

## Tribol 890

Synthetic Compressor Oil

### Description

Castrol Tribol™ 890 compressor oils are fully synthetic ester based lubricants formulated for long service life and clean deposit-free operation. They are manufactured in several viscosity grades to satisfy the lubrication needs of the most demanding air compressor applications (as well as many other process gases).

### Application

**Rotary vane and rotary screw compressors:** Tribol 890/32 and 890/68 are designed for vacuum pumps and rotary compressors where circulation systems inject oil directly into the air stream to lubricate, cool and seal the compressor. The Tribol 890 range performs better than petroleum oils in flooded rotary vane and screw compressors. By minimizing varnish and carbon deposits, it can extend drain intervals from 1,000 hours to more than 5,000 hours in most vane compressors. Under normal use oil-flooded screw compressor drain intervals can be extended to over 8,000 hours with maximum air discharge temperatures <100°C, as defined by ISO 6743-3:2003. Tribol 890 can also be used in compressor units operating under severe conditions with maximum air discharge temperatures of >100°C with reduced oil drain intervals.

**Reciprocating compressors:** Tribol 890/100 is used for both crankcase and upper cylinder lubrication in reciprocating compressors for either normal or severe duty lubrication, as defined by ISO 6743.

**Hydraulic and circulating systems, gears, bearings:** where rust and oxidation inhibited (R&O) turbine type circulating oils are specified. Tribol 890 is particularly well suited where operating temperatures ranges are too extreme for petroleum-based oils. Tribol 890 is classified as follows: DIN 51506 classification - VBL, VCL and VDL. ISO 6743/4 - DAG, DAH and DAJ for rotary air compressors also DAA, DAB for trunk pistons at high pressure and high temperature (Viscosity grade 100).

### Advantages

- Excellent thermal and oxidative stability leads to longer operating life and reduce lubricant costs. Can last up to 4 to 8 times longer than mineral based compressor oils depending on operating conditions.
- Natural cleansing action prevents the formation and build-up of varnish, sludge or deposits. This prevents valve wear and sticking, allows more efficient re-compression and provides clean intercoolers. The resulting benefits are less heat generation, reduced fire potential as well as reduced energy input required for constant discharge capacity and overall improved compressor efficiency.
- Low volatility means less oil contamination of plant air, greater demister efficiency, less maintenance of filters and separators and reduced oil consumption.
- Natural oil film strength and lubricity with additional load carrying and antiwear additives providing excellent wear protection and reduced downtime from unscheduled maintenance.

## Typical Characteristics

Name	Method	Units	890/32	890/68	890/100
ISO Viscosity Grade	-	-	32	68	100
Density @ 15°C / 59°F	ISO 12185 / ASTM D4052	kg/m <sup>3</sup>	990	970	960
Kinematic Viscosity @ 20°C / 68°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	72	217	391
Kinematic Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	32	68	100
Kinematic Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	6.1	8.6	9.5
Pour Point	ISO 3016 / ASTM D97	°C/°F	-51/-60	-33/-27	-33/-27
Flash Point - open cup method	ISO 2592 / ASTM D92	°C/°F	243/ 469	254/ 489	260/ 500
Fire Point	ISO 2592 / ASTM D92	°C/°F	280/ 536	282/ 540	290/ 554
Autoignition temperature	ASTM E659	°C/°F	410/ 770	410/ 770	427/ 801
Carbon residue - Conradson test	ISO 6615 / ASTM D189	%wt	0.5	0.2	0.2
Carbon residue - Conradson test - 20% remaining sample volume after distillation	DIN 51356	%wt	-	-	0.18
Carbon residue - Conradson test - after air ageing	DIN 51352-2	%wt	-	-	0.21
Carbon residue - Conradson test - after air ageing (with catalyst)	DIN 51352-2 (modified)	%wt	-	-	0.55

Subject to usual manufacturing tolerances.

## Additional Information

Changeover from petroleum oils to Castrol Tribol 890 should always be preceded by a very thorough cleanout. Although 890 oils are compatible with petroleum, any residual mineral oil will soon oxidize and contaminate Tribol 890, shortening the anticipated service life. Tribol 890 oils soften polycarbonate and should not be used with this material. These fluids should not be used where neoprene seals and E.P.D.M. elastomers sealing materials are present anywhere in the air system.

Tribol 890  
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Castrol Industrial, Technology Centre, Whitchurch Hill, Pangbourne, Reading, RG8 7QR, United Kingdom

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