

Environmentally Hardened Linear Motor Stage: LINEAX-8



LINEAX-8

The LX-8 is an environmentally hardened linear motor stage with 6 variants of travel length, from 125 mm to 750 mm. Utilizing an ironcore linear motor, the LX-8 can achieve higher speeds by producing an exponential peak force density. Recirculating ball bearing guides are capable in maintaining stable trajectory at high-load capacities. The recommended payload limit is 50 kg. The stage has a position feedback with an advanced linear encoder with 50-nanometer resolution. These specialized encoders have built in end-point optic sensors minimizing the LX-8 systems internal wiring. NUTEC's patented Concealed Linear Seal (CLS) protects the LX-8 from contaminates.

Benefits

The ironcore linear motor on the LX-8 achieves more compliant positioning trajectories, faster settling times, higher repeatability, and a faster servo response. Having a higher thermal efficiency allows the LX-8 to serve high speed cycles 24/7, without motor burnout. With no friction effects, linear motors can achieve faster accelerations and superior control. The LX-8 has the capability of achieving a maximum peak force of 800 N and a maximum continuous force of 160 on the standard models.

Structures are high-strength aluminum alloys, all surfaces are precision machined, and hard coat anodized. The low-profile stage has a height of 76 mm, and is capable of stacking for producing a space efficient XY table. Contaminants from harsh work environments such as dust, debris, or scraps can affect the proper function of the guide system and encoder. NUTEC's CLS provides a 99% reduction of contaminant infiltration protecting the system with a stainless-steel cover supplemented by a lip seal to ensure complete protection of the LX-8.

Diverse options

The LINEAX linear motor stage series comes in standard precision and high precision models; visit website for details and specifications. NUTEC does offer customizable options, as our advanced engineering team will suggest suitable design options for the application. LX-8 is optionally available with an ironless linear motor for slower, less demanding cycle motion positioning that requires extremely low velocity ripple.

The LX-8 performance is optimized when driven by our MICROMATIC-9, a matched digital servo control.

Applications

The LINEAX series stages are well suited for precision positioning applications where accuracy, true trajectory, high repeatability, high duty cycles, and longevity are required.

The LINEAX is well suited in the fields of laser machining, semiconductor, optical metrology, 3D & Additive manufacturing, medical, fiber-optics, biomedical, and assembly equipment.

About NUTEC Products

When you select a NUTEC Mechatronic Systems product you can feel secure in knowing it has been designed and precision built, and tested to enable sustained positioning performance for its entire life expectancy. We design it METRIC from the ground up in the US and use ISO tolerancing to assure interchangeability and global supportability in the future.