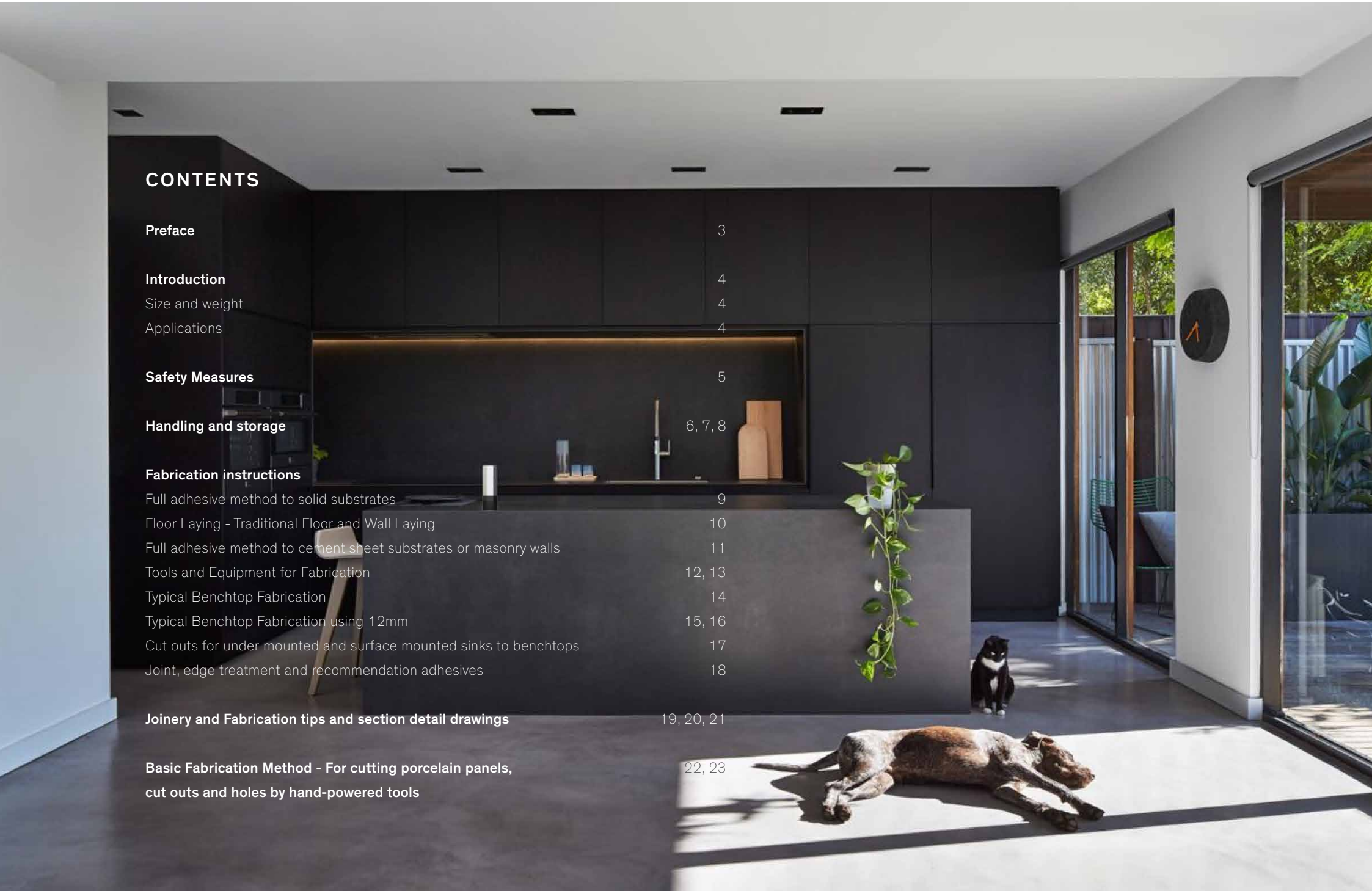
Fabrication instructions



CONTENTS

PREFACE

Technical manual to be used by professional architects, joiners, fabricators, tilers and builders

This manual is intended for use by qualified and experienced architects, engineers, contractors and builders. The authors, publishers and distributors of this manual, sample specification and the associated drawings do not accept any responsibility for incorrect, inappropriate or incomplete use of this information.

Using this manual

This manual, including the design recommendations, sample specification and the associated drawings, are available in electronic format, with the express intention that designers will edit them to suit the particular requirements of specific construction projects. It is the responsibilty of all parties that intend to use recommended systems within this manual to ensure that all engineering, design and installation compliances are met in accordance with specific project requirements.

Basis of the specification and drawings

Relevant regulatory requirements and applicable standards compliance.

Composition

Manufactured from 100% all natural minerals such as clay, quartz and feldspar, and up to 40% recycled content. Maximum Panels contain no sealants, waxes, epoxies, man-made binders or artificial colouring agents.

INTRODUCTION

Maximum Pressed Porcelain Panels are manufactured by one of Italy's leading porcelain and ceramic suppliers, Graniti Fiandre. The environment has always been an important focus at Fiandre in the production of their pressed porcelain panels; they are, and always have been, sustainable, green and environmentally friendly. Made from 100% all natural minerals, Maximum pressed porcelain panels are sustainable for the harmful elements that have been left out: they contain no sealants, waxes, epoxies, man made binders or artificial colouring agents that could add to harmful VOC emission after installation.

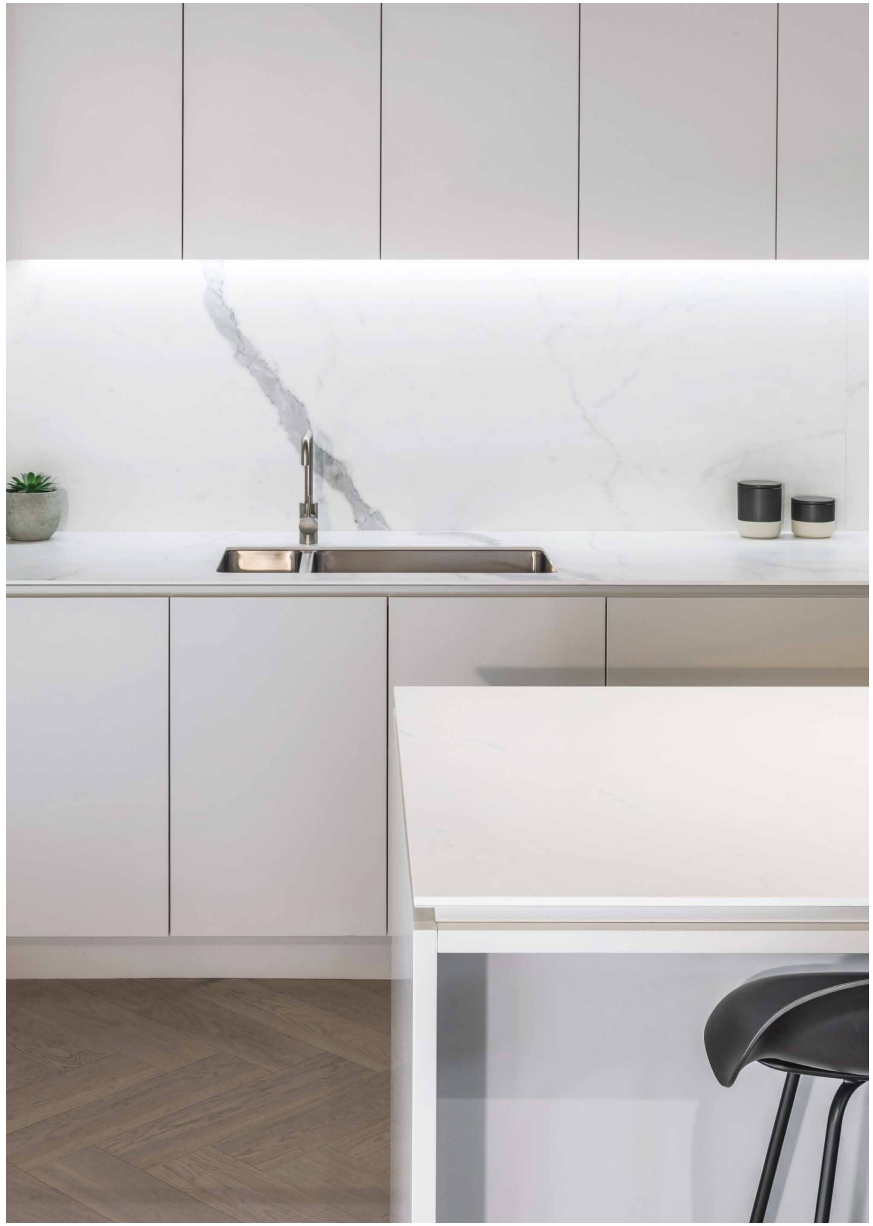
SIZE AND WEIGHT

Typical size: 3000 x 1500 x 6mm or 3200 x 1500 x 12mm
Weight: 14.67kg/sqm or 29.34 kg/sqm
Total area per panel: 4.5sqm or 4.8sqm
Standard cut to size formats for 6mm project orders over 200sqm
3000 x 1000mm, 1500 x 1500mm, 1500 x 750mm, 1000 x 1000mm, 750 x 750mm, 750 x 375mm
Maximum comes in a variety of colours and finishes, not all sizes are available in every finish, please refer to our website for detail. Other custom sizes for larger projects may also be ordered.

APPLICATIONS

Maximum applications include all external wall cladding, internal floor and wall linings, shower recesses, kitchen benchtops and splashbacks, vanities, and applications over existing floors or walls.

- Suitable for all domestic, commercial, retail, multi-residential and refurbishment projects
- Maximum is made from 100% natural material with up to 40% recycled content
- No chemical binders or resins are used
- Maximum is UV resistant and can be used externally
- High strength and scratch resistance
- Thermal shock resistance
- Stain and mould resistance



SAFETY MEASURES

RESPIRATORY PROTECTION

Always use proper protection, i.e., OSHA approved gloves and respirators.

VENTILATION

Dust levels must be kept below recommended exposure level with proper equipment. Do not inhale dust.

PROTECTIVE GLOVES

Proper OSHA leather or cotton gloves.

EYE PROTECTION

Safety glasses with side shields or dust proof goggles.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

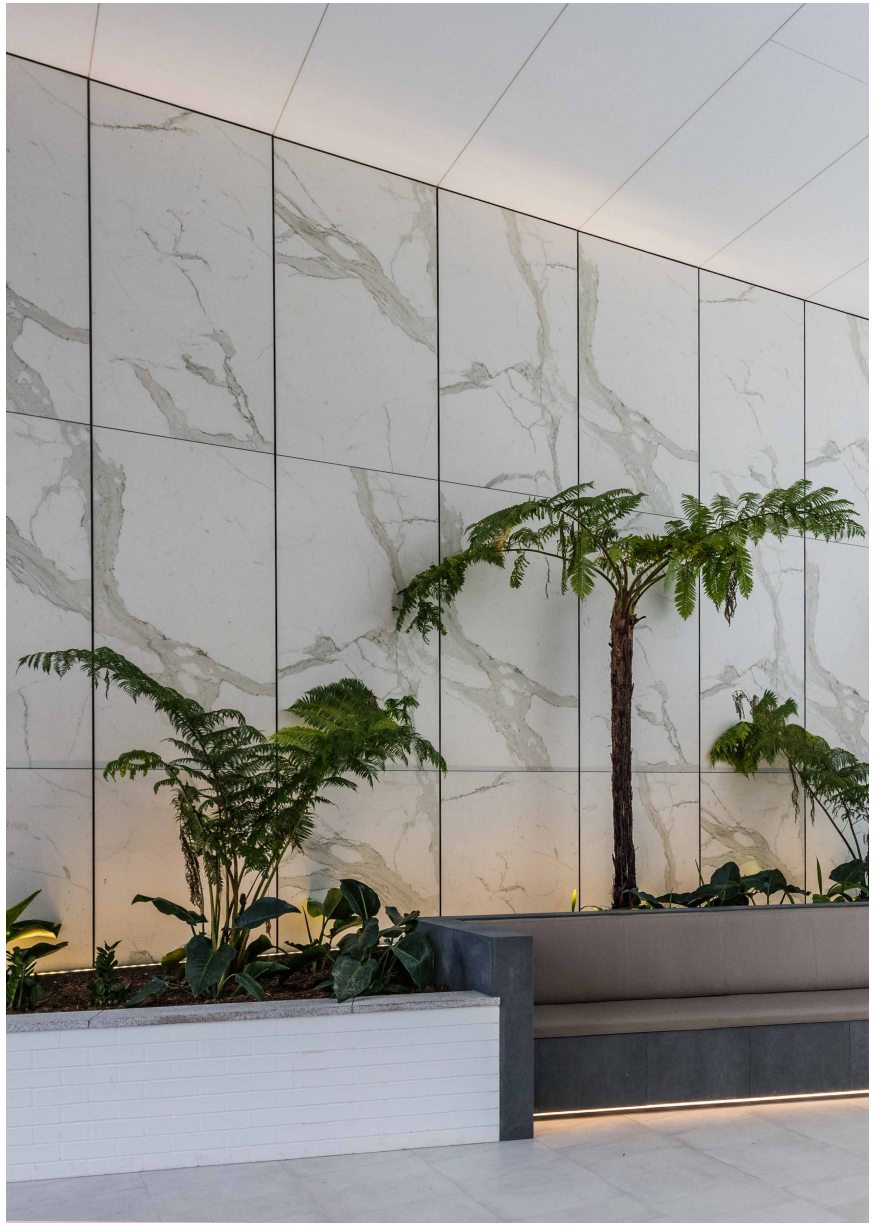
If special circumstances are required, then special equipment and clothing must be designed to meet the needs and requirements.

HYGIENIC PRACTICES

Wash with soap and water after handling.

CUTTING AND DRILLING

Always use wet methods of cutting and drilling to reduce generation of dust.



HANDLING AND STORAGE

See video link: http://www.youtube.com/watch?v=RNn_B75EUk0

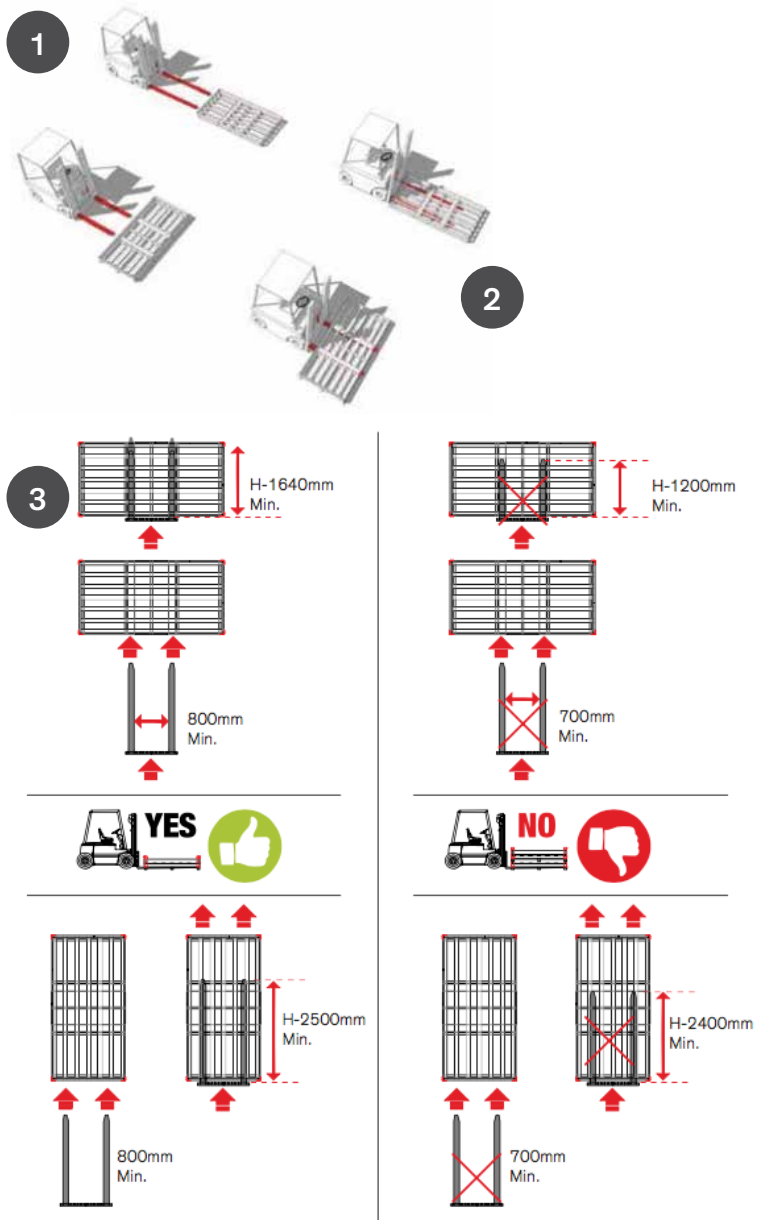
DESCRIPTION

Maximum Pressed Porcelain Panels can be packed flat in timber crates (dimensions are 3200 x 1640mm) or delivered on A-frames. Approximate weight for crate containing twelve 6mm panels is 980 kgs. Forklift extenders must be used when moving crates.

For the correct handling of the crates, a forklift must be used with at least 1.8m long forklift extenders with the forks positioned in the maximum width position (see Figure 1). Under normal conditions, the forks are positioned in the middle of the long side of the pallet, as they must grip the whole depth of the pallet (see Figure 2).

If 2.5m forklift extenders and correct forklift are available the crates can also be moved as shown in illustration (See Figure 2).
When removing crates from containers, it is recommended to move only 1 crate at a time. Removal either by crane lifting with slings out of top load containers or by using correct forklift blades. To allow the extraction of the panels easily and safely, it is recommended to position the crates in a suitable area where the fork lift can be moved around all sides of the crate.

STACKING CRATES Crates are designed to stack to a maximum of 6 crates in height.
CRATE CAPACITY Crates are designed to contain a maximum of twelve 6mm panels.



HANDLING AND STORAGE

For manual handling and subsequent laying of the Maximum panels, in order to guarantee the installer's safety and the integrity of the panels, it is strongly recommended to use a frame with suction cups. The full frame is particularly suitable for large dimension Maximum formats whereas on smaller Maximum formats (e.g. 1500 x750mm) two double suction cups are sufficient.

PREPARATION STAGES

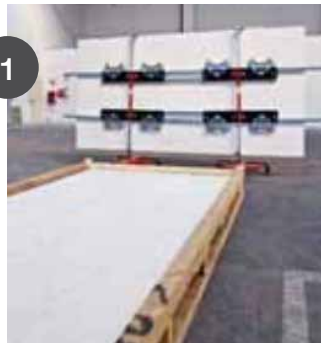
1. Position the frame with suction cups on the panel and make sure that the cups adhere to it perfectly (see figure 3).
2. For horizontal handling (on the surface), put the panel into a vertical position and use the wheels applied to the handling frame.

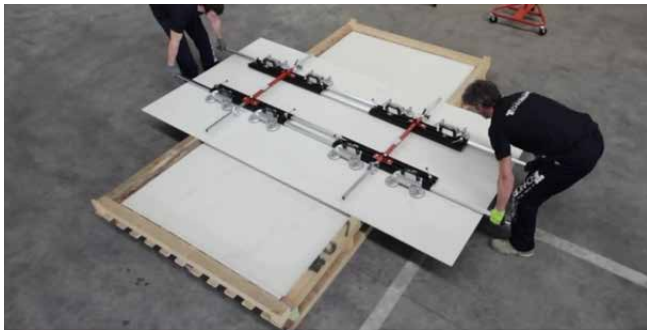
INSTRUMENTS REQUIRED

The instruments for lifting and handling the panels can be chosen according to the size of the panel and the activities to be performed on the site.

Note: Suction cups only work effectively on the face of panels and not the rear.

1





2

3

HANDLING AND STORAGE

Ensure that for deliveries an oversized stone slab or board is supplied on the steel A-frame as backing support. Strap in Maximum to ensure no horizontal movement occurs during transport.

Panels can also be moved with a vertical clamp and overhead crane. To assist moving individual 6mm panels where the clamp doesn't close to 6mm a rubber saddle can be made up (see photos), or vacuum suction lifters can be used.

HANDLING BENCHTOPS OR SPLASHBACKS

When transporting to site, in particular benchtops with cut outs, always lay bench against a solid substrate such as MDF or similar. Ensure that backing support is at least 2cm wider than the benchtop, strap or tape both together, so handling will be easier and will avoid potential damage to panels in particular to cut outs. Always carry panels vertically not horizontally.

FULL ADHESIVE METHOD TO SOLID SUBSTRATES

Adhesion method using an optional mechanical safety hook.
Same method applies without safety hook.

INTERNAL AND EXTERNAL APPLICATIONS

The laying system can be achieved by a full adhesion system with suitable adhesives. On 3000 x 1500mm panels, especially for exterior cladding where heights exceed minimum Council requirements, it is recommended that the Raimondi hidden mechanical safety hook be used as it allows the wall covering to be installed in complete safety with a great impact and faster installation.
For this mechanical application system, the Maximum Porcelain Panel is either pre-processed in the factory or on-site, so that it is delivered to the site already equipped with the hidden mechanical safety hook, sealed onto the back of the slab.

Instruments required

- Handling frame with suction cups
- Suitable cement-based powder adhesive for full spread
- 15mm round toothed trowel
- 3 x 3mm square toothed trowel
- Gas-powered nailing machine and relative nails (if mechanical system is required)

BONDING TO THE WALL

1. Ensure that the surface to be covered is solid, flat and free from dust.
2. Use a suitable adhesive such as Laticrete or Mapei (see Maximum web site for specifications) for full spread and adhesion, in accordance with Australian standards.
3. Spread the adhesive onto the surface to be covered with a 15mm round toothed trowel across an area of 5/10cm more than dimensions of the slab.
4. With slab in a vertical position on the handling frame, spread adhesive onto the back of slab with a 3 x 3mm square toothed trowel - buttering the panel.
5. Using the handling frame in a vertical position lay the slab.
6. Before releasing slab from handling frame, ensure adhesive holds it in place.
7. To guarantee complete bonding of slab and eliminating any air, tap from the middle towards the edges using a non-bounce plastic or rubber mallet.
8. Mechanical fixing - Before bonding the next slab, fix the hidden mechanical hook to the wall with the relevant nails (length 27mm) using the gas-powered nailing machine. In order to guarantee that the mechanical hook is properly fixed, it is recommended to use the suitable gas-powered nailing machine, which can ensure a constant supply of energy.

See wall laying video: http://maximumaustralia.com/technical/

Raimondi Fix System is available from Battrims www.battrims.com 03 9797 7900

FLOOR LAYING - TRADITIONAL FLOOR AND WALL LAYING

DESCRIPTION AND TECHNICAL FEATURES

Laying Maximum requires similar laying conditions to those required for traditional format tiles.

Maximum requires the adhesive to be applied both on the setting bed and on the back of the panel.

Maximum panels flooring require the following conditions:

- A flat surface, clean and free from dust, scraps and any lumps of cement
- The setting bed must be uniform and have already undergone the drying shrinkage process
- Any uneven parts on the surface must be filled with suitable compounds

Instruments and recommended adhesives

- LATICRETE 4237 latex mixed with 290 Powder or LATICRETE 335 Premium. Contact Lacticrete for specifications prior to ordering materials.
- Grouts; either PermaColor or SpectraLOCK Pro Grout
- Other suitable adhesives for porcelain panels can be used
- 3 x 3 mm square toothed trowel and 15mm round toothed trowel
- Frame with suction cups for handling or double suction cups
- Non-bounce plastic mallet 170 x 370mm.
- Levelling system: base clip + wedge + pliers.

PROCESSING STAGES: BONDING TO FLOORS OR WALLS

1. Ensure that the surface to be covered is solid, flat and free from dust and oil/grease.
2. Use the adhesives described above mixed according to the specifications indicated in the technical data sheet of the chosen adhesive.
3. Spread the adhesive onto the surface to be covered with a 15 mm round toothed trowel across an area of 5/10cm more than the dimensions of the slab.
4. With the slab in a vertical position on the handling frame, spread the adhesive onto the back of the slab with a 3 x 3mm square toothed trowel.
5. Using the frame with suction cups, bring the panel into a horizontal position and lay it.
6. To guarantee uniform bonding of the slab, the special 170 x 370mm non-bounce plastic mallet must be used, tapping from the middle towards the edges so as to remove any air pockets between the back of the panel, the adhesive and the surface to be tiled.
7. Use the levelling system

LEVELLING SYSTEM

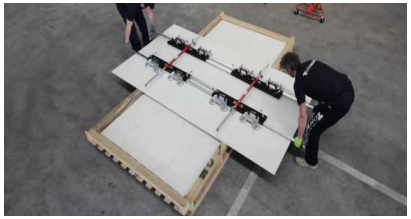
The levelling system aims to guarantee perfectly levelled floors simply and quickly, eliminating any unevenness between panels. The levelling system is strongly recommended for laying Maximum panels.

Instruments required

- Base clip
- Wedge
- Adjustable pliers for installing floors/wall tiles.

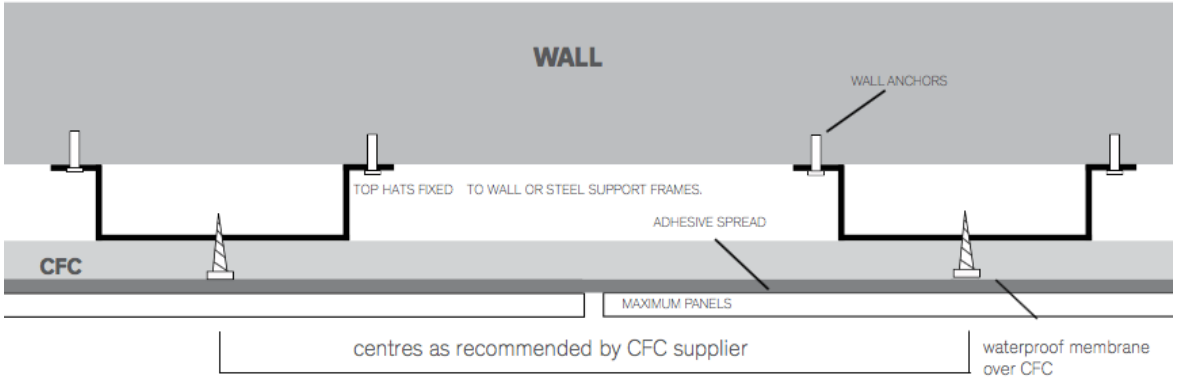
Application of the levelling system

1. After spreading the adhesive, insert the base clip below the Maximum panel on the 4 sides.
2. Depending on the format of the slab, position one or more supports for each side of the panel.
3. Position the panel.
4. Inserting the wedge: Insert the wedge in the slot of the support, taking care not to exceed the breaking point.
5. To make inserting the wedge easier, it is recommended to use the adjustable pliers.
6. Removing the support: Once the adhesive has dried, the protruding part of the support





FULL ADHESIVE METHOD TO CEMENT SHEET SUBSTRATES OR MASONRY WALLS



Recommended fixing details - Internal or external wall applications.

1. Set out top hat centres as per builder's or engineer's or substrate suppliers recommendation.
   Ensure that the set out is 100% plumb.
2. Fix fibre cement sheeting with counter sunk screw system.
   Refer to engineer for thickness required. Ensure that substrate is rigid.
   Recommended substrates for exterior cladding are BGC Stonesheet, CFC or masonry walls.
   Waterproofing substrate may be required.
3. Adhere cladding panels to fibre cement using a full adhesive spread both sides (i.e. panel and substrate), using suitable adhesive.

TOOLS AND EQUIPMENT FOR FABRICATION

In achieving quality workmanship it is essential that the correct equipment and cutting methods are used.

BASIC EQUIPMENT

Normal processing equipment that is used for marble and granite is suitable for Maximum Porcelain Panels. Blades and milling tools must be suitable for wet cutting porcelain.

BASIC FABRICATION METHOD

Note These tips are only recommended guides and different methods can be explored depending on equipment available.

Tips for cutting Maximum Pressed Porcelain Panels using a bridge saw or water jet;

- De-stressing is not required for 6mm Maximum panels. 12mm panels require de-stressing panels by trimming edges.
- Must use a solid base, such as a flat stone slab – slightly larger than panel size.
- Continuous water flow.
- Only run slow cuts. Step cutting is an option, as well as first creating a small step cut at opposite end.
- Use a superior quality continuous porcelain blade.
- Use handling equipment as required.
- It can assist to weigh down panel, to avoid any flex or vibration in product when cutting.
- When cutting smaller panels to use stone off cuts around perimeter edge of panel to minimise panel movement.
- Regular sharpening of the blade is essential to maintain a quality finish on cut edges.
- Always cut and fabricate with wet diamond tools and take appropriate measures to provide efficient ventilation in the work area.
- Always wear approved eye, face, boot and hand protection when fabricating. Cut edges of porcelain can be very sharp.

Maximum panel showing cut out for kitchen sink.

Bridge Saw
Use continuous diamond porcelain cutting wheel.

Water Jet machines
One of the most efficient ways to fabricate porcelain.

Mitre Saw
The central component to cut accurate mitres for a wide range of applications on engineered stone, granite and marble of thicknesses. Accuracy is the key when cuttingmitres. The more accurate the cut, the better the result.

TOOLS AND EQUIPMENT FOR FABRICATION

Create a solid oversized and flat stone base to work on, such as granite or a quartz composite.

Create a solid oversized and flat stone base to work on, such as granite or a quartz composite.

Set up a straight edge along one side to ensure straight cuts.

For smaller pieces - set up a straight edge along one side using a stone section to ensure no movement occurs.

Maximum Moon 6mm – with 19mm FC (Fibre Cement) substrate glued with Megabond adhesive. For optimum results on a mitre edge use Akemi Akepox 5010.

Maximum Moon 6mm – with 19mm FC (Fibre Cement) substrate glued with Megabond adhesive. For optimum results on a mitre edge use Akemi Akepox 5010.

TYPICAL BENCHTOP FABRICATION

Substrates for Countertops

Always use a rigid and continuous moisture resistant substrate such as HMR particle board laminated with melamine or CFC and ensure that the substrate has no flex. Do not install Maximum panels over timber support bench battens without a suitable substrate.

Note It is essential that all cut out edges of moisture resistant substrates are sealed with a waterproofing.

Adhering Maximum to substrates and splashbacks

When gluing panels to an existing substrate or splashback you must ensure that the adhesive spread has 100% coverage of at least 2-3mm thick. Do not leave air gaps under bench tops. Ensure that manufacturers curing times are adhered to before any works are performed such as core drilling, plumbing or on-site cut outs.

Overhangs

Recommend flush finish or 5mm - 10mm for 6mm thick benchtops or maximum 20mm overhang with angle support - see drawings. If larger overhangs are required for island benchtops, use a suitable support substrate to minimise any potential damage to material due to heavy impact or flex. Again substrates must be rigid and continuous such as a HMR particle board laminated with melamine which in the industry is called “whiteboard”. Consult with your joiner. 12mm thick benchtops can have a maximum unsupported overhang of 20mm.

Quick tips

Cleaning tip – use Glitz Green Eucalyptus oil to remove dust, clean and revitalise surface finish after installation or Porcelain Creme from Spirit Marble and Tiles.

TYPICAL BENCHTOP FABRICATION USING 12MM MAXIMUM

Note 12mm Maximum can be sucessfully cut using water jet machines and bridge saws. Every machine is different and suppliers of these machines should also be able to offer guidance.

1. 12mm panels are unrectified and will need trimming. 10-20mm trim is recommended to rectify. (See figure opposite)

2. For both cutting methods, commence cut slowly for the first 200mm (300mm/min) then speed up and finish the cut slowly for the last 200mm (300mm/min), particularly for mitres.

3. For full lenth or full width cuts always commence with back-cut approximately 200mm. (See cut 5 on figure opposite)

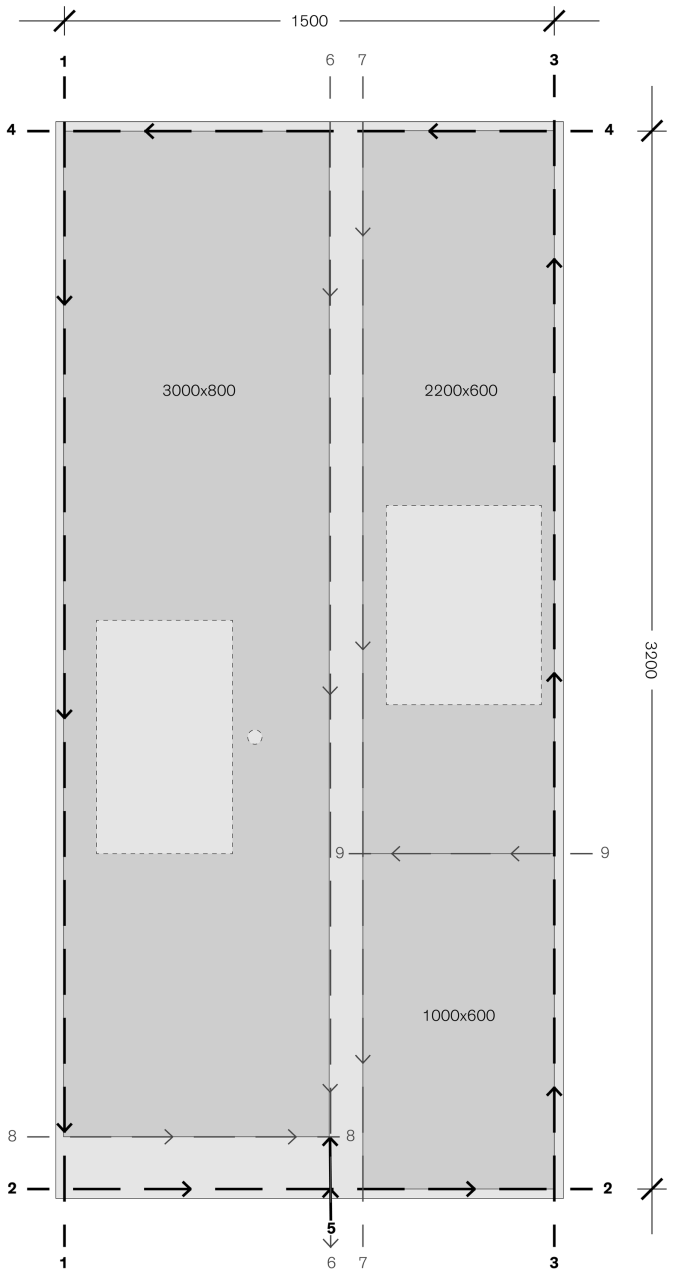
4. Cut required panel sizes first using full width/length cuts **before** adding penetrations (ie. sinks, cooktops, tapholes, gpo's).

Water Jet machine tips

Feed rate of approximately 600mm/min.

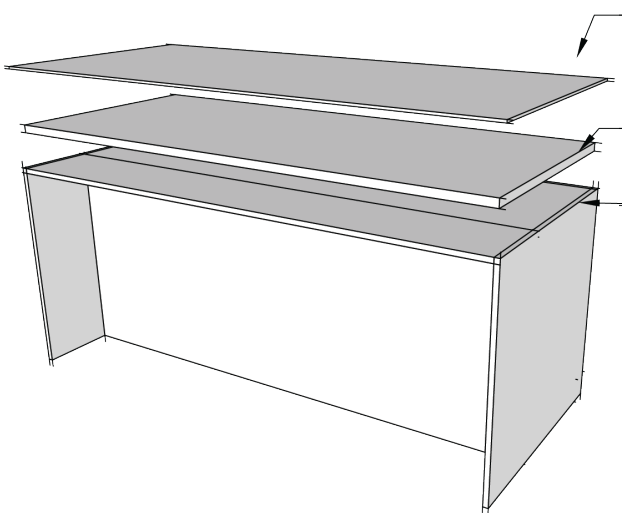
Bridge Saw tips

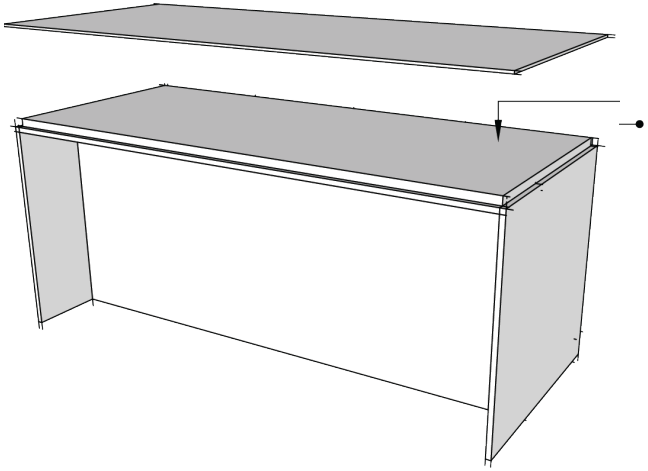
For penetrations, always core drill corners and then complete cut-out with bridge saw.



12mm suggested cutting pattern

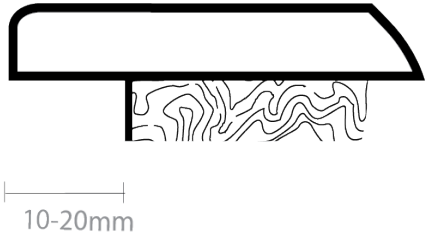
TYPICAL BENCHTOP FABRICATION USING 12MM MAXIMUM



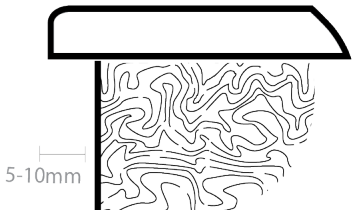


Full coverage of adhesive being applied to substrate

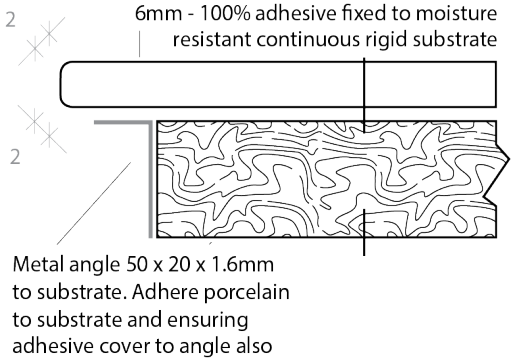
Pietra Grey with shadow line detail



12mm - max 20mm unsupported overhang



12mm - max 20mm unsupported overhang



6mm - with metal angle support

CUT OUTS FOR UNDER MOUNTED AND SURFACE MOUNTED SINKS TO BENCHTOPS

Undermounted sink and fixing taps - see fig. 01

To avoid hairline cracks, do not adhere sinks to underside of porcelain only. Ensure that sink lip is rebated to substrate. Most importantly avoid over tightening tap fittings - ensure that Maximum sits flush to edge of substrate and that porcelain and substrate both support tap base and fixing. Best solution for fitting taps is to fix the tap base housing direct to substrate, which means enlarging the hole on Maximum so that the tap base can be recessed (ensure that silicon is used to prevent moisture ingress). Only use silicon to adhere sink lip (aluminum or stainless element) to Maximum (due to thermal movement of metal) and adhesive to fix Maximum to substrate. Ensure that the silicon and adhesive sit at the same level and thickness.

Top mounted sink

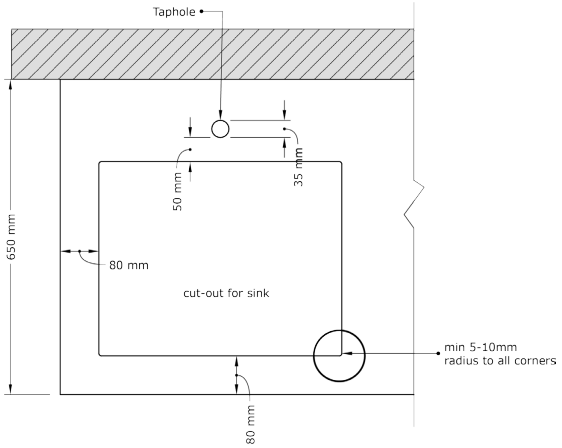
Ensure that maximum sits flush to edge of substrate and that porcelain and substrate both support sink weight.

Edge distance to cut out

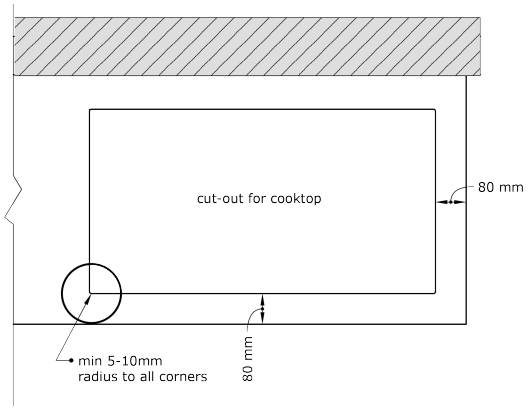
We recommend a minimum 80mm to any edge, pending cook-top or sink sizes and hole for the tap, and cut out a minimum of 50mm to any edge of hole from back wall and edge of sink.

Cutouts for sinks, cook tops, power points and other cut outs

Cutouts, such as for sinks and cook tops, should have rounded internal corners (min 5mm - 10mm radius) to prevent cracking. Specifically items like shower niches, fireplaces etc where the porcelain might be expected to return in from one or more faces with a mitred or butt joint. It is essential that the face panel is sectioned around this type of opening to avoid stress points in the product, where subsequent movement in the structure may cause a fracture.



A 1 Dimensions for sink cut-out



A 2 Dimensions for cooktop cut-out

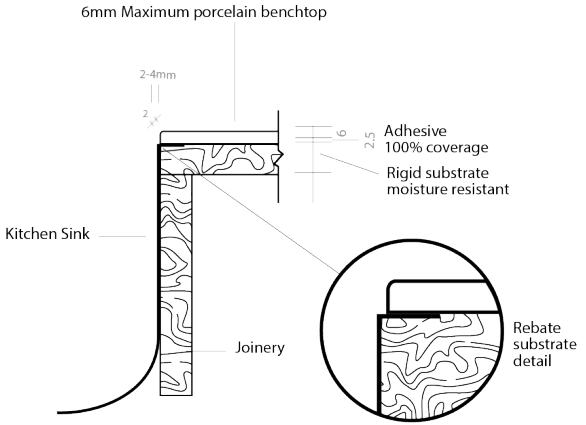


FIG: 1 REBATED UNDER MOUNTED SINK DETAIL

Quick tips

General cut outs - All cuts outs including right angles, square or other require a minimum 5 - 10mm radius on all corners.

Curved corners - For under mounted basins - curved cuts can be considered in conjunction with equipment limitations.

Under mounted - Use a diamond core drill, diameter to suit radius of curve and then complete cut on Water Jet or Bridge Saw. Hone as required with small aris around top edges. Water Jet would not require these steps. We recommend that all drilled holes or cutouts be located through application and marking of suitable tape. It is always best to use a template for any drilled hole to ensure correct location is achieved.

JOINT, EDGE TREATMENT AND RECOMMENDATION ADHESIVES

Joint treatment

We recommend all joints be taped prior to application of any joint slant such as silicon or colour matched resin. No joint sealant should be allowed to touch the finished surface of the panel. Do not work on the face of the panel with pads or buffers.

Edge treatments

With Maximum Porcelain Panels, various methods can be used with excellent success. Many kitchen benchtops are now being manufactured with a slim natural profile using a straight edge that does not require polishing. Although edges can easily be polished if required as exposed edges are best finished to minimise potential for chipping.

Mitred edges

A mitred edge can be achieved (as per Images 2 & 3). It is recommended that the junction between the mitre be suitably worked so as to minimise sharp edges, generally a 1mm aris or light pencil round is effective.

Apron returns

Apron returns can be produced (see Image 3). In this example case study a 40mm apron with mitred joint was fabricated using a 9mm FC substrate to adhere Maximum to, 19mm marine ply packers/spacers, then marine ply spacers used for final bedding over cabinet battens. It is up to the fabricator to work out best solutions pending on skill set.

Adhesives for substrates and mitres

Most fabricators will have a knowledge of best adhesives to use. We recommend, T-Rex Power and Wall adhesive or Mapei Keralastic T Polyurethane G19 for adhesion to substrates.
Always respect manufacturers curing times for adhesives before completing further works such as coring holes or working above the finished Maximum installation.

For mitre joints

Akemi Akepox 5010 epoxy adhesive has excellent adhesion for porcelain.

Repairs

For chips and other, we recommend Konig Repair System or Akepox 5010. Akemi colouring paste is available or the Akelux stone repair system.

Image 1. Argento 12mm shark nose detail

Image 2. Moon 6mm edge profile with shadowline and mitre

Image 3. Statuario mitred edge with apron

Image 4. Moon 6mm raked edge substrate detail

JOINERY AND FABRICATION TIPS

Substrates for countertops

Always use a rigid and continuous moisture resistant substrate such as CFC or FC and ensure that the substrate has no flex. Do not install Maximum panels without a suitable substrate.

Adhering Maximum to substrates and splashbacks

When gluing panels to an existing substrate or splashback you must ensure that the adhesive spread has 100% coverage of at least 2-3mm thick. Do not leave airgaps under benchtops. Ensure that manufacturers curing times are adhered to before any works are performed such as core drilling, plumbing or on-site cut outs.

Overhangs

We recommend flush finish of Maximum edge to benchtop joinery, 5mm overhang unsupported or maximum 20mm overhang with angle support - see drawings. If larger overhangs are required for island benchtops, use a suitable support substrate to minimise any potential damage to material due to heavy impact or flex. Substrate must be rigid, steel framing may be required to ensure rigidity.

Undermounted sink and fixing taps

Do not adhere sinks to underside of porcelain only, sink flange must be entirely supported by the substrate (see fig.01). All cut outs to be waterproofed and important to ensure taps are not over tightened. Taps should only be installed after the adhesive has fully cured. To avoid over tightening tap fittings - ensure that Maximum sits flush to edge of substrate and that porcelain and substrate both support tap base and fixing. A solution for fitting taps is to fix the tap base housing direct to substrate, which means enlarging the hole on Maximum so that the tap base can be recessed (ensure that silicon is used to prevent moisture ingress). We recommend silicon to adhere sink lip (aluminum or stainless element) to Maximum and adhesive to fix Maximum to substrate. Ensure that the silicon and adhesive sit at the same level and thickness.

Drop-in sink

Ensure that maximum sits flush to edge of substrate and that porcelain and substrate both support sink weight.

Edge distance to cut out

We recommend a minimum 80mm to any edge, pending cook-top or sink sizes and hole for the tap, and cut out a minimum of 50mm to any edge of hole from back wall and edge of sink.

Square edge cut outs

All square and rectangular cutouts, such as for sinks, cook tops , shower niches and fireplaces must have rounded internal corners (min 10mm radius) to prevent radial cracking. Specifically where the porcelain might be expected to return in from one or more faces with a mitred or butt joint. It is essential that the face panel is sectioned around this type of opening to avoid stress points in the product, where subsequent movement in the structure may cause a fracture.

Quick tips

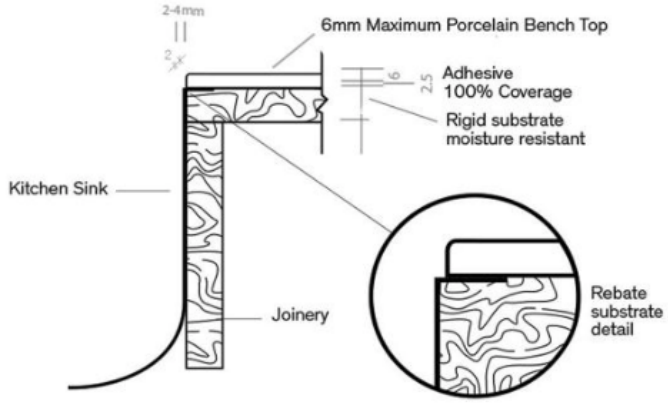
Panel Inspection Prior to fabrication ensure that panels have no visible defects such as blemishes, surface markings or damage.

Recommended Porcelain blades
Contact Farnese: Piero 0488 065 846
piero@farnese.com.au

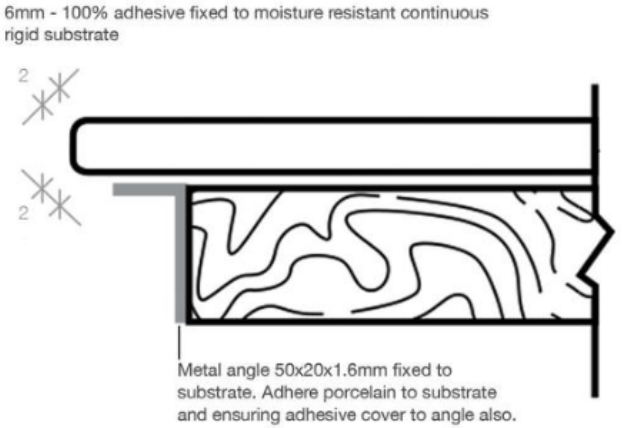
Sharpening Blades Use a pumis or sandstone block and resharpen every 4-5 cuts.

Honing edges and Aris Sandpaper Grit -
Matt finish: 120,220 G.
Polished finish: 120,220,400 used with water.

JOINERY AND FABRICATION TIPS



01 REBATED UNDER MOUNTED SINK DETAIL

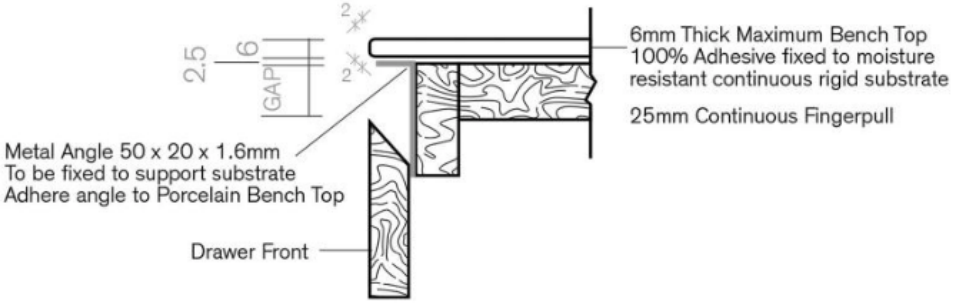


02 TYPICAL KITCHEN BENCH EDGE DETAIL

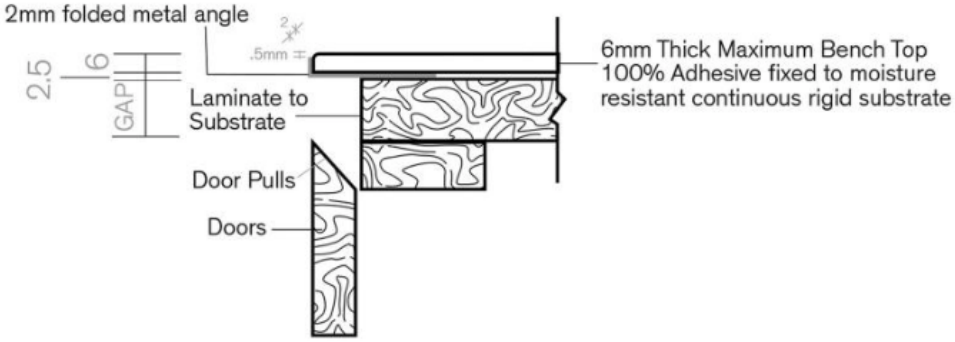
Maximum Porcelain Panels - Options for supports on overhangs

Notes:

1. Ensure that the substrate is rigid.
2. 100% adhesive coverage is required when applying Maximum Panels to substrate



03 KITCHEN BENCH FINGER PULL OPTION 1



04 KITCHEN BENCH FINGER PULL OPTION 2

JOINERY AND FABRICATION TIPS

Cutting speeds for bridge saw
As a guide only pending equipment type -1000mm per min and 500mm per min for mitres. 1850 to 1900 RPM depending on specific equipment.

Water jet
Table slats in perfect condition, with as little distance as possible to give full support. Water level at the height of the slats and 3mm between the nozzle and the slab. Abrasive used to cut Maximum should be 300 gr/min. (recommended grain 80 micron.) Firstly start drilling at 700bar and continue with high pressure cutting at 3500bar (starting piercing for 10 seconds) (parameters depending on the machine).

Avoid blow outs when cutting with wet saw
Either cut a small step cut at opposite end and slow speed down or begin and finish cut with slow speed. Always trial cuts from offcuts. Blades and CNC tools must be sharpened prior and between operations. Correct feed rates used as per CNC tooling parameters.

Care and maintenance
Maximum Porcelain Panels are stain resistant, but care must be taken to immediately clean off stains, especially on polished bench tops. Best way to ensure stubborn stains do not occur is to immediately wash away stains such as red wine, food and drinks, using warm water and a soft cloth. For stubborn stains use a non abrasive cleaning product, sugar soap or normal house cleaning products. Do not use cleaners that have strong alkaline pH levels and thoroughly rinse the surface with clean water to remove residue. Full Cleaning and Maintenance Guide is available on our website.

Heat resistant
Although Maximum is thermal shock resistant, it is always advisable to use a place mat or similar when placing hot pots on the bench.

Safety guidelines when fabricating
Wear an approved face mask when fabricating Maximum.
Always cut and fabricate with wet diamond tools and take appropriate measures to provide efficient ventilation in the work area.
Always wear approved eye, boot and hand protection when fabricating porcelain.
Sharp edges of cut or broken porcelain can be sharp and should be carefully handled.

BASIC FABRICATION METHOD - FOR CUTTING PORCELAIN PANELS, CUT OUTS AND HOLES BY HAND-POWERED TOOLS

MAXIMUM can also be easily processed by using some simple hand tools. It is recommended to process the slabs on a flat work surface, at least 5 cm longer than the slab from each side or double suction cup. One operator is sufficient for cutting the holes.

Cutting

Instruments required - depending on the type of cut and process to be applied to the panel, the recommended tool types are listed below:

- Handling frame with suction cups or double suction cups
- Cutting guide with cutting carriage for linear cuts of 150/300 cm
- Cutting pliers
- Wet core diamond drill bits
- Angle grinder with diamond blade
- Diamond buffer

Linear cuts and scoring

1. Mark the portion to be removed at the ends of the slab (see Figure 1).
2. Position the cutting guide with cutting carriage so that the references on the guide coincide with the lines marked on the panel. Lock the cutting guide with the cutting carriage in place using the suction cups.
3. To guarantee correct scoring, the pressure and movement of the cutting carriage must be constant along the whole length of the cut.
4. Score one end of the panel by 15cm pushing the cutting carriage towards the edge of the panel (see Figure 2). Complete the scoring up to the opposite end of the panel.

Completing cuts

1. With cutting guide move panel until scoring line protrudes 5/10cm from work surface.
2. Release the cutting guide from suction cups and move towards the middle of panel.
3. Start cutting off process by positioning cutting pliers in line with line scored on panel (see Figure 3).
4. Exert progressive pressure until you notice that cutting off process has begun.
5. Go to opposite side and position cutting pliers in line with line scored on the panel.
6. Exert progressive pressure until you notice the cutting off process has begun.
7. To complete the cutting off process, one or more operators must grip the portion to be removed and exert progressive pressure downwards (see Figure 4)
8. The finishing of the edges on the cut side can be carried out using the special diamond buffer or a ceramic polished pad (see Figure 5).

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BASIC FABRICATION METHOD - FOR CUTTING PORCELAIN PANELS, CUT OUTS AND HOLES BY HAND-POWERED TOOLS

L-shaped cuts

For L-shaped cuts (holes for electrical boxes, internal corners) it is essential to create a radius at the internal angle by making a hole first with suitable wet core bits.

Square cuts/cut-out

1. Mark the portion to be removed on the panel.
2. To limit the possibility of breakage, it is recommended to make a hole in-line with the point where the two lines marked on the panel meet.
3. With an angle grinder equipped with a diamond blade, follow the marked lines. All square cuts at any size require a radius hole at every corner before commencing cuts.

Rectangular holes

1. Mark the sides of the portion to be removed on the panel.
2. Make radius holes in the 4 corners.
3. Using an angle grinder equipped with a diamond blade join the 4 holes.

Round holes

1. Position the Maximum panel on a solid, non-slip surface (e.g. wood or concrete). To avoid drill bit slipping whilst drilling, a pre cut round template could be used as a guide made from a 20mm stone.
2. Using a diamond core bit (hole cutter), spray water onto the area where the hole is to be made.
3. Start to make a hole at an angle of 75°-85° and penetrate into the panel with a depth of about 1-2 mm.
4. Keep the drill/screwdriver at a 90° angle and make circular movements with an angle of about 5°-10°.
5. Do not exert too much pressure.
6. Do not push straight downwards.

Make sure there is enough water to wet the cutter. Clean up the scraps once the hole has been made.

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