

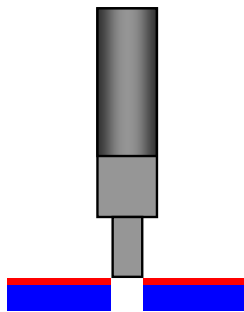
How to Choose a Parallel Cutter

Ordering & Application Information

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Typical Applications

Typical applications for parallel cutters include cutting holes and routing flexible engraving plastic.



Parallel Cutter

Type of Cut

The main difference between parallel cutters and standard engraving cutters is that the cut is vertical rather than beveled.

How to Order

- 1) Choose the cutter family by the material you are engraving or cutting and the cutter composition (see chart below). For soft plastic, choose either carbide or High Speed Steel (HSS). Carbide lasts longer but costs more than High Speed Steel (HSS). For metal, carbide is recommended.

33909	1/8 Ferrous metal - HSS
33865	1/8 Gravoply - carbide
33844	1/8 Phenolic- Carbide
34183	1/4 Ferrous metal- carbide
34197	1/4 Gravoply - carbide
34170	1/4 Phenolic - carbide
34118	11/64 Acrylic - carbide
34085	11/64 Acrylic - HSS
34034	11/64 Aluminum - carbide
34074	11/64 Ferrous metal - HSS
34010	11/64 Ferrous metal - carbide
34023	11/64 Gravoply - carbide
33999	11/64 Phenolic - carbide

- 2) Specify the tip diameter size.

- Tip sizes can be specified from 0.015" to the shank diameter.

- 3) Specify the cutting depth.

- For best strength, specify tip length up to 1.5 times the tip diameter
- Tip lengths > 1.5 x tip size can be specified, but they will tend to break easier.

- 4) Call Customer Service at 1-800-843-7637 to place order.

Parallel Cutters vs. Engraving Cutters Where Tip Size Equals Shank Diameter

Standard conical cutters with tip size equal to shank size will also provide a vertical cut. The difference is that the cutting depth is fixed with engraving cutters but can be specified with parallel cutters.

Typically, the cutting depth of engraving cutters with tip size equal to shank diameter is in the range of 0.125" - 0.150". These are primarily for engraving applications but can also be used for routing.

Application Tips

End mills for routing plastic are not recommended due to cost & performance. In particular, routing acrylic with end mills tends to melt the plastic, causing it to bind to the cutter, clog the nozzle and leave hard clumps of white plastic in the cut grooves. End mills are designed for use in metal substrates.

Cutting or routing 1/8" acrylic is best performed with a 90 x 150 parallel cutter (0.090" tip and 0.150 length). The carbide tool is pn 34118 and the HSS tool is 34085. Cutting in one pass can be accomplished with the 200 watt spindle motor. Cut in multiple passes when using the 80 watt spindle motor.

Cutting or routing 1/4" acrylic is best performed with a 171 x 275 parallel cutter (0.171" tip and 0.275 length). The carbide tool is pn 34118 and the HSS tool is 34085. This should be cut in multiple passes.

Radius Cutters

Radius cutters are similar to parallel cutters except for having a rounded shape. These are specified the same. Available in HSS or carbide for tip sizes at least 0.030". Applications include reverse engraving, 3D contouring & gasket grooves.