

ERIEZ



PERMANENT PLATE MAGNETS

PLATES • HUMPS • ROUND PIPE SEPARATORS



ERIEZ
GLOBAL LEADER IN SEPARATION TECHNOLOGIES

About Eriez

Established in 1942, Eriez stands as a pioneering force in separation technologies, embodying a truly global presence.

With 12 wholly owned subsidiaries spread across the globe, we proudly design, manufacture, and support our magnetic separation, flotation, metal detection, and material handling equipment on an international scale.

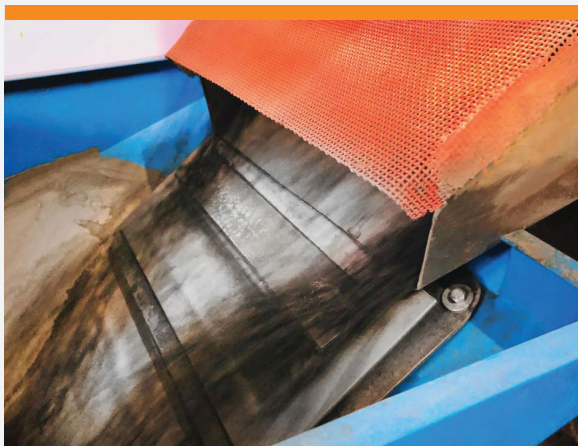
Our dedicated team of knowledgeable and experienced sales engineers collaborates closely with customers, understanding their unique challenges to deliver dependable, high-performance equipment, systems, and solutions.

Whether clients require our standard equipment or bespoke solutions tailored to their precise specifications, Eriez delivers.

Drawing from more than 80 years of experience across diverse industries, including mining and minerals processing, food processing and packaging, aggregates, metals recycling, and many other sectors, Eriez leverages its extensive experience to design and supply products that elevate productivity, efficiency, and product purity.

Eriez remains steadfast in its commitment to setting the global standard for excellence in key technologies, driving innovation and reliability across industries worldwide.

Permanent Plate Magnets

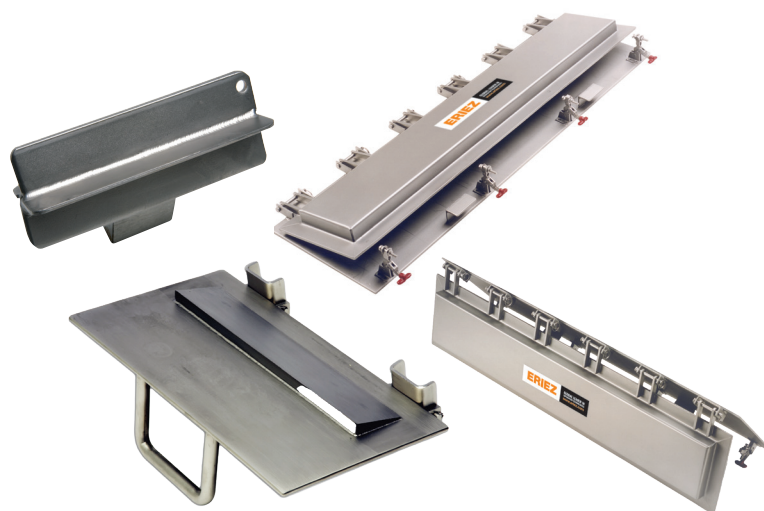


Standard Design and Construction

- **All Stainless Steel**
For best resistance to wear from corrosive materials and atmospheres
- **Milled Stainless Steel Step**
400 series stainless steel 1/2" (12.7 mm) high tapered step provides a magnetic and physical barrier to provide superior removal and retention of fine ferrous contamination
- **Welded Construction**
Compact and rugged design is easy to install and will last for years of continuous service in the most demanding environments
- **Mounting Hardware**
Standard units include a heavy duty stainless steel hinge, zinc plated latch and latch mounting hardware for simple installation and easy maintenance

Optional Features

- **Sanitary Construction**
Identical to the standard magnets but manufactured in accordance with accepted sanitary standards
- **Fixed or Suspended Applications**
We can provide the unit without a hinge and incorporate a flange bolt hole pattern or lift lug for easy installation
- **Stripper Plates**
Non-magnetic stainless steel covers hinge on and off the magnet face to provide a quick and positive discharge of collected tramp metal






Permanent Plate Magnets

Eriez Permanent Plate Magnets provide dependable and economical solutions to problems associated with tramp iron contamination in processing lines.

Ceramic or Rare Earth Plate Magnets installed in chutes, spouts, ducts, pipes, or suspended over conveyors remove tramp iron to help stop costly shutdowns associated with machinery damage, avoid spark-caused fires and explosions, prevent product contamination and improve product purity. The magnetic field penetrates the product flow and grabs tramp iron as it passes, holding it tightly to the magnet surface until it is removed during the cleaning process.

Application Guide

	Fine Ferrous Contamination	Small Tramp Iron	Medium & Large Tramp Iron
TO REMOVE			
CHOOSE OUR	Rare Earth+ or Xtreme Rare Earth+ Model	MaxiPower or SuperBrute for Suspended Applications	SuperPower or BrutePower for Suspended Applications

Permanent Plate Magnet Models

SuperPower

2-1/16" (52 mm) thick, projects 2 to 3" (51 mm–76 mm)

Our most popular ceramic unit removes tramp metal from a variety of heavy duty applications. SuperPower creates a powerful magnetic field projecting 2–3" (5–7 mm) into a burden to remove large tramp iron from product flows.

MaxiPower

2-11/16" (68 mm) thick, projects 3 to 4" (76 mm–102 mm)

This extra heavy-duty ceramic magnet incorporates 75% more magnet material in a thicker and longer plate so feed material is exposed to the magnetic field 40% longer than our next closest size. MaxiPower creates a deep magnetic field that will project 3–4" (76 –102 mm) into a burden to remove both small and large tramp iron.

Rare Earth+

1-3/16" (30 mm) thick, high holding force

Rare Earth+ Magnetic Plates are smaller than conventional magnets, but these magnets create a field so powerful that wash off is virtually eliminated. They are ideal for food and pharmaceutical applications where fine particles can contaminate products.

Xtreme Rare Earth+

2-1/16" (52 mm) thick, maximum holding force

When deeper product depths and higher suspension heights are required, Xtreme Rare Earth+ Magnets provide maximum separation performance. Eriez Xtreme Rare Earth+ Permanent Plate Magnets are the strongest in the industry.

BrutePower

4-7/8" (124 mm) thick, projects 4 to 5" (102 mm–127mm)

BrutePower Ceramic Plate Magnets create a deep magnetic field that will project 4–5" (102–127 mm) into a material burden to remove damaging tramp iron contamination. They are typically used in wood chips processing, sugar cane and other extremely difficult applications.

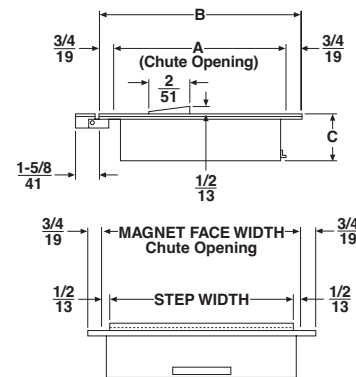
SuperBrute

6-3/8" (162 mm) thick, projects 6 to 7" (152 mm–178 mm)

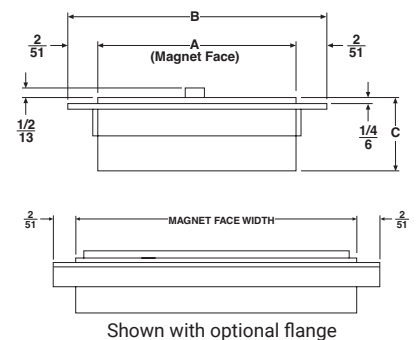
SuperBrute Ceramic Plate Magnets are typically used in suspended applications to remove large tramp iron from deep product flows in restricted height areas. Typical suspension height is less than 7" (178 mm).



SuperPower, MaxiPower, Rare Earth+ & Xtreme RE+



BrutePower & SuperBrute



Dimensions

Model	A		B		C		Approx. Weight Per Inch	
	in	mm	in	mm	in	mm	lbs	kg
SuperPower	7-5/8	194	9-1/8	232	2-1/16	52	2.8	1.3
MaxiPower	10-5/8	270	12-1/8	308	2-11/16	68	4.7	2.1
Rare Earth+	5-1/2	140	7	178	1-3/16	30	1.7	.77
Xtreme RE+	5-1/2	140	7	178	2-1/16	52	2.4	1.1
BrutePower	13-1/4	337	17-1/4	438	4-7/8	124	14	6.4
SuperBrute	13-1/4	337	17-1/4	438	6-3/8	162	17.25	7.8

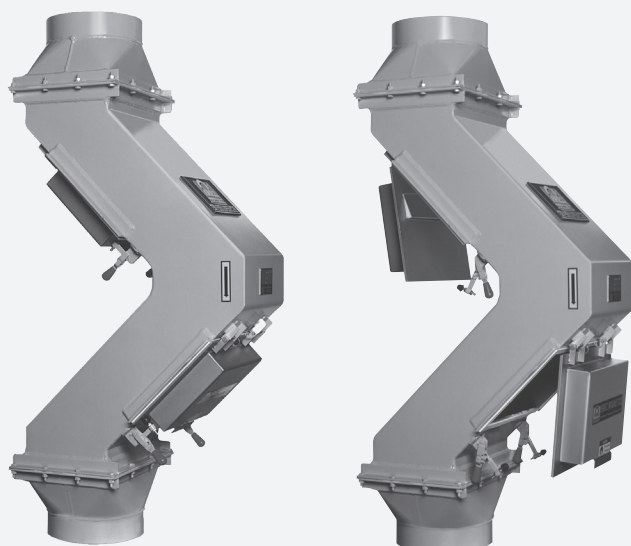
Standard plates are available in even inch magnet face width increments, e.g., 8, 10, 12 inch (103, 254, 305 mm).

Permanent Plate Magnets with Housings

Eriez' Magnetic Humps and Round Pipe Separators provide a simple and effective way to remove tramp iron contamination from gravity or pneumatically conveyed dry, free-flowing products such as feed, grain, wood chips, food stuffs, sand or plastic.

Features

- Ceramic and Rare Earth magnet strengths are available
- Minimized overall height for difficult retrofit installations
- All welded, mild or stainless steel construction
- De-Sta-Co clamps for easy operation and maintenance



Operating Position

Cleaning Position

Gravity Flow Magnetic Humps

Designed for heavy, loose-flowing materials are conveyed in vertical gravity flow chutes. Ferrous contamination remains on the face of the magnets until an operator removes it.

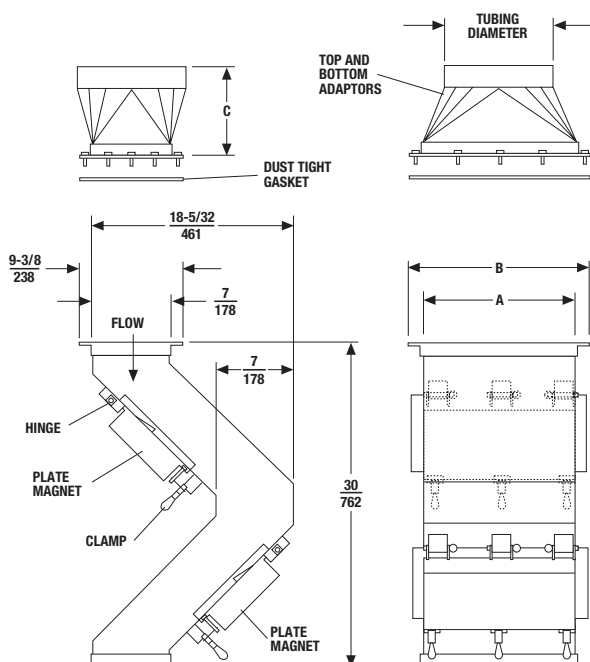
- Various strength magnets—Rare Earth+, Xtreme Rare Earth+, SuperPower, or MaxiPower
- Magnets are typically hinged to the housing, although on larger units, the magnets can be permanently attached with cleanout panels opposite the magnet face for tramp iron removal
- Adaptors are optional

Pneumatic Magnetic Humps

Designed to eliminate tramp iron in pneumatic lines. Assembly consists of two powerful permanent plate magnets in an enclosed rectangular sheet metal housing.

- Magnets swing open for cleaning
- Standard pneumatic Humps are constructed for installation on the suction side of a blower*
- Optional adaptors convert any shaped piping or outlet to the rectangular opening of the Hump

*Special construction may be required to tolerate the expected air pressure.



Dimensions

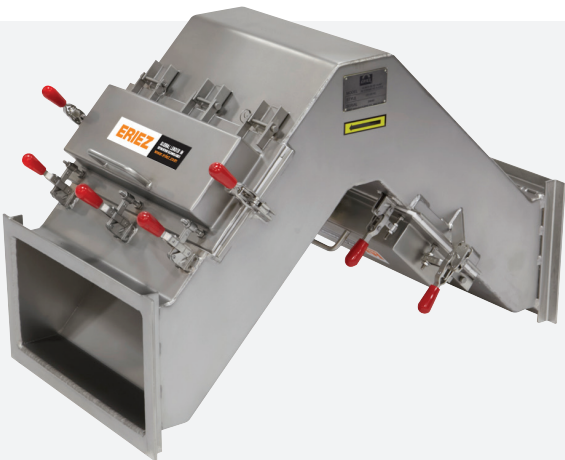
Hump Size		Tubing Diameter		A		B		C	
in	mm	in	mm	in	mm	in	mm	in	mm
8	203	6	152	8	203	10-3/8	264	6	152
10	254	8	203	10	254	12-3/8	314	6	152
12	305	9	229	12	305	14-3/8	365	7	178
14	356	10	254	14	356	16-3/8	416	8	203
20	508	12	305	20	508	22-3/8	568	12	305
24	610	14	356	24	610	26-3/8	670	13	330
30	762	16	406	30	762	32-3/8	822	17	432
36	914	18	457	36	914	38-3/8	975	20	508
44	1118	20	508	44	1118	46-3/8	1178	24	610

Self Cleaning Humps

Powerful permanent self-cleaning magnets automatically remove tramp iron from free-flowing materials conveyed by gravity in vertical pipes or chutes.

Operation

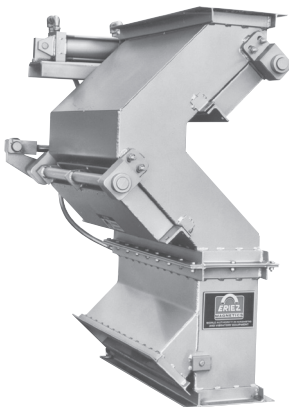
To clean the magnets, product flow is momentarily stopped. A push-button (or optional timer) activates air cylinders which control a diverter gate near the bottom of the unit which closes off the product discharge area and opens a tramp iron discharge chute. Air cylinders then swing the magnets away from the housing, releasing the iron which falls to the diverter gate and out the discharge chute. Pushing the button then reverses the process, resuming normal production in less than 15 seconds.



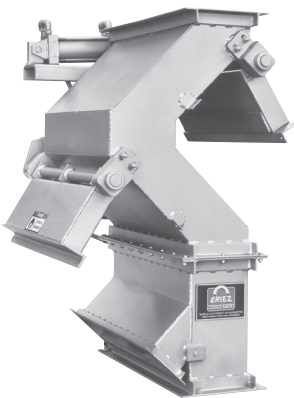
Features

- Tapered step holds small tramp iron
- Self-cleaning cycle time under 15 seconds
- All stainless steel product contact surfaces
- Oversized air cylinders
- Sizes for pipes up to 18-inch (457 mm) diameter

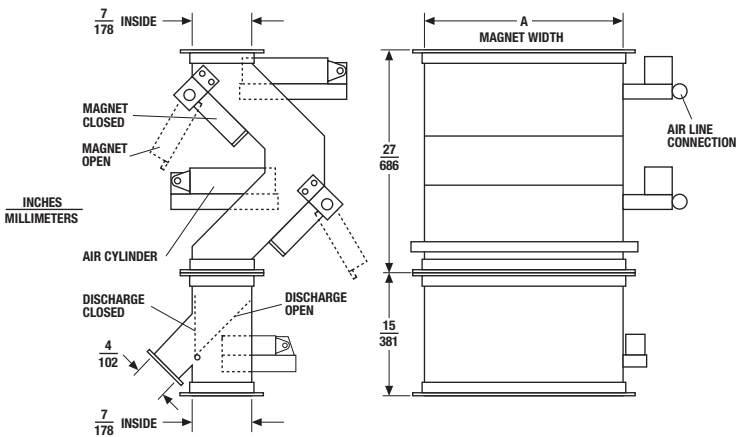
Self Cleaning Humps



Operating Position



Cleaning Position



Diameter		Magnet Width		Weight	
in	mm	in	mm	lb	kg
6	152	8	203	200	91
8	203	10	254	225	102
9	229	12	305	250	113
10	254	14	356	280	127
12	305	20	508	365	166
14	356	24	610	420	191
16	406	30	762	500	227
18	457	36	914	600	272

* Capacities are based on dry sand weighing 100 lb/cuft (1,600 kg/cu m)

Round Pipe Separators

The Round Pipe Separator makes the installation of plate magnets in round gravity flow chutes simple and economical.

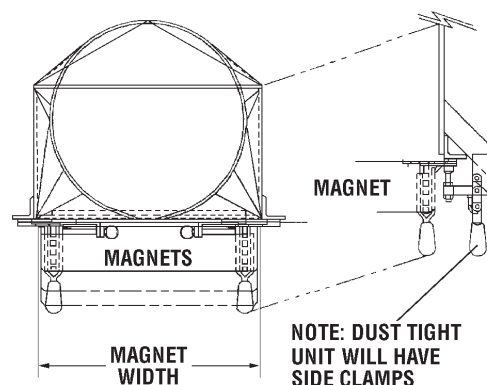
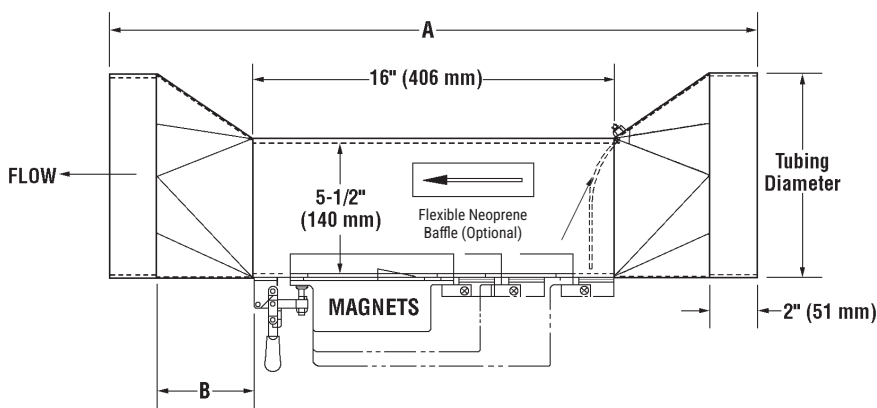
The assembly is installed by cutting out a section of the chute where magnetic protection is required, and slipping the separator into position. A neoprene baffle directs the flow directly over the magnet face, which assists in tramp iron removal.

The magnet required will be determined by the application. The assembly is built to accommodate SuperPower, MaxiPower, Rare Earth+ or Xtreme Rare Earth+ magnets.

The Round Pipe Separator features powerful magnetic elements, rugged construction and no operation cost.



Round Pipe Separators



Magnet Width*		Tubing Diameter		A		B	
in	mm	in	mm	in	mm	in	mm
6	152	4	102	26	660	3	76
8	203	6	152	26	660	3	76
10	254	8	203	28	711	4	102
12	305	9	229	30	762	5	127
14	356	10	254	32	813	6	152
20	508	12	305	36	914	8	203
28	711	14	356	40	1016	10	254
36	914	16	406	44	1118	12	305
46	1168	18	457	48	1219	14	356

Dimensions and specifications are subject to change without notices.

*Smaller housing heights available on smaller diameter units

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