



Klüberoil NH1 4

Synthetic gear oils for the food-processing industry

KLÜBER
LUBRICATION

your global specialist

Gear manufacturers and users today are faced with ever-increasing requirements: higher power density with the same or even smaller gear designs, longer gear running time, higher reliability and ever-higher energy efficiency are expected. High-performance lubricants with above-average performance capabilities help to keep wear low and increase the efficiency of your application.

Special solutions by Klüber Lubrication help you achieve the goals of higher revenue with increased food safety and an improved ecological footprint. Klüber Lubrication's fully synthetic gear oils are manufactured to achieve highest performance and they are used and recommended by the largest gear manufacturers.

Benefits of synthetic gear oils

Our specialty lubricants provide optimum movement and power transmission, high efficiency, low wear and extended lubricant change intervals due to high ageing resistance. Synthetic gear oils made by Klüber Lubrication help you save energy costs, ensure long service life with reduced lubricant consumption and hence, less used oil disposal, reducing the environmental impact and your disposal costs.

In addition to the wide service temperature range, synthetic gear oils offer many advantages compared to mineral oil:

Your benefits at a glance

- Oil change intervals are 3 times longer
- Higher wear protection
- Better cold start with the same nominal viscosity (ISO VG)
- May not require oil coolers due to reduced temperatures
- Reduced friction leads to lower energy costs

Klüberoil NH1 4 oils

Klüberoil NH1 4 oils are based on polyalphaolefin (PAO). They show good corrosion protection properties as well as good oxidation resistance, enabling much longer oil change intervals. The Klüberoil NH1 4 oil series can contribute to increased reliability of your production equipment and processes.

Products	Benefits and Values
Klüberoil NH1 4-150	<ul style="list-style-type: none"> - Meet the CLP requirements according to DIN 51517-3 - Prolonged service life and extended service intervals compared to mineral and white oil due to base oil's ageing resistance and oxidation stability
Klüberoil NH1 4-220	<ul style="list-style-type: none"> - Good viscosity-temperature behaviour for good wear protection within a wide range of operating temperatures
Klüberoil NH1 4-320	<ul style="list-style-type: none"> - NSF ISO 21469 certified
Klüberoil NH1 4-460	<ul style="list-style-type: none"> - NSF ISO 21469 certified

Klüberoil NH1 4

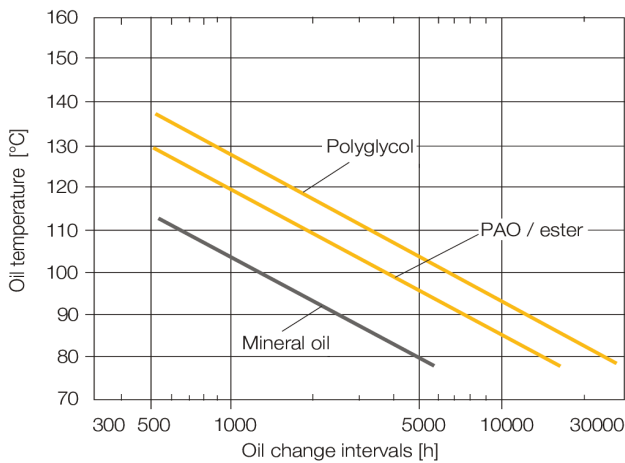
Synthetic gear oils for the food-processing industry



Benefits of synthetic gear oils from Klüber Lubrication

Achievable oil change intervals

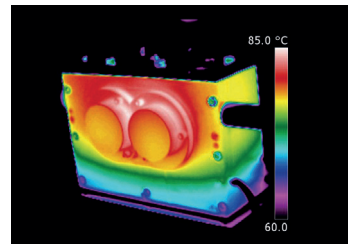
The prolonged service life of synthetic lubricants and the consequent longer oil change intervals can reduce equipment downtime and save resources. In some cases, lubrication for-life is possible.



Gear oils' temperature behaviour in spur gears

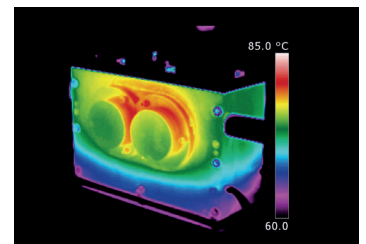
Our synthetic gear oils offer significantly higher efficiency than a standard gear oil based on mineral oil. Even in spur gears, an oil temperature reduction from 85 °C with mineral oil to 80 °C with Klüber Lubrication synthetic gear oils based on PAO can be achieved, as shown in the thermal pictures below. This results in a reduction of energy consumption, longer lifetime of the gearbox and less maintenance.

Standard gear oil
(Mineral oil, ISO VG 220)



$\vartheta_{oil} = 85\text{ °C}$

Synthetic gear oil
(Based on PAO)



$\vartheta_{oil} = 80\text{ °C}$

To optimise the service life of your equipment or if you have any other questions regarding your application, our experts will be pleased to help you.

It is our aim to offer you high-quality speciality lubricants and services around the globe along with the high technical competence Klüber Lubrication is known for. We meet this aim through our worldwide network of production and sales companies, and our highly specialised local experts are ready to respond to your individual requirements.

Contact our specialists now to learn more about our solutions or email us.

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