

ALIO INDUSTRIES

NANOMETER PRECISION LINEAR STAGES

ALIO Industries designs and manufactures high resolution precision linear and rotary stages for demanding nanometer applications. The precision stages are available with controllers and integrated process hardware and software or they can be purchased with our high resolution encoders and amps, ready for connection to OEM and customer controllers.

Features/Benefits

Flexibility:

- Modular design for any multi-axis configuration.
- Linear, rotary, goniometric and vertical stages for application specific kinematics.
- Complete systems for plug-and-play simplicity and low start up costs.
- Powerful motion controller for demanding alignment tasks and motion requirements.

Price and Performance

- High-resolution non-contact encoders for exceptional repeatability.
- Ceramic servomotors provide high speed with fast settling time and no servo dither.
- Linear DC motors provide high speed with high force.
- Precision crossed roller bearings assure high accuracy with long life.
- Efficient stage design provides exceptionally competitive value.
- CE compliant components and assemblies.
- Clean room and vacuum chamber capable.



[AI-HR4-10000E-XY Linear Ceramic Servo Stage](#)



[AI-LM-5000 Linear DC Servo Motor Stage](#)



[AI-HR4-8000E-AP080-XY-UHV](#)



[AI-D8-40000E Linear Stage](#)

Linear Stage Specifications

MODEL	Stroke	Force*	Dimensions	Optional Force*
1200	12 mm	4.4 N	40/40/34 mm	8.8 N
2400	24 mm	4.4 N	80/80/34 mm	8.8 N
5000	50 mm	8.8 N	106/80/34 mm	N/A
10000	100 mm	17.6 N	150/100/40 mm	N/A
15000	150 mm	17.6 N	260/100/40 mm	N/A
20000	200 mm	17.6 N	320/100/40 mm	N/A
30000	300 mm	35.2 N	456/155/50 mm	N/A
40000	400 mm	35.2 N	610/155/50 mm	N/A
2500E	25 mm	8.8 N	88/114/30 mm	17.6 N, 35.2 N, 70.4 N
5000E	50 mm	8.8 N	100/114/30 mm	17.6 N, 35.2 N, 70.4 N
10000E	100 mm	17.6 N	155/114/30 mm	35.2 N, 70.4 N
20000E	200 mm	17.6 N	330/114/30 mm	35.2 N, 70.4 N
30000E	300 mm	35.2 N	485/125/40 mm	70.4 N
40000E	400 mm	35.2 N	610/130/50 mm	70.4 N

Resolution from 5 nm to 5 micron. Velocity range from 50 mm/sec to 250 mm/sec depending on encoder resolution. *Higher speeds and forces available with linear DC servo motors.

Environmental:

Operating Temperature: 0 to 100 degrees C

Humidity: 10 to 80% non-condensing

STANDARD STAGE EQUIPMENT:

- Ceramic servomotors & linear DC servomotors
- High resolution non-contact optical encoders.
- Ultra-precision crossed roller bearings.
- Precision 6061 aluminum structure.

OPTIONAL FEATURES:

- High-end motion controllers and amplifiers.
- Alternate materials and plating finishes.
- Clean room and vacuum chamber compatible.
- Special designed stages for integration with OEM products.



11919 W. I-70 Frontage Rd. N. #119

Wheat Ridge, Colorado U.S.A. 80033

Telephone: 303-339-7500

www.alioindustries.com