Magnets For The Mining & Aggregate Industry

Suspended magnets are designed for separation of ferrous metal from a variety of over-the-belt conveyor applications. Proven in industries such as Mining, Aggregate, Recycling, Tire Shredding, Foundry, Wood Chip, Pulp & Paper, Power Generation, Construction and Demolition.



Self-Cleaning Permanent Magnets

IMI's SMS series of magnets offer optimum operating efficiency with a continuous cleaning belt to keep the magnet face free of collected metal. The powerful, deep reaching magnetic circuit pulls metal to the face of the magnet where the cleated belt can remove the metal off the end of the magnet and out of the product flow. The compact design of the SMS makes it ideal for use on portable, size reduction equipment.



Suspended Electromagnets (SEMO)

These powerful electromagnets are designed to deliver peak ferrous metal separation performance. The "Deep Reaching" magnetic field is ideal for applications that require increased suspension heights for the magnet or that have a deep product burden.

The Self-Cleaning Suspended Electromagnet offers optimum separation capacity by removing collected metal from the magnet face instantly and discharging it out of the product flow. This continuous cleaning function allows the magnetic circuit to maintain maximum magnetic strength at all times.



Manual Clean SEMOs are best suited for applications with a lower volume of ferrous metal in the product flow or in applications where the system is only run intermittently. The ability to turn the magnet "OFF" makes removing the collected metal easy for the operator.

Manual Clean Permanent Magnets (SPMC)

These magnets are a good economical solution for applications that require a magnet for equipment protection but don't encounter enough ferrous metal in their product flow to justify a self-cleaning magnet.

SPMC (Optional Swiper Bar Shown)

Benefits of Suspended Magnetic Separators:

- Protect vital processing equipment from ferrous metal damage
- Improve product purity and quality for high volume belt conveyed products
- Deep reaching magnetic circuits supply superior separation capabilities
- Use prior to a metal detector to achieve maximum separation and system performance capabilities
- Reclaims valuable ferrous metal
- Reduce product liability





Magnetic Separation Pulleys and Drum Separators



Magnetic Separation Pulleys

IMI's comprehensive line of powerful permanent Magnetic Separation Pulleys are typically installed as head pulleys in conveyor system applications. They provide effective, automatic and continuous removal of tramp metal from a material flow.

Commonly used in industries such as waste recovery, mining and bulk material processing, IMI pulleys improve product purity and protect equipment from metal damage.

- Removable Steel Shaft
- Stainless Steel Shell
- Powerful Permanent Magnet Circuit
- Straight hub with keyway
- Taper lock on some models, verify with factory
- Axial magnetic circuit design (Tech Sheet TG-11A)



IMI's Drum Separators provide ferrous metal removal from dry, bulk products in free-flowing processing systems.

Due to the nature of their design, Drum Separators are continuously self-cleaning units. These separators can be provided as a complete assembly with the housing and the drive package included, or as the magnetic drum only.



- Over 180° of Magnetic Arc Protection
- Manually adjustable magnetic arc position
- Drum diameters from 12" to 24" available
- Drum Widths Available from 12" to 60"
- Inlet and Discharge Mounting Flanges
- Inlet transition to direct product flow
- Access Doors for Inspection and Drum Removal
- Sealed Bearings for Drum Support and Drive (Tech Sheet TG-10A)

MARS™ - Metal Automated Removal System

The MARS™ is the Metal Automated Removal System, a state-of-the-art, patented piece of equipment that removes all types of tramp metal from conveyor belt systems automatically, without stopping or damaging the belt.

- Can remove non-ferrous and ferrous metals
- Reduces System Downtime from Metal Detector Trips
- The MARS[™] will work with any make and model of metal detector
- Will discharge material either to the left or the right of the conveyor
- Custom designed to fit all belt widths and speeds







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