



Magnetic Filtration

Cuts consumable media spend
Reduces environmental impact
Extends fluid life

www.magneticfiltration.co.uk

Why use magnetic filtration?

Significantly lower operating costs

Longer lasting fluids

Magnetic filters remove particles smaller than one micron in size. Traditional barrier filters leave particles smaller than 5 microns circulating in the fluid. These particles significantly affect the performance of fluids and also act as a focus for bacterial build up.

NO consumables

Once installed there is nothing else you need to buy to ensure effective filtration over the filter's lifetime.

Minimal fluid loss

Contamination is removed from the filter as a semi-dry 'cake'. Fluid loss is considerably less than that of traditional filter media.

NO disposal costs

The cake itself can be recycled, eliminating specialist disposal costs.

Minimal running costs

Manually cleaned magnetic filters require no additional power. Self-cleaning filters only require a small amount of power for the cleaning process.

More environmentally responsible

Less fluid used

More efficient filtration means fluids retain their essential properties for longer giving extended fluid life.

Contamination can be recycled

Ferrous contamination is collected and can be easily recycled as a single material.

Reduced pollution

No contaminated filter media ends up in landfill.

Increased productivity

Maintain flow rates

High flow rates can be maintained without affecting filtration efficiency. Fluid does not flow through filter media so flow is uninterrupted. Flow rates are determined by your process requirements, not by your filter.

No back pressure up

Even when the filter is 'full' there is no blinding or risk of burst filters, reducing downtime.

Reduced wear

Particles that pass through traditional filters act as an abrasive, wearing parts, machinery and product. Magnetic filters remove these particles.

Fine filtration

Conventional filtration media 5 microns and below can strip oils of anti-foaming, anti-bacteria and other additives. Micromag enables sub-micron filtration without affecting the oil's characteristics.

Where to use magnetic filtration

Magnetic filtration can be used in almost any environment where ferrous, para-magnetic and grinding medium contamination of a liquid is a problem.

Metalworking / finishing

Liquids Coolants
Applications Grinding, milling, honing, lapping, fine finishing, Wire & EDM, laser cutting, CNC

Liquids Cleaning fluids
Applications Part washing, cleaning stations

Hydraulic systems

Liquids Fluid/oil
Location Hydraulic systems, test beds

Fuel storage and handling

Liquids Oil, diesel, petrol, bio-fuels
Applications Tank cleaning, storage inlet and outlet points, fuel dispensers

Gearboxes

Liquids Oil
Location General, gearbox maintenance

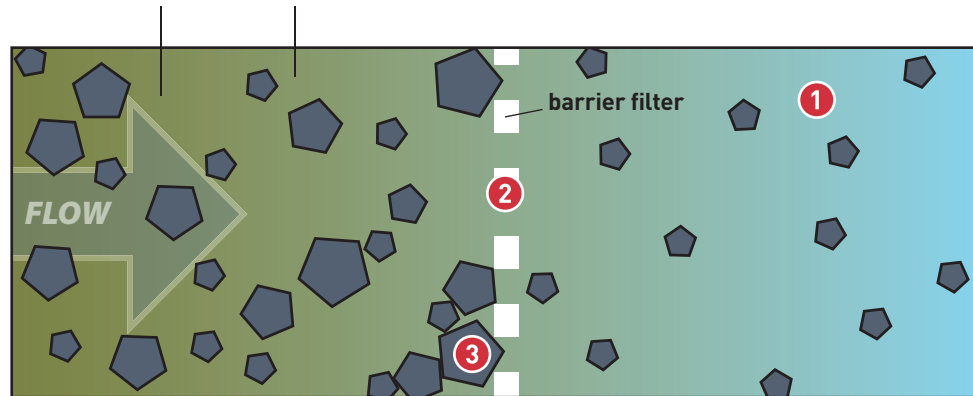
Heating systems

Liquids Hydronic fluids
Applications Domestic and industrial heating

Filters in action

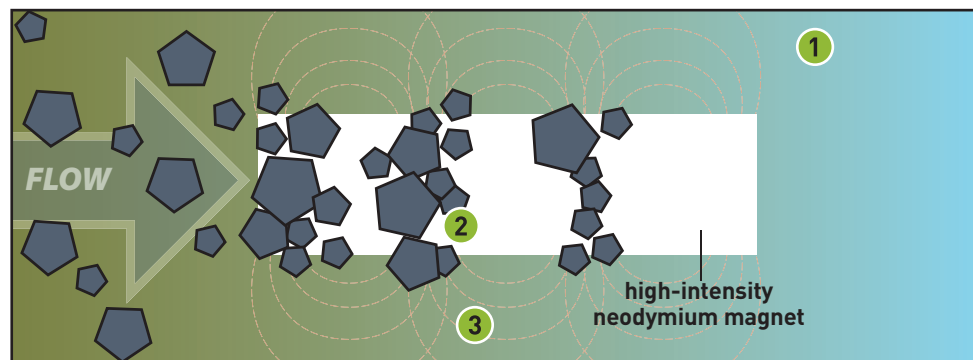
Barrier filtration

contamination particles | fluid



- 1 Particles smaller than media rating remain in the fluid reducing its efficiency and increasing wear on machinery and cutting tools
- 2 Once full, the contaminated media is disposed of along with fluid held in the filter medium
- 3 The filter becomes clogged causing blinding and back pressure

Magnetic filtration



- 1 All particles are removed
- 2 Once full, the contamination is removed from the magnet and can be recycled with little loss of fluid and can be recycled
- 3 Patented magnet configuration means that even when the filter is full, flow channels remain open so there is no blinding or pressure build up

CASE STUDIES Magnetic filtration in use

Reduced environmental impact

Elite Tooling installed a Filtramag magnetic filter on a Walter Heliotronic Power Grinder, used for manufacturing carbide cutting tools, and were able to cut consumable costs and sell removed contamination for recycling.

Increased production efficiency

Honda installed a Micromag on a bespoke machine used for manufacturing engine valve seats – where accuracy and finish quality is critical. Not only was part quality improved but the filter's minimal maintenance requirements meant that machine downtime was significantly reduced.

Significant savings made

Auto parts manufacturer ThyssenKrup was having to replace one pump per week in its de-greasing plant due to inefficient filtration. After installing an Eclipse Magnetics filter before the pumps this figure was reduced dramatically. The cost of the filter was paid back within weeks.

Product data

Higher flow, higher contamination. Applications with less magnetic contamination e.g. grinding medium, para-magnetic steel, carbide. Harsh chemical environments.

Inline/offline filtration
Manually cleaned
Full stainless steel construction
11000 Gauss high-intensity magnet
Temp range: 5°C to 70°C
Stock item

Product number	Number of cores	Maximum flow rate* (see table below)		Max. Contaminant kgs	Operating pressure bar
		Litres/min.	m³/min.		
FM1.5M	3	250	15	3	10
FM2.5	6	500	30	6	10

* Maximum flow rates for different fluids and contaminants

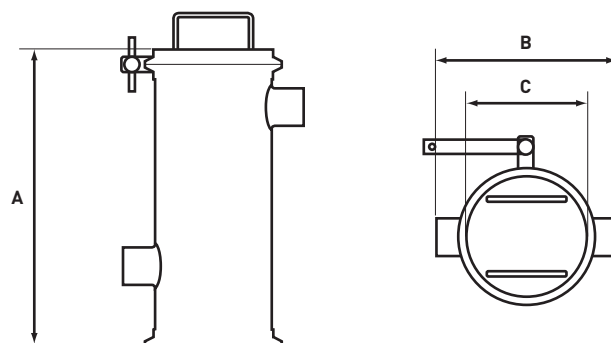
*Flow rates are based on the FM2.5 with 2½" inlet/outlet ports. Maximum flow rate capability will be reduced in the other options.

		Contamination			
		Mild steel	Cast iron	Stainless steel	Carbide
Fluid type	Water based	500	500	300	300
	Oil fluids	450	350	250	250



Dimensions in mm unless stated

Product number	A	B	C	Port size
				" BSP/NPT
FM1.5M	320	119	82	1½
FM2.5	480	180	120	2½



Other Eclipse Magnetics filters



Compact, general purpose magnetic filter. Most machining applications.



Automated self-purging filter requiring no user intervention. Inline applications.



Modular, stand-alone system. Automated self-cleaning, non-stop filtration. Offline applications. Delivers 'dry cake' contamination.

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