

## KPX Precision Linear Servo Stage



The KPX is a complete family of single axis positioning stages that employ integrated Ironless Linear Servo technology along with high precision optical encoders to form a compact self contained unit.

These units are optimal for high performance positioning applications requiring high accuracy and repeatability. They are also uniquely qualified for applications that require ultra smooth velocity control. The motor and encoder technology along with Anti-Creep Crossed Roller guides offer superior performance for cogless velocity and/or sub-micron positioning.

Great for pick and place positioning applications requiring a very stiff and very tight sub micron repeatability, such as optics, photonics, biomedical, drug discovery, metrology and semiconductor and a host of other applications.

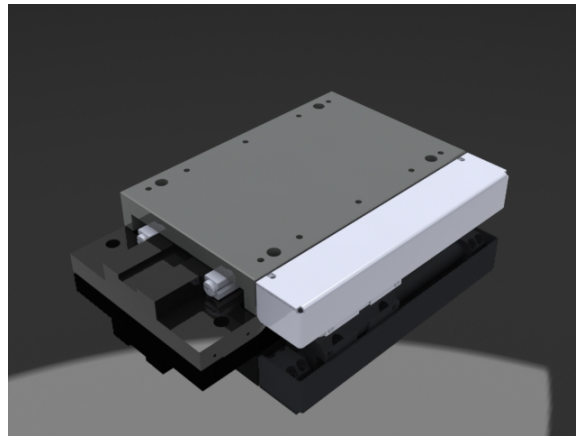
This family of product can be used in single axis or multi axis configurations. The stages come in multiple widths and lengths that allow you to tailor configurations to suit your requirements.

Unlike most manufactures Ibex Engineering is uniquely qualified to take any standard configuration and tailor them to suit your custom requirements. Ibex offer a plethora of different stage solutions to meet your needs.

### Features at a glance

- Multiple widths and lengths
  - 50mm, 75mm, 100mm, 150mm widths
- Ironless shaft linear servo technology
  - Non-contact, Cogless, Superior efficiency which means lower heat
- Anti-Creep Crossed Rollers
  - Superior precision and rolling smoothness
- Optical linear encoder
  - Available in multiple resolutions and can be configured with different scale types
- No moving wires
  - Superior life and wear, no wire fatigue
- Very stiff for maximized positioning performance

# KPX Precision Linear Servo Stage KPX100



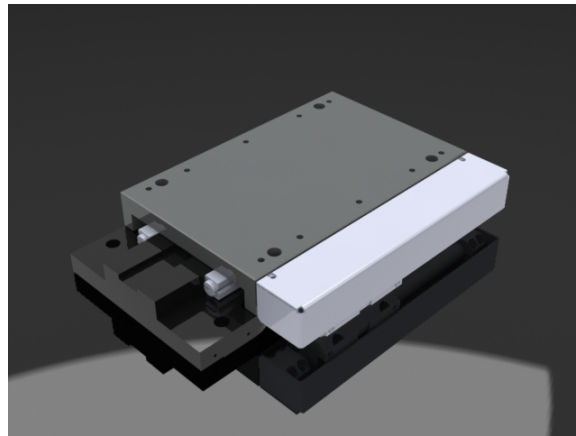
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## Mechanical Stage Specifications

Specification	Units	KPX100-100	KPX100-150	KPX100-200	KPX100-250	KPX100-300
<b>Travel / Stroke</b>	mm (in)	100 (3.94)	150 (5.91)	200 (7.87)	250 (9.84)	300 (11.81)
<b>Length</b>	mm (in)	190 (7.48)	240 (9.45)	290 (11.42)	340 (13.39)	390 (15.35)
<b>Accuracy</b>	µm	5	7	9	11	12
<b>Bi-Directional Repeatability</b>		±1 count				
<b>Straightness &amp; Flatness</b>	µm	2 / 25mm				
<b>Encoder Resolution</b>	µm	1, 0.5, 0.1, 0.05, 0.01				
<b>Maximum Acceleration</b>	m/s <sup>2</sup>	12	10	8	7	6
<b>Maximum Velocity</b>	m/s	1.0	1.2	1.2	1.3	1.3
<b>Load Capacity</b>	kg (lb)					
<b>Moving Mass</b>	kg (lb)	1.1 (2.4)	1.5 (2.9)	1.6 (3.5)	2.0 (4.4)	2.2 (4.9)
<b>Home Limit Switches</b>	µm	* Home marker on center tape and limits as part of the encoder				
<b>Linear Shaft Motor(s)</b>		S08D, S08T, S08Q				

# KPX Precision Linear Servo Stage KPX100

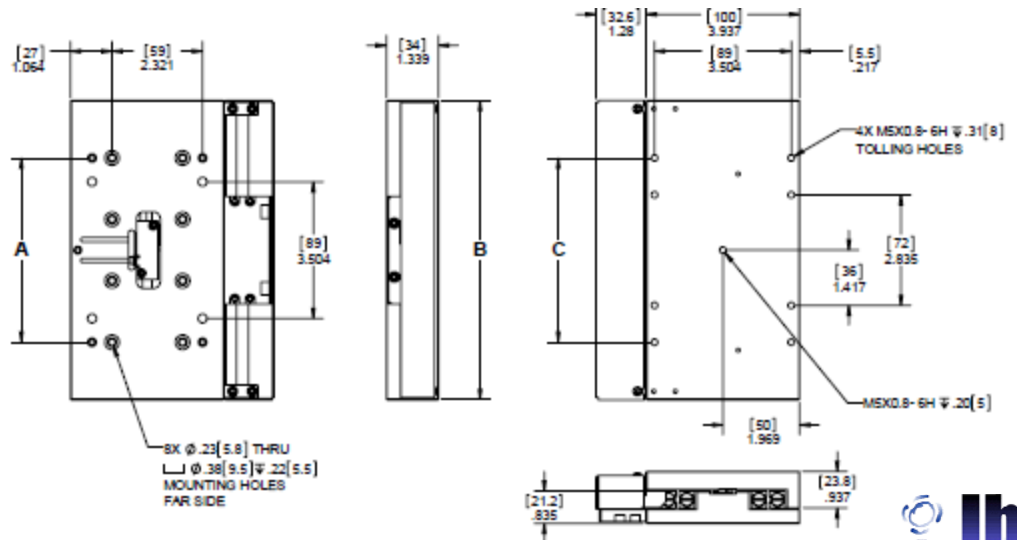
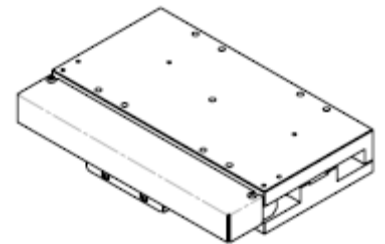


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### Mechanical Stage Specifications

MODEL	TRAVEL in [mm]	A	B	C
KPX100-050	2.362 [50]	NA	5.709 [145]	NA
KPX100-100	3.937 [100]	4.528 [115]	7.677 [195]	4.724 [120]
KPX100-150	5.906 [150]	6.496 [165]	9.646 [245]	6.299 [160]
KPX100-200	7.874 [200]	7.874 [200]	11.614 [295]	7.874 [200]
KPX100-250	9.843 [250]	10.236 [260]	13.583 [345]	10.236 [260]
KPX100-300	11.811 [300]	11.811 [300]	15.551 [395]	11.811 [300]

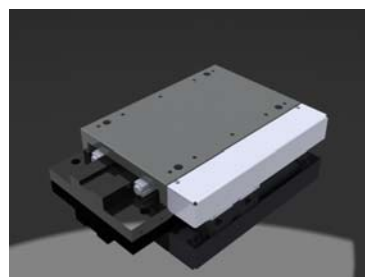




# KPX Precision Linear Servo Stage KPX100

## SYSTEM REQUIREMENTS

Stages can be purchased with or without Drive or Control. If you need help selecting a drive and/or control or if you would like to purchase them with the stage Ibex Engineering can accommodate either choice



## SERVICES AVAILABLE

- Technical Support
- Drive and control selection
- Installation and Setup
- Maintenance
- Application Support
- Hardware Support
- Guaranteed Warranty

## Electrical Motor Specifications

Utilize the electrical data below to help select the proper servo drive

Linear Motor Specifications	Units	S080D	S080T	S080Q
Motor Force Constant	N/A rms	2.1	3.2	4.2
Continuous Current	A rms	0.8	0.8	0.8
Peak Current **	A rms	3.4	3.4	3.4
Continuous Force	N	1.8	2.47	3.5
Peak Force **	N	7.2	10.8	14
Back Emf Constant	V/m/s	0.7	1.1	1.4
Coil Resistance ***	$\Omega$	4.7	6.8	9
Coil Inductance	mH	0.7	1	1.3
Continuous Power Rating	W	3	4.4	5.8
Thermal Resistance	C/w	33.2	22.9	17.3
Magnetic Pitch North to North	mm	30	30	30

## How to order

