

56 Sparta Avenue • Newton, New Jersey 07860  
 (973) 300-3000 Sales • (973) 300-3600 Fax  
 www.thorlabs.com

# THORLABS

## ER90B - November 3, 2022

Item # ER90B was discontinued on November 3, 2022. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

### MINI-SERIES CONSTRUCTION ACCESSORIES

- ▶ Compatible with Our  $\varnothing 6$  mm Mini-Series Posts
- ▶ Designed for use in Tight Spaces and OEM Applications
- ▶ Double-Bored Through Holes for Stable Mounting



MSCB1



MSAP90



ER90B



**Application Idea**  
 MK05 Mirror Mount with MSRA90 Adapter  
 (Each Component Sold Separately)

MSCB2 shown with  
 Mini-Series Posts

[Hide Overview](#)

## OVERVIEW

### Features

- Rigid Construction Accessories Required for Many Complex 3D Assemblies
- Angle Clamp Options
  - Fixed 90° Mini-Series or  $\varnothing 1/2$ " Mounting Options
  - Fixed 180° for Mini-Series Posts
  - Continuous 360° for Mini-Series or  $\varnothing 1/2$ " Posts
- Construction Cubes Provide Space-Saving Platform for Multiple Optical Mounts

Thorlabs' Mini-Series Angle Clamps, Brackets, and Construction Cubes provide space-saving mounting solutions. Our angle clamps give the user the ability to orient our  $\varnothing 6$  mm posts in multiple directions and provide rigid, stable, and compact structures that can meet many laboratory needs. The double-bored mounting holes ensure two lines of stable contact, while the aluminum thumbscrews securely fasten the posts in place. Our angle brackets provide a stable platform for constructing rigid assemblies.

For compatibility with  $\varnothing 1/2$ " posts, Thorlabs' offers angle clamps that allow a  $\varnothing 6$  mm post to be mounted to a  $\varnothing 1/2$ " post. These angle clamps are available with a fixed right-angle or continuous 360° rotation.

Thorlabs' Mini-Series Construction Cubes can be used to mount multiple optical elements close together, which alleviates the need for multiple posts and post holders. The two cube designs provide adaptable laboratory solutions to crowded table problems.

[Hide Ø6 mm to Ø6mm Mini-Series Angle Clamps](#)

### Ø6 mm to Ø6mm Mini-Series Angle Clamps

<b>Product Image (Click to Enlarge)</b>			
<b>Item #</b>	MSRA90	ER90B(M)	MSWC
<b>Clamp Angle</b>	90°	180°	Continuous 360°

- ▶ Rigid Construction Accessories Required for Many Complex 3D Assemblies
- ▶ Double-Bored Through Holes for Stable Two-Line Contact
- ▶ Thumbscrew Provides Secure Holding Force for Locking

Thorlabs' Mini Angle Clamps securely fasten our Ø6 mm mini posts at precise angles (90° or 180°) to one another. In addition to the fixed angle options, we also offer a variant for 360° continuous adjustment (Item #

MSWC). The holes of these clamps are double bored to provide two lines of stable contact. The ER90B(M) has one double-bored hole and 4-40 (M3) taps on the top and bottom, allowing the clamp to be directly threaded onto a mini post. The thumbscrews located at either side of the clamps secure the Ø6 mm mini posts in place once the desired position is achieved.

Part Number	Description	Price	Availability
ER90B/M	Fixed 90° Bracket, Ø6 mm Bore and M3 Taps	\$16.31	Today
MSRA90	Mini-Post Right-Angle Post Clamp, Fixed 90° Adapter	\$19.22	Today
MSWC	Mini-Post Swivel Post Clamp, 360° Continuously Adjustable	\$37.40	Today
ER90B	Fixed 90° Bracket, Ø6 mm Bore and 4-40 Taps	\$16.31	Lead Time

[Hide Ø1/2" to Ø6 mm Angle Post Clamp](#)

### Ø1/2" to Ø6 mm Angle Post Clamp

- ▶ Mounts a Ø6 mm Mini-Series Post or Cage Rod to a Ø1/2" Post
- ▶ Right-Angle and 360° Continuous Adjustment Available
- ▶ Imperial and Metric Versions Available

Thorlabs' Ø1/2" to Ø6 mm angle post clamps are used to integrate Ø1/2" posts into mini-series constructions or cage system assemblies. These clamps are available as a fixed right-angle, for perpendicular mounting, or with continuous 360° angle adjustment. Individual locking mechanisms for each post, as well as the rotation angle, allow for independent adjustment of each component.

The MSWCA(/M) clamp allows a Ø6 mm cage rod or mini-series post to be mounted to a Ø1/2" post with 360° continuous adjustment. The clamp features witness lines marked every 45°, as well as a 3/16" (5 mm) hex thumbscrew to secure the swivel angle. Two additional 3/16" (5 mm) hex thumbscrews are used to secure the posts into place. The center-to-center distance between the two posts is 0.62" (15.7 mm).

The RA90TR(/M) clamp allows a Ø6 mm cage rod or mini-series post to be mounted perpendicularly to a Ø1/2" post. The design combines a highly stable clamp flexure lock for holding the Ø6 mm post that is secured using a 5/64" (2 mm) balldriver. A 3/16" (5mm) thumbscrew locking mechanism is used for attaching the clamp to the Ø1/2" post. The center-to-center distance between the two posts is 1/2" (12.7 mm).



Click to Enlarge  
A Ø6 mm Post Mounted to a Ø1/2" Post With Continuous 360° Rotation Using the MSWCA Clamp



Click to Enlarge  
A Ø6 mm Post Mounted Perpendicularly to a Ø1/2" Post Using the RA90TR Clamp

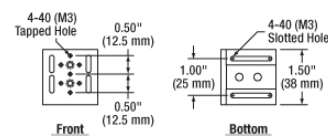
Part Number	Description	Price	Availability
MSWCA/M	Rotating Clamp for Ø1/2" to Ø6 mm Posts, 360° Continuously Adjustable, 5 mm Hex	\$37.70	7-10 Days
RA90TR/M	Customer Inspired!&nbsp;Right-Angle Ø1/2" to Ø6 mm Post Clamp, 5 mm Hex Thumbscrew	\$17.82	Today
MSWCA	Rotating Clamp for Ø1/2" to Ø6 mm Posts, 360° Continuously Adjustable, 3/16" Hex	\$37.70	Today
RA90TR	Customer Inspired!&nbsp;Right-Angle Ø1/2" to Ø6 mm Post Clamp, 3/16" Hex Thumbscrew	\$17.82	Today

[Hide Mini-Series Right-Angle Plate](#)

### Mini-Series Right-Angle Plate

- ▶ One-Piece Aluminum Construction for Excellent Rigidity
- ▶ Angled Rear Support Structure Reinforces Mounted Optomechanics
- ▶ Parallel and Perpendicular to Within 0.02" (0.05 mm)

Our MSAP90(/M) Mini-Series Right-Angle Plate, based upon our popular AP90 Right-Angle Plate design, is an ideal solution for constructing rigid three-dimensional assemblies with our Mini-Series components. This bracket provides four 4-40 (M3) clearance slots, seven 4-40 (M3) tapped holes, and two 4-40 (M3) counterbores oriented at 90° from an optical table surface. Its base contains two 1.0" (25.4 mm) long, 4-40 (M3) clearance slots and two 4-40 (M3) counterbores for mounting to a Mini-Series Breadboard.



[Click for Details](#)  
MSAP90 Mechanical Drawing

Part Number	Description	Price	Availability
MSAP90/M	Mini-Series Right-Angle Bracket, M3 Holes	\$51.16	Today
MSAP90	Mini-Series Right-Angle Bracket, 4-40 Holes	\$51.16	Today

[Hide Mini-Series Construction Cubes](#)

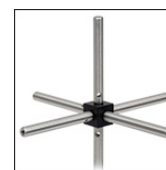
### Mini-Series Construction Cubes

Ideal for building compact structures that require a high degree of rigidity, the MSCB1 construction cube is tapped on all six surfaces, allowing our Ø6 mm mini posts to be attached to any surface (see photo to the right). The MSCB2 has three mounting surfaces, each with a #4 (M3) clearance hole that allows the assembly of three of our Ø6 mm mini posts. These cubes are machined from a solid block of aluminum on all six sides, parallel and perpendicular to within 0.002" (0.05 mm).

We also offer the MSCB3(/M) 1/2" (12.7 mm) Construction Cube with 8-32 (M4 x 0.7) mounting holes for use with larger optomech like Ø1/2" Posts.



[Click to Enlarge](#)  
Three Ø6 mm Posts  
Attached to an MSCB2



[Click to Enlarge](#)  
Six Ø6 mm Posts  
Attached to an MSCB1

Part Number	Description	Price	Availability
MSCB1/M	12.7 mm Construction Cube with M3 x 0.5 Tapped Holes	\$14.55	Today
MSCB2	1/2" Construction Corner Bracket with #4 (M3) Bores	\$14.55	Today
MSCB1	1/2" Construction Cube with 4-40 Tapped Holes	\$14.55	Today