

# ALIO INDUSTRIES

## NANOMETER PRECISION 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 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.
- Piezo servo motors provide high speed with fast settling time and no servo dither.
- Precision cross 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.



**Dual 10000 E**

### **4 Axis Kinematic Solution**



## Linear Stage Specifications

<b>MODEL</b>	<b>Stroke</b>	<b>Force</b>	<b>Dimensions</b>	<b>Optional Force</b>
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.**

### STANDARD STAGE EQUIPMENT:

- Nanomotion linear piezoelectric motors.
- High resolution non-contact encoders with analog outputs.
- Ultra-precision cross roller bearings.
- Precision 6061 aluminum structure.

### Environmental:

Operating Temperature: 0 to 100 degrees C  
Humidity: 10 to 80% non-condensing

### OPTIONAL FEATURES:

- Controllers and amplifiers.
- ALIO electrical enclosure with power sources.
- Clean room and Vacuum chamber compatible.
- Special designed stages for integration with OEM products.



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