

DIY - Silver soldering

A Silver ring



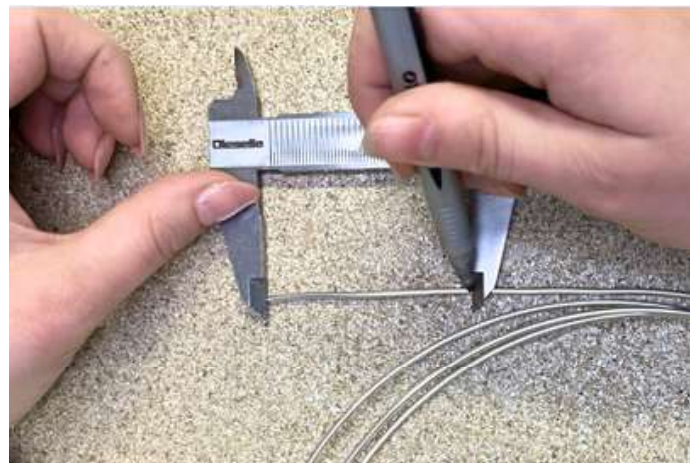
Materials/tools used:

Soldering set, starter set for silver soldering (21252A)
Silver wire 2mm (21251-2mm) (length depends on ring size)
Flat & half-round file from file set (31126F)
Sawset (31160)
Ringmandrel (31136C)
Hammer (31139)

2x Wide flat-nose pliers (31105D)
Side-cutting pliers (31105F)
Brass brush (311325)
Polishing cloth (31132B)
Ring measuring mandrel (31136)
Measuring tape (31131B)
Caliper (31130-17mm)

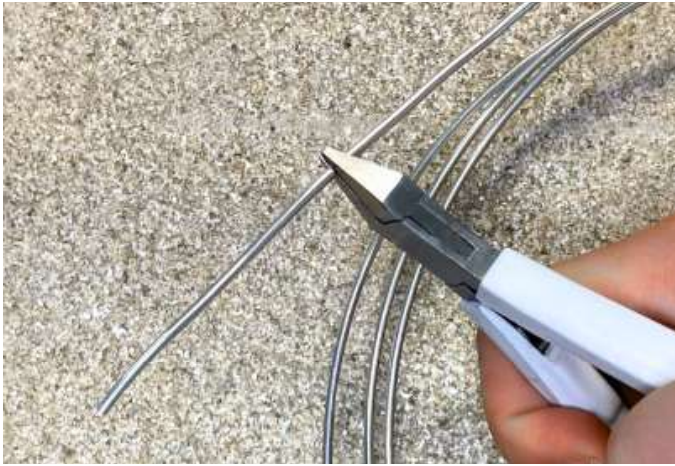


1. Measure your ring size in mm, with a tape measure. Or if you already have a ring in the size you want to make, you can use a ring measuring mandrel (31136) to see what size it is. Ring size + 3 x wire thickness. A ring size of 58 mm + 3 x 2mm (as we use 2mm wire) is a total of 64 mm. Thicker and thinner wire can of course also be used.



2. Measure and mark the silver wire, with a permanent marker, or mark the wire by scratching a small line.

DIY - Silver ring, by soldering



3. Cut the measured piece with wire cutters, making sure to use the innermost part of the wire cutters, bite, turn the wire and bite again until the piece is cut.

You can also choose to saw the wire - see "DIY - Saw guide".



4. File the ends flat with a flat file.



5. Use flat nose pliers to bend the wire and bring the ends together.



6. Press the ends together while moving them slightly past each other, back and forth.



7. The ends should be straight and close to each other. It is not important to have a perfectly round ring, this can be straightened out later.



8. Place the ring on the soldering pad and apply a small dab of flux to the joint with the soldering needle.

DIY - Silver ring, by soldering



9. Next, cut a small piece of hard solder, it really doesn't take much solder for this small soldering. Dab a little flux on the soldering needle again and pick up the solder with the tip.



10. Place the solder on top of the joint.



11. Now you have to solder. Fill the mini burner with gas. Light the flame, by opening the gas, turn the round button to the left and now you can hear the gas seeping. Press the round button and the flame appears. Start by focusing the flame across the flux. It may bubble up a bit. If the solder moves, you can always correct the position, with the soldering needle. As soon as the flux settles, apply heat over the entire item, in circular motions.



12. When the entire ring is hot, the flame is focused directly over the solder and joint, when the right temperature is reached, the solder melts (Solder H (hard) has a melting point of 770°) and will flow and fill the solder joint. If the solder floats the wrong way, you can try and force the floating solder into the joint, with the soldering needle. If the solder does not melt, either heat or cleaning (the use of flux) is missing. If so apply one more dab of the flux, and continue with the heat. Add more solder if needed.

DIY - Silver ring, by soldering



13. When the solder has melted and filled the joint, cool the ring in water, you may want to have a small bowl of water on your table. Use the tweezers to put the ring into the water, it will now make a small sound (the piece cools quickly and you can already touch the ring with your fingers).



14. The ring must now be cleaned in acid, as you need to get rid of the small glass-like layer that comes from the flux. Boil some water, mix it with citric acid and put the ring in, leave it in the acid bath for about 10 minutes. Approx. 1 tsp. citric acid to 1.5 dl boiling water. If necessary, reheat the bath in the microwave without the ring, if it has become too cold.



15. Rinse the ring in water and brush it with a brass brush to remove the boil skin (the white layer that occurs after acid treatment) and black spots if they remained.



16. Then the ring needs to be moulded. Slide the ring onto the ring mandrel and hammer the ring round. A plastic/rubber hammer is used here to avoid unnecessary nicks/scratches on the ring.

DIY - Silver ring, by soldering



17. File the ring as needed, with a half round file. Remove scrapes and any residual solder.



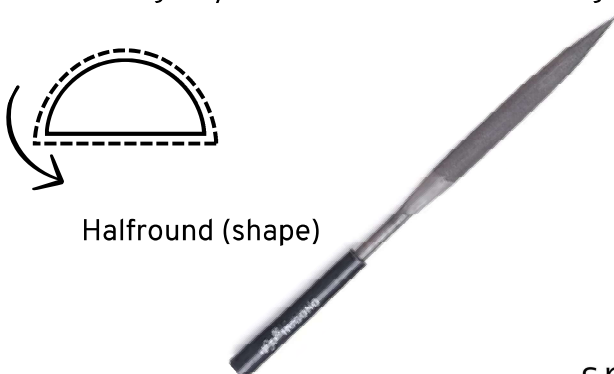
18. Sand the ring with fine sandpaper and finally polish, if you want a shiny surface. You can achieve different surfaces, by filing the surface in different directions with a coarse file or coarse sandpaper. This gives a more raw look.

And then you are done!



Small tips

Has the ring become a little too small? Here you can file the inside of the ring, with a half-round file. File all the way round the ring until the size fits. This will give you a flatter inside of the ring.



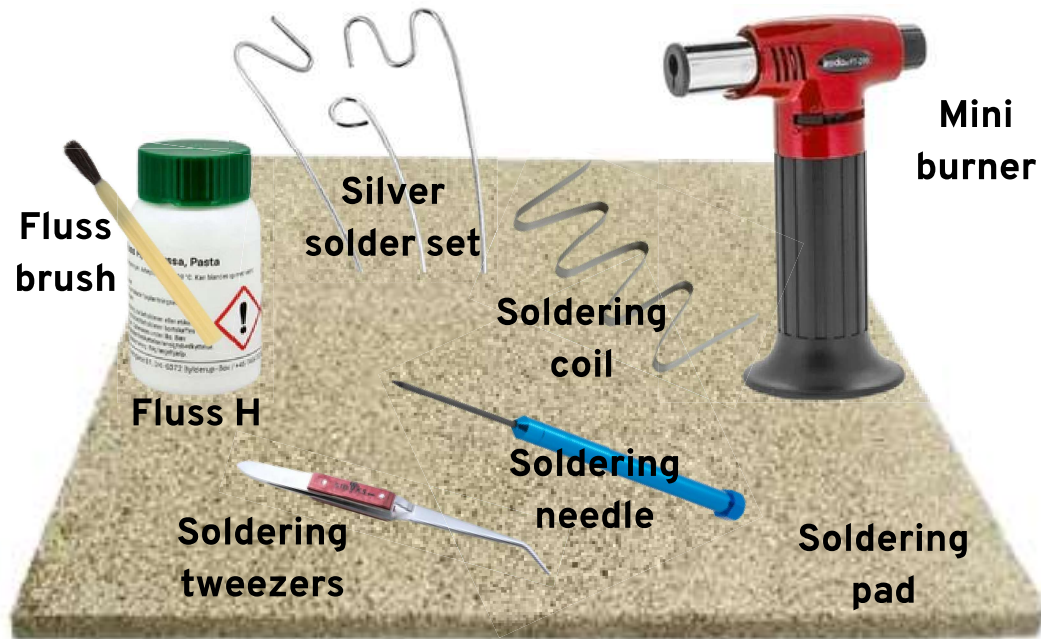
Halfround (shape)

Is the ring a little too big? Here you can saw the ring open again and saw off a small piece of the ring. Then start again from **step 4**.

(Step 5) Is the silverwire hard to bend? Then you can do something called annealing. Annealing makes the silver softer to work with. The more you bend, tap/work with the wire, the stronger the metal becomes. Heat the wire with the mini torch on the soldering plate for a few seconds. Then cool the wire in water and you can now feel that it is easier to bend the wire.

Items in the soldering kit

Silver Soldering Starter Kit (21252A).



Ekstra tools for ring making

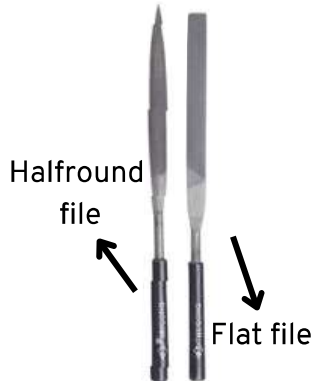
Ring mandrel
(31136C)



Hammer
(31139)



Steel files
(31126F)



(can be omitted)
Ring measuring mandrel
(31136)



(can be omitted)
Caliper
(31130-17mm)



(can be omitted)
Polishing cloth
(31132B)



Brassbrush
(311325)



Measuring tape
(31131B)



Silver wire
(21251-2mm)



(can be omitted)
Saw set
(31160)



Flat-nose pliers
(31105D)



Side-cutting pliers
(31105F)



Fastener

