

Newport Announces the Industry's First Family of Air Bearing Stages for 450mm Wafer

Initiative - DynamYX® Datum TM 450 and 450GT

Irvine, CA – July 9, 2012 – Newport Corporation, a worldwide leader in advanced motion control solutions, introduces the industry's premier line of high-performance air bearing stages specifically designed for the 450mm semiconductor wafer initiative. The new DynamYX® Datum™ 450 and 450GT are based on Newport's proven DynamYX 300-series wafer processing and inspection platforms with more than 1,000 worldwide installations. They are perfectly suited to handle the larger travel ranges, payloads, and increased throughput requirements of next-generation 450mm tools.

The DynamYX Datum 450 and 450 GT deliver high resolution, dynamic positioning of a wafer chuck or similar substrate in two orthogonal translation axes from a single-plane carriage. For added flexibility, a vertical Z-axis with tip/tilt function and a rotary axis for wafer offset correction can be added on the carriage beneath the wafer chuck. Other options are available for encoder and interferometer feedback, if required.



High efficiency linear motors minimize heat generation and apply drive forces through the center of the gravity of the stage resulting in superior long-term repeatability and dynamic performance. The maximum velocity reaches 1.5m/sec., with acceleration of 2G (Y axis) and 3G (X axis). With a rated payload of 20 kg, the new 300 Hz natural frequency stage features high accuracy (encoder feedback) at 50 nm (3 sigma) and high repeatability at 10 nm (3 sigma), making it ideal for tasks that require a high performing positioning stage for 450 mm wafers.

Business Development Manager, Walter Silvesky, notes,

“The all-new DynamYX Datum 450 and 450 GT feature unique performance characteristics that are achieved in part due to the highly differentiated and proprietary construction using advanced ceramics (SiC) that yields lightweight and incredibly rigid stage structures with high natural frequencies and exceptional thermal stability. A low-profile monolithic stage architecture with integrated pressure-vacuum air bearings provides unsurpassed stepping and scanning performance.”



Press Release

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About Newport Corporation

Newport Corporation is a leading global supplier of advanced-technology products and systems to customers in the scientific research, microelectronics manufacturing, aerospace and defense/security, life and health sciences and precision industrial manufacturing markets. Newport's innovative solutions leverage its expertise in high-power semiconductor, solid-state and ultrafast lasers, photonics instrumentation, sub-micron positioning systems, vibration isolation, optical subsystems and precision automation to enhance the capabilities and productivity of its customers' manufacturing, engineering and research applications. Newport is part of the Standard & Poor's SmallCap 600 Index and the Russell Microcap Index.