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DETAILS

PLASMAPEN™ SYSTEM



PlasmaPen™

The **PlasmaPen™** is a patented atmospheric plasma system used to solve surface preparation problems. The **PlasmaPen™** produces high density plasma with a low heating effect, giving it the ability to clean and activate the surfaces including low melting point polymers. Our **worldwide customer base** uses the **PlasmaPen™** for a broad range of applications that span the Life Science, Electronics and Industrial markets.

The **PlasmaPen™** cleans and activates the surface of materials promoting wettability of potting compounds, adhesives, inks, paints and dyes. Surface cleaning with the **PlasmaPen™** ensures reliable wire and die bonding for semiconductor packaging. It has shown particular success in adhesion promotion of anisotropic conductive film (ACF) used in flat panel display manufacturing.

The patented design of the **PlasmaPen™** keeps voltages and current safely away from the plasma jet. This means that the user is not exposed to potentially dangerous voltages and surfaces are not subjected to damaging filamentary discharges.

The **PlasmaPen™** can be used manually or remotely through host automation. It is ideally suited to *in situ* treatments enabling rapid in-line processing, eliminating any activation lifetime issues. Process gasses are flowed through the pen, activated and ejected through the nozzle. PVA TePla's design allows compressed air to be the standard treatment gas for most applications and provides for a very low cost of ownership. Other gasses can be utilized depending on the specific application.

[To Request a Brochure/Literature/Product CD, Click Here](#)

[Plasma Pen featured on Azom TV](#)

Plasma Pen from PVA TePla



Technical Data

Width of treatment band (configurable)	3 - 10 mm
Service Interval (dependent)	1500 hours (gas dependent)
Standard Cable Length	3 m - 6 m (9 - 18 ft.)

Power Requirements

Electricity (4 amps max)	115 VAC, 1 phase, 60 Hz
	100 or 230 VAC, 1 phase, 50/60 Hz (4 amps max)

Compressed Air	Compressed air (6 Bar, 88 psi), 1275 liters/hour (45cf3/h)
Other Gasses	N2, N2/H2, O2, CO2, He
Weight	25 kg / 55 lbs

Advantages

- High density plasma in contrast to corona discharge
- No electrical current or filamentary streamers in the plasma jet
- Broad material application capability
- Low thermal load allows treatment of low melting point polymers
- Simple host automation integration
- Low environmental impact (no chemicals, primers or vacuum)
- Onboard systems monitoring and diagnostics

Applications

- Adhesion Promotion of:
- Anisotropic Conductive Film (ACF) - FPD assembly
- Polymer adhesive bonding
- Inks, dyes and paints
- Potting, over mold and under-fill compounds
- Bio Materials

Critical Cleaning:

- Wire and Die Bond pads
- Fiber Optic Cables
- Weld Lines
- Packaging, caps and closures
- Connectors
- Optics

PlasmaPen™ Markets

- Chip scale devices
- Electronics packaging
- Flat panel displays
- Textiles
- Life Science and Medical device products
- Automotive, Aerospace and Nautical parts
- Wires, cables, fibers
- Toys and consumer goods
- Window/glass manufacturing

Options

- Robotic operation (Multi Axis or X, Y & Z)
- Multiple plasma jet array
- Foot pedal
- Custom fixtures
- Plasma detection
- Secondary gas cooling
- Ventilation hood
- Calibration equipment
- Full onsite service maintenance contract
- Plasma pulsing and secondary gas cooling

Safety Certification Standards

Independently laboratory tested:

- CE certified
- EN 61010
- EN 61326

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