

KCB2E - September 30, 2016

Item # KCB2E was discontinued on September 30, 2016. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

RIGHT-ANGLE KINEMATIC MOUNTS FOR ELLIPTICAL MIRRORS

- ▶ Kinematic Mounts for 1/2", 1", and 2" Elliptical Mirrors
- ▶ Cage System, Lens Tube, and Post Mount Compatible
- ▶ $\pm 4^\circ$ of Kinematic Tip and Tilt Adjustment



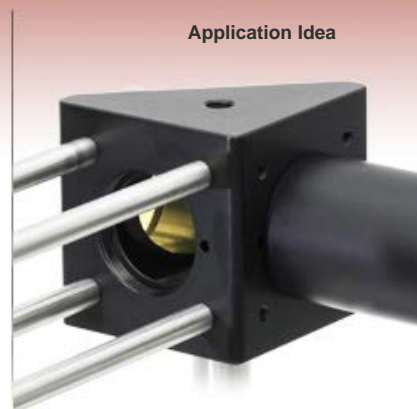
KCB2E
Holds 2" Elliptical Optics



KCB1E
Holds 1" Elliptical Optics



KCB05E
Holds 1/2" Elliptical Optics



Application Idea

Elliptical Mirror Mounts are Cage System and Lens Tube Compatible

[Hide Overview](#)

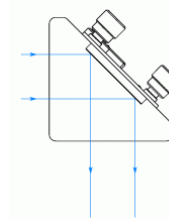
OVERVIEW

Features

- Mount Elliptical Optics at 45° with $\pm 4^\circ$ of Kinematic Adjustment
- Versions Available to Mount a 1/2", 1", or 2" Elliptical Optic
- Fabricated from Black Anodized Aluminum

Right-Angle Kinematic Mounts for Elliptical Mirrors allow elliptical optics to be mounted at a 45° angle within a cage system or lens tube system. Elliptical optics have the advantage of a circular aperture when mounted at 45° . KCB05E(M), KCB1E(M), and KCB2E(M) feature tapped holes for cage rods on both the entrance and exit ports, while KCB1EC(M) feature smooth bores for cage rods. All of these mounts have SM-threaded entrance and exit holes for lens tube integration.

The eight right-angle mounts listed below are sized to incorporate 1/2", 1", or 2" elliptical optics within a 16 mm, 30 mm, or 60 mm Cage System, respectively. These mounts are compatible with our dielectric and metallic elliptical mirrors. We also offer Fixed 45° Mounts for our 1" and 2" elliptical mirrors.



The KCBxE(M) and KCBxEC(M) elliptical mirror mounts divert a beam 90° , while the elliptical optic maintains a circular aperture.

Item #	KCB05E	KCB05E/M	KCB1E	KCB1EC	KCB1E/M	KCB1EC/M	KCB2E	KCB2E/M
Elliptical Mirror Size	1/2"		1"			2"		
Cage System Compatibility	16 mm		30 mm			60 mm		
Lens Tube Compatibility	1/2"		1"			2"		
Post Mounting Taps	4-40 and 8-32	M3 and M4	8-32 and 1/4"-20		M4 and M6	8-32 and 1/4"-20	M4 and M6	

[Hide 16 mm Cage Right-Angle Kinematic Elliptical Mirror Mount with Tapped Cage Rod Holes](#)

16 mm Cage Right-Angle Kinematic Elliptical Mirror Mount with Tapped Cage Rod Holes

- ▶ Eight 4-40 Tapped Holes to Mate with 16 mm Cage Systems

- ▶ Mounts 1/2" (12.7 mm) Elliptical Optics at a 45° Angle to the Optical Axis
- ▶ Provides ±4° Kinematic Tip and Tilt Adjustment
- ▶ Compatible with SM05-Threaded (0.535"-40) Lens Tubes
- ▶ Post Mountable:
 - ▶ KCB05E: One 4-40 Tap and One 8-32 Tap (for Mini-Series and Ø1/2" Posts)
 - ▶ KCB05E/M: One M3 Tap and One M4 Tap (for Mini-Series, Ø1/2", and Ø1" Posts)



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KCB05E Elliptical
Mount with SR Cage
Rods and an SM05
Lens Tube

The KCB05E(M) cube provides kinematic tip and tilt of a 1/2" (12.7 mm) elliptical optic held in a mounting plate whose mean horizontal position is at a 45° angle. The ports are equipped with SM05-threaded (0.535"-40) bores and four 4-40 tapped holes center-to-center spaced to mate with our 16 mm Cage System standard. The kinematic tip and tilt adjustment plate is actuated with M3 x 0.25 threaded adjustment screws that allow for smooth, high-resolution movement of 0.25 mm (0.01") per turn. Two of these adjusters include removable knobs, while the third must be tuned with a 5/64" (2 mm) hex key or balldriver.

A nylon-tipped adjustment screw and a nylon-coated spring clip are used to secure 1" (25.4 mm) elliptical optics using a 0.05" (1.3 mm) hex key or balldriver via the mounts' rear-loading, double-bored hole. The rear loading design does not limit the thickness of the mounted optic and the mounted optic remains accessible even after the mount is fitted with cage rods or lens tubes. We offer dielectric and metallic elliptical mirrors, which are compatible with this mount. The minimum thickness for optics that can be secured by these mounts is 0.12" (3 mm).

Part Number	Description	Price	Availability
KCB05E/M	Right-Angle Kinematic Elliptical Mirror Mount, 16 mm Cage System and SM05 Lens Tube Compatible, M3 and M4 Mounting Holes	\$220.00	Today
KCB05E	Right-Angle Kinematic Elliptical Mirror Mount, 16 mm Cage System and SM05 Lens Tube Compatible, 4-40 and 8-32 Mounting Holes	\$220.00	Today

[Hide 30 mm Cage Right-Angle Kinematic Elliptical Mirror Mount with Tapped Cage Rod Holes](#)

30 mm Cage Right-Angle Kinematic Elliptical Mirror Mount with Tapped Cage Rod Holes

- ▶ Eight 4-40 Tapped Holes for ER Cage Rods
- ▶ Mounts 1" (25.4 mm) Elliptical Optics at a 45° Angle to the Optical Axis
- ▶ Provides ±4° Kinematic Tip and Tilt Adjustment
- ▶ 30 mm Cage System and SM1 (1.035"-40) Compatible
- ▶ Post Mountable:
 - ▶ KCB1E: One 8-32 Tap and One 1/4"-20 Tap (for Ø1/2" and Ø1" Posts)
 - ▶ KCB1E/M: One M4 Tap and One M6 Tap (for Ø1/2" and Ø1" Posts)



Click to Enlarge
KCB1E Elliptical Mount
on a Post with ER Cage
Rods and an SM1 Lens
Tube

The KCB1E(M) cube provides kinematic tip and tilt of a 1" (25.4 mm) elliptical optic held in a mounting plate whose mean horizontal position is at a 45° angle. The ports are equipped with SM1-threaded (1.035"-40) bores and four 4-40 tapped holes center-to-center spaced to mate with our 30 mm Cage System standard. The kinematic tip and tilt adjustment plate is actuated with 100 TPI (Threads per Inch) adjustment screws that allow for smooth, high-resolution movement of 0.01" (0.254 mm) per rotation. Two of these adjusters include removable knobs, while the third must be tuned with a 5/64" (2 mm) hex key or balldriver.

A nylon-tipped adjustment screw and a nylon-coated spring clip are used to secure 1" (25.4 mm) elliptical optics using a 0.05" (1.3 mm) hex key or balldriver via the mounts' rear-loading, double-bored hole. The rear loading design ensures that the optic remains accessible even after the mount is fitted with cage rods or lens tubes. These mounts were designed for a 6 mm thick optic. We offer dielectric and metallic elliptical mirrors, which are compatible with these mounts.

Part Number	Description	Price	Availability
KCB1E/M	Right-Angle Kinematic Elliptical Mirror Mount with Tapped Cage Rod Holes, 30 mm Cage System and SM1 Compatible, M4 and M6 Mounting Holes	\$198.00	Today
KCB1E	Right-Angle Kinematic Elliptical Mirror Mount with Tapped Cage Rod Holes, 30 mm Cage System and SM1 Compatible, 8-32 and 1/4"-20 Mounting Holes	\$198.00	Today

[Hide 30 mm Cage Right-Angle Kinematic Elliptical Mirror Mount with Smooth Cage Rod Bores](#)

30 mm Cage Right-Angle Kinematic Elliptical Mirror Mount with Smooth Cage Rod Bores

- ▶ Mounts 1" (25.4 mm) Elliptical Optics at a 45° Angle to the Optical Axis
- ▶ Eight 0.25" (6.35 mm) Deep Smooth Bore Holes for ER Cage Rods
- ▶ Provides ±4° Kinematic Tip and Tilt Adjustment
- ▶ 30 mm Cage System and SM1 (1.035"-40) Compatible



- ▶ Post Mountable:
 - ▶ KCB1EC: One 8-32 Tap and One 1/4"-20 Tap (for Ø1/2" and Ø1" Posts)
 - ▶ KCB1EC/M: One M4 Tap and One M6 Tap (for Ø1/2" and Ø1" Posts)

Click to Enlarge
KCB1EC(M) Mounts
have Smooth Bores for
Cage Rods

The KCB1EC(M) cube provides kinematic tip and tilt of a 1" (25.4 mm) elliptical optic held in a mounting plate whose mean horizontal position is at a 45° angle. The ports are equipped with SM1-threaded (1.035"-40) bores and four 0.25" (6.35 mm) deep smooth bore holes spaced to mate with our 30 mm cage system standard. The cage rods are secured by eight setscrews using a 5/64" (2 mm) hex key or balldriver. This design allows multiple 30 mm cage components to be directly interfaced without the need for ERSCA ER Rod Adapters. The kinematic tip and tilt adjustment plate is actuated with 100 TPI (Threads Per Inch) adjustment screws that allow for smooth, high-resolution movement of 0.01" (0.254 mm) per turn. Two of these adjusters include removable knobs, while the third must be tuned with a 5/64" (2 mm) hex key or balldriver.

A nylon-coated spring clip is used to secure 1" (25.4 mm) elliptical optics using a 0.05" (1.3 mm) hex key or balldriver via the mounts' rear-loading, double-bored hole. The rear loading design ensures that the optic remains accessible even after the mount is fitted with cage rods or lens tubes. These mounts were designed to hold a 6 mm thick elliptical optic. We offer dielectric and metallic elliptical mirrors, which are compatible with these mounts.

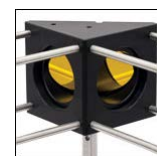
Part Number	Description	Price	Availability
KCB1EC/M	Customer Inspired!Right-Angle Kinematic Elliptical Mirror Mount with Smooth Cage Rod Bores, 30 mm Cage System and SM1 Compatible, M4 and M6 Mounting Holes	\$198.00	Today
KCB1EC	Customer Inspired!Right-Angle Kinematic Elliptical Mirror Mount with Smooth Cage Rod Bores, 30 mm Cage System and SM1 Compatible, 8-32 and 1/4"-20 Mounting Holes	\$198.00	Today

[Hide 60 mm Cage Right-Angle Kinematic Elliptical Mirror Mount with Tapped Cage Rod Holes](#)

60 mm Cage Right-Angle Kinematic Elliptical Mirror Mount with Tapped Cage Rod Holes



- ▶ Eight 4-40 Tapped Holes for ER Cage Rods
- ▶ Mounts 2" (50.8 mm) Elliptical Optics at a 45° Angle to the Optical Axis
- ▶ Provides ±4° Kinematic Tip and Tilt Adjustment
- ▶ 60 mm Cage System and SM2 (2.035"-40) Compatible
- ▶ Post Mountable:
 - ▶ KCB2E: One 8-32 Tap and One 1/4"-20 Tap (for Ø1/2" and Ø1" Posts)
 - ▶ KCB2E/M: One M4 Tap and One M6 Tap (for Ø1/2" and Ø1" Posts)



Click to Enlarge
KCB2E Elliptical Mount
on a Post with ER Cage
Rods

The KCB2E(M) Right-Angle Kinematic Cage Mount provides kinematic tip and tilt adjustment of a 2" (50.8 mm) elliptical optic held in a mounting plate with a mean horizontal position at a 45° angle. The ports are equipped with SM2-threaded (2.035"-40) bores. The KCB2E(M) has eight 4-40 tapped holes spaced to mate with our 60 mm cage systems. The ±4° kinematic tip and tilt adjustment plate is actuated with three 100 TPI (Threads per Inch) adjustment screws for smooth, high-resolution movement of 0.01" (0.254 mm) per rotation. Two of these adjusters include removable knobs, while the third must be tuned with a 5/64" (2 mm) hex key or balldriver.

A nylon-tipped setscrew is used to secure 2" (50.8 mm) optics using a 5/64" (2 mm) hex key or balldriver via the mounts' rear-loading, double-bored hole. The rear loading design does not limit the maximum thickness of the mounted optic and the mounted optic remains accessible even after the mount is fitted with cage rods or lens tubes. The minimum thickness for optics that can be secured by these mounts is 0.24" (6 mm). We offer dielectric and metallic elliptical mirrors, which are compatible with these mounts.

Part Number	Description	Price	Availability
KCB2E/M	Right-Angle Kinematic Elliptical Mirror Mount, 60 mm Cage System and SM2 Compatible, M4 and M6 Mounting Holes	\$225.00	Today
KCB2E	Right-Angle Kinematic Elliptical Mirror Mount, 60 mm Cage System and SM2 Compatible, 8-32 and 1/4"-20 Mounting Holes	\$225.00	Today