

# R M SUPPORT

REFRIGERATION & MACHINERY

*From contaminated  
to clean oil....*



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## Your Purification advantages:

- Sustainability
- Efficiency
- Reliability
- Higher machine accessibility
- Lower oil and energy consumption
- Lower cost over life cycle.

These advantages result in higher machine reliability, improved machine performance, and most importantly, higher production output and capacity.

The condition of the cooling compressor lubricant determines the productivity of a compressor aggregate.

In addition, new oil and the modification of contaminated oil can be expensive. There are several methods available to extend the lifespan of your oil, or to regenerate the captured oil in your installation.

Oil purification has been implemented in cooling applications for years now, especially on ships and in other situations in which the risk of a reaction with free radicals and doping of the oil is increased due to the presence of a catalyst such as water.



## Methods & Installation

Purification, or bypass filtration, is one method of oil purification and is implemented worldwide. It involves diverting a portion of the oil stream and slowly filtering it with a very fine filter. The NAS class is switching to bypass filtration, which will improve the quality and usability of their captured oil.

Most cooling compressors do not require external pumps, instead using the differential pressure between high-pressure gas and suction pressure gas. Bypass filtration also brings the free parts (radicals) in the captured oil into contact with anti-oxidants, extending the oil's lifespan.

## History

From 1960-1990, oil purification was implemented in installations involving a high-pressure gas temperature. The most commonly used mineral oil had the tendency to carbonise (incinerate). Oils produced in the mid-eighties were more resistant to carbonising, but the trade-off was an increase in chemical reactions in the re-used oil, which caused problems with many refrigerants. Water is a catalyst in chemical reactions; therefore purification helps to extend the lifecycle of the oil. Water is partially absorbed during filtration, thus limiting the risk of an early chemical reaction in the oil.

Some users of cooling compressor applications include: *Aviko Lomm, Redery Anthony Veder, Oerlemans. Van Reuzel Snacks, Bird Eye on the Wall (after 30 years of existence, recently closed in 2005),*

*Oil purification contributes to the identification of barriers to optimal production capacity.*