



Oval Disc Cutting Kit



Based on the world's best-selling disc cutter, the oval cutter by Pepetools carries over all off the innovative features found in the PepeTools 196.10A Premium Disc cutter. These features include;

- Recessed punch clearing design on the bottom plate
- Laser etched HDPE base
- High carbon steel plates, hardened to 48-52HRC
- Finished in protective black oxide
- Laser etched disc cutter to mark each hole
- 6 oval shapes (the most available on a single unit in the market today)
- Can cut material up to 20 gauge with just a 2 lb brass mallet, over 20 gauge we recommend the use of a hydraulic press.

The Oval Disc Cutting Set includes the following;

- PepeLube
- Pepe Urethane 6" x 6" 95A Cutting Pad
- Oval Cutter

Each punch is first precision turned on a state of the art CNC machine based in our Oklahoma City factory. After turning the punches are heat treated to 48-52 HRC. This hardness insures a lifetime of use and a sharp edge. To get the cleanest cut possible we include a 5 degree angle on the cutting edge which allows a beautiful shearing action. Instead of tearing through the material like your traditional disc cutter, the punch cleanly shears the oval without burrs or raised edges. After machining the punches are finished in black oxide, a heavy duty protective coating against corrosion.

Punches 30x22 mm 25x18 mm 24x14 mm 20x15 mm 20x12 mm 18x13 mm

IMPORTANT!

It is vital that you do not use a steel hammer, as this could cause damage to the hardened steel punches and reduce the lifespan of your tool. A 2lb brass mallet will provide the weight required for effortless use, but will not mark or damage the punches. Alternatively, the tool may be used with a hydraulic press.



Brass Head 2LB Mallet

Materials.

The tool is designed for jewellers and hobbyists to cut discs from non-ferrous thin sheet materials such as silver, gold, brass, copper, aluminium and similar alloys. It is not intended for heavy gauge steel. It may also work on non-metallic materials such as heavy card, or some flexible plastics. The capacity of the tool will depend on many factors including the hardness of the material, the size of the punch used and the pressure being applied. Whilst many people use the tool for punching holes in coins, if the material cannot easily be punched with 2-3 hammer blows then the material is too hard or too thick. The excessive pressure and repeated blows required may prematurely blunt the punches.

Set up and placement.

The tool comes pre-assembled and ready to go straight out of the box. However, you should read the instructions carefully first to ensure safe and correct operation. The tool is suitable for left or right-handed use and requires no fixing. When in use, the cutter needs to sit on a solid fixed flat surface, which can withstand the hammer blows. A heavy bench top or anvil is perfect. The design of the tool is such that the punches clear right through the tool. This gives an accurate finish to the discs. In order to prevent damage to your surface or to the punches, use the red urethane pad underneath the tool when cutting. When not in use, the tool may be stored on its base, in a dry place. It does not take up valuable space on your benchtop!

Basic Operation.

Begin by placing the disc cutter on a solid surface on top of the red urethane pad. Unscrew the knurled nut at the centre (anticlockwise) and note that the two plates will spring open. If they do not open, just tap them gently. Oil and lube may sometimes cause the plates to stick together, especially on first receipt. Slide your sheet in between the two plates ensuring that the sheet completely fills the desired hole. Ensure you are not clipping the edge of your sheet.

Optional Tip.

You may use a small offcut of the exact same thickness sheet and insert it between the plates at the opposite side, as a shim. This will ensure that the plates remain perfectly parallel when tightened. See the image. The Pepetools disc cutter has three alignment pins to ensure accuracy. So whilst this tip is not essential, it is a commonly used technique with other disc cutters. Especially with thicker materials.

Tighten the centre screw clockwise to close the plates together and clamp your sheet. "Good" finger tight is sufficient, no tools are required. Ensure your sheet is clamped firmly and does not move.

Select the corresponding die to the hole and apply PepeLube around the cutting face and edge. Insert the punch into the hole, with the cutting face downwards onto the sheet.

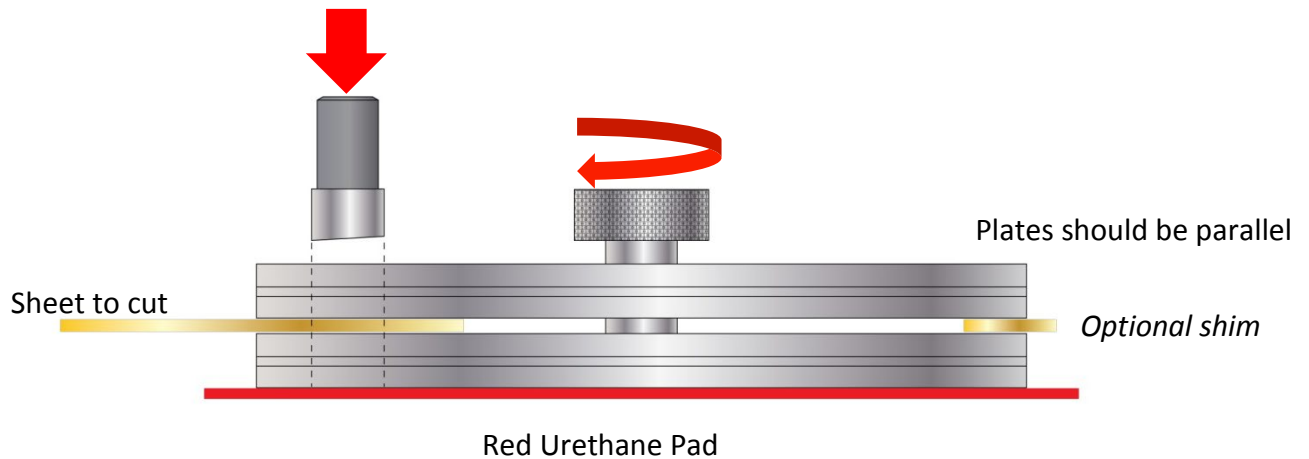
Strike the top of the punch firmly with a brass head mallet. With thin material, one blow may be sufficient. Thick material may require 2-3 blows, but do not adjust or remove the punch between blows.

Once successfully punched, you will note the punch drops through the hole and the sheet. Lift up the cutter and you will see the disc and the punch will fall right through, leaving a perfect hole. Unscrew the centre nut anti-clockwise to release the plates. Remove your sheet and shim.

Rounded Strike End



Angled Cutting Face

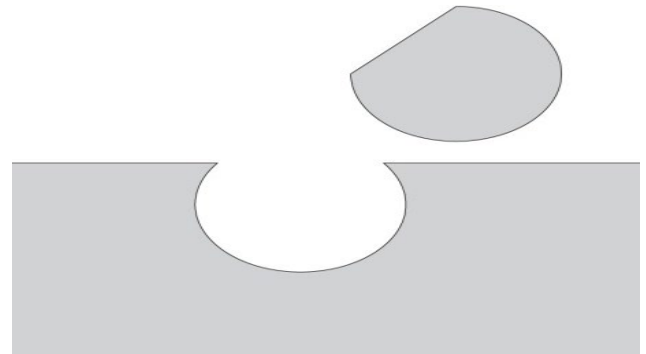


Optional shim placement.

This can help to keep the plates parallel assisting in clearance of the punch. This should not usually be necessary with the PepeTools disc cutter, but it's always good to keep a couple of offcuts handy. Especially if punching thicker materials.

Tip – Avoid edges.

Avoid cutting within a few millimetres of the edge. Always ensure that the sheet is fully under the hole with a good few millimetres clearance all around it. This allows for a secure clamp all around the hole, for optimal results. It also avoids having flat spots on the edge of your disc.



Tip – Mark your spot beforehand.

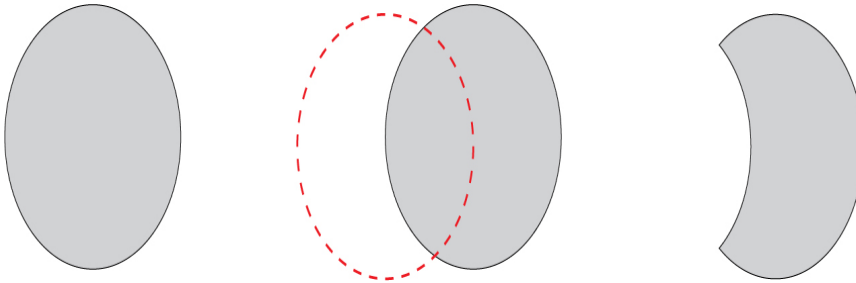
Place the punch onto your sheet and using a permanent marker, draw around the punch, creating a circle on your sheet. You can then align this when you insert it between the plates.

Tip - Texture first.

If you intend to apply a heavy texture to your disc such as a hammered finish, this can distort the edges of your sheet. Hence it is better to texture your sheet beforehand, and then punch the disc out. This will result in a perfect circular shape with a clean edge. Another tip is to place the textured surface face down when punching.

Creative Tip - half moon.

An interesting effect can be achieved by punching a large disc and then reinserting it part way through a hole and punching it again. This method can be used to create half-moon crescent shapes.



Creative Tips -Pendants

The oval discs naturally lend themselves to the setting of large cabochons for rings and pendants. But with a little creativity the possibilities are endless. Combined with the round disc cutter, multiple holes can be punched to create an array of forms. Below you can see a few pieces created by Dave Wilson of CelticDreams.co.uk



Experiment. Large Sterling Silver and fused Glass oval pendant, by Dave Wilson and Peter Richardson.



“Autumn” By Dave Wilson, large Sterling silver oval textured and formed to create a curled leaf pendant.



Copper punched and domed pendant created with the circular PePETools Premium disc cutter. by Dave Wilson

Maintenance.

Under normal use, your disc cutter needs no maintenance other than an occasional light coat of oil. Just as with any other steel tool, keep it dry and free from moisture. Should the unit require cleaning, simply unscrew the top nut completely. This will allow you to separate the two plates. Clean with a cotton cloth and apply a light coat of general purpose household oil before screwing back together.

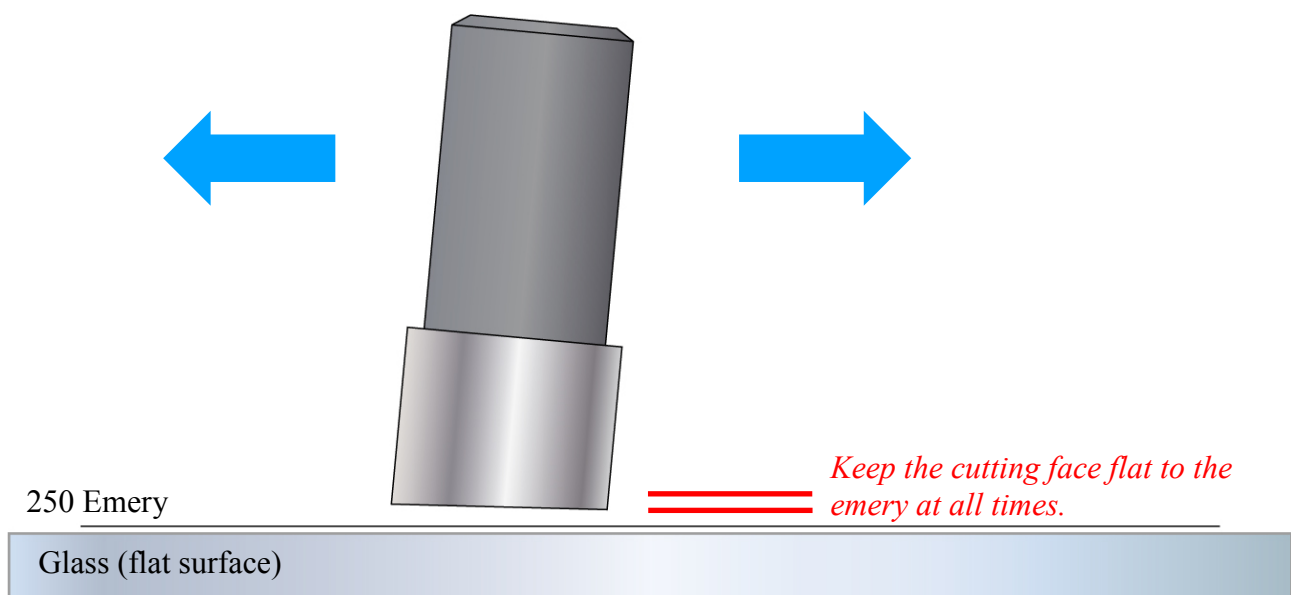
TIP.

When storing for extended periods, loosen the top nut so that the plates are not touching. This will avoid them sticking together with the oil.

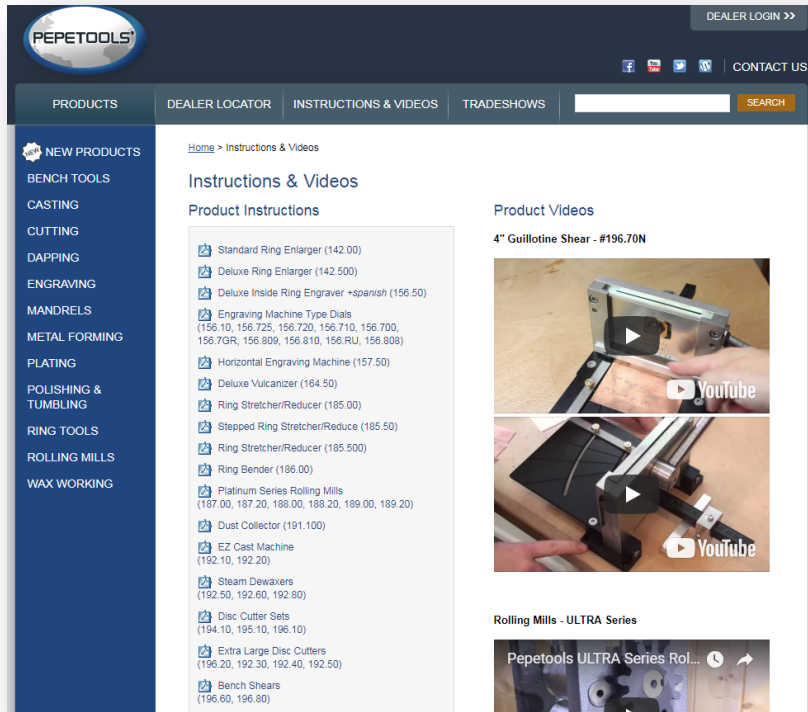
Sharpening.

Again, your punches should last for many years if used sensibly. However, should you find your punches need sharpening this can be done very easily. Please check out PepeTools website and YouTube channel for videos on how to do this, but the method is as follows.

Place a sheet of 250 grit emery paper onto a perfectly flat surface, e.g. a sheet of glass, and tape it down securely. With your chosen punch, remove any traces of PepeLube using a cloth and alcohol. Using a permanent marker, blacken the cutting face of the punch uniformly and right to the edges. Apply a few drops of oil to the emery paper and place the punch face down onto the emery. Ensure that the face is flat to the emery at all times. Note that the face is angled slightly. With a light pressure move the punch in a figure eight motion around the emery sheet, maintaining a flat cutting surface at all times. Check to see the marker pen being removed from the face. Once all the black has been uniformly removed, the punch should now be sharp. Do not allow the punch to tilt and do not sand the edges or sides. Clean the punch with alcohol and reapply oil. Test the punch on some thin material.



For the latest tips and advice, check out PepeTools website for instructions, projects and 'how to' videos. Follow us on Facebook, Twitter and YouTube. If you have any questions or concerns then just get in touch and we will be happy to help.



www.Pepetools.com

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