

Ceramic Hand Crank Salt Or Pepper Mill Grinder Mechanism Turning Kit

Product: #179212, #179213

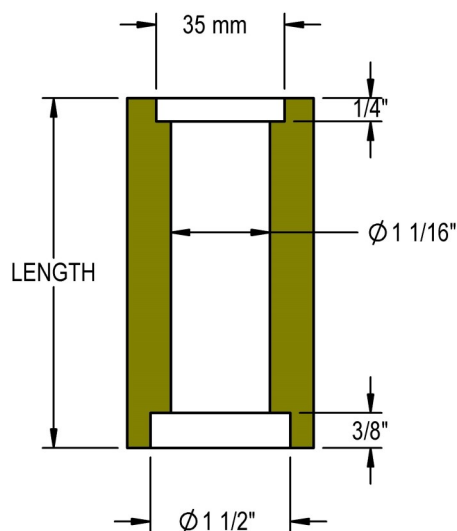
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Supplies Needed to Complete Kit:

- ☐ 35mm Forstner Bit
- ☐ 1¹/₁₆" Forstner Bit
- ☐ 1¹/₂" Forstner Bit
- ☐ Forstner Bit Extensions (6" or 8" lengths needed for taller mills)
- ☐ 2¹/₂" x 2¹/₂" Turning Stock 3³/₄", 5³/₄", or 7³/₄" Length
- ☐ Lathe
- ☐ Pen Mandrel
- ☐ Bushings (180151)
- ☐ Turning Tools
- ☐ Drill Press or Lathe Drill Chuck
- ☐ Sandpaper
- ☐ Eye & Ear Protection
- ☐ Dust Mask

Dimension Notes:

The dimensions shown below are the bore diameters for the body of the grinder. The outside dimensions will vary to suit your design, but the wall thickness should be at least 1/4". The overall finished length, will vary depending on the shaft length chosen. Ensure part is cut to length and ends are square. See reference chart below for dimensions.



LENGTH
3 3/4" (4" SHAFT)
5 3/4" (6" SHAFT)
7 3/4" (8" SHAFT)

Boring/Turning/Shaping the Mill:

- ☐ Mark centers on both ends of the blank. If using the lathe to bore, mount the blank using a 4-jaw chuck.
- ☐ Using the lathe drill chuck, bore a 35mm diameter hole 1/4" deep.
- ☐ Install a 1¹/₁₆" diameter bit and bore slightly over half of the length of the blank.
- ☐ Rotate blank 180 degrees and re-mount into the 4-jaw chuck. Install a 1¹/₂" diameter bit, bore a 3/8" deep hole.
- ☐ Install a 1¹/₁₆" diameter bit and bore through the remainder of the blank.
- ☐ Using the WoodRiver Hand Crank S or P Mill Bushings (180151) mount between centers using a 4-jaw chuck and live center. **Note:** Pen mandrel may be utilized to turn the 3³/₄" blank length.
- ☐ Turn blank to your desired profile.
- ☐ Sand the mill up to 320 grit.
- ☐ Apply a food safe finish of your choice.

Assembly:

- ☐ With 120 grit sandpaper, lightly sand the rim of the 35mm diameter hole creating a slight chamfer. Next, install Upper Guide Cup (H) into the 35mm diameter hole. This will be a tight fit, use a small hammer and scrap block of wood to drive the Guide Cup into place may be necessary. Once installed pre-drill 1/32" holes and secure Upper Guide Cup with screws (K).
- ☐ Slide Male Grinder (E), Female Grinder (D), Spring (C), Spring Retainer (B) onto Shaft (A) as shown in image.
- ☐ Insert grinder assembly (E, D, C, B, and A) into the 1¹/₂" diameter end of the blank. Ensure that the notches on the sides of the Female Grinder (C) and Spring Retainer (B) are aligned. Install Retaining Ring (J) raised portion out over the mechanism, again ensuring that the holes align with the notches in the Female Grinder (D) and Spring Retainer (B).
- ☐ Mark the locations of the pilot holes, pre-drill 1/32" holes and install grinder assembly using Retaining Ring Screws (I).
- ☐ Install Crank Wheel (F) onto Shaft (A). Finish assembly by threading Adjustment Knob (G) onto Shaft (A).
- ☐ For finer grind turn Adjustment Knob clockwise; for a coarser grind, turn Adjustment Knob counter clockwise.

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