

Kathleen Duncan
 360-241-3378
woodspinner@gmail.com
 Piercing and Thin-Turning

NSK Presto II (320,000 rpm)	https://www.treelineusa.com/power-carving/pneumatic-tools	\$500
NSK Evolution Ring type handpiece (VS 30- 40,000 rpm)	http://cascadecarvers.com/	Call for price (about \$1200). Look around there may be less expensive ones
Portable Micro Motor.	https://www.treelineusa.com/ Search micromotor There are others available including the Mystia http://www.handpiecesolutions.com/rammystisapktset1.html	\$325-\$409
8" outside Digital Calipers part #1042510001	https://www.woodturnerscatalog.com/p/86/5120/iGaging-8%22-Digital-Caliper?term=calipers Craft Supplies	\$32.00
Coloring books	Michael's, Craft Warehouse, Joann's, etc.	Frequently on sale. Register for coupons
Kneadable eraser	Michael's, Craft Warehouse, Blick Art Supplies	~\$2.00
Negative rake sharpening.	https://woodturner.org/Woodturner/AAW/Article-Search.aspx?hkey=d5634394-9b01-4db5-b5df-76d8fdce171f	

	Sharpening -> Techniques -> Sam Angelo's Negative Rake (My scraper is reground from a 1" Serious Tools scraper. Ground with a 60° included angle)	
170L Drill bit for NSK Presto (bits last a long time!)	http://shippsdental.com/index.php?id_product=492&controller=product&search_query=170l&results=2 #H23.31.010 #170 L http://www.ebay.com 699L and 170L	\$10/5 pack About \$15/10
Sanding disk mandrels	https://www.amazon.com/dp/B00VUH43TG/ref=sr_ph?ie=UTF8& Check eBay also	\$7 (pack of 12)
Small cone sanders	http://cascadecarvers.com/products/sanding-supplies-rasps.html?cone#sanding-supplies-rasps Also eBay	\$6.25/10
Bristle discs (red)	Amazon and eBay.	
Solder Smoke extractor (you can order replacement filters)	Amazon, eBay	
Sanding bands (small drum sanders)	https://www.widgetsupply.com/ Widget Supply	
Brass rod 3/16"	Local hardware store (for cleaning carbon from drill bits)	
Thread protectors	Local hardware store (for ends of calipers – protects wood from denting when measuring)	
Needle file set #69876	Harbor Freight	
Stainless steel Dental pick	Dentist or hygienists, Amazon	
Craft sticks	Michaels, Amazon	

Gorilla grip gloves (for arthritic hands)	http://www.homedepot.com/p/Grease-Monkey-Large-Gorilla-Grip-Glove-25053-030/202709681	
Graphite pencil (5B,6B, 7B)	Blick's Art Supply	
Miscellaneous:	Balloons (Fred Meyer 7in-17.7cm), Black Jesso, hand dental tools (ask you hygienist for discards), gold leaf kits, Gilder's paste, tracing paper, stencils, graphite transfer paper, 2-part wood bleach (paint store)	
Two- part wood bleach (Daly's or Zinsser)	Amazon, eBay, paint stores etc.	
Glue dots	Scrapbooking supplies (Michael's, Craft Warehouse, Hobby Lobby)	

Notes:

- When using dry wood, use dry, tight-grained wood. I rough turn to about 1" and weigh in grams. When it stops losing weight, it's probably dry enough (8-10%).
- When turning wet wood, plan to complete the vessel within a few hours. Once you start hollowing, the wood will start to move a lot.
- Pay attention to grain orientation. For something tall and slender, use spindle orientation,
- Thickness for thin piercing is ~2mm (3/32").
- For finish turning, I find it best to turn the outside, let it "rest" overnight, re-turn the outside to get it back to round and then turn the inside.
- MEASURE FREQUENTLY!
- Don't be afraid (or too proud) to use scrapers.
- Use negative rake scraper to remove "bumps" and tool marks.
- Cut to thickness in about ¾ -1-inch segments. You can't go back and recut a thin area once you moved further into the piece.
- MEASURE FREQUENTLY!!!

- Sand to about 400 BEFORE piercing.
- USE PROPER SAFETY EQUIPMENT FOR PIERCING: HEARING PROTECTORS, RESPIRATOR.
- After you've drawn the design on the piece, look at it for a while before you continue. I often will look at something a couple of days and re-draw parts of it before I pierce.
- Move tool in a clockwise direction. Don't force it – let the tools cut.
- To clean char, move in counterclockwise direction.
- Keep the bit perpendicular to the piece.
- If you need to stop on a continuous cut, try to do so where it won't be obvious.
- Clean carbon off the bit by running across brass rod.
- Support your work with fingertips when sanding or filing.
- Sanding drums remove a lot of wood very quickly – light touch!
- I find it works best to pierce in 20-minute intervals to give my hands a chance to rest.
- Save the oops'es. They may be design opportunities or use the broken pieces to practice your piercing.
- I use a grain-filled pillow under my wrist when piercing.
- Most important – HAVE FUN!

Build Your Own Piercing Tool

- eBay highspeed dental handpiece (~\$30). Ceramic (or plan to oil frequently, LED (optional), 45° or 90°, 2- or 4-hole.
- eBay Dental drill hose <https://www.ebay.com/itm/263800846940>
Silicone tubing hose connector for dental high-speed handpiece (~\$12). Same number of holes as handpiece
- Air regulator with filter (eBay ~\$15). 60 PSI is preferred.
- Air line disconnect
- 2-way toggle valve
- 1/8 NPT to 1/4" tube fitting
- 1/8 NPT to 1/8" barb fitting.
- 1/4 NPT to 1/4 tube elbow
- 1/4" OD tubing (mine is 1/8 ID, 3/16 OD)
- 3/16" to 1/8" Barbed Reducing Union Adapter Splicer Mender Joint Fitting (Amazon) or to fit your tubing from dental drill to toggle line.
- Optional – non-valved inline coupling insert and non-valved inline coupling body (Fresh Water Systems).
- Optional – Paint ball quick disconnect (eBay) if using air brush setup.
- Video Glynn Cox https://www.youtube.com/watch?v=5P8Zh_pl-tU