Vanstron
PCB assembly & traceability

Inline

Plasma treatment (cleaning) machine

Dry plasma cleaning with atmospheric plasma

www.vanstron.com

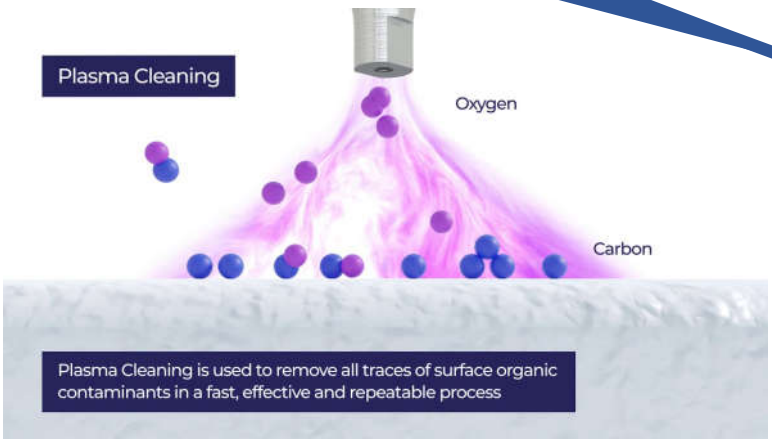
Atmospheric plasma solutions - High-efficiency plasma cleaning, activation and nanocoating

Inline Plasma treatment (cleaning) machine , designed by Vanstron ***is used for direct dry plasma cleaning with atmospheric plasma on PCBAs which is for the PCBAs cleaning before coating.***

The plasma head is mounted on the Z axis above the transport system on a linear X/Y axis. The The PCB to be cleaning is taken over onto the transport system and transported into the cleaning position, and by advanced automation control technology, the operator is allowed to select the position of cleaning at the any corner on the surface of the boards.

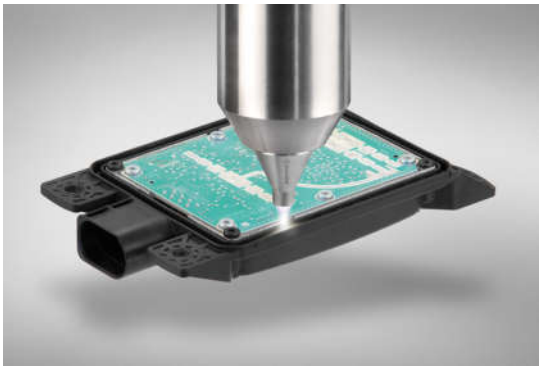
Atmospheric pressure plasma pretreatment is one of the most efficient plasma processes for cleaning, activating or coating plastics, metals, (e.g., aluminum), glass, recycled materials and composite materials.

With the customized fixtures for the transportation, the above-mentioned material can be also working in the vanstron plasma treatment machine for the inline automatically production.



Features & Benefits

- **Completely automated high production** atmospheric plasma treatment processing.
- Generate plasma solely using **compressed air without the need for carrier gases.**
- **Multi-functional:** system can be used as standalone or placed inline with upstream or downstream operation processes.
- **Environmentally Friendly**: zero chemicals are used and no harmful substances are produced.
- **Cleaning**: remove fine dust, oil, grease, organic, inorganic and microbial contaminants.
- **Activation:** Increase surface energy to promote wetting and adhesion



Spear Nozzle,Atmospheric PlasmaTreatment

Standard Features

- Board presence sensors
- UPS and voltage stabilizer
- Light tower beacon
- ESD grounding

Rotary Nozzle, Atmospheric Plasma Treatment

Optional Features

- Heavy duty conveyor
- Dual lane conveyor system
- Multi-stage or multi-zone conveyor
- Return conveyor (underneath)
- Larger conveyor width
- CCD vision camera
- Barcode or 2D code scanner
- Dual plasma nozzles for top and bottom side simultaneous cleaning
- Nitrogen generator

Specifications

Model	PLS-450
Plasma Processing	
Effective Work Area	L 450 x W 450 (L = 17.72" W = 17.72")
Clearance Height	3 - 15 mm (0.12" - 0.59")
RF Power	500 W/1000 W/ 300 - 620 W
RF Frequency	20 - 25 kHz
Nitrogen Generator	Optional
Transmission System	
Process Flow	L to R (Standard); R to L (Optional)
Conveyor Type	Pin Chain-5mm
Conveyor Height	900 ± 20 mm (35.43" ± 0.79")
Conveyor Speed (XY)	2 - 13 m/min
Conveyor Width Adjustment	Automatically
XYZ Axes Configuration	
Motor	Servo + Ball Screw Linear Actuator
Spray Nozzle	Single plasma nozzle or Dual plasma nozzles (Optional)
Max. Movement Speed	800mm/s
Working Speed	50 -100m m /s(Typical)
Effective Operating Height	3-1 S mm (0.12" - 0.59")
Repeated Accuracy	± 0.2 mm(± 0.007")
Facility	
Standard footprint	L 900 x W 1300 x H 1627 mm (L 35.43" x W 51.18" x H 64.06")
Weight	AP-3P: 530 kg (1168 lb)
Air source	0.4 Mpa
Extraction	5 m3/min
Input power	AC 220 V 50/ 60 Hz 1P
Interface	
Controller	PLC with touch screen control
Software	Vanstron UI & Windows OS
Programming	File transfer, On-line vision programming with keyboard/mouse
Communication Protocols	SMEMA

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