



## Smart off-line filters

The growing demand for Condition Monitoring solutions and the successful application of depth filtration on hydraulic and lube oils systems have led to the development of RMF Off-line filters with an integrated Contamination Monitoring System (CMS). This development allows machine operators to keep their hydraulic oil clean and monitor the contamination levels real time. The Contamination Monitoring System (CMS) can be combined with the entire selection of off-line filters in the RMF Systems range.

The low cost CMS has 8 channels for solid contamination measurement and a Moisture (RH) & Temperature option. It reports in any of the international standard formats ISO 4406:1999, NAS 1638, AS 4059E and ISO 11218.

RMF Systems Smart Off-line filters are characterized by their extremely efficient filter elements with a fineness of 0.5 micron. If required different micron sizes are available to suit any specific application. The Smart Off-line filters can also be equipped with special water absorbing pre-filters in case of extreme water contamination. These water absorbing spin-on cans will remove most of the water prior to the fluid reaching the cellulose element.

Specially designed for industrial hydraulic installations, the RMF Smart Off-line filters are available in single or multiple housing configurations.

The Smart Off-line filter units can be easily mounted to new and existing hydraulic installations. An integrated pump-motor unit in the Off-line filter, pumps the oil from the reservoir through the filter unit.

After filtering the oil is returned to the tank.

## Integrated Contamination Monitoring System (CMS)

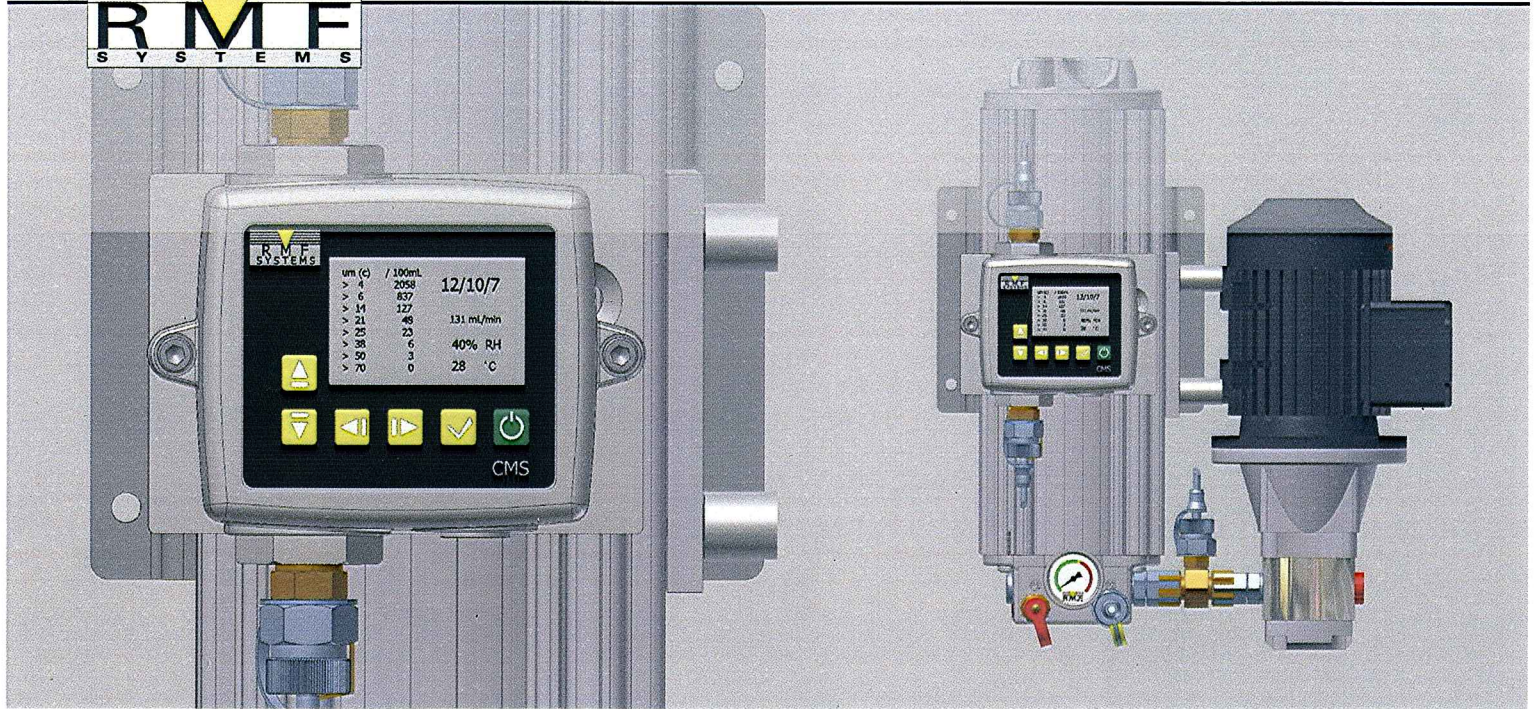
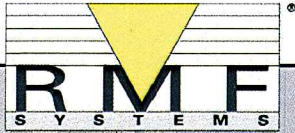
The CMS in-line contamination monitor automatically measures and displays particulate contamination, moisture and temperature levels in various hydraulic fluids where ongoing measurement or analysis is required.

- Measures and displays the international standard formats ISO 4406:1999, NAS 1638, AS 4059E and ISO 11218
- 8 Channels solid contamination measurement
- Moisture (RH) & Temperature option
- 9-36 Volt DC
- Large backlit display and keypad
- Multicolour LED status alarms
- Programmable test times
- Manual/ Auto operation
- Programmable alarm relays
- PC/ PLC Operation
- Windows based software included
- RS 485 communication standard
- Data logging and 4000 test result memory



**Managing your oil  
contamination**

# Contamination Monitoring Systems



## Economical

The hydraulic market accepts that 80% of mechanical failures are caused by contamination in the system. The RMF Smart Off-line filters attack this contamination at source and in addition to solid particles, these filters are also capable of removing water from the oil. This prevents the catalytic reaction of water and solid particle contamination, resulting in extended useable oil life. The use of RMF Smart filters means less defects, less maintenance, and less wear and tear of the hydraulic components. The integrated Contamination Monitoring System allows machine operators to monitor the contamination levels real time and receive warning if contamination levels for both solid particle and water exceed set target levels.

## Applications

RMF Smart Off-line filter units can be fitted to every imaginable industrial application where hydraulic and/or lubrication systems are present. The standard range of Off-line filters can be utilised in reservoirs with a maximum volume of 11.000 litres. A large selection in electrical motors and filter elements is available.

In recent years RMF Systems have developed a great deal of experience in cleaning and keeping clean hydraulic and lubrication systems in:

- Steel industry
- Plastic moulding industry
- Maritime industry
- Petro chemical industry
- Paper industry

## Advantages

- Extremely clean oil due to high filtration efficiency
- Permanent reporting of contamination levels
- Permanent reporting of moisture RH % and temperature
- Prevention of channel forming by radial filtration direction
- Increased flow capacity
- Large dirt holding capacity
- Large water holding capacity
- Compact and easy-maintenance design
- Environmentally friendly elements available
- Longer usage life for oil and components
- Reduces cost of ownership

