

HOISTING MAGNET



Part No. 11-198

Product Description

This hoisting magnet is designed to lift flat, smooth low-carbon steel sheets or plates. It is a permanent magnet requiring no electricity.

This product lifts up to 250 lbs (113.4kg) of steel. Activating the fulcrum lever releases the magnet from the load. Use this product to load counterweights into a frame while avoiding back injury.

Magnet Specialties
9812 S.E. Empire Ct.
Clackamas, OR 97015

NOTE: When the safe operation of this magnet is compromised due to age or abuse, it can be re-built or replaced through our Trade-In program. Call the factory for details at (800) 547-6353.

OPERATION

Both the magnet and the load must be clean, dry, and free of rust or scale.

1. Inspect magnet before EVERY lift as follows:
 - Inspect magnet face for foreign material and smoothness.
 - Inspect condition of lifting ball or eye bolt.
2. Make sure load is clean and dry in the area of magnet contact.
3. Check load weight and dimensions to ensure load is within rated load capacity (see chart, pg. 3).
4. Position magnet for balanced lift.
5. Make sure hoist rope, cable, and chain are not kinked or twisted.
6. Perform preliminary lift of a few inches to establish a safe lift prior to moving load. If load edges tend to droop or peel away from single magnet, multiple magnets with spreader bars must be used.
7. Push suspended loads rather than pull them.
8. Check for safe clearance around suspended load throughout intended path.
9. Elevate load only high enough to clear obstructions; "Keep It Low and Slow".
10. Accelerate and decelerate load smoothly.

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SAFETY INSTRUCTIONS

- **DON'T** ride or allow others to ride suspended loads.
 - **DON'T** allow any part of yours or others' bodies under a suspended load.
 - **DON'T** allow moving load to contact any obstruction.
 - **DON'T** use any magnet that has been abused or shows excess wear.
 - **DON'T** exceed rated capacity for any reason.
 - **DON'T** try to lift thin, large sheets or unbalanced loads.
 - **DON'T** try to lift round bars with a flat magnet.
 - **DON'T** try to lift the following: expanded metal, structural steel, uneven surfaces, stainless steel, cast iron, flooring plates, or raised lugs.
 - **DO** check and clean magnet face prior to each lift.
 - **DO** ensure load is flat and clean, and that the magnet makes 100% contact with the load.
 - **DO** make sure the load is within the rated capacity of the magnet.
 - **DO** make a trial lift before moving the load.
 - **DO** avoid swinging or jerking the load.
- Consult factory if load temperature is to exceed 250° F.***

MAGNET INFORMATION

Lifting Abilities

The factors listed below are those that limit the flow of the magnetic force from the magnet's lifting ability.

Load Surface Conditions

Magnetic lines of force do not flow easily through air; they need iron in order to flow freely. Therefore anything that creates an air gap between a magnet and the load limits the flow of magnetic force and reduces the lifting capacity. Paper, dirt, rust, paint and even a rough surface acts the same as air because it creates an air gap.

Load Length or Width

If the length of width of a load is such that it ceases to lie flat and begins to droop or sag at the edges (peeling), it can create an air gap between itself and the magnet and may suddenly release.

Load Thickness

Magnetic lines of force are more effective when they flow through iron instead of air. The thicker the load, the more lines of magnetic force are able to flow.

Thin material (load) means less iron available and thus fewer lines of magnetic force flow from the magnet into the load. Therefore, the lifting ability of the magnet is reduced. Workload capacities in the chart on page 13 are based on lifting 1" thick mild steel having a Blanchard ground surface.

MAGNET INFORMATION (CONT'D)

Load Alloy

Low-carbon steels, such as 1020 steel, are nearly as good at conducting magnetic lines of force as pure iron. However, many other alloys contain non-magnetic materials which reduce the ability of magnetic lines of force to flow into the load.

Some materials, although ferrous, are not suitable for magnetic handling. Stainless steel (300 series) is a poor conductor of magnetic force and no lift should be attempted. Type 416 Stainless steel is magnetic, but it can only conduct one-half as much magnetic force as 1020 steel. Cast iron also has only half the magnetic force of 1020 steel.

Attitude of Load

As the attitude of the surface of the load to which the magnet is attached (lifting surface) changes from horizontal to vertical, the lifting ability of the magnet decreases. When the lifting surface of the load is vertical, the ability of the magnet to support the load is dependent upon the coefficient of friction of the lifting surface as well as the weight of the load. Our hoist magnets are designed to lift straight up. No other types of lifting are recommended.

Portion of magnet face in contact with load: The full face of the magnet must contact the load if the magnet is to achieve maximum strength. Holes in that portion of the surface of the load upon which the magnet is placed will reduce the magnet's lifting capability. If the load is narrower or shorter than the magnet face, the magnet's lifting ability will also be reduced.

SAFETY ALERT: HOIST MAGNET CAPACITIES

Magnet capacity depends partly upon thickness of steel being lifted. This chart is based on clean, ground steel.

Steel	1037Jr
1"	1000
1/2"	900
3/8"	650
1/4"	500
1/8"	200
1/16"	100

TYPICAL SPREADER BAR

