



## MASTER MAGNETS OVERBAND SEPARATORS



Used for the continuous removal of tramp metal/ferrous materials from a product stream, overband magnetic separators are long established in ferrous separation.

Master Magnets manufacture one of the widest, most comprehensive ranges of permanent and electro magnetic overband separators. Permanent magnets are built from strontium ferrite material and then magnetised using Master Magnets unique 12 tonne magnetiser to totally saturate the material, making them amongst the most powerful permanent magnets available. Electro magnets are wound from aluminium wire or foil and insulated to class H temperature specification.

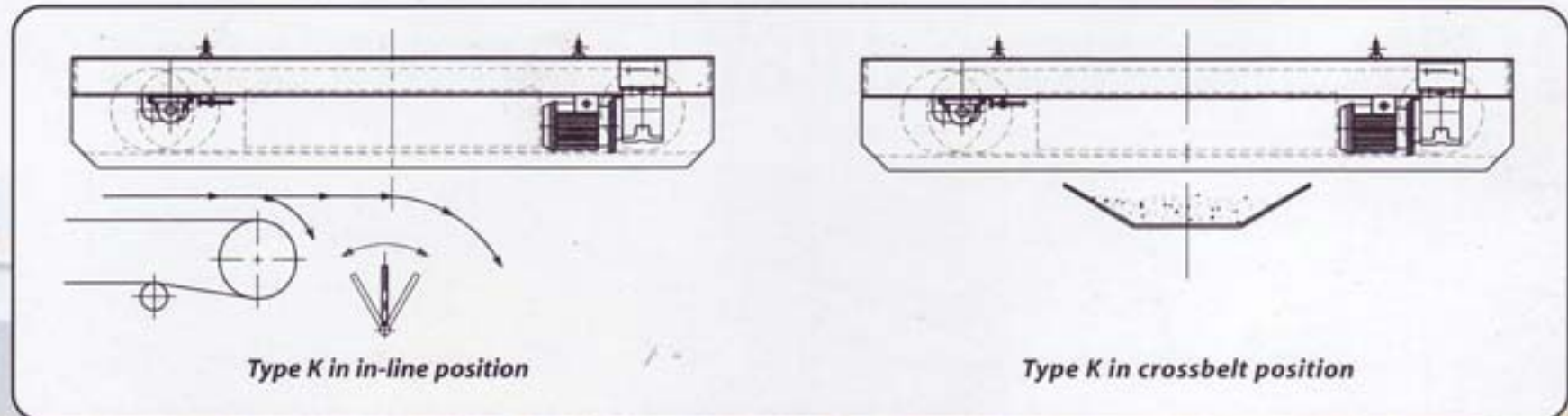
MasterMag overband separators are extremely effective in extracting tramp metal to protect processing machinery and to separate and upgrade product feed. In mining, quarrying and allied industries there is always the possibility that tramp metal will find its way into the product stream. If tramp metal continues into the crusher or shredder, machinery can be damaged resulting in expensive downtime and repairs. Commonly used worldwide mounted on mobile crushing machinery for the extraction of reinforcing bars, or in process plants, overbands can be used in the separation and upgrading of materials including plastics, wood, rubber, glass, computer components and aggregate.

The principle of operation is simple: a conveyor belt revolves continuously around a permanent or electro magnet. The product on the main conveyor or feeder passes under the overband and tramp metals are lifted clear by the magnet. The metals are then swept out of the magnetic field by the cleated conveyor belt and discharged at a point either parallel to, or at right angles to the side of the conveyed product. Ideally the overband will be positioned in-line as the material being conveyed will be in virtual suspension and "dwell time" under the magnet is optimum. Due to space restrictions within plant, overbands are commonly fitted across the conveyor so Master Magnets manufacture in-line and cross-belt to suit customer requirements.



# Master Magnets Overband Separators

## Type K Permanent Overband Separators



The MasterMag Type K was a breakthrough for the quarrying and recycling industries in that it was the first permanent overband separator that could be mounted to a mobile crusher unit or in a fixed plant. More importantly it offered an economic and highly versatile alternative to electro magnets, and has become a success story for Master Magnets.

The Type K was originally visualised as a low cost solution to the problem of tramp metal entering the product supply during mining and crushing operations. The installation of a Type K will protect crushing machinery and by removing ferrous contamination, upgrade the final product line.

With its permanent magnet block, the Type K is considerably lighter and more compact than electro magnets and requires no power source to the magnet, saving on cost and cabling. The permanent magnetic block is non-deteriorating and, barring mistreatment, will have an unlimited op-

erating life. Type Ks are designed to be virtually maintenance free and are available with either electric or hydraulic drives.

The Type K has since been adapted into the design of recycling operations installed in either recycling plants or on mobile crushers used for recycling purposes.

Master Magnets supply Type K units to the worlds leading crusher unit manufacturers and they are designed for easy mounting and interchange between mobile crushers. Most units comply with EU road regulations and can be left in position during transportation. Type Ks are manufactured to suit all widths and speeds of conveyor belts and operating gaps upto 600mm.

Type K permanent overbands are available at competitive prices and on quick deliveries and are supported by expert technical backup from our technical team and agents network.



*Type K operating in subzero climate*

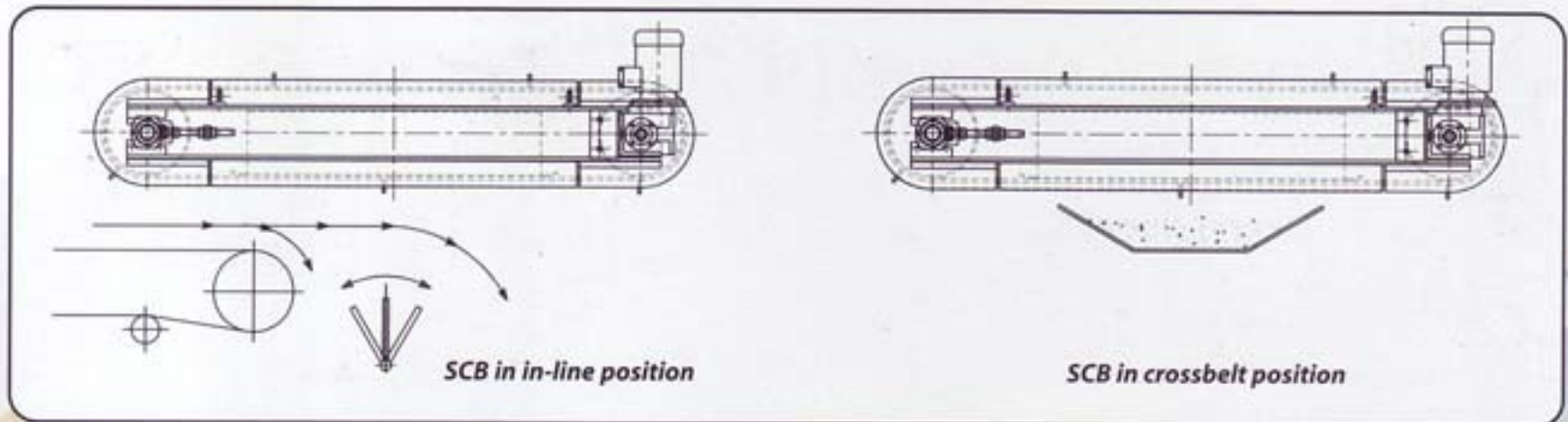


*Type K mounted on mobile crusher*



# : Continuous, Safe, Effective Protection

## SCB Series Permanent Overband Separators



The SCB series has been developed by Master Magnets designers as an updated, long-life permanent overband separator.

The SCB series features computer designed tri-polar magnetic circuitry - a design feature that drastically reduces magnetic "leakage" around the frame of the magnet. This creates a more concentrated, powerful magnetic field in the target area and reduces the chance that ferrous metals can be attracted and held to the frame of the overband.

The design has specifically taken into account ease of belt change. The magnet design is incorporated in the structure of the frame work, and the pulleys are mounted on the extremities of the frame. Belt removal is achieved by simply removing guards and slackening the tension screws which allows the belt to slide off. Fitting a new belt is a simple reversal of this process: a new endless belt is placed over the framework of the magnet and tightened. This system of belt change does not require any removal of integral parts and reduces downtime significantly during maintenance.

Where the SCB is required to operate in heat or handle abrasive materials, for additional protection the SCB series features an optional armour clad belt. Constructed from individually replaceable stainless steel plates, the armoured covering increases the operational life of the belt and reduces damage to the magnet system base.

The SCB has been designed with the accumulated experience of twenty years of design and manufacture of Type K and Heavy Duty overband separators. The design incorporates many of the features that has made the Type K a success, such as the low maintenance of the unit and the minimum of supervision needed in operation.

The drives, motors and component parts have been updated and designed for an increased service life and reliability.

The SCB design accommodates mobile crushers and static plant configurations easily, and as with the Type K, the series is available with electric and hydraulic drives and in ranges to suit all widths and speeds of conveyor belts and operating gaps.

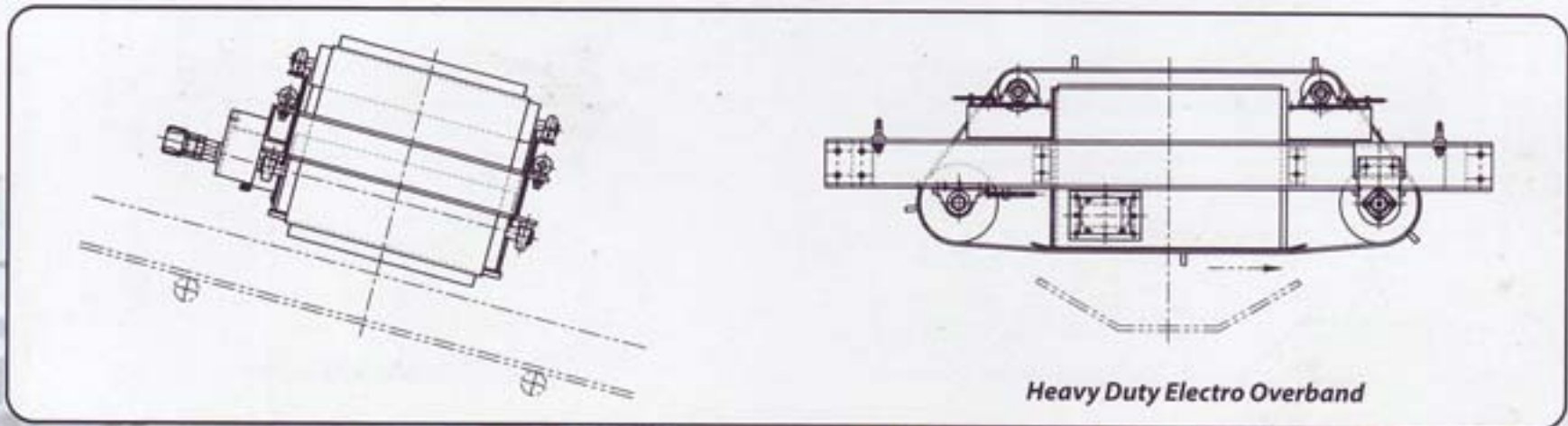


SCB series with optional armour clad belt



# World Class Magnetic Solutions

## Heavy Duty Electro Overband Separators



At increased operating gaps or at faster moving and wider, deep troughed conveyors, Master Magnets manufacture one of the largest ranges of heavy duty overband separators available.

The Master Magnets range of Heavy Duty separators are available as permanent or electro dependant on the application. Electro magnets are available at higher magnetic strengths than permanent magnets, and so can be used at greater operating gaps.



*Guarded In-line Heavy Duty Electro Magnet in operation*

Heavy Duty Magnets are suitable for installation in plants where there is a fast moving, deep burden of materials and can easily be integrated into the overall plant design.

The Master Magnets range of Heavy Duty Permanent and Electro overbands are covered in further detail on leaflet OB/1/01.

### Magnetic Solutions

The MasterMag range of overbands are recognised as the best in the market place and have been sold worldwide for over twenty years.

All of the MasterMag range of overbands are part of our "Magnetic Solutions" design and service commitment. We have identified the five stages of an order: appraisal, design, manufacture, commissioning and aftercare and identified how we can offer a superior service to our customers.

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 processing. The MasterMag range of systems are known for high performance and reliable operations and also include suspension magnets, overband magnets, magnetic drums and pulleys, eddy current separators and lifting magnets and are complemented by our range of vibratory feeders and metal detectors

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