

EG6000

- **Highest accuracy, throughput and system longevity available.** The EG6000 features a unique direct drive gantry stage with linear servo motors and wear-free air bearings to deliver smooth, fast, and precise motion.
- **Control vibration for consistent test results.** Active vibration cancellation (patent pending) maintains consistent contact resistance reducing yield loss from vibration.
- **Enables probing delicate device technologies.** The EG6000 provides a new generation of overall Z accuracy, including: 50 nanometer resolution, closed-loop chuck positioning, proprietary grid-based surface mapping, and advanced probe-to-pad alignment algorithms.
- **Damage-free probing of Cu, low K and SOI wafers with soft touchdowns.** The new **MicroTouch™** (patent pending) feature allows the user to control the velocity of the z-stage just before contact and during overtravel to reduce probe damage to low-k dielectrics, circuitry under bond pads, and aluminum capped copper pads.
- **Supports high-mix production environments.** With easy system portability and kit-less conversion from 150mm to 300mm wafers, the EG6000 provides essential flexibility.
- **Quickly test at different temperatures.** Proprietary Electroglas thermal technology allows testing to resume rapidly after changing temperatures.

ADVANCED 300MM PRODUCTION WAFER PROBER

The fastest, most accurate and most reliable prober on the market



••• **The EG6000** is the world's most accurate 300mm production wafer prober. Electroglas' second generation 300mm wafer prober fuses the automation and reliability requirements of high-volume manufacturing environments with the highest caliber of prober technology.

The World's Most Accurate 300mm Prober

With overall pin-to-pad accuracy of +/- 1.5µm, the EG6000 sets the industry standard of wafer prober accuracy. This outstanding accuracy is essential for shrinking device sizes and is made possible through new techniques for precision wafer and probe card alignment combined with a sophisticated motion control system.

The EG6000 uses the most stable motion control system ever incorporated in a wafer prober. Its direct drive gantry design has a superior combination of accuracy, throughput, dynamic stability, and external disturbance rejection, compared to alternative leadscrew designs. Wear-free induction motors, with 100 nm resolution, control the air bearing stage on a stable granite block. All three axis utilize high precision closed-loop feedback. The system is ultra accurate and ultra fast.

High Speed Testing Without Damage

Many new devices are made with delicate low-k dielectric layers, copper pads with thin aluminum coatings and often bond pads located above

active circuitry. These applications require accurate Z contact height and impact speed control to prevent damage to the device.

The EG6000 uses an impact control technique called MicroTouch™ to control the velocity and deceleration of the chuck top as the device's bond pads contact the probe pins. This minimizes impact force and because the stage slows just before contact, high throughput is maintained. To ensure the consistency of the probe force on each touchdown, from die to die and wafer to wafer, a comprehensive Z strategy is employed.

The EG6000 is designed to address the factors which affect the overall Z accuracy. Probe tips are accurately measured and monitored for thermal growth and wafers are profiled with a new high resolution technique. Finally, the wafer is positioned by the Z stage with a resolution of up to 50 nm.

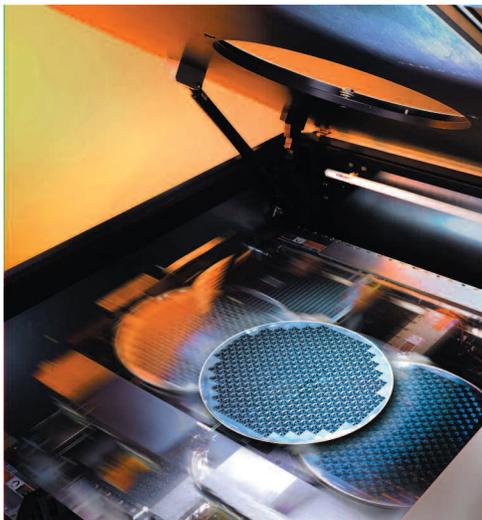
Meeting the Needs of High Volume Manufacturing

The EG6000 is designed with advanced automation to ensure maximum test cell utilization.

Compensation for thermal expansion and contraction of prober components and the probe pins is automatic. This enables testing to resume rapidly after changing temperatures.

Test floor vibration, caused by adjacent equipment or traffic in the aisles, can lead to inconsistent test results resulting from variation in contact resistance. The EG6000 is the only prober with active and passive vibration controls to reject vibration before it reaches the device under test.

Test cell utilization is further increased with the EG6000's high throughput. The high rigidity stage enables high parallel test while wafers are efficiently exchanged with the fast material handler. Setup time is reduced with a simplified operator interface and automatic thermal compensation.



Portability and Flexibility for Mixed Test Floors

The EG6000 is suitable for production floors with a mix of different products and ATE equipment. Combo interfaces are available which can connect to multiple brands of testers. The EG6000 is designed for portability with large wheels and bulkhead quick-connect fittings to easily separate the material handler from the probe chamber. With these portability features, the EG6000 can be probing less than 1 hour after a move to a new location.

The Next, Easy Step

For more information on how the EG6000 can probe your most advanced devices, contact your Electroglas sales representative at (800) 538-5124 or visit www.electroglas.com.

Other Electroglas products and solutions, including Electroglas' prober software products and the SORTmanager Test Floor Management Software family, can enhance or expand on the capabilities of the EG60000 prober.

The EG6000 features a unique direct-drive gantry stage, with linear servo motors, wear-free air bearings, and closed-loop control to deliver the highest accuracy, throughput and system longevity available.

ELECTROGLAS, INNOVATIVE TOOLS FOR TEST

Electroglas is Focused on Advancing Innovative Technologies to Meet Evolving Challenges in Semiconductor Test.

Test is all about ensuring device quality and manufacturing performance. In the high-volume manufacturing environment of our customers, our innovative products provide substantial value and help lower the overall cost of test.

Electroglas delivers high-speed tools for wafer probing and package test that are reliable, accurate and production proven. Today, we are focused on overcoming our customers' evolving test challenges, partnering with them to develop solid solutions for wafer probing, prober-based test handling, and test management that will drive greater efficiencies in their wafer and device testing processes. Our customers have rapid, direct access to our worldwide team of experts for service and advice.

Wafer Probers for Any Test Environment; With Shipments of Over 15,000 Systems

Electroglas' probers have been meeting a variety of probing needs for more than 40 years. These automated systems consistently deliver accurate, reliable wafer probing for high volume, low cost manufacturing, as well as leading edge, multi-die, bumped wafer, in-line parametric test and fine-pitch probing applications.

Prober-Based Test Handlers for Today's Latest Packaging Technologies

Electroglas' test handlers are built upon proven prober technology to give chip-makers a fast, flexible handling solution for today's final test challenges. Strip test handlers deliver unprecedented throughput for testing a wide variety of popular package types in panel or leadframe format. Filmframe handlers have unique capabilities for testing Wafer Level Packages (WLP), Known Good Die (KGD) on diced wafers, Microelectro-mechanical Systems (MEMS), and ultra-thin wafers.

Test Floor Management Software for Web-Based Process Analysis and Control

Electroglas test floor management software provides a unique, networked solution to connect wafer probers and test handlers to the broader testing infrastructure, allowing the chipmaker to better manage overall test effectiveness with accurate and efficient tools for monitoring, analyzing and improving important processes.

All Products Backed by Global Service for Fastest Response

Electroglas' customer service centers are located worldwide for rapid-response field service and local spare parts support. Electroglas demonstrates its commitment to total customer satisfaction through service excellence backed by factory-based technical support, applications development and training.



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