

# Every drop of oil is a responsibility

### Beijing sanxing dingfeng technology co.,LTD.

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# Fexuel refrigeration chemical (Guangzhou) Co., LTD.

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**ENTERPRISE SURVE** 

# **COMPANY PROFILE**

Beijing Sanxin Dingfeng Technology Co., Ltd. is an old business enterprise focusing on therefrigeration field for several 10 years. In 2020, it established a wholly-owned subsidiary in Guangzhou, Fexuel refrigeration chemical (Guangzhou) Co., Ltd

Our company is the general agent of FEXUEL lubricating oil in China. Main business scope: refrigeration compressor lubricant, process gas compressor lubricant, air compressor lubricant, automotive air conditioning compressor lubricant, etc.

Five series product structure: POE polyol ester, AB synthetic alkyl benzene, MO mineral oil series, PAO poly @ olefin, PAG polyether and other synthetic lubricants.

At the same time, it is also a vertical channel supplier of other original brand refrigeration oil, and is committed to building a "fluid aircraft carrier" in the refrigeration field!

FEXEUL refrigeration oil is now supplied by many central air conditioning, cold storage, quick freezing tunnel, water / heat pump and refrigeration compressor manufacturers in China. And for a number of outstanding enterprises in the industry to provide international export OEM services, and received praise.

We have been working hard for more than ten years, insisting on import quality, and serving more than 30000 customers in total

Refrigeration oil series brands: FEXUEL, BVA, SUNISO, EMKARATE, CPI, BITZER, HANBELL, FUSHENG, YORK, Carrier, TRANE, DAPHNE, HITACHI, CLIMVENET, McQuay, Dunham-Bush...

The company adheres to the business philosophy of "professional, honest and trustworthy" to provide high-quality products and services. With years of accumulated experience and continuous innovation in the professional field, it has been unanimously affirmed and praised by customers in the same industry and won excellent reputation for the company.

Company service tenet: every drop of oil is a responsibility!

"Customer trust, the preferred brand supplier" is our enterprise from the first to the end of the pursuit. Highquality products, reasonable prices, at a critical time can always provide you with the most perfect products and services.

Our company has a large storage base in Beijing and Guangzhou, North and south channel, the major provincial capital cities within 48 hours on time.

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Official website: www.sxdfrhy.com

# ORPORATE CULTURE

# \* mission of company

To be a respected enterprise, to help customers succeed, to join hands with staff development, to shoulder social responsibility to purify the industry, to walk with the good:

### corporate vision

Make first-class products and become the most trusted partner of customers.

Build a first-class brand, become the most cutting-edge window of the industry.

# Company core values

Integrity, responsibility, innovation, sharing

# Concept of company development

Innovation creates success, learning wins tomorrow

## Company brand Concept

Integrity management, reputation first, brand is culture, culture reflects value, believe in the power of bra

Deep ploughing for 10 years, adhere to the import quality, the accumulative service users more than 30,000.





PRODUCT CLASSIFICATION

# CONTENTS >>>

Refrigeration compressor lubricating oil

Process gas compressor oil

Lubricating oil for air compressor

Automotive air conditioning compressor oil

# Five series product structure

1 POE polyol ester

AB synthesizes alkylbenzene

3 MO mineral oil series

PAO poly@ alkene

5 PAG polyether and other synthetic lubricants



# Data and introduction of Fexuel five series products Fexuel POE polyol ester synthesis refrigeration CompressI oil

FEXUEL POE synthetic refrigeration oil series products, applies to everything, R404A, R407C, R410A, R507, R23, R32, R508 HFC, HFO

Refrigerants and hydrocarbon refrigerants. This series of products based on oil polyol ester (POE), with the appropriate compound additive through special process refined catalytic and become, has excellent lubricity, chemical stability, hydrolysis stability and electrical insulation, with good high and low temperature during the process of refrigerant mixture intermiscibility, excellent resistance to emulsification, anti-foam, Make the refrigeration compressor run steadily and safely for a long time.



		FX-POE-32	FX-POE-46	FX-POE-68	FX-POE-100
Item	Method	Result	Result	Result	Result
Viscosity @ 40℃	ASTM D445	31.61mm²/s	43.86mm²/s	62.60mm²/s	98.85mm²/s
Viscosity @ 100°C	ASTM D445	5.210mm²/s	6.348mm²/s	7.935mm²/s	10.76mm²/s
Viscosity Index	ASTM D2270-10 (2016)	92	90	91	91
Density @15℃	ASTM D4052	0.9487g/cm <sup>3</sup>	0.9529g/cm <sup>3</sup>	0.9619g/cm <sup>3</sup>	0.9617g/cm <sup>3</sup>
Pour Point	ASTM D6749	-51°c	-39°c	-42°c	-36°c
Flash Point	ASTM D92	218°c	220°c	246°c	260°c
TAN	ASTM D974	0.01mgKOH/g	0.01mgKOH/9	0.01mgKOH/g	0.01mgKOH/g
Water Content	ASTM D6304	<50ppm	<50ppm	<50ppm	<50ppm
Breakdown Voltage	ASTM D877	50 kilovolts	53 kilovolts	57 kilovolts	62 kilovolts
(3h,100°C) Copper Strip corrosion	ASTM D130-19	1a Rating	1a Rating	1a Rating	1a Rating

\*The above data do not represent product specifications

		FX-POE-120	FX-POE-170	FX-POE-220
Item	Method	Result	Result	Result
Viscosity @ 40°C	ASTM D445	122.2mm²/s	165.1mm²/s	204.0mm²/s
Viscosity @ 100℃	ASTM D445	12.36mm²/s	15.08mm²/s	17.28mm²/s
Viscosity Index	ASTM D2270-10 (2016)	91	90	90
Density @15℃	ASTM D4052	0.9629g/cm <sup>3</sup>	0.9656g/cm <sup>3</sup>	0.9663g/cm <sup>3</sup>
Pour Point	ASTM D6749	-33°c	-30°c	-27°c
Flash Point	ASTM D92	266°c	268°c	266°c
TAN	ASTM D974	0.01mgKOH/g	0.01mgKOH/g	0.01mgKOH/g
Water Content	ASTM D6304	<50ppm	<50ppm	<50ppm
Breakdown Voltage	ASTM D877	56 kilovolts	59 kilovolts	51 kilovolts
(3h,100°C)	ASTM D130-19	1a Rating	1a Rating	1a Rating
Copper Strip corrosion				





# Fexuel POE dual alcohol ester synthesis refrigeration compressor oil

FEXUEL POE dual alcohol ester synthesis refrigerant oil series, suitable for HFC refrigerants such as R22. This series of products based on binary alcohol ester (POE) as base oil, with the appropriate compound additive through special process refined catalytic and become, has excellent lubricity, chemical stability, hydrolysis stability and electrical insulation, with good high and low temperature during the process of refrigerant mixture intermiscibility, demulsification, antifriction performance is excellent, Make the refrigeration compressor run steadily and safely for a long time.



20		FX-POE-85	FX-POE-150	FX-POE-320
Item	Method	Result	Result	Result
Viscosity @ 40°C	ASTM D445	87.65mm²/s	148.0mm²/s	329.0mm²/s
Viscosity @ 100°C	ASTM D445	13.47mm²/s	19.87mm²/s	35.53mm²/s
Viscosity Index	ASTM D2270-10 cosity Index (2016)		154	154
Density @15°C	ASTM D4052	0.9840g/cm <sup>3</sup>	0.9973g/cm <sup>3</sup>	1.016g/cm <sup>3</sup>
Pour Point	ASTM D6749	-51°c	-45°c	-39°c
Flash Point	ASTM D92	260°c	266°c	285°c
TAN	ASTM D974	0.01mgKOH/g	0.01mgKOH/g	0.01mgKOH/g
Water Content	ASTM D6304	<50ppm	<50ppm	<50ppm
Breakdown Voltage	ASTM D877	61 kilovolts	57 kilovolts	62 kilovolts
(3h,100°C) Copper Strip corrosion	ASTM D130-19	1a Rating	1a Rating	1a Rating

\*The above data do not represent product specifications

# Fexuel K series synthetic refrigerating oil

Fexuel K series is a polyester synthetic oil with a special formula. The product is suitable for specific refrigeration compressors, piston, vortex, screw, centrifugal air conditioning and refrigeration compressors using carbon dioxide (R744) and hydrocarbons as refrigeration medium.



		FX-60K	FX-85K
Item	Method	Result	Result
Viscosity @ 40°C	ASTM D445	60.06mm²/s	83.20mm²/s
Viscosity @ 100℃	ASTM D445	8.762mm²/s	10.76mm²/s
Viscosity Index	ASTM D2270-10 (2016)	118	117
Density @15°C	ASTM D4052	1.006g/cm <sup>3</sup>	1.009g/cm³
Pour Point	ASTM D6749	-48°c	-45°c
Flash Point	ASTM D92	256°c	261°c
TAN	ASTM D974	0.02mgKOH/g	0.02mgKOH/g
Water Content	ASTM D6304	<50ppm	<50ppm
Breakdown Voltage	ASTM D877	60 kilovolts	63 kilovolts
(3h,100°C)	ASTM D130-19	1a Rating	1a Rating
Copper Strip corrosion			



# Fexuel AB synthesis alkyl benzene series

FEXUEL AB synthetic alkyl benzene refrigerant oil series, suitable for R22, R600A, R290 HCFC refrigerants and hydrocarbon gas. This series of products are made of refined alkyl benzene refrigerating oil and POE synthetic refrigerating oil in a specific ratio, which have lower flocculation point, better low temperature fluidity, better high and low temperature compatibility and good chemical stability, so as to make the refrigeration compressor run stably and safely for a long time.



compressor run stably and safety for a long time.					
		FX-AB32	FX-AB68	FX-AB100	
Item	Method	Result	Result	Result	
Viscosity @ 40°C	ASTM D445	30.22mm²/s	68.33mm²/s	96.13mm²/s	
Viscosity @ 100℃	ASTM D445	4.9mm²/s	8.27mm²/s	10.48mm²/s	
Viscosity Index	ASTM D2270-10 (2016)	73	86	91	
Density @15℃	ASTM D4052	0.9031g/cm <sup>3</sup>	0.9345g/cm <sup>3</sup>	0.9398g/cm <sup>3</sup>	
Pour Point	ASTM D6749	-49°c	-47°c	-42°c	
Flash Point	ASTM D92	205°c	211 °c	214°c	
TAN	ASTM D974	0.01mgKOH/g	0.01mgKOH/g	0.01mgKOH/g	
Water Content	ASTM D6304	<50ppm	<50ppm	<50ppm	
Breakdown Voltage ASTM D877		43 kilovolts	43 kilovolts	45 kilovolts	
(3h,100°C)	ASTM D130-19	1a Rating	1a Rating	1a Rating	
Copper Strip corrosion					

\*The above data do not represent product specifications

# Fexuel GS mineral oil series product parameters

FEXUEL MO mineral refrigerant oil series products, suitable for R22, R600A, R123, R-717 HCFC refrigerants and CFC refrigerants. This series of products are made of selected naphthenic alkyl crude oil adding proper amount of alkyl benzene, after special treatment process and refined. This product does not contain wax, and has the superior lubricity, the chemical stability, and the refrigerant has the good high and low temperature compatibility, makes the refrigeration compressor long-term stable and safe operation.

	200 000 00	FX-MO3GS	FX-MO4GS	FX-MO5GS	
Item	Method	Result	Result	Result	
Viscosity @ 40℃	ASTM D445	30.51mm²/s	52.69mm²/s	103.5mm²/s	
Viscosity @ 100°C	ASTM D445	4.574mm²/s	6.290mm²/s	8.733mm²/s	
Viscosity Index (2016)		30	47	27	
Density @15°C	ASTM D4052	0.8836g/cm <sup>3</sup>	0.8956g/cm <sup>3</sup>	0.9037g/cm <sup>3</sup>	
Pour Point	ASTM D6749	-53°c	-40 °c	-34 °c	
Flash Point	ASTM D92	188°c	195°c	203°c	
TAN	ASTM D974	0.008mgKOH/g	0.008mgKOH/g	0.01mgKOH/g	
Water Content	ASTM D6304	<60ppm	<60ppm	<60ppm	
Breakdown Voltage	ASTM D877	40 kilovolts	46kilovolts	41kilovolts	

### Fexuel GS mineral oil series product parameters

<b>L</b>		FX-MO3GSD	FX-MO4GSD	FX-MO5GSD	
Item	Method	Result	Result	Result	
Viscosity @ 40℃	ASTM D445	30.51mm <sup>2</sup> /s	52.69mm²/s	103.5mm²/s	
Viscosity @ 100℃	ASTM D445	4.574mm²/s	6.290mm²/s	8.733mm²/s	
Viscosity Index	ASTM D2270-10 (2016)	30	47	27	
Density @15℃	ASTM D4052	0.8836g/cm <sup>3</sup>	0.8956g/cm <sup>3</sup>	0.9037g/cm <sup>3</sup>	
Pour Point	ASTM D6749	-53°c	-40°c	-34°c	
Flash Point	ASTM D92	188°c	195°c	203°c	
TAN	ASTM D974	0.008mgKOH/g	0.008mgKOH/g	0.01mgKOH/g	
Water Content	ASTM D6304	<60ppm	<60ppm	<60ppm	
Breakdown Voltage	ASTM D877	40 kilovolts	46kilovolts	41kilovolts	



# **FEXUEL** industrial refrigerating lubricants series

FX-1091 series products are suitable for HFC refrigerants such as R22, R-717 and CFC refrigerants. This series of products are made of selected mineral base oil with high refined alkyl benzene ratio, and are refined by special processing technology. This product does not contain wax, and has excellent lubricity, chemical stability, good high and low temperature compatibility with refrigerant, low water absorption, good deemulsification performance, make refrigeration compressor long-term stable and safe operation.

Item	Method	FX-1091-56 Result	FX-1091-68 Result	FX-1091-100 Result
Viscosity @ 40℃	ASTM D445	52.71mm²/s	64.21mm²/s	105.3mm²/s
Viscosity @ 100℃	ASTM D445	6.320mm²/s	6.940mm²/s	8.734mm²/s
Viscosity Index	ASTM D2270-10 (2016)	49	43	24
Density @15°C	ASTM D4052	0.9011g/cm <sup>3</sup>	0.9032g/cm <sup>3</sup>	0.9045g/cm <sup>3</sup>
Pour Point	ASTM D6749	-41°c	-39℃	-39℃
Flash Point	ASTM D92	198°c	210°c	210°c
TAN	ASTM D974	0.01mgKOH/g	0.01mgKOH/g	0.01mgKOH/g
Water Content	ASTM D6304	<50ppm	<50ppm	<50ppm
Breakdown Voltage	ASTM D877	42 kilovolts	45 kilovolts	62 kilovolts
(3h,100°C) Copper Strip corrosion	ASTM D130-19	1a Rating	1a Rating	1a Rating

\*The above data do not represent product specifications

FX-1061 series products are suitable for HFC refrigerants such as R22, R-717 and CFC refrigerants. This series of products are made of high refined alkyl benzene and refined by special processing technology. With excellent lubricity, chemical stability, good high and low temperature compatibility with refrigerant, low water absorption, good deemulsification performance, so that refrigeration compressor long-term stable and safe operation.

Item	Method	FX-1061-32	FX-1061-68	FX-1061-100
		Result	Result	Result
Viscosity @ 40℃	ASTM D445	31.15mm²/s	67.64mm²/s	98.56mm²/s
Viscosity @ 100°ℂ	ASTM D445	5.720mm²/s	9.980 mm <sup>2</sup> /s	13.44 mm²/s
Viscosity Index (2016)		126	130	135
Density @15°C	ASTM D4052	0.9291g/cm <sup>3</sup>	0.9345g/cm <sup>3</sup>	0.9540g/cm <sup>3</sup>
Pour Point	ASTM D6749	-47°c	-43°c	-41°c
Flash Point	ASTM D92	210°c	217°c	219°c
TAN	ASTM D974	0.01mgKOH/g	0.01mgKOH/g	0.01mgKOH/g
Water Content	ASTM D6304	<50ppm	<50ppm	<50ppm
Breakdown Voltage ASTM D877		43 kilovolts	43 kilovolts	45 kilovolts
(3h,100°C) Copper Strip corrosion	ASTM D130-19	1a Rating	1a Rating	1a Rating

\*The above data do not represent product specifications

FX-5600 series is suitable for R134a, R404A, R507, R23, R407C, R410A and other HCF refrigerants. This series of products are made of high refined polyester POE synthetic freezing oil, adding a proper amount of customized additives, and refined by special processing process. It has excellent lubricity, high thermal stability and chemical stability, and good compatibility with refrigerant at high and low temperature, so that the refrigeration compressor can run steadily and safely for a long time.

	2005 ACC 10	FX-5600-32	FX-5600-68	FX-5600-120	FX-5600-170
Item	Method	Result	Result	Result	Result
Viscosity @ 40℃	ASTM D445	31.53mm²/s	62.35mm²/s	121.87mm²/s	166.1 mm²/s
Viscosity @ 100℃	ASTM D445	5.231 mm²/s	8.012mm²/s	12.35 mm²/s	15.18 mm²/s
Viscosity Index	ASTM D2270-10 (2016)	94	93	91	91
Density @15 <sup>®</sup> C	ASTM D4052	0.9412g/cm <sup>3</sup>	0.9589g/cm <sup>3</sup>	0.9617g/cm <sup>3</sup>	0.9703g/cm <sup>3</sup>
Pour Point	ASTM D6749	-51°c	-42°c	-33°c	-32°c
Flash Point	ASTM D92	218°c	248°c	268°c	264°c
TAN	ASTM D974	0.01mgKOH/g	0.01mgKOH/g	0.01mgKOH/g	0.01mgKOH/g
Water Content	ASTM D6304	<50ppm	<50ppm	<50ppm	<50ppm
Breakdown Voltage	ASTM D877	50 kilovolts	57 kilovolts	62 kilovolts	56 kilovolts
(3h,100°C)	ASTM D130-19	1a Rating	1a Rating	1a Rating	1a Rating



# Fexuel process gas lubricating oil series

# Fexuel Hydrocarbon process gas compressor oil -4600 series

 $FX-4600\ series\ hydrocarbon\ process\ gas\ compressor\ oil\ is\ based\ on\ PAO\ (polyalpha\ olefins)\ synthetic\ oil.\ The\ 4600\ series\ is\ thermally\ stable\ and\ compatible\ with\ a\ wide\ range\ of\ hydrocarbon\ products.\ The\ strong\ oil\ film\ ensures\ good\ lubrication\ even\ after\ dilution.$ 

# Performance advantage

- synthetic PAO base oil as the main carrier of synthetic gas compressor oil, and hydrocarbon other compatibility
- Good thermal stability, guarantee the compression system long period of work
- Wider temperature range for better viscosity-temperature properties
- good demulsibility, narrow fraction high volatile stability, compared with general mineral oil, gas oil content is very low



		FX-4600-68	FX-4600-100	FX-4600-150
Item	Method	Result	Result	Result
Viscosity @ 40°C	ASTM D445	68.28mm²/s	101.8mm²/s	150mm²/s
Viscosity @ 100°C	ASTM D445	10.5mm²/s	14.7mm²/s	20mm²/s
Viscosity Index	ASTM D2270-10 (2016)	145	148	154
Pour Point	ASTM D6749	-45°c	-41°c	-41°c
Flash Point	ASTM D92	257°c	262°c	262°c
(3h,100°C)	ASTM D130-19	1a	1a	1a
Copper Strip corrosion				
Foaming Test @93.5°C	ASTM D892	5ml/0ml	5ml/0ml	5ml/0ml

\*The above data do not represent product specifications

# Fexuel Hydrocarbon process gas compressor oil -4601 series

FX-4601 series hydrocarbon process gas compressor oil is based on PAO (poly  $\alpha$  olefin) synthetic oil, and is compounded with excellent antioxidant and anti-corrosion additives. 4601 series have good thermal oxidation stability, widely compatible with other hydrocarbons, less carbon and sediment.

### Performance advantage

- Good thermal oxidation stability, to ensure the compression system long period of work
- Good thermal stability, guarantee the compression system long period of work
- Wider temperature range for better viscosity-temperature properties
- good demulsibility, narrow fraction high volatile stability, compared with general mineral oil, gas oil content is very low



Item	Method	FX-4601-46 Result	FX-4601-68 Result	FX-4601-100 Result	FX-4601-150 Result
Viscosity @ 40℃	ASTM D445	46.9mm²/s	68.0mm²/s	101mm²/s	152mm²/s
Viscosity @ 100°C	ASTM D445	8.1mm²/s	10.6mm²/s	14.6mm²/s	20.9mm²/s
Viscosity Index	ASTM D2270-10 (2016)	135	146	149	161
Pour Point	ASTM D6749	-50°c	-46°c	-43°c	-41°c
Flash Point	ASTM D92	252°c	258°c	262°c	266°c
(3h,100°C)  Copper Strip corrosion	ASTM D130-19	1a	1a	1a	1a
Foaming Test @93.5°C	ASTM D892	5ml/0ml	5ml/0ml	5ml/0ml	5ml/0ml





# Fexuel process gas lubricating oil series

# Fexuel Hydrocarbon process gas compressor oil -1516 series

FX-1516 synthetic process gas compressor oil is based on polyether synthetic oil, especially the effective anti-corrosion additives. Suitable for low carbon chain hydrocarbon gas compression liquefaction transport and refrigeration compression.

# Performance advantage

- Fully synthetic gas compressor oil based on polyether synthetic oil and unique additives with less gas dilution
- contains additives to protect equipment from wear and rust
- Low pour point makes it easier to start equipment at low temperatures, reducing friction
- High volatile stability, compared with general mineral oil, gas oil content is very low

VETYTOW				
Item	Method	FX-1516-68 Result	FX-1516-100 Result	FX-1516-150 Result
Viscosity @ 40°C	ASTM D445	69.2mm²/s	99.80mm²/s	150mm²/s
Viscosity @ 100°C	ASTM D445	12.6mm²/s	18.3mm²/s	25.8mm²/s
Viscosity Index	ASTM D2270-10 (2016)	186	200	205
Pour Point	ASTM D6749	-45°c	-41°c	-38°c
Flash Point	ASTM D92	225°c	229°c	232℃
Density @15°C	ASTM D4052	1.0 g/cm <sup>3</sup>	1.0 g/cm³	1.0 g/cm³
(3h,100°C)	ASTM D130-19	1a	1a	1a
Copper Strip corrosion				
Foaming Test @93.5°C	ASTM D892	5ml/0ml	5ml/0ml	5ml/0ml

\*The above data do not represent product specifications



# Fexuel Hydrocarbon process gas compressor oil -1519 series

FX-1519 synthetic process gas compressor oil is based on polyether synthetic oil, specially selected unique compound additive composition, effectively prevent hydrocarbon gas dilution. Special compound system, suitable for medium to heavy hydrocarbon gas compression.

# Performance advantage

- Fully synthetic gas compressor oil based on selected polyether synthetic oil and high temperature resistant additives, less gas dilution
- contains an additive formulation system to protect the equipment from wear and rust
- has a lower pour point than ordinary polyethers, making it easier to start equipment at low temperatures and reducing friction
- Reduce sludge and sediment production and improve production efficiency



· ·	N. d. d.	FX-1519-68	FX-1519-100	FX-1519-150
Item	Method	Result	Result	Result
Viscosity @ 40℃	ASTM D445	68.3mm²/s	102mm²/s	150mm²/s
Viscosity @ 100℃	ASTM D445	14.1mm²/s	19.1mm²/s	27.8mm²/s
Viscosity Index	ASTM D2270-10 (2016)	219	221	226
Pour Point	ASTM D6749	-41°c	-36°c	-35°c
Flash Point	ASTM D92	233℃	235°c	232°c
Density @15℃	ASTM D4052	1.0 g/cm³	1.0 g/cm <sup>3</sup>	1.0 g/cm³
(3h,100°C)	ASTM D130-19	1a	1a	1a
Copper Strip corrosion				
Foaming Test @93.5°C	ASTM D892	5ml/0ml	5ml/0ml	5ml/0ml



# Fexuel process gas lubricating oil series

# Fexuel Hydrocarbon process gas compressor oil -1507/1508 series

FX-1507/1508 series synthetic process gas compressor oil is a new generation of polyether synthetic oil as the main base oil, especially selected high temperature antioxidant and compound high efficiency additives composition, special anti-corrosion formula, especially suitable for high-pressure natural gas compression and other heavy hydrocarbon gas compression. Among them, PLUS series is a unique H2S - resistant formula system.

### Performance advantage

- Fully synthetic gas compressor oil based on new polyether synthetic oil and high temperature resistant additives to prevent gas dilution
- contains additives to protect equipment from wear and rust
- has lower pour point and better lubrication characteristics than traditional polyethers
- Plus formula is more suitable for sulfur-containing gas to inhibit corrosion

Item	Method	FX-1507-46	FX-1507-68	FX-1508-46	FX-1508-68
		Result	Result	Result	Result
Viscosity @ 40℃	ASTM D445	46.3mm²/s	68.2mm²/s	46.3mm²/s	68.2mm²/s
Viscosity @ 100℃	ASTM D445	7.6mm²/s	9.98mm²/s	7.6mm²/s	9.98mm²/s
Viscosity Index	ASTM D2270-10 (2016)	137	134	137	134
Pour Point	ASTM D6749	-40°c	-37°c	-40°c	-37°c
Flash Point	ASTM D92	258°c	267°c	258°c	267°c
(3h,100°C)	ASTM D130-19	1a	1a	1a	1a
Copper Strip corrosion					
Foaming Test @93.5°C	ASTM D892	5ml/0ml	5ml/0ml	5ml/0ml	5ml/0ml

\*The above data do not represent product specifications

# Fexuel Vinyl chloride compressor oil -4561 series

FX-4561 Series screw type air compressor oil is based on synthetic hydrocarbon and polyolefin. The unique additive system ensures the high temperature and chemical stability of the oil. Excellent low temperature performance ensures a wide range of use in the temperature area.

### Performance advantage

- •Better high temperature resistance and chemical stability to prevent sediment formation in the rotating parts of screw compressors
- Good oil/water separation performance, keep the compressor inner surface especially the oil/gas separator and oil/water separator system highly clean.
- compared with mineral oil, it has better performance at low temperature and is easy to start at low temperature
- suitable for screw type vinyl chloride compressor

lkana	Mathad	FX-4561-46	FX-4561-68
Item	Method	Result	Result
Viscosity @ 40℃	ASTM D445	46.32mm²/s	67.88mm²/s
Viscosity @ 100℃	ASTM D445	7.59mm²/s	10.6mm²/s
Viscosity Index	ASTM D2270-10 (2016)	132	138
Pour Point	ASTM D6749	-45°c	-44°c
Flash Point	ASTM D92	252°c	258°c

\*The above data do not represent product specifications

Forge ahead, the pursuit of excellence



# **Fexuel Air compressor** oil series

FX-6000 Series semi-synthetic screw air compressor oil is mainly based on multiple hydrotreating base oil and anti-high temperature synthetic oil, specially selected anti-high temperature antioxidant and compound high efficiency additives. The recommended oil change cycle is 6000 hours under standard operating conditions.

FX-6300 Series screw air compressor is made of high viscosity index base oil and latest technology additives, suitable for weak acid, weak alkali environment operation of oil injection screw air compressor. This series of products have good oxidation stability, viscosity and temperature performance and sludge cleaning performance, suitable for weak acid, weak alkali and other harsh environment, recommended oil change cycle 2000-4000 hours.

FX-6500 Series reciprocating air compressor oil is based on saturated polyol ester (POE) and high temperature resistant synthetic oil as the main base oil, especially high temperature resistant antioxidant and anti-wear extreme pressure agent. Suitable for reciprocating air compressor.

FX-6600 Series centrifugal compressor oil is based on polyether ester, with optimized additives specially selected for high temperature antioxidant and corrosion inhibitor. Suitable for gear lubrication of centrifugal compressor. It is not recommended to be used in aluminum die casting industry and acid gas environment, and it is not suitable for mixing with other non-polyether ester compressor oils such as mineral type and polyA olefins centrifugal type.

FX-6700 Series screw air compressor oil is based on synthetic hydrocarbon (SHC) and high temperature resistant synthetic oil as the main base oil, especially high temperature resistant antioxidants and acid inhibitors. Top synthetic hydrocarbon (SHC) air compressors with a recommended change cycle of 8,000-10,000 hours under standard operating conditions.

FX-6800 The series screw rotor coolant system is based on polyether ester, with optimized additives specially selected for high temperature antioxidant and acid inhibitor. It is recommended to replace the top coolant with a cycle of 8000-12000 hours under standard operating conditions. Not recommended for use in aluminum die casting and acid gas environments.

FX-6900 Series screw rotor coolant system is based on silicone oil, and the formula of anti-wear additives is optimized. Under standard operating conditions, it is recommended to change the oil cycle up to 30,000 hours of super rotor coolant.



# **Believe that professional select Fexuel**

		FX-6800-32	FX-6800-46	FX-6700-46	FX-6900-24KT
Item	Method	Result	Result	Result	Result
Viscosity @ 40°C	ASTM D445	39.73mm²/s	49.35mm²/s	46.00mm²/s	37.70mm²/s
Viscosity @ 100°C	ASTM D445	7.632mm²/s	9.01mm²/s	7.63mm²/s	15.58mm²/s
Viscosity Index	ASTM D2270-10 (2016)	165	167	133	426
Pour Point	ASTM D6749	-53°c	-50°c	-44°c	-58°c
Flash Point	ASTM D92	266°c	267°c	258°c	282°c

	8	FX-6000-46	FX-6300-32	FX-6600-22	FX-6500-150
Item	Method	Result	Result	Result	Result
Viscosity @ 40℃	ASTM D445	46.0mm²/s	35.66mm²/s	25.19mm²/s	151.6mm²/s
Viscosity @ 100°C	ASTM D445	6.96mm²/s	6.831mm²/s	5.31mm²/s	13.83mm²/s
Viscosity Index	ASTM D2270-10 (2016)	108	155	150	86
Pour Point	ASTM D6749	-31°c	-46°c	-52°c	-43°c
Flash Point	ASTM D92	227°c	251°c	235°c	267°c



# **Fexuel Automobile air** conditioning compressor oil

### R134a Synthetic compressor lubricant for automotive air conditioning compressors

The FX-1503 series is a single-seal polyalkyl diol (polyether, PAG) compressor lubricant designed specifically for traditional R134a automotive air conditioning system compressors. 1503 series has better tribological properties and excellent compatibility with R134a, which can effectively protect the operation of the compressor and prolong the service life.

#### Performance advantage

- Good lubrication characteristics, anti-wear protection and high load capacity, the optimized base fluid and formula system can extend the working life of the relevant parts of the friction pair and reduce the repair cost
- · Good high temperature resistance and chemical stability to prevent the formation of sediment in compressor components
- Excellent mutual solubility with R134a, reduce the fluid retention of the evaporator, improve the efficiency of the compressor

#### **Application to recommend**

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Recommended use of refrigerant R134a for non-electric vehicle air conditioning compressors: one-way swash plate, two-way swash plate, rotary vane and scroll

Item	Method	FX-5100-46	FX-5100-56	FX-5100-68	FX-5100-100
item	Metriod	Result	Result	Result	Result
Viscosity @ 40℃	ASTM D445	46.9mm²/s	68.0mm²/s	101mm²/s	152mm²/s
Viscosity @ 100℃	ASTM D445	8.1mm²/s	10.6mm²/s	14.6mm²/s	20.9mm²/s
Viscosity Index	ASTM D2270-10 (2016)	135	146	149	161
Pour Point	ASTM D6749	-50°c	-46°c	-43°c	-41 °c
Flash Point	ASTM D92	252°c	258°c	262°c	266°c
(3h,100°C)	ASTM D130-19	1a	1a	1a	1a
Copper Strip corrosion					
Foaming Test @93.5°C	ASTM D892	5ml/0ml	5ml/0ml	5ml/0ml	5ml/0ml

#### Fexuel R1234yf Synthetic compressor lubricant for automotive air conditioning compressors

FX-5101 lt is a new type of sealed polyalkyl diol (polyether, PAG) compressor lubricant, specially suitable for the next generation environmental protection refrigerant R1234yf (HFO, 2,3,3, 3-tetrafluoropropylene) compressor of automotive air conditioning system. Fx-5101 is compatible with R-1234YF (HFO, 2,3,3, 3-tetrafluoropropylene) and has a wide temperature range. Double-ended alkylation minimizes the tendency to absorb water and provides excellent lubrication for automotive air conditioning compressors. The FX-5101 product series is also suitable for the original R134a automotive air conditioning system.

#### Performance advantage

- · Good lubrication characteristics, anti-wear protection and high load capacity, the optimized base oil and formula system can extend the working life of the relevant parts of the friction pair and reduce the repair cost
- · Good high temperature resistance and chemical stability to prevent the formation of sediment in compressor components
- and R1234yf excellent mutual solubility, reduce evaporator fluid retention, improve the efficiency of the compressor
- less moisture absorption, compatible with seals and rubber elastic parts

#### **Application to recommend**

Non-electric vehicle air conditioner compressors with R1234yf refrigerant are recommended: one-way swash plate, two-way swash plate, rotary vane, and scroll.

Item	Method	FX-5101-46 Result	FX-5101-56 Result	FX-5101-68 Result
Viscosity @ 40℃	ASTM D445	47.55mm²/s	55.37mm²/s	67.89mm²/s
Viscosity @ 100°C	ASTM D445	9.997mm²/s	11.55mm²/s	13.94mm²/s
Viscosity Index	ASTM D2270-10 (2016)	204	209	214
Pour Point	ASTM D6749	-53°c	-53°c	-53°c
Flash Point	ASTM D92	226°c	227°c	227°c
(3h,100°C)	ASTM D130-19	1a	1a	1a
Copper Strip corrosion				
Foaming Test @93.5°C	ASTM D892	5ml/0ml	5ml/0ml	5ml/0ml

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# Fexuel Automobile air conditioning compressor oil

# Fexuel Synthetic compressor lubricant for automotive air conditioning electric compressors

FX-5300 is a traditional polyols ester (POE) compressor lubricant, suitable for environmental protection refrigerant R134a automobile air conditioning electric system compressor. Fx-5300 has good compatibility with R134a and wide temperature range. The polyol ester technology based on FX-5300 can greatly reduce the water absorption performance and provide good electrical insulation performance for automobile air conditioning electric fully enclosed compressor.

### Performance advantage

- relative to polyether products have lower hygroscopic performance, improve the electrical insulation performance of fully closed compressor, avoid the phenomenon of leakage compressor
- Good high temperature resistance, prevent the formation of sediment in compressor components and R134a excellent high and low temperature solubility, reduce the evaporator fluid retention,
- improve the efficiency of the compressor
- less moisture absorption, compatible with seals and rubber elastic parts

#### **Application to recommend**

The recommended use of refrigerant R134a for electric vehicle air conditioning compressors: one-way swash plate, two-way swash plate, rotary vane and scroll type.

		FX-5300-46	FX-5300-68
Item	Method	Result	Result
Viscosity @ 40°C	ASTM D445	46.13mm²/s	68.27mm²/s
Viscosity @ 100°C	ASTM D445	6.558mm²/s	8.540mm²/s
Viscosity Index	ASTM D2270-10 (2016)	90	94
Pour Point	ASTM D6749	-46°c	-46°c
Flash Point	ASTM D92	251°c	253°c
(3h,100°C) Copper Strip corrosion	ASTM D130-19	1a	1a
Foaming Test @93.5°C	ASTM D892	5ml/0ml	5ml/0ml

\*The above data do not represent product specifications

# Fexuel Synthetic compressor lubricant for automotive air conditioning electric compressors

FX-5310 It is a fully synthetic type of electric vehicle air conditioning compressor oil, suitable for environmental protection refrigerant R134a and the next generation refrigerant R1234yf car air conditioning electric system compressor. FX-5310 is compatible with R134a and R1234yf and has a wide range of temperature. Due to the special base oil technology of FX-5310, it can greatly reduce the water absorption performance, provide good electrical insulation performance and take into account the tribological properties.

## Performance advantage

- Compared with polyether has a good volume resistivity, improve the electrical insulation performance of fully closed compressor, avoid the phenomenon of leakage compressor
- Good high temperature resistance and chemical stability to prevent the formation of sediment in compressor components
- excellent tribological performance, reduce the failure rate of compressor and R134a and R1234yf excellent high and low temperature mutual solubility, reduce the
- evaporator oil retention, improve the efficiency of the compressor

#### **Application to recommend**

The recommended use of refrigerants R134a and R1234yf for electric vehicle air conditioning compressors: one-way swash plate, two-way swash plate, rotary vane and scroll type.

Item	Method	FX-5301-46 Result	FX-5301-56 Result
Viscosity @ 40°C	ASTM D445	46.79mm²/s	68.25mm²/s
Viscosity @ 100°C	ASTM D445	9.12mm²/s	12.56mm²/s
Viscosity Index	ASTM D2270-10 (2016)	180	186
Pour Point	ASTM D6749	-53°c	-53°c
Flash Point	ASTM D92	221°c	227°c
(3h,100°C) Copper Strip corrosion	ASTM D130-19	1a	1a
Foaming Test @93.5°C	ASTM D892	5ml/0ml	5ml/0ml



# Some chilled oil recommended comparison table

# BITZER

Compress mode	Applicable Refrigerant types	Original model number	Fexuel Corresponding to the model unmber
Piston / Vortex machine	HCFC	B5.2	FX-MO3GS
Piston / Vortex machine	HFC	BSE55	FX-POE68
Piston / Vortex machine	HFC	BSE32	FX-POE32
Screw compressor	HCFC	B320SH	FX-POE320
Screw compressor	HCFC	B100	FX-AB100
Screw compressor	HFC	BSE170	FX-POE170
Piston / Screw compressor	CO <sub>2</sub>	BSE60K	FX-60K
Piston / Screw compressor	CO <sub>2</sub>	BSE85K	FX-85K

### FUSHENG

Compress mode	Applicable Refrigerant types	Original model number	Feruel Corresponding to the model unmber
Screw compressor	HCFC	FS-100M	FX-MO5GS
Screw compressor	HCFC	FS-150R	FX-POE150
Screw compressor	HCFC	FS-300R	FX-POE320
Screw compressor	HCFC	FS-100A	FX-AB100
Screw compressor	HFC	FS-120R	FX-POE120
Screw compressor	HFC	FS-220R	FX-POE220

#### YORK

Compress mode	Applicable Refrigerant types	Original model number	Fexuel Corresponding to the model unmber
Screw compressor	HCFC	S	FX-POE85
Screw compressor	HFC	L	FX-POE120
Centrifuge	HFC	K	FX-POE32
Screw compressor	HFC	Н	FX-POE68
Screw compressor	HFC	W	FX-POE220

### TRANE

Compress mode	Applicable Refrigerant types	Original model number	Fexuel Corresponding to the model unmber
Screw compressor	HFC	48	FX-POE68
Screw compressor	HCFC	15/22/31	FX-AB68

#### Carrier

Compress mode	Applicable Refrigerant types	Original model number	Fexuel Corresponding to the model unmber
Screw compressor	HCFC	PP23BZ101005C	FX-MO4GS
Centrifuge	HFC	PP23BZ103005C	FX-POE68
Screw compressor	HFC	PP23BZ110005C	FX-POE220

# **CLIMAVENETA**

Compress mode	Applicable Refrigerant types	Original model number	Fexual Corresponding to the model unmber
Screw compressor	HCFC	UC6460194	FX-POE320
Screw compressor	HFC	UC6460197	FX-POE170
Screw compressor	HCFC	UC6460161	FX-4GSD

## HANBELL

Compress mode	Applicable Refrigerant types	Original model number	Fexuel Corresponding to the model unmber
Screw compressor	HCFC	HBR- A01	FX-MO5GS
Screw compressor	HCFC	HBR-B01	FX-POE320
Screw compressor	HCFC	HBR-B02	FX-POE150
Screw compressor	HCFC	HBR-B03	FX-AB100
Screw compressor	HFC	HBR-B04	FX-POE220
Screw compressor	HFC	HBR-B05	FX-POE68

# Refcomp

Compress mode	Applicable Refrigerant types	Original model number	Fexuel Corresponding to the model unmber
Screw compressor	HCFC	6100	FX-AB100
Screw compressor	HCFC	6150	FX-POE150
Screw compressor	HFC	6170	FX-POE170
Screw compressor	HCFC	6320	FX-POE320

# McQuay

Compress mode	Applicable Refrigerant types	Original model number	Fexuel Corresponding to the model unmber
Centrifuge	HFC	A	FX-POE32
Screw compressor	HFC	В	FX-POE68
Screw compressor	HFC	E	FX-POE68
Screw compressor	HCFC	С	FX-MO4GS

# KOBELCO

Compress mode	Applicable Refrigerant types	Original model number	Fexuel Corresponding to the model unmber
Screw compressor	HCFC	3GSD	FX-MO3GSD
Screw compressor	HFC	FVC-32	FX-POE32

# DunHan-Bush

Compress mode	Applicable Refrigerant types	Original model number	Fexuel Corresponding to the model unmber
Screw compressor	HCFC	2#	FX-MO4GS
Centrifuge	HFC	2#	FX-POE68
Screw compressor	HCFC	3#	FX-POE320
Screw compressor	HFC	7#	FX-POE120
Screw compressor	HFC	15#/20#	FX-POE170

# Danfoss

Compress mode	Applicable Refrigerant types	Original model number	Fexuel Corresponding to the model unmber
Vortex machine	HCFC	160P	FX-MO4GS
Vortex machine	HCFC/HFC	160SZ	FX-POE32
Vortex machine	HCFC/HFC	320SZ	FX-POE68

