

Atlas Copco Lubricants

L Piston Fluid

Concentrated performance for piston compressors

Piston compressors pose extreme demands on lubricants: the high compression temperature - possibly exceeding 200°C (392°F) – pressures up to 40 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 L 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 two liters, the economy of lesser quality oils simply is not worth the risk.



	Features	Benefits
Specifically Designed for piston compressor operation	L 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 L 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 start up.	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	L 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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Lubricant Characteristics

Appearance:
Colorless to straw pale yellow, transparent

Performance	Method	Unit	Value
VDL lubricating oils	DIN 51506		VDL
Classification industrial oils	ISO 6743-3		L-DAA & L-DAB
Density at 15°C	ISO 3675	kg/dm³	0,889
Viscosity at 40°C	ASTM D 445	mm²/s	47,28
Viscosity index	ASTM D 2270		109
Total acid number	ASTM D 974	mg KOH/g	0,07
Rust test	ASTM D 665B		Pass
Pour point	ASTM D 97	°C	-45

These characteristics are typical of current production. Whilst future production will conform to Atlas Copco's specification, variations in these characteristics may occur.

ID Card

Name	L Piston Fluid
Oil type	Synthetic based lubricant, specifically engineered for piston compressors
Service intervals	3 000 h or 2 years at reference conditions
Environment	Ambient temperature range at 0°C to +50°C
	Maximum operating pressure 40 bar
Equipment	Atlas Copco oil injected pistons
Compatibility	LE/LT/LB compressors
Capacity (ID)	1 l plastic can (1630 2040 01) 5 l plastic can (1630 2040 05)

