



POLYGON
PHYSICS

TES Ion mill

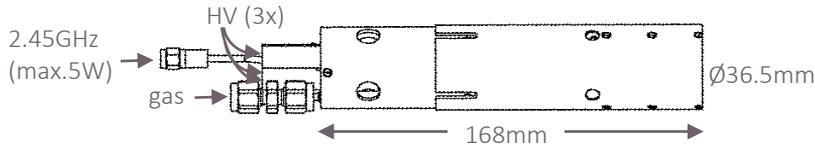
For surface
modifications
with focused
ion beams



Plug & Play
ECR-plasma based
Stable & reliable
up to 4keV

TES I Ion mill

Polygon Physics' TES Ion mill is a ECR ion source, developed for surface processing with focused ion beams in (reactive) HV or UHV environment.



Flexible connectors only: free positioning

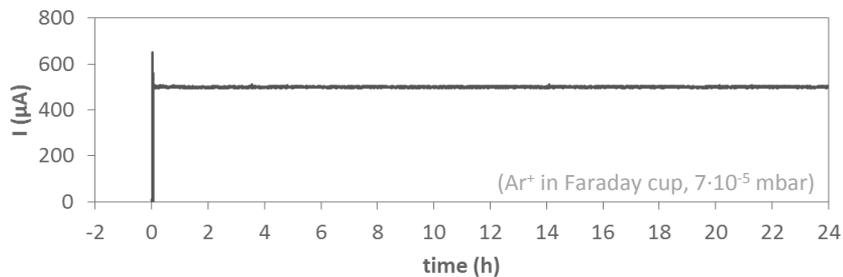
How it works

The core element is the patented microwave discharge system TES that operates at **ultralow** power and is as small as a thumb.

The plasma is ignited by creating an Electron Cyclotron Resonance discharge in a cavity resonating at 2.45 GHz and surrounded by permanent magnets. The extraction system connected to the cavity determines the nature of the particles that leave the source and consists of aperture and tube lenses. The beam energy, ion current, and focusing, can be varied independently.



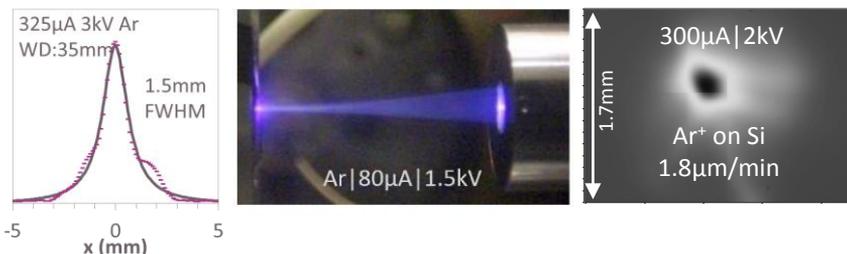
Beam stability



High local milling rates

TES Ion mill is equipped with a focusing module that can squeeze the ion beam that hits the surface to sub mm dimensions. This, in combination with high beam currents and a beam energy up to 4keV, ensures high local milling rates. For more gentle milling the beam energy can be reduced.

Examples



Applications

Adapted to applications requiring stable and high intensity high current focused ion beams such as ion beam figuring for optics manufacturing and ion milling for sample preparation for imaging and/or analysis.

Main features

- Filamentless design
- Gas: inert, reactive
- Typ. gas flow rate: 0,3 sccm (Ar)
- Beam energy: 0,25-4 keV
- Beam current: max. 500µA (Ar)
- Typ. working distance: 25-50mm
- UHF power: max. 5W
- No cooling required
- Rigid or flexible mounting to flange

Options

- TES Neutralizer
- Automated operation including closed loop current regulation



Contact us if you'd like more information or discuss your application:

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La conception de TES est cofinancée par l'Union européenne. L'Europe s'engage en Auvergne-Rhône-Alpes avec le Fonds européen de développement régional.



Polygon Physics reserves the right to change specifications and introduce design improvements without notice or obligation.