BREVA hexapod

High resolution hexapod medium size
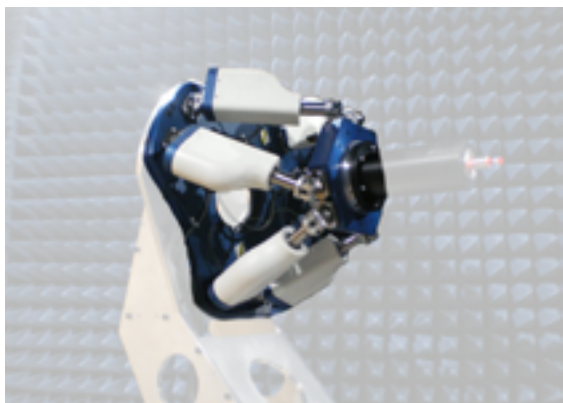
KEY FEATURES

- Payload capacity up to 200 kg
- Linear travel range ± 75 mm
- Angular travel range ± 22 °
- Absolute encoders
- Resolution Tx, Ty: 0.5 µm

APPLICATIONS

- Instrumentation
- Aeronautics and space
- Optics
- Metrology
- Testing laboratories
- Synchrotrons

This hexapod integrates a 360° rotation in its mobile platform. It orientates a microwave source to qualify microwave antennas.

Diffractometer with BREVA hexapod on CEA BM32 beamline at ESRF synchrotron for the development and analysis of nanomaterials.

This hexapod positions a vacuum chamber containing a gas sample and offers a ± 20° angular range.
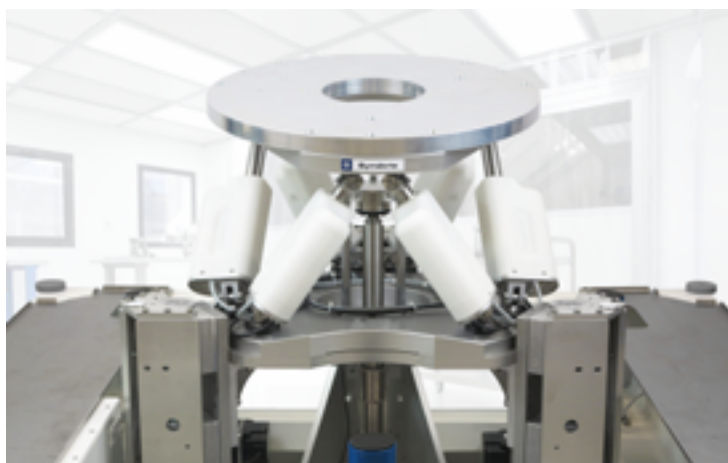
This hexapod is coupled to a Tz elevation stage in order to achieve larger travel range for space optical calibration.

	BREVA
Motion and positioning	
Travel range Tx, Ty (mm)	± 75
Travel range Tz (mm)	± 50
Travel range Rx, Ry (deg)	± 20
Travel range Rz (deg)	± 22
Resolution Tx, Ty, Tz (µm)	0.5
Resolution Rx, Ry, Rz (µrad)	2.5
Repeatability Tx, Ty, Tz (µm)	± 0.5
Repeatability Rx, Ry, Rz (µrad)	± 2.5
Speed Tx, Ty (mm/s)	6
Speed Tz (mm/s)	4
Speed Rx, Ry (deg/s)	1.5
Speed Rz (deg/s)	2.25
Mechanical properties	
Stiffness X, Y (N/µm)	5
Stiffness Z (N/µm)	32
Payload capacity (kg) (vertical orientation / horizontal orientation)	200 / 80
Motor type	Stepper motor, gearhead
Encoder type	Absolute encoder
Miscellaneous	
Operating temperature range (°C)	0 to + 50
Material	Aluminum, steel, stainless steel, plastic
Size mobile platform (mm)	Ø 289
Central aperture (mm)	Ø120 form mobile platform ; Ø250 for fixed platform
Height in middle position (mm)	350
Mass (kg)	34
Cable length (m)	3
Options	Clean room compatibility Hand-held control unit
Controller	
Controller type	ALPHA+
Interface	Ethernet
Power supply	110-240 VAC / 50-60 Hz

The performances are specified for single axis motions, with all other axes at midrange and for a rotation center in the middle of the mobile platform.

Hexapod in middle position