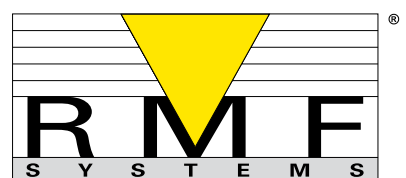
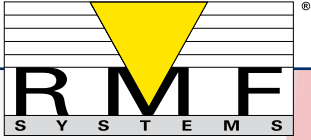


# Managing your oil contamination

**RMF SYSTEMS**  
Radial  
Micro  
Filtration





## Heated Off-line filters

RMF Systems radial micro filter units are characterised by their extremely efficient filter elements with a fineness of 0.5 micron. The Off-line filter units with pre-heating are developed specially for cold hydraulic and lubricating systems.

The electric pre-heating ensures that the cold and/or high viscosity fluid is brought to a temperature with a suitable filtration viscosity. Off-line filters with pre-heating can be applied to new or existing installations.

The integrated pump-motor combination draws fluid from the reservoir, pumps it through a heating element, filters it and returns it to the tank. The heating is thermostat controlled and adjustable to any required fluid temperature. The heating is effected by a 'flow-through' principle, preventing 'burning' or thermal overloading of the oil. The Heated Off-line filters can continue to work even when the main system is not in use. Element change can also be done without interfering the main system.

### Economical

The hydraulic market accepts that 80% of the mechanical failures are caused by contamination in the system. The RMF Off-line filters attack this contamination at source. 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 an extended usable oil life. The use of RMF-filters means reduced down time, increased component life and extended service intervals with reduced oil changes.

### Applications

RMF Off-line filter units with pre-heating can be applied to any industrial application where it is necessary to heat the oil and maintain it at a particular temperature, such as hydraulically operated bridges and gear boxes in the wind power energy industry.

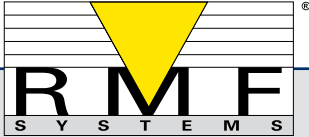
### Advantages

- Extremely clean oil due to the high filtration efficiency  $\beta_{0.5} \geq 200$ ,  $\beta_2 \geq 2,330$ .
- Prevention of channel forming by radial filtration direction.
- Increased dirt holding capacity.
- Large water holding capacity.
- Compact and easy-maintenance design.
- Environmentally friendly elements.
- Longer usable life for oil and components.



**TECHNICAL DATA HEATED OFF-LINE FILTERS**

Filter model	OLUH1A30...	OLUH1B30...	OLUH1B30...
No. of filter housings	1	1	1
Material filter housing	Anodised aluminium		
Seal material filter unit	Buna-N standard		
Seal material heater unit	Viton standard		
Max. flow capacity to achieve enough delta T in single pass	Approx. 2.9 l/min with 2 kW heater		
By-pass opening pressure	6.2 bar (at 0 bar back pressure)		
No. of filter elements	1	2	
Length filter elements	300 mm (standard)		
Max. pressure filter housing	20 bar		
Heater capacity	2 kW	2 kW	4 kW
Max. pressure filter housing	20 bar		
Max. oil temperature	80 °C		
Dirt indicator	Pressure gauge (0-10 bar, green/yellow/red zones)		
Connection pump suction port	3/8" BSP female		
Diameter hose suction side	1/2" or 3/4" with positive head preferably		
Connection return port	1/2"		
Diameter hose return side	1/2"		
Dimensions h x w x d (mm)	570 x 485 x 190	730 x 485 x 190	825 x 485 x 190
Pump type	Hydraulic gear pump		
Power supply E-motor	Various electrical power supplies possible		
Max. tank volume	± 1,350 l	± 2,700 l	± 2,700 l
Sample port connections: P1 filter inlet side (red) P2 filter inlet side (yellow)	Test connector M16x2 Test connector M16x2		
Approximate weight	24.0 kg	28.0 kg	30.0 kg
<i>Consult RMF for 4 kW heaters and flows exceeding 2.9 l/min</i>			



**Ordering codes:  
RMF Heated Off-line filters**

**Filtertype:  
OLUH units**

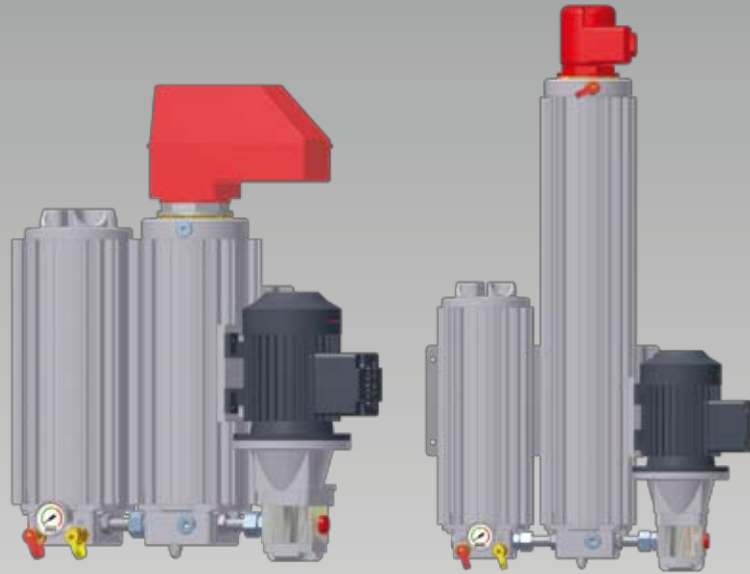


Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	Table 9	Table 10
<b>OLUH</b>									

Table 1	Basic configuration	
<b>OLUH</b>	Off-line heated unit	Industrial applications

Table 2	Housing configuration	Typical reservoir size	Number of elements
<b>1A</b>	Single housing (single length)	Suitable for 1,350 l reservoir	1 pcs element (300 mm)
<b>2A</b>	Twin housing (single length)	Suitable for 2,700 l reservoir	2 pcs element (300 mm)
<b>1B</b>	Single housing (double length)	Suitable for 2,700 l reservoir	2 pcs element (300 mm)

Table 3	Length element	
<b>30</b>	L = 300 mm	Standard

Table 6	E-motor options
<b>0</b>	Standard: 230/400 VAC 50 Hz / 3 phase, 255/460 VAC 60 Hz / 3 phase
<b>A</b>	230 VAC 50 Hz / 1 phase
<b>E</b>	230/400 VAC 50 Hz, IP65 / 3 phase
<b>F</b>	230 VAC 60 Hz / 1 phase

Table 4	Filter material
<b>H</b>	Cellulose 0.5 micron, silicon bottom seal
<b>N</b>	Cellulose 0.5 micron, NO silicon bottom seal
<b>G1*</b>	Glass fibre, 1 micron, $\beta_1 \geq 200$
<b>G3*</b>	Glass fibre, 3 micron, $\beta_3 \geq 200$
<b>A5</b>	Glass fibre with polymer, 5 micron, $\beta_5 \geq 200$
<b>*</b>	<i>G1 and G3 also suitable for Water Glycol</i>

Table 5	Seal material	
<b>B</b>	Buna-N	Standard
<b>V</b>	Viton	Optional



Table 7	Pump options	Standard for
<b>Code</b>	<b>Standard for 50 Hz motor</b>	
<b>00</b>	1.6 cc/rev. group 1	OLU1A
<b>10</b>	3.15 cc/rev. group 1	OLU2A / OLU1B
<b>60</b>	1.0 cc/rev. group 1	
	<b>Standard for 60 Hz motor</b>	
<b>01</b>	1.25 cc/rev. group 1	OLU1A
<b>11</b>	2.5 cc/rev. group 1	OLU2A / OLU1B

Table 8	Indicator	
<b>0</b>	Pressure gauge	Standard
<b>1</b>	Additional electr. indicator	Optional
<b>2</b>	Additional $\Delta p$ indicator	Optional

Table 9	Extra options
<b>0</b>	No options
<b>2</b>	Motor/pump/heater left side mount
<b>4</b>	Incl. on/off and motor protection
<b>5</b>	Incl. on/off and motor protection / External By-pass

Table 10	Heater options	Standard for
<b>0</b>	2,000 W / L = 300 mm / voltage equal to e-motor	OLU1A / OLU2A
<b>1</b>	4,000 W / L = 600 mm / voltage equal to e-motor	OLU1B
<b>2</b>	2 pcs. 2,000 W / L = 300 mm / voltage equal to e-motor	Special
<b>3</b>	2 pcs. 4,000 W / L = 600 mm / voltage equal to e-motor	Special



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