

EXPANSION PLAN PAYS OFF

Master Magnets is successfully expanding its global reach after increasing its range of industrial magnetic separation solutions.

Established nearly 30 years ago, Master Magnets is a leading manufacturer of magnetic solutions for the recycling and reclamation, materials handling, ceramics, powder and food industries.

Larger premises

The expansion plan included moving to larger premises in Worcestershire and acquiring two further companies -

Integrated Recycling Systems in 2003, and Metal Detection Ltd in 2005. The plan is paying off, with a wider range of solutions on offer and new market opportunities.

Master Magnets offers the 'whole solution', including site evaluation, sample testing, customer design, manufacture, installation, repair and refurbishment - all led by experts in the field of advanced magnetic technology.

Worldwide

Chairman Geoff Worley commented: "I am very proud that Master Magnets has reached a position where we can honestly say that our products have a worldwide reputation

for being the best in their class and that customers continue to be impressed with our after sales support.

"Master Magnets has the capability to provide a full range of separation, extraction and recycling solutions to meet the needs of all applications, placing this company well ahead of even our closest rivals."

NEW PRODUCT

PAY BACK TIME FOR EDDY

A new, low cost Eddy Current Separator that separates drinks cans has now been developed by Master Magnets, enabling customers to maximise their profit from the rising price of aluminium and steel.

With the high volume of drinks cans available, the payback time is very quick - the Eddy can pay for itself in months.

An extremely compact machine, designed as a simple 'drop in' unit, it is easily adapted to a customer's process.

Contact our sales department for more information on this equipment or check the details on our website.

Masters Of Detection

Metal Detection Ltd, a Master Magnets owned company and leading supplier of metal detectors in the UK and abroad, is winning new business with blue-chip customers.

The company specialises in detection equipment and has been going from strength to strength since Master Magnets acquired it in 2005.

The metal detection range caters for a wide range of industries, including recycling, mining, food and bulk handling.

The metal detectors are now manufactured at the Master Magnets production facility in Redditch (UK).

Contact Master Magnets for servicing, repairs and spares.

Visit www.metaldetection.co.uk



Metal Detection's QDC tunnel detector suitable for belt conveyors.

Pilkington Goes To The Masters

Pilkington, one of the world's largest manufacturers of glass and glazing products, is improving the quality of its raw materials after upgrading to a high performance Magnetic Disc Separator designed and built by Master Magnets.

This latest advance in disc separator technology is enabling Pilkington to perform more accurate tests in their laboratory. Sample testing of production feed materials is used to detect the levels of undesirable minerals such as chromite present in the material. Any material found to have excessive levels of contamination is rejected

prior to production to avoid costly reject glass being produced.

The Mastermag Disc Separator is designed for continuous use with all separating parameters enabling operators to fine-tune the equipment for many separating requirements.

This type of separator extracts minerals on a selective basis in order of magnetic susceptibility, which is achieved by setting the disc operating gaps at differing heights from the belt.

The discs incorporate a tooth formation at the working zone of the separator, which ensures a magnetic intensity of 1.8 - 2 Tesla attainable at the minimum gap. This means

that, with careful control of the separating parameters, even the most feeble magnetic minerals can be extracted.



Pilkington's newly installed high performance Magnetic Disc Separator from Master Magnets

OUR OWN SPECIAL K

With 10,000 units sold, the Mastermag Type K Overband Separator has become the best selling separator and market leader in the recycling and quarrying industries. *Magnet World* celebrates the last 20 years.

In two decades the Mastermag Type K Separator has earned a worldwide reputation as 'the best overband separator in the market place', capable of paying for itself in a short space of time if used at capacity.

Higher grade

Companies choose the Type K because it has been developed to help recycling companies dramatically cut their operating costs by producing a higher grade, and therefore higher value, aggregate. It can also cut manpower costs by reducing the number of belt pickers.

The Type K is self-cleaning, low maintenance, and requires no supervision. In addition, most units comply with EC road regulations, enabling the separator to be left in position during transportation.

Master Magnets pioneered the Type K Permanent Overband Separator back in the 1980s to use with mobile crushers. It was designed to be lightweight with low running costs and requiring no power source for the magnet to operate, saving costs in the long run and making it the ideal solution for mobile crushers.

Before the Type K, extracting ferrous materials from non-ferrous materials, including crushed concrete, asphalt, shingles, tyres, wood, glass and household

refuse, required electro magnetic separation equipment. This was expensive to purchase and operate, and often too heavy and clumsy for use on mobile crushing plants.

Breakthrough

The Type K was a breakthrough for the recycling and quarrying industries, in that it was the first product designed specifically for use with mobile crushers, and able to withstand the most punishing and demanding conditions.

In two decades the Mastermag Type K Separator has earned a worldwide reputation as the best overband separator in the market place

Most importantly, it offered an economic and highly versatile alternative to electro magnetic separation, making it a good choice for a wide range of recycling and quarrying operations.

The Type K has undergone regular design updates and technical changes, as part of Master Magnets' drive to improve product quality and performance. For example, during the past 20 years the Type K Separator has gained a stronger frame construction for greater rigidity, and the side guards have been modified to give extra protection and to allow for a quicker service.

The Type K Separator is designed to be used in a range of applications. All models are custom manufactured to suit all belt widths, belt speeds and operating gaps. Another option is to have a hydraulic or

electric motor drive. Most mobile crushers have a hydraulic drive, so the Type K can be powered off the crusher's existing hydraulic system.

MD Phil Tree commented: "Our site move in 2003 to a custom built factory increased our capabilities in production and design, enabling us to have greater control over product quality of the Type K Overband."

"Master Magnets also has a 12 tonne magnetiser measuring some 2.8 x 1.5 metres with a 50 kw power pack. We believe this to be the largest and most powerful magnetiser in the UK, and is responsible for the success of the Type K."

Master Magnets has won major contracts with the Type K overband, supplying leading organisations worldwide, such as Metso minerals.

To find out more about the Type K Overband Separator, please contact Master Magnets, or visit our website www.mastermagnets.com.

Type K facts:

- pays for itself in six months.
- self cleaning, low maintenance, no supervision.
- requires no power source
- designed for quick servicing
- dramatically cuts operating costs
- suits wide range of applications
- Complies with EC road regulations



Making history - the latest Type K



Top of the range! Master Magnets' separation plant is helping BMW to produce clean aluminium.



Sorting swarf with BMW

BMW, one of the world's largest car manufacturers, is now able to produce a higher volume of clean aluminium from left over iron swarf - currently worth around £1100 per tonne.

The company has invested in a custom designed and built separation plant from Master Magnets, which is expected to pay for itself in 18 months.

Financial return

The car company's engine manufacturing plant at Castle Bromwich in the Midlands was previously selling scrap swarf mixed with

aluminium and iron for a low value but wanted to increase its financial return from waste swarf.

The enquiry for a swarf separation plant came to Master Magnets Ltd from the company Magna Force Ltd, who distribute a range of magnetic equipment to major car manufacturers across the UK.

To ensure that BMW was getting a high performance swarf separator, Master Magnets offered Magna Force the use of their laboratory, where extensive sample tests were carried out free of charge.

BMW were impressed with the results and

its engine manufacturing plant in Castle Bromwich is now benefiting from the new equipment, consisting of two custom-made totally enclosed drum separators and a specialised vibratory feeder.

Control

The vibratory feeder is driven by 2 out-of-balance vibratory motors, for the purpose of controlling the throughput rate of 1 tonne per hour, feeding the material into the enclosed drum separator. The drum features a double drum for enriched magnetic performance ensuring ferrous and non-ferrous metals are cleanly separated.

BANGING A WORLD LEADING DRUM

One of our best sellers, the 'frag' drum is now in operation at over a hundred sites throughout the world - and has been voted 'most efficient drum on the market' by leading electro-magnetic expert and consultant engineer John Kay.

New advances, such as high performance cooling system, give the drum a longer working life, along with higher magnetic intensity resulting in greater separation of ferrous and non-ferrous metals.

'Flux density'

"Most importantly, it has a higher 'flux density' than any other rival machine, which is the key to its superior performance," John Kay said.

Fragmentiser drums are used for continuous separation of ferrous from non-ferrous material, most commonly in End Of Line Vehicle (ELV) plants, foundry metal recovery plants and many other heavy-duty applications.

Master Magnets have solved applications in countries as far apart as China and Australia, including a large fragmentiser drum for a car residue plant in Taiwan, capable of processing up to 100 tonnes per hour.



New Website www.mastermagnets.com

FROM WASTE TO POWER

A processing plant in Sweden is now able to recycle and reuse waste packing material as a fuel for a power station – after a unique design solution from Master Magnets.

Sweden contains a number of power stations, providing the local communities with central heating and power for their households.

The power station in Pitea, in northern Sweden, wanted to become more environmentally friendly by turning waste packaging and paper into an alternative fuel, instead of dumping it in local landfill sites.

SCA, the world's largest packaging

manufacturer, agreed to supply the waste paper and packaging but needed to overcome the problem of metal contaminants from staples and paper clips.

Cleans

Master Magnets was commissioned to find a solution and our experts designed a custom built plant that cleans the waste packaging, making it free of non-ferrous and ferrous metal contamination. It also reduces its size so the packaging can be used as a fuel.

Avoiding landfill

Master Magnet's chairman Geoff Worley commented. "This was a particularly pleasing contract because it not only met the customer's requirement and reduced their costs, but has provided a viable and environmentally friendly way of providing fuel, while avoiding damage through landfill." The plant is now in full operation



Two feed conveyors escalating the shredded waste to be separated by a Master Mag Eddy Current Separator.

capable of processing 7 tonnes per hour, with SCA fuelling the power station at a reduced cost.

The plant consists of the following machines:

1. Stainless steel screw conveyor.
2. Master Mag Overband Electro Magnetic Separator.
3. Mono-shear Shredder 50/200 132Kw.
4. Master Mag Eddy Current Separator.
5. Various feed and transfer conveyors.

GREEK SLAG PROFITS

A slag processing plant in Greece has boosted its financial return on waste after Master Magnets supplied a range of custom built magnetic separation equipment.

The plant, owned by Aiforos S.A, is now capable of processing 2.5 tonnes of raw slag per hour, improving the product quality and enabling the company to recover the higher value scrap for return to the iron and steel making processes.

Raw slag originates as surplus material from refining and furnace operations and is contaminated with metal, which needs to be removed to avoid problems during the end use of slag.

Ideal solution

Our engineers at Master Magnets devised the ideal solution for Aiforos. Using our 30 years' experience in the magnetic separation of slag, along with sample testing and custom design, they were able to exactly meet the customer's requirement.

The slag separation plant included a pulley magnet, an overband separator, a slag permanent drum and vibratory feeder. This ensured that the slag processing plant has the power and durability to retain ferrous material which may be buried in a non-ferrous mass, such as rock, or which may have a considerable amount of non-ferrous material attached.

MAGNETIC SELECTION CHART

This chart is a guide to our range of products and the industries we cover. However, many factors will influence the type of equipment needed for specific applications and our engineers are on hand to help you make a choice that is exactly right for you. Please contact Master Magnets for expert information and advice, or visit our website for more information on our products. www.mastermagnets.com

Product

Industry

	Mining and Minerals Industry	Recycling Industry	Ceramic and Powder Handling Industry	Food Processing & Pharmaceutical Industry	Metal Detection	Plastic and Glass Manufacturing	Laboratory Equipment	Aggregate / Quarrying Industry	Steelworks and Slag Processing Industry	Mini MRF'S Plants	Wood Processing Industry	Packaging Industry	Power Stations
Eddy Current Separator		•	•			•	•			•	•	•	
Suspension Magnets	•	•	•	•		•		•	•		•	•	•
Whim Magnetic Separator	•		•				•						
Disc Separator	•		•			•	•						
Induced Roll Separator	•		•			•	•						
Wet Drum Separator	•						•						
Rare Earth Roll	•	•	•	•		•	•						
Electro Magnetic Filters	•		•				•						
Liquid Pipeline Separator			•	•									
Bullet Separator			•	•		•					•		
Magnetic Grids			•	•									
Plate Magnets		•	•	•		•					•		
Drum Magnets	•	•	•	•		•	•	•	•	•	•	•	•
Pulley Magnets	•	•		•		•		•	•	•	•	•	•
Overband Magnets	•	•				•		•	•	•	•	•	•
Magnetic Sweepers				•					•		•		•
Laboratory Equipment	•						•		•				
Metal Detectors	•	•	•	•	•	•		•			•	•	•
Can Flatteners		•								•			
Shredders		•		•		•				•	•	•	
Vibratory Equipment	•	•	•	•	•	•		•	•	•	•	•	•
Trommel Screens		•								•			
Conveyors	•	•		•	•	•		•	•	•	•	•	•
Fork Lift Stabilising Magnets									•				
Integrated Plants and Systems		•								•			



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