Caesarstone Design Guide

Product Information

The actual usable slab surface is slightly less per side due to the bevelled perimeter

Length	3050mm +/-10mm (some sizes available in Jumbo please check with office)
Width	1430mm +/-10mm (some sizes available in Jumbo please check with office)
Thickness	30mm,20mm **+/-1.5mm**
Weight	20mm = 220kg per slab (50kg m2)
	30mm = 330kg per slab (75kg m2)

Understanding Caesarstone Slabs

Caesarstone slabs are made with approximately 93% natural mineral quartz. The quartz gives the Caesarstone its strength, but being a natural material, it also means there are some important factors that should be considered.

As the slabs are largely composed of natural minerals, each slab is unique, even though it will have the same common quartz structure, colour and overall look for the series.

Inclusions

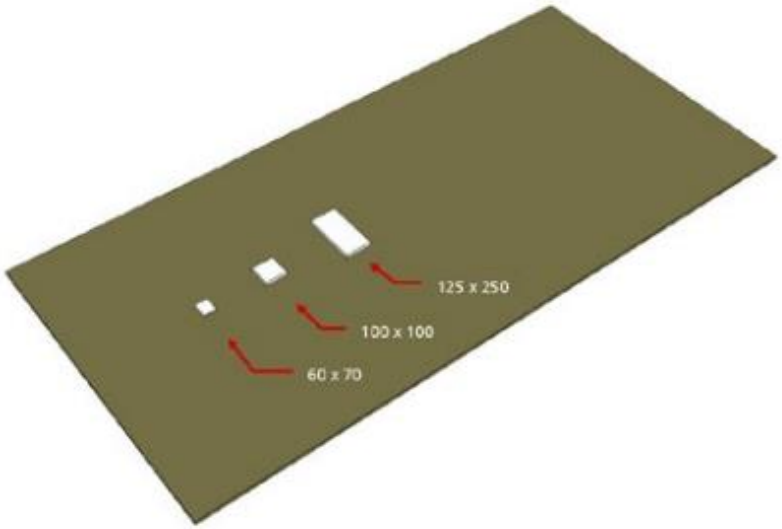
The raw quartz materials are screened to remove impurities and graded by colour and size before proceeding to manufacture. However, it is impossible to remove 100% of the irregularities in the colour of the quartz. This means that small black chips might appear in a lighter coloured material, or small white chips in a dark coloured material. This is not a flaw, but just a result of using natural materials.

Colour Matching

There might be slight colour variations between each production batch of slabs. This can be evident when comparing a sample in the showroom, which may be several years old, and the actual slab what will be used for manufacturing the worktops, which is from a more recent batch.

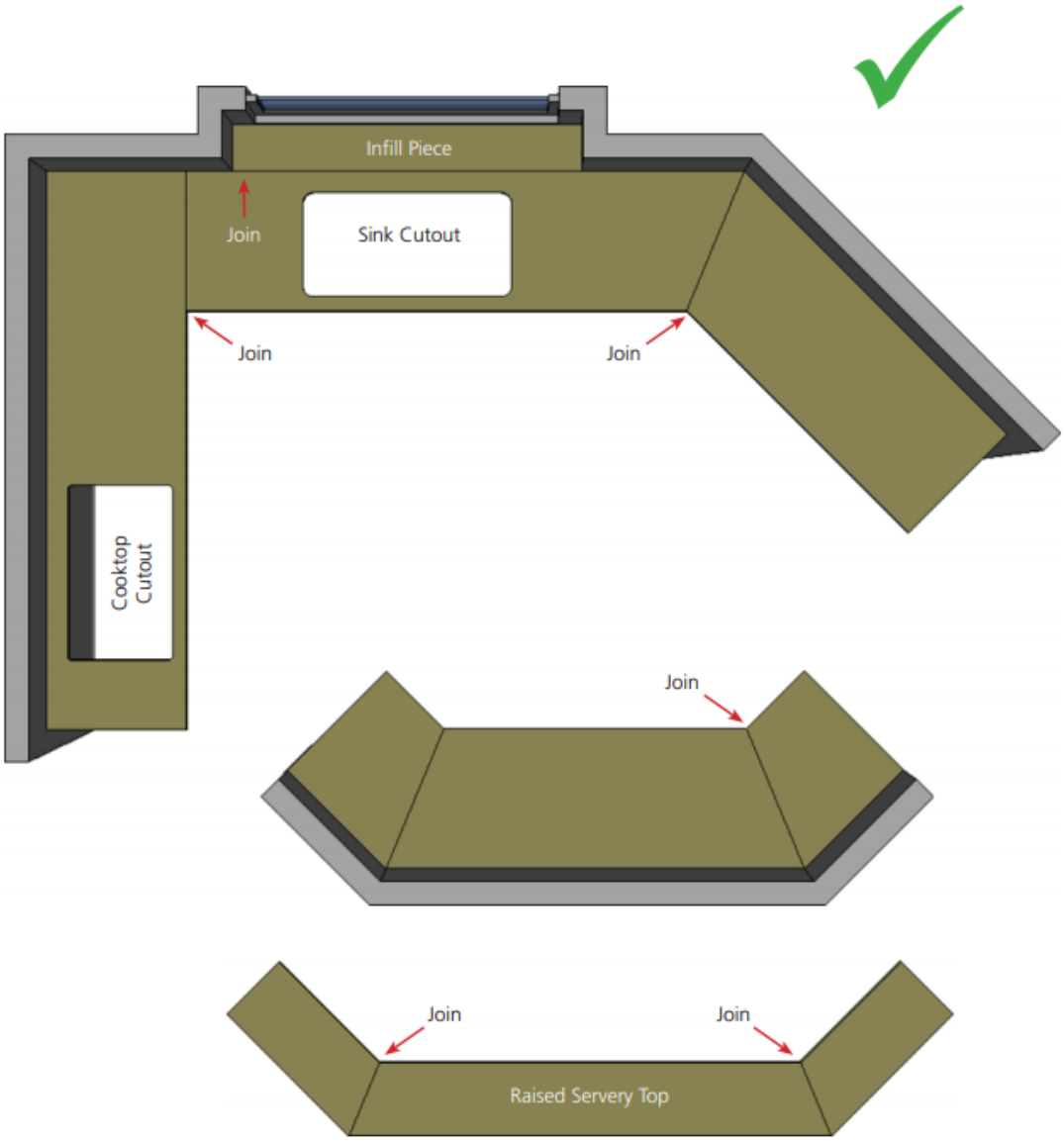
Sample Vs Full Slab

A Sample only tells part of the story, below you can see the size of samples in relation to the size of the slab. While a sample gives a good idea of the look and feel of the slab, it is not a complete indicator of the overall effect of the full size of slab. We always recommend that the customer views larger images on the website, or inspects the slab prior to fabrication to ensure that It meets expectations



Placement of joints

When designing worktops, it is recommended that there are joins every change of direction in a worktop as L shape cut-outs should be avoided



Joints

Maximum length of a piece with sawn cutout in 30mm thick 3000mm

Maximum length of a piece with a sawn cutout in 20mm 3000mm

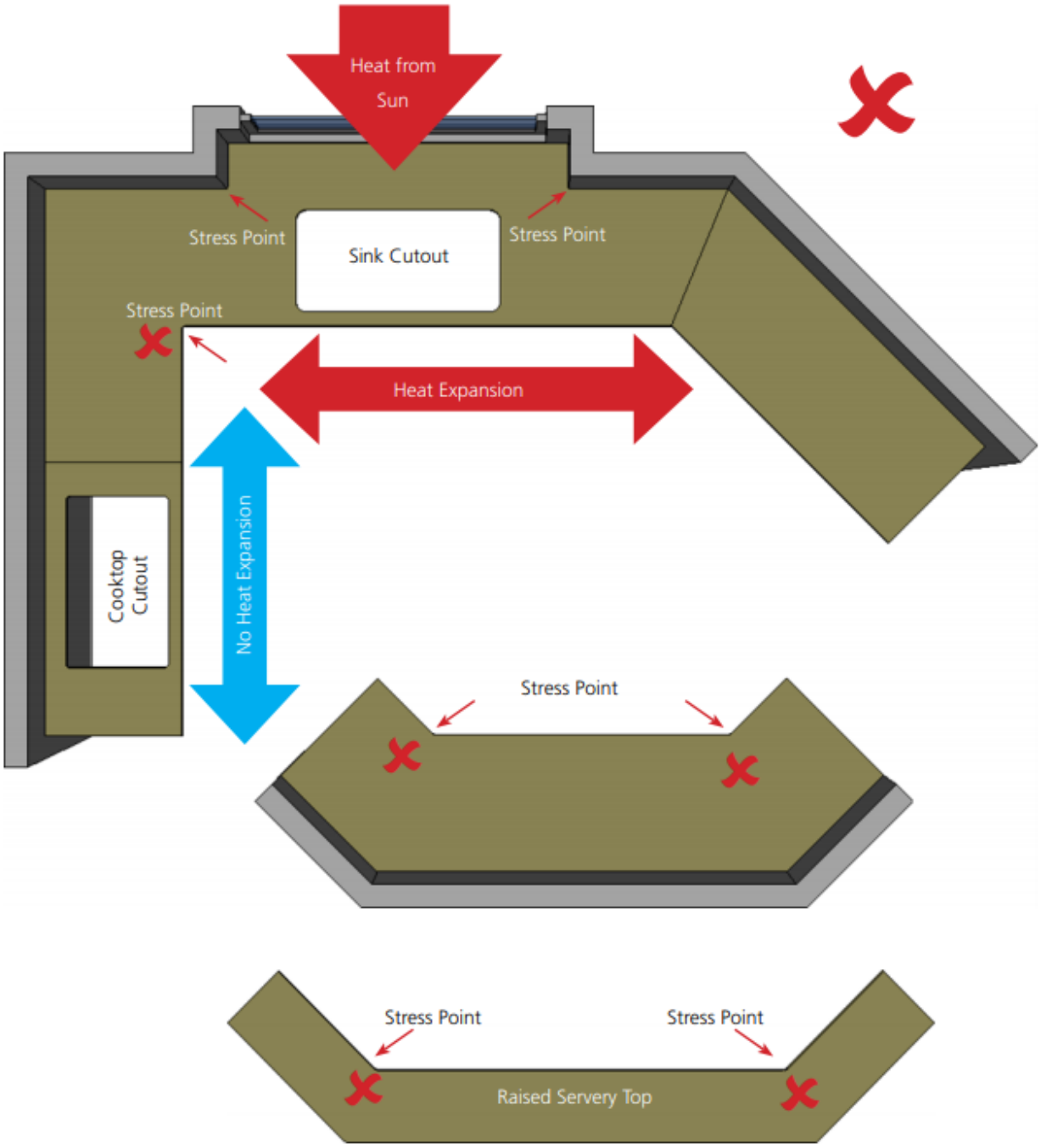
Maximum length of a piece with polished cutout in 30mm 3000mm,

Maximum length of a piece with polished cutout in 20mm is 3000mm

Upstands are 20mm thick and maximum length 2500mm, **Minimum height of upstand 50mm**

Expansion Gaps

A 5mm expansion gap is required with stone worktops against a wall, this is normally covered with upstands, tile or glass, but will be an issue if the customer requires nothing against the wall, to do less than the 4-5mm recommended will void any warranty so should be taken into consideration when designing



Although these worktops can be cut as one piece from a slab, we do not recommend this as it is important to consider the risks of cracking that can happen after installation.

Cracking does not indicate a material fault or even a fault with the fabrication or installation. Often it may be the result of externally induced or mechanical stress on the worktops. The two most common sources are heat (thermal shock) causing expansion or contraction, and high load points. These could be the result of something that the consumer has done unknowingly or accidentally.

It is best to avoid this situation in the first place by using joins and avoiding L shape cut-outs

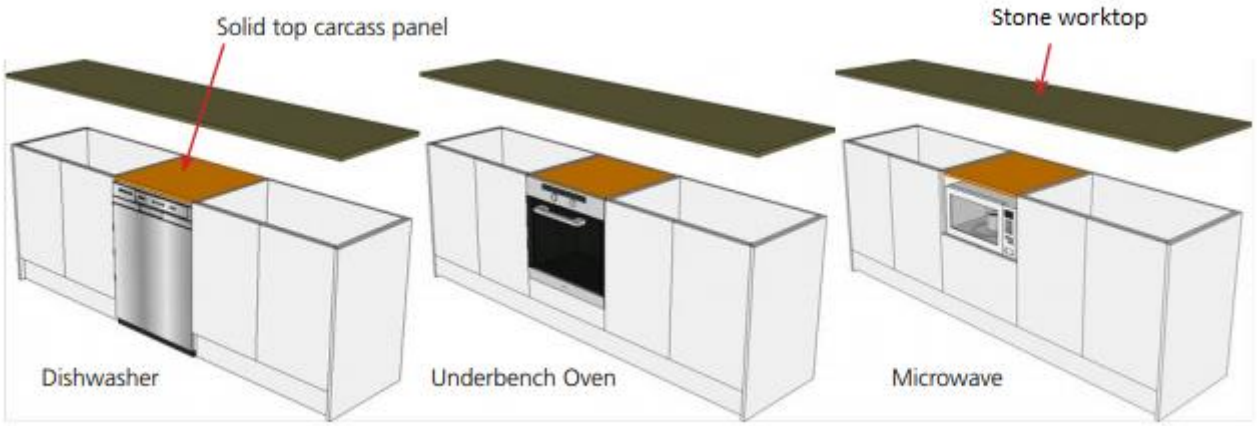
Cutting

Please take into account we operate to industry standard tolerances of +/-2mm, so a 5mm minimum overhang is always recommended, asking us to supply it flush, means when it is cut it could be -2mm overhang i.e. showing the door or carcase

Under worktop Appliances

Appliances such as ovens, dishwashers, washing machines and microwaves can generate heat in a very confined area. To protect the worktops from this we do recommend that a solid top is installed above these appliances made from the same material as the cabinet carcasses.

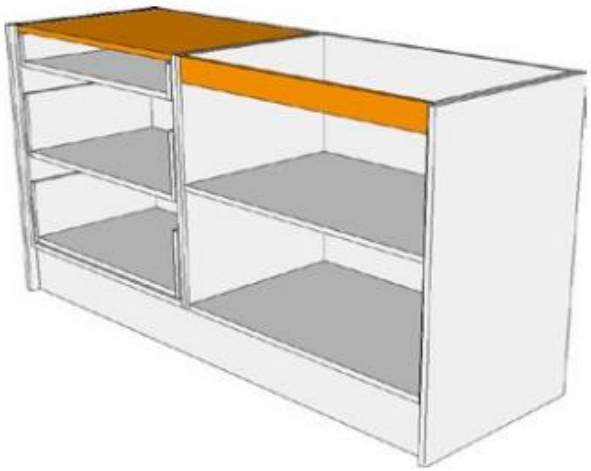
This will provide both support and insulation for the worktops, also a heat defusing pad can be used.



Solid Tops are not a replacement for vertical rails a flat panel, although add strength, does not negate the need for solid vertical rails in cabinets where there will be cutouts

Ideally cabinets should have a solid timber vertical rail to provide maximum strength

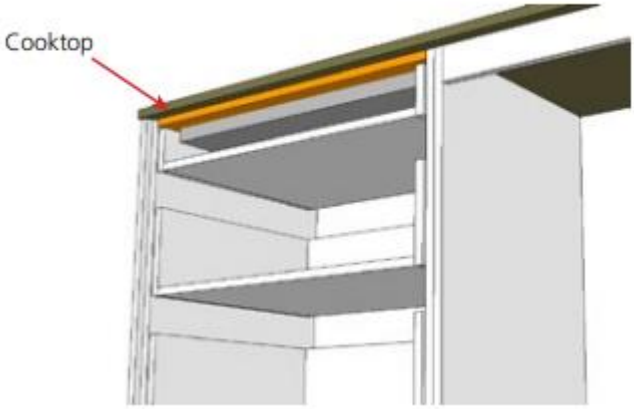
Draw cabinets should have a solid top as vertical rails are not practical

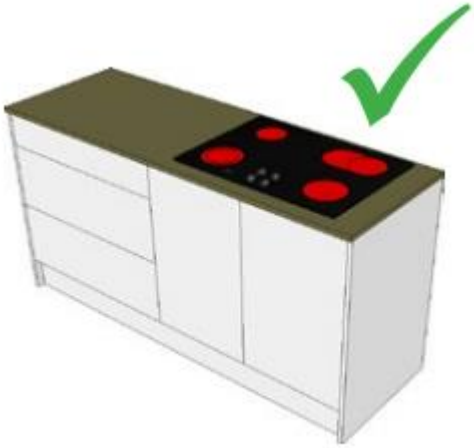


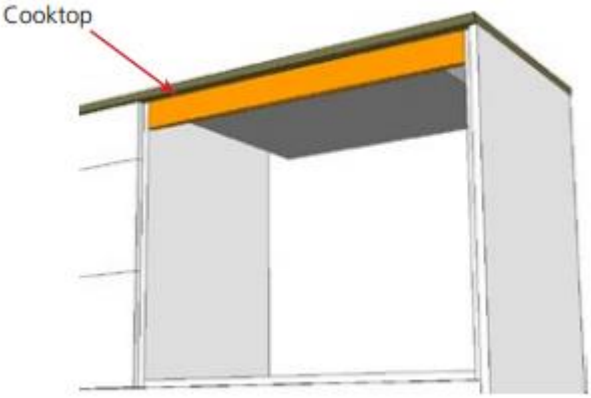
Vertical rails over under bench ovens provide additional support, especially important when the cooktop cutout is above the oven.

Hob/Cooker Locations

Avoid having a hob located above drawer units, this may restrict the use of vertical rails and potentially weaken the support structure under the worktop.







Horiontal rails under a sink or hob cutout tend to have a large portion cutout. This leaves the support inadequate for the worktops. Keep in mind that the worktops also have a cutout for the appliance, resulting in a weak section of worktop without adequate support below (see RIGHT)

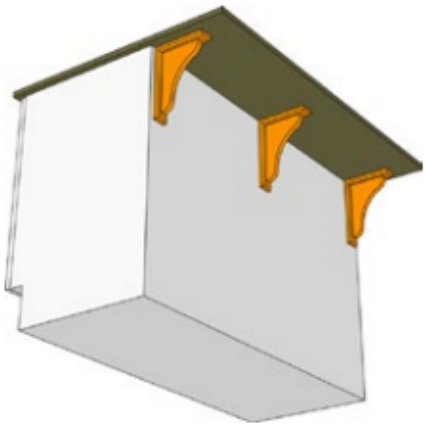
Therefore vertical timber rails or similar stronger, vertical supports are always recommended.

Overhangs

An overhang is a surface that is not directly supported by a construction underneath e.g. a surface that extends past the edge of the supporting cabinetry like a breakfast bar overhang

The permitted overhang dimension must be determined by a professional. It is dependent on a number of factors, such as:

- The complete length to width ratio of the surface relative to the length and width ratio of the overhang.
- Whether the overhang is supported on one or more sides by a wall or other supporting fixture.
- The table below provides approximate guidelines for support required for overhangs. Supports are dependent on the application, if the overhangs will be subjected to high loads, then supports should be used regardless of the recommendations below.



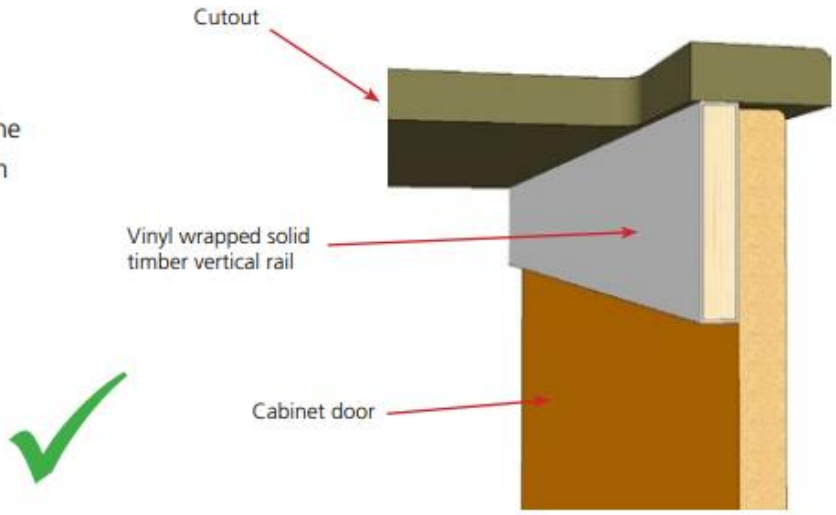
Types of Overhang	13mm Thickness Slabs	20mm Thickness Slabs	30mm Thickness Slabs	Comments
Unsupported Overhangs	Equal or less than 100mm	Less than 250mm overhang	Less than 350 mm overhang	No additional support required
Supported Overhangs		250 mm to 500mm	350 mm to 600mm	Support brackets at 600mm intervals
		Greater than 500mm	Greater than 600mm	Legs, columns or panels required

Cut out Supports

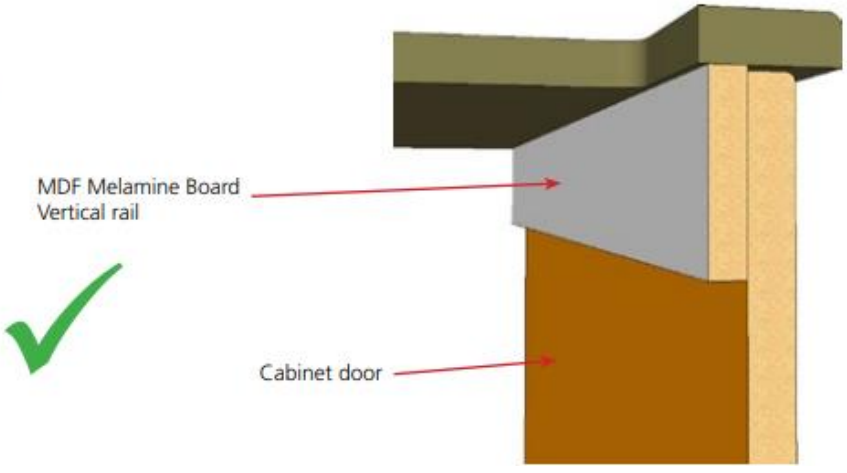
Cut-outs within worktops for sinks or hobs should always be supported to ensure the worktop is not bearing the direct weight of any applied heavy loading placed on the worktops.

For this reason, we recommend the use of vertical rails that will fully support the weight of the worktop and any additional heavy loads further placed on the worktop. Any rail support must not flex or sag regardless of span, which could place stress on the worktop material.

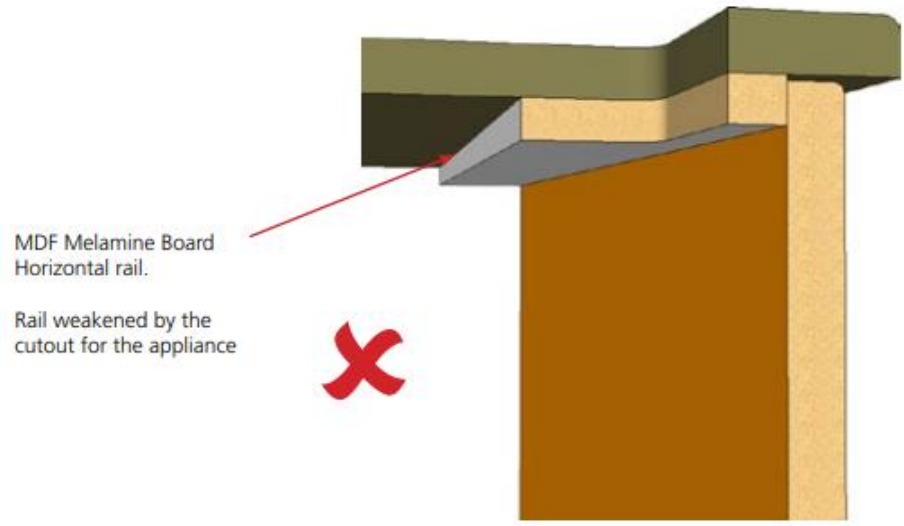
The use of a vinyl wrapped, solid timber vertical rail has the advantage of greater strength and better support.



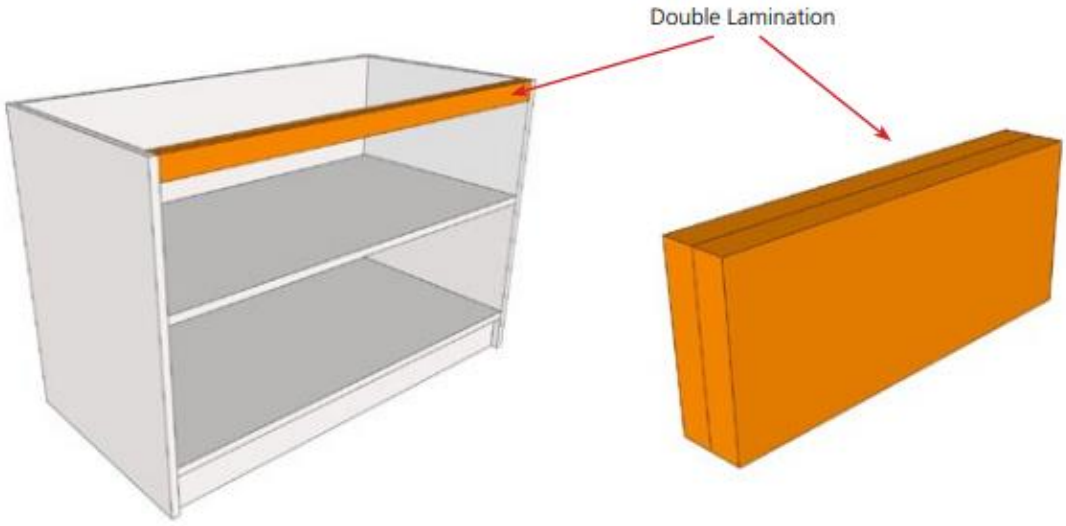
The use of a MDF vertical rail is still better than having a flat rail.



Horizontal rails are not recommended, the installation is dependant on the quality of structure and support that the worktops are being installed onto.

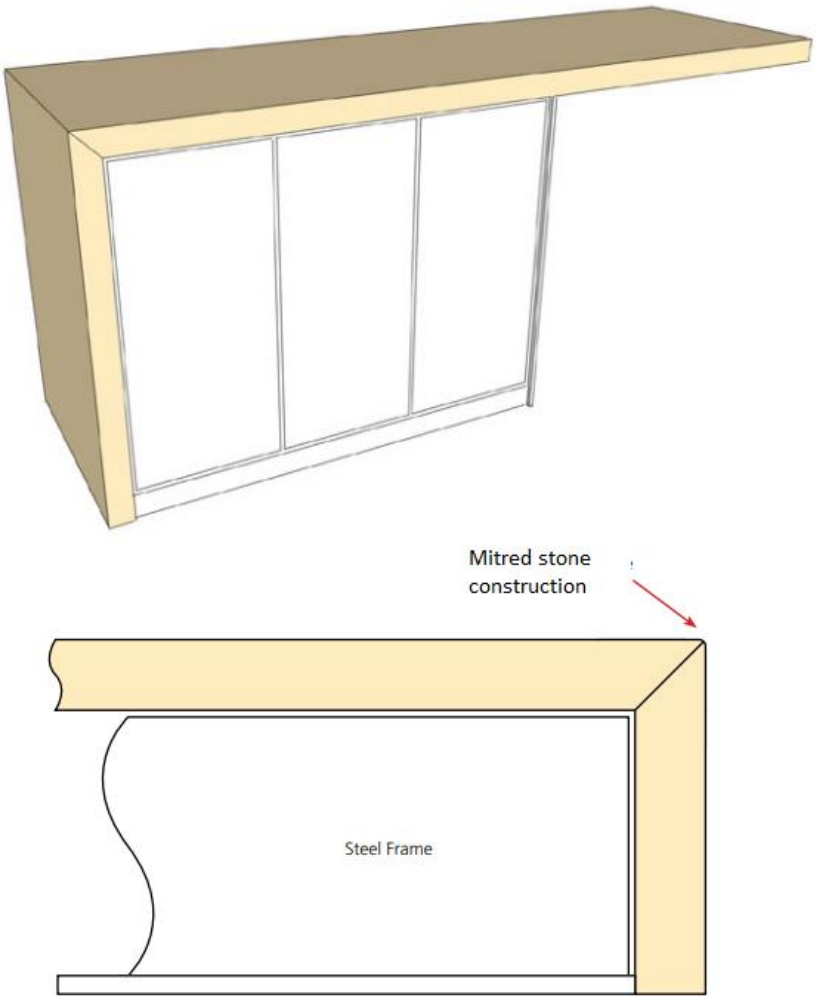


For carcasses with large spans, it is essential that the rear and especially the front rail are constructed from strong materials that are rigid and will not flex under load. In these circumstances a double laminated, vinyl wrapped, solid timber rail or one made from aluminium or steel may be necessary.



Cantilever islands

Slabs must be installed on a rigid frame or base that cannot flex or bend. Cantilever islands should be constructed from a steel frame and must be capable of supporting the full weight of slabs negating any movement or sagging.



Worktop Cut-outs

The following information must be considered when designing the incorporation of sinks, hobs etc into worktops

Cut-outs are usually creating in worktops for the installation of sinks, hobs and other accessories

Cut-outs must be prepared according to the instructions of the manufacturer of the item to be installed

A Minimum radius of 10mm is recommended for all internal corners in cut-outs (figure 1) the larger the radius the stronger the corner

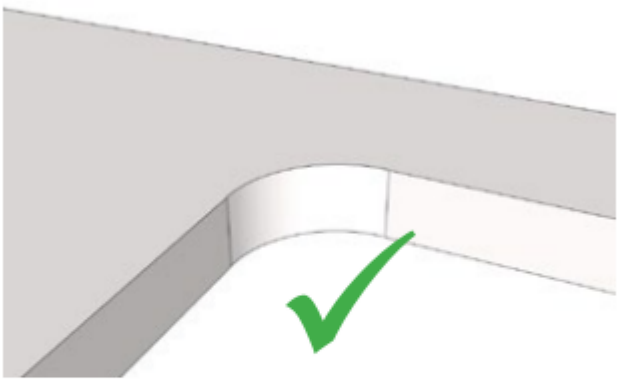


Figure 1

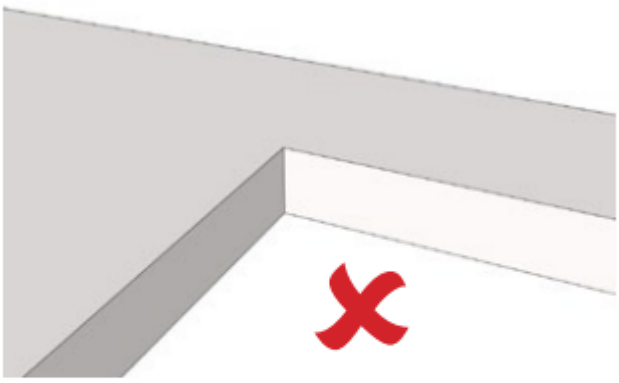


Figure 2

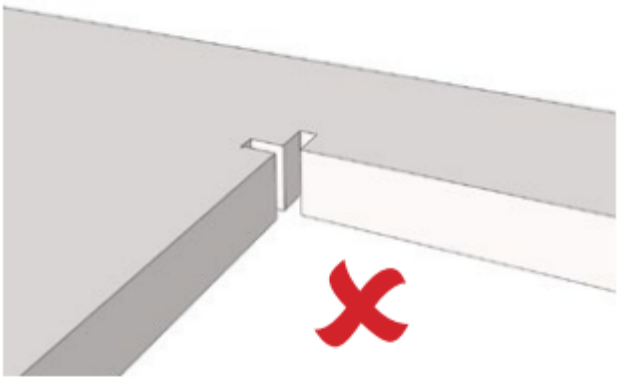


Figure 3

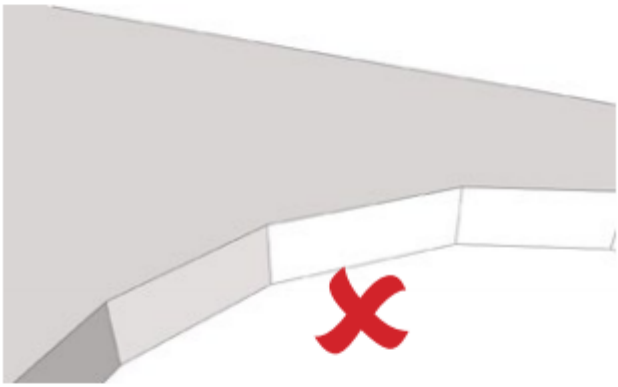
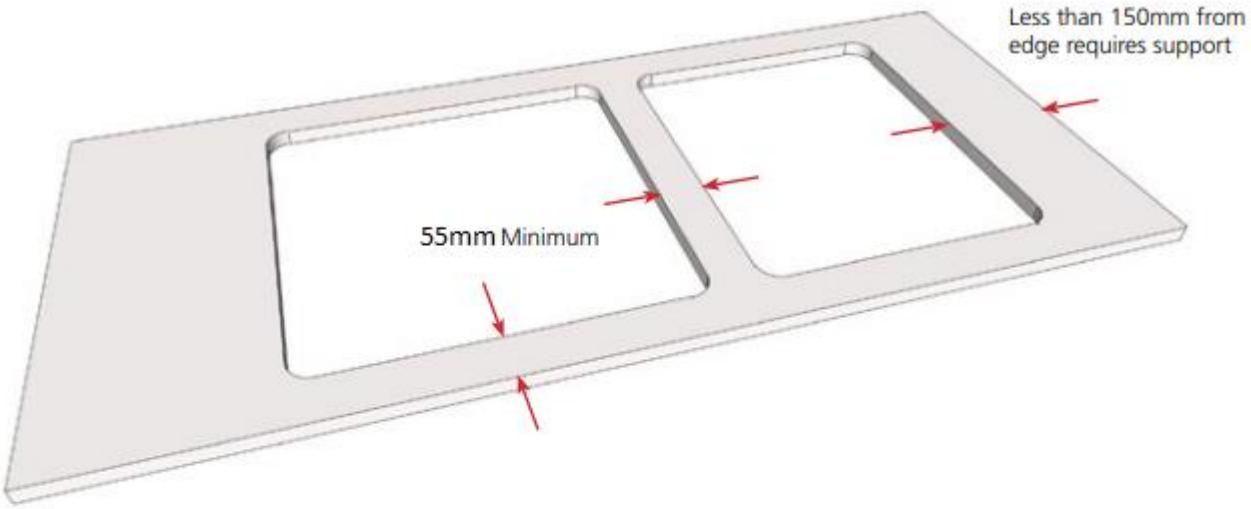


Figure 4

- Do not square cut (Figure 2) or cross-cut (Figure 3) corners.
- Do not cut large radius in sections (Figure 4), these need to be one continuous smooth radius.
- Do not reduce the thickness of the surface when preparing the cutout.
- The distance between a cutout and an edge or join must be no less than 60mm. The greater the distance, the stronger the area.
- If the distance between a cutout and an edge or join is less than 150mm, the area must be supported. Ensure that the area between the cutout and the edge or join is located over the junction between the base cabinets or fit a solid support strip under the area.

cut-out Surrounds

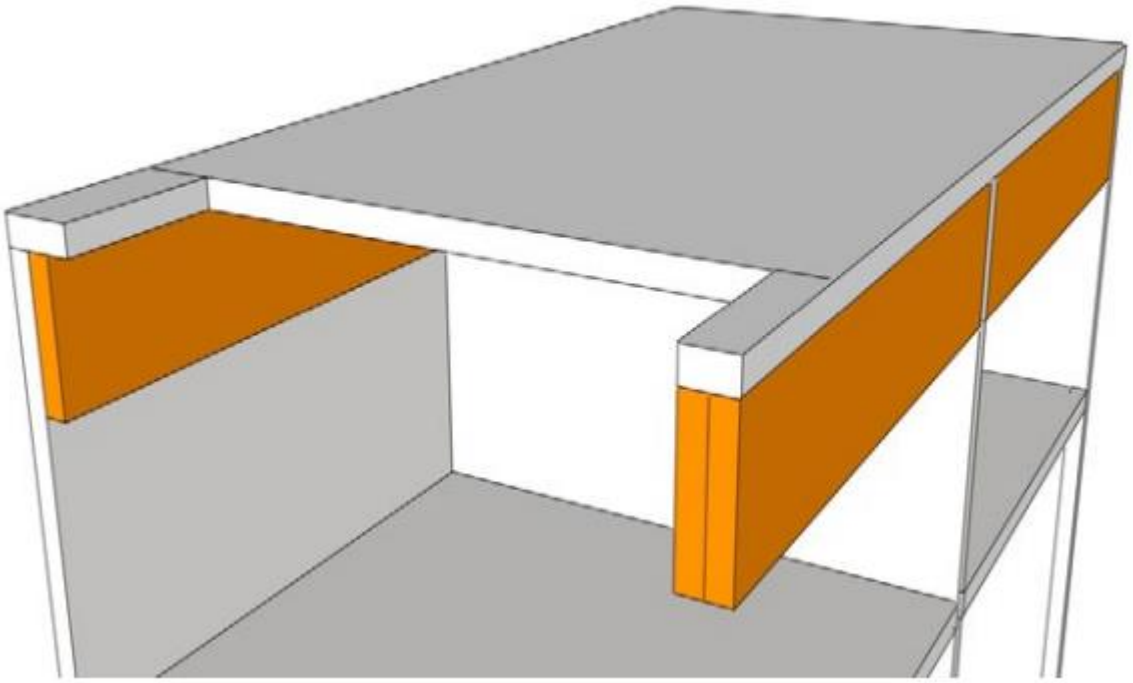
Consider the minimum recommended dimensions when designing cut outs for appliances and sinks



Large Cutouts

If a cutout will leave front and back benchtop rail widths of less than 55 mm, consideration should be given to making these rails from separate pieces to avoid problems with cracking.

If less than 55 mm from edge, then it is recommended that separate rails be abutted to the end of the benchtop.



Sink Drainers

Sink Drainage grooves and recesses are often cut into the surface of the material when under mounted sinks are used. There are several fabrication considerations that need to be addressed.

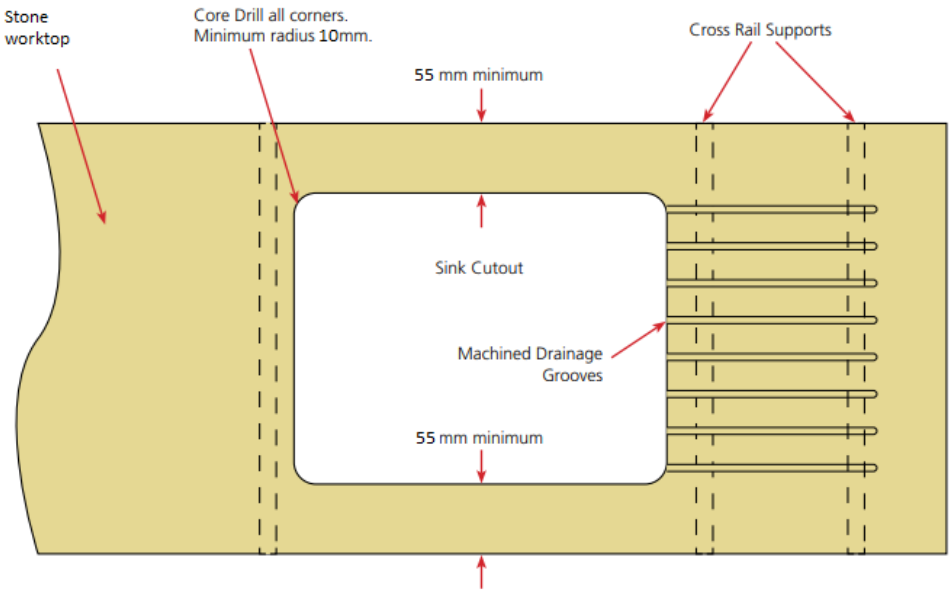
Undermount Sink Installation

1) On Recess and Grooves, it is not always possible to get the same finish as the surface of the worktop, it will often be more of a matt finish.
2) Any groove/recess should not be too deep as it may seriously affect the strength of the worktop around that area.
   If you have 20mm worktops you can have either GROOVES **OR** RECESS,
   in 30mm material GROOVE **AND** RECESS
3) Drainage Grooves may need to be cleaned with a soft bristle brush
4) We recommend that square corner undermount sinks are not installed as we recommend minimum 10mm Radius in all internal corners

Any square corners either in a sink, hob or other worktops are not covered under any warranty

Note – the recommended edge profile for under mounted sink cut outs should be 5mm radius top and bottom edge, to minimise the risk of chipping or damage. The greater the profile the more durable the edge will be.

As standard we overhang the sink all around by 10mm, this means the silicone is out of sight, we recommend the minimum is 5mm overhang, but if a customers requires less than this they need to take into account cutting tolerances of +/- 2mm so if you for example ask for flush i.e. no overhang once it comes off the machine it could be -2mm overhang



Kitchen Splashbacks

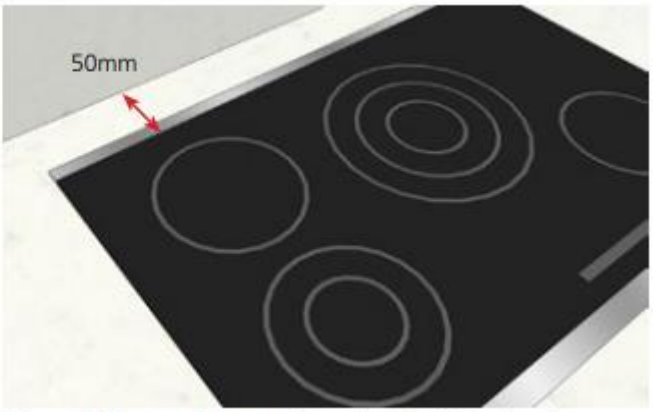
Stone splashbacks offer low maintenance, easy to clean, grout free surface with continuity of worktop colour and are ideal behind sinks and hobs. In addition, they offer reduced lead times with the same day installation as the worktops.

Where can stone be used

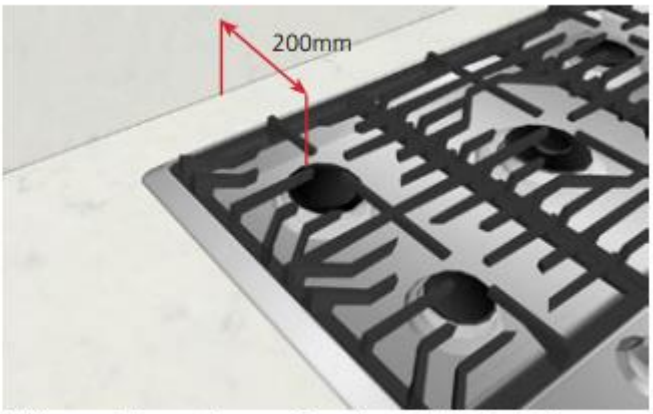
Where can stone be used ?

Electric cook tops (both freestanding or inset) and induction tops
* for both electric and induction we recommend a minimum 50mm clearance from th eback edge of the hob to the stone splasback

Gas Cook tops (both freestanding or inset) for Gas hobs a minimum of 200mm from the periphery of the gas burner to the stone splashback is recommended
When desiging worktops check with the manufacturers recommended installation details as they may require more than our minimum, always follow the manufacturers installation instructions



50mm minimum clearance from splashback for electric cooktops



200mm minimum clearance from the splashback to the gas burner element

Edge Profiles

There are many edge profiles that can be achieved using stone worktops, and it is important to take the following factors into consideration.

All exposed edges should be cut then polished

The top and bottom edges must have a minimum of a 3mm arris top and bottom but recommended 5mm pencil round top and bottom to reduce the chipping. The larger the radius of the edge the more resistant it is to chipping.

Examples of some of the edges available please visit the showroom to see all of them

Chipping

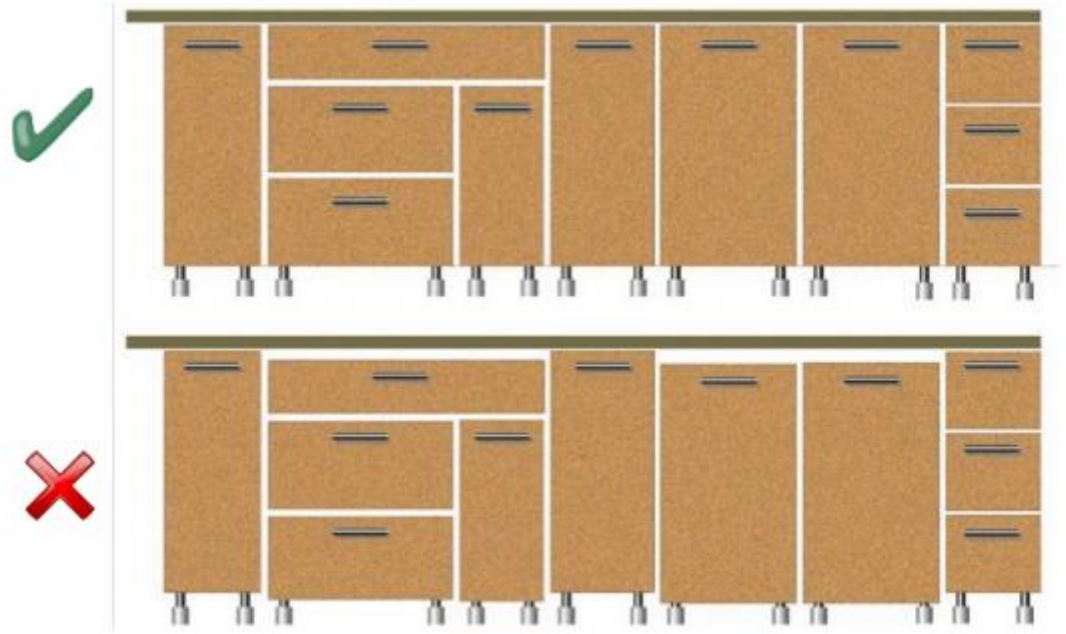
If you knock 2 hard materials together, on the leading edges there is a risk of chipping, this is not covered by the warranty, we advise to change the edge as discussed above to reduce the risk of chipping

Preparing the Base units and Cabinets

Natural stone surfaces are installed on top of cabinets and are not fixed to the wall. Before installing the worktops, ensure that cabinets are complete, stable, level and suitable for bearing the weight of the surface and any other heavy applied loading including sinks filled

Stone worktops must be supported on strong, weight supporting perimeter frame or on a full solid carcase

Ensure the worktops are supported sufficiently in areas of joins, cut-outs and over spaces for appliances such as dishwashers, ovens, washing machines etc.

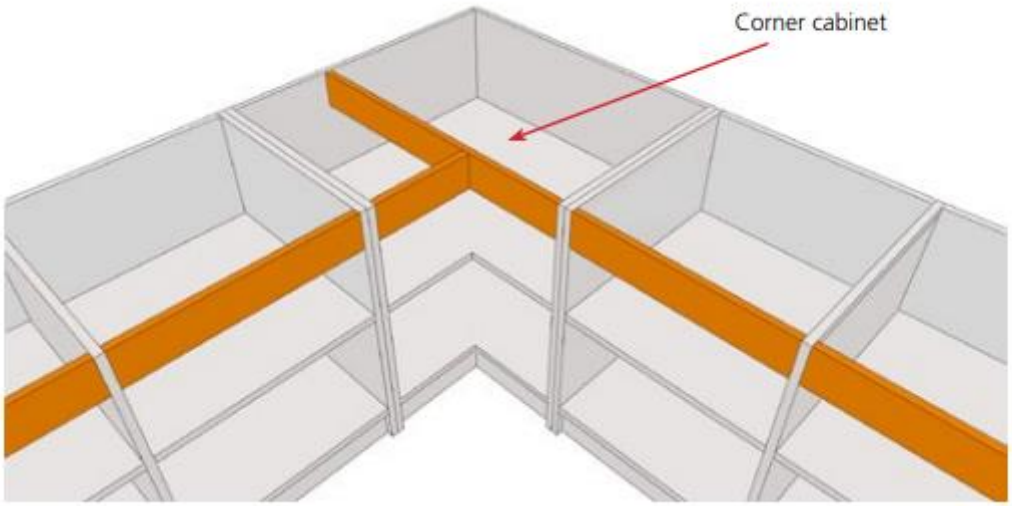


For cut outs longer than 600mm provide side to side support beams under the surface

Provide support under all worktop joints

Attach a board between the cabinet tops on both sides of under worktop appliances that generate heat

For surfaces of 12mm or 20mm if extra reinforcement of the cabinets or the surface is considered necessary, incorporate a full carcass panel in the top of the cabinets



Finishing Touches

Once installation is complete, the installer will ask you to check the worktops all over, please be careful about the first 24 hours as glues and silicones take time to dry, do not use the sink in this time.

If further works are required in your kitchen for example appliance installation, decorating etc please ensure you protect your worktops by covering them once the silicones and glues have dried with corrugated cardboard or another protective material.

Please ensure the worktops are not used as a work bench, step or standing platform, and any person using strong solvents or adhesives must show due care.

Below are some examples of kitchens after the worktops have been signed off, on each occasion customer had scratches and damage to the worktops caused by trades working after the kitchen installation

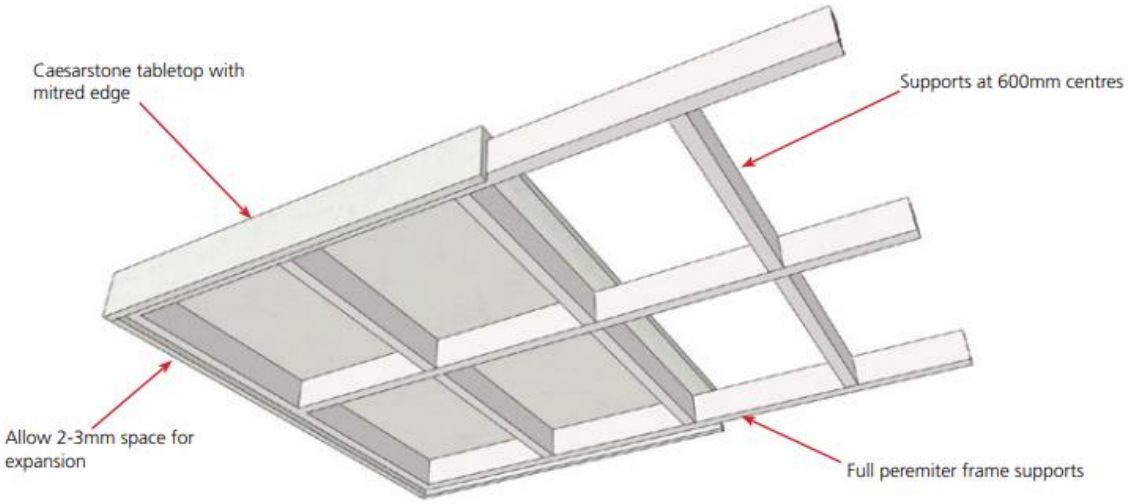
Table tops and larger overhangs

When installing a stone surface as a freestanding table top or where a larger overhang, the base must fully support the weight of the stone table top. All edges should be arrised to 3mm top and bottom to reduce the risk of damage from chairs etc.

The stone should be bonded to the substrate with epoxy or neutral cure silicone and then screw fixed to substrate.

Table top Frames

Natural stone is an ideal surface for furniture, large benches etc. When using stone in these applications, it is important that the perimeter and internal supports do not sag or move from the weight of the stone or any additional applied surface loading.

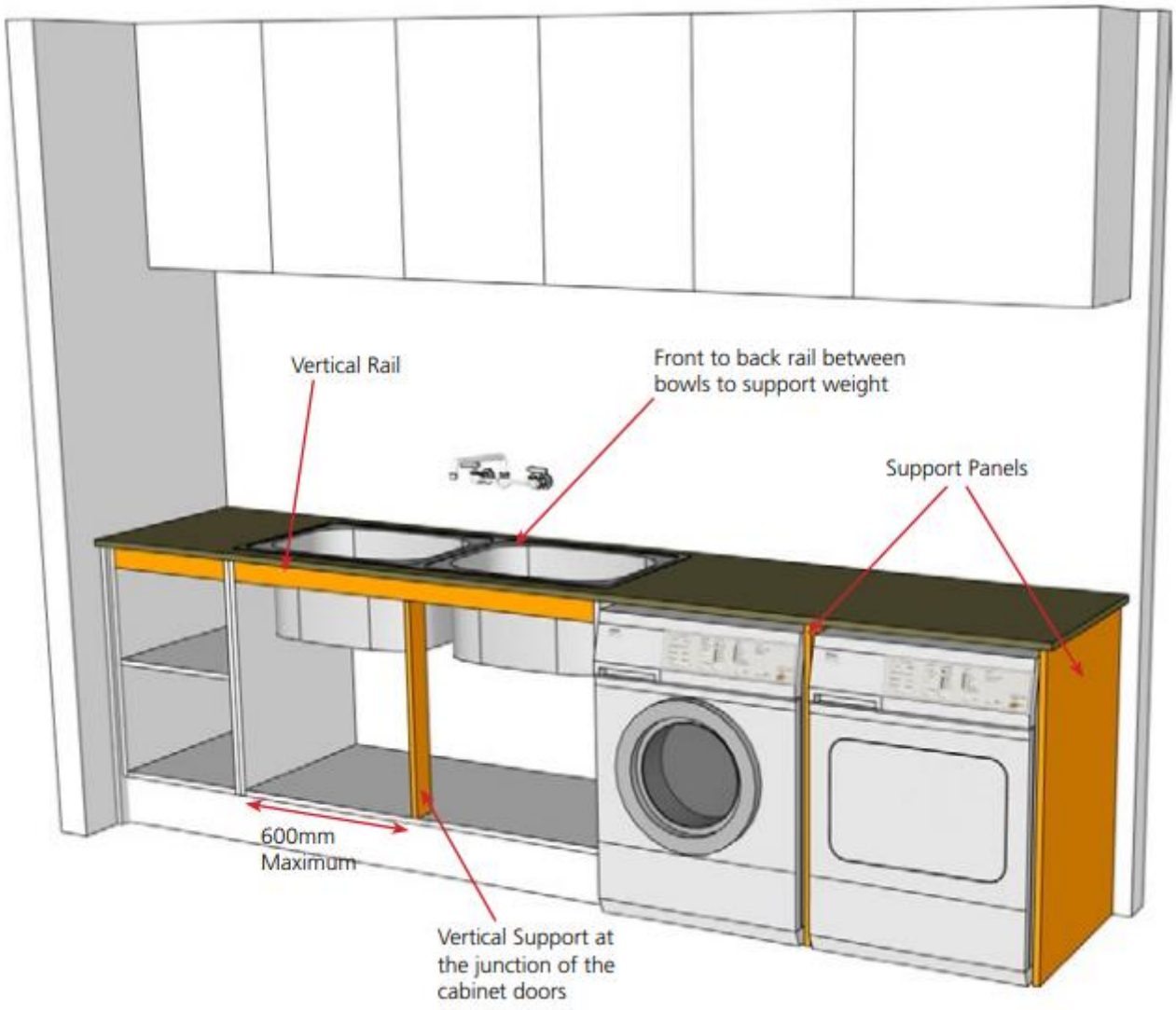


Vanities

Stone can be used in several ways to create a vanity unit

Where the material itself forms the receptacle that will hold water or where water is running directly onto the surface of the Stone. Boiling water must be avoided due to the risk of thermal shock.

Utility/Kitchen



Installing large bowls into utility and increasingly kitchens requires additional consideration, as for example above is a dual sink which requires a wide cabinet to accommodate it

The total capacity is 90L with each litre of water weighing 1kg, so it could potentially have a weight of approximately 90kg if both sinks were filled with water. If there are two bowls, then we recommend adding a rail between the bowls.

This is equivalent to a person standing on the top in an area with a large cut-out. Unless the cabinets are reinforced and can adequately support this weight, then there is a high risk of a worktop failure.

Washing Machine/Dryer/Dishwasher

Where these appliances are installed below the worktops, care needs to be taken with providing additional support.

It is advisable that a vertical support panel is placed between the appliances and either a support panel or cabinet be placed either side this will ensure that the tops have adequate support.

The Other consideration is with the heat generated by these appliances, especially the dryer. Some of these exhaust through the front while others through the back, some may also need to be ducted.

If required a panel/ heat defuse may need to be installed below the tops to protect them from heat

Heat Resistance

Stone surfaces can tolerate moderately hot surfaces for brief periods of time. Prolonged exposure will result in discolouring or other types of damage

Do not expose stone to excessive heat, the rule of thumb is that if cookware is too hot to hold then don't place it directly on your stone worktop use a trivet

Always use an insulator trivet, chopping board or heat pad. Never place hot cookware directly onto the surface of any stone worktop

Do not allow direct contact between Stone surfaces and very hot pots or other hot cookware.

Example of concentration of heat on one area of the bench top due to pot with a high thermal load. The use of a heat pad eliminates this problem. There is no heat transfer to the tops.

Heat can cause a worktop to expand rapidly but in a very localised area while the rest of the worktop remains cold. This thermal expansion is opposed by the cold, non-expanding adjacent material as well as any adhesive used to fix the worktops.

A pot placed on the worktop directly creates two issues firstly there is a sudden change in temperature of the top (thermal shock) and secondly the thermal load, that is the amount of heat present.

Cracking in this situation many not happen the first time, although they may develop over time if the proper precautions are not taken. Below is an example using a crayon to highlight that heat has been placed on the worktop

Care and Maintenance

Please download the care and maintenance guide for the type of worktop you have on the website

Care & Maintenance

Everyday Cleaning

Caesarstone requires very little maintenance to keep the surface looking like new. For everyday, routine cleaning we recommend wiping the surface with warm soapy water (a mild detergent) and a damp cloth, or use a spray and wipe cleaner that is stone safe. Wipe the surface with a clean damp cloth then dry off with a microfibre cloth.

As Caesarstone is virtually non-porous, it will keep its lustrous gloss and ultra smooth surface without polishing and it never needs sealing. Never attempt to polish the surface, and avoid prolonged rubbing in one spot when cleaning.

Caesarstone Cream Cleanser

Caesarstone Cream Cleanser has been specially formulated to remove the most stubborn stains such as red wine or beetroot while taking care of the Caesarstone surfaces. It is also suitable for cleaning sinks and taps, baths and basins, shower recesses, tile surfaces and cook tops.

Food Preparation

We always recommend cutting on an appropriate cutting board and never directly on the Caesarstone surface to avoid blunting kitchen knives or damaging the surface of your bench top.

Warranty Registration

Your templater will provide you with information on how to register your warranty, also the installer will leave you a general maintenance kit

Heat Resistance

Caesarstone will tolerate brief exposures to moderately hot temperatures, however prolonged direct contact with, or radiated heat from very hot pots can cause thermal shock, discolouration or damage. Therefore we do not recommend placing hot pots, pans, electric frying pans, oven trays, etc. directly from the hotplate or out of the oven onto the surface of Caesarstone. We always recommend the use of a hot pad or trivet to place hot items on.

Tough? Yes. Indestructible? No.

As with any surface, Caesarstone can be permanently damaged by exposure to strong chemicals and solvents that undermine its physical properties. Do not use products that contain trichlorethane or methylene chloride, such as paint removers or stripper. Avoid any highly aggressive cleaning agents like oven cleaner that have high alkaline/pH levels. Should the surface be accidentally exposed to any of these damaging products, rinse immediately with water to neutralize the effect.

Caesarstone has developed a range of cleaning products specially designed and formulated to keep Caesarstone quartz surfaces looking their best. Our Cream Cleanser is available to purchase through approved Caesarstone fabricators.

Extra Stubborn Stains

For extra stubborn stains that can't be removed with Caesarstone Cream Cleanser, contact our Caesarstone customer support team at 0800 303 606 who will be able to provide you with further cleaning advice for your specific type of stain.

Substance	Caesarstone Cream Cleanser	Methylated Spirits	Stone Safe Spray Cleaner
Red Wine	✓		
Beetroot	✓		
Coffee / Tea	✓		
Cordial	✓		
Spices	✓		
Food Oils			✓
Glue / Silicone / Paint		✓	

For more information please refer to the Caesarstone Care & Maintenance Guide.

Treating Stains

Type of Stain	Cause / Source of Stain	Treatment Remarks
Chemical	Materials containing caustic soda pH 10-14 Fat/grease removers, eg, oven cleaners	Cannot be removed.
Heat source Direct / Indirect	Hot pressure cooker Hot frying pan Hot saucepan Polishing burn Toaster oven Grill Hot plate Oven shelves and trays Hot food spillage	The severity of the burn is indicated by its colour. Yellow stains can sometimes be removed with Caesarstone Cream Cleanser. Brown stains generally cannot be removed.
Oil – natural	Olive oil Canola oil, etc.	Caesarstone Cream Cleanser. 10% bleach
Oil – synthetic	Machine oils	Caesarstone Cream Cleanser,
Cosmetics	Hair shampoo Medical creams Make-up	Iso Propyl Alcohol Caesarstone Cream Cleanser Hydrogen peroxide, max. 30%
Metal	Metal kitchen tools (e.g., knives) Metal pots Metal belt buckles	Caesarstone Cream Cleanser Metal stains may resemble scratches but they are actually metal residue and easily removed.
	Rust	Oxalic acid Repeat use for stubborn stains.
Food and beverages	Food colouring Herbs and spices Red wine Pomegranates	Caesarstone Cream Cleanser 10% bleach
Colours	Ink Markers – water based Markers – oil-based (permanent) Paint Print from supermarket bags	Alcohol Caesarstone Cream Cleanser 10% bleach
Other	Blood	Caesarstone Cream Cleanser
	Candle wax	Alcohol Caesarstone Cream Cleanser
	Glue from adhesive tape	Alcohol
	Hard water deposits	Scale remover Vinegar
	Soap stains	Caesarstone Cream Cleanser
	Silicone	Alcohol

*Results represent a partial series range.
**Some models require scrubbing to remove certain stains.

For further Caesarstone Technical Information register for the Professional Zone of the Caesarstone website at www.caesarstone.co.uk