

## VC3/M - August 3, 2016

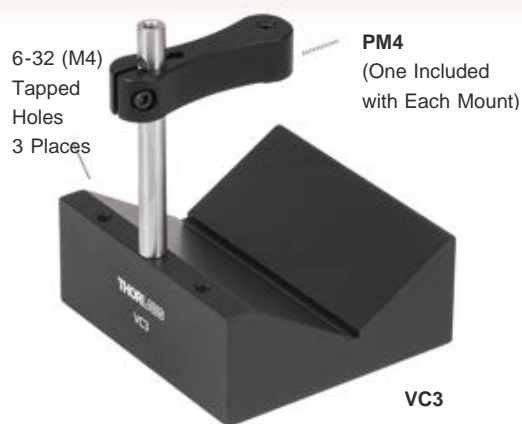
Item # VC3/M was discontinued on August 3, 2016. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

### POST-MOUNTABLE V-CLAMPS

- ▶ V-Clamp Models Accommodate Wide Range of Mounting Applications
- ▶ Solid One-Piece V-Clamp Body Provides Excellent Stability
- ▶ Vertical Clamping Arm Provides Stable, 3-Point Contact

#### Application Idea

A PCM Clamp with PCMV  
V-Groove Adapter Mounting  
a GRIN Collimator



[Hide Overview](#)

#### OVERVIEW

##### Features

- Clamp Cylindrical Objects Ranging from  $\varnothing 0.02"$  ( $\varnothing 0.5$  mm) to  $\varnothing 2.04"$  ( $\varnothing 51.8$  mm)
- V-Clamp Lengths from 0.42" (10.7 mm) to 6.0" (152.4 mm)
- Clamping Arm Provides Stable, 3-Point Contact with the V-Clamp
- $\varnothing 1/2"$  Post Mountable

These post-mountable V-Clamps are available in five distinct models, each designed for different cylindrical mounting requirements. Each model offers a solid, one-piece V-clamp body accompanied by a clamping arm whose contact area is positioned directly in-line with the center of the 'V'.

While most commonly used to hold cylindrical objects such as GRIN Lenses (VH1 and PCM with PCMV), Fiber Collimation Packages (VC1 and PCM with PCMV), Laser Diode Modules (VC3 and PCM with PCMV), and HeNe Lasers (VC6), these mounts are excellent general-purpose mounts capable of holding even unusually shaped objects. The V-shaped body and vertical clamping arm offers a stable, three-point contact resulting in stable component mounting. The V-clamps can all be mounted to  $\varnothing 1/2"$  posts.

[Hide Miniature V-Clamp, 0.42" \(10.7 mm\) Long](#)

#### Miniature V-Clamp, 0.42" (10.7 mm) Long

- ▶ Clamps Cylindrical Objects Ranging from  $\varnothing 1/32"$  (0.8 mm) to  $\varnothing 3/8"$  (9.5 mm)
- ▶ Compact Design Ideal for Small Optomechanical and OEM Assemblies
- ▶ Post Mountable via #8-32 (M4) Tapped Hole

This miniature V-clamp is ideal for applications that require the positioning of short, small diameter cylindrical components, such as our GRIN Lenses, ranging from Ø1/32" (0.8 mm) to Ø3/8" (9.5 mm). The VH1 measures just 0.42" (10.7 mm) from front to back, a compact design that allows close access to both ends of a cylindrically shaped optic fastened within the mount. Cylindrical objects are clamped in place via a nylon-tipped setscrew, using a 5/64" (2.0 mm) hex key, housed in an adjustable height arm. One bottom-located 8-32 (M4) tapped hole makes this V-clamp directly compatible with our Ø1/2" posts.



Part Number	Description	Price	Availability
VH1/M	Miniature V-Clamp, 0.42" Long, M4 Tapped Hole	\$36.80	Today
VH1	Miniature V-Clamp, 0.42" Long, 8-32 Tapped Hole	\$36.80	Today

[Hide Compact V-Mount and Platform Mount, 0.49" \(12.4 mm\) Long](#)

Compact V-Mount and Platform Mount, 0.49" (12.4 mm) Long

- ▶ Post-Mount Prisms or Cylindrical Objects
- ▶ PCM(M) Ø1/2" Post Clamp Secures Objects Mounted on Base Adapters
- ▶ PCMV(M) V-Groove Adapter Holds Cylindrical Objects
  - ▶ Minimum Object Diameter: 0.02" (0.6 mm)
  - ▶ Maximum Object Diameter: 0.52" (13.2 mm)
- ▶ PCMP(M) Flat Adapter Holds Prisms or Beamsplitter Cubes
  - ▶ Maximum Optic Height: 0.82" (20.8 mm)
- ▶ Adapters Mount to 1/4"-20 (M6) End of our Ø1/2" Optical Posts



Click for Details  
PCM Clamp Used with PCMP Prism Base  
to Mount a Dove Prism Over the 1/4"-20  
Tap of a Ø1/2" Post

Thorlabs' Compact Platform Mount is ideal for mounting cylindrical objects from 0.02" (0.6 mm) to 0.52" (13.2 mm) in diameter or prisms up to 0.82" (20.8 mm) tall onto a Ø1/2" Optical Post. Its thin 0.65" (16.5 mm) profile allows the mount to easily fit into a space-constrained setup, where a larger mount could not. Please note that a complete post clamp mount will require a PCM(M) Ø1/2" Post Clamp and either a PCMP(M) Flat or PCMV(M) V-Groove Base Adapter, all of which are sold separately.

The PCMP(M) and PCMV(M) Base Adapters thread onto the 1/4"-20 (M6) end of a Ø1/2" post to provide a stable mounting surface for prisms or cylindrical objects, respectively. To secure the mounted component, the PCM(M) Post Clamp fits over the post and includes a PM3 or PM3/M Clamping Arm with nylon-tipped setscrew that can be adjusted using a 5/64" (2 mm) hex key. The post clamp is locked in place on the Ø1/2" post using a side-located thumbscrew that can also be secured using a 3/16" (5 mm) hex key. See the photo to the right for a mounting example.

Part Number	Description	Price	Availability
PCM/M	Post Clamp Mount for Ø1/2" (12.7 mm) Posts (Base Adapter Sold Separately)	\$37.50	Today
PCMV/M	V-Groove Base Adapter for PCM(M) Mount, M6 Threaded Stud	\$16.00	Today
PCMP/M	Flat Base Adapter for PCM(M) Mount, M6 Threaded Stud	\$16.00	Lead Time
PCM	Post Clamp Mount for Ø1/2" (12.7 mm) Posts (Base Adapter Sold Separately)	\$37.50	Today
PCMV	V-Groove Base Adapter for PCM(M) Mount, 1/4"-20 Threaded Stud	\$16.00	Today
PCMP	Flat Base Adapter for PCM(M) Mount, 1/4"-20 Threaded Stud	\$16.00	Today

[Hide Small V-Clamp, 0.75" \(19.1 mm\) Long](#)

Small V-Clamp, 0.75" (19.1 mm) Long

- ▶ Clamps Cylindrical Objects Ranging from Ø0.02" (0.5 mm) to Ø0.82" (20.8 mm)
- ▶ Post Mountable via Two 8-32 (M4) Tapped Holes
- ▶ One PM3(M) Clamping Arm Included with Each Mount

The VC1(M) Small, 0.75" (19.1 mm) Long V-Clamp is ideally suited for holding small cylindrical objects such as our Fiber Collimation Packages. Cylindrical objects are clamped in place using the nylon-tipped setscrew on the included PM3(M) Clamping Arm (one included with each mount; additional arms are available below). This setscrew can be tightened with a 5/64" (2 mm) balldriver or hex key.



Click to Enlarge  
Post-Mounted VC1 V-  
Clamp Holding a Fiber

The PM3(/M) clamping arm is held to a post using a flexure locking mechanism that locks with the same 5/64" (2 mm) hex key. The post of the PM3(/M) includes a Ø0.09" (Ø2.3 mm) through hole that allows for extra torque to be applied when tightening.

This V-Clamp is equipped with one bottom-located and one side-located 8-32 (M4) tapped hole for post mounting. The side-located hole is opposite the clamping arm.

Collimation Package

Part Number	Description	Price	Availability
VC1/M	Small V-Clamp with PM3/M Clamping Arm, 0.75" Long, Metric	\$38.90	Today
VC1	Small V-Clamp with PM3 Clamping Arm, 0.75" Long	\$38.90	Today

[Hide Large V-Clamp, 2.5" \(63.5 mm\) Long](#)

Large V-Clamp, 2.5" (63.5 mm) Long

- ▶ Clamps Cylindrical Objects Ranging from Ø0.26" (6.6 mm) to Ø2.04" (51.8 mm)
- ▶ Post Mountable via Three 8-32 (M4) Tapped Holes
- ▶ One PM4(/M) Clamping Arm Included with Each Mount

This 2.5" (63.5 mm) Long, Large V-Clamp is designed to hold large cylindrical objects such as our Laser Diode Modules. Cylindrical objects are clamped in place using the nylon-tipped setscrew on the included PM4(/M) Clamping Arm (one included with each mount; additional arms are available below). This setscrew can be tightened with a 5/64" (2 mm) balldriver or hex key.

The PM4(/M) clamping arm is held to a post using a flexure mechanism that locks with the same 5/64" (2 mm) hex key. The post of the PM4 includes a Ø0.09" (Ø2.3 mm) through hole that enables the use of added torque when tightening.

For extra clamping support, this V-clamp has two additional (three total) 6-32 (M4) tapped holes for use with extra PM4(/M) clamping arms. Three bottom-located 8-32 (M4) tapped holes are provided for post mounting.



Click to Enlarge  
Post-Mounted VC3 V-Clamp  
Holding a Laser Diode Module

Part Number	Description	Price	Availability
VC3/M	Large V-Clamp with PM4/M Clamping Arm, 2.5" Long, Metric	\$37.10	Today
VC3	Large V-Clamp with PM4 Clamping Arm, 2.5" Long	\$37.10	Lead Time

[Hide Large V-Clamp, 6" \(152.4 mm\) Long](#)

Large V-Clamp, 6" (152.4 mm) Long

- ▶ Clamps Cylindrical Objects Ranging from Ø0.26" (6.6 mm) to Ø2.04" (Ø51.8 mm)
- ▶ Post Mountable via Three 8-32 (M4) Tapped Holes or Six 1/4"-20 Counterbores
- ▶ One PM4(/M) Clamping Arm Included with Each Mount

This 6" (152.4 mm) Long, Large V-Clamp is designed to secure long cylindrical objects, such as our HeNe Tube Lasers. Cylindrical objects are held in place using the nylon-tipped setscrew on the included PM4(/M) Clamping Arm (one included with each mount). This setscrew can be tightened with a 5/64" (2 mm) balldriver or hex key.

The PM4(/M) clamping arm is held to a post using a flexure mechanism that locks with the same 5/64" (2 mm) hex key. The post of the PM4 includes a Ø0.09" (Ø2.3 mm) through hole that enables the use of added torque when tightening.

For extra clamping support, seven additional (eight total) 6-32 (M4) tapped holes have been added for extra PM4 clamping arms (available below). This mount is equipped with six 1/4"-20 (M6) counterbores and three bottom-located 8-32 (M4) tapped holes for directly mounting the V-clamp to an optical breadboard or a post.



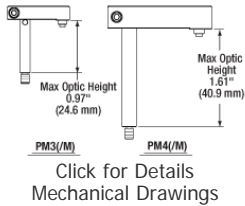
Click to Enlarge  
Post-Mounted VC6 V-Clamp with an  
Additional PM4 Clamping Arm Holding a  
Ø1.74" (Ø44.2 mm) HeNe Tube Laser

Part Number	Description	Price	Availability
VC6/M	Large V-Clamp with PM4/M Clamping Arm, 6" Long, Metric	\$61.80	Today
VC6	Large V-Clamp with PM4 Clamping Arm, 6" Long	\$61.80	Today

[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



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

Visit the *Post-Mountable V-Clamps* page for pricing and availability information:  
[https://www.thorlabs.com/newgrouppage9.cfm?objectgroup\\_id=1317](https://www.thorlabs.com/newgrouppage9.cfm?objectgroup_id=1317)