



REDUCING FLUID CONSUMPTION

Massive chilling and freeze storage facility reduces fluid consumption after switch to REFLO™ 68A.



“Since switching to REFLO™ 68A our cooling operating costs have reduced quite substantially.”

Richard Garstman, Cooling Technology Engineer, Kloosterboer Vlissingen

KLOOSTERBOER VLISSINGEN





Kloosterboer Vlissingen, The Netherlands

Contrary to popular belief, there are parts of The Netherlands that stay extremely cold all year long. For instance, there's a place in Vlissingen that's known for its continual chilly conditions – it's called Kloosterboer, one of the largest facilities for chilling and freezing in the country.

Founded in 1925, Kloosterboer started out as a vegetable trader. A lot has changed since then though.

Throughout the years several services have been added and enhanced. The company is now highly recognized as one of the industry's best, providing European customers with a comprehensive package of chilling and freezing warehousing, land & sea transportation, stevedoring and custom services. Products handled include fish, fruit, juices and concentrates.

The Vlissingen Facility

With a cold storage capacity of 155,000 tons, the facility located in Vlissingen is Kloosterboer's largest. Situated on its own quay, the facility employs over 200 people and houses cutting edge technology – such as online bar code scanning – and optimized logistics – such as a 100-ton container crane and stevedoring capabilities.

The cold storage space in the plant is kept cold thanks to Grasso refrigeration compressors. It's critical that all rooms and cells be kept at the same temperature at all times, that's why these compressors are running 24/7. The only time they're shut down is during service intervals and repairs.

Though maintenance and repairs are inevitable, Richard Garstman, the facility's Cooling Technology Engineer, works hard to limit and lessen downtime occurrences. He knows that the right maintenance protocol combined with the application of proper lubricants can help to reduce unnecessary downtime. Out of the many lubricants he uses, refrigeration compressor fluid is among the most important.

Reducing Fluid Consumption with REFLO

Garstman consulted with his lubricant supplier, KLT. They told him about a product manufactured by Petro-Canada called REFLO 68A and also provided him with testimonials from current REFLO users as well as Grasso trial recommendations and approvals. KLT felt that this product would provide a number of performance benefits and would be the ideal solution.

“The compressors were first filled with a naphthenic compressor fluid,” says Garstman.
“Fluid consumption was very high and we weren't happy with either the energy consumption or discharge temperature.”

Why REFLO 68A Was KLT Recommended

REFLO 68A because it's an ammonia refrigeration compressor fluid used in industrial refrigeration systems – one that is formulated to outperform solvent refined paraffinic and naphthenic refrigerant oils. When used with Kloosterboer's maintenance best practices it would help to extend service life, lower fluid consumption, and reduce operating costs.



The Switch

Three Grasso screw compressors in the Vlissingen facility were switched to REFLO 68A and the results have been very favourable, especially with fluid consumption as it has been reduced.

"Since switching to REFLO 68A our overall operating costs have reduced quite substantially," says Garstman. "A great example is our fluid consumption, it has decreased by 60%!"

REFLO 68A's lower oil volatility can help reduce the oil carry-over seen with solvent refined paraffinic and naphthenic fluids. Lower oil carry-over improves refrigerant flow and can cut fluid consumption*.

Garstman adds, "We also noticed that our discharge temperature has decreased from 117°C (242°F) to 83°C (181°F).**"

Not only is Garstman extremely happy with the performance benefits REFLO 68A is bringing to his operation, but he is also very happy with the service KLT provides.

"The entire changeover process was quite easy thanks to KLT. They provide us with great lubricants and a high level of customer service."

The Full Changeover

REFLO 68A has performed so well in the Vlissingen facility Kloosterboer has decided to switch all compressors in the other Vlissingen locations over.

"We are so impressed with REFLO 68A that we will be undertaking a complete changeover," says Garstman. "Next up are 3 Grasso RC piston compressors at our facility in Denemarkenweg."

Product Benefits

REFLO 68A starts with a pure advantage in quality and performance. We use the HT Purity Process to remove performance-hindering impurities found in many conventional products. The result is 99.9% pure base oils - among the purest in the world. Combine our crystal-clear base oils with our formulation expertise and the result is a wide range of high-performance lubricants, specialty fluids and greases that out-perform the competition and go beyond today's standards. Unlike conventional naphthenic refrigeration oil, REFLO 68A is less volatile at high temperatures and less soluble with ammonia. As a result, REFLO 68A can help reduce fluid consumption when compared to conventional naphthenic oils.

* When used in combination with proper maintenance practices.

Note: Results may not be typical. These claims were developed without testing of equipment or technical validation. Please consult your OEM regarding recommendations for your equipment.

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