

HANDLE ANYTHING BOTTLE STOPPER SET

Turn Bottle Stopper projects using bushings with standard through holes.
(examples shown to the left)

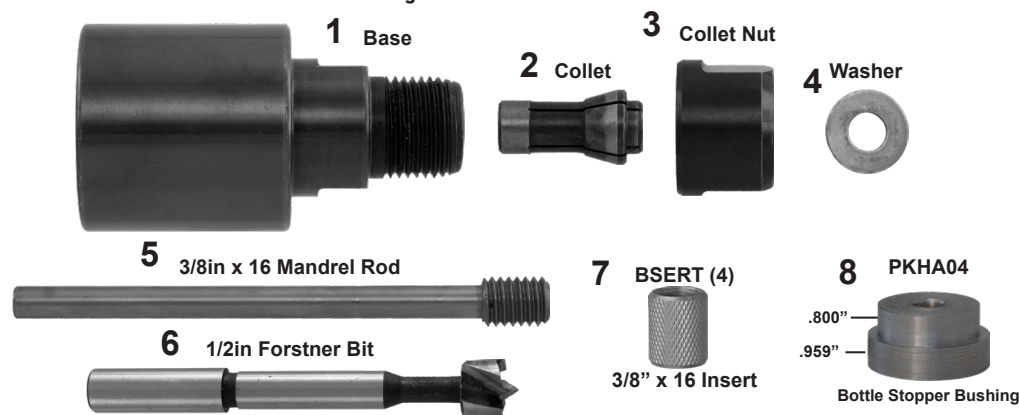
Included Accessories

1. Base
2. Collet
3. Collet Nut
4. Washer
5. Mandrel Rod with 3/8in. x 16tpi thread
6. 1/2in. Forstner Bit
7. 4ea. #BSERT 3/8" x 16 insert
8. Stepped Bottle Stopper Bushing

Additional Accessories (NOT INCLUDED)

- 7/8" Open Wrenches: #PKMWR
- #PKM-BUSH3 (for spacing and trimming)
- Bushing for BS3: Cap from #PKSKULLBU
- Digital Calipers (recommended)
- 2 part Epoxy recommended

Diagram A: Accessories



Setting Up The Chuck:

The Handle Anything Chuck is meant to thread directly onto a 1in. x 8tpi Lathe Headstock. The Chuck can also be mounted on a different thread with the correct adapter. The Flats on the Collet Nut and the Base accept 7/8" wrenches or an adjustable wrench may be used. To open the Collet, use wrenches to unthread the Collet Nut slightly from the Base. This will open the Collet enough to accept the Mandrel. The Collet can be accessed and replaced if needed by fully removing the Collet Nut. Once a Mandrel Rod is inserted into the open Collet and is ready to be used, tighten the Collet Nut using two 7/8" wrenches to hold the rod firmly in place.

Note that even though the Handle Anything Chuck helps make closed end projects, it works best if there is tailstock support during roughing and shaping. An extra length should be added to the intended length of the final piece. This support section would be separated off the workpiece once support is no longer needed.

Preparing Bottle Stopper Blanks for Mandrel Rods:

- If top of Bottle Stopper is an unknown, non-standard diameter, measure with calipers to determine size and look up matching bushing sizes in Index C of the Penn State Bushing Book at www.pennstateind.com/library/bushing_book.pdf.
- Measure the length of the post that needs to go into the blank.
- Mark the center of the surface on one end of the blank. This can be done with a centerfinder or by drawing two lines with a ruler from corner to corner to form an "X" in the center.
- Drill a 1/2" hole at least 11/16" deep for the BSERT or deep enough to accommodate the length of the post measured in step one plus at least an extra 1/16". This allows a bit extra for trimming on the lathe. Spread glue (2 part epoxy recommended) inside the hole and an small amount lightly on the outside of the Insert so it gets into the the knurling. Push Insert into hole and allow glue to cure.

Trimming the Blank:

Since Barrel Trimmer cannot be used. This optional section uses the lathe. This can be skipped, but keep in mind that may result in a poor fit.

- Slide two spacer bushings (PKM-BUSH3) and PKHA04 bushing onto the Mandrel Rod. (Diagram C). Some kits might need less or more spacer bushings depending on hole depth.
- Thread the blank onto Mandrel until tight.
- Slide back of Mandrel Rod fully into Collet Opening
- Bring Tailstock up to the blank and advanced tailstock point into the end of blank.
- NOTE: Do not try to bend the blank to force the Tailstock to align to a pre-marked center, it will cause the final piece to be off center. Allow the Tailstock Center to penetrate naturally into the end of the mounted blank.
- Tighten the collet using 7/8" wrenches, Make sure the Blank is fully threaded, and re-adjust Tailstock as needed.
- Rough turn blank and use a parting tool or skew to trim the Headstock end of the blank so it is 90° to the side of the blank. Only remove enough material to make sure edge is trimmed straight. Do not remove too much or you might start cutting into the insert.
- Loosen Collet and remove Mandrel Rod and the Spacer Bushings.

DIAGRAM C / TRIMMING THE BLANK

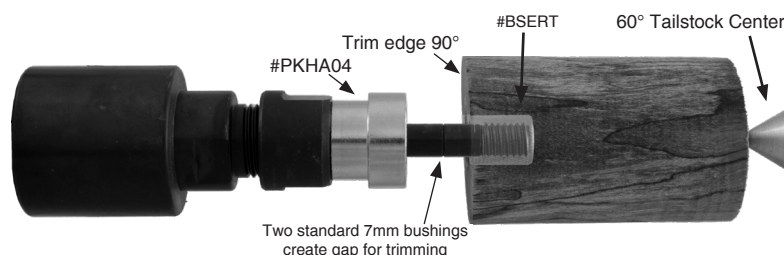


DIAGRAM D. Turning Standard PSI BottleStopper

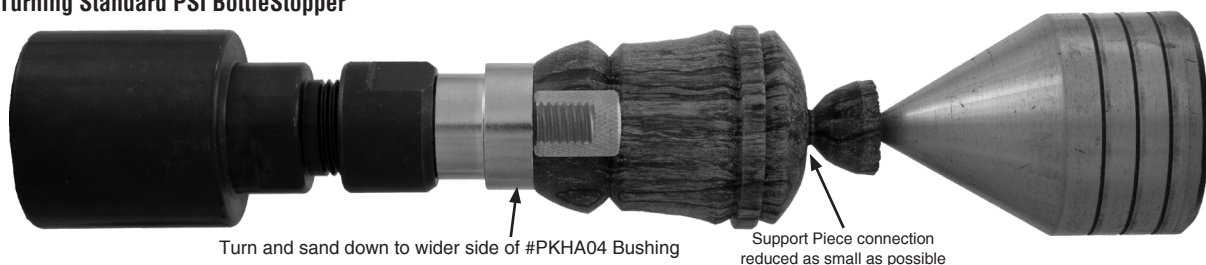


DIAGRAM E. Turning Niles Style Bottle Stopper

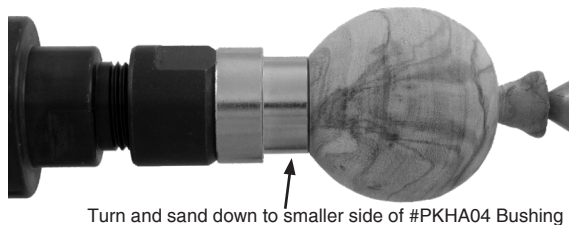
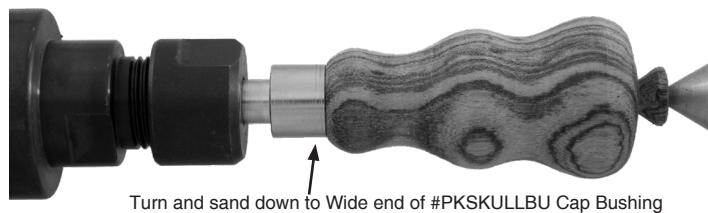


DIAGRAM F. Turning BS3 Corkscrew Combo Bottle Stopper



Turning the Blank:

- Slide Mandrel Rod into Chuck with the correct Bushing side against the threads.
- Tighten Collet Nut and then fully thread the Blank onto the rod so it is tight against the Bushing (See Diagrams above).
- Turn a small support section on the tailstock side of the blank. Support should be long enough that the tailstock center does not go past it and into the end of the final shape.
- Turn the rest of the blank straight or to a profile of your choice, shaping Headstock end close to the bushing diameter.
- Reduce Tailstock support piece connection until it is as small as possible. Keep support piece until most of the sanding is done.
- Sand the final shaped portion down to be flush with the bushing, and proceed to sand with progressively finer grits to finish the rest of the blank almost to the support piece.
- Use a sharp tool to reduce and remove the tailstock support piece as cleanly as possible. Slide Tailstock away from blank.
- Sand the end of the blank where support piece was, blending it into the rest of the handle using gradually finer sandpaper grits.
- Finish the barrels using your choice of polish. Allow Sufficient time for the polish to cure—refer to polish manufacturer's instructions.

Final Assembly

- Unthread Finished workpiece from Mandrel Rod and Thread onto the post of Bottle Stopper until fully tightened.