

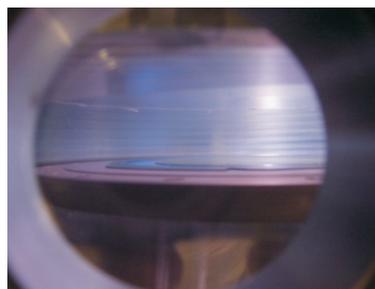
Plasma Silicon Etcher Tool (3 kW / 2450 MHz)

Microwave Plasma System MA3000D-181BB

Features:

- Suitable for rapid and homogenous silicon etching
- Using a directed fluorine radicals beam of short-lived and highly active F*-radicals
- Etch rates up to 3 $\mu\text{m}/\text{min}$ for 200 mm wafers and up to 2.5 $\mu\text{m}/\text{min}$ for 300 mm wafers
- Etch rate limited by tape material; without tape up to 5 $\mu\text{m}/\text{min}$ possible
- TTV (Total Thickness Variation): 1 μm after 10 μm Si-removal on 300 mm wafers
- Homogeneity adjustable by rotation and azimuth angle displacement of the fluorine radicals beam
- Pulsed plasma mode and DC plasma mode selectable
- CF₄ based etching chemistry for Si-etching in presence of metals like Copper
- Vacuum Chuck with adjustable vacuum zones for 100, 150, 200 and 300 mm wafer size
- Vacuum Chuck temperature controlled
- Etching of ultra-thin wafers with sawing frame possible

Examples:



MW-Plasma System MA3000D-181BB

Industrial Microwave +
Plasma Systems



Specifications:

INPUT VOLTAGE:	400 V AC, 3 ph, 50 Hz, 3 x 45 A; (Recommended fuse: 50 A / NH00-gL/gG)	EXTERNAL DIMENSIONS:	W = 800 mm, L = 1200 mm, H = 2250 mm
HF-POWER:	Max. 3 kW cw, 2450 MHz	WAVER SIZE	100, 150, 200 and 300 mm
COMPRESSED AIR:	Quality: Oil-free, dry, 5 µm filtered Pressure: 6 bar - 9 bar	CONDITIONS:	Ambient-Temp.: 5 °C - 45 °C non- condensing, T max. = 45 °C < 3 h/d, Humidity: 80 % @ 30 °C, subsequently linearly reduced to 50 % @ 45 °C
INPUT GASES; PROCESS PRESSURE:	Oxygen (O ₂), Nitrogen (N ₂), Tetrafluoromethane (CF ₄), Sulfur hexafluoride (SF ₆), Argon (Ar); 0.5 mbar - 5.3 mbar	COOLING:	Internally air-cooled and water-cooled 4.5 bar - 6 bar, Water inlet temperature 20 °C - 25 °C
WORKING PLATE:	Temperature: 20 °C - 200 °C Heating/Cooling Fluid: Oil	CONNECTIONS:	CEE-Connector plug 63 A (MAINS), CEE-Connector-female (VACUUM PUMP), USB / COM / Ethernet (INTERFACE), ½" lock coupling Rectus Series 87 (COOLING WATER), ¼" torque clutch (COMPRESSED AIR), 6 mm Swagelok (INPUT GASES), ISO-K63 (OUTPUT TO VACUUM PUMP), Stud M6 (PE)
ASSEMBLY:	Fully enclosed aluminum housing, Solid encapsulated assembly	WEIGHT:	Approx. 550 kg

Recommended system components:

- Vacuum pump (dry pump min. 300 m³/h)
- Gas cleaning system (CS CLEAN dry absorber)