Off-Line & By-Pass Filters OLS / BPS Technical Data

Description

Stauff Off-line and By-pass Filter Systems, OLS / BPS, are designed to keep hydraulic and lubrication systems free of particle and water contamination. Stauff OLS and BPS units utilize the Radial Micro Filtration Systems concept for the removal of contamination from hydraulic and lubrication systems. Desiccant Air Breathers, which clean and dry the air entering the reservoir, are also part of this contamination removal system.
Stauff RMF Filtration Systems will provide optimal system cleanliness for today's sophisticated hydraulic and lubrication systems.

Technical Specification

Construction	OLS (off-line filter system with integrated motor / pump unit), BPS (by-pass filter system)
Housing	Anodized aluminium
Seals	NBR (Buna-N®)
Connection	1/4" and 1/2" BSP (for BPS) 3/8", 1/2", 3/4" BSP and 18L (for OLS)
Differential pressure	max 6.2 bar *(90 PSI)* across element
Nominal flow	between 2.1 l/min *(0.55 US GPM)* and 17 l/min *(4.5 US GPM)*
Temperature range	max 80°C *(176°F)* media temperature (at a viscosity between 20 and 160 cSt)

Max system volume	up to 10.800 liter *(2853 gal)*
Bypass valve (integrated in filter head)	6.2 bar *(90 PSI)* for all types
Clogging indicator	Pressure gauge, filled with glycerin
Media	Mineral- or lubrication oil, others on request
Motor types (for OLS)	Several motor types available, for more information please see page F102 (Ordering Codes)

System Contamination

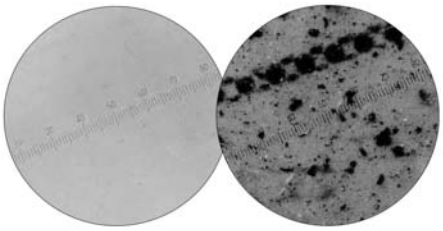
In today's hydraulic market it is an accepted fact that contamination causes 80% of all mechanical failures. This contamination results from the presence of solid particles such as metal, sand and rubber.

Changes in temperature cause water vapour to condense, resulting in unwanted water in the oil, the presence of this water accelerates the deterioration of the oil.

Mainstream filters are incapable of removing particles, smaller than 2 micron (better known as silt). Fluctuations in pressure and flow result in changing conditions preventing these filters from carrying out fine filtration; most of the silt remains in the system affecting the chemical compostition of the oil.

All these problems lead to reduced oil life and increased component wear, maintenance costs and machine down time.

Removing silt and preventing the formation of free water will combat these problems.



Micro Filtration and Air Conditioning

At the heart of the RMF Off-line and By-pass filter unit is the unique microfilter element. This filter is designed with a radial flow path.

The element is constructed with 0.5 micron media, and is therefore able to remove the smallest particles (silt), from the oil.

The filter material is composed primarily of cellulose, which is applied by a special wrapping method.

This material is capable of retaining solid particles and absorbing water. This helps to prevent chemical deterioraton of the oil and the formation of various acids and sludge.

Hydraulic cylinder extension for example, can draw air, solid contamination particles and water vapour into the oil reservoir.

The water vapour condenses due to temperature changes and causes not only oxidation of the oil, but can also lead to serious mechanical wear in the system.

Standard air filters remove a certain amount of solid particle contamination from the air but allow water vapour, to pass through.

The Stauff RMF “Air conditioners” type SDB and SVDB ensure that incoming air is first dried and then filtered. The SDB and SVDB units should be used in conjunction with the OLS / BPS systems in order to provide a more complete filtering system. See Hydraulic Accessories section of this catalog, pages A21 and A22 for more details.

OLS / BPS Filter element

SDB Air conditioner