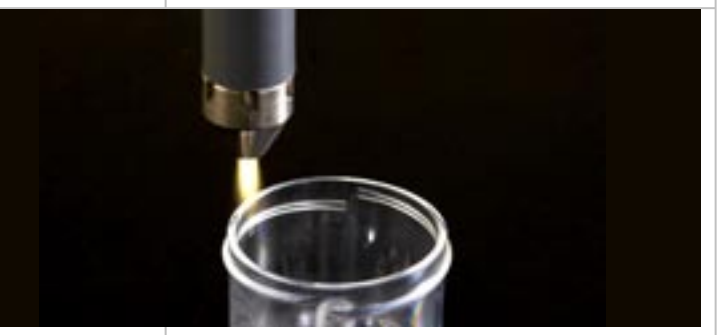
ROBOPEN™

Computer Controlled Atmospheric Pressure Plasma System

- Surface cleaning and activation
- Surface modification
- Fully Programmable
- Works on a variety of materials

PVA TePla America, Inc.

RoboPen™



RoboPen™ is the innovative solution for surface preparation problems. It is designed to activate the surface of many types of material (plastics, glass, ceramics, metals, etc.) for industrial and laboratory applications. Surface treatment with the RoboPen™ increases the surface tension of material; which enhances the adhesion of glues, inks or paints subsequent to the plasma surface cleaning.

RoboPen™ is a surface modification device, which operates at atmospheric pressure. Its innovative design keeps high voltages and current safely inside of the pen body and away from the plasma jet and delicate surfaces.

RoboPen™ can be operated manually or remotely and the surface treatment can be localized or scanned. The speed range is specific for different applications (for an activation of several plastic surfaces: up to .05 m/sec.) The compressed air flowing through the pen is activated and ejected out of the nozzle and the use of air as a treatment gas will be sufficient for most applications.

RoboPen™ X,Y, Z table is on an optional steel table and an optional enclosed ductless fume hood wih potective clear walls and door. A fully progammable PC based control system allows for manual and/or automatic operation. Unlimited series of treatment patterns or "recipes" are possible.

PVA TePla America, Inc.
251 Corporate Terrace
Corona, CA 92879-6000 USA
Tel. (951) 371-2500
Fax (951) 371-9792
E-mail: sales@pvateplaamerica.com

Advantages

- Uniform high-power density (in contrast to a corona discharge)
- Uniform treatment is assured with automated speed and distance from component
- No electrical current in the plasma jet
- Most materials can be treated (plastic parts, films, fabric, metal, ceramic, glass)
- Ambient conditions (no chemicals, primers or vacuum)
- No consumables, operates on CDA

RoboPen™ eliminates the inefficiency, safety hazards and product damage often found in competitive technologies such as corona discharge, open flame, and chemical surface preparation.

Applications:

RoboPen™ solves surface preparation problems for wide variety of applications, such as:

- Direct and ink jet printing
- Surface cleaning
- Residue removal
- Adhesive bonding
- Bond pad cleaning
- Gluing
- Assembling
- Painting decorating
- Surface heating
- Plastic/metal welding
- Pre-encapsolation cleaning
- Pre-die attach cleaning

RoboPen™ can be used on all kinds of products:

- Industrial components
- Plastic containers
- Tools and equipment
- Wires, cables, fibres
- Consumer goods
- Medical and health care products
- Automotive parts
- Caps and closures
- Electrical/electronic components

Easy handling:

RoboPen™ is very simple and easy to program. All that you need is to connect the power supply to an ordinary 115/230 VAC circuit and connect the gas line to a compressed air system. It is also safe to use with no danger of burning and it provides easy access even on complex part geometry. For small jobs the PlasmaPen™ body can be removed from the end of the arm for safe manual treatment of materials.

	Technical Data
Width of the treatment band	1/4" at 1/4" distance
Lifetime of the plasma device	> 1500 hours
Work Range:	x = 14, y = 10", z = 6" x = 20, y = 20", z = 6" x = 24, y = 24", z = 6"
Power Requirements	
Electricity:	115 VAC, 1 phase, 60 Hz 230 VAC, 1 phase, 50 Hz
Compressed Air:	90 PSI; 15.0 f^3/h - Dry and Oil Free
Weight:	Up to 181 kg / 400 lbs.
Demensions:	39" D x 27.5" W x 77.5" H
Table load capacity:	25 lbs.

ISO 9001 REGISTERED

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