NEOLITH

touch.feel.live

NEOLITH TECHNICAL DESIGN GUIDE

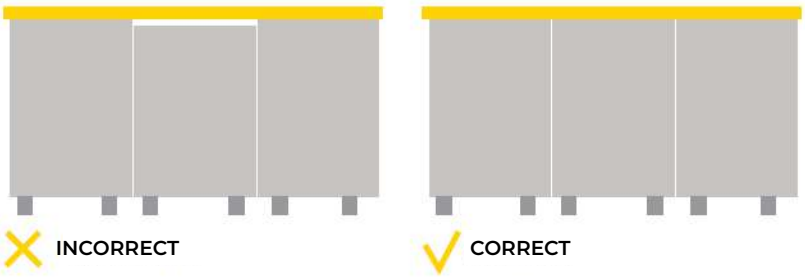
NEOLITH

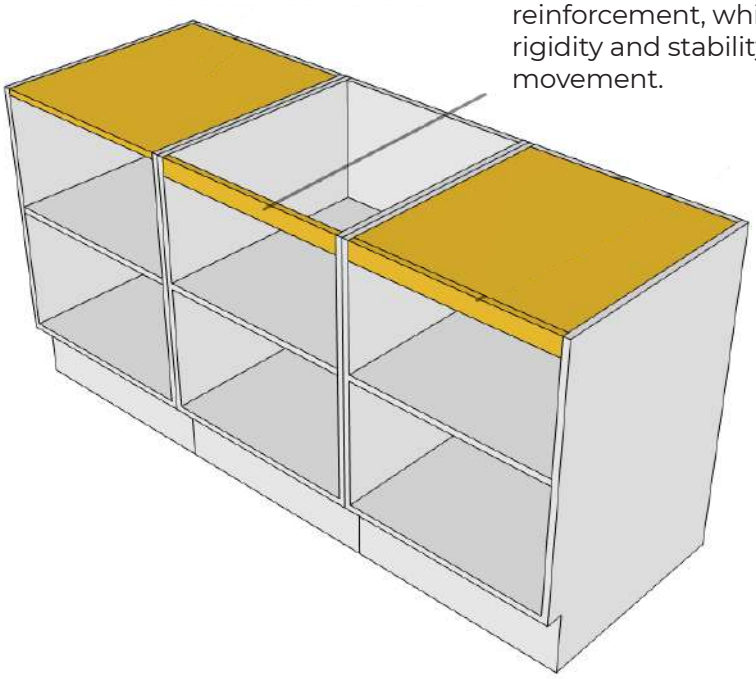
Kitchen Design

Cabinetry & Support	04
Cut-outs	06
Sinks	07
Drainer Grooves	08
Taps	09
Hobs	10
Joints	11
L-shaped counter tops	12
Waterfall counter tops	12
Edges	13
Built-up edges	14
Overhangs	15
Cleaning & Maintenance	16

Cabinetry & Support

Cabinets should provide a flat and level surface (no high spots). It is important that any cabinets or sub-structure fully supports the weight of the countertop and any additional load bearing weight that may be placed onto it during everyday use.





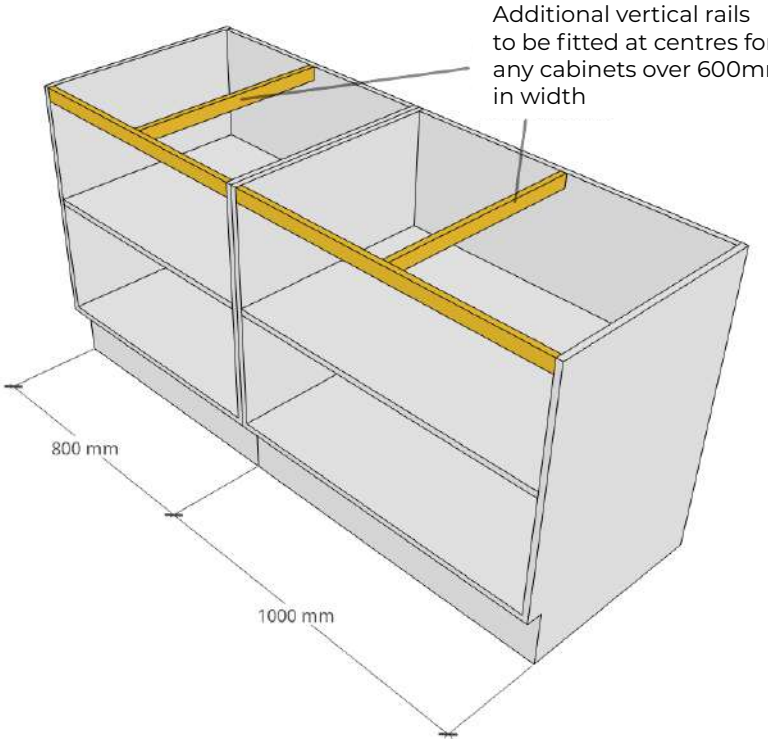
This part needs additional reinforcement, which provides rigidity and stability and prevents movement.

Cabinets should also have strong, inflexible and level vertical edge rails Either will need to be fitted so that they are level with the top of the cabinet. If both can be fitted it will just add greater support.

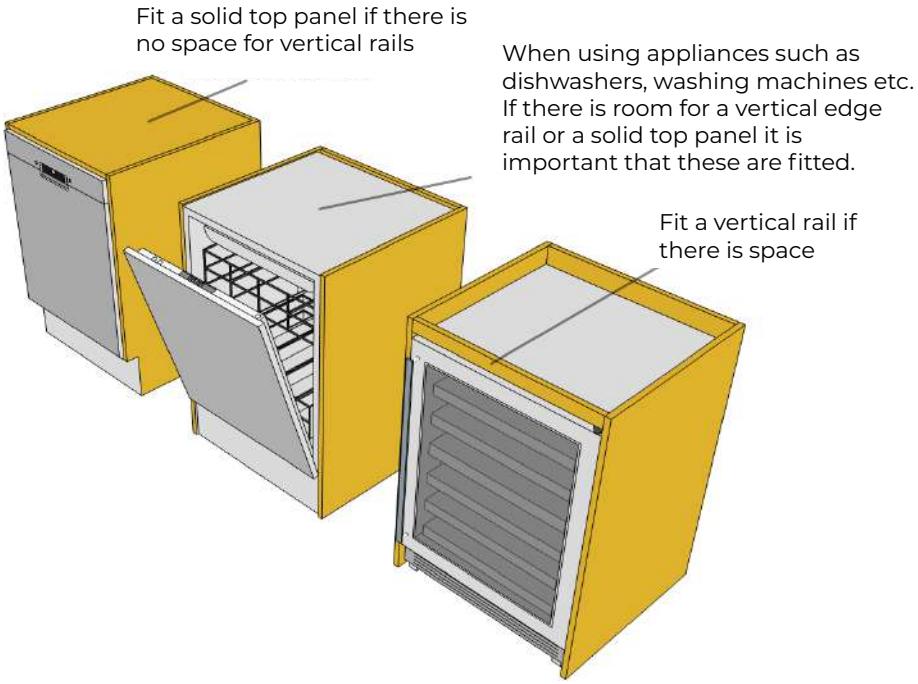
Cabinetry & Support

For cabinets with an expanse > than 600mm, additional cross rail support at equal or < than 600mm centres should be fitted. If possible, fit these as close to the middle of the cabinet as possible to offer better support. For example, in a 700mm cabinet fit the cross rail at 350mm, in an 800mm fit at 400mm and so on.

For drawer units where there is no space for vertical rails, solid top panels can be used.

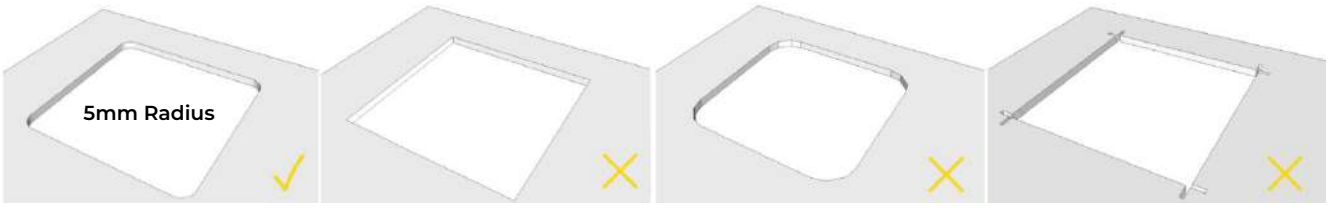


When using appliances such as dishwashers, washing machines etc. If there is room for a vertical edge rail or a solid top panel it is important that these are fitted.



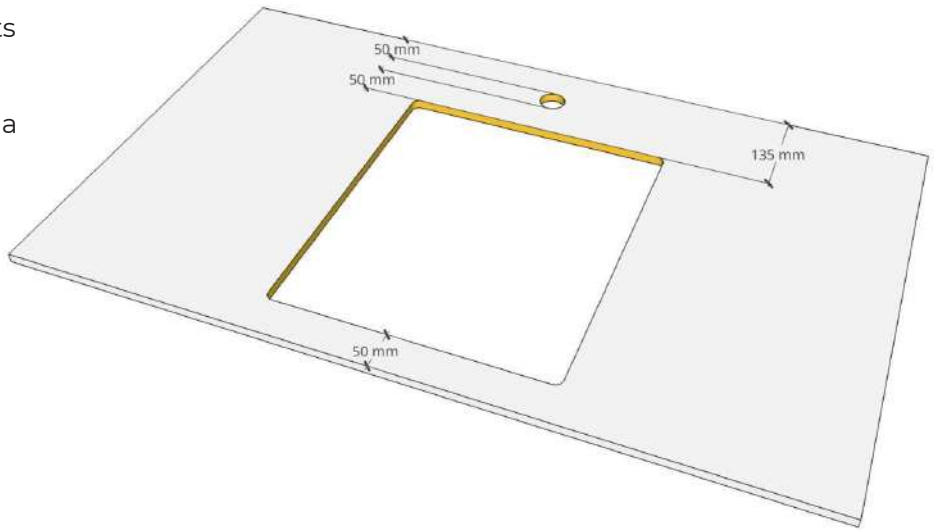
Cut-outs

Cut-out edges and corners should be smooth and corners should have a radius of no less than 5mm.

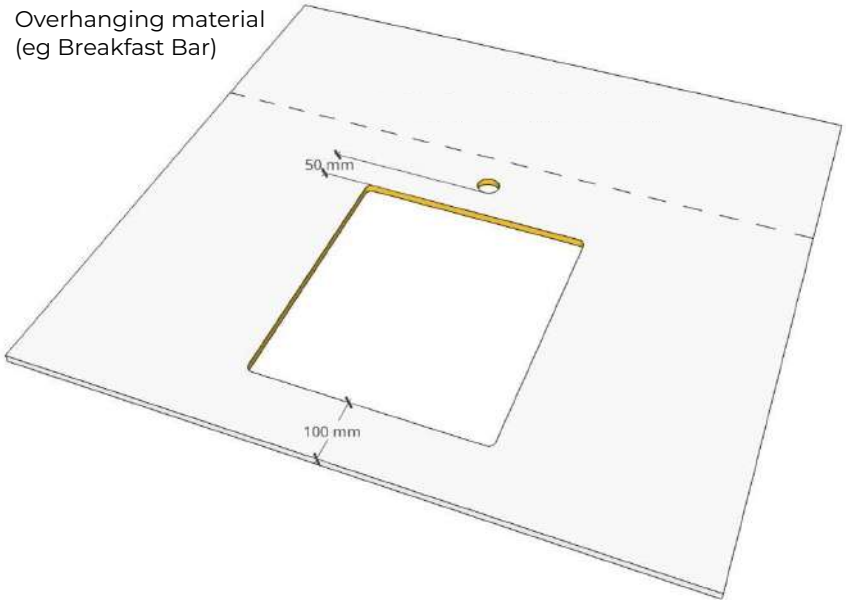


The recommended measurements for cut-outs vary depending on whether the material has an overhanging section (for example a breakfast bar).

There must be at least 50mm of material between any cut-out and any edge.



Overhanging material (eg Breakfast Bar)



For installations with an overhang, there must be at least 100mm of material between any cut-out and any edge.

This cannot contradict what is explained below in the section on overhangs.

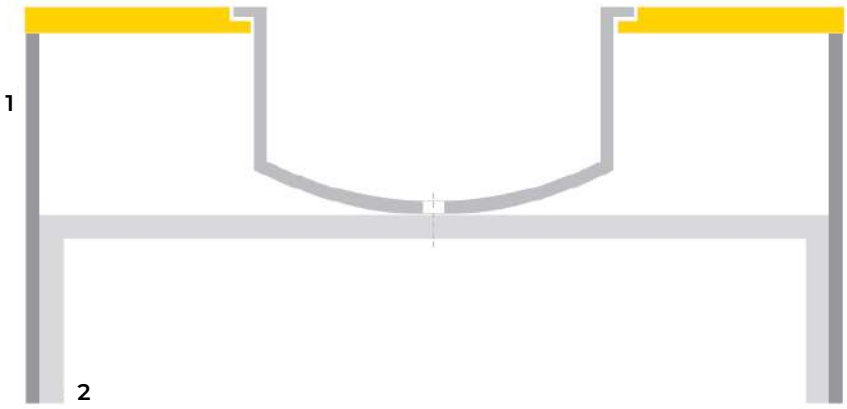
Sinks

Flush-mounted sinks
Neolith only recommends the installation of flush sinks in 12 mm and 20 mm.

Removing more than 6 mm on a 12 mm slab or 10 mm on a 20 mm slab is not recommended.

Under-mounted sinks
To protect the edge, a rounded or bevelled edge with a radius of at least 2 mm is recommended.

Place a support rod structure under the sink, so the weight is on the rod and not the countertop.

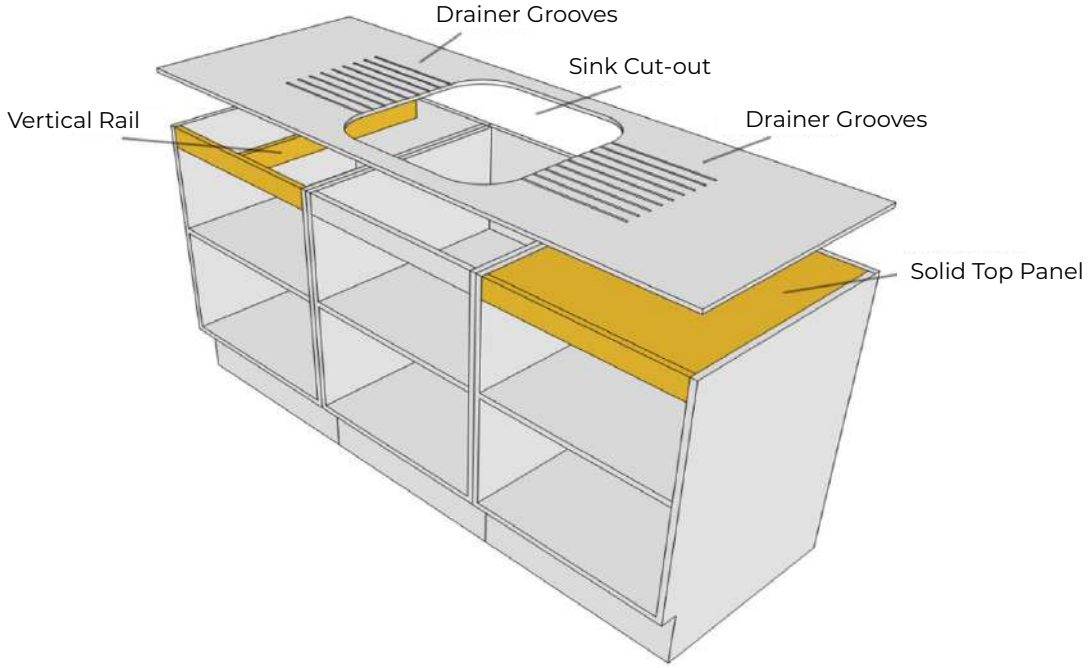


1. Furniture
2. Support rod

Drainer Grooves

The following considerations must be observed for tops with drainer grooves.

- This part of the worktop will require additional reinforcement with a solid top panel or vertical rail(s), sufficient to maintain rigidity and stability.
- The maximum depth of the channels is 3 mm for 12 mm thicknesses and 5 mm for 20 mm thicknesses.
- The minimum distance between channels should be 1 cm.
- NANOTOP by LITHOFIN or a similar product should be used to seal the grooves.



Please consider that with drainer grooves, the base colour of the material will be visible. In some cases, this will contrast with the colour of the surface.

Specifications for LED Strip Lighting for Neolith Countertops

Groove Depth:
- 3-4mm (Recommended)
- Avoid exceeding 4mm to maintain structural integrity.

Groove Width:
- 10-14mm (Slightly wider than the LED strip for easy installation)

Distance from front Edge:
- 20-30mm minimum (Recommended to preserve strength)

Stopping Short at either end along length of piece:
- 20-30mm before the edge to avoid creating weak points.

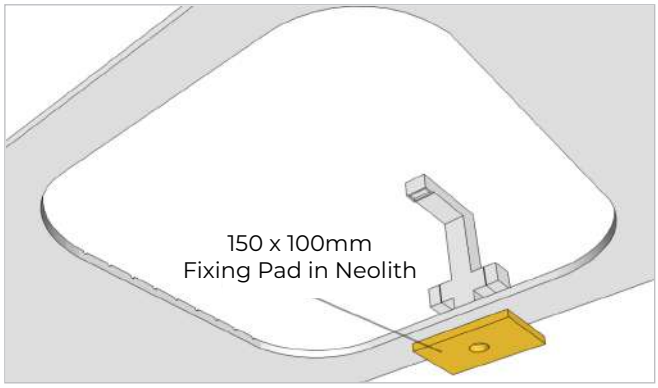
Edge Treatment:
- Ensure the groove edges are smooth and rounded to prevent stress concentrations.
- Shape the internal edges of the channel similarly to sink drainer grooves for added strength and durability.

Reinforcing tap holes for 12mm worktops

Where taps are installed directly onto the countertop surface, we recommend fitting a 12mm thick reinforcement pad to the underside. This reinforcement pad should not restrict the movement of the Neolith material.

150 x 100 minimum reinforcing pad fixed to underside of countertop using silicone.

Preferably the material used should be strips of Neolith or similar (never use quartz).

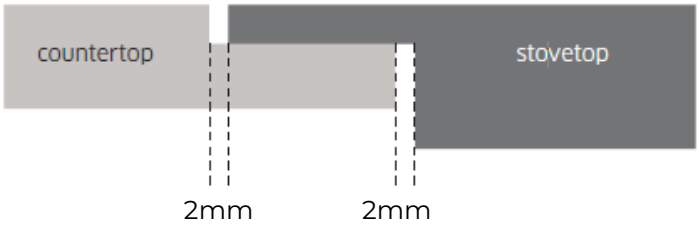


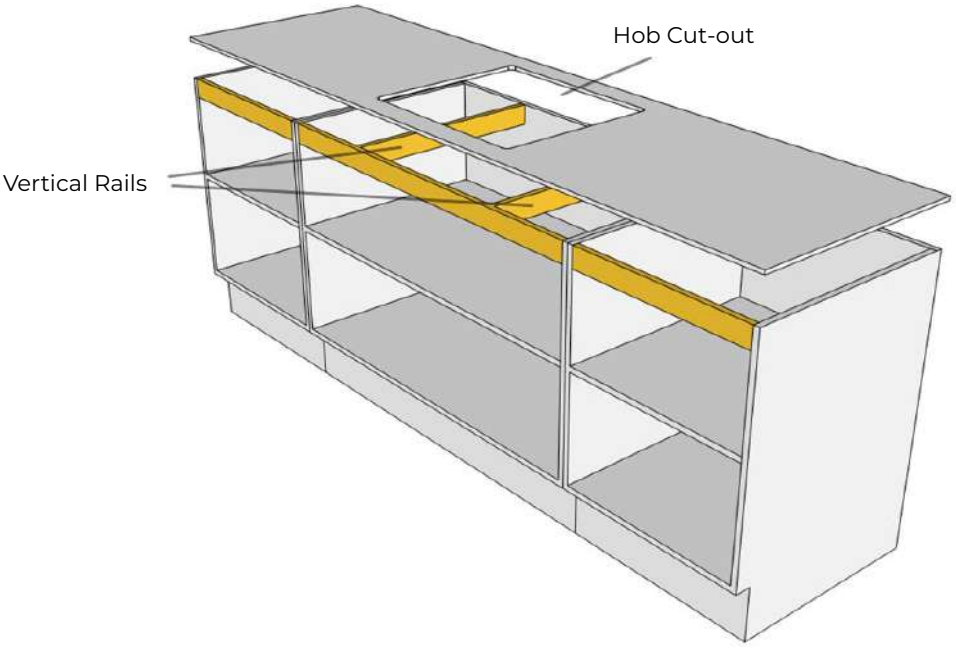
Hobs

Where the design calls for a large hob, it is recommended that support with vertical cross rails or solid top panels are added in a way that offers support to each side of the cut-out.

Glass/Ceramic/Induction Hobs
The minimum distance between the cut-out edge and the edge of the hob must be 2 mm.

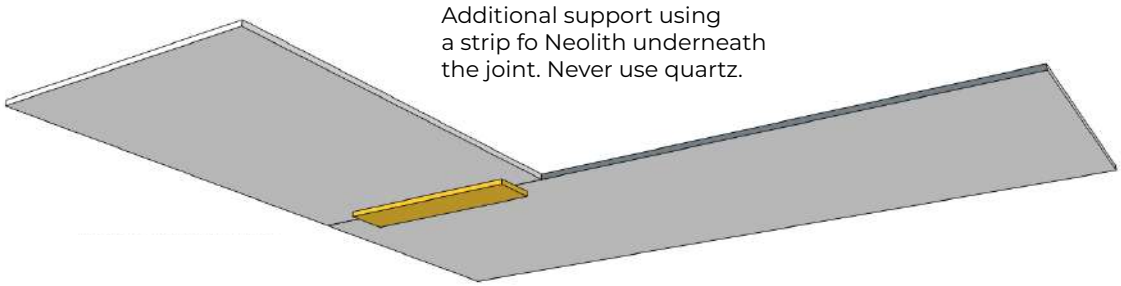
Please refer to the hob manufacturer for the correct heat-resistant silicone and tape to use. Removing more than 6 mm on a 12 mm slab or 10 mm on a 20 mm slab is not recommended.



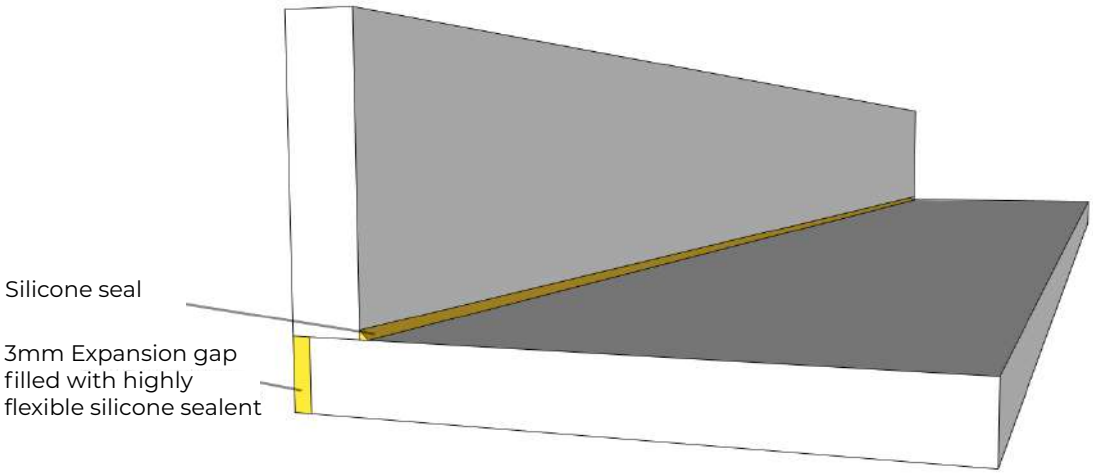


Backsplash:
The distance from the hob should be at least 5 cm if the hob is electric or induction and 8 cm if the hob is gas with flame. Make sure that the flame is never in direct contact with the hob.

Joints



- Each joint requires additional support
- A micro-bevel is recommended for all joints.
- The surface of the slab cannot be “touched-up”. Once the surface of Neolith is polished or ground, it will not be possible to get back to the same high-quality finish that is achieved when slabs are manufactured.



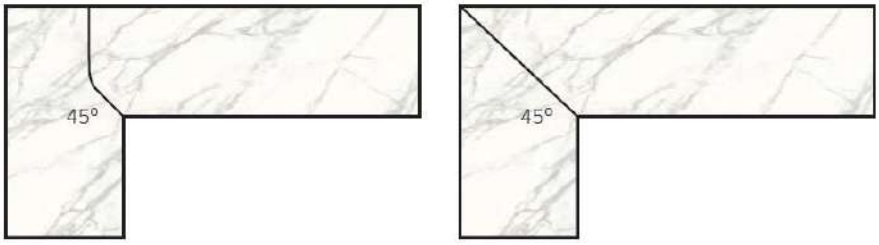
Expansion joints
Please leave at least 3 mm around the perimeter of the worktop for expansion.

Where the upstand/splashback and worktop meet please fill the gap with highly flexible silcone sealent and then seal with a line of silicone. This ensures any liquids cannot seep down the back and cause potential damage/swelling of the cabinets.

Using adhesives such as epoxy or liquid nails to secure the countertop is not recommended.

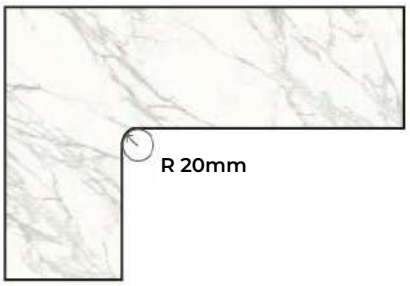
L-shaped countertops

Dividing L-shaped countertops into several parts is recommended to avoid 90° corners in one part.



L-shaped countertops made of a single piece without any joint must have a minimum radius of 20mm on the inner corner.

Please take extra steps to ensure the furniture is in perfect condition and level before installing this type of countertop.



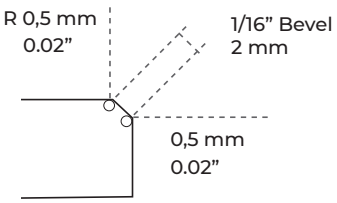
Waterfall countertops and islands

Decorative Neolith Feature

- The waterfalls or legs should only be glued to the structure (furniture).
- A gap of 3 mm shall be left between the floor and the leg.
- The gap can be filled with foam strips or similar material which will allow for movement. Do not glue fix leg to floor.
- Do not seal the leg to the floor.

Edges

Many edge profiles are possible using Neolith. They all offer different aesthetics and some offer more functionality than others. Our recommended edge profile offers a balance between aesthetics and functionality.



STANDARD EASED EDGE

Only for squares and rectangles

The edge is formed by a 2 mm bevel and by two rounded edges with a radius of 0.5 mm. The radius is barely visible but increases the edge impact resistance.

In high impact risk areas (sinks and dishwashers, for example), the edges couldinclude a 2mm radius.

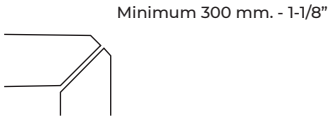
The greater the radius, the better the edge will bear any impacts. Remember that the bevel will reveal the body of the slab.

Other recommended edges for Neolith:

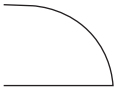
The edges can be wet or dry polished using standard granite or marble discs.

Polished edges must be treated with water repellent to permanently seal the edge. Neolith recommends using NANOTOP by LITHOFIN or a similar product.

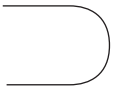
45° edges should be reinforced with Neolith strips or dense granite (it will need to expand and contract at the same rate as the worktop). Quartz is not suitable, please do not use it.



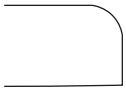
MITERED EDGE



HALF-BULLNOSE EDGE
6 MM - 1/4”

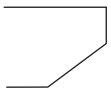


FULL BULLNOSE EDGE
6 MM - 1/4”



HALF-BULLNOSE EDGE
12/20 MM - 1/2”-3/4”

EASED EDGE TOP AND BOTTOM



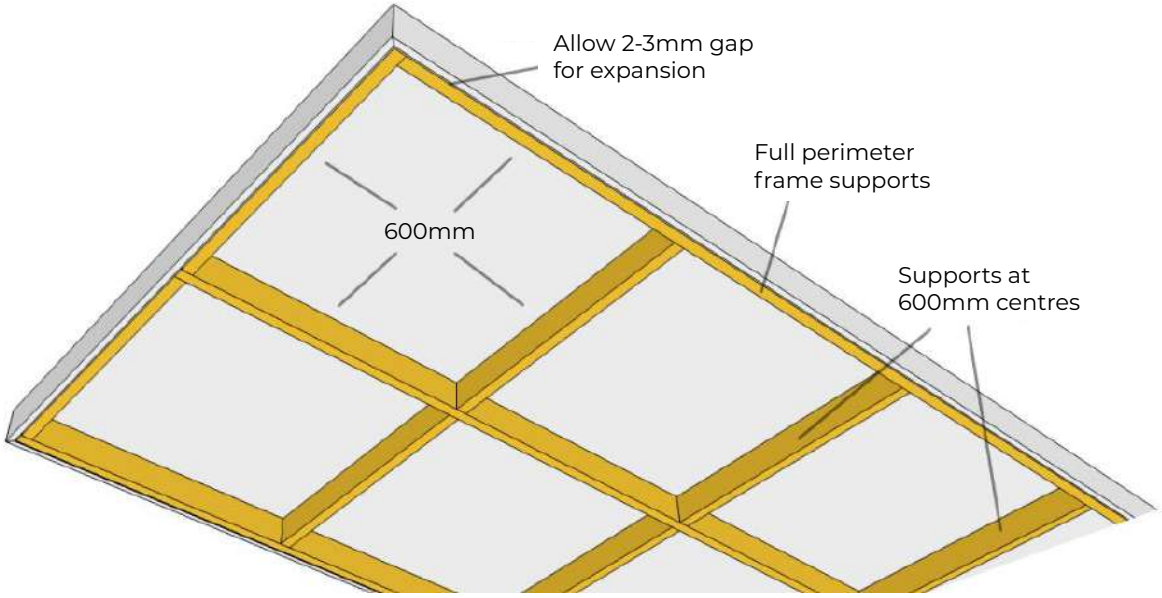
BEVELED BOTTOM EDGE

Only for squares and rectangles

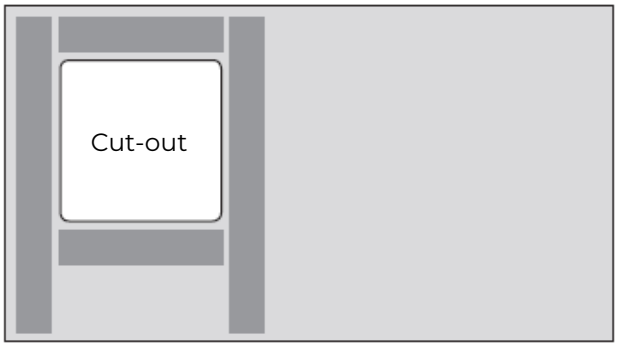
Built-up Edges

It is possible to “build-up” a Neolith worktop edge to offer a different aesthetic.

To achieve this, it is important that a solid and level substructure is built that offers the material support every 600mm or on top of all the cabinet uprights where possible.



All reinforcements must be distributed in such way that they find direct support on the kitchen furniture.



Please also ensure any cut-outs have additional support installed around the perimeter when building up the edge or having a 45° edge.

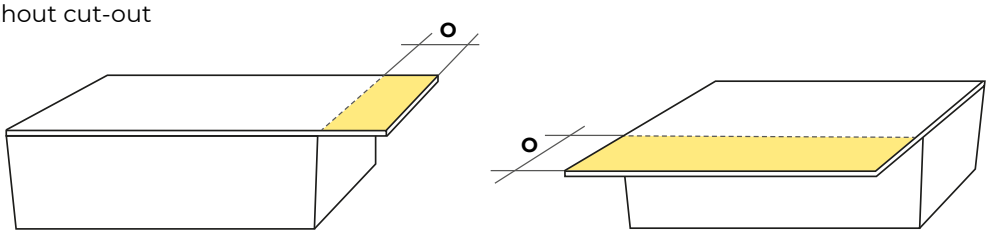
Overhangs

Please consider the below recommendations regarding maximum dimensions of unsupported overhangs when designing countertops.

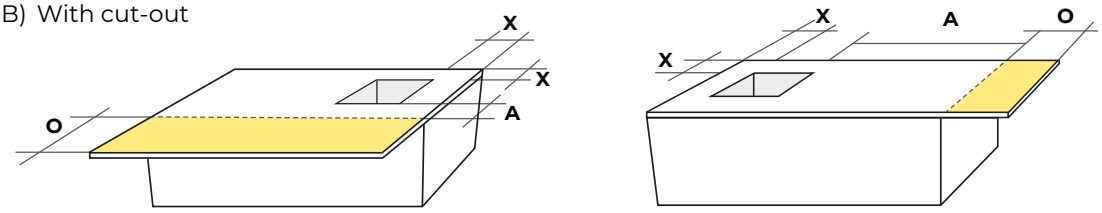
For high use and higher load areas, please reduce the maximum allowed dimensions for unsupported overhangs. Please contact Neolith technical department for assistance.

1. Full side overhang

A) Without cut-out

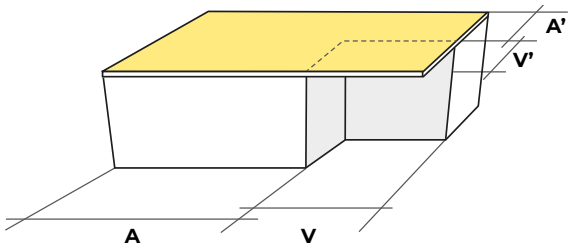


B) With cut-out

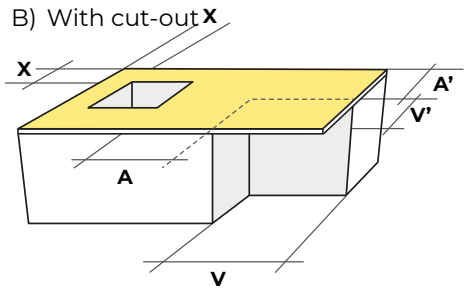


2. Partial overhang

A) Without cut-out



B) With cut-out



	12 mm thickness	20 mm thickness
O (overhang)	≤ 350 mm (less than 350 mm)	≤ 500 mm (less than 500 mm)
V (overhang)	≤ 500 mm (less than 500 mm)	≤ 1000 mm (less than 1000 mm)
V' (overhang)	≤ 200 mm (less than 200 mm)	≤ 400 mm (less than 400 mm)
A (supports)	≥ O , ≥V (greater than O, V)	≥ O, ≥ V (mayor de O, V)
A' (supports)	≥V' (greater than V')	≥V' (greater than V')
X (measurement from the edge to the cut-out)	≥ 100 mm (greater than 100 mm)	≥ 100 mm (greater than 100 mm)

NEOLITH

Cleaning and Maintenance Guide

Features of Neolith

Neolith countertops are fairly easy to clean, as food scraps and deposited waste cannot penetrate the material, so it guarantees good hygiene. For most cases, only a damp cloth is sufficient for cleaning.

Stains created by food and substances generally used in kitchens (e.g. lemon juice, vinegar, olive oil, wine and coffee) are easy to remove.

Even highly aggressive cleaning agents, such as oven cleaners do not affect the surface of Neolith.

Another advantage of its production process is that Neolith is heat resistant. Hot pots or pans do not discolor nor damage the surface. However, it is advisable to use a trivet avoid sudden temperature changes.

Special consideration with the ceramic knives:
Ceramic knives may scratch Neolith's surface in every finish, the same way they scratch other surfaces of the same product category and other categories.

Special consideration with edges:
Neolith is a highly performing material resistant to stains, heat, Uv rays, scratches, and more. Nevertheless, as with all products within the sintered category, it requires special attention to avoid heavy impacts around the edge-area of a countertop that could cause chipping.

Everyday cleaning

Use a microfiber cloth to remove dust from the surface. Clean your Neolith countertop daily if necessary.

Neolith countertops can be washed with warm water, to which a detergent can be added, used in the dose recommended by the manufacturer. (Avoid products containing hydrofluoric acid and its derivatives). Rinse with warm water and dry with a cloth or similar.

If liquids are spilled, it must be dried immediately. The faster you clean and dry spills, the easier it is to remove stains.

It is not advisable to use waxes, oily soaps, impregnating agents or other treatments (hydro-oil repellent) on the product, because its application is not necessary at all.

Some of the detergents currently on the market contain waxes or polishing additives that, after several washes, can leave an oily film on the surface of Neolith.

Cleaning and Maintenance Guide

Suggested detergents to clean general stains

Some products may not be removed by normal cleaning operations and specific procedures must be used, depending on their nature. The amount of time the substance remains on the surface is very important, as it is advisable to clean the area as soon as possible. This will prevent it from drying out and allows to be cleaned easily.

Here are some of the substances listed for removing stains.

Types of Stains	Types of detergents
Grease	Alkaline / Solvent
Oil	Solvent
Ink	Oxidant / Solvent
Rust	Acid
Lime	Acid
Cement	Acid
Wine	Alkaline / Acid
Coffee	Alkaline / Solvent
Rubber	Solvent
Plaster	Acid
Epoxy glues	Solvent
Candle wax	Solvent
Iodine	Oxidant
Blood	Oxidant
Ice cream	Alkaline
Resins	Solvent
Fruit juice	Oxidant
Permanent marker	Solvent
Aluminum scratches	Acid

TOP TIP

During treatment, closely examine the spot. If the spot is still there, but is lighter or reduced, you know the treatment is working. Keep applying until the stain is completely gone.

Acid: Acidic cleaning products: descalers, cement removers
Alkaline: Basic cleaning products: ammonia, degreasers
Solvent: Universal solvent, thinner, turpentine, acetone, alcohol
Oxidant: Diluted hydrogen peroxide or bleach
Warning: Always follow the manufacturer's recommended dosage and time.

Prepared by:	Reviewed by:	Approved by:
Customer Quality Technician	Customer Quality Manager	Dir Quality.

APPROVAL AND CONTROL MODIFICATIONS

REVIEW	DATE	REASON FOR MODIFICATION	AFFECTED PAGES	APPROVAL RESPONSIBLE
00	oct-24	Document registration	ALL	Dir Quality.

RELATED DOCUMENT

Document	Code	Document Type	Process

NEOLITH

NEOLITH.COM