

Fabrication

Cutting the Slab

IMPORTANT! Use only water-cooled tools for cutting, drilling and polishing in order to prevent overheating and generating dust.

If Alito is dry cut, the generated heat will undermine its physical properties and make it more susceptible to cracking, chipping, discoloration and other damages.

Any issues or failures caused by dry cutting are not covered by the Alito warranty.

REMOVE SLAB PERIMETER

Before cutting to plan, cut a minimal amount off the outer perimeter of the slab in order to straighten the edges. Before the slab is cut, check the color match of the pieces to be seamed. Use a silica stone to keep diamond cutting tools sharp.

Full Body Cutting Considerations

Alito slabs are full body in that the materials are integral to the body of the slab, rather than limited to a surface layer or printed on the top.

The veins in Alito slabs are not designed to penetrate the whole depth of the slab. In some cases, they can reach the back of 20 mm slabs but as this is not the case in all slabs, applications cannot be planned assuming this.

If it is necessary for the design to appear on both sides of the slab, we recommend joining two slabs with the top surfaces facing outwards.

We do not recommend polishing the back of slabs as the factory-polished side can easily be damaged during the process.

Cutting Straight Lines

AUTOMATED

Machine cut straight lines with a CNC.

Be sure to use the correct diameter diamond disk for the machine and the material.

Cutting Curved Lines

AUTOMATED

Machine cut curved lines by one of the following

methods: CNC with water-cooled diamond finger

bit Water jet cutter

MANUAL

Cut curved lines manually by one of the following

methods: Router with water-cooled diamond finger

bit grinding wheel with water-cooled concave

diamond disk



Cutting Holes

AUTOMATED

Machine cut holes by one of the following

methods: Drill with water-cooled diamond

core bitCNC with water-cooled diamond

core bit Water jet cutter

MANUAL Cut holes manually with a carbide-

tipped drill bit (for small holes) or a diamond

core bit mounted on a suitable water-cooled

angle grinder or manual drill (for larger holes).

Seams

BONDING AREA FOR ADHESIVE

Cut an X-shaped pattern approximately 1 mm ($1/32$ ") deep in the edges to be seamed in order to enhance the bonding area for the adhesive.

SUPPORT STRIPS

Attach wooden support strips to the cabinetry under seams. The center of the seam should rest on the support strip.

SUPPORT IN AREAS OF HEAT

We suggest the use of a full sub-deck for added support in areas of

heat. Do not polish seams on Alito.

Use of acetone is forbidden on Alito surfaces. Alcohol is recommended for cleaning during installation.

Cutouts

Cutouts are usually created in countertops for the installation of sinks, cooktops/hobs and other fixtures.

Fabricate cutouts according to the instructions of the fixture manufacturer.

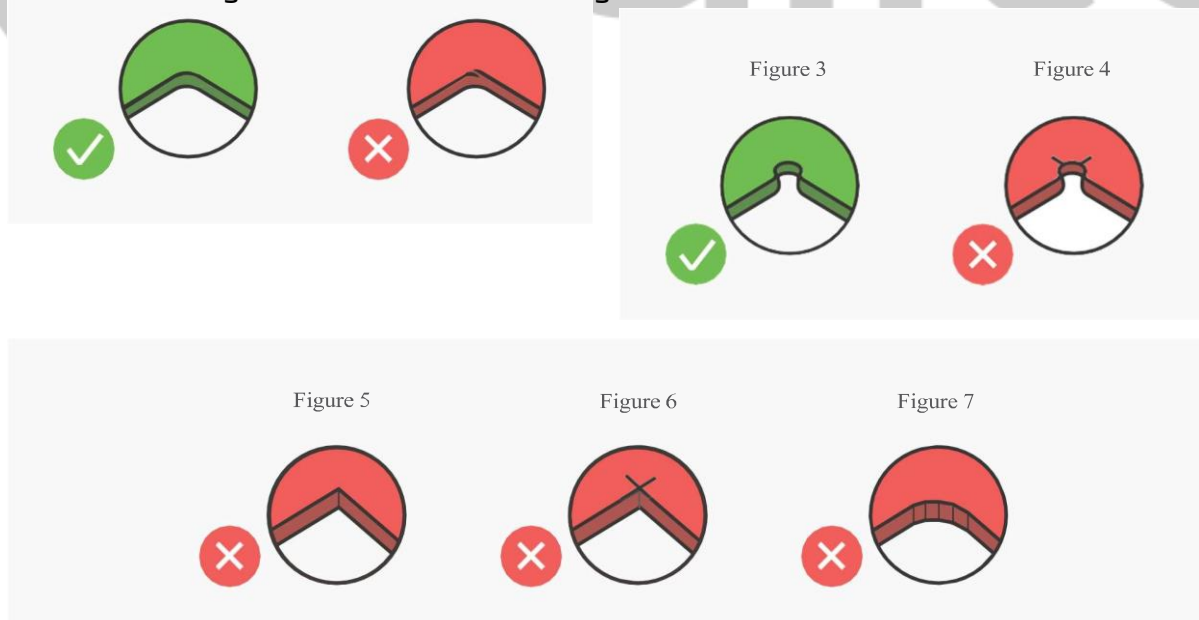
Fabricate a minimum radius of 10 mm ($\frac{3}{8}$ ") with a core bit/cup drill for all seen and unseen corners in cutouts; see figure 1. The larger the radius, the stronger the corner.

In the event that fabricating a 10 mm ($\frac{3}{8}$ ") cutout corner radius would prevent the proper installation of an item that requires a 90° angle corner, drill beyond the corner with a core bit/cup drill; see figure 3.

Take care not to cut beyond the rounded edge in cutouts as in figures 2 and 4. Damage to the area may lead to the formation of hairline cracks.

Do not cut square corners or cross cut corners as in figures 5 and

6. Do not cut a large radius in sections as in figure 7.



Do not reduce the thickness of the surface when preparing the cutout.

The distance between a cutout and an edge or seam must be no less than 60 mm (2 $\frac{3}{8}$ "). The greater the distance, the stronger the area.

If the distance between a cutout and an edge or seam is less than 150 mm (6"), the area must be supported by a support strip of Alito.

Fabricating Cutouts for Fixtures

It is generally necessary to install fixtures such as sinks and cooktops/hobs in countertops.

Below are the main methods of installing fixtures, each of which requires a different type of cutout fabrication.

Ensure that the fixture is fully supported inside the cabinet, e.g., by support rails or legs connected to the cabinet, in addition to being attached to the Alito surface.

OVERMOUNT INSTALLATION

In over mount installation, the lip of the cooktop/hob or sink extends above the surface and rests on it.

Smooth the edge of the cutout and leave it unpolished. Leave a space between the fixture wall and the surface.



FLUSH-TO-BOWL

UNDERMOUNT

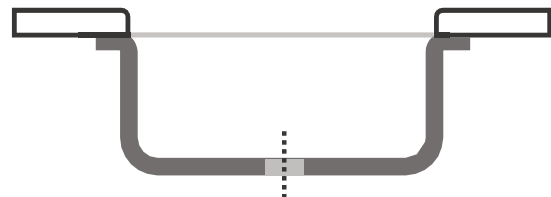
INSTALLATION

Some installations require a cutout that is flush to the inside wall of the sink. This typically reduces the exposure of the bonded edges but is difficult to produce exactly to match the sink.



STEPPED BACK TO CURVE OR BEVEL OF BOWL INSTALLATION

Some installations and most templates provided by sink manufacturers have the finished edge of the counter set back to the

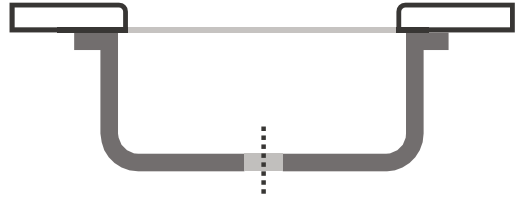


edge of the rounded or beveled top of the sink bowl with a minimum amount of flat deck of the sink showing.

OVERHANG INTO BOWL UNDERMOUNT INSTALLATION

In under mount installation, the sink is positioned underneath the surface.

Fabricate the cutout slightly smaller than the sink aperture so that the join between the sink and the surface is not visible. Round or bevel the top and bottom edges. Polish the edges of cutout.



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Fabricating Edges

VISIBLE EDGES

All visible edges must be polished to the same finish as the surface.

TOP OF EDGES

The top of edges must be rounded or beveled. Do not create square edges.

MINIMUM EDGE PROFILE

All edges must have a minimum edge profile of 3 mm ($1/8"$). The larger the surface area of the edge, the more resistant it is to chipping.

EDGE DETAILS

The most common edge details are radius or 45° bevel; however, there is a very wide range of detail options.

CONFIRM WITH CUSTOMER

Before cutting, visually confirm the edge profile with the customer as edge terminology can vary between different companies and regions.

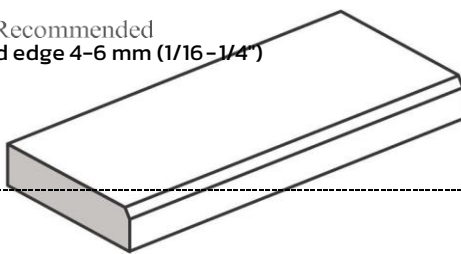
Single Thickness Edges

Single thickness edges are the original thickness of the slab.

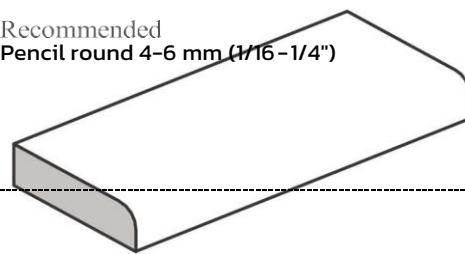
Single thickness edges are easily and quickly fabricated.

Most automated edge profiling machinery is designed to create single thickness edges.

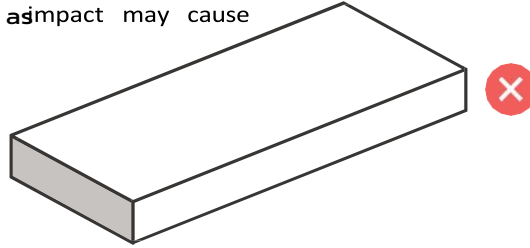
Recommended
Beveled edge 4-6 mm ($1/16$ - $1/4"$)



Recommended
Pencil round 4-6 mm ($1/16$ - $1/4"$)

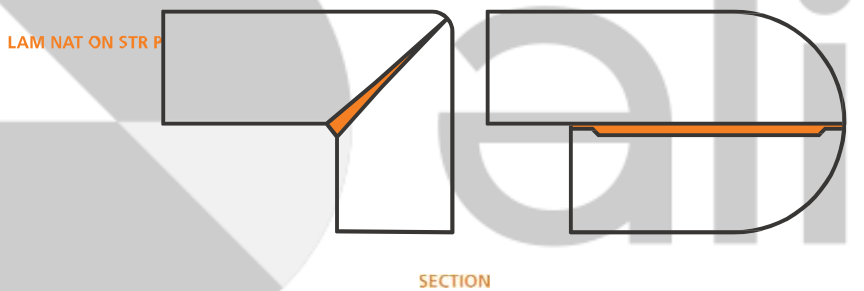


Square edge not recommended as impact may cause chipping



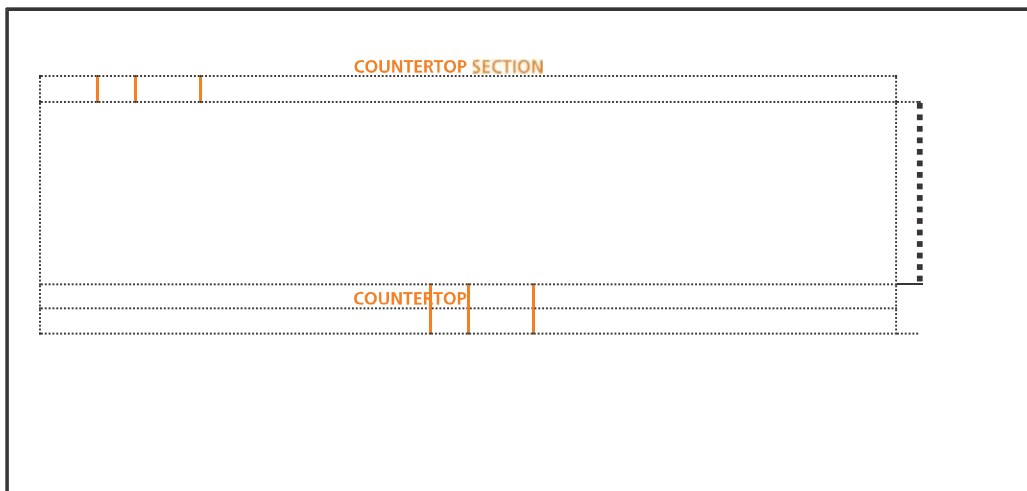
Laminated Edges

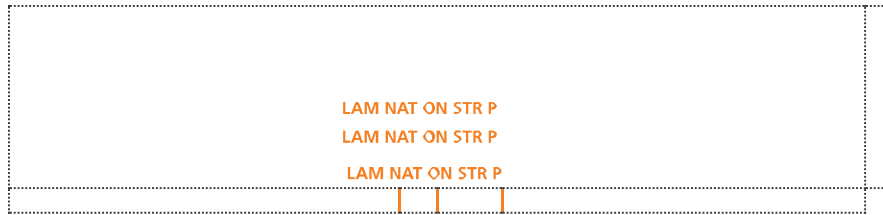
Lamination is the process of gluing one or more strips of Alito along the bottom edge of another piece of Alito in order to create the illusion of a thicker slab. This process is more complex and time consuming than fabricating single-thickness edges; however, it produces a richer aesthetic effect.



COLOR MATCH LAMINATION STRIPS

Cut lamination strips from the same slab as the countertop, and wherever possible from the same saw cut to ensure a color match; see below.





ALIGN JOINS WITH SEAMS

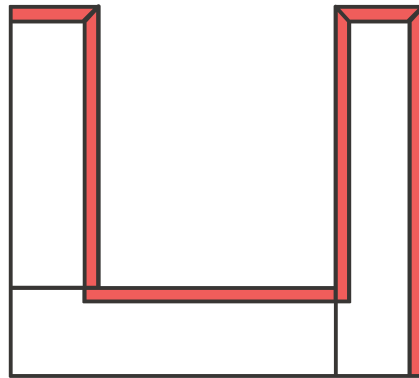
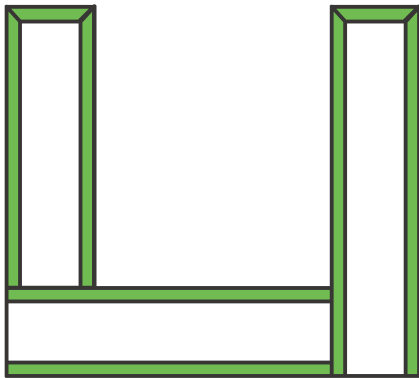
The lamination strip should be the same length as the piece of surface to which it is attached. Joins in lamination strips will, therefore, be aligned with the surface seams.

MITER CUT EDGES

The preferred method of laminating edges requiring longer edge skirts is the miter cut; see section 8.4.4.

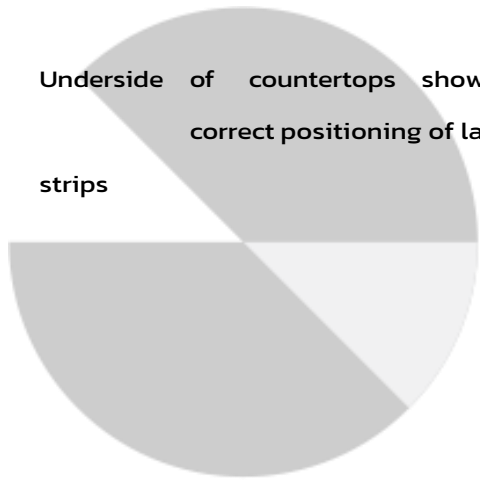


POSITIONING LAMINATION STRIPS



Underside of countertops showing
correct positioning of lamination
strips

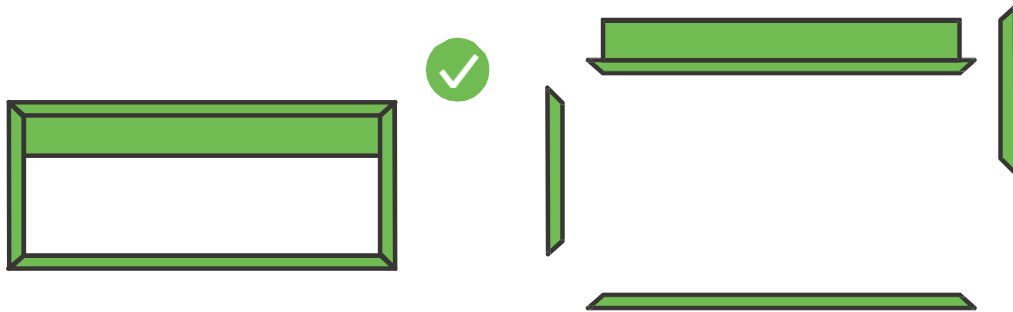
Underside of countertops showing
incorrect Positioning of lamination
strips



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Underside of island bar showing lamination strips in place plus an exploded view of the lamination pieces. Island bar laminations should follow the full perimeter of the countertops. If you require a full thickness lamination under the overhang use a separate infill piece as shown here.



Multilayered Edges

Characteristics of Multilayered Edges

Multilayered edges are fabricated by adding one or more lamination strips underneath the outer edge of the surface.

Triple or more edges enable various design options such as using lamination strips of different thicknesses and/or colors, and by recessing one or more of the lamination strips.

This is the method used for creating the popular double bullnose.

Fabrication of Multilayered Edges

REDUCE

Before gluing the lamination strip to the underside of the surface, reduce the lamination strip from approximately 3 mm ($\frac{1}{8}$ ") behind the edge to ensure flush closure of the visible joint and to leave space for the adhesive. Leave a few unreduced points on the strip to maintain the full height of the strip when attached to the surface.

CHECK FLUSH JOINT

Place the reduced lamination strip against the underside of the surface to check the closure of the joint. If it is not perfectly flush, smooth the points of contact until the edges are flush.

GLUE

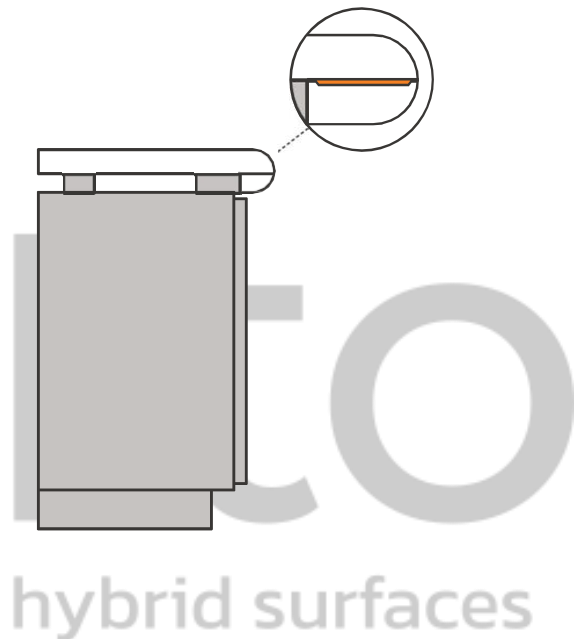
Glue the lamination strip to the surface.

CLAMP

Clamp the strip to the surface at regular intervals, sufficient to achieve a good, even bond between the two surfaces whilst eliminating any visible glue lines.

POLISH

After gluing the lamination strip to the surface, polish the entire visible area of the edge.





Miter Edges

Characteristics of Miter Edges

Miter edges allow the fabrication of edges of any height. The height of the edge is independent of the thickness of the slab. Miter edges enable the continuation of a pattern around an edge. Miter edges can be used to create edge profiles of various depths. It is not necessary to polish the vertical part of the miter as the visible area is the polished surface of the slab.

Fabrication of Miter Edges

CUT STRIP

Cut a strip from the slab. The width of the strip must be the same as the height required for the miter edge.

For miter edges on Alito models with prominent designs, cut the slab at the location planned for the miter join for continuation of the slab pattern.

STANDARD MITER JOIN

Fabricate miter edges at a 45° angle to ensure maximum strength and enable a final edge

angle of 90°. An angle of less than 45° makes the edge prone to chipping. Distribute the adhesive evenly throughout the joint. Polish the miter edge to a radius or bevel profile as required.

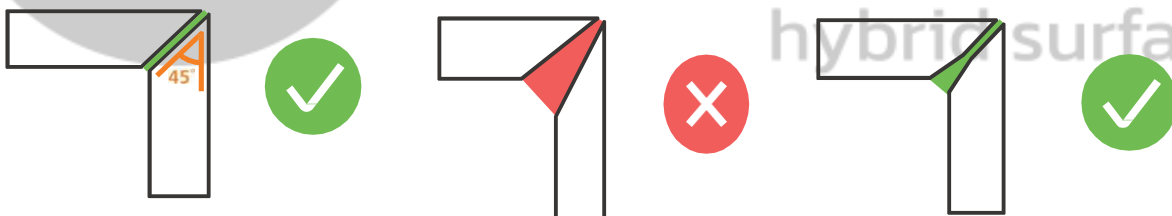
A join in the middle of a small radius or bevel makes the edge prone to chipping. It is therefore recommended to create a large radius.

HIGH-STRENGTH MITER JOIN

For areas subject to greater stress, after cutting the 45° angle, reduce the angle slightly on the back part of the miter with a manual tool to create space for the adhesive. This allows for a stronger joint and flush closure on the visible part of the miter.

DO NOT CREATE ANGLES LESS THAN 45°

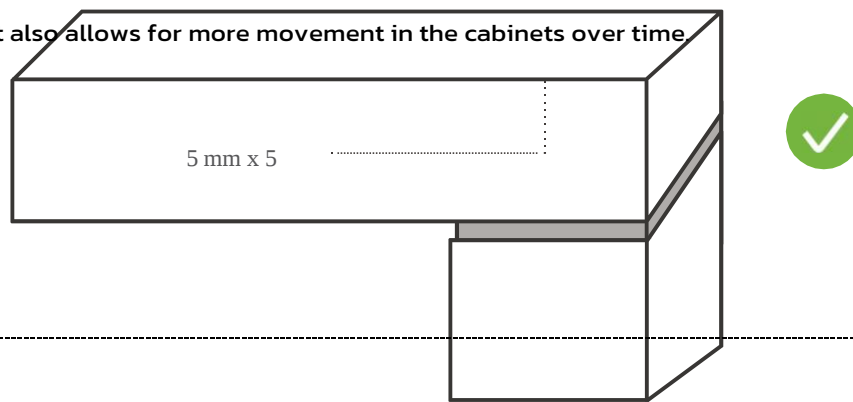
These joins produce a thin wedge at the tip of the miter, making it more susceptible to chipping or breaking. Also, the greater the edge radius, the more joint adhesive is visible.



It is recommended to use a miter clamp in order to create an accurate 90° angle, to tighten the joint and prevent the adhesive showing.

SHADOW LINE

Another alternative is to use a 5 mm x 5 mm shadow line join. This join is recommended for waterfall ends that reach the floor. It also allows for more movement in the cabinets over time.



Polishing Edges

Follow the guidelines below to achieve an edge polish equal to the factory surface polish.

General Guidelines

Never polish the face of the surface, only the edge! Ensure that the area to be polished is clean of debris.

Use water-cooled tools for polishing; dry polishing may overheat and damage the area.

Use a polishing bob/drum for polishing rounded or curved inside corners and small cutouts with exposed edges.

Each stage of polishing should remove the marks of the previous stage. When a uniform finish is achieved, progress to the next stage.

Do not polish edge profiles in excess of the factory surface polish.

When a significant amount of material must be removed from the edge, a water-cooled diamond grinding wheel can be used before the coarsest pad.

It is recommended NOT to use polishing stones for manual polishing.

Methods

Edges may be polished using 4-step wet polishing pads for quartz; or with the traditional polishing method detailed below:

Use suitable diamond polishing pads with water.

Perform polishing by progressing through the various grit sizes from course (lower number) to fine (higher number).

Polish edge profiles in a progressive manner according to the tables provided.



Polished Finishes

Polished finishes are smooth and shiny.

Create polished finishes by using diamond polishing pads.

Avoid over polishing, i.e., do not use a 3000 grit pad, as this will make the polished area shinier than the surface.

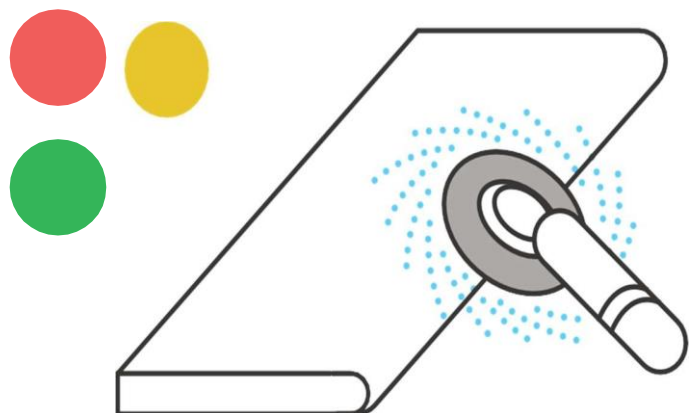
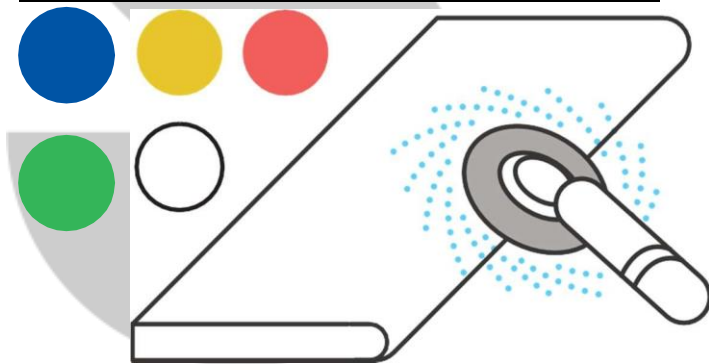
ACCESSORY	GRIT SIZE
Green diamond polishing pad	60
Black diamond polishing pad	80
Red diamond polishing pad	120
Yellow diamond polishing pad	400
White diamond polishing pad	800
Blue diamond polishing pad	1500

Concrete, Honed/Matt and Natural Finishes

These finishes are smooth but not shiny.

Create these finishes by using diamond polishing pads up to 400 grit depending on the finish.

ACCESSORY	GRIT SIZE
Green diamond polishing pad	60
Black diamond polishing pad	80
Red diamond polishing pad	120
Yellow diamond polishing pad	400



Support Strips

Glue support strips of Alito or solid timber to the underside of the edge in order to raise and support the edge where a laminated edge would hinder the opening of the cabinet doors. This also strengthens the edge.

WHOLE LENGTH FRONT AND BACK

Glue the support strips along the whole length of the front and back of the cabinet.

HEIGHT AND WIDTH

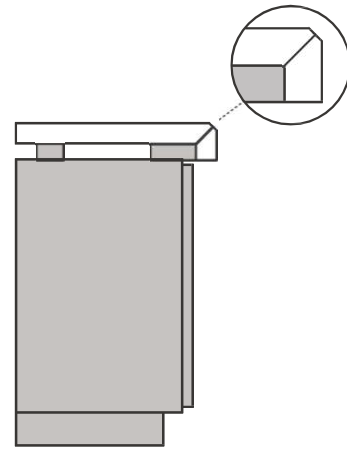
The strips should be a minimum of 70 mm (2 3/4") wide, and the same height as the part of the lamination strip that protrudes underneath the slab.

ALIGN JOINS

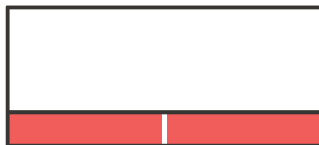
The support strip should be the same length as the piece of surface to which it is attached. Joins in support strips will, therefore, be aligned with the surface joins.

45° JOINS

Partial support strips are not recommended as they create stress points that could lead to cracking on the countertop above. If, however it is necessary to create support strips out of more than one piece, make a 45° angle diagonal join and cut support pieces on outside corners at a 45° angle; see below.



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