob button simultaneously.

The Advanced setup menu items can be cycled through by rotating the process selection knob button.

The current software version number as well as the checksums are displayed on the “WD/UI” item of the Advanced Setup Menu. This menu item is read only and may be useful for troubleshooting purposes. Pushing the bottom encoder will scroll through the different software revisions of different printed circuit boards in the system.

- UI contains information about the user interface board.
- WCtrl contains information about the Power Source’s Control board.
- WTbl contains information about the weld table version number.

#### **Factory Reset:**

Factory Reset can be initiated to return all settings to their default values.

#### **Arc Time Display Enable:**

“Arc Time” in the advanced setup menu is Off by default. If it is enabled then the User’s Arc Time will be displayed for 5 seconds after the system mapping is complete. When viewed from the advanced setup menu the cumulative arc time and the user arc time will be displayed on the top line. The user arc time can be reset by pressing and holding the bottom knob for 3 seconds and following the prompts.

#### **Test Modes Enable:**

“Test Modes” in the Advanced Setup Menu are set to N by default. When enabled and set to Y, they are populated at the end of the process selection screen. They include CC, CV, CP and others and are typically not used during normal operation. To disable them, navigate back to the Advanced Setup Menu and select N and push the bottom left knob.

#### **System Test:**

Once “System Test” is enabled all of the LEDs should be illuminated. Pushing the bottom left knob will enter an encoder test that will use the displays to provide the user with a readout of how many counts the encoders have registered. This can be useful in determining if any of the encoders are damaged. Pushing the bottom knob a second time will navigate back to the Advanced Setup Menu and return the “System Test” to N.

## Section D – Maintenance

### ROUTINE MAINTENANCE

- Check weld cables and gas hoses for cuts.
- Clean and tighten all weld terminals.

### PERIODIC MAINTENANCE

- Blow out or vacuum the inside of the controller.
- Inspect and clean 12-pin connectors and associated cables.

## Section E – Troubleshooting

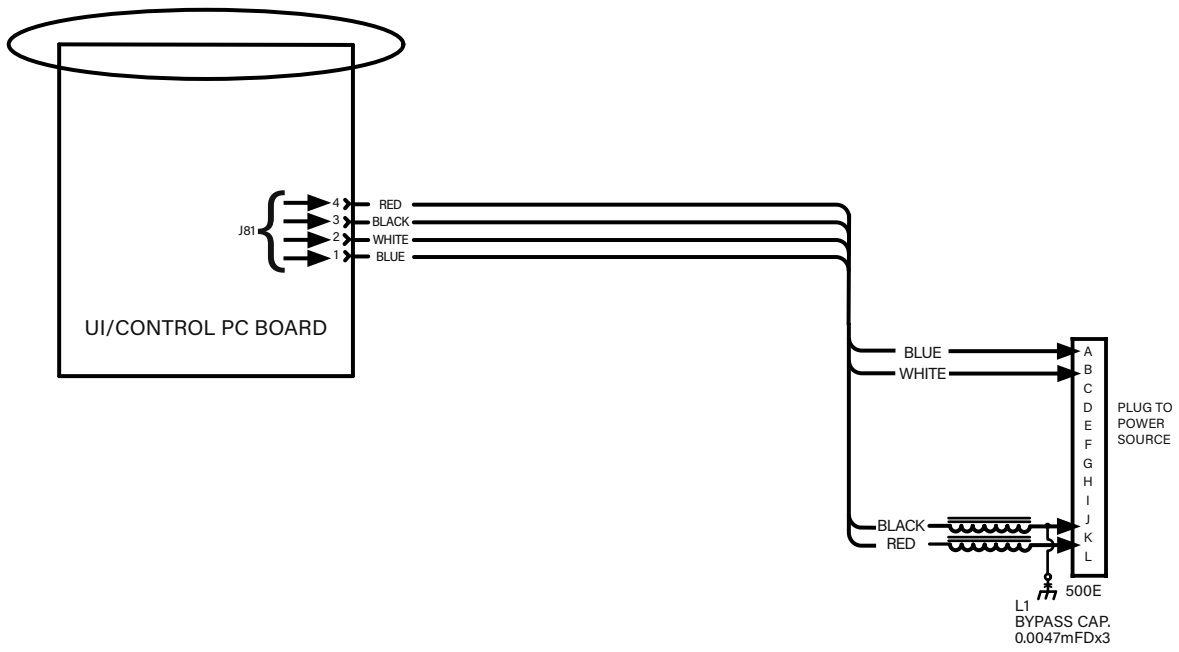
PROBLEM	POSSIBLE CAUSE	RECOMMENDED COURSE OF ACTION
<b>OUTPUT PROBLEMS</b>		
The CobraMig® Controller does not power up	1. No output from power source 2. Input cable is disconnected or broken	1. CobraMig® Controller will not power up if the power source is “OFF” 2. Verify the cable is connected between the power source and the CobraMig® Controller
Error 6	Communication error from the power source to the CobraMig® Controller	1. Verify that the power source is operating properly 2. Check control cable for loose or broken leads 3. See power source instruction manual

### CAUTION

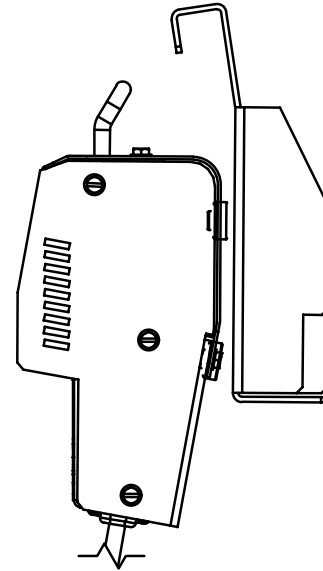
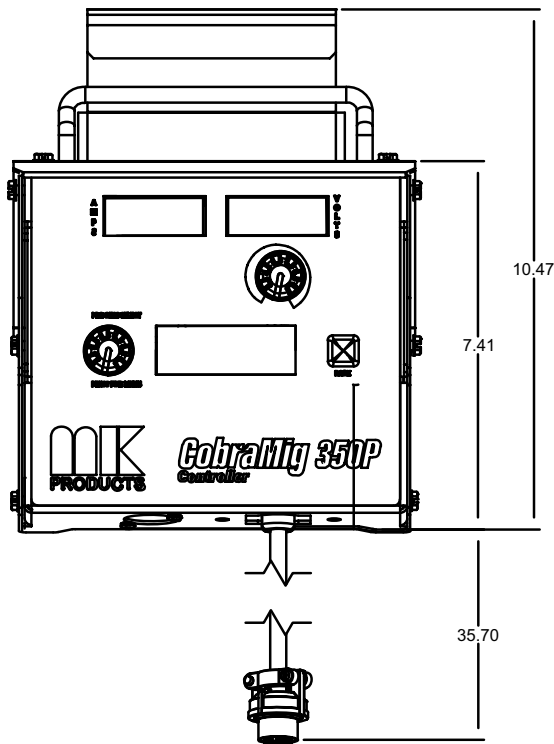
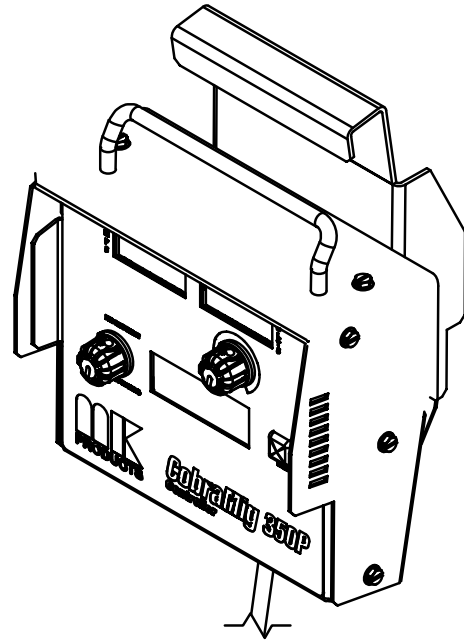
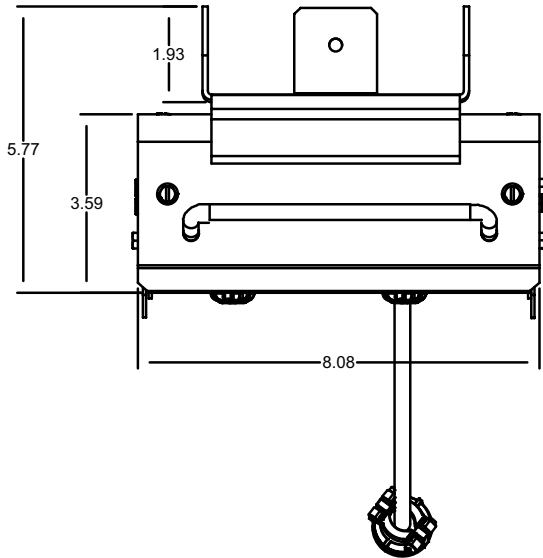


If for any reason you do not understand the test procedures or are unable to perform the tests/repairs safely, contact your MK Products Authorized Service Facility for technical troubleshooting assistance before you proceed.  
To locate your nearest service provider please visit [www.mkprod.com](http://www.mkprod.com)

# Section F - Wiring Diagram



# Section G - Dimensions



# LIMITED WARRANTY

USE OF OTHER THAN GENUINE MK PRODUCTS® INC. AND TEC WELDING PRODUCTS® CONSUMABLES, PARTS, AND ACCESSORIES MAY VOID YOUR PRODUCT WARRANTY.

This warranty supersedes all previous MK Products® / Tec Welding Products® warranties and is exclusive, with no other guarantees or warranties expressed or implied.

LIMITED WARRANTY - MK Products® Inc. and Tec Welding Products® warrants that all new and unused equipment furnished by MK Products® Inc. and Tec Welding Products® is free from defects in workmanship and material. No warranty is made by MK Products® Inc. and Tec Welding Products® with respect to trade accessories or other items manufactured by others. Such trade accessories and other items are sold subject to the warranties of their respective manufacturers, if any.

MK Products® Inc. and Tec Welding Products® warranty does not apply to components having normal useful life of less than one (1) year, such as and not limited to, tungsten, collets, brushes, and welding gun parts that come in contact with the welding wire, including conduits, gas cups, gas cup insulators, and contact tips where failure does not result from defect in workmanship or material.

MK Products® Inc. and Tec Welding Products® shall, exclusively remedy the limited warranty or any duties with respect to the quality of goods, based upon the following options:

- (1) repair
- (2) replacement
- (3) where authorized in writing by MK Products® Inc. and Tec Welding Products® the reasonable cost of repair or replacement at our Irvine, CA facility.

As a matter of general policy only, MK Products® Inc. and Tec Welding Products® may honor an original user's warranty claims on warranted equipment in the event of failure resulting from a defect within the following periods from the date of delivery of equipment to the original user:

1. CobraMig® 350P Power Supply .....5 Years
2. Power Supplies and Wire Feed Cabinets .....3 years
3. Weld Heads, Coolers, Positioners, and Push-Pull Guns .....1 year
4. Spool Guns, and Spool Gun Modules.....180 days
5. Repairs/Exchanges/Parts.....90 days

Classification of any item into the foregoing categories shall be at the sole discretion of MK Products® Inc. and Tec Welding Products®. Notification of any failure must be made in writing within 30 days of such failure.

A copy of the invoice showing the date of sale must accompany products returned for warranty repair or replacement.

All equipment returned to MK Products® Inc. and Tec Welding Products® for service must be properly packaged to guard against damage from shipping. MK Products® will not be responsible for any damages resulting from shipping.

Normal surface transportation charges (one way) for products returned for warranty repair or replacement will be borne by MK Products® Inc. and Tec Welding Products®, except for products sold to foreign markets.

ANY EXPRESS WARRANTY NOT PROVIDED HEREIN AND ANY IMPLIED WARRANTY, GUARANTY, OR REPRESENTATION AS TO PERFORMANCE, AND ANY REMEDY FOR BREACH OF CONTRACT WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE, OR COURSE OF DEALING, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR PARTICULAR PURPOSE, WITH RESPECT TO ANY AND ALL EQUIPMENT FURNISHED BY MK PRODUCTS® INC. AND TEC WELDING PRODUCTS®, IS EXCLUDED AND DISCLAIMED BY MK PRODUCTS® INC. AND TEC WELDING PRODUCTS®.

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