



Resist Ashing System GIGAbatch 360 M / 380 M

- No device damage due to microwave plasma
- Photoresist removal after high-dose implant or dry etch process

PVA TePla

Advanced Microwave Plasma Batch Ashing

The **GIGAbatch 360 M / 380 M** are compact reactors for resist removal and substrate cleaning, designed for production of

- Semiconductor devices
- High brightness LED
- MEMS devices

at very low cost of ownership. A pristine glass front qualifies the tools for cleanroom environment.

The systems are able to handle various substrate sizes ranging from 2" to 8" and can accommodate up to 75 wafers per run. Wafer support arms, custom-designed for the respective wafer carriers (quartz boats), are included with the system. The convenient drawer door allows wafer loading without touching the plasma chamber, reducing loading errors and particle defects.

Microwave plasma is ideal for resist removal in modern device fabrication, since it produces a very high concentration of chemically active species along with low ion bombardment energy, guaranteeing fast ash rate and a damage-free plasma process.

Applications

- Removal of photoresist after implant or dry etching
- Wafer and substrate cleaning
- Suitable for various substrate technologies like silicon, III/V-compounds, quartz, ceramic, lithium niobate, copper interconnect devices, etc.

Technical Data

Wafer Size	Model 360 M: up to 150 mm Model 380 M: 200 mm
Throughput	Up to 150 wafers/hour, depending on type of process
Batch Size	Up to 75 wafers, depending on size
Wafer Loading	Manual wafer loading outside of plasma chamber
Plasma Chamber	Quartz, depth: 395 mm (15")
Model 360 M	Diameter: 245 mm (9.6") Volume: 18 l
Model 380 M	Diameter: 300 mm (12") Volume: 28 l

Plasma Generation	Microwave source (2.45 GHz), maximum power 1000 W
Process Gas Supply	2 gas channels included, 2 optional
Vacuum Gauge	MKS Baratron capacitance manometer
Temperature Monitor	Infrared thermometer
End Point Detection	Optical emission EPD, plasma verification
System Control	PC-based controller, 10.4" color monitor, GUI with function keys
Operating System	QNX real time platform
Program Features	Manual or automatic operation, user password, multiple recipe storage (1-10 steps each), self test rou- tines, warning and error messaging
Process Tracking	Real time monitoring, on-screen display of graphic plots, data logging, export of process data
Interfaces	Ethernet, USB, RS232 interface
System State Signal	Light tower R/Y/G/buzzer

Performance Data

Uptime	>95%
MTBF	>500 h
MTTR	<2 h
Standards	CE-certified, Semi S2/S8 compliant

Supplies

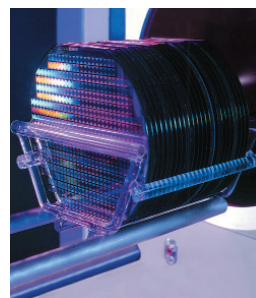
Electricity	230 V, 50/60 Hz, 15 A
Process Gas, Vent	1-2 bar (15-30 psi), 1/4" Swagelok
Compressed Air	6 mm Festo QS, 4-6 bar, (60-90 psi)

Dimensions

W/H/D	795 x 1540 x 710 mm (32" x 61" x 28")
Weight	190 kg (420 lbs)

Options

Vacuum Pump	Oil rotary vane pump or dry pump 65 m ³ /h or larger
Hydrogen Gas Supply	H ₂ generator, any mixture, compliant to ATEX regulations, TÜV certified



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