

Turning Urns by Walt Wager

Sizing urns Urns

1 lb. body weight = 1 cubic inch of ashes

1 cup of rice = 14.5 cubic inches

200 lb. person requires 14 cups of rice

Cylinder calculator link: <https://www.calculatorsoup.com/calculators/geometry-solids/cylinder.php>

Example of urn shapes and sizes.

 <p>m typical commercial urn: 10" H x 6" diameter brass about 200 cubic inches \$70.</p>	 <p>Fancy commercial urn: 10 x 7 at widest point 200 cubic inches - \$300.</p>	 <p>7 x 6 interior 197 cubic inches Simple urn American Woodturner V27:no.5 pp20-21</p>
		
		

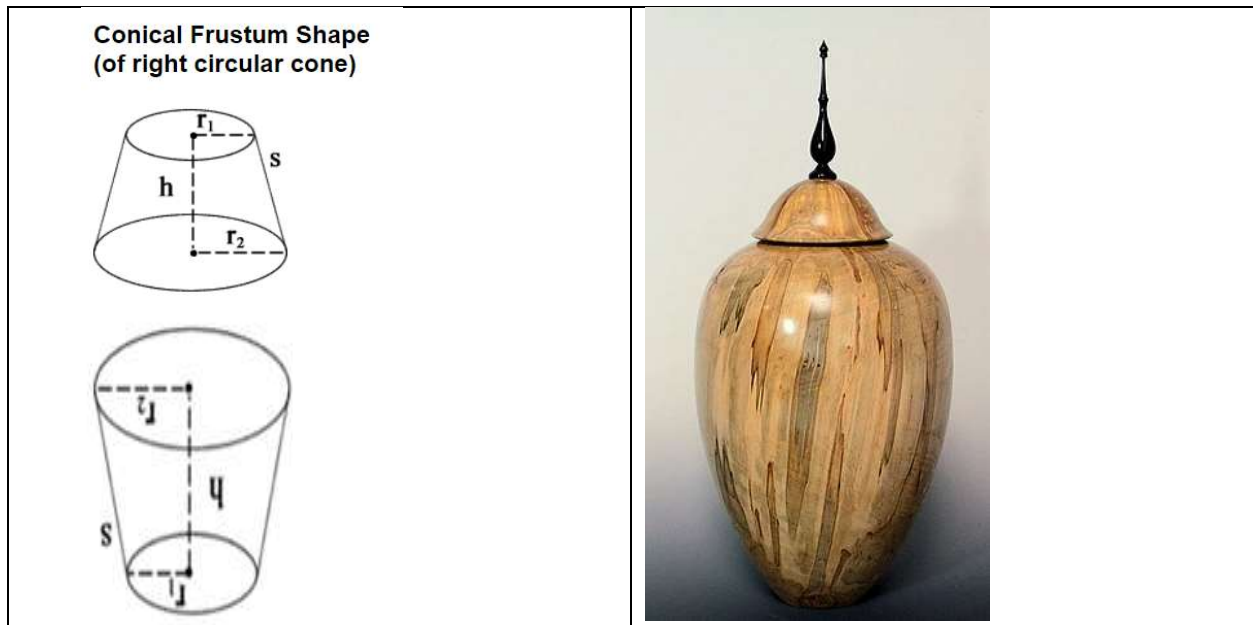


Turn an Urn

I once was asked if I could turn one of my hollow forms into an urn. It was pretty simple to add a lid, and since then I've turned over a dozen urns. Probably the biggest question is how large to make the urn so that the ashes fit into it. I found this calculator on the web. The formula for finding the volume of a hollowform isn't complicated if the form is a straight-sided cylinder – It is $3.14 * \text{Radius squared} * \text{the Height}$. So a cylinder with a 3" inside radius, that is 7" deep will be $3.14 * 9 * 7 = 197.82$ cubic inches. One pound of body weight – before cremation – equals 1 cubic inch of ashes.

The process becomes more complicated with different shaped hollow forms. A spherical urn with an inside diameter of 8" and a depth of 8" inches – has a volume of 268 cubic inches,

A shaped urn with a wider shoulder presents a different problem it is the result of two conical frustum shapes. If the top shape has a top radius of 1.5" , a bottom radius of 3" and height of 3" it has a volume of 49 cubic inches. If the bottom shape is 1.5" radius at the bottom and 3" at the junction, and 6" high the volume of the bottom is 99 cubic inches for a total volume of 148 cubic inches.



Considerations when turning an urn

1. Green or dry wood? If someone commissions an urn I first ask when they need it. Of course when cremation ashes are delivered, they are in a plastic bag in a cardboard box, and it isn't important that they be immediately put into an urn – BUT, if there is a service involved and the client wants the urn at the service, you need to know. It takes me between 2-4 months to finish an urn from green wood, depending on the wood and how quickly it dries. It might take me up to two weeks to finish an urn from kiln dry wood. I try to have at least one urn available if they need something immediately.
2. Is this a decorative urn to be displayed or an urn that will be buried? There are situations where the urn might be buried in a memory garden. I ran into this once where the urn had to be made from pine or poplar with no finish on the wood.
3. Weight of the body being cremated. Affects the size of the urn. It is easier to make an urn bigger than needed than it is to remake it. Remember that the dimensions are the inside of the urn – if the walls are $\frac{1}{4}$ " thick the wood size needs to be $\frac{1}{2}$ to 1" larger than the calculated dimensions.
4. The rice method is great to determine how large an urn is – but useless for estimating the size of a new urn.
5. Are the ashes to be shared with relatives – are multiple smaller urns desired?
6. Shape of the urn – I ask the client if they see something they like or if they have an idea for the urn. Do they want something plain and simple or something bolder and more decorative?
7. Communication and shipping. Are you working with someone face to face or over a distance? I invite clients to come in and see progress at any time – if at a distance I try to send pictures at different stages. Shipping costs need to be considered.
8. Pricing – what are you going to charge for your time and materials? Clients usually want an estimate. My urns usually range between \$500 - \$1200. Urns that have exotic wood inserts or threaded lids cost more than locally available woods and friction fit lids.
9. Empathy with the clients – this is generally a difficult time for them, and it helps to make suggestions that will relieve some of the decision making, and to listen to their stories if they want to talk about the deceased. It might give you an idea of what they would like to see in the urn design.
10. Customization – Do they want a name and date engraved on the urn? Where on the urn? This is most easily done with an insert. If you can't do this yourself plan with an engraving shop that can – costs can range between \$60 and \$100.
11. Craftsmanship – it is important to do your very best – this is an heirloom piece.

Setup for hollowing urns (or other hollow forms)

Walt Wager



I use a Jameson trapped bar system with a webcam camera where the laser pointer would be. The camera is connected to the computer on the headstock via a short usb cable. The image can be sent via a hdmi cable to a larger tv/ or monitor. I see no problem with setting this up on the jet 1642.

I can also set up a system using a car backup camera that goes into a RCA type input on a TV, that can also be sent via HDMI to a larger tv or monitor. This is similar to the Trent Bosh visualizer.

My process is this:

1. Rough out the raw blank between centers
2. Either add a tenon or attach to a face plate depending on size
3. Shape the vessel – sand the outside
4. Cut off what is needed for the lid.
5. Drill a 3/8"inch hole to inside depth using a gun drill (requires compressed air connector or long twist drill
6. Enlarge the hole with a 1 1/16 forstner bit on an extension
7. Determine the size of the opening
8. Set up a steady rest if necessary
9. Set up the Jameson system to level and cut at center
10. Adjust the camera to be centered over the cutter
11. Depending on the camera system being used, align the cutter and computer image
12. Start hollowing

13. Sand the inside if necessary
14. Size opening for insert or friction fit lid
15. Part off from the chuck or face plate
16. Turn the lid sizing for an insert or friction fit – turn finial if needed.
17. Apply embellishments or finish to the urn (see below).
18. Measure the volume of the urn using rice techniques
19. Deliver to customer or gallery

Process for the inserts

1. Select a close grain wood with no checks
2. Rough to round (2 to 3")
3. Attach to a glue block
4. Part into 2 pieces – one for the lid and one for the vessel
5. Attach cutoff to a glue block
6. Drill a hole into the piece going into the vessel
7. Determine the outside diameter of the insert and tenon
8. Thread the tenon
9. Determine the outside diameter of the lid insert
10. Determine the inside diameter of the lid insert (it has to be approximately 1/16" smaller than the outside diameter of the threaded tenon)
11. Thread the mortise
12. Check fit
13. Part off from the glue block and install in the lid

Embellishments:

None – use polyurethane or lacquer

Air brush – use transparent acrylics – overspray with Krylon Acrylic lacquer.

Marbling – Use Prochemical marbling materials

<https://prochemicalanddye.net/pro-marbling-paints.html>

Metal Foil – Apply under color – apply binder and foil – overcoat with urethane or lacquer

Any combination of the above

The process may vary somewhat, depending on the design.