



# PERMANENT MAGNETIC DRUMS & DRUM SEPARATORS



## INTRODUCTION

Permanent Magnetic Drum Separators are essential in nearly processing industry and the widely used for the separation of iron contamination from minerals, chemicals, food, flour, sugar, grains, plastics, sand, cement, fertilizers, rock, boring and many other gravity or conveyer transported product.

## WORKING PRINCIPAL

Material is distributed evenly with a feed system onto a rotating magnetic drum. Any magnetic piece is attracted to the drum shell and is carried to the point where the magnetic core ends. The non-magnetic particles have fallen off before this point. With material and drum going in the same direction, the flow is easy to handle and, the ferrous losses are small. Even when the material is large, small or mixed, the size of the particles usually determines the diameter of the drum.

## SIZE AND RANGE

The Permanent Magnetic Drum Separators are available in standard drum diameters of 300mm, 400mm, 500mm, 650mm, 800mm and 1000mm.

Drum width range from 300mm to 2000mm. Other sizes can be made as per customers requirement.

## MAGNETIC MATERIAL

Available two different magnetic material having different magnetic intensity

## CERAMIC MAGNETS

This Low intensity drum uses Ceramic Magnets This is useful for most of the applications where the iron is in free form or where iron particles are large. The average magnetic field strength on the magnetic drum surface would be in the region of 1500 - 2500 Gauss depending on the drum size.

## RARE EARTH MAGNETS

This medium intensity drum uses a special grade of Neodymium - Iron - Boron (NdFeB) magnets. This is useful for removing weakly magnetic contamination as well as fine iron particles. The average field strength on the drum surface would be in the region of 4000 - 5000 Gauss. The rare earth magnetic drum is obviously far more expensive than the ceramic magnetic drum, but, it offers unmatched performance in certain difficult applications.

## AVAILABLE STYLES

ERICH Permanent Magnetic Drum Separators are available in various styles to suit customers convenience:

## MAGNETIC DRUM

The drum is supplied without the housing drive or any other accessories. This drum is however supplied mounted on pedestals and a V-groove pulley is furnished for driving the drum shell by link-belt or V-belt. The drum is suitable for installation at the discharge end of chutes, spouts, screw conveyors, elevators and other form of carrying medium.

## SINGLE DRUM MACHINE



The drum machine is self contained and consists of a feed hopper with adjustable feed gate, jig shaker feed tray, the drum itself, motorized drive for the drum and discharge chutes for magnetic and non-magnetic material. All components are mounted on a sturdy, suitably designed frame work of heavy section angle iron.

## DOUBLE DRUM MACHINE



The Double Drum Machine is used for handling large capacities or difficult materials requiring more than one magnetic treatment. Double Drum Machines with individual jig shaker tray, can also be supplied. Triple Drum Machines can also be supplied if required.

## ENCLOSED DUST TIGHT DRUM MACHINE



The equipment comes complete with a chute type feed hopper, adjustable feed regulation gate, magnetic drum and geared motor drive in a ready for use condition. Inlet and outlet openings are flanged for ease of connection to customers duct work. Double or triple totally enclosed machines can also be supplied if required by clients.

## ADVANTAGES

- No transformer rectifier required
- No coils to burn-out.
- No power consumption.
- No operating cost.
- No maintenance.
- No failure - hence no downtime.
- Uniformly powerful.
- Everlasting magnetic power guaranteed.

## DRUM SLECTION

The following points are of special importance.  
Type of Material:

- Whether wet, dry or hot.
- Whether free flowing, dusty or cohesive.
- Density of material (t/m<sup>3</sup>).
- Neutral or chemically reactive.

Average and maximum lump size of material.



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