



BP Energol RC-R Range

Air compressor lubricant

Description

BP Energol™ RC-R compressor oil range of lubricants are based upon highly refined mineral oils and carefully chosen additives. They are intended for the lubrication of rotary and reciprocating compressors.

Application

The Energol RC-R grades are ashless oils recommended for the lubrication of rotors, bearings and gears in rotary compressors, especially the oil flooded screw type with lubricant drain cycles of up to 2000 hours under normal use. Normal use in screw type compressors is defined by a maximum air discharge temperature $\leq 100^{\circ}\text{C}$ as defined by ISO 6743-3:2003.

Energol RC-R can be used for either normal or severe duty lubrication of reciprocating and rotary drip-feed air compressors, as defined by ISO 6743.

Normal duty is described as:

- discharge temperatures $\leq 165^{\circ}\text{C}$
- differential pressures $\leq 2.5\text{ MPa}$ (25 bar)
- discharge pressures $\leq 7.0\text{ MPa}$ (70 bar).

Severe Duty is described as:

- discharge temperatures $> 165^{\circ}\text{C}$
- differential pressures $> 2.5\text{ MPa}$ (25 bar)
- discharge pressures $> 7.0\text{ MPa}$ (70 bar)

Energol RC-R compressor oils exhibit low carbon forming tendencies and meet the requirements of the DIN 51506 VDL classification for reciprocating compressors having air discharge temperatures up to 220°C .

Selection of the required viscosity grade should be based upon the compressor manufacturers' recommendation however as a general guide Energol RC-R 32 and 46 are suitable for oil flooded rotary compressors, whereas Energol RC-R 68 and 100 would be selected for lubricating the crankcase and cylinders of reciprocating compressors. Energol RC-R 150 is recommended for sliding-vane compressors, or for reciprocating units at high ambient temperatures. The Energol RC-R range is fully compatible with nitrile, silicone and fluropolymer seal materials.

Energol RC-R grades are classified as follows:

- DIN 51506 classification – VDL
- ISO 6743/4 – DAA and DAB for reciprocating air compressors, DAG for rotary air compressors.

Energol RC-R grades meet the requirements of:

- Atlas Copco (2000 hour oil)
- Compair.

Advantages

- Good water separation characteristics allow condensation to readily separate from the oil, minimising the risk of emulsions which could block the oil separator element.
- Prevents corrosion when operating under humid conditions.
- Excellent coalescing properties mean little carry over of oil in the air stream.
- Low deposit forming tendencies extends oil change intervals and provides longer air filter life which contributes to a reduction in maintenance costs.
- Good thermal stability, low volatility and low carbon formation reduces the risk of fire and explosion.

Typical Characteristics

Test	Method	Unit	RC-R 32	RC-R 46	RC-R 68	RC-R 100	RC-R 150
Density @ 15°C	ISO 12185 / ASTM D4052	g/ml	0.87	0.87	0.88	0.89	0.89
K.V @ 40°C	ISO 3104 / ASTM D445	mm ² /s	32	46	68	100	150
K.V @ 100°C	ISO 3104 / ASTM D445	mm ² /s	5.57	6.67	8.57	11.4	14.5
Viscosity Index	ISO 2909 / ASTM 2270	-	100	100	100	98	98
Foam Sequence I	ISO 6247 / ASTM D892	mls/mls	30/0	30/0	30/0	30/0	30/0
Pour Point	ISO 3016 / ASTM D97	°C	-21	-21	-21	-12	-9
Flash Point, PMC	ISO 2719 / ASTM D93	°C	216	222	222	243	246
Rust Test (24 hr synthetic sea water)	ISO 7210 / ASTM D665B	-	Pass	Pass	Pass	Pass	Pass
Conradson carbon residue after aging	DIN 51352/2	%	0.7	0.7	0.7	<3.0	<3.0
RPVOT	ASTM D2272	mins	270	270	270	-	-

Subject to usual manufacturing tolerances.

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