

Atlas Copco Lubricants Piston Fluid

Concentrated performance for piston compressors

Piston compressors pose extreme demands to lubricants: the high compression temperature - possibly exceeding 150°C (300°F) - pressures up to 20 bar, condensation - typically during low cycle load - and dust contamination in installations that are not optimally maintained.

Traditional lubricants cannot cope with these extreme conditions, resulting in fast oil degradation, overheating and potentially irreversible damage and high repair costs. Therefore, high performing lubricants increase the equipment lifetime. The Atlas Copco Piston Fluid has been developed as a high resistance lubricant, withstanding severe conditions, with a long service interval and superior performance.

Considering the low oil content in piston compressors, often less than 2 liters, the economy of lesser quality oils simply is not worth the risk.



Features

Benefits

Specifically designed for piston compressor operation

Piston Fluid is not just another oil, but an engineered product designed to resist the demanding operating conditions of piston compressors.

Long lubricant lifetime, despite high operating temperatures, high pressures and often excessive dust contamination.

Robust formulation to cope with high compression temperatures

Resistance to very high operating temperatures is critical. The base oil quality, the chemical formulation of additives and the high quality blending process ensure superior temperature resistance of Piston Fluid.

Sustained lubricant properties under severe operating conditions, for increased longevity of the equipment.

Low pour point maintains properties under low temperatures

The lower pour point limits the lubricant's resistance to flow, which is important during starting.

Smooth operation, even in case of outdoor operation.

Contamination resistance against condensation

Piston compressors operate with a very low load cycle to enable cooling; the lubricant heats up during continuous compression and cools down during stopping, when condensation occurs. In this phase, water resistance and protection against miscibility are essential to maintain lubricant properties.

No early degradation of the oil due to water presence in the piston crankcase. Increased protection against corrosion. Long lifespan of lubricating activity.

Excellent seal compatibility

Piston Fluid is not harmful to sealing materials. It is compatible with silicone seals, PTFE and polystyrene foams, and compatible with paints on epoxy or phenolic resin basis.

Reduced risk of leakage, no need for regular resealing of equipment.

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Characteristics

Appearance

Light yellow with opaque appearance

Performance	Method	Unit	Value
Density at 15 °C	ISO 3675	kg/dm ³	0.843
Viscosity at 40 °C	ASTM D 445	mm ² /s	46
Viscosity index	ASTM D 2270		133
Water separateability	ASTM D 1401	ml oil/water/emulsion	40/40/0 (15 min)
Foam stability	ASTM D 892	ml	0/0/0
Total acid number	ASTM D 974	mg KOH/g	0.14
FZG fail stage	ISO 14635-2		12
Rust test	ASTM D 665B		pass
Pour point	ASTM D 97	°C	-57

These characteristics are typical of current production. Whilst future production will conform to Atlas Copco's specification, variations in these characteristics may occur. Complies with ISO 6743 /3.2 categories DAA-DAB-DAC.

ID Card

Name	Piston Fluid
Oil type	Synthetic base lubricant, specifically engineered for piston compressors
Service intervals	3 000 h or 2 years at reference conditions
Environment	Ambient temperature range 0°C to 50°C Maximum operating pressure 30 bar
Equipment	Atlas Copco oil injected pistons
Compatibility	LE/LT compressors
Capacity (ID)	1 l plastic can (2901 1790 00) 5 l plastic can (2901 1791 00)

