Dilmar Oil Company

PAO 100

Compressor Lubricant

Product Description

Dilmar PAO 100 is an advanced air compressor lubricant using unique additive technology, capable of giving supreme performance in oil-flooded air compressors of screw or vane design. Based on specially selected PAO base fluids, Dilmar PAO 100 provides long oil life and effective lubrication in severe applications.

Applications

Rotary sliding vane and screw air compressors
Oil-flooded single and two-stage compressors, in particular those operating with output pressures of greater than 20 bar and with air discharge temperatures greater than 100°C (including intermittent operation under these conditions).
Equipment running under arduous conditions
May also be used where exceptionally high ambient temperatures are found, when the oil temperature cannot be reduced to normal levels.
ABB Turbochargers
The product is recommended for use in ABB turbochargers fitted to low and medium speed diesel engines used in marine and power generation applications.

Advice on applications not covered in this leaflet may be obtained from your Dilmar Oil representative.

Performance Features and Benefits

- ***Excellent thermal stability***

Dilmar PAO 100 reduces sludge and deposit formation from thermal degradation processes, even at very high temperatures, maintaining compressor efficiency.

- ***Excellent water shedding properties***

The product is easily separated from water, keeping the system in good condition even when contaminated with water.

- ***Outstanding resistance to oxidation***

Dilmar PAO resists the formation of carbon deposits and the formation of sludge in all moving parts of sliding vane and screw compressors to ensure maximum output of the machine throughout the service interval.

- ***Very good rusting and wear protection***

Effectively protects all metal surfaces from corrosion. Protects all sensitive machinery parts, e.g. gears, screws, bearings, from wear and prolongs the service intervals.

- ***Excellent low volatility characteristics***

Low volatility giving low oil consumption and low oil carry over. The top up rates are low.

- ***Very good surface properties***

Resulting in a low foaming tendency, very good air release and water shedding properties. This helps to separate oil from air and water in two-stage compressor intercoolers, oil/water separators and drier units.

- ***Extended oil drain intervals***

Dilmar PAO 100 will allow for significant increases in oil drain intervals, where allowed by manufacturers -up to a maximum of 12000 hours, even when operating at a continuous maximum discharge air temperature in excess of 100°C. Depending on intake air quality, duty cycle and ambient conditions, especially in hot and humid type climates as found in the Asian and Pacific regions, a reduced oil drain period is recommended.

- ***High viscosity index***

Reduced change of viscosity with change in operating temperature in comparison to conventional mineral oil-based products. This provides low starting viscosity together with higher viscosity at operating temperature.

Specifications and Approvals

Dilmar PAO 100 meets the requirements of: ISO 6743-3A-DAJ.
Dilmar PAO 100 is approved by ABB for use in VTR turbochargers, with a maximum oil change interval of 5000 hours (HZTL 90617, list 3a).

Miscibility
Dilmar PAO 100 is fully miscible with mineral oils, although dilution with mineral lubricants will markedly reduce its performance. Care must be taken to ensure that Dilmar PAO 100 is not mixed with some type of synthetic fluids. Contact your Dilmar Oil Representative for further information

Seal compatibility
Dilmar PAO 100 is compatible with all sealing materials commonly used in air compressors.

Typical Physical Characteristics

Dilmar PAO 100

ISO Viscosity Grade ISO 3448	68
Kinematic Viscosity ASTM D445	
at 40 °C mm^2/s	68
at 100 °C mm^2/s	10,4
Density at 15 °C kg/m^3 ASTM D1298	846
Flash point (COC) °C ASTM D92	258
Pour Point °C ASTM D97	<-45
Viscosity Index (VI) DIN ISO 2909	139
Rust prevention properties ASTM D665-B	pass
Water separability min ASTM D1401	10
Rotating Pressure Vessel Oxidation Test min ASTM D2272	2200
FZG load carrying test failure load stage CEC-L-07-A-95	>12