

# 10" Pepper Mill Instructions

By John Cahall

## Materials:

3" x 3" x 12" dry hardwood  
Chef Specialties 10" Deluxe Pepper Mill Mechanism (available @ Craft Supplies)  
Finish of choice

## Equipment:

Lathe capable of turning at least 18-20" between centers  
4 jawed chuck  
Live tail center w/cone  
Jacobs chuck  
1 5/8" jam chuck  
7/8", 1 1/16", 1 5/8" Forstner drill bits  
6" Forstner drill bit extender  
3/8" brad point drill bit

## Procedure:

Locate and mark the center of each end of the blank and rough turn between centers to just under 2 3/4" diameter. Square off both ends of blank.  
*(My Vicmarc VM100 chuck expands to just under 2 3/4" You could turn a tenon to fit your chuck instead but you will need to compensate for length of tenons)*

Mount the bottom of mill blank into the chuck and part off cap section at 8".  
Mark the top of cap section with an arrow for future reference and set cap section aside for now.

Drill 1 3/8" x 3/8" deep hole in the top of body section. Drill a 1 1/16" hole at least half of the way through the body section.  
*(If you don't have a 1 1/16" bit you can use a 1" bit and adjust bottom later)*  
Mark the top of body section with an arrow for future reference.  
Clean up and sand the top of body section at this time.

Mount the top of body section into chuck and drill 1 5/8" x 3/8" deep hole.  
Drill a 1 1/16" hole through body to meet the partially drilled hole from earlier step. *(If you used a 1" bit you need to open up the hole to 1 1/16" x 5/8" deep on bottom of body section to accommodate the spring bar assembly.)*  
Clean up and sand the bottom of body section at this time.

Mount the bottom of cap section in chuck and drill a 3/8" hole at least half of the way through cap section.

Mount the top of the cap section into the chuck and drill a 7/8" x 1/8" deep hole. *(This is for the turnplate disc w/square hole in the middle. The recess will need to be enlarged to accommodate the actual size of the disc.)*

With a 3/8" bit drill through the cap section to meet the partially drilled hole from the earlier step.

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Turn a 1 3/8" diameter tenon 1/4" long on the bottom of the cap section of mill. Test fit the base recess with the cap tenon and be sure the tenon turns freely. Clean up and sand the bottom of cap section.

Turn the base upside down and insert the spring bar assembly into the recess in the bottom. Make a mark on the side of cap at the center of the threaded portion of shaft. *(The tenon on cap must be excluded from measurement)*  
This marks the finished length.

Mount the bottom of base section on the jam chuck and insert the cap tenon into the recess in the top of the mill body. Bring the tail center w/cone up to cap for stability. It may be necessary to place a piece of paper towel between cap and body sections to secure them while finish turning the mill. Establish the top of mill by a parting cut at the mark showing the center of shaft threads.

Mark lines for your design shape and turn mill.

## **Finishing:**

Sand through 220 grit and finish. I use a coat of Deft wiped off completely before it dries and then three coats of equal parts of varnish, tung oil, and turpentine. Allow to dry overnight cutting each coat back with 0000 steel wool. *Finish must be able to be repaired from the wet, greasy, grimy hands that use the mill.*

## **Assembly:**

Press turnplate disc into the recess in the cap, drill 3/32" pilot holes, and screw in place.

Turn base upside down and insert the spring bar assembly into the recess in the bottom. Press the female portion of the grinder mechanism into the spring bar. Slide the male portion of the grinder and spring onto the shaft, and slide the shaft through the female mechanism and the spring bar.

Place the retainer bar over the assembled mechanism, line up the holes, drill pilot holes, and screw in place.

Slide the cap over the top end of the shaft and screw on the top knob.

Finally, tighten the knob to adjust the grind.

*If you find that more than half of the threads of the shaft are exposed through the top of cap, using a hack saw cut off amount necessary from the **unthreaded** end of the shaft and peen the cut end.*

**Get a good quality of peppercorns and pepper everything you eat. Enjoy!!**