

mecal

***MAGNETIC
SEPARATORS***

(AGG-13-004)



A.B.N. 63 103 035 687

MECAL PTY. LTD.
9 Paramount Road (P.O. Box 4140)
West Footscray 3012
Melbourne, AUSTRALIA

Website: www.mecal.com.au

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Email: mecal@mecal.com.au

MECAL MAGNETS

Mecal can offer a complete range of Magnetic Equipment to suit all applications. All MECAL Magnets are designed and manufactured in Australia. MECAL offer exclusive 'computer-aided' selection and design, resulting in the most accurate performance predictions.

TRAMP SEPARATORS

- Permanent or Electro
For removal of Tramp Metal and to protect plant equipment.

EDDY CURRENT SEPARATORS-

- For the separation of non-ferrous materials.

LIFTERS

- Round or Rectangular
For lifting Scrap Steel, Plates or Coils.
Also Fine-Grained magnetic materials.

MINERAL SEPARATORS

- Laboratory and Plant
For upgrading Mineral Sands, Tin, Wolfram, Iron Ore, etc.

DRUMS

- Permanent or Electro
For: Metal Reclamation
Food Application
Swarf Separation
Foundry Sand Upgrading

MECAL also manufacture Demagnetisers, Magnetic Grates, Fanner, Sweepers, Chutes, Pipelines Traps and other specialised magnetic equipment.

Please do not hesitate to contact us to discuss your special requirements.

Thanh Thai
MANAGING DIRECTOR

(MOO-06-002/0104)



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WHY CHOOSE A MECAL MAGNET

1. Over 30 years of successful design and manufacture in Australia.
2. Exclusive Computer assisted design program which allow us to:-
 - (a) Very precisely predict Magnet performances.
 - (b) Optimize the designs (especially valuable for "Specials").
 - (c) Have an almost exclusive Market for "Specials", over the whole range, from Hi-Intensity Mining Equipment to Mechanical Handling Systems in Australia and Overseas.
3. Your inquiry and after sales service processed only by Experienced Professional Engineers.

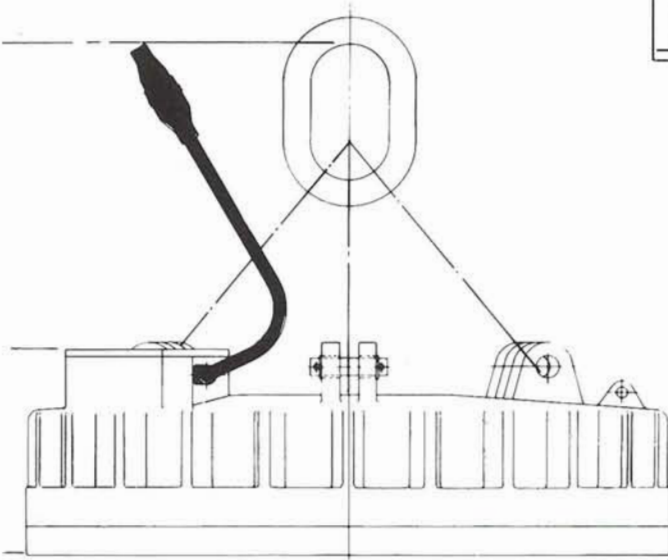
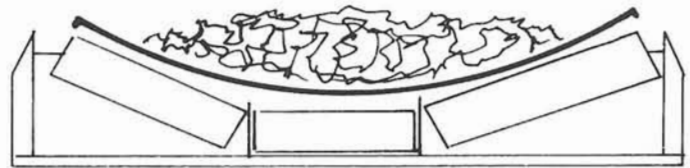
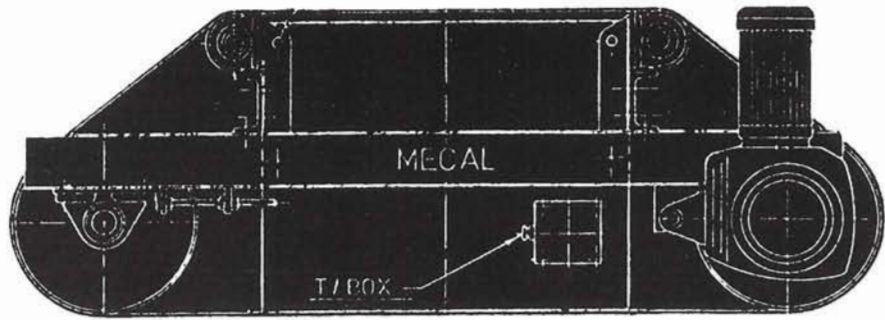
****** If a Competitor's specification or price is different (except marginally) we strongly suggest that a very thorough check be made to determine the Technical suitability. ******

(MOO-10-002)

MECAL - MAGNETS

SEPARATORS

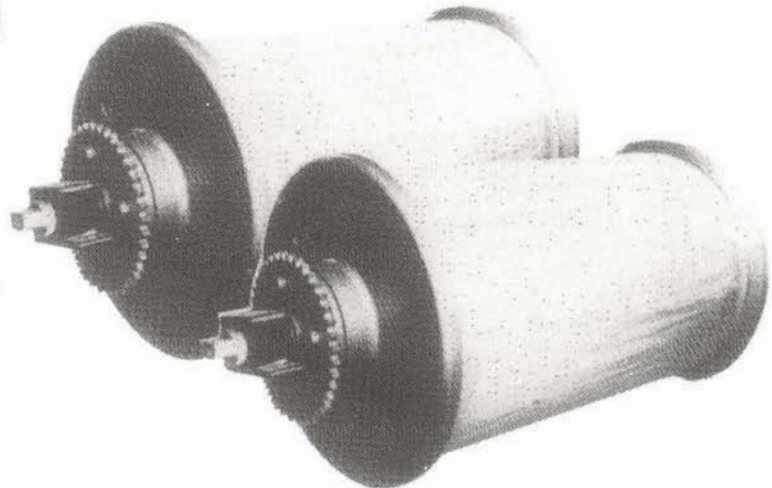
PERMANENT or **ELECTRO**
for removal of Tramp Metal and to
protect plant equipment.



LIFTERS

ROUND or **RECTANGULAR**
for lifting Scrap Steel, Plates or Coils.

Also Fine-Grained magnetic materials.



DRUMS

PERMANENT or **ELECTRO**
for Metal Reclamation, Food Applications,
Swarf Separation and Foundry Sand
Upgrading.

Mecal also manufacture Magnets for Mineral Separation and other specialised applications.

ALL MECAL MAGNETS ARE DESIGNED AND MANUFACTURED IN AUSTRALIA.



A Division of Mechanical Service Pty. Ltd.
A.C.N. 004 322 650

HEAD OFFICE — Engineers:
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(MOO-01-002)

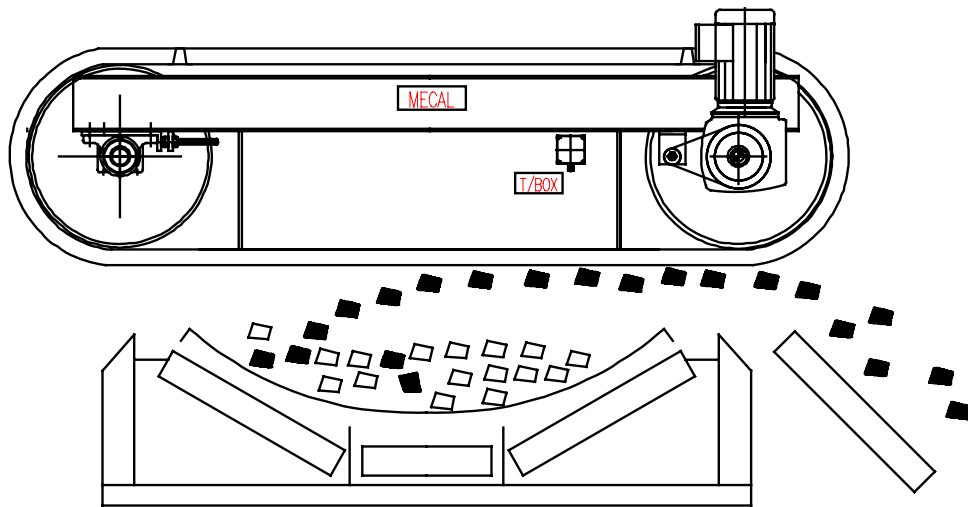


MAGNETIC OVERBAND SEPARATORS

- FOR PLANT PROTECTION & PURIFICATION
- STEEL WORKS
- POWER STATIONS
- MINES & QUARRIES
- SLAG PLANTS
- REFUSE PLANTS
- FOUNDRIES
- GLASS MAKING/RECYCLING
- BRICKWORKS

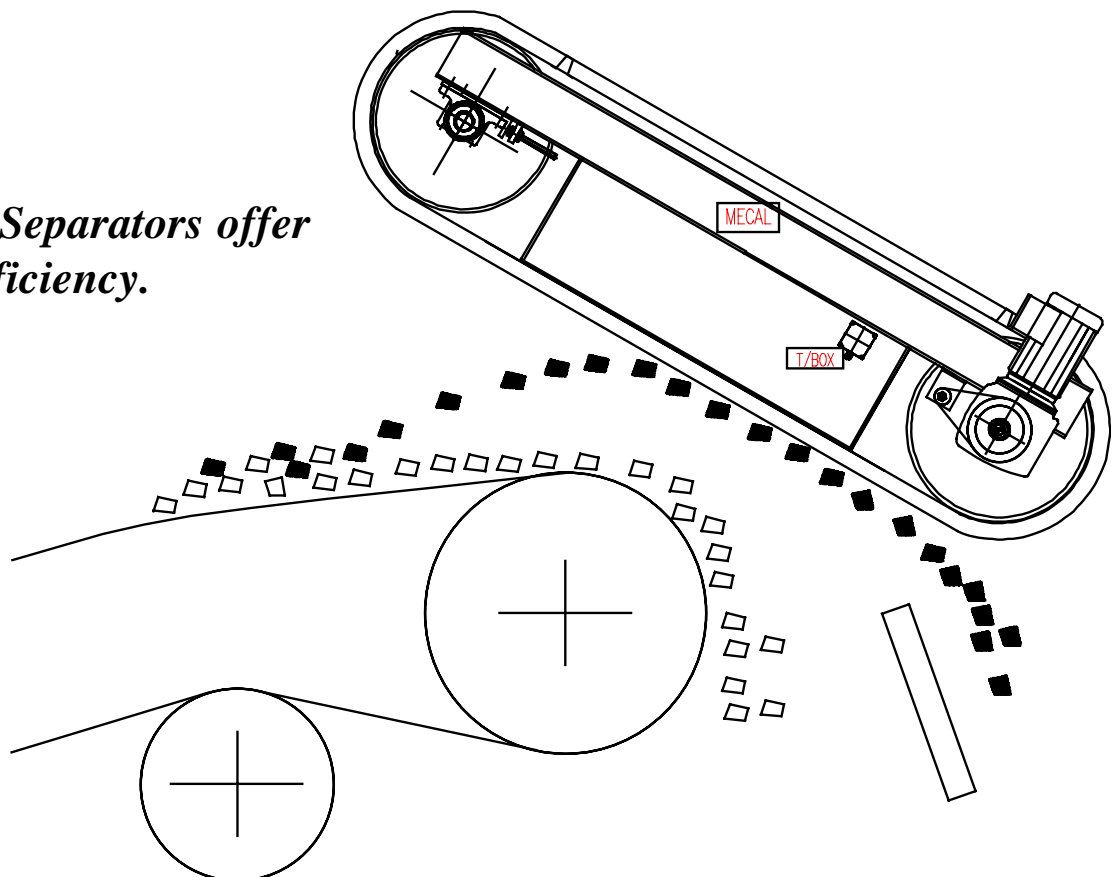
SERIES CT crossbelt

Series C.T. Crossbelt Separators are used where installation at the head pulley is not possible.



SERIES LT inline

Series L.T. Inline Separators offer a high recovery efficiency.



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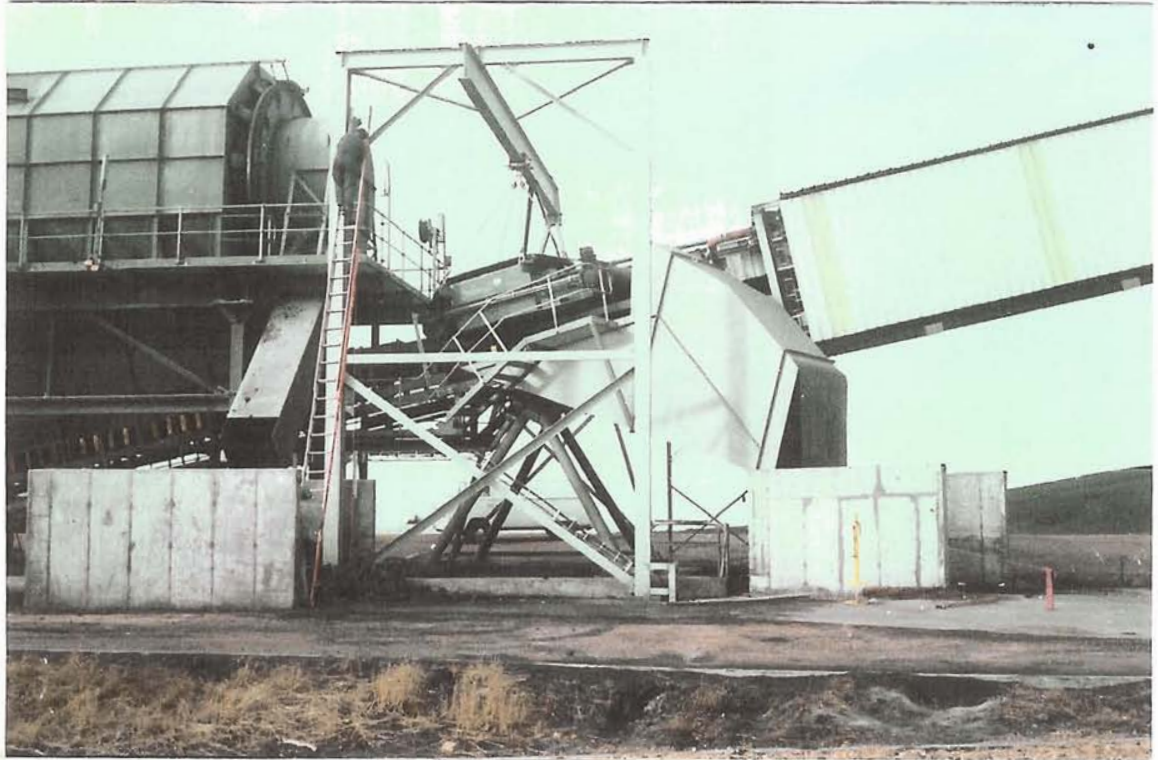
MECAL MAGNETS

PROBLEM:

AN AUSTRALIAN POWER STATION Coal Mine, which was converted from an underground to an open-cut operation. How do they remove the roof bolts etc., from the coal?

SOLUTION:

Call MECAL

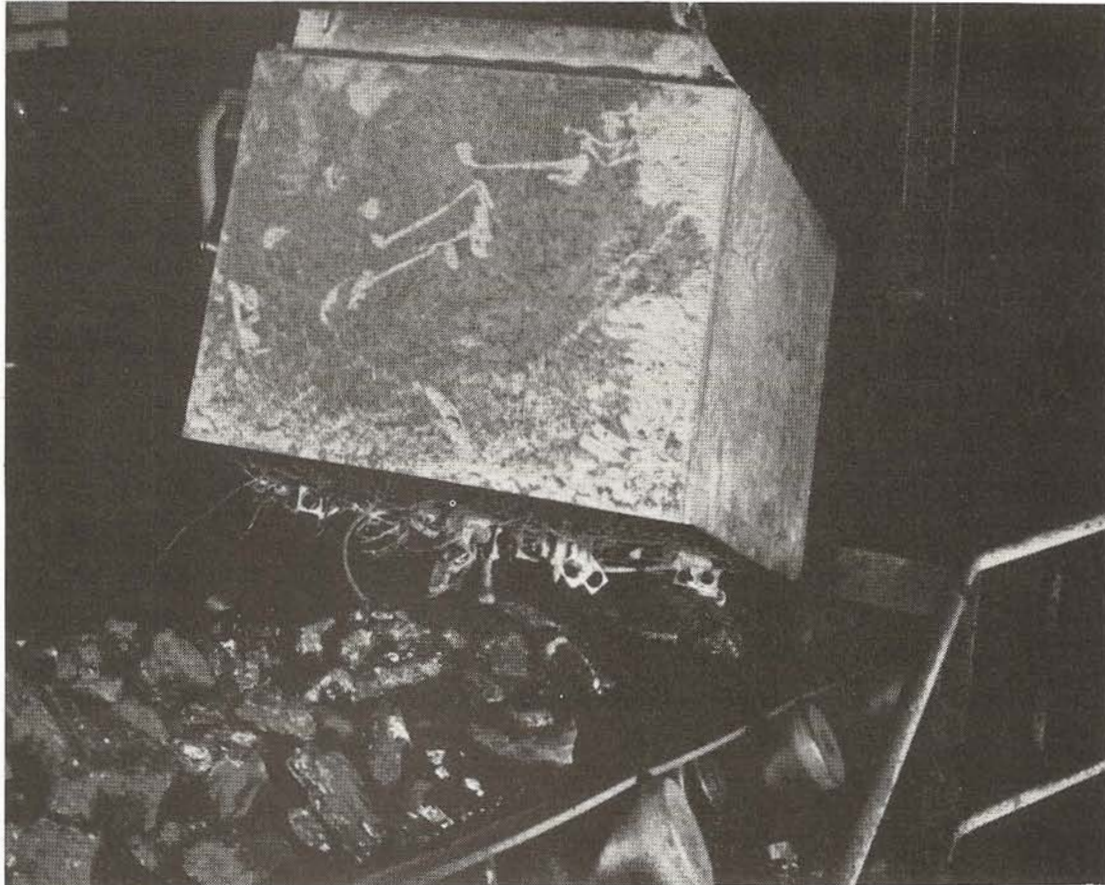


MECAL



TM RANGE
RECTANGULAR SUSPENDED
ELECTRO MAGNETIC

TRAMP IRON SEPARATORS



APPLICATION

A new range of Rectangular Electro Suspension Magnets.

Computer designed for optimum performance and greatest tramp iron extraction power.

Most comprehensive range to accommodate belt widths from 450 up to 2000mm.

Unequaled in performance, reflecting more than 30 years of magnetic separation experience with most of the major Australian mining companies and public power generating utilities.

Designed

- to extract tramp iron from materials carried by belt conveyors, vibratory feeders and inclined chutes.
- to operate in hot, dusty and steamy conditions and in all climates without alterations or modifications to the standard design specifications.
- for the protection of machinery from damage and to ensure product purity in all types of plant from mining to food processing.

SPECIFICATION

- **Designed and Manufactured in Australia** to the latest standards and in accordance with the best current engineering practices and procedures.
- Computer designed magnetic circuit. Optimised for the specified operating distance and installation position.
- Energising coil — wound in aluminium foil or wire and insulated to class H. Cavity spaced and oil cooled for superior heat transfer characteristics.
- Internal expansion chamber design eliminates contact between cooling oil and surrounding atmosphere.
A proprietary designed one-way pressure relief valve with integral moisture trap allows the cooling oil to expand during heating up, prevents moisture or air from re-entering on cooling.
- Poles and back bar fabricated from high permeability steel.
- Bottom (bumping) plate fabricated from non-magnetic stainless steel, for superior abrasion resistance and ease of tramp iron discharge.
- Terminal box to IP65 — generously proportioned, heavy-duty steel construction.

PERFORMANCE

- Magnetic extraction power — optimised for type of tramp and the width and depth of the conveyed material burden.
- Top performance is maintained indefinitely in adverse conditions of vibration, dust, moisture and corrosion.
- Inherently static in operation — low maintenance requirements.

ANCILLARIES & OPTIONS

- **Suspension Chains**
3- or 4-legged *Herc-Alloy* chains with hammerlocks, shackles and oblong connecting links. Turnbuckles for easy height adjustment as an option.
- **Magnet DC Power Supply**
DC power is essential for all magnets. Air cooled AC-DC rectification equipment incorporating double wound power transformer, bridge connected silicone rectifier diodes and surge suppressors. Housed in a steel cabinet to class IP65. The smaller range of magnets is available with built-in rectifiers for operation directly from a single phase AC mains supply.
- **Electrical Control Equipment**
Housed in a sheet steel cabinet to IP65, incorporating fuses, indicator lights, operation control and selector switches, V- and Ammeters, current transducer, contactors and PLC interfacing relays.
- **Magnashield**
An auxiliary permanent or electro emergency magnetic retention system can be incorporated into most models to safeguard against release of the collected tramp iron in the event of a power failure. Special control equipment neutralises the emergency system during a normal tramp discharge cycle.

ALTERNATIVE EQUIPMENT

- Inline — or Crossbelt electro magnetic separators for the continuous removal of the collected tramp iron.
- Permanent Suspension magnets.
Permanent Inline — or Crossbelt separators.
- Permanent — or electromagnetic pulleys.
- Special designs to customer requirements.

INFORMATION & ASSISTANCE

For further information, assistance or advice please contact your local representative or our main office direct.



A DIVISION OF MECHANICAL SERVICE PTY. LTD.

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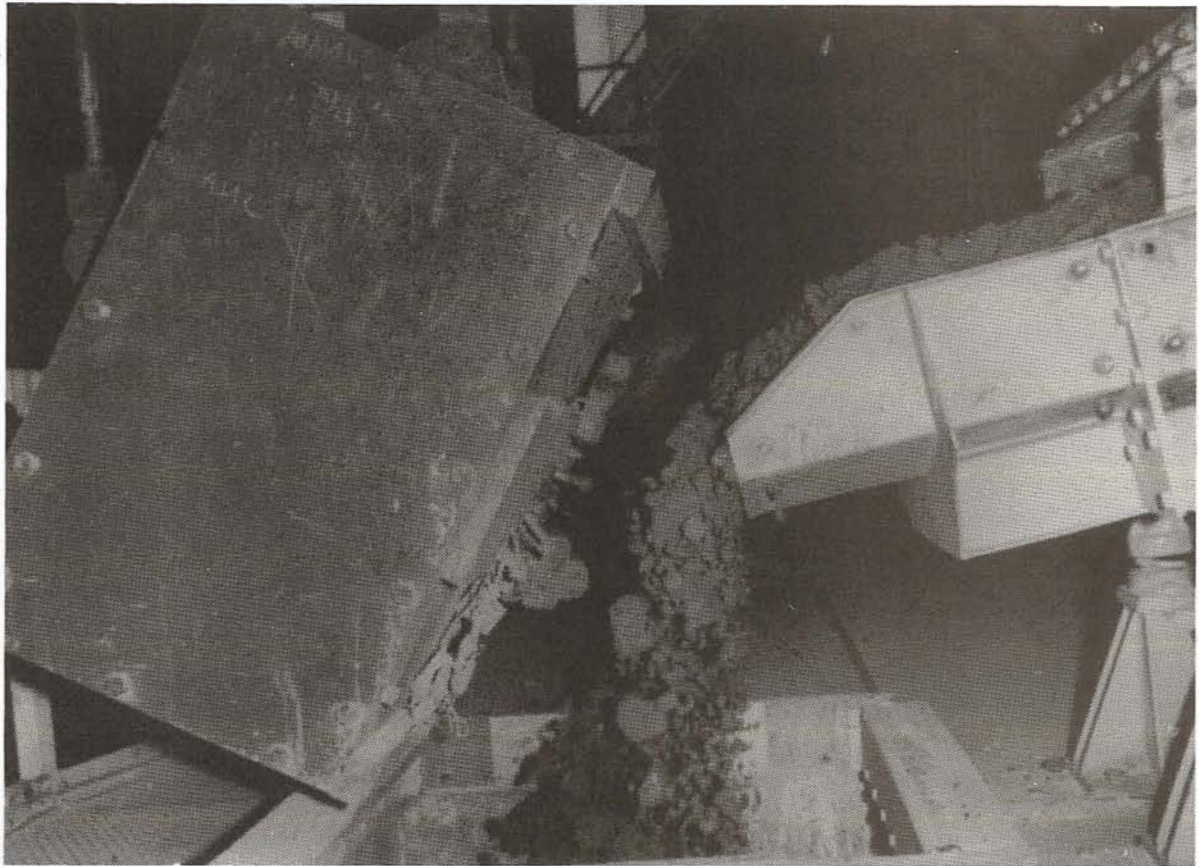
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MECAL



**KS RANGE
RECTANGULAR SUSPENDED
PERMANENT MAGNETIC**

TRAMP IRON SEPARATORS



APPLICATION

A new range of Rectangular Permanent Suspension Magnets.

Computer designed for optimum performance and greatest tramp iron extraction power.

Most comprehensive range to accommodate operating heights up to 350mm and belt widths up to 1400mm.

Unequaled in performance, reflecting more than 30 years of magnetic separation experience with most of the major Australian mining companies and public power generating utilities.

Designed

- to extract tramp iron from materials carried by belt conveyors, vibratory feeders and inclined chutes.
- to operate in hot, dusty and steamy conditions and in all climates without alterations or modifications to the standard design specifications.
- for the protection of machinery from damage and to ensure product purity in all types of plant from mining to food processing.

SPECIFICATION

- **Designed and Manufactured in Australia** to the latest standards and in accordance with the best current engineering practices and procedures.
- Computer designed magnetic circuit.
Optimised for the specified operating distance and installation position.
- Poles and back bar fabricated from high permeability steel.
- Non-magnetic stainless steel bottom (bumping) plate, casing and cleaning drawer.

PERFORMANCE

- Magnetic extraction power — optimised for type of tramp and the width and depth of the conveyed material burden.
- At the nominated operating gap — equivalent in performance to electro magnets.
- Top performance is maintained indefinitely in adverse conditions of vibration, dust, moisture and corrosion.
- Inherently static in operation — low maintenance requirements.
- Intrinsically safe in hazardous and underground locations.
- No electric power supply and cabling — no operating costs.
- Low maintenance.

ANCILLARIES & OPTIONS

- **Suspension Chains**
3- or 4-legged *Herc-Alloy* chains with hammerlocks, shackles and oblong connecting links.
Turnbuckles for easy height adjustment as an option.
- Manual cleaning drawer for quick and easy tramp discharge.

ALTERNATIVE EQUIPMENT

- Inline — or Crossbelt permanent separators for the continuous removal of the collected tramp iron.
- Electro Suspension magnets.
Inline — or Crossbelt electro magnetic separators.
- Permanent — or electro magnetic pulleys.

INFORMATION & ASSISTANCE

For further information, assistance or advice please contact your local representative or our main office direct.



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GENERAL SPECIFICATIONS

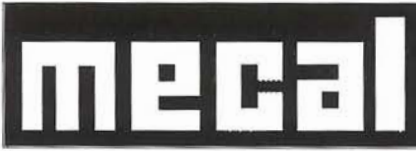
Electro Magnetic Tramp Iron Separators

Design, Manufacture & Material.

- Designed & Manufactured in Australia: -
To the latest standards and in accordance with the best current engineering practices & procedures.
- Computer Designed Magnetic Circuit: -
Optimised for the specified operating distance & installation position.
- Magnet Energising Coil: -
Wound in Aluminium strip with anodizing insulation that has melting point of 2000 degree Celsius. Cavity spaced and oil cooled for superior heat transfer characteristics.
- Internal Expansion Chamber Design: -
Eliminated contact between cooling oil and surrounding atmosphere. An one-way pressure relief valve is used to allow the cooling oil to expand during heating up and prevents moisture or air from re-entering on cooling of the magnet.
- Poles & Back Bar: -
Fabricated from high permeability steel.
- Bottom (Bumping) Plate: -
Fabricated from non-magnetic stainless steel, for superior abrasion resistance and ease of tramp iron discharge.
- Terminal Box: -
Generously proportioned; heavy duty - steel construction, protection class IP65.

Performance.

- The specified recovery performance is for the magnet in its 'hot' state, i.e. normal magnet operating conditions.
- Magnetic extraction power - optimised for type of tramp and the width & depth of the conveyed material.
- Top performance is maintained indefinitely in adverse conditions of vibration, dust, moisture and corrosion.
- Inherently static in operation. Low maintenance requirements.



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GENERAL SPECIFICATIONS

Electro Magnetic Tramp Iron Separators - Auxiliary Equipment

Magnet - AC / DC Power Conversion Equipment.

- All components are rated for the design cold power of the electro magnet.
- Three phase, double wound power transformer, dry seal - naturally air-cooled.
- Bridge connected silicone rectifier diodes with integral surge suppressor.
- Housed in sheet steel cabinet to class IP65.

Options

- Transformer / Rectifier, or Rectifier Stack housed in control equipment enclosure (up to 8 kW).
- Single-phase supply (up to 6 kW).
- Built in rectifier (single phase supply - up to 4 kW).
- Special customised design.

Separator - Electrical Control Equipment.

Basic (AC - Switching).

- Protection Circuit Breaker in IP65 enclosure with NO / NC voltage free auxiliary contact.

Standard (AC - Switching).

- Power & control circuit fuses, magnet "ON - OFF" push buttons, power "ON" indicating light, AC contactor & relays with NO / NC voltage free auxiliary contacts. Magnet DC power supply - zero current sensing relay. All wired to common terminal strip.
- Housed in wall mountable sheet steel enclosure to class IP65, with removable bottom gland plate.

Options.

- DC volt - and ammeters.
- "Manual - Auto" selector switch and indicating lights, control & interfacing circuitry.
- DC power switching.
- Special design and enclosures to customer requirements.



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GENERAL SPECIFICATIONS

Electro Magnetic Tramp Iron Separators - Auxiliary Equipment

Magnet Separator Suspension Sling.

Standard Sling

- Alloy chain sling assembly - rated SWL exceeds magnet weight.
- Multi oblong connecting link or alloy shackle for attaching chain to suspension hook / device.
- Hammerlocks for quick assembly of chain and components.
- Shackles to attach to separator lugs.
- **Alloy Chain Assembly Type**

For magnets up to 3t 3 legged chain.

For magnets of 3t to 6t 3 legged or 4 legged chain.

For magnets above 6t 4 legged chain.

Four legged chains are generally supplied as two assemblies, each with suspension multi oblong link or shackle and two chain legs. This two suspension point design provides excellent positional stability to the magnet and no additional guy wires are required. (Recommended in conjunction with two monorail trolleys for automatic - or remotely controlled tramp iron discharge operations).

Options.

- Turnbuckles -
for convenient magnet height & position adjustment.
- Wire Rope Suspension Slings -
complete with clips and mounting hardware.
- Special Customised Design.
- Separator Suspension Trolleys -
monorail - push, geared or motorised trolleys.



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GENERAL SPECIFICATIONS

In-line & Cross-belt Electro Magnetic Tramp Iron Separators

Pulleys & Bearings

- Heavy-duty main pulleys, Whittington type, crown faced for ease of tracking.
- Tail pulley screw take-ups for cleaning belt tensioning and tracking.
- Pulleys are equal to - or larger than the minimum diameter recommended by the belt manufacturer, ensuring optimum belt life.
- Large diameter, Whittington type, flat faced idler pulleys for ease of belt tracking and long belt life. Shell type available upon request.
- Shaft deflections within proven industry limits - (values as recommended by shaft - hub-locking assembly manufacturers).
- UCP series blocks with grease lubricated self-aligning ball bearings. (Plummer blocks available upon request or specified).

Separator Cleaning Belt.

- Fabricated from heavy duty, abrasion resistant 3 ply PN160 fabric belt and made endless by cold vulcanising.
Nominally - 2mm bottom cover.
 3-5mm top cover.
- Rubber cleaning slats - cold vulcanised to belt.

Drive Unit.

- Shaft mounted helical bevel -, or helical worm gearbox with integral flanged 4- pole squirrel cage T.E.F.C. drive motor.
Design - ensures long trouble free operating periods with minimum maintenance requirements.

Zero Belt Speed Detector (Optional).

- Inductive rotational speed detector installed at main take - up pulley to signal belt slippage or breakage.

(MFO03004/0401)



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STANDARD PAINTING SPECIFICATIONS

Electro Magnetic Tramp Iron Separators

Surface Preparation.

- Surfaces shall be prepared by dry blast cleaning to Class 2-½ in accordance with AS 1627 Part 4.

Prime Coat.

- Primer shall be air cured Zinc Ethyl Silicate to AS 2105 Type 4.
Taubmans - Durazinc 7 (or equivalent).
50 microns dry film thickness.

Finish Coat.

- Final coat shall be a two-pack high solids high build Polyamide Epoxy Coat.
Taubmans - Valchem HSHB Epoxy (or equivalent).
125 microns dry film thickness.
Colour: Y-14 golden yellow / standard black - to AS 2700



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MAGNETIC SEPARATORS.

<u>Company/Country</u>	<u>Location</u>	<u>State</u>	<u>Type</u> (See Legend)	<u>Industry</u>	<u>Product</u>
Aberfoyle Resources A.C.I.	Hellyer	TAS	1	Mine	
		VIC	2 & 3	Glass	Cullet
		WA	3 & 4		Dolomite
		QLD	4		Cullet
		NSW	2		Cullet
Adelaide Fertilizers		SA	3	Fertilizer	Phosphate
Alcoa of Australia	Geelong VIC		3	Aluminium	
	Pinjarra Mine	WA	1		Bauxite
Altona Rock Blasting		VIC	4	Quarry	
Ardlethan Tin		TAS	1	Mine	Ore
Austral Brick	Penrith	NSW	4	Brick	Clay
Australian Cement	Kandos	NSW	4	Cement	
Aust. Defence Ind.		VIC	1		Soil Reclaim
Aust. Iron & Steel		NSW	4	Steel	Coal
Axcom Plant Hire		VIC	4	Mine	
Aztec Mining	Bounty Gold Mine	WA	1	Mine	Gold
Bechtel Australia BHP		QLD	3	Smelter	Aluminium
	Sth Walker Creek	QLD	3	Mine	Coal
Big Bell Mines	Cue	WA	1 & 3	Mine	Gold
Blue Circle S.C.		NSW	1 & 3	Cement	Limestone
Boral	Lysterfield	VIC	1	Quarry	
Bowral Brickworks	Bowral	NSW	4	Brick	Clay
Bulga Coal	Singleton	NSW	3	Mine	Coal
Bulli Tile & Brick	Bulli	NSW	4	Brick	Clay
Capricorn Coal	Middlemount	QLD	3	Mine	Coal
Coal Cliff Colliery	Appin	NSW	1	Mine	Coal
Copper Mines of Tas	Queenstown	TAS	1	Mine	Copper
Cortex Resources NZ			4	Port	Grain
Comalco Aluminium	Gladstone	QLD	3	Refinery	Coal
CSR Construction Material	Cecil Park	NSW	4	Quarry	
CSR Readymix	Queanbeyan	NSW	4		
	Koroit	VIC	4	Quarry	
	Marulan	NSW	4	Cement	
David Mitchell Est.	Lilydale	VIC	4	Quarry	Limestone
Delta Group	Brooklyn	VIC	1&2	Quarry	Rock
Dominance Ind.	Wangaratta	VIC	2	Timber	Medium Density Fibre Board Plant
Dowding & Mills	Rydalmere	NSW	3	Mill	Flour
Drayton Coal	Muswellbrook	NSW	1	Mine	Coal
EG & AJ Leighton	Sale	VIC	4	Quarry	
Ellavale Engineering	Mt Thorley	NSW	3	Mine	Coal
Fimiston Gold Mine	Boulder	WA	1	Mine	Gold
Globex Bulk Term.	Footscray	VIC	1	Grain	
James N. Kirby		NSW	2	Foundry	Sand
John Holland P/L		QLD	3		
Kevron Aerial Surveys	East Perth	WA	4		
Kinder & Co. Ltd	Braeside	VIC	4		
Laminex Industries	Gympie	QLD	4	Timber	Woodchip
Leonora Gold		WA	1	Mine	Gold

<i>Company/Country</i>	<i>Location</i>	<i>State</i>	<i>Type</i>	<i>Industry</i>	<i>Product</i>
Mackay Sugar	Mackay	QLD	2 & 4	Sugar	Coal
Masalkovski & Sons	Altona Nth	VIC	2	Quarry	
Maxcon		QLD	4		
Mobile Recyclers		SA	4	Quarry	
Montrose Quarry		VIC	3	Quarry	
Mossman Central Mill		QLD	3	Sugar	Coal
Mount Isa Mines		QLD	3 & 4	Mine	
Mt. Percy Gold		WA	1	Mine	Gold
Mt. Thorley Coal Mine		NSW	1 & 4	Mine	Coal
Northern Cement		NT	2	Cement	
Newcom Collieries	Wangi	NSW	1	Mine	Coal
North Sydney Brick & Tile		NSW	4	Brick	Clay
Olympic Dam Operations		SA	1	Mine	Copper
Osborne Mine		QLD	3	Mine	Gold - Copper
Pancontinental Gold		WA	3	Mine	Gold
Peak Hill Resources	Meekatharra	WA	4	Mine	Gold
PGH Bricks	Bathurst Doonside	NSW	3 & 4 4	Brick	Clay
Porphyry Gold		WA	1	Mine	Gold
Queensland Glass		QLD	4	Glass	Cullet Dolomite
QLD Recycling	Fortitude Valley	QLD	4	Glass	Recycle
Readymix	Colac	VIC	3	Cement	Clinker
Recyclers of Aust.	Laverton	VIC	1 & 2	Glass	Recycle
Recycling Ind.	Laverton	VIC	4	Glass	Recycle
Regional Conveyors	Fyshwick	ACT	2	Quarry	
Robe River		WA	3	Mine	Iron Ore
Roche Bros	Rockhampton	QLD	4	Quarry	
State Brickworks		NSW	3 & 4	Brick	Clay
Stratford Coal	Gloucester	NSW	3	Mine	Coal
Temco - Bell Bay		TAS	3	Mine	Zinc
Visy Pulp & Paper	Tumut	NSW	1	Paper	
Walker Ltd	Maryborough	QLD	3	Sugar	
Waverly Woollahra Process Plant		NSW	1	Recycling	
Western Collieries		WA	1	Mine	Coal
Western Mining Corp	Collie	WA	1 & 3	Mine	Nickel
Western Power	Muja P.S.	WA	1 (3) & 3	Power Station	Coal
Woodlawn Mines		NSW	1	Mine	
VAW	Kurri Kurri	NSW	1	Aluminium	
<u>ARGENTINA</u>					
Metso Panelboard Ltd (N.Z.)			2	Timber	Medium Density Fibre Board Plant
<u>BRAZIL</u>					
Metso Panelboard Ltd (N.Z.)			2	Timber	Medium Density Fibre Board Plant
<u>CHINA</u>					
Fangcheng Grain Terminal		Fangcheng	1	Grain	
<u>COLUMBIA</u>					
Carbocol			3	Mine	Coal
<u>FIJI</u>					
Emporer Gold Mining			2 & 4	Mine	Gold

<i>Company/Country</i>	<i>Location</i>	<i>State</i>	<i>Type</i>	<i>Industry</i>	<i>Product</i>
<u>HONG KONG.</u>					
Kwah Stone			1	Quarry	
Planters & Co.			2	Cement	Clinker
Saw Bros			1	Quarry	
<u>INDONESIA.</u>					
A.C.I.			2	Glass	Cullet
Aneka Tambang			3	Mine	Coal
Arutmin	Balikpapan		3	Mine	Coal
Bukaka Teknik Utama	Bukit Asam		1	Contractor	
Kaltim Prima Coal			1	Mine	Coal
Kertapati Port			3	Port	Coal
North Pulan Laut Coal			3	Terminal	Coal
Terminal (P.T. Arutmin)					
Pentangis Coal			3	Mine	Coal
Pt Anugerah					
Senakin Coal			3	Mine	Coal
<u>KOREA.</u>					
Daewoo – Hanwha	Seoul		3	Port	Coal
<u>MALAYSIA.</u>					
APMC (Malayan Cement)	Rawang		1	Cement	Coal
			3		Limestone
Golden Hope (Sunds)			2	Timber	MDF
Pahang Cement	Kuantan		4	Cement	
Tasek Corporation					
<u>NEW ZEALAND.</u>					
Alex Harvey			2	Glass	Cullet
Masons Engineers			2	Timber	Woodchip
Port of Whangarei			4	Timber	Woodchip
Raynier (Sunds)	Mataura		2	Timber	MDF
Special Steels & Metals					
<u>PAPUA NEW GUINEA.</u>					
OK Tedi			1	Mine	Copper
Pioneer Concrete	Bougainville		4	Cement	Granite
<u>PHILIPPINES.</u>					
Northern Cement	Sison		2	Cement	
<u>SINGAPORE.</u>					
Megadrive			1	Representative	
Ssangyong Cement	Jurong		1	Cement	
<u>TAIWAN.</u>					
Taiwan Power Corporation	Taichung		1	Power Station	
<u>THAILAND</u>					
Siam City Cement	Saraburi		1	Cement	

Legends:

- 1 = Electro - Self-Cleaning.
- 2 = Permanent - Self-Cleaning.
- 3 = Electro Suspension.
- 4 = Permanent Suspension.



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SEPARATOR MAGNET - QUESTIONNAIRE

DATE:

COMPANY:.....

PHONE:

CONTACT:.....

FAX:

TYPE OF PLANT:

CONVEYOR

Belt Width?..... Speed? Head Pulley Dia.?.....

Flat/trough? Level/inclined? Degree?

CONVEYED PRODUCT

Description:..... Burden Depth?

Max Lump Size?..... Rate per hour?

Bulk Density?

TRAMP METAL

Description:.....

Min. Size to be removed? mm

Preferred location of Magnet: Overhead Pulley?..... Cross Belt?

Will magnet be located near heavy metal objects? (eg. Hoppers, Crusher, Feeders...) YES / NO

Does it need to be Self Cleaning? or Manual Cleaning?
 (eg. Cleaning drawer)

Power Supply: Volt: Phase: Hz

If applicable, are Permanent Magnets acceptable?

PERMANENT MAGNETIC CHUTES - PLATES - GRIDS - TRAPS

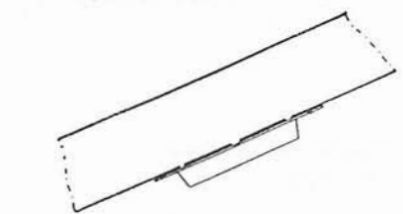
INSTALLATION IN WOOD OR STEEL CHUTES, SPOUTS, ETC. Magnaplates are supplied complete with hinges and other accessories ready for installation in either wood or steel chutes without extra equipment or added cost. To install, cut opening in chute bottom and bolt Magnaplate in position. In the case of steel chutes a marginal clearance of approximately 12mm should be allowed between the magnet poles and chute. Hinges construction permits swinging the Magnaplate away from the chute for easy removal of accumulated iron.

INSTALLATION ABOVE BELT. Place magnet as close as possible to the material on the belt because here it must overcome gravity.

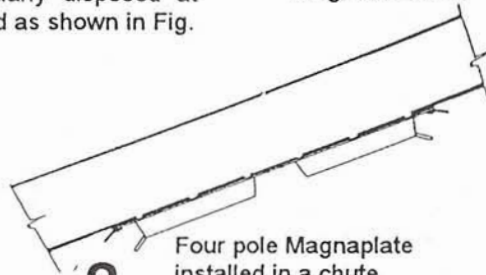
Magnaplate may be suspended, angularly disposed at terminal of conveyor as Fig. 12 or hinged as shown in Fig.

17. Magnetic attraction being in inverse proportion to the square of the distance between the magnet poles and the iron, it is essential to arrange your installation where depth of material is at a minimum and in an open state so that the iron will come as close as possible to the magnet face. Always install where flow is slowest because the magnet must also overcome the momentum of the moving iron. Install a 2-pole unit in a spout or chute where the angle of inclination is below 45° and a 4-Pole unit to 70°. Where the angle is sharp or the flow is vertical use the Magnahump.

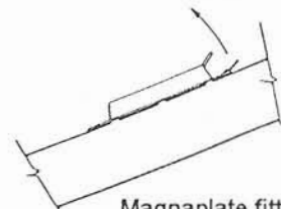
Note - Magnets must be kept clean to be effective - don't let clusters of iron accumulate. For large amounts of iron it may be advisable to have self-cleaning Magnaplate or a Magnetic Drum.



- 1.** Magnaplates can be readily fitted to the base of metal or wood chutes. Hinged to facilitate cleaning if necessary.



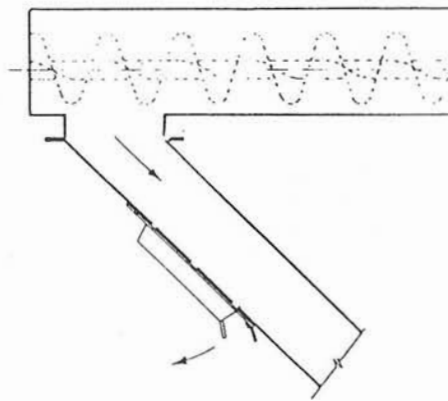
- 2.** Four pole Magnaplate installed in a chute. Extra poles add to efficiency.



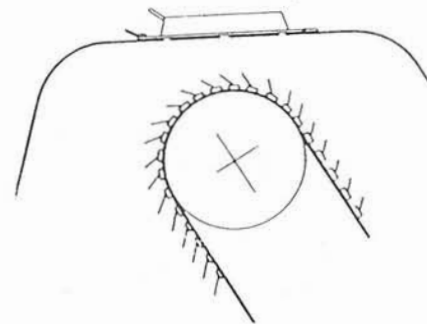
- 3.** Magnaplate fitted into the cover of closed chute, hinged to facilitate cleaning.



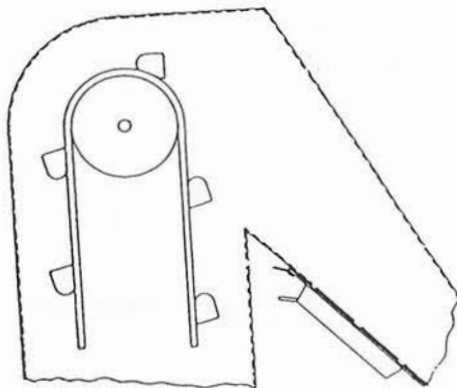
- 4.** Magnaplate introduced at discharge of pipe lines will remove Tramp Iron from the liquid.



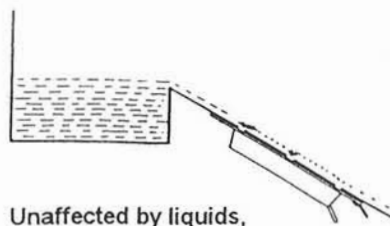
- 5.** Magnaplate positioned in discharge chute from screw conveyor.



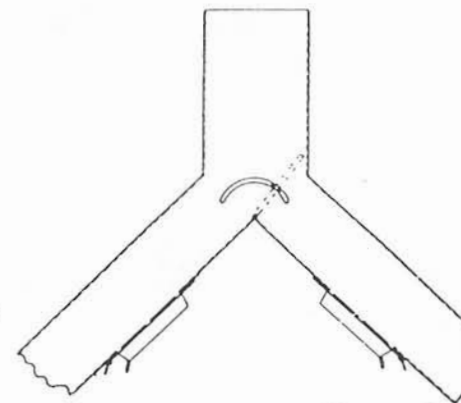
- 6.** Magnaplate installed above spiked apron feeder, a common textile mill or bedding plant application.



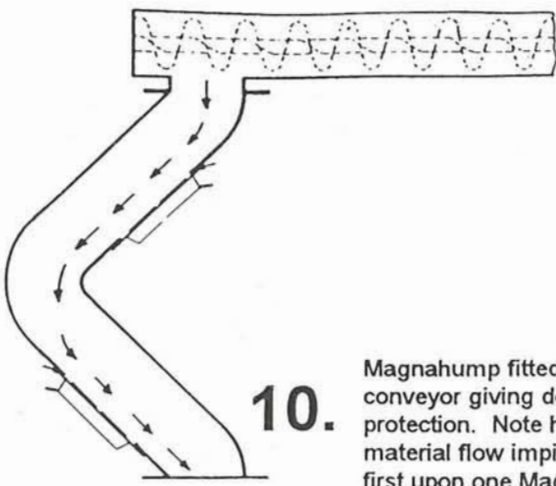
- 7.** Installed at the discharge of bucket elevators, etc. Magnaplates protect vital process machinery from damage by Tramp Iron.



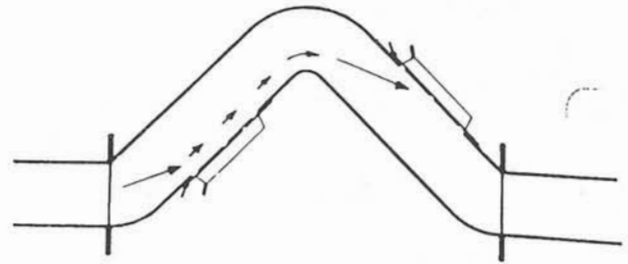
- 8.** Unaffected by liquids, Magnaplates can be positioned at the mouth of weirs or even immersed in the flow channels.



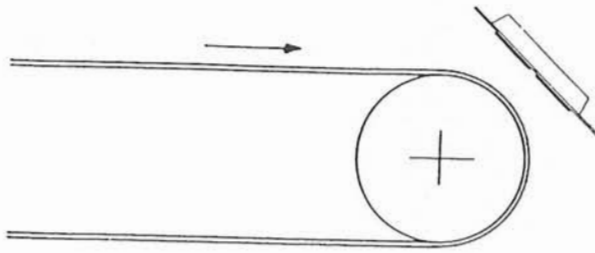
- 9.** Magnaplates inserted in a bifurcated trunk and hinged for cleaning.



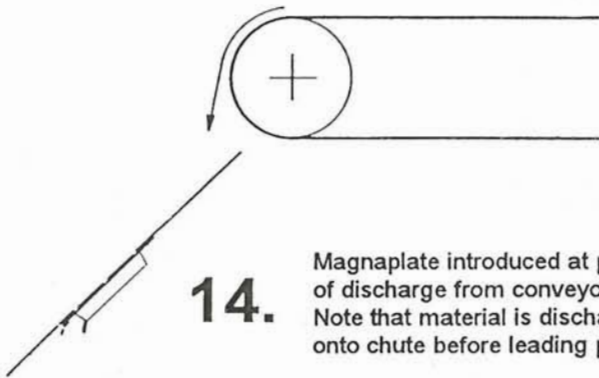
10. Magnahump fitted to screw conveyor giving double protection. Note how material flow impinges first upon one Magnaplate and then upon the second.



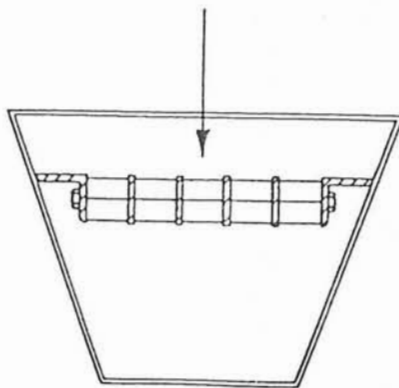
11. Magnahump or Hydrohump as applied to pneumatic or hydro lines. A common application in textile and paper pulp industries.



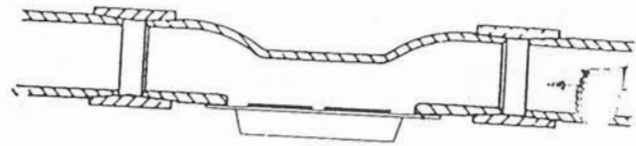
12. Magnaplate angularly disposed at terminal of conveyor. Typical application on Sand Slinger.



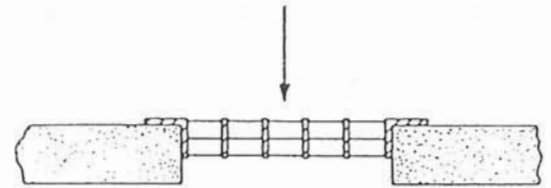
14. Magnaplate introduced at point of discharge from conveyor. Note that material is discharged onto chute before leading pole.



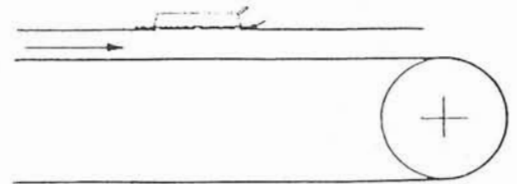
16. Magnagrid fitted in delivery hopper.



13. Magnatrap incorporated in standard pipe lines.



15. Magnagrid serves as a protective grating and extractor in floor openings.



17. Magnaplates suspended above a conveyor belt.



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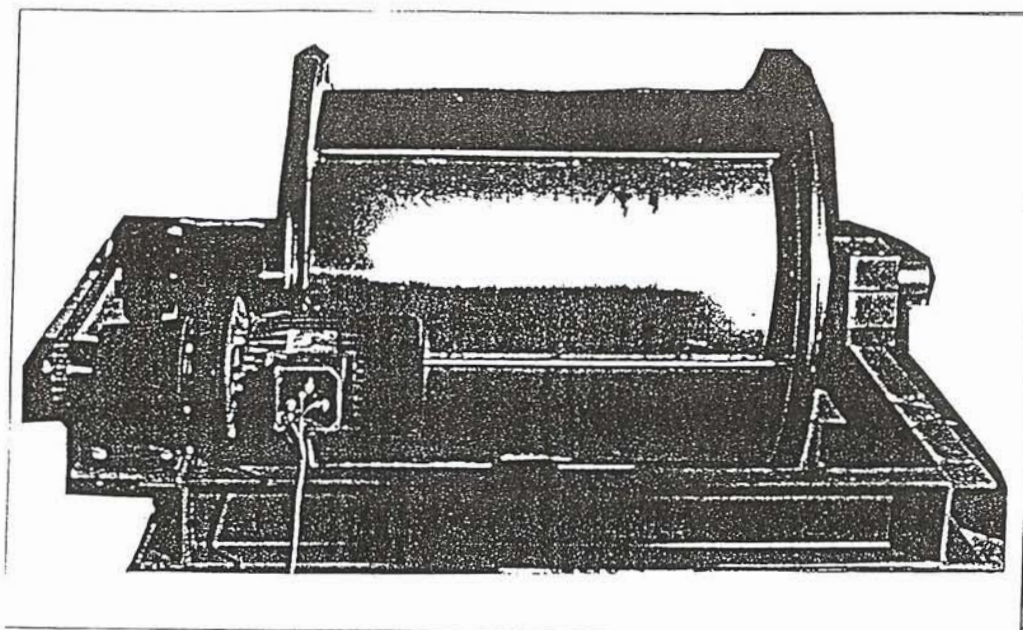
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APD & APDH RANGE OF PERMANENT MAGNETIC DRUM SEPARATORS

IDEALLY SUITED FOR: METAL RECLAMATION, FOOD, SWARF SEPARATION & FOUNDRY SAND UPGRADING.



INSTALLATION

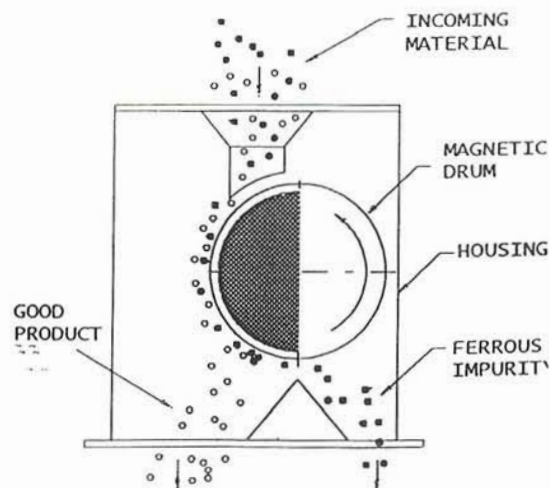
When planning an installation attention should be given to the position of the last row of idler rollers and the return side of the belt.

An adjustable non-magnetic apex plate should be fitted beneath the Pulley in the position indicated, the final position being established by precise running conditions on site.

A complete range of high gradient magnetic drum separators available in a range of 3 diameters. Total of 20 models.

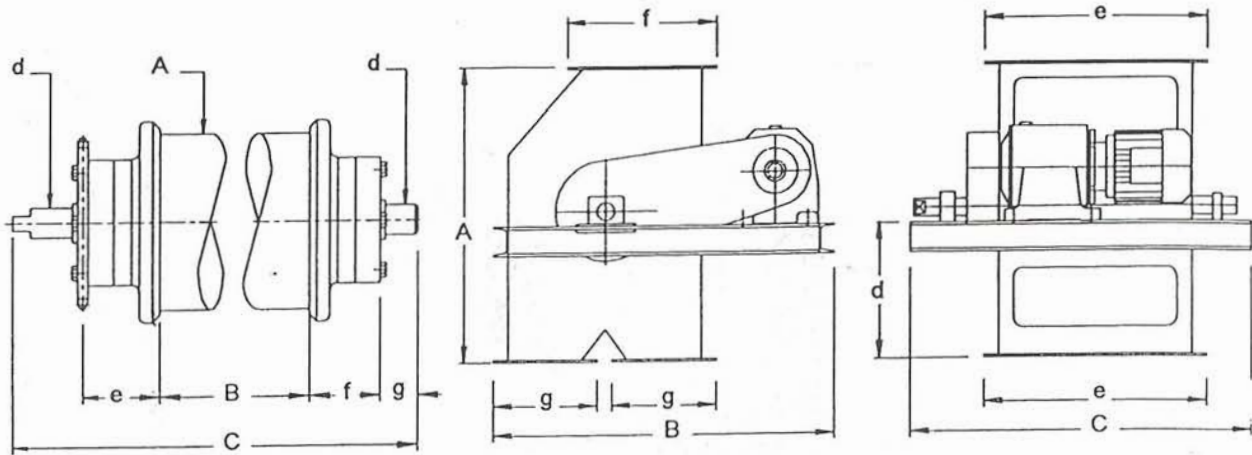
Drum can be provided in housings complete with geared motor, inlet and outlet chutes; ready for installation.

The drum's high gradient magnetic field ensures the removal of general ferrous metal through to fine particles. The alternate pole arrangement gives a clean concentrate and entrainment-free tailings product automatically.



MLA-01-001/0308

Alternate Pole Permanent Magnetic Separators



Bare Drum Type – APD

Drum & Housing Type – APDH

TYPE-MODEL	MAX CAPACITY m3/hr	A	B	C	D	E	F	G	DRIVE kW	NETT WGT kg	GROSS WGT kg	SHIPPING Vol-m3
Maximum Speed 0.65m/s												
APD-30.30	20	305	300	625	40	70	35	75	0.55	110	155	0.2
APD-30.45	26	305	450	775	40	70	35	75	0.55	155	200	0.2
APD-30.60	35	305	600	925	40	70	35	75	0.55	200	245	0.3
APD-30.75	45	305	750	1075	40	70	35	75	0.75	245	290	0.3
APD-30.90	80	305	900	1225	50	70	35	75	0.75	290	335	0.4
Maximum Speed 0.95m/s												
APD-45.45	60	450	450	830	40	75	50	75	1.1	230	275	0.6
APD-45.60	80	450	600	980	50	75	50	75	1.1	285	345	0.7
APD-45.75	105	450	750	1130	50	75	50	75	1.1	350	410	0.8
APD-45.90	120	450	900	1280	60	75	50	75	1.5	410	470	0.9
APD-45.105	140	450	1050	1430	60	75	50	75	1.5	480	540	1.0
APD-45.120	160	450	1200	1580	75	75	50	75	1.5	550	610	1.1
Maximum Speed 1.25m/s												
APD-75.60	180	750	600	1050	60	90	60	100	1.5	500	615	1.5
APD-75.75	230	750	750	1200	60	90	60	100	1.5	650	765	1.7
APD-75.90	280	750	900	1350	75	90	60	100	1.5	800	915	1.9
APD-75.105	330	750	1050	1500	75	90	60	100	2.2	955	1070	2.1
APD-75.120	380	750	1200	1650	100	90	60	100	2.2	1115	1230	2.3
APD-75.150	480	750	1500	1950	100	90	60	100	2.2	1330	1455	2.7
APD-75.180	580	750	1800	2250	100	90	60	100	2.2	1620	1745	3.2
APDH-30.30	20	850	1000	675	400	450	400	250	0.55	280	325	0.7
APDH-30.45	26	850	1000	825	400	600	400	250	0.55	330	375	0.8
APDH-30.60	35	850	1000	975	400	750	400	250	0.55	380	425	1.0
APDH-30.75	45	850	1000	1125	400	900	400	250	0.75	435	480	1.1
APDH-30.90	80	850	1000	1275	400	1050	400	250	0.75	485	530	1.3
APDH-45.45	60	1000	1185	880	470	615	500	300	1.1	415	460	1.3
APDH-45.60	80	1000	1185	1030	470	765	500	300	1.1	480	540	1.5
APDH-45.75	105	1000	1185	1180	470	915	500	300	1.1	730	790	1.7
APDH-45.90	120	1000	1185	1330	470	1065	500	300	1.5	795	855	1.9
APDH-45.105	140	1000	1185	1480	470	1215	500	300	1.5	875	935	2.1
APDH-45.120	160	1000	1185	1630	470	1365	500	300	1.5	955	1015	2.3
APDH-75.60	180	1750	1850	1100	865	775	800	350	1.5	890	1005	4.3
APDH-75.75	230	1750	1850	1250	865	925	800	350	1.5	1055	1170	4.9
APDH-75.90	280	1750	1850	1400	865	1075	800	350	1.5	1215	1330	5.4
APDH-75.105	330	1750	1850	1550	865	1225	800	350	2.2	1710	1825	6.0
APDH-75.120	380	1750	1850	1700	865	1375	800	350	2.2	1885	2000	6.6
APDH-75.150	480	1750	1850	2000	865	1675	800	350	2.2	2125	2250	7.8
APDH-75.180	580	1750	1850	2300	865	1975	800	350	2.2	2440	2565	8.9

Dimensions in mm

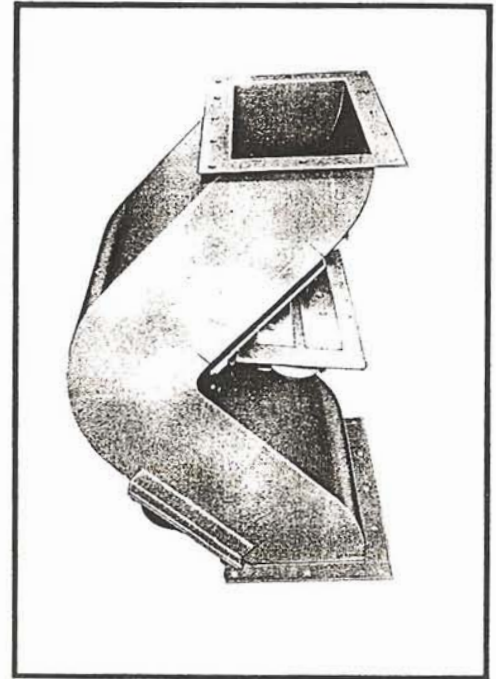
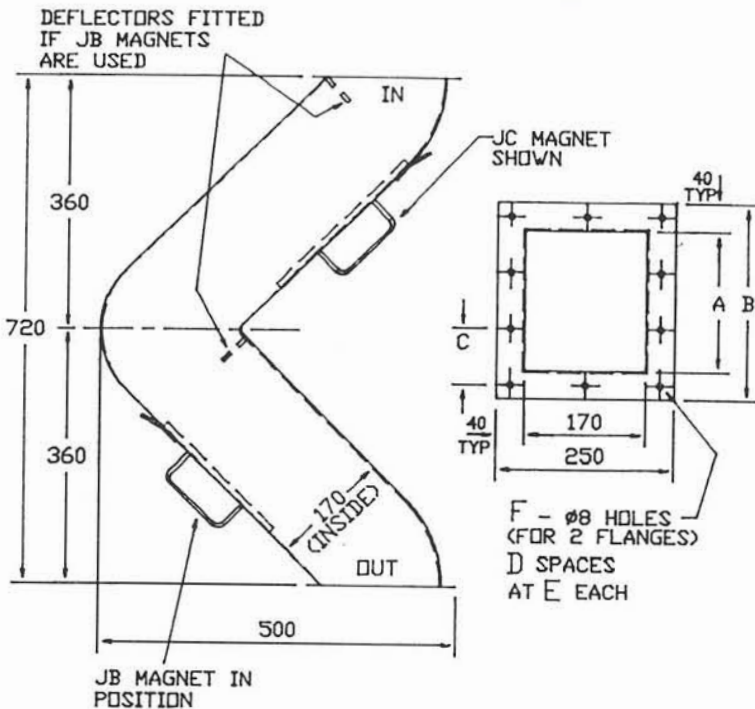


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Magnahump



For installation in ducts and closed chutes.

The Magnahump is designed for extracting iron contamination from wet or dry materials where space limitations exclude the conventional 45° gravity feed.

Incorporating two permanent magnet units, the Magnahump is constructed so that the material flow crosses the magnetic field of the first unit and then changes direction to flow across the second - ensuring that any iron content is brought into direct contact with the poles. Cleaning is simple, the magnet units are hinged and swing open on the release of a latch.

Size (mm)	Equiv. Pipe Dia. Ins. (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	JB Net Wt. (Kg.)	JB Gross Wt. (Kg.)	JC Net Wt. (Kg.)	JC Gross Wt. (Kg.)	Shipping Space Cu.M.
200	200	200	280	2	125	10	17	33	22	38	0.17
250	230	250	330	2	150	10	20	38	27	45	0.19
300	250	300	380	2	175	12	25	44	33	52	0.21
400	300	400	480	3	150	14	35	57	47	68	0.26
550	350	550	630	4	150	16	50	75	65	90	0.33
700	400	700	780	5	150	20	70	100	90	120	0.40
850	450	850	930	6	150	22	80	110	107	140	0.47
1000	500	1000	1080	7	150	26	95	135	125	165	0.55

(MRJ-01-001/9706)



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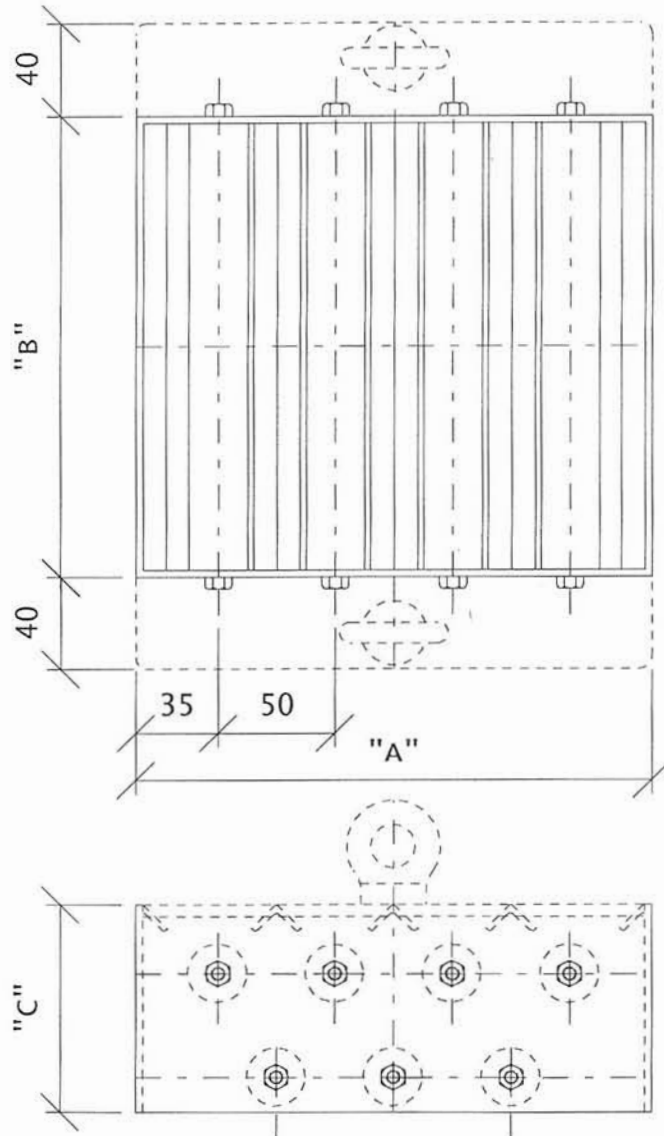
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Email: mecal@mecal.com.au

Magnagrid



Dimensions A, B and C are to suit client's applications.

Double layer shown, single and multiple layers are also available.

For installation in floor openings, hoppers, bins, vertical spouts, etc.

Installed at point of entry for extracting iron contamination from a wide variety of materials, Magnagrids also act as a protective grating against the ingress of other non-magnetic contaminants - string, paper, etc.

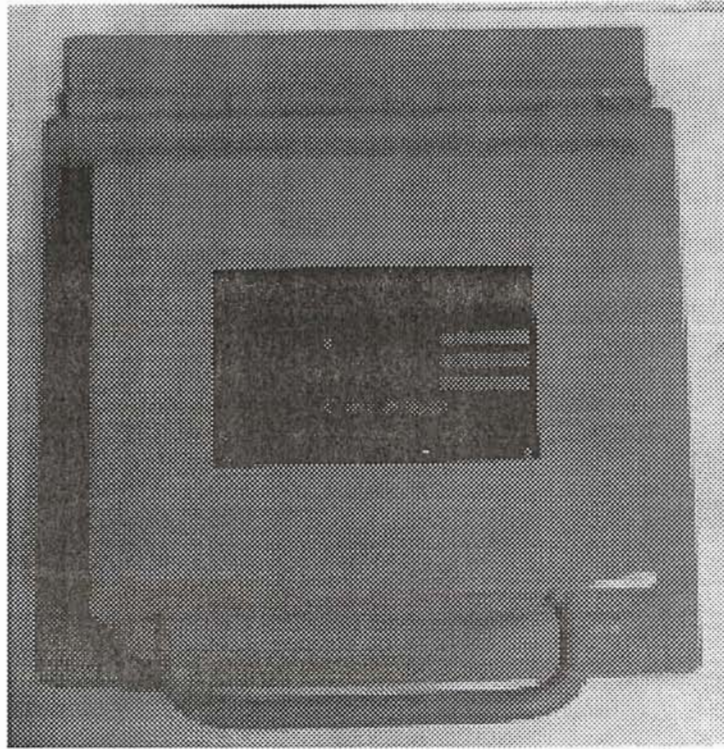
Incorporating high intensity rare earth magnet units across the full width of the grating, the assembly is permanently operative and requires no maintenance apart from occasional cleaning-off of the collected iron.

Magnagrids without angle support brackets are available upon request.

Optional features such as cleaning drawer or double tube to facilitate cleaning are also available.

(MRJ-01-002/9805)

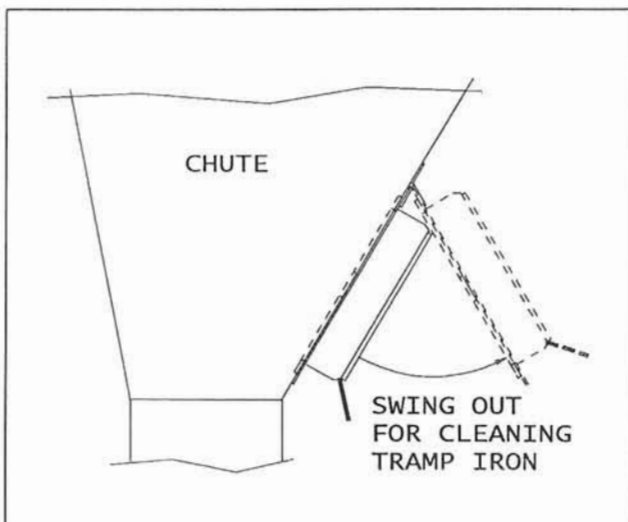
CERAMIC MAGNAPLATES.



An entirely NEW range of plate magnets incorporating the latest anisotropic ceramic permanent elements.

These remarkable units have a list of star features which add up to a new peak in quality and performance in half the space previously occupied.

- Uniform intensity across entire face of Magnet.
- Larger magnet area spanning full pole width.
- Stainless steel welded enclosure keeps out iron and moisture, prevents magnet removal and satisfies requirements of food and chemical industries.



- Stainless steel faceplate and poles prevent corrosion and abrasion.
- Unequalled resistance to demagnetisation by vibration and abnormal temperatures.
- Optimum holding power and field penetration with substantial saving in space.
- Raised poles increase flux gradient and magnet area and prevent loss of fine iron.
- No power supply, no operating costs and no maintenance required, except for occasional iron removal.

Application and Scope.

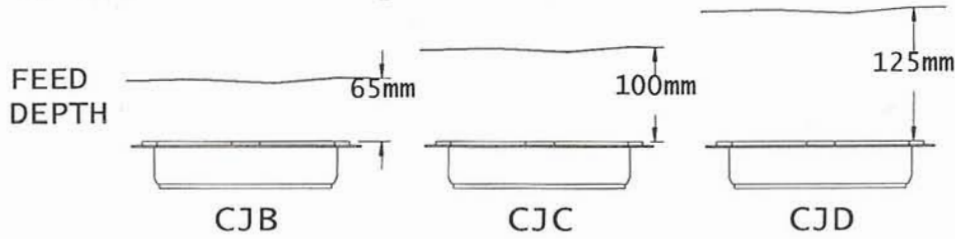
The most compact and easily installed Magnet for extracting iron from processed materials in chutes, ducts or pipelines and on belt conveyors and feeders.

Whether the material is plastics or paper pulp, foundry sand, food or fertilizers, the result is the same - sure protection of processing machinery and an iron-free final product.

Available in three iron-stopping intensities to treat feeds up to (125mm) deep and in widths to suit chutes from 9100mm) upwards in increments of (50mm).

All units are supplied with hinges and latchplates for mounting, with holes already drilled to assist installation.

GRAVITY ASSISTED APPLICATION
(Bottom of chute, beneath conveyor or feeder discharge, etc.)

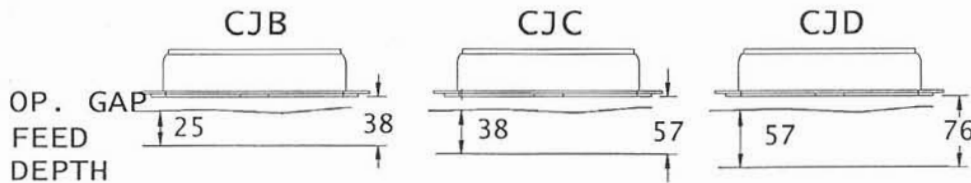


Conditions shown are based on medium sized tramp iron in dry, granular, free flowing materials in chute at maximum angle of 45° or conveyor with speeds up to 1 m/sec.

For greater angles or faster speeds use two or more units in series.

For fine iron consult our engineers.

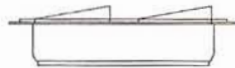
AGAINST GRAVITY APPLICATION
(Top of chute, above conveyor or apron feeder, etc.)



STYLE



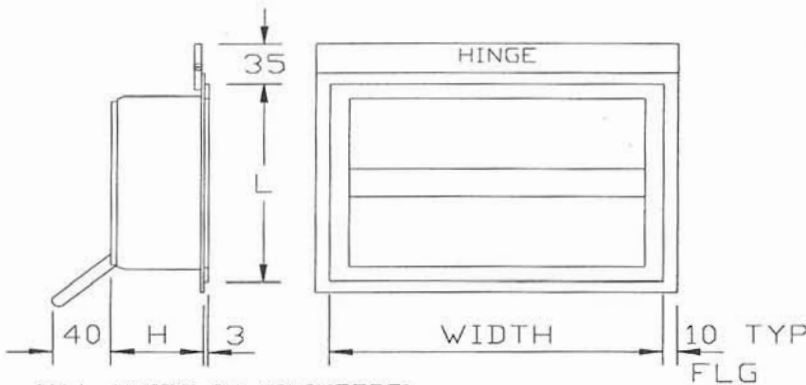
SMOOTH FACE



STEPPED FACE
When extremely fine iron is present



RECESSED AIR GAP
When spherical or hard to hold iron is present



(ALL UNITS IN MILLIMETRE)
(OTHER WIDTHS AVAILABLE UPON REQUEST)

TECHNICAL DATA

WIDTH	MODEL		
	CJB (Kg)	CJC (Kg)	CJD (Kg)
130	3	4	9
180	5	7	13
230	6	8	18
280	8	12	22
330	11	15	27
380	12	17	31
435	14	18	36
485	17	20	40
535	18	21	45
585	20	22	50
635	21	24	54
Height (H)	32	51	63
Length (L)	180	180	261



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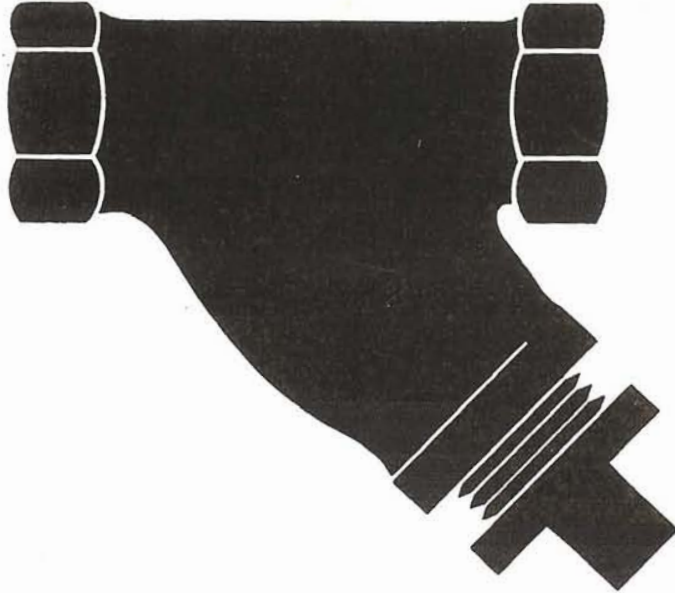
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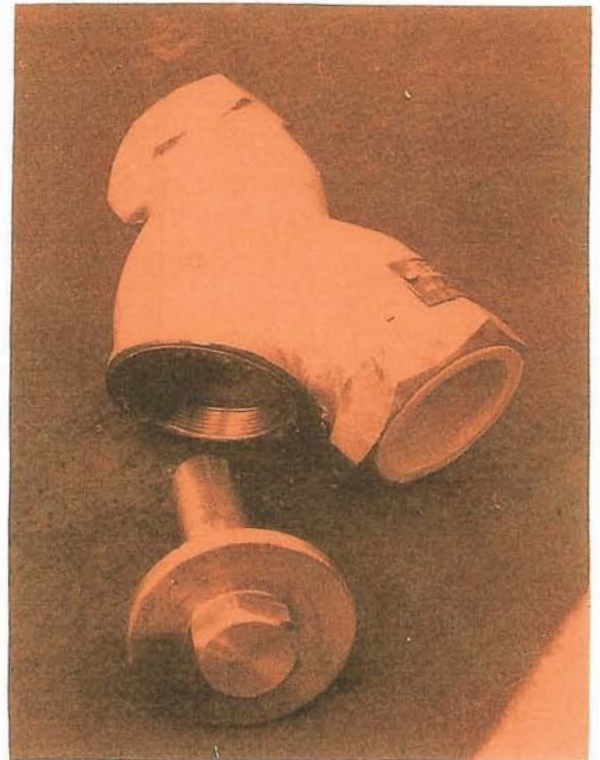
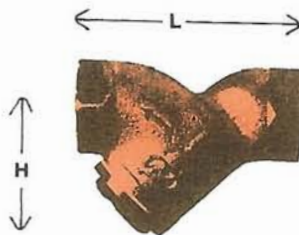


PIPE LINE MAGNETIC TRAPS

TYPE M.T.Y.

The magnetic separation of fine ferrous metal in pipe lines conveying foodstuffs – oil – ink – paint etc.

The powerful magnetic field attracts and retains the ferrous contamination.
 Collected metal removed by withdrawing The magnetic probe – wiping clean and replacing.
 Trap is all stainless steel construction T316 for hygiene and low maintenance.
 Standard Construction – Bronze.



MODEL	L	H	NOMINAL BORE	WORKING PRESSURE	WORKING TEMPERATURE
MTY 100	102	66	25	1400 kPa	250°C
MTY 150	175	85	40	1400 kPa	250°C
MTY 200	175	107	50	1400 kPa	250°C
MTY 300	200	120	75	1400 kPa	250°C