

## Athena

Anti-wear hydraulic oils

### Description

**Athena** is a series of anti-wear hydraulic oils formulated with highly refined paraffinic base oils. They provide excellent anti-wear protection, oxidation and corrosion inhibition as well as foam and aeration suppression. All grades have excellent demulsibility characteristics.

### Performance Benefits

- Good thermal and oxidative stability leads to longer operating life, reduction in lubricant costs and minimizes deposit formation giving a cleaner system.
- Excellent anti-wear performance gives wear protection and reduces downtime from unscheduled maintenance.
- Good filterability characteristics, even in the presence of water, enables cost savings to be made from increased filter life and reduced maintenance.
- Excellent water separation and hydrolytic stability means reduced down time through prolonged lubricant life and increased equipment reliability.

### Recommended Applications

Athena anti-wear hydraulic oils are specially formulated to provide good anti-wear and thermal stability performance using the very latest additive technology. The careful blend of additives with a high quality base stock ensures that the Athena series oils have excellent hydrolytic and oxidative stability while exhibiting a minimal tendency to produce sludge and deposits. In addition, the Athena series provides corrosion protection to ferrous and yellow metal components found within a hydraulic system.

This range is designed for use in industrial hydraulic systems which require anti-wear protection. It is also suitable for other duties in which lubricants of high oxidation stability and lubrication performance are required, such as lightly loaded gears, variable speed units and bearings. The Athena series is fully compatible with elastomer materials commonly used for static and dynamic seals, such as nitrile, silicone and fluorinated (e.g. Viton) polymers.

Athena series oils are classified as follows:

DIN 51502 classification - HLP

ISO 6743/4 - Hydraulic Oils Type HM

Athena anti-wear oils meet the requirements (for appropriate viscosity grade) of:

DIN 51524 Part 2

Cincinnati Lamb (Milacron) P 68-69-70

Denison (Parker Hannafin) HF-0

US Steel 126 & 127

Eaton (formerly Vickers) I-286-S & M-2950-S

Bosch Rexroth RE90220

## Characteristics

			Athena 10	Athena 15	Athena 22	Athena 32	Athena 46	Athena 68	Athena 100	Athena 150	Athena 220
ISO Viscosity Grade	-	-	10	15	22	32	46	68	100	150	220
Viscosity @ 40°C	cSt	ASTM D44	10	15	22	32	46	68	100	150	220
Viscosity @ 100°C	cSt	ASTM D445	2.76	3.55	4.45	5.56	6.92	8.77	11.28	15.08	19.5
Viscosity Index	-	ASTM D2270	>110	>110	>110	>100	>100	>95	>95	>95	>95
Flash Point, COC	°C/°F	ASTM D92	192	197	207	215	215	229	230	232	232
Pour Point	°C/°F	ASTM D97	-40/-40	-40/-40	-30/-22	-30/-22	-27/-17	-24/-11	-21/-6	-18/-4	-15/5
Copper corrosion	3 hr at 100°C	ASTM D130	1b	1b	1b	1b	1b	1b	1b	1b	1b
Foam Seq 1	ML	ASTM D892	10/0	10/0	10/0	10/0	10/0	10/0	10/0	10/0	10/0
Demulsibility	Minute	ASTM D1401	10	10	15	15	15	15	20	20	25
Air Release Value			3	3	4	4	8	8	12	18	20
FZG fail stage		ASTM D5182	-	-	-	9	9	10	11	11	12
Rust Test A&B		ASTM D665	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Subject to usual manufacturing tolerances