



DINGS CO. MAGNETIC GROUP

# MAGNETIC SEPARATORS CATALOG

POWERFUL SOLUTIONS SINCE 1899



PREVENT DAMAGE TO PROCESSING EQUIPMENT  
& COSTLY DOWNTIME, RECOVER VALUABLE  
FERROUS AND NON-FERROUS METALS,  
GENERATE INCOME, ENSURE PRODUCT PURITY



RECYCLING APPLICATIONS  
PLASTICS & RUBBER  
STEEL & SLAG PROCESSING  
FOUNDRY & MANUFACTURING  
AGGREGATE & QUARRY  
CONSTRUCTION & DEMOLITION  
MINING/MINERALS  
AVIATION & HIGHWAY  
GRAIN & MILLING  
FOOD & BULK PROCESSING  
WOOD PROCESSING.



[www.dingsmagnets.com](http://www.dingsmagnets.com)

4740 West Electric Avenue  
Milwaukee, WI 53219

# DINGS

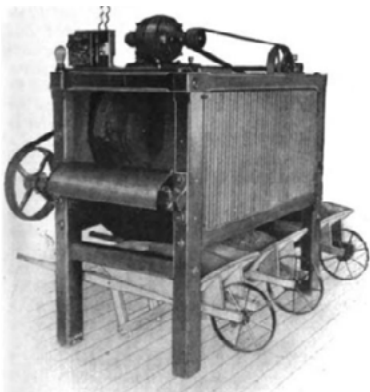
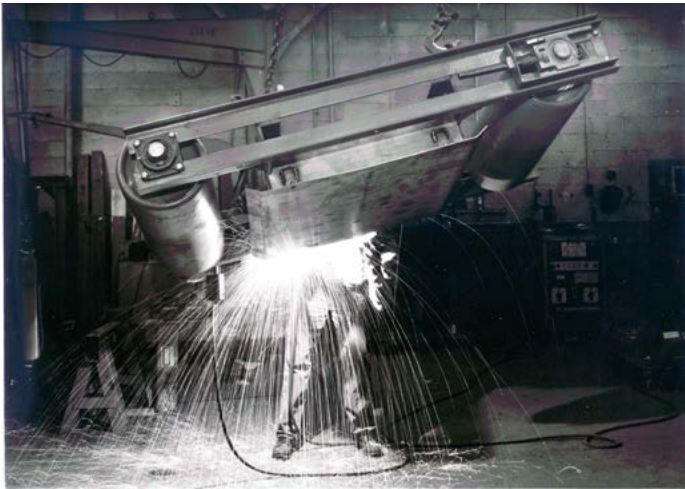
*Magnetic Separator Co. - Specialists in ~*

## Magnetic Separation

### DINGS COMPANY - RICH WITH HISTORY

Since 1899, the Dings Company Magnetic Group has been manufacturing a complete line of magnets to meet your specific needs. Our reputation for engineering and manufacturing optimum heavy duty equipment is well known in the trades. Our company is embedded with traditional values and old-fashioned customer service. We will work with you to gain an

understanding of your specific application needs. We will offer the most appropriate magnetic separation equipment including sizing, positioning, and performance details. After installation, we continue to provide exceptional service. Our relationship and expertise continues for the life of the equipment. We stand by our company and our products.



**OLD-FASHIONED VALUES & SERVICE – NEW INNOVATIVE PRODUCTS**

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## DINGS EQUIPMENT BY APPLICATION TYPE

| Type of Applications | Aggregate & Quarry     | Construction & Demolition | Mining/Mineral Processing | Recycling Applications | Grain & Milling | Food & Bulk Processing | Plastics & Rubber | Steel & Slag Processing | Aviation & Highway | Foundry & Manufacturing | Wood Processing |
|----------------------|------------------------|---------------------------|---------------------------|------------------------|-----------------|------------------------|-------------------|-------------------------|--------------------|-------------------------|-----------------|
| Magnetic Separator   | Overhead Self-Cleaning | X                         | X                         | X                      | X               |                        | X                 | X                       |                    | X                       | X               |
|                      | Overhead Stationary    | X                         | X                         | X                      | X               |                        | X                 | X                       |                    | X                       | X               |
|                      | Eddy Current Separator |                           | X                         |                        | X               |                        | X                 |                         |                    | X                       |                 |
|                      | Magnetic Head Pulley   | X                         | X                         | X                      | X               | X                      | X                 | X                       |                    | X                       | X               |
|                      | Drums                  |                           | X                         | X                      | X               | X                      | X                 | X                       |                    | X                       | X               |
|                      | Magnetic Sweeper       |                           |                           |                        |                 |                        |                   |                         | X                  |                         |                 |
|                      | Grates & Ferroplates   |                           |                           |                        |                 | X                      | X                 | X                       |                    | X                       |                 |
|                      | Swinging Pendulum      |                           |                           | X                      | X               |                        |                   | X                       |                    | X                       |                 |
|                      | Rendering              |                           |                           |                        |                 |                        | X                 |                         |                    |                         |                 |
|                      | Sugaron                |                           |                           |                        |                 |                        | X                 |                         |                    |                         |                 |

Dings provides expert advice to customers needing assistance with separation solutions. Our magnetic separation experts take the extra time in engineering and custom designing a product to our customer's specific expectations

and satisfaction. We manufacture what best fits into their existing production process to save money and time. From start to finish, our trusted team of experts work together under one roof in Milwaukee, WI - USA.

Contact us today to get a magnetic separation expert working for you  
 414-672-7830  
[magsales@dingsco.com](mailto:magsales@dingsco.com)

# OVERHEAD ELECTROMAGNETS

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Dings Overhead Electromagnets have penetrating, deep magnetic fields that remove metal contaminants before they can cause damage to your belts, crushers, conveyors, screens, pulverizers, grinders and other expensive equipment. Our electromagnets are engineered

with optimum performance reliability and manufactured with rugged construction - ensuring reduction in production downtime and significant decreases in costs for repairs and maintenance. We build quality magnetic separators to meet your specific needs.

## OVERHEAD ELECTROMAGNET FEATURES:

- ✓ 20 Year Warranty on coil burnout - the best warranty in the industry
- ✓ Expansion of high dielectric cooling oil takes place inside the magnet box - needs no additional plumbing or oil tanks!
- ✓ Magnet is filled with cooling oil containing antioxidants that improve service life and operation
- ✓ Pressure relief valve prevents moisture from getting into magnet
- ✓ Easy access to oil level, oil drain and oil fill plugs save cost and man hours
- ✓ Full stainless steel bottom plate with extra stainless steel center wear plate in the main impact area to provide longer equipment life
- ✓ Stainless steel deflector extends belt life and minimizes cleaning (crossbelt mounting only)
- ✓ Crowned curved pulleys for easy belt tracking
- ✓ Self-aligning pillow block bearings
- ✓ Adjustable screw take-ups on tail pulley
- ✓ IP56 AGMA Class II Motor
- ✓ NEMA 4 terminal box

## SELF-CLEANING MODEL



**Dings Self-Cleaning Models'** belt continuously travel across the face of the magnet to automatically discharge tramp iron. It comes equipped with an endless multi-ply rubber belt with 1 inch hot vulcanized cleats.

**Options:** Dust cover, pulley & pinch point guards, belt guide rollers, zero speed & belt alignment switches, hazardous locations & CSA approved models, custom designs.

# OVERHEAD ELECTROMAGNETS

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## SEVERE DUTY DESIGN



The **Severe Duty Design** is specifically designed for tough applications such as concrete recycling. They are built to withstand the harshest environments and come equipped with a Dings 'Durabelt' that prevents the rubber belt from being pierced by pointed rebar, a heavy duty drive assembly, lagging on the drive pulley and reinforced suspension/mounting arrangement.

## MRF MODEL



The **MRF (Material Recovery Facilities) self-cleaning model** features 3 inch tall rubber vulcanized cleats on a tough endless belt. This model serves to sweep away large diameter cans that might not be removed with the standard 1 inch cleat. This model is commonly used in material recovery facilities.

## SWMS MODEL



The **SWMS (Solid Waste Management System) self-cleaning model** is a powerful, highly selective magnetic separator. This patented design system is constructed with multiple electromagnets (single, double or triple) to have a long and deep penetrating magnetic field. It features a Dings 'Durabelt', a heavy duty drive assembly, lagging on the drive pulley and reinforced suspension/mounting arrangement. The SWMS Model operates with vigorous actions to product clean, salable steel.

## STATIONARY MODEL



**Dings Stationary Models** are virtually maintenance-free (other than maintaining cooling oil) with no moving parts. Ferrous metal is pulled out of the material stream and held in place until the magnet is shut off. Designed for easy installation, this model comes with a 3-point sling suspension system that includes two cables and one turnbuckle connected to a bull ring. Adjustment of suspension angle is easy. There is no measuring, shortening, lengthening or cutting of cable required.

**Options:** 4-point suspension system, custom designs.

# OVERHEAD ELECTROMAGNETS

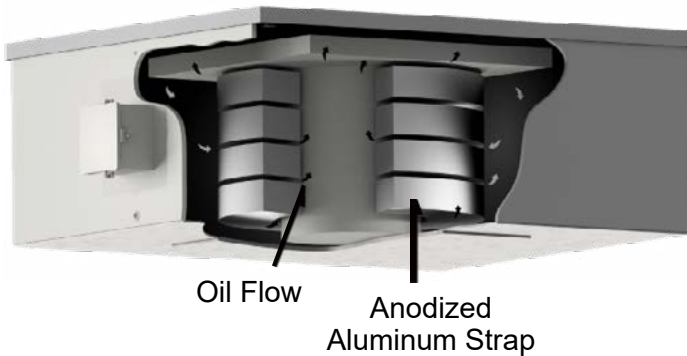
## ELECTROMAGNETIC COILS

Dings electromagnetic coils are wound with an anodized aluminum strap; an exclusive design that generates more magnetism than any other on the market and exceeds Class “H” insulation rating! This design outlasts and out-performs copper wire with polymer insulation or bare aluminum with Nomex® insulation.

Dings electromagnetic coils stay cooler – operating at a much lower temperature. Since electromagnets perform best at lower operating temperatures, this design ensures Dings electromagnets are stronger and more efficient. With “conventional” round wire coils, inside turns are not cooled evenly and product hot spots that damage coils. Each turn of the Dings

electromagnetic coil is exposed to oil-cooling and is in constant contact with oil, therefore, eliminating the need for an oil expansion tank. Oil is free to flow around and in between each coil to maximize cooling effect.

Dings Electromagnetic Coil



**20-Year Warranty** on Coil Burnout

## DINGS ELECTROMAGNETIC COILS HAVE:

- ✓ 20 Year Warranty on coil burnout
- ✓ No insulation needed - eliminating the major cause of coil failure (insulation breakdown)
- ✓ More magnetism and separating power - generated by extra turns
- ✓ Each turn is exposed to oil-cooling - assuring a stronger, more efficient magnet
- ✓ Eliminates the need for external oil expansion (less pipes or tanks that can be easily damaged)

# ELECTROMAGNET RECTIFIERS

## RECTIFIERS FOR ELECTROMAGNETS

All overhead electromagnets require a DC power supply. Dings offers a maintenance-free Rectifiers for each of our magnet sizes. Rectifiers are auxiliary equipment that supply the electric power needed by electromagnets. It converts the alternating current (AC) from your local power source to the necessary direct current (DC) needed by electromagnets. The Rectifier consists of a hinged

door cabinet and an internal assembly of electrical components.

Dings Rectifiers are available in a wide range of wattages to handle the power requirements of any electromagnet. A Rectifier cabinet can be selected in a particular NEMA enclosure rating according to the proposed rectifier location at the jobsite.

## RECTIFIER FEATURES:

- ✓ Overload capacity for short, infrequent loads
- ✓ No maintenance, solid state silicon diodes
- ✓ Voltage regulation within 3.5% from no load to full load
- ✓ Hinged door for easy access
- ✓ Protection from corrosion and extreme environments
- ✓ Various NEMA rating enclosures available

## RECTIFIER



**Dings Rectifiers** are maintenance-free, solid state silicon diodes with hinged doors for easy access.

**Options:** ETL listed, NEMA enclosures, remote door operated switch, magnetic starter, auto thermal cutout, manual starter, custom designs.

## DINGS RECTIFIERS

Maintenance-free, overload capacity for short infrequent periods and corrosion protection in extreme environments

Voltage regulation within 3.5% from no load to full load



# OVERHEAD PERMANENT MAGNETS

Dings Overhead Permanent Magnets are non-electric. No external power source is required to generate the magnetic field. They are designed with Dings Flux Control (DFC) circuit that eliminates internal leakage between magnetic poles to

improve separating performance. Overhead Permanent Magnets remove metal contaminants before they can cause damage to your expensive processing equipment.

## OVERHEAD PERMANENT MAGNET FEATURES:

- ✓ Guaranteed Lifetime Warranty on Magnetism
- ✓ Dings Flux Control (DFC) Circuit provides a stronger, deeper and more uniform magnetic field
- ✓ Unique construction - smaller, lighter. magnet for a given strength than any other in the industry!
- ✓ Magnet housing filled with Ceramic VIII magnet material - Highest Grade
- ✓ Full stainless steel bottom plate
- ✓ 8 point mounting lugs (self-cleaning models)
- ✓ Non-magnetic stainless steel frame construction that prevents collection of ferrous metals

**Dings Stationary Models** are virtually maintenance-free with no moving parts. Ferrous metal is pulled out of the material stream and held in place until manually removed. Designed for easy installation, this model comes with a 3-point sling suspension system that includes two cables and one turnbuckle connected to a bull ring. Adjustment of suspension angle is easy. There is no measuring, shortening,

lengthening or cutting of cable required. Stationary Permanent Magnets can be the most economical method of removing tramp metal when it is rare but must be removed.

**Options:** Sweep Arm Assembly, 4-point suspension system, custom designs.

## STATIONARY MODEL



## STATIONARY MODEL (UNDER)

\*SHOWN WITH OPTIONAL SWEEP ARM





# OVERHEAD PERMANENT MAGNETS

## SELF-CLEANING MODEL



**Dings Self-Cleaning Models'** belt continuously travel across the face of the magnet to automatically discharge tramp iron. It comes equipped with an endless multi-ply rubber belt with 1 inch vulcanized cleats.

**Options:** Dust cover, pulley & pinch point guards, belt guide rollers, zero speed & belt alignment switches, hydraulic & explosion-proof motors, hazardous locations motors, high temperature belts, special motor voltages, custom designs.

## DING FLUX CONTROL (DFC) CIRCUIT DESIGN

Dings Flux Control (DFC) Circuit design eliminates internal leakage between magnetic poles and improves separating performance. Other 'conventional' magnetic circuits contain air or filler material between the magnetic poles; this allows flux (magnetism) to escape (leak out) and be wasted.

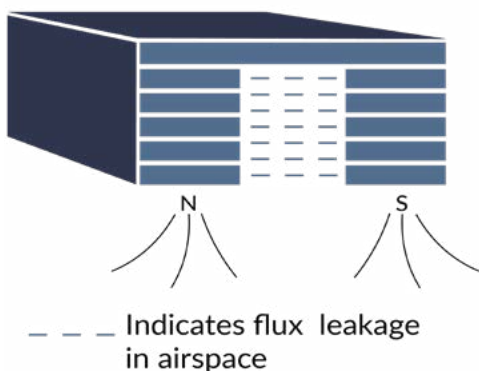
In Dings DFC design - blocking magnets are strategically positioned in the spaces between the magnetic poles. These redirect the flux outward, into your product, converting the wasted flux into working force - making the magnet more efficient.

## DINGS DFC DESIGN IMPROVES THE OVERALL STRENGTH OF THE MAGNET IN 3 WAYS:

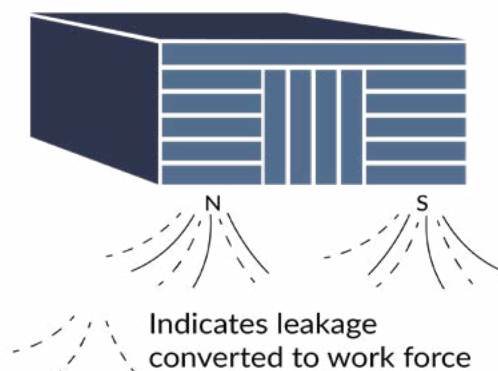
- ✓ The magnetic field is stronger
- ✓ The magnetic field extends deeper
- ✓ The magnetic field pattern is more uniform



Conventional magnetic circuit



Dings magnetic circuit



## LIFETIME GUARANTEE ON MAGNETISM

Dings patented Flux Control Circuit (DFC) eliminates internal leakage between magnetic poles and improves separating performance.

# CROSSBELT & INLINE MOUNTING

## CROSSBELT (OVER BELT)

In a cross-belt over the conveyor belt mounting position the magnet is installed at a right angle to the travel direction of the material on the belt. Tramp metal is collected by the magnet and discharged by the magnet's self-cleaning belt into a collection bin along side the conveyor. This orientation is commonly used when the magnet is being installed in an easily accessible area on an existing conveyor.

## CROSSBELT (OVER PULLEY)

The cross-belt over the pulley orientation results in a more efficient use of the magnet since the conveyor belt flattens as it reaches the pulley allowing for a reduced suspension height. The material is also becoming airborne liberating the tramp metal and making it easier to separate. This orientation may permit the use of a smaller magnet and tramp metal can be collected in a bin alongside the conveyor.

## INLINE

In Line orientation sometimes used in conjunction with a splitter is ideal because the material is fully airborne and the tramp metal is liberated making it easier to separate. This orientation permits the use of a smaller magnet compared to cross-belt over the conveyor orientation because the suspension height is reduced and tramp metal is separated while airborne instead of being pulled thru the material burden as it's being conveyed.

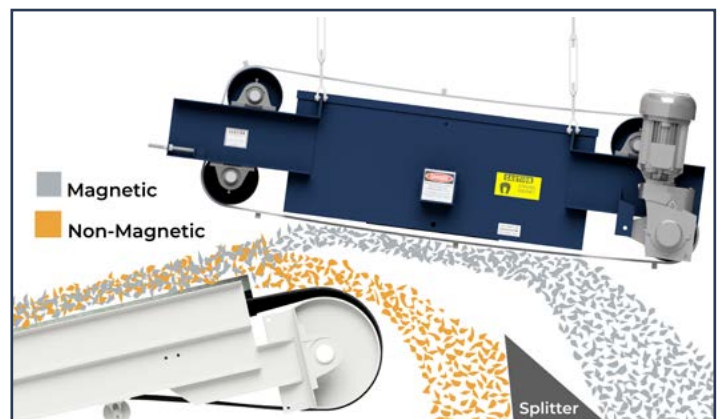
## CROSSBELT MOUNTING (OVER BELT)



## CROSSBELT MOUNTING (OVER PULLEY)



## INLINE MOUNTING



# MAGNETIC HEAD PULLEYS

Dings Magnetic Head Pulleys are non-electric, self-cleaning magnetic separators. They operate as head pulleys on conveyors to separate tramp iron and iron impurities from materials conveyed in bulk form. It is designed for machinery protection and product

purification. Our magnetic head pulleys magnetism is produced by an internal ceramic magnet assembly that is enclosed with a nonmagnetic stainless steel shell. Magnetic Head Pulleys come shipped ready to install!

## MAGNETIC HEAD PULLEY FEATURES:

- ✓ Guaranteed Lifetime Warranty on Magnetism
- ✓ Dings Flux Control (DFG) Circuit on our DFC Ultra Model
- ✓ Automatic and continuous separation
- ✓ Easily integrated into existing processing systems
- ✓ Stainless steel face
- ✓ Magnet assembly filled with Ceramic VIII magnet material - Highest Grade
- ✓ Type 304 nonmagnetic stainless steel shell
- ✓ NO COST operation
- ✓ Uniform magnetic fields across the width of the pulley



LIFETIME GUARANTEE  
ON MAGNETISM

## STANDARD MODEL



**Dings Standard Model** Magnetic Head Pulley has diameters from 6 inches through 24 inches with welded construction.

**Options:** Vulcanized lagging, herringbone grid, chevron groove, diamond groove, rough top lagging, shaft modifications, tape (safety walk) lagging, taper lock hubs and bushings, XT hubs and bushings, custom designs.

## HEAVY DUTY MODEL



**Dings Heavy Duty Model** Magnetic Head Pulley has diameters from 12 inches through 42 inches with welded construction.

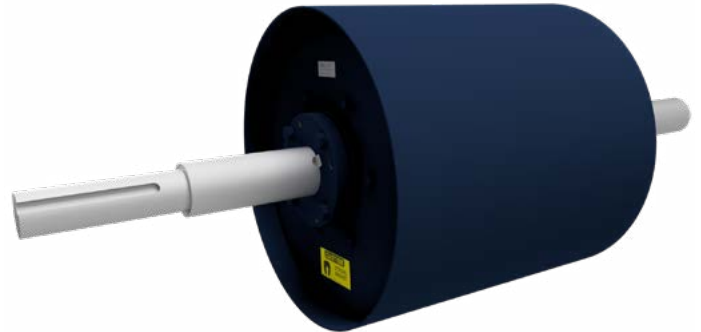
**Options:** Vulcanized lagging, herringbone grid, chevron groove, diamond groove, rough top lagging, shaft modifications, tape (safety walk) lagging, taper lock hubs and bushings, XT hubs and bushings, custom designs.

# MAGNETIC HEAD PULLEYS

**Dings DFC Ultra Model** Magnetic Head Pulley has the greatest depth of magnetic field. It is designed with our Dings Flux Control (DFC) Circuit, which eliminates leakage in between magnetic poles. The overall strength of the magnetic field is stronger, extends deeper and more uniform. The DFC Ultra Model has diameters from 12 inches through 42 inches with welded construction

**Options:** Vulcanized lagging, herringbone grid, chevron groove, diamond groove, rough top lagging, shaft modifications, tape (safety walk) lagging, taper lock hubs and bushings, XT hubs and bushings, custom designs.

## DFC ULTRA MODEL



## MAGNETIC HEAD PULLEY OPERATION & STRENGTHS

Since every application has its own specific needs regarding the magnetic depth of field required, Dings Company Magnetic Group is the only company to offer you three different magnetic strengths.

The DFC Ultra Model is our strongest pulley through the entire burden depth.

## DINGS STANDARD

8", 12" 15" 18" 20" & 24"  
Diameters

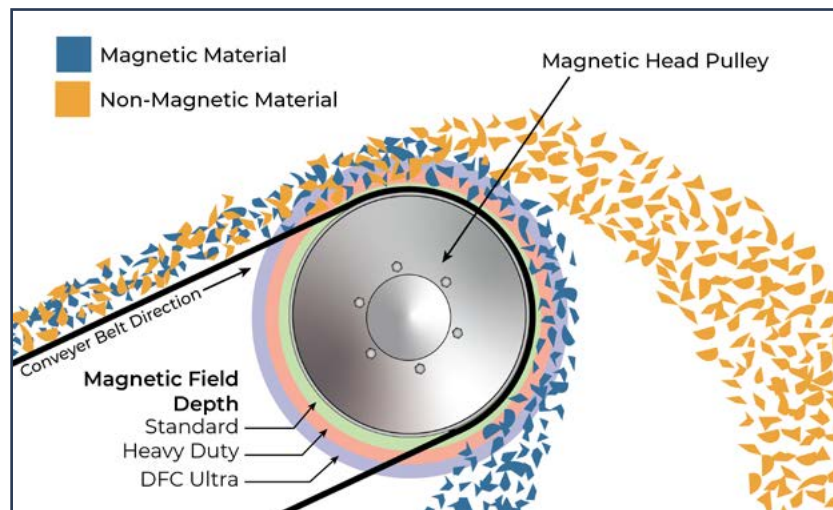
## DINGS HEAVY DUTY

12", 15", 18", 20", 24", 30", 36" & 42"  
Diameters

## DINGS DFC ULTRA

12", 15", 18", 20", 24", 30", 36" & 42"  
Diameters

## MAGNETIC HEAD PULLEY MATERIAL TRAJECTORY



# DEEP DRAW DRUMS

Dings Deep Draw Drums are specially designed for heavy duty, high-volume ferrous recovery. This large and powerful magnetic drum has a nonmagnetic outer shell that is driven around a fixed magnet. Ferrous metal is magnetically drawn out of the material feed, held against the rotating shell, and then released at the discharge point. Our Deep

Draw Drum has the rugged construction needed for separating ferrous metal from the material stream in shredded cars, scrap metals, municipal solid waste, wood waste, slag, recycling crushed ore, ash at mass burn-out plants, and more. The Deep Draw Drum can be fed at multiple positions since the internal magnet assembly is adjustable.

## DEEP DRAW DRUM FEATURES:

- ✓ Guaranteed Lifetime Warranty on magnetism
- ✓ Dings Flux Control (DFC) Circuit provides a stronger, deeper, and more uniform magnetic field
- ✓ Drum can be fed at any position with an adjustable internal magnet assembly
- ✓ Replaceable heavy duty manganese cover extends drum life
- ✓ Axial or radial pole designs
- ✓ Magnetic adjusting arm rotates the magnet clockwise or counterclockwise
- ✓ Drum sized more efficiently for significant cost savings

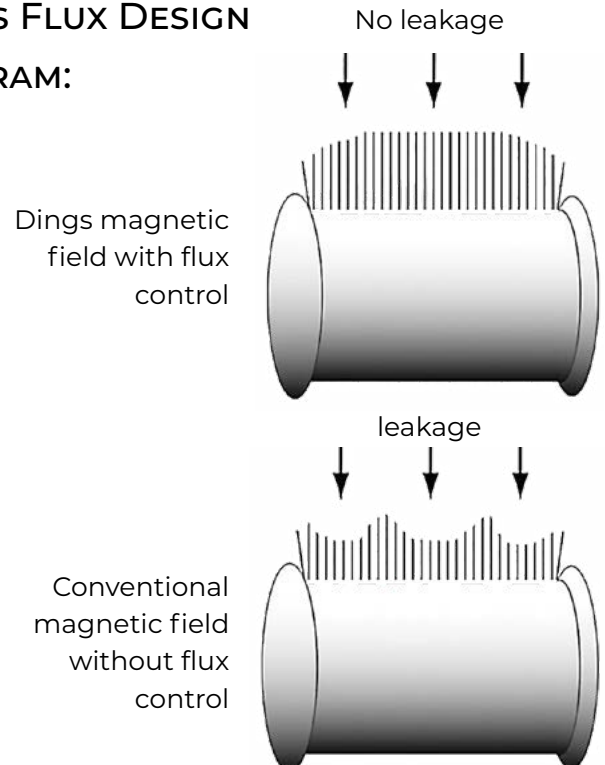
Dings Deep Draw Drums are designed with Dings Flux Control Circuit (DFC), which eliminates leakage between magnetic poles that other 'conventional' magnets have. Our patented design improves the strength of the magnet, therefore offering superior separating performance.



## LIFETIME GUARANTEE ON MAGNETISM

- ✓ With DFC circuit design, the overall strength of the magnet field is stronger, extends deeper and the pattern is more uniform

## DINGS FLUX DESIGN DIAGRAM:



# DEEP DRAW DRUMS

## DEEP DRAW DRUM



**Dings Deep Draw Drum** includes two shaft clamps, driven sprocket and a magnet arc adjusting arm.

**Options:** Additional or custom cleats, motion sensor, stainless steel heads, multi-grooved sheave, hand-wheel, custom designs

## DEEP DRAW DRUM WITH FRAME & DRIVE PACKAGE

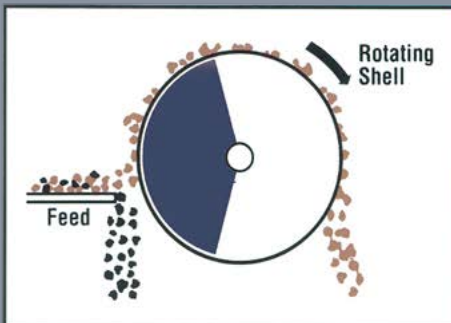


**Dings Deep Draw Drum with Frame and Drive Package** features a horizontal structural steel support frame with four support lugs for suspended installation and drive components.

**Options:** Additional or custom cleats, motion sensor, stainless steel heads, multi-grooved sheave, winch, sheave and belt-driven drums, custom designs

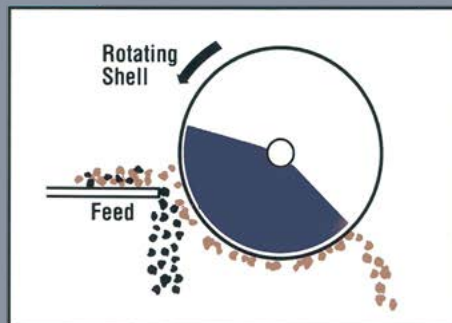
## FEED ARRANGEMENTS

Dings Deep Draw Drum can be fed in any position. After mounting, the magnet arc is adjusted to match the feed location. Feed position can affect the purity of recovered ferrous metal.



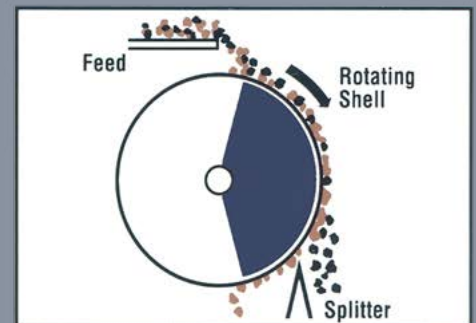
### UP-AND-OVER FEED

Ferrous is lifted out of the burden and carried up and over the magnet while the nonferrous material drops off the feeder.



### DOWN-AND-UNDER FEED

This arrangement has the shortest and most direct transfer area for the ferrous.



### TOP FEED

The top feed arrangement is used with weakly magnetic ferrous or nonferrous pieces too large to pass through a reasonable gap setting.

# DEEP DRAW DRUMS

## DEEP DRAW DRUM SIZE SELECTION

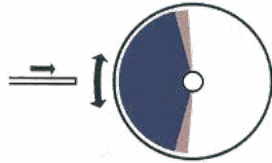
The magnetic strength of the drum needed for your application is determined by the diameter - the larger the drum diameter and width, the greater the volume of material which can be handled.

The selection chart below shows recommended drum diameters based on gap distance, magnet

arc and feed position. Feeder and drum positions may vary from the recommended locations due to physical restrictions at job sites. The magnet arc should then be adjusted accordingly to produce the best possible separation.

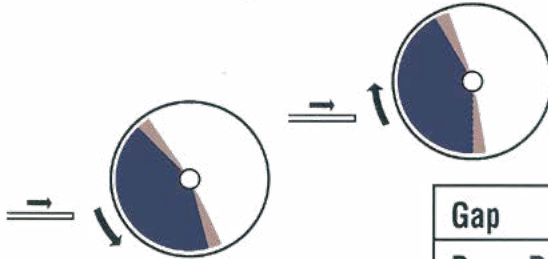
### Standard and Extended Arc Radial Pole Drums

#### Feed at 9 o'clock position



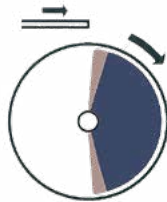
|           |     |     |     |     |     |     |
|-----------|-----|-----|-----|-----|-----|-----|
| Gap       | 6"  | 8"  | 10" | 12" | 14" | 16" |
| Drum Dia. | 24" | 30" | 36" | 42" | 48" | 60" |

#### Feed at 8 o'clock position



|           |      |      |      |        |        |        |
|-----------|------|------|------|--------|--------|--------|
| Gap       | 4-5" | 6-7" | 8-9" | 10-11" | 12-13" | 14-15" |
| Drum Dia. | 24"  | 30"  | 36"  | 42"    | 48"    | 60"    |

#### Feed at 12 o'clock position



|              |     |     |     |     |     |     |
|--------------|-----|-----|-----|-----|-----|-----|
| Burden Depth | 4"  | 5"  | 6"  | 8"  | 10" | 12" |
| Drum Dia.    | 24" | 30" | 36" | 42" | 48" | 60" |

### Lateral Pole Drum

#### Feed at 8 or 12 o'clock position



|               |     |     |     |
|---------------|-----|-----|-----|
| Gap or Burden | 2"  | 4"  | 6"  |
| Drum Dia.     | 24" | 30" | 36" |

# DEEP DRAW DRUMS

## PERMANENT DEEP DRAW DRUMS OUTPERFORM ELECTRO MODELS

Dings Deep Draw Drum is a permanent, self-cleaning separator that outperforms electric-powered models. It ALWAYS operates at top efficiency while maintaining constant magnetic strength. During operation, an electro drum loses some magnetism and separating power as the coil heats up. This reduction in magnetism can be as great as 30% - which results in a drop-off in metal recovery. Dings Deep Draw Drums have a constant permanent magnetic strength with a lifetime guarantee and can operate in the same applications as electro drums. They have a significant savings in replacement and maintenance costs with no coils and rectifier used in electro drums.

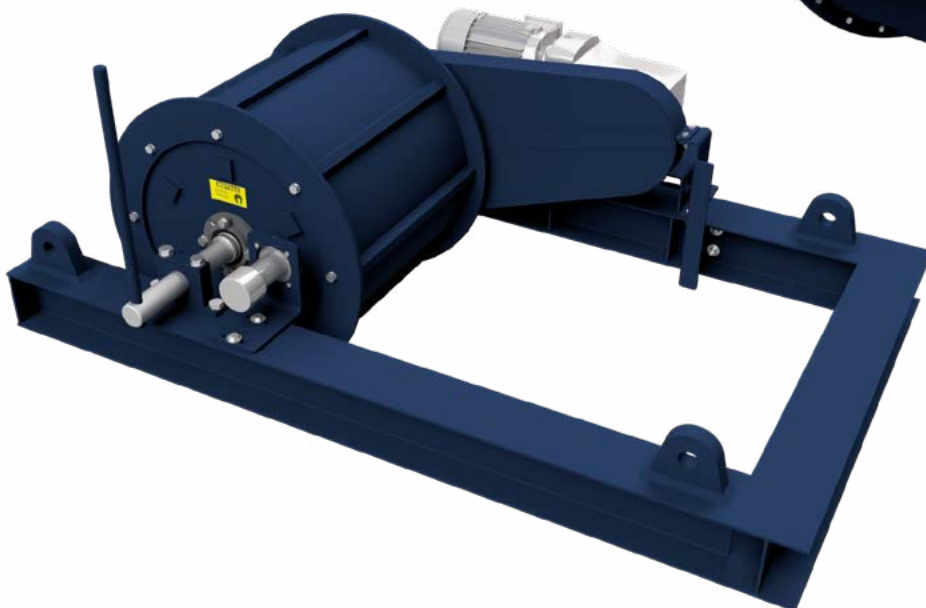


The Deep Draw Drum emits a very powerful, even magnetic field — note the influence on iron filings at a distance of several feet.

DEEP DRAW DRUM  
(WITH HAND WHEEL)



DEEP DRAW DRUM  
(WITH MOTION SENSOR)





# MAGNETIC DRUMS

Dings Magnetic Drums are designed to continuously remove large quantities of ferrous metals for product purification in free-flowing powders and granular materials or to concentrate and reclaim product in recycling. Magnetic Drums also protect processing equipment and prevent costly repairs and downtime caused by tramp iron damage. Their self-cleaning design means no

interruptions in product flow for cleaning cycles. High-strength, lifetime guaranteed permanent magnets function at top efficiency, day in and day out. Dings drum magnets feature our DFC magnetic circuit. This unique design ensures you of a uniform magnetic field across the entire surface of the magnet.

## MAGNETIC DRUM FEATURES:

- ✓ Guaranteed Lifetime Warranty on magnetism
- ✓ Dings Flux Control (DFC) Circuit provides a stronger, deeper and more uniform magnetic field
- ✓ Rugged, dust-tight construction with stainless steel shell
- ✓ Continuous, low-cost separation
- ✓ Easily integrated into existing production processing system
- ✓ Self-aligning bearings
- ✓ Ceramic VIII grade magnetic material



LIFETIME GUARANTEE  
ON MAGNETISM

## TYPE PC DRUM



**Dings Type PC Drum** mounts easily with pillow block bearing and shaft clamp and can be fed manually or integrated into an existing production system. The PC Drum comes with a choice of standard (radial) or agitating (lateral) pole designs.

**Options:** Custom designs

## TYPE FC DRUM



**Dings Type FC Drum** is a PC Drum furnished with a totally enclosed drive motor, feed leveler, splitter and flanged housing.

**Options:** Multiple configurations, custom designs

# EDDY CURRENT SEPARATORS

An Eddy Current Separator is designed to recover nonferrous metal from commingled recyclables, plastics, glass, material processed at composting or waste-to-energy facilities, auto shredder residue, and various other industries. Our Eddy Current Separators provide significant savings on labor costs by reducing the man hours required for manual sorting. They are engineered for dirty, dusty and severe outdoor surroundings found at many job

sites. The permanent rare earth magnets used in our Eddy Current Separators provide larger and deeper magnetic fields that are well-suited for industrial applications. Dings Eddy Current Separators have better separation of large objects, deeper field and tolerate deeper burdens than the competition. Dings' patented features and support separate us from the rest.

## EDDY CURRENT SEPARATOR FEATURES:

- ✓ Layer Shell design protects valuable components
- ✓ Adjustable and endless polyurethane or nitrile wear-resistant belt
- ✓ Splitter adjustment for optimized material separation
- ✓ Belt motor moves with take-up assembly for easy tracking and adjustment
- ✓ Easy to remove access panels reduces maintenance
- ✓ Oversized, high speed, self-aligning rotor bearings
- ✓ Stainless rotor shell and stainless steel rotor heads
- ✓ Adjustable rotor assembly optimizes separation efficiency

## ECCENTRIC DESIGN

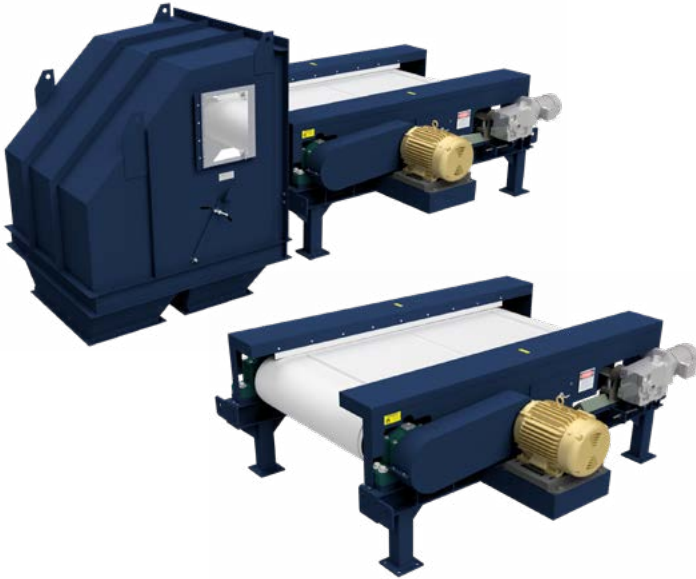


**Dings Eccentric Design** concentrates the magnetic field and releases the ferrous materials sooner. The Eccentric is used for small fragments of metal. It is engineered with Dings Double Shell Layer design that provides maximum protection of the rotor assembly. This design significantly reduces overall maintenance and replacement costs of the Eddy Current Separator.

**Options:** Belt tracking sensors, fixed speed control panel, standard and non-standard variable speed belt & rotor control panel, UL/CSA control panel, splitter assembly, custom designs.

# EDDY CURRENT SEPARATORS

## CONCENTRIC DESIGN



**Dings Concentric Design** has a triple shell layer of ceramic tile, fiberglass, and heavy duty stainless steel shell that protects the rotor assembly. This design lowers maintenance and replacement costs. The Concentric is used for bigger pieces of metal and high throughput. It is manufactured with heavy duty structural steel I-beam frame and support structure, oversized shafts and bearings, and a heavy duty drive package.

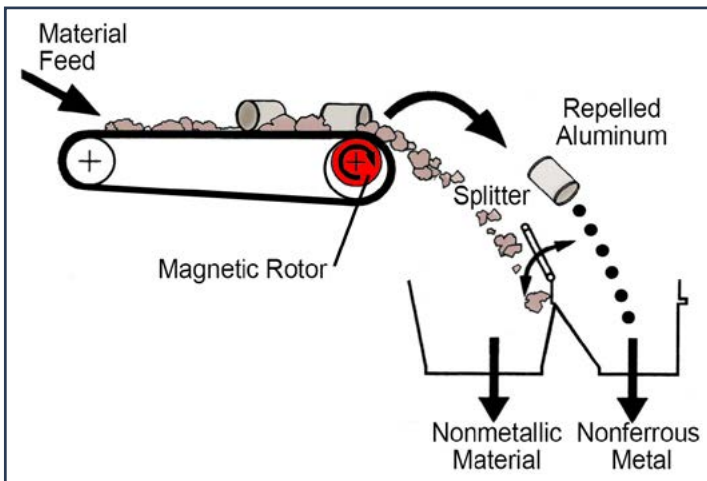
**Options:** Belt tracking sensors, fixed speed control panel, standard and non-standard variable speed belt & rotor control panel, UL/CSA control panel, splitter assembly, custom designs

## EDDY CURRENT SEPARATION OPERATION

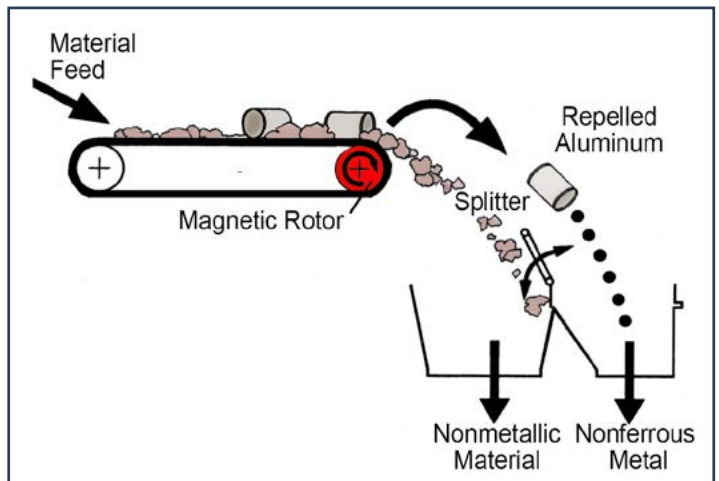
When a piece of non-ferrous metal such as aluminum, passes over the separator, the magnets inside the rotor rotate past the aluminum at high speed. This forms eddy currents in the aluminum, creating a magnetic field around the piece of aluminum. The polarity of that magnetic field is

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 material, allowing the two material streams to be separated.

## EDDY CURRENT ECCENTRIC DESIGN OPERATION



## EDDY CURRENT CONCENTRIC DESIGN OPERATION



# MAGNETIC SWEEPERS

Magnetic Sweepers protect tires from damage caused by steel objects like nails, screws, wire, rods and other damaging scrap metal. A Magnetic Sweeper operates by simply moving it over areas that need cleaning. It automatically picks up loose pieces of steel. Dings Magnetic Sweepers cost

nothing to operate, because they are built with permanent magnets that don't consume energy. The magnetism is guaranteed for life! They are easy-to-use, highly effective and built to operate year after year with an exceptional degree of reliability.

## MAGNETIC SWEEPER FEATURES:

- ✓ Guaranteed Lifetime Warranty on magnetism
- ✓ Ceramic Grade VIII magnetic material - highest grade
- ✓ Durable carbon steel and stainless steel construction
- ✓ Effective, economical and convenient protection
- ✓ Maintenance-free, easy-to-use models
- ✓ Continuous, no-cost separation
- ✓ Reduces tire repairs and replacement costs
- ✓ Magnet body protected by welded housing of heavy gauge steel



LIFETIME GUARANTEE  
ON MAGNETISM

**Dings Yard Magnetic Sweeper** keeps the vehicle areas free from tire-damaging steel pieces. It eliminates downtime expenses by keeping vehicles in service. The Yard Model is designed with two eyebolt mounts for suspending from vehicles. It provides continuous, maintenance-free protection.

**Options:** Custom designs

## YARD MODEL



**Dings Tireguard Magnetic Sweeper** is a power-packed magnet on wheels. The Tireguard can be towed, lifted, or pushed and is made for large and small traffic areas. Dings Tireguard Magnetic Sweeper is economical, versatile, lightweight and tough!

**Options:** Trailer mount, forklift mount, bracket mount, custom designs

## TIREGUARD MODEL



# MAGNETIC SWEEPERS

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## ROADGUARD MODEL



**Dings Roadguard Magnetic Sweeper** offers power plus convenience of a time-saving release. The lever releases metal debris, eliminating wiping or hand contact with metal and can be locked in release (non-pickup position) for safety. This model can exert nearly a ton of force on a wide block of steel.

**Options:** Trailer mount, forklift mount, bracket mount, u-bolt hitch, eyebolt hitch, 2" ball fulton hitch, custom designs.

## FLATGUARD MODEL



**Dings Flatguard Magnetic Sweeper** has a removable onboard pan that can accumulate much more metal debris than the standard model on the market! It is constructed for hard usage encountered in military service over rough, unpaved ground containing rocks, bumps, pot holes, debris and other obstructions under bad weather conditions.

**Options:** Trailer mount, forklift mount, bracket mount, u-bolt hitch, eyebolt hitch, 2" ball fulton hitch, 3" holland hitch, safety chain & grab hook, reflectors (as shown), custom designs.

## ATLAS/ATLAS XL MODEL



**Dings Atlas/Atlas XL Magnetic Sweeper** removes potentially damaging metal debris from very large traffic areas. It produces more magnetism over a larger area through a greater distance than other models. It comes equipped with a horizontal handle that releases the load of metal debris. A handle provides better leverage when releasing the load and can be locked into position for safety.

**Options:** Trailer mount, forklift mount, bracket mount, eyebolt hitch, 2" ball fulton hitch, remote switch, custom designs.

# MAGNETIC SWEEPERS

**Dings Remotlas/Remotlas XL Magnetic Sweeper** removes potentially damaging metal debris from very large traffic areas. It produces more magnetism over a larger area through a greater distance than other models. The Remotlas can be remotely cleaned from inside the cab, with a remote switch, saving time getting in and out of the vehicle.

**Options:** Trailer mount, forklift mount, bracket mount, eyebolt hitch, 2" ball fulton hitch, custom designs.

## REMOTLAS/REMOTLAS XL MODEL



**Dings Atlas FT3X-24 Magnetic Sweeper** is the world's largest sweeper. It is designed for commercial airports and military fields. The Atlas FT3X-24 can easily sweep large constrained areas and achieve traveling speeds of up to 55 mph. This model provides the most effective and labor-saving FOD control at airports. Each of the sections can be used interchangeably, allowing any of them to be connected to the vehicle as lead magnet.

**Options:** Ring hitch and swing away swivel jack, remote switch, mount, custom designs.

## ATLAS FT3X-24 MODEL



# ELEKTROLIFT MAGNETS



**Dings Elektrolift Magnets** are all-welded, steel constructed magnets built to take punishing actions encountered when hoisting steel in factories. Elektrolifts are the preferred answer when searching for a better way to hoist parts on tool beds, grinders, etc. and to load trucks, bins and furnaces. They ship ready to be installed.

**Options:** Custom designs.

**Diameters** of 4", 8", 13", and 18" are available, ready for shipment. Our magnetic experts can custom design an Elektrolift Magnet to suit your application needs.

## ELEKTROLIFT MAGNET FEATURES:

- ✓ Deep magnetic field to reach irregular objects
- ✓ High surface strength for flat steel objects
- ✓ Continuously-welded solid construction
- ✓ Multiple Elektrolifts can be used in tandem
- ✓ Maintenance-free
- ✓ Rated for continuous duty

## ELEKTROLIFT MAGNET LIFTING CAPABILITIES

|                        | Plate Thickness |            |            |             |             |
|------------------------|-----------------|------------|------------|-------------|-------------|
|                        | 1/4 inch        | 5/8 inch   | 1 inch     | 2 inch      | 3 inch      |
| <b>4" Elektrolift</b>  |                 |            |            |             |             |
| Max. Weight (lbs)      | 85 lbs.         | 220 lbs.   | 250 lbs.   | 250 lbs.    | 250 lbs.    |
| <b>8" Elektrolift</b>  |                 |            |            |             |             |
| Max. Weight (lbs)      | 400 lbs.        | 1,400 lbs. | 2,300 lbs. | 2,500 lbs.  | 2,500 lbs.  |
| <b>13" Elektrolift</b> |                 |            |            |             |             |
| Max. Weight (lbs)      | 600 lbs.        | 2,200 lbs. | 4,200 lbs. | 7,000 lbs.  | 7,000 lbs.  |
| <b>18" Elektrolift</b> |                 |            |            |             |             |
| Max. Weight (lbs)      | 800 lbs.        | 3,200 lbs. | 6,600 lbs. | 13,500 lbs. | 13,500 lbs. |

# HEAVY DUTY PIT MAGNET

## REMOVES FERROUS CONTAMINANTS FROM GRAIN STREAMS

Extra sturdy grate magnet mounts securely over receiving pit opening to remove ferrous materials from grain stream. Larger 2" square magnetic tubes and wider tube spacing allow the pit magnet to be used in high volume applications. Sizes range from one to five feet square or rectangular.

The Dings Pit Magnet was designed specifically for grain handling facilities, continuously removing nails, screws, wire, tools, and other tramp iron. It's also ideal for other high volume processing operations with free-flowing powders or granular materials.



\*Shown with deflectors

## SUPERIOR GRADE CERAMIC VIII

Dings Co. uses the best grade of ceramics for magnet tubes, ensuring a stronger, longer lasting magnetic field. Ceramic VIII has a better resistance to demagnetization than Ceramic V or other lower grade materials.

This resistance is particularly important in grates because of the arrangement of polarities inside

the tubes. For maximum separating power, the magnetic components must be assembled in the tubes with like poles facing each other. However, these repelling poles create a strong demagnetizing force which can weaken the performance of the grate magnet. Ceramic VIII was developed specifically to overcome this negative effect, making it the ideal material for grate magnets.

## SPECIFICATIONS:

- ✓ Square or rectangular models
- ✓ Available in any width or length from 1 to 5 feet
- ✓ Heavy duty , all welded construction
- ✓ Frame and grate tubes are all 304 stainless steel
- ✓ Large 2"x 2" square tubes
  
- ✓ Frame is 3/16' thick
- ✓ Tube walls that enclose magnetic material are heavier gauge than standard grate magnets for extra rigidity
- ✓ Choice of magnetic material: Ceramic VIII or high intensity rare earth
- ✓ Meets OSHA specification at 2-1/2" space between tubes
- ✓ Optional deflectors direct flow toward the tubes for maximum separation
- ✓ Lifetime warranty on magnetism



LIFETIME GUARANTEE  
ON MAGNETISM



# GRATE MAGNETS

Grate Magnets are powerful, non-electric separators designed to remove small magnetic particles from free-flowing powders and granular materials. Dings Grate magnets are made with permanent magnets, therefore the magnetism is guaranteed for life. Magnetism is spread across the entire space where material flows. It's concentrated on the smooth surfaces of magnetic tubes, and in the spaces near them. All material fed into a Grate Magnet is subjected to a magnetic separating force. Dings Grate Magnets contain magnetic

material throughout the entire tube to produce a more uniform separating force, unlike other grate magnets that are partially loaded with springs and fillers.

Grate Magnets are built in a variety of designs from drawer types to floor types. They fit vertical flow chute applications more easily, more effectively and more economically than other separator types. They cost nothing to operate!

## GRATE MAGNET FEATURES:

- ✓ Guaranteed Lifetime Warranty on magnetism
- ✓ Ceramic Grade VIII magnetic material - highest grade or Rare Earth Magnets available
- ✓ Heavy duty, all-welded models
- ✓ Continuous and/or automatic separation
- ✓ Maintenance-free and easy-to-use models
- ✓ Dust-tight construction
- ✓ Cost-effective way to increase production



LIFETIME GUARANTEE  
ON MAGNETISM

## GRATE MODELS



**Dings Grate Magnets** are available in a variety of designs and models: Rotary, Hopper, Easy Clean, Auto Clean, Heavy Duty Pit, Standard Housed, Drawer, Heavy Duty Frame and much more. Contact a Dings magnetic expert today to get the right Grate Magnet for your application.

**Options:** Sanitary finish, deflectors, double bank, drum adapters, hopper adapters, bin vibrators (pneumatic and electromagnetic), transitions, collection trays, rare earth magnetic material, custom designs.

# FERROPLATE MAGNETS

Ferroplates are low-cost, non-electric flat plate magnetic separators. They are designed to remove tramp iron and magnetic contaminants from processed powders and granular materials conveyed in chutes. The most popular installation is a sloping chute. An installed Ferroplate is hinged to the underside of the chute, where it can overlap an opening cut into the chute bottom. Any magnetics in material that slides over the Ferroplate are attracted towards its magnetic face, then held

firmly on it. Dings Ferroplates provide more magnetic range and holding power than others on the market. Our Ferroplates have the capability of effectively attracting metal through a distance while securely holding that metal in a chute.

Dings Ferroplates come in several different models and design shapes that are available to meet your specific application requirements. Any Ferroplate can be custom designed.

## FERROPLATE FEATURES:

- ✓ Guaranteed Lifetime Warranty on magnetism
- ✓ Ceramic Grade VIII magnetic material - highest grade
- ✓ Durable carbon steel or stainless steel all-welded construction
- ✓ Enhanced separating action
- ✓ Maintenance-free and easy-to-use models
- ✓ Continuous, no or low-cost separation
- ✓ Easy installation where space is limited
- ✓ Purifies and prevents expensive equipment damage



LIFETIME GUARANTEE  
ON MAGNETISM

## FERROPLATES



**Dings Ferroplates** are available in a variety of designs and models: from our plate magnet models to our application specific designs: Dry Hump, Hydro Hump, Round Pipe Separator, Perma Chute, Pneumatic Inline, Quick Clean and Auto Clean models, and FDA approved gasket seals. Contact a Dings magnetic expert today to get the right Ferroplate for your application.

**Options:** Sanitary finish, 4 pole construction, sensors, pad eyes, rare earth magnetic material, custom designs.

# DEMAGNETIZING COILS

Precision ground, honed or machined steel is often magnetized. Dings Demagnetizing Coils remove magnetism in ferrous materials. They are designed for high capacity with low-rated heat rise.

**Dings Demagnetizing Coils** require no maintenance and protect expensive equipment, saving costs of replacement and downtime.

**Options:** Custom designs.

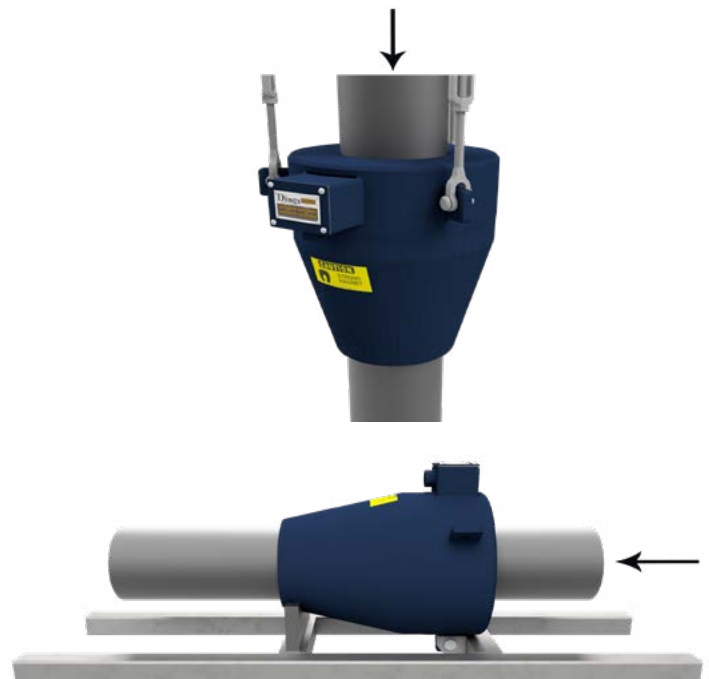


## DEMAGNETIZING COIL FEATURES:

- ✓ Sturdy, protective surface
- ✓ Withstands severe impacting action
- ✓ Maintenance-free
- ✓ Easy installation
- ✓ Step-winding design

## DEMAGNETIZING COIL INSTALLATION

Dings Demagnetizing Coils are easy to install - just place vertical, horizontal or at a 45° angle.



# SPECIALTY MAGNETS

## SWINGING PENDULUM

Dings Swinging Pendulum electromagnet is a very large and durable magnetic separator, originally designed for reclaiming iron. It can withstand the punishment of continuously attracting massive hunks of steel weighing up to 600 lbs! The Swinging Pendulum is designed and manufactured like no other! It performs like no other, operates like no other and can take a beating

like no other magnetic separator on the market! It has a unique self-cleaning pendulum that swings underneath a powerful electromagnet, cooled by a forced oil system. Attracted metal is discharged first to one side and then to the other. This magnetic separator is another example of the experience and technology that Dings can apply when answering specific application requirements.

### SWINGING PENDULUM FEATURES:

- ✓ 20 Year Warranty on coil burnout - the best warranty in the industry
- ✓ Expansion of high dielectric cooling oil takes place inside the magnet box - no additional plumbing or oil tanks!
- ✓ Magnet is filled with cooling oil containing antioxidants that improve service life and operation
- ✓ Easy replace manganese steel wear plates and cleats in field
- ✓ Easy access to oil level, oil drain and oil fill plugs save cost and man hours
- ✓ Protects crushers and other processing equipment
- ✓ Eliminates costly downtime
- ✓ Pendulum face and wear plates absorb all shock and wear
- ✓ Complete and non-stop separation
- ✓ NEMA 4 terminal box



20-Year Warranty  
on Coil Burnout

## SWINGING PENDULUM



**Dings Swinging Pendulum Electromagnet** is used in reclaiming iron from steel mill slag, mineral processing applications, in foundries and recycling applications. Contact a Dings magnetic expert today.

Options: Explosion proof motor, explosion proof outlet box, motor starter, custom designs.

# SPECIALTY MAGNETS

## RENDERING ELECTROMAGNET

Dings Rendering Electromagnet is designed to capture knives and other metal objects as they fall down an inclined chute along with entrails and other meat processing byproducts. The magnet's sloped design and 4" step protects and holds

attracted metal until the chute is ready for cleaning. Turn off power to the magnet and attracted metal falls freely away. The tapered step-face helps hold contaminants out of product flow to minimize wash-off.

### RENDERING ELECTROMAGNET FEATURES:

- ✓ 20 Year Warranty on coil burnout - the best warranty in the industry
- ✓ Expansion of high dielectric cooling oil takes place inside the magnet box - no additional plumbing or oil tanks!
- ✓ Magnet is filled with cooling oil containing antioxidants that improve service life and operation
- ✓ Pressure relief valve prevents moisture from getting into magnet
- ✓ Easy access to oil level, oil drain and oil fill plugs save cost and man hours
- ✓ Full stainless steel bottom plate with extra stainless steel center wear plate in the main impact area to provide longer equipment life
- ✓ Balanced magnetic circuit



20-Year Warranty on Coil Burnout

## RENDERING ELECTROMAGNET



**Dings Rendering Electromagnet** is available for your specific application. Contact a Dings magnetic expert today.

**Options:** Custom designs.

# SPECIALTY MAGNETS

## SUGARON ELECTROMAGNET

Dings Sugaron Electromagnet mounts inside chutes that carry deep loads of processing materials. It combines high surface strength with extended magnetic range. Sugar cane can't push attracted iron off with the step face design. The Sugaron

captures metal plates, machetes, cutting tools, etc. in mills processing sugar cane. This electromagnetic separator protects equipment from breakage and damage, prevent costly repairs and production line shutdowns.

### SUGARON FEATURES:

- ✓ 20 Year Warranty on coil burnout - the best warranty in the industry
- ✓ Expansion of high dielectric cooling oil takes place inside the magnet box - no additional plumbing or oil tanks!
- ✓ Magnet is filled with cooling oil containing antioxidants that improve service life and operation
- ✓ Pressure relief valve prevents moisture from getting into magnet
- ✓ Step face design
- ✓ Balanced magnetic circuit
- ✓ Protects processing equipment and eliminates costly downtime
- ✓ Continuous protection



20-Year Warranty  
on Coil Burnout

## SUGARON



**Dings Sugaron Electromagnet** is available in widths ranging from 54 " to 84". Units have been made for specialty applications. Contact a Dings magnetic expert today.

**Options:** Custom designs.



## **ENGINEERING DRIVEN - CUSTOMER SERVICE FOCUS**

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### **CUSTOMER FOCUSED SERVICES**

Dings Company Magnetic Group engineering and sales staff work together from our Milwaukee, WI factory to provide outstanding customer service from experts in magnetic separation. We listen to our customers to gain an understanding of their needs and apply our experience in their trade to provide magnetic separation equipment that is sized and positioned for the best possible performance in their specific application.

### **HEAVY DUTY CONSTRUCTION**

Dings Company Magnetic Group has been providing recycling operations with high quality magnetic separators for over 120 years. Our reputation for robust equipment is valued in recycling applications where low maintenance and reliable operation is essential.

### **REPLACEMENT PARTS**

We offer replacements parts and spare parts for your magnetic separators. Our staff is available to assist in identifying parts needed. Many parts are in stock and available for same day shipment.

### **ON-SITE SUPPORT**

Our factory sales staff and local representatives are available to provide on-site support. Expert advice regarding the positioning, suspension height, and maintenance ensures that your magnetic separators are providing optimum performance.



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