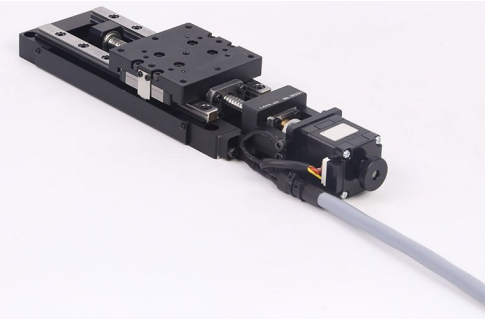
LA Series Compact Motorized Linear Stages, 50–150 mm Travel, 60 × 60 mm Table

Model LA Series · waveqvanta.com/products/la-series-compact-motorized-linear-stages

Compact ball-screw linear stages with a 60 × 60 mm table for repeatable industrial positioning.



The LA series are compact motorized linear stages designed for industrial tasks that need high repeatability. The rigid, black-anodized aluminum alloy body supports load and multi-axis combinations, and a φ8 × 2 ball screw driven by a standard two-phase stepping motor provides fine resolution and good positioning accuracy. Three travel lengths of 50, 100 and 150 mm share the same 60 × 60 mm table.

Key features

- φ8 × 2 precision ball screw with two-phase 28 stepping motor; 0.5 µm resolution at 20 microsteps
- Smooth linear-slider guides allow speeds up to 20 mm/s
- Precision-machined guide mounting surface for motion straightness ≤ 20 µm
- Repeatability ≤ ±2 µm; ≤ ±1 µm in micro-step motion
- Three built-in sensors (positive limit, negative limit, origin) with high-flex cable and cable module for easy maintenance
- Five-phase 28 stepping motor optional (-ST528)

Specifications

Travel Range	50 / 100 / 150 mm (by model)
Table Size	60 × 60 mm
Drive	Ball screw, φ8 × 2
Guide	Linear-slider guides
Body	Black anodized aluminum alloy
Resolution (Full / Half Step)	10 / 5 µm
Resolution (20 Microsteps)	0.5 µm
Max Speed	20 mm/s (zero load, motor at 600 rpm)
Repeatability	≤ ±2 µm
Static Clearance	≤ 1 µm
Backlash	≤ 3 µm
Static Parallelism	≤ 0.08 mm
Motion Straightness	≤ 20 µm
Motion Parallelism	≤ 30 µm
Minimum Incremental Motion	≤ 2 µm with TMC controller; ≤ 5 µm with MC600 or ZC300 controller
Repeatability (Micro-Step Motion)	≤ ±1 µm
Backlash (Micro-Step Motion)	≤ 0.5 µm
Motor	Two-phase 28 stepping motor, 1.8°
Motor Current / Holding Torque	1.3 A / 0.0785 N·m
Motor Option	Five-phase 28 stepping motor (-ST528)
Limit / Origin Sensors	2 limit + 1 origin, built-in

Sensor Supply	5–24 V DC ±10%
Sensor Output	NPN open collector, 5–24 V DC, ≤ 8 mA; residual voltage ≤ 0.3 V at 2 mA
Output Logic	ON when sensor is blocked
Connector / Cable	DB9 (pin); high-flex cable, 0.2 m
Load Capacity (Horizontal / Vertical / Inverted)	4 / 2 / 2 kg

Model overview

Model	Travel (mm)	Table (mm)	Weight (kg)
LA50-60	50	60 × 60	0.73
LA100-60	100	60 × 60	0.85
LA150-60	150	60 × 60	1

Typical applications

- Industrial automation requiring repeatable short-stroke positioning
- Compact multi-axis stage assemblies
- Positioning of small optics, probes and samples
- Test and inspection equipment