



Magnetic Separation



Introduction To Eclipse Magnetics

Over 100 Years of Manufacturing Excellence



Serving some of the leading names in processing, including:

- Nestlé
- Mondelez
- PepsiCo
- Kellogg's
- Weetabix
- Rank Hovis
- Premier Foods
- Allied Bakeries
- Unilever
- Warburtons
- Mars
- Pfizer
- GlaxoSmithKline
- Genzyme
- Roche
- AstraZeneca

Innovation in Magnetic Technology

Eclipse Magnetics is at the forefront of development in magnetic materials and design. With over 100 years experience, we have a proven track record for supplying quality products and providing total customer support to some of the leading names in the industry.

Eclipse Tools North America Inc., is a wholly owned subsidiary of Spear & Jackson PLC, and is responsible for the sales, distribution, and customer service of the Eclipse Magnetics range throughout North America.

Designing Excellence

We have a track record of producing high quality products backed by a commitment to total customer service. Our technical application teams have a wealth of experience, thus ensuring many of our products are market leading innovations.

All manufacturing is carried out under an ISO 9001 certified quality management system and we are accredited to ISO 14001 environmental standards.

Unrivalled Product Range

We serve worldwide markets with an extensive product range including workholding systems, filtration systems, foreign body removal systems, magnetic assemblies and complex magnetic industrial equipment used in industries such as automotive, aerospace, food processing and nuclear.

Many of our products are unique and are covered by global patents.

Process Protection

Magnetic Separation

Managing Risk – Process Safety

One of the greatest challenges to processing industries is ensuring maximum integrity of the finished product. Failure to do so can be catastrophic with the real risk of causing personal harm to the consumer, product scrappage/recall costs and high profile brand damage.

To protect themselves, major retailers now ask their suppliers to implement safety management systems. Hazard Analysis and Critical Control Point (HACCP) is an internationally recognized system for reducing the risk of safety hazards.

Our magnetic separation systems are integral to HACCP in almost every processing industry. They remove ferrous and para-magnetic (including stainless steel) contamination from process lines, preventing product contamination and damage to machinery.

We produce high-quality, high-power magnetic separators for most applications, including bulk grain, dry powders, damp powders, and liquids and syrups.



We offer a range of benefits:

Experience

With over 30 years' experience we are perfectly placed to offer a range of separation systems which are integral to process safety across a variety of industries.

Knowledge

We pride ourselves on understanding the business of our customers, the risks they face and changing market requirements.

Flexibility

The ability to offer a flexible and responsive solution, enabling short lead times to reactive requirements and ensuring process safety is never compromised.

Advancement

From simple manually cleaned units to fully automated touch screen PLC controlled systems, we can offer the latest designs and technology available.

Multi-Site Strategies

We offer group wide solutions for multi-site organizations, specializing in final product improvement and risk management.

A Single Source

Our clients can deal with a single source for separation solutions, catering for all stages of production and process volumes.

Bespoke Design

Utilizing the latest 3D design software, we can produce bespoke systems in short lead times.

High Quality Manufacture

Using the latest magnetic technology and surface finishing techniques we produce high quality systems suitable for use in food or pharmaceutical environments.

Standards

We are fully conversant with all major food safety policies such as FSA, FDA and IFS. Plus other institutes such as BRC and GFSI.



In-house ATEX Certification

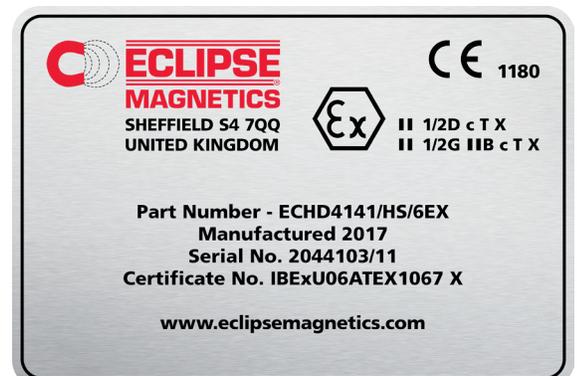
EU Directive 94/9/EC

In addition to high performance products, a major benefit of working with Eclipse Magnetics is that we are one of the few manufacturers who manufacture and certify ATEX approved equipment in-house. Most manufacturers have to submit to an external independent test house, thereby incurring additional cost and extending lead times.

We supply fully certified equipment for use in zones 20, 21, 22 or gas zone 0, 1 and 2 environments. ATEX product certification (or EC Type Examination) is a check on the design specification of a product in relation to a series of relevant standards laid out under the directive.

It involves detailed examination, testing and assessment of equipment intended for use in potentially hazardous areas, with the end result being the issue of an ATEX certificate and report, confirming and demonstrating that the product is safe to use (within certain parameters) within potentially explosive atmospheres.

The certification process must be undertaken by an approved organization such as Eclipse Magnetics.



A Choice Of Systems

Primary & Secondary Separators

Secondary Separators

Our most popular separation options are highlighted below:

Magnetic Rods



Extremely efficient at removing ferrous and para-magnetic contamination, down to sub-micron size, from free flowing products including powders or liquids.



Square/Circular Grids



High intensity grids are very versatile and can be used in most powder, granulate and liquid applications for the removal of ferrous and para-magnetic contamination down to sub-micron size.



Sieve Magnet



Our sieve magnet is a unique lightweight, full stainless steel design which reduces the stress on the sieve that other types often cause.



Easy Clean Grid



Our high intensity easy clean grid is very versatile and can be utilized in most powder and granulate applications for the removal of ferrous and para-magnetic contamination down to sub-micron size.



Easy Clean Housed Grids



Ideal for the removal of fine iron and para-magnetic contamination from a range of dry free flowing or gravity fed products such as grains, flour, granulates and powders. Available in a range of sizes and multi-row magnet configurations.



Auto-Shuttle



With an automated cleaning function, the Auto-Shuttle enables 24/7 screening of processed free flowing dry granulates and powders such as sugar and salt.



Pneumag Separator



A high intensity separator, designed to operate on pneumatic dry powder or granulate conveying lines to provide protection against ferrous and para-magnetic contamination.



High Intensity Liquid Filter



Designed to operate in pressurized transfer lines to remove ferrous and para-magnetic particles from liquid processing lines. For items such as chocolate, syrup, jam, pastes and beverages.



Primary Separators

Our most popular separation options are highlighted below:

Strip Magnet



Rare Earth strip magnets are versatile and can be used in various processes. These units are usually installed above transfer conveyors and vibratory feeders to attract 'tramp' type contamination and any loose machinery that has fallen off during the manufacturing or packaging stages.



Underflow Magnet



Our high intensity underflow magnet has been designed to operate in arduous conditions and where contamination size is relatively large e.g. nuts, bolts etc. The unit incorporates two magnetic poles which generate high intensity magnetic fields.



Bullet Magnet



Ideal for the removal of tramp type contamination, for example nuts, bolts, staples etc., from gravity and pneumatically conveyed pipelines.



Chute Magnet



Designed to operate in arduous conditions and where contamination size is relatively large e.g. nuts, bolts etc.



Drum Magnet



Ideal for the continuous removal of tramp ferrous contamination from any dry bulk material and is regularly installed in the most arduous of environments.



Permanent Plate Magnet



Used in recycling, quarrying and heavy industries. These units can be placed above flat or trough type conveyors. Large permanent magnetic packs generate deep penetrating magnetic flux fields that attract and remove 'tramp' type steel items.



Permanent Magnetic Overband



Used in recycling, quarrying and heavy industries. These units can be placed above flat or trough type conveyors. Large permanent magnetic packs generate deep penetrating magnetic flux fields that attract and remove 'tramp' type steel items.



Foreign Body Removal

Find Your Solution

Our range of Foreign Body Removal systems encompasses products for a variety of applications.

Use the chart below to find the most suitable system for your application.



Secondary Separators

Secondary separators guarantee product purity and quality by removing sub-micron ferrous particles e.g, process equipment wear. This includes paramagnetic stainless steel particles. Secondary separators also remove residual primary contamination

Product	Typical Applications						Selection Criteria					
	Food	Chemical	Pharmaceutical	Plastics	Recycling	Wood	ATEX Approved	Gravity Feed	Pneumatic Feed	Conveyor Feed	Manual Clean	Automatic Clean
Magnetic Rod	✓	✓	✓	✓	—	—	✓	✓	✓	—	✓	—
Sampling Probe	✓	✓	✓	✓	—	—	—	—	—	—	✓	—
Square / Circular Grid	✓	✓	✓	✓	—	—	✓	✓	—	—	✓	—
Sieve Magnet	✓	✓	✓	—	—	—	—	✓	—	—	✓	—
Easy Clean Grid	✓	✓	✓	✓	—	—	✓	✓	—	—	✓	—
Housed Easy Clean Grid	✓	✓	✓	✓	—	—	✓	✓	—	—	✓	—
Auto Shuttle	✓	✓	✓	✓	—	—	✓	✓	—	—	—	✓
Rota-Grid	✓	✓	✓	✓	—	—	✓	✓	—	—	✓	—
Auto-Rota Shuttle	✓	✓	✓	✓	—	—	✓	✓	—	—	—	✓
Pneumag	✓	✓	✓	✓	—	—	✓	—	✓	—	✓	—
In-line Liquid Filter	✓	✓	✓	N/A	N/A	N/A	✓	N/A	N/A	N/A	✓	✓

Primary Separators

Primary separators prevent machinery damage by removing 'Tramp' type contamination such as nuts, bolts and screws. Typically installed at bulk intake points, our range is shown below

Product	Typical Applications						Selection Criteria					
	Food	Chemical	Pharmaceutical	Plastics	Recycling	Wood	ATEX Approved	Gravity Feed	Pneumatic Feed	Conveyor Feed	Manual Clean	Automatic Clean
Strip Magnet	✓	✓	✓	✓	✓	✓	✓	—	—	✓	✓	—
Underflow Magnet	✓	✓	✓	✓	✓	✓	—	✓	—	✓	✓	—
Housed Underflow Magnet	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓	—
Bullet Magnet	✓	✓	✓	✓	✓	✓	—	✓	✓	—	✓	—
Chute Magnet	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓	—
Drum Magnet	✓	✓	✓	✓	✓	✓	—	✓	—	✓	—	✓
Housed Drum Magnet	✓	✓	✓	✓	✓	✓	✓	✓	—	✓	—	✓
Permanent Head Roller	✓	✓	✓	✓	✓	✓	—	—	—	✓	—	✓
Permanent Plate Magnet	✓	✓	✓	✓	✓	✓	✓	—	—	✓	✓	—
Permanent Magnetic Overband	✓	✓	✓	✓	✓	✓	—	—	—	✓	—	✓

Customized Solutions

High performance Foreign Body Removal systems to bespoke specifications

Our 100 years of magnetic expertise and our deep knowledge of processing industries enable us to work with our clients to provide the optimum solution.

If a standard product is not the answer we can offer a tailor-made solution. This could be an adaptation of a standard separation system or a complete new system. With in-house design expertise and the latest CAD and FEA software we can provide bespoke Foreign Body Removal systems in condensed lead times.

Our consultation service involves visiting your site, assessing your application or process and identifying the optimum solution. We can offer bespoke designs, different grades of magnet material, surface finishes, ancillary equipment or cleaning methods.



Pharmaceutical specification double row housed easy clean grid, pre and post sifter protection.



Housed easy clean grid with 4 rows and track system designed for large bulk flow applications.



Pneumag installed at bulk material intake, ATEX rated.

Representative:

www.eclipsemagnetics.com/en-us

While every effort has been made to ensure the accuracy of the information in this publication please note that specifications may change without notice.



Eclipse Magnetics NA. Innovative Magnetic Solutions

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