

**DODECON**

nanotechnology GmbH

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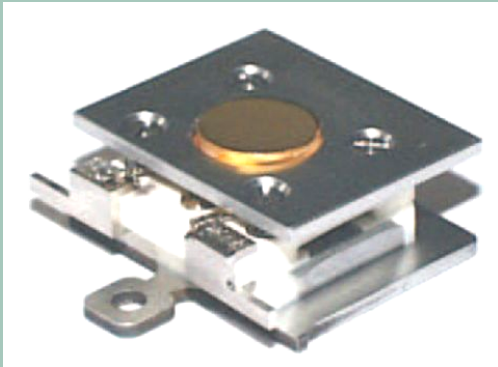
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## i-Sample Holder



**Integrated temperature measurement**

**Integrated e-beam/radiative heating**

**Easy sample mounting**

**Independent electrical sample contact**

**Sample cooling**

The i-Sample Holder is a highly versatile variable temperature sample holder with integrated temperature reading. Samples can be heated radiatively or by electron bombardment. A modular design guarantees high flexibility in sample type and shape and an easy and quick sample mounting. The i-Sample Holder is compatible with several commercial Scanning Probe Microscopes.

### Samples

- Electrical connection to reference base plate. In combination with Dodecon Universal Manipulator Sample Stage allows for reading of ion deposition/bombardment currents.
- Samples with many different geometries can be employed by a simple adaptation of the cover plate (hat-shape, disk-shaped, wafers, etc.).
- Easy mounting and changing thanks to the modular design of the holder and the separation from the lower heating stage.

### Temperature measurement

- The actual sample temperature can be precisely and locally measured by means of a thermocouple connected to the sample back (precision ~ 5 K).
- Temperature range: K-type thermocouple (5 – 1500 K) - standard; other temperature ranges on request.

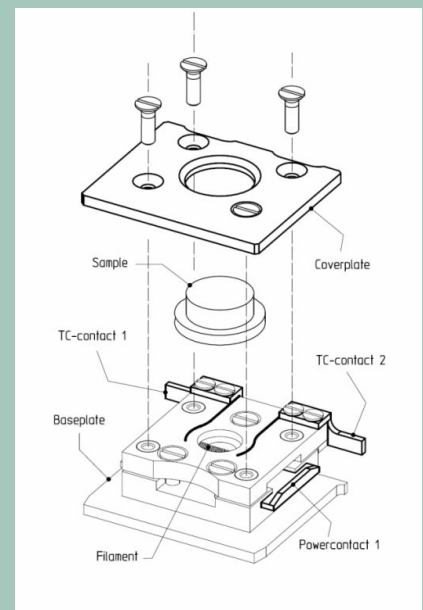
### Sample heating

- An integrated heating stage comprising an electrically isolated tungsten filament allows both radiative heating (up to 500 K) and e-beam bombardment heating (up to 1200 K).

- e-beam heating particularly indicated for quick and high temperature sample annealing (flash annealing, e.g. for metal crystal preparation).

### Sample cooling

- With LN<sub>2</sub> down to 97 K.
- With LHedown to 40 K.



### Technical data

max. sample lateral size	9 mm
max. sample height	dependent on application
thermocouple	type K (5-1500 K) others on request
sample heating*	up to 500 K (radiative) up to 1200 K (e-beam)
sample cooling	down to 97 K (LN <sub>2</sub> )** down to 40 K (LHe)

\* with Dodecon Universal Manipulator Sample Stage

\*\* with Dodecon LN<sub>2</sub> Cryostat