

# Zero Contamination, Magnetic Filtration

IN PARTNERSHIP WITH



Better Produced Parts From

# FLUID INTELLIGENCE

A combination of our four core service offers;  
**Expertise, Service, Equipment and Fluids.**

Fluid Intelligence is the complete package that provides the ultimate solution to metal processing. Using our experience, an advanced product portfolio, supportive services and manufacturing equipment – Fluid Intelligence defines our comprehensive service offering, enabling you to run your machinery at peak performance.

- ✓ COMPLIANCE
- ✓ PRODUCTIVE
- ✓ COST EFFICIENT
- ✓ IN BEST PRACTICE



## The global turnkey solution to metal processing

### Expertise

- ENVIRONMENTAL, HEALTH & SAFETY
- CONSULTANCY
- TECHNICAL & APPLICATIONS SUPPORT
- ACCOUNT MANAGEMENT
- STRATEGIC PARTNERS
- FLUID INTELLIGENCE ACADEMY

### Equipment

- STORAGE, MIXING & DISTRIBUTION
- CONDITION MONITORING & CONTROL
- FLUID MAINTENANCE & OPTIMISATION
- ENVIRONMENTAL, HEALTH & SAFETY
- COST RECOVERY
- WASTE & WATER TREATMENT

### Service

- LABORATORY TESTING
- TECHNICAL SERVICES
- ENGINEERING SERVICES
- QH FLUIDTREND™ PERFORMANCE MONITORING SOFTWARE
- QH FLUIDCARE™ ON-SITE ENGINEERS
- QH FLUIDSUPPORT™ VISITING SERVICE ENGINEERS

### Fluids

- ROLLING, FORMING & FORGING
- METAL REMOVAL
- HEAT & SURFACE TREATMENT
- DEGREASING & CLEANING
- METAL PROTECTION
- FIRE RESISTANT & GENERAL LUBRICATION
- DIE-CASTING



# Zero Contamination, Magnetic Filtration

As part of Quaker Houghton's roster of trusted partners, Eclipse Magnetics is the world's premium developer, manufacturer and supplier of industrial magnetic filtration products.

Through Quaker Houghton's complete solutions portfolio, Fluid Intelligence Solutions, Eclipse Magnetics' industry-beating filtration technology can be offered in conjunction with a selection of our world-leading process fluids and equipment.

Industrial magnetic filtration, as offered by Eclipse Magnetics, is the most process and cost-effective solution available to manufacturers. Able to remove almost 100% of ferrous contamination from process fluids with the use of neodymium magnets, trapping even sub-micron size particles, magnetic filtration allows manufacturers to save on consumables, enhance production, elongate fluid life and reduce their environmental footprint.

With their unique filtration technology, Eclipse Magnetics, unlike other providers, can promise equipment that does not clog and is easy to clean. A specially designed magnetic field arrangement forces particulates to collect in such a way that prevents the filters from clogging, no matter what.

Cleaning is as simple as removing the magnetic cores in one simple action and scraping away the debris with the custom tool provided. Eclipse Magnetics also offer units which perform their own cleaning as and when it is needed, further enhancing the production benefits.

Eclipse Magnetics' magnetic filtration units will allow you to make disposable filters redundant and even recycle or sell your swarf, enabling unbeatable filtration and production enhancements.

**Forward Together™**



## FLUID INTELLIGENCE

Expertise | Service | Equipment | Fluids

In line with our Fluid Intelligence concept, Eclipse Magnetics filters are compliant, cost-effective, productive and in best practice.

### ✓ COMPLIANCE

Through Quaker Houghton and Eclipse Magnetics, manufacturers stand to enhance their compliance with not only key legislation but also with increased shifts towards growing corporate social responsibility surrounding our environment.

Eclipse Magnetics' filtration allows manufacturers to comply with ISO14001 accreditation requirements, in turn, providing a sales-boosting stamp of quality to their customers.

### ✓ COST EFFECTIVE

Eclipse Magnetics' advanced magnetic filters provide extended fluid life, increased tooling longevity, little or no dependency on consumable filters and recyclable or even saleable swarf.

As a result of extended fluid life and the ability to sell or recycle collected swarf, consumption and disposal costs are massively reduced.

### ✓ PRODUCTIVE

Unique collection patterns in Eclipse Magnetics filters allow for an unrivaled ease of cleaning. This significantly reduces production downtime caused by filter cleaning or changing.

Eclipse Magnetics filters are capable of capturing even sub-micron particles, preventing them from entering the machining process, in turn reducing wastage caused by product rejects.

### ✓ IN BEST PRACTICE

Eclipse Magnetics filtration solutions ensure users are upholding 'in best practice' ideals by ensuring optimum cutting performance, protecting workforces from workplace hazards caused by frequent cleaning operations, and enabling the best possible surface finish.

Due to the extremely high rate of ferrous particulate removal facilitated by Eclipse Magnetics, even sub-micron swarf particles are prevented from entering the machining process. This leads to enhanced cutting performance and an increased quality of surface finish, unmarked by stray swarf.

IN PARTNERSHIP WITH





# Why every manufacturer needs a magnetic filtration system

## Cost Effective

By using magnetic filtration, manufacturers are not only able to reduce or remove their dependency upon disposable filter cartridges, but also achieve a better finish on their end-products. This, in turn, results in a lesser rate of wastage and brings process costs down.

## Health & Safety

Without the use of effective filtration, fluid holding tanks can become rapidly fouled and require frequent cleaning. In the process of doing so, employees are exposed not only to a range of potentially harmful chemicals but also to metallic swarf, which, if incorrectly handled, can cause cuts, abrasions and dermatitis.

By reducing these cleaning cycles, manufacturers can reduce employee exposure to such risks, ensuring higher health and safety standards as well as increased employee comfort.

## Tooling

Using Eclipse Magnetics filters allows manufacturers to achieve vastly improved levels of filtration, collecting even sub-micron ferrous particles. This, in turn, allows for considerable gains on finish quality but also yields dramatic increases in tooling lifespans and enables increased cutting speeds.

## Environmental

With the ability to reduce or even entirely remove dependency on disposable filters, manufacturers can reduce their environmental impact. In conjunction with this, ferrous material collected within the filter units can be easily gathered and then recycled or sold, once again reducing waste.

## ROI

In conjunction with the use of Quaker Houghton fluids, return on investment can be achieved within months. This is due to the extensive reductions in process costs made possible by means of magnetic filtration.

Additionally, collected waste materials can be sold for re-use, allowing manufacturers to produce an additional source of revenue.

## Minimise Maintenance Efforts

Because Eclipse Magnetics' filters do not require the frequent removal of costly papers or cartridges, maintenance efforts are kept to a minimum. This frees more employee hours for tasks of increased importance.

## Easy Installation

Eclipse Magnetics' filters take the form of easy-to-use, plug-and-play units. This allows for simple, quick installation, minimising production downtime and maintaining productivity levels.



# Micromag

## The patented, compact Micromag magnetic filter can benefit many different industries.

Contaminated fluid enters the inlet port where it is dispersed by the unique tapered radial flow channels. Fluid passes down the outside of the centrally mounted rare earth magnetic core which captures contamination particles along its length, resulting in excellent filtration efficiency.

The geometry of the magnetic flux circuit means that contamination builds up in a controlled way, ensuring that the filter can never block, irrespective of how much contamination is held. Channels remain open allowing fluid to continue to flow freely.

The filtered fluid flows through the return slots located in the upper section of the magnetic core, down through the centre and exits through the outlet port.



## Micromag HP/50 and Micromag HP/80

The Micromag HP/50 and HP/80 variants have all the same benefits of the standard Micromag but have been developed to suit high pressure through spindle-coolant applications, where the smallest of particles can damage seals, spindles and even reduce the efficiency of the cutting tool.

### Performance

- Magnetic Performance – High intensity
- Circuit Design – Open
- Magnetic Material – rare earth neodymium iron boron
- Magnet Grade – N45 – Inspected & confirmed via hysteresis prior to use

### Benefits

- Sub-micron filtration
- Large holding capacity
- High-intensity rare earth magnetic material
- Suitable for all machining applications
- Environmentally responsible
- No consumables

### Fluids Compatibility

Neat and soluble oils

## Materials



### MICROMAG SERIES

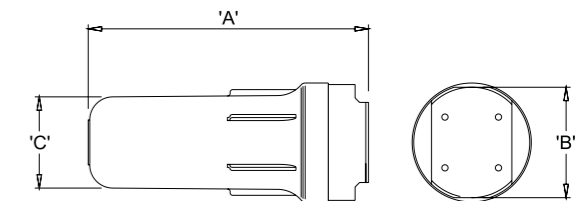
- Housing – Styrene Acrylo Nitrile (SAN)
- Lid – Marine grade aluminium, anodised blue
- Magnetic Core – 304 Grade stainless steel
- Sealing – Nitrile O-ring

### MICROMAG HP/50 SERIES

- Housing – Aluminium
- Lid – Aluminium
- Tube – 304 Grade stainless steel
- Surface – Finish Machined and anodised
- Sealing – Viton O-ring

### MICROMAG HP/80 SERIES

- Housing – 316 Grade Stainless Steel
- Lid – 316 Grade Stainless Steel
- Tube – 316 Grade Stainless Steel – Aerospace Quality
- Seal – Viton rubber



## Technical Data

Product number	Flow rate	Contamination capacity	Max. operating pressure	Connection	Temperature range	Weight	Construction	Dimensions
Measurement	L/min	kgs	bar	"BSP	°C	kgs		mm (A x B x C)
<b>MM5</b>	70	1	12	1	5 – 50	3.15	SAN housing,	190 105 95
<b>MM10</b>	100	2	12	1	5 – 50	5.2	aluminium lid	315 125 100
<b>MM20</b>	150	4	12	1	5 – 50	9.7		605 135 100
<b>MM5/HP/50</b>	70	1	50	1	0 – 140	6.27	Full aluminium construction	247 116 125
<b>MM10/HP/50</b>	100	2	50	1	0 – 140	8.4		365 116 125
<b>MM20/HP/50</b>	150	4	50	1	0 – 140	21.5		625 116 125
<b>MM5/HP/80</b>	70	1	80	1	0 – 140	18	Full stainless steel construction	247 116 125
<b>MM10/HP/80</b>	100	2	80	1	0 – 140			365 116 125
<b>MM20/HP/80</b>	150	4	80	1½	0 – 140	33		625 116 125

# Filtramag

**Filtramag+ is a patented, high-performance magnetic filter with full stainless-steel construction, making it suitable for use in a variety of industry sectors and applications.**

## Dual Flow Technology

Filtramag+ is the most efficient filter of its type. The dual-chambered design means that fluid is exposed to the high-intensity magnets for the maximum time thus ensuring almost 100% of contamination is removed on first pass through the filter. The patented magnetic circuit on the 4,000-gauss version design ensures that the filter can never block even in high contamination applications.

## Magnetic Core Options

High-intensity magnetic cores ensure particle filtration down to sub-micron size. For standard machining or wash system applications a 4,000 gauss magnetic core pack is available. For applications which involve lower magnetically permeable materials (e.g. cast iron and carbide) or require an ultra-precise surface finish an 11,000 gauss magnetic core pack is available.

## Benefits

Using fully filtered fluids, free from ferrous particles provides:

- Improved surface finish
- Cost savings on disposable filtration media
- Extended fluid lifespan
- Reductions in waste disposal
- Longer lasting tools and machinery

## Performance

- Maximum Pressure – 20 bar
- Magnetic Performance – Standard option 4,000 gauss, high-intensity option 11,000 gauss
- Magnetic Material – rare earth neodymium iron boron NdFeB
- Magnet Grade – N35 (Standard option) or N45 (High-intensity option)
- Temperature – -5°C to 80°C

## Fluids Compatibility

Oil, coolants, fuel, ink, paint and chemicals

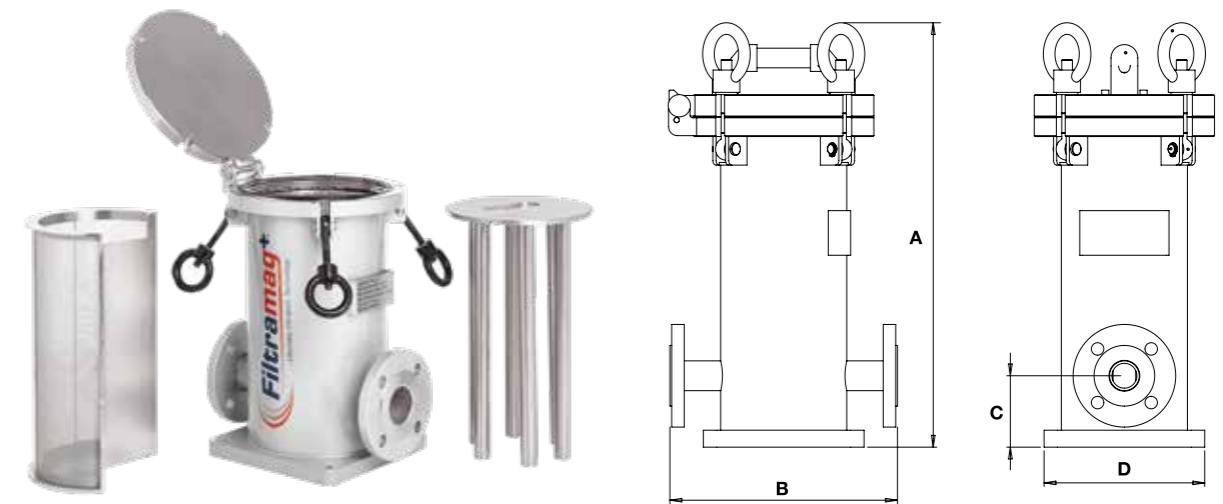
## Materials

- Housing – 304 Grade Stainless Steel
- Lid – 304 Grade Stainless Steel
- Tube – 316 Grade Stainless Steel
- Surface finish – External-powder coated
- Sealing – Viton O-ring
- Mesh strainer – 304 Grade Stainless Steel
- Swing bolts – High tensile steel
- Cleaning tool – Stainless steel



## Technical Data

Product number	Max. flow rate	Contamination capacity	Max. operating pressure	Connection	Weight	Dimensions			
Measurement	L/min	kgs	bar	PM16 flange	kg	mm (A x B x C x D)			
<b>FM1.5+</b>	250	3	20	1 1/2"	30.5	475	255	100	180
<b>FM2.0+</b>	500	6	20	2"	54	522	330	100	250





# Autofiltrex

**Autofiltrex represents the very latest in automated ferrous filtration technology. Built on the framework of Eclipse Magnetics' world-leading magnetic filtration, the Autofiltrex is able to provide 24/7 automation to your industrial metalworking processes.**

Stepping manufacturers towards Industry 4.0, the Autofiltrex is the newest industrial ferrous filtration product to be designed by the Sheffield-based leaders. Fluid passes through several advanced-collection cores, where close to 100% of even sub-micron ferrous contaminants are removed.

A timed sequence of cleaning then allows the cores to be automatically raised and purged, with the accumulated waste able to be collected and recycled or even sold on, providing an unbeatable return on investment and a significant reduction in manufacturers' environmental impact.

With a new, more compact design, the Autofiltrex occupies the smallest possible footprint, providing yet greater production efficiency.

The brand-new filtration solution was unveiled in full at this year's EMO, which took place over the course of the 16th to the 21st of September in Hannover. This industry-driving show displays the very latest and best that the world of industry has to offer, in which Eclipse Magnetics and the Autofiltrex played a proud part in conjunction with Quaker Houghton.

## Benefits

- Cleaner fluid delivery to the machine
- Reduced expenditure on filter media
- Fully automated cleaning
- Reduced waste disposal
- Increased fluid lifespan
- Improved surface finish and accuracy
- 24/7 uninterrupted filtration
- Minimal space required



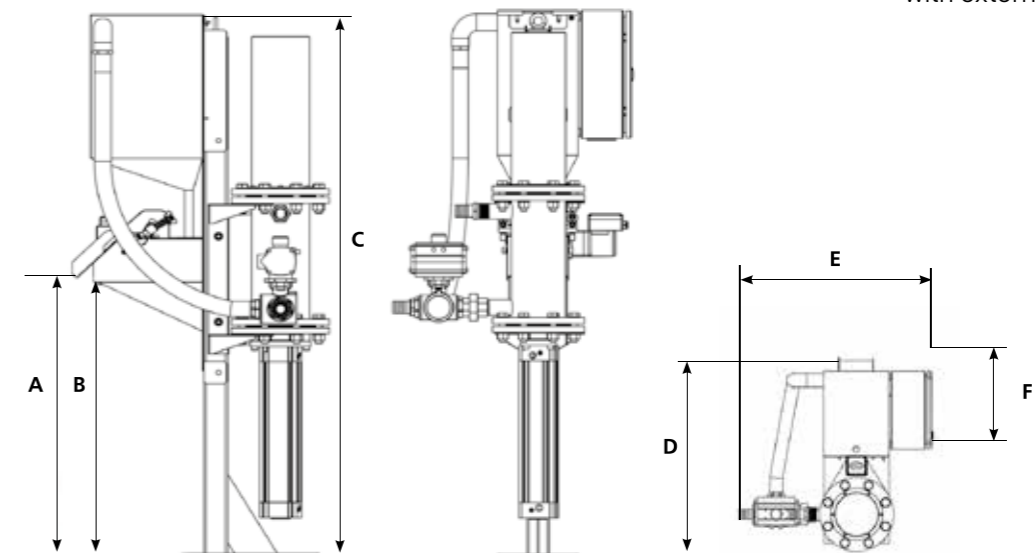
## Technical Data

Product number	Flow rate	Number of magnetic rods	Magnetic strength	Connections	Contamination capacity	Weight
Measurement	L/min		gauss	mm		kg
<b>AF1</b>	60	1	9,000	19	1	30
<b>AF3-RC</b>	150	3	9,000	31	3	122
<b>AF5-RC</b>	200	5	9,000	38	5	145

Product number	Dimensions					
	A	B	C	D	E	F
<b>AF1</b>	N/A	N/A	1504	250	N/A	210
<b>AF3-RC</b>	872	852	1701	717	698	300
<b>AF5-RC</b>	872	852	1701	747	747	300

Product number	Inlet hosetail ID	Outlet hosetail ID	Purge hosetail ID	Materials (web parts)	Air connection	Min air pressure	Max air pressure	Max fluid pressure	Unboxed weight
Measurement	mm	mm	mm	ss	mm	Bar	Bar	Bar	Kg
<b>AF1</b>	19	19	19	304	8	6	10	10	30
<b>AF3-RC</b>	31	31	50	304	8	6	10	10	122
<b>AF5-RC</b>	38	38	50	304	8	6	10	10	145

All models available with external pump



# Why industries choose magnetic filtration

## Automotive

INDUSTRY	ADVANTAGES	TYPICAL APPLICATION
Magnetic filtration is widely used in the automotive industry within OEMs and tier 1 and 2 suppliers for the manufacture of powertrain and engine components.	<ul style="list-style-type: none"> <li>High precision finish</li> <li>Reduced downtime</li> <li>100% effective with cast iron particles</li> <li>Ideal for 24/7 operation</li> <li>Flow rates up to 10,000 litres: multi-use to increase flow capacity</li> </ul>	<ul style="list-style-type: none"> <li>Ring &amp; pinion gear lapping</li> <li>Turbocharger balancing machines</li> <li>Crank shaft gun drilling</li> <li>Valve face grinding</li> <li>Cam shaft grinding</li> <li>Cylinder liner honing</li> <li>Engine liner grinding</li> <li>Gear cutting and finishing</li> </ul>

## Steel Processing

INDUSTRY	ADVANTAGES	TYPICAL APPLICATION
Magnetic filtration can improve efficiency in most steel processing operations such as steel production, both hot and cold.	<ul style="list-style-type: none"> <li>Automated cleaning ideal for heavy contamination</li> <li>Improved surface finish</li> <li>Reduced downtime</li> <li>Suitable for arduous environments</li> <li>24/7 operation</li> </ul>	<ul style="list-style-type: none"> <li>Steel rolling mills</li> <li>Sawing machines</li> <li>Steel pipe cutting</li> <li>Tube threading equipment</li> <li>Steel quenching tanks</li> <li>Surface treatment processes</li> <li>Spray bars, Roller lubrication</li> <li>Final wash process</li> <li>Deep hole drilling</li> </ul>

## Bearings

INDUSTRY	ADVANTAGES	TYPICAL APPLICATION
Magnetic filtration is used by some of the world's largest bearing manufacturers to ensure sub-micron accuracy in the production of bearing components.	<ul style="list-style-type: none"> <li>High precision product finish, concentricity and consistency</li> <li>Reduced downtime</li> <li>Sub-micron filtration</li> <li>Ideal for high volume processes</li> <li>Can be retrofitted to existing lines</li> <li>Rapid return on investment</li> <li>Reduced waste - ISO14001</li> </ul>	<ul style="list-style-type: none"> <li>Hub honing</li> <li>Ball grinding</li> <li>Super-finish/polishing</li> <li>Ring grinding</li> <li>Raceway grinding</li> <li>Wash systems</li> </ul>

## Machine Tool OEMs

INDUSTRY	ADVANTAGES	TYPICAL APPLICATION
Magnetic filtration enhances performance on a variety of machine tools. It offers a competitive edge to machine tool manufacturers particularly when servicing high precision applications.	<ul style="list-style-type: none"> <li>Can be retrofitted to enhance existing filtration systems</li> <li>Reduces machine maintenance/downtime</li> <li>Flow rates 70 to 10,000 litres per minute</li> <li>100% effective with low magnetic materials</li> <li>Increases the equipment, value provides a solution for the customer</li> </ul>	<ul style="list-style-type: none"> <li>VMC, HMC, and CNC machines</li> <li>Multi-axis vertical turning centres</li> <li>Grinding</li> <li>Honing</li> <li>Lapping</li> <li>Deep hole/gun drilling</li> <li>EDM machines</li> <li>Laser cutters</li> </ul>

## Wash Systems within all manufacturing segments

INDUSTRY	ADVANTAGES	TYPICAL APPLICATION
It is vital that wash solutions are kept free from ferrous particles. Many wash systems have benefitted from installation of magnetic filtration which ensures the finished product is clean and complies with quality inspection.	<ul style="list-style-type: none"> <li>Flow rates up to 10,000 litres per minute</li> <li>Filters do not degrade in wash solutions</li> <li>Removes ferrous deposits from finished product</li> <li>Reduces reject rates</li> </ul>	<ul style="list-style-type: none"> <li>Rotary wash systems</li> <li>Transfer wash stations</li> <li>Degreasing equipment</li> <li>Multi-stage washers</li> <li>Spray wash stations</li> </ul>

## Tool Cutting

INDUSTRY	ADVANTAGES	TYPICAL APPLICATION
High intensity magnetic filtration is the only option available to guarantee a high precision finish on tool cutting operations.	<ul style="list-style-type: none"> <li>Enables tolerances of &lt; 1 micron</li> <li>Enables manufacture of "mirror" finish tools</li> <li>Can increase the value of tools by 300% with extended fluid life</li> <li>100% effective with low magnetic materials e.g. tungsten carbide materials</li> <li>Reduces wear on grinding wheels. Ensures clear grinding contact</li> </ul>	<ul style="list-style-type: none"> <li>Multi axes CNC machines</li> <li>Tungsten carbide drills and endmills</li> <li>Radius grinding</li> <li>Wood working tool superfinish</li> <li>"Mirror" finish plastic cutters</li> </ul>



## Micromag MM5 Helps Ensure Huge Savings for Turbocharger Balancing

### The Challenge

Our client is one of the world's leading suppliers of engine and drivetrain products to the automotive industry. They employ a number of turbocharger balancing machines in order to machine components for their industry-leading turbocharger units.

These machines use engine oil as a lubricant and were previously fitted with standard cartridge filters. These filters were allowing ferrous particles to pass and continue to contaminate the oil, as they became fouled very quickly.

Filter changes were necessary every few days, resulting in large amounts of downtime and high replacement costs.

### The Solution

The leading automotive components manufacturer reached out to Eclipse Magnetix regarding their needs. After reviewing the best solution for the client, Eclipse Magnetix acted.

Four Micromag MM5 units were fitted in less than an hour to four of their turbocharger balancing machines, prior to the cartridge filters. This rapid installation ensured production was able to resume as soon as possible.

### The Benefits

Since the installation, the leading automotive components manufacturer has experienced a dramatic reduction in the volume of contamination entering their cartridge filters.

In turn, this has significantly extended their lifespans, reducing the downtime caused by filter changes and carrying huge cost-saving implications for our client.

- With the Micromags installed, they now **save an estimated £7,000 per year** on each of the four machines, leading to an **estimated total saving of £28,000**. This represents an incredibly high return on investment.
- Extended filter lifespan
- Reduced machine downtime
- Huge cost savings of £7,000 per machine, per year
- Strong ROI
- Increased productivity



## Filtramag 1.5 Boosts Product Quality for Recreational Vehicle Producer

### The Challenge

Bombardier Recreational Products (BRP) is a world leader in the design and manufacture of motorised recreational vehicles, including snowmobiles, watercraft and all-terrain vehicles. BRP-Powertrain, based in Austria, specialises in the development of drive systems for products in the powersports industry.

Their engines are machined from aluminium, but piston bushings are made from cast iron and processed on milling-machines with gun drills. Coolant is held in a 1100L holding tank before passing through a vacuum filter and on to a 330L clean tank, after which it is pumped at 50 bar back to the machine.

The vacuum filter in operation could only remove ferrous particles down to 20 microns, and as a result these small particles remained in circulation, damaging drill tools and compromising a high percentage of finished piston bushings.

### The Solution

Eclipse Magnetix identified the need for a magnetic filter to remove the fine ferrous particles and, due to the relatively high volume of fluid used, recommended the use of the Filtramag 1.5.

Filtramag 1.5 units were fitted on a cycle as fluid left the clean tank and then as it returned to the tank too.

### The Benefits

Following the Filtramag 1.5 installations, BRP-Powertrain has witnessed the effective removal of even the smallest ferrous particles from the coolant, ensuring only clean fluid enters and leaves the clean tank.

After a year of operation, reject rates and tool changes due to ferrous contamination of the coolant have **fallen to near zero**.

In light of this success, BRP-Powertrain has installed Filtramags on all 16 milling machines on site.

- Cleaner coolant
- Increased coolant lifespan
- Almost 0% reject rate
- Almost no tool changes caused by ferrous contamination
- Increased efficiency and productivity
- Reduced costs



# Case Study

## Micromag MM20 Enables Savings on Wash Systems

### The Challenge

ATI Stellram is a leading manufacturer and distributor of world-class cutting tools for turning, milling, drilling, threading, and grooving applications in metalworking industries. They operate a production line where finished parts are passed through a washing system to remove any residual ferrous contamination.

Wash solution was previously circulated from the wash unit via a centrifuge system to a holding tank before being returned to the wash unit. This centrifuge system was only able to filter out ferrous particles down to a 10-micron size. As a result, smaller ferrous contamination was constantly being recirculated, causing damage to the centrifuge.

This meant that the centrifuge required regular repair and servicing, resulting in a downtime of 3-4 days each time.

### The Solution

ATI Stellram decided after another centrifuge breakage, to replace their filtration media. M

Eclipse Magnetics recommended the installation of a Micromag MM20, which was installed alongside a deep bed filter in the main flow to replace the centrifuge. The Micromag was fitted into the by-pass circuit.

### The Benefits

The installation of the Micromag MM20 enabled the filtration of even submicron ferrous particles. Within just a year, production downtime had been reduced to virtually zero, leading to cost savings as a result of more continuous production.

In addition, due to the Micromag's lack of upkeep costs, ATI Stellram was able to save on energy costs.

- Downtime almost eliminated
- Cost savings due to reduced downtime
- Cost savings due to reduced energy usage
- Rapid ROI
- Increased productivity



# Application data selector

The below table shows percentage reductions in flow rates based upon fluid type, material type, and material loading.

Product number	Flow rate	Fluid Type					Material Type						Material Loading			
		Coolant/wash solution (%)	Thin oil (%)	Med. oil (%)	Thick oil (%)	Mild steel (%)	Hard Steel (%)	Cast iron (%)	Stain-less steel (%)	High speed steel (%)	Tung-sten carbide (%)	Heavy	v	Light	Wear	
<b>Micromag</b>																
MM5	70	0	20	n/a	n/a	0	n/a	20	n/a	n/a	n/a	n/a	n/a	n/a	✓	
MM10	100	0	20	n/a	n/a	0	30	20	n/a	n/a	n/a	n/a	n/a	✓	✓	
MM20	150	0	20	30	60	0	30	20	70	n/a	n/a	n/a	✓	✓	✓	
<b>Filtramag+</b>																
FM1.5+	250	0	10	20	40	0	20	20	50	60	70	n/a	✓	✓	✓	
FM2.0+	500	0	10	20	40	0	20	20	50	60	70	✓	✓	✓	✓	
<b>Autofiltrex</b>																
AF1	60	0	10	20	40	0	20	20	50	60	70	n/a	✓	✓	✓	
AF3-RC	150	0	10	20	40	0	20	20	50	60	70	✓	✓	✓	✓	
AF5-RC	200	0	10	20	40	0	20	20	50	60	70	✓	✓	✓	✓	
<b>Automag Skid</b>																
AM6S1	450	0	10	20	30	0	20	20	40	50	60	✓	✓	✓	n/a	
AM12S1	900	0	10	20	30	0	20	20	40	50	60	✓	✓	✓	n/a	
AM6S2	900	0	10	20	30	0	20	20	40	50	60	✓	✓	✓	n/a	
AM12S2	1800	0	10	20	30	0	20	20	40	50	60	✓	✓	✓	n/a	
AM32S1	2000	0	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	✓	n/a	

### Example

Filter: FM2.0+  
Flow: 500 ltrs/min.  
Material: Cast iron  
Fluid: Medium oil

500 ltrs/min × Medium oil (20%) = 400 ltrs/min.  
400 ltrs/min × Cast iron (20%) = 320 ltrs/min.  
**Suggested flow rate = 320 ltrs/min.**



# Forward Together™

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