



VESTA

Version: CUSTOM

CUSTOMIZABLE PLASMA CLEANING PLATFORM

Vesta is a customizable plasma cleaning platform.

It includes all the subassemblies necessary to deliver excellent cleaning and surface modification results.

The features contained in this system allow a reliable and repeatable cycling of the plasma process for 24/7 operation.

In particular, Vesta is complete with:

A 13.56 MHz RF system inclusive of an automatic tuning network.

Two Mass Flow controlled gas input lines.

An oil vacuum pump contained in the body of the machine. (Dry pump optional).

A high precision capacitance pressure gauge.

An all-aluminum chamber with no welded joints, Nickel coated for maximum performance.

A PC controller with an LCD Touch Screen User interface.



SCI Automation Pte. Ltd.
210 Tuas South Avenue 2, West Point BizHub
Singapore 637210

Tel: +65 6465 1886 Fax: +65 6465 1887
www.sciplasma.com

General Enquiry
Email: sales@sciplasma.com



APPLICATIONS

- Cleaning of leadframes prior to wire bonding
- Organic decontamination prior to wire bonding
- Adhesion promoter prior to molding
- Adhesion promoter of die attach materials on leadframes or PBGA strips
- Flux removal from semiconductor packages or hybrids
- General activation, cleaning and decontamination
- Adhesion promoter for flip chip packages prior to Underfill
- Wafer Cleaning and Activation
- Hard Disk applications
- Solar applications
- Surface activation and cleaning of small objects
- Surface activation and cleaning of polyimide flex substrates
- Surface activation and cleaning of large surface substrates
- Surface activation and cleaning of large bulky objects

OPTIONS

- Electrode Configuration
- Chamber Size
- Hydrogen Generator
- 1000 Watt RF Generator
- N2 Purge Line
- Extra Gas Lines with Mass Flow Controller

PROCESS GASES

- Ar
- O2
- N2
- He
- Ar/O2 in various mix ranges
- Ar/H2 in various mix ranges
- Other gases on request

SOFTWARE SPECIFICATIONS

Microsoft Window™ based software, inclusive of:

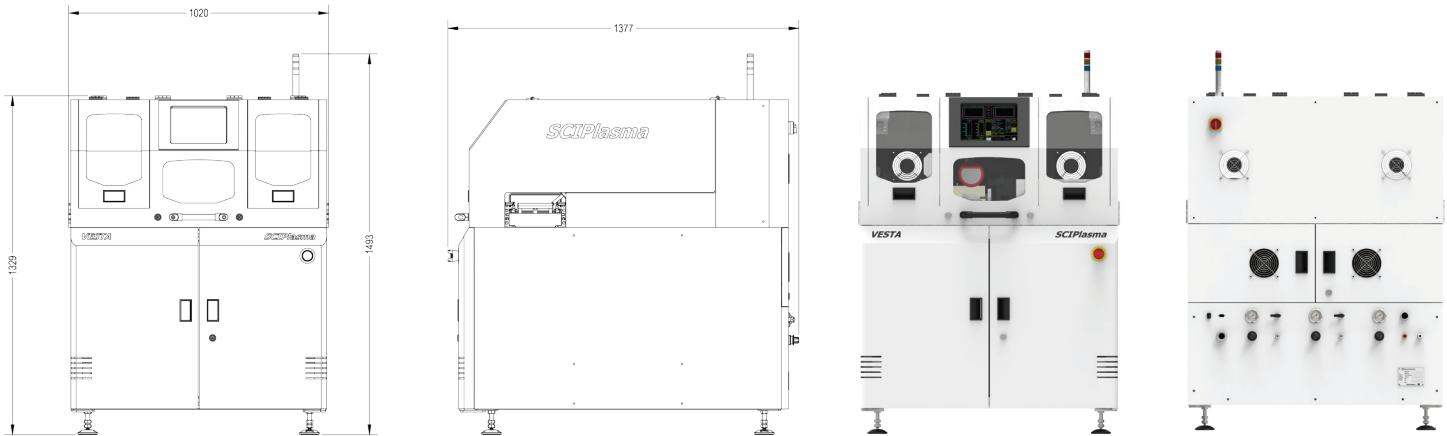
- Fully automatic operation mode
- Manual operation mode
- Setup page with all variables stored in a SQL database
- User page with security level selection and storage for controlled access to the machine
- Program page, for the selection and entry of all the process variables that are stored in the SQL database
- Automatic log creation and storage
- Multiple alarm settings for a totally controlled process
- SECSGEM (optional)

CUSTOMIZABLE ITEMS

- Chamber (Size, Material, Finish)
- Product handling (In Line, stationary, on shelves, on racks, rotating, manual loading)
- Substrate handling (In line, Magazines with loaders, Bulk, SCARA Robot, Special configurations)
- Electrode configuration (Etching, RIE, UV Trap, ION Trap)
- Multiple powered electrodes with equal or different operation frequency and power
- Software

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SPECIFICATION TABLE	System Name/ Type	Vesta	Inline Plasma System
	Machine Dimensions	Footprint (mm)	1020x1377x1329h
	Weight	Kg	500
	Chamber	Material	Aluminum, Nickel Coated/Stainless Steel
		Dimensions (mm)	Custom designed according to application
		Volume (Liters)	1 to 50, Application Dependent
		Plasma Type	Direct Plasma; RIE
	RF Power	Frequency (MHz)	13.56
		Max. Power (Watts)	200; 300; 600
	Automatic Tuning Network	Type	L/C Network
		Functions	Auto Tuning; Preset Tuning
		Configuration	All Silver conductor on the RF Path
	Electrode Configuration	Geometry	Planar
	Pressure Sensor	Type	Capacitive
		Range (mBar)	1-1x10 ⁻³
	Gas Lines	Quantity	2
		Type	Digital Mass Flow
	Pumping System	Vacuum Pump	Dry Pump 5 m ³ /h ⁻¹ to 35 m ³ /h ⁻¹
	Controller	PC	CPU; Digital I/Os; DAC and ADC
		User Interface	17" Active Touch Screen
	System Facilities	Electrical Power Supply	Single Phase 100-240V 50/60 Hz, 3.5KVA
		Gas Fittings	Swagelok 6mm OD
		Process Gas Max. Pressure	1.5 Bar
		Process Gas Purity	99.995 or better
		Compressed Air	CDA 4 - 6 Bar
		CDA Fittings	8mm OD fast connect fitting
		Exhaust pipe	25 mm OD
	Standards	SEMI	S2, S8
			Cleanroom ready
		Others	CE
	Options	Gas Generators	H2
		Extra Gas Line	N2 Purge Line
			Up to 3 extra Digital Mass Flow Gas Lines

Specifications are subject to change without notice.