

# Permanent Plate Magnets



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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.

## 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" 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.



*Step holds ferrous material from product flow.*

## APPLICATION GUIDE

	Fine Ferrous Contamination	Small Tramp Iron	Medium and Large Tramp Iron
To Remove			
Choose Our	<b>Rare Earth+ or Xtreme Rare Earth+ Model</b>	<b>MaxiPower or SuperBrute for Suspended Applications</b>	<b>SuperPower or BrutePower for Suspended Applications</b>

## OPTIONAL FEATURES

### Sanitary Construction

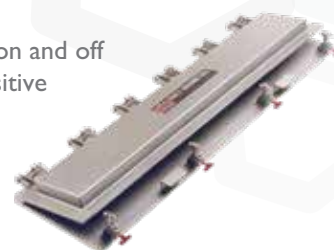
Identical to the standard magnets but manufactured to contain no pits, cracks or crevices, in accordance with accepted sanitary standards.

### 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 MAGNET MODELS

### SuperPower - 2-1/16" thick, projects 2 to 3"

Our most popular ceramic unit removes tramp metal from a variety of heavy duty applications. SuperPower creates a powerful magnetic field projecting 2–3" (50–75 mm) into a burden to remove large tramp iron from product flows.

### MaxiPower - 2-11/16" thick, projects 3 to 4"

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" (75–100 mm) into a burden to remove both small and large tramp iron.

### Rare Earth+ - 1-3/16" 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" 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" thick, projects 4 to 5"

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" thick, projects 6 to 7"

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" (152 mm).

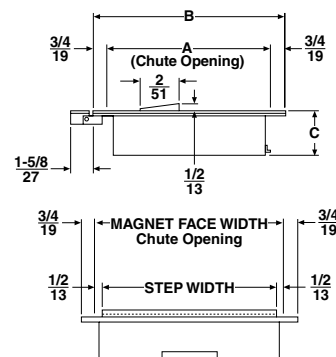


MaxiPower

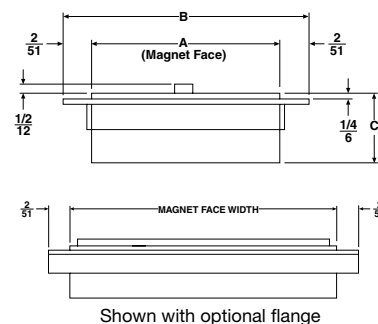


SuperBrute

### SuperPower, MaxiPower, Rare Earth+ & Xtreme RE+



### BrutePower & SuperBrute



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	336	17-1/4	438	4-7/8	124	14	6.4
SuperBrute	13-1/4	336	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).

# *Permanent Plate Magnets*

WITH HOUSINGS

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## FEATURES

- **Ceramic or 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**

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.

## *Gravity Flow Magnetic Humps*

The Gravity Flow Magnetic Hump is used for tramp iron removal where heavy, loose flowing materials are conveyed in vertical gravity flow chutes.

Material enters the Hump and is forced to change direction against the face of a powerful plate magnet. As the material tumbles, it again changes direction and is forced against the face of a second plate magnet. The Hump greatly increases the probability of capturing ferrous material.

The ferrous contamination remains on the face of the magnets until an operator swings the magnet out of the product flow and physically removes it.

Various strength magnets—Rare Earth+, Xtreme Rare Earth+, SuperPower or MaxiPower—can be selected to suit specific application requirements. 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

The elimination of tramp iron from materials traveling in pneumatic lines is handled effectively by the Pneumatic Magnetic Hump. The assembly consists of two powerful permanent plate magnets in an enclosed rectangular sheet metal housing. Magnets are hinged to the housing and swing open for cleaning. Standard pneumatic Humps are constructed for installation on the suction side of a blower.

Eriez should be consulted on applications where material is to be blown through a Hump, as special construction may be required to tolerate the expected air pressure. Adaptors can be ordered, which convert any shaped piping or outlet to the rectangular opening of the Hump. Choking is eliminated by increasing the relative area of the Hump in correct proportion to the diameter of the pipe.



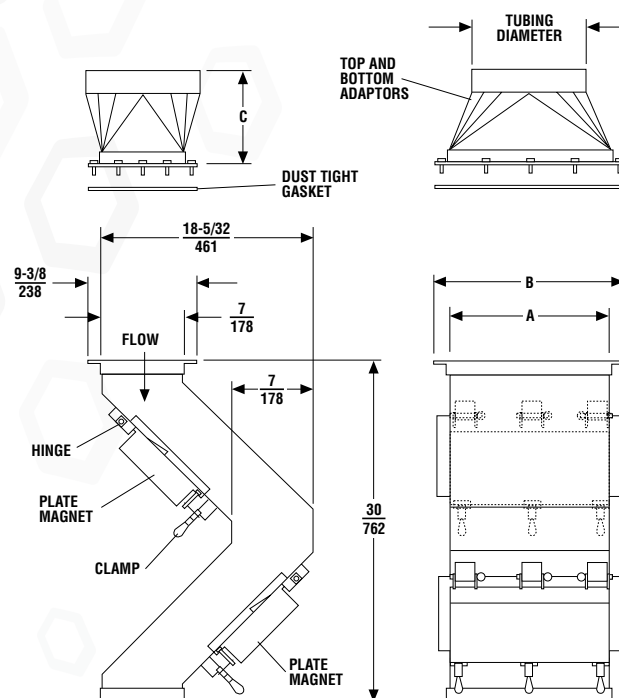
*Operating Position*



*Cleaning Position*

## 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	601	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

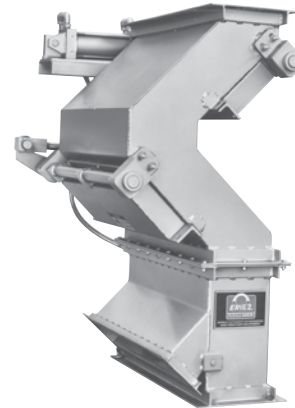
Powerful permanent self-cleaning magnets automatically remove tramp iron from free-flowing materials conveyed by gravity in vertical pipes or chutes.

## FEATURES

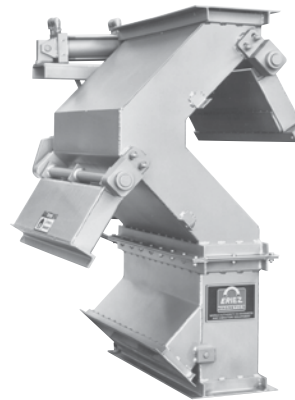
- Tapered step holds small tramp iron
- Self-cleaning cycle time under 15 seconds
- All stainless steel product contact surfaces
- Oversized air cylinders
- Sizes for pipes up to 18-inch (457 mm) diameter

## 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.



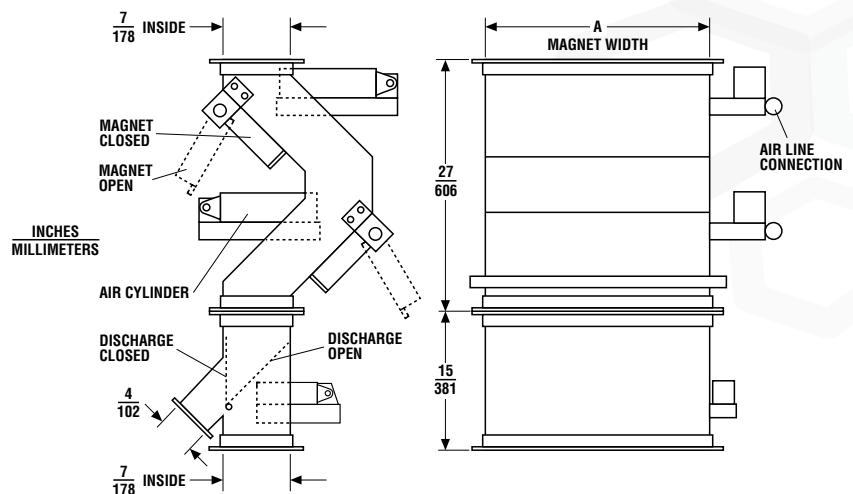
*Operating Position*



*Cleaning Position*

## Dimensions

Diameter		Magnet Width		Weight	
in	mm	in	mm	lb	kg
6	152	8	203	200	91
8	203	10	254	225	103
9	229	12	305	250	113
10	254	14	352	280	127
12	305	20	508	365	166
14	357	24	610	420	191
16	406	30	762	500	227
18	457	36	914	600	272





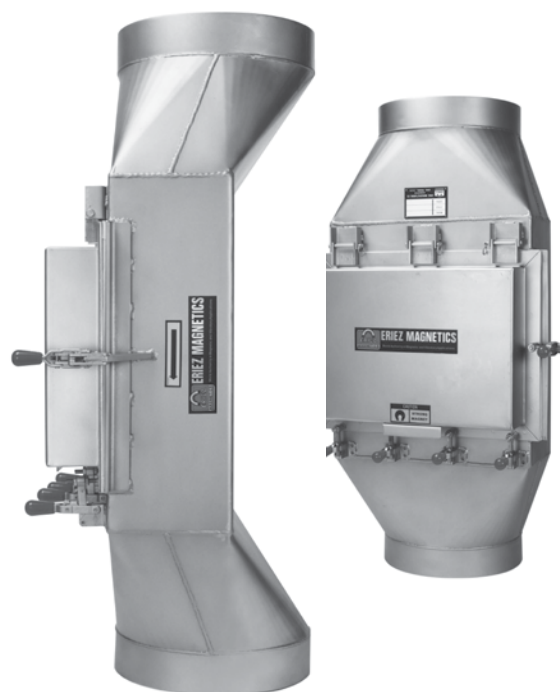
# Round Pipe Separators

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

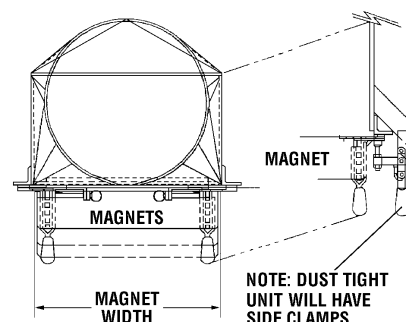
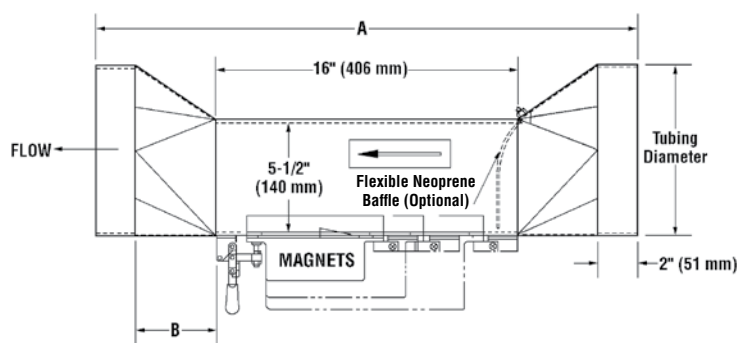
The assembly is installed by cutting out a section of the chute where magnetic protection is required, and slipping the separator into position. A Neoprene baffle directs the flow directly over the magnet face, which assists in tramp iron removal.

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.



## Dimensions



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



## WORLD AUTHORITY IN SEPARATION TECHNOLOGIES

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