

## Electromagnetic Filter

Tianjin North Star Technology Co., Ltd

*Efficiently remove PPM~PPB level of ferromagnetic or paramagnetic pollutants in fine powder or slurry*



**HIGH EFFICIENCY AND HIGH QUALITY  
MAGNETIC SEPARATION SOLUTIONS**

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

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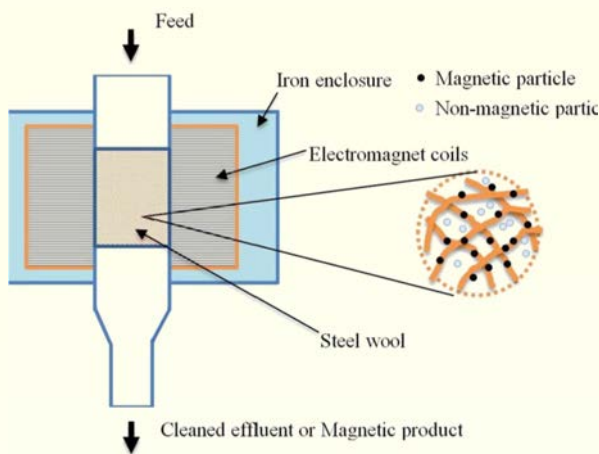
# Electromagnetic Filter

## Electromagnetic filter

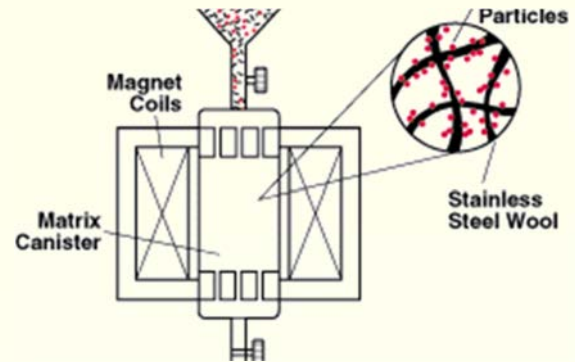
The electromagnetic filter performs high-gradient magnetic separation for the material passing through the filter cartridge. When the material passes through the filter cartridge, the built-in magnetic medium can effectively remove ferromagnetic and paramagnetic impurities so as to obtain high-grade materials of PPM~PPB level.

## Design principle

The steel case and inside electromagnetic coil constitute an electromagnet, which can generate strong magnetic field in the coil inner hole. The magnetic matrix placed in inner hole of the coil converges the magnetic field to form a high field strength and high-gradient sorting area. The sorting area can effectively capture ferrous particles to obtain high-purity products. Performing high-frequency and low-amplitude vibration on the medium through vibrating device can effectively improve the passing capacity of non-magnetic materials and obtain greater production capacity.



Dry Powder Electromagnetic Filters



Slurry Electromagnetic Filters

## Electromagnetic filter category

Classified by material type: dry electromagnetic filter & slurry electromagnetic filter

According to cooling method: water-cooled oil cooler & external oil-cooled machine

Classified by wire coil material : copper wire or aluminium wire

A variety of background field strengths and standard calibers are optional

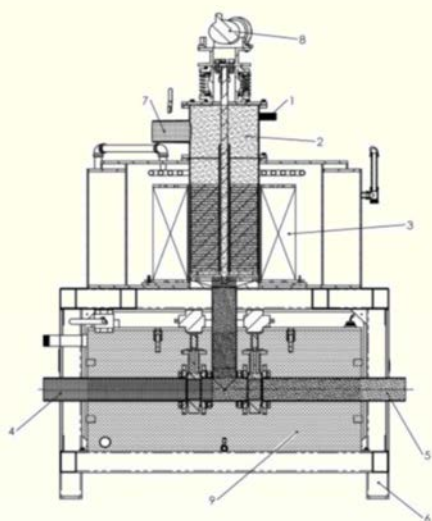
# Dry Powder Electromagnetic Filters

## Characteristics and advantages

- Specially used to adsorb magnetic substances mixed in fine powders below 50 $\mu$ m
- An electromagnetic vibrator can be installed to speed up the passage of materials for slow-flowing materials
- Different screen apertures can be selected according to the material size
- Standard background field strength (3500-5000GS), the peak gauss on medium node can reach 16000GS (actual measured)
- Fully automatic iron unloading can be realized by PLC module and automatic iron removal device

## Application industry

Specially designed for the refinement of fine and dry powders in fields of battery source material, electronic packaging material, refractory material, alumina, talc powder, silica sand, zircon, ceramics, food and medicine.



## Standard specification sheet

Specification	Maximum field intensity (GS)	Background field strength (GS)	Cartridge $\varnothing$ (mm)	Medium material	Weight (kg)	Power (kw)	Cooling System
DVG35-150	12000	3500	150	430SUS	3000	5.9	Water-cooling oil cooler
DVG35-250	12000	3500	250	430SUS	3200	7.2	Water-cooling oil cooler
DVG35-300	12000	3500	300	430SUS	4000	7.9	Water-cooling oil cooler
DVG50-100	15000	5000	100	430SUS	950	10	External oil cooling equipment
DVG50-150	15000	5000	150	430SUS	1500	11.3	External oil cooling equipment
DVG50-250	15000	5000	250	430SUS	4100	14.8	External oil cooling equipment
DVG50-300	15000	5000	300	430SUS	4200	20.6	External oil cooling equipment

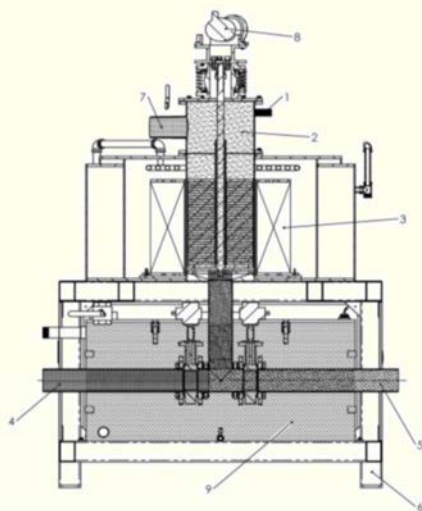
# Slurry Electromagnetic Filters

## Characteristics and advantages

- Specially used to adsorb tiny scrap iron below 50 $\mu$ m from ore pulp and other fluid materials
- Standard background field strength (2500Gs-10000Gs), the peak gauss on medium node can reach 16000GS (actual measured)
- 4 kinds of background field strengths (2500Gs, 5000Gs, 6500Gs, 10000Gs) can be optional and one for 4 kinds of standard calibers are available
- Fully automatic iron removal function can be realized through the PLC control cabinet and the automatic iron removal device

## Application industry

Specially designed for the refinement of battery source materials, ceramics, uranium materials, clays, dyes, pigments and other fine industrial minerals and chemical materials.



Specification	Maximum field intensity (GS)	Background field strength (GS)	Liquid capacity (Gmp)	Cartridge $\varnothing$ (mm)	Power (kw)	Weight (kg)	Cooling System
DVS35-100	12000	3500	10	89	2	1.27	Water-cooling oil cooler
DVS35-150	12000	3500	25	152	2.5	1.34	Water-cooling oil cooler
DVS35-200	12000	3500	50	203	2.7	1.5	Water-cooling oil cooler
DVS35-300	12000	3500	100	305	3.3	2.06	Water-cooling oil cooler
DVS35-400	12000	3500	200	406	3.8	2.5	Water-cooling oil cooler
DVS50-100	15000	5000	10	89	4.5	1.84	External oil cooling equipment
DVS50-150	15000	5000	25	152	6.5	2.8	External oil cooling equipment
DVS50-200	15000	5000	50	203	6.5	3.59	External oil cooling equipment
DVS50-300	15000	5000	100	305	7.5	4	External oil cooling equipment
DVS50-400	15000	5000	200	406	8.5	4.44	External oil cooling equipment