

MEO Engineering Company, Inc.

High Tech on Small Scale Since 2004

GALEX™ Instruments FIB/SEM Etching Precursor Gas Injector

DESIGN HIGHLIGHTS

- Easy installation, alignment, and start-up
- Compatible with deposition precursors
- User-exchangeable and re-loadable cartridges, self-service precursor exchange
- Port-mounted and always ready, no lengthy preparations prior to operation
- Most precursors ready for injection within seconds after sample pump-down
- Rapid switch, no internal absorption for most precursors, no lengthy degassing
- Sequential injection of multiple precursors without position correction or re-alignment
- Desktop or rack-mountable controller, push-button operation or computerized GUI control
- Self-sealed precursor cartridges improve handling and safety compliance
- Double-sealed shipping containers comply with safety regulations
- Fail-safe normally-closed process valves for safe power-loss shutdown
- Fail-safe retraction facilitates withdrawal in case of air pressure loss or power shutdown
- Customization for experimental precursors and application development support available
- Designed and built by people with decades of expertise in FIB instrumentation, gas injection and FIB GAE and deposition
- Deposition version is available
- UHV-compatible version upon request

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PRECURSOR HANDLING

Number of cartridges:	3 – standard, 4- upon request
Precursor cartridge housing:	Heated and room temperature – standard Cooled – optional
Gas switch time:	10 Sec for chemically compatible precursors
Heated cartridge temperature:	Ambient to +65°C
Cooled cartridge temperature:	Ambient to +10°C
Precursor cartridge capacity:	2.0 cm ³
Precursor cartridge design:	Self-sealed, re-loadable and user-replaceable
Wetted materials (standard):	Molybdenum, SST-304, Viton (FKM), PBT, FEP

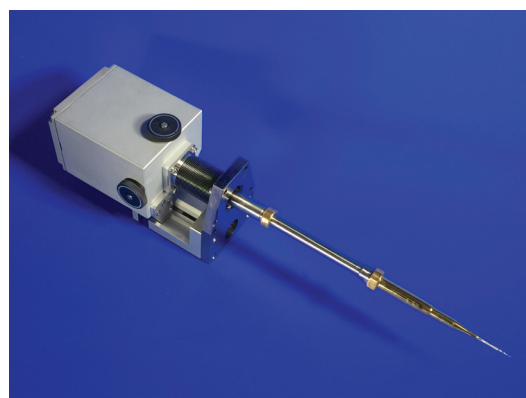
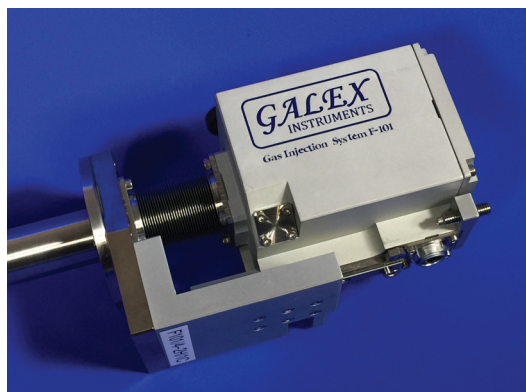
Standard wetted materials are compatible with most typical etching precursors: XeF₂, I, Br, TFA, etc... Substitutions of wetted materials for other chemistries available upon request.



Patent Pending

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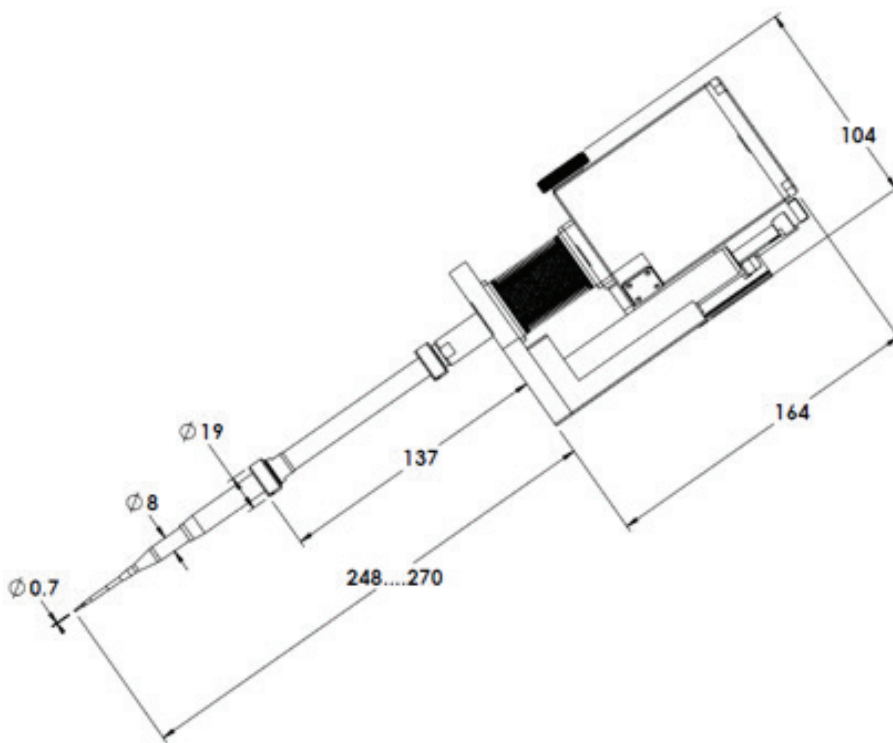
CONTROLLER

Configurable 1U desktop or 19" rack-mountable with push-button interface and GUI through USB PC interface.

UTILITIES

Vacuum:	10E-2 Torr or better by system or dedicated rough pump.
DN ₂ , CDA, or compressed air:	90PSI ± 15PSI stand-alone or integrated IN/OUT control
Purge gas (N ₂ , O ₂ , Ar) optional:	5PSI ± 1PSI
Computer interface:	USB

DIMENSIONAL SKETCH (mm)



Patent Pending

INJECTOR MOUNTING

Weight: 1.6 kG (3.4 lb)
Mounting: Tool-specific adapter with Viton O-Ring
Insertion/Retraction stroke: 22mm
Insertion/Retraction time: < 5 Sec
Needle insertion repeatability: ±5µm

SHIPPING CONTAINER

Dimensions: 22" x 18" x 11"
(56cm x 46cm x 28cm)
Weight: 30lb (15kg)

CONTACT US FOR YOUR NEXT PROJECT

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