AK Series Aluminum Crossed-Roller Manual Linear Stages, 13/25 mm Travel

Model AK Series · waveqvanta.com/products/ak-series-aluminum-crossed-roller-manual-linear-stages

Black anodized aluminum linear stages with crossed-roller guides for loaded, accurate manual positioning.



AK series manual linear stages are machined from hard aluminum alloy with a black anodized finish that suits dark lab environments. Crossed-roller guides on precision-machined mounting surfaces give a sensitivity of 2 µm or better and straightness within 3 µm over the full travel, with horizontal loads up to 15 kg. Each stage is available with a fine-tuning screw (standard) or micrometer drive and several drive locations.

Key features

- Crossed-roller guide for load capacity and durability
- Precision-machined guide mounting surfaces: sensitivity ≤2 µm, straightness ≤3 µm
- Pitch ≤25″, yaw ≤15″, motion parallelism ≤10 µm
- Hard aluminum alloy with black anodized surface for strength and wear resistance
- Fine-tuning screw drive as standard, micrometer drive with A suffix (0.01 mm reading)
- Drive at center, right or left, with vertical-mount variants (C, SR, SL, CZ, RZ, LZ)
- Five sizes from 40 × 40 mm to 100 × 100 mm, 13 or 25 mm travel

Specifications

Travel Range	13 mm (AK13); 25 mm (AK25)
Stage Surface Size	40 × 40 to 100 × 100 mm
Thickness	20 mm
Guide Mechanism	Crossed-roller guide
Drive Type	Fine-tuning screw (standard); micrometer (A)
Drive Location (xx)	C: center; SR: right; SL: left; CZ / RZ / LZ: center / right / left and vertical
Sensitivity	≤2 µm
Micrometer Minimum Reading	0.01 mm
Motion Parallelism	≤10 µm
Straightness	≤3 µm
Pitch	≤25″
Yaw	≤15″
Horizontal Load	2–15 kg
Vertical Load	1–7 kg
Weight	0.12–0.7 kg
Body Material and Finish	Black anodized aluminum alloy

Model overview

Model	Travel (mm)	Stage Size (mm)	Thickness (mm)	Horizontal Load (kg)	Vertical Load (kg)	Weight (kg)
AK13(A)-4020(xx)	13	40 × 40	20	2	1	0.12

Model	Travel (mm)	Stage Size (mm)	Thickness (mm)	Horizontal Load (kg)	Vertical Load (kg)	Weight (kg)
AK13(A)-6020(xx)	13	60 × 60	20	5	2	0.25
AK25(A)-6520(xx)	25	65 × 65	20	6	2.5	0.28
AK25(A)-8020(xx)	25	80 × 80	20	10	5	0.5
AK25(A)-10020(xx)	25	100 × 100	20	15	7	0.7

Typical applications

- Manual positioning of optics and optomechanics
- Laboratory optical setups requiring higher load capacity
- Building multi-axis manual stage assemblies
- Positioning in dark or low-reflection environments