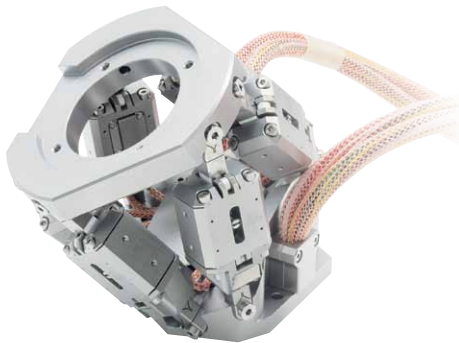


UHV-Compatible Miniature Piezo Hexapod

HIGH-PRECISION POSITIONING EVEN IN STRONG MAGNETIC FIELDS

P-911K

- Ultra-compact
- UHV-compatible to 10^{-9} hPa
- Nonmagnetic
- Ultra-high precision flexure joints
- Load capacity to 1.5 kg
- Travel ranges to 1.5 mm, to 2°
- With NEXLINE® piezo stepping drives



The space-saving parallel-kinematic design allows for the low overall height of less than 90 mm and a diameter of only 100 mm. NEXLINE® piezo stepping motor drives and integrated incremental sensors ensure a position resolution down to $0.1 \mu\text{m}$ in the linear axes

	Travel ranges	Max. load	Sensor resolution	Dimensions
P-911KNMV miniature Hexapod	X, Y, Z: 1.5 mm $\theta_x, \theta_y, \theta_z: 2^\circ$	1.5 kg	$0.1 \mu\text{m}$	$\varnothing 100 \text{ mm}$ Height 90 mm

6-Axis Miniature Hexapod

HIGH PRECISION IN A SMALL PACKAGE

H-810

- Most compact standard Hexapod in the PI portfolio
- Travel ranges to 40 mm / 60°
- Load capacity to 5 kg
- Actuator resolution 40 nm
- Min. incremental motion to $0.5 \mu\text{m}$
- Repeatability to $\pm 0.1 \mu\text{m}$



Despite its compact dimensions, the H-810 offers large a travel range of up to 40 mm. Brushless DC motors and ball screws provide for high precision and long lifetime

	Max. load	Travel ranges	Rotation ranges	Max. velocity	Dimensions
H-810 miniature Hexapod	5 kg	X, Y: $\pm 20 \text{ mm}$ Z: $\pm 6,5 \text{ mm}$	$\theta_x, \theta_y: \pm 10^\circ$ $\theta_z: \pm 30^\circ$	2.5 mm/s	\varnothing external: 100 mm Height: 118 mm

Non-Magnetic Piezo Hexapod

6-AXIS PRECISION POSITIONING SYSTEM WITH NEXLINE® PIEZO STEPPING DRIVES

N-515K



- For high-energy physics and medical applications
- Travel ranges 10 mm, 6°
- Nonmagnetic
- Load capacity to 50 kg
- Nanometer resolution
- Low Profile: only 140 mm height
- Self-locking, no heat generation at rest

This 6-axis parallel kinematics positioning system with NEXLINE® high-load actuators was designed for use in strong magnetic fields such as are encountered in the vicinity of beam control systems on accelerator rings or in MRI scanners

	Travel ranges	Max. load	Dimensions
N-515KNPH Non-Magnetic Piezo Hexapod	X, Y, Z: 10 mm $\theta_x, \theta_y, \theta_z: 6^\circ$	50 kg	Ø Base plate, external: 380 mm Ø moving platform, top: 300 mm Height: 140 mm Clear aperture: Ø 202 mm

High-Stiffness Nanopositioning Z Stage with NEXLINE® Piezomotors

HIGH-PRECISION VERTICAL POSITIONING, WITH CAPACITIVE FEEDBACK

N-510K



- Closed-loop resolution to 2 nm
- Self-locking, no heat generation at rest
- Hybrid piezo drive combines high stiffness, long travel and very fast response
- Travel range 400 µm coarse, 40 µm fine
- Direct metrology: One single control loop with capacitive sensors
- Piezo stepping drive w/o wear and tear and outstanding lifetime due to PICMA® piezo actuators

The N-510KHFS Z-stage combines NEXLINE® piezo stepping drives with PICMA® piezo actuators, and meets the strict requirements of inspection tasks in the semiconductor industry. Both drive technologies are controlled by a single control loop based on capacitive position feedback sensors providing accuracy in the nanometer range

	Travel ranges	Max. velocity	Bidir. Repeatability	Max. load	Dimensions
N-510KHFS hybrid focusing system	Coarse: 400 µm Fine: 40 µm	1 mm/s	50 nm (full travel)	2.5 kg	Ø external: 300 mm Height 68.5 mm