FlexTRAK-WR™
Plasma Treatment System

March
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SUPERIOR PLASMA TECHNOLOGY FOR HIGH THROUGHPUT WAFER PROCESSING

The FlexTRAK-WR system is designed for high-throughput processing of semiconductor wafers up to 300mm (12 in.). The patented plasma chamber design provides exceptional etch uniformity and process repeatability. Its three-axis symmetrical chamber ensures all areas of the wafer are treated uniformly, while tight control over all process parameters ensures highly repeatable results.

The universal architecture of the FlexTRAK-WR system accommodates a wide range of wafer sizes in the same systems, yielding unmatched production flexibility. Its small chamber volume and proprietary process control system provide short cycle times, with high machine autonomy.

APPLICATIONS

Wafer processing prior to typical back-end packaging steps. Suitable for wafer-level packaging, flip chip, or traditional packaging.

Wafer Cleaning

- Clean Aluminum bond pads
- Remove Fluorine and other halogen contamination
- Modify passivation to improve underfill adhesion
- Remove organic contamination
- Improve spun-on film adhesion
- Remove metal and metal oxides
- Remove other contamination prior to wafer bumping

Wafer Etching

- Enhance adhesion of gold, solder bumps
- Descum wafer of residual photoresist material
- Pattern dielectric layers for redistribution
- Enhance adhesion of other wafer-applied materials
- Strip photoresist
- Remove excess wafer-applied mold material
- Destress wafer to reduce breakage

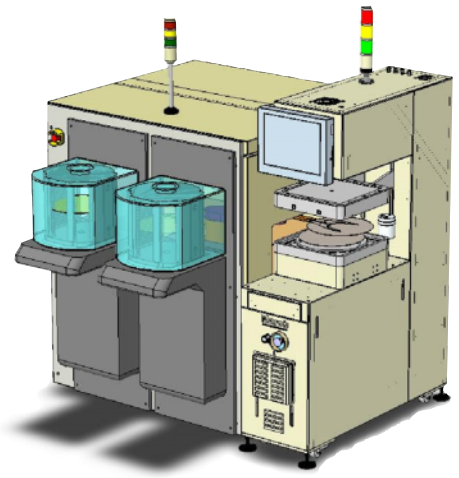
HIGH THROUGHPUT PROCESSING

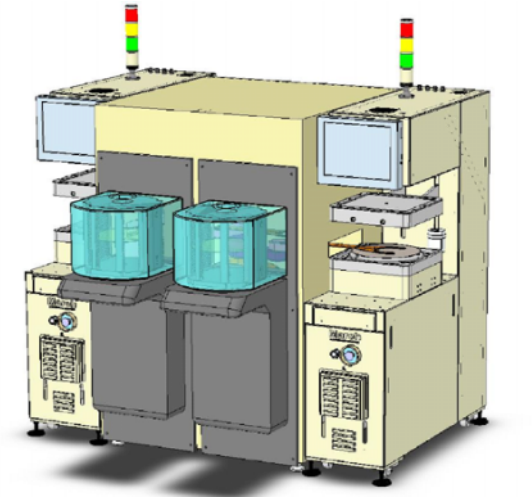
FlexTRAK-WR system's integrated semiconductor wafer handling system provides rapid material transfer for a wide range of wafer sizes, up to 300mm (12 in.). Processing can be done from most types of wafer cassettes and front opening unified pods (FOUP). The patented chamber design and control architecture enables short plasma cycle times with very low overhead, ensuring that throughput for your application is maximized and cost of ownership is minimized.

FEATURES AND BENEFITS

- Highly uniform plasma with high etch rates
- Production-ready wafer handling
- High machine autonomy
- Service components accessible via front pull-out shelves
- High throughput and low cost of ownership

FlexTRAK-WR System Specifications	
Enclosure	Powder-coated aluminum Completely houses the process chamber, electronics, pump and generator
Chamber	Material: Nickel-plated aluminum with aluminum fixturing Part Envelope: 305 x 305 x 50 mm (12.0 x 12.0 x 2.0 in.) Flexible Geometries for Inlet Gas Flow
RF Power	600 W, solid state 13.56 MHz
Gas Control	Two (2) Mass Flow Controllers: 100 SCCM, 250 SCCM (other sizes available upon request) Up to four (4) MFCs optional
User Interface	Touch-screen PC with intuitive graphical user interface Unlimited alphanumeric recipe storage
Pump System	16 CFM Dry Pump Variable Frequency Drive for process consistency Suitable for corrosive gases
System Controls	Automatic Impedance Matching Network Temperature-Compensated Pressure Gauge
Facility Requirements	**System Dimensions W x D x H (with light tower):** 1194W x 1603D x 1905H mm (47.0 x 63.0 x 75.0 in.) Two (2) FOUP Loaders are included within this envelope **Power:** Single-phase 220VAC ± 10%, 25A, 50/60 Hz **Process Gases:** 6 mm (1/4 in.) compression fitting, 0.7-1.4 bar (10-20 PSI) *The system can accommodate a wide range pf process gases **CDA:** (1x) 6 mm (1/4 in.) compression fitting, 5.5-6.9 bar (80-100 PSI) (1x) 10 mm (1/2 in.) compression fitting, 5.5-6.9 bar (80-100 PSI) Flow: 8.2 L/min. @ 1 cycle/min. **N_2 or CDA (Chamber Purge):** 6 mm (1/4 in.) compression fitting, 5.5-6.9 bar (80-100 PSI) Flow: 10 L/min. @ 1 cycle/min. (Peak flow: 150 L/min.) **N_2 (Pump Purge):** 6 mm (1/4 in.) compression fitting, 0.7-3.5 bar (10-50 PSI) Flow: 1.65 L/min. **Robot Type:** 4-axis atmospheric with absolute encoders and fully integrated PC-based control system
Compliance	Complete machine enclosure Light tower CE-certified SMEMA 1.2 compatible SEMI E-10





Wafer Size & Throughput Chart

Wafer Size	FlexTRAK Systems		Units Per Hour (UPH)*	
150 mm	1	2	137	274
200 mm	1	2	80	160
300 mm	1	2	80	160

*Capable machine rates

Our Applications and Customer Service departments bring to you more than 20 years of experience in RF plasma technology.

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March Plasma Systems reserves the right to make design changes to products and components to improve their function. These changes may occur between printings.

Leading Plasma Innovations

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PLL-04-2841 Rev. A
Printed 9/05