



# Magnetic Filtration

**Cuts consumable media spend**  
**Reduces environmental impact**  
**Extends fluid life**

[www.magneticfiltration.co.uk](http://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 typically 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. Magnetic 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

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 damaging particles.

### Fine filtration

Conventional filtration media, at 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 properties.

## Where to use magnetic filtration

Magnetic filtration can be used in almost any environment where ferrous and para-magnetic 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

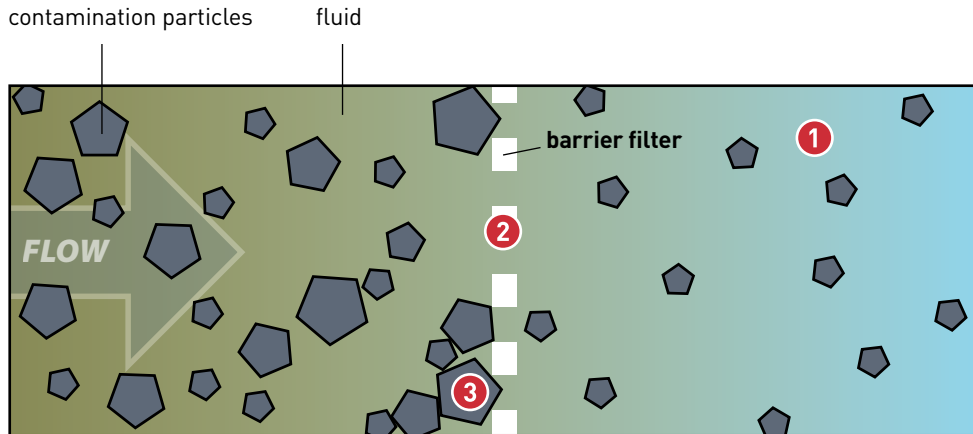
**Liquids** Oil  
**Location** General, gearbox maintenance

### Heating systems

**Liquids** Hydronic fluids  
**Applications** Domestic and industrial heating

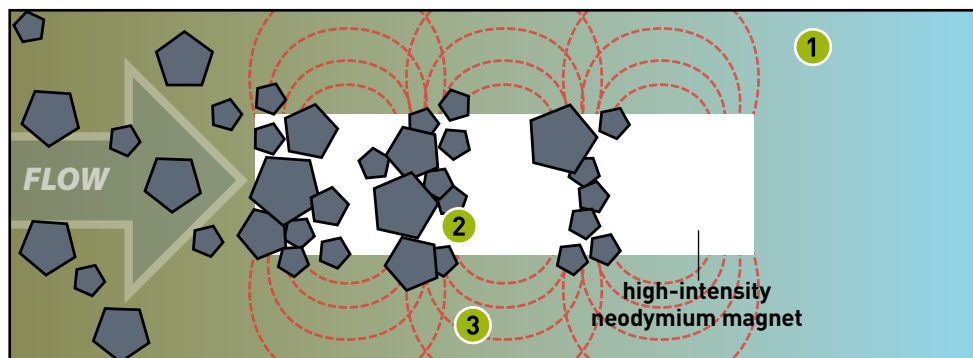
# Filters in action

## Barrier filtration



- 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
  - 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
- \*Micromag

## CASE STUDIES Magnetic filtration in use

### Reduced environmental impact

Elite Tooling installed a Filtramag magnetic filter on a Walter Helitronic Power Grinder, used for manufacturing carbide cutting tools, and were able cut consumable costs and sell collected 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.

# Magnetic filter range Product data

## MICROMAG

Standard machine filtration. Smaller wash stations. Non-chemical environments.

Inline/offline filtration  
Manually cleaned  
Styrene Acrylo Nitrile (SAN)  
Temp range: 5°C to 50°C.  
Stock item

Product number	Max. Flow rate litres/min	Contam. Capacity kgs	Max. Operating pressure bar	Connection " BSP
MM5	70	1	12	1
MM10	100	2	12	1
MM20	150	4	12	1½



## MICROMAG HP

Micromag for high pressure applications – up to 80 bar.

Full stainless steel construction  
Temp range: 5°C to 70°C.  
Stock item

Product number	Max. Flow rate litres/min	Contam. Capacity kgs	Max. Operating pressure bar	Connection " BSP
MM5/HP	70	1	80	1½
MM10/HP	100	2	80	1½
MM20/HP	150	4	80	1½

## FILTRAMAG

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	Max. Flow rate litres/min	Contam. Capacity kgs	Max. Operating pressure bar	Connection " BSP
FM1.5M	250	3	10	1½
FM2.5	500	6	10	2½



## AUTOMAG

Higher flow, higher contamination. Non-stop operations. Harsh chemical environments.

Inline/offline filtration  
Automated self-purging (air operated)  
Full stainless steel construction  
Temp. range: 5°C to 70°C  
Multiple units can be grouped for higher capacity  
Stock item

Product number	Max. flow rate litres/min	Contam. Capacity kgs	Max. Operating pressure bar	Connection
AM6	450	7	10	2" PN16 flange
AM12	900	14	10	3" PN16 flange



## Automag Skid

Self contained filtration and fluid recovery system for higher flow, higher contamination applications. 24/7 automated operation.

Inline/offline filtration  
Automatic self-cleaning filter (air operated)  
Magnetic coolant roller for full recovery of fluid used in cleaning process  
Temp. range: 5°C to 70°C (filter unit)

Product number		
AM6/SKID1	see AM6	* Skids can be supplied
AM12/SKID1	see AM12	with two filters to accommodate higher flow rates



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