

FLUID CONDITIONING SYSTEMS



removing the barriers to fluid cleanliness

www.magnum.com

FCS has just launched a new website to offer better information on its revolutionary Magnum™ filtration.

New features include Case-Studies and a global distributor list

Drax Power gears up with Magnum™



Drax Power Station, the largest coal fired power station in Europe, has for a number of years suffered a significant number of **coal pulverising mill transmission** failures at considerable cost (typical refurbishment cost circa £50K).

To reduce these expensive gearbox failures, Drax decided to trial Magnum™ on the mill lubrication circuits, following earlier success with the Magnum™ in an identical application at Didcot A power station.

The extent of contaminant removal was remarkable (see image to the left) and, backed up with oil analysis data, the Engineering Team at Drax decided to retrofit all 60 mills on site. No problems have been experienced with the transmissions already fitted with Magnum™. FCS is now working with the majority of coal fired power stations in the UK.

Magnum™ flies in the aviation sector

FCS has been commissioned to design a Magnum filtration solution for a **blue-chip jet turbine manufacturer**.

The Magnum™ is already used in Formula 1 racing cars and marine systems, it was therefore only a matter of time before the demanding aviation sector approached FCS to benefit from similar improvements in machine reliability and durability.

The initial prototypes are to be completed in August and full trialing will complete early next year, the Magnum™ is expected to become a key component in jet turbine systems by the end of 2005.



Magnum™ distributor saves GKN thousands...



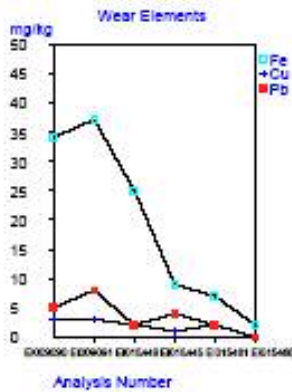
Magnum™ Distributor, Fluid Technology Analysis (FTA), was recently approached by GKN (the blue chip axle manufacturer) in the UK to help reduce **spindle failures in high frequency grinding machines**. Spindles were failing due to overheating at a cost of between £700 and £1,700 every 2 weeks on average.

A Magnum 5'' HT unit was installed on a single grinding machine in the cooling line to remove rust and stop the cooling water flow channels from blocking. The clear Magnum bowl permitted simple condition monitoring, the engineers were shocked to see the core removing large amounts of contamination (see image to the left) which was found to be between 1 and 900 microns in size. The Magnum was simply cleaned after 3 hours and reinstalled where it continued to remove debris and prevented any system failure. Over time, intervals between cleaning extended dramatically as the system contamination was removed, preventing the chain reaction of wear.

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Exxon fluid analysis from Bridgnorth aluminium speaks volumes...

Esso Index



At the Bridgnorth Aluminium plant in the UK, Exxon Index oil analysis identified a significant presence of ferrous contamination and other wear elements within a number of lubrication circuits on key **transmissions driving the Hot Rolling Mills**. Subsequent visual gear survey identified significant and progressive wear with a real risk of catastrophic failure.

To alleviate this problem, a Magnum™ Process Unit was specified for installation on a Tandem Mill Lubrication Circuit (1000 litre capacity, Glycolube) in an offline (dialysis) configuration.

Subsequent Exxon analysis shows clearly the effect that the Magnum has had on reducing the wear elements (see graph to the left), this will extend the gearbox life by many times...

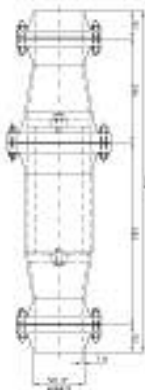


Magnum's not just for coolant in machine tools

A leading global machine tool manufacturer recently needed to reduce the pump failures in the hydraulic pumps in their machines. A Magnum™ Mini-Module was fitted after 5 micron cartridge filter to reduce downtime by improving the cleanliness of the system. Considering this was in a closed hydraulic system, the Magnum™ was found to remove an astonishing amount of harmful fine ferrous debris (see image to the right). The Magnum™ is simply removed, cleaned and replaced.



The Magnum™ had the desired effect — eliminating pump failures and therefore dramatically reducing warranty costs



Magnum™ in a 6" line in marine!

Magnum™ distributor, Aventi Norge of Norway (tel. 0047 9711 0856, email. post@aventinorge.com) recently designed and built its own stainless steel housing for a Magnum™ Process Unit Core for the marine sector.

The unit is designed to be installed in a 6" line that runs **cargo diesel fuel** during its transportation aboard a Skandi Navica tanker. The client had real problems with bacteria and contamination in the 3500m³ fuel, Aventi Norge have designed this system to remove the contamination and prevent the growth of the bacteria, it is installed in line with the cargo pump

FCS opens US office...

FCS has recruited Keith Day as General Manager of its **US Operations**, located in Chicago.

Keith has an MBA and an engineering background. Keith's contact details are:

Fluid Conditioning Systems, 910 W. Van Buren St. #159, Chicago, IL 60607

O: 312-738-1147, F: 312-893-2096, M: 312-342-4778

Keith.Day@fluidcs.com

New range of cleaning cabinets...



FCS has developed a range of **cleaning cabinets** for Magnum™ units to assist its clients with frequent cleaning requirements.

For further information and prices please contact the FCS team.

FLUID CONDITIONING SYSTEMS

The Magnum™ can save you money at home too



When Mino Karani, Founder and MD of Aquacure plc, one of the UK's leading water treatment companies, had problems with his home central heating system he thought his company should have the product to rectify the problem.

His central heating system was frequently failing through both cold spots in the radiators and cavitation in the pumps.

A 5"HT Magnum™ Unit was installed by Mino's technicians, it was clear that the Magnum™ was working within a week, the water was flowing more freely, the pump was not cavitating and importantly the Magnum™ was visibly filling with contaminant. After 3 weeks, the reuseable core was removed, cleaned and simply re-installed, where it still continues to collect smaller amounts of remaining contaminants.

In central heating systems the Magnum™ has been shown to reduce cold spots, improve flow, extend pump and boiler life and reduce flushing requirements.

Magnum of champagne awarded at FCS Open Day

FCS Chairman Simon Preston was pleased to hand over a magnum of champagne to FCS Open Day competition winner Ken Morris.

FCS will be holding further Open Days at its facility in Warwick, UK on the 2nd September and 18th November, please contact FCS if you would like to attend to learn more of specific applications in which Magnum™ has been successful.

FCS is also prepared to run additional Open Days for specific Distributors or customers.



A Brief History of Magnum™

A US E-Newsletter recently commissioned a piece charting the history behind the Magnum™ technology.

The story outlined the reasons that Harald Hall (pictured left), an ex-RAF Engineer who had been influential in the Spitfire airplane program, designed the technology.

A full copy of the article is available at www.magnum.com under Technology—History.

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to fluid cleanliness





Please fax to +44 (0) 1926 623 171

Enquiry Form

I am interested in the following: (please check relevant boxes)

The Magnom™ technology in a:

Transmission application

Machining application

Hydraulics application

Water application

Flushing application

Diesel fuel application

Engine application

Distributorship

End customer

Please find my contact details below:

Name

Company

Telephone

Email

Best time to contact.....