



Industrial Microwave +
Plasma Systems

MUEGGE

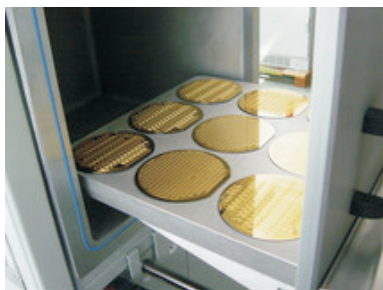
Plasma Stripping Tool (3 kW / 2450 MHz)

Microwave Plasma System MA3000D-231BB

Features:

- Optimized for the removal of thick photo resist layers like SU-8
- Can also be used for isotropic etching of materials like Si, SiO₂, SiN, SiO_xN_y, W, Mo, etc.
- Pure chemical etching with no attack onto the etching sample by ions
- Integrated remote plasma source
- Water cooled plasma zone
- Very low thermal load for substrates
- High etch rates possible (more than 200 μm/h on large areas)
- Substrate size up to 460 mm x 460 mm
- No attack to metals like Ni, Ni/Fe, Au, Cu etc.
- Only very slight attack to Si and Si compounds as SiO₂ or Si₃N₄
- High environmental compliance

Examples:



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MW-Plasma System MA3000D-231BB

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Specifications:

PRIMARY POWER CIRCUIT:	400 V AC, 3 phases, 50/60 Hz, 16 A	EXTERNAL DIMENSIONS:	Width = 900 mm, Depth = 900 mm, Height = 2200 mm
HF-POWER:	Max. 3 kW cw, @ 2450 MHz	DIMENSIONS PLASMA CHAMBER:	Width = 500 mm, Depth = 500 mm, Height = 400 mm, (e. g. 9 x 6" wafers)
COMPRESSED AIR:	Quality: Oil-free, dry, 5 µm filtered Pressure: 6 - 9 bar	CONDITIONS:	Ambient-Temp.: 5 - 45 °C non-condensing, $T_{max.} = 45\text{ °C} < 3\text{ h/d}$, Humidity: 80 % @ 30 °C, subsequently linearly reduced to 50 % @ 45 °C
INPUT GASES; PROCESS PRESSURE:	Oxygen (O ₂), Nitrogen (N ₂), Tetrafluoromethane (CF ₄); Pressure: 1.5 - 2.5 bar	COOLING:	Internally air-cooled and water-cooled min. 10 l/min, 4 - 6 bar, Water inlet temperature 20 - 25 °C
WORKING PLATE:	Temperature: 20 - 200 °C Heating/Cooling Fluid: Oil	CONNECTIONS:	CEE-Connector male 63 A (PRIMARY POWER CIRCUIT), CEE-Connector female 32 A (VACUUM PUMP), USB / COM / Ethernet (INTERFACE), 1/2" lock coupling Rectus Series 87 (COOLING WATER), 1/4" torque clutch (COMPRESSED AIR), 6 mm Swagelok (INPUT GASES), ISO-K 63 (OUTPUT TO VACUUM PUMP), Stud M6 (PE)
ASSEMBLY:	Fully enclosed aluminum housing, Solid encapsulated assembly	WEIGHT:	Approx. 520 kg

Recommended system components:

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