

Cosmos Opulith Matte Surfaces

Cutting and Installation Guide



MACHINING

BRIDGE SAW

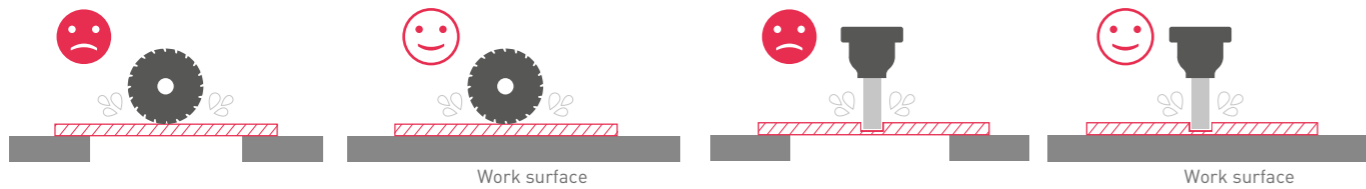
GENERAL RECOMMENDATIONS

The Manufacturer recommends trimming 2cm off each side of the Opulith Matte Surface to release any tension within the panel.

Make sure that the work bench is in good condition and even.

The direction of the cut should always coincide with the rotation of the cutting disk.

All inserts must have any holes pre-drilled.

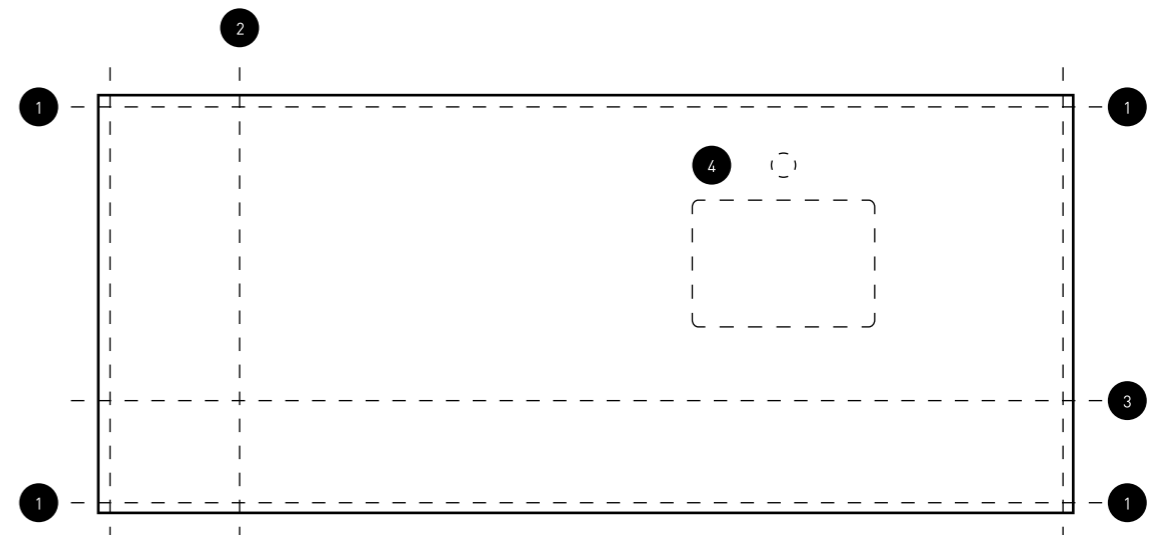


MACHINING PARAMETERS

THICKNESS	MITRE SPEED (M/MIN)	Ø DISC	RPM	SURFACE SPEED (FT/S)
12mm 10,5mm	0,7-1 m/min	300mm	2500	1-1,5 m/min
		350mm	2200	
		400mm	1900	

SAMPLE CUT FOR A BRIDGE MILLING MACHINE

- 1 Cuts to release tension within the piece
- 2 3 Recess cuts to adjust to the final countertop measurements
- 4 Cut outs



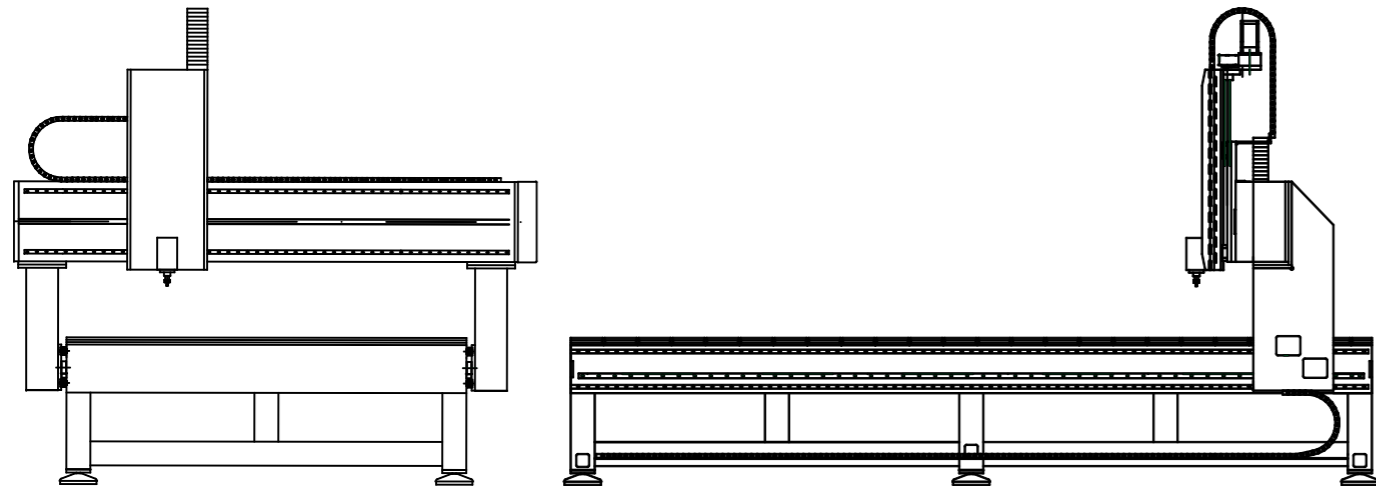
MACHINING

GENERAL RECOMMENDATIONS

We recommend trimming 2cm off each side of the Opulilth Matte Surface to release any tension within the panel.

We recommend a suitable distribution of the sucker pads to support the parts of the piece subject to stress during machining.

Make sure that there are sucker pads beneath the cutting surface, especially that of the insert.



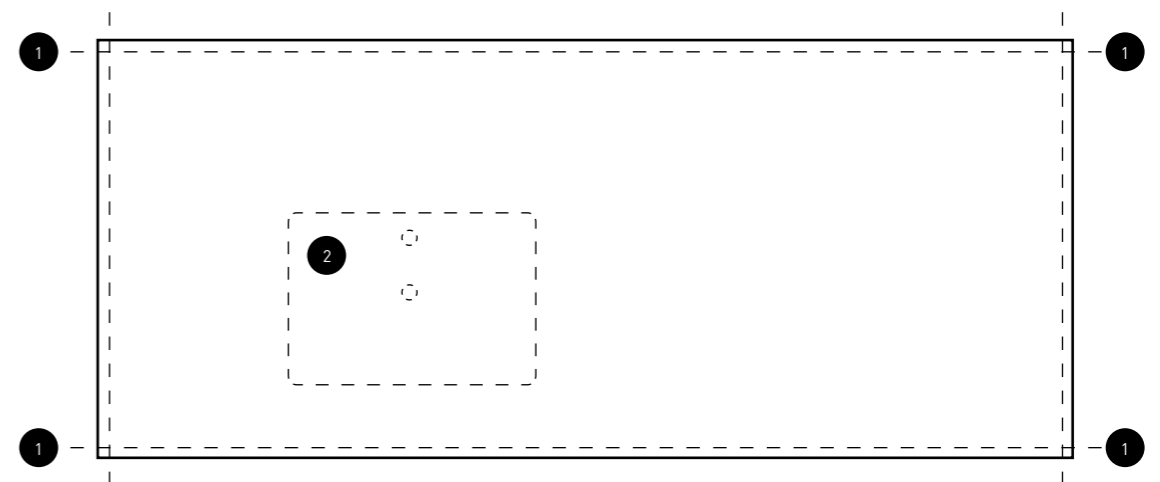
MACHINING PARAMETERS

TOOL	RPM	SPEED (mm/min)
Crown drill bit	4500 - 5500	9,5
Router cutter	12" 4500 - 5500	150
Recess router	8000 - 10000	250

CUTTING SECUENCE

- 1- Perimeter cut
- 2- Drill hole using a 30mm crown core bit
- 3- Cut using a router cutter starting from the hole drilled earlier

- 1 Cuts to release tension within the piece
- 2 Cuts outs



Before starting to work on a 12mm or 10,5mm panel, it is important to trim 2cm off each side of the panel.

MACHINING

WATER JET CUTTER

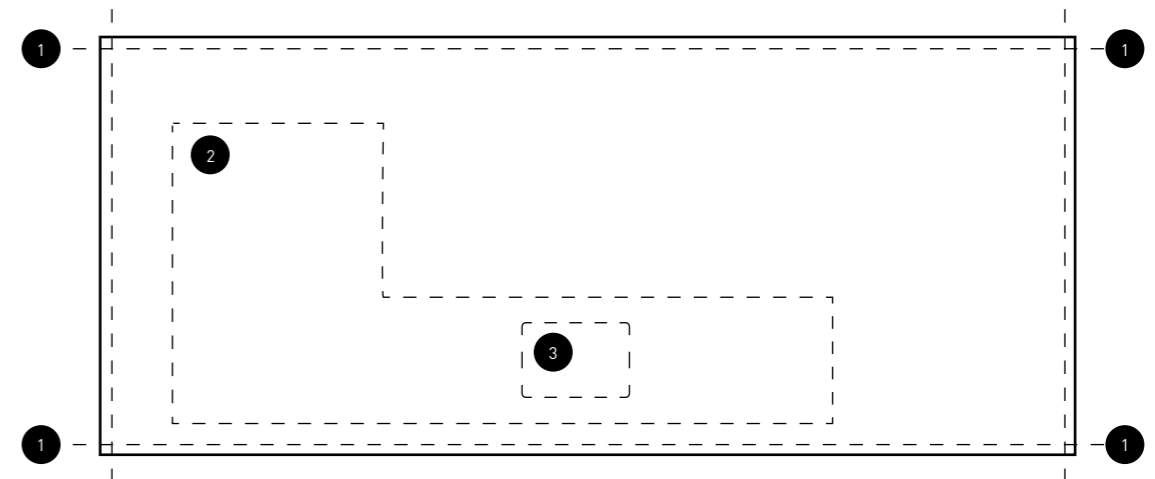
GENERAL RECOMMENDATIONS

We recommend trimming 2cm off each side of the Opulith Matte surface to release any tension within the panel. Check that the workbench is level and free of any debris.



CUTTING SECUENCE

- 1 Cuts to release tension within the piece
- 2 Recess cuts to adjust to the final measurements
- 3 Cuts outs



MACHINING PARAMETERS

SPEED (m/min)	PRESSURE (Pa)	Abrasive feed rate (Kg/min)
1	6900	0,45



Before starting to work on a 12mm or 10,5mm panel, it is important to trim 2cm off each side of the panel.

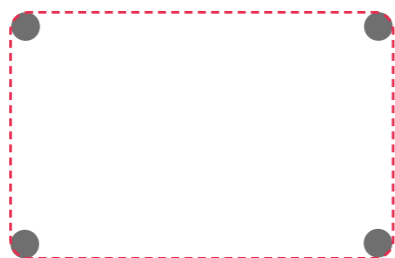
COUNTER DESIGN RECOMMENDATIONS



COUNTER DESIGN RECOMMENDATIONS

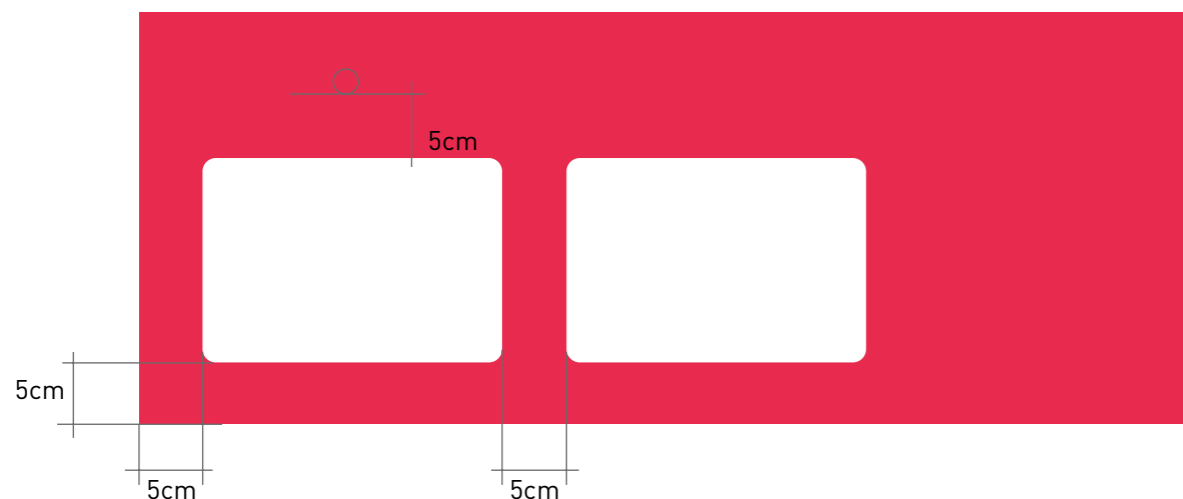
RECESSES AND INSERTS

To correctly create the inset recess, we recommend drilling holes in the corners first and then cutting around the outer edges.



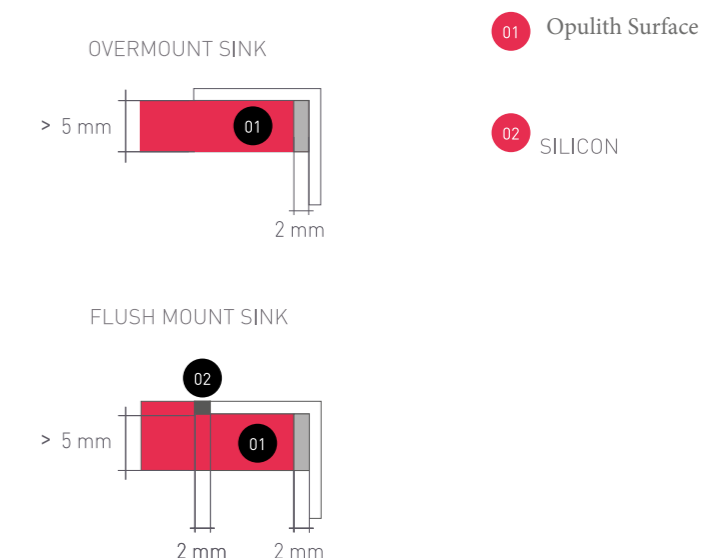
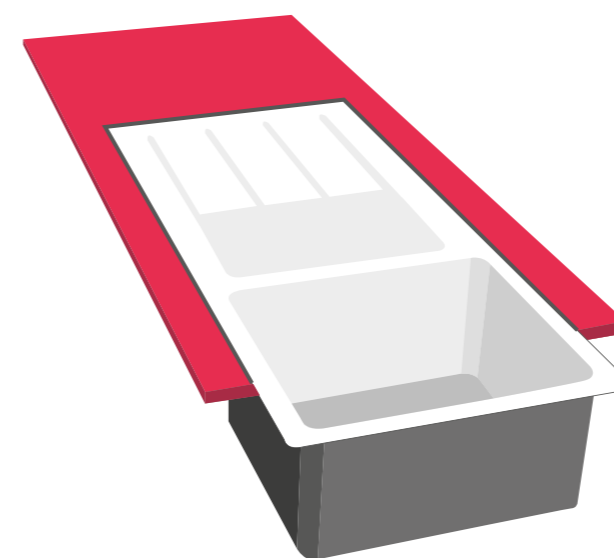
For drilling the holes in the corners, we recommend always using a bit with a radius of over 3mm. The minimum distance between the inserts and any edge of the countertop should be 5cm.

For the inset recesses, we recommend avoiding 90° angles at the corners. As a general rule, we advise against designs that result in an uneven weight distribution of the finished countertop.



SINKS

When installing a flush mount sink, we advise against cutting down into the Cosmos Opulith Surface panel by more than 5mm. When installing undermount sinks, we recommend lightly rounding off the Cosmos Opulith Surface edges to prevent chipping. If working with large sinks, we recommend reinforcing the kitchen unit using a structural support for the sink.



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COUNTER DESIGN RECOMMENDATIONS

EDGES AND JOINTS

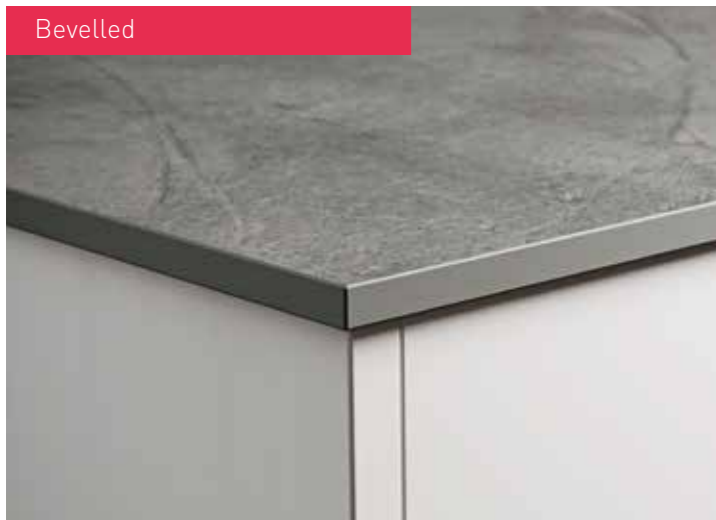
With non-mitred edges, we recommend working with either a 2mm-radius edge or a 2mm bevel.



Bevelled



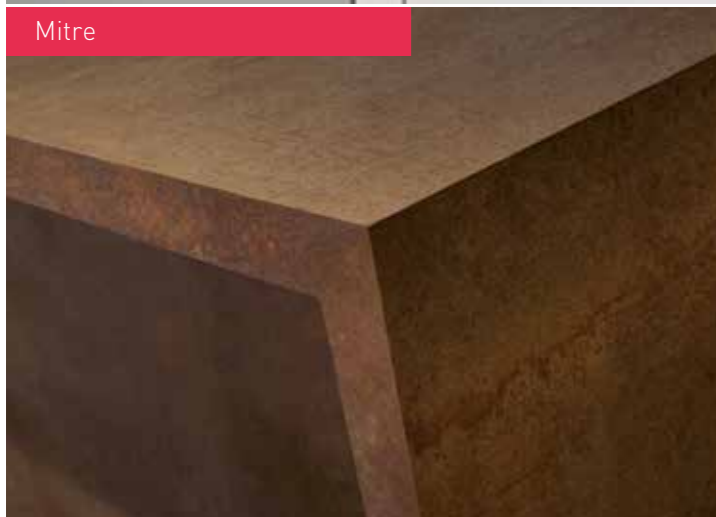
Polished



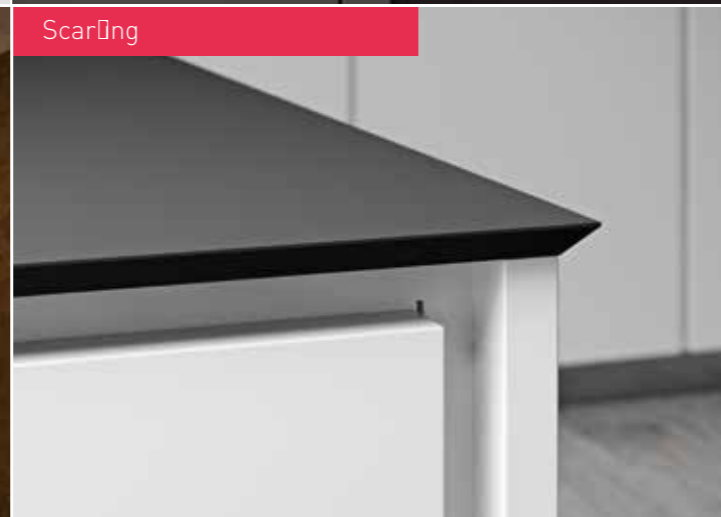
Bevelled



Polished



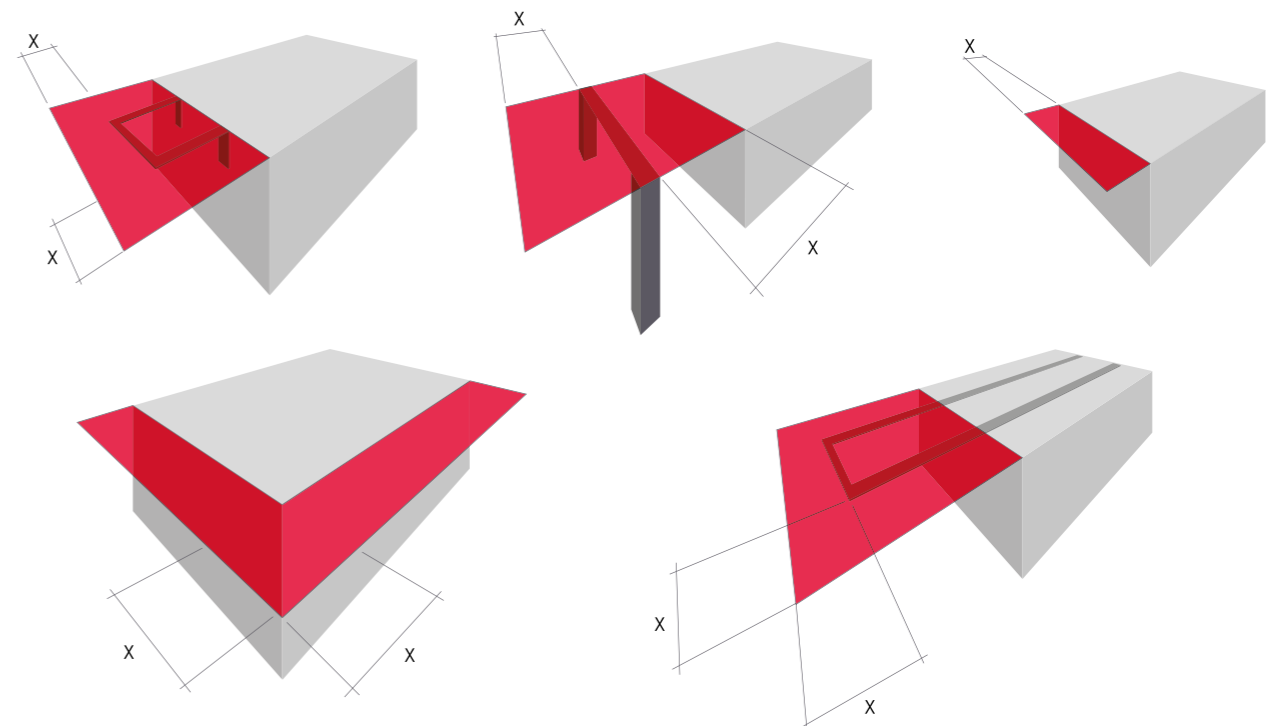
Mitre



Scarving

OVERHANGS

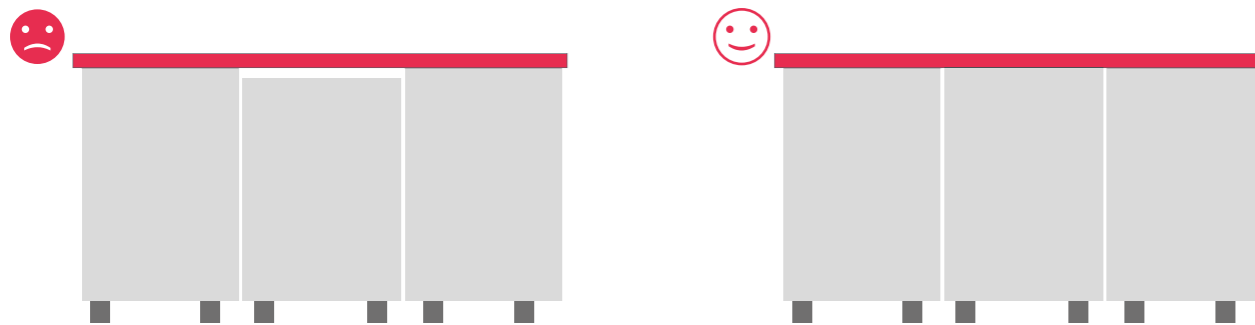
	THICKNESSES		ILLUSTRACIÓN
	10,5mm	12mm	
Countertop with unsupported overhangs	X < 125mm	X < 150mm	
Countertop with recess and unsupported overhang	X < 75mm	X < 90mm	



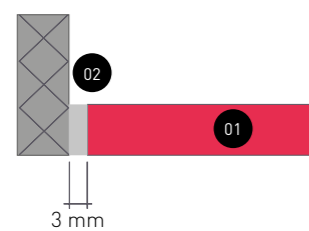
COUNTER DESIGN RECOMMENDATIONS

COUNTERTOP INSTALLATION

When installing the finished countertop on top of a kitchen unit, the units should be properly levelled, fixed together and anchored to the wall.



When installing in close proximity to a vitro-ceramic hob, we advise leaving a minimum distance of 2mm between the countertop and the hob. The countertop requires a 3mm perimeter joint to compensate for any irregularities in the wall or building movements.



01 Opulith Surface

02 SILICON

We recommend using a flexible adhesive to fill joints and bind the countertop to the kitchen unit so that it performs adequately should thermal expansion occur.



OTHERS

REINFORCING

When working with mitred edges, these should be reinforced using the same Opulith surface strips. We advise against using reinforcements made from other materials due to the differences in thermal expansion and any repercussions that this might have on the countertop (curvature, opening of the mitred edge). We recommend reinforcing the perimeters of the inserts to make the join more solid.

EXTERIORS

For an exterior countertop, we recommend installing Cosmos Opulith Surfaces on materials with similar expansion coefficients (cement or brick).

We advise against installing Cosmos Opulith Surfaces on top of a wooden base given their tendency to expand outdoors and any repercussions that this might have.

For exterior adhesives, we recommend using C2 improved cementitious adhesive.





TOOLS

RECOMMENDATIONS

The manufacturer recommends the use of FREDIMAR tools for the correct machining of Opulith Matte or Honed Surfaces.



Segmented blade for cutting all types of porcelain materials. Both for 90-degree cuts and 45-degree mitre cuts. 10mm diamond height.



Segmented router bit (CNC)



Electroplated diamond core drill bit(CNC)



Diamond drill bit for water jet drilling and at high speed

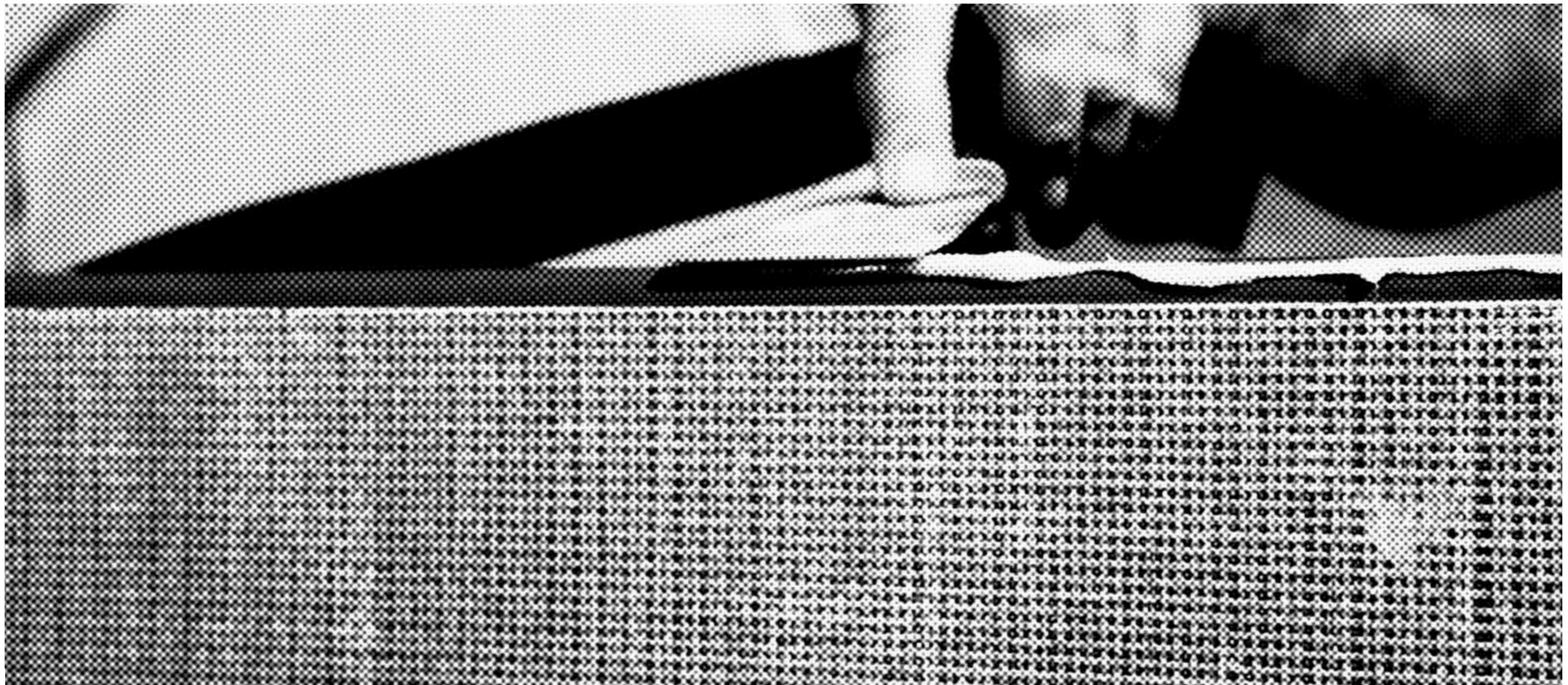


Continuous core drill bit



Sandpaper with a range of different grits for final polishing of edges

BONDING



BONDING

RECOMMENDED ADHESIVES

The manufacturer recommends the use of AKEMI adhesives for different bonding requirements with Opolith Matte or Honed surfaces. To ensure the correct adhesion of the joints according to the intended use for the countertop, one of the following ranges of adhesives should be used:



PLATINUM

The Platinum range consists of top-quality two-component adhesives based on epoxy acrylate. The two different consistencies, gel-like (transparent and slightly opaque) and liquid (clear transparent), make it very suitable for both vertical and horizontal jobs. Very easy to colour with Akemi polyester colouring pastes. Excellent polishing results. Available in 900 ml cans (packs of 6)



COLOUR BOND

A gel-like two-component product based on epoxy acrylate resins dissolved in styrene. Very workable due to its very smooth, slightly gel-like consistency - does not form filaments. Very fast hardening (15 to 40 minutes), very good polishing, resistant to water, petrol and mineral oils. Wide range of colours; more than 50 colours enables invisible joints. Available in 250 ml cartridges (packs of 6)



AKEPOX

Akepox5000 and Akepox5010 are both two-component adhesive systems based on an epoxy resin that is resistant to UV rays. This high-quality adhesive system has been specially developed for outdoor use: it is weather-resistant and has a low tendency to yellowing. It is recommended for creating invisible joints, and is ideal for colouring with AKEPOX colouring pastes. It is suitable for polishing, has very low shrinkage during hardening, and is solvent-free. Its creamy consistency makes it suitable for vertical jobs. Once the product hardens, it is not harmful to human health when it comes in contact with food. Available in cans and cartridges.

