

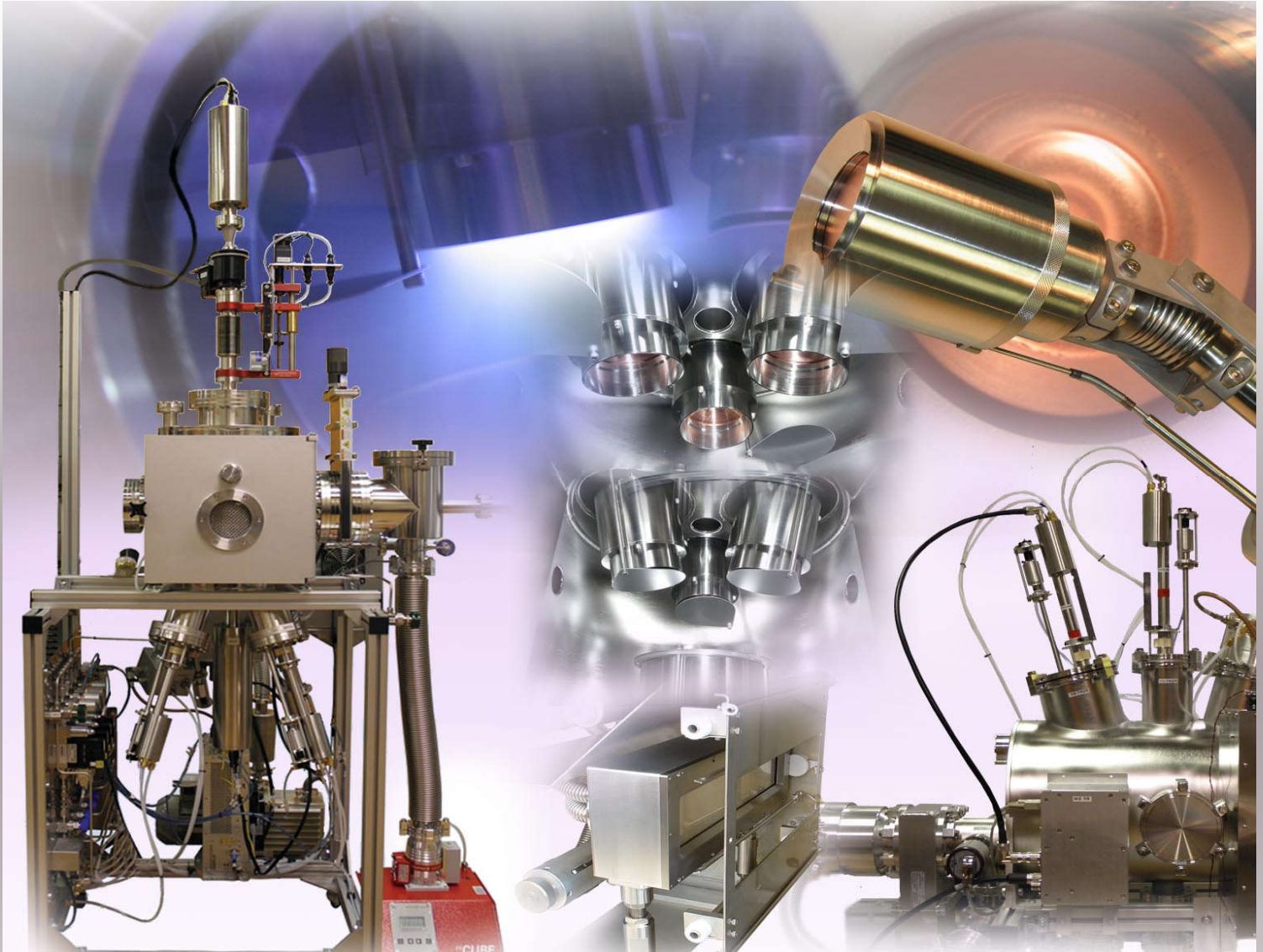


Advancing Plasma-Based Technologies

PLASMIONIQUE

À l'Avant-Garde des Technologies Plasma

MAGNION Series Sputter Deposition Systems and Cathodes



MAGNION Series of sputter deposition systems offer turnkey integrated systems for research and manufacturing. Highly versatile systems with fully integrated control and data acquisition systems. Upgrade to Plasma assisted Reactive deposition using PLUME series ICP sources is seamless. Substrate rotation, biasing, computer controlled axial motions are options available on all systems. MAGNION Series sputtering cathodes are designed for high target utilization efficiency, and are available in balanced and unbalanced magnetic configurations in circular or rectangular shapes.

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MAGNION System Characteristics

MAGNION Sputtering Magnetrons	<ul style="list-style-type: none"> • Target sizes circular 1", 2", 3", 4" diameter, or rectangular • Operation with RF(13.56 MHz) DC or Pulse-DC • Balanced or unbalanced magnetic geometries • Cross-contamination shields and shutters • Option for adjustable axial position or head angle
Substrate/ Sample Mount	<ul style="list-style-type: none"> • User defined samples size/shape • Heating to over 850 °C with PID temperature control or cooling • Sample Motorized rotation and axial translation motorized or manual • Biasing (RF or DC) available • Load-lock sample transfer station (optional)
Process Environment	<ul style="list-style-type: none"> • Stainless steel chamber, vertical or horizontal cylindrical • Access door or split chamber design • Vacuum to 10⁻⁸ Torr range with turbomolecular pump backed with rotary vane or dry scroll mechanical pump • Operation with oxygen or corrosive gases (optional) • Vacuum gauges: wide-range gauge and capacitance manometer for process pressure control • Throttling gate valve with automatic control
Gas Management	<ul style="list-style-type: none"> • User defined number of Mass Flow Controllers with shut-off valves • Purge/vent line with safety pressure relief valve
Process Control System	<ul style="list-style-type: none"> • LabView®-based monitoring and control software • Intuitive graphical user interface • Plotting and data-logging • Program mode for programming multi-step processes • Alarms and safety interlocks, emergency shut-off • Options for Optical Emission and Mass spectroscopy Diagnostic interfaced to process control
Plasma Source Option	<ul style="list-style-type: none"> • Optional Remote ICP source for enhance reactive sputter deposition • Independent power supply and integrated control included
Utility Requirements	<ul style="list-style-type: none"> • Electrical: Typically, 208/380V, 60/50Hz, 3-phase, 5-wire • Cooling water: typically 1-4 gpm, 17-30 °C, system dependent • Instrument air: 40-80 psig (3-5 bar) • Purge/vent gas, regulated • Process gases, regulated