

Ferrofluidic Spindle



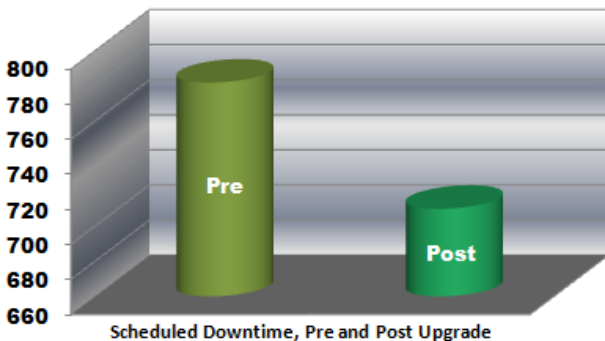
Wafer Scrap has a significant impact on the profitability of today's semiconductor manufacturers. The Ferrofluidic Spindle enhancement eliminates a potential source of wafer scrap events.

The FerroFluidic spindle seal replaces the standard spindle T-seal for Concept One 200mm products. This enhanced seal requires no lubrication and offers lower friction.

The FerroFluidic seal capitalizes on the response of a magnetic fluid to an applied magnetic field. Basic seal components include FerroFluidic, a permanent magnet, two pole pieces and a magnetically permeable shaft. The magnetic circuit, completed by the stationary pole pieces and the rotating shaft, concentrates magnetic flux in the radial gap under each pole piece.

In site tests, the FerroFluidic spindle eliminated T-seal failures. In addition, it eliminated the spindle backlash and wafer movement that had been caused by the drying-out of the T-seal lubricant. This drop-in replacement requires no preventive maintenance and eliminates the recommended 10K* PM schedule resulting in increased system availability and lowered cost of ownership.

Scheduled Annual Downtime, Hours



Upgrade Benefits

- Drop in replacement; once installed, no maintenance required
- FerroFluidic eliminates spindle backlash and wafer movement due to drying T-seal lubricant thus reducing the potential for wafer scrap
- PM eliminated: T-seal replacement no longer required (typical replacement frequency of T-Seal is 1.5 months, with upgrade, replace as fails)
- Lifetime of up to 4 years with rebuild options available

CONCEPT ONE PRODUCT UPGRADES

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Concept Parts Solutions (CPS) is fully authorized and approved by Lam Research Inc.; CPS is the only company licensed to provide original OEM parts, upgrades, and service for the Novellus Concept One and GaSonic Legacy Asher platforms.

For pricing, quotations and ordering guidance, or for additional information, please contact:

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