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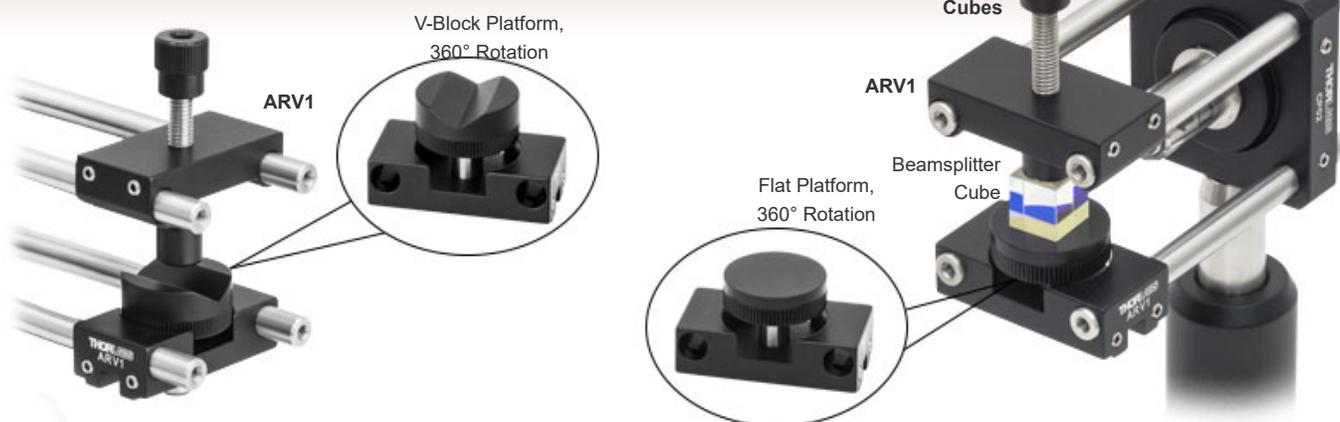
# THORLABS

## ARV1 - July 7, 2021

Item # ARV1 was discontinued on July 7, 2021. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

### ADJUSTABLE HEIGHT CAGE CLAMPS

- ▶ V-Block and Flat Platform
- ▶ Lockable, Height-Adjustable Rotating Platform
- ▶ Rotating V-Shaped Clamping Head



#### OVERVIEW

##### Features

- Lockable, Height Adjustable Rotating Pedestal
- Includes V-Groove and Flat Mounting Surfaces
- V-Groove Holds Cylindrical Objects from  $\varnothing 0.15"$  ( $\varnothing 3.8$  mm) to  $\varnothing 0.59"$  ( $\varnothing 15.0$  mm)
- Flat Mounting Platform Translates  $0.60"$  ( $15.2$  mm)

This cage clamp provides flexible adjustments within our 30 mm cage assemblies. Both the top and bottom of the mount assembly can be independently translated along the Cage Assembly Rods while the base pedestals offer additional flexibility with lockable height and rotation adjustment. A top-located thumbscrew, complete with a swiveling Delrin<sup>®</sup>\* tip, provides the fastening force required to securely hold optical components in place. Each cage rod through hole is accompanied by a side-located locking 4-40 setscrew, which can be secured using a 0.05" hex key.

\*Delrin<sup>®</sup> is a registered trademark of DuPont Polymers, Inc.



Click to Enlarge  
 ARV1 Adjustable Height Cage  
 Clamp Mounted within a 30  
 mm Cage System

## CAGE OVERVIEW

## Cage System Overview

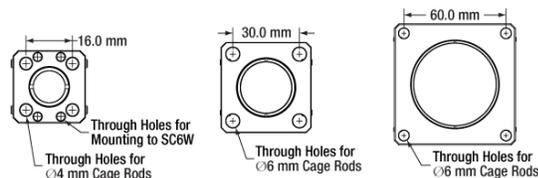
The Cage Assembly System provides a convenient way to construct large optomechanical systems with an established line of precision-machined building blocks designed for high flexibility and accurate alignment.

### 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  $\varnothing 1/2"$ ,  $\varnothing 1"$ , and  $\varnothing 2"$  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	
Cage Cubes	16 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.
	30 mm	
	60 mm	
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.

Part Number	Description	Price	Availability
ARV1	Rotatable Cage Mount, V-Groove and Flat Platform	\$107.94	Lead Time