



# OPERATION AND INSTRUCTION MANUAL

## ON/OFF MAGNETIC WELDING GROUND CLAMPS

**MAG-MATE®**

**TOLL FREE: 888.582.0822**

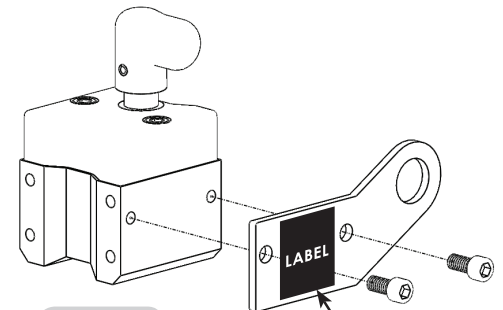
### TO USE THE WELDING GROUND CLAMP

- **Attach the ground lug to the bolt on the Ground Clamp.** Tighten the nut securely.
- **DO NOT attach any other ground clamp to this Ground Clamp** as this will degrade the performance and cause excessive heat or arcing.
- **Ensure that the ground wire is of the correct gauge** to handle the amperage of the welder. (See welder owner's manual for specific information).
- **WARNING: Ensure that the entire Ground Clamp bottom is in contact with bare metal.** Less than 100% contact may cause arcing or excessive heat buildup which may cause damage to the unit. Always remove paint, debris, spatter and any other items that would interfere with 100% contact.
- **Never strike a test arc off of the Welding Clamp.**
- For proper operation and to avoid overheating, **do not place the Welding Ground Clamp less than Three (3) Inches from the weld point.**
- **Never exceed the rated amp range of the ground clamp.** Excess Amperage can cause overheating or damage to the unit.
- **If the Magnetic Ground Clamp is found to be overheated,** remove from all sources of heat quickly and cool by spraying a light lubricant on the magnet, or by placing in a cool dry location.
- The Magnetic Ground Clamp is **designed to be placed on most sizes of Round Stock or Pipe** using the 'V Groove' in the bottom. Ensure that the pipe is along the length of the V groove, not sideways to the groove. (See illustration)
- In all cases, **ensure that the Ground Clamp does not move, rock or rotate** while in use. Ensure that the position of the cable is such that the Ground Clamp is not pulled or twisted upon when in use.
- Always **test the connection** before attempting to use the Ground Clamp to ensure that it is capable of holding to the material securely.
- **Numerous factors can negatively affect the strength of the Magnetic bond or cause arcing,** dirt, debris, oils and grease, painted surfaces and any gap between the Magnet and the metal surface will decrease the bond and may cause arcing. Ensure that the connection point is clean and free of these factors.
- **Thicker metals will be held more strongly than thinner metals.** E.g.: 1/4" (6mm) steel will be held more strongly than thin gauge metals. Thin metals will allow the Ground Clamp to slide. Use of a backing plate will help to hold more securely when placed on thin metals.
- **Always turn the clamp "OFF" and clear the Ground Clamp of all debris, slag etc...** before attaching to a Ferromagnetic surface.
- **Always ensure that the Ground Clamp is on clear and clean metal** to eliminate the possibility of arcing, excessive heat buildup or damage.
- **Always ensure that the ground wire is securely connected to the Magnetic Welding Ground Clamp** to prevent arcing or overheating.
- **Avoid sudden jerking or Shock force** as this will cause the Ground Clamp to lose its hold.

### MAGNETIC WELDING GROUND CLAMP OPERATION

1. Expose fresh metal by grinding or scraping away any debris, paint, contaminants, rust, spatter, or other substance that would prevent complete contact.
2. Attach ground wire to the bolt on ground clamp.
3. Attach the ground clamp to the bare metal
4. Turn the ground clamp "ON" and ensure a secure hold that will not move.
5. Perform the welding operation
6. Promptly turn the weld clamp "OFF" and remove from the area to avoid any heat absorption.
7. Wipe clamp clean of any debris and the clamp is ready for use again.

- **The handle on this Ground Clamp must be turned clockwise 180 degrees until it locks into place** in order to be turned "ON". It is not possible to hold the Ground Clamp in place unless fully turned "ON". **DO NOT turn "ON" unless in contact with metal!** Damage to surfaces may occur or debris may be attracted that will cause arcing.
- **To release the Ground Clamp turn the handle in the counter clockwise direction until it stops.** The Ground Clamp will **turn "OFF" and release immediately** upon turning the handle, Use Caution to ensure that it is safe to release the Ground Clamp and that nothing will fall or become dangerous.
- This Ground Clamp is capable of **exceptional Break-Away force** holding power; Magnetic Welding Ground Clamps are exceptionally strong in **Shear Force** as well. **Prying force is the least powerful** of the holding capabilities and great care must be used when attempting to use this device with Pry force.
- For safe operation, the **bottom surface of the magnet must always be flat and smooth.** If necessary, it is possible to sand the magnet face smooth using 400 grit sandpaper and a flat surface. **Always file any burrs** that would interfere with full contact.



**LABEL MUST BE  
VISIBLE WHEN  
ASSEMBLED**



**INLINE  
WITH  
"V"  
GROOVE**

**CORRECT  
PIPE / ROUND  
ATTACHMENT**

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**INDUSTRIAL MAGNETICS, INC.**

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**AUTOMATION**

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**TRAMP METAL**

**888-582-0821**