



**Magnum™ Benefits
Technical / Economic**

What Magnum™ can do for you

Magnum™ magnetic filters excel at extracting abrasive ferrous particles from fluid systems - thus removing the major cause of wear, performance drop, system failure or product damage. The award winning design of the Magnum™ leads directly to *enhanced performance* and substantial *bottom line benefits* with rapid R.O.I.

Technical Benefits

The Magnum™ technical benefits come from its revolutionary technical design. A 'simple concept' solves many problems simultaneously.

Microscopic particle removal

Magnum: Powerful field effect magnets remove ferrous particles as small as 0.07um.

Alternatives: Only finest barrier filters can match this - at price of significant pressure drop, danger of splitting & need for continual replacement.

Alternatives: Conventional magnetic filters do not have enhanced field effect collection.

Negligible pressure drop

Magnum: Carefully designed large open channels have same unobstructed capacity as inlet. Channels do not block up as time passes.

Alternatives: Traditional barrier filters cause significant pressure drop on insertion. Pressure drop increases as filter clogs.

Suction side capable

Magnum: negligible pressure drop means these can be placed on suction side of a pump.

Alternatives: Traditional barrier filters will cause cavitations when placed suction side, as filters fill up, going into bypass mode.

No wash-off

Magnum: Collected ferrous particles collect in between the field plates, out of the main flow, so are not subject to pressure wash-off. In

Alternatives: Conventional magnetic systems, such wash-off can lead to large clumps falling into vulnerable parts.

No catastrophic failure mode

Magnum: Constructed of robust steel plates with no moving parts to split or seize.

Alternatives: Traditional barrier filters can split in operation, thus dumping the accumulated filtrates right back into the 'protected' area.

Large storage capacity

Magnom: large capacity as particles 'stored' in volume between field plates.

Alternatives: Small capacity limited to surface of filter paper or round head of 'pins'.

Collects non ferrous particles

Magnom: Amazingly, some non ferrous particles are also collected, when ferrous particles are present, by the heterocoagulation process, and then 'trapped' in 'store' by the ferrous particles.

Alternatives: These will simply wash back off conventional magnetic filters where the particles are held within the full force fluid flow.

Highly scalable

Magnom: Technology can be scaled in size and for vast range of pressures, temperatures and viscosities (up to 140bar and up to 600F).

Alternatives: Traditional barrier filters cannot be used in some aggressive or viscous fluids, or in high pressure flows, especially if pulsating.

Retains additives

Magnom: Does not strip additives from the fluid.

Alternatives: Fine paper filters will strip large molecules of additives from fuels, leading to a loss of performance.

Work in 'difficult environments'

Magnom: will happily work under high pressure and vibration.

Alternatives: Suffer from washoff or splitting in these environments.

Economic Benefits

The technological features lead directly to the economic benefits of the Magnom™ system.

Increased lifespan

Removing ferrous particles removes the *key cause* of wear within a fluid system; especially in critical parts with tight tolerances, such as engines and pumps.

No catastrophic failure mode in filter leading to general system failure.

Reduced downtime

Removing ferrous particles reduces downtime needed for repairs, replacements or even servicing.

Improved quality

When used in cooling and machine cutting, removal of hard ferrous particles can dramatically increase quality of final product, because these particles are no longer present to cause surface damage.

Reduced wear

Ferrous particles are the main cause of wear in a fluid system.

Improved performance

Removing the cause of wear stops dimensional changes in key parts, maintaining design efficiency levels.

Does not strip out performance enhancing additives.

Ease of maintenance

Magnum™ units are designed for simple maintenance. Cores can be removed, cleaned and replaced with ease.

Ease of inspection

Transparent Magnum™ units allow for simple, quick visual inspection of the amount of collected particulates.

Invotec Solutions Limited
18 High Greeve
Wootton
Northampton NN4 6BA

Invotec Solutions Limited
0845 838 1510 (Tele)
0845 838 1520 (Fax)
sales@invotecsolutions.co.uk
www.invotecsolutions.co.uk