

TURNING END GRAIN BOWLS

Namaste Series with Eric Lofstrom

Turning an end grain bowl is a great exercise in planning and refining your turning skills. For me, the end grain bowl is an opportunity to play with a very simplistic design. I see the simplest of designs as a palette to explore the use of color and texture. While the form I use is simple, the overall process of creating a piece worthy of its place in the Namaste



End grain bowls from the Namaste series, (ranging up to 4.5" dia. by 3" tall)

series becomes considerably more complex with each added step of refinement. This project is a great illustration of the concept, *simple isn't easy*. My favorite artwork uses the simplest, purest forms.

I recently took a class to learn a painting style from an artist who's work is simplistic in style, yet profound in effect. The power of her work is accented through a stylized use of the most simplest repeated circle. As I watched her paint several uniform circles using a handheld brush, my ego was shouting, "How simple!"...after trying it myself, I revised my thoughts, "Simple is *NOT* easy!" Painting a circle freehand is simple **and** extremely difficult. The purity of form and familiarity of shape leaves nowhere to hide imperfections. I enjoy playing with clean lines, pure forms and simplicity. A welcome challenge helps me strive for elements which combine confidence and vulnerability.



Applying a spiral using a brush and acrylic paint.

Like many projects, creating an end grain bowl requires a series of steps. Consider the 4 F's, Foundation, Function, Form and Finish to ensure success with this simple and exciting project.

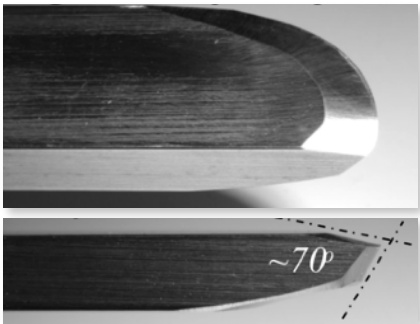
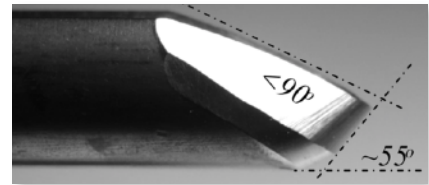
Foundation. “What equipment, materials and steps are needed to create an end grain bowl?”

Equipment:



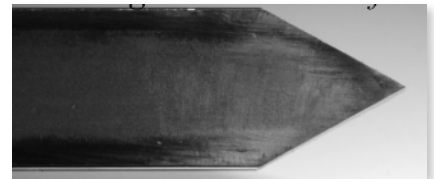
1. Radius Skew- A radius edge skew of 1” X 3/8” shank is extremely versatile in roughing the blank and refining the exterior form. I use a peeling cut to rough in the form, then a rolling cut to refine the curve with an ultra clean cut. Smaller diameter bowls are easier to turn than those with a larger diameter. As an alternative, a spindle gouge or bowl gouge may be used.

2. Fingernail Grind Bowl Gouge- I prefer a 1/2” shank diameter bowl gouge for turning end grain bowls up to 4 1/2” diameter. The bowl gouge can be used to turn both the entire exterior, rough-to-finish and roughing out the interior.

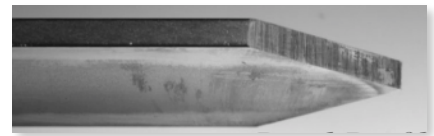


3. Negative-Rake Scraper- I prefer a 3/8” thick scraper to help minimize tool vibration, in the largest width that fits inside the bowl. Typically I use a 1” or 1 3/8” wide, radius-edge, negative-rake scraper, tuned for cleanest cut surface to minimize sanding. When sharpened on the grinder, then honed and burnished to raise a “hook”, this tool is able to refine and finish the interior of the bowl with an amazingly smooth cut.

4. Parting Tool- I prefer a 1/8” thick by >3/4” tall parting tool, tuned for the cleanest cut. This parting tool is sharpened by laying the tool shank flat on its side on the grinder platform, then polished with a diamond hone. Both the leading edge (tip) and sides of the bevel can be used to slice wood cleanly.



5. Sandpaper- Once you learn how to tune your tools for maximum sharpness and how to present the edge for the cleanest cut, sanding becomes a very small part of the process.



6. Lathe- An electronic variable speed (EVS) lathe allows for tuning out vibrations during the shaping process. EVS also opens up a wide range of surface speeds for possible embellishments.

7. Four-Jaw Chuck or Faceplate- A chuck or faceplate of approx. 3” diameter works great for turning end grain bowls up to 4 1/2” diameter. If using a chuck, ensure your spigot is turned to match the diameter, profile and depth to maximize your chuck’s mechanical advantage.

8. Light- A single-source light will allow visual inspection and feedback while turning. A finely-tuned touch will get you started when striving for a pleasing curve, but rarely allows you the fine feedback to sense a pure enough curve. A light with a single point of origin will cast a single, crisp shadow line to visually evaluate both interior and exterior forms. When teasing out the final interior form, I evaluate the shadow to ensure a pure curve. The *glow* that makes the Namaste series so special relies on an "optically resonant" curve, free from sharp transitions and flats.

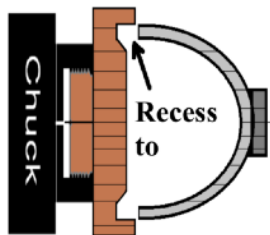
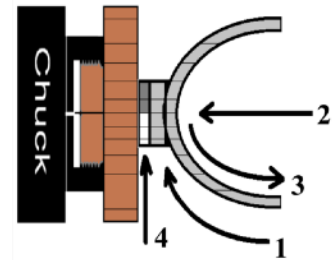
Materials:

Wood- Clean, even grained wood, 3"-4" diameter by 4" long will give you plenty of wood to turn a 3"+ diameter by 2" tall bowl. A shorter block of wood can easily be used once you gain some confidence in the process. I routinely select hard, evenly dense Sugar Maple due to availability, closed grain structure, consistency of turning and its naturally light color tone.

Progression/ Basic Steps:

Once the blank is mounted on the lathe using a faceplate or chuck, work your way through five basic steps to create an end grain bowl.

1. Begin cutting the outside profile, leaving the spigot approx. 1/3 to 1/2 the overall diameter for stability. The spigot may be incrementally reduced as interior hollowing reaches center.
2. Drill or plunge cut the interior center to near finished depth.
3. Cut wood fibers from the center axis, drawing toward the rim for the cleanest cut. Hollow the interior in 3 large steps beginning with the shallowest 1/3 and finishing with the deepest 1/3 of the interior, blending to center. For each 1/3, carefully evaluate and blend to create a uniform curve. Continue the exterior (cut #1) as the interior progresses, paying attention to wall thickness and dampening for vibration as the spigot diameter decreases.
4. Part through the spigot, leaving a small spigot or nub on the bottom of the bowl's foot.



5. Reverse the bowl using either a vacuum chuck or jam chuck. Using an external jam chuck traps the outside of the bowl's rim for the greatest stability. If using a vacuum chuck, air may leak through the short straws, resulting in an inferior hold. Refine the foot to accent the overall form.

Note: Most surface embellishments can be applied after the bowl is complete. A turner's specific set of skills and available equipment will dictate the possibilities for holding a finished bowl after the foot is completed. Embellishments are further discussed in the *Finish* section of this resource.

Function. “What is the intended purpose of this end grain bowl?”

Considering the intended purpose and function a piece serves will focus your intention and make the entire creative process more efficient. This may take into account many factors including the audience, a need or problem to be solved and a basic idea of how it will interact with the audience. Sometimes the function of a piece is more about provoking thought or emotion than solving a utilitarian need. For me, the embellishment of each end grain bowl in the Namaste series is what shifts the *function* to eliciting an emotional response. These pieces could easily be utilitarian in function by altering the grain orientation to face grain, enlarging the foot and substituting an appropriately durable finish. As the intent for the Namaste series is sculptural, I choose end grain orientation for smaller bowls like these to maximize dimensional stability and grain consistency for surface textures and color embellishments to maximize the emotional impact of each piece.

This series was inspired by the definition of the word *Namaste*, “a greeting with the utmost of respect... a salutation from one to another.” I first heard the word namaste from a musician performing a song she wrote about her experience practicing yoga. She addressed the audience with “namaste”, holding her hands together at the level of her heart, bowing slightly forward in an honoring gesture. The offering of a loose translation to her audience, “The inner light in me honors the inner light in you.” was all it took to stir something deep within me. Inspired by the spiritual essence of one soul recognizing the energy in another, the Namaste Series was born!



The glow from “optically resonant” curves.

Namaste vessels are created with an optically resonant curve and embellished to glow from across the room, in even the faintest of ambient light, inviting a pause from the rush of life to connect for a moment. Each piece is a sincere greeting from me to a curious onlooker, with utmost respect and honor, “Namaste!”

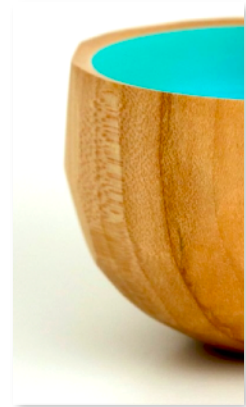
Form. “How do design elements support the intended function of this end grain bowl?”

The form of your bowl is both the silhouette, the way light casts across the surface to create shadow and reflection, which your brain’s visual cortex uses to form an interpretation of three-dimensions. The form can also be interpreted by the way a piece feels to touch or hold. The proportions of height-to-diameter, visual weight line or waist, wall thickness and purity of curve all come into play when planning the form. I encourage turners to play with all parts of form; create two-dimensional drawings to explore basic shapes and then into three-dimensional studies of how light interacts with the surface.

Another design element to consider is how the wood grain plays with the actual three-dimensionality of piece. Visual texture, such as wood grain, can support, mute or even compete with the overall form. Similarly, any added visual or surface features like coves and beads may either create cohesiveness in a piece, or distract and scatter the viewer's attention.

Finish. “How does the surface support the intended function and form?”

Surface treatment includes both texture, or lack of, and choice of finish. Choice of surface texture can add to the overall character of a piece. The surface alone can communicate a level of refinement, or rustic-ness, depending on the layout and contrast between the high and low points. Texture will never cover up for poorly planned form, however textures *may* distract from an otherwise well executed form. As a general method, work to refine the form and surface first, then apply surface treatments and choice of finish.



Faceted surface.



Spiral embellishment.

A subtle texture on the exterior surface created by carving, wire brushing or sandblasting, followed by a finish of choice can add intrigue in support of the invitation to interact. The interior “optically resonant” curve is a perfect pallet for embellishments that amplify contrast and resonance such as metallic leaf, color, or an unbroken spiral. I find the most versatile medium for adding color is acrylic paint and acrylic dye. There are a multitude of colors, available in varying thickness, translucence/opacity, and unique application techniques to create an array of interesting effects. My favorite part of creating a Namaste bowl is playing with color to emphasize the form and function. When exploring a new finishing technique, use a scrap (preferably of the same species and grain orientation) before applying to your piece. Most finishing techniques will show differently on side grain and end grain.



Wrought-iron texture.



Wire-brushed surface.

Every woodturner seems to have their favorite finishes.

For me, the intended function dictates the choice of finish. If the piece is intended to be handled, then a finish which tactilely enticing may serve best. For the exterior of Namaste bowls, I use subtle textures, followed with either a layer of color, or a penetrating clear coat to protect and preserve the natural look of the wood. As with the other F's, the choice of finish can either work to support or even amplify the intended purpose of the piece or it can distract from the overall intent of your work. There is no hard-fast rule to choosing the “right” finish, consider the intent for the piece and go for it!

Supplies. “What tools and supplies support the making of this project?”

Wood:

1. **Sugar Maple** https://en.wikipedia.org/wiki/Acer_saccharum
2. **Big Leaf Maple** https://en.wikipedia.org/wiki/Acer_macrophyllum
3. **Madrone** https://en.wikipedia.org/wiki/Arbutus_menziesii
4. **Eastern Cherry** https://en.wikipedia.org/wiki/Prunus_serotina

Tools:

1. **1” Radius E.Lofstrom Signature Skew** <https://www.ericlofstrom.com/purchase/lofstrom-1-radius-signature-skew>
2. **1/2 “Bowl Gouge** <https://d-waytools.com/1-2-bowl-gouge-fingernail-grind-shaft-size-515/>
3. **Lg. Radius NRS** <https://d-waytools.com/curved-neg-rake-scraper-lrg-1-5-16-x-3-8-5-8-tang/>
4. **1/8” Parting Tool** <https://d-waytools.com/1-8-std-parting-tool-1-2-tang/>

Sharpening:

1. **DMT Dia-Sharp Diamond Hone (Extra Fine)-** <https://www.dmtonlinestore.com/3-Dia-Sharp-Credit-Card-Sized-Sharpener-P49.aspx>
2. **Dremel Rotary Bit #9901 (for DIY Burnishing Tool)** https://us.dremel.com/en_US/products/-/show-product/accessories/9901-tungsten-carbide-carving-bit

Safety:

Uvex Bionic Faceshield (S8510) <https://www.amazon.com/Bionic-Shield-Clear-Polycarbonate-S8500/dp/B001VXXUWK>

Abrasives:

1. **Makita 90deg. 3/8” Drill (DA3010F)** https://www.amazon.com/Makita-DA3010F-8-Inch-Right-Angle/dp/B0000789HO/ref=sr_1_2?crid=1AZ8G2I9210IR&dchild=1&keywords=makita+90+degree+drill&qid=1621490021&srefix=Makita+90%2Caps%2C226&sr=8-2
2. **NEIKO 30266A 5" Backing Pad** https://www.amazon.com/Neiko-30266A-Flex-Edge-Backing-5-Inch/dp/B0764JBNYV/ref=sr_1_11?crid=1Z1S2U2C949ZG&dchild=1&keywords=5+sanding+pad+hook+and+loop&qid=1621490151&srefix=5%22+sanding+pad+hook%2Caps%2C206&sr=8-11
3. **Mirka Bulldog Gold Abrasives 5” Dia. (assorted grits)** https://www.amazon.com/Mirka-Bulldog-Abrasive-Discs-Count/dp/B001AFBXW8/ref=sr_1_16?crid=3KJL1AEKSETYK&dchild=1&keywords=mirka+5+inch+sanding+discs&qid=1621490231&srefix=Mirka%2Caps%2C231&sr=8-16

Embellishments:

1. **Zinnser SealCoat- Dewaxed Shellac** <https://www.rustoleum.com/en/product-catalog/consumer-brands/zinsser/interior-wood-finishes/sealcoat-universal-sanding-sealer>
2. **Zinnser B-I-N Primer Aerosol (Shellac Based- 01008)** https://www.amazon.com/Rust-Oleum-Corporation-01008-Primer-13-Ounce/dp/B000ZYND0A/ref=sr_1_4?crid=3A97ZXXQ1D76S&dchild=1&keywords=bin+shellac+primer&qid=1621490322&sprefix=BIN+%2Caps%2C232&sr=8-4
3. **Golden Acrylic Paint (Heavy Body)** <https://www.dickblick.com/products/golden-heavy-body-artist-acrylics/>
4. **Golden Acrylic Paint (Fluid Acrylic)** <https://www.dickblick.com/items/golden-fluid-acrylics-carbon-black-4-oz-bottle/>
5. **Ranger Liquid Pearls Acrylic Paint** <https://rangerink.com/apps/omega-search/?q=liquid+pearls>
6. **#12 Filbert Brush (for acrylic paints)** https://www.amazon.com/Liquitex-1300412-Professional-Freestyle-Traditional/dp/B003V60KYQ/ref=sr_1_44?crid=1C287GGZIJZEO&dchild=1&keywords=filbert+brush+size+12&qid=1621490597&sprefix=%2312+Filbert+%2Caps%2C212&sr=8-44
7. **Round 2.5" Synthetic Sponges** https://www.amazon.com/Creative-Hobbies-Pack-Synthetic-Sponges/dp/B00B5EPJCY/ref=sr_1_4?dchild=1&keywords=round+synthetic+sponge&qid=1621490800&sr=8-4
8. **Faber Castel PITT- Big Brush Artist Pen Black (#199)** https://www.amazon.com/Faber-Castell-Pitt-Brush-Artist-Black/dp/B0026I4US2/ref=sr_1_14?crid=1AJ97HB8I5ZHO&dchild=1&keywords=faber+castell+pitt+artist+pen&qid=1621521988&sprefix=Faber+Castel%2Caps%2C234&sr=8-14
9. **GlovePlus Black Nitrile Gloves** <https://www.woodturnerscatalog.com/p/89/5096/gloveplus-Black-Nitrile-Gloves-100-Pack>

Penlight:

Streamlight Stylus Pro LED Penlight (#66118) https://www.amazon.com/Streamlight-66118-Stylus-PenLight-Holster/dp/B0015UC17E/ref=sr_1_1?dchild=1&keywords=streamlight+stylus&qid=1621491014&sr=8-1

Clothing:

Vivobarefoot Shoes- Ra II <https://www.vivobarefoot.com/us/ra-ii-mens>

Custom Smock *Limited edition made by Barb Lofstrom... Thanks Mom! :)*