



Industrial Microwave +
Plasma Systems

MUEGGE

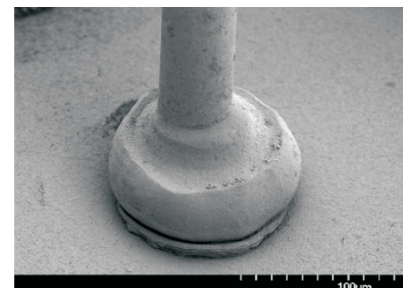
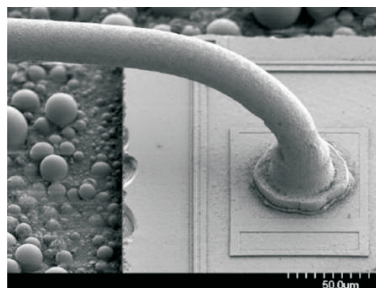
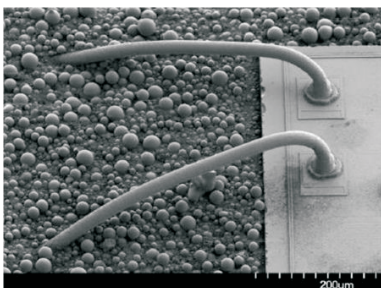
Plasma Decapsulation Tool (3 kW / 2450 MHz)

Microwave Plasma System MA3000D-151BB

Features:

- Optimized for decapsulation of microchips
- Short decapsulation time at gentle process conditions
- Very high removal efficiency: > 0.2 mm per hour including inorganic filling material
- No attack to materials like Au, Al, Cu and Pd
- No attack on wire bonding / wiring (e.g. Cu and Pd-Cu materials)
- Slight attack of chip passivation (selectivity > 500:1)
- Decapsulation time: 1 - 3 hours typical after laser ablation
- Integrated highly efficient water cooled microwave remote plasma source
- Fast, isotropic etching by radicals only
- No ions, no MW-radiation, no electrical fields in the area of the samples
- Field proven
- Suitable for wafer sizes up to 300 mm

Examples:



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MW-Plasma System MA3000D-151BB

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Specifications:

INPUT VOLTAGE :	400 V AC, 3 ph, 50 Hz, 3 x 45 A; (Recommended fuse: 50 A / NH00-gL/gG)	EXTERNAL DIMENSIONS:	W = 980 mm, L = 930 mm, H = 2200 mm
HF-POWER:	Max. 3 kW cw, 2450 MHz	DIMENSIONS WORKING PLATE:	W = 320 mm, D = 320 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); 0.4 mbar - 2.4 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), 1/2" lock coupling Rectus Series 87 (COOLING WATER), 1/4" 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. 480 kg

Recommended system components:

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