# Pepper Mill and Salt Shaker Combo Turning Kit

#### **Required Tools and Supplies:**

- 1-1/2" Forstner Bit
- 1-1/16" Forstner Bit
- 7/16" Drill Bit
- Large Diameter 60° Live Center for Tail Stock
- 1-1/2" Expanding Jam Chuck or same diameter expanding sanding drum (you can also turn your own wooden stepped or tapered jam chuck is you so desire)
- Drill Chuck for head stock, or other method to secure the jam chuck
- Base Blank: 2-1/2" Min x 3-3/4" L
- Head Blank: 2-1/2" Min x 2" L
- **Optional Tools and Supplies:**
- Forstner Bit Extender:
- Morse Taper Adaptor (if you plan to bore on the lathe and do not already have a drill chuck for the tail stock, or would rather seat the drill bit directly in the taper as opposed to the drill chuck)
- Drill Press (if you do not wish to bore the blank on the lathe)

### Boring the Blanks:

Base:

- Mark the center on both ends of the blank.
- Drill a 1-1/2" hole 3/8" deep at the bottom of the base
- Drill a 1-1/16" hole through the entire blank, (bit extender is optional for this process) or drill half-way through and turn around and drill through from the opposite end. Note: If you drill the center hole from both ends to meet in the middle, be sure the ends of the blanks are 90° square to obtain the best alignment of holes.

<u>Head</u>:

- Mark the center on both ends of the blank.
- Drill a 1-1/2" hole, 1-1/4" deep on the top end of the blank. Check to make sure the salt shaker cap fits into this recess.
- Follow with a with a 7/16" diameter hole to the end



## Chucking and Turning The Blanks

#### Head Blank:

- Mount the head blank on a 1-1/2" Jam Chuck and expand it in the hole.
- Bring the tailstock center into the hole at the opposite end and lock in place.
- Turn the head blank into the profile of your choice
- Sand and finish the wood.



Base Blank:

- Mount the bottom of the base blank on a 1-1/2" Jam Chuck and expand it in the hole.
- Bring the tailstock center into the hole at the opposite end and lock in place.
- Turn the base blank to the profile of your choice.
- Sand and finish the wood



Chucking the Head

Chucking the Base

### Assembly

- Insert the grinder components over the grinder shaft in the following order: grinder, grinder housing, spring, grinder support
- Insert the assembly through the bottom of the *base blank* and push in.
- Align the slots of the grinder housing and support, affix the grinder retainer lining up the holes in the grinder retain with the slots.
- Mark the holes for drilling.
- Drill small pilot holes (1/16") in the recess and screw in the mounting screws to mount the grinder retainer.
- Insert the grinder sleeve into the bottom of the *head blank*
- Mark the holes for drilling
- Drill small pilot holes (1/16") in the recess
- Screw in the mounting screws to mount the grinder sleeve.
- Slide the grinder sleeve (now attached to the head blank) over the grinder shaft
- Affix the salt shaker cap over the grinder shaft and into the hole at the top of the head blank.
- Follow with the adjusting nut and secure the assembly
- To fill with pepper: Unscrew the adjusting nut, remove the head blank and fill the container with pepper corns. Replace the head piece. Use the adjusting nut to set the grind.
- To fill with salt: Remove the adjusting nut and the salt shaker cap. Fill with granulated salt. Replace parts

