



MAGNETIC SEPARATION SYSTEMS

The Key of Metal Separation technology for various industry

Matics is a company that makes magnetic separators, other metal separation equipments, and plants for resource recycling. It has been manufacturing and supplying Separation equipment not only in Korea but also around the world since its founding in 1996, and has grown into a trusted firm with its own know-how and technology, as well as customer-focused service. We will continue to work relentlessly to build items that will impress our customers with our global partners.

Product of Matics has been used worldwide

UK, USA, Canada, Germany, Russia, Japan, China, Indonesia, Ireland, Sweden, Australia, Chile, Taiwan, Singapore, Malaysia, Thailand, Vietnam, UAE, Egypt





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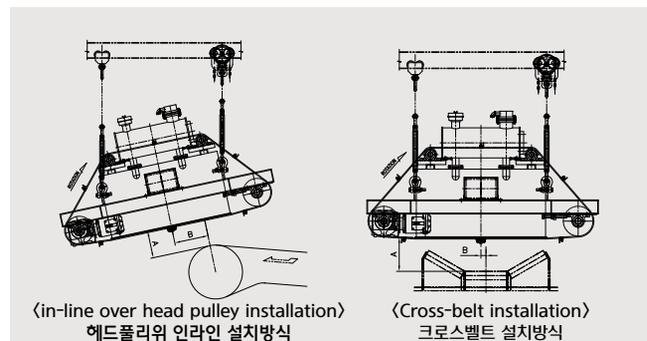
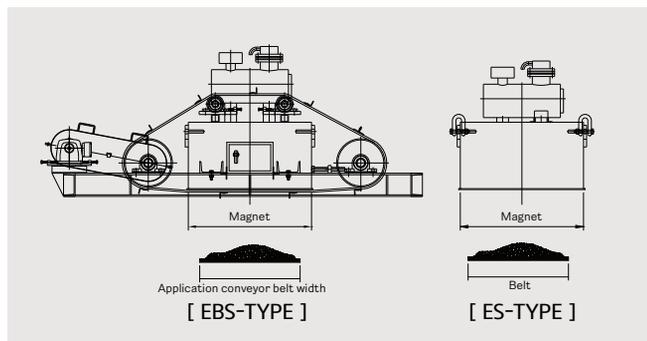
Suspended Electromagnetic Separator



Suspended Electromagnetic Separator

- Available in a full range of custom units.
- For 24-hour around-the-clock operation.
- Featuring deep and powerful magnetic fields.
- Available with or without automatic reject belts
- All units feature Class "H" insulation levels.
- Long life cooling oil with antioxidants
- Compact design without an oil expansion tank





Specification

Model	Apply Conveyor belt width(mm)		Magnet size LxW(mm)	Electromagnet DC power(kw)	Drive motor (kw)	Weight (kg)
	In-line	Cross-belt				
E(B)S-450	400	400	500 x 450	1.5	0.75	950
E(B)S-600	600	500	800 x 600	2.1	1.5	1,500
E(B)S-800	800	700	1000 x 800	3.2	1.5	2,300
E(B)S-1000	1000	900	1200 x 1000	4.5	2.2	3,000
E(B)S-1200	1200	1100	1400 x 1200	6.0	2.2	4,500
E(B)S-1400	1400	1300	1600 x 1400	7.5	3.7	7,100
E(B)S-1600	1600	1500	1800 x 1600	9.0	3.7	9,200
E(B)S-1800	1800	1700	2000 x 1800	11.0	5.5	10,500
E(B)S-2000	2000	1900	2200 x 2000	12.0	5.5	12,500
E(B)S-2200	2200	2100	2400 x 2200	13.0	5.5	14,000

•Options : Customized special strength magnetic power, Dust cover, Explosion-proof motor, Speed switch, Sway switch, Turn buckle supports.



Diverse New types of Electromagnetic Separator

- Superconducting
- Dry Self cooling
- Forced-oil cooling
- Dure-core, and very Compact design for mobile plants



Dure-core



Forced-oil cooling



Dry self cooling



Compact design with no oil expansion tank





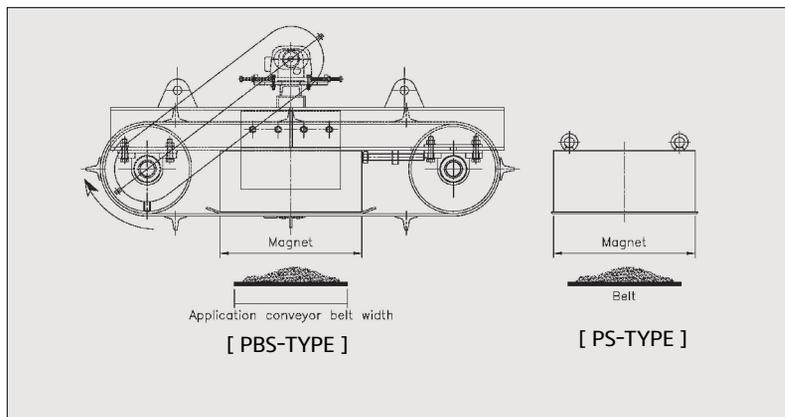
Suspended Permanent Magnetic Separator



Suspended Permanent Magnetic Separator

- Available in a full range of custom units.
- Unlike electromagnet, permanent magnet requires no electricity to power on the magnet.
- Available with or without automatic reject belt.

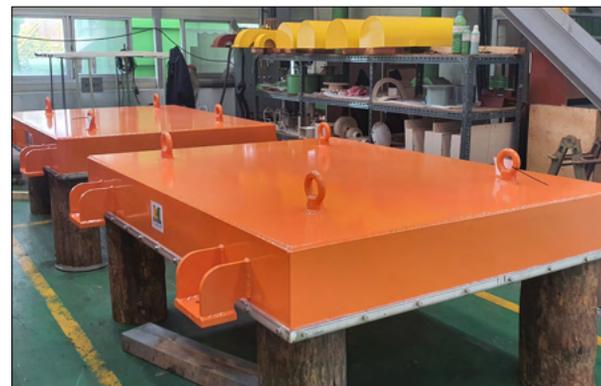




Specification

Model	Apply Conveyor belt width(mm)	Magnet size LxW(mm)	Belt motor (kw)	Weight (kg)
P(B)S-400	to 400	500 x 350	0.4	610
P(B)S-500	to 500	500 x 450	0.4	740
P(B)S-600	to 600	650 x 490	0.75	850
P(B)S-800	to 750	800 x 650	0.75	1,150
P(B)S-1000	to 900	1000 x 800	0.75	1,550
P(B)S-1200	to 1200	1300 x 950	1.5	2,100

· Options : Dust cover, Explosion-proof motor, Speed switch, Sway switch, Turn buckle supports.



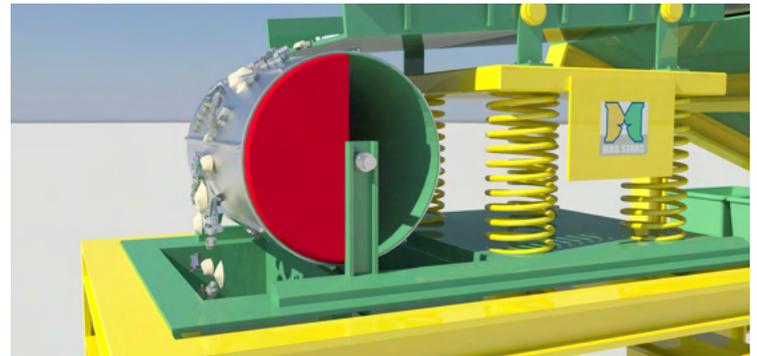


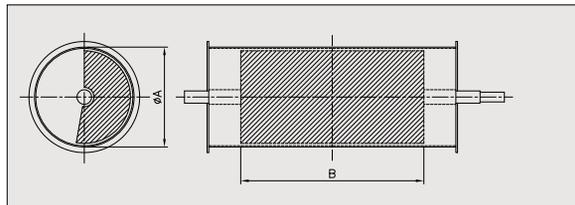
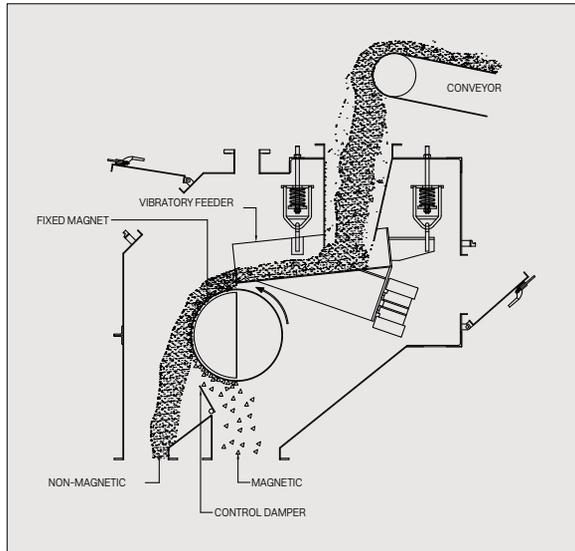
Magnetic Drum Separator



Magnetic Drum Separator

- Remove small magnetic particle from various materials.
- Drum separators are divided into two types Dry(PD) or Wet(WDPT), depending upon the material being handled
- Available in various diameters and widths according to the volume being proceed.
- There are four magnetic strength selections, depending on customer request or handling material.
 1. Approximately 1,500 gauss at drum surface (PD standard series)
 2. Approximately 3,000 gauss at drum surface (PD-RL series)
 3. Approximately 5,000 gauss at drum surface (PD-RH series)
 4. Approximately 7,000 gauss at drum surface (PD-RHI series)





Specification

Model		Diameter A(mm)	Width B(mm)	Geared motor(kw)	Weights (kg)	Capacity (ton/hr)
PD30	PD-3030	318	300	0.4	145	4
	PD-3040	318	400		180	6
	PD-3050	318	500		215	8
	PD-3060	318	600		250	10
PD46	PD-4630	457	300	0.4	500	10
	PD-4645	457	450	0.75	600	15
	PD-4660	457	600		800	20
	PD-46120	457	1200	1.5	1,800	40
	PD-46150	457	1500	2.2	2,600	50
	PD-46180	457	1800		3,300	60
PD70	PD-7060	711	600	0.75	1,100	21
	PD-7090	711	900	1.5	1,600	32
	PD-70120	711	1200		2,200	42
	PD-70150	711	1500	2.2	2,900	53
	PD-70180	711	1800		3,700	63
PD90	PD-9060	914	600	0.75	1,500	24
	PD-9090	914	900	1.5	2,000	36
	PD-90120	914	1200		2,500	48
	PD-90150	914	1500	2.2	3,000	60
	PD-90180	914	1800		3,900	72



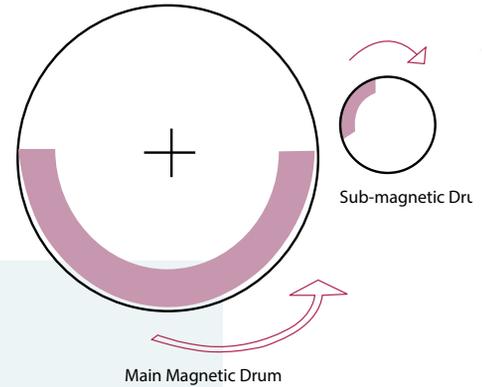
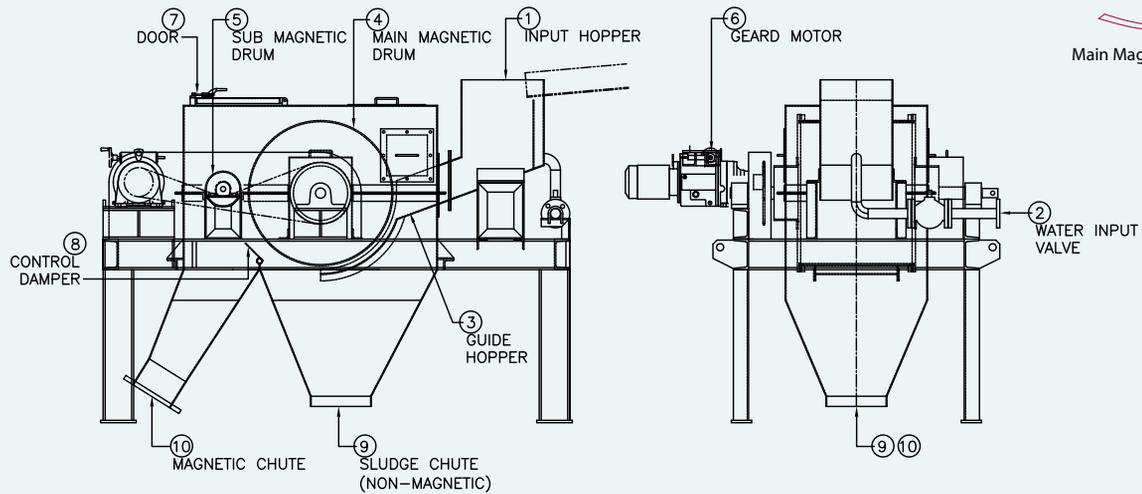
Magnetic Drum Separator



Wet drum separator WPD series

- Around 2/3 of the drum possesses the magnetic field by magnets inside of the stainless drum.
- Magnetic axis is fixed, therefore the drum shell is the only rotating part.
- Magnetic material is collected on the drum surface. Next, the magnetic material will be extracted in the secondary magnetic drum and discharged.
- You can adjust the position of the pole for optimum adsorption, carrying and extraction.







Magnetic Pulley



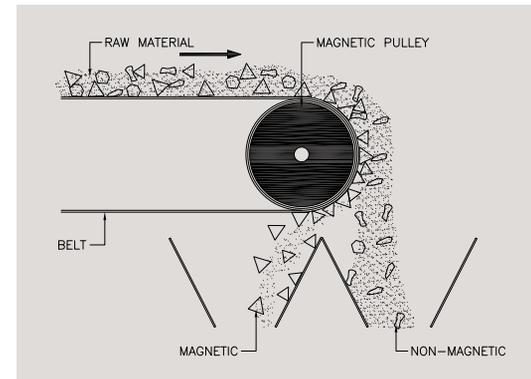
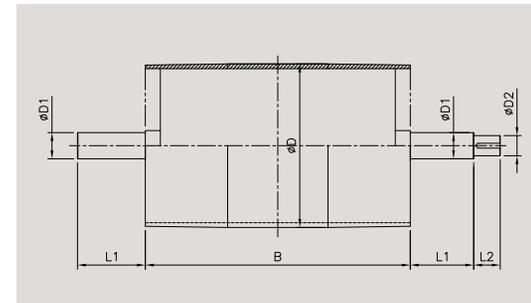
Magnetic Pulley

- Automatically separates ferrous items from belt conveyed materials.
- Strong permanent magnets with long life.
- Electromagnetic pulley is also available.



Specification

Model	Belt Width	ØD	B	Magnet Width	ØD1	ØD2	L1	L2	Weight (kg)
PP-2235	350	214	400	300	60	50	135	60	52
PP-2740	400	265	450	350				86	
PP-3250	500	315	550	450				135	
PP-3560	600	350	650	550				280	
PP-4050	500	400	550	450	55	150	80	300	
PP-4075	750	400	820	700			450		
PP-5060	600	500	700	550	75	65	100	480	
PP-5090	900	500	1000	850			750		
PP-6075	750	600	850	700	95	90	200	120	900
PP-6090	900	600	1000	850				1070	
PP-60120	1200	600	1300	1150			1450		
PP-7575	750	750	850	700			150	1200	
PP-75120	1200	750	1300	1150	120	95	230	200	1900
PP-75140	1400	750	1500	1300				2150	
PP-90105	1050	900	1150	950	130	100	250	250	2150
PP-90140	1400	900	1500	1300	140			120	250





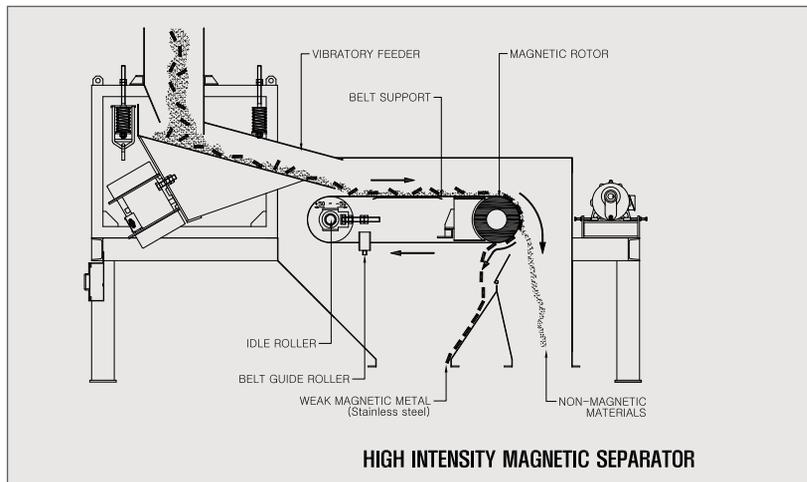
Stainless Steel Separator



Stainless Steel Separator

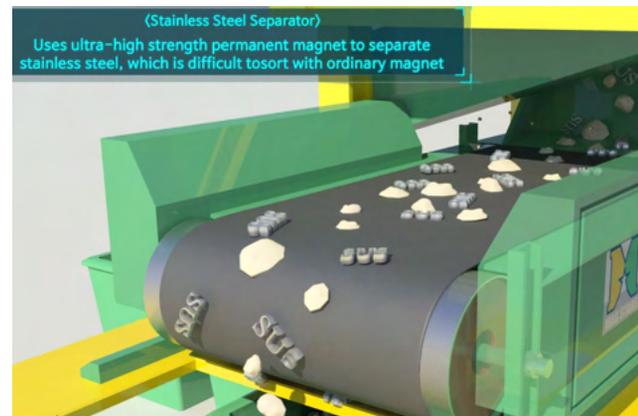
- The HIM separator is for separating weak magnetic materials such as stainless steel by using High-Intensity Magnetic force.
- Around 14,000 gauss on the drum face
- Suitable for separating SUS304 steel from shredded materials.





Specification

Model	Drive motor (kw)	Vibratory motor (kw)	Belt width (mm)
HIM-600	1.5	0.2 x 2	600
HIM-800	1.5	0.2 x 2	800
HIM-1000	2.2	0.4 x 2	1000
HIM-1200	2.2	0.4 x 2	1200
HIM-1400	3.7	0.75 x 2	1400





Shredder Drum Separator



Shredder Drum Separator

- Core technology of the shredder facility to maximize of renewable resources
- Installation options to fit the work environment
- State-of-the-art design which combines the suction force of an electromagnet and the adsorption capacity of a permanent magnet.





Characteristics & Advantages shredder drum separator

Electro-permanent drum

This is combined Electromagnet and permanent magnet, so electromagnet is for absorption of iron among the fed materials and permanent magnet is for moving absorbed iron to opposite chute.

Permanent magnetic drum

Inside of a rotating drum is designed with special magnetic polarity for permanent magnet. Permanent magnet type is ideal when power supply is limited and unstable.

Easy to maintenance

Outside of the drum which directly contact with fed materials is made of a strong material to prevent wear, and it boasts long life. There is no maintenance required except lubricate in two bearings and drive chain.

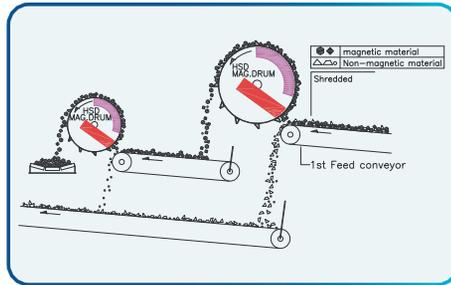


Shredder Drum Separator

4 recommended the drum installation types are listed. Each part maximise recoveries of iron pieces from shredded scrap, waste and other fed material.

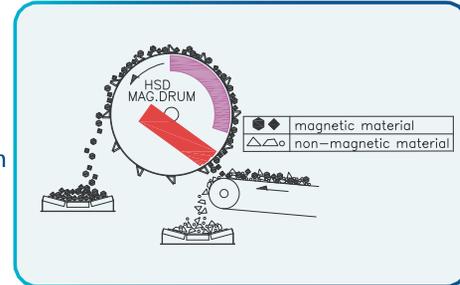
Style 1

Double Drum



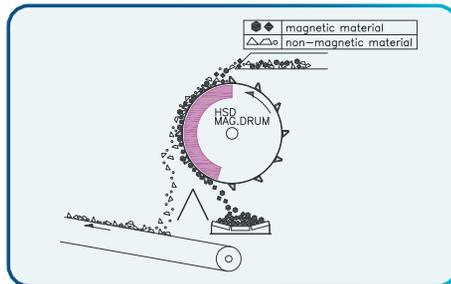
Style 2

Suspended Drum



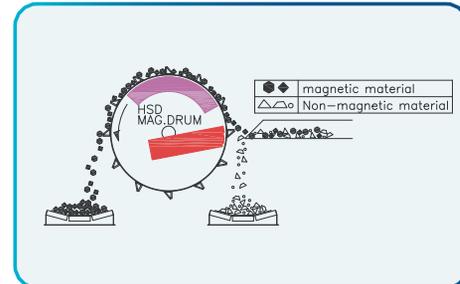
Style 3

Top Feed



Style 4

Side Feed



Specification

Model	Electromagnet power (kw)	Magnet width (mm)	Drum dimension (mm)	Drum speed (M/min)	Motor power (kw)	Capacity(Max) (ton/hr)
HSD-80-80	1.8kw at 20°C	800	Ø800 × 1250L × (8t+8t)	60 M/min	2.2kw × 1/30	11 ton/hr
HSD-90-90	2.5kw at 20°C	900	Ø920 × 1300L × (10t+6t)	60 M/min	3.7kw × 1/30	13 ton/hr
HSD-120-105	4.7kw at 20°C	1050	Ø1200 × 1450L × (12t+6t)	60 M/min	5.5kw × 1/30	15 ton/hr
HSD-120-120	5.3kw at 20°C	1200	Ø1200 × 1600L × (12t+6t)	60 M/min	5.5kw × 1/30	17 ton/hr
HSD-120-150	5.8kw at 20°C	1500	Ø1200 × 1800L × (12t+6t)	60 M/min	5.5kw × 1/30	21 ton/hr
HSD-150-180	11.5kw at 20°C	1800	Ø1500 × 2200L × (12t+6t)	60 M/min	11kw × 1/30	26 ton/hr
HSD-80-80p	Permanent magnet type	800	Ø800 × 1250L × (8t+8t)	60 M/min	2.2kw × 1/30	9 ton/hr
HSD-90-90p	Permanent magnet type	900	Ø920 × 1300L × (10t+6t)	60 M/min	3.7kw × 1/30	11 ton/hr

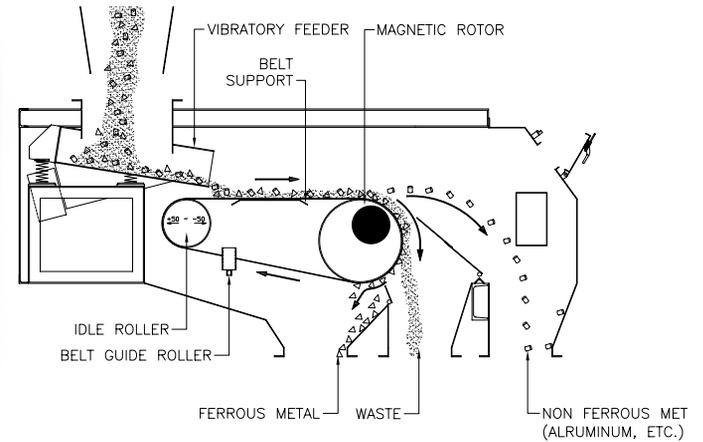
Remarks

- Usage of equipment : separation iron pieces from various industrial wastes.
- Fed materials on the Data : Shredded automobile
- Size of fed material : Below 150mm
- Model ending with P is a permanent magnet type.
- Apparent specific gravity : 0.56 t/m³
- Ambient temperature : room temperature
- Larger sizes are also available.



Eddy Current Separator

- Separates non-ferrous metals such as aluminium, copper, brass, etc.
- Separates materials into three categories : Ferrous, inerts, non-ferrous metals.

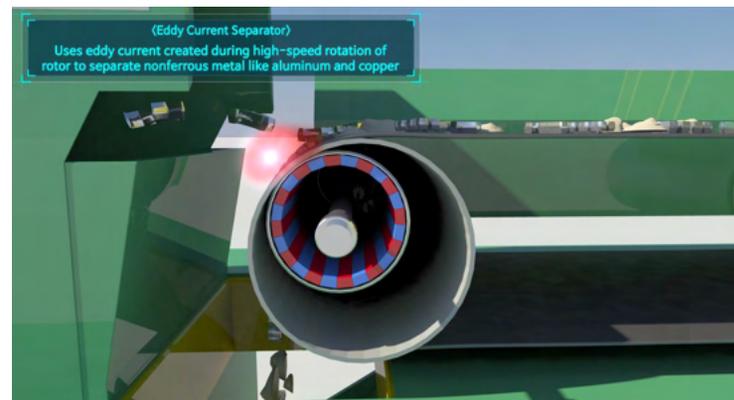


We have four types of Eddy Current Separator depending on size of material to be separated

Model	ECS-L	ECS-M	ECS-H	ECS-HI
Poles(극수)	12	12	18	24
Gauss(표면가우스)	2,000	3,000	4,200	5,200
RPM	2,000	2,200	3,000	3,000
Drum Diameter (드럼직경)	181	310	366	366
Size of material to be separated (처리물 사이즈)	Aluminum Cans	under 100mm	under 10mm	under 5mm

Specification

Model	Rotor drive (kw)	Belt drive (kw)	Vibratory motor (kw)	Belt width (mm)
ECS-300	3.7	1.5	0.15 x 2	300
ECS-450	5.5	1.5	0.15 x 2	450
ECS-600	5.5	2.2	0.15 x 2	600
ECS-750	7.5	2.2	0.2 x 2	750
ECS-900	7.5	2.2	0.4 x 2	900
ECS-1200	11	2.2	0.4 x 2	1200
ECS-1500	15	2.2	0.75 x 2	1500
ECS-1800	22	3.7	0.75 x 2	1800
ECS-2000	22	3.7	0.75 x 2	2000

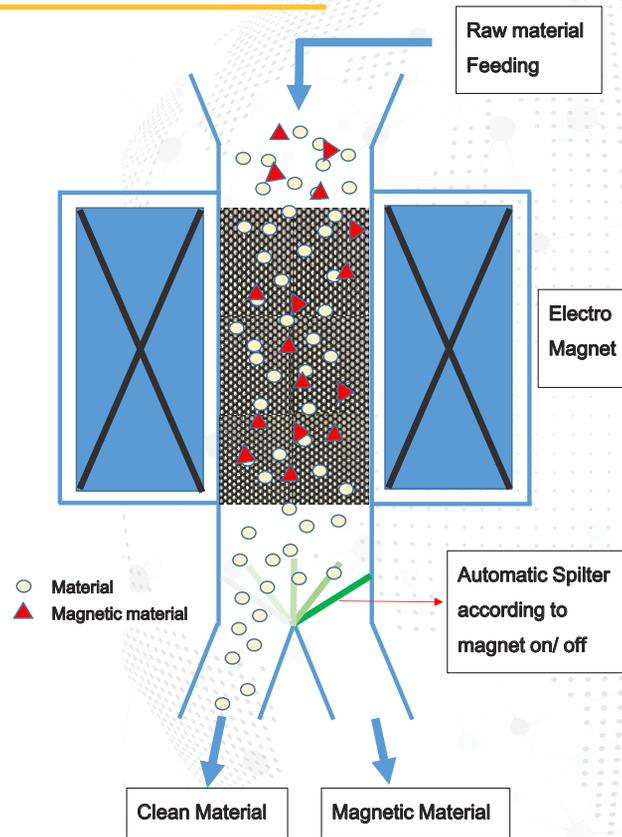




Magnetic Filter (Wet / Dry)

- It's designed remove ferrous and weak magnetic material from powdered raw material.
- Separate very fine particles in microns unit.
- Various range of magnetic force up to 28,000 gauss.
- Filter design can be applied screen or ball type according to condition of material.





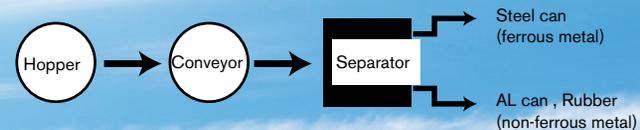
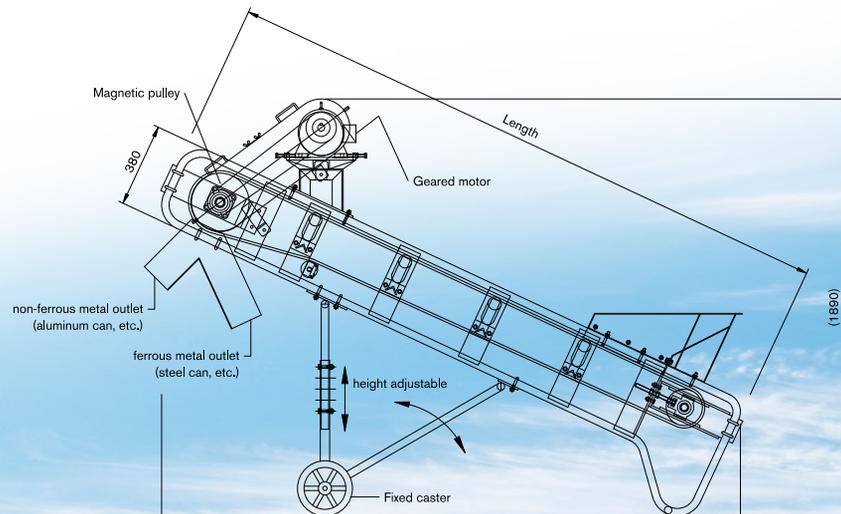


Conveyor Magnetic Separator



Conveyor Magnetic Separator

- This is an ideal machine separates steel cans and aluminium cans completely.
- It can be handled easily and moved readily by using wheels.
- It is available to combine with drum separator or suspended separator for larger volume.

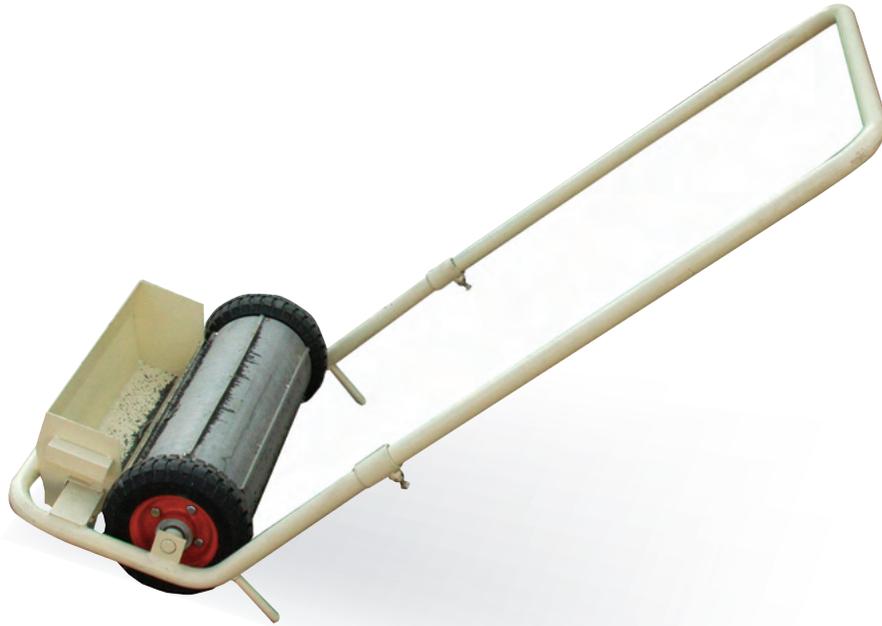


Specification

Model	Belt Width (mm)	Length (mm)	Pulley	Gearmotor
HMC-3	400	3000	Ø265 × 450L	0.75kw × 1/60
HMC-4	400	4000	Ø265 × 450L	0.75kw × 1/60
HMC-5	400	5000	Ø265 × 450L	0.75kw × 1/60



Magnetic Sweeper

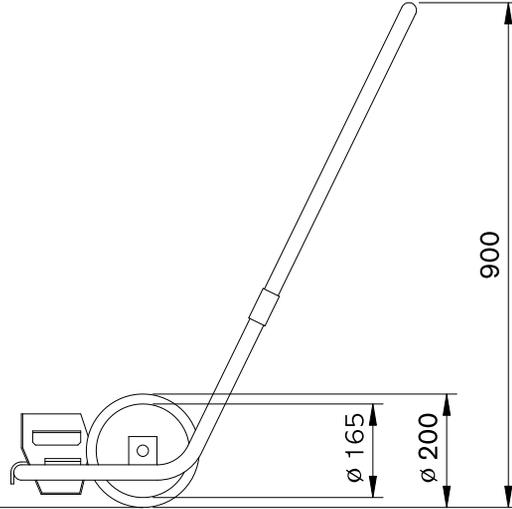
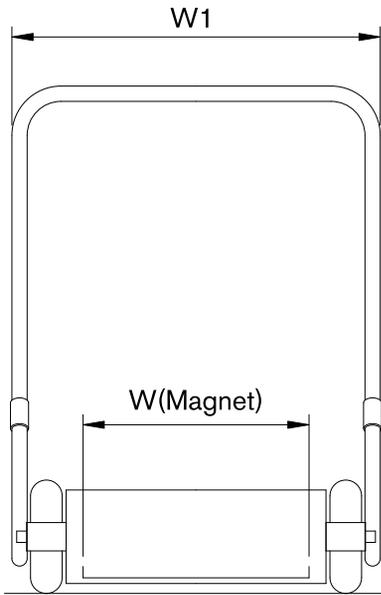


Magnetic Sweeper

- Collect Shots and Tramp metals on work floor by simple drive.
- In this equipment, permanent magnet is installed at the inside rotor of the stainless steel drum, and it removes metal debris and steel shot on your work floor.
- Collected shots move into a bucket automatically with driving of the magnetic sweeper, so it keeps clean floor easily

Specification

Model	W(mm)	W1(mm)	Weight (kg)
HMS-40	400	660	30





Other Separation Equipment

- We also manufacture other machinery related to metal separation industry.



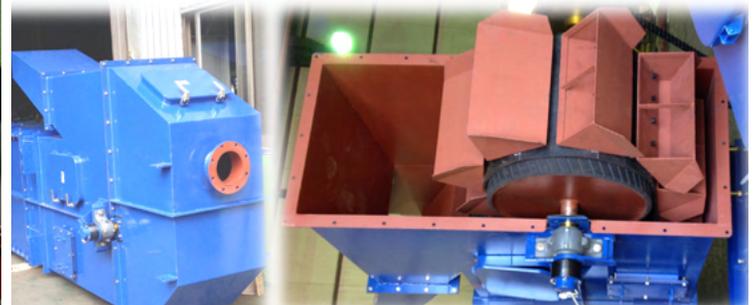
Air separator



Vertical Dryer



Coupled poles magnetic separator



Bucket Elevator



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