Cutting and Forming Copper Sheet Metal

Cutting and forming sheet metal can be done with shears, Disk Cutting tools are for cutting and forming copper Sheet Metal and are often used in jewelry and small metalwork.
Here's a breakdown of how to use some of them on **copper sheet metal**:

Burrlife or Beeswax for lubrication of cutting surface
Steel Block as work surface, not wood.
Heavy Brass Mallet
Disk Cutters, Bevelled end up - the cutting side of the punch is a flat smooth surface.

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1. **Disk Cutter (circular tool with round holes)**

This is used to **punch out perfect circles** of metal.

Steps to use:

1. **Anneal your copper** (heat it to a dull red and let it air cool or quench in water if it's safe—wear gloves).
2. Place your copper sheet between the plates of the disk cutter.
3. Select the punch size that fits the hole.
4. Align the sheet so the desired area is under the hole.
5. Insert the corresponding punch into the hole.
6. Use a **heavy brass mallet** or an **arbor press** to strike the bevelled end of the punch. It will shear the metal and drop a disk through the bottom

?? Proper Usage Tips

- **Insert the Punch Correctly**: Always insert the flat, sharp end of the punch into the corresponding hole of the disc cutter, ensuring it makes direct contact with the metal sheet.
- **Strike the Beveled End**: Use a heavy mallet or hammer to strike the beveled end of the punch. This will drive the sharp end through the metal, creating a clean cut.
- **Avoid Reversing the Punch**: Striking the sharp cutting end can damage both the punch and the disc cutter, leading to poor cuts and potential injury.

Quick Reference: Using Disk Cutters on Copper

- Anneal copper before cutting (heat to dull red, then cool).
- Use a heavy mallet or arbor press for clean punches.
- Lubricate punch tips with Bur Life or beeswax.
- Always place cutter on a steel block, not wood.
- Align copper and punch carefully—no tilt.
- Check punch sharpness regularly.
- Use correct gauge copper (20–24 gauge ideal).
- Remove stuck punches gently by flipping and tapping.

Disk Cutter Troubleshooting Guide

Issue	Cause	Solution
Cutter won't pierce copper	Copper is too hard (work-hardened)	Anneal the copper before cutting
Punch doesn't go through	Not enough force used	Use a brass/rawhide mallet or an arbor press
Punch gets stuck	No lubrication / tight fit	Lubricate punch with Bur Life or beeswax
Ragged or uneven cuts	Copper or punch misaligned	Ensure copper is flat and punch is vertical
Noisy, ineffective cut	Cutter not on solid surface	Place on a steel bench block or anvil
Won't cut thicker sheet	Gauge is too high for tool	Use thinner copper or alternative tools
Punch not sharp	Edge dull or damaged	Sharpen or replace punch

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