POLYGON PHYSICS

TES
Electron source / Neutralizer

Developed for ion beam processing in reactive gas environments

Plug & Play
ECR-plasma based
No consumables
Up to 75mA

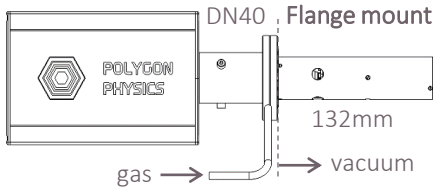
TES | Electron source / Neutralizer

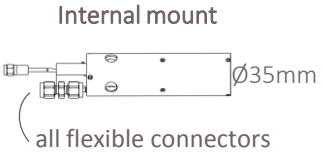
Polygon Physics' TES neutralizer is a compact ECR electron source, developed for processing & analysis in HV or UHV environment.

POLYGON PHYSICS

Filamentless neutralization

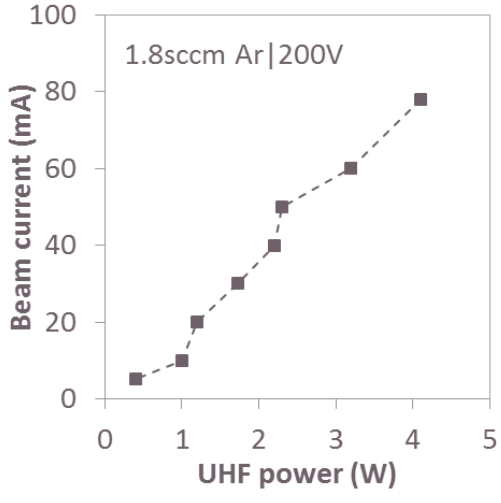
Neutralizers are useful to avoid undesirable charge effects in ion processing of materials, and surface analysis methods based on ion beams. The TES Neutralizer is an ECR-plasma based electron source that has no consumables like filaments. This makes the TES Neutralizer particularly suitable for reactive gas environments.





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 biased apertures. The electron current can be varied by varying the applied microwave power.



TES sources family

Need ion beams instead? Or rather looking for a plasma or radical source? Please take a look at our other TES sources, based on the same plasma cavity connected to different extraction systems. Contact us for more information.

Applications

- Ion beam sputter deposition
- Ion beam figuring/trimming
- Ion beam texturing/smoothing
- Ion beam etching
- Sputter cleaning
- Ion beam assisted deposition
- Ion beam direct deposition
- Electron assisted chemistry

Main features

- Filamentless design
- No cooling required
- Plug & Play
- Gas: Ar, H_2, O_2, etc.
- Typ. gas flow rate: 1 sccm
- Beam energy: 60 - 500 eV
- Beam current: up to 75mA

Options

- Automated operation
- UHV-compatible
- Rigid or flexible mounting to flange

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.

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