ERIEZ







EDDY CURRENT SEPARATORS

FOR NONFERROUS RECOVERY • AMERICA MODELS



About Eriez

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

With 12 wholly owned subsidiaries across the globe, we proudly design, manufacture, and support our magnetic separation, flotation, metal detection, X-ray inspection, 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 custom solutions tailored to their precise specifications, Eriez delivers.

Drawing from more than 80 years of experience across diverse industries, including metalworking, 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 Eddy Current Separators

Proven Technology for Recovery

In 1969, Eriez patented both permanent magnetic and electromagnetic eddy current separators. Today, these powerful systems feature improved permanent magnetic circuits with rare earth magnetic material for stronger eddy currents and improved separation of nonferrous materials.

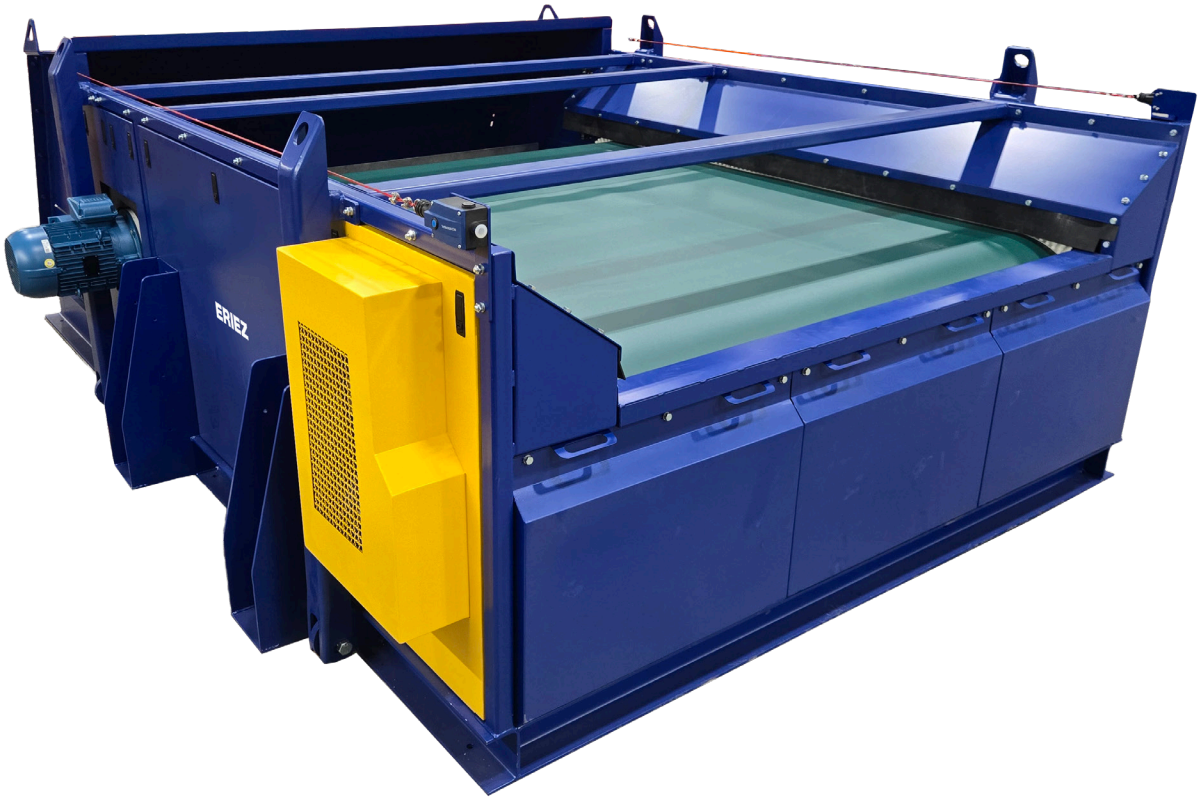
In operation, the nonferrous separator utilizes permanent rare earth magnets to induce eddy currents into metallic particles. This produces repelling forces which separate the metallics from non-metallics, providing a cleaner product for further processing. Removal of the metallics is selective and product loss is minimized.



Extract Valuable Nonferrous Metals

The nonferrous metallic separator consists of an external drum, an internal permanent magnetic rotor, a drive, and a belt conveyor. The external drum shell of non-metallic composite material rotates at conventional belt conveyor speed. The internal rare earth alternating polarity rotor turns at much higher RPM than the external shell.

Through the induction of eddy currents and the resulting repelling forces, the alternating magnetic field selectively repels the nonferrous metals and physically separates them from other materials with minimum product loss, offering high recovery of valuable materials.



RevX-E MKIII Eccentric Rotor Eddy Current Separators

Focused Field for Enhanced Recovery

Eriez' RevX-E® Eddy Current Separators are designed with an eccentrically mounted magnetic rotor within the non-conductive larger diameter shell for separation of nonferrous metals. The rotor concentrates its eddy current forces into a zone of separation at the end of the belt. By focusing its field, this design ignores potentially damaging ferrous material in the flow.



Advantages

- Rare earth rotor produces a powerful focused field
- Rotor position is adjustable for optimum separation
- Reduces long-term wear from heated ferrous buildup
- Compact design requires less space
- Access panels conveniently located for easy service

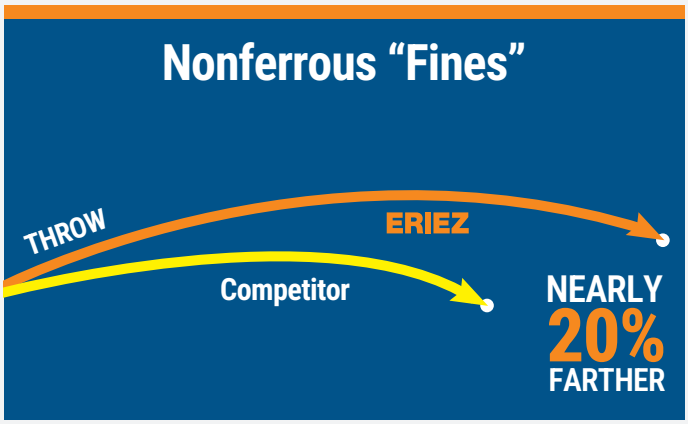
RevX-E Rotor Models

RevX-E is offered in two models for coarse or fines material separation. For coarse material greater than one inch, model LT2 provides excellent separation with a deep field rotor designed for maximum trajectory. For nonferrous fines typically measuring less than one inch, model ST22 with its high-frequency rotor configuration concentrates the eddy currents closer to the belt's surface, improving separation of this difficult material. Both models can be configured with a heavy-duty vibratory feeder, feeder support framework, separation shroud/splitter and controls for turnkey installation.

Superior Performance

Independent tests show Eriez' Eddy Current Separators throw aluminum "fines" nearly 20% farther than other top-selling brands. This extra distance is critical to improving separation and recovery.

SGS Report is available online at Recovery.Eriez.com



Stock Models

Model	Poles	Material Size	Width		Feeder	
			in	mm	in	mm
LT2	8	+1"	40	1,016	34 x 65	864 x 1,651
	8	+1"	48	1,219	42 x 65	1,067 x 1,651
	8	+1"	60	1,524	54 x 65	1,372 x 1,651
	8	+1"	80	2,032	74 x 105	1,880 x 2,667
ST22	22	+1/4" to 1"	40	1,016	34 x 65	864 x 1,651
	22	+1/4" to 1"	48	1,219	42 x 65	1,067 x 1,651
	22	+1/4" to 1"	60	1,524	54 x 65	1,372 x 1,651
	22	+1/4" to 1"	80	2,032	74 x 105	1,880 x 2,667

At 3000 RPM

RevX-E Design Features

Quick Change Conveyor Belt

Eriez' design includes a unique cantilever frame to expedite conveyor belt maintenance. The quick change belt design is available exclusively on RevX-E models. A belt can easily be replaced in under ten minutes.





Loosen support blocks



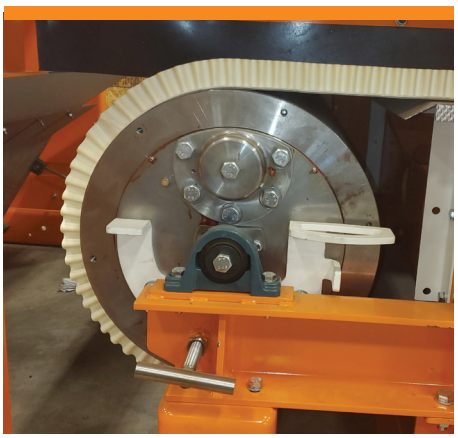
Remove support blocks



Slide off belt



Replace belt



Eccentric rotors (rare earth)



Rack and pinion splitter adjustment



Direct drive rotor



Controls



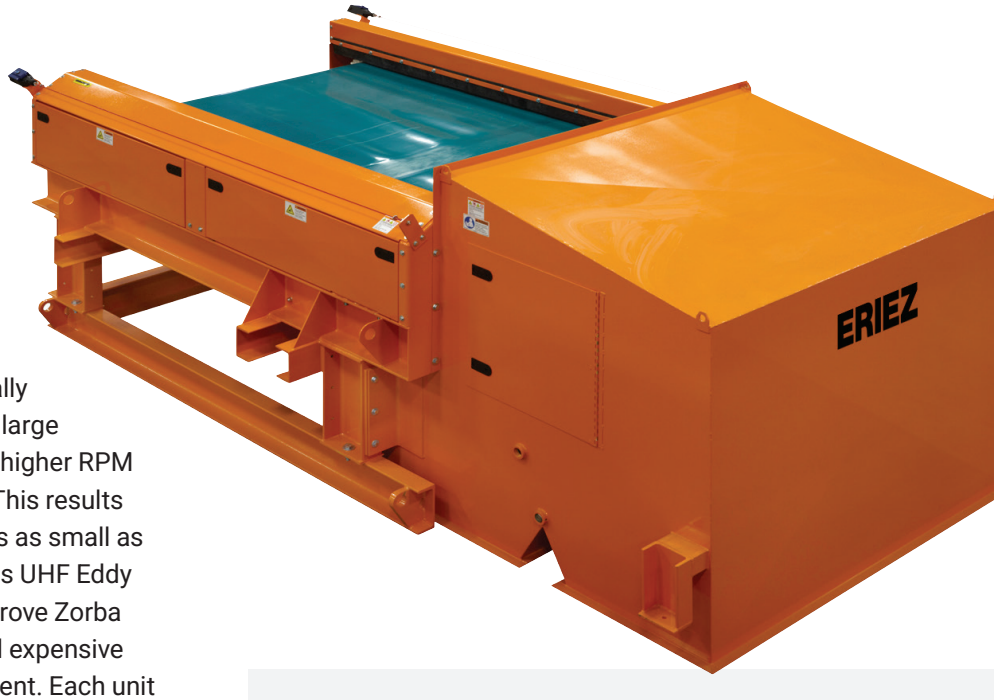
Brute Force Feeders



Emergency stops

UHF — Ultra-High Frequency Eddy Current Separators

Advanced Recovery of Fine Nonferrous Metals



Eriez Ultra High-Frequency Eddy Current Separator recovers micro-fine aluminum, copper and other nonferrous fines materials from ASR typically missed on traditional eddy current separators. The UHF Eddy Current Separator's combination of a rotor — designed to produce exceptionally high gauss at the belt's surface— and a large number of magnetic poles operating at higher RPM creates ultra-high-frequency changes. This results in superior separation of fine nonferrous as small as 2–3 mm and even bare copper wire. This UHF Eddy provides an economical solution to improve Zorba recovery without the need for additional expensive sensor-based or optical sorting equipment. Each unit ships with an Eriez Brute Force feeder to provide an even presentation of material across the rotor.



Process ASR fines to recovery bare copper wire and micro-fine aluminum

Features

- Ultra-high-frequency rotor
- High surface gauss
- Large number of frequency changes for superior separation
- Rotor spins at higher RPM
- Carbon fiber shell
- Precise fines splitter adjustments



UHF Models

Material Size	Width		Feeder	
	in	mm	in	mm
3/8"	40	1,016	34 x 65	864 x 1,651
3/8"	48	1,219	42 x 65	1,067 x 1,651
3/8"	60	1,524	54 x 65	1,372 x 1,651

Eddy Current Separators

Applications

- Auto shredding and scrap recycling
- Municipal solid waste facilities
- Aluminum can (UBC)
- Glass cullet
- Foundry sand
- Bottom ash
- Plastics
- PET flake
- Electronic scrap (E-Scrap)
- Soil remediation



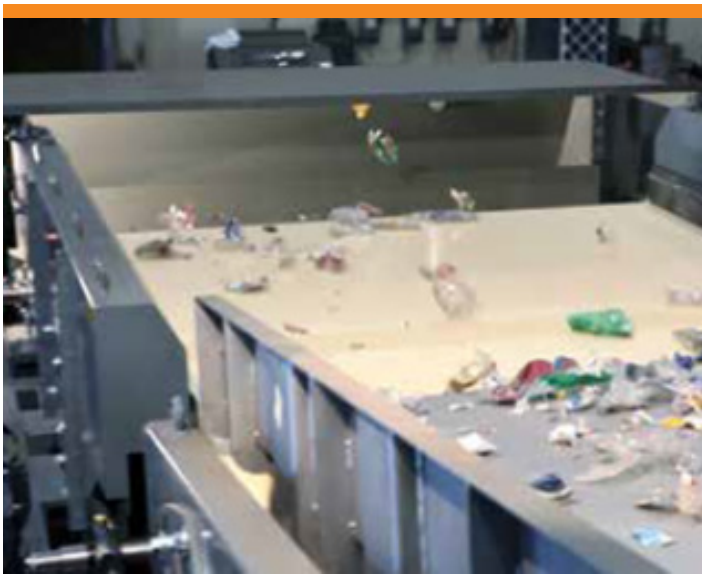
Zorba recovered at a recycling facility



PET flake is processed to remove any aluminum contaminants



Powerful Eriez LT2 RevX-E Eddy Current Separators are reliable workhorses sorting high volumes of aluminum in scrap yards



UBC from MSW at MRF



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