



## Hyspin Spindle Oil

Spindle Oils

### Description

The Castrol Hyspin™ Spindle Oil range is based upon highly refined mineral oil enhanced with rust and oxidation inhibitors and formulated especially for the lubrication of high speed and precision machine tool spindle bearings.

### Application

Castrol Hyspin Spindle Oils have been specially formulated to provide outstanding protection against rust and oxidation while demonstrating good lubricity. These types of oils are also referred to as "R and O" oils.

Castrol Hyspin Spindle Oils are designed for use in all types of spindle bearings, including high-speed spindle bearings. Spindle E5 has an additional oiliness agent for enhanced lubricity.

Castrol Hyspin Spindle Oils are fully compatible with elastomer materials commonly used for static and dynamic seals, such as nitrile, silicone and fluorinated (e.g. Viton) polymers.

Hyspin Spindle Oils are classified as follows:

DIN 51502 classification – HL

ISO 6743/4 - Hydraulic Oils Type HL

ISO 6743/2 – Spindle Oils Type FC

Hyspin Spindle oils meet or exceed the following industry specifications:

Cincinnati Lamb (formerly Milacron) P-45 (FC-22) - Spindle Oil 22

Cincinnati Lamb (formerly Milacron) P-62 (FC-10) - Spindle Oil 10

Cincinnati Lamb (formerly Milacron) P-65 (FC-2) - Spindle Oil 2

### Advantages

- Good thermal and oxidative stability leads to longer operating life, reduction in lubricant costs and minimises deposit formation giving a cleaner system.
- Good protection of yellow metal and ferrous components helps maintain and prolong equipment life.
- Excellent water separation and hydrolytic stability means reduced down time through prolonged lubricant life and increased equipment reliability.
- Controlled foaming to provide consistent lubrication under the high agitation conditions found in spindle bearings.

## Typical Characteristics

Name	Method	Units	Spindle Oil 2	Spindle Oil E 5	Spindle Oil 10	Spindle Oil 22
Appearance	Visual	-	Clear, colourless to pale amber liquid	Pale yellow liquid	Clear, colourless to pale amber liquid	Clear, colourless to pale amber liquid
Density @ 15°C / 59°F	ISO 12185 / ASTM D4052	kg/m <sup>3</sup>	870	870	880	880
Kinematic Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	2	5	10	22
Kinematic Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	0.95	1.9	2.6	4.3
Pour Point	ISO 3016 / ASTM D97	°C/°F	<-40/<-40	-39/-38	-39/-38	-30/-22
Demulsification 54°C, mins to 40/37/3	ASTM D1401	minutes	10	25	10	10
Flash Point - open cup method	ISO 2592 / ASTM D92	°C/°F	91/196	114/237	154/309	177/351

Subject to usual manufacturing tolerances. Notes: For viscosities above 22 cSt use the relevant R&O Hydraulic Oil (Castrol Hyspin VG range)

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