



## **TOOLS & MATERIALS LIST - Hollow Forms in Silver – Three Day Live/Online Workshop**

**Note from Rachel:** Please don't let this list scare you off – a chunk of it is “nice to have” and some can be adjusted to your available stock (for example, you could work in heavier gauge metal than is recommended, or with a mix of copper and silver to save money, though I don't recommend working in nothing but copper). When in doubt, or if you're not sure what something is, send me an [email](#) and ask!

### **METALS – Minimum recommended (if you like really large work, you may want more):**

- 6" x 2" sheet of 22 g Sterling or Fine Silver (1)
- 6" x 3" sheet of 26 g Sterling or Fine Silver (1)
- 1' - 2' hard wire solder
- 2' - 3' medium wire solder\*
- 6" - 1' easy wire solder
- Some premade jump rings or wire scraps for making them (in the 16-20 gauge range)

\* Note that you CAN use chip solder for this project, but we'll be discussing stick soldering as a “savior” for an incomplete solder seam, so you'll likely at least want some medium wire, even if using chip for other steps.

### **Optional ideas for decorative elements & findings:**

- Gemstones and appropriate settings and/or bezels and setting tools
  - Small faceted stones for details
  - Larger abstract cabs for either setting on top of a hollow form or connecting to it
- Hanging beads (drilled pearls, gemstones, etc.)
- Bits of gold, bi-metal, or mokume gane sheet for a reversible hollow form (we'll be doing patterned reversible, but this adds extra bling)
- Sterling silver wire and tubing for hinges/other details
- Cord, leather, chain, etc. to hang work on
- Lengths of 18 or 16 gauge wire for making multi-form wire connectors
- Lengths of tubing for making hinge-based connectors

### **TOOLS (BASICS):**

***If you do not have any of these items and want to discuss alternatives, please email me – I don't want you to panic over a tool or two!***

#### **Tech**

- Cellphone camera or other means of showing me your work (via photograph upload or video) – you may want an inexpensive tripod or [gooseneck](#) mount to hold it near your workspace
- Strong internet connection – we will be meeting via Zoom

#### **Hand Tools**

- A good 3" or 4" depth saw frame
- An array of sawblades with multiple 2/0 saw blades (you may go through a lot of them!)
- Bench pin
- Flat, half round, and needle nose pliers
- Good quality fine and/or extra fine large and small barrette and crossing files
  - Crossing files in particular are your friend when working on hollow forms – if you don't already own one, I recommend investing in at least a 6" or 8" extra fine, but a half-round will do in its place
- Measuring tools (dividers, small ruler, etc.)
- Shears (I like either Rio's [French Straight-Tip Shop Shears](#) or [Brussel's Bonsai shears](#) with the red/white handle, but Joyce Chens work well, too)

- Wood, rawhide, or Delrin mallet
- Steel bench block
- Ring mandrel (round for sure, square is a nice addition)
- Small metal drill bits and a drill or flex shaft tool (circa #64 size)
- Sandpaper - 2 sheets – 220/coarse, 1 sheet each - 400, 600, 1000 grit sheets

### Soldering Gear

- Torch station and associated solder, flux, tweezers, pickle, and quench bowl – I will be demonstrating with air/acetylene – larger hollow forms can be somewhat challenging (but not impossible) with butane or a Smith Little torch (get the biggest tip you can if this is your only option)
- Turntable for your soldering area – **you won't want to be without one**
  - If you don't have one, check your local hardware store for “lazy susan turntable hardware” – you can attach a solderite board to it or just rest a fire brick or ceramic tile on top
- Baking soda and water neutralizing bowl (in addition to any regular water rinse you do)
- Iron binding wire (the black stuff, NOT galvanized or shiny silver) – as close to 22g and, ideally, 26g or thinner as you can find

### General

- Sketchpad and your choice of pens/pencils
- Ultra-fine point black sharpie
- Shop towel

### Optional/Helpful to have but there are ways around it:

- Dremel or flex shaft (even if only the Harbor Freight \$50 model)
  - Alternative for sanding/finishing: LOTS of hand sanding and filing
  - Alternative for drilling: Your local Goodwill or used tool shop may have an old fashioned eggbeater drill, often under \$10. Make sure you get one that can close down tightly enough for really small bits, OR, you can use a pin vice and hand drill
- Split ring mandrel for Dremel or flex shaft
  - Alternative: Hand sanding and filing interior spaces in the hollow form
- Mizzy or Dedeco Heatless Silicone Carbide Wheel (grinding wheel) and mandrel for flex shaft
  - Alternative: Hand files or strips of coarse belt sander sandpaper (180/220 range)
- Center punch
  - Alternative: Sharpen a 12d common nail or a heavy rug stitching pin by sanding and filing it rounder or by running it on your belt sander (remember not to get it too hot in the process or it will lose its temper – if it changes colors, it's getting too hot)
- Texture plates/Rolling mill - For adding decorative elements
  - Alternative: You can also hammer texture, stamps, and file textures on your surfaces instead, or buy pre-textured metal
- Belt/bench sander (I use the [Wen Benchtop Sander](#) from Lowes for c. \$125 – it pays for itself quickly)
  - Alternative: Hand sanding and filing
- Circle punch
  - Alternative: Hand sawing discs or purchasing pre-made discs. Premade, I recommend 22 gauge, 1" or larger for lentils, and ½" or so for bead end caps: <https://www.riogrande.com/product/Sterling-Silver-254mm-Disc-22-Ga-Soft/921697>
- Dapping blocks/daps
  - Alternative: Create a divot in a 2x4 scrap with a ball-peen hammer. Use the divot as the block, and either sand a wood rod to a curve that matches to use as the daps or put down the silver, then a thin piece of leather, then your ball peen and hammer *that* hammer with a mallet to strike the blows to dome your work. You can also dap directly over the end of a ball peen hammer if it's round enough, using a mallet. Note that both alternatives will be considerably harder to get a good fit for a lentil bead
- Shape mandrels (often called bezel mandrels when in smaller sizes)
  - Alternative: Hand shape with pliers or find household objects with interesting shapes to use as mandrels (handles of screwdrivers, small spice containers, dowels, etc.)