

CUTTING AND CUT-OUTS

Introduction

This bulletin discusses cutting and the creation of cut-outs during fabrication of Corian® Solid Surface. The following cut-outs are for room temperature applications only. High temperature applications such as hob cut-outs require other specific fabrication techniques. Please refer to specific Fabrication and Technical Bulletins for more information.

Overview

Proper placement and fabrication of seams will impact the cost of fabrication and the quality of the installation. Proper cut-outs and cut-out support structures are essential.

A. Cutting list

It is important to examine each cut and seam considering design, support requirements and sheet yield. A comprehensive cutting list is essential for cost-effective fabrication of Corian® Solid Surface. From job templates or job drawings, calculate the best yield with seam placement and installation in mind.

Steps to completion:

1. Get job drawings from office.
2. From plan drawings, determine the quantity of raw sheet and shape material required, including all individual pieces. Don't forget to allow for saw cuts and a minimum 3 mm total gap for expansion.
3. Draw diagrams of the sheets to scale, and draw on the diagram all parts required to fabricate the planned job.
4. Clearly number all parts and transfer these numbers back to the plan for cross-reference.

HELPFUL HINTS

Handle work in progress with extreme care to ensure no breakage occurs. Corian® Solid Surface is more susceptible to damage when it is partially fabricated without full support.

B. Cut-out templates

The use of an accurate template is one of the most essential elements for the successful fabrication of a cut-out in Corian® Solid Surface. More information on template materials and manufacture can be found in *Corian® Solid Surface Fabrication/Installation Fundamentals – Site Preparation and Templating* (K-25287).

Complete the construction of a cut-out template using standard good carpentry practice. It is important that the templates do not shrink, deflect or warp, but instead provide a true and long-lasting tool.

The minimum inside corner radius for all cut-outs in Corian® Solid Surface is 5 mm.

Cut-out templates can be made by using the following methods. The following methods require the use of a bottom bearing trimming cutter, or in the case of a paper template pattern a 10 mm diameter router cutter and a 30 mm template guide. Be sure that template material is thicker than the vertical collar of the template guide.

C. Making cut-out templates

Seamed Undermount Bowls

Steps to completion:

1. Select template material and cut to size.
2. Cover the vertical upper edge of inside of bowl with two layers of masking tape. Make sure that the tape is laying flat with no wrinkles. Use hot-melt glue on flange of sink to fasten sink to template material.
3. Carefully drill a hole away from the flange towards the centre of the sink in the template material.

Caution: Do not drill into the bowl flange.

4. Install a flush-cut bottom bearing cutter in a router, and set depth so that the roller bearing is about 1 mm below the bottom of the template material.
5. Carefully rout around the inside of the bowl.

6. Spray denatured alcohol¹ on the hot-melt glue to loosen it, and separate bowl and template. Be sure to remove all hot-melt glue from bowl flange.
7. Sand around inside of cut-out to remove routing marks and ease edges of opening.
8. Mark template with bowl model.

Making a hard template from a paper pattern

This procedure works best using a 10 mm diameter router cutter and 30 mm template guide.

1. Locate paper template, 10 mm router cutter and 30 mm template guide.
2. Locate solid line on paper template representing the shape and size of the required cut-out opening.
3. Scribe a new line around the inside of the solid black cut-out opening line on the paper template. The new line should be scribed 20 mm inside the line representing the required opening.
4. Use scissors or a sharp construction knife to carefully cut paper template on the scribed line. Save the inside piece.
5. Carefully trace the shape of inside paper piece onto a piece of plywood or MDF.
6. Use a jig saw to cut out the shape. Stay just outside of the line.
7. Sand the plug back to the line. Make the plug as smooth and perfectly shaped as possible.
8. Mark the plug for bowl model, manufacturer, cutter and template guide size.
9. Select material for the template and cut to size.
10. Place template material on sturdy supports and clamp securely.
11. Centre plug on template material, and screw through plug and template material into supports underneath.
12. Use a router equipped with a 10 mm diameter cutter and 30 mm template guide to carefully rout around the outside of the plug. Remember to go left to right (anticlockwise) around plug.
13. Sand template smooth to remove routing marks and to ease edges of opening.
14. Mark template for bowl model, manufacturer, cutter and template guide size.
15. Set plug aside to remake template when needed.

D. Making cut-outs

Cut-outs in Corian® Solid Surface are best done in the workshop, where the fabricator has the best working conditions. **Sometimes cut-outs must be made on the job site, but this is the least desirable way due to dust considerations.**

Steps to completion:

1. Select the proper cut-out template and clamp securely on worktop.
2. Cut-outs must be done with a router and a sharp straight cutter, 10 mm diameter minimum. This is the only recommended tool for this procedure.
3. Rout around the inside of the template, clockwise.
4. The cut-out area has to be correctly supported to avoid the waste material plug dropping before the cut is complete, as this can cause a crack in the sheet. If no support under the cut-out is possible, rout a partial cut-out on opposite edges, apply some stop blocks on the top with hot melt glue overlapping the cut-out line, then complete the cut-out (see Figure D-1).
5. Top and bottom edges must be smoothed to a minimum radius of 1.5 mm. Sand all inside edges removing any chatter marks.

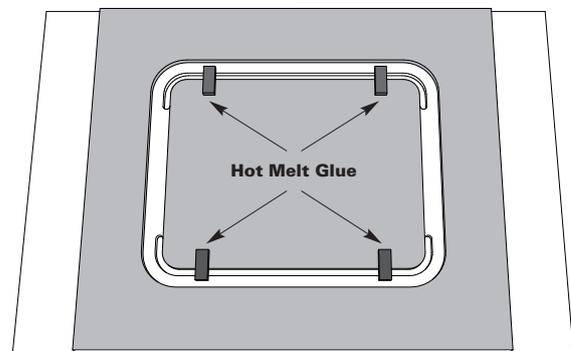


Figure D-1

An alternative is to make a “partial cut-out” in the workshop to leave most of the dust in the workshop. The worktop is then transported to the job site where the installer completes the cut-out.

¹ Denatured alcohol is the preferred solvent for cleaning Corian® Solid Surface products. Acetone is approved for cleaning in regions where denatured alcohol is prohibited. Please see *Corian® Solid Surface Fabrication/Installation Fundamentals – Approved Cleaning Solvents (K-25701)* for more details.

Steps to completion:

1. Select the proper cut-out template and clamp securely on worktop.
2. Rout an elongated “C” around the inside of the template along the back and front of the worktop.
3. Complete cutting the “C” up each side of the cut-out about 75 mm to 100 mm, or out far enough to clear any obstacles on the job.
4. Leave the centre intact for added strength during transportation.

A sheet with cut-outs needs special care during handling and transportation. See *Corian® Solid Surface Fabrication/Installation Fundamentals – Transportation and Installation* (K-25299) for more details.

E. High-strength cut-outs

DuPont requires that heat-generating appliances have high-strength cut-outs. This technique is the best way known to avoid cracking around heat generating appliances. Due to the differences in equipment and usage the guidance is different for residential and commercial use. Contact your authorised distributor of Corian® Solid Surface for additional guidance. There are specific guidelines for hob integration in EMEA. Please see *Corian® Solid Surface Technical Bulletin – Residential Hob Cut-outs (EMEA)*.

F. Referenced documents

Corian® Solid Surface Fabrication/Installation Fundamentals – Site Preparation and Templating (K-25287)

Corian® Solid Surface Fabrication/Installation Fundamentals – Transportation and Installation (K-25299)

Corian® Solid Surface Fabrication/Installation Fundamentals – Approved Cleaning Solvents (K-25701)

Corian® Solid Surface Technical Bulletin – Residential Hob Cut-outs (EMEA).

PLEASE VISIT OUR WEB SITE: WWW.CORIAN.UK OR CONTACT YOUR CORIAN® REPRESENTATIVE FOR MORE INFORMATION ABOUT CORIAN® SOLID SURFACE.

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