

your global specialist

Refrigeration compressor lubrication.

Selection of speciality lubricants - Klüber Summit R series



Klüber Summit R series designed to optimise the operation of your refrigeration installations

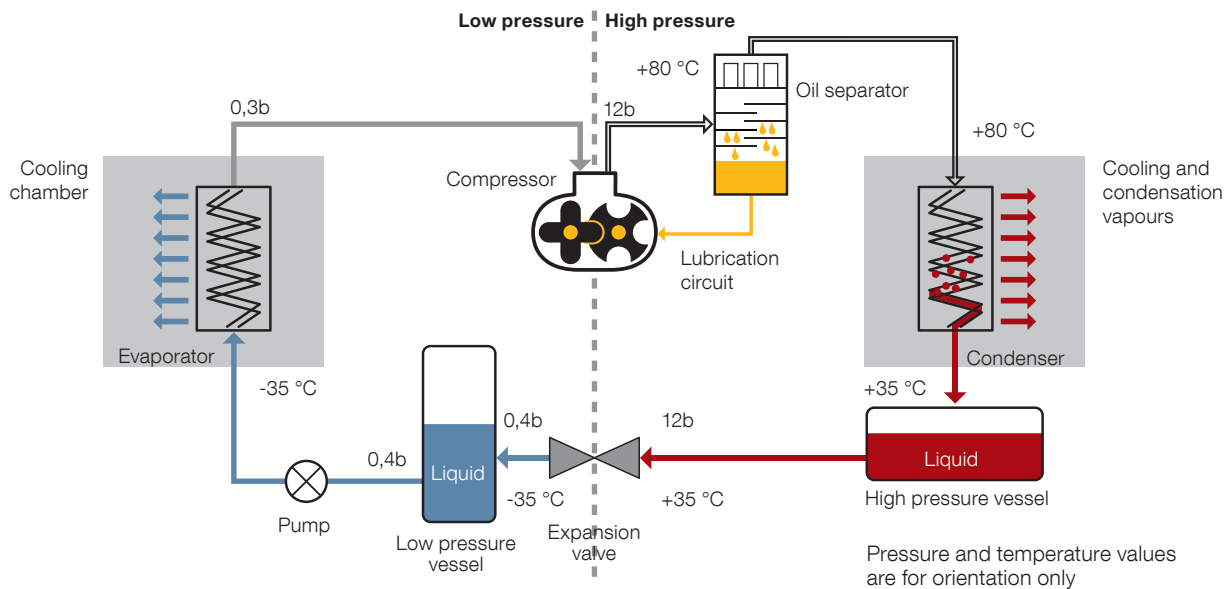
How to increase yields, improve operating safety, extend oil change intervals and reduce your operating costs?

The right selection of high-quality lubricants is an essential key element for the smooth running of your refrigerating compressors. Klüber Lubrication offers a full range of speciality lubricants for refrigeration installations using NH₃, CO₂ and other refrigerants.

Our specialised experts are at your service to monitor your installation in partnership with OEMs and packagers:

GEA Grasso – Stal – Maneurop – MAYEKAWA
Axima – Clauger – GEA Refrigeration – Johnson Controls

Refrigeration circuit: simplified diagram



The benefits of our oils for your installations:

Extended lifetime of oil (Fig. 1)

Their low tendency to form residues, less change in viscosity and high thermal stability are innovative features in extending oil lifetime.

Less volatile fractions (Fig. 2)

Lower evaporation loss, and less change in viscosity result in extended oil change intervals. Thanks to their high chemical stability, the chain molecules are preserved.

This results in better oil trapping in the separators:

- Optimum performance, reduced lubricant consumption
- Less clogging of coalescing filters

High efficiency/reduced consumption of lubricant

High chemical stability, combined with high purity leads to less gas reactions. Less residues are formed and oil carryover is considerably lower, thus leading to lower oil consumption and better performance.

Longer filter lifetime

The high purity of Klüber Summit R series lubricant allows sustainable operation without residue formation.

Reduction of spare parts costs

Reduced spare parts costs in maintenance due to extended oil change intervals (e.g. oil trap cleaning).

Fig. 1 – Oil life (h)

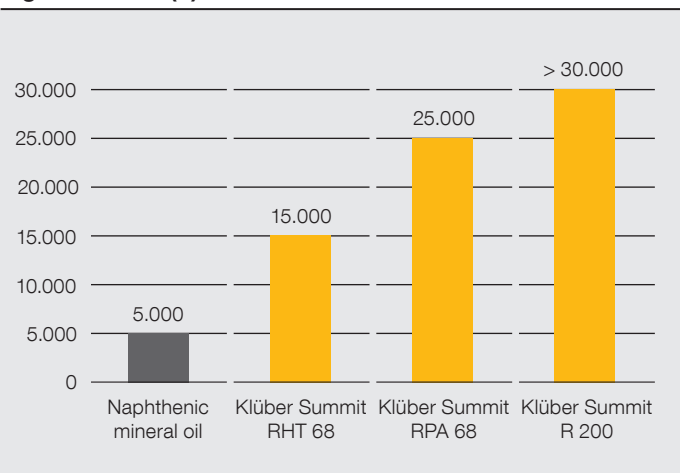
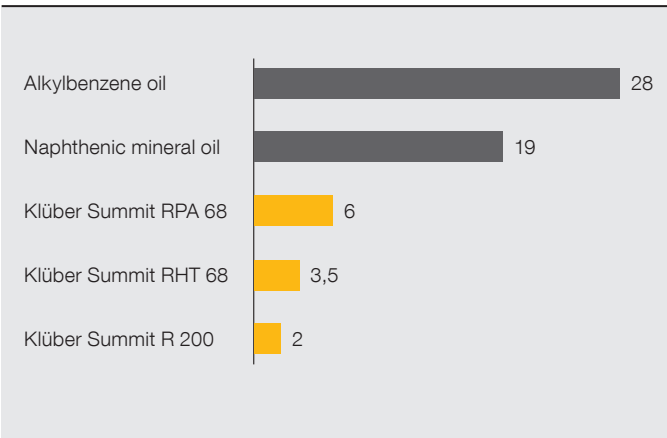


Fig. 2 – NOACK volatility test, % evaporation weight loss at 150 °C over 3 hours



Gas	Oils	Base oil	Miscibility with gas	Evaporation temperature in °C	Benefits
NH ₃	Klüber Summit RH T 68-100	Hydrotreated mineral oil	No	-39	<ul style="list-style-type: none">– Improved performance, low evaporation, low oil carryover, leads to lower oil consumption– Ammonia resistance, no residue formation in the refrigeration circuit– Conversion of naphthenic mineral oils– Klüber Summit RHT 100 developed for higher operating temperature in NH₃ heat pumps
NH ₃ – CO ₂	Klüber Summit R 100...600	PAO	No	-35 to -51	<ul style="list-style-type: none">– Low evaporation, very low oil carryover, leads to lower oil consumption– High chemical stability, extended oil change intervals, ammonia resistance, no residue formation in the refrigeration circuit– Designed especially for compressors which are operated with NH₃ and CO₂– Klüber Summit R 300 developed for heat pumps, suitable for higher operating temperature
NH ₃	Klüber Summit RPA 68	PAO + AB	No	-35 to -53	<ul style="list-style-type: none">– Neutral to seals which have been already been operated with mineral oils– Reduced oil consumption– High chemical stability, extended oil change intervals, ammonia resistance and no residue formation in the refrigeration circuit– Particularly suitable for compressors that were previously running with mineral oils
CO ₂ HFC	Klüber Summit RPE 32-68-170	POE	Yes	-20 to -45	<ul style="list-style-type: none">– Good thermal stability with refrigerant gases– Excellent chemical stability– Good solubility in and miscibility with refrigerant HFC (R134a)– Very good flow properties at low operating temperatures ensuring good oil backflow and lubricating effect in the compressor to prevent the risk of compressor shutdown or heat transfer losses in the evaporator– Excellent lubrication properties which help reduce wear and prevent leakage

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Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high-performance lubricants for more than 85 years.