AKR Series Manual Rotation Stages, 360° Coarse, 10° Fine, Black Anodized

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Low-profile aluminum rotation stages with 360° coarse and 10° micrometer fine adjustment for low-light optical setups.

AKR series rotation stages offer 360° coarse rotation and a 10° micrometer-driven fine adjustment in a low-profile aluminum body. The black anodized surface keeps reflections low, which suits dark-room setups that need careful angle adjustment. Four models cover Φ45 to Φ120 mm stage surfaces at 20–30 mm thickness.



Key features

- 360° coarse rotation and 10° fine adjustment by micrometer
- Sensitivity from 1.21 arcmin down to 0.49 arcmin (AKR10A-120)
- Crossed-roller ring bearing on Φ60–Φ120 models; angular contact ball bearing on the Φ45 model
- Black anodized aluminum alloy body with low reflectivity
- Low-profile design: 20–30 mm thick, 0.16–1.5 kg
- Vernier scale with 0.1° minimum reading; static parallelism ≤0.05 mm
- Central load capacity up to 3 kg

Specifications

Coarse Travel	360°
Fine Travel	10°
Stage Surface Size	Φ45, Φ60, Φ90 or Φ120 mm
Thickness	20–30 mm
Guide Mechanism	Crossed-roller ring (Φ60–Φ120); angular contact ball bearing (Φ45)
Drive Type	Micrometer
Body Material and Finish	Black anodized aluminum alloy
Vernier Minimum Reading	0.1°
Sensitivity	0.49–1.21 arcmin (model dependent)
Angle per Micrometer Turn	≈0.41° to ≈1.01° (model dependent)
Static Parallelism	≤0.05 mm
Axial Run-Out	≤30 µm (≤40 µm for AKR10A-45)
Radial Run-Out	≤50 µm (not specified for AKR10A-45)
Central Load Capacity	1.5–3 kg (model dependent)
Weight	0.16–1.5 kg

Model overview

Model	Stage Size (mm)	Thickness (mm)	Guide	Sensitivity (arcmin)	Axial Run-Out (µm)	Radial Run-Out (µm)	Angle per Turn (°)	Load (kg)	Weight (kg)
AKR10A-45	Φ45	20	Angular contact ball bearing	1.21	≤40	—	≈1.01	1.5	0.16
AKR10A-60	Φ60	25	Crossed-roller ring	0.95	≤30	≤50	≈0.74	2	0.35
AKR10A-90	Φ90	25	Crossed-roller ring	0.68	≤30	≤50	≈0.55	3	0.76
AKR10A-120	Φ120	30	Crossed-roller ring	0.49	≤30	≤50	≈0.41	3	1.5

Typical applications

- Angular alignment of optics in dark or low-light environments
- Orientation of polarizers, waveplates and filters
- Sample rotation for angle-dependent measurements
- Compact multi-axis manual positioning assemblies