



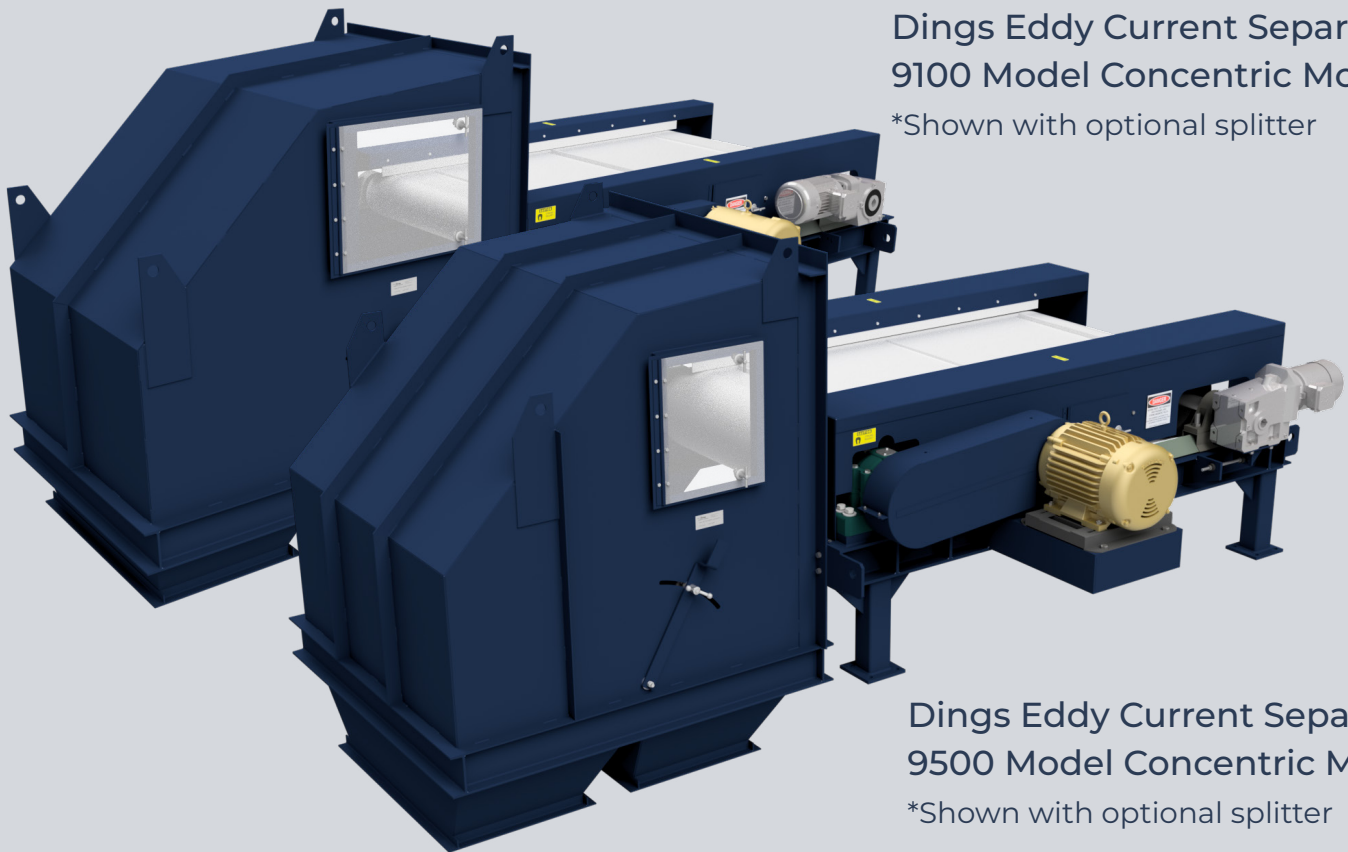
Powerful Magnetic Products Since 1899

# Concentric Eddy Current Separators

## Engineering Driven Customer Service Focused

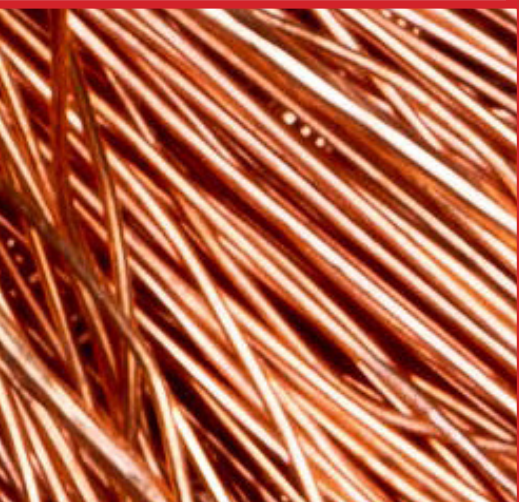
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(414)672-7830

- ◇ Recover Non-Ferrous to Generate Income
- ◇ Improve the Purity of Your Product Stream.



Dings Eddy Current Separator  
9100 Model Concentric Model  
\*Shown with optional splitter

Dings Eddy Current Separator  
9500 Model Concentric Model  
\*Shown with optional splitter

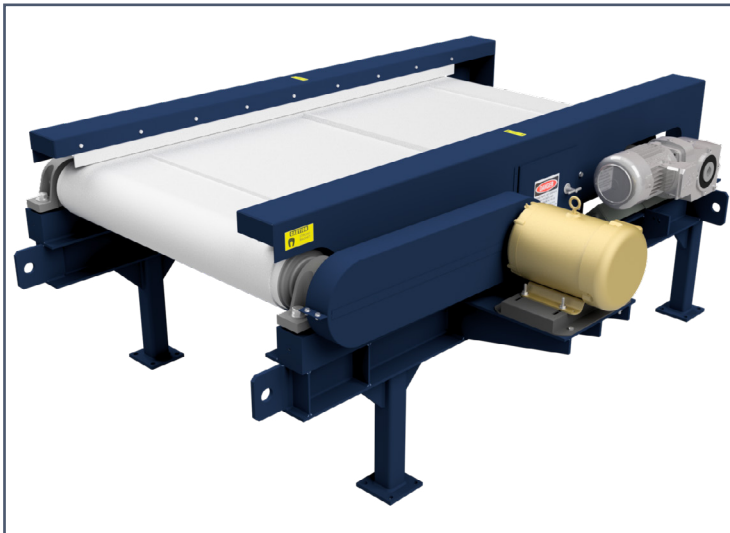


Call us for Expert Support of Dings Co. Equipment - Regardless of its Age

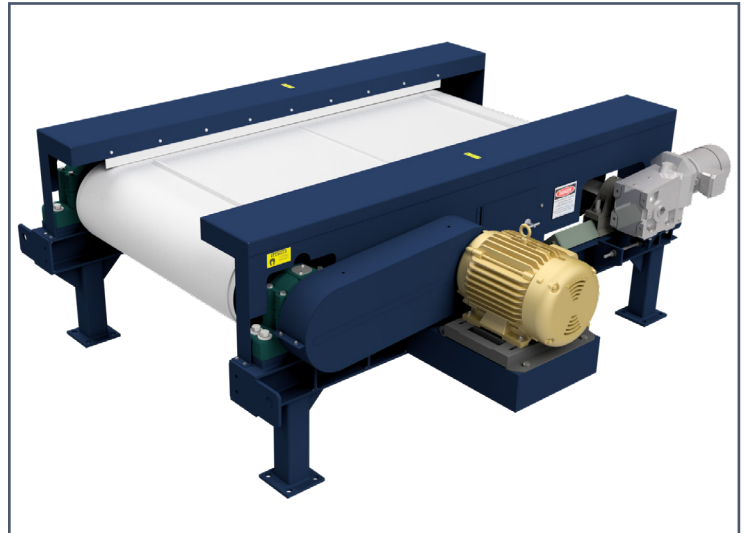
## Eddy Current Separator

Concentric Designs  
9100 Model  
9500 Model

- ◇ Triple layered Shell design protects valuable components
- ◇ Stainless-steel interior rotor shell around high strength rare earth magnets
- ◇ Polyurethane or nitrile wear resistant belt.
- ◇ Belt motor moves with take-up assembly for easy tracking and adjustment
- ◇ Heavy duty structural steel I-beam frame and support structure.
- ◇ Oversized, high speed rotor bearings & shaft & a heavy-duty drive package



9100 Model without optional splitter



9500 Model without optional splitter

### Eddy Current 9100 Concentric Model

Ideal for separating non-ferrous from fractional sizes up to the size of aluminum cans from a paper and plastic product stream. The 9100's concentric design has a triple layered shell consisting of an outer layer of ceramic tile and fiberglass around a heavy duty stainless steel inner shell to protect the magnetic rotor assembly. This design lowers maintenance and replacement costs. .

#### 9100 Concentric Model

**Magnetic Pulley Diameter:** 7" (Rotor 6.5")

**Belt Width:** up to 48"

**Rotor Speed:** up to 3000rpm

### Eddy Current 9500 Concentric Model

Ideal for separating aluminum cans and larger pieces of non-ferrous metal and high throughput product streams. The 9500's concentric design has a triple layered shell consisting of an outer layer of ceramic tile and fiberglass around heavy duty stainless steel inner shell to protect the magnetic rotor assembly. This design lowers maintenance and replacement costs. The 9500 is manufactured with heavy duty structural steel I-beam frame and support structure, oversized shafts and bearings, and a heavy duty drive package.

#### 9500 Concentric Model

**Magnetic Pulley Diameter:** 13" (Rotor 12")

**Belt Width:** Up to 72"

**Rotor Speed:** up to 1500rpm

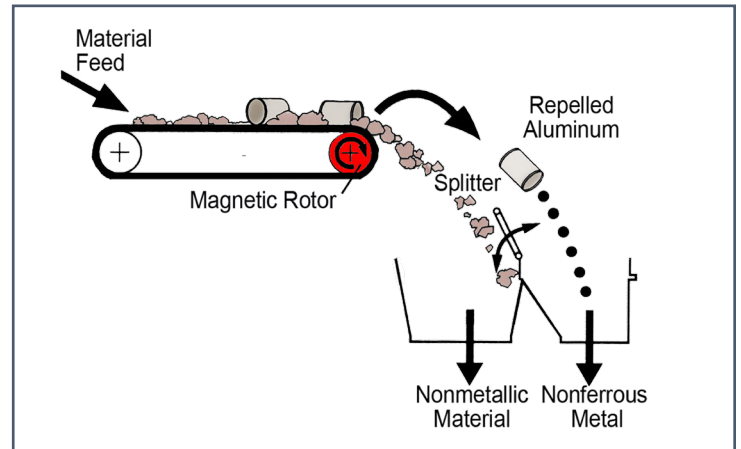
## Dings Eddy Current Operation

Material is fed onto the conveyor belt of the eddy current separator, which moves it across the magnetic rotor where separation occurs. The two streams of material discharge into a housing. The housing has a splitter to divide the non-ferrous metal from the nonmetallic material (such as: paper, plastic wood, or fluff)

The key component of the eddy current separator is the magnetic rotor, which has a series of permanent rare earth magnets mounted on a support plate attached to a shaft. The magnetic rotor is surrounded by a wear shell which supports the conveyor belt. This allows the rotor to spin independently and at a much higher speed than the wear shell and belt around it.

When a piece of non-ferrous metal (such as aluminum) passes over the separator, the magnets inside the rotor rotate past the aluminum at high speed. This forms eddy currents in the aluminum which, in turn, creates a magnetic field around the piece of aluminum. The polarity of that magnetic field is the same as the rotating magnet, causing the aluminum to be repelled away from the magnet. This repulsion makes the trajectory of the aluminum greater than that of the nonmetallic metal, allowing the two material streams to be separated.

## Eddy Current Eccentric Design Operation



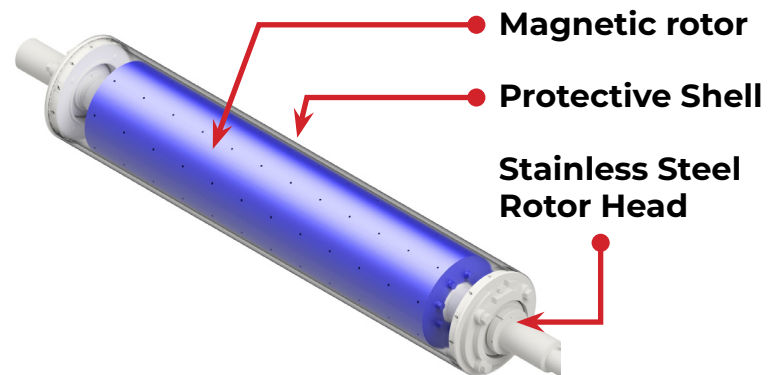
## Eddy Current Separator Options

- ◇ Standard & Non-Standard Variable Speed Belt & Rotor Control Panels
- ◇ Fixed Speed Control Panel; UL/CSA Control Panels
- ◇ Belt Tracking Sensor
- ◇ Splitter Assembly
- ◇ Custom Lengths & Heights

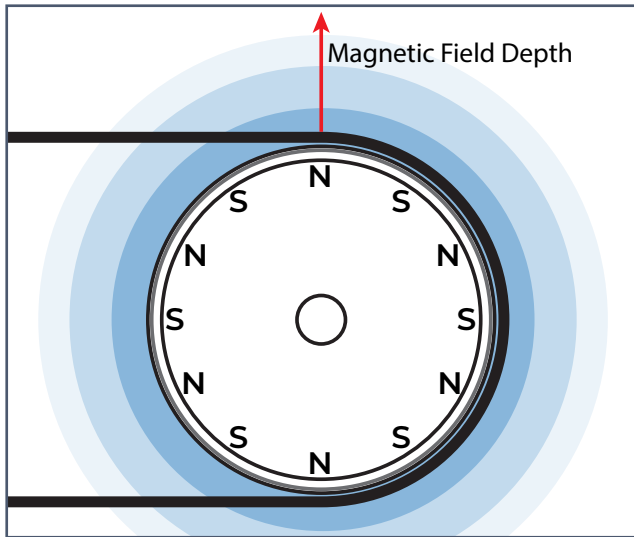
## Rotor Features & Design

### Concentric Rotor Features & Specifications

- ◇ Adjustable rotor speed
- ◇ Oversized, high-speed, self-aligning rotor bearings.
- ◇ Stainless-steel rotor heads
- ◇ Rotor construction optimized for:
  - High speed operation
    - 9100 Model – up to 3000 RPM
    - 9500 Model – up to 1500 RPM
  - Quiet operation / low vibration
- ◇ Triple Layer Shell Design:
  - Hard Ceramic Tile
  - High Temp Fiberglass
  - Non-Magnetic 304 Stainless Steel Inner Shell
- ◇ Epoxy encapsulated magnets eliminates rotor imbalance due to magnet movement



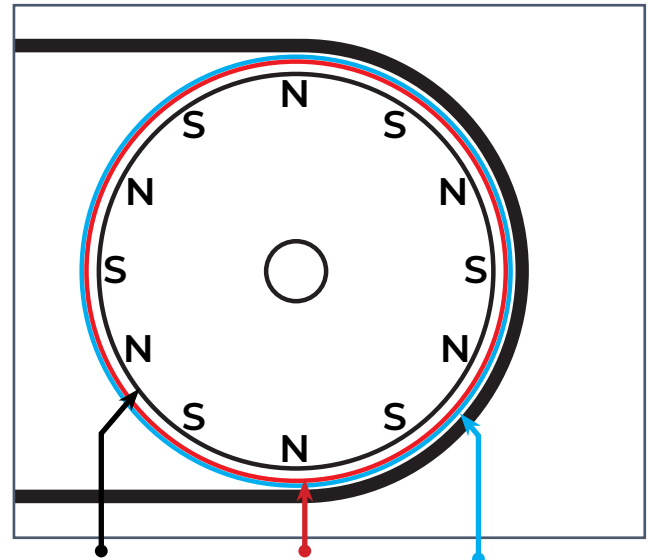
## Concentric Design Magnetic Field



High frequency magnetic pole changes & high magnetic field strength provide superior product separation

**Note:** Depth of magnetic field is relative to the size of magnets inside the rotor. For example the 9500 Model has a larger/deeper field in comparison to the 9100 version.

## Concentric Design Triple-Layer Shell



Heavy-Duty  
Stainless Steel  
Rotor Cover

Fiberglass  
Wear Shell

Ceramic Tile  
Shell Cover

This design provides maximum rotor protection that gives the equipment longer life, lower maintenance and repair costs and simplifies maintenance of the equipment.

## More Dings Company Magnetic Separation Equipment

### Magnetic Head Pulley

Available in 3 different strength series

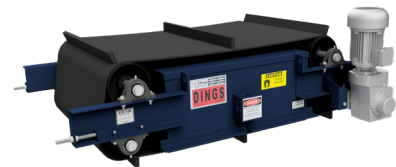


### Deep Drum Magnet



### MRF (Material Recovery Facility) Overhead Self-Cleaning Electromagnet

3" high cleats



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