

Industrial Microwave +
Plasma Systems

MUEGGE

Plasma Array - Scalable Plasma Source

Modular Plasma System (2 kW / 4 kW / 2450 MHz)

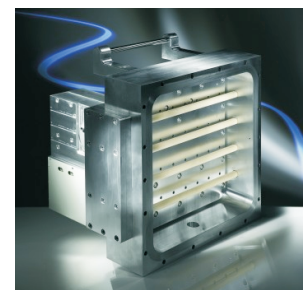
Features:

- Low pressure microwave plasma source
- Suitable for cleaning, etching, ashing, deposition, sterilization, pretreatment ...
- Scalable* compact design
- Large area applications
- Easy adaption to customer systems
- Integrated gas shower
- Integrated microwave power system
- High plasma density
- High efficiency
- Low damage

* Single sources as well as 2, 4 and 8 parallel arranged plasmalines are available

Options:

- Gas supply
- Pumping unit
- Pressure gauge
- Plasma monitoring
- Vacuum components
- Complete customized system
- Magnetic confinement



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Specifications

Frequency:	915 MHz / 2450 MHz / 5800 MHz
HF-Input Power:	Typical 2 kW / m @ 1 mbar
Waveguide:	Coax 8/26
Process pressure:	Typical 0.1 mbar - 1 mbar
Plasma density:	Up to 10^{12} / cm ³ @ 2450 MHz
Typical process gases	ArO ₂ , N ₂ H ₂ , NH ₃ , SiH ₄ , HMDSO
Electron temperature:	~ 2 eV
Homogeneity:	Better than 5 %
Material:	Chamber: aluminum, Gas shower: aluminum, Plasma source: quartz, AL ₂ O ₃
Cooling:	Water / air combined
Connectors:	Coaxial 8/26 (MICROWAVE), Swagelok (WATER, AIR, GAS)
Dimensions:	Customer specific

Recommended system components:

- MW-Power supply e.g. MX4000D-112KL
- Magnetron head e.g. MH2000S-221BB