

ERIEZ



MINING & MINERALS PROCESSING

EQUIPMENT FOR THE MINING INDUSTRY



ERIEZ
GLOBAL LEADER IN SEPARATION TECHNOLOGIES

About Eriez

Established in 1942, Eriez stands as a pioneering force in separation technologies, embodying a truly global presence.

With 12 wholly owned subsidiaries spread across the globe, we proudly design, manufacture, and support our magnetic separation, flotation, metal detection, and material handling equipment on an international scale.

Our dedicated team of knowledgeable and experienced sales engineers collaborates closely with customers, understanding their unique challenges to deliver dependable, high-performance equipment, systems, and solutions.

Whether clients require our standard equipment or bespoke solutions tailored to their precise specifications, Eriez delivers.

Drawing from more than 80 years of experience across diverse industries, including mining and minerals processing, food processing and packaging, aggregates, metals recycling, and many other sectors, Eriez leverages its extensive experience to design and supply products that elevate productivity, efficiency, and product purity.

Eriez remains steadfast in its commitment to setting the global standard for excellence in key technologies, driving innovation and reliability across industries worldwide.

Eriez is the Global Leader in Separation Technology

Eriez' separation technology is used throughout mineral processing operations. Our magnetic separation equipment includes low, medium and high intensity magnetic separators to concentrate magnetic ores or remove metallic contaminants, and our state-of-the-art metal detection equipment can detect and remove dangerous unwanted metals from conveyed materials.

Eriez flotation systems offer maximum separation efficiency for many applications, including cleaning, roughing and scavenging applications in base metals, gold, industrial minerals, coal and oil sands, phosphate and potash.



Heavy Vibratory Feeders

Ideal for handling coal, ore, and aggregates, Heavy Duty Vibratory Feeders from Eriez offer controlled feeding for tough high-volume applications.

Heavy Duty Vibratory Feeders

Our heavy duty line of feeders provide a cost effective means to feed or screen large volumes of bulk material for applications where limited feed rate adjustability is required. Eriez offers three styles of heavy-duty vibratory feeders designed specifically for high volume rugged environments. Whether you are presenting conveyed material to separation equipment or you need to accurately feed tons of rock under a high headload, Eriez has a feeder solution to match your application.





Large Magnetic Separation Equipment

Eriez specializes in providing magnetic separation solutions to enhance the efficiency, safety, and quality of your production processes. Our large magnetic separators, such as suspended magnets, magnetic head pulleys, and drum separators, are designed to continuously and automatically protect your equipment and ensure product purity for years to come.

Suspended Electromagnets

Suspended Electromagnets provide tramp metal removal from conveyed materials. The electromagnet is typically mounted or suspended over a conveyor belt to remove large pieces of tramp metal that represent a hazard to downstream crushers, mills, pulverizers and grinders. Suspended electromagnets also remove sharp metal that can damage or tear expensive conveyor belts, especially at transfer points.



Suspended Permanent Magnets

Suspended Permanent Magnets are an effective method for removing unwanted iron from heavy burdens of material being conveyed on fast moving belts. They are ideal for separation applications on wet or dry, fine or coarse materials in large or small tonnages. Offering uninterrupted magnetic protection, suspended permanent magnets provide processing machinery safety from tramp iron and assure high product purity.



Magnetic Pulleys

Widely used as head pulleys in belt conveyors, Magnetic Pulleys from Eriez provide automatic removal of unwanted iron from materials conveyed on belts to prevent machinery damage and product contamination for sand, gravel, limestone, mining, rock product, and coal handling operations.



Permanent Magnetic Drum Separators

Eriez' Drum Separators remove both large and small pieces of iron contaminants from material processing lines. Powerful permanent magnets enable more efficient separation performance for a broader range of applications than ever before. They provide years of trouble-free automatic removal of tramp iron from heavy flows of bulk materials, including large and highly abrasive materials.





Pulse Induction Metal Detection

Eriez designs, develops, manufactures, and markets industrial metal detection with a focus on high sensitivities with the industry's easiest-to-use interface. The best metal detector is the one that's correctly calibrated to your specific application and product – Eriez has spent considerable time designing our metal detection equipment to be the easiest to use metal detector in the industry.

1200 Series Metal Detector

Detect both ferrous and non-ferrous tramp metal in magnetic ores, highly mineralized products and food products even when conveyed on steel cable belts.



MetAlarm Metal Detectors

The MetAlarm's lightweight design proves easy maneuverability and quick installation. In most cases, it can be installed with little or no adjustment to idler spacing.





Magnetic Separation Solutions for Wet Minerals Processing

Whether it's processing high volumes of iron ore or removing micron-sized ferrous or paramagnetic contaminants from valuable minerals, Eriez offers a complete range of continuous and batch magnetic solutions for wet processing. In hard rock mining, specialized magnetic equipment improves ball mill efficiencies by removing worn steel media fragments or using them as a protective liner.

Wet Drum Separators

Eriez Wet Drum Separators are used for automatic, continuous recovery of magnetite or ferrosilicon in heavy media operations and concentration of ferrous and weakly magnetic ores.



High Intensity Magnetic Filters

Eriez High Intensity Magnetic Filters are magnetic separators designed to remove fine ferrous and paramagnetic contaminants from flowing liquids.



Wet High Intensity Magnetic Separator

WHIMS are designed for high capacity, continuous removal or concentration of feebly magnetic materials.



Magnetic Flocculators

Eriez Permanent Magnetic Flocculators aid in the separation of minute magnetic particles from liquids and slurries. Used widely in the iron and coal mining industries to speed settling of fine magnetic particles in ore slurries and heavy media.



Demagnetizing Coils

Electromagnetic Demagnetizing Coils have been specifically designed to demagnetize natural magnetite flowing through pipelines.





Magnetic Separation Solutions for Dry Minerals Processing

Similar to the equipment used in wet processes, Eriez uses drum, roll, pulley and filter type magnetic separators in varying degrees of intensity to process dry minerals. These processes require conveyors, feeders and belts to present the material to the magnetic separators in underbelt, overbelt or gravity-fed applications.

Dry Vibrating Magnetic Filters

Eriez' unique Dry Vibrating Magnetic Filter (DVMF) is a high intensity electromagnetic filter designed to remove fine ferrous contaminants from dry powder. It incorporates vibrating magnetized filter elements to capture iron-bearing contaminants, resulting in a high-purity product while maintaining a high-capacity material flow.



Dry High Intensity Magnetic Separator

Dry High Intensity Rare Earth Roll Magnetic Separators provide maximum efficiency in the separation of weak magnetic particles for product purification applications. The Rare Earth Roll, generating peak magnetic field strengths approaching 24,000 gauss, is very effective for concentrating or removing weakly magnetic minerals from a dry process stream.



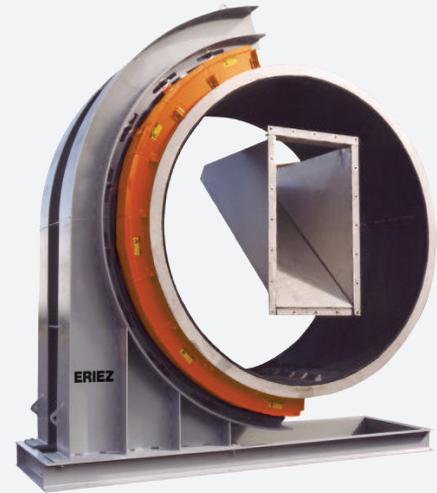
DF High Speed Drum Magnets

Dry Low Intensity Magnetic Separators (DLIMS) for automatic continuous concentration of magnetic ores, removal of magnetite from fly ash, purification of ground slag, foundry sand, cement and minerals.



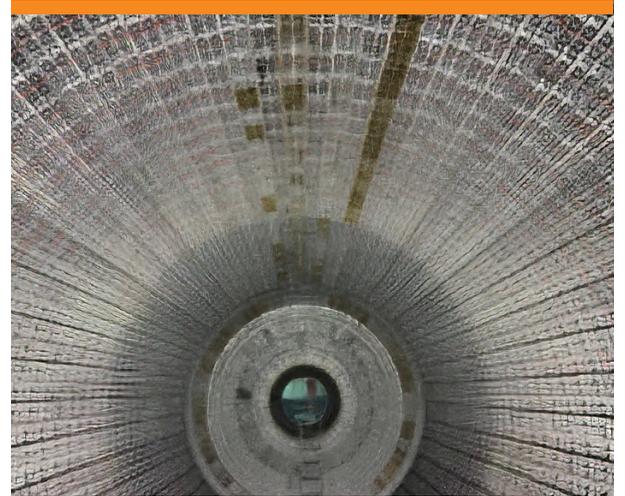
Trunnion Magnet System

Permanent magnetic separation system for the automatic and continuous removal of grinding ball fragments from the ball mill discharge. The Trunnion Magnet System bolts directly to the ball mill discharge flange to provide continuous magnetic collection of the grinding ball fragments. A permanent magnetic circuit collects the grinding ball fragments and discharges them to a collection hopper.



Magnetic Mill Liner

The metal magnetic mill liner (MML) is a wear resistant steel-encased magnet. It combines the best qualities of steel and magnetic liners. The magnet holds the metal magnetic liner to the shell and retains ball chips and magnetic minerals to form a solid protection layer, which serves as the wear liner.



High Intensity Electromagnetic Separators

High intensity, multi-zone dry disc magnetic separators purify and concentrate products, especially minerals. The Dry Disc Magnetic Separator produces exceptionally clean magnetic fractions with high magnetic recovery.





Flotation

Eriez Flotation provides game-changing innovations in process technology for the mining and mineral processing industries such as HydroFloat® for coarse particle recovery and the StackCell® mechanical flotation cell, as well as advanced testing and engineering services, column flotation and sparging equipment.

Applications for Eriez Flotation equipment and systems include metallic and non-metallic minerals, bitumen recovery, fine coal recovery, organic recovery (solvent extraction and electrowinning) and gold/silver cyanidation. Eriez Flotation has designed, supplied and commissioned more than 1,000 flotation systems worldwide for cleaning, roughing and scavenging applications in metallic and non-metallic processing operations, and we are a leading producer of modular column flotation systems for recovering bitumen from oil sands. Strengths in process engineering, equipment design and fabrication position Eriez Flotation as a global leader in minerals flotation systems.

Column Flotation

Eriez has supplied more than 1,000 flotation columns throughout the world in mineral concentrating and purification applications that include iron ore, base-metals, gold, industrial minerals, fertilizers (phosphate and potash), energy, and specialty applications such as oil/water separation. Flotation Columns incorporate design features that enhance metallurgical performance.



StackCell® Flotation

StackCell® flotation reduces the conventional flotation residence time requirement by 75 to 85% and increases the selective recovery of fine particles and slow-floating minerals, which increases profitability and improves the environmental sustainability of mining projects. For mining companies that want to minimize the environmental impacts of flotation circuits and maximize profitability, the StackCell offers reduced flotation circuit size and power consumption while delivering superior mineral recovery and concentrate grades.



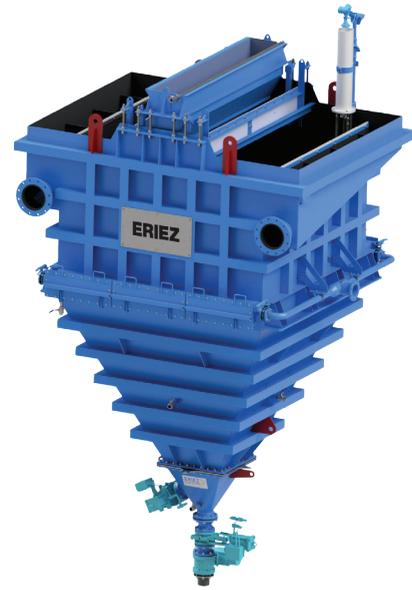
HydroFloat®

The HydroFloat® recovers particles +2x coarser than conventional flotation cells, which allows for a shift in the economic optimum grind size, and in turn increases profitability and improves environmental sustainability of mining projects. Eriez has developed and patented the HydroFloat, an innovative fluidized-bed coarse particle flotation machine with demonstrated commercial success in base metals and industrial minerals applications for nearly 20 years.



CrossFlow® Separator

Eriez CrossFlow® Separator is a highly efficient hydraulic classifier for the separation of material based on particle size, shape and/or density. This technology can also be used for desliming, counter-current washing and acid neutralization of minerals. The CrossFlow separates particles based on hindered-settling principles providing an economical and efficient means of classifying material such as silica and frac sands, mineral sands and industrial minerals.



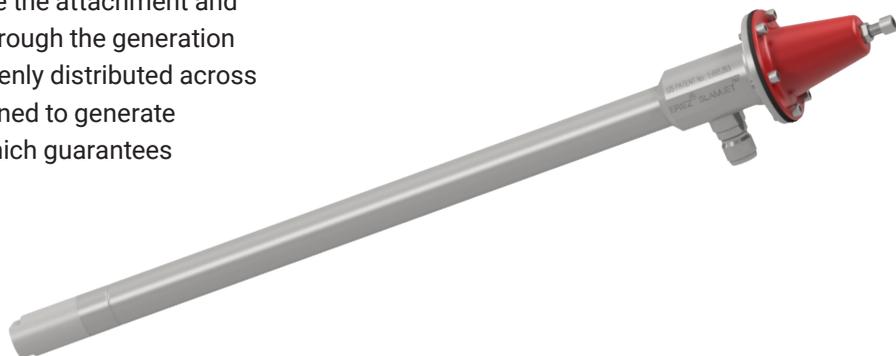
CavTube® Sparging

The CavTube® design is based on hydrodynamic cavitation. This occurs when the pressure in a moving liquid is momentarily reduced below its vapor pressure, creating ultra-fine air or vapor-filled bubbles. Cavitation and the shearing of additional gas ensure the generation of fine bubbles suitable for the recovery of both ultra-fine and coarser particles.



SlamJet® Spargers

SlamJet® sparging systems promote the attachment and recovery of hydrophobic particles through the generation of a fine bubble dispersion that is evenly distributed across the flotation column. They are designed to generate high rates of bubble surface area which guarantees a high probability of attachment and improved recoveries.



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HEADQUARTERS

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Note: Some safety warning labels or guarding may have been removed before photographing this equipment. Eriez, Eriez Flotation and Eriez Magnetics are registered trademarks of Eriez Manufacturing Co., Erie, PA.

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