

TECHNICAL INFORMATION



vitrastone™

NATURAL STONE CLADDING SYSTEM / MANUFACTURED BY FAIRVIEW



FAIRVIEW

DEFINING ARCHITECTURE SINCE 1963

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TECHNICAL INFORMATION

1.1 PANEL SIZES

In order to minimise onsite machining and handling, the Vitrastone Stone Honeycomb panels can be produced in custom sizes. With a minimum quantity per size of only 200m², this enables the best overall panel size for a façade to be selected, allowing for the majority of panels to be installed straight from the pallet.

Maximum sizes for the panels do vary widely depending on what type of natural stone is selected, but typically can be up to 2400mm x 1200mm. Please contact Fairview to confirm what is available for your preferred stone type.

1.2 ONSITE STORAGE

Panels must be stored in a clean dry area, free from contamination. When taken off the packing pallet, they must be placed on a shock absorbent support such as expanded polystyrene for edge protection.

Vitrastone Stone Honeycomb panels are durable and impact resistant. However, the natural stone facing is easily chipped at the edges. Softer stones including limestone and sandstone can be marred by dirt, mud and other contaminants.

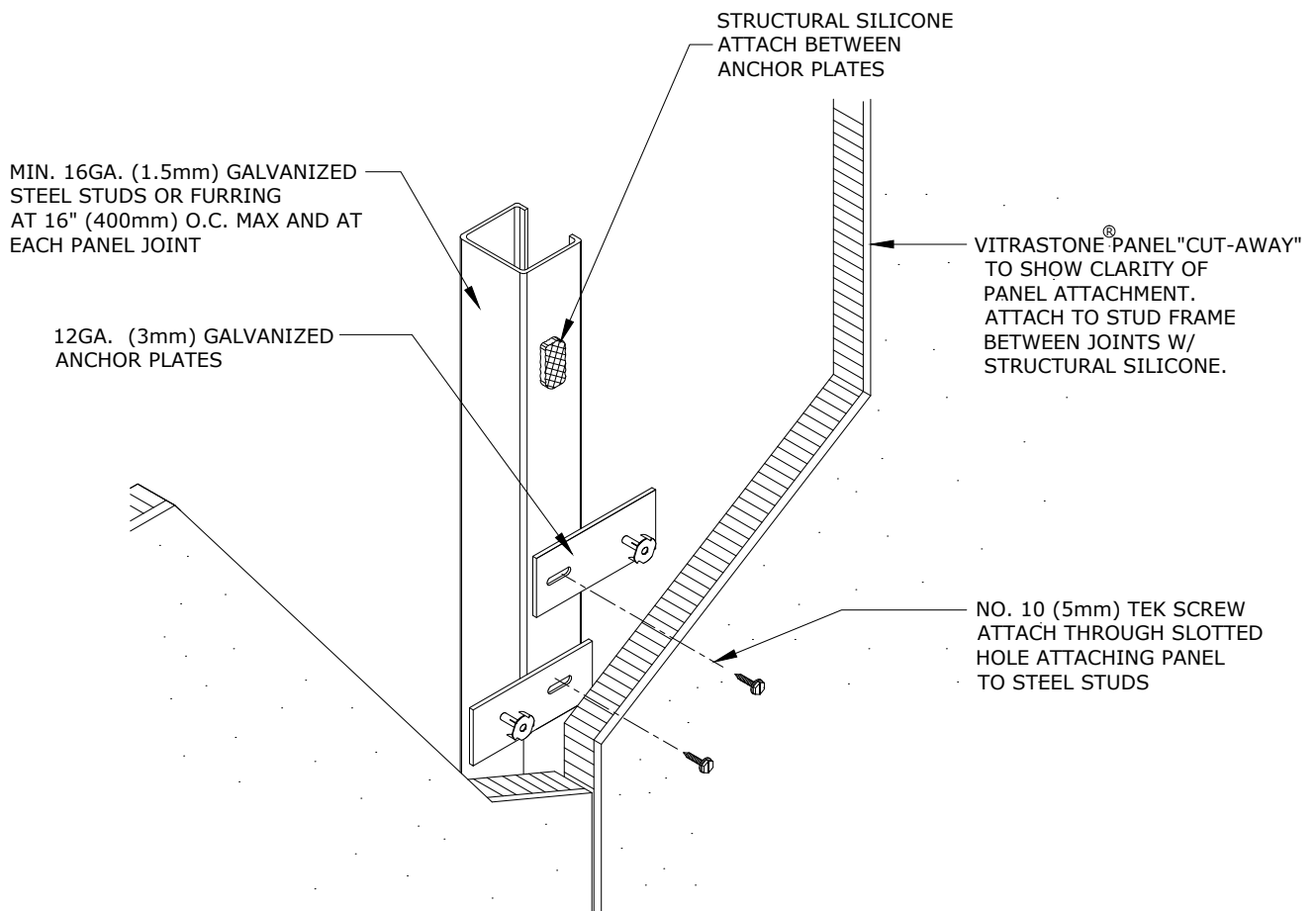
It is strongly recommended that panels should be staged in advance and moved to their appropriate locations. This has the benefit of minimising labour required on site as well as reducing the possibility of damage to panels as less panel movement is required.

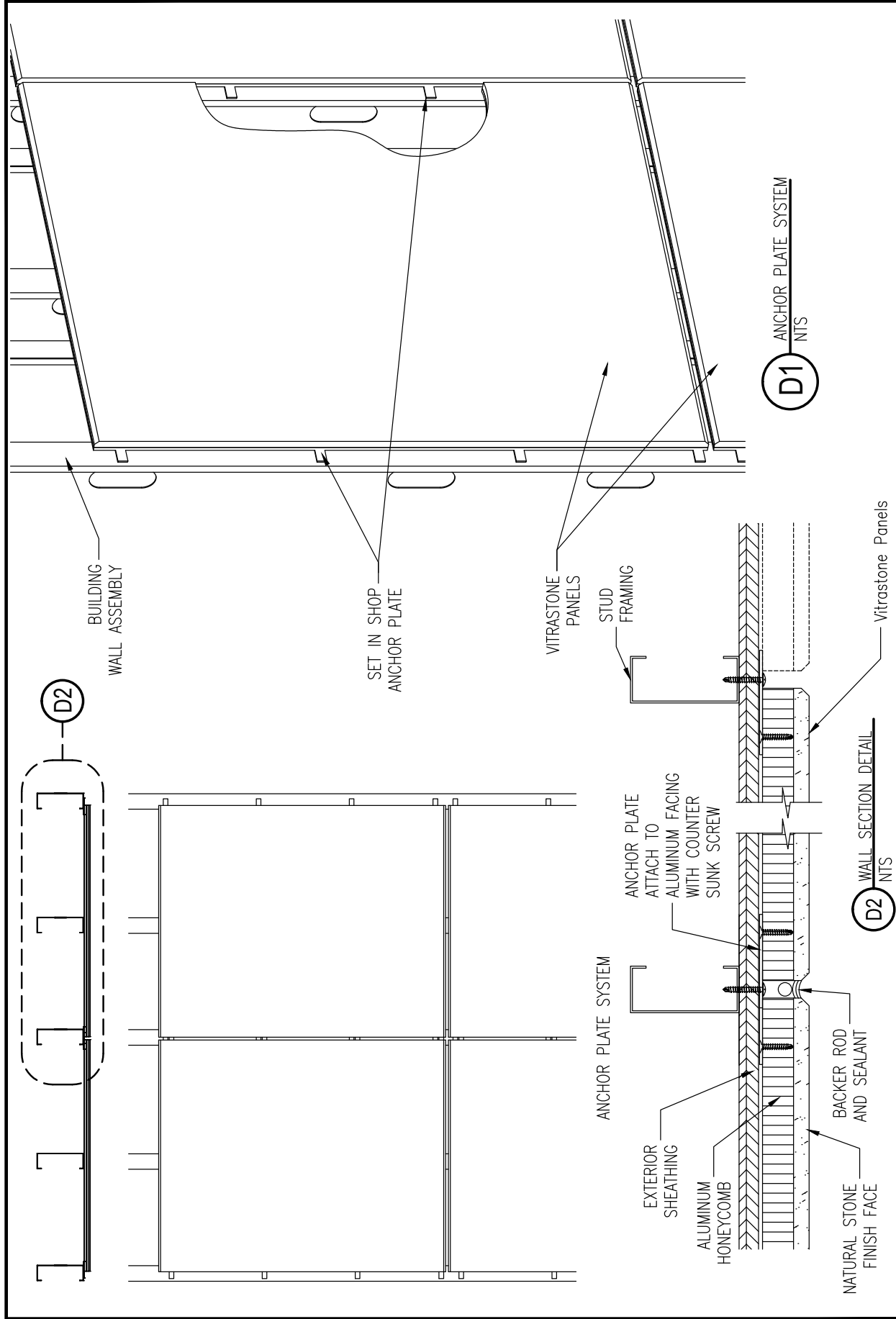


2.1 ANCHOR PLATE ATTACHMENT

The anchor plate attachment system is our simplest system. Each panel is fixed with slim 'Zed' anchor plate sections around the panel, which are then fixed back to the tophat or lightweight steel framing. Minimum joint size is 10mm.

1. The subframe of tophats or lightweight steel should be conformed to align with the panel joints, allowing the panels to be fixed on all edges.
2. It is generally best to start at the bottom row of panels and progress up the wall. Since the panel centres have no support it is recommended to apply globs of structural silicone to the substrate behind the panel centres.
3. Panels should be lifted into place and positioned (clamping if possible), screwing through the anchor plates into the tophat subframe. Care should be taken not to chip the edge of the panel when screwing through the joint.
4. Installation may proceed vertically or horizontally. Continue applying the silicone prior to installing each panel. Careful attention needs to be paid to panel joints and evenness between panels. It is suggested to use packers for easy spacing of the panels.





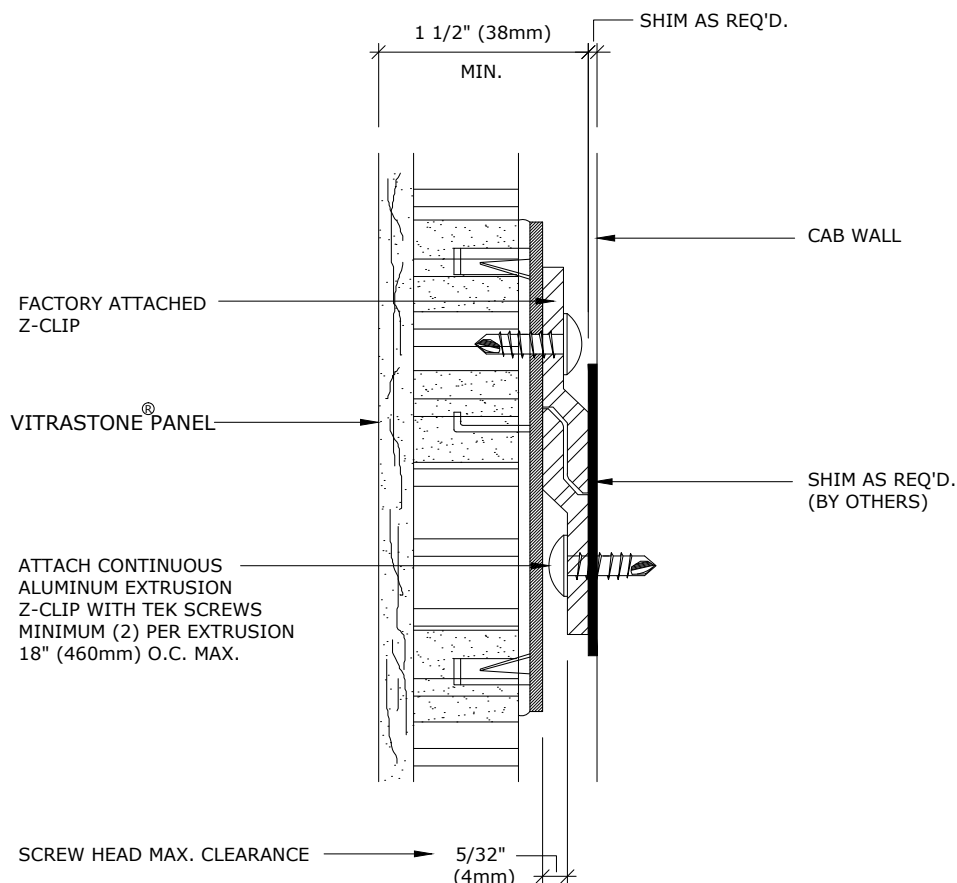
Disclaimer: These details are limited to the generalised design specification for VitraStone, and are intended for use by a technically skilled person only. Any use of the same is at their own discretion and risk.

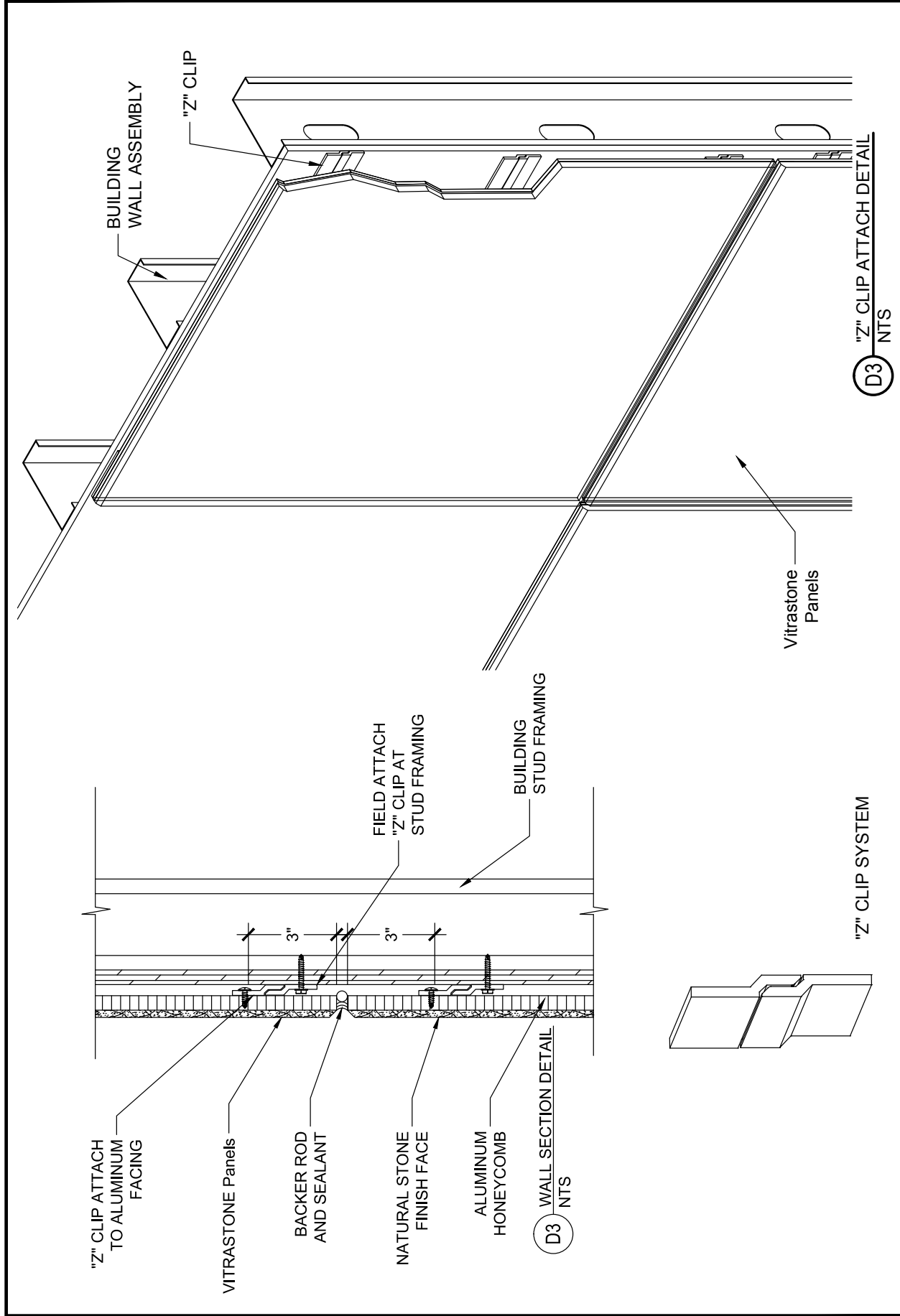
FAIRVIEW	
18-20 Donald St, Lithgow NSW 2790	Phone 02 6352 3115 Fax 02 6352 2355
TITLE: ANCHOR PLATE ATTACH SYSTEM	TYPE DWG: MOUNTING
SCALE: NTS	DWG. SHEET: AGD2

2.2 'Z' CLIP SYSTEM

The Z Clip System, while requiring more accuracy during panel and wall preparation, is an extremely fast system to install.

1. The subframe of tophats (minimum face size 75mm) or lightweight steel should be run horizontally and packed as required to ensure a flat and even install.
2. Fix the zed sections to the rear of the panel using rivets or 10 gauge pan head screws. These must be run horizontally and at a preset distance. It is recommended to use a jig to ensure consistency here.
3. Run the zed sections horizontally across the façade, beginning at the bottom and working up. Again, a jig will be required to ensure the spacing remains accurate and consistent (such as an aluminium extrusion with cut outs).
4. Panels should be lifted into place and positioned. Spraying some soapy water onto the zed sections on the wall will lubricate them slightly and assist with panel installation.
5. If it is necessary to screw the panels into place as well, some tabs as per the Anchor Plate install system can be attached to one edge. Alternatively, the zeds on the panel rear could be slightly offset to allow these to be screwed at the joint on one side, taking care not to limit any potential panel expansion/contraction.
6. Installation may proceed vertically or horizontally. Continue lubricating the zeds prior to installing each panel. Careful attention needs to be paid to panel joints and evenness between panels. It is suggested to use packers for easy spacing of the panels.





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FAIRVIEW	
18-20 Donald St, Lithgow NSW 2790	Phone 02 6352 3115 Fax 02 6352 2355
TITLE: Z-CLIP ATTACHMENT	TYPE DWG: MOUNTING
SCALE: NTS	DWG. SHEET: AGD3



3.1 CAULKING EXTERIOR JOINTS

NOTE: It is recommended that testing should be conducted by the sealant manufacturer for assurance that neither sealant nor primer will “bleed” into the stone and cause staining.

1. At joints around the panel perimeters push round open cell foam backer rod between panels well into the joint so that the veneer stone edge is exposed and ideally 4mm of the honeycomb panel.
2. Some sealants cannot be completely removed from stone, particularly if porous or with naturally occurring surface holes. In this case, it is recommended to mask or tape the stone to prevent the sealant from adhering to the surface.
3. Apply primer if recommended by the sealant manufacturer and allow to dry.
4. Sealant should be applied in a continuous operation, to fill the entire joint. Tool the sealant into the joint to ensure even, complete adhesion and a neat finish.
5. Masking must be removed within ten minutes of tooling the sealant.

3.2 CUTTING OF VITRASTONE PANELS

STRAIGHT CUTS

With proper care, onsite cutting of Vitrastone stone panels is no more difficult than cutting a sheet of plywood. The main concern while cutting a panel is to protect the stone from being scratched, and the edges of the cut from chipping. To cut the stone a circular saw with a dry cut diamond tipped blade is used. The line to be cut and any area of stone in contact with the saw should be covered with masking tape prior to cutting. It may also be helpful to mask or otherwise cover the bottom of the saw to prevent scratching otherwise the panel can be cut face down, provided proper care is taken to protect the face.

Marks should never be made directly on the stone as some inks may bleed or otherwise stain the stone.

When making long straight cuts, a saw with a guide (such as a Festool) is recommended. Alternatively, it is often helpful to clamp a straight edge such as an angle to the panel to act as a guide for the saw.

Place the circular saw with a dry cut diamond tipped blade against the straight edge, and proceed slowly along the previously marked line. On certain stones, especially marbles, a fast cutting rate will chip the edges of the panels. If excessive chipping occurs, try slowing down the rate at which you push the saw blade through the panel. Once finished with the cut, remove all masking tape from the face of the stone.

CUT OUTS AND IRREGULAR SHAPES

Cut outs of the panel are best done with a dry cut diamond tipped blade on a small angle grinder. Correct PPE must be worn when undertaking this task.

After masking and marking the area to be cut, cut through the stone from the face side using the angle grinder. Flip the panel over and cut through the aluminium panel rear, and punch out the cut out from the face side. If the rear of the panel can't be accessed, a jig saw can be used to complete the cutting through the aluminium panel rear.

QUALITY

4.1 MANUFACTURING QUALITY

A dedication to the total fulfillment of our client's and customer's expectations is reflected by a complete quality control system, beginning at the point of specification and continuing through to delivery of the guaranteed products. All activities are carried out in a manner which:

- Uses the framework of ISO9000 Quality Standards to verify the quality of our systems
- Ensures that our products and services are of the highest standards
- Creates continuous improvements to our product through the application of the best quality practices.

4.2 WARRANTY

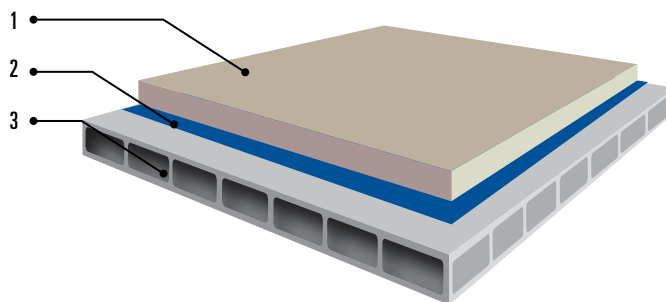
The standard warranty is 10 years.

MATERIAL PROPERTIES

5.1 TYPICAL COMPOSITION

1. Natural Stone
2. Aviation Grade Epoxy
3. Vitracore Honeycomb Substrate

This combination results in a high impact strength, high flexural strength, lighter weight and easier to install panel.



5.2 SKIN & CORE

Face Skin - 5mm Natural Stone
Core - 10mm Vitracore Honeycomb Panel

5.3 DIMENSIONS

STANDARD PANEL DIMENSION
2400mm x 1200mm

Panels can be made smaller or larger on request.
Note: Not all sizes are available with all stone types.

5.4 WEIGHT

THICKNESS	WEIGHT (kg/m ²)
15mm	22 (approx — depending on stone type)

TECHNICAL DATA

NO.	ITEM	STANDARD	TESTED VALUE	RESULT
1	Flat Bonding Strength	Average ≥ 1.0 MPa; Minimum ≥ 0.6 MPa	Average 1.31 MPa; Minimum 0.88 MPa	Pass
2	Flat Tensile Strength	≥ 0.8 MPa	0.91 MPa	Pass
3	Flat Tensile Modulus	≥ 30 MPa	70.7 MPa	Pass
4	Flat Shearing Strength	≥ 0.5 MPa	0.54 MPa	Pass
5	Flat Shearing Modulus	≥ 4.0 MPa	6.43 MPa	Pass
6	Bending Strength	≥ 8.0 MPa	41.0 MPa	Pass
7	Bending Rigidity	$\geq 1.0 \times 10^9$ N.mm ²	2.86×10^9 N.mm ²	Pass
8	Shearing Rigidity	$\geq 1.0 \times 10^5$ N	4.40×10^5 N	Pass
9	Climbing Drum Peel Strength	Average ≥ 50 N.mm/mm; Minimum ≥ 40 N.mm/mm	Average 9.1N.mm/mm; Minimum 42.4NN.mm/mm	Pass
10	Fasten Fitter Loading Capacity	≥ 3.2 kN	3.2 kN	Pass





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NATURAL STONE CLADDING SYSTEM / MANUFACTURED BY FAIRVIEW

FAIRVIEW PRODUCT RANGE:



vitracore G2

NON-COMBUSTIBLE COMPOSITE PANEL / MANUFACTURED BY FAIRVIEW
as deemed by the BCA



ceramapanel

COMPRESSED FIBRE CEMENT FACADE / MANUFACTURED BY FAIRVIEW



vitradual

NON-COMBUSTIBLE CASSETTE CLADDING / MANUFACTURED BY FAIRVIEW



vitranamel

VITREOUS ENAMEL PANEL / MANUFACTURED BY FAIRVIEW



vitrafix

VITRABOND FIXING ACCESSORIES / MANUFACTURED BY FAIRVIEW



vitraART

CUSTOM GRAPHIC CLADDING / DEVELOPED BY FAIRVIEW

Trimo

INSULATED SANDWICH PANEL / SUPPLIED BY FAIRVIEW

Qbiss.One

NON-COMBUSTIBLE FACADE PANEL / SUPPLIED BY FAIRVIEW

ArGeTon®
TERRACOTTA FACADE TILE

TERRACOTTA FACADE TILES / SUPPLIED BY FAIRVIEW

EQUITONE
Fibre cement facade materials

HIGH DENSITY FIBRE CEMENT / SUPPLIED BY FAIRVIEW



FAIRVIEW

DEFINING ARCHITECTURE SINCE 1963

AUSTRALASIA

P / +61 2 6352 2355
helpdesk@fv.com.au

NORTH AMERICA

P / +1 860 242 2711
helpdesk.na@fairviewarch.com

UNITED KINGDOM

P / +01278 428 245
helpdesk.uk@fairviewarch.com



WWW.FV.COM.AU