FlexTRAK-CD Plasma System

March
A NORDSON COMPANY

Superior Plasma Processing, Small Footprint, High Throughput

The FlexTRAK-CD plasma system is designed for high-throughput processing of leadframe strips, laminated substrates, and other strip-type electronic components, up to 10 strips per plasma cycle.

The patented plasma chamber design provides high uniformity and process repeatability. It ensures all areas of the substrate are treated uniformly, while tight control over process parameters provides highly repeatable results.

The system accomodates a wide range of strip sizes, yielding unmatched production flexibility. Its small chamber volume and proprietary process control system provide short cycle times, with high machine autonomy.

APPLICATIONS

Plasma for pre-die attach, pre-wire bond, pre-mold/encapsulation and pre-underfill

Contamination Removal & Surface Cleaning

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

Etching and Surface Roughening

- Improve die adhesion & wire bonding
- Improve mold adhesion & reduce delamination

Surface Activation

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

COMPACT DESIGN AND HIGH THROUGHPUT

The FlexTRAK-CD plasma system's integrated strip handling system delivers rapid and reliable material transfer for a wide range of strip sizes. Processing can be done from most types of magazines and carriers. The patented chamber design and control system 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 fast treatment rates
- Production-ready strip handling system
- Easy-to-use touch screen graphical user interface (GUI)
- Service components accessible via front pull-out shelves
- High throughput, small footprint, low cost of ownership

System Specifications	
Enclosure	Powder-coated, safety-interlocked Completely houses process chamber, electronics, pump, generator, and material handling system
Integrated Handling System	High throughput, fully integrated Handles a wide variety of lead frame & strip sizes Converts to other sizes with optional conversion kit(s)
Chamber	Nickel-plated aluminum with aluminum fixturing Std. Part Envelope: 305 x 305 x 50 mm (12 x 12 x 2 in.) Controlled vacuum exhaust Chamber configurable for customer parts
RF Power	600 W, solid state 13.56 MHz
Gas Control	Two (2) Mass Flow Controllers: 100 SCCM, 250 SCCM (Other sizes available; up to 4 MFCs optional) Hydrogen-ready option
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
System Controls	Automatic Impedance Matching Network Temperature-Compensated Pressure Gauge Advacned PLC Control System
Facility Requirements	System Dimensions W x D x H (with light tower): 1068 x 1166 x 1950 mm (42 x 46 x 77 in.) Power: Single-phase 220VAC ± 10%, 20A, 50/60 Hz Process Gases (ea.): 6 mm (1/4 in.) compression fitting, 0.7-1.4 bar (10-20 PSI) CDA: 6 mm (1/4 in.) compression fitting, 5.5-6.9 bar (80-100 PSI) N_2: 6 mm (1/4 in.) compression fitting, 0.7-3.5 bar (10-50 PSI)
Compliance	Complete Safety Enclosure 3-Color Light Tower CE-Certified SEMI E10 Compliant SEMI S2/S8 Compliant

FlexTRAK-CD Plasma System for Strip and Lead Frame Processing

Strip Width & Throughput Chart

Strip Size (width)	# Strips	Units Per Hour (UPH)*
25 to 54.4 mm	5	576
54.5 to 69.8 mm	4	461
69.9 to 95.5 mm	3	346
95.6 to146.9 mm	2	230
147 to 305 mm	1	115

*Machine capable rates; for other strip sizes, contact March

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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