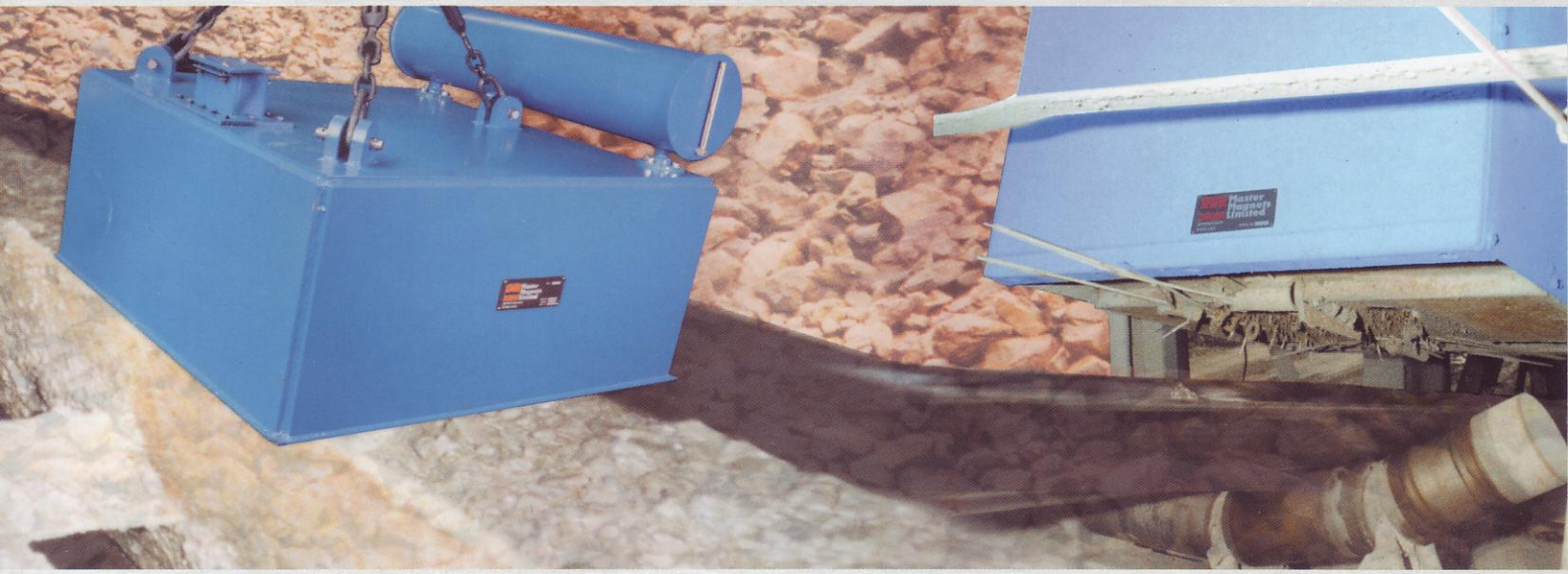
MASTERMAG

# MASTERMAG ELECTRO AND PERMANENT SUSPENSION MAGNETS



## Electro and Permanent Suspension Magnets for the removal of occasional tramp iron from conveyors and for use in universal recycling, quarrying and processing applications where machinery needs to be protected and product cleaned

Suspension magnets are designed specifically for the extraction of occasional tramp iron from material being carried by conveyor belt, vibratory feeder or gravity chute.

The suspension magnet invariably of rectangular pattern, is suspended over the material being conveyed. Ferrous material is extracted and held against the magnet face until the magnet, in the case of an electro, is de-energised. The magnet is normally suspended from a travelling trolley so that it can be moved clear of the conveyor before de-engerisation and discharge takes place.

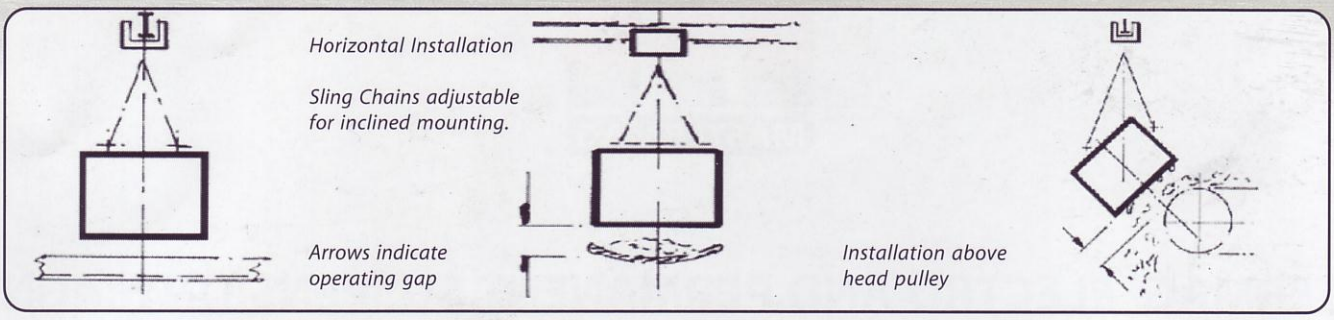
The electro range of suspension has been extended during the past few years to cater for the ever increasing size of conveyors, deeper troughing and conveyor speeds. The MasterMag range accommodates both air and oil cooled coils.

Electro suspension magnets can also be fitted with an ancillary permanent magnetic system to safeguard against release of extracted iron in the even of power failure. This type of magnet requires special control gear to de-energise the permanent magnets to release the collected iron, and to recharge the permanent magnets for subsequent duty.

Permanent suspension magnets are available for similar duties as the electro range. Extracted iron is cleared manually with this range of magnets. Permanent suspension magnets have a non-deteriorating high power ferric magnet unit, and require no cabling.

They also have the advantage of generally being less expensive to purchase and operate, and are virtually moisture, corrosion and flameproof.

Typical applications for the use of suspension magnets include the removal of iron from R.O.M. coal, stone, fertilisers, slag, gypsum, ores and similar materials where contamination by tramp iron is occasional, and continuous separation is not essential.




## Installation

The above diagram shows the alternative methods of mounting the suspension magnets, either horizontal, inclined or over the head pulley. All magnets are fitted with adjustable sling chains designed to suit the application.

Preferred installation position is over the head pulley where the burden spreads and the material is in virtual suspension. This always provides an improved efficiency of extraction, particularly as the absence of belt troughing allows the magnet to be positioned closer to the surface of the material, however the head pulley must be manufactured in non-magnetic material.

## General Specification

### Electro Suspension Magnets

These consist of a tri-polar design with core, poles and backbar in high permeability mild steel. The base is fitted with robust non magnetic impact plate, designed to withstand heavy impact of extracted tramp iron.

The energising coil wound in high conductivity aluminium is heavily insulated to receive DC power supply and can be air or oil cooled. An oil cooled magnet is fitted with conservator tank to ensure coil is always oil immersed, and is complete with breather and sight glass, all our magnets are completely computer designed.

### Permanent Suspension Magnets

Incorporates a high power strontium ferrite magnet unit replacing the electro coil and steel core, the permanent magnets are fully stabilised and virtually everlasting if not mistreated.

Modern materials and technology allows for magnets to operate at larger gaps than previously thought possible to be economically designed and manufactured.

### Suspension Lugs

Magnets are provided with heavy duty mild steel lugs, welded to the magnet to provide correct angle positioning for customers conveyor.

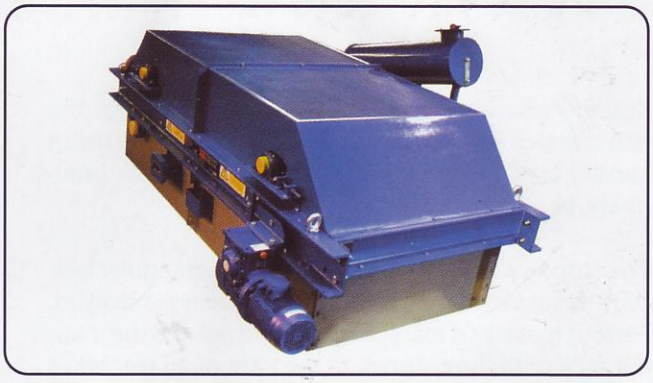
### Sling Chains

High tensile steel, fitted with adjustable turnbuckles to provide final adjustment on site. Chains terminating in main ring for attachment to trolley or lifting hook.

### Geared Trolley (Optional)

When mounted on a runway beam this allows manual removal of magnet to side of conveyor for discharge of collected iron or inspection.

**For when automatic cleaning is required, the range of MasterMag electro and permanent overband separators**



Master Magnets have over twenty five years experience providing innovative magnetic solutions to industries involved in recycling, demolition and reclamation, mining and quarrying, food processing, ceramics production and powders and minerals separation. The MasterMag range of systems are known for high performance and reliable operations and also include suspension magnets, overband magnets, drums and pulleys, eddy current separators and lifting magnets and are complimented by our range of vibratory feeders and metal detectors

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*As improvements are introduced we reserve the right to supply products which differ from those described*