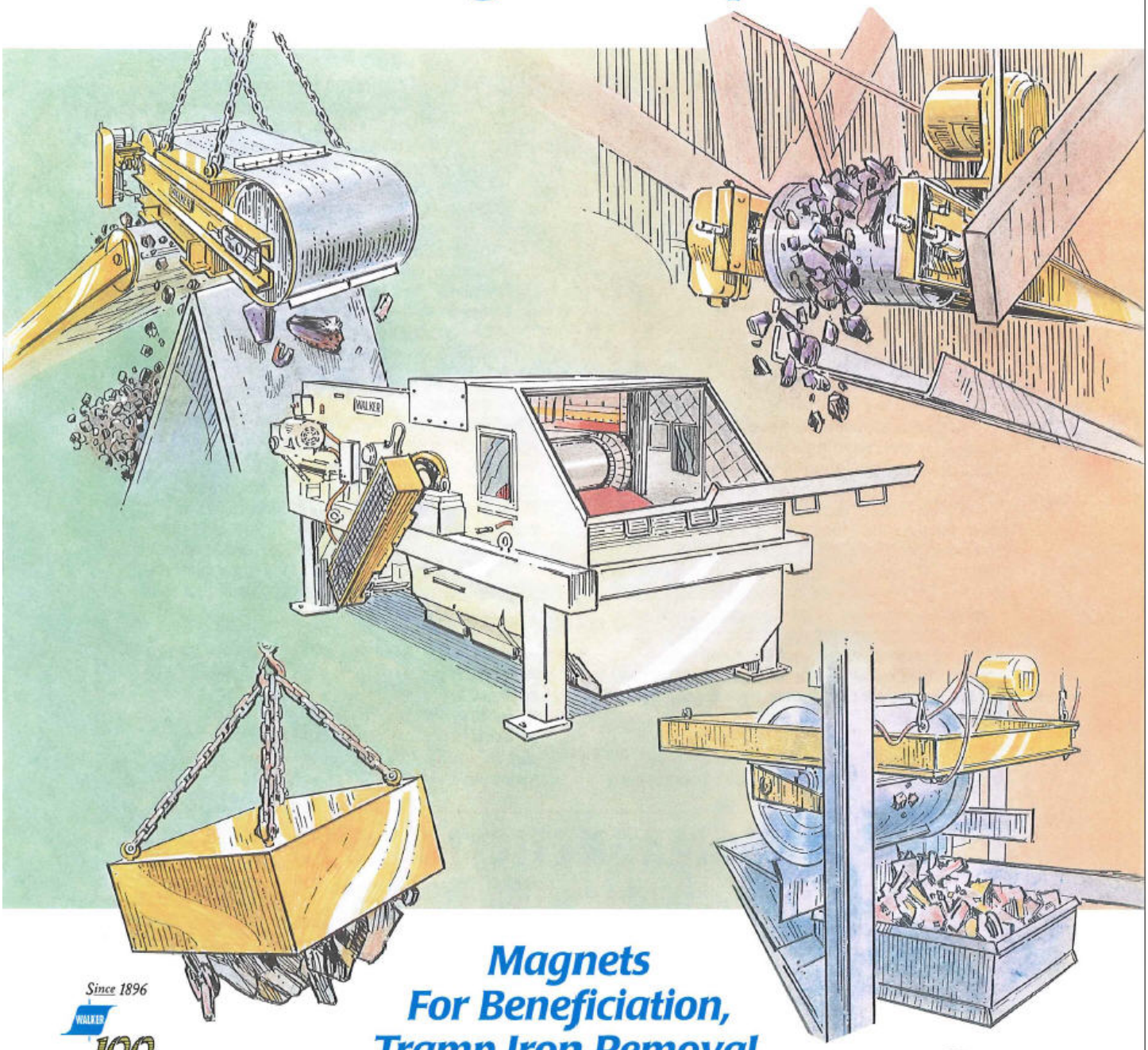
Walker Magnetic Separation



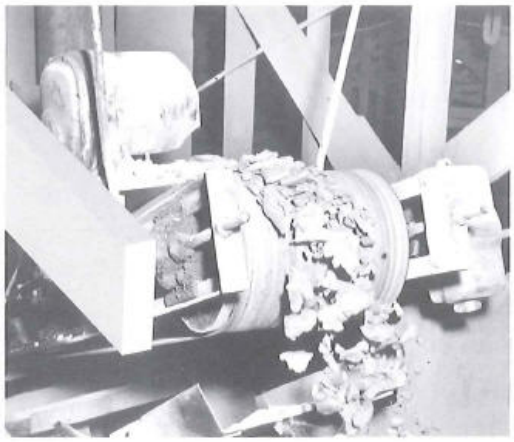
Since 1896
WALKER 100
A Century of Leadership

Magnets For Beneficiation, Tramp Iron Removal, and Non-Ferrous Metal Recovery

www.magneticseparator.com

WALKER MAGNETICS

DYNAFORCE™ PERMANENT MAGNETIC PULLEYS



Features:

- ☐ DynaForce Permanent Magnet Pulleys are powered by Ceramax® focused-flux strontium- ferrite ceramic magnets for superior coercive force.
- ☐ Truly a permanent magnet, the DynaForce never needs charging, is impervious to weather, requires no maintenance.
- ☐ DynaForce's patented design concentrates attractive power on the pulley's peripheral surface where it is needed most.
- ☐ Stainless steel outer skin ensures longer life.
- ☐ DynaForce is easy to install with sizes to fit every operation; shafts machined to specification on request.

Magnetic pulleys are widely used in the processing and recycling industries for several reasons. They are inherently self-cleaning, easy to install, and virtually maintenance free. Walker DynaForce pulleys provide maximum holding force because they focus the flux of oriented Ceramax® magnets on the pulley's peripheral surface. The radial pole field design is arranged for large and cylindrical shaped ferrous material, minimizing belt wear. The Ceramax strontium-ferrite ceramic magnets never need charging and are impervious to weather. Axial pole designs are also available for use with finely divided material for field uniformity across the belt width.

Pulleys are available in a wide range of standard sizes, with diameters from 8" to 48", belt widths from 12" to 60", and belt speeds from 175 FPM to 435 FPM. The size required for an application is based on a number of factors, including the maximum and minimum size of particles, the type and size of ferrous materials to be separated, the moisture content of the burden, the angle of conveyor incline, and the system capacity in cubic feet or tons per hour.

Walker engineers and sales personnel are available to select or design the proper unit to fit your specific application.

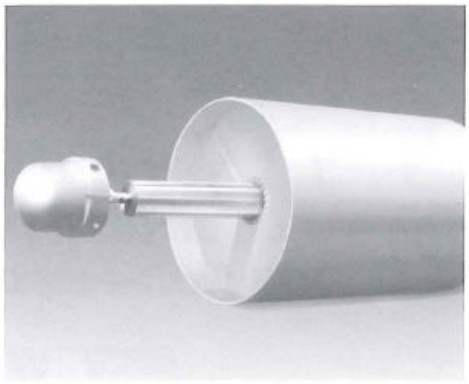
WALKER MAGNETICS Pulleys give you more of what you want a magnet for--greater attracting power and greater holding power to keep harmful, dangerous ferrous particles out of your processing system or to redeem valuable ferrites from other substances.

ELECTROMAGNETIC PULLEYS

For certain applications such as iron ore cobbing, slag processing, mineral beneficiation, etc., successful utilization requires that the field strength of the magnets be regulated to compensate for various factors that can change recovery and grade of values in the product.

For these applications, Walker Magnetics offers Electromagnetic Pulleys rather than the permanent magnets described above. In addition, Electromagnetic Pulleys come equipped with a Variable Voltage Control Rectifier which can be remotely mounted at the most convenient work location.

Walker Electromagnetic Pulleys are available in the same wide range of diameters and belt widths as Walker Permanent Magnet Pulleys, and in addition, offer a choice of 115 or 230 VDC aluminum or copper coils.



WALKER MAGNETICS

DYNAFORCE™ PERMANENT MAGNETIC DRUMS

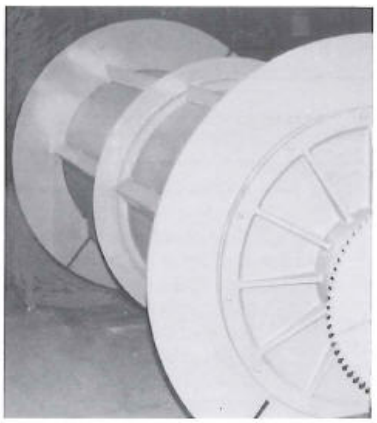
- ☐ DynaForce Permanent Magnet Drums are available in either axial pole (with diameters from 18 to 60 inches) or radial pole designs (with diameters from 12 to 60 inches).
- ☐ DynaForce Drums are powered by maintenance free Ceramax®, focused-flux strontium-ferrite ceramic magnets for superior coercive force, and are impervious to weather.
- ☐ Drums are available in a variety of cylinder materials and linings, with non-magnetic drum heads.

Walker Magnetics DynaForce Permanent Magnet Drums are designed to accommodate feed widths up to 96". Magnet assemblies utilize strontium ferrite magnets which are designed to operate through a temperature range of -40° C to 150° C.

Drums in an axial pole configuration produce high-grade magnetic concentrates, and can be equipped with housings that incorporate one or two adjustable splitters which will provide up to three products: tailings (non-magnetic), middlings (non-liberated), and concentrate (magnetic). Grade of separation can be influenced by drum diameter, number of poles and drum speed. The feed presented should be uniformly sized.

Drums in a radial pole configuration orient long material such as roof bolts or re-bars along the drum width so they cannot be knocked off. Magnets can be arranged in a variety of ways to produce the depth of field and holding power to accommodate a broad range of applications. Deep-reaching magnetic fields can be achieved for suspended drums that will pluck ferrous particles up to a height of 18", and items as large as 12" can be handled by the largest 60" diameter drums. The advantage of these units is that they require no power and are permanently magnetized for the life of the installation.

ELECTROMAGNETIC DRUMS



For applications requiring adjustments in field strength or the ability to shut the magnet down such as parts recovery, iron ore cobbing and municipal refuse ferrous recovery, drums fitted with electromagnets are the solution.

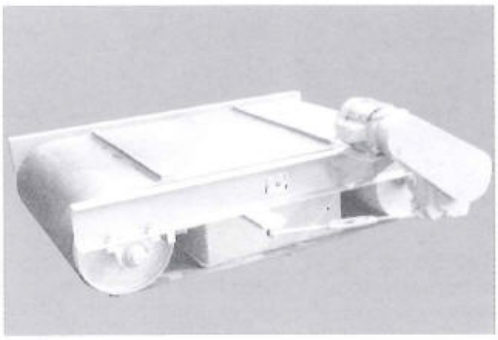
Walker Electromagnetic Drums are available with either axial or radial pole constructions. They can provide control of individual poles or sections of the entire surface, through use of a variable voltage transformer control.

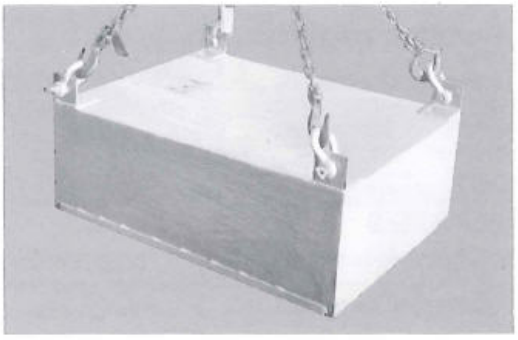
All electromagnets used are wound with Class C insulated wire. They are designed to dissipate concentrated heat without external cooling. All drums are provided with shells of stainless steel or manganese, depending on application.

Walker Electromagnetic Drums provide the ultimate in design and performance for heavy duty ferrous separation applications.

PERMANENT MAGNET SUSPENDED SEPARATORS

SELF-CLEANING AND MANUAL





Walker's permanent-magnet suspended separators use powerful Ceramax® magnets for increased efficiency in the separation of ferrous materials. The permanent magnet design has a lower installation cost than the electromagnet type, because no DC rectifier is required, and operating costs are also lower, since the magnets consume no power. Suspension heights up to 10" - 12" are available.

These separators are available in manual and self-cleaning designs. Manually cleaned magnets can be supplied with a stripper mechanism, and the self-cleaning type uses a two-pulley design. Parallel self-cleaning magnets are mounted in line with the material flow, while transverse self-cleaning magnets remove the ferrous materials over the side of the conveyor.

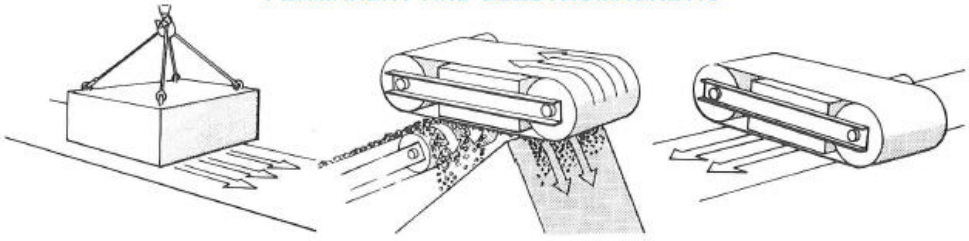
STANDARD FEATURES

- ☐ High-powered Ceramax magnetic circuit for deeper field penetration
- ☐ Heavy-duty welded construction for years of service
- ☐ Extra thick bottom plate for wear resistance
- ☐ No power consumption, virtually maintenance-free

SELF-CLEANING COMPONENTS

- ☐ Shaft mounted speed reducer
- ☐ TEFC motor
- ☐ Belt take-up adjustment
- ☐ Heavy cleated rubber belt
- ☐ Self-aligning sealed bearings
- ☐ Four point suspension
- ☐ Rugged structural steel frame

TYPICAL APPLICATIONS PERMANENT AND ELECTROMAGNETIC



Manual Cleaning | In-Line Self-Cleaning | Transverse Self-Cleaning

Walker Repairs All Makes of Separation Magnets... Electro & Permanent
For Repairs 1-800-W-MAGNET

WALKER MAGNETICS

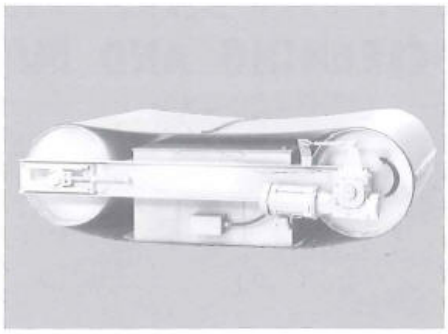
ELECTROMAGNETIC SUSPENDED SEPARATORS
SELF-CLEANING AND MANUAL

STANDARD MAGNET FEATURES

- ☐ 115 or 230 VDC aluminum coils with Class C (220° C) insulation
- ☐ 100% duty cycle, oil cooled
- ☐ Space wound aluminum coils for rapid heat dissipation
- ☐ Internal oil expansion chamber with pressure relief valve and drain plugs
- ☐ Heavy wear-resistant non-magnetic steel bottom plate

SELF-CLEANING FEATURES

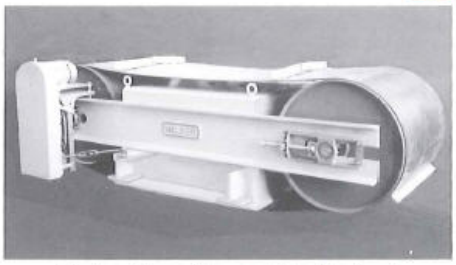
- ☐ Heavy-duty self-aligning sealed bearings
- ☐ Rugged structural steel frame
- ☐ TEFC motor
- ☐ Single head and tail pulleys on smaller units, compact four-pulley design on larger units
- ☐ Heavy cleated rubber belt with take-up adjustment
- ☐ Four-point suspension
- ☐ Shaft-mounted speed reducer



Deep penetrating electromagnets, incorporating all of the latest innovations in coil design, allow Walker's electromagnetic suspended separators to remove both large and small tramp metal from deep burdens on fast-moving conveyors. The separators are designed for continuous operation at peak performance.

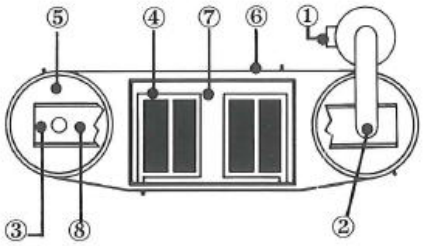
Electromagnetic suspended separators are available in manual and self-cleaning designs. Manually cleaned magnets are discharged electrically. Self-cleaning magnets can be mounted in line with the material flow or tansverse to remove the ferrous materials over the side of the conveyor.

NEW! DynaForce Suspended Separator
2 & 4 Pulley Construction — Belt Speeds up to 700 FPM
Ideal For Tramp Iron Removal



Walker Magnetics provides the best in suspended Magnet and Separator design with its experienced staff of design engineers. Over 50 years' of field expertise has shown us what is required to make these separators the best available for consistent and proven performance. We've incorporated a 2 and 4 pulley design for most sizes for ease of tracking, providing longer belt life. Large pulleys are used to increase belt life. Large shaft diameters are used for additional bearing life. Heavy-duty bearings will provide virtually maintenance free operation. Walker Magnetics will provide the proper selection of the best and most economical unit for your application.

- ☐ 2 & 4 Pulley Construction
- ☐ Shaft Mounted Reducers
- ☐ Mounting Flexibility
- ☐ Cool Operating Coils
- ☐ Oil or R-TEMP® Coolant
- ☐ Internal Oil Expansion Chamber
- ☐ Heavy-Duty Belts
- ☐ Full Range of Sizes



R-TEMP is a registered trademark of Cooper Power Systems

OPERATIONAL FEATURES

1. Heavy-duty Shaft Mount Motor Reducer
2. Heavy-duty Flange Bearings
3. Heavy-duty Take-Up Bearings
4. Liquid Dielectric Gap Wound Coils
5. Heavy-duty 2 & 4 Pulley Construction on Most Sizes
6. Heavy-duty Belt with Stainless Steel or Vulcanized Rubber Cleats
7. Internal Expansion Cnamber
8. Heavy-duty Frame for Suspended or Base Mounting

WALKER MAGNETICS