



MAKERSPACE

VINYL CUTTER GUIDE

Silhouette Cameo 4



What is a Vinyl Cutter?

It is a tool that allows users to cut a variety of materials including adhesive vinyl, heat transfer vinyl (HTV), paper, cardstock, and fabric. It's ideal for craft projects, signage, decals, apparel, and more.



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Machine Specifications

Our Vinyl Cutter

The Makerspace has a [Silhouette Cameo 4](#).

- **Max Cutting Area:** 12 in. x 24 in. (mat);
12 in x 10 ft. (roll)
- **Max Media Thickness:** 3 mm

See the official manual [here](#)



Photo Credit: Silhouette Canada

https://silhouettecanada.ca/pages/cameo4srsltid=AfmBOor57f1DnpR-xqUFRvRA_Pj3njB1Sa7IQgAN-4seWBzreU7Urit8

Our Heat Press

For applying heat transfer vinyl to fabric we have a [Cricut EasyPress 2](#).

- **Size:** 12" x 10" size (30 cm x 25 cm)
- **Temperature:** Precise temperature control up to 400°F (205°C)
- **Insulated Safety Base**
- **Auto-shutoff feature**

See the official manual [here](#); See the Cricut Heat Guide [here](#)



Photo Credit: Cricut

<https://cricut.com/en-ca/heat-presses/cricut-easypress/easypress-9x9/new-open-box-cricut-easypress-2-raspberry---9-x-9/2010211.html>

Borrowing a Vinyl Cutter

The Makerspace also has a portable vinyl cutter, the [Silhouette Portrait 3](#), that can be borrowed from the Library Services desk.

- **Max Cutting Area:** 12 in. x 24 in. (mat);
12 in x 10 ft. (roll)
- **Max Media Thickness:** 2 mm

See the official manual [here](#)



Photo Credit: Silhouette Canada

<https://silhouettecanada.ca/pages/portrait-2?srsltid=AfmBOorT3QDVP1knLgO5ZJiMPqnjPEV5D8k-Ycqt1Jv-LUgqxqLZuYe>

Safety



Cutting blade hazard.

Avoid contact with the blade during operation or setup.



Keep hands out of the way of the cutter while in operation.

Moving parts can cause pinch points and lead to injury.



Be careful when using hand tools.

Cutting vinyl or transfer tape may require sharp tools (e.g., utility knives) which can cause cuts or injury.



Be careful of hot surfaces when using heat press.

Temperatures can exceed 300°F / 150°C and can cause severe burns.

Terminology	
Term	Definition
Cutting Mat	Sticky mat used to hold materials in place while cutting.
Weeding	Removing unwanted vinyl from around your design.
Weeding Tools	Assorted pick like tools used in the weeding process.
Adhesive Vinyl	Vinyl designed to be applied to a variety of hard surfaces like plastic, metals, glass and wood. Think stickers.
HTV (Heat Transfer Vinyl)	Vinyl designed to be applied to fabric with heat.
Transfer Tape	Sticky tape used to lift and place adhesive vinyl designs.
Silhouette Studio	Mark guidelines or sewing lines. Always test your marking device on a swatch of your fabric to avoid damage to material.
AutoBlade	Automatic blade that adjusts depth based on material settings.
Registration Marks	Printed marks used for aligning print-and-cut jobs.
Force	The pressure applied by the blade—can be adjusted in the software.
Passes	Number of times the blade goes over the same cut line—useful for thicker materials.
Heat Press	A machine that uses heat and pressure to permanently apply HTV to fabric and other materials. The Makerspace uses Cricut EasyPress 2.

Materials

A variety of vinyl is available in the Makerspace for student use, but the cutter can also handle other materials that you can bring yourself. Check with the Makerspace tutors to ensure your material is compatible with the machine before cutting!

The common colours of adhesive vinyl that the Makerspace typically stocks:

- Glossy - black, white, red, hot pink, yellow, orange, teal, light blue, dark blue, lavender, purple
- Metallic - gold

Some of the common materials the Silhouette Cameo 4 can cut include:

- vinyl (adhesive, permanent, heat transfer, stencil, window cling, glitter, dry erase, chalkboard, holographic)
- paper (printer, photo, crepe, washi, vellum, specialty patterned, freezer, wax, construction)
- cardstock and matboard (up to 2mm thick)
- fabric (with the appropriate iron-on interfacing)



Photo Credit: VViViD Self-Adhesive Craft Vinyl
<https://www.amazon.ca/VViViD-Self-Adhesive-Bundle-Including-Transfer>



Photo Credit: Stardustworkx Holographic Permanent Vinyl
<https://www.amazon.ca/Stardustworkx-Holographic-Vinyl-Permanent-Iridescent>



Photo Credit: HTVSTD Splatter Heat Transfer Vinyl
<https://www.amazon.ca/HTVSTD12x10InchesPatterned-Compatible-Silhouette>

Machine Diagrams

 silhouette

SILHOUETTE CAMEO® 4 PARTS MAP

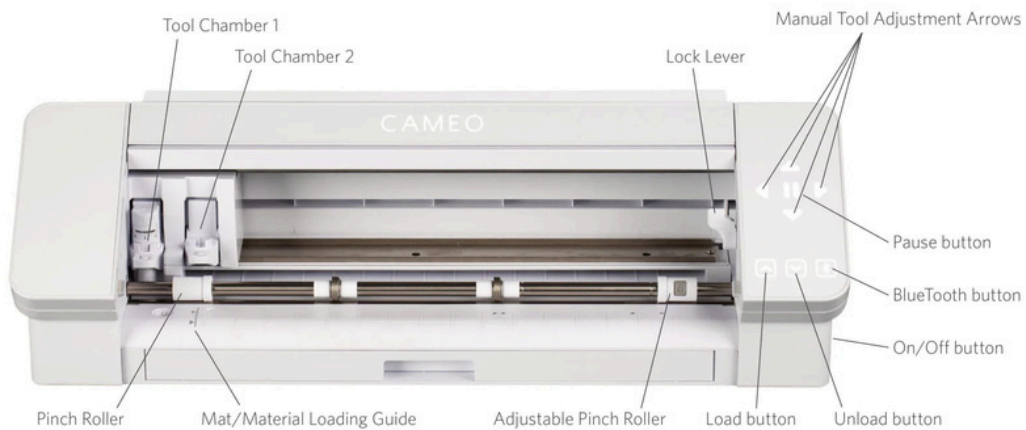
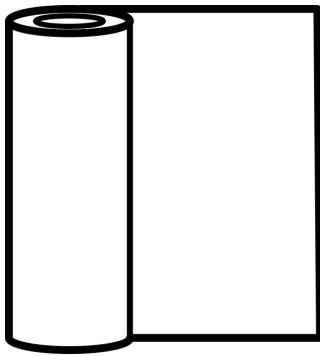


Photo Credit: Silhouette Canada
https://silhouettecanada.ca/pages/cameo4srs?lid=AfmBOor57f1DnpR-xqUFRvRA_Pj3njB1Sa7IQgAN-4seWBrzeU7Urit8

Checklist for Use

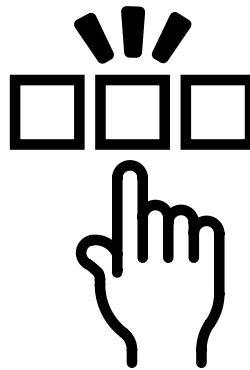
Follow this helpful overview of steps

6 Easy Steps for using the vinyl cutter



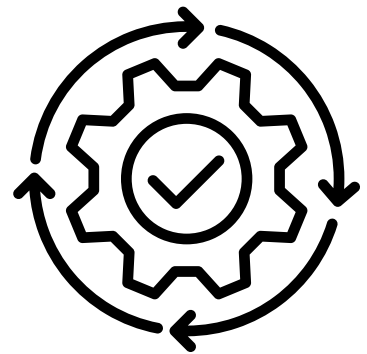
1. Determine

Choose the type of material (ex. HTV or adhesive vinyl)



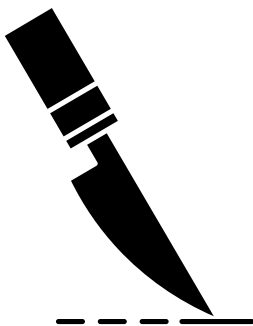
2. Select

Pick an appropriate image



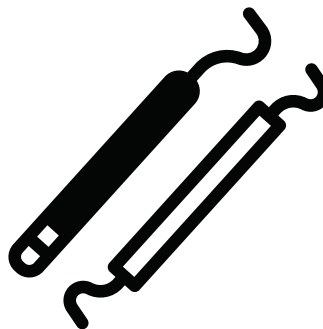
3. Prepare

Set up image in [Silhouette Studio](#)



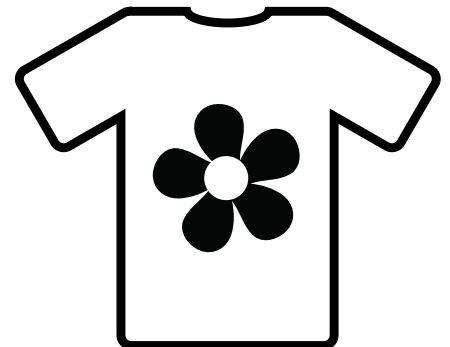
4. Load & Cut

Set up chosen material in Cameo 4



5. Weed

Remove the excess material



6. Apply

Attach vinyl to a surface

For more detailed instructions continue to pg.9

Steps for Vinyl Cutting

1. Determine

- a. Choose what type of material is needed for your project. There are two main types of vinyl to choose from:



Photo Credit: ORACAL, Michaels
<https://canada.michaels.com/product/cricut-premium-vinyl-permanent-12-x-48-10565153>



Photo Credit: Siser, Michaels
<https://canada.michaels.com/product/siser-metal-heat-transfer-vinyl-36-10667250?michaelsStore=3930&inv=2>



YouTube Video Tutorial

[Using the Vinyl Cutter for Adhesive Vinyl](#)



YouTube Video Tutorial

[Using the Vinyl Cutter for Heat Transfer Vinyl](#)

Steps for Vinyl Cutting

2. Select

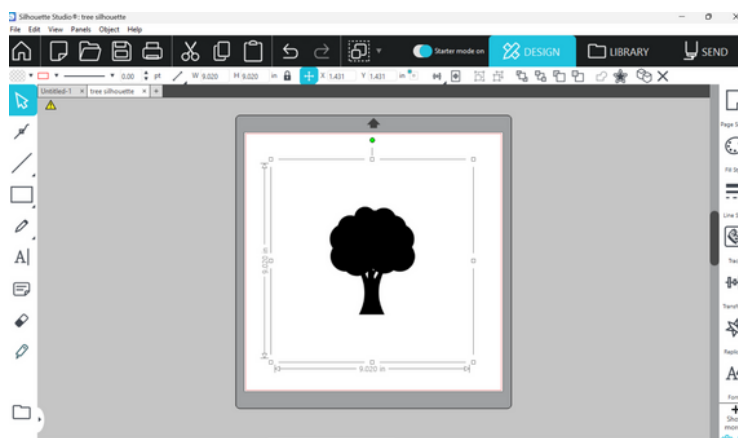
- a. To find an image online, select a search word and add the words “silhouette” or “decal.” For example, “bear decal” “tree silhouette.” Try to find an image that looks like it would work as a sticker.



- b. Save the image to the computer, or a memory stick. You can select any type of image file.

3. Format

- a. Open Silhouette Studio software. Click on file, open, and select the image you want to cut.

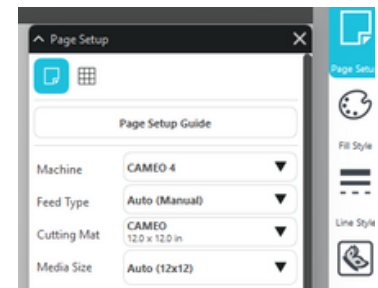


Steps for Vinyl Cutting

3. Format Continued

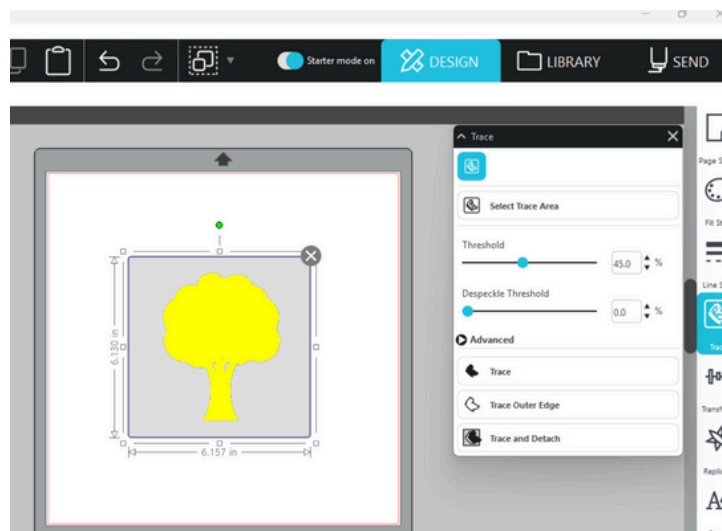
b. Re-size the image to the size you want to cut. You can cut more than one vinyl sticker per page if you would like.

c. The library has 12X12 and 12X24 size vinyl. You can change the size on the right hand side of your screen by selecting the “Page Setup” icon and selecting from the drop down menu under “Cutting Mat.” Make Sure that CAMEO 4 is selected as the machine.



d. Once your image is properly sized you need to turn your image into a cuttable file, by using the trace function. Click on Panels, then click on Trace. This will bring up the Trace window. Click on “select Trace Area.” Trace your image. The area that will be cut should appear in yellow. If you’re satisfied, click on Trace at the bottom of the Trace window.

e. If you are using heat transfer vinyl (HTV) your image must be mirrored!



Steps for Vinyl Cutting

4. Load & Cut

- a. Stick your vinyl face up to the sticky side of the plastic grid, ensuring the paper is lined up.



Photo Credit: Silhouette School Blog
<https://www.silhouetteschoolblog.com/2022/01/how-to-cut-vinyl-with-silhouette-cameo.html>

- b. Line up your grid with the blue line on the left side of the vinyl cutter. Select “load” on the screen.



Photo Credit: Silhouette School Blog
<https://www.silhouetteschoolblog.com/2022/01/how-to-cut-vinyl-with-silhouette-cameo.html>

- c. Once your vinyl is loaded, in the Silhouette Software, hit the blue “Send” button at the bottom of the screen to send your file to be cut.
- d. The vinyl cutter will cut the vinyl. Once it is finished press “unload” on the screen.

Steps for Vinyl Cutting

Adhesive and Permanent Vinyl

5.1 Prepare

- Use one of the weeding tools to remove the excess vinyl that is not part of your design. Be sure to remove inner parts that are not part of the design as well.
- Once you're done "weeding" you should be left with only your design.



Photo Credit: Silhouette School Blog
<https://www.silhouetteschoolblog.com/2022/01/how-to-cut-vinyl-with-silhouette-cameo.html>

- Cut a piece of transfer paper that is larger than the vinyl decal.
- Carefully lay the transfer paper onto the vinyl. Use the roller to ensure the vinyl is firmly stuck to the transfer paper.

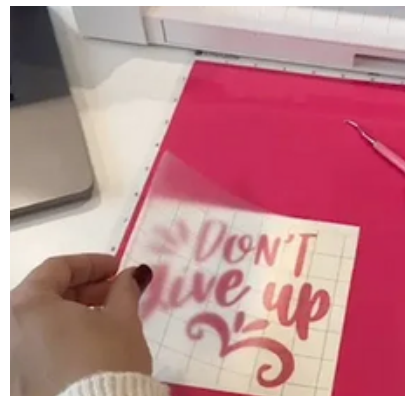


Photo Credit: Silhouette School Blog
<https://www.silhouetteschoolblog.com/2022/01/how-to-cut-vinyl-with-silhouette-cameo.html>

Steps for Vinyl Cutting

Adhesive and Permanent Vinyl

6.1 Apply

- a. Once you're ready to apply your vinyl to a surface (wall, laptop, etc.) you need to remove the backing.
- b. Starting from the corner, slowly peel the transfer paper up, bringing the vinyl with it.
- c. The vinyl should now be separated from the vinyl backing and the sticky side of the vinyl should be exposed.
- d. Position the vinyl on the surface. Using a roller, credit card, or other flat surface burnish the vinyl onto the surface through the transfer paper.
- e. Starting with one corner, slowly peel away the transfer paper, ensuring the vinyl design stays on the surface and doesn't come away with the transfer paper.



Photo Credit: Silhouette School Blog
<https://www.silhouetteschoolblog.com/2022/01/how-to-cut-vinyl-with-silhouette-cameo.html>

Steps for Vinyl Cutting

Heat Transfer Vinyl

5.2 Prepare

- Use one of the weeding tools to remove the excess vinyl that is not part of your design. Be sure to remove inner parts that are not part of the design as well.
- The design should remain on the plastic carrier sheet.



Photo Credit: Silhouette School Blog
<https://www.silhouetteschoolblog.com/2022/01/how-to-cut-vinyl-with-silhouette-cameo.html>

6.2 Apply

- Preheat your heat press (Cricut EasyPress 2) based on your HTV and fabric type.

Common settings:

- Standard HTV on cotton
 - Temperature:** 305°F (150°C)
 - Time:** 15 seconds
 - Pressure:** Firm

For more guidance on temperature see [Cricut Heat Press Guide](#)



- Place the fabric item on an EasyPress mat (or towel).
- Pre-iron your fabric making sure it is flat and wrinkle free.

Steps for Vinyl Cutting

Heat Transfer Vinyl

6.2 Apply Continued

- d. Position your weeded design on the fabric with the shiny side (carrier sheet) facing up.
- e. Apply the heat press:
 - Place it firmly over the design
 - Press for 15 seconds with firm, even pressure
- f. Remove the EasyPress and let the vinyl cool slightly.
- g. Peel the carrier sheet; hot or cold peel depending on vinyl type (check HTV instructions).



Photo Credit: Cricut Brasil

<https://www.cricutbrasil.com.br/prensa-termica-cricut-easypress-2-110v-30x25cm-branco-framboesa-p1005686?srlid=AfmBOoox-7YDwVUvmjH3f5pGB0PatEUQQGizAST1CalaT6b1ZA0kA9eM>



YouTube Video Tutorial

[Using the Cricut EasyPress 2](#)

Troubleshooting

Tips for best results:

- Perform a test cut before every new material.
- Use good lighting for weeding small details.
- Store vinyl in a cool, dry place to prevent curling.
- Use scraper to firmly apply vinyl and remove air bubbles.

Common Issues		
Problem	Likely Cause	Fix
Material not cutting through	Blade depth too shallow or force too low.	Increase blade depth or force setting in Silhouette Studio.
Cutting too deep / through backing	Blade depth too high or wrong material selected.	Reduce blade depth or double-check material type in software.
Vinyl not loading straight	Material not aligned with guides.	Align material to the left and ensure rollers are gripping evenly.
Cuts not aligned properly	Design shifted or mat not loaded correctly.	Re-check design placement, re-load mat or material carefully.
Design doesn't cut completely	Low force or single pass setting.	Increase force or number of passes.

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I acknowledge the use of ChatGPT (<https://chat.openai.com/>) to help develop this instructional guide.

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