

*...Only from Eriez*



### Features & Benefits:

- Choice of agitating field to provide a cleaner ferrous; a radial field for maximum recovery
- Thick manganese steel shell with 3" stainless steel vertical cleats
- Fabricated heavy duty end flanges with 3" high side skirts
- Heavy duty sealed bearings
- Heavy duty drive option
- Suspension or base mounted support stand options
- Available in permanent or electro models
- Optional Traction Plate™ Drum Wrap

**ERIEZ®**

# Magnetic Drum Separators

## Electro and Permanent

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

Using our sophisticated design software and unique magnetic circuits, 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.





# Magnetic Drum Separators

Only Eriez 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.



Optional **Traction Plate™** improves cleaning yielding a better ferrous product.

# Features and Advantages

## 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 such as 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.

## 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 scrap drums are ideal for applications with limited or unstable electrical power.

## Low Maintenance

The drum shell that 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

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.

## 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

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

## 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.

## 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 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.
- Optional **Traction Plate™** Drum Wrap improves cleaning action by gripping ferrous, allowing it to agitate on the face of the drum and releasing fluff and dirt.
- 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.





# 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 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

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.

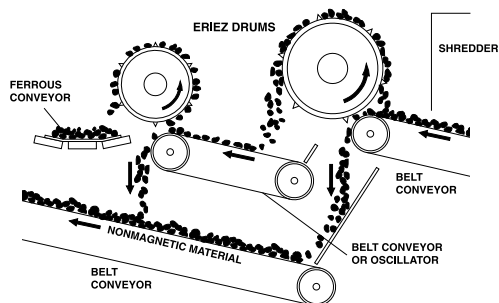


Figure 1

## 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.

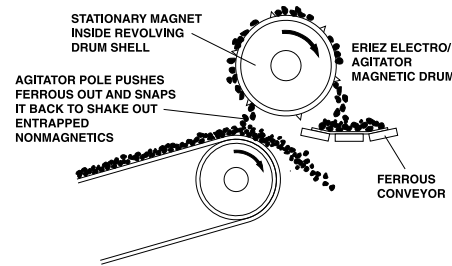


Figure 2

## 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.

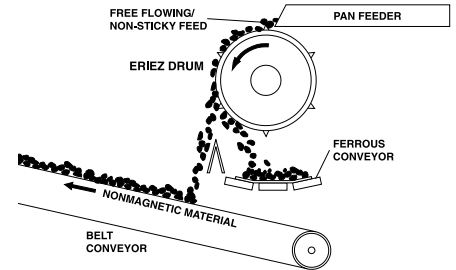


Figure 3

## 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.

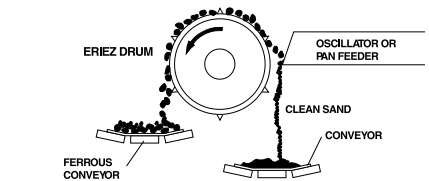


Figure 4





# Specifications

## 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: 4 to 8 inches (100-200 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: 6 to 10 inches (150-250 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: 8 to 12 inches (200-300 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
	96		13,200	7.5	10	18,500	

Working Distance: 10 to 14 inches (250-350 mm)

## 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: 4 to 8 inches (100-200 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: 6 to 10 inches (150-250 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: 8 to 12 inches (200-300 mm)

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

Working Distance: 10 to 14 inches (250-350 mm)

Larger Sizes Available

Note: Working gap depends on ferrous size, shape and density.

★ Hp will increase with the use of drum shell wrap and non standard shell thickness.

Note: Some safety warning labels or guarding may have been removed before photographing this equipment.



**World Authority in Separation Technologies**

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