



Ring Stretcher / Reducer



Positioning and installation

The tool is very solid and heavy being made of solid metal. Please take care when handling it and placing it into position. The tool needs to be very securely fixed to a solid bench. Ideally, something immovable which is in turn attached to a solid wall. The best way to secure it is via four large bolts, through the holes in the base of the tool right through the benchtop and secured underneath by washers and nuts. Note this will require drilling holes through the benchtop, so chose a location carefully as it will be fixed permanently. Check that the handle allows a full range of movement, both forward and back. Do not position the tool too close to a wall.

Tip - As a temporary measure whilst deciding upon its final location, the tool can be screwed to a thick piece of wood and attached to the benchtop with G clamps. Whilst this is not ideal, it does allow you to test out the tool before committing to its final location.

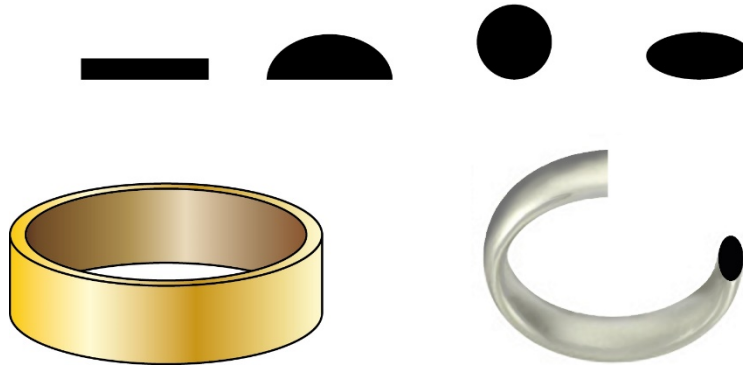


Above. The Pepetools Ring stretcher and reducer.

Note the expanding mandrel on the top, and the reduction dies on the bottom.

Two in one

The Pepetools ring stretcher/reducer is really two tools in one. As the name suggests, it can expand or reduce. On the top is an upright ring mandrel for expanding rings. Below it is the disc of reduction dies, for making bands smaller. The tool is designed for adjusting band rings. I.e. rings with a uniform profile and thickness all the way around, such as the traditional style wedding bands.



Expanding a band

To make a wedding band larger, place it over the mandrel and allow it to drop down as far as it will go. As you move the handle back and forth the mandrel will expand and contract. With every forward stroke, the mandrel will expand. As it does so, it applies pressure to the inside of the ring, expanding it. Hold the ring between forefinger and thumb and keep rotating it as you work the handle back and forth. As the ring expands it will move further down the mandrel. Check it constantly using a Pepetools gold standard ring mandrel, and repeat until you get the desired size.

Tip ensure you check the ring from both sides to ensure it is equal.

Right; A ring being stretched on a ring stretcher. As the handle is pushed back, the mandrel expands, stretching the ring.



Wide rings

For wide rings, it is recommended to flip the ring over and expand it equally from each side. This avoids any possibility of the ring becoming conical. By stretching both sides the ring can be adjusted equally and remain parallel.

Stepped Mandrel Version

For extra wide bands, Pepetools also offer a version with a 'stepped' mandrel, which helps to apply more even pressure on wider bands. It also alleviates the need to keep flipping the ring over. Ideal for stores that specialize in wedding wings.



Above, Pepetools Stepped upright ring stretcher.
Note the magnified view left showing the stepped mandrel.

TIP

The Pepetools stretcher has been manufactured to the highest standards with a smooth, precise mandrel to avoid marking the inside of the rings. However, for extra care with soft or internally patterned rings, wrap with PTFE tape, available from the plumbing section of your local DIY store. Also referred to as 'thread tape' it is used by plumbers. Remember to ensure that you can see the edges of the ring as it is stretched.



How far can you stretch?

The big question is always how far you can stretch a ring in this way. Every ring is different, and ultimately it comes down to personal experience. With a brand new ring, you should be safe with a couple of sizes up. Note that as the ring expands in size the band gets thinner. A thick chunky ring can, therefore, be stretched a few sizes without any noticeable difference in appearance. However, very thin rings should only be stretched a minimal amount to avoid the band getting too thin and weak.

Old rings.

The ring stretcher can exert a lot of force, and if misused can potentially snap a ring in half. With an old or used ring, you must be cautious. It is vital that the ring is examined carefully and is in good sound condition. Poor solder joints, previous repairs, wear, or damage can create a potential weak spot. As the ring is stretched, any weak spots can potentially cause a break. There is also the issue that an old ring may have already been stretched previously. With such rings, work slowly and gently with small movements, do not force the handle. Keep rotating and flipping the ring, to stretch evenly. As you work constantly check the edges for any signs of narrowing or fine cracking. At which point you should stop. Any weak spots should be addressed (soldered or polished out). But it is not advisable to continue stretching.

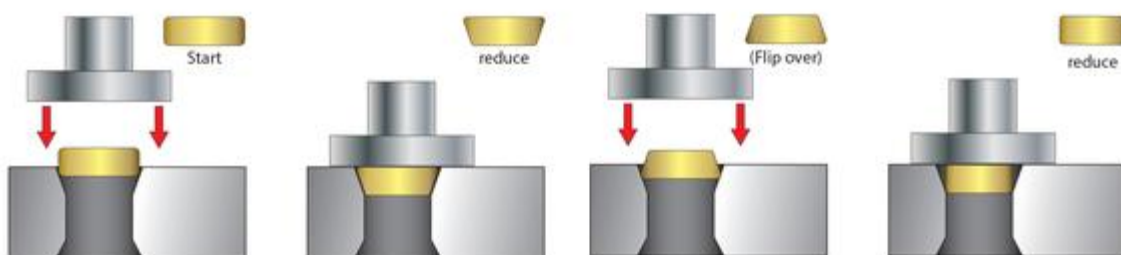
Annealing

When working with silver and gold, if a large stretch of multiple sizes is required it may be advisable to anneal the ring to soften it. Usually, this is done by gently heating to dull red, air cool for a moment until the piece stops glowing (black heat), and then quenching it in water. This will soften the metal and make it easier to stretch. Of course, this will require additional cleaning and polishing when complete.

Reducing wedding bands.

The same Pepetools ring stretcher can also be used to reduce rings. At the bottom is a double-sided disc with holes of decreasing diameter (reduction dies). Pepetools have gone to great lengths to accurately machine these holes and polish them for a smooth finish. Additionally, the application of a little grease or oil in the holes will greatly help the reduction process.

The ring is placed in the largest hole it will sit in whilst standing proud of the surface. Ideally, it will sit about halfway in the hole. Rotate the disc, positioning the ring directly and centrally underneath the plunger. As the handle is pulled forward the plunger pushes down and forces the ring into the tapered hole. It is important to push the plunger all the way down until it is flush with the surface. This will reduce the lower side of the ring slightly, as it is forced down into the narrow hole. Again, always flip it both sides to ensure uniformity. Check the size and if necessary, move on to the next smaller hole. A few sizes can be accomplished very quickly and easily.



Above; diagram showing a ring being reduced in the reduction dies, by first reducing one side, flipping over and reducing the other side. Note the start position, the ring must sit in the hole but be slightly proud of the surface.

Top tip.

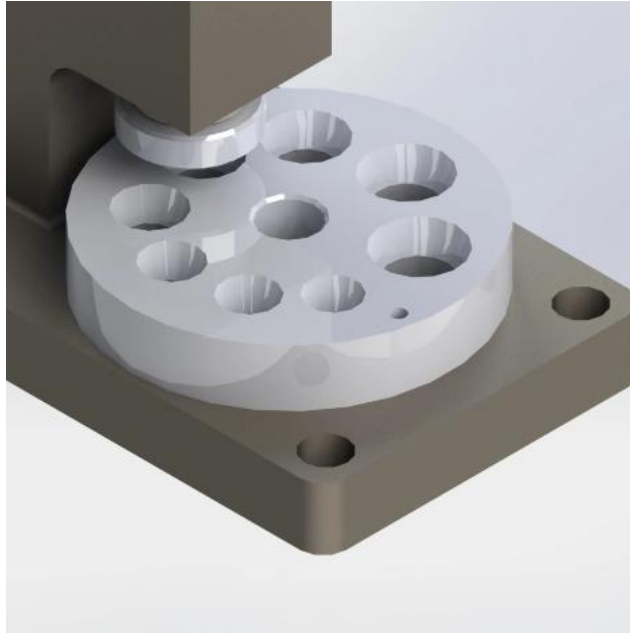
For perfect accuracy, reduce the ring slightly smaller than the required size and expand it back with the mandrel for a perfect fit.

Again, If the ring has a delicate pattern or engraving, a couple of wraps of plumbers PTFE tape will protect it. Just start with a slightly larger hole. Alternatively, read on...

Other uses.

The Pepetools ring stretcher reducer also has many other uses. For example, a bent and misshapen ring can be slightly stretched on the mandrel to make it round again. A misshapen wedding band can be pushed through the reduction dies to make it perfectly round, then adjusted back to size on the expanding mandrel. When making your own rings, the tool is invaluable for ensuring the final rings are perfectly round, and uniform, without the time on a mandrel with a rawhide mallet.

New Delrin dies and pusher set.



New Pepetools Delrin dies and pusher set

If you frequently work with patterned rings or make coin rings. A great new addition to the Pepetools range is a matched set of Delrin reduction plate and pusher. These are made from a highly tough and resilient material that won't scratch delicate rings. The pusher and plate simply replace the current steel ones, whenever you need that extra care.

Note these Delrin accessories are designed specifically for the Pepetools ring stretcher and reducer. Whilst they may be compatible., They are not necessarily designed for other makes and so their functionality cannot be guaranteed with third-party tools.

Coin rings.

These ring stretching tools are perfect for making coin rings too. Using the mandrel to stretch the ring and the reduction dies to make it uniform.



Above; His n Hers Coin rings made by Dave Wilson of Celtic Dreams

The above coin rings were made using the upright ring stretcher and reducer. Note that both rings started life as the same size coins, British Victorian silver shillings. The smaller one has the popular “fat tire” look, by pressing it partly into a much smaller reducing die, giving a convex profile. With the larger ring, careful adjustments on the mandrel ensure that both sides are perfectly uniform and parallel.

Coin ring Die plate.



Pepetools in collaboration with Coin ring maker Skyler Jenkins have also created an additional reducing plate with specially shaped holes specifically intended for making coin rings. Features include:

- Hardened and polished tool steel
- 14 total reducing dies
- .9", 1", 1.1", 1.2", 1.3", 1.4" 1.5"
- Side A has 17-degree true conical taper
- Side B has 25-degree true conical taper

Check out Pepetools.com for more info.

General maintenance

As with any steel tool, it is important to keep it dry and free from moisture. A light coating of oil occasionally will be sufficient. Also, apply a few drops of oil to the very top of the mandrel and allow it to run down inside, whilst you move the handle back and forth. Remember to coat both sides of the reducing plate with light oil and also coat the inside of the holes. The Delrin accessories do not require any such maintenance, they can be cleaned with soapy water if necessary and dried before replacing.

Important note:- Gem set rings.

Gem set rings should not be stretched using the wedding ring stretcher. Often gem-set rings have thinner backs, shoulder details, and settings to the front. All these variations create weaker areas of the ring. The action of stretching them all the way around can potentially cause mounts to open and stones to loosen. For this reason, Pepetools have created the **“Deluxe Ring Enlarger”**. This ingenious tool is designed specifically for enlarging gem-set rings. Check out Pepetools.com for more info.

Remember too the Pepetools calibrated ring mandrels and finger gauges to ensure consistent accuracy. See the Pepetools blogs on finding your correct ring size.

Written and illustrated by Dave Wilson
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