Dings Electro Overhead Magnets

Built To Last

self-cleaning

severe-duty

stationary

Dings Co.
magnetic group

Separate metal quickly and easily

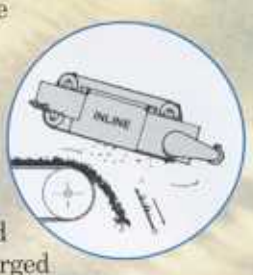
Whether you're removing unwanted tramp iron from a product stream or reclaiming metal in a scrap or C & D recycling operation, Dings has an overhead magnet to solve your separation problem.

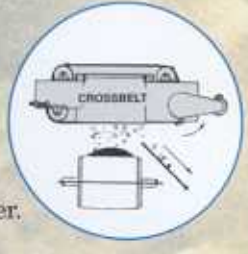
Continuous Removal

For applications where large amounts of metal need to be removed, choose Dings' self-cleaning overhead magnets. Here a thick heavy-duty rubber belt moves continuously around the magnet, intercepting attracted metal and sweeping it off the magnet. You won't have to worry about an excessive buildup of iron covering the face of the magnet and possibly shorting out the magnetic field. One inch high rubber cleats vulcanized to the belt prevent round metal fragments from rolling and staying in the magnetic field. Vulcanizing also prevents metal from becoming entrapped under the cleat. For MRF applications, three inch high rubber cleats are available.

Mounting Options

Depending on your application, you may choose either an Inline or Crossbelt installation. An Inline installation is preferred for most applications. In this case, the magnet is installed over a conveyor headpulley with its cleaning belt running parallel to the trajectory of material falling off the conveyor headpulley. Since the material being conveyed is less compact as it is discharged from the headpulley, less magnetic force is required to separate the metal. This is the most economical configuration since you can usually use a smaller magnet to do the job. When space is a consideration, a Crossbelt installation may be the answer. In this case, the magnet is mounted over any straight section of a conveyor with its cleaning belt running at a right angle to the conveyor travel direction.





Built to withstand the toughest conditions

Rebar, nails, spikes, metal plates and other sharp pieces of metal can cause extreme damage to a magnetic separator. That's why Dings severe-duty overhead magnets are specifically designed to handle these tough assignments.

Heavy-Duty Performance

Careful engineering has gone into every detail of the Dings severe-duty overhead magnet. We start with the superior holding power of our standard overhead magnet. Add to this a heavy-duty belt drive package, lagging on the drive pulley and a replaceable wear plate that provides extra protection for the magnet impact area. Finish it off with our armor-clad Durabelt and you've got a tough, durable magnet that you can count on to provide years of dependable service under the worst conditions.

Armor-Clad Durabelt

Dings Co. was the first to develop an armored belt, allowing overhead magnets to be used in severe-duty applications. Thick plates of 304 stainless steel protect the impact area of the Durabelt from the punishing action of sharp, heavy objects attracted by the magnetic field. Individual plates or cleats can be easily replaced in the field – reducing downtime and belt replacement costs. You'll appreciate the durability of our double-walled A-frame cleats, which are more rugged and impact-resistant than the single-surface bent angle cleats in other designs.

The Difference

EXCLUSIVE COIL DESIGN ELIMINATES MAGNET BURN-OUT

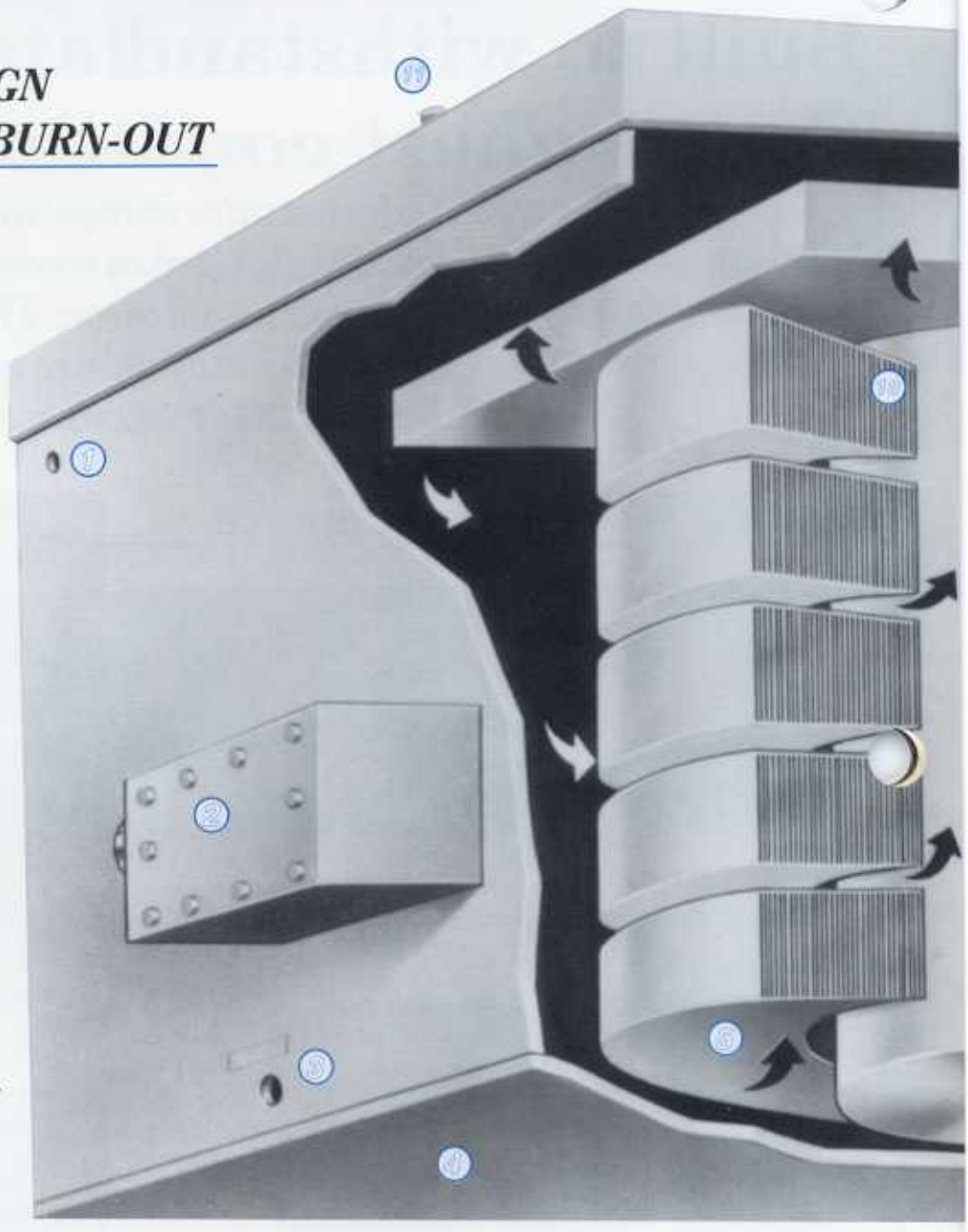
Magnet burn-out is one of the leading causes of failure in magnetic separators. To protect against this, Dings electromagnets are wound with anodized aluminum strap, an exclusive design that lasts longer and generates more magnetism than other designs.

MORE POWER, LESS CHANCE OF A BREAKDOWN

Since Dings uses anodized aluminum strap, no additional insulation is required. You benefit from extra turns which fit into the same area – generating more magnetism and separating power. You can also rely on years of dependable performance without the threat of insulation breakdown, the major cause of coil failure.

COOLER, MORE EFFICIENT OPERATION

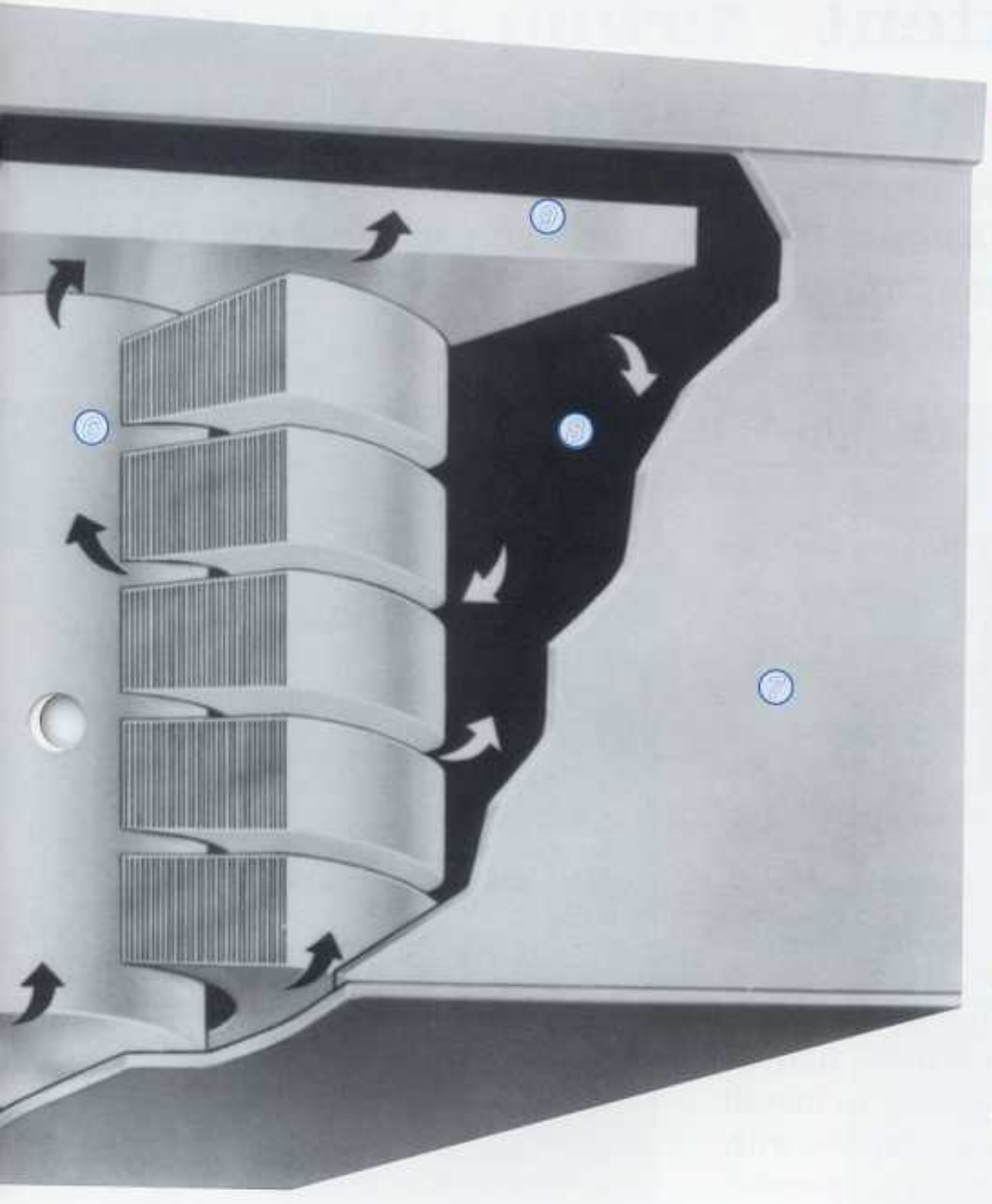
Dings aluminum strap coil design ensures that every coil turn is exposed to oil-cooling. You'll notice that your magnet runs cooler, and since electromagnets perform best at lower operating temperatures, you'll get a stronger, more efficient magnet. And, because each strap turn is in contact with oil, thermal expansion of the oil can be accommodated inside the magnet box – eliminating the external oil expansion tank required with round wire designs.



BALANCED MAGNETIC CIRCUIT

You want the most magnetic power for your investment. That's why Dings designs its electromagnets with a balanced magnetic circuit. By optimizing the size and arrangement of all components, the most penetrating and effectively shaped magnetic field is created. Ordinary designs produce a weaker, asymmetrical field. As a result, it may be necessary to use a larger magnet to achieve the same penetration.

Is In The Design



1. Oil level and filler plug.
2. Electric terminal box provides for fast hook up and easy access. You simply connect 2 wires from your DC power source to 2 terminals inside.
3. Drain hole.
4. The additional non-magnetic stainless bottom plate protects your magnet from impact damage caused by attracted metal.
5. Each coil turn completely immersed in oil, for maximum heat transfer. Free flowing oil convection currents prevent overheating. Your magnet will be filled with the highest quality transformer oil when you receive it.
6. Steel core is not covered by a pole shoe. Pole shoes are common in old designs. Elimination of pole shoe in Dings balanced circuit allows stronger and deeper magnetic intensity (a higher gradient). You can't buy more efficiency.
7. Heavy steel plate on all four sides provides an optimum magnetic path and mechanical strength.
8. Free space for warm oil to expand. No need for external expansion tanks and additional plumbing.
9. Thick steel backplate spreads magnetic lines uniformly to side plates.
10. Anodized aluminum strap gives maximum performance with minimum weight. You can't buy a longer life design. Exceeds Class H insulating rating.
11. One way pressure relief valve allows air to escape but keeps dirt and moisture out.

Dings CO.
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For intermittent metal removal

If you are troubled by occasional tramp metal, a Dings stationary overhead magnet will take care of the job.

Maintenance-Free Design

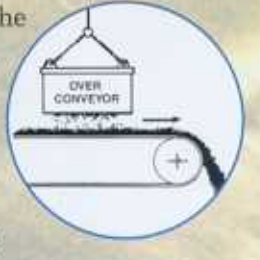
More Magnetic Power

Dings stationary overhead magnets feature the same box and coil design found in our self-cleaning models. Anodized aluminum strap means you get the most magnetic power in the smallest space.

Each Dings stationary overhead magnet is constructed from continuously welded stainless steel bottom plate, steel side plates and backplate. With no moving parts, there is nothing to lubricate, tighten or replace. You'll also find it easy to install your Dings magnet. It comes complete with a convenient 3 point cable sling suspension system. To change the suspension angle, simply adjust the turnbuckle provided on one of the suspension members. There's no measuring, shortening, lengthening or cutting of cable.

Simple Operation

Depending on your operation, you may suspend your Dings stationary overhead magnet either over the conveyor or over the headpulley. Connect it to your DC power supply and it's ready to go. When the magnetic surface becomes filled, just swing the magnet away from the conveyor to a discharge bin and shut off the power supply. Attracted metal falls free. Swing it back over the feed stream and turn the power on. Your Dings magnet is back in operation – in a matter of seconds.



The right power for your magnet

All electromagnets require a steady DC current. Dings rectifiers are specifically designed to transform the alternating current from your local power source to the necessary direct current.

Dependable Current Transfer

Dings rectifier features include:

- DC output wattage up to 50KW to match separator requirements
- No maintenance solid state silicon diode design
- Excellent voltage regulation – within 3.5% from no load to full load
- Overload capacity for short infrequent periods
- Hinged door cabinet for easy access
- Available in your choice: NEMA 1, 4, 4X, 9 or 12 enclosures

Design Modifications

If your application calls for a unique magnet design, give us a call. Our team of engineers will work with you to design the perfect magnetic separator for your application.

Examples of modified designs include:

- Dust Tight Enclosure for control of air pollution

- Solid Waste Magnetic Systems used for reclaiming and cleaning of steel in shredded solid waste

- Swinging Pendulum Magnet for reclaiming steel in slag

The Dings Company

A Tradition of Excellence

1899. The year Myron Dings founded the Dings Magnetic Separator Company in Milwaukee, Wisconsin. What started as a small manufacturer of magnetic separators for the foundry industry soon grew and diversified. Today, more than 100 years later, the Dings Company is a recognized leader in magnetic separation technology for a wide variety of industries.

Dings magnets are used in rock quarries to protect crushers, at mines to concentrate iron ore, in food and chemical plants to prevent iron contamination, in recycling operations to separate aluminum and other metal, in solid waste plants to reclaim steel, and on roads and construction sites to pick up nails and other metal debris. Wherever metal needs to be moved, or removed, Dings has a magnet to do the job.

Call us today to discuss your magnetic separator needs. Our qualified sales engineers will work with you to find the right product for your specific requirements.

Dings Company – Foremost in the Manufacture of Industrial Magnets Since 1899.

Dings Co. magnetic group

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