

# HESTIA ULT 6

ULTIMATE PRECISION CRYOGENIC SIX-AXIS STAGE FOR  
MOMENTUM MICROSCOPY

## KEY FEATURES

- Cryogenic UHV Sample Stage for SH2/12 Sample Holders
- Ideal for Microscopy Applications with KREIOS and METIS
- Real Six-Axis-Design with  $\pm 45^\circ$  Azimuthal Rotation
- Highest Stability
- Sample Temperature  $T < 9$  K

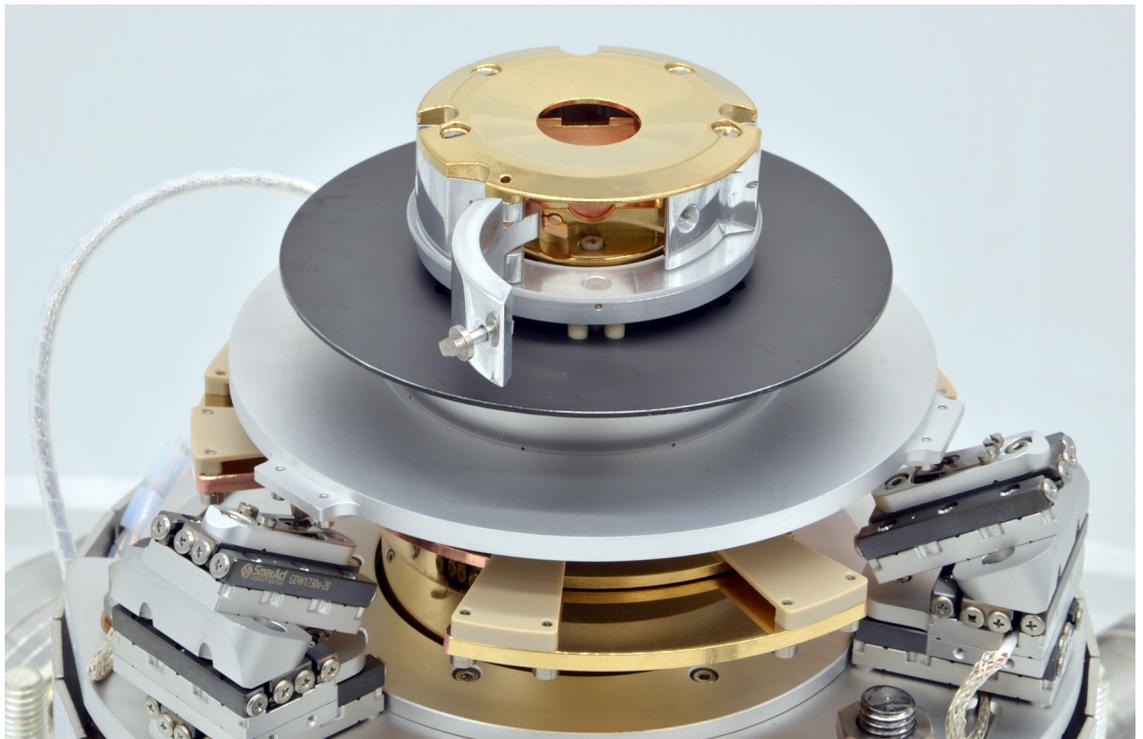


SPECS™

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MOMENTUM MICROSCOPY

**Momentum microscopes (KREIOS 150 MM Series and METIS 1000) and electron momentum spectrometers (KREIOS 150) require a UHV sample stage of highest precision and stability for operation.**



The HESTIA sample stage is a real six-axis sample stage for precise alignment of the lateral components x, y and z as well as both tilt directions and an independent azimuthal rotation of  $\pm 45^\circ$ .

A unique design of piezo actuators allows for exact sample positioning in front of the microscopy lens. An additional independent azimuthal rotation allows for fine adjustment

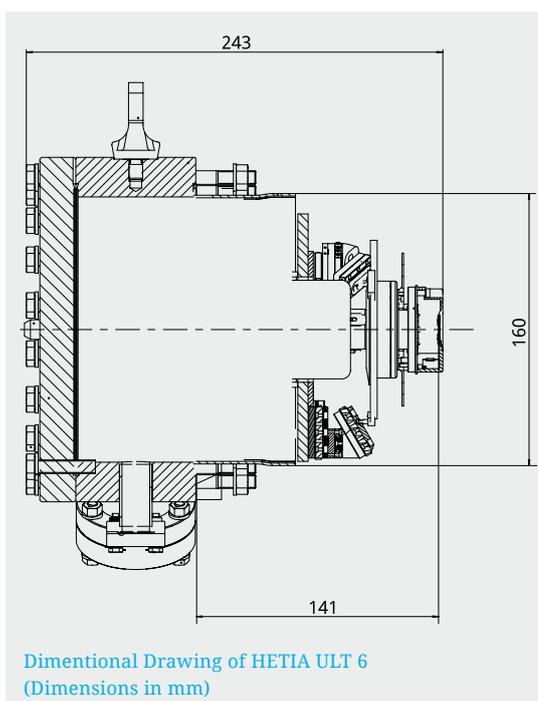
of the detected structure, e.g. for aligning a reciprocal high symmetry direction along the entrance slit of the analyzer.

The achievable sample temperature can be lower than 9 K at low helium consumptions. An optimized cooling shield and tight thermal contact of the sample to the stage ensures highest cooling performance. The sample stage features an open cycle flow cryostat. An external closed

cycle cryostat is available on request. HESTIA can also be used in experiments besides microscopy approaches, where lowest temperatures and highest stabilities are required.

For special experimental setups, four electrical contacts can be implemented to apply voltages or currents to samples during measurements

Specification	Value
Degrees of freedom	x,y,z : $\pm 3$ mm Tilt : $\pm 2^\circ$ Azimuth : $\pm 45^\circ$
Stability	< 20 nm
Reproducibility	< 5 $\mu$ m
Cooling	Open Cycle Liquid Helium (Closed Cycle available)
T <sub>Sample</sub>	< 9 K to 300 K
Sample Holder	SH2/12
Max. Sample Size	½ Inch
Electrical Contacts	4 Contacts + Sample Bias optional
Mounting Flange Size	DN150CF (8" OD)



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