

Resist Ashing System GIGAbatch 310 M

PVA TePla



- Economic model for universities, R&D labs
- Large variety of applications for small batch and single substrates
- Cooling plate option for removal of SU-8
- No device damage due to microwave plasma

Plasma Systems

PVA TePla

Advanced Microwave Plasma Batch Ashing

The **GIGAbatch 310 M** is a compact table top reactor for resist removal in semiconductor applications, configured for universities and R&D labs and offered at an economic price level.

The versatile system is able to handle various substrate sizes ranging from 2" to 6" and can accommodate up to 25 wafers per run. Wafer boat support arms, custom-designed for the respective wafer carriers (quartz boats), are optionally available. The manual 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.
- SU-8 removal (SU-8 package option required)

Technical Data

Wafer Size	up to 150 mm
Batch Size	25 wafer 6" 50 wafer 4"
Wafer Loading	Manual wafer loading outside of plasma chamber
Plasma Chamber	Quartz Diameter: 245 mm (9.6") Depth: 395 mm (15") Volume: 18 l

Plasma Generation	Microwave source (2.45 GHz), maximum power 600 W
Process Gas Supply	1 gas channel included, 1 optional
Vacuum Gauge	MKS Baratron capacitance manometer
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 routines, warning and error messaging
Process Tracking	Real time monitoring, on-screen display of graphic plots, data logging, export of process data, plasma signal verification
Interfaces	Ethernet, USB, RS232 interface

Performance Data

Uptime	>95%
MTBF	>500 h
MTTR	<2 h
Standards	CE-certified

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 650 x 710 mm (32" x 26" x 28")
Weight	150 kg (330 lbs)

Options

Vacuum Pump	Oil rotary vane pump or dry pump, recommended pumping speed 65 m ³ /h or larger
SU-8 Package	Incl. cooling plate, chiller, EPD, pressure control valve and additional gas channel

PVA TePla AG
BU Plasma Systems
 Ammerthalstrasse 34
 85551 Kirchheim (Munich)
 Germany

Phone +49(0)89-905 03-0
 Fax +49(0)89-905 03-185
 E-Mail plasma@pvatepla.com
 Home www.pvatepla.com
 www.tepla.com

