CobraMig® 300

Quick Start Guide

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MK PRODUCTS

091-0719/ ***Rev B***

Installation Process

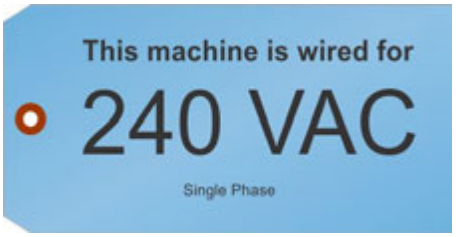
Step 1: Out of the box

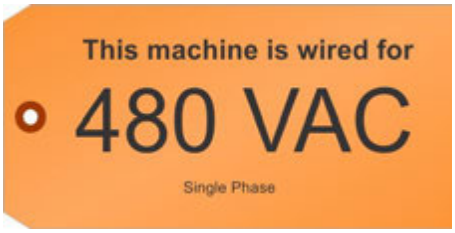
Tools needed:
- 1/2" wrench
- Phillips screw driver

Uncrate CobraMig 300:
- remove box covering welder
- remove lag bolts from rear platform holding down welder with 1/2" wrench
- remove security bracket from bottom front of welder with Phillips screwdriver
- unit will now be available to remove from shipping pallet

**** 2 people are required to lift welder from shipping pallet (approx. 250 lbs.)***
DO NOT use handle on top for lifting
Permanent damage or serious injury may occur *

Refer to tag to designate how your unit is wired





VOLTAGE	240
CURRENT	60 AMPS
FREQUENCY	50 / 60 Hz
DUTY CYCLE	100% @ 225 AMPS 60% @ 300 AMPS
PHASE	SINGLE

VOLTAGE	480
CURRENT	40 AMPS
FREQUENCY	50 / 60 Hz
DUTY CYCLE	100% @ 225 AMPS 60% @ 300 AMPS
PHASE	SINGLE

~Refer to user manual to change input power~

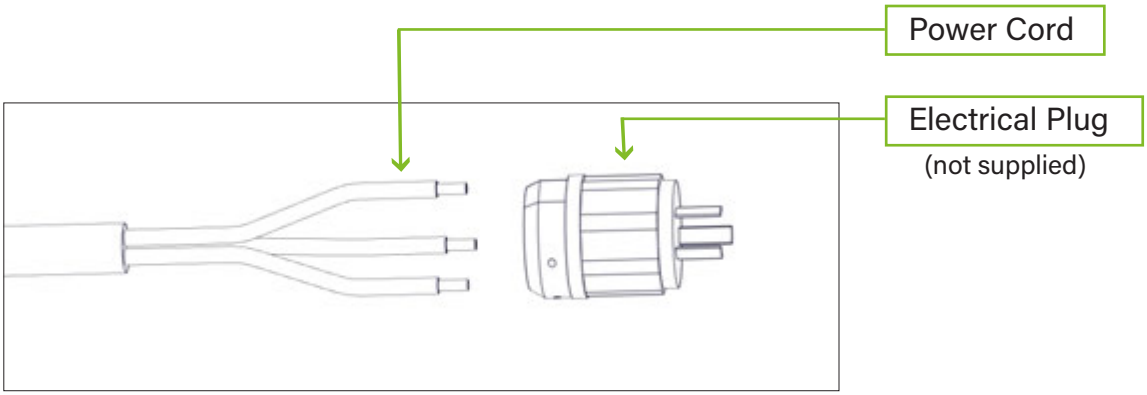
WARNING

Turn OFF input power using the disconnect switch at the fuse box before working on equipment. Install equipment in accordance with the U.S National Electrical Code, all local codes and the manufacture's recommendations

Failure to comply with this warning can result in serious injury or death

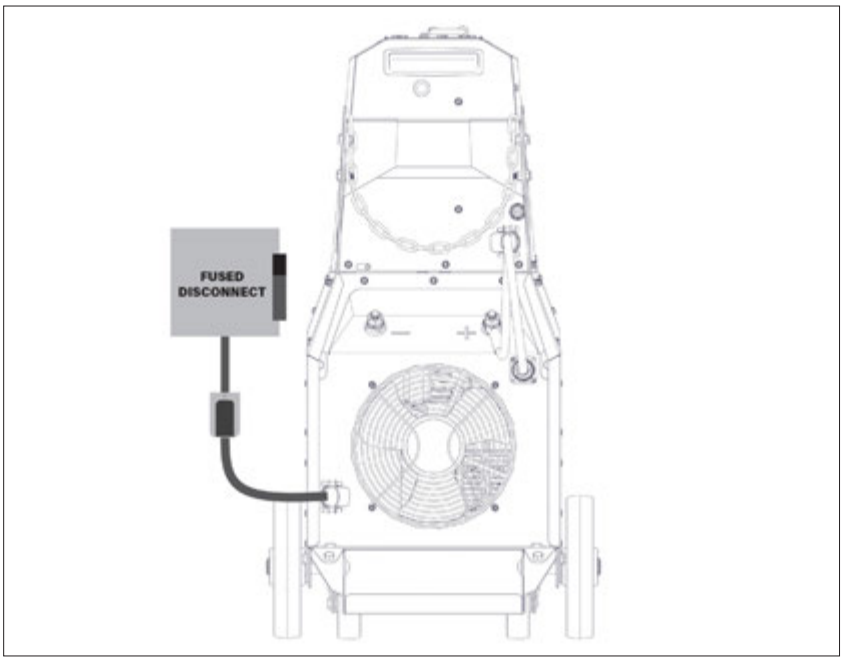
Step 2: Single Phase Electrical Plug

Wire an appropriate electrical plug to the provided power cord



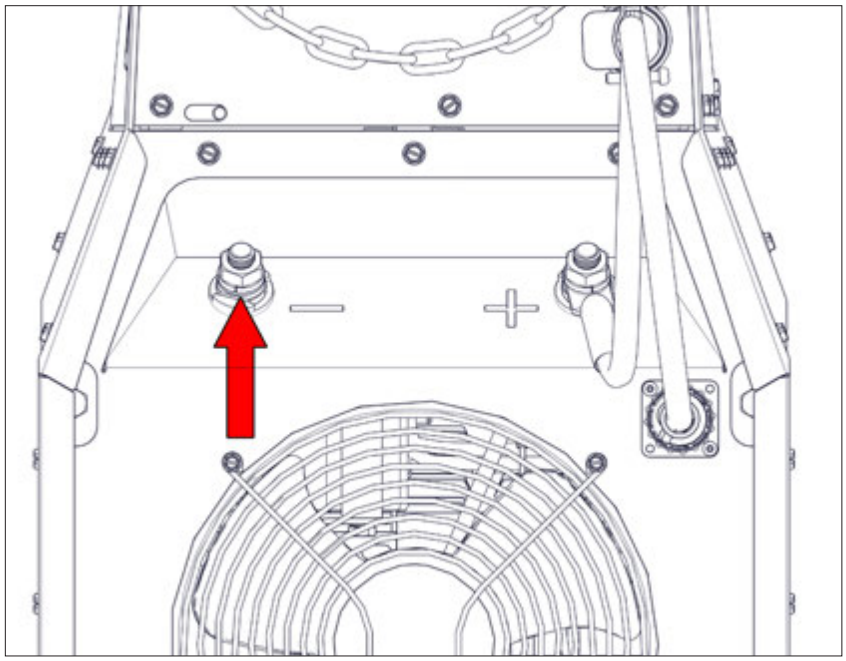
Step 3: Connect to Power

Plug the welder power cord into a single phase fused power outlet



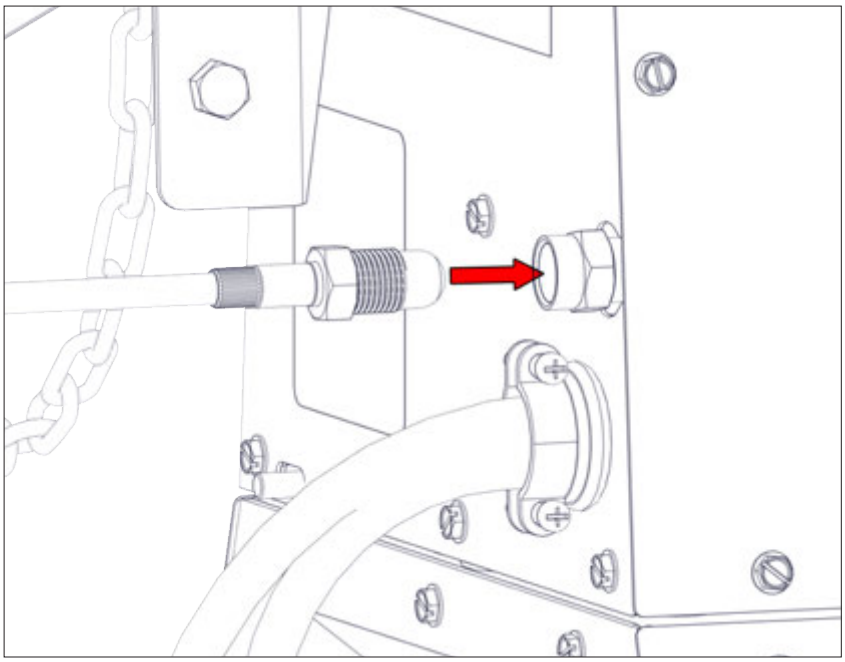
Step 4: Ground Cable

Attach a ground cable to the negative post on the back of the power supply



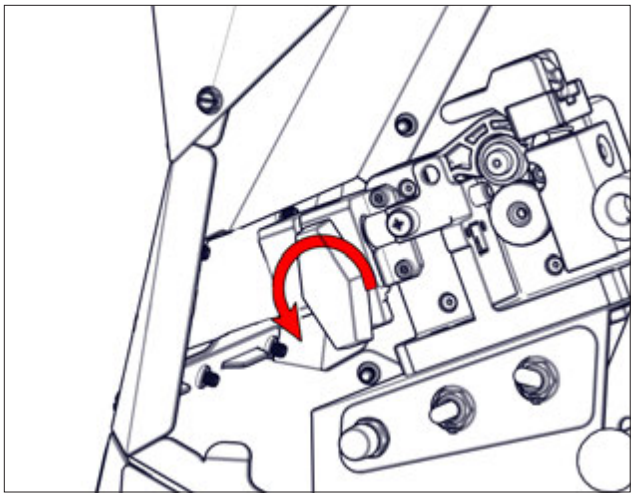
Step 5: Inlet Gas Connection

Connect a regulated gas line to the inlet in the back of the wire feeder through a flow meter typically set to 20-30 CFH

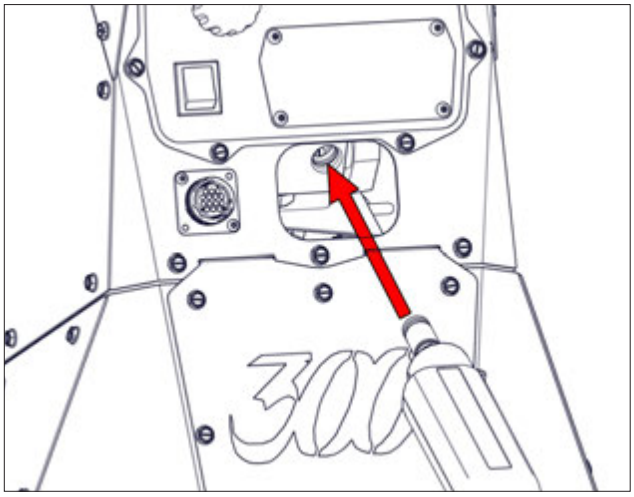


Installing Gun

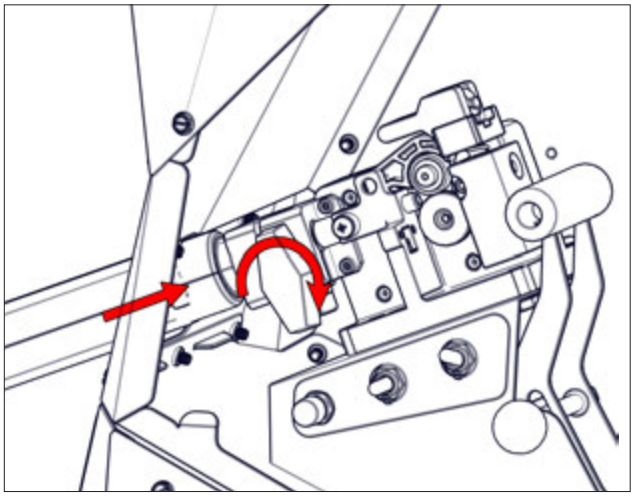
Step 1: Connect your gun



Loosen power pin connection knob



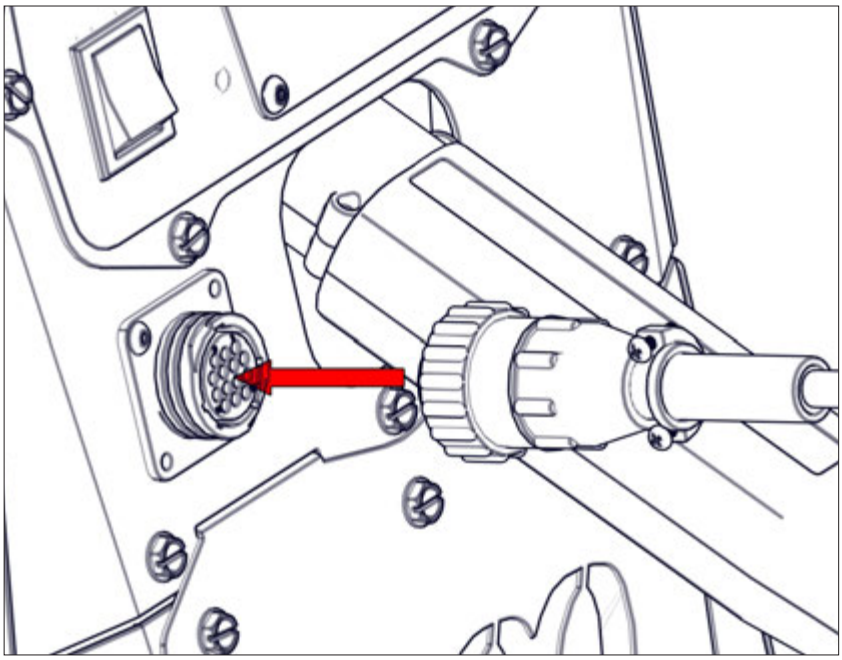
Install power pin connection of the gun. Verify the handle orientation is correct to not interfere with the sheet metal



Tighten power pin connection knob

Step 2: Connect 14-pin Amphenol

Connect the 14-pin Amphenol to the front panel of wire feeder portion of welder



Aligning keys and tighten threaded collar until locked

Verify proper tip is installed

X Series Digital Push-Pull Guns

1/4" Diameter - CobraX

Wire Size	Tip ID	QTY.	Part Number
.023" (0.6 mm)	.031" (0.8 mm)	25	621-0057-25
.030" (0.8 mm)	.036" (0.9 mm)	25	621-0325-25
.030"/.035" (0.8/0.9 mm)	.041 (1.0 mm)	25	621-0076-25
.035" (0.9 mm)	.044 (1.1 mm)	25	621-0001-25
3/64" (1.2 mm)	.053" (1.37 mm)	25	621-0327-25
3/64" (1.2 mm)	.060" (1.5 mm)	25	621-0003-25
1/16" (1.6 mm)	.074" (1.9 mm)	25	621-0075-25
1/16" (1.6 mm)	.085" (2.1 mm)	25	621-0153-25

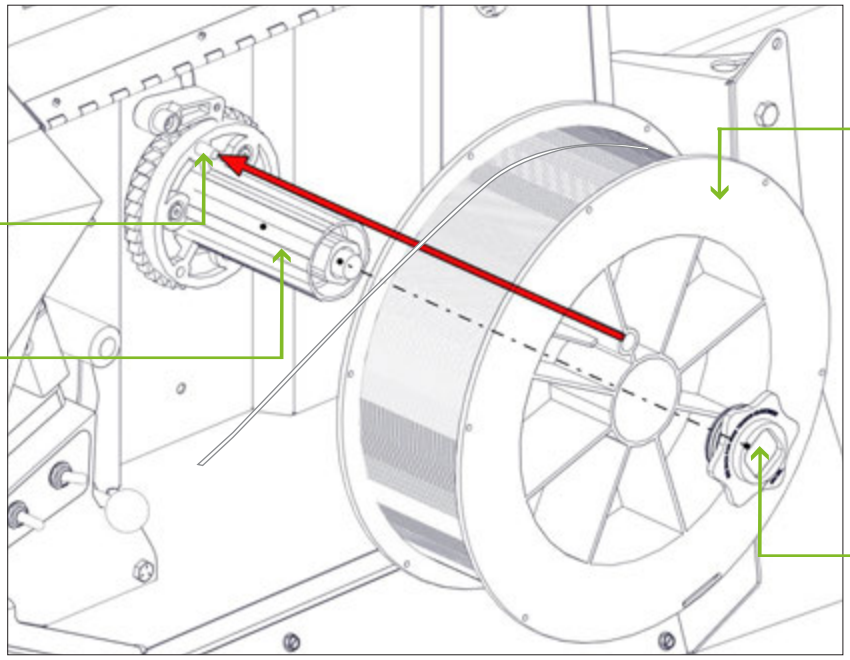
3/8" Diameter - PythonX and PrinceX

Wire Size	Tip ID	QTY.	Part Number
.030" (0.8 mm)	.041" (1.0 mm)	25	621-0390-25
.035" (0.9 mm)	.044" (1.1 mm)	25	621-0391-25
3/64" (1.2 mm)	.053" (1.37 mm)	25	621-0392-25
3/64" (1.2 mm)	.060 (1.5 mm)	25	621-0393-25
1/16" (1.6 mm)	.074" (1.9 mm)	25	621-0394-25

Installing Wire Spool

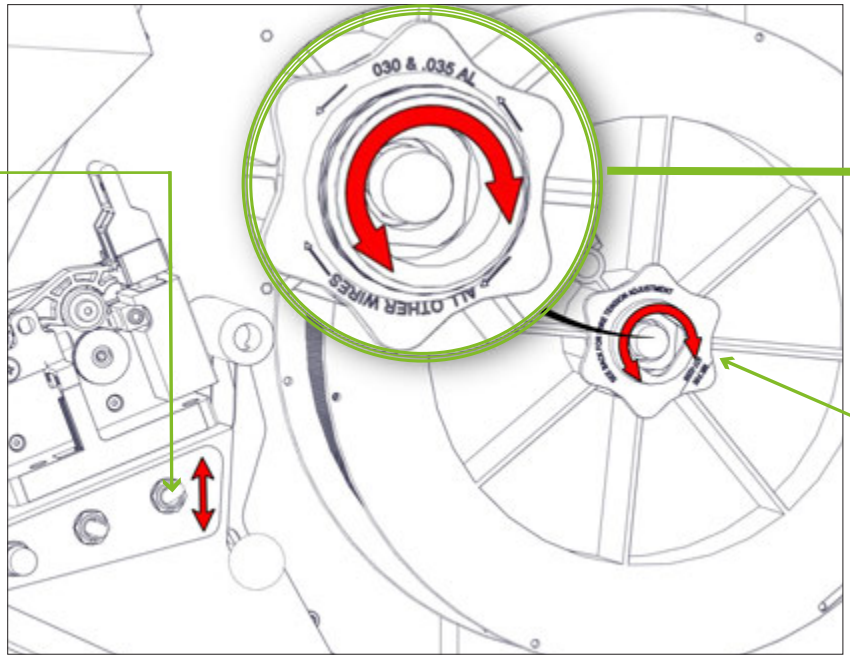
Step 1: Install Wire Spool

Loosen spindle nut, install spool on spindle with wire coming off the top as shown.



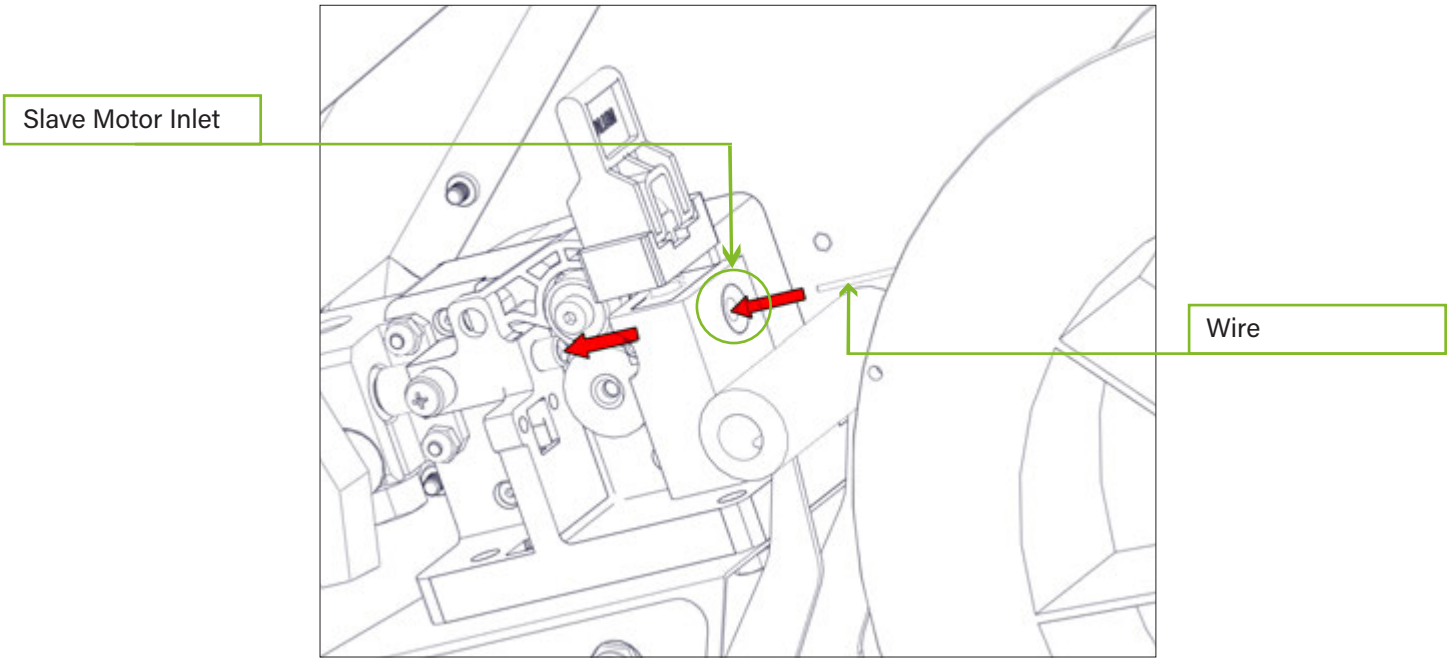
Step 2: Spool Drag, Motor Torque

Set the spindle drag and motor torque to match the wire used.



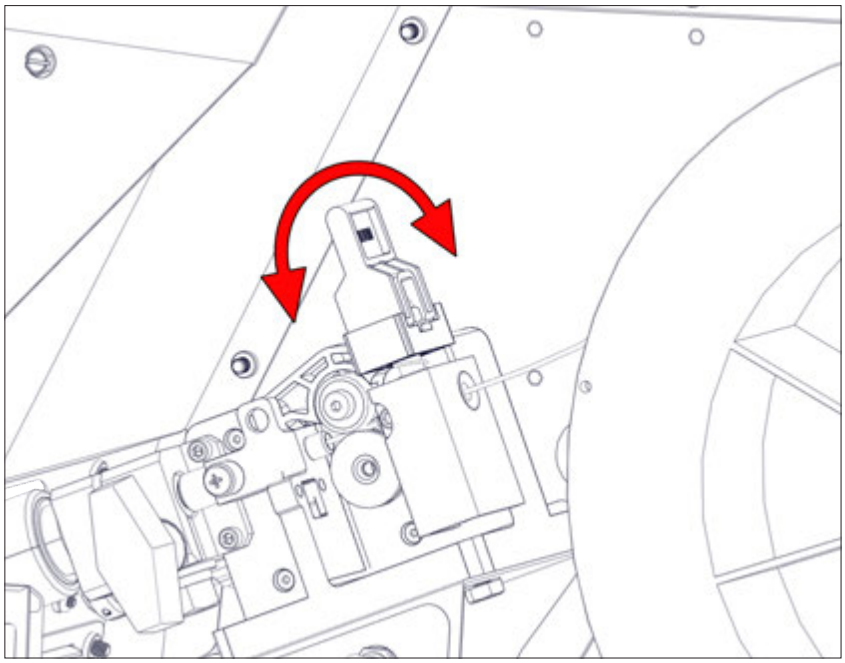
Step 3: Wire Threading

Straighten approximately 6 inches of wire to allow it to feed through the conduit gun head assembly. Thread the wire into the slave motor inlet. Feed the wire through the rollers



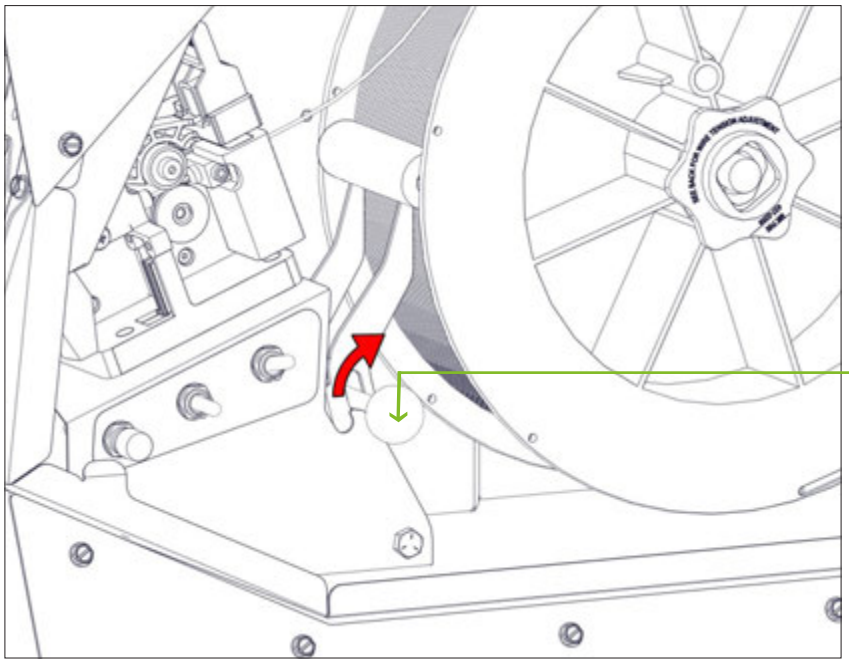
Step 4: Drive Tension

Flip the wire selector arm to either aluminum or steel based on alloy installed



Step 5: Secure Wire

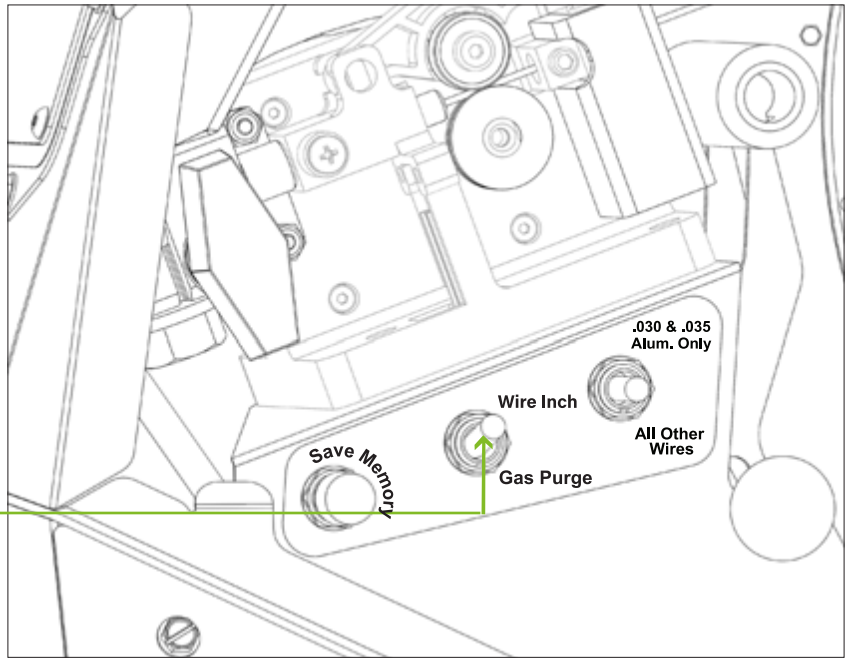
Lift to release retaining arm. This arm will aid in the level unwinding of spool during normal operation



Release retaining arm to secure wire in place

Step 6: Feed Wire Through Gun

There are two methods for initially feeding wire through the system
1. Pull the trigger on the gun
2. Hold 'wire inch' toggle up



Feed Wire by holding toggle up

Operation Mode

There are 3 operational values on your CobraMig300 User Interface:

Voltage: Is a reference voltage value from 0-10 (Actual voltage will display while welding)
Wire Speed: Wire speed displayed is from 0-800 (Displays in inches/ minute)
Memory: 1-8 User memories available

Press 'SELECT' button to switch between operational settings
The LED light will illuminate which setting is active
Use adjustment knob to adjust the value up or down

Note: Once arc is established, actual welding Voltage and AMPS will be live and displayed on the user interface for three seconds after weld sequence

~ All parameters are automatically saved per user memory~

(See advanced parameters S 04 for more details)

X Series Guns

New X Series Digital Push-Pull Guns give the user ultimate control at their fingertips. Remotely change parameters or switch between memory programs directly from the gun

All Digital X Series Guns will navigate parameters

S — Just like the 'select' button on the front panel, press the 'S' (select) button on the gun to switch between operational settings. The LED light will illuminate which setting is active on your user interphase

\+ — Just like the 'adjustment knob' on the front panel, press the '+' button on the gun to ***increase*** the value

\- — Just like the 'adjustment knob' on the front panel, press the '-' button on the gun to ***decrease*** the value

Advanced Parameters

- Hold ‘select’ button for 3 seconds to access Advanced Parameters
- Press ‘select’ button to scroll between available parameters
- Use adjustment knob to adjust values
- Press gun trigger or hold ‘select’ button for three seconds to exit

These settings are unique per memory

 Pre Purge	Sets time gas is on, prior to feeding wire. This creates an inert environment and purges oxygen from the gun prior to arc initiation	**0.0 - 10.0 seconds**
 Posa Start	Also known as “run in” will reduce the speed of wire until arc is established. Will also reduce the unnecessary popping of wire at arc initiation.	**OFF, 10%, 25%, 50%, 75%, 90%**
 Hot Start	Increases the heat after arc initiation at the set percentage for the amount of time in the hot start length.	**OFF-50%** (Increments of 5)
 Hot Start Length	Length of time hot start is active	**0.05 - 3.05** (Increments of .05)
 Crater Fill	Reduces heat at set percentage for amount of time in crater fill length parameter. This feature is active at the release of trigger or signals triggers in latch mode.	**OFF-50%** (Increments of 5)
 Crater Length	Length of time crater fill is active.	**0.1 - 1.6 seconds**
 Burn Back	Maintains weld parameters at the end of the weld for set amount of time to burn back the wire from the weld puddle.	**0 - 1000** ex. 500 = 1/2 second 1000 = 1 second
 Post Purge	Sets time gas remains on after weld is extinguished. Solidifies the weld puddle and reduces weld contamination and porosity.	**0.00 - 10.0 seconds**
 Spot Timer	Activates weld sequence for set time when trigger is depressed Used for repetitive spot or tack welds.	**OFF - 6.0 seconds**
 Trigger	There are two available values: Normal and Latch. Normal - Standard trigger operation. Latch - Pull trigger once and wire will continue to feed until trigger is pulled again.	 - Normal  -Latch

~All settings are system wide parameters~

S 01
Gas Control

There are two values available:

Cabinet - Gas is controlled at the solenoid in the cabinet for all digital guns with no gas valve including X series guns.
Gun - For use with classic guns with valve installed. Solenoid is bypassed and gas is controlled directly at the gun.

CAB - Cabinet
Gun -Gun

S 02
Pick a Gun

This parameter will not be displayed for X Series Digital guns. This setting is auto-sensed and will only display if an analog gun is installed.

Pyth - Python
Prnc - Prince XL
Cobr - Cobra MX
Cob5 - Cobra SX

S 03
Brightness

Adjusts LED display brightness

0 - 15

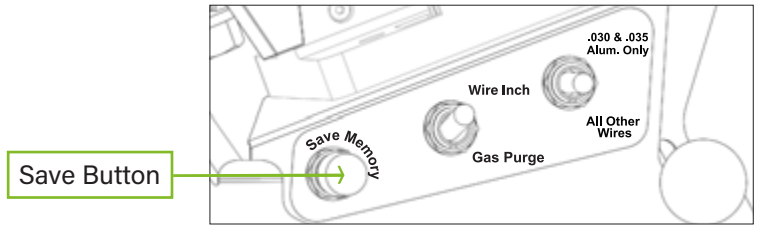
S 04
Auto Save

There are two values available:

On – This mode will automatically save all your Operational Values and Advanced Parameters for each memory individually as they are changed. DO NOT NEED TO USE THE SAVE MEMORY BUTTON. Powering off the unit will not affect the values that were automatically saved.

OFF – This mode allows memories to be saved and changes by the user to not overwrite saved memories automatically. The Save Memory button on the inside of the feeder will need to be held until the progress bars on the front panel display stop (indicating that memory has been saved). Failure to use the Save Memory button will revert all Operational Values and Advanced Parameters to the last saved values when switching between Memories in the Operation Mode. Unsaved memories will also revert to last saved values when the machine has been powered off.

OFF
On



Loc
Lock Advanced Paramters

This four digit lock will ensure that Advanced Parameters remain secure from non-authorized changes for each individual memory. USE THE “SELECT” BUTTON AND THE ADJUSMENT KNOB ON THE FRONT PANEL TO SET LOCK CODE

To Lock: Rotate the adjustment knob to the desired first number, press the “SELECT” button. Repeat until all four numbers have been established. Once all four digits have been established, hold down the “Select” button for three seconds to lock the machines Advanced Parameters and return to the Operation Mode. Record the Lock Code for future use to Unlock the Advanced Parameters.

To Unlock: Hold down the “SELECT” button for 3 seconds. The Front Panel will Display LocD. The four digit lock code originally entered must be entered using the same method as it was locked. Once the four digit lock code is entered, press the “SELECT” button once to Unlock the machine and access the Advanced Parameters.

If the Lock Code is lost or forgotten, please contact MK Products customer service at 800 787 9707