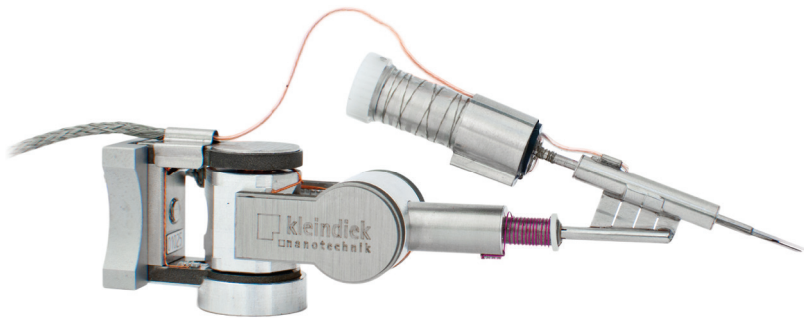


## GIS-EM Gas Injection System

The GIS-EM plug-in for the MM3A micromanipulator is the smallest gas injection system on the market to date.



This unique tool consists of a heated reservoir with temperature control, a proportional valve which is actuated by a NanoMotor for ultimate precision, and a nozzle which is positioned precisely over the area of interest using the micromanipulator.

The nozzle's tip is slanted for an optimal geometry of the gas flow and has a small aperture at the top which allows irradiating the area of interest with the electron or ion beam.

Filling the reservoir can be achieved by simply removing its cap and introducing the desired precursor material. Typical materials are: Water, Hexane, Naphthalene, Tungstenhexacarbonyl, or Iodine - but pretty much anything goes! The precursors may be heated to a temperature of up to 90°C in order for them to evaporate. Using the valve's fine control, the amount of gas introduced into the chamber can be finely tuned.

Replacing the cap with an inlet allows introducing gaseous substances such as Argon, Oxygen, or gas mixtures.

### Applications

- Depositing metal or carbon structures
- Atomic Layer Deposition
- Charge compensation

### Technical specifications

- Reservoir volume: 0.5 cm<sup>3</sup>
- Max. temperature: 90°C

### Further information

- Contact us at [info@kleindiek.com](mailto:info@kleindiek.com)
- Find your local agent at [www.kleindiek.com](http://www.kleindiek.com)

