

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 to be used for processes that require smooth velocity control. The motor and encoder technology along with Anti-Creep Crossed Roller guides offer a superior performance for cogless velocity control 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 applications not mentioned.

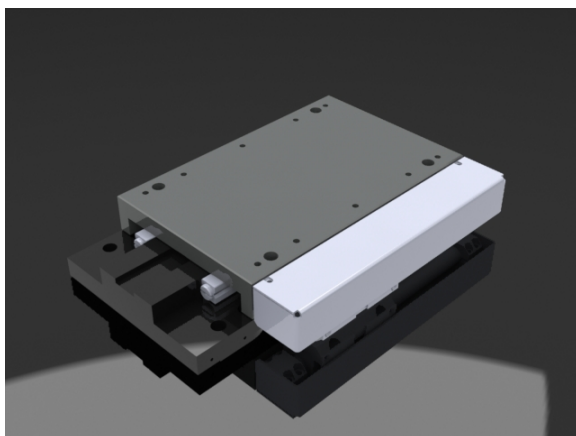
This family of product can be used in single axis or multi axis configurations. The stages come in multiple widths and length that allow you to tailor the configuration to suit your requirements.

Unlike most manufactures Ibex Engineering is uniquely qualified to take any standard configuration and tailor them to suit your custom configuration. 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 configure with different scale types
- Moving magnet to minimize moving wiring meaning superior life and wear
- Very stiff for superior positioning performance

KPX Precision Linear Servo Stage KPX150

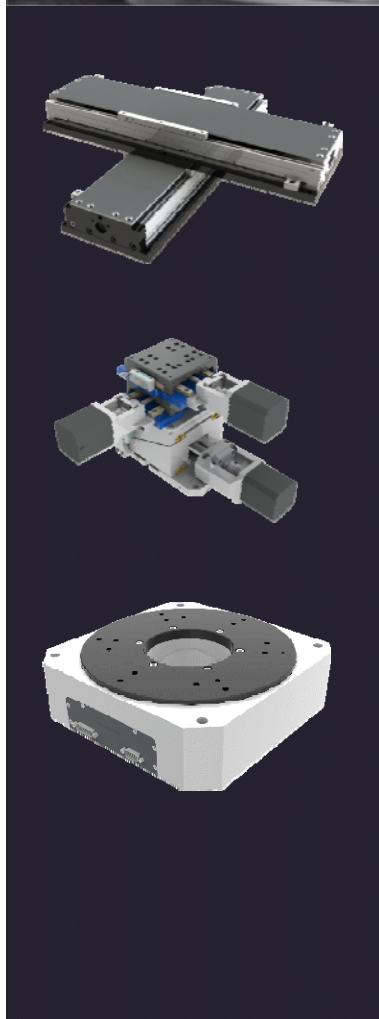
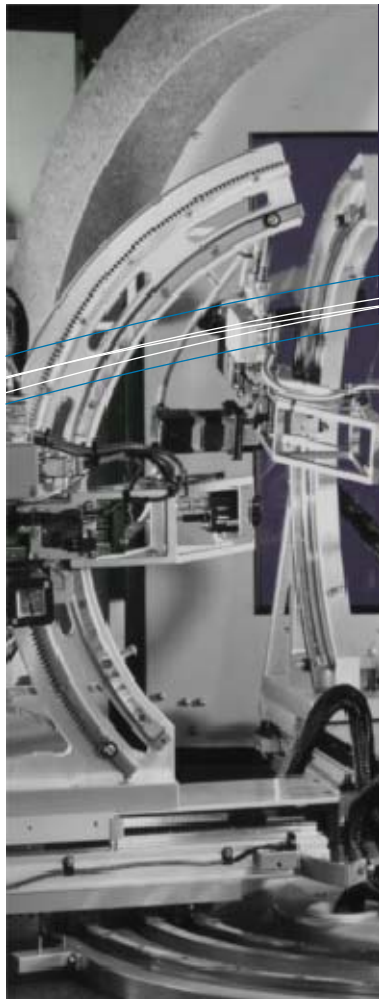


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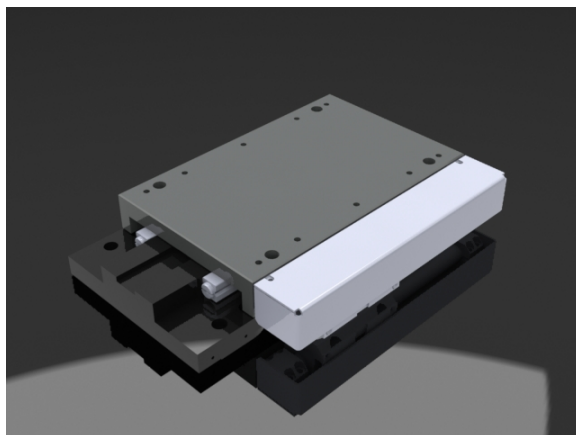
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 - Available in multiple resolutions and can be configured with different scale types
- No moving wires
 - Superior life and wear, no wire fatigue
- Very stiff for maximized positioning performance

Mechanical Stage Specifications

| Specifications | Units | KPX150-100 | KPX150- 150 | KPX150- 200 | KPX150- 300 |
|------------------------------|------------------|--|--------------|--------------|-------------|
| Travel / Stroke | mm (in) | 100 (3.94) | 150 (5.91) | 200 (7.87) | 300 (11.81) |
| Length | mm (in) | 230 (9.055) | 280 (11.024) | 330 (12.992) | 430 (16.93) |
| Accuracy | µm | 5 | 7 | 9 | 12 |
| Bi-Directional Repeatability | | ±1 count | | | |
| Straightness & Flatness | µm | 2/25mm | | | |
| Encoder Resolution | µm | 1, 0.5, 0.1, 0.05, 0.01 | | | |
| Maximum Acceleration | m/s ² | 17 | 13 | 11 | 8 |
| Maximum Velocity Note 4 | m/s | 1.3 | 1.3 | 1.4 | 1.5 |
| Load Capacity | kg (lb) | 45.5 (100.3) | | | |
| Moving Mass | kg (lb) | 2.3 (5.1) | 2.9 (6.4) | 3.5 (7.7) | 4.7 (10.4) |
| Home Limit Switches | | * Home marker on center tape and limits as part of the encoder | | | |
| Linear Shaft Motor(s) | | S160D, S160T, S160Q | | | |



KPX150 Stage Dimensions

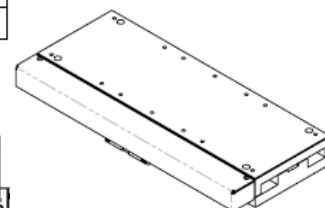
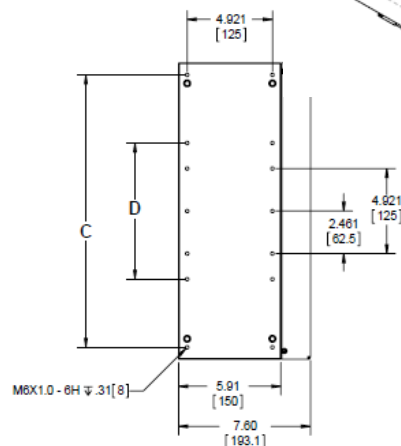
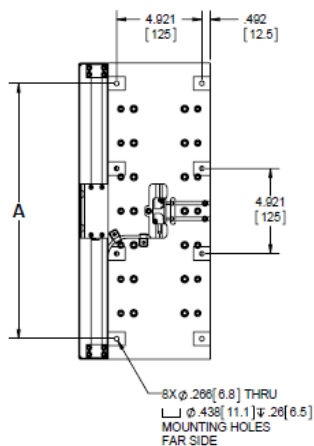


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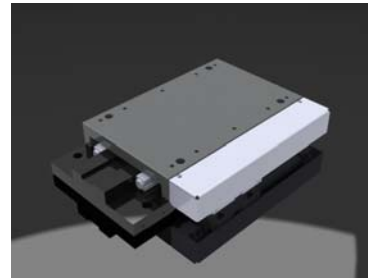
| MODEL | TRAVEL in [mm] | A | B | C | D |
|------------|----------------|--------------|----------------|--------------|-------------|
| KPX150-100 | 3.937 [100] | 6.889 [175] | 9.252 [235] | 7.874 [200] | NA |
| KPX150-150 | 5.906 [150] | 8.858 [225] | 11.210 [284.7] | 9.843 [250] | NA |
| KPX150-200 | 7.874 [200] | 10.810 [275] | 13.453 [341.7] | 11.811 [300] | NA |
| KPX150-300 | 11.811 [300] | 14.764 [375] | 17.118 [434.8] | 15.748 [400] | 7.874 [200] |



KPX Precision Linear Servo Stage KPX150

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 *** | Ω | 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

KPX 150 - 100 - .1 - 08Q

