

# FlexTRAK™ 2MB Plasma System

## Features and Benefits

- Unique boat bypass feature optimizes productivity
- Multiple inline plasma modules increase throughput
- High uniform plasma treatment
- Production ready dual lane boat handling
- Ideal for pre-Flip-Chip Underfill (FCUF) processes

## Plasma System for High-Throughput, Inline Boat Processing

The FlexTRAK™ 2MB system is designed for high throughput, inline processing of microelectronic devices held in boats, trays or other carriers. The patented plasma module provides exceptional uniformity and run-to-run process repeatability. Its advanced three axis symmetrical plasma chamber ensures control over all process parameters and highly repeatable results.

The system seamlessly integrates into a production line, while accommodating a wide range of boat sizes, yielding unmatched production flexibility. Its compact plasma chamber and proprietary process control system minimize cycle time.

The integrated boat handler of the FlexTRAK-2MB system provides rapid material transfer, up to 2 boats per plasma cycle. Combined with the compact design and short plasma cycle, the system maximizes through-put and minimizes cost of ownership.



## Applications

Plasma processes for pre-flip chip underfill, pre-die attach, pre-wire bond and pre-mold steps.

## Plasma Contamination Removal & Cleaning

- Fluorine & other halogens
- Metals & metal oxides
- Organic compounds

## Plasma Etching

- Roughen surfaces to improve adhesion and reduced delamination
- Modify surfaces to increase bond strength and surface tension properties

## Surface Activation

- Improve flip chip underfill performance by minimizing voids, enhancing adhesion, increasing wicking speed and maximizing fillet height uniformity.
- Improve mold material flow to eliminate voids and reduce wire sweep

## Specifications: FlexTRAK™ 2MB Plasma System

|                                |   |   |
|--------------------------------|---|---|
| <b>Enclosure Dimensions</b>    | <b>W x D x H – Footprint</b>                    | 800W x 1530D x 1596H; 1950H mm with Light Tower (31.5W x 60.2D x 62.8H; 76.8H in. with Light Tower) |
|                                | <b>Net Weight</b>                               | 590 kg (1300 lbs)   |
|                                | <b>Equipment Clearances</b>                     | Front, Right, Left – 607 mm (24 in.), Back – 254 mm (10 in)   |
| <b>Chamber</b>                 | <b>Maximum Volume</b>                           | 5.5 liters (338 in <sup>3</sup> )   |
| <b>Electrodes</b>              | <b>Variable Electrode Configurations</b>        | Power-Ground, Ground-Power; Power-Power   |
|                                | <b>Working Area</b>                             | 305W x 305D mm (12W x 12D in.)  |
| <b>RF Power</b>                | <b>Standard Wattage</b>                         | 600 W   |
|                                | <b>Frequency</b>                                | 13.56 MHz   |
| <b>Gas Control</b>             | <b>Available Flow Volumes</b>                   | 10, 25, 50, 100, 250 or 500 sccm  |
|                                | <b>Maximum Number of MFCs</b>                   | 4   |
| <b>Control &amp; Interface</b> | <b>Software Control</b>                         | EPC with PC-Based Touch Screen Interface  |
|                                | <b>Remote Interface</b>                         | SMEMA, SECS/GEM   |
| <b>Vacuum Pump</b>             | <b>Standard Dry Pump</b>                        | 16 cfm  |
|                                | <b>Optional Wet Pump</b>                        | 19.5 cfm  |
|                                | <b>Optional Purged Dry Pump</b>                 | 16 cfm  |
|                                | <b>N2 Purged Pump Flow</b>                      | 2 slm   |
| <b>Facilities</b>              | <b>Power Supply</b>                             | 220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire   |
|                                | <b>Process Gas Fitting Size &amp; Type</b>      | 6.35 mm (0.25 in.) OD Swagelok Tube   |
|                                | <b>Process Gas Purity</b>                       | Lab or Electronic Grade   |
|                                | <b>Process Gas Pressure</b>                     | 0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated                                       |
|                                | <b>Purge Gas Fitting Size &amp; Type</b>        | 6.35 mm (0.25 in.) OD Swagelok Tube   |
|                                | <b>Purge Gas Purity</b>                         | Lab or Electronic Grade N2/CDA  |
|                                | <b>Purge Gas Pressure</b>                       | 2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated  |
|                                | <b>Pneumatic Valves Fitting Size &amp; Type</b> | 6.35 mm (0.25 in.) OD Swagelok Tube   |
|                                | <b>Pneumatic Gas Purity</b>                     | CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm   |
|                                | <b>Pneumatic Gas Pressure</b>                   | 3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated                                      |
| <b>Compliance</b>              | <b>Exhaust</b>                                  | 25.4 mm (1 in.) OD Pipe Flange  |
|                                | <b>SEMI</b>                                     | E10, S2/S8 (EH&S/Ergonomics)  |
|                                | <b>International</b>                            | CE Marked   |
| <b>Ancillary Equipment</b>     | <b>Gas Generators</b>                           | Nitrogen, Hydrogen (Requires Additional Non-Optional Hardware)                                      |
|                                | <b>Facilities</b>                               | Chiller, Scrubber   |

For more information, speak with your local representative or contact your regional office.

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