FlexTRAK-SH™
Plasma Treatment System

March
A NORDSON COMPANY

SUPERIOR PLASMA TECHNOLOGY FOR HIGH THROUGHPUT STRIP PROCESSING

The FlexTRAK-SH system is designed for high-throughput processing of lead-frame strips, laminate substrates, and other strip-type microelectronic components, up to 5 strips per cycle. The patented plasma chamber design provides exceptional uniformity and process repeatability. Its three-axis symmetrical chamber ensures all areas of the strip are treated uniformly, while tight control over all process parameters ensures highly repeatable results.

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

APPLICATIONS

Plasma processes for die attach, pre-wire bond, pre-mold and post-mold.

Contamination Removal & Cleaning

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

Etching

- Modify strip to improve die adhesion
- Modify surface of bonded die & strip to improve mold material adhesion and reduce delamination

Surface Activation

- Improve die adhesive flow to eliminate voids and enhance adhesion
- Improve mold material flow to eliminate voids and reduce wire sweep
- Improve underfill to eliminate voids, enhance adhesion, increase wicking speed and maintain uniform fillet height

HIGH THROUGHPUT PROCESSING

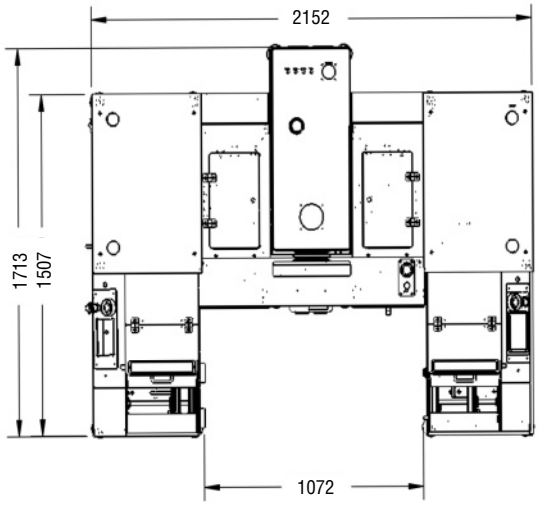
The FlexTRAK-SH system's integrated strip handling system provides rapid material transfer for a wide range of strip sizes, up to 5 strips per cycle. Processing can be done from most types of magazines and carriers. The patented chamber design and control architecture enable short plasma cycle times with very low overhead, ensuring that throughput is maximized and cost of ownership is minimized.

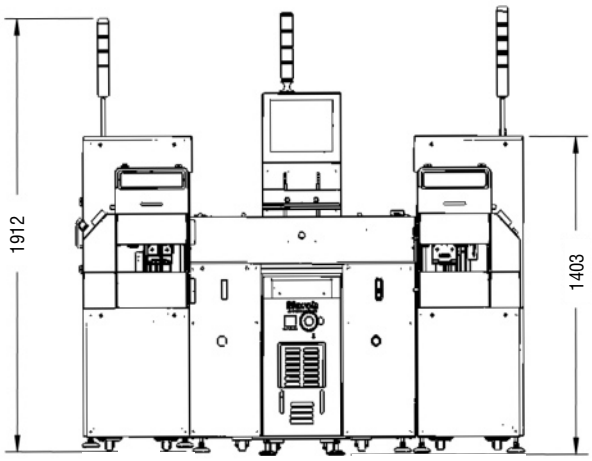
FEATURES AND BENEFITS

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

FlexTRAK-SH 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):** 2152 x 1713 x 1912 mm (85.0 x 67.0 x 75.0 in.) **Power:** Single-phase 220VAC ± 10%, 20A, 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:** (4x) 6 mm (1/4 in.) compression fitting, 5.5-6.9 bar (80-100 PSI) Flow: 23 L/min. @ 2.5 cycles/min. **N_2 or CDA (Chamber Purge):** 6 mm (1/4 in.) compression fitting, 5.5-6.9 bar (80-100 PSI) Flow: 25 L/min. @ 2.5 cycles/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.
Compliance	Complete machine enclosure Light tower CE-certified SMEMA 1.2 compatible SEMI E-10





Strip Width & Throughput Chart

Strip Size (width)	# Strips	Units Per Hour (UPH)*
25 to 54.4 mm	5	640
54.5 to 69.8 mm	4	512
69.9 to 95.5 mm	3	384
95.6 to146.9 mm	2	256
147 to 305 mm	1	128

*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

March Plasma Systems, Inc. 2470-A Bates Avenue Concord, California 94520 Telephone: 800-326-1151 Facsimile: 925-827-1189

www.marchplasma.com www.plasmapowerplus.com

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