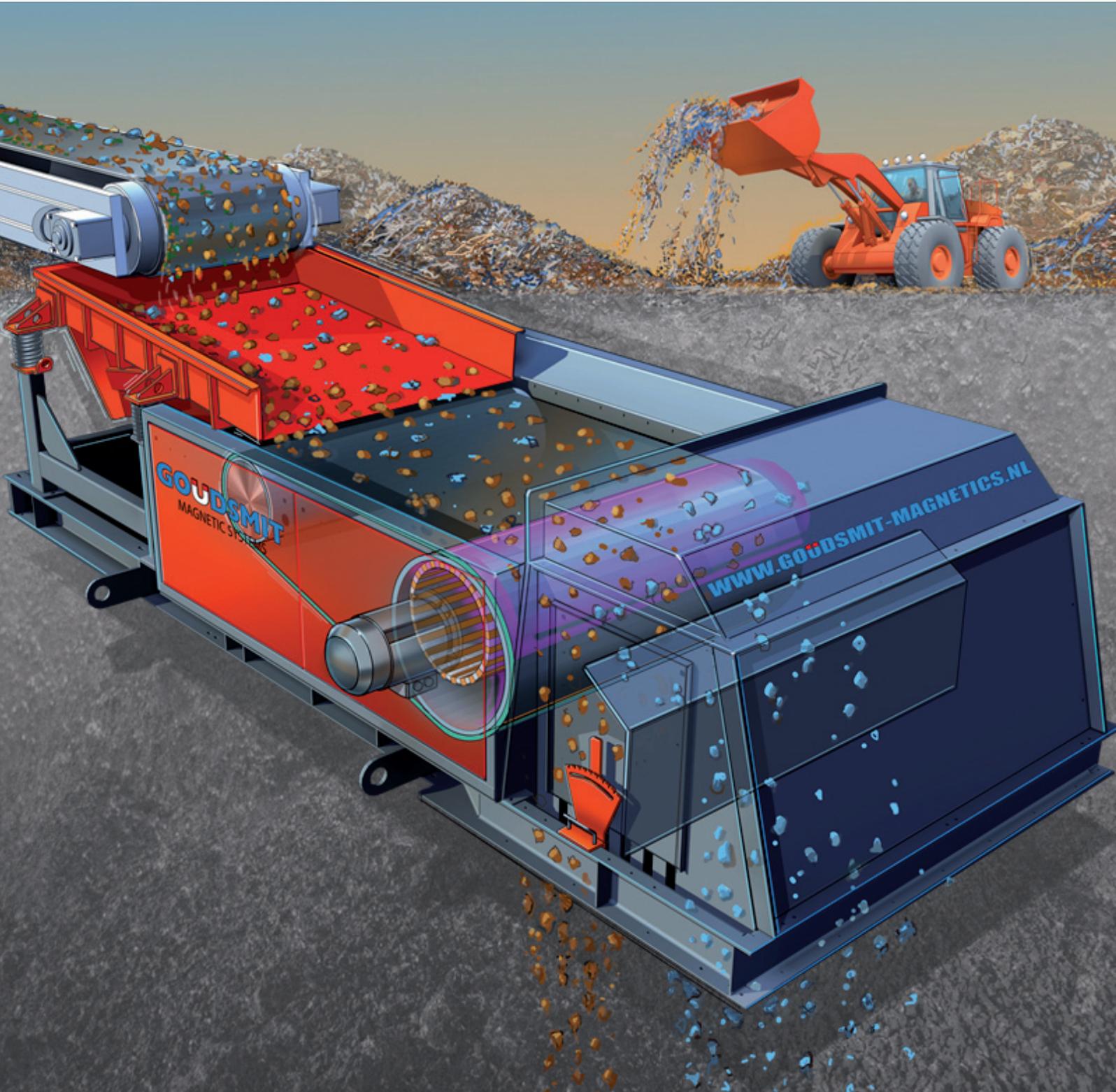


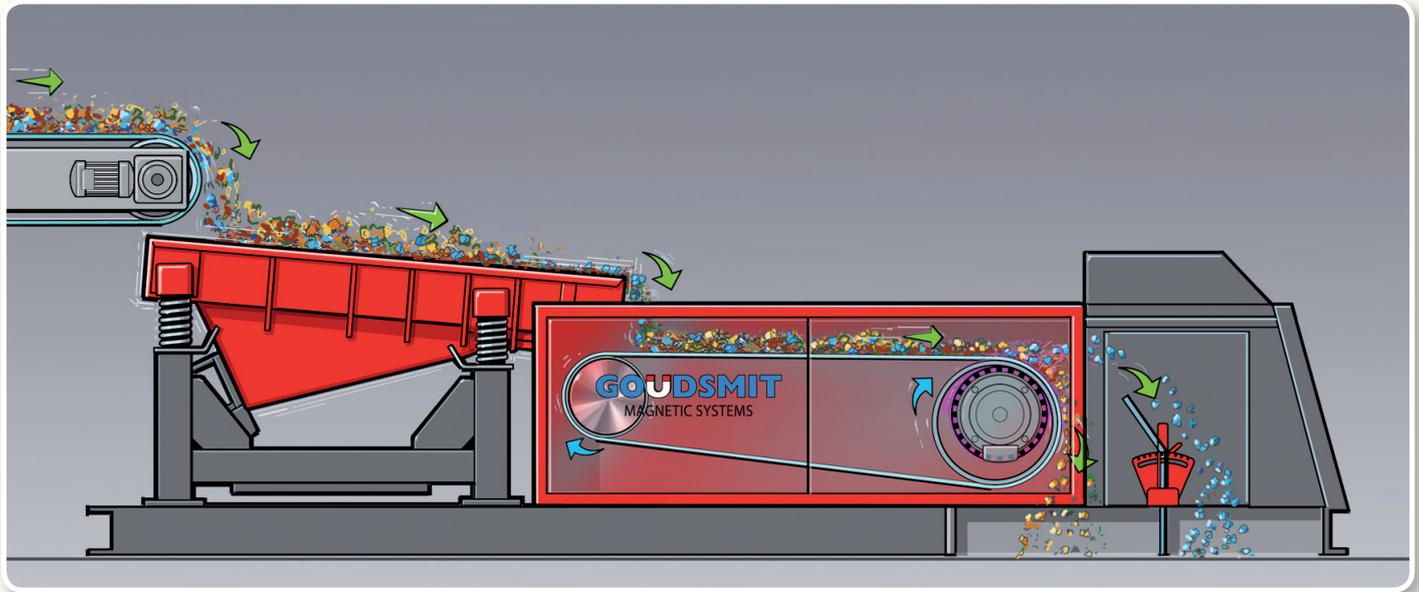
Eddy Current Separators



Goudsmit Excentric Eddy Current Separator

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The Eddy Current separators manufactured by Goudsmit have been used widely for decades. They are composed of a conveyor belt system with a rapidly rotating magnetic rotor that creates an induction field by means of magnetic poles. The rotation speed results in a rapidly fluctuating changing magnetic field. In non-ferrous electrically y conductive metal parts (non-ferro metals) a magnetic Eddy Current is created. This interplay of forces results in the ejection of the non-ferrous part from the product flow.



The highest yield in metal separation (mix)

This is what you may expect of an Eddy Current separator. But, in addition, you have a top quality machine that reduces the downtime of a production process to a minimum. These are important parameters that, since 2009, Goudsmit has taken into consideration in the further development of the Excentric Eddy Current Separator.

Typical areas of use are incineration slag, shredder residues, glass, wood, construction and demolition work, metals, electronic scrap, plastics, household waste, rejects and moulding sand (greensand).

Fraction 0-5 mm:

NF38HI (metal particles from 0.5 mm are separated!)

- 3000 rpm - 950 Hz

Fraction 5-10 / 10-20 mm:

NF22HI - 3000/3800 rpm – 550/696 Hz

Fraction 20-80 mm:

NF22 - 3000 rpm – 550 Hz

Fraction 80-300 mm:

NF12 - 3000 rpm – 300 Hz

Can sorting:

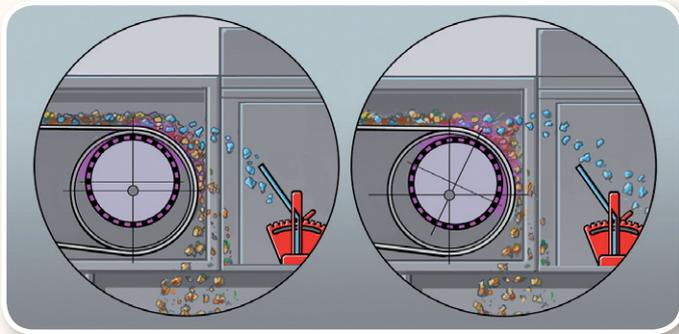
EddyCan 10 poles - 1500 rpm – 250 Hz



The newest generation of Goudsmit Eddy Current separators give an optimal yield in metal separation (mix) and reduce to a minimum the downtime of your production process.



The mobile "next generation" Eddy Current separators can be used with both fine and normal fractions - even with small quantities - and placed in different locations.



Angle setting of the magnetic rotor is done manually and has 5 settings from 0 to 31.25 degrees. Setting the angle adjustment with a simple spindle system is an optional offer. This is used in particular with machines for finer fractions.

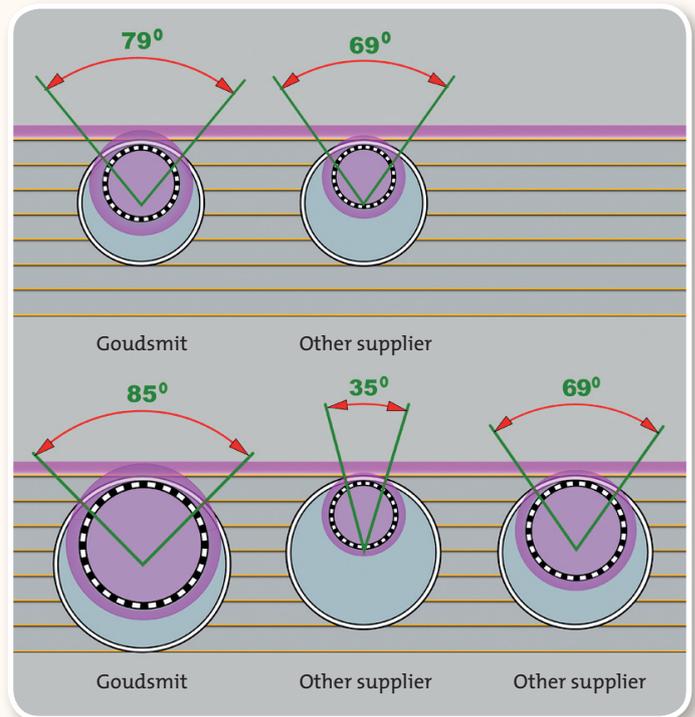
With the refined angle setting it is possible to achieve a **perfect** synchronisation of the ejection moment* of the non-ferro metals with the speed and capacity of the material flow being treated. This possibility provides an extra high separation yield for all fraction sizes.

The Eddy Current separator delivers a **maximum yield** in the **purest** non-ferro metal mix. The consequence of maximum setting possibilities such as:

- magnetic rotor speed
- magnetic rotor angle setting
- belt speed
- strong and deep Neoflux® (Nd-Fe-B) magnetic field

Eddy Current separators are used primarily to separate a maximum proportion of non-ferro metal mix from a waste flow or bulk flow. This refers to a high and pure recovery* and grade*. In addition, it is very important to obtain an end product that is as clean as possible in order to give a guarantee to the customers of secondary* raw materials in respect of particular quality requirements.

With the deep magnetic field configurations specially developed by Goudsmit and calculated by FEM, it is possible to operate a relatively high capacity. The strong magnets deliver high percentage of copper in, for example, ASR and incineration slag fractions. These configurations are very valuable parameters compared to what is offered by other suppliers in the market.



NF1500/22HI + 9000 Gss drum for PET recycling.



Integrated drum magnet.



Standard vibrating conveyor.



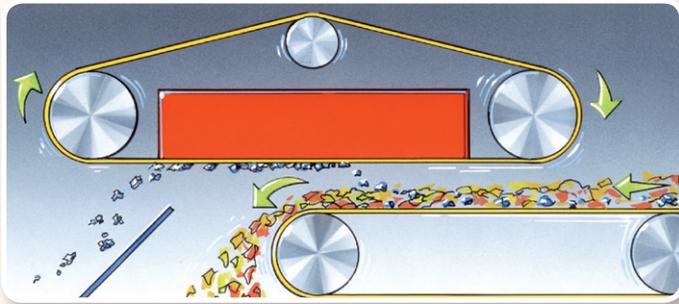
Partial product flow.

State-of-the-art test centre

Together with our clients, we have built up a solid network based on long-term relationships, qualitatively perfect mechanical engineering, and high magnetic values. This has resulted in a state-of-the-art test centre where specialists from the top segment of the market can answer your specific queries. If you have any questions concerning metal separation, do not hesitate to contact us for an analysis of your product.

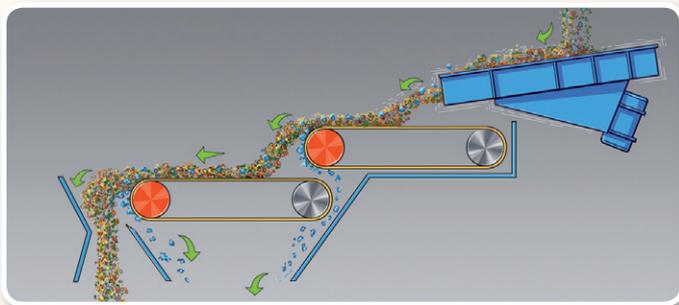
- * → **Grade** = purity of the separated metal particles
- **Recovery** = quantity of the separated metal particles
- **Ejection moment** = the place where the magnetic rotor must be strongest with regard to the metal particle to be ejected
- **Secondary raw materials** = Recovered, reusable raw materials; materials extracted from raw materials used earlier. They are collected, separated, sorted, prepared or treated and ultimately processed.

Below you can find information on other Goudsmit magnetic systems for the bulk sector and recycling sector.



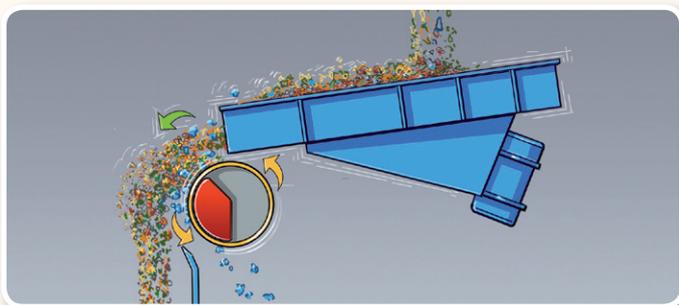
Permanent and electro overbelt magnets

Permanent and electro overbelt magnets are often used in the first step of a ferro separation process. The effectiveness varies from 70% to 90%. If you want to have a cleaner product, we can add one or more ferro separation steps. Overbelt magnets can be mounted both linearly and transversally over the conveyor belt.



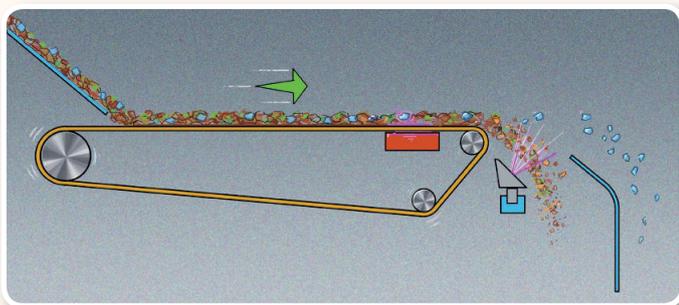
High gradient separator

High gradient separators are magnets that are so strong that they attract and remove paramagnetic, i.e. weakly magnetic, materials. For example, stainless steel, processed by a shredder, can become magnetic due to this mechanical transformation. Another example is iron dust the size of microns in ceramic materials.



Drum magnet

A drum magnet is a stationary 180 degree magnetic segment around which a stainless steel drum with attachments revolves. The iron particles are pulled against the drum and transported to the bottom of the magnet. Extractors draw the iron particles out of the magnetic field. The result is a pure separation between the product and the iron particles in the bulk and recycling industry.



I-Sens sensor separator

The I-Sens sensor separator perfectly complements the metal separation before or after the eddy current separators! With this separator it is possible to separate stainless steel, lead and copper wire from a material flow.

The separation principle is composed of a conveyor belt in which a sensor plate is mounted just before the final roller. This sensor plate detects a metal particle as well as the line along which this metal particle is located on the conveyor belt. The software then calculates the exact location and the metal particle is ejected from the flow with a pulse of air during its free-fall curve, after which it falls behind a partition.