



INSTALLATION & OPERATION MANUAL TRANSPORTER® CYLINDER ACTUATED MAGNETS (TPCA)

TOLL FREE: 888.582.0823
PNEUMATICALLY ACTUATED
MAGNET WITHOUT CONTROLS

APPLICATION

THIS IS A GENERIC USAGE AND SAFETY MANUAL

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PRECAUTIONS & SAFETY MEASURES

PRECAUTIONS: Although a magnet can provide adequate holding through small amounts of non-ferrous materials such as dirt; in general, the greatest effectiveness of any magnetic lift is achieved when the magnet face(s)* makes complete contact with the load. Therefore, it is recommended to:

- Clear any foreign material from the part before setting the magnetic lift on it. Avoid setting the lift down in places that are very dirty or where the part is deformed.
- Periodically check the condition of the magnetic contact face(s) to ensure that it is flat and has not been accidentally damaged during its time in use.

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INDUSTRIAL MAGNETICS, INC.

1385 S M 75 • Boyne City, Michigan 49712 • Phone: (231) 582-3100 • Fax: (231) 582-2704 • www.magnetics.com • imi@magnetics.com

AUTOMATION

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MAG-MATE®

888-582-0822

TRAMP METAL

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PRECAUTIONS & SAFETY MEASURES (CONTINUED)

- Keep the contact surface of the magnets and material to be lifted clean and free of chips, oil, slag, welding beads, dirt, etc. This can be accomplished by frequently wiping the surface of the magnet with a wire brush or shop rag with the magnet in the release mode.
- DO NOT hoist a load weighing more than the lift's holding capacity.
- DO NOT hoist a load if it is unbalanced.
- DO NOT hoist a load before ensuring perfect magnet contact. First, make a test lift of 2 to 3 inches above the stack or table
- DO NOT release the load before ensuring that the load is rigidly supported on the floor or other adequate support.
- DO ensure load has steadied before lowering.
- DO ensure that load is balanced.
- DO NOT perform welding operations in close proximity to the magnet(s).
- DO NOT use the magnet lift system as part of the welding system ground circuit.
- DO NOT place the magnet lift system directly on to a conductive floor used as a welding ground plane. Use a non-conductive spacer.
- DO NOT lift people or loads with people on them.
- DO NOT leave suspended loads unattended.
- DO NOT operate the lift system with missing parts or damaged or malfunctioning lift magnet(s).
- DO NOT remove or obscure any product labeling.
- DO NOT lift loads higher than necessary.
- ALWAYS use the entire contact surface of all the system magnets.
- ALWAYS keep magnet contact face perfectly flat and parallel to the surface of the load.

PRODUCT DESCRIPTION

The Industrial Magnetics Lifting System (referred to as "System" in remainder of manual) consists of the following:

- **Magnet Lifting Pod** consisting of a magnet, housing & release cylinder. The cylinder, upon receiving an air signal from a control valve moves the magnet within the housing. By stroking the cylinder out, the cylinder moves the magnet toward the housing face and into the grip position. By stroking the cylinder in, the cylinder moves the magnet away from the housing face and into the release position.

INSTALLATION INSTRUCTIONS

MECHANICAL

- The standard magnet is supplied with a plate that has drilled and tapped holes for mounting.

PNEUMATIC

- The magnet will require a control valve (supplied by others) to actuate the release cylinder. The valve should be a 4-way, 2 position unit with a Coefficient of Flow (Cv) of .7 or greater. The valve can be solenoid or air pilot operated or manually actuated dependent upon the control scheme chosen by the user. The valve cylinder ports are to be plumbed to the cylinder inlets using adequately sized tubing or hard piping.
- Note that most systems used in conjunction with a Gorbel G-Force or similar device will have the air supplied via a coil-hose wound around the lift cable or chain. The valve can then be supplied from this hose.
- Any switches or pilot valves used to operate the control valve are to be furnished by other.

OTHER

- Crane Controls for Up/Down functions - supplied by others.

MAINTENANCE

MECHANICAL

- Attachment feature should be inspected on a regular schedule. Look for loose bolts, cracked cap or deformed bale.
- Inspect magnet pods for damage to magnet housing
- Inspect magnet pod supports. Look for loose bolts. Check for damaged adjustment knobs, cracked welds or bent pivot pins.
- Clean magnet faces at least daily with a rag or gloved hand to minimize collected tramp metal.

PNEUMATIC

- Inspect for tubing damage (Nicks / Cuts).
- Periodically check valving for wear/leakage.

TROUBLESHOOTING

If magnets will not cycle from one mode to the other:

- Check Air Pressure at source and at magnet. Pressure must match that shown on equipment drawing.
- If proper Air Pressure is present, perform the following check:
 - Place magnet in Release mode then remove to a service area.
 - Place magnet in Grip mode.
 - Pass a piece of scrap steel fastened to a non-ferrous stick or rod under each magnet.

Warning: Do not hold the scrap steel in your hand. Injury may result.

- Working magnets will readily attract the scrap. Non-working magnets will not attract the scrap.
- Inspect each magnet cylinder.
- Remove the non-working magnet for servicing. Consult IMI for replacement parts or disassembly advice.
- If magnets will not release the sheet, plate or parts:
 - Check for voltage if solenoid type, or for air flow restrictions.
 - Check for proper valve operation and tubing connections.

SPARE PARTS

- **SEAL KIT FOR CYLINDER**
- **CYLINDER**
- **STAINLESS STEEL HOUSING**
- **MAGNET IS NOT REPLACEABLE. IMI MAY BE ABLE TO REBUILD IT.**

COMMENTS OR CONCERNS?

We believe Industrial Magnetix, Inc. offers the finest Lifting Magnets available today. Great pride has gone into the design and manufacture of this unit. Any comments or concerns should be directed to our Customer Service Department at 1-888-582-0823. **We appreciate the opportunity to serve you!**

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