

TITAN

BATCH PLASMA SYSTEM

Titan is a standalone batch plasma cleaning system specially designed to process 6 magazines per cycle.

Titan's chamber configuration ensures uniform plasma distribution to guarantee effective cleaning and activation across all the substrates.

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

Titan is self-contained with:

- A 13.56 MHz RF system inclusive of an automatic tuning network
- Two mass flow controlled gas input lines
- A dry vacuum pump contained in the body of the machine
- A high precision capacitive pressure gauge
- An all-aluminum chamber, nickel-coated for maximum performance
- A PC controller with an LCD touch screen user interface.



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APPLICATIONS

- Organic decontamination and surface activation of lead frames prior to wire bonding
- Adhesion promoter prior to molding
- Adhesion promoter of die attach materials on lead frames or PBGA strips
- Adhesion promoter for flip chip packages prior to underfill
- Flux removal from semiconductor packages or hybrids
- General activation, cleaning and decontamination

PROCESS GASES

- Pure: Ar, He, O₂, N₂, H₂
- Mixtures: N₂/H₂, Ar/O₂, Ar/H₂ all in various mix ranges
- Other gases available on request

SOFTWARE SPECIFICATIONS

Microsoft Windows™ based software, inclusive of:

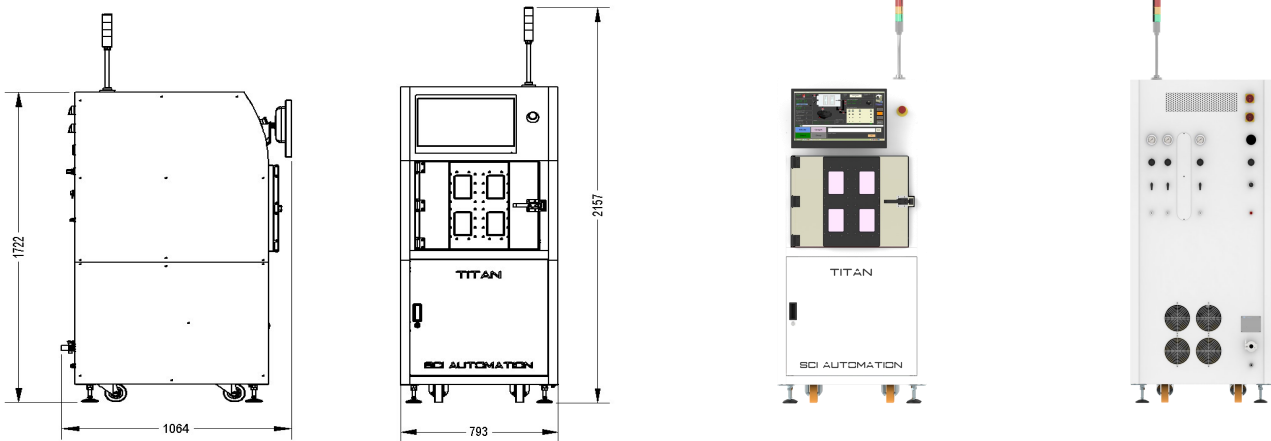
- User interface on screen
- Full manual and automatic operation
- Setup page to allow full customization
- User page with security level selection for controlled access to the machine
- Programs page, for the selection and definition of all the process variables
- Automatic advanced logging capabilities

OPTIONS

- H₂ generator
- 1000 W RF generator
- 1 extra mass flow controlled gas lines
- SECSGEM

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System name / type	Titan	Batch plasma system
Machine dimensions	Footprint (mm)	793 x 1064 x 2157H (including tower light)
	Weight (kg)	400
Magazines	Max dimensions (mm)	110 x 300 x 200H
Chamber	Material	Nickel-coated aluminum
	Dimensions (mm)	563 x 380 x 461H
	Volume (L)	98.6
	Plasma type	Direct plasma
RF generator	Frequency (MHz)	13.56
Automatic tuning network	Max power (Watts)	600
	Type	L/C Network
	Functions	Auto tuning; preset tuning
Electrodes configuration	RF line	All silver-coated copper conductor
	Geometry	Planar
	Configuration	6 shelves for 6 magazines 4 powered electrodes with insulated RF guards
Pressure gauge	Type	Capacitive
	Range (mbar)	0.0001 to 1
Gas lines	Quantity	2 + 1 purge line
	Max flow rate (mL/min)	200
Pumping system	Vacuum pump	Dry pump (1000 L/min)
Controller	PC with fieldbus	CPU; digital I/Os; DAC and ADC
	User interface	21" active touch screen
System facilities	Electrical power supply	Single phase 110-240V 50/60 Hz, 2.5KVA
	Process gas fittings	Swagelok 6 mm OD
	Process gas pressure	1 to 1.5 bar
	Process gas purity	99.995 % or better
	Compressed air	5 to 6 bar
	Compressed air fittings	8 mm OD fast connect fitting
	Exhaust port	25 mm OD
Standards	SEMI	S2, S8
		Cleanroom ready
	Others	ISO 9001 CE
Options	Hydrogen generator	Up to 300 mL/min of H ₂ with purity above 99.995 %