



Quill Stop Precision Matthews PM-30MV Installation Guide

Thank you for purchasing the Quill Stop for the Precision Matthews PM-30MV mill. Your feedback is always appreciated. Please email questions and comments to gregpriest@cox.net.

Note: installation of the Quill Stop requires the chip guard and its switch enclosure be removed from the mill. The Quill Stop-stop block is mounted in the lower hole vacated by the chip guard switch enclosure.

What's Included

1. Quill Stop plate
2. Quill Stop block
3. Button nut
4. 1/2-20" threaded rod



Parts Bag

1. Socket cap screw, 10-24 x 1"
2. 10-24 x 1/8" socket set screw
3. Threaded rod, M8-1.25 x 30mm
4. Coupling nut, M8-1.25
5. Hex nut, M8-1.25 (2)
6. Wire connector
7. Installation instructions

Use

- Secure Quill Stop plate to quill
- Lock 1/2-20" threaded rod
- Quill lock handle assembly
- Quill lock handle assembly
- Quill lock handle assembly
- Connect chip guard circuit wires

Tools Required

1. Hex keys: 3/32, 5/32"
2. Metric hex key: 2.5mm
3. #1 Phillips screwdriver
4. Parallels

Installation

1. Remove power to the mill and remove tooling from the spindle.
2. Position the mill head to a convenient height for installing the Quill Stop.
3. Remove the chip guard and its switch enclosure from the mill.
4. Use one of the socket cap screws removed from the chip guard switch enclosure to mount the Quill Stop block. Insert the screw through the center hole of the stop block. Use a square to level the stop block and tighten the screw.

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5. Connect the two wires from the chip guard circuit with the supplied wire connector and tuck these wires up into the mill head cavity so they will not interfere with the spindle.
6. The quill lock handle will be extended so it does not interfere with the Quill Stop plate. Remove the quill lock handle from the mill head. Thread one of the supplied 8mm hex nuts onto the handle thread, then the 8mm coupling nut, then the other 8mm hex nut. Tighten this assembly. Install the quill lock handle.
7. Thread the 10-24 x 1" socket cap screw through the hole with the slot of the Quill Stop plate. Leave 2-3 threads loose on the screw. Slide the plate up onto the quill sleeve. It may be necessary to gently spread the slot with a flat screwdriver to get the plate up onto the quill sleeve. Align the front edge of the plate with the front edge of the bottom of the mill head. Place two parallels between the top of the plate and the bottom of the mill head. Push the plate upward against the parallels and mill head to ensure a parallel fit. Tighten the socket cap screw.
8. Thread the 1/2-20 rod with the flat-end into the hole in the Quill Stop plate so it is flush with the bottom of the plate. Position the flat outward so that it will face the 10-24 x 1/4" set screw. Install and tighten the 10-24 set screw. Center the threaded rod in the center of the stop block hole by rotating the plate.
9. Slide the Button Nut down over the 1/2-20 threaded rod to any spot above the Stop Block and check the operation of the Quill Stop by rotating the quill until the Button Nut contacts the Stop Block. Minor adjustments may be made to the position of the Stop Block and the rotation of the Plate by loosening the fasteners, adjusting, and re-tightening the fasteners. Congratulations, installation of your new Quill Stop is complete!

Operation

The Quill Stop is simple to operate, simply press the button and the nut disengages from the thread. Slide to the desired position and release the button to engage the threads. Turning the nut then allows for precision micro-adjustments of depth of cut.

The Quill Stop is great for doing chamfers. With the spindle stopped and the chamfer tool in the spindle and centered on the hole, lower the quill until the chamfer tool seats in the hole. Then lower the Button Nut until it contacts the Stop Block. Rotate the Button Nut clockwise a half-turn to back out of the hole a bit and release the quill. Lower the spindle using the quill to make sure that the chamfer tool is not contacting the part. Start the spindle turning (150 RPM is recommended for chamfers) and lower the spindle using the quill. Then start a cycle of rotating the Button Nut counter clockwise in small increments while checking the depth of the chamfer by lowering and raising the quill. This is a great way to sneak-up on the correct chamfer depth.



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Quill Stop PM-25MV & PM-30MV

1/2-20 Threaded Rod Hole Location

