APPLICATION TIPS

Engraving and Cutting Synthetic Suede with a Universal Laser System

Introduction
A Universal laser system is ideal for cutting and engraving natural and synthetic fabrics.

A Universal laser system can cut fabric more quickly and accurately than hand or knife cutting and eliminates edge fraying. A Universal laser system can also engrave a photograph, text or artwork directly onto the surface of many fabrics to create a very unique look. Some of these fabrics include felt, leather, denim, canvas, nylon, silk and polyester. Of the many fabrics that can be laser cut and engraved, one of the easiest and most popular to work with is synthetic suede.

Synthetic suede, also known as Ultrasuede®, is a polyester or nylon microfiber material that has the look and feel of real suede. It is available in a wide variety of designer colors and cuts and engraves beautifully. Engraving into the surface of synthetic suede darkens the material and produces a high contrast appearance. Synthetic suede is easy to sew and can be used to create garments such as jackets, vests, dresses and skirts. It is also ideal for creating appliqués and all kinds of craft projects.

In this tutorial you will learn how to use a Universal laser system to cut and engrave simulated suede to create a decorative throw pillow. Throw pillows are fun to make and a great introduction into the basics of cutting and engraving fabric. We hope you find the process rewarding and enjoyable.

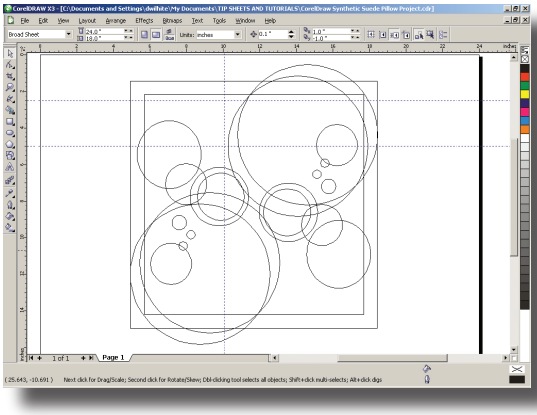
Sincerely,

The Universal Laser Systems Training Staff

UNIVERSAL LASER SYSTEMS INC.

Engraving and Cutting Synthetic Suede

Section 1: Preparing the Artwork



(GRAPHIC 1)

1.1: In this tutorial you will learn how to engrave and cut the design shown in Graphic 1 to create a decorative throw pillow.

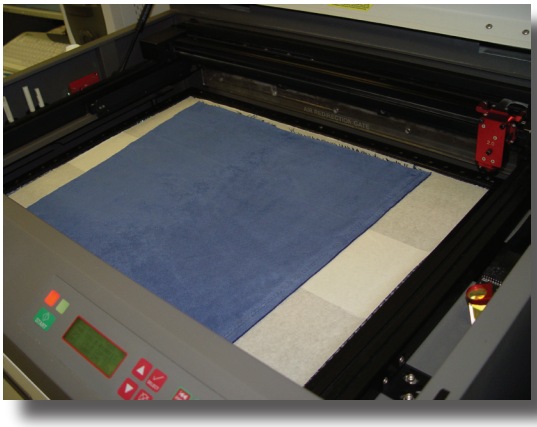
Note: If you do not have access to the file, you can create your own design in CorelDRAW or the Windows® based graphic software of your choice

Tip: If you plan to engrave both sides of the pillow, mirror the image so the back of the pillow will match the front.

Section 2: Preparing the Fabric

2.1: Choose the color and weight fabric that you want to use for your pillow. For this project, we used medium weight blue synthetic suede which has a crisp texture and a short nap that is pleasing to the touch.

Note: We highly recommend the use of Universal's downdraft honeycomb cutting table when cutting fabric. It is possible to cut fabric without the honeycomb table, but it is much harder to keep the material from bunching up, and some residue may be left behind on the fabric.



(GRAPHIC 2)

2.2: If you are using the honeycomb cutting table, apply transfer tape to the areas of the table not covered by the fabric and also cover the upper rear exhaust vent. This will increase vacuum hold down to better hold the fabric in place. Place the fabric on the table and smooth out any wrinkles as shown in Graphic 2. If you are not using the honeycomb cutting table, tape the fabric synthetic suede securely to the cutting table so that it cannot move and smooth out any wrinkles.

Note: You can purchase synthetic suede from most retail fabric stores. If you cannot find the material locally, you can purchase it online at www.fieldsfabrics.com/.

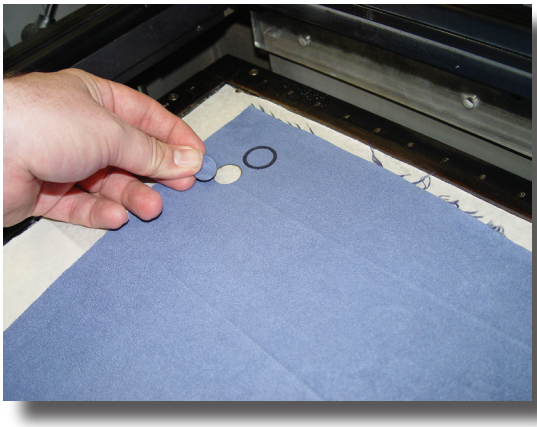
Section 3: Adjusting the Cutting Depth

3.1: Run a test to determine power settings for cutting and engraving the synthetic suede material.

3.2: Copy and paste two or three circles from your pattern well outside of the area in which you plan to engrave.

3.3: Focus the laser and adjust the power and speed settings as necessary so that you cut and engrave the circles successfully in the synthetic suede as shown in Graphic 3.

Tip: Engraving synthetic suede does not require much laser power. Begin your test by engraving at a low power setting and high speed and increase the power as necessary.



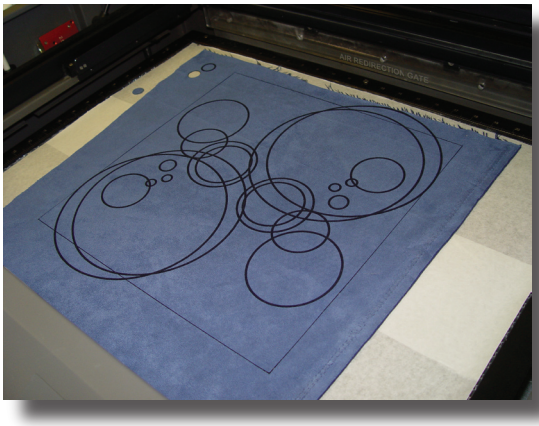
(GRAPHIC 3)

Section 4: Engraving the Pattern

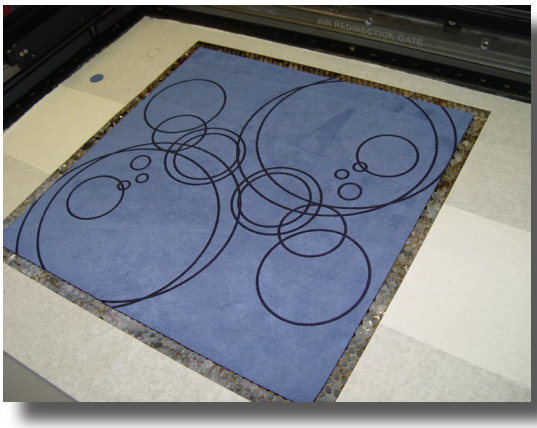
4.1: Now you are ready to cut and engrave the synthetic suede. We processed the material using the following settings with a 25-watt laser system and 2.0 inch lens:

Raster Engrave
- Power = 20
- Speed = 100
- PPI = 500

Vector Cut
- Power = 100
- Speed = 20
- PPI = 1,000



(GRAPHIC 4)



(GRAPHIC 5)

4.2: The engraved fabric prior to cutting is shown in Graphic 4. If you are planning to engrave the back side of the pillow, put another piece of synthetic suede in the laser system and repeat step 4.1. Remember to mirror the graphic if you want it to match the front of the pillow.

4.3: The engraved fabric after cutting is shown in Graphic 5.

Section 5: Sewing the Pillow

5.1: Now it is time to assemble the pillow.

Tip: Synthetic suede can be sewn by hand or machine using either conventional or flat construction sewing methods. Use 10-12 stitches per inch as short stitches tend to weaken the fabric. Do not stretch the fabric when sewing.

Note: If you do not have a sewing machine, you can assemble the pillow using a good quality fabric glue or heat bonding tape.

5.2: Fold each of edge of the fabric over 3/8 inch and pin the two pillow pieces together, face-to-face. Make sure the edges line up evenly.

5.3: Choose a coordinating polyester thread and sew approximately 1/4 inch inward in a straight line along three of the seams using a straight stitch.

Tip: It is best to begin with a new size 9–11 (60–70) needle when sewing synthetic suede.

5.4: Leave a gap just large enough to insert cotton or foam stuffing and sew approximately 1/4 inch inward in a straight line along the fourth side.

5.5: Turn the pillow right-side-out and stuff with cotton or foam, making sure to fill the corners first.

5.6: Hand stitch the gap closed. Done!

Tip: It is a good idea to include material care instructions when delivering items made of synthetic suede to your customers. Synthetic suede is color-fast and can be machine washed and dried, however, avoid the use of fabric softener sheets. Synthetic suede can also be dry cleaned. Synthetic suede varies in material composition and quality. Follow the manufacturer's care instructions carefully.