

RENOLIN

Compressor Oils

MOVING YOUR WORLD

LUBRICANTS.
TECHNOLOGY.
PEOPLE.



MOVING YOUR WORLD

We want to keep the world moving, with innovative and technological lubrication solutions that will have a lasting impact on the future.

To do this, we have combined our knowledge and experience across many applications.

Our goal: to keep our customers' world moving in an efficient, sustainable and reliable way.

Today and tomorrow...

What can we move for you?

FUCHS LUBRICANTES

Key Information:

Company: FUCHS LUBRICANTES S.A.U., a company of the FUCHS Group

Headquarters: Castellbisbal

Product Range: Over 10,000 products for all kinds of uses in industry and the automotive

Certifications: ISO 9001:2015, IATF 16949:2016; ISO-14001:2015; ISO 45001:2015; Innovative SME; 100 % Renewable Energy Certificate

CO2-neutral production*.

Since 1931 we have been pursuing the same goal: to keep the world moving. At FUCHS we develop, produce and market technologically innovative lubrication solutions with a sustainable impact on the future. Trust is the basis of everything that defines us and also a promise to our clients, which comprises virtually all sectors and areas of application.

Our extensive experience and a team of more than 500 professionals in the fields of science and engineering work to develop more efficient and sustainable solutions, always taking into account compliance with standards and regulations at all levels. Our extensive process knowledge and dialogue with our customers enables us to provide a reliable, safe and efficient service beyond the lubricant.

The Spanish subsidiary has its own R&D laboratories, which are a reference within the FUCHS Group, and a sustainable production plant for energy generation and consumption. These are the differentiators that enable us to continue to move the world.

* Unavoidable CO₂ emissions are offset by compensatory measures.

Air compressor lubricants as essential construction element

The lubrication has a significant influence on the behavior of compressors and their availability.

Therefore, in order to maintain reliable, economical and safe operation, the selection and correct application of the lubricant is of particular importance. FUCHS offers you the right air compressor lubricant for your compressor and your special application.

The main tasks of a compressor lubricant include:

- Lubricating the bearings
- Sealing (minimizing backflow losses)
- Dissipation of compression heat
- Corrosion protection (iron and non-ferrous metals)
- Wear protection

To meet these requirements, high-performance air compressor lubricants need the following properties:

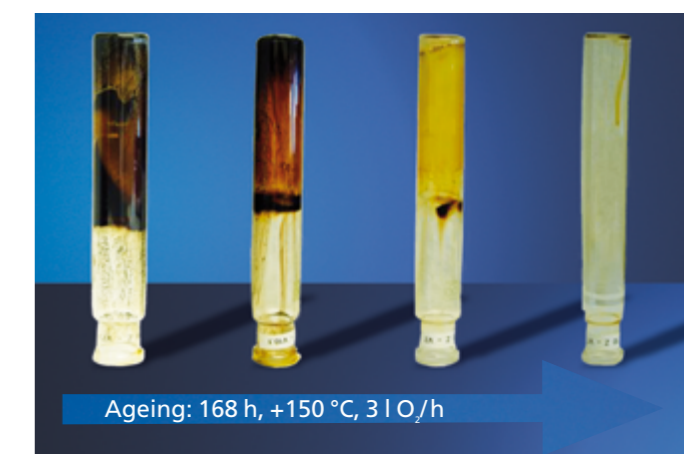
- Excellent oxidative and thermal stability
- Low evaporation / coking tendency
- Low foaming tendency
- Good long-term viscosity-temperature behavior
- Good air release properties
- High corrosion protection
- Excellent aging resistance
- Long service life
- Good filtration behavior
- Extremely low residue formation

In particular the temperature and aging resistance (thermal / oxidative stability; tendency to evaporate / coke) are of great importance for safety reasons and in order to achieve a long service life.

In recent years screw compressors have not only gained market share but also their performance efficiency could be increased. Today's systems have a higher specific output with a smaller size. Among other things, this leads to increased requirements for the lubricants used, since the amount of oil available for cooling and lubrication is steadily decreasing.

In order to reduce operating costs and minimize downtimes for maintenance, the maintenance intervals have been extended. This extension also automatically leads to the extension of the oil change intervals. This and higher air compression end temperatures represent an increasing load on the compressor oils. For example, many systems are already operated with air compression end temperatures of up to 110 ° C. In general, the final compression temperatures are lower and in the range of 80° C - 95° C.

Thermal stability / sludge tendency (FUCHS Inhouse Test)



ITS ALL ABOUT THE RIGHT LUBRICANT

Today compressed air is an important energy source for a lot of technical applications. So producing compressed air reliably is very important for the users. That's why air compressors are key for a lot of industrial applications.

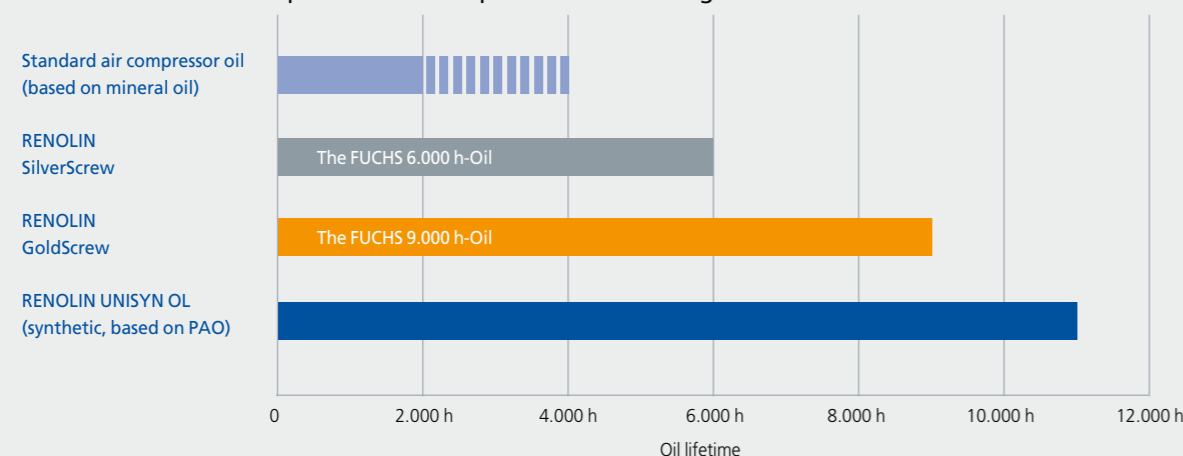
Lifetime & oil change intervals of screw compressor oils.
Average values at 85°C discharge temperature

Oil lifetime*	Performance level	Product
2.000 h – 3.000 h	Basic performance	RENOLIN SilverScrew The FUCHS 6000 h-Oil
3.000 h – 4.000 h	Medium performance	RENOLIN SilverScrew The FUCHS 6000 h-Oil
4.000 h – 6.000 h	Medium – high performance	RENOLIN SilverScrew The FUCHS 6000 h-Oil
6.000 h – 9.000 h	High performance	RENOLIN GoldScrew The FUCHS 9000 h-Oil
9.000 h – 12.000 h	Highest performance	RENOLIN UNISYN OL (Basis PAO)
12.000 h – 15.000 h	Highest performance	RENOLIN SynAir 46 (Basis PAG/Ester)

* Oil lifetime at reference conditions:
- Discharge temperature 85 °C
- Average ambient temperature 10-30°C/average ambient air quality,

FUCHS air compressor oils – For extra long oil change intervals

Pict. 1: Standard air compressor oil in comparison to FUCHS High Performance Products



Air compressor lubricants in practice

RENOLIN UNISYN OL-range

Fully synthetic high-performance air compressor oils based on synthetic polyalphaolefin base oils. The products have a high natural viscosity index, excellent low-temperature behavior and outstanding air separation properties.

RENOLIN Silver Screw

The products of the RENOLIN SilverScrew series are high-tech air compressor fluids with high oxidative and thermal stability for an extended oil service life of up to 6,000 operating hours. The products are particularly recommended for use in oil-injected screw compressors.

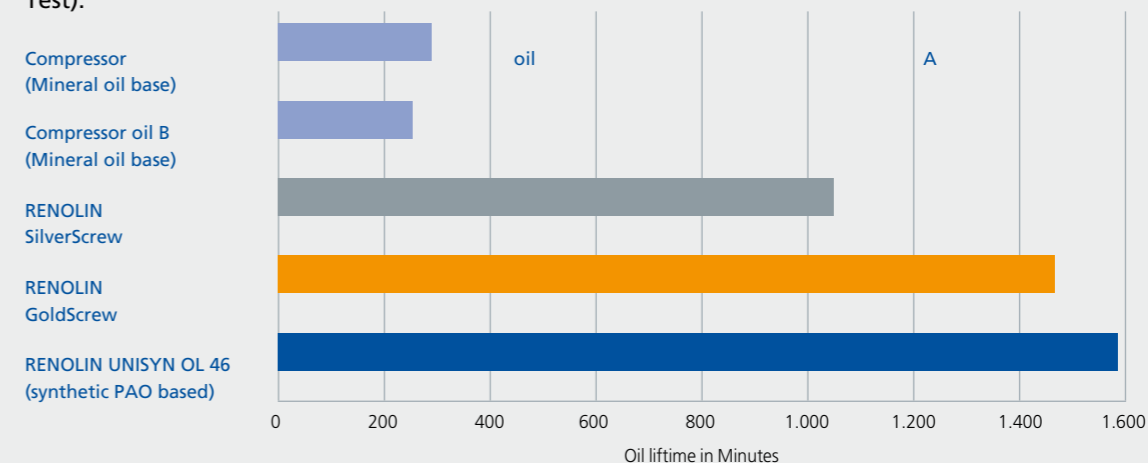
RENOLIN Gold Screw

The RENOLIN GoldScrew range of products are outstanding high-tech air compressor fluids with extremely high oxidative and thermal stability. They are designed for an extended service life of up to 9,000 operating hours. The lubricants of the RENOLIN GoldScrew series represent the highest class of base oil and additive technology in the field of oil-injected screw compressors.

FUCHS always offers you the right fluid for your screw compressor

Oxidation stability RPVOT at 150°C according to ASTM D-2272

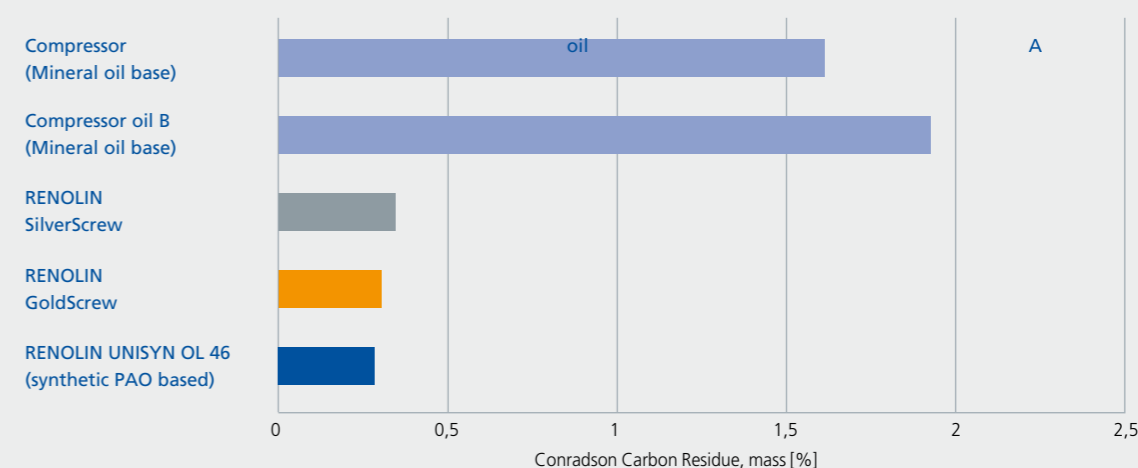
Pict. 2: Typical results for common screw compressor oils ISO VG 46 (RPVOT Test).



Ageing behavior according DIN 51 352-2:

Increase of Conradson Carbon Residue (CCR)

Pict. 3: Typical results for common screw compressor oils ISO VG 46 (Test acc. DIN 51352-2).



All information corresponds to the current state of knowledge and our development. We reserve the right to make changes. As of 04/2012

Compressor Oils



Product name	Description	Density at 15 °C kg/m ³	Flash point Clev. °C	Kin. visc. at 40 °C mm ² /s	Kin. visc. at 100 °C mm ² /s	VI	Pour-point °C	Main application area
RENOLIN SilverScrew 32	Range RENOLIN SilverScrew High-tech air compressor fluids with high oxidative and thermal stability, which allows oil lifetimes of up to 6000h.	863	235	32	5.5	108	-38	Universal air compressor fluids for oil injected screw, vane and piston compressors.
RENOLIN SilverScrew 46		868	244	46	6.9	105	-36	
RENOLIN SilverScrew 68		870	255	68	9.0	106	-40	
RENOLIN GoldScrew 46	Range RENOLIN GoldScrew Outstanding high-tech air compressor fluids with excellent oxidative and thermal stability, which allows oil lifetimes of up to 9000h.	855	260	46	7.6	260	-39	Universal air compressor fluids for oil injected screw, vane and piston compressors.
RENOLIN GoldScrew 68		871	278	68	9.4	278	-33	
	Surpasses the requirements of DIN 51506:VDL. Corresponds to ISO 6743-3-DAJ. Corresponds to several OEM Requirements.							
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RENOLIN UNISYN OL 32	Range RENOLIN UNISYN OL Fully-synthetic cooling oils for piston and screw compressors based on polyalphaolefins with excellent oxidation stability, outstanding wear protection, good demulsification and excellent viscosity-temperature behaviour. High viscosity index. Excellent air release. Allow service intervals to be extended. Lubricating oils VDL according to DIN 51506 and synthetic hydraulic oils according to DIN 51524-2/3.	838	240	32	6.1	142	<-60	Fully-synthetic screw compressor oils based on PAO for extended oil change intervals even when subject to high thermal loads. Also suitable for highly loaded hydraulic systems. Excellent air release properties. Extended oil drain intervals.
RENOLIN UNISYN OL 46		843	260	46	7.9	146	<-60	
RENOLIN UNISYN OL 68		845	260	68	10.6	144	-54	
RENOLIN UNISYN OL 100		849	260	100	14.2	146	-54	
RENOLIN UNISYN OL 150		849	250	150	19.4	148	-47	
RENOLIN SynAir 46	High performance synthetic air compressor fluid, excellent biodegradability according to OECD 301C > 60%. Excellent thermal and oxidation stability. Guarantee a reliable corrosion protection and compatibility with elastomers	992	271	48	8.7	161	-50	For use in flooded or oil-injected screw air compressors. For applications at high temperatures to reduce oil-related residues, varnish and sludge. Extended oil drain intervals. Biodegradable acc. to OECD 301 C > 60%.

FUCHS Group

Developing custom lubrication solutions for the most demanding challenges

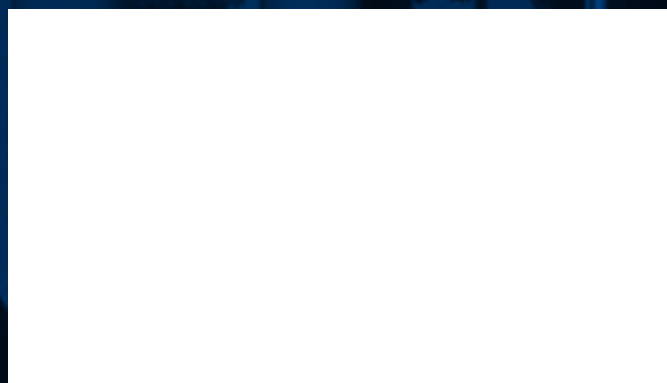
Our international team of experts from all sectors and industries focuses solely on lubrication solutions so that our customers can concentrate on their business.

It is our mission to ensure that we deliver technology that provides them with benefits and improves the sustainability of their processes.

Our engineering team is at your disposal!



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