Increasing reliability and reducing wear under high pressure

Eaton Delta Motor

EATON

Powering Business Worldwide

While other hydraulic motors include a case drain port as a third zone, the Delta motor architecture makes the third zone unnecessary. With fewer components and potential failure points, the Delta's two-zone design improves reliability at the outset and offers more trouble-free operation throughout its life.

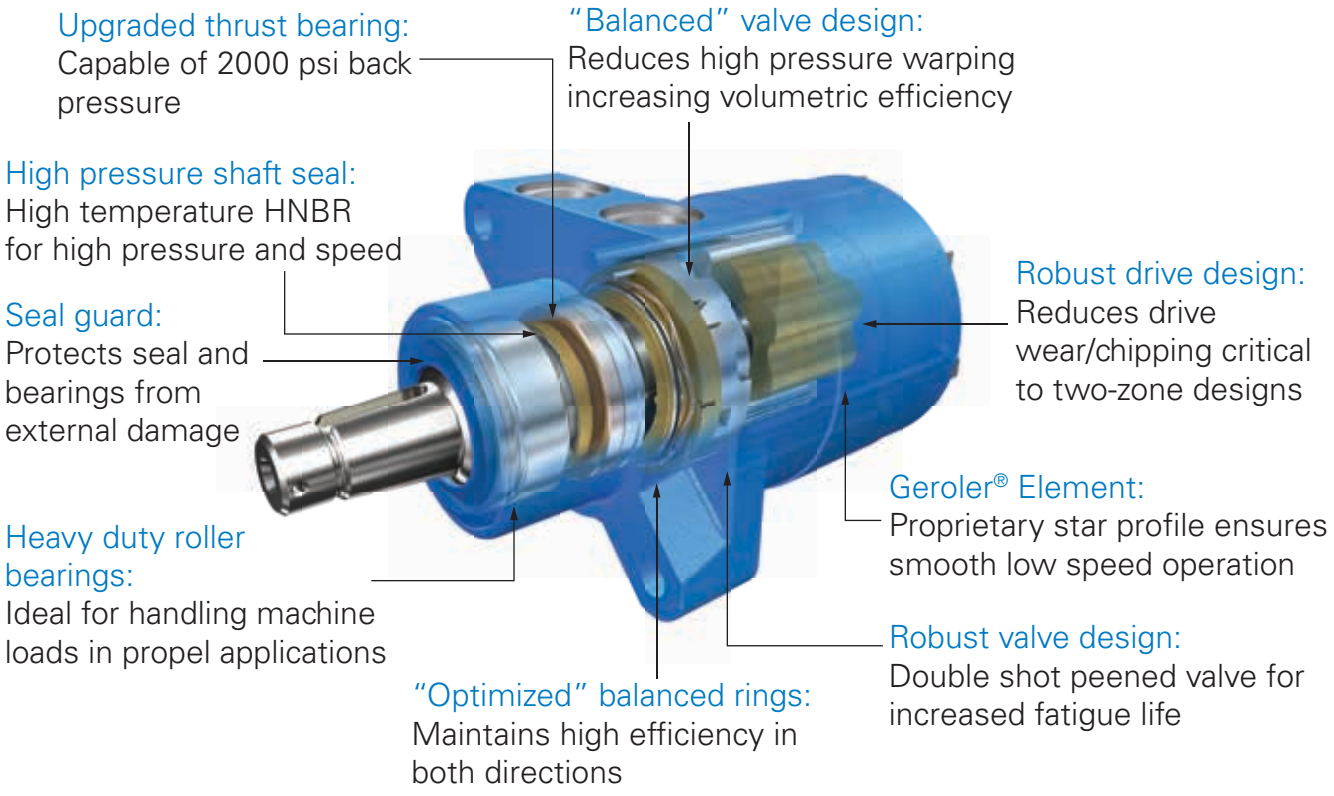
Introducing Eaton's Delta motor — a low-speed, high-torque motor that sets an entirely new standard for performance and durability.

Reliability by Design

Eaton's tradition of innovative solutions and trustworthy performance under the toughest conditions continues with the Delta motor. Designed mainly for traction drives in the turf care market, this all-purpose motor features Eaton's proven Geroler® technology and provides exceptional durability in a compact two-zone design.

The Delta motor delivers superior drive life, seal life, and bearing life compared to market competitors so that you don't have to sacrifice reliability in a cost-effective solution. In addition, the motor's balanced valve design architecture is more efficient under high pressure, preventing warping which can lead to internal leaks and motor slowdown.

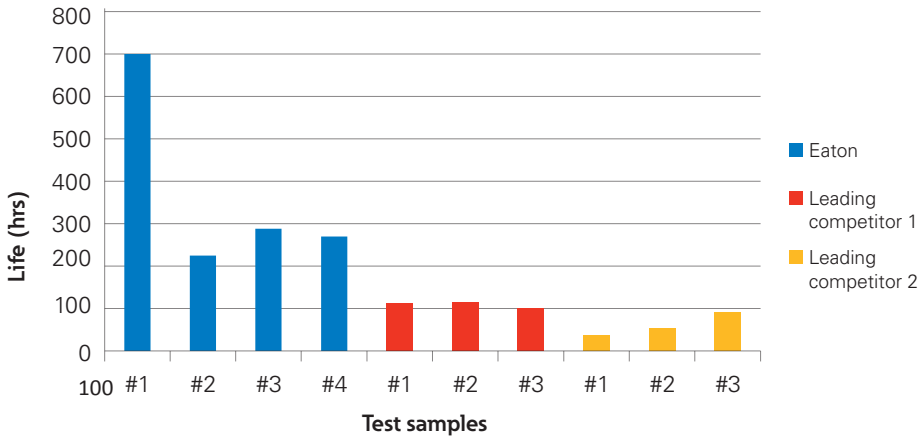
Delta – Built for durability



Increased drive life

Due to their design, drive wear on most two-zone motors creates contaminants that travel back to the pump. And because pumps are highly sensitive, they fail prematurely due to excessive contamination and require costly replacement. The Delta motor's robust, proprietary drive was designed with one goal in mind: enhance reliability to eliminate failure. This low-speed, high-torque motor sets the new standard for performance and durability.

Delta motor accelerated life tests



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Competitor 2 Motor

In this test, the Delta motor qualified for 200 hours* (accelerated life standard), more than four times the life of the competition in some cases. The competitors' units suffered from star and drive spline failure and excessive drive wear on the output shaft and drive, while the Delta motor showed only minor spline chipping.

* Testing stopped @ 200 hours

Seal life durability

Robust shaft seals are required to keep oil in and dirt out. A seal leak can result in an expensive and time-consuming cleanup. In accelerated durability tests, the Delta motor had a nine times lower leakage rate and a three times longer time to first leak when compared to the competition. This gives you a more robust seal, and more time to take corrective action before a catastrophic failure occurs.

Common applications for the Delta motor:

- Turf care – traction drives
- Sweepers – brush drives
- Attachments – auger drives
- Utility – propel
- Grapples
- Tub Grinders/Mixers
- Spreaders

Eaton's Delta motor benefits:

- Robust, proprietary drive design reduces wear and increases reliability
- Pressure seals resist spikes and high reversals for improved life
- Higher side load capacity due to front radial bearing
- Optional built-in shock reliefs
- Cost-effective two-zone design does not require a case drain

Technical specifications

- Max Pressure: 4,000 PSI / 275 bar (intermittent)
- Max Flow: 30 GPM / 115 LPM (intermittent)
- Max Torque: 10,500 in-lbs / 1186 Nm (intermittent)
- Displacements: 6.9 to 46 cid / 110 to 736 ccr

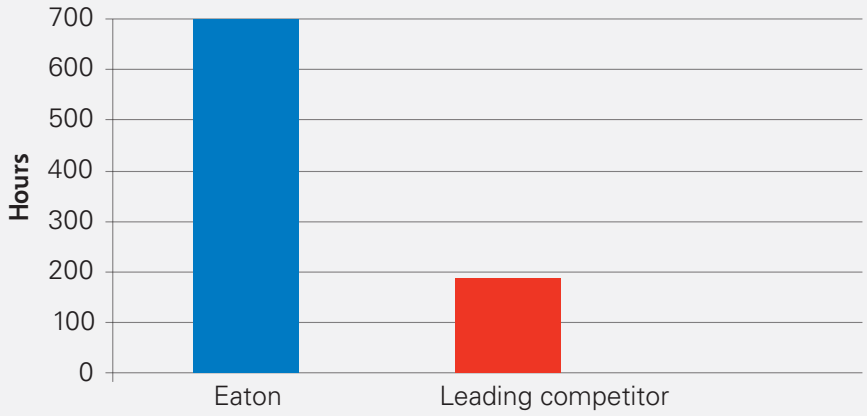
Committed to excellence:

Decision makers turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority. Each product is independently tested and backed by industry-leading warranties, and the largest engineering and technical support teams in the industry.

For more information:

To learn more about Eaton's Delta motors, visit eaton.com/Geroler-Motors/Medium-Pressure or contact your Eaton sales representative.

Delta motor shaft seal accelerated life testing



In accelerated tests, Eaton's Delta motor lasted 3X longer than the competition.

Testing included the following conditions:

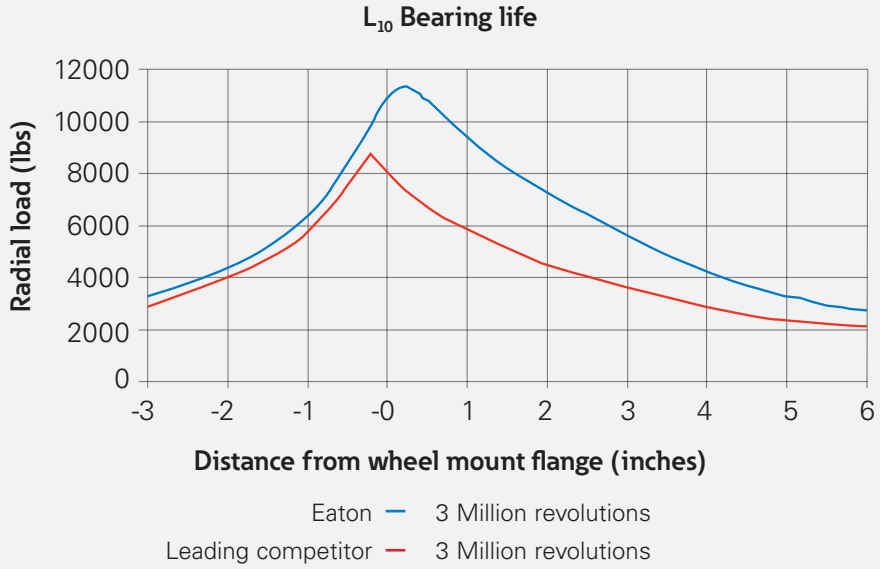
- DTE-24 @ 67°C (~12 cSt)
- CCW Direction – 95% of the time*
- 1000 psig (69 bar) on shaft seal @ 200 rpm
- CW Direction – 5% of the time
- 2000 psig (138 bar) on shaft seal @ 200 rpm

Note: *Since backing up (reverse direction) challenges motor operation, thorough testing was performed in the CCW direction.

Superior bearing life

Designed with the front bearing protecting the shaft seal, the Delta motor is leak resistant and has the highest side load capacity compared to the competition--4,500 lbs at three inches from the mount face. The superior side load ratings are due to the front radial bearing.

Delta motor radial shaft loading



Each curve is based on B 10 bearing life (2000 hours of 12,000,000 shaft revolutions at 100 RPM) at rated output torque.

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