

Training Guide: Cutters

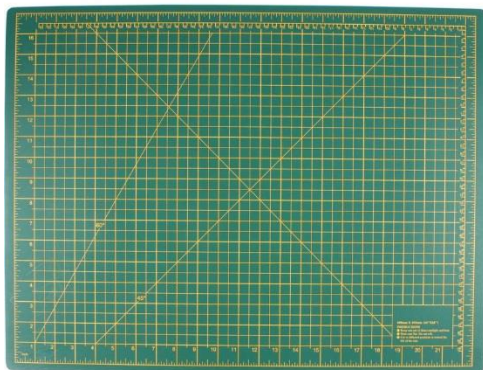
INTRODUCTION:

There are many different types of mechanical cutters made for many different applications. The proper cutter choice is dependent on the material the maker is working with, as well as desired outcome. All types of cutters typically have a blade and a handle, with the handle often covered by a grip of some sort.

For safe and efficient cutting, it is best to secure the material to a fixed surface, on top of a sacrificial material such as MDF fiberboard or a “self-healing” plastic cutting mat. Cutters work by holding the handle and applying force as the blade makes contact with the fixed material. The user drags in the direction of desired cut or puncture. It is important not to aim the blade away from the user’s body while operating, and to maintain the desired blade angle. Several operations may be needed to cut through the entire material.

No matter what kind of cutter you’re using, the most important thing is that the user is operating it properly. Cutters can be used safely by anyone who can understand how to use it properly.

CUTTER ACCESSORIES



Self-Healing Plastic Cutting Mat



Bar Clamp

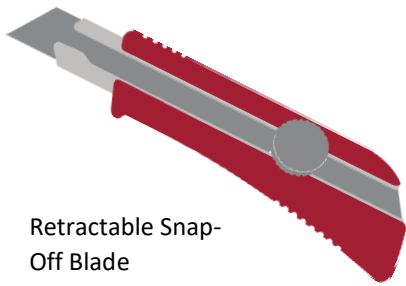


Cork-backed ruler

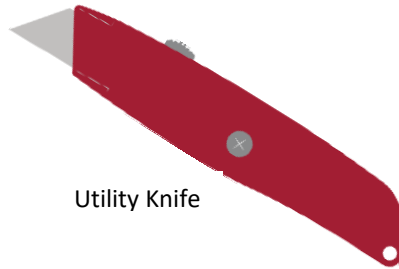
AFTER COMPLETING THIS TRAINING, STUDENTS WILL BE ABLE TO:

- Assess what type of cutter is appropriate for a given application
- Secure the work piece if necessary
- Complete the cut taking proper safety precautions
- Secure or cover the blade after use if applicable

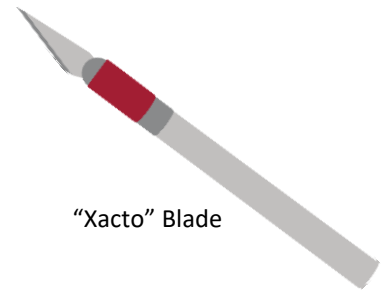
HOW TO USE:



Retractable Snap-Off Blade



Utility Knife



"Xacto" Blade

1. Draw intended cut on workpiece or secure template.
2. Obtain a cutting surface such as a self-healing plastic cutting mat or MDF fiberboard.
3. Secure the material with a clamp or hold it down firmly with your hand. Check that your hand is not in the path of the intended cut.
4. Align a cork-backed ruler with the desired cut to run your blade against during the cut.
5. Keep blade vertical and run it against the cork-backed ruler while cutting.
6. Repeat cut line as necessary.
7. Retract or store the blade when not in use.

SAFETY GUIDELINES FOR OPERATING CUTTERS:

- Check that the blade is not dull or damaged. A dull blade is very dangerous as it can cause the user to use too much force and cut themselves instead of the materials. Replace or snap off the blade as needed.
- Cut on a sacrificial material such as MDF fiberboard or a "self-healing" plastic cutting mat to protect the surface below
- Make sure blade is not exposed when tool is not in use
- Never aim the blade toward the body
- Dispose of used blades in an appropriate "sharps" container

PRACTICE APPLICATIONS FOR STUDENTS:

- Straight cut
- Curved cut using template
- Curved cut using drawn-on template
- Cut non-circular holes
- Secure straight-edge for precise cut