

Klüber Summit FG Elite 32, 46, 68, 100, 150

Fully synthetic compressor oils for the food-processing and pharmaceutical industries



Your benefits at a glance

- Klüber Summit FG Elite series is NSF H1 registered for use in the food-processing and pharmaceutical industries and complies with FDA 21 CFR Sec 178.3570
- ISO 21469 certified – supports compliance with the hygienic requirements of your production. You will find further information on ISO Standard 21469 on our website www.klueber.com
- Low maintenance and operating costs due to extended oil change intervals up to 8,000 operating hours* in oil-lubricated air compressors and vacuum pumps
- Easy compressor conversion from mineral oils to the synthetic Klüber Summit FG Elite series due to miscibility and compatibility with common seal materials**
- The special product formulation ensures cleanliness of the oil-carrying components, thus enabling efficient operation of compressed-air plants.
- Longer service life of oil filters, activated carbon filters and oil separators
- Very good water separation ability
- Surpasses the requirements of DIN 51506-VDL and ISO 6743-3 L-DAJ (VG 32/46/68) / L-DAB (VG 100/150)

Your requirements - our solution

Klüber Summit FG Elite series compressor oils were especially developed for the food-processing and pharmaceutical industries. It clearly outperforms conventional food-grade compressor oils. Its high-quality base oils and special additive package tuned to the requirements of air compressors offer excellent oxidation stability. Due to the innovative product concept, the formation of oil-related residues is reduced and oxidative deposits or sludge build-up minimised. These benefits enable longer oil change intervals and service life of oil filters and separators.

The product is miscible with mineral oils and other synthetic hydrocarbon oils. It is registered as NSF H1 and therefore complies with FDA 21 CFR 178.3570. Klüber Summit FG Elite series was developed for incidental contact with products and packaging materials in the food-processing, cosmetics, pharmaceutical or animal feed industries. The use of Klüber Summit FG Elite can contribute to increased reliability of your production processes. Nevertheless it is recommended to conduct an additional risk analysis, e.g. HACCP.

Application

Klüber Summit FG Elite series has been especially formulated for rotary screw (VG 32 / 46 / 68), vane and reciprocating air compressors (VG 100 / 150) and vacuum pumps (VG 68 / 100) used in the food-processing and pharmaceutical industries.

Application notes

When selecting the oil viscosity for air compressors, please observe the manufacturers' instructions. Notes on switching from mineral to synthetic oils:

When switching a used compressor to Klüber Summit FG Elite series, drain old oil from whole circuit of compressor while still warm. We also recommend changing all oil filters and separators. Then refill the compressor with a Klüber Summit FG Elite series oil. When switching from mineral oil to a synthetic Klüber Summit FG Elite oil, please bear in mind that the compressor may contain oxidation residues in the form of blackened or contaminated oil. Typical symptoms are black discoloration or impurities in the previously used oil. As such residues can affect the service life of the fresh Klüber Summit FG Elite oil, the compressor should be cleaned using the Klüber Summit Varnasolv conditioner.

After changing over to Klüber Summit FG Elite series, we recommend determining the oil change interval through an oil analysis.

For further information please turn to your contact person at Klüber Lubrication or see the product information leaflet on Klüber Summit Varnasolv.

*The indicated oil change intervals are guide values which are based on practical experience. They depend on the intended use, the application method and the technical condition of the compressor. Lubricants change their condition depending on the mechano-dynamical loads, pressures and temperatures and the mixing with oil residues or build-ups of the previous oils fills. Such changes in

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product properties may have an effect on the oil change intervals and the function of components.

**These data are based on our current knowledge and experience. Owing to the many different elastomer compositions we recommend checking their compatibility and other influencing factors that are relevant for the application with the component and under conditions similar to series application.

Material safety data sheets

Material safety data sheets can be requested via our website www.klueber.com. You may also obtain them through your contact person at Klüber Lubrication.

Pack sizes	Klüber Summit FG Elite 32	Klüber Summit FG Elite 46	Klüber Summit FG Elite 68	Klüber Summit FG Elite 100
Canister 1 l		+	+	+
Canister 5 l		+		
Canister 20 l		+		
Bucket 19 l	+	+	+	+
Drum 208 l	+	+	+	+

Pack sizes	Klüber Summit FG Elite 150
Canister 1 l	+
Canister 5 l	
Canister 20 l	
Bucket 19 l	+
Drum 208 l	+

Characteristics	Klüber Summit FG Elite 32	Klüber Summit FG Elite 46	Klüber Summit FG Elite 68	Klüber Summit FG Elite 100
Article number	050186	050136	050183	050181
NSF H1 registration number	159549	150874	159550	159547
Demulsifying capacity, DIN ISO 6614 /ASTM D1401, 54°C	40-37-3 (30) ml (min)	40-37-3 (30) ml (min)	40-37-3 (30) ml (min)	
Demulsifying capacity, DIN ISO 6614 /ASTM D1401, 82°C				40-37-3 (60) ml (min)
Flash point, DIN EN ISO 2592, Cleveland open cup	≥ 220 °C	≥ 230 °C	≥ 250 °C	≥ 250 °C
ISO viscosity grade, DIN ISO 3448, ISO VG	32	46	68	100
Kinematic viscosity, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 100°C	approx. 6.0 mm ² /s	approx. 7.6 mm ² /s	approx. 10.1 mm ² /s	approx. 14.3 mm ² /s
Kinematic viscosity, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 40°C	approx. 32 mm ² /s	approx. 46 mm ² /s	approx. 66 mm ² /s	approx. 102 mm ² /s
Viscosity index, DIN ISO 2909	≥ 130	≥ 120	≥ 120	≥ 120

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Characteristics	Klüber Summit FG Elite 32	Klüber Summit FG Elite 46	Klüber Summit FG Elite 68	Klüber Summit FG Elite 100
Pour point, DIN ISO 3016	≤ -51 °C	≤ -34 °C	≤ -35 °C	≤ -36 °C
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 months	36 months	36 months	36 months

Characteristics	Klüber Summit FG Elite 150
Article number	050182
NSF H1 registration number	159548
Demulsifying capacity, DIN ISO 6614 /ASTM D1401, 54°C	
Demulsifying capacity, DIN ISO 6614 /ASTM D1401, 82°C	40-37-3 (60) ml (min)
Flash point, DIN EN ISO 2592, Cleveland open cup	≥ 250 °C
ISO viscosity grade, DIN ISO 3448, ISO VG	150
Kinematic viscosity, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 100°C	approx. 19 mm ² /s
Kinematic viscosity, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 40°C	approx. 150 mm ² /s
Viscosity index, DIN ISO 2909	≥ 120
Pour point, DIN ISO 3016	≤ -39 °C
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 months

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 90 years.

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