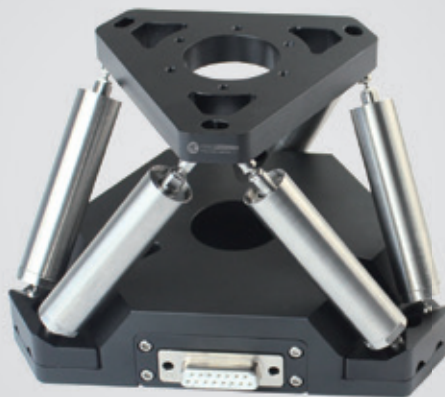


Hexapod | H60.XYZTR3S/K

Piezo Hexapod



Characteristics >>

- Motion in X, Y, Z, θ_x , θ_y , θ_z
- Closed-loop control with high accuracy
- Ultra small coupling
- No accumulation of error

Applications >>

- 6 axes precise positioning
- Semiconductor equipment
- Wafer inspection/micromachining
- Lithography
- Medical
- Aerospace

Introduction

H60.XYZTR3S/K Piezo Hexapod is a piezo stage with 6-axis motion of θ_x , θ_y , θ_z , X, Y, and Z 6-axis movement in space is realized by the coordinated expansion and contraction of six piezoelectric actuators. The closed-loop model has high positioning accuracy. It is suited for applications such as microelectronics precision machining, test, etc.



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Technical Data >>

Type	S-Closed loop K-Open loop	H60.XYZTR3S	H60.XYZTR3K	Units
Active axes		X, Y, Z, θ_x , θ_y , θ_z		
Linear travel in X, Y (0~120V)		± 12.5	± 12.5	$\mu\text{m} \pm 20\%$
Linear travel in Z (0~120V)		± 6.4	± 6.4	$\mu\text{m} \pm 20\%$
Tilt angle in θ_x , θ_y (0~120V)		± 0.32 ($\approx \pm 66''$)		$\text{mrad} \pm 20\%$
Tilt angle in θ_z (0~120V)		± 0.48 ($\approx \pm 99''$)		$\text{mrad} \pm 20\%$
Tilt resolution (θ_x , θ_y)		0.04 ($< 0.01''$)	0.02 ($< 0.01''$)	μrad
Tilt resolution, θ_z		0.06 ($\approx 0.01''$)	0.03 ($< 0.01''$)	μrad
Resolution in X, Y		1.6	0.8	nm
Resolution in Z		0.8	0.4	nm
Closed-loop linearity		0.25	-	%F.S.
Closed-loop repeatability		0.1	-	%F.S.
Structure		Hexapods		
Driving source		Piezo actuators		
Operating temperature ^[1]		-20~80	-20~80	$^{\circ}\text{C}$
Load capacity		5	5	kg
Mass		1150	1150	$\text{g} \pm 5\%$
Cable length ^[2]		1.5	1.5	$\text{m} \pm 10\text{mm}$
Sensor/voltage connector ^[2]		-	-	

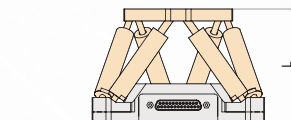
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^{\circ}\text{C}$.

[1] Custom ultralow temperature and ultrahigh vacuum versions are available.

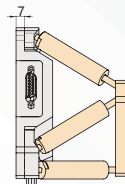
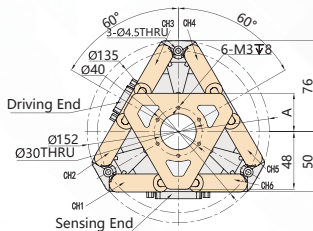
[2] Custom cable length and connector is available.

Note: The parallelism of the moving platform is about 20 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Drawing >>



Type	A (mm)	L (mm)
H60.XYZTR3S/K	41	78



Recommended Controllers >>



E00.D6
LCD, membrane button, up to 625mA
RS-232/RS-422/USB interface
Software secondary development



Modular E70
6~96 channels
Digital & analog integrated control
Servo control power supply



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