

Installation, Operation and Maintenance Instructions



RADIAL FIELD (RF) CARTRIDGE MAGNET

ERIEZ MAGNETICS HEADQUARTERS: 2200 ASBURY ROAD, ERIE, PA 16506-1440 U.S.A.
WORLD AUTHORITY IN ADVANCED TECHNOLOGY FOR MAGNETIC, VIBRATORY and INSPECTION APPLICATIONS

Introduction

This manual details the proper steps for installing the Radial Field (RF) Cartridge Magnet.

Careful attention to these Installation Requirements will assure the most efficient and dependable performance of this equipment.

If there are any questions or comments about the manual, please call Eriez Manufacturing at 814/835-6000 for Radial Field (RF) Cartridge Magnet assistance.



CAUTION - STRONG MAGNET

This equipment includes one or more extremely powerful magnetic circuits. The magnetic field may be much stronger than the Earth's background field at a distance several times the largest dimension of the equipment.

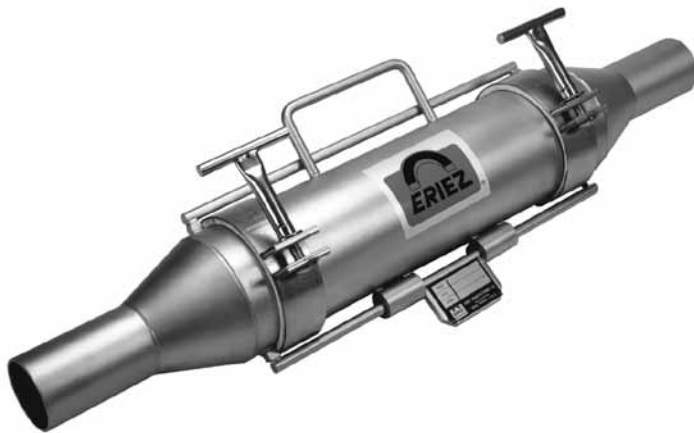
- **If you use a heart pacemaker or similar device you must never approach the equipment because your device may malfunction in the magnetic field with consequences up to and including death.**
- **To avoid serious pinch-type injuries caused by objects attracted to the magnet, keep all steel and iron objects well away from the equipment. Do not allow hands, fingers, and other body parts to be caught between the equipment and "workpiece" being lifted.**
- **Keep credit cards, computer disks, and other magnetic storage devices away from the equipment because magnetically stored information may be corrupted by the magnetic field.**
- **Keep electronic devices, such as computers or monitors, away from the equipment because exposure to the magnetic field may result in malfunction or permanent damage to such devices.**

Contact Eriez if you have a question regarding these precautions.

Description

Eriez RF Cartridge Magnets are designed to remove tramp iron from dry, free-flowing material in pipelines. Material enters the housing and is distributed by a solid stainless steel cone. A pressure drop, approximately equal to flow through a 90° elbow, occurs to allow the magnetic cartridge to capture and hold tramp iron before the clean material exits. The cartridge magnet has tapered steps to increase removal of smaller tramp iron.

Standard magnet circuits are suitable for temperatures below 150°F (65°C). Special circuits are required for higher temperatures depending upon application criteria. Please review the Eriez order acknowledgment or contact your local representative if you have questions about the circuit provided and its temperature limitations.



Installation

The RF Cartridge Magnet is installed by cutting out a section of the pipe where magnetic protection is required. Slip the RF unit into position and rigidly attach each end of the housing to the mating pipe. The RF unit must be installed with the cartridge magnet cone pointing upstream into the flow.

Factors That Affect Magnet Performance

1. High Temperature

Standard rare earth circuits should not be subjected to temperatures in excess of 150°F (65°C). Special circuits are available for higher temperatures.

2. Direct Current

Welding equipment should not be used on or in close proximity to Eriez Permanent magnet circuits. Demagnetization can result from this.

3. Moisture

The raw magnet material should not be exposed to liquids. This would normally only result from breaching the magnet enclosure.

4. Physical Abuse

The magnet castings are brittle, and when subjected to repeated abuse such as banging on a table or dropping on the floor, the castings may shatter and the tubes may crack. Over time abuse will cause the magnetic field will diminish.

Operation & Maintenance

⚠ CAUTION - FINGER PINCH POSSIBLE
Cartridge magnets are very strong and will attract to any iron, steel railing, or beams in the cleaning area.

There are no moving parts in an Eriez RF Cartridge Magnet. The cartridge magnet is the only “working” component. As material flows over the magnet, the powerful magnetic field reaches out to attract and hold ferrous contaminants.

The only maintenance required is periodic cleaning of the magnet. **This cleaning is absolutely essential.** Overloading the magnet with entrapped ferrous material will impair efficiency. Frequency of cleaning is determined by the amount of ferrous contamination removed from the material by the magnet.

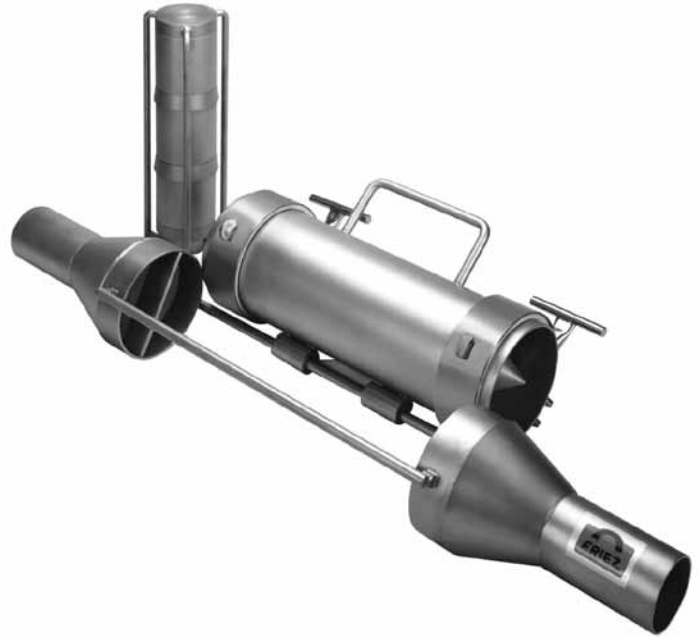
Operation & Maintenance *(cont.)*

To clean, release clamps and remove magnet assembly from the RF housing. Simply wipe the accumulated tramp iron from the cartridge magnet with a rag. If some fine iron still remains on the cartridge, use the sticky side of masking tape and blot off the remains. Return magnet assembly to the RF housing and engage clamps.

Repair & Alteration

Alteration or disassembly of the assembly would disturb a carefully engineered magnetic circuit which could only be restored by returning the unit to our factory for rebuilding and recharging.

Repair, alteration or disassembly of this magnetic equipment in the field without written authorization and instructions by Eriez Manufacturing Company nullifies the responsibility and guarantee of the manufacturer.



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Headquarters: 2200 Asbury Road, Erie, PA 16506-1440 U.S.A.

Telephone: 814/835-6000 • 800/345-4946 • Fax: 814/838-4960 • International Fax: 814/833-3348

Web Site: <http://www.eriez.com> e-mail: eriez@eriez.com

Manufacturing Facilities: AUSTRALIA • BRAZIL • CANADA • CHINA • INDIA • JAPAN • MEXICO • SOUTH AFRICA • UNITED KINGDOM • UNITED STATES