

KUBAN hexapod

High resolution hexapod small size



KEY FEATURES

- Height 600 mm
- Resolution 1.5 μrad
- Repeatability $\pm 2.5 \mu\text{rad}$
- Payload capacity up to 500 kg
- Absolute linear encoders
- Resolution Tx, Ty: 0.2 μm

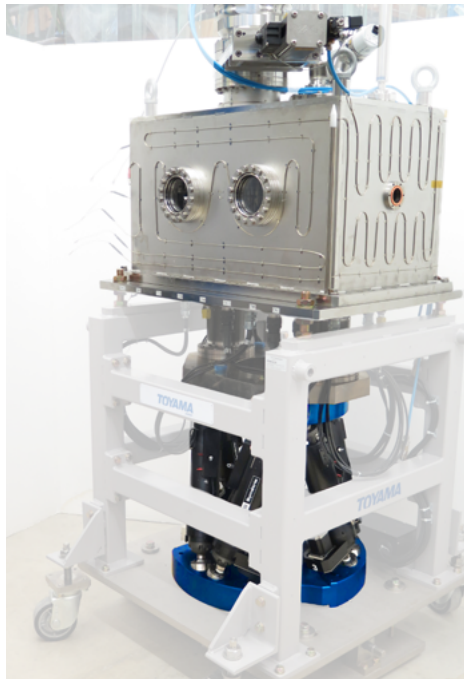


APPLICATIONS

- Synchrotron: mirror or chamber supports ■ Optics



This KUBAN hexapod aligns a mirror inside a vacuum chamber on LUCIA beamline at Synchrotron SOLEIL. A high stability over time is crucial.



KUBAN hexapod aligns a polarimeter with high precision in a short time. This installation made by TOYAMA can be moved to be used on different beamlines at MAX IV Laboratory synchrotron.

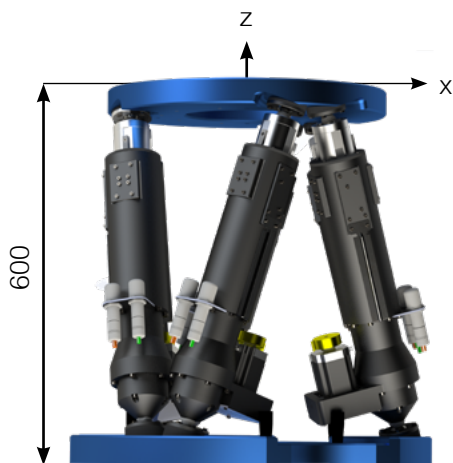


KUBAN hexapod positions a mirror inside of a vacuum chamber with high resolution. To be sure to avoid harming any part due to an unexpected over range, an inclination limit switch is installed under the hexapod mobile platform and stops the motion if the maximum roll angle is reached.



	KUBAN
Motion and positioning	
Travel range Tx, Ty, (mm)	± 75
Travel range Tz (mm)	± 45
Travel range Rx, Ry (deg)	± 5
Travel range Rz (deg)	± 10
Resolution Tx, Ty (µm)	0.2
Resolution Tz (µm)	0.1
Resolution Rx, Ry (µrad)	1.5
Resolution Rz (µrad)	2
Repeatability Tx, Ty (µm)	± 0.5
Repeatability Tz (µm)	± 0.25
Repeatability Rx, Ry (µrad)	± 2.5
Repeatability Rz (µrad)	± 4
Speed Tx, Ty (mm/sec)	0.9
Speed Tz (mm/sec)	0.4
Speed Rx, Ry (deg/sec)	0.12
Speed Rz (deg/sec)	0.3
Mechanical properties	
Payload capacity (kg) (vertical orientation)	500
Motor type	Stepper motor
Encoder type	Absolute linear encoder
Miscellaneous	
Operating temperature range (°C)	0 to + 50
Material	Aluminum, steel, stainless steel
Size mobile platform (mm)	Ø 450
Central aperture (mm)	Ø200 form mobile platform ; Ø280 for fixed platform
Height in middle position (mm)	600
Mass (kg)	140
Cable length (m)	5
Options	Clean room compatibility Higher speed with brushless or DC motor Heavier payload Hand-held control unit
Controller	
Controller type	ALPHA+
Interface	Ethernet
Power supply	110-240 V AC 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

