

Turning a Travel Mug

This 16 oz. Travel mug is a fun, practical project you can enjoy everyday. Made of solid stainless steel, it features a sliding sip closure to prevent spills.

Supplies Needed

- 2 1/4" Forstner Drill Bit
- 3 5/8" 3 5/8" x 7 1/2" Blank
- Key Chuck
- Sandpaper & Finish
- Outside Calipers
- Eye and Ear Protection
- 5 Minute Epoxy
- Tape Measure



1. Mount blank between centers and turn it down until round and true the ends of the blank.



2. Set your caliper to the distance across the inside of the chuck jaws with the jaws partially open. Cut a 5/16" long tenon to fit into the chuck jaws. Use calipers to determine the correct size of the tenon.



3. Mount the blank in the chuck and tighten securely. Drill a 5 1/2" deep hole in the blank using a 2 1/4" forstner bit clearing the chips frequently.



4. Verify the correct hole depth before continuing. Mark a 2 15/16" diameter line at the opening of the blank.



5. Turn a 5/8" deep recess at the line as marked. This establishes the finished size of the opening. Using a heavy scraper or hollowing tool, turn the inside of the blank to match the tapered profile of the travel mug.



Hint: For final fitting, mark the outside of the mug with a dry erase marker then press check for fit by inserting and twisting the mug. Missing ink on the mug indicate areas that need to be turned away. Repeat this process as needed until the shoulder of the insert rests against the top of the blank.



6. Turn a 1/4" rabbet on the top of the blank for the lip of the mug to register against. (see diagram, step 13). Check frequently until a proper fit is achieved.



7. Measure the inside depth of the blank. Add 3/8" and mark this distance on the outside of the blank. Be sure to include the shoulder when measuring. Make a parting cut left of the pencil mark down to 2 5/8" diameter which represents the diameter of the finished base. Turn the blank to shape. Be sure to leave a shoulder where the mug insert registers against the wood. This provides a good transition point. (see diagram, step 13)



8. Continue the parting cut at the base until the tenon is about 1" diameter. This cut should be made at a slight angle to provide a slightly undercut base. Sand through 320 grit. If you choose not to turn the base of the travel mug, you can finish the mug on the lathe. With the lathe stopped, cut through the tenon. Sand away the remaining nub. Proceed to step 12.

Optional: Turning and finishing the base of the Travel Mug



9. Mount a 3 1/2" x 3 1/2" x 2 1/2" scrap block in a chuck and turn a 3/8" tenon with shoulder to fit firmly inside the opening of the mug.



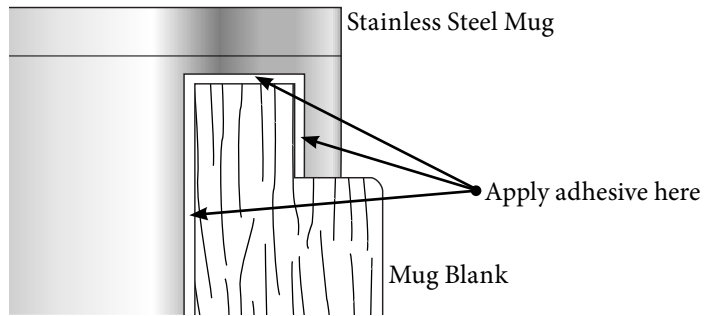
10. Press the mug blank onto the tenon until it seats against the shoulder, bring the tailstock up to the base of the blank and secure. Rotate the lathe by hand to make sure the blank runs true before you continue turning the base.



11. Using a small gouge to make light cuts, turn the foot of the mug with a recess in the center area. Turn away as much of the cone as you're comfortable with while leaving support for sanding and finishing. Sand and finish the base. With the lathe stopped, cut through the tenon. Sand away the remaining nub.



12. Apply the finish of your choice to the mug.



13. Carefully apply silicone or epoxy adhesive around the shoulder and upper inside wall of the blank. (See diagram).



14. Slide the mug insert into the turning until it seats properly. Remove any excess glue that shows. Secure the mug insert in place while drying. Set the glued mug upside down and let the adhesive dry.

