SCI AUTOMATION

QUADRIO MAX

FULLY AUTOMATIC HIGH VOLUME PLASMA SYSTEM

Quadrio MAX is a fully automatic plasma cleaning system designed for products with a strip form factor handled in magazines.

Quadrio MAX is really fully automatic, the conversion that is usually required when moving from a product to another that has different dimensions is completely handled by the machine. The plasma chamber tracks, mini-tracks and the magazines table slots align automatically to fit the new product size without any manual adjustment. Everything is defined in the process recipe.

Quadrio MAX is the best choice for a production with high product variability and maximum efficiency requirements.

Quadrio MAX can perform automatically both the PE and RIE processes allowing flexibility in choosing the best plasma processing conditions.

Full traceability is available to guarantee the best process control.

APPLICATIONS

Quadrio MAX can be used for:

- 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, O_2, N_2, H_2
- Mixtures: N_2/H_2, Ar/O_2, Ar/H_2 all in various mix ranges
- Other gases available on request

SOFTWARE SPECIFICATIONS

Microsoft Windows™ based software, inclusive of:

- User interface on touch 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

- SECSGEM
- Magazine or lead frame traceability
- H_2 generator
- 1000 W RF generator
- Up to 4 total mass flow controlled gas lines
- Higher classroom standard ISO5 (100)
- Stainless steel plasma chamber

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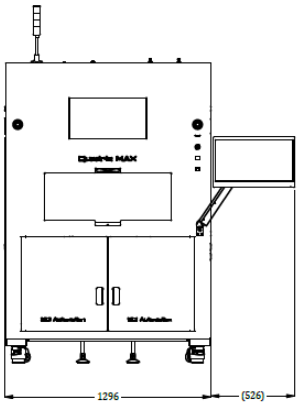

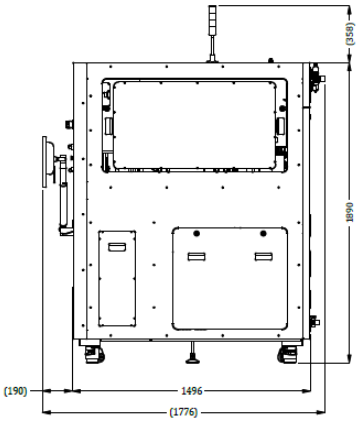

System name / type	Quadrio MAX	Standalone fully automatic high volume strip plasma system
System dimensions	Footprint (mm)	1296 x 1496 x 1890H
	Weight (kg)	1200
Substrates / magazines	Min dimensions (mm)	20 x 50 x 0.05H / 25 x 50
	Max dimensions (mm)	100 x 300 x 1.5H / 115 x 305 x 250H
Chamber	Material	Nickel-coated aluminum
	Dimensions	740 x 380 x 111H
	Volume (L)	32.1
	Plasma type	Direct plasma, RIE
RF Generator	Frequency (MHz)	13.56
	Max power (W)	600
Automatic tuning network	Type	L/C network
	Functions	Auto tuning, preset tuning
	RF Line	All silver-coated copper conductor
Electrodes configuration	Geometry	Planar
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 (5000 L/min)
Controller	PC with fieldbus	Windows 10 LTSC
	User interface	21.5" active touch screen + 21.5" display
System facilities	Electrical power supply	Three phase 380-415V 50/60 Hz, 15.5 KVA
	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 one touch fitting
	Exhaust port	25 mm OD
Standards	SEMI	S2, S8
	Cleanroom	Class ISO 7 (10k) compatible
	Others	CE
Options	Traceability	SECSGEM / Handling of substrates marked with 2D codes
	Hydrogen generator	Up to 500 mL/min of H_2 with purity above 99.995 %
	RF Generator	Power 1kW at 13.56 MHz
	Cleanroom	Class ISO5 (100) compatible
	Plasma chamber material	Stainless steel AISI 304

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