



# OPERATION MANUAL ON/OFF POWERGRIP

**MAG-MATE®**

**TOLL FREE: 888.582.0822**

## TO USE THE ON/OFF POWERGRIP

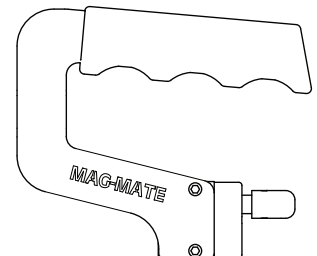
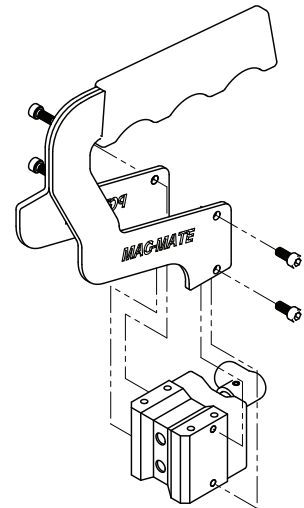
- Always **test the connection** before attempting to use the On/Off Powergrip to ensure that it is capable of holding the material securely.
- **Numerous factors can negatively affect the strength** of the magnetic bond. Dirt, debris, oils and grease, painted surfaces and any gap between the Magnets and the metal surface will decrease the bond. **Ensure that the metal 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.
- **Never exceed the rated capacity** of the device or attempt to alter the device in any way. PG3060N has up to 60 lbs (27 kg) and PG3100N has up to 100 lbs (45 kg) of Safe Working Load under ideal conditions. Tested in accordance with Magnet Distributors and Fabricators Association testing methods and represents a straight Break-Away pull. Actual in-use results will vary greatly and **user must test every bond to determine the suitability of the magnet to hold the material.**
- **Avoid sudden jerking or Shock force** as this will cause the Magnets to lose its hold.
- **This On/Off Powergrip is not designed to be used as a welding ground clamp** or as part of an electrical circuit.
- 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.

## ON/OFF POWERGRIP OPERATION

- **The handle on the Powergrip must be turned clockwise 180 degrees until it stops in order to be turned "ON."** It is not possible to hold the magnet in place unless fully turned "ON."
- **DO NOT turn "ON" unless in contact with ferrous metal.**
- **To release the Powergrip, push in and turn the handle in the counter clockwise direction until it stops. The Powergrip Lifter will turn "OFF" and release immediately** upon turning the handle. Use caution to ensure that it is safe to release the Powergrip Lifter and the nothing will fall or become dangerous.

## ON/OFF POWERGRIP USAGE

- This On/Off Powergrip is designed to lift ferrous steel pieces in the horizontal plane **UP TO 100 LBS** (45 kg) of Safe Working Load (SWL). It is perfectly suited to holding and carrying any Ferromagnetic substance such as steel plate, angle iron, pipe, and rod and bar stock.
- Maximum holding power will be achieved when the steel piece is flat, clean and bare mild steel similar to AISI 1020 of 3/16" (4.5 mm) or greater. Other materials, shapes and thinner materials will not achieve the same holding force and will have to be DeRated for safe lifting/handling.
- Other DeRating Factors include; any type of airgap, uneven surface, rough surface, debris, spatter, paint, rust, limited contact area, flexible metal, grease and other factors. Care must be taken to test the connection and to verify that it is adequate for the item being held or lifted.
- Test lifts are recommended; 1. Attach the magnet and turn it "ON" 2. Lift the material an inch or two off the surface 3. Gently shake the material in the position that it will be carried to determine that the material will not fall off of the magnet.
- If the test lift is successful, carry or lift the material, being sure that no body part will be under the material, and that no object will come into contact with the magnet during the lift/carry.
- Avoid all shock forces that could cause the magnet to lose its grip.
- Never turn the magnets "ON" when not in contact with metal. Sudden impact to the metal can occur causing personal injury or damage to the surfaces.
- When finished, turn magnet "OFF". Taking care that nothing will fall or become a hazard as the magnets will release their hold immediately.
- When used for material holding for metals that are to be welded, be careful not to overheat the magnets. Temperatures above 180° F (80°C) internal will permanently degrade the magnetic power and holding strength. Industrial Magnetics, Inc. recommends a tack weld only to keep the heat transfer to a minimum. **Industrial Magnetics, Inc. recommends a minimum of 3 inches from the magnet to the weld point**, and that the magnet is removed immediately after the tack weld to reduce heat transfer.
- The On/Off Powergrip is ideal for use in picking parts and pieces off of Cutting or Burn Tables. This may result in the magnet contacting very hot pieces of metal. Great care must be taken to ensure that the magnet does not go beyond its safe working temperature of 180° F (80°C). Limited contact time may be necessary to prevent this from occurring. The magnet may also be left on a steel plate that is not hot in between uses to act as a Heat Sink and to draw the heat from the magnet to keep it cool.



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**INDUSTRIAL MAGNETICS, INC.**

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