

MAHLE

Industrial Filtration

MORE COMPETENCE FOR CLEAN SOLUTIONS

SHIP MAINTENANCE



MAHLE

INDUSTRIAL FILTRATION

TAKING IT UP A NOTCH

Innovative systems partner

MAHLE Industrial Filtration has been developing and manufacturing high-quality industrial filters for all applications since 1962. The company is one of the leading manufacturers and is integrated in the MAHLE Group, which takes pride of place among the top 3 systems suppliers in the combustion engine and engine peripherals segments.

In **fluid technology** we offer our customers filter materials with outstanding properties, advanced processes and a modular filter and equipment program for maintaining optimum levels of cleanliness in hydraulic fluids and lubricants. Our filters, units and systems for **de-dusting air and gases** increase productivity and contribute to product recycling as well as greater environmental protection and occupational safety. When it comes to filtering liquids, pastes and similar substances, our patented **automatic filters** enable optimized production processes combined with highly efficient, economical non-stop operation – with automatic purification and disposal processes.

Our extensive experience and the continuous further development of materials and production technologies make us the selected innovative development and systems partner of our customers: for ever more improved, efficient and clean solutions.

All shipshape: filters for ship maintenance

MAHLE industrial filters are used as

- lubricating oil filters
- hydraulic filters
- transmission oil filters
- filters for fuels (gas oil and MBO)
- service and cooling water filters
- filters for intake air
- bilge water filters
- gray and black water filters

NFV

TECHNOLOGICAL LEADER



Filtration and separation with maximum cleaning performance

Norddeutsche Filter is a quality and technological leader for mechanical processes in filtration and separation. When it comes to de-oiling, fuel and oil care or service, waste and cooling water treatment in process and environmental technology, we offer our customers products and bespoke solutions for safe and environmentally friendly operation.

In action for clean processes and the environment

Our modern bilge water separators (MPEB – multi-phase demulsifiers) ensure continuous separation of oily bilge water in ship maintenance and hence play a tremendously important role in water pollution control throughout the world. But this is just one of many examples showing the broad range of services we offer our customers:

- **Oil treatment:** Continuous cleaning of hydraulic, lubricating and control oils for longer service lives, less maintenance expense and resource saving.
- **Fuel treatment:** Effective filter water separators for product quality you can rely on.
- **Bilge water:** Phase separators, demulsifiers and diaphragm technology which clean the bilge water so efficiently that the strictest current and future civil/military limits and protection regulations are complied with.
- **Process, waste water:** Upstream and downstream treatment units together with diaphragm flotation, sterilization and metering devices, diaphragm and activated carbon filters.
- **Ballast water:** Environmentally-friendly solutions tailored to individual requirements for the filtration and sterilization of ballast water – through a combination of various upstream and downstream treatment processes.
- **Cooling water:** Treatment technology for cooling water circuits of all types and dimensions, from refineries to power plants.
- **Emulsions:** Mechanical demulsifiers which attain the highest levels of purity in all oil-in-water applications as well as for lees and cooling lubricant emulsions.



AKO

GREATER PERFORMANCE THROUGH COMPETENCE



Automatic, customized and flexible

With over 70 years of expertise in development and design, we offer customer-oriented filter solutions for shipping and all sectors of industry.

Simply safe and effective: simplex filters

The user-friendly, sturdy and cost-effective solution for the filtration of all types of liquid. All simplex filters are fitted with cleanable metal filter elements, combining easy handling and cleaning with effective filter performance and long service life.

Filtering without service interruption: changeover filters

Our sturdy changeover filters ensure continuous filtration of all types of liquid and support the efficiency of production processes. From small standard versions through to large project solutions, we cover almost the entire application field of changeover filters in pressure ranges up to 40 bar.

Fully automatic, efficient: reverse-flow filters

The space-saving and powerful reverse-flow filters with fully automatic, uninterrupted purification cope perfectly with even the smallest reverse-flow volumes. They cut the costs and protect the environment.

For all media

Our application-optimized solutions for efficient operation in shipping for fuels, lubricating oil or seawater and in industry for cooling, service and waste water as well as cooling lubricants, oils or chemicals.

Our range of services:

- filter design for your projects
- development of customer solutions from detailed media analyses through to the potential use of test filters
- service technicians – on site throughout the world for commissioning and maintenance
- personnel training for correct operation and maintenance ensures long service lives
- spare parts service

Full speed ahead: extended systems competence for ship maintenance

Because of our longstanding experience with complex systems and diverse applications, we are continually in demand throughout the world as an innovative development and systems partner for ship maintenance. We have now significantly extended our range of services and are steering a clear course towards a bright future – with two new partners on board. These offer many years of reliable competence to perfectly complement our portfolio.

Welcome on board: Norddeutsche Filter Vertriebs GmbH and AKO FILTER GmbH

The integration of **Norddeutsche Filter Vertriebs GmbH** allows us to offer you even more comprehensive solutions especially in the area of ship maintenance and liquid treatment as well as a complete range in the area of filters, complemented by separation: from de-oiling, fuel and oil care through to service, waste and cooling water treatment.

In addition, **AKO FILTER GmbH** complements our range of services with simplex, changeover and reverse-flow filters for maritime technology and for the most diverse sectors.

Your benefits

- All tried and tested products and services remain – while you benefit from even more services from a single source
- Your contacts remain unchanged
- We shall continue to extend the locations of the combined companies and utilize new perspectives in North Germany



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