

ThinkSolid™ Modular

Installation Guide

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Introduction

Think Solid™ Modular is brought to you by CASF, one of Australia's leading suppliers of high quality decorative surface solutions. The Think Solid™ Modular has been carefully developed to meet the needs of the Australian market. It has been engineered in a range of pre-finished sizes, that will allow you to significantly reduce the time to install your new Think Solid™ Modular benchtop.

Think Solid™ Modular has a smooth surface with seamless inconspicuous joins and is available in a range of colours. Water, chemical and impact resistant, in extreme cases where accidental damage occurs, the surface can be repaired/restored to its original finish. Think Solid™ Modular offers an affordable solid surface solution with style, quality and long term value.

Think Solid™ Modular is a 12mm solid surface material made from natural minerals, and polymer resins. Think Solid™ Modular is fabricated on a 25mm subframe.

Think Solid™ Modular is warm and inviting to the touch, taking on the room temperature and will absorb every day knocks, whereas laminate and other similar products would be permanently damaged.

Think Solid™ Modular provides an excellent kitchen benchtop, as it can be seamlessly joined, is extremely hygienic and durable.

Think Solid™ Modular is resistant to most kitchen stains but additionally stains can be removed with mild abrasive cleaners.

As with any high quality benchtop, care should be taken against possible scoring with knives or other cutting tools and chopping board should always be used. However, accidental damage can be polished out. Part of the surface can even be repaired/ renewed in extreme circumstances.

Think Solid™ Modular should not be subjected to high temperatures. **Always use a heat pad or trivet** when placing hot pots/pans on the benchtop. Please see our care and maintenance literature for more information

The information contained in this document is provided as a guide for the installation of Think Solid™ Modular. No warranty, however expressed or implied, is given in relation to the guidelines in this document.

Before you begin

Please read this booklet before commencing installation of your benchtops. Some of the information may not be applicable to your particular installation, however certain stages of preparation and assembly are important, and spending a short time to review this booklet may save time later.

Important notes

1. Installation of the benchtops MUST be carried out by a competent person. If in any doubt, consult an expert for any technical advice.
2. Always carry your benchtop on edge (never flat) (see Fig. 1).
3. Do not rush your installation. Take time and care during installation to achieve a professional finish.
4. Protect your benchtop from damage by keeping all metal tools off the surface during the installation process.
5. Under no circumstances must screws be used directly into the benchtop.
6. When fixing benchtops to cabinets DO NOT use the brackets supplied with your cabinets. Use a silicone adhesive for this purpose.

Storage & preparation

Installation of the benchtops should be carried out as soon as possible after delivery. If storage is necessary, benchtops MUST be laid flat and fully supported in their original packaging (see Fig. 2). Make sure the storage area is indoors, and in a completely dry area. Do not unpack the benchtops unless the room humidity is stable and all cabinets are installed with any debris cleared away.

To achieve the best installation results, store your benchtops in a room temperature of around 20°C. This should be for at least 24 hours prior to installation.



Fig. 1

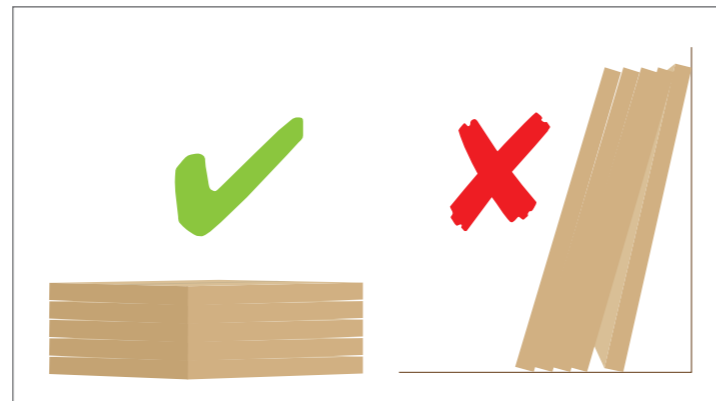


Fig. 2

Tools and materials you may need

Adhering your Think Solid™ Modular benchtop to your cabinets

- Tape measure
- Spirit level
- Silicone gun
- Methylated spirits and clean cloth
- Silicone glue
- Packers or wedges
- Masking tape

Joining

- Power/cordless drill
- Mason's mitre jig
- Straight edge
- Face mask
- Safety glasses
- Vacuum cleaner
- Double flute straight cutter

Appliance Installation

- Pencil & square
- Jigsaw (used for cutting template board material)
- Router (1800-2300 watts / 2.5-3hp), (used for cut-outs in Think Solid™ Modular benchtop)
- Sand paper (150 grit, to smooth edges of cut-outs) and sanding block
- Template board (eg. MDF)
- 3M double sided tape as appropriate
- 3M heat conductive tape (used for cooktop cut-outs)

Professional Tip - The operation of sanding and routing will generate dust. It is strongly recommended to use extraction on your power tools to remove the dust, i.e. vacuum cleaner. There will be airborne dust which can only be cleaned after routing. Sealing doorways etc. to occupied areas is advisable or alternatively do these tasks externally.

Cabinet requirements

(incorporating benchtop support)

The design and construction of the cabinets as a benchtop support has a large influence on the successful installation and ongoing performance of your Think Solid™ Modular benchtop.

A suitable benchtop support will eliminate the chance of the Think Solid™ Modular surface from warping or cracking under load during normal applications. The benchtop support must be able to hold the Think Solid™ Modular material, which weighs approx 25kg per m² plus any additional load the top could be subject to. Typical loads applied to benchtops can exceed 100kg per m².

- Cabinets must be constructed from solid panels 16mm thick (minimum), ensuring the weight transfer from the benchtop to the floor is carried out through each end gable or division. (Fig. 3).
- If the cabinets are fitted with plastic adjustable legs, then the base plate design must facilitate a support lug for the cabinet end.
- Vertical support rails should be screw fixed to the front of the cabinet, to ensure adequate rigid support for the benchtop. The rails can be made from moisture resistant MDF, moisture resistant plywood or timber and the rail should be at least 50mm wide x 25mm thick.
- Cabinets deeper than 700mm, will require an additional vertical support rail in the centre.

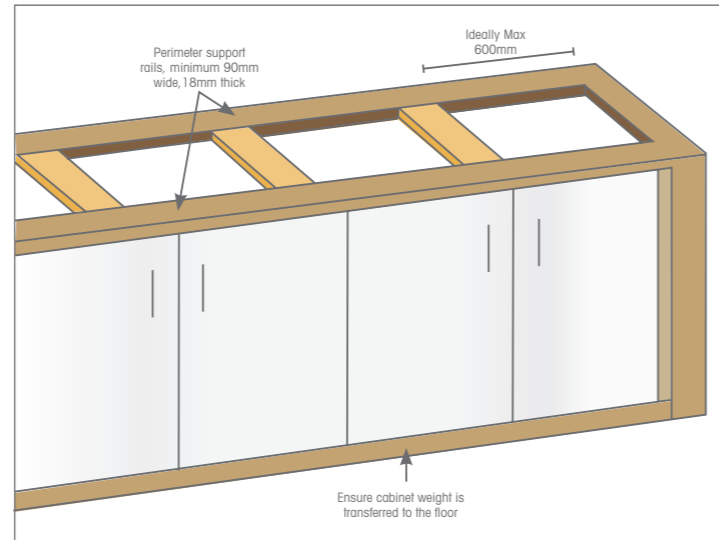


Fig. 3

Span & overhang support

Spans

Think Solid™ Modular requires a strong perimeter support frame that will keep it level for the useful life of the benchtop. Base cabinets that are spaced 600mm apart provide an ideal base for your Think Solid™ Modular benchtop. If base cabinets exceed 900mm, then additional support material will be required to strengthen these types of installations, ensuring that it provides a strong and level base for the benchtops to be installed.

Overhang support

Some applications may require a significant benchtop overhang as a functional element or a design feature such as a breakfast bar or island top. The following chart provides guidelines for designing overhanging benchtop sections to ensure adequate support.

Overhang size 38mm material	Suggested support
Less than 150mm	No additional support required.
Between 150mm & 300mm	Brackets every 600mm or fixed breakfast bar support legs.

Benchtop sizing & cutting

Preparation

- Always cut so the join sits on the cabinet end panel of the cabinet wherever possible (Fig. 4), enabling benchtops to be joined on a gable end not in the middle. This gives added support to a join and a stronger area for shimming up the surface to achieve a flush join. Where this isn't possible an MDF strip (90x25mm) should be secured below the join to give added support (Fig. 5).
- Ensure benchtops get an expansion clearance between walls of 1mm for every linear metre of benchtop (i.e. 3mm for 3 metre length).
- Ensure you use a router with a double flute bit to size benchtops. Follow the manufacturers instructions on how to operate this tool. Consult an expert if you have any doubt.
- Ensure all benchtop joins are a minimum of 150mm away from any appliance cut-out.
- Any cutting work should be done outside as machining Think Solid™ Modular creates dust.

Join positioning on cabinets

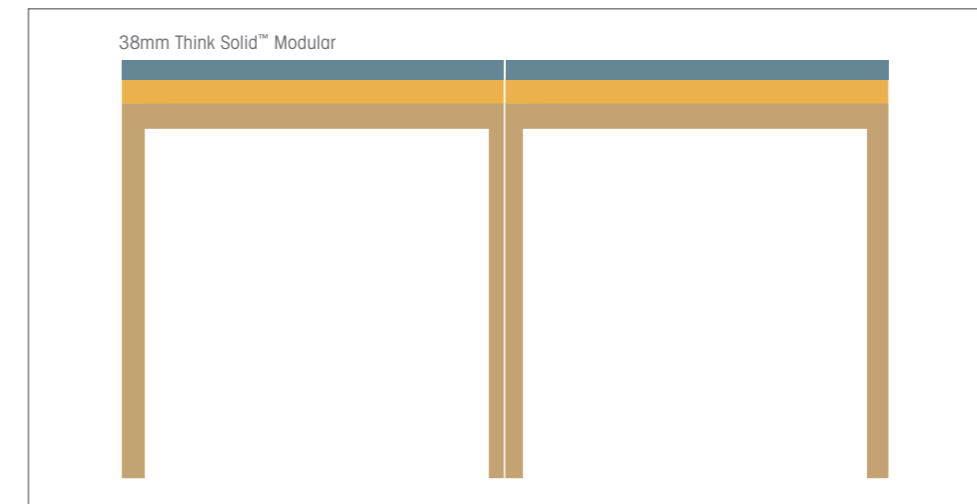


Fig. 4 Strongly recommended position

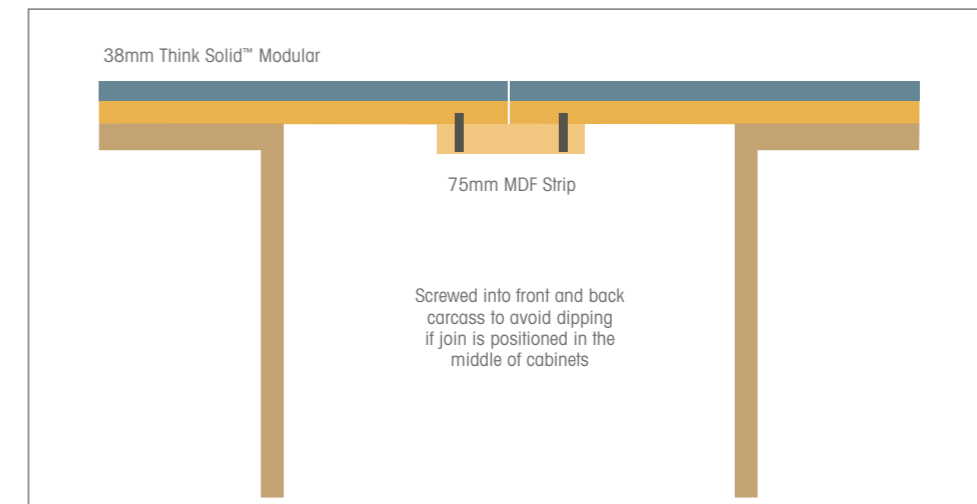


Fig. 5 (not advisable) Join in middle of unit with MDF strip (if recommended position not possible)

Mason's mitre join

The following joining technique enables the retention of the downturn edge detail at an internal corner, without the need for a full mitre join. This method requires a Mason's mitre join (see Fig. 6).

Female side of join

- Place the pre finished benchtop on a suitable surface with the front edge towards you, (cut from underside where necessary).
- Align the mason's mitre template and clamp in position (see Fig. 7).
- Router using a double flute straight cutter from left to right with slight pressure to the side of the slot closest to you. (run router through the blank, without stopping and taking care not to tilt router).

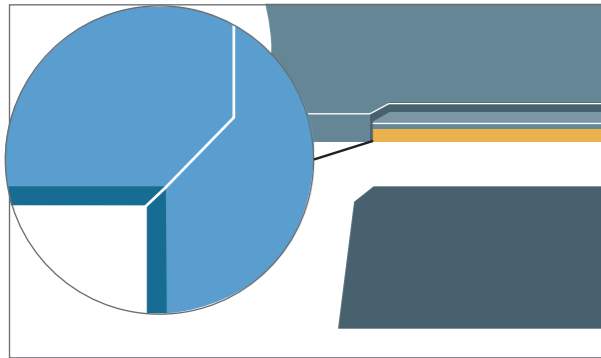


Fig. 6 Mason's Mitre Join

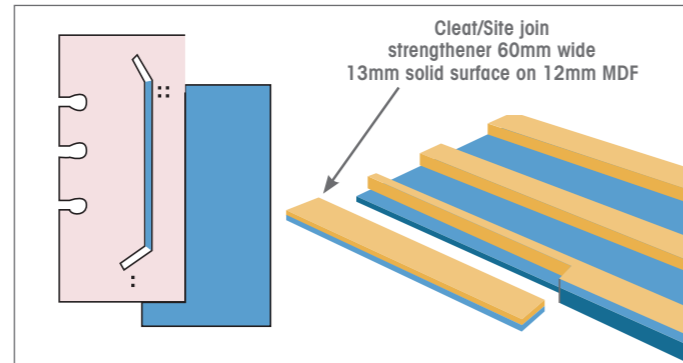


Fig. 7 Female Masons Mitre Join section & Underside of Female Mason's Mitre after routing

Male side of join

- Cut the blank that is the male side of the join to length by measuring the length required and then refer to Fig. 8 or Fig. 9 to provide a template positioning line in pencil.
- Align the template with front edge and pencil line and clamp in place.
- Router using a double flute straight cutter, from left to right with slight pressure to the side of the slot closest to you. (run router through the blank, without stopping and taking care not to tilt router).
- Provide a finish cut to edge by running router with pressure to side furthest away from you.
- All joints must be reinforced using the standard cleat method as Fig. 9.
- Fix a 25mm MDF cleat to underside of female join using silicone adhesive and leave to cure, this will create strength and support for the site join.
- Turn top over and trim MDF subframe back to accept joining cleat.
- In areas where there is no base support for the site joins, please provide support (see previous section) to stop the joint dipping when being clamped together (using silicone and hot melt method Fig. 10).

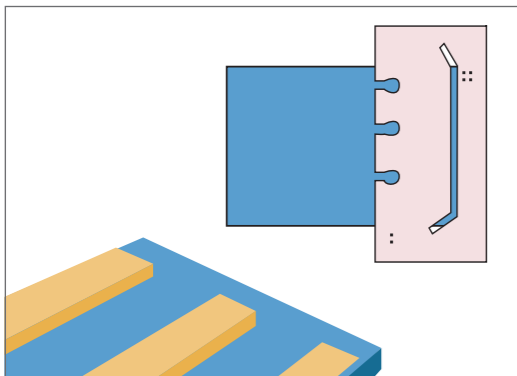


Fig. 8 Underside of Male Mason's Mitre after routing

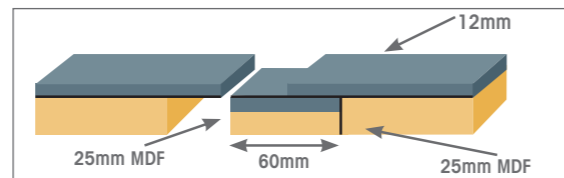


Fig. 9 Standard Join - Cleat method

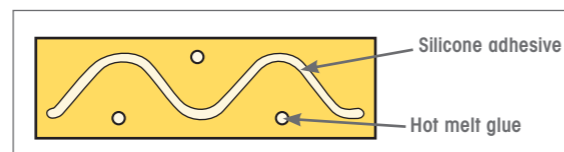


Fig. 10 Gluing MDF to underside of benchtop

Scribing benchtops (if necessary)

The scribing process (Fig. 11) reflects the contours of the wall, not the benchtop and is achieved by placing a small block of wood onto the surface and against the wall.

Always remember to add 30-35mm overhang to carcass, which will take into account the door thickness, and also make sure the thickness of any waterfall ends (if applicable) is taken into account. Adhere a strip of 50mm masking tape flush with the back edge of the benchtop, this will enable you to see the pencil line that will be produced in the scribing process. A pencil is then placed at the front edge of the block. The block and pencil are then pushed along the length of the benchtop, marking the benchtop as you proceed. Using this method, any deviation in the wall is marked onto the benchtop.

Scribe with a grinder fitted with a 125mm diameter blade.

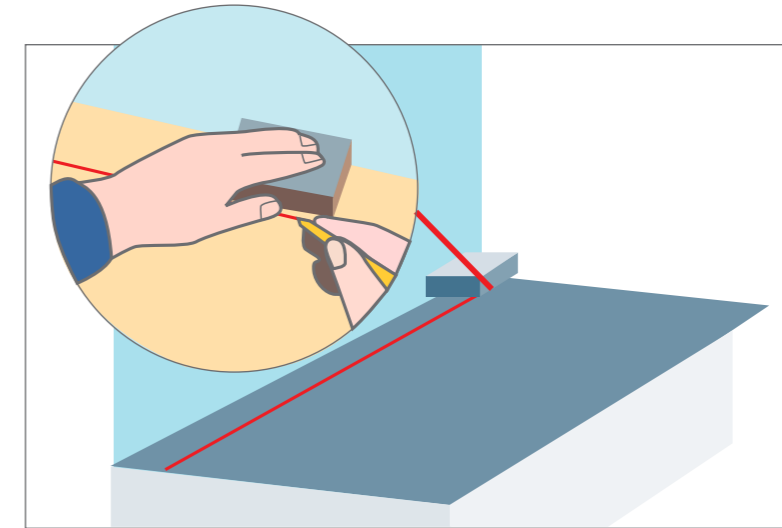


Fig. 11 Scribing to correct depth

Sink & cooktop cut-outs

Step 1 - Making cut-out templates

The use of an accurate template is one of the most essential elements to the successful completion of a cut-out in your Think Solid™ Modular benchtop.

- Ensure the appliance manufacturer's paper templates are used and trace on to the template board material (see Fig. 12).
- Use a jigsaw to make the cutout in the template board material.
- Sand the template board material as smooth and as perfectly shaped as possible.
- Gently position and clamp the template in the exact position of where you require the cutout (see Fig. 13).



Fig. 12



Fig. 13

Step 2 - Routing

CAUTION: Only use a router when making a cut-out in a Think Solid™ Modular benchtop. Ensure you operate this power tool according to the manufacturer's instructions. Consult an expert if you have any doubt.

- Ensure the benchtop is properly supported before you commence routing the cut-out, making sure the waste part of the benchtop is supported at all times (see Fig. 14).
- **CAUTION:** Failure to properly support the waste section of the cut-out will cause damage to your benchtop.
- **CAUTION:** A jigsaw should not be used to make the cut-out in the Think Solid™ Modular material.
- Once you have the template board clamped into the correct position, plunge the router into the cut-out using a profile router bit similar to that shown in Fig. 15.
- Using the template board as your guide, route in a left to right direction around the template to complete the cut-out.
- Using a 150 grit sandpaper, sand the inside edge of the cut-out to remove cutting marks (see Fig.16).
- Remove sharp edges at the top and bottom of the cut-out by sanding the edges to an approximately 2mm radius. This can be done with 150 grit sand paper and block. If this is not done correctly, fine cracks may appear in your bench top over a period of time.
- **For cooktop cut-outs only, apply the 3M aluminium heat conductive tape around the cut-out in one continual piece (Fig. 17). This is an important step to ensure the benchtop is protected from excessive heat.**
- Ensure the aluminium heat tape extends up the cut-out edge and over the surface of the benchtop enough to run past the outside edge of the cooktop flange (see Fig. 17).



Fig. 14



Fig. 15



Fig. 16



Fig. 17

Professional Tip - After properly finishing the edges of the off cut of your sink or cooktop cut-out, apply four rubber feet under the surface and use this as a colour matched heat pad in your kitchen.

Undermounting your sink (if required)

Please note, if you intend to undermount your sink, you will need to position and fix the sink to the underside of the benchtop prior to the benchtop being installed on to the cabinets.

The following steps will prove helpful to achieve the best results when mounting your sink.

Step 1

Ensure you use the installation instructions provided by your sink manufacturer to obtain the best results.

Step 2

Ensure you locate the exact position of where you require your sink to be cut-out. Refer to the Sink & Cooktop cut-outs section in this installation guide for help.

Step 3

Once the hole is cut, sand the inside edge of the cut-out smooth with a 150 grit sandpaper, making sure you remove all cutting marks.

Step 4

Remove sharp edges at the top and bottom of the cut-out by polishing the edges to an approximately 2mm bevel. If this is not done correctly, fine cracks may appear in your bench top over a period of time.

Step 5

Turn the benchtop over and locate where to position any additional fixing blocks.

Step 6

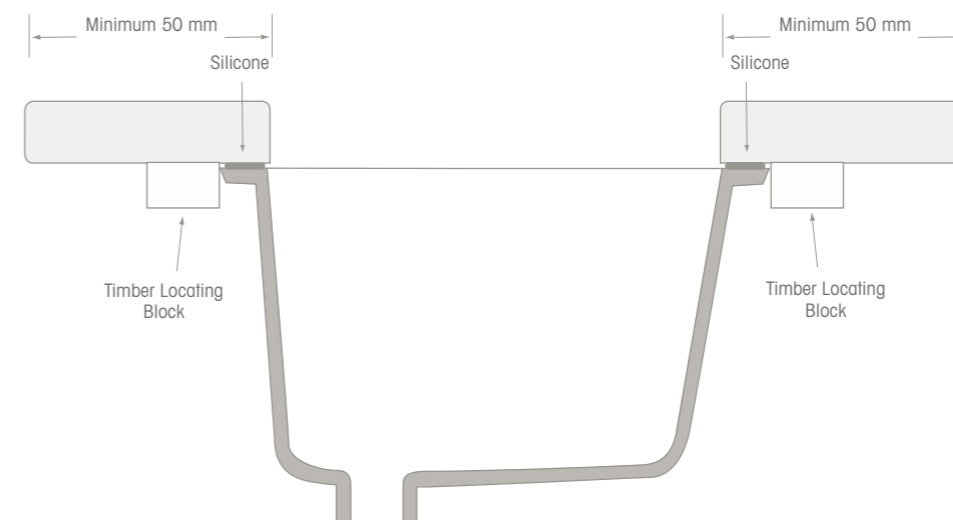
Remove all dust or dirt around the underside of the cut-out. Apply a bead of silicone to the underside of the sink cut-out and position the sink under the benchtop.

Step 7

Tighten the sink mounting screws to the timber subframe and any fixing blocks. Remove any excess silicone that oozes around the edge as per the manufacturer's instructions.

Step 8

Once you have installed the sink, turn the benchtop over to complete the overall benchtop installation. Refer to the 'joining and installation of benchtops' section of this installation guide.



Joining & installation of benchtops

Step 1 - Join preparation

After all cut-outs have been made, dry fit the pieces together to double check the alignment and fit. Also make sure the tops are level.

Note: Ensure the edges which are joining meet along the full length (see Fig. 18). When benchtops are butted together they can be shimmed underneath with thin packing pieces to ensure the top surfaces are level. Note: Properly leveled joints result in a better quality finish.

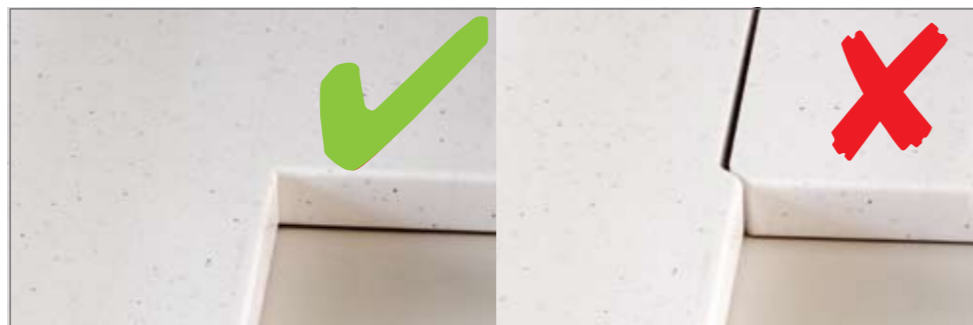


Fig. 18

Step 2 - Cleaning And Preparing Joins

Clean the pre-prepared edges with methylated spirits and a clean cloth, prior to applying the silicone adhesive to ensure the join will be free of any dirt or grime.

Step 3 - Position The First Top

Start in a corner and work outwards. Apply small amounts of the silicone adhesive on the cabinet front & back rails, as well as other points where they make contact with the benchtops (see Fig. 19). Gently fit the first top in place and check that it is level.

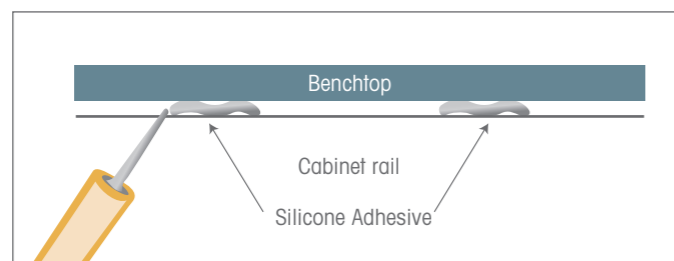


Fig. 19

Step 4 - Installing the second/third tops

Apply silicone adhesive to the cabinets as before in step 3.

Step 5 - Joining the benchtopS together

CAUTION: When joining benchtops, ensure the pre-prepared edges are protected from damage when being positioned together.

Apply a bead of silicone adhesive along the adjoining edges (see Fig. 20). Bed the benchtop down on to the silicone and push the benchtops together ensuring they are aligned, and join firmly ensuring that a small amount of silicone adhesive beads on the benchtop surface. (see Fig. 21)

Remove any excess silicone adhesive from the benchtop with a clean moist cloth.



Fig. 20



Fig. 21

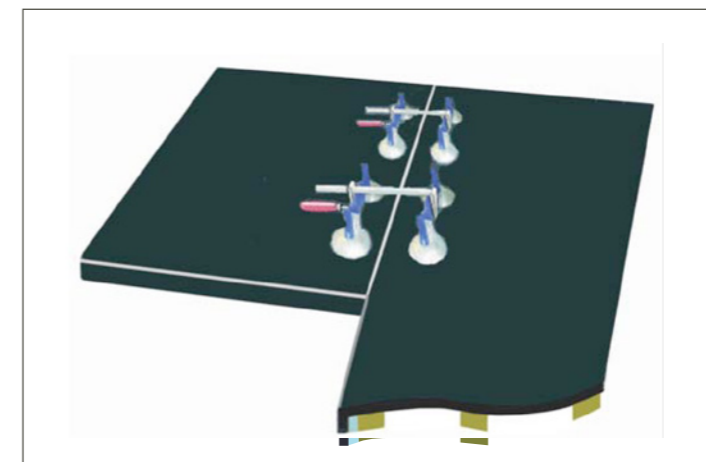


Fig. 22 Suction Cups & Clamps

For additional benchtops, follow instructions shown in the second and third top section.

Once you have completed the installation of all benchtops, you can have your appliances installed by a licensed plumber and/or electrician.

Professional Tip - Installation of the benchtops that have in excess of a 150mm overhang (e.g. Breakfast bars) will require additional support. Use of appropriate brackets is recommended to properly support these benchtops. See Span & Overhang support for more details.