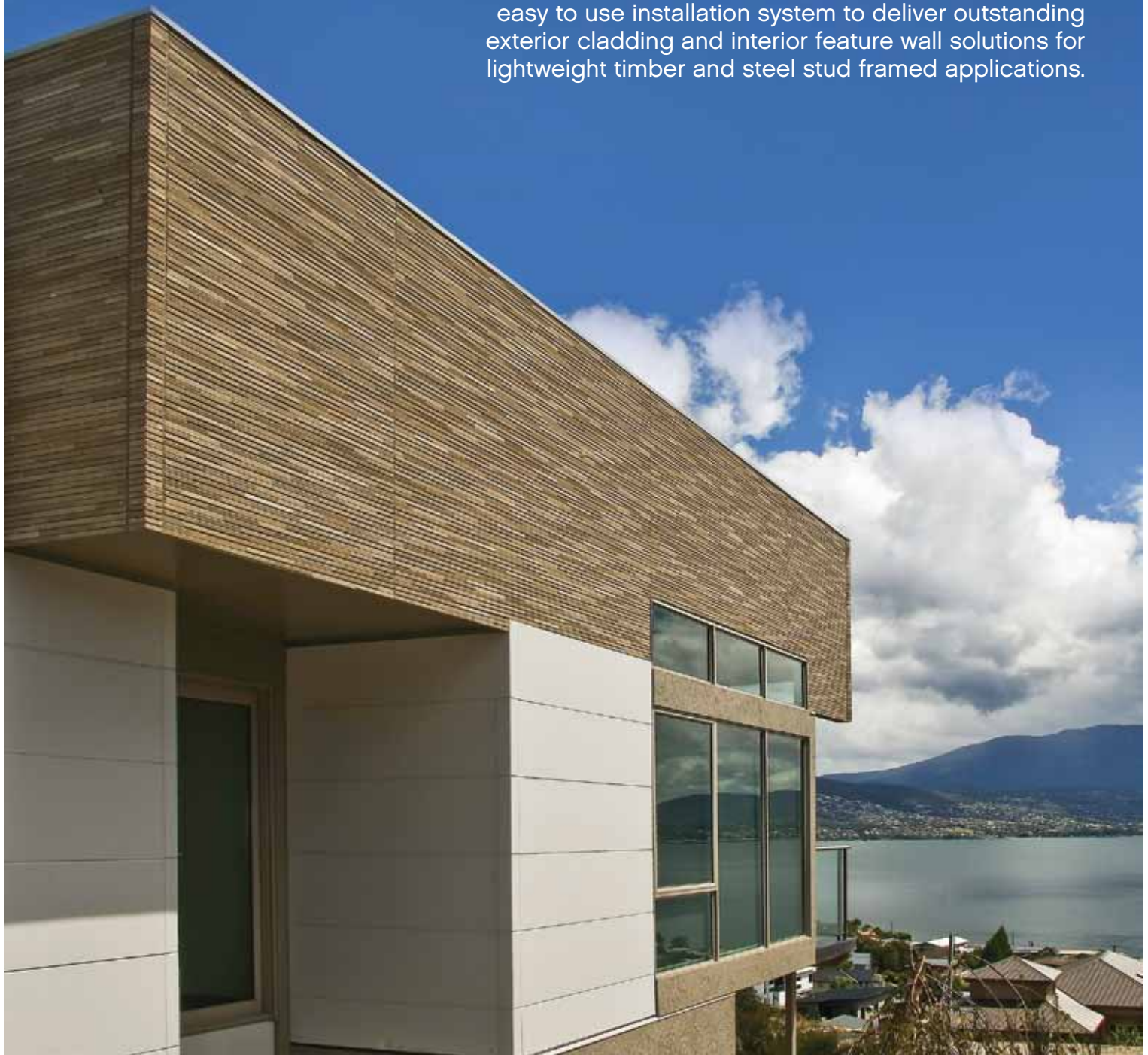


FCNZ:502

External Cladding

The Designer Series™ pre-finished cladding system combines a modern contemporary appearance with the time and effort saving of a pre-finished panel, and a fast, easy to use installation system to deliver outstanding exterior cladding and interior feature wall solutions for lightweight timber and steel stud framed applications.



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Description

The Designer Series™ pre-finished, cladding system combines a contemporary appearance with simple installation systems to deliver outstanding external cladding and internal feature wall solutions for residential buildings.

Designer Series panels are pre-finished using a durable multi-layer paint process and a NichiGuard stain resistant coating. Panels are tongue and groove profiled along top and bottom edges (long horizontal edges), and fit neatly together to form a waterproof joint. Vertical aligned joints are formed at the ends of the panels and are sealant filled.

The Designer Series system requires little change to normal building practices and is compatible with industry standard components such as windows and flashings.

Applications

The Designer Series™ system may be used on timber framed buildings of up to three storeys that are within the scope of NZS3604 Timber Framed Buildings, and on steel framed buildings with similar limitations.

Designer Series is ideal for new homes with either slab-on-ground or elevated timber/concrete floor construction, including duplex and townhouse construction, extensions, upper storey additions and other applications where residential construction techniques are appropriate.

Designer Series™ is also suitable as an internal lining system in residential applications. It is ideal for creating feature walls and creative elements on both steel and timber structural framing.

Compliance

The Designer Series™ external cladding system features a ventilated and drained cavity which is a proven and highly effective method of weatherproofing buildings. It has been tested successfully to E2/VM1 and is the subject of a CodeMark™ Certificate of Conformity. For current certificate information, please refer to www.global-mark.com.au.

The system complies with New Zealand Building Code Clauses B1 Structure, B2 Durability, E2 External Moisture and F2 Hazardous Building Materials.

Advantages

The Designer Series™ pre-finished cladding system features include:

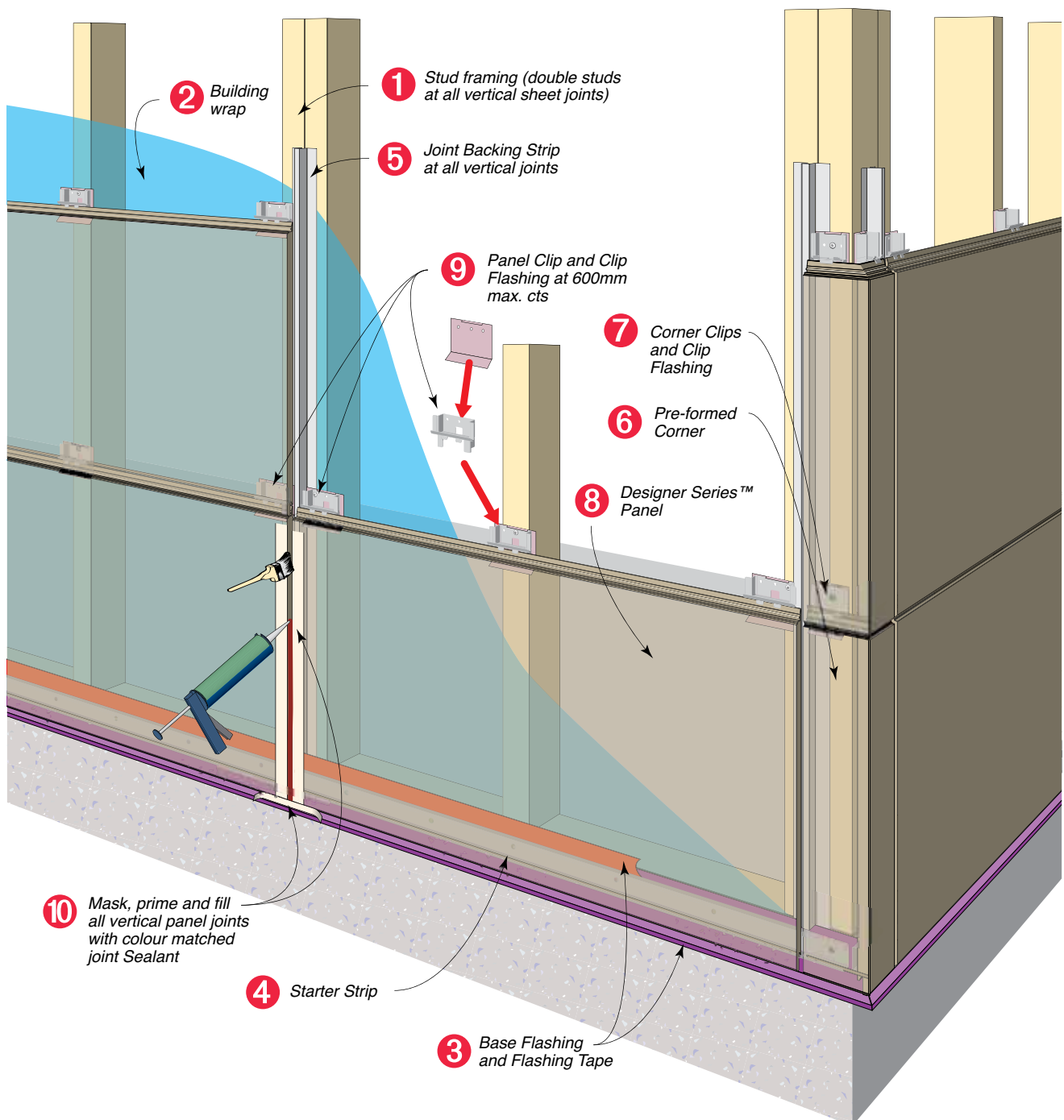
- An ultra-modern contemporary appearance to deliver individual differentiation in building designs.
- Pre-finished panels that speed up the construction process, reduce on-site labour, reduce supervision requirements and reduce trade coordination delays.
- Pre-finished panels provide quality factory checked finishes to deliver higher customer satisfaction and reduce call-backs.
- Extensive range of smooth, textured and profiled surface finishes in attractive colour tones to meet today's customer tastes.
- Panels are protected with NichiGuard coating, which has an anti-staining, self-cleaning function. Silica particles in the NichiGuard coating attract water from the atmosphere to form a thin molecular film, so that airborne contaminants do not reach the panel surface itself. Rain water that runs down the wall washes contaminants away.
- Compatible with cost effective, industry standard lightweight timber and steel stud wall construction.
- Suitable for integration with industry standard window and door frames.
- Has simple components and construction techniques to ensure fast and easy assembly.
- Results in an attractive sealed joint finish.
- Pre-fabricated external corner profiles assist quick and easy installation and produce a high quality finish. No additional reinforcing required to corners.



Cladding System Overview

Overview & Features

- Designer Series™ Panels have complementary tongue and groove profiles along the horizontal edges with an in-built flexible sealing strip.
- Panel Clips fit over the lower panel tongue, and accept and retain the groove of the upper panel providing invisible fixing. A Clip Flashing (patent pending) is used to further protect against water transfer to the building wrap.
- Pre-formed External Corners are easy to install using Corner Clips, and provide an attractive matching finish.
- Pre-finished Panels mean virtually no finishing work is required. Simply fill all vertical joints with colour matched sealant and finish off with the matching touch-up kits.



Components

Designer Series™ pre-finished Panels

Designer Series™ panels are a cement bonded fibrous wood particle product that is pressed with the required surface texture and cut to length. The long horizontal edges of the panels are machined with complementary tongue and groove profiles and a compressible sealing strip is bonded onto the tongue. Multiple finishing coats are applied to the exterior surface, producing a ready to install and highly durable pre-finished panel. Supplied in a pack of 2 panels.

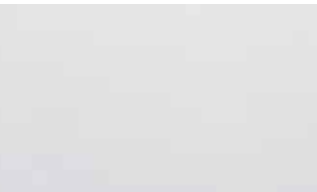
Colours and Styles

Designer Series™ pre-finished panels are available in the following range of modern styles, colours and textures. There is also a range of colour matched accessories, including Preformed External Corner profiles, Joint Sealant and Touch-up Paint kits to speed installation and enhance the project finish and appearance.

Material Properties

Specification	Size
Thickness (nominal)	16 ±1.2 mm
Mass (nominal)	18.86 kg/m ²
Panel Length	3030 ±1 mm
Effective Cover (width nominal)	455 ±1 mm
Overall Width (nominal)	470 ±1mm
Diagonals (difference max.)	±2 mm

The Designer Series™ panel sytem has been tested for fire hazard properties in accordance with AS/NZS3837 at 50kW/m² irradiance with results of Group Number 1 and average specific extinction area of 41.3m²/kg.



Smooth | Cream



Smooth | Mocha



Smooth | Frappe



Smooth | Latte



Textured | Sandstone



Textured | Ebony



Textured | Alpine*



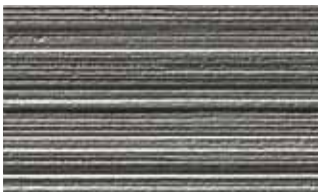
Urban | Grey



i-Cube | Zircon*



i-Cube | Quartz*



i-Cube | Onyx*



Slimline | Slate*



Woodgrain | Oak*

* Available on request, lead times apply.

Pre-Formed External Corner

Manufactured in designs and colours to match all available panels. Provides a strong, attractive and weathertight finish for external corners.

Internal 70 x 70mm. Cover nom.
86 x 86 x 455mm.



Touch-up paint Set

Panel Touch-up paint, colour matched to ensure a perfect finish. Used for nail heads, cut edges at window heads and other visible blemishes. Primary kit provides up to 3 colours suitable for the raised sections of the pattern (highlights).

Tins 80ml. Supplied with brush and stirring stick.

Nail heads only may be coated with Dulux Weathershield™, colour matched to the panel. Use three coats as per Dulux directions. Contact NZ Brick Distributors for colour formulations.



Joint Sealant – Colour Matched

Colour matched sealant to fill all vertical joints and seal around window and door openings.



Description	Pack Size
Joint Sealant	320ml

Primer

Required to prepare sheet edges before using Joint Sealant.

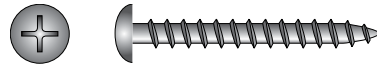
Description	Pack Size
Edge Primer	150ml

Fasteners

To guarantee performance, only approved fasteners should be used in these systems.

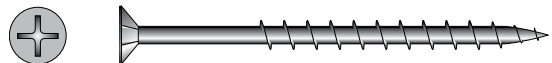
■ Screws for fixing components to Timber Framing

For fixing Starter Strip, Clips and other components to timber framing. Stainless steel 410 grade and clear coated. Length 35mm.



Description	Pack Quantity
For timber frame.	250

For fixing components to timber framing over materials such as bracing sheet. Galvanised steel. Length 57mm.



Description	Pack Quantity
For timber frame	100

■ Face Nails for fixing Panels to Timber Framing

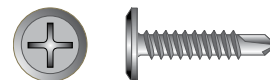
For fixing Designer Series Panels at soffit line and other locations where required. Ribbed shank, flat head, stainless steel 304 grade, 75mm length. Pre-drill 2.3mm holes in panels for all nails.



Description	Pack Quantity
For timber frame	115

■ Screws for fixing components to Steel Framing

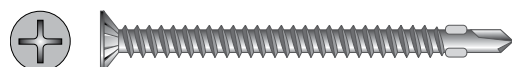
For fixing Starter Strip, Clips and other components to steel framing. Class 3, 8g x 20mm, Self-drilling, Button Head, Phillips Drive.



Description	Pack Quantity
20mm for fixing components to steel framing	250

■ Face Screws for fixing Panels to Steel Framing

For face fixing Designer Series Panels at soffit line and other specified locations to steel framing. Class 3, 10g x 55mm, Self-drilling, CSK self-embedding head, Phillips drive.



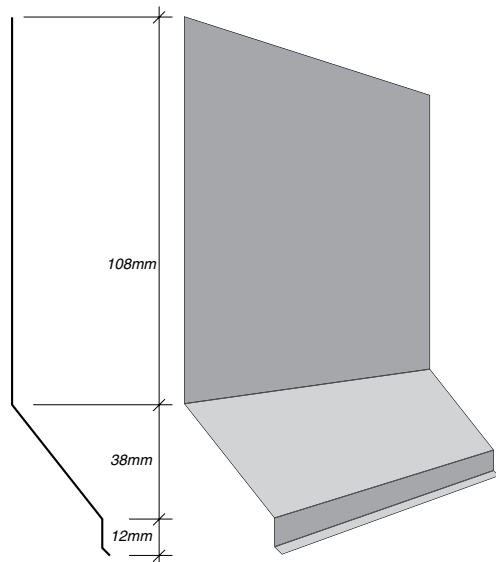
Description	Pack Quantity
Fixing panels to steel frame.	115

Fasteners (continued)

- Fasteners for general fixing (supplied by others)
- For fixing backing strip and other components to framing.
- For timber framing – Galvanised clout, 40 x 1.6mm.
- For steel framing – Screws, Class 3, 6g x 40mm self-drilling, button head, Phillips drive.

Base Flashing

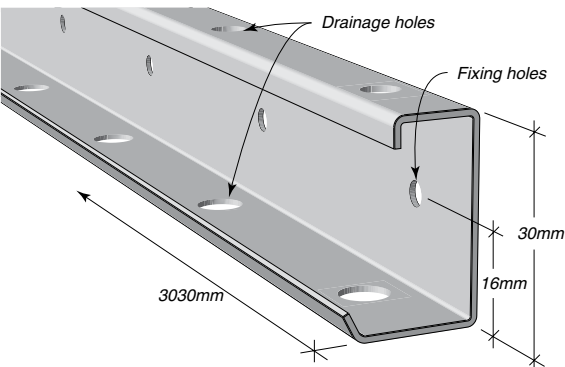
Base Flashing. Zincalume steel 0.55mm BMT. Length 2.4m



Description	Pack Quantity
Base Flashing	1

Starter Strip

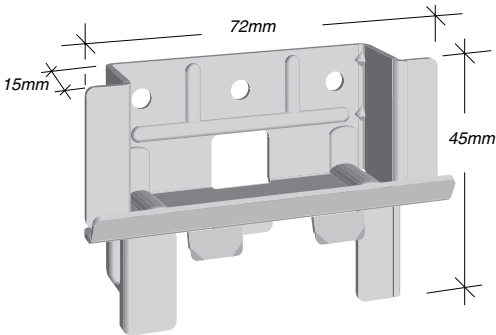
Steel profile used at the base to locate the first row of panels. Manufactured from 1.2mm BMT steel with Galvalume AZ150 corrosion resistant coating.



Length	Pack Quantity
3030mm	1

Panel Clip

Fixed to the framing to retain the top and bottom horizontal edges of panels. Manufactured from SuperDyma corrosion resistant coated steel.

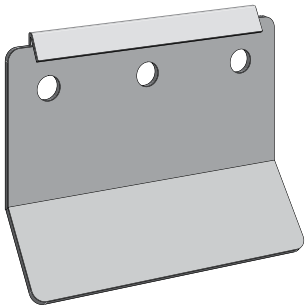


Description	Pack Quantity
Panel Clip	10

Panel Clip Flashing

Used behind each Panel Clip. Galvanised steel 0.4mm BMT. (Patent pending).

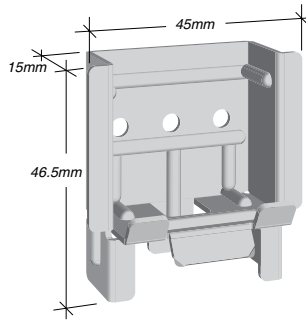
Description	Pack Quantity
Panel Clip Flashing	10



Corner Clip

Fixed to the framing to retain the top and bottom edges of the Pre-formed External Corner. Manufactured from SuperDyma corrosion resistant coated steel.

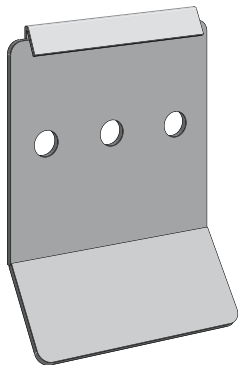
Description	Pack Quantity
Corner Clip	10



Corner Clip Flashing

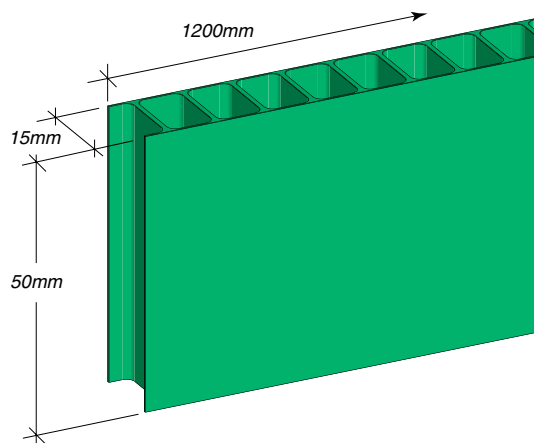
Used behind each Corner Clip. Galvanised steel 0.4mm BMT. (Patent pending).

Description	Pack Quantity
Corner Clip Flashing	10



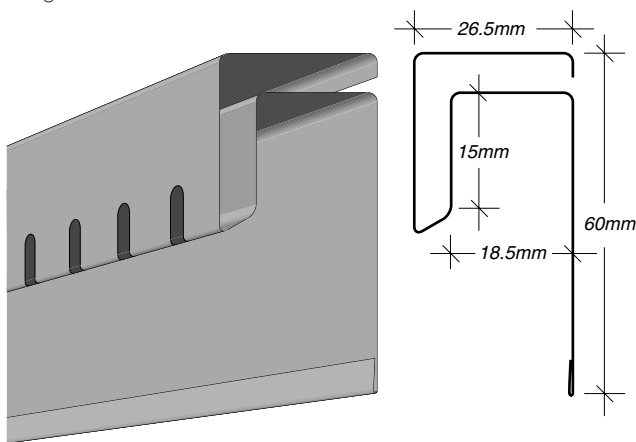
Spacer

For packing between framing and panels at eaves and other locations wherever face fixing is required. Manufactured in extruded plastic. Size 15 x 50 x 1200mm.



Eaves Trim

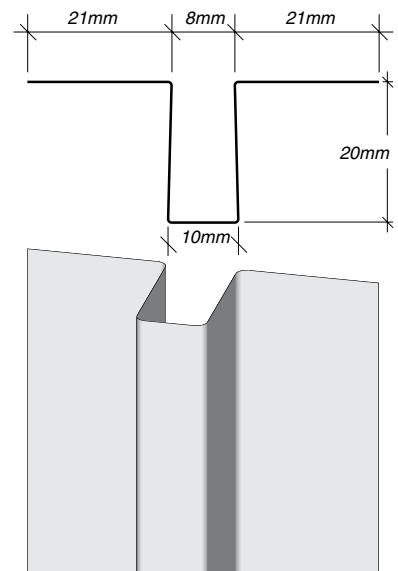
Manufactured in complementary colours to provide a neat and attractive finish at eaves/soffit line. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating. Length 3030mm.



Available Colours	Pack Quantity
Charcoal, Pearl, Silver	5

Joint Backing Strip – Double Flange

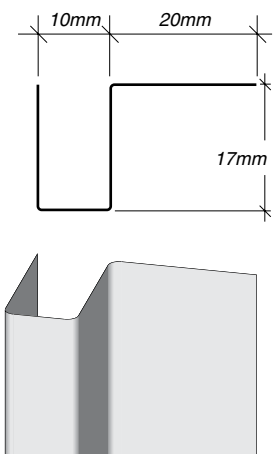
Used at vertical joints to fill cavity and provide a backing for sealant. Manufactured in 0.3mm BMT steel with Galvalume AZ150 corrosion resistant coating. Length 3030mm.



Length	Pack Quantity
2400mm	1

Joint Backing Strip – Single Flange

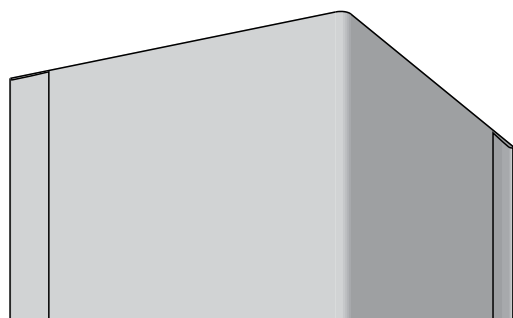
Used at vertical internal corner joints and at openings to fill cavity and provide a backing for sealant. Manufactured in 0.3mm BMT steel with Galvalume AZ150 corrosion resistant coating. Length 2000mm.



Length	Pack Quantity
2400mm	1

Internal Corner Backing

Metal angle flashing used at internal corners. Steel with Galvalume AZ150 corrosion resistant coating. Size 50 x 50 x 3030mm.

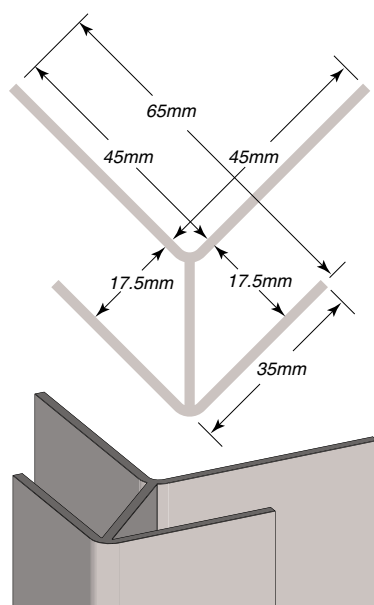


Length	Pack Quantity
2400mm	1

External Corner Trim

Anodised aluminium extrusion used to dress and finish external corners.

Size 65 x 65 x 3030mm.

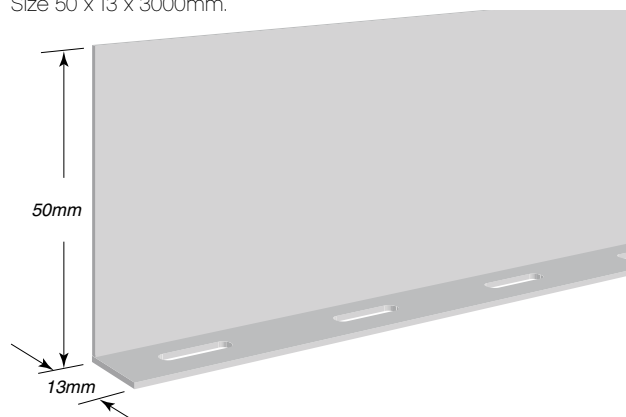


Available Colours	Pack Quantity
Charcoal, Pearl, Silver	4

CAVITY CLOSER

UPVC profile used above windows, doors and similar openings as a vermin barrier. Colour – white.

Size 50 x 13 x 3000mm.



Length	Pack Quantity
3000mm	1

BOND BREAKER TAPE

Used at some sealed joints. Tesa Multiform Tape N°7492, 48 x 3mm polyethylene closed cell foam tape.

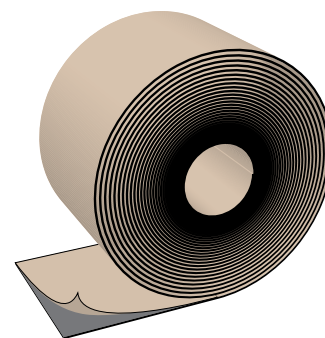
Description	Roll Length
Bond Breaker Tape	25m

Building Wrap

Building wrap material and installation is to be in accordance with Acceptable Solutions E2/AS1 for wall underlay. Supplied by others.

Flexible Flashing Tape

To seal components including building wrap and flashings in accordance with Acceptable Solutions E2/AS1. Supplied by others.



Design Considerations

This guide represents good practice, though it is not intended as an exhaustive statement of all relevant information. It remains the responsibility of the building designer to verify that the Cemintel Designer Series™ external cladding system is suitable for the particular requirements of any given project, and that all relevant clauses of the NZBC have been met.

WIND LOADS

Wind loads have been calculated in accordance with AS/NZS1170.2 and for wind zones described in NZS 3604. Span tables are provided for timber and steel framing, suitable for all New Zealand wind zones.

The tables assume that an interior lining is in place so that only exterior pressures are applied to the cladding. The interior linings must be designed for the appropriate pressures.

Contact NZ Brick Distributors for information on buildings requiring specific design.

FRAMING

The Designer Series system can be fixed to timber or steel framing. As a minimum requirement, framing shall be in accordance with the following standards:

- NZS 3604 – Timber Framed Buildings.
- NZS 3404 – Steel Structures
- AS/NZS4600 – Cold-Formed Steel Structures

Timber shall be dry with an equilibrium moisture content of 18% or less at the time of framing, and must be protected against significant changes in moisture before and after installation. Green timber is not recommended. To meet durability requirements, timber must be selected or treated as specified in the Acceptable Solution B2/AS1.

The design and construction of the steel frames should be considered in conjunction with the advice from the manufacturer. Further information can be found in the NASH Standard – Residential and Low-rise Steel Framing Part 1: Design Criteria. In corrosive environments, appropriate measures should be taken to protect the frame from corrosion.

Standard framing techniques are appropriate with the addition of double studs at all vertical panel joints to allow for fixing of clips each side of panel joints.

WALL BRACING

Designer Series panels are indirectly attached to the structural framing using clips and spacers. As a consequence, they are not designed to provide wall bracing. Bracing must be provided in the structural framing in the normal manner by using methods such as strap bracing or sheet bracing. Where sheet bracing is used, the entire wall framing to be clad with the panels must be sheathed to maintain a uniform fixing plane. Note that window set-out will be affected.

PENETRATIONS

Penetrations in the Designer Series panels must be neatly cut using appropriate tools such as a saw, drill or hole saw. Penetrations should be prepared with a clearance of 8-10mm all around and the gap must be fully sealed with Joint Sealant. Elements that cross the cavity must not allow water to transfer to the building wrap, for example, by angling them down to the cladding.

COASTAL AREAS

Corrosivity zones are described in NZS 3604, with further information available in AS/NZS 2728. It is recommended that the building designer assess the site in accordance with the standards and local conditions to determine suitability of the system.

The Designer Series™ system may be used in zones B and C some coastal areas in zone D. It is NOT suitable for salt spray areas of zone D. This includes the beachfront in regions of rough seas and surf beaches, and inland for several hundred metres. Consideration must be given to local weather and topographical features that can cause an increase in the distance that salt spray can travel beyond these limits.

The system should not be used in aggressive industrial areas where the environment may be acidic with a pH of less than 5.

In zones C and D, all walls which are protected by soffits above must be washed down twice per year, to remove salt and debris build-up, particularly around window/door openings.

Building Wrap

Building wrap (flexible underlay) is an integral part of the Designer Series system, and must be combined with a rigid wall underlay in wind zone Extra High. Wind forces can produce lower air pressures within buildings than on the outside, assisting to force water through gaps in the building envelope such as around penetrations and joints, even at low wind speeds.

The system incorporates a drained cavity, similar to brick veneer construction. This is highly effective at removing condensation and any incidental moisture from the cavity, thereby ensuring that the components within the cavity can dry out.

The underlay must be installed in accordance with the Acceptable Solution E2/AS1 (except that battens are not used).

Condensation is a complex problem, and can occur under a variety of conditions, not just cold weather. Literature on this subject is available from CSIRO/ BRANZ/ASHRAE/ABCB and should be consulted when building in areas where condensation is likely to occur.

INSULATION

Thermal insulation values for walls must be calculated in order to meet the energy efficiency requirements of NZBC Clause H1. Calculation tools are available (BRANZ) based on the methods of NZS 4218 for the total insulation values for walls, based on the climate zone (as shown in Appendix B of NZS 4218) and the construction R-values of the building wall elements. Construction R-values should be calculated in accordance with NZS 4214. Methods of determining the total thermal resistance of parts of buildings.

Further information can be found in Acceptable Solution H1/AS1 and the BRANZ House Insulation Guide.

WINDOW SELECTION

The Designer Series system is designed to accept standard aluminium or timber framed windows and doors. Aluminium windows MUST NOT have sill drain holes which can direct water into the wall cavity.

The face of the panels finishes 31mm (nominal) in front of the framing (and greater where sheet bracing is used).

Consideration must be given to the depth of the stud framing, the depth of the chosen window frame, and the depth of the timber reveal so as to provide the required clearance at the window jamb to accommodate the panels. Refer to typical window installation details later in this guide.

BUILDING RENOVATIONS

Ensure the condition of the framing is in accordance with current applicable standards. Install additional studs behind all vertical panel joints and prepare framing, wall underlay and flashings as per details in this publication. Install the Designer Series system in accordance with all requirements in this publication.

BUILDING ADDITIONS

When undertaking building additions, a movement control joint must be installed at the junction of the current framing and new framing. The current and new framing and cladding systems must be discontinuous at this control joint.

LIMITATIONS

The Designer Series system is NOT suitable for the following applications: non-horizontal panel joints; non-vertical panels (e.g. parapet capping); wet areas such as bathrooms and water features; chimney cladding except as over-cladding; contact with standing snow or ice.

Do NOT apply tiles or other materials to the face of the panels.

MAINTENANCE

Regularly inspect panel surfaces and follow wash-down procedures when required. Small blemishes to panels can be repaired using Touch-up Paint. Remove damaged sealant and re-apply.

Ensure ventilation and drainage gaps between panels and flashings are clear of any debris. Maintain minimum ground clearances at wall base as detailed in Acceptable Solution E2/AS1.

Should surface deterioration occur after extended exposure to UV radiation, the surface can be washed-down and coated with a proprietary clear finish to restore surface protection.

WASH DOWN

When cleaning panels, use no more than 700psi (50kg/cm²) of water pressure at 3 to 3.5m distance from the face. Water pressure should be applied downward to avoid forcing water into tongue and groove joints.

Use neutral detergent with a soft brush when removing dirty spots from a panel. When diluting the neutral detergent, follow the manufacturer's instructions, and use the weakest solution possible.

GRAFFITI PROTECTION

For walls requiring anti-graffiti protection, NZ Brick Distributors recommends the application of Watty!® Poly U-400 Anti-Graffiti Clear. Please refer to Watty!® for coating instructions and the warranty conditions of this product.

RECOATING

The Designer Series system utilises a multi-layered coating system designed to provide long lasting performance, and can be recoated with a proprietary clear finish to prevent deterioration.

If recoating in an alternative colour is desired, NZ Brick Distributors recommends the use of 1 coat of Watty!® Aquaprep Primer Sealer Undercoat and 2 coats of Watty!® Solagard®.

Prior to any recoating, panels should be washed down, as per the maintenance instructions, and the coating should be applied as per Watty!® instructions.

NZ Brick Distributors recommends that only Designer Series Smooth and Woodgrain are suitable for recoating with an alternative colour.

CONTROL JOINTS

As the panels are indirectly attached to the structural framing using clips and spacers, and vertical joints are created at the ends of all panels, i.e. at maximum 3030mm spacings (full panel length), no additional vertical control joints are required.

Movement joints provided in framing should be aligned to joints in the panels.

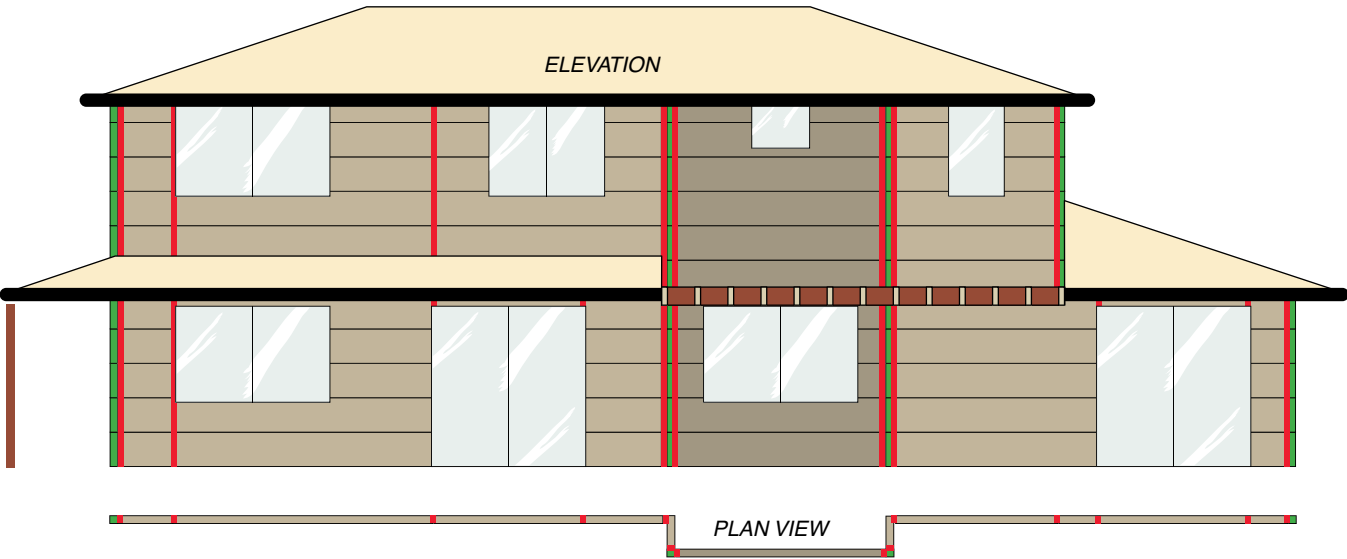
Where frame shrinkage may be a concern, NZ Brick Distributors recommends creating a horizontal break in the panelling at first floor level by incorporating veranda or awning roofing or other design elements to create discontinuous panelling.

A control joint must also be installed when a masonry wall adjoins framed construction, and at the junction of framed additions or existing buildings, to allow for differential movement. Refer to 'Installation Details'.

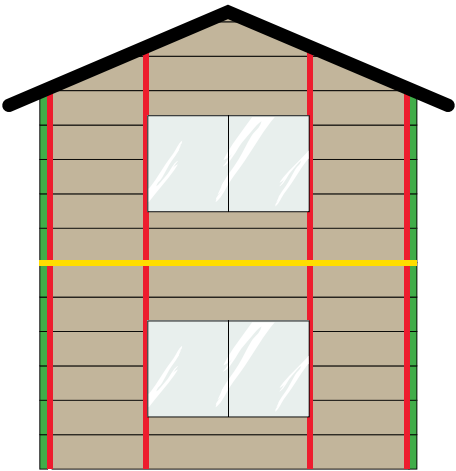
VERTICAL PANEL JOINTS

Vertical joints in panels must be aligned and extend for the full height of continuous panelling, although additional joints may be installed over windows for ease of installation. As the joints are expressed, consideration to the positioning of joints is important for aesthetic reasons. Placing joints at sides of openings or above doors can reduce the impact of joints.

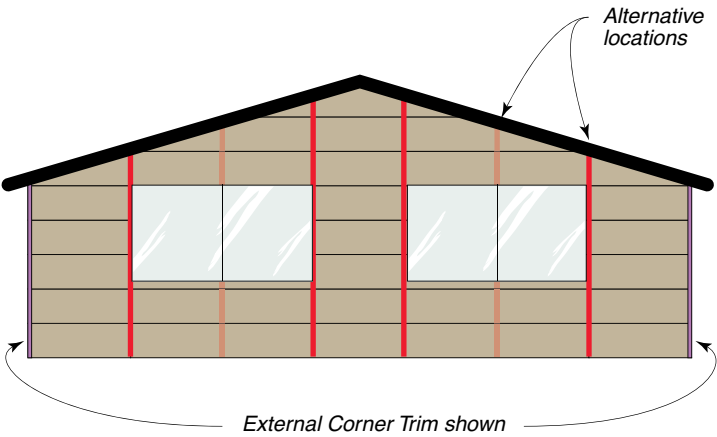
FIG 1: Typical Layout of Vertical Panel Joints



LEGEND			
Sealant Filled Panel Joint	Pre-formed External Corner	External Corner Trim	Second Storey Junction



Vertical frame shrinkage issues must be addressed



External Corner Trim shown

Installation Checklist

The Designer Series construction process requires coordination between the builder and the Designer Series system installer. The following checklist will assist in making this process run smoothly.

ACTION	COMPLETED
PRE-CLADDING CHECKLIST	
1 Confirm that double studs are appropriately located behind all vertical panel joints.	
2 Confirm that studs are appropriately located to accept preformed corners (when used).	
3 Confirm that studs are appropriately located at internal corners.	
4 Confirm timber framing alignment is in accordance with NZS3604, or steel framing is in accordance with AS/NZS4600, and correct if necessary.	
5 Confirm any concrete that may foul the cladding line has been removed, particularly at steps in slabs and isolated columns.	
6 Confirm bracing is in place. NOTE: Where sheet bracing is used behind panels, the entire area must be sheeted to maintain a uniform fixing plane.	
7 Confirm adequate ground clearance to the bottom of the Panels in accordance with E2/AS1.	
8 Confirm that the building wrap has been fully and correctly installed, and overlapped at joints.	
9 Confirm that window placement provides the appropriate clearance for panel installation. (31mm nom. from face of frame to face of panels).	

ACTION	COMPLETED
10 Confirm all window and door flashings are correctly installed.	
11 Confirm chosen eaves soffit detail and installation has been completed correctly.	
12 Confirm adequate structural support for fixtures such as pergolas and decks has been provided. No loads may be carried by the cladding.	
13 Confirm membranes and flashings for deck areas have been installed in accordance with manufacturer's specifications.	
14 Confirm territorial authorities have completed appropriate inspections prior to cladding commencement.	
POST-CLADDING CHECKLIST	
1 Confirm all vertical joints have been neatly filled with approved sealant.	
2 Confirm all visible nail heads have been covered with appropriate Touch-up Paint.	
3 Confirm sealant has been applied to gaps at window jambs and penetrations.	
4 Confirm all exposed cut edges, such as at window heads, have been protected with two coats of Touch-up Paint.	

Panel Preparation & Handling

Handling & Storage

Designer Series Panels are pre-finished, and must be treated with care. During handling, avoid damage to edges, ends and surfaces.

All Panels must be stacked flat, clear of the ground, and supported at 300mm maximum centres on a level platform.

Material must be kept dry, preferably by being stored inside the building. Panels exposed to moisture prior to installation may be subject to shrinkage, and voiding of warranty. Protect from contaminants such as silicone spray. Where it is necessary to store panels outside, they must be protected from the weather.

Panels must be carried on edge.

Panels must be dry prior to fixing and prior to joint sealing.

Panel Cutting

Panels should be cut from the back using a power saw. NZ Brick Distributors recommends using the FESTO TS 55 EBQ Plunge Cut Saw with guide rail and appropriate blade.

All exposed cut edges such as at the window heads and roof junctions must be coated with two coats of appropriate Touch-up Paint prior to panel installation.

Face Fixing of Panels

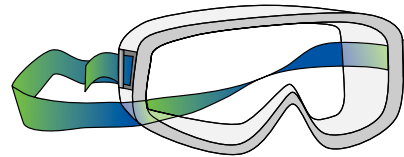
At face fixing points, all panels must be supported by a Spacer Strip. Panels must be pre-drilled to accept nails. Use a 2.5mm timber drill bit, and drill from the front. Nail/screw heads should finish flush with the panel surface. All visible nail/screw heads should be neatly covered with Colour Matched Paint used sparingly. Do NOT use sealant on nail heads.

Penetrations

Penetrations in Panels may be cut or drilled prior to installation. Cut from the back or drill from the front.

Safety

When cutting, drilling or grinding Panel using power tools, always ensure the work area is well ventilated. An approved dust mask (AS/NZS1715 and AS/NZS1716) and safety glasses (AS/NZS1337) must be worn. NZ Brick Distributors recommends that hearing protection be worn.



Tools

All saws, drill/drivers, cutting blades, drill bits and hand tools must be maintained in good and clean condition to ensure appropriate cutting and drilling.

NZ Brick Distributors recommends the use of following tools in conjunction with appropriate dust reduction methods.



FESTO TS 55 EBQ Plunge Cut Saw with guide rail

Framing & Panel Set-Out – Timber Framing

FIG 2: Typical Framing Set-Out with 90mm Timber Framing and Pre-formed Corners – Plan View

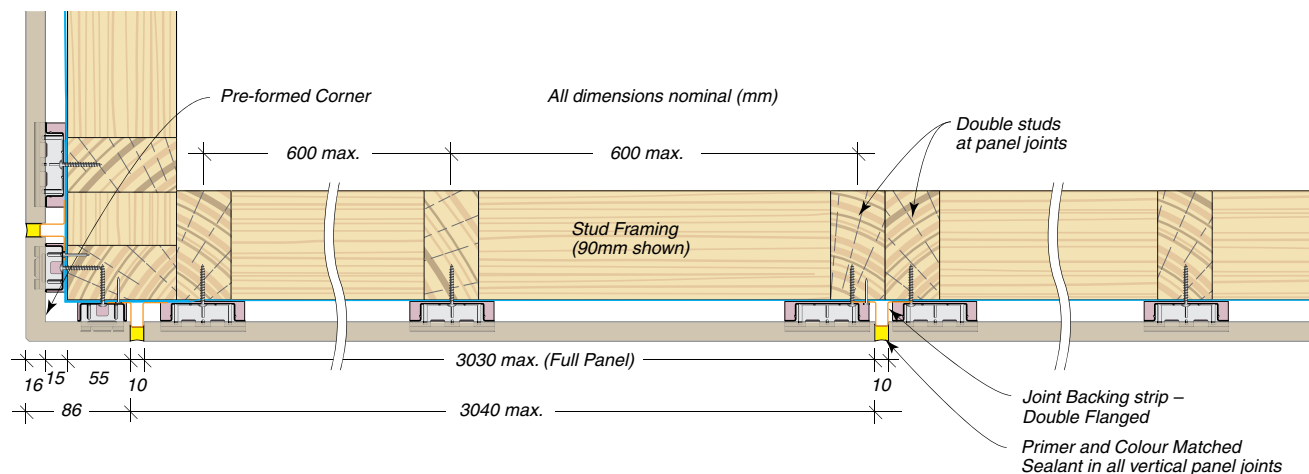


FIG 3: Typical Framing Set-Out with 70mm Timber Framing and Pre-formed Corners – Plan View

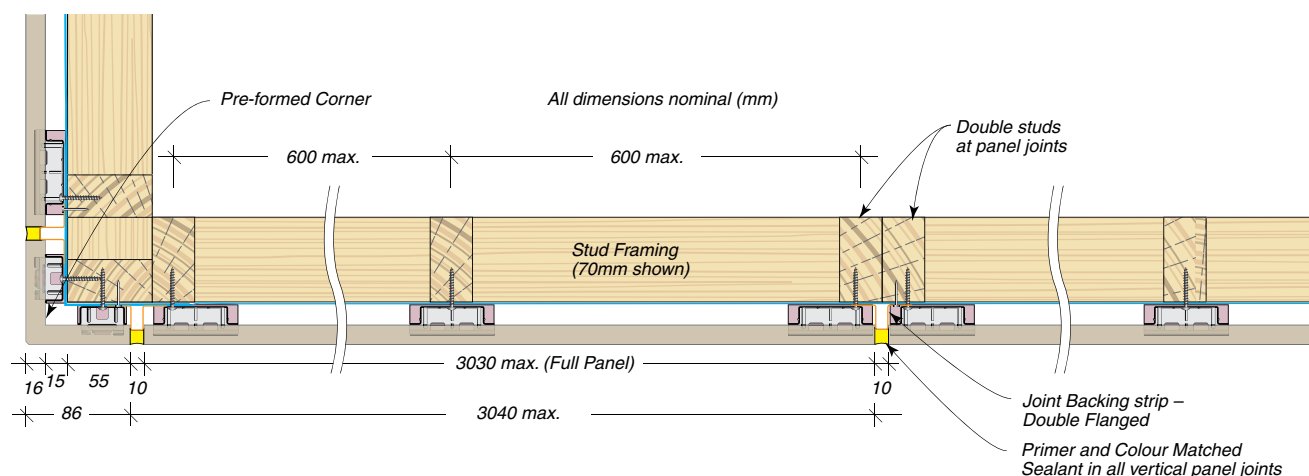


Table 1: Fixing Requirements for Timber Framing – Based on Wind Category – Studs at 600mm max. centres

Wind Category()	Minimum Fixing Requirements General and Corner Zones
Low	Clip @ 600mm cts
Medium	Clip @ 600mm cts
High	Clip @ 600mm cts
Very High	Clip @ 600mm cts
Extra High	Clip @ 600mm cts

NOTE: Table based on external pressures only, with internal linings designed to resist internal pressures.

Approved fasteners must be used.

FIG 4: Typical System Cross Section – Elevation

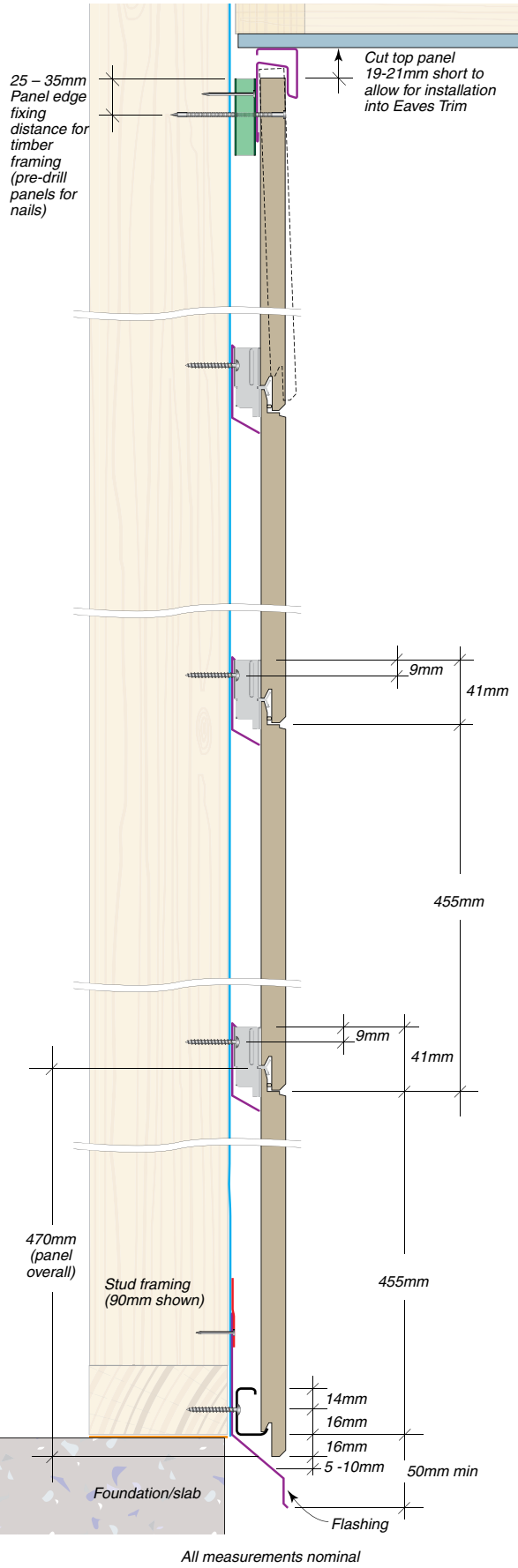


Table 2: Panel Height Coverage Calculator

Designer Series Panel Rows	Coverage Height (mm nominal)
19	8645
18	8490
17	7735
16	7280
15	6825
14	6370
13	5915
12	5460
11	5005
10	4550
9	4095
8	3640
7	3185
6	2730
5	2275
4	1820
3	1365
2	910
1	455

Designer Series Panel = 455mm nominal height coverage per row.

Framing & Panel Set-Out – Steel Framing

FIG 5: Typical Framing Set-Out with 90mm Steel Framing and Pre-formed Corners – Plan View

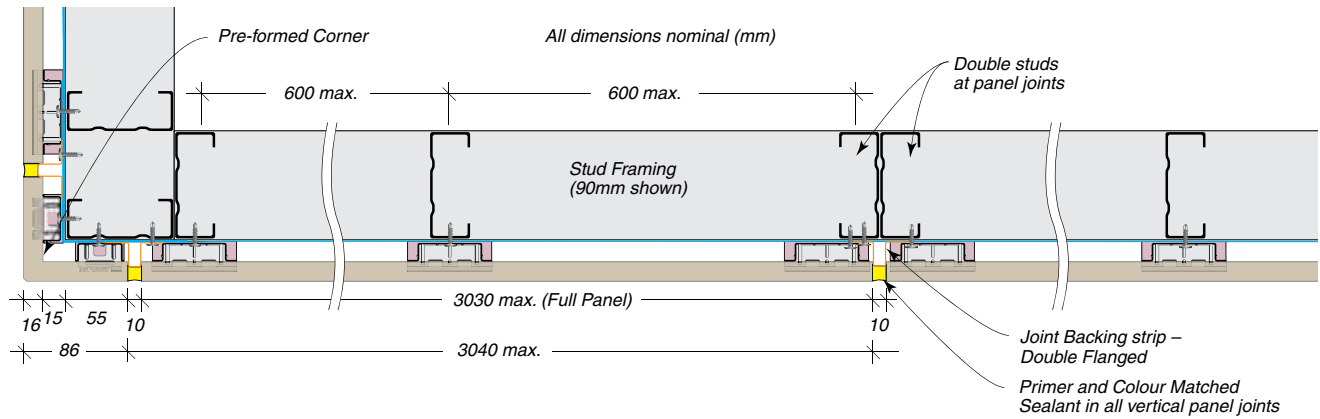


FIG 6: Typical Framing Set-Out with 75mm Steel Framing and Pre-formed Corners – Plan View

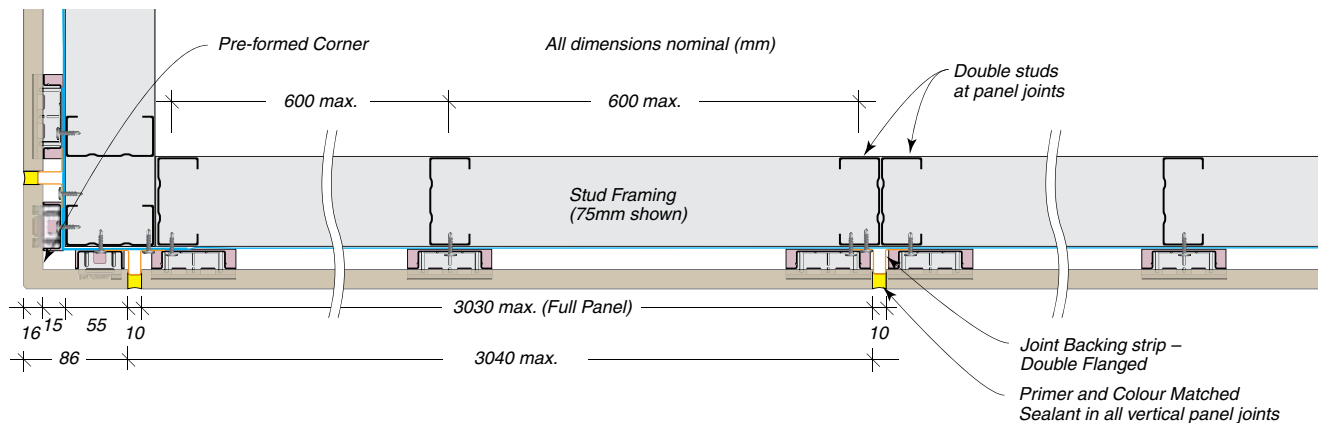


Table 3: Fixing Requirements for Steel Framing – Based on Wind Category – Studs at 600mm or 450mm. centres

Wind Category	PANEL AND CORNER ZONE – General and Corner Zones		
	Steel Frame Metal Thickness		
	0.5mm	0.75mm	1.2mm
Low	Clip @ 600 cts	Clip @ 600 cts	Clip @ 600 cts
Medium	Clip @ 600 cts	Clip @ 600 cts	Clip @ 600 cts
High	Clip @ 450 cts	Clip @ 600 cts	Clip @ 600 cts
Very High	N/A	Clip @ 600 cts	Clip @ 600 cts
Extra High	N/A	Clip @ 450 cts	Clip @ 600 cts

NOTE: System performance relies on the use of approved fasteners.

Table based on external pressures only, with internal linings designed to resist internal pressures.

FIG 7: Typical System Cross Section – Elevation

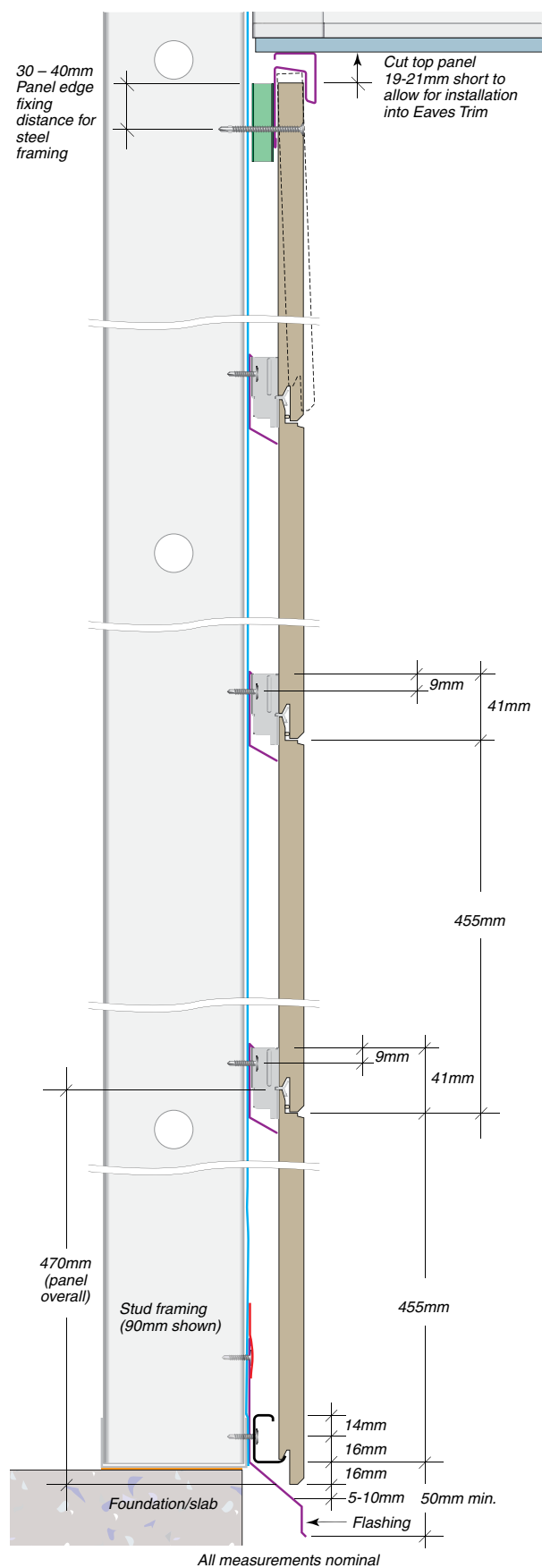


Table 4: Panel Height Coverage Calculator

Panel Rows	Coverage Height (mm nominal)
19	8645
18	8490
17	7735
16	7280
15	6825
14	6370
13	5915
12	5460
11	5005
10	4550
9	4095
8	3640
7	3185
6	2730
5	2275
4	1820
3	1365
2	910
1	455

Designer Series Panel = 455mm nominal height coverage per row.

Installation Procedure

Installation Overview

Install building wrap as per installation requirements.

Install base flashing and screw fix to framing. Seal with flashing tape.

Starter Strip is used at the base of the first row.

Joint Backing Strip is fixed to the framing at the vertical joint location.

Designer Series Panels are installed horizontally with the lowest row being installed first onto the starter strip and hard against the backing strip.

Panel Clips, each with a Clip Flashing are placed over the top edge tongue of the panel and screw fixed to framing at centres in accordance with Table 1 or 3.

At the soffit line, face fixing is required. Refer to detailed information on this topic later in this publication.

Depending on the installation, face fixing may also be required at the wall head and around openings. Refer to detailed information later in this publication.

At all face fixing locations, a Spacer is required behind the panel.

Sealing Vertical Panel Joints

All vertical panel joints must be primed and filled with Colour Matched Sealant after installation. Panels must be completely dry before applying primer and sealant.

Correct and full application of Primer to both ends of the panels is critical to successful sealant performance. Primer must be allowed to dry fully before installing sealant.

Sealant must be installed not less than 30 minutes after and not more than 6 hours after primer application. Primer may be re-applied if required.

Touch-Up

All visible fastener heads must be covered with a small amount of Colour Matched Touch-up Paint. Do not use sealant on fastener heads.

All exposed cut edges must be treated with 2 coats of Touch-up Paint.

FIG 8: Installation Overview of Panels with Clips

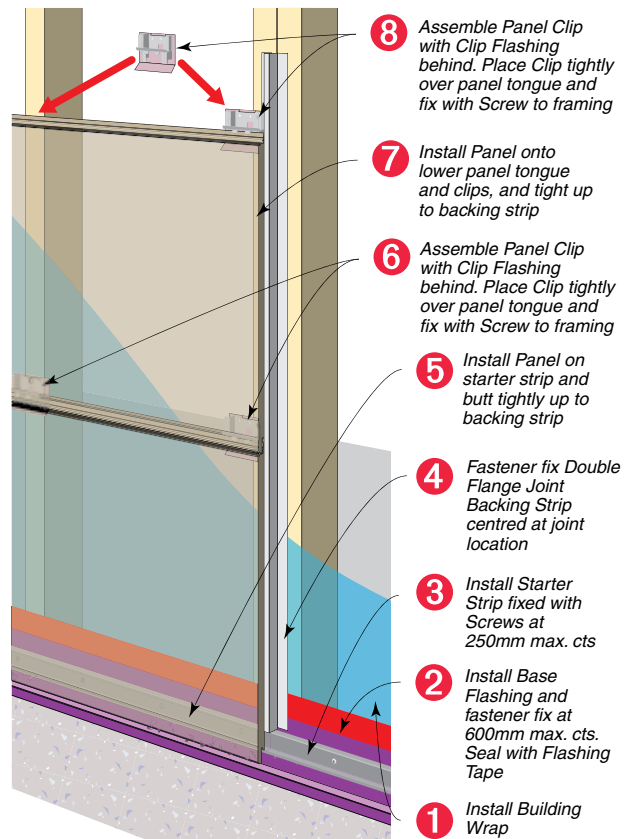
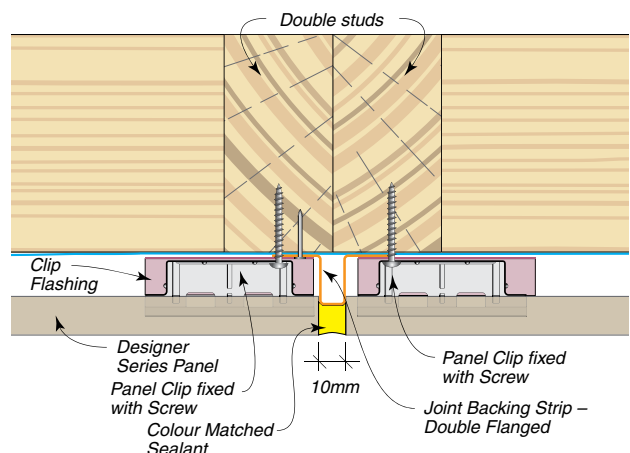
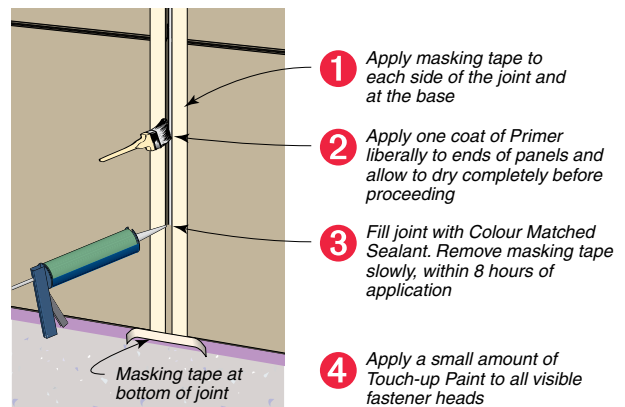
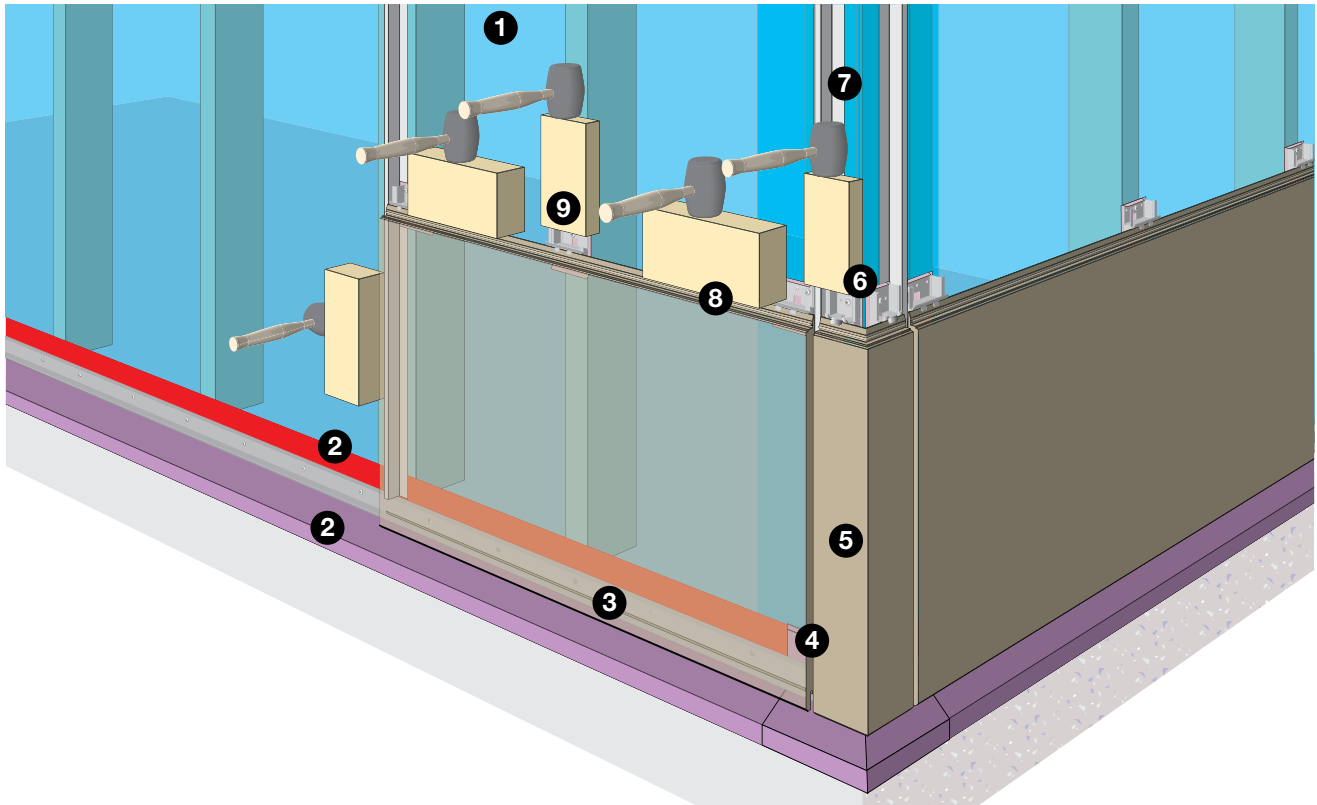


FIG 9: Vertical Joint Detail

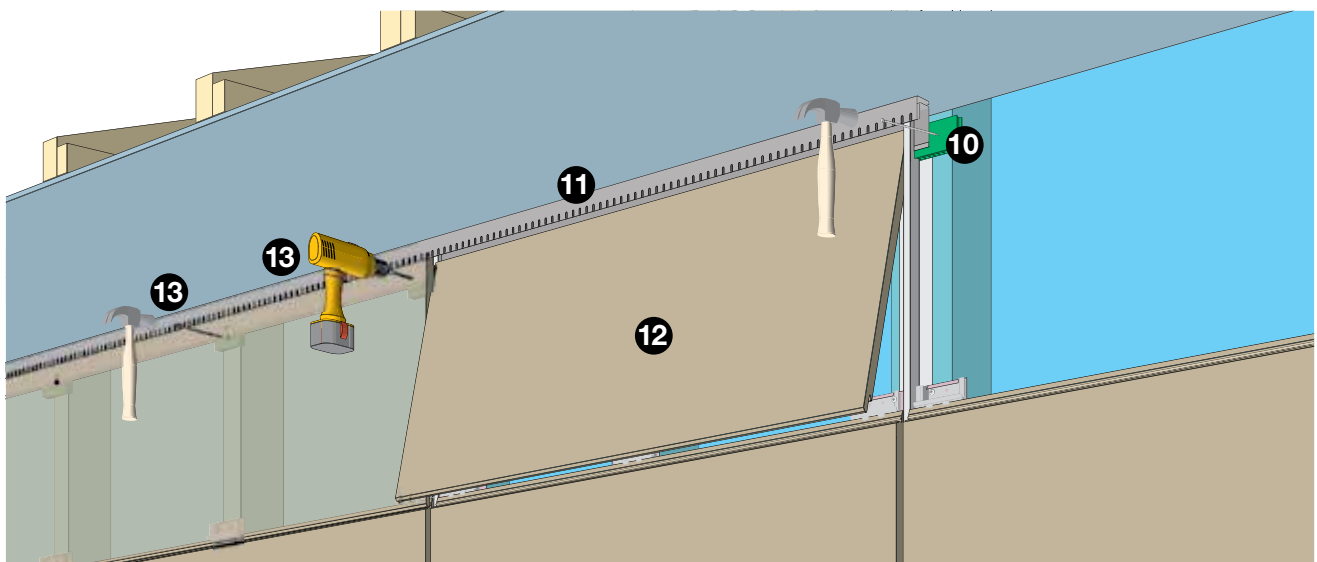


Step by step installation procedure

❶ Install building wrap. ❷ Install base flashing and tape to building wrap. ❸ Install Starter Strip and screw fix at 250mm max. centres. Ensure there will be 10-15mm clearance between flashing and bottom of panels. ❹ Install Joint Backing Strip at joint location. ❺ Install Preformed Corner and firmly tap corner onto the starter strip. ❻ Install Corner Clips with Clip Flashing, firmly tap into place and screw fix to framing. ❼ Adjust joint backing strip and fix to framing. Ⓢ Install Panel and firmly tap into place. Ⓣ Install Panel Clips with Clip Flashing, firmly tap into place and fastener fix to framing. Repeat step 1 to step 9 for adjacent panels and rows.



❿ Fastener fix Spacer Strip on each stud. (If additional face fixing is required, install 50mm sections of spacer strip at fixing locations). ⓫ Install Eaves Trim hard against eaves sheet and fix through spacer with fastener at each stud. Notch the back of the eaves trim to allow for the Joint Backing Strip. ⓬ Tilt Panel out at the bottom, insert top into Eaves Trim, lift panel up and locate bottom of panel onto Clips. ⓭ Face fix panel with fastener through Spacer Strip at each stud and 20-35mm from panel edges for timber frame or 30-40mm for steel frame. Pre-drill holes through panels for nails.



Installation Details

Base details

FIG 10: Base Detail – 90mm Framing Shown

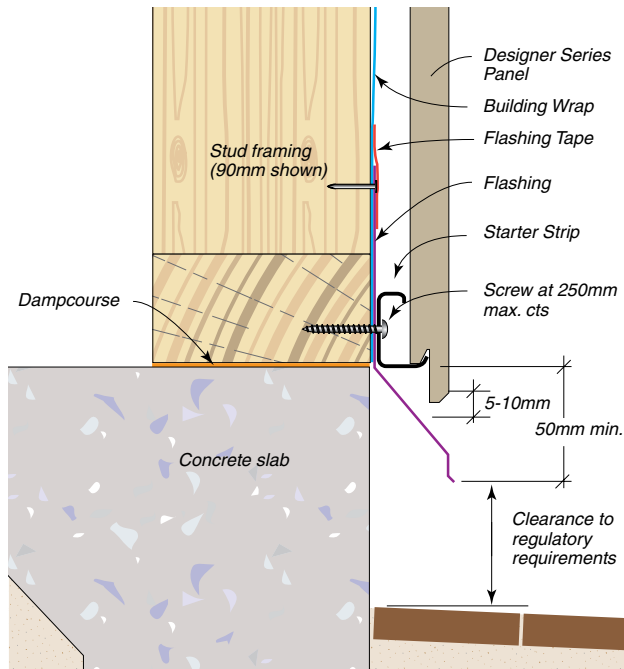
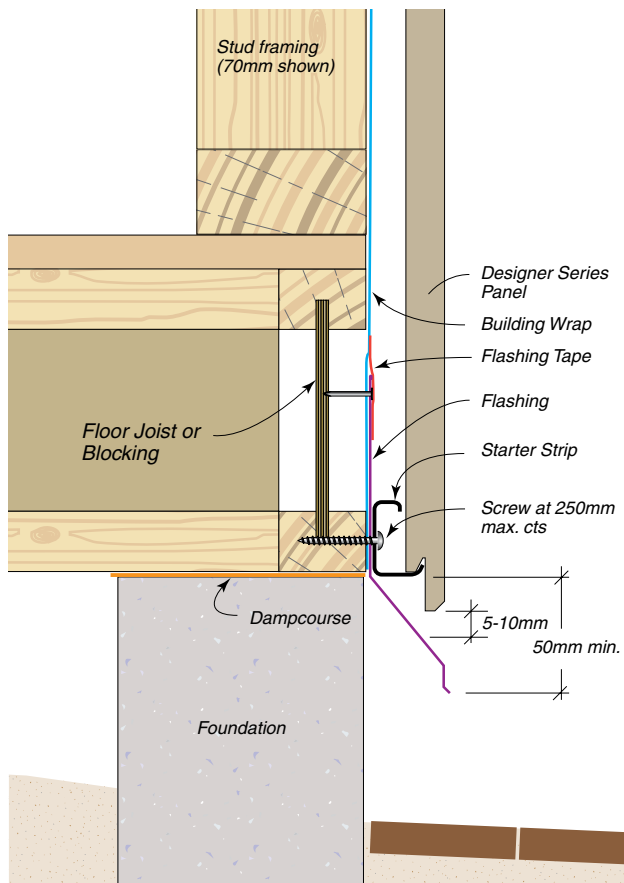


FIG 11: Base Detail – 70mm Framing Shown



Base Flashing

Base flashing is required to exclude vermin and draughts from the cavity, while allowing moisture to freely escape. At corners of the building, the flashing must be mitred and/or sealed to prevent wind and water from being driven behind the panels.

FIG 12: Base Flashing at Internal Corner

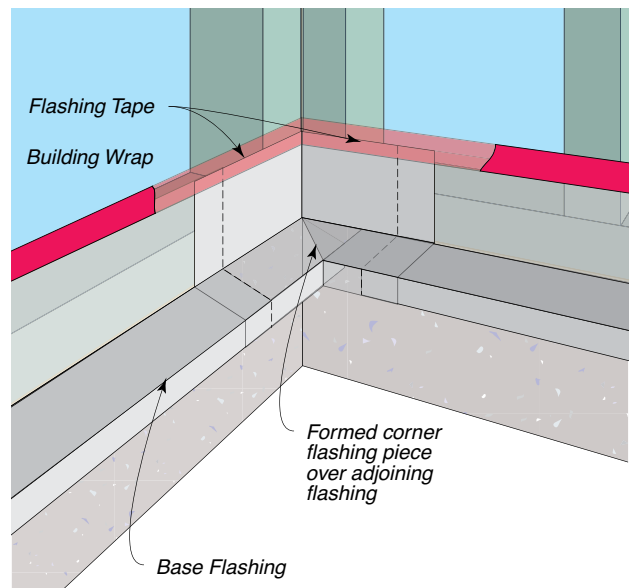
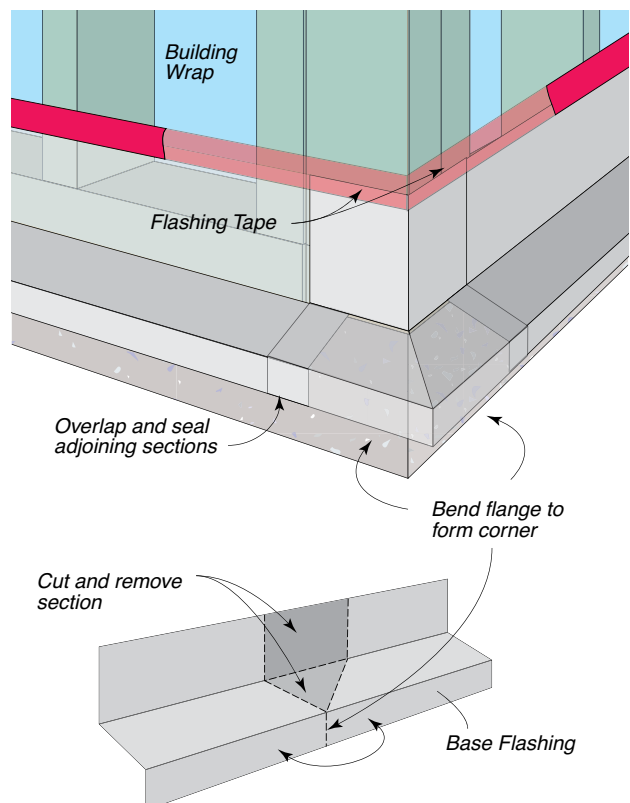


FIG 13: Base Flashing at External Corner



Corner Details

Additional studs may be required at corners to allow for fixing Panel Clips and other components.

FIG 14: External Corner Detail – With Preformed Corner – Plan View

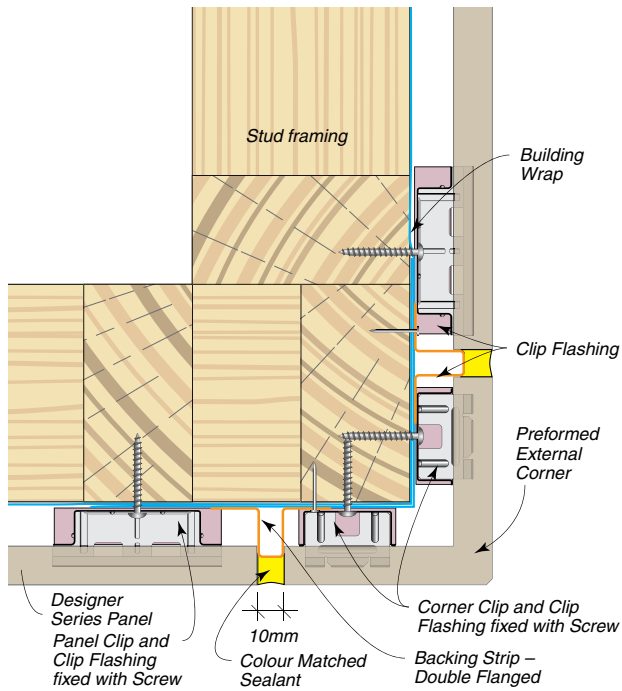


FIG 15: External Corner Detail – With Coloured External Corner Trim – Plan View

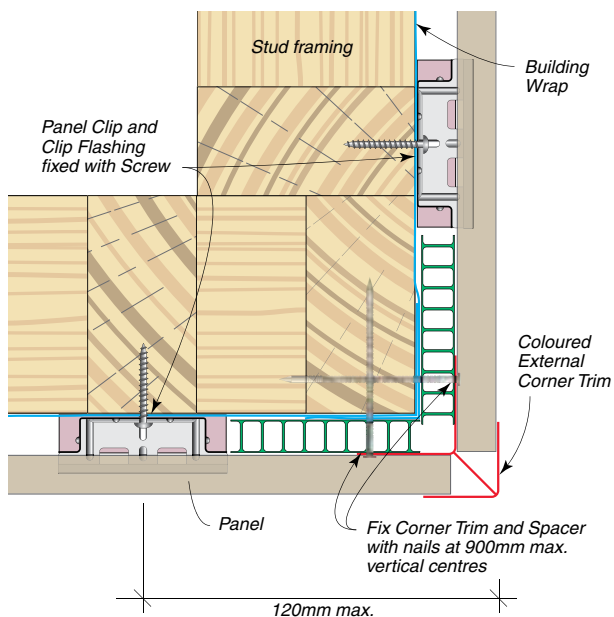


FIG 16: Internal Corner Detail – With Backing Strip and Colour Matched Sealant – Plan View

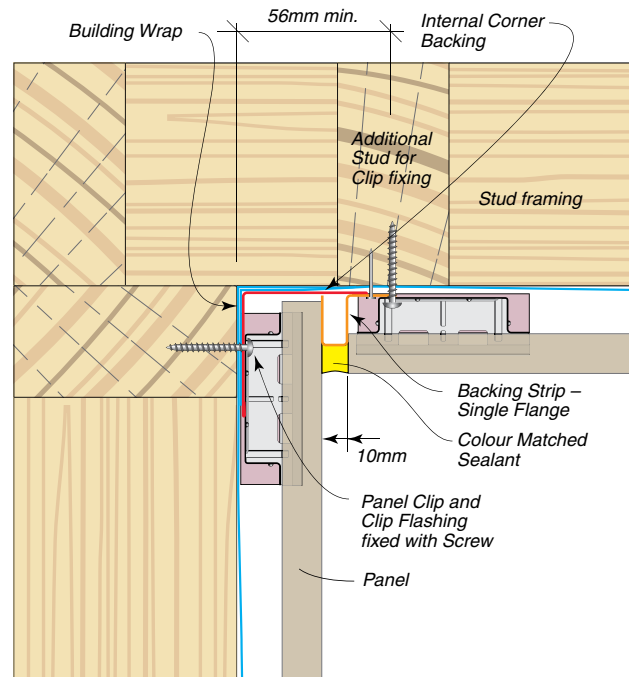
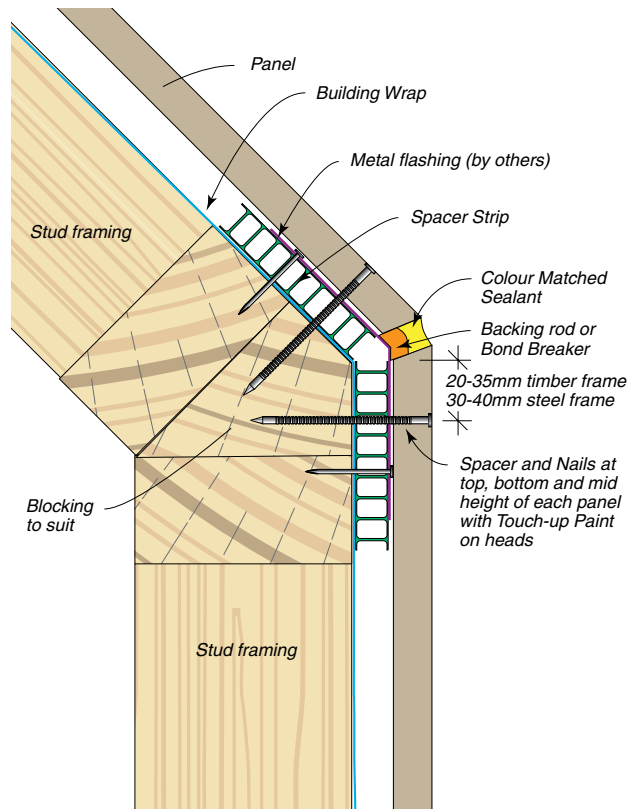


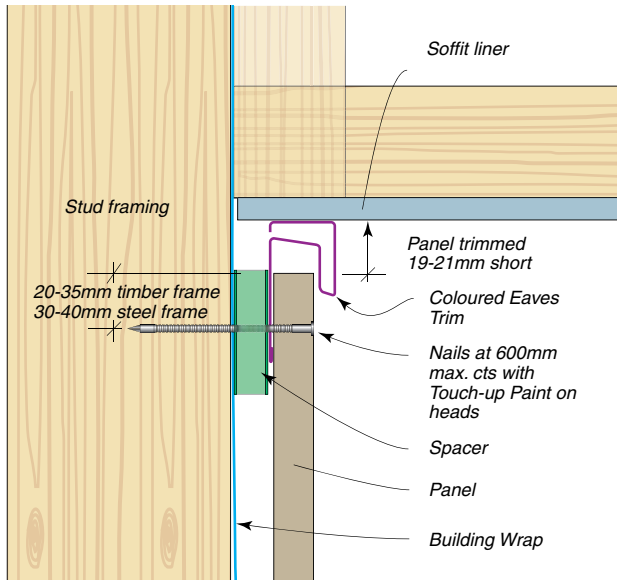
FIG 17: Obtuse Angle Corner Detail – With Metal Flashing and Colour Matched Sealant – Plan View



Junction Details

At eaves line the Designer Series system must be provided with cavity ventilation. Panels are trimmed to appropriate height and face fixed through the Spacer into the framing. Refer to the following detail options.

FIG 18: Soffit Detail – With Coloured Eaves Trim – Elevation



NOTE: Notch the back of Coloured Eaves Trim at intersections with Joint Backing Strip

FIG 19: Soffit Detail – With Timber Trim – Ventilated Roof Space – Elevation

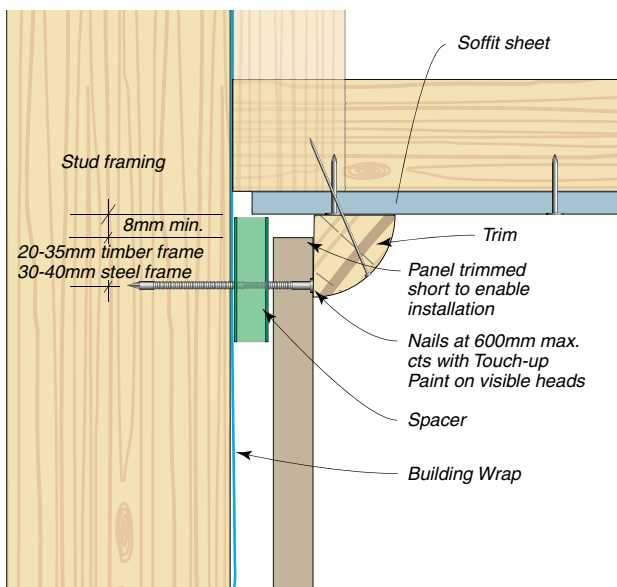


FIG 20: Soffit Detail – With Sealant – Ventilated Roof Space – Elevation

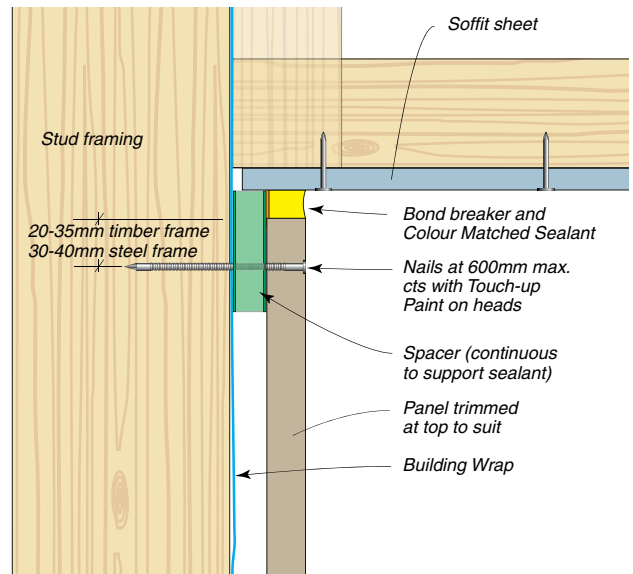
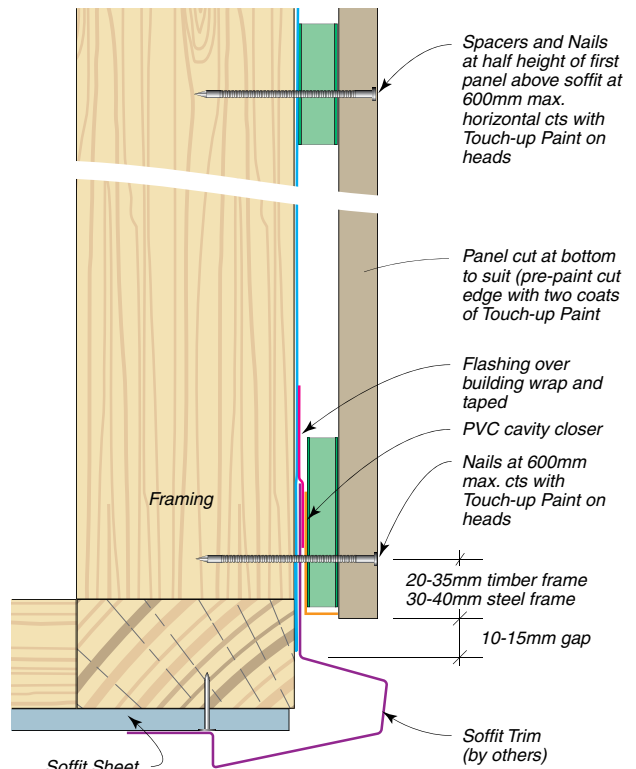


FIG 21: Soffit Detail – With Soffit Trim – Elevation



Typical dimensions for Soffit Trim (supplied by others)

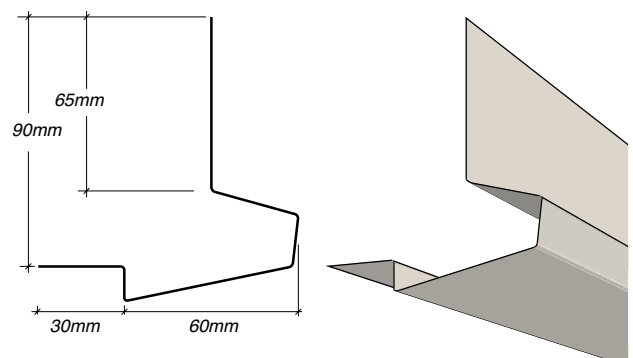


FIG 22: Typical Junction of with In-line Masonry Wall – Plan View

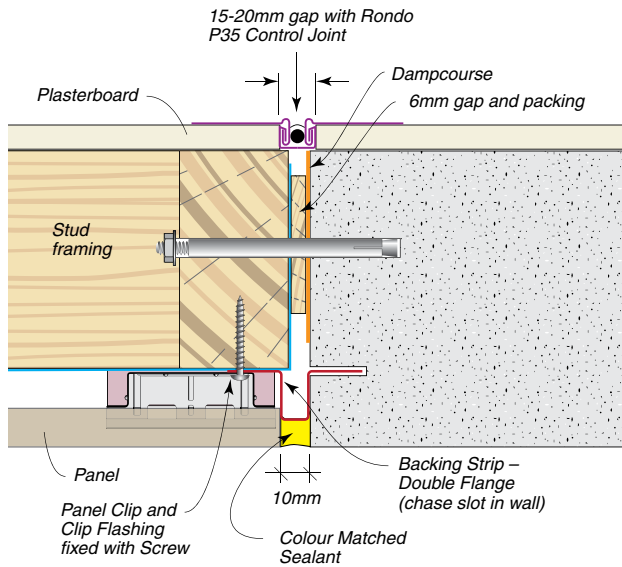


FIG 23: Typical Junction with Offset Masonry Wall – Plan View

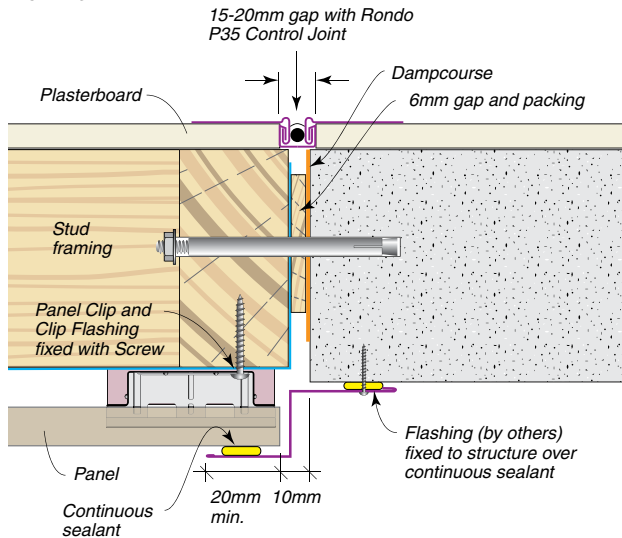


FIG 24: Typical Junction with Fibre Cement Cladding System – Plan View

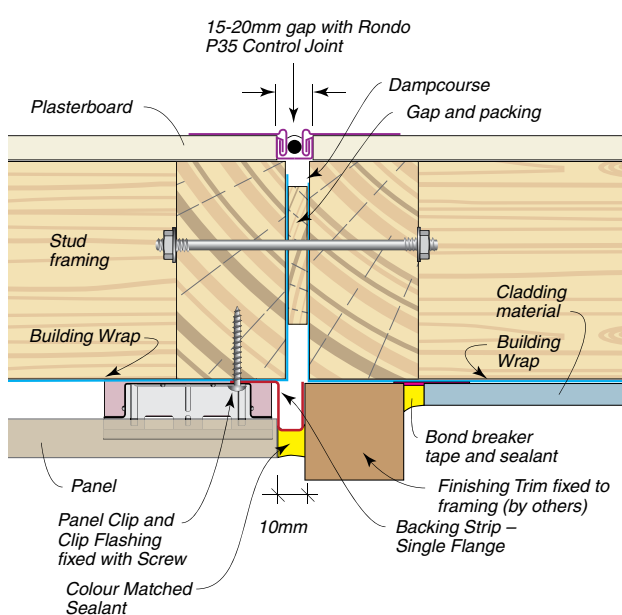


FIG 25: Junction of with External Roofing

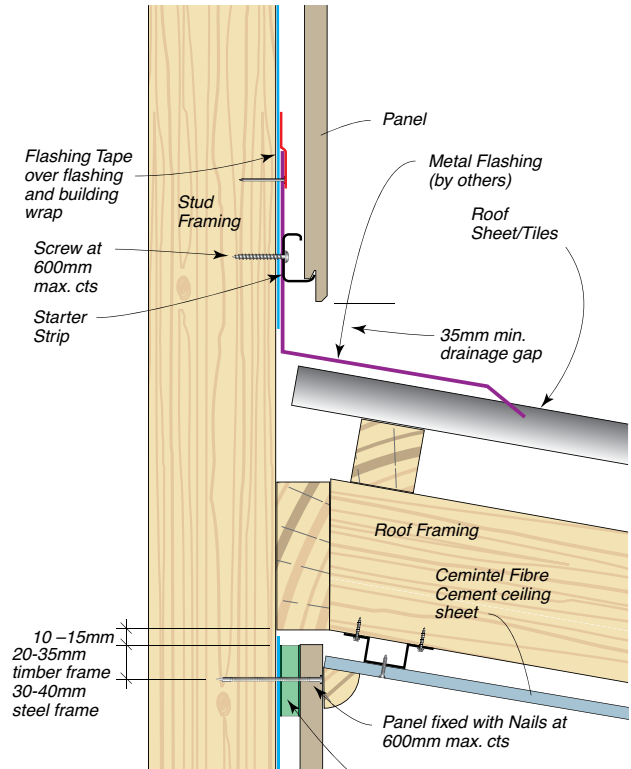


FIG 26: Junction with External Roofing

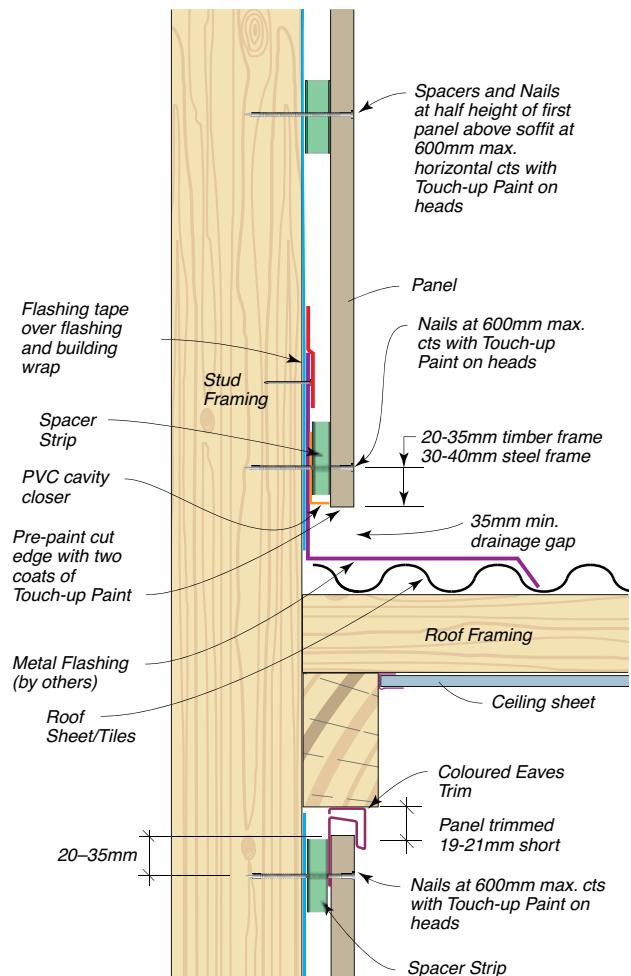


FIG 27: Typical Window Head, Sill and Jamb Detail

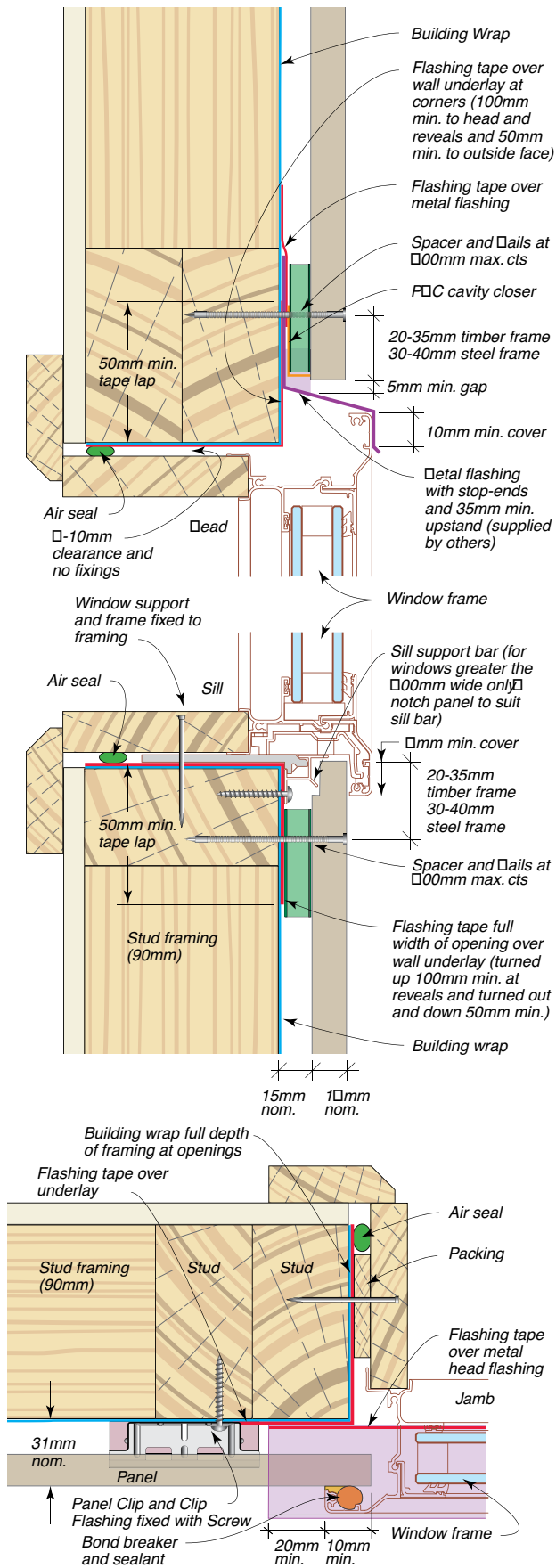


FIG 28: Typical Window Head - Front Elevation

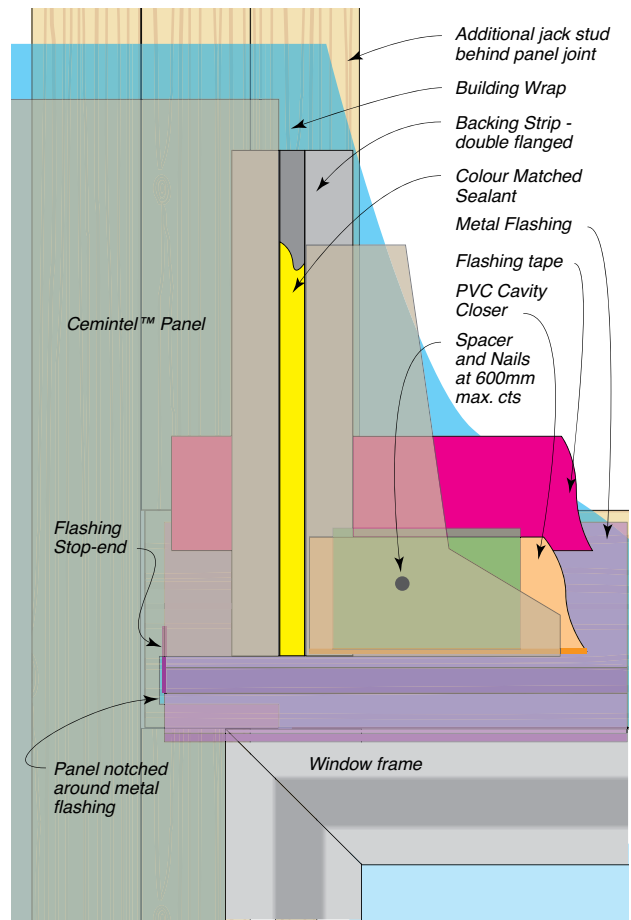


FIG 29: Second Storey Junction

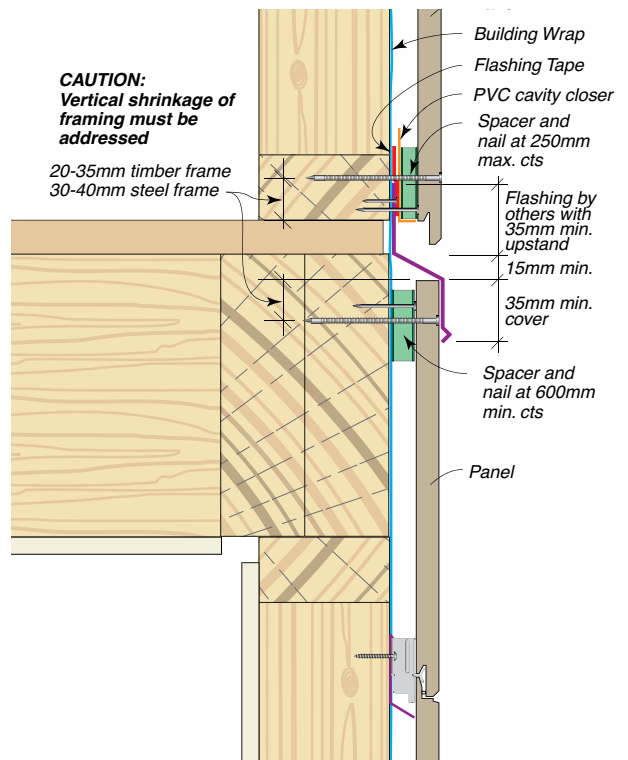


FIG 30: Second Storey Junction with Brick Veneer or Masonry Wall – Cantilevered Framing

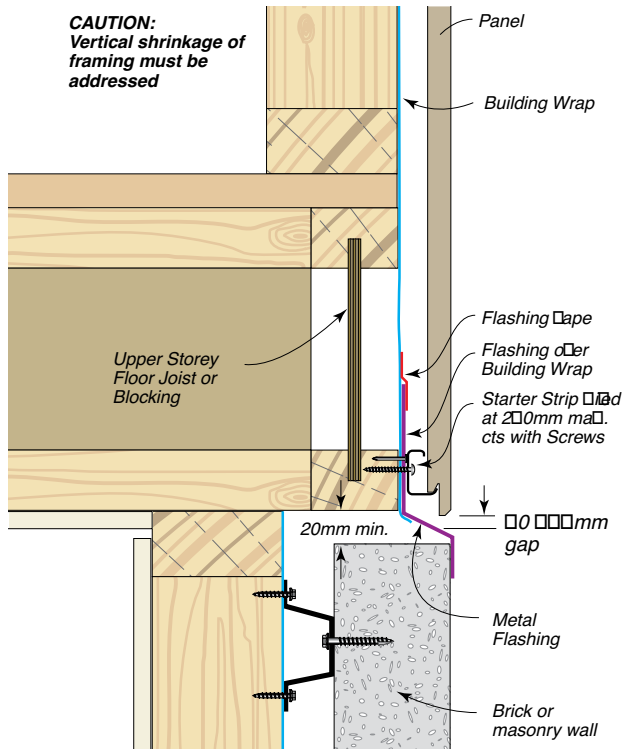


FIG 31: Second Storey Junction with Masonry or Brick Veneer – In-line Framing

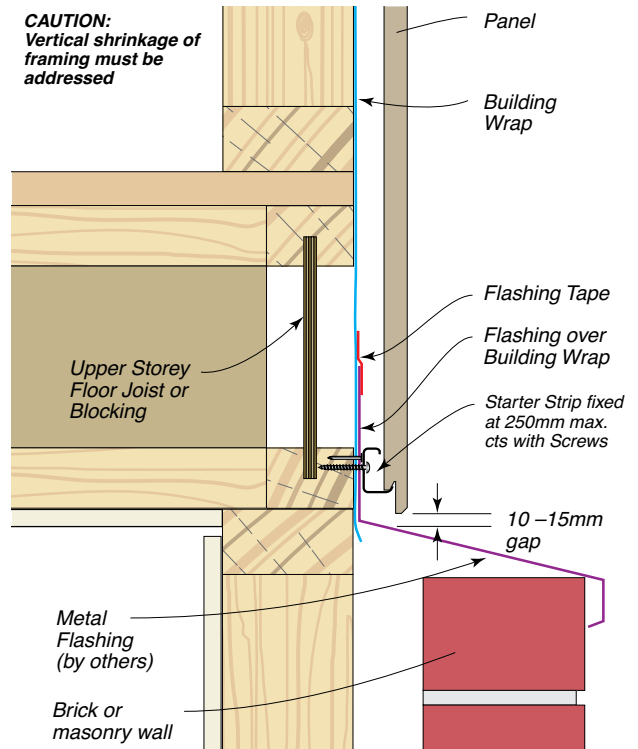
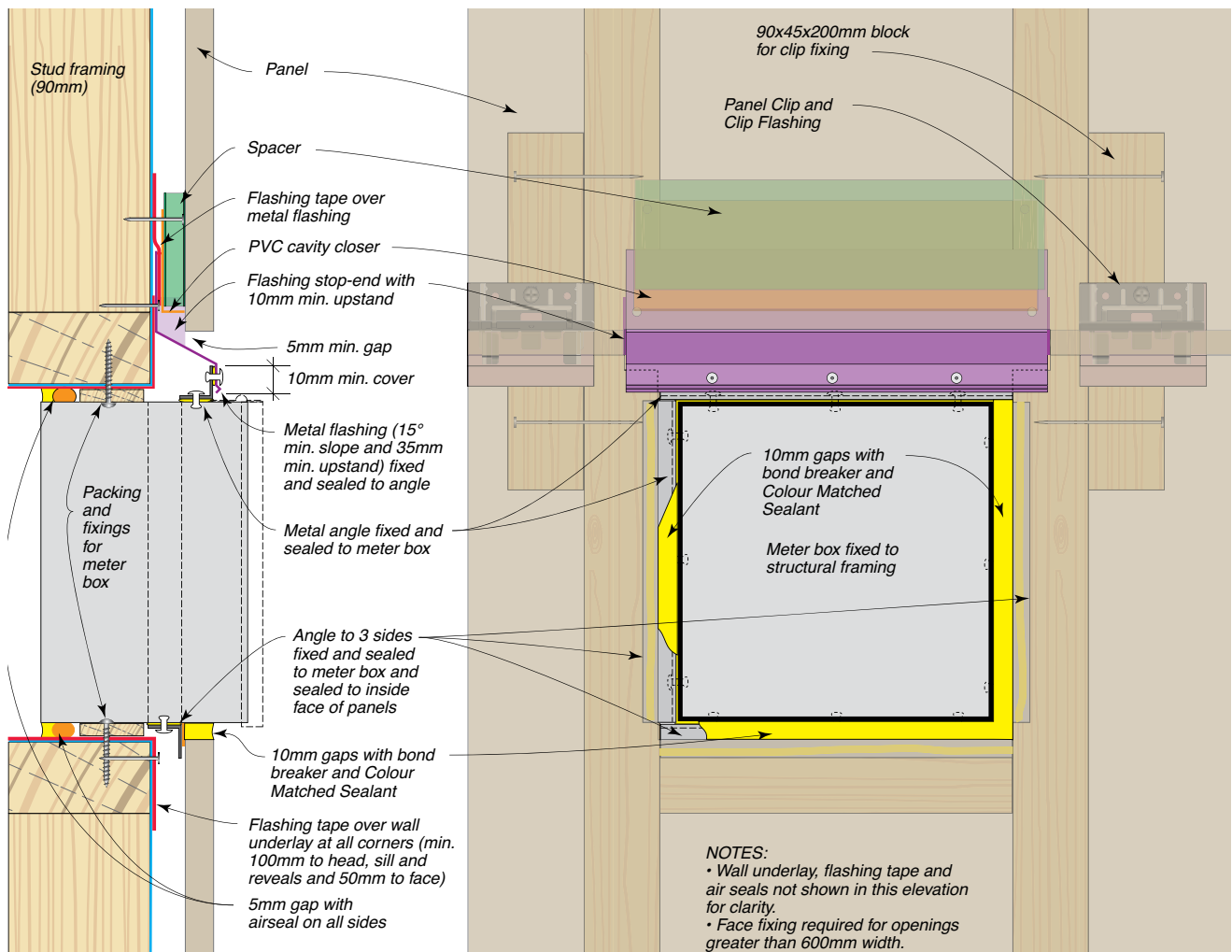


FIG 32: Typical Power Meter Box Installation – Elevation



New Zealand Selection Centres

> **Auckland**

956 Great South Rd,
Penrose, Auckland 1642
Tel. 09 579 0166

> **Tauranga**

15 Hynds Rd,
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Tel. 07 578 7117

> **Hamilton**

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> **Christchurch**

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> **NZ Brick Distributors Ltd.**

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0800 274 257

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Health & Safety

Warning

Fibre Cement products contain crystalline silica. Repeated inhalation of fibre cement dust may cause lung scarring (silicosis) or cancer. Do not breathe the dust. When cutting sheets, use the methods recommended in this brochure to minimise dust generation. If power tools are used, wear an approved dust mask (respirator). These precautions are not necessary when stacking, unloading or handling fibre cement products.

Warranty

NZ Brick Distributors Partnership Limited warrants its Cemintel Designer Series panels ("Product") to remain free of defects in material and manufacture and that the coating will not blister, peel or flake for a period of 15 years from the date of purchase.

In the event of any failure of the Product caused by the direct result of a defect in the material or manufacture of the Product, NZ Brick Distributors will at its option replace or repair, supply an equivalent product, or pay for doing one of these.

This warranty does not apply where the Product has been used in any manner not in accordance with the manufacturer's instructions, nor the reuse of the Product after its initial installation. This includes installation and maintenance in accordance with the relevant Designer Series Technical manual, current copies are available by contacting NZ Brick Distributors 0800 274 257. NZ Brick Distributors recommends that only those products, components and systems recommended by it be used and the project must be designed and constructed in strict compliance with all relevant provisions of the current Building Code of New Zealand, regulations and standards. All other products, including coating systems, applied to or used in conjunction with the Product must be applied or installed and maintained in accordance with the relevant manufacturer's instructions and good trade practice. NZ Brick Distributors will need to be satisfied that any defect in its Product is attributable to material or manufacture defect (and not another cause) before this warranty applies.

To the extent that it is able to do so, NZ Brick Distributors excludes all liability for loss and damage (including consequential loss) in connection with the Product. This exclusion does not apply where the Product is sold to a consumer and is a good of a kind ordinarily acquired for personal, domestic or household use or consumption. Without limiting the foregoing, NZ Brick Distributors will not be liable for any claims, damages or defects arising from or in any way attributable to poor workmanship, poor design or detailing, settlement or structural movement and/or movement of materials to which the Product is attached, incorrect design of the structure, high levels of pollution, acts of God including but not limited to earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions, efflorescence or performance of paint/coatings applied to the Product or normal wear and tear.

Subject to any limitations in the Commerce Act 1986, the Fair Trading Act 1986, the Consumer Guarantees Act 1993 and any other applicable legislation, NZ Brick Distributors excludes all other warranties, guarantees and remedies with regard to the Products including all implied warranties and guarantees.

Notification of a warranty claim must be made within 30 days after the defect would have become reasonably apparent to NZ Brick Distributors prior to any return or attempted repair of the Product. Failure to allow NZ Brick Distributors to examine an alleged faulty Product in situ may result in the voiding of this warranty. This warranty is not transferable.

To make a claim under this warranty, you must contact NZ Brick Distributors on 0800 767 776, or write to us at Designer Series Cladding Systems, P.O. Box 188, Takanini. All expense of claiming the warranty will be borne by the person making the claim. NZ Brick Distributors may require documentation supporting the claim to be provided.

FCNZ502.BMS1000.1013