Steps in turning small hollow-forms - Walt Wager

blank 3x3 or 4x4 approximately 5" long

Secure between centers or chuck and live center

rough blank to round, add tenon to one end

drill opening hole with forstner bit - 3/4 or 1" ; 2-3" deep

bring tailstock back up while turning the outside shape - leave extra wood for support on the bottom

remove the tailstock to start hollowing with straight hollowing tool - go about 1/3 of the way down and remove wood from the center to provide room for chips and tools.

define the thickness on the top edge, cutting in on the shoulder - use a homemade gauge or caliper to check thickness from here-on.

use the 45 degree tool to remove wood in the top 1/3 - only use 90 degree tool if necessary to reach the corner of the shoulder

remove more wood in the center middle 1/3 working toward the outside

remove wood from the bottom 1/3 working from the edge of the hole created by the forstner bit.

smooth the inside if desired.

remove from chuck, and secure between a jam chuck and live center to finish the bottom

finish cutting outside shape, sand, and finish the bottom.

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American Woodturner - "Laser guide for Boring," 27.5:16–17



Steps for turning a polymer clay top - Walt Wager

Start with about 2 oz of Premo polymer clay

Condition the clay until soft

Form the disk that will become the body of the top, about 2.5 inches diameter, 1/2 thick

Bake the clay disk at 275F. for 1 hour - remove and let cool

drill a 3/8" hole through the center of the clay disk

Turn the top --secure a 1/2 x 1/2" x 5" long pen blank in a spigot jaws chuck (or use a blank glued into a waste block)- bring up the tail stock.

rough turn the blank to round

turn a 3/8" diameter tenon about 1" long on the tailstock side of the blank

glue the clay disk onto the blank

return the tail stock to hold the blank steady while you turn the blank to round and balanced.

turn the bottom of the disk, forming the point it will spin on, sand it to 600

put a wad of paper towel beween the live center (cup center) and the bottom of the blank to support it while you turn the top of the disk

turn the top of the disk to your desired profile and sand it.

turn the stem for the top, sand it and finish it with CA glue

part it off and finish with Krylon Low Odor Finish

**make the spin platform--** 4x4x 3/4 blank of wood cut to round on the band saw

glue to a waste block

turn the bottom so it can be secured with expanding chuck jaws, sand the bottom

Turn the disk around on the chuck, holding it with the expansion jaws

turn a slight concave in the top, finish the sides, finish sanding the top with a finish of your choice.

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Steps for turning a the box (two tubes, one inside the other) - I refer to the inside tube as the small tube and the outer tube as the large tube. American Woodturner - Wager and Gibson, 30.3:24-26

start with a blank 2x2x8" long --secure between centers and rough to round, put a tenon on one end.

secure tenon in chuck, bring up the tailstock and face off the blank to make it square (perpendicular) to the lathe bed.

remove the live center, replace with drill chuck, drill a hole for the inside tube with 1 1/4" forstner bit about 2.5" deep

remove 1 1/4" forstner bit and replace with 1 1/2" bit, bring it up to the surface and scribe a reference line for the outside of the small tube. This will make the tube thickness to be slightly less than 1/8", If you use a 1 3/8" fostner bit for this step the wall thickness will be slightly less than 1/16th inch.

sand the inside of the tube with a sanding stick

mark on the outside surface the bottom of the tube (depth of the hole) - replace the live center (gently)

turn the outside of the tube from the tailstock to the mark down to the reference line scribed in the end. Make a gauge to measure the thickness of the outside of the smaller tube.

leave about 1/2" to 3/4" for turning the end of the tube - part off the smaller tube.

face off the end of the blank still in the chuck, and drill the inside of the larger tube so that the smaller tube fits into it. get the depth accurate as possible with a caliper depth gauge.

Insert the small tube into the hole and bring up the tail stock and live center - using the larger tube as a jam chuck, finish the end of the smaller tube. Then turn the body of the large tube and end to match the other end.

sand all parts before parting off the large tube.

Part off the large tube and jam chuck to finish the end.

make a tenon on the waste block that will become the closed end of the small tube (1 1/4" dia x 1/4" deep. Glue the open end of the small tube onto the tenon. Recheck the depth of the large tube against the length of the small tube. Make the small tube fit exactly as possible.

Part off the small tube.

drill a 5/16" x 1/8 deep hole for the magnet in the bottom of the large tube. Glue in the magnet so it is flush with the bottom of the large tube. Put a drop of paint on the magnet and insert the small tube so that it touches the paint. Drill a 5/16" hole in the bottom of the small tube and glue in the magnet - check polarity first!

cut the opening in the small tube using a round sanding tube in a drill press, clean up the sides of the opening and you are almost finished. Mark in some way where the opening is in the small tube, so that when someone uses it they don't spill the contents.

Finish with a finish of your choosing

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