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THORLABS

CP360R - November 7, 2022

Item # CP360R was discontinued on November 7, 2022. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

PIVOTING QUICK-RELEASE Ø1" OPTIC MOUNT FOR 30 MM CAGE SYSTEM

- ▶ 360° Pivoting Optic Mount for Mirrors, Beamsplitters, Filters, and Lenses
- ▶ 30 mm Cage System Compatible with Quick-Release Mechanism

Application Idea

CP360R
 30 mm Quick-Release
 Pivoting Mount



Front

Pivot Adjustment
 Knob

Pivot Adjustment
 Lock



Back



The CP360R Snaps into Place without
 Cage System Disassembly

[Hide Overview](#)

OVERVIEW

Features

- Quick-Release Cage Mount with Adjustable SM1-Threaded (1.035"-40) Optic Cell
- Compatible with Ø1" and Ø25 mm Mounted and Unmounted Optics
- On- and Off-Axis Optic Alignment for use with Lenses, Filters, Mirrors, and Beamsplitters
- Quick-Release Flexure Clamping Mechanism for Secure Cage Mounting without Disassembly

The CP360R is easily snapped into and removed from preassembled cage sections, as shown in the animation above. It can be used to mount optics at variable angles of incidence (AOI), as shown below.

The CP360R and CP360Q/M cage mounts allow for 360° of manual rotation of an optic within a 30 mm cage system. Optics up to 7 mm thick can be mounted in the 0.45" (11.4 mm) long SM1-threaded (1.035"-40) optic cell using the two included retaining rings. Both items use a flexure-style clamp with two setscrews (1.3 mm hex for the CP360R and 2.0 mm hex for the CP360Q/M) to quickly connect the mount without disassembling the cage. Simply turn the optic perpendicular to the cage system's optical axis and loosen the setscrews enough to allow the flexure mechanism to snap onto the cage rods. The cage mount can be mounted on any two of the four cage rods for either X- or Y-axis pivoting adjustment. By slightly loosening the locking setscrews, the cage mount can also be slid along the cage rods.

The optic can be rotated via the knurled knob or 3/16" (5 mm) hex, and the optic mount's pivot position can then be locked via a 1.3 mm (CP360R) or 2.0 mm (CP360Q/M) hex. An engraved scale indicates the angle of the optic, with tick marks every 5°. Please note that when using with beamsplitters, the clear aperture will be an ellipse with a minor axis of approximately 0.315" (8 mm) when used at 45° AOI. Thorlabs also offers a larger version of this item for 60 mm cage systems designed to mount Ø2" optics, which can be found [here](#).



Click to Enlarge
The CP360R can be mounted on cage rods inside a C6WR cage cube to hold a Ø1" optic at any chosen angle.



Click to Enlarge
Ø1" Filter at 0°
AOI



Click to Enlarge
Ø1" Mirror at
45° AOI

[Hide Cage Overview](#)

CAGE OVERVIEW

Cage System Overview

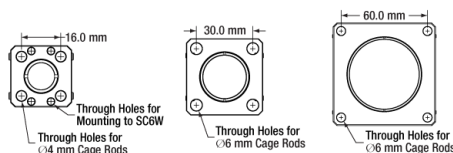
The Cage Assembly System provides a convenient way to construct large optomechanical systems with an established line of precision-machined building blocks designed for high flexibility and accurate alignment.

16 mm, 30 mm, and 60 mm Cage System Standards

Thorlabs offers three standards defined by the center-to-center spacing of the cage assembly rods (see image below). The 16 mm cage, 30 mm cage, and 60 mm cage standards are designed to accommodate Ø1/2", Ø1", and Ø2" optics, respectively. Specialized cage plates that allow smaller optics to be directly inserted into our larger cage systems are also available.

Standard Threads

The flexibility of our Cage Assembly System stems from well-defined mounting and thread standards designed to directly interface with a wide range of specialized products. The three most prevalent thread standards are our SM05 Series (0.535"-40 thread), SM1 Series (1.035"-40 thread), and SM2 Series (2.035"-40 thread), all of which were defined to house the industry's most common optic sizes. Essential building blocks, such as our popular lens tubes, directly interface to these standards.



An example of the standard cage plate measurements determining cage system compatibility.

Standard Cage System Measurements

Cage System	16 mm	30 mm	60 mm
Thread Series	SM05	SM1	SM2
Rod to Rod Spacing	16 mm (0.63")	30 mm (1.18")	60 mm (2.36")
Total Length	25 mm (0.98")	41 mm (1.60")	71.1 mm (2.8")

Cage Components

Cage Rods	16 mm	These rods are used to connect cage plates, optic mounts, and other components in the cage system. The SR Series Cage Rods are compatible with our 16 mm cage systems, while the 30 mm and 60 mm cage systems use ER Series Cage Rods.
	30 mm	
	60 mm	
Cage Plates	16 mm	These serve as the basic building blocks for a cage system. They may have SM-threaded central bores, smooth bores sized for industry standard optics or to accommodate the outer profile of our SM Series Lens Tubes, or specialized bores for other components such as our FiberPorts.
	30 mm	
	60 mm	
Optic Mounts	16 mm	Thorlabs offers fixed, kinematic, rotation, and translation mounts specifically designed for our Cage Systems.
	30 mm	
	60 mm	
	16 mm	

Cage Cubes	30 mm	These cubes are useful for housing larger optical components, such as prisms or mirrors, or optics that need to sit at an angle to the beam path, such as beamsplitters. Our cage cubes are available empty or with pre-mounted optics.
	60 mm	
Replacement Setscrews	Replacement setscrews are offered for our 16 mm (SS4B013, SS4B025, and SS4B038) and 30 mm (SS4MS5 and SS4MS4) cage systems products.	
Post and Breadboard Mounts and Adapters	Mounting options for cage systems can be found on our Cage System Construction pages. Cage Systems can be mounted either parallel or perpendicular to the table surface.	
Size Adapters	Cage System Size Adapters can be used to integrate components from different cage system and threading standards.	
Specialized Components	Thorlabs also produces specialized cage components, such as Filter Wheels, a HeNe Laser Mount, and a FiberPort Cage Plate Adapter, allowing a wide range of our products to be integrated into cage-mounted optical systems. Explore our Cage Systems Visual Navigation Guide to see the full range of Thorlabs' cage components.	

[Hide Pivoting Quick-Release Ø1" Optic Mount for 30 mm Cage System](#)

Pivoting Quick-Release Ø1" Optic Mount for 30 mm Cage System

Part Number	Description	Price	Availability
CP360Q/M	NEW! Pivoting, Quick-Release, Ø1" Optic Mount for 30 mm Cage System (Metric)	\$109.20	Lead Time
CP360R	Customer Inspired! Pivoting, Quick-Release, Ø1" Optic Mount for 30 mm Cage System	\$109.20	Lead Time

