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## Filtration Solutions for Efficient Contamination Control



David Dyce, Business Unit Manager of Fluid Technology at BMG, talks about the company's comprehensive range of filtration solutions, which ensure that fuel and lubricant oil are maintained within the required cleanliness standards for the better protection of modern equipment assets.

BMG's Fluid Technology division is committed to improving operational efficiencies for customers in all industries, by providing essential filtration, separation and purification technologies.

"With broad technical capabilities and an extensive range of quality-branded fluid power components, BMG is able to offer

total process, filtration and lubrication management solutions throughout Africa, even in chemical and corrosive environments, as well as in arduous mining conditions," says David Dyce, Business Unit Manager, Fluid Technology, BMG.

"BMG's Fluid Technology team has a thorough understanding of the filtration process and offers solutions to ensure fluids – including oil, fuel and lubricant oil – are within the required cleanliness standards.

"Efficient filtration disciplines result in optimum performance, improved reliability and extended service life of machinery, equipment and vehicles. Without a structured control and contamination prevention programme, premature equipment failure is likely to occur, resulting in unnecessary downtime and costly replacement of parts."

Optimum filtration performance, combined with lower differential pressure of the system, significantly reduces energy consumption, which is critical to maximising production efficiencies.

Contamination is the biggest threat to the supply of clean bulk fuel product. The main cause of contamination in diesel and lubricant oils is water and dirt ingress. Foreign materials encourage the culture of bacteria, which feed on hydrocarbons, degrading fuel quality and resulting in equipment failure.

BMG has recognised a greater demand from industries – including earthmoving, mining, agriculture, transport, chemicals and petrochemicals, as well as shipping – for products and solutions that ensure 'cleaner', non-contaminated diesel and lubricant oils.

### Mobile Filtration Trailers

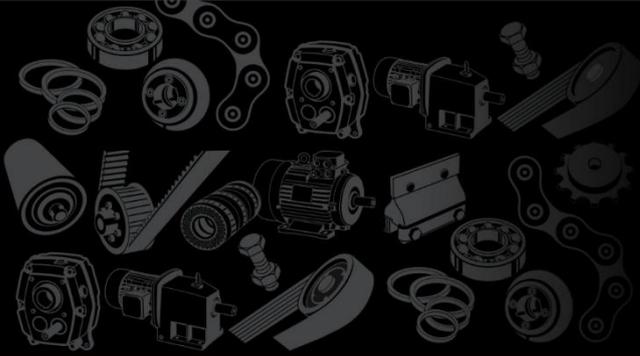
BMG's mobile filtration trailers provide reliable and cost-effective filtration of diesel, oils, lubricants and aviation fuel – not only at filling stations, but also on mines, construction sites and in the field.

This mobile filtration system removes particulate and water ingress – the two most destructive contaminants for diesel engines, on both light and heavy vehicles. Bulk fuel filtration systems ensure cleaner fuel to meet the finer tolerances of modern diesel injection systems.

BMG's mobile filtration trailers consist of a 12 V dc pump, mechanical flow meter, water separator and filter, a 6.0 m hose and dispensing nozzle. The tank (500 to 3 000 ℓ) has a lockable filler, baffles and a breather. Bowser material options include Mild Steel, Stainless Steel and Polyurethane.

### On-board Filtration Solutions

BMG has also extended its on-board filtration range, to include products that protect new TK4 and TK5 engines – which have tighter tolerance levels for their injectors – against wear and water damage.



FG EcoPart series, which includes a wide range of pressure filter and return filter elements, is available from BMG in different versions with various grades.

These products, which include complete coolant, lubricant and filtration service kits for 250 hours, 500 hours, 750 hours and 1 000 hours, can be adjusted to meet the required service schedules.

BMG also has convenient service pack kits available for all types of excavators, dump trucks, loaders, graders and crushers. Technical experts assist with the selection of the correct filter for every application, to ensure optimum performance and extended service life of every system.

#### **FG EcoPart: the High-Performance Desiccant Breather**

BMG's extensive fluid technology range also encompasses EcoPart filter elements for stationary and mobile hydraulic systems from the Filtration Group. These components, with defined filter performance and purity class, comply with stringent DIN and ISO standards and have all other necessary standard industry approvals.

FG EcoPart series, which includes a wide range of pressure filter and return filter elements, is available from BMG in different versions, with various grades of fineness.

These components are suitable for diverse hydraulic applications, as well as gear oil treatment. FG Filter elements are designed to reduce the solid particle contamination to the prescribed contamination class, to prevent the ingress of dirt from the environment and maintain the properties of the hydraulics fluid for an extended time period. Included in this range are FG desiccant breathers, which protect lubricants and machines from damage caused by moisture and the ingress of particles.

The FG breather replaces conventional dust caps or breathers often found on new equipment. When contaminated air enters the top of the breather, it passes through layered filter media, blocking particles from entering the breather, thus preventing wear to equipment surfaces. The filtered air passes through a bed of silica gel, which effectively removes moisture. Silica keeps the equipment dry by attracting moisture from inside the equipment reservoir during service or shutdown.

FG desiccant breathers have an enlarged housing, which ensures up to 20% more absorption of moisture than conventional breathers. The centre tube is constructed from a robust nylon material, providing rigidity to the element and allowing an even airflow through the silica gel. For additional system protection, secondary filter media prevent any possible migration of silica dust.

For optimum change-out intervals, a clear Polycarbonate outer shell provides a visual indicator of the condition of the silica gel. Multi-layer polyester filter media provide 3-micron particulate filtration and Polyurethane foam collects oil mist and distributes air evenly over the filter media and the moisture-absorbing silica gel.

Breathers are suitable for use in hydraulic units, where there are high humidity and temperature fluctuations. The normal hazards of condensation – rapid ageing of hydraulic oil, degradation of additives and corrosion – are prevented.

Typical applications include wind energy, power plants, tunnel construction, aerospace and manufacturing processes, as well as petrochemical and chemical plants. In addition, BMG supplies FG coalescer filters, which are used in the fuel line for the efficient operation of marine diesel engines.

#### **BMG Fluid Technology**

BMG's fluid technology services include solutions for hydraulics and pneumatics, lubrication, fuel and industrial filtration systems, hydraulic hose and fittings, as well as instrumentation, pumps and industrial valves. The company's national branch network, of over 130 outlets, supports an extensive range of fluid technology products and bespoke systems, with field services and technical resources.

BMG also offers a design and manufacturing service, according to exact requirements, for small installations and major projects alike.

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