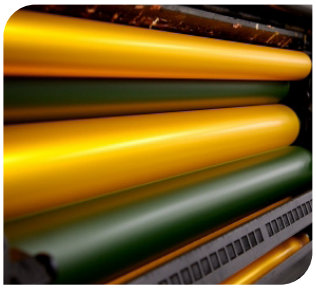
Ink Manufacture to Press



www.magneticfiltration.co.uk

Ink Manufacture to Press Filtration

Eclipse Magnetics filters use powerful high-intensity neodymium magnet material to remove ferrous and para-magnetic particles – down to less than a micron in size – from fluids.

How does magnetic filtration work?

With an ever increasing focus being placed on environmental awareness and the associated regulatory compliances more companies are seeking new and environmentally driven products that can assist and maintain operational continuity.

Magnetic filtration technology harnesses one of the most powerful natural energies available. Utilising the very latest in Rare Earth magnetic materials, we have been able to design and produce a comprehensive product range that can be tailored to suit almost any fluid application.

Changes in temperatures, however subtle, can generate moisture in the fluid being processed. This moisture can start to corrode and oxidise any ferrous contact parts such as pipe walls, valves and process machinery.

Magnetic filters are capable of removing ferrous and para-magnetic* contamination and non-magnetic metals and minerals such as aluminium, silicon, calcium and magnesium.

Advantages of magnetic filtration

Confirmed ink quality
Eclipse Magnetics filters remove sub-micron magnetic contamination improving the quality and reliability of the fluids you supply.

No back pressure
Magnetic filters never build up back-pressure, even when full of contamination. In traditional media filters back pressure can result in burst socks or cartridges.

No loss of fuel
With traditional media filters you throw away expensive fluid every time you change a cartridge. Contanimation is removed from magnetic filters as a relatively dry 'cake' that can be easily disposed of, reducing overall environmental impact.

No consumables required
Simply wipe the magnet core clean and re use. No need for costly replacement filters.

Reduced costs
Less ink thrown away with sodden filtration media. Lower disposal costs. No disposal of contaminated inks or solvents. No consumables at all.

No maintenance
Removal of the fine contamination will reduce the overall wear, reduce the risk of damage to your press and decrease the number of blockages in your system.

No downtime
Magnetic filtration can run 24/7 continuously without the need for operator intervention.

Safety
Reduction in intrusive line maintenance reduces overall risk.

MAGNETIC FILTRATION IN PRINTING APPLICATIONS

Inks, in particular, have the ability to hold and transfer pieces of damaged or splintered metal debris; the contaminants will generally stay suspended and not settle out. Inks then supplied back to the press may be in a contaminated state.

The debris in the main will be will be broken doctor blades, normally damaged due to wear and tear or because of some other rogue element. This could be broken doctor blades that have recalculated or nuts, bolts or washers that have been dropped during maintenance. All can be carried with the ink supply.

Our filters remove particles down to sub-micron size and material that will damage blades and rolls.

Magnets filters draw the contaminants out of the ink rather than filter the ink itself, so manufacturers' additives, and ink itself, not removed by the filtration process.

Locations

For complete protection in bulk fluid applications we recommend filters are installed in the following critical control points:

Manufacturing new inks
This will qualify the inks entering the tank and new drums removing any chance of stray contamination being exported to your customers.

Between the press and the ink tanks
Ink leaving the press on the return to the tanks is cleaned, removing damaged doctor blades from the ink at source, protecting the pumps and rolls from the contamination that can be taken from the tank and prevening the build up of contamination in the ink reservoir.

Between the tank and press (option)
Micro filters installed before the point of pumping, if possible, or on the input side of the press. This would be a final check to ensure that the ink was clear of particulate prior to being supplied to the press.

Contaminants

Generally the material found in the filters will be doctor blades and other ferrous contaminants which enter the printing process from outside or generated during printing.

Magnets will attract a mixture of swarf, scale and coarse sub-micron particulate which has been released by the holding tank, pipework or delivered with new ink.

Even particles of stainless steel blades will be removed. As the blade is damaged, the particles released generally become para-magnetic. These are attracted by the magnet from the ink.

Eclipse Magnetics Filtration Products

Magnetic Grids

Micromag

Micromag HP

FIltramag

Liquid filter

Automag

www.magneticfiltration.co.uk

Eclipse Magnetics Ltd
Atlas Way, Atlas North, Sheffield, S4-7QQ, England
T +44 (0)114 281 4319 **F** +44 (0)114 225 0525
enquiries@eclipse-magnetics.co.uk www.magneticfiltration.co.uk

ECLIPSE MAGNETICS®