

Resist Ashing System GIGAbatch 360 M / 380 M

PVA TePla



- Photoresist removal after high-dose implant or dry etch process
- Batch descum process for LED applications
- No device damage due to microwave plasma

Plasma Systems

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. The convenient drawer door allows wafer loading without touching the plasma chamber, reducing loading errors and particle defects.

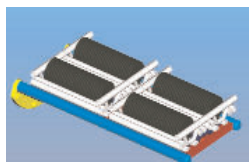
Microwave plasma is ideal for resist removal in modern device fabrication, since it produces a very high concentration of chemically active species along with low ion bombardment energy, guaranteeing fast ash rate and a damage-free plasma process.

Applications

- Removal of photoresist after high dose 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



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Plasma Generation

Microwave source (2.45 GHz), maximum power 1000 W

Process Gas Supply Vacuum Gauge Temperature Monitor End Point Detection System Control

2 gas channels included, 2 optional MKS Baratron capacitance manometer
 Infrared thermometer
 Optical emission EPD, plasma verification
 PC-based controller, 10.4" color monitor, GUI with function keys

Operating System Program Features

QNX real time platform
 Manual or automatic operation, user password, multiple recipe storage (1-10 steps each), self test routines, warning and error messaging

Process Tracking

Real time monitoring, on-screen display of graphic plots, data logging, export of process data

Interfaces System State Signal

Ethernet, USB, RS232 interface
 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

