

# Magnetic Plate Separator

**Powerfully absorb ferromagnetic iron in materials and fast clean iron in powder**  
*Bring new opportunity for high-standard material purification and decontamination*



**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**

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# Company Profile

Tianjin North Star Technology Co., Ltd. is a professional equipment manufacturer dedicated to the magnetic separation industry. Relying on expertise in magnetic sorting and vibration conveying technology, it aims at designing and manufacturing high-performance equipment to provide the industry with high-performance and high-quality designed magnetic sorting, magnetic automation and vibration conveying equipment. With rich application experience in professional and technical fields, we can solve problem encountered in product processing, purification and quality review for enterprises.



## **Our mission**

Provide efficient and practical customized products through technical innovation

## **Company vision**

Become an quality supplier in the field of magnetic separation technology

## **Company strategy**

Continuously develop and design new products according to industry need

Adopt expertise in magnetic separation technology, methods and materials

Continue to innovate and create various products that are user-friendly

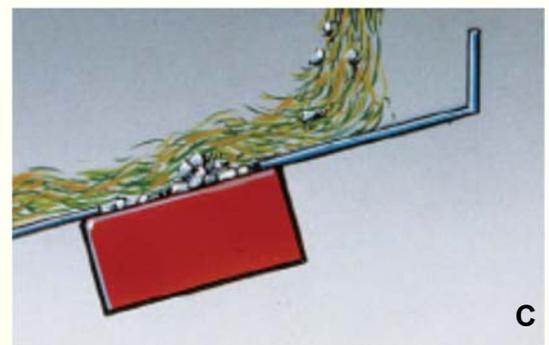
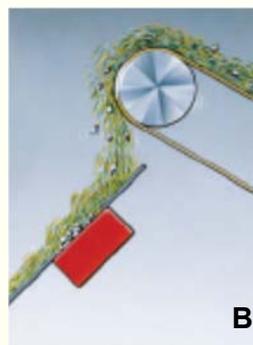
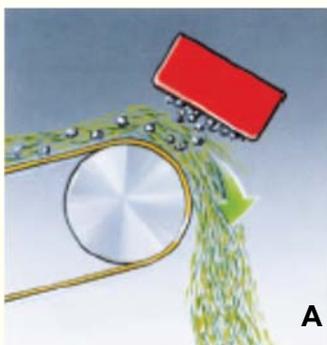
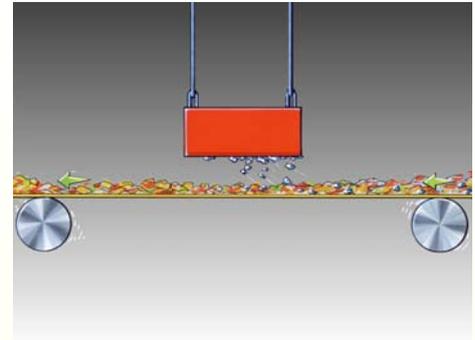
Concentrate financial resources and the company's core resources for key projects

Experienced R&D technical team work together to create a better and safer world

Corporate organization structure oriented to common goals

# Magnetic Plate

The permanent magnetic plate can clear out iron particles from various material. According to the specific factory environment and operation requirements, the magnetic plates are usually designed into various sizes and field strength, also installed in different methods (as shown in figure below). The plate magnet can remove iron impurities such as bolts, nuts, iron wires, screws and other possible iron contaminants from free flow of materials to protect downstream equipment.



## Characteristics and advantages

- ◇ All stainless steel enclosure
- ◇ A variety of installation methods are available (as shown in figure A, B, C)
- ◇ Field strength on plate magnets surface up to 12000 gauss
- ◇ Continuous welding effectively avoids cracks, blisters or cracks
- ◇ Sanitary ware design meets food-grade standards
- ◇ Simple installation and maintenance-free

## Optional configuration

- ◇ Various magnetic circuit and temperature-tolerance criteria can be optional
- ◇ The quantity and specification of magnetic strip gathering magnetism can be available
- ◇ Optional number and type of magnetic poles
- ◇ Surface treatment can choose sandblasting, polishing, satin-finished, etc.
- ◇ Fixing methods can be hinge, chain or flange, etc.

## Handling material

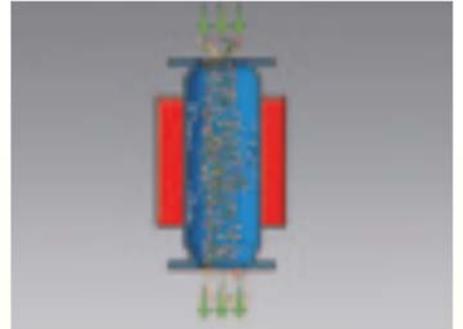
Feed or grain, sugar, plastic particles, resin, wood chips, fruits and vegetables, corn or potato chips, etc.

## Application industry

Generally install on chutes, conveying pipes, feeding trays and conveyor belts.

# Plate House Magnet

The stainless steel housing, two plate magnets mounted on both sides and the center drawer constitute the plate house magnet. A typical deep reach magnetic separator utilizes two large magnets on two sides to grab large tramp iron passing through the stainless steel housing. The plate house magnet is designed for products that are easy to bond or bridge. The center position between the two plate magnets is the region with the highest magnetic field.



## Characteristics and advantages

- ◇ Simple structure, small size, saving installation space
- ◇ No need to manually unload iron
- ◇ Avoid material from blockage or bridging
- ◇ Ordinary magnetic system can absorb large impurities, such as nails, nuts, etc.
- ◇ Strong magnetic system can absorb small impurities, such as iron filings, staples, etc.
- ◇ Suitable for a variety of special environments (corrosive, food raw materials, etc.)
- ◇ Discharging iron outside the flow chute can avoid secondary pollution
- ◇ Suitable for positive or negative pressure piping systems

## Optional configuration

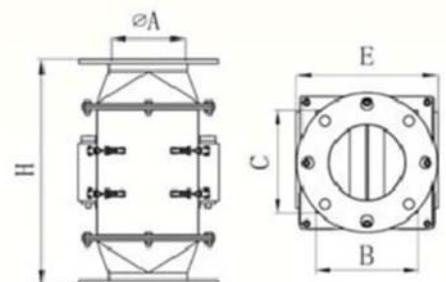
- ◇ Various magnetic circuit and temperature-tolerance criteria can be optional
- ◇ It is available for add different inter-face adaptor for inlet and outlet

## Handling material

Cocoa powder, sugar powder, starch, wood chips, gypsum powder, dehydrated vegetables, tobacco, plastics, pharmaceuticals, recycling, etc.



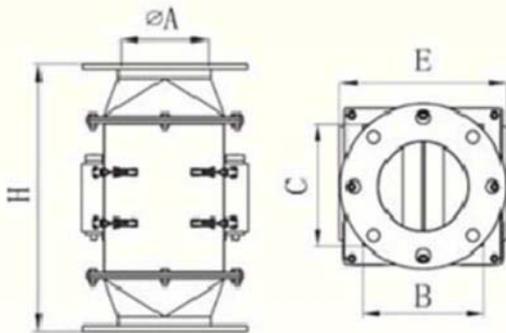
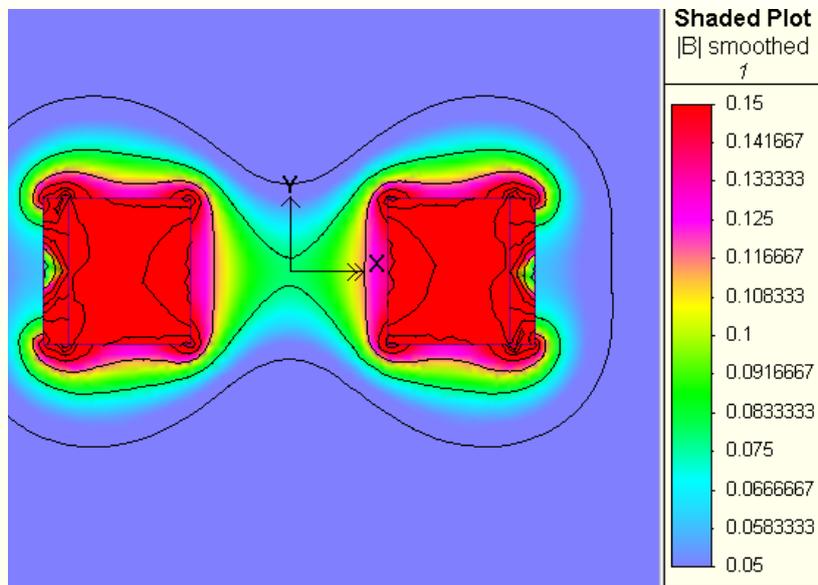
Plate House Magnet		
Series	Inlet and outlet pipeline dimension A (mm)	Capacity (m3/h)
PEJ-RP-D150	Ø150	30
PEJ-RP-D200	Ø200	75
PEJ-RP-D250	Ø250	100
PEJ-RP-D300	Ø300	150



# Self-Cleaning Plate House Magnets

Compared with plate house magnet, the self-cleaning plate house magnets do not need unload iron manually. Only through a unique-design electrical circuit, the automatic iron-unloading system is connected to control cabinet through PLC modules. By setting the clean frequency and number of times according to the content of iron in material to achieve automatic iron unloading. But need to stop the production line during unloading-iron.

The peak value of field strength on both sides' magnetic plates can reach 12000GS, which has a good adsorption effect for the miscellaneous iron and 304 stainless steel mixed in large-particle materials.

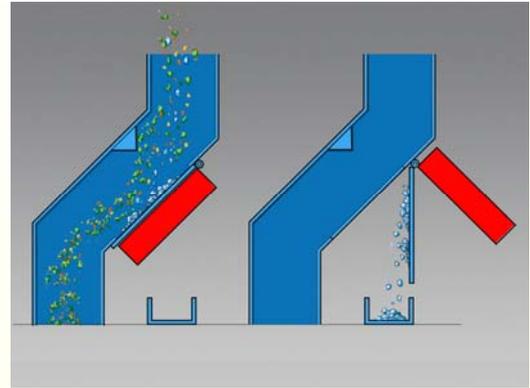


Self-Cleaning Plate House Magnets		
Series	Diameter of inlet and outlet (mm)	Capacity (m3/h)
PAEJ-RP-D50	Ø150	30
PAEJ-RP-D200	Ø200	75
PAEJ-RP-D250	Ø250	100
PAEJ-RP-D300	Ø300	150



# Hump Magnet

Hump magnets can effectively remove unwanted tramp iron from materials in free-fall or air conveying pipeline. Two plate magnets are arranged on both sides of the V-shaped chute. The installation-type make the magnetic surface and material be in full contact and largely enhance the iron removal effect.



## Characteristics and advantages

- ◇ Compact structure, saving installation space
- ◇ Applicable to various air-conveying pipelines
- ◇ No wearing parts and free-maintenance
- ◇ Simple and convenient unloading of iron



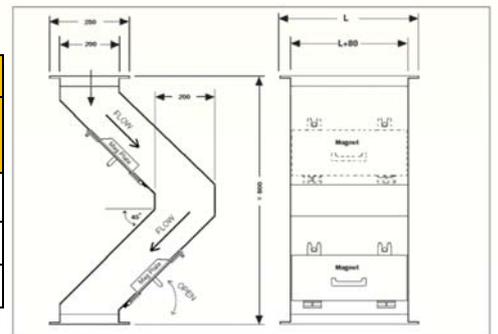
## Optional configuration

- ◇ Housing material can be carbon steel or stainless steel
- ◇ The size and specification of magnet plates can be customized according to requirements
- ◇ Various magnetic circuit and temperature tolerance criteria are available
- ◇ Optional inspection window can observe the situation of iron adsorption

## Handling material

Feed, peanuts, grains, sawdust, fiberglass, plastic, rubber and other materials, etc.

Hump Magnet		
Series	Inlet and outlet pipeline dimension Lx200 (mm)	Capacity (m3/h)
PET-RP-S	□400X200	50
PET-RP-S	□600X200	90
PET-RP-S	□800X200	140



# Self-Cleaning Hump Magnet

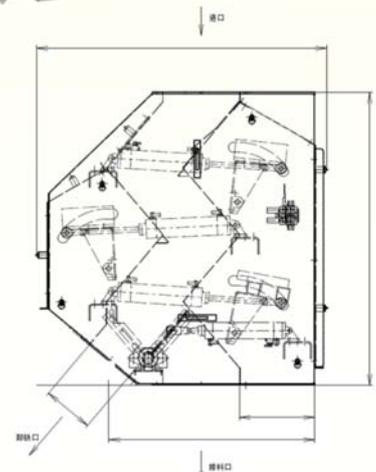
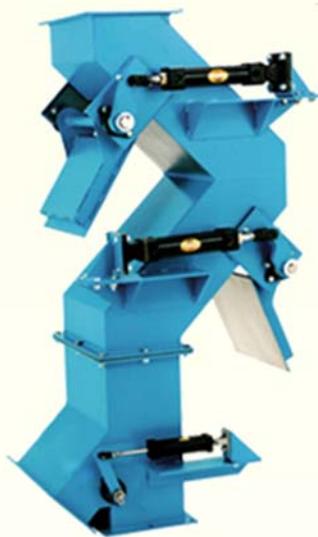
Compared with general hump magnet, the self-cleaning hump magnet do not need unload iron manually but is through a unique-design electrical circuit. The automatic iron-unloading system is connected to control cabinet through PLC modules. By remote setting the clean frequency and number of times according to the content of iron in material to achieve automatic iron unloading. But need to stop the production line during unloading-iron.

## Characteristics and advantages

- ◇ Material of overall surface can be stainless steel or mild steel
- ◇ Automatic unloading iron without manual participation
- ◇ Simple operation and easy maintenance
- ◇ Discharging iron outside the flow chute can avoid secondary pollution

## Handling material

Feed, peanuts, grains, sawdust, fiberglass, plastic, rubber and other materials, etc.



Self-Cleaning Hump Magnet		
Series	Inlet and outlet pipeline dimension (mm)	Capacity (m3/h)
PAET-RP-D150	Ø150	30
PAET-RP-D200	Ø200	75
PAET-RP-D250	Ø250	100
PAET-RP-D300	Ø300	150

# Product & Service

## Control and Test device

In order to provide much more types of magnetic equipment, Tianjin NorthStar technology Co.,Ltd provides related service including monitoring, installation, maintenance and so on, as well as corresponding monitoring and detection equipment.

In many industry, including the food industry, magnetic equipment requires regular testing. We can provide users with door-to-door service for magnetic strength testing and provide magnetic certification reports after the magnet test, to help users deal with product quality audits inside and outside the company. We can also provide the more high quality Gauss meter to help you test in-house. The main feature of our Gauss meter is very easy to operate. It means person without professional training can easily measure.



Using NdFB magnetic bar, you can quickly test whether the product contains iron impurities. The magnetic strength on surface of magnetic bar can reach 15000GS, and it can absorb iron impurities greater than 30 $\mu$ m. However, such extremely fine iron impurities cannot be detected by metal detector. The detection magnet not only has good detection performance, but also the surface's iron impurities can be easily collected to analyze.



## Product & Service

We can provide the following services:

- $\alpha$ ) Commissioning of the control system
- $\beta$ ) Maintenance service
- $\chi$ ) The installation and commissioning of new product
- $\delta$ ) Control, detection and monitoring of magnetic equipment
- $\epsilon$ ) Maintenance and replacement of magnetic equipment
- $\phi$ ) All of the above service types can be operated on site



