

C1503 - December 29, 2015

Item # C1503 was discontinued on December 29, 2015. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

Ø1.5" POST V-CLAMP MOUNTS

► **Ideal for Mounting Tube Lasers on Our Ø1.5" Stainless Steel Posts**

Application Idea



PM4
 Clamping Arm
 (One Included with
 Each Mount)



[Hide Overview](#)

OVERVIEW

Thorlabs' Post V-Clamp Mounts are designed to fasten HeNe Lasers at a right angle from our Ø1.5" Posts. The V-clamp mount provides two lines of contact along the bottom, and the included PM4(M) Clamping Arm provides a third point of contact at the top. They are compatible with cylinders ranging in size from Ø0.56" to Ø2.00" (Ø14.2 mm to Ø50.4 mm), and are fabricated from black anodized aluminum.

The C1502(M) Post V-Clamp Mount orients the mounted cylinder perpendicular to the Ø1.5" post. In contrast, the C1503(M) Kinematic V-Clamp Mount includes two knobs that provide ±3° of tip and tilt control. Three 6-32 (M4) taps along the outer edge of the V-clamp provide flexible mounting locations for the included clamping arm. For additional stability, extra clamping arms may be purchased below.

A quick-release handle is also available that allows for a simple and reliable way of securing these clamps to a post. It is easily installed by replacing the 1/4"-20 (M6) locking screw in the post clamp. The 2.03" (51.4 mm) long handle contains a 1/4"-20 (M6) threaded stud that engages the part by simply rotating the handle.

Ø1.5" Post Accessories
Construction Accessories
V-Mounts
Mounting Plates
Brackets / Platforms
Mirror Mounts



Click to Enlarge
 C15QR Quick-Release Handle
 Being Used in Place of the
 1/4"-20 (M6) Clamping Screw

[Hide Ø1.5" Post V-Clamp Mount](#)

Ø1.5" Post V-Clamp Mount

- Designed for Use with Ø1.5" Posts
- ±10° of Coarse Pitch Control



- ▶ One PM4(/M) Clamping Arm Included

The C1502(/M) Post V-Clamp Mount accepts cylindrical objects ranging in diameter from 0.56" to 2.00" (14.2 mm to 50.4 mm). The angle of the V-clamp may be adjusted within a $\pm 10^\circ$ range by loosening two 8-32 (M4) cap screws that are located behind the V-clamp's inner edge. The vertical position is set by a 1/4"-20 (M6) locking screw once the desired position is achieved.

This mount includes one PM4(/M) Clamping Arm, which may be fastened at any of three positions along the outer edge of the V-clamp. Additional PM4(/M) clamping arms are sold below.



Click to Enlarge
HeNe Laser Mounted on Two C1502 V-Clamps
and Ø1.5" Posts

Part Number	Description	Price	Availability
C1502/M	Post V-Clamp Mount, Metric, One PM4/M Clamping Arm Included	\$96.60	3-5 Days
C1502	Post V-Clamp Mount, One PM4 Clamping Arm Included	\$96.60	Lead Time

[Hide Ø1.5" Cylindrical Laser Mount](#)

Ø1.5" Cylindrical Laser Mount



- ▶ Designed for Use with Ø1.5" Posts
- ▶ Kinematic Knobs Provide $\pm 3^\circ$ of Pitch and Yaw Control
- ▶ One PM4(/M) Clamping Arm Included

The C1503(/M) Kinematic V-Clamp Mount accepts any of our HeNe Lasers, as well as other cylindrical objects ranging in diameter from 0.56" to 2.00" (14.2 mm to 50.4 mm). The two kinematic knobs provide fine control of tip and tilt within a $\pm 3^\circ$ range and an adjustment per revolution of 6 mrad/rev. The vertical position is set by a 1/4"-20 (M6) locking screw once the desired position is achieved.

This mount includes one PM4(/M) Clamping Arm, which may be fastened at any of three positions along the outer edge of the V-clamp. Additional PM4(/M) clamping arms are sold below.

The kinematic mechanism consists of a series of hardened chromium steel balls and ball seats that are coupled to heavy-duty springs. This mechanism works with gravity and provides long-term stability.

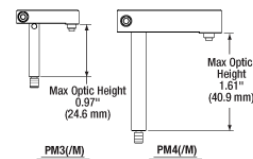
Part Number	Description	Price	Availability
C1503/M	Kinematic V-Clamp Mount, Metric, One PM4/M Clamping Arm Included	\$246.84	3-5 Days
C1503	Kinematic V-Clamp Mount, One PM4 Clamping Arm Included	\$246.84	Lead Time

[Hide Clamping Arms](#)

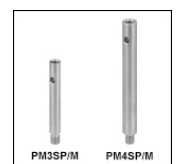
Clamping Arms



- ▶ Provide Clamping Force for Our Platform Mounts
- ▶ 6-32 (M4) Threads on Top and Bottom of Post
- ▶ PM3(/M): Holds Optics up to 0.97" (24.6 mm) Tall
- ▶ PM4(/M): Holds Optics up to 1.61" (40.9 mm) Tall
- ▶ Extension Posts Available to Increase Max Optic Height
 - ▶ PM3SP(/M) with PM3(/M): Hold Optics up to 2.21" (56.1 mm) Tall
 - ▶ PM4SP(/M) with PM4(/M): Hold Optics up to 3.61" (91.7 mm) Tall



Click for Details
Mechanical Drawings



Click to Enlarge
Clamping Arm
Extension Posts
with Metric Indicator
Groove

Thorlabs' PM3(/M) and PM4(/M) Clamping Arms use a nylon-tipped setscrew with a 5/64" (2.0 mm) hex to secure optics to our kinematic platform mounts and V-clamps. The PM3(/M) accommodates optics up to 0.97" (24.6 mm) tall and features a 0.69" (17.5 mm) center-to-center distance between the post and the nylon-tipped setscrew. In contrast, the PM4(/M) accommodates optics up to 1.61" (40.9 mm) and features a 1.16" (29.3 mm) center-to-center distance between the post and the nylon-tipped setscrew. The maximum optic height of the PM3(/M) or PM4(/M) Clamping Arms can be extended using our PM3SP(/M) or PM4SP(/M) Extension Posts, respectively. These extension posts are identical to the posts included in each complete clamping arm.

The clamping arm for all items is held to the post using a flexure mechanism that locks with a 5/64" (2.0 mm) balldriver or hex key. The post also offers a through hole for added torque when tightening down the post. Please see the diagram above for additional information.

Part Number	Description	Price	Availability
PM3/M	Small Adjustable Clamping Arm, M4 Threaded Post	\$18.00	Today
PM3SP/M	Customer Inspired!Extension Post for PM3/M Clamping Arm, M4 Threaded	\$5.00	Today
PM4/M	Large Adjustable Clamping Arm, M4 Threaded Post	\$22.00	Today
PM4SP/M	Customer Inspired!Extension Post for PM4/M Clamping Arm, M4 Threaded	\$5.00	Today
PM3	Small Adjustable Clamping Arm, 6-32 Threaded Post	\$18.00	Today
PM3SP	Customer Inspired!Extension Post for PM3 Clamping Arm, 6-32 Threaded	\$5.00	Today
PM4	Large Adjustable Clamping Arm, 6-32 Threaded Post	\$22.00	Today
PM4SP	Customer Inspired!Extension Post for PM4 Clamping Arm, 6-32 Threaded	\$5.00	Today

[Hide Quick-Release Handle](#)

Quick-Release Handle



- ▶ Quick-Release Handle for Fast and Repeated Positioning of Post Clamps
- ▶ Compatible with Ø1" (Ø25.0 mm) or Ø1.5" Post Clamps that Incorporate a 1/4"-20 (M6) Clamping Screw
- ▶ Provides More Control and Feel when Locking and Unlocking a Clamp
- ▶ Handle can be Rotated Without Actuating the Locking Screw
- ▶ 1/4"-20 (M6) Threads



[Click for Details](#)

Left: Handle Being Attached to the Former Generation C1501 Post Mounting Clamp
 Right: Pull Back to Rotate the Position of the Handle

The C15QR(M) Quick-Release Handle provides a simple and reliable way of securing a flexure-based Ø1" (Ø25.0 mm) or Ø1.5" post clamp. In many cases a cap screw is used to lock a flexure-based clamp in place on a post, which requires a balldriver for adjustments. Depending on the mounted load, using a balldriver can be difficult, or even unsafe. This quick-release handle mitigates this problem by allowing the clamp to be hand-tightened, ensuring better control over the amount of torque applied to tighten or loosen the clamp. This also decreases the amount of time needed for basic setup and alignment by eliminating the need for additional balldrivers and allowing for a quick way to secure a clamp.

Easily installed by replacing the 1/4"-20 (M6) locking screw in a post clamp, the 2.03" (51.4 mm) long handle contains a 1/4"-20 (M6) threaded stud that engages a part by rotating the handle. Once the handle is tightened to secure a clamp to a post, the internal ratchet-type mechanism allows for the handle's rotational position to be adjusted without actuating the mounting stud. Simply pull the handle outwards to disengage it from the mounting stud, as shown in the image to the right, then rotate it to a more convenient position. This feature ensures that the handle will always be accessible to the user.

Part Number	Description	Price	Availability
C15QR/M	Quick Release Handle for Ø25.0 mm or Ø1.5" Post Clamps, M6 Threads	\$9.50	Today
C15QR	Quick-Release Handle for Ø1" or Ø1.5" Post Clamps, 1/4"-20 Threads	\$9.50	Today

Visit the [Ø1.5" Post V-Clamp Mounts](#) page for pricing and availability information:
https://www.thorlabs.com/newgrouppage9.cfm?objectgroup_id=174