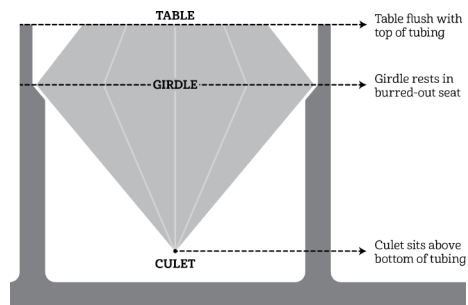


At the Jeweller's Bench: Tube Setting Gems

A mini tutorial by Robyn Cornelius of Little Rock Jewellery

Cutting a Seat

✂ *Tubing has to be a couple mm taller than the height of the gemstone to begin with. The top of the tubing should be sanded flush.*



- 1) Double-check the size of the gemstone and tubing size with a calliper. Many gemstones are sold as one size but may be slightly bigger or smaller. Eg a 3mm could be a 3.1 or 3.2mm. It is okay to use a 3.1 or a 3.2 in a 3.5mm setting as long as the bur matches the stone size.

Materials Needed

- **tubing** with a .5mm wall thickness
- **faceted round gemstone** 0.5mm smaller than the outside diameter of the tubing (e.g. a 3mm gemstone will fit in a 3.5mm tubing).
- **setting bur** the same size as the gemstone
- **calliper**
- **booger stick** (a small lump of beeswax on the end of tooth pick)
- **sanding stick**
- **burnisher**
- **bur lubricant**
- **handheld rotary tool** (e.g. flexshaft, dremel, etc.)

OPTIONAL:

- **setting punch set**
- **porosity killer** or **hammer setting tool**

- 2) Place the gemstone on the tubing. You should see a tiny lip of metal all around the gemstone.
- 3) Install the setting bur in your rotary tool. It is important to use burs at low speeds and with pressure. If you are using a flex shaft, use your tippy toe on the foot pedal to control the speed. Apply bur lubricant to the bur to help it cut. Place the bur into the tubing straight down, press the foot pedal and apply pressure. Bur a little bit into the tubing and remove. It is better to bur a little at a time and check the depth of the gemstone.
- 4) Use a booger stick to pick up the gemstone and place it straight into the seat. The girdle of the gemstone should sit inside the tubing. The table of the gemstone needs to sit flush with the tubing.
- 5) Continue burring and checking back and forth until the gemstone sits flush with the top of the tubing. If you have burred too far and the gemstone sits too low, gently sand down the top of the tubing with a sanding stick.



Setting the Stone

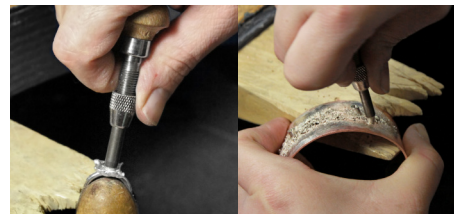
Option 1: Using a burnisher

- 1) Use the rounded side of the burnisher to push the bezel wall towards the stone. Move to the opposite side and push that wall in. Move to the opposite and opposite and so on until all the edges are pushed against the stone.
✂ *If you don't burnish opposite sides of the stone, you will likely end up with a crease in the setting.*
- 2) Use the burnisher to round out the edge of the stone rubbing the edge parallel with the edge of the gemstone, until the setting looks smooth and shiny.



Option 2: Using a setting punch set

- 1) Select a setting burnisher that is bigger than the tubing. The tool must be able to move freely around the setting and not be too small or it will just mar up the edge of the setting. Ignore the measurements listed on the box (e.g. I use the 5mm punch for a 3mm gem setting).
- 2) Place the setting on an anvil, place the punch overtop of the tubing and apply great pressure while pressing down and turning around the setting. This will bring the wall of the tubing evenly around the gemstone
- 3) Often the gemstone will look like it is set, however the lip of metal has been brought close to the girdle of the gemstone but it is not pushed down against the table. Use a burnisher to press the wall down against the top of the gemstone. You will not hurt the gem unless you are using the pointed end of the burnisher, always use the rounded smooth side. After burnishing you should see a shiny circle of metal all around the gemstone.



Option 3: Using a handheld rotary tool

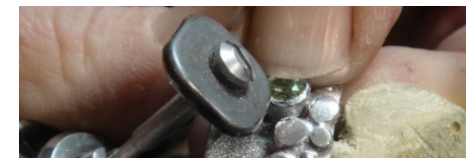
✂ *This option only works for gemstones that can take heat such as synthetics, lab grown, corundum and diamond. The stone would be set first and then soldered onto the jewellery. You will need to start with a piece of tubing that is at least 1/2" long.*

- 1) Place the tubing into the flexshaft leaving just a few mm poking out of the collet.
- 2) Slowly spin the tubing while pressing the rounded edge of the burnisher onto the top edge of the tubing. Rock the burnisher to almost flush with the top of the gemstone to finish.



Finishing

- To make sure the gemstone is secure, try to pull it out with the booger stick. If the gemstone pulls out, place the gemstone on top of the setting and use the wood part of the burnisher handle to pop it back into place. Usually you will hear it snap back into the seat. If this does not work, you will have to cut a new seat and start again.
- **Stone settings that fight you:** Often I have a stone setting that just won't set. With all my strength, I try and try but the metal has become too work hardened. This is when I pull out my porosity killer. A porosity killer is used to fix air bubbles in cast metal known as porosity. I use it as a setting tool. It is smooth on the edge and will not hurt you. It is a cheap version of a hammer setting tool.



✂ *I use my fingernail to protect the gemstone while beating the edge of the metal down with the porosity killer.*

- Clean up with sanding stick.

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