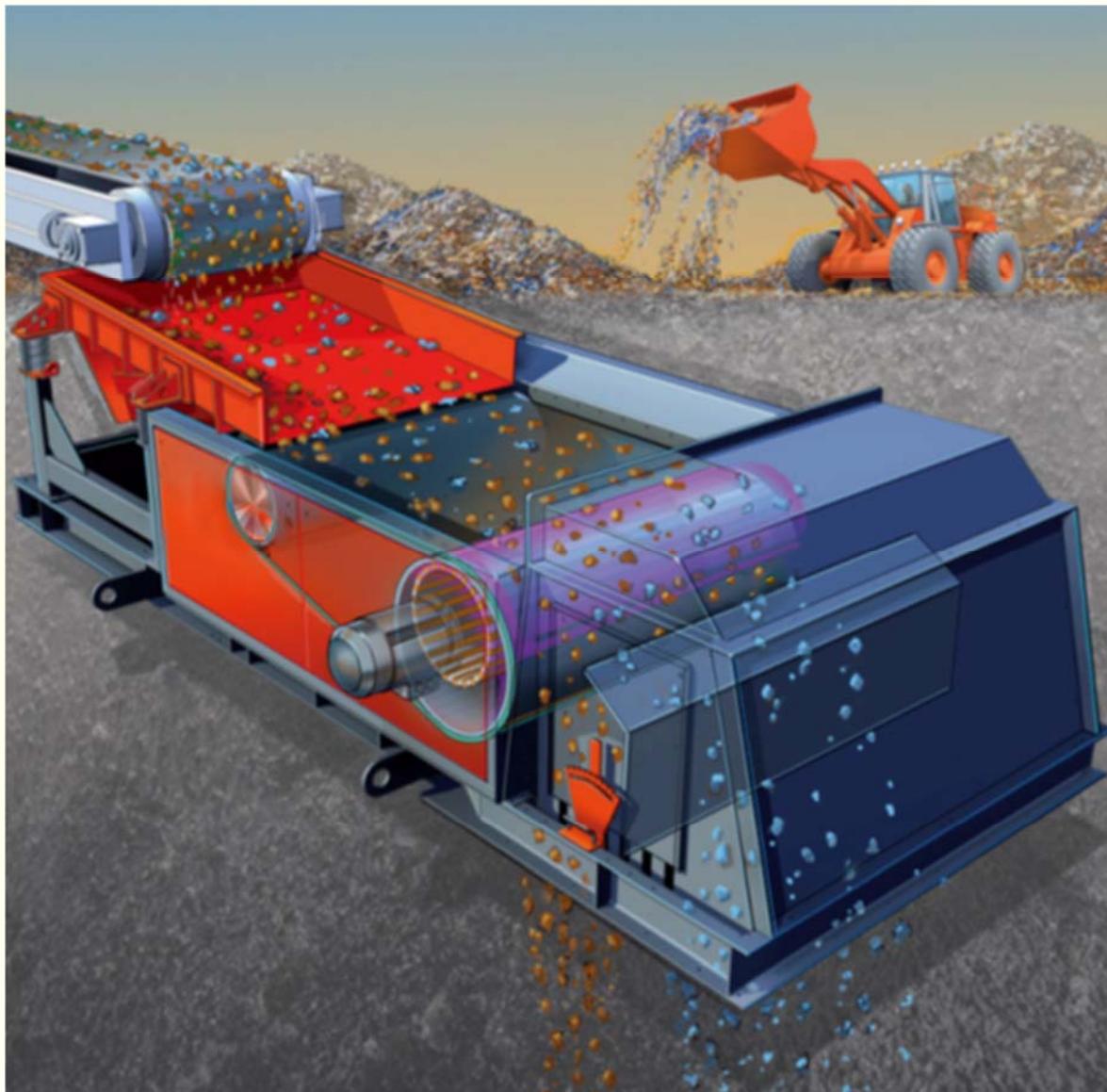


# Eddy Current Separator

Tianjin North Star Technology Co., Ltd

*Widely used in resource recovery industry, efficiently separate non-ferrous metals and non-magnetic materials out*



HIGH EFFICIENCY AND HIGH QUALITY  
MAGNETIC SEPARATION SOLUTIONS

Based on profound design capabilities, provide you with  
more reasonable magnetic separation solutions



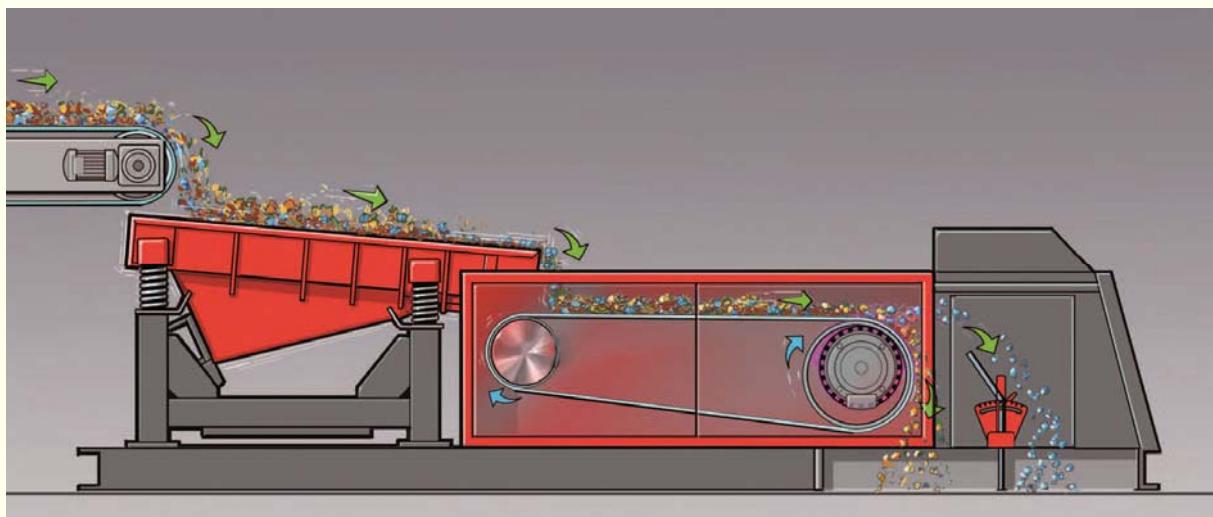
Tianjin North Star Technology Co.,Ltd

Address: 10B, Taihu beiLi, 2 District, Sixiaotun Village,  
Liangwangzhuang Town, Jinghai County, Tianjin,  
P.R.China, 301617  
Tel: +86-022-87987163  
E-Mail: tjbeisu@163.com  
Website: <http://tjbeisu.cn>

# Eccentric Eddy Current Separator

## Eccentric eddy current separator

Widely used in resource recovery industry, eddy current separator is consisted of a conveying system with a high-speed rotating magnetic roller. The magnetic poles on roller surface generate an induced magnetic field during high-speed rotation, and the rotation speed causes rapid fluctuations to the magnetic field strength. When non-ferrous metal pass through the magnetic field area, there are eddy currents generated in the metal. When material fall from roller's surface, the repulsive force generated by eddy current make the non-ferrous metals separated from the normal trajectory to achieve the ideal sorting effect.



## Maximize obtain sorted metals

This may be what we expect to obtain with the eddy current separator equipment. We also take the downtime factor into consideration in the initial product design, so that you can have the better product quality while minimizing the downtime of the production line. Typical application industries for eddy current separators: plastics, broken glass, electronic waste, scrap cars, industrial slag, foundry sand, municipal solid waste, mixed recycled materials, waste wood, mixed metals, etc.



# Eccentric Eddy Current Separator

## Particle size sorting parameters

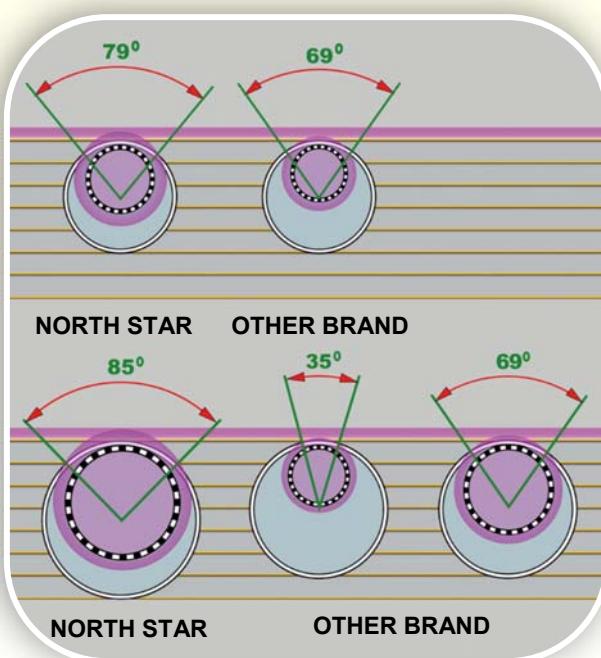
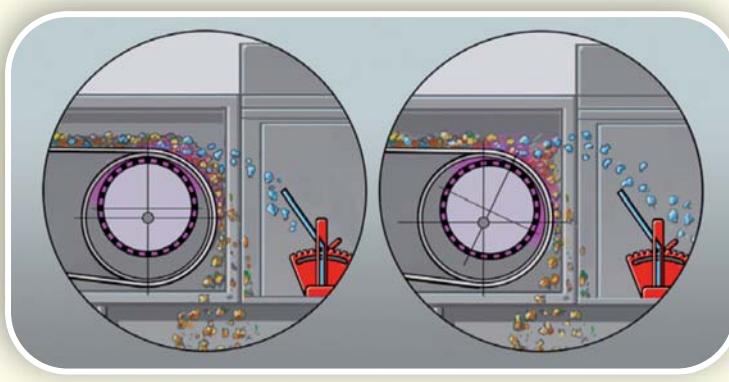
Non-ferrous particle size (mm)	Magnetic pole qty	Roller speed (r/m)	Maximum frequency(Hz)
0.5-5	38P HI	3000	950
5-10	22P HI	3000	550
10-20	22P HI	3800	696
20-80	22P	3000	550
80-300	12P	3000	300
	10P	1500	250

## Sorting angle setting

The eccentric eddy current separator is equipped with a magnetic roller on top of the drum, and the magnetic wrap angle can be manually adjusted from 0-31.25°. Under given material speed and processing capacity, applying precise angle setting make it possible to maximize the recovery of non-ferrous metals.

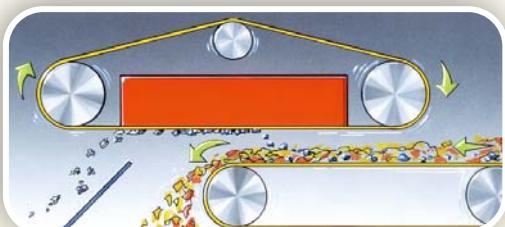
Eddy current separator can achieve the better purification effect for non-ferrous metals which is the result of reasonable setting relevant parameters such as:

- ◊ Magnetic roller speed
- ◊ Magnetic wrap angle setting
- ◊ Belt speed
- ◊ Magnetic circuit design on roller surface



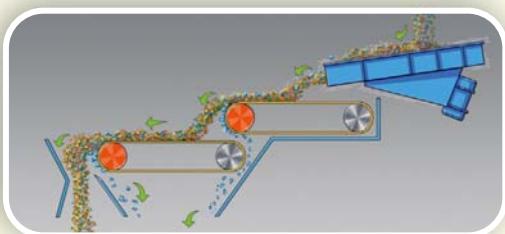
# Eccentric Eddy Current Separator

## Commonly used magnetic sorting system



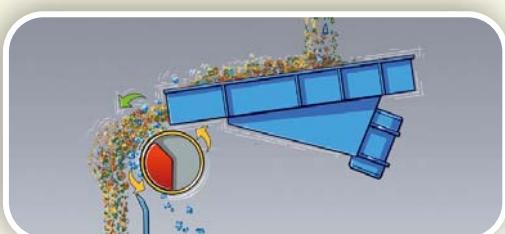
### Permanent/Electromagnetic Suspended Magnet

The first step in process of ferrous metal sorting apply for electromagnetic or permanent magnetic suspension magnet. The sorting effect for ferrous metal ranges from 70%-90%. If you want more pure materials, we can add one-level or more-level sorting steps. Suspension magnet can be installed across the belt or diagonal to the position of head wheel.



### High gradient magnetic separator

High-gradient magnetic separators are often used to adsorb and remove weakly magnetic even paramagnetism metal due to the design of high-gradient field strength. For example, the stainless steel processed by crusher and the micron-scale iron filings mixed in ceramic materials, both of which also have paramagnetism.



### Magnetic Drum Separator

The permanent-magnetic drum separator utilize a stainless steel shell rotate around a 180° fixed magnetic field area. When ferromagnetic metal pass through its magnetic field, they are adsorbed on drum surface and are separated from non-magnetic material's track during drum rotating. It is often used to recover ferromagnet in resource recovery industry.

## Eddy current separator standard parameter

Non-ferrous particle size (mm)	Specification	Feeding type	Magnetic system	Magnetic pole qty	Field strength on belt surface (GS)	Roller speed (r/m)	Maximum frequency (Hz)
60-300	WFX-12P	-	Eccentric	12P	-	4000	733
10-60	WFX-22P	-	Eccentric	22P	-	3800	733
5-20	WFX-22P-H	-	Eccentric	22P HI	-	4000	733
5-20	WFX-22P-H	Drum	Eccentric	22P HI	3000	3800	733
0-5	WFX-38P-H	Feeder	Eccentric	38P HI	3500	3000	1050
0-5	WFX-38P-H	Head pulley	Eccentric	38P HI	3500	3000	1050