



MAGNETIC TUBES & GRATES

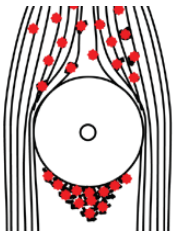
INSTALLATION AND OPERATIONS MANUAL

P.O. #: Order #: Part #:

OVERVIEW & OPERATING PRINCIPLE

Magnetic Grate Tubes

IMI's magnetic tubes are ideal for custom installations that require magnetic separation, but lack the space for a housing or grate assembly. Tapped mounting holes located in each end of the tube allow for easy bolt-in installation. Welded ends are also available for upgrading existing Magnetic Separators. Customers can arrange these tubes in a configuration that works best for their magnetic separation needs.

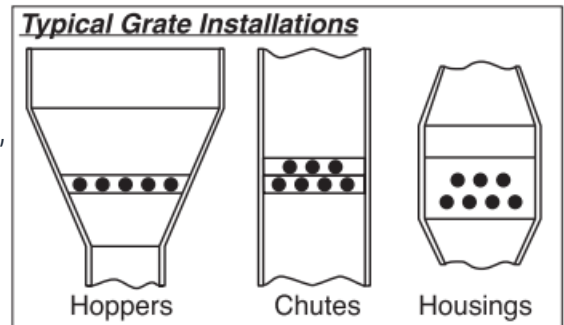


Grate tubes are typically arranged on alternating centers in a processing chute or housing to force product to flow in a zig-zag pattern. As ferrous metal passes through the magnetic field, it is held to the tubes and separated from the product. Captured tramp metal is held on the tubes until cleaning is initiated or activated; cleaning needs to be performed on a regular basis to eliminate buildup and prevent wash-off back into the product flow - see Cleaning Guidelines.

Magnetic Grate Assemblies

Magnetic Grate Assemblies are ideal for ferrous metal separation in bins, chutes, drawers, bag dumps and hoppers.

IMI grates are constructed with 1" diameter magnetic tubes placed on 2" centers in a heavy duty stainless steel frame. Magnetic grates are available in a variety of round, square and rectangular configurations. See illustrations below.

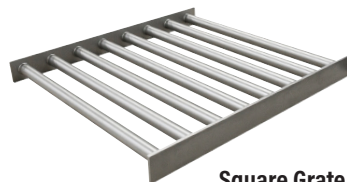


OPTIONAL CONFIGURATIONS

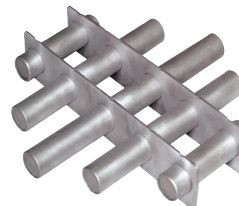
Many alternatives are available in both standard and custom configurations.



**End Frame with
Sides**



**Square Grate with
Food Grade Finish
(Fully Seam Welded)**



**Round Grate with
Customary Finish
(Rolled & Staked)**



HEALTH AND SAFETY WARNINGS

GENERAL



Please be advised that in and around the application of magnetic equipment, there are potential safety concerns that can arise with sensitive medical devices:



- » Pacemaker behavior can be affected when they are near strong magnetic fields
- » Medical implants and external fixation systems can be influenced by magnetic fields
- » Hearing aid behavior may be affected when exposed to strong magnetic fields

Any individual that carries the above equipment or other sensitive medical devices should use caution when they are around or handling magnets. For more specific information the wearer should contact their physician.



Beware of pinch points from sudden attraction and unexpected movement between magnets and ferrous metal equipment components or tools.

CLEANING GUIDELINES AND PROCEDURES

It is recommended that cleaning frequency is scheduled such that magnetic build-up does not exceed 1mm of fines covering up to 50% of a magnetic surface. The recommended cleaning interval is at least twice in an 8-hour shift. Note: Cleaning frequency is dependent on the amount of tramp metal being separated from the product; if heavy concentrations of tramp metal are detected additional cleaning is necessary. When cleaning, ensure that the product flow has been shut off and that the magnet assembly is empty. If possible pull grate tubes and grate assemblies out, one at a time. Use a rag/gloved hand to wipe the collected tramp metal down to the end of the tubes. Reinstall.

MAGNET DEGRADATION

The force of a permanent magnet can degrade over time and when subjected to external influences. The most common factors for loss of performance or failure include:

- » Blunt force impact such as dropping or banging on a magnet which can cause fractures
- » Temperatures exceeding the operating range of the magnet material
 - » 180°F for neodymium material
 - » 480°F for ceramic grade 8
 - » High temperature options are available.
- » Exposure to electrical fields, like generators, lightning or welding ground circuits, can result in loss of magnetism



It is recommended that magnetic devices are audited annually. IMI can provide a Magnet Audit and Plant Survey to evaluate magnetic equipment performance and assist with compliance to global industry standards; Pull Test Kits are available for self-auditing plant activity.

COMMENTS OR CONCERNS?

We believe Industrial Magneticon, Inc. offers the finest Magnetic Grate Tubes and Grate Assemblies 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 1-888-582-0821.

We appreciate the opportunity of serving you!