

Tips for Laser Cutting Names and Monograms

by Shannon L. Brown

Considering the current trend toward personalization in jewelry, creating name and monogram jewelry quickly and accurately to order with a laser engraver is beneficial in today's market—and it doesn't require special design skills. "The benefit of laser technology is that it allows a user who doesn't have a tremendous amount of design experience to look like an expert," says James E. Gervais, president and chief operating officer of LaserStar Technologies in Riverside, Rhode Island. The only limits are the creativity of the user. In minutes, the laser can cut intricate patterns that would take hours by hand. The following are tips and tricks for laser cutting applications:

CUTTING DIFFERENT METALS

All jewelry metals, precious and non-precious, can be laser cut—from gold and silver to stainless steel and titanium. For most types of laser equipment, metal thicknesses of up to 1 mm work well for cutting out pendants, charms, keepsakes, and monograms. As a general rule for name jewelry designs, a thickness of 0.5 to 0.8 mm will suffice.



The different properties of each metal make the laser-cutting process unique for each, including these three popular metals used in name jewelry designs:

- Gold cuts well because it is a good conductor of thermal energy, but proper settings for the metal are required. (Check with your laser supplier, as settings vary by model.) Ariel Fapakhob, owner of Fine Laser Cut in New York City, finds that each gold alloy cuts differently. "White gold cuts better than yellow, and pink is harder to cut and takes more energy because the copper makes it more reflective," he says.

- Silver is tough to work with because it retains heat from the laser and can start to flex and warp when you are working with it. To prevent this from happening, heat-sink the silver using a bracket or clamping fixture to transfer heat away from the affected area.

"Most of the samples we take to shows are in sterling," says Gervais. "If you can do it in silver, you can do it in any metal."

- When working with stainless steel, operate the laser at fast cutting speeds (300-500 mm/sec) to ensure that the metal doesn't weld to itself. Also, the iron in the steel will splatter if the laser is moving too slowly.

NAMES AND MONOGRAMS

Depending on the power of the laser, the thickness of the metal, and the intricacy of the design, a name or monogram can be cut out in about five to 25 minutes. When cutting such pieces, try the following tips:

- When it comes to font choice, stick with those that have uniform widths across all letters—no super narrow areas, suggests Kyung Paeng, owner of Soul Jewelry in Los Angeles. He's found that fonts with letters that narrow in places leave a potentially weaker area that can break.

When in doubt, select the bold feature on a font to enhance the strength of the letters and reduce the kerning, suggests Gervais.

- To save the step of soldering on rings for attaching a necklace to a name pendant, program the machine to cut an eyelet on each side of the piece as the names are being cut. Engraved patterns and textures can also be programmed as part of the process.



- Collect cut-out sections of precious metal designs, such as the centers of the letter B, to refine as clean scrap. The fine dust generated by the cutting process is automatically collected in a filter that can be sent out for refining. ♦





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