

Magnetic Drum Separators

磁性滾桶磁選機

...Only from

Electro and Permanent 電磁鐵和永久磁鐵

For automatic, continuous separation of ferrous from non-ferrous materials in many processing applications.

magnetic drums have been used for many years in scrap metal yards to separate iron and steel from other materials.

Using computer aided design, Eriez has once again provided scrap drums with deeper magnetic fields to reclaim ferrous materials in shredded car bodies, scrap metals, municipal solid waste, wood waste, slag, incinerator bottom ash, foundry sand and minerals processing applications.

Only has new all electro-magnetic and new permanent magnetic model scrap drums for high volume, heavy duty applications.

These drums offer state-of-the-art electro or permanent magnetic circuits to provide maximum performance. They are ruggedly built to provide long service life with minimum maintenance.



Features and Advantages 特性和優點



2種型式電磁式磁性滾桶 **TWO TYPES OF ELECTRO MAGNETIC DRUMS**

The All Electro Agitator type utilizes a deep field rectangular-core pickup magnet to reach out and grasp the ferrous, and a second rectangular-core agitator magnet to flip or agitate the ferrous, cleaning it of contaminants like loose mud, paper, fluff, and trash. A double drum scheme with counter rotation (see Figure 1) will provide maximum cleaning.

Eriez also builds the nonagitating transfer design that uses a deep field radial pickup magnet and pole shoes to convey or transfer the ferrous around the drum shell to the discharge area. When used in top feed schemes (see Figure 3) these drums will provide maximum recovery.

Eriez Scrap Drums also have wider magnetic fields to handle increased tonnages.

所有永久深磁場磁滾桶 **ALL PERMANENT DEEP FIELD MAGNETIC DRUMS**

This design uses Erium® permanent magnets and bucking poles to project a deep magnetic field capable of removing ferrous from distances of up to 15 inches (380 mm). The permanent non-electric scrap drums are ideal for applications with limited or unstable electrical power.

LOW MAINTENANCE 低維修

The drum shell which contacts the ferrous material is made of heavy manganese steel and is abrasion resistant for extended operating life. Coil is warranted for three years.

NO JAMMING 不會卡死

Eriez Drum Separators are completely enclosed; there is no possibility of pieces of iron jamming internally and stopping their operation. Outdoor installation with exposure to the weather presents no problems.

只有2個軸承

ONLY TWO BEARINGS

There is no scheduled maintenance on the Drum Separators other than the occasional lubrication of only two heavy duty bearings and the optional drive chain.

EASY INSTALLATION 容易安裝

The compactness of the Drum Separator and shaft clamp mounting blocks, simplifies installation either by suspension or support from below.

可增加頂部空間

ADDED HEAD ROOM

The rotation of the drum shell automatically elevates recovered metal to a higher level than the feed point, gaining valuable head room and elevation.

很多選項可適合特殊用途

MANY OPTIONS TO FIT

SPECIAL APPLICATIONS

- Eriez-built rectifiers to convert AC power to 230 VDC. Units utilize avalanche diodes and the cabinet is available in NEMA 1, 3, 3R, 4, 4X, 12, or 9 construction.

- Replaceable 1/4 inch (6 mm) thick shell wear wrap. Available in both multipiece weld-on or bolt-on styles. This makes shell replacement easy in highly abrasive applications.

- Box type support frame with heavy steel channels and four turnbuckle suspension; this allows the drum to be supported over conveyors, oscillators, and feeders. Base mount triangular style support frames are also available.

- Drive packages complete with TEFC gearmotor, chain, drive sprocket, and chainguard.

- Dust hood type enclosures with access panels. Recommended for dirty environments.

- Zero speed switches to monitor drum shell RPM.

桶安裝

Typical Drum Installations

Four recommended installations of Drum Separators are illustrated. Each will attain maximum recovery of ferrous material from properly prepared shredded scrap, municipal waste or other materials.

A wide variety of diameters, widths and magnetic strengths are available to provide the desired capacity and degree of separation at the lowest possible cost. Consult your Eriez Magnetics specialist for recommendations.

NOTE: This equipment is intended for use in areas where personnel are not in direct proximity. When personnel are assigned in separator areas, protective guards and/or other safety devices must be used.

Style 1 - Double Drum 型式1 - 雙滾桶

For the cleanest possible recovered metal without secondary shredding or air classification, a two drum installation as shown in Figure 1 is recommended. The illustration shows one combination of feed conveyors. Others would serve equally well. The first drum, suspended above the primary feed conveyor picks up ferrous material from the waste and carries it up and over the top to the intermediate conveyor section. The bulk of the non-magnetic material falls to a take-away conveyor located below the primary separator. Because of the greatly reduced burden on the intermediate feed conveyor, the second drum often can be smaller and positioned closer to the conveyor. The drum rotates in a direction opposite to the material flow, insuring that there is no jamming or bridging. Clean metal with only a minimum of non-magnetic material is deposited on the ferrous conveyor.

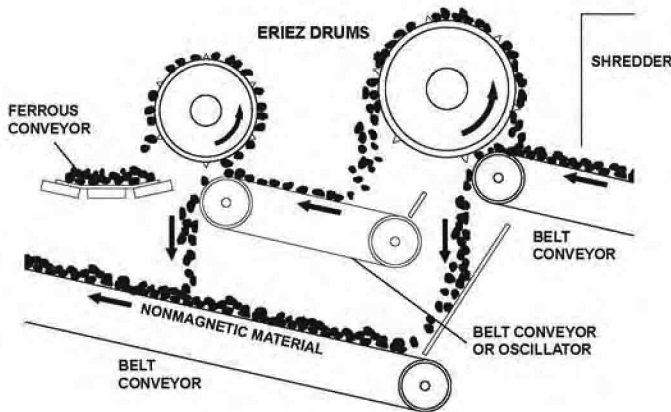


Figure 1

型式2 - 懸吊滾桶

Style 2 - Suspended Drum

This installation, with the drum suspended at the discharge end of the conveyor, utilizes the trajectory of the discharged shredded waste to help separate loose nonmagnetics and recover the ferrous materials. Feed to the separator can be either by belt conveyor, oscillating conveyor or chute.

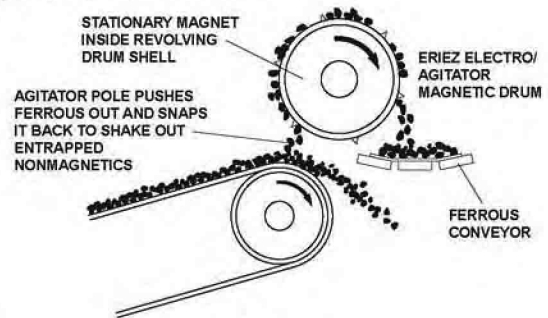


Figure 2

型式3 - 頂部入料

Style 3 - Top Feed

This type of installation is recommended only for non-sticky products and large iron. It can be used to remove large liberated ferrous pieces from shredded or unshredded product.

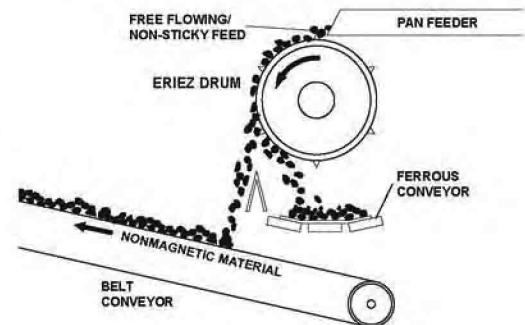


Figure 3

型式4 - 旁邊入料

Style 4 - Side Feed

This type of installation is typically used in foundries to remove large, heavy sprues, gates, and risers from shakeout sand. The iron jumps to the magnet and is pushed/pulled over the top discharging on a ferrous take-away conveyor.

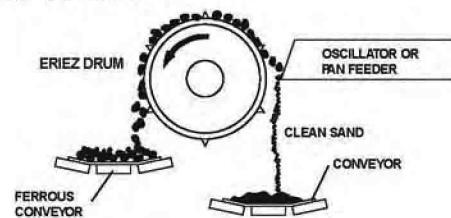


Figure 4

規格 Specifications

所有電動/攪拌器型廢鋼滾桶

ALL ELECTRO/AGITATOR TYPE SCRAP DRUMS

DRUM DIAMETER	OVERALL WIDTH		MAGNET WATTS	MOTOR DRIVE		WEIGHT*	
	in	mm		hp	kw	lb	kg
36 (914 mm)	42	1,067	3,669	1.5	1.1	3,825	1,735
	48	1,219	4,035	1.5	1.1	4,290	1,946
	54	1,372	4,402	2	1.5	4,785	2,182
	60	1,524	4,770	2	1.5	5,280	2,395
	66	1,677	5,135	3	2.2	5,775	2,620

Working Distance: Up to 10 inches (250 mm)

42 (1067 mm)	42	1,067	4,492	1.5	1.1	4,745	2,152
	48	1,219	4,919	2	1.5	5,380	2,440
	54	1,372	5,348	2	1.5	6,010	2,726
	60	1,524	5,775	3	2.2	6,640	3,012
	66	1,677	6,203	3	2.2	7,280	3,302
	72	1,829	6,631	5	3.7	7,910	3,588

Working Distance: Up to 12 inches (300 mm)

48 (1219 mm)	48	1,219	5,869	2	1.5	6,625	3,005
	54	1,372	6,358	3	2.2	7,390	3,352
	60	1,524	6,509	3	2.2	8,100	3,674
	66	1,677	7,337	3	2.2	8,920	4,046
	72	1,829	7,834	5	3.7	9,700	4,400
	84	2,134	9,047	5	3.7	11,355	5,151

Working Distance: Up to 14 inches (360 mm)

60 (1524 mm)	60	1,524	9,170	5	3.7	12,340	5,597
	72	1,830	10,500	7.5	5.6	15,000	6,750
	84	2,133	11,600	7.5	5.6	17,400	7,900

Working Distance: Up to 16 inches (410 mm)

所有永久磁鐵廢鋼滾桶

ALL PERMANENT TYPE SCRAP DRUMS

DRUM DIAMETER	OVERALL WIDTH		MOTOR DRIVE		WEIGHT	
	in	mm	hp	kw	lb	kg
36 (914 mm)	42	1,067	1.5	1.1	4,070	1,846
	48	1,219	1.5	1.1	4,650	2,109
	54	1,372	2	1.5	5,210	2,363
	60	1,524	2	1.5	5,790	2,626
	66	1,677	3	2.2	6,370	2,890

Working Distance: Up to 10 inches (250 mm)

42 (1067 mm)	42	1,067	1.5	1.1	5,350	2,427
	48	1,219	2	1.5	6,130	2,781
	54	1,372	2	1.5	6,930	3,143
	60	1,524	3	2.2	7,720	3,502
	66	1,677	3	2.2	8,510	3,860
	72	1,829	5	3.7	9,030	4,096

Working Distance: Up to 12 inches (300 mm)

48 (1219 mm)	48	1,219	2	1.5	7,840	3,556
	54	1,372	3	2.2	8,850	4,014
	60	1,524	3	2.2	9,850	4,468
	66	1,677	3	2.2	10,870	4,931
	72	1,829	5	3.7	11,740	5,325
	84	2,134	5	3.7	13,730	6,228

Working Distance: Up to 14 inches (360 mm)

60 (1524 mm)	60	1,524	5	3.7	15,270	6,926
------------------------	----	-------	---	-----	--------	-------

Working Distance: Up to 16 inches (410 mm)

*Weights for standard drums without options.
Dimensions and specifications subject to change without notice.