PU Polyurethane Insulated Wall Cladding Panel

INSTAPANEL

Specifications

Weight	3.7kg/m2
Length	4000mm
Width	383mm
Thickness	16mm
Area of each piece	1.532m2
Standard size	4000mm x 383mm x 16mm

Product Composition

A factory-bonded sandwich panel comprising:

External face: Al-Zn alloy pre-finished high-quality sheet with special surface treatment (perfect weather barrier)

Core: rigid polyurethane (PU) foam insulation layer (Low U-values)

Backing layer: Aluminium foil protective lining (Good moisture resistance)

Overall thickness: 16 mm

Product Overview

Lightweight composite cladding panel designed to provide an attractive finished surface with integrated thermal insulation. Intended for use as in external and internal applications. Get a clean appearance, and improved thermal performance with fast and economical installation.



Substrate

The panel is designed to be installed to a structurally adequate substrate, such as: Timber framing, Light gauge steel framing, Solid masonry, concrete, blockwork

Advantages

Hail Protection
Designed to withstand hail impact without damage, ensuring reliable performance.

Noise Proof
Reduces external noise, creating a quieter environment.

Anti-Fading
Advanced coating technology keeps colors rich and vibrant, resisting fading.

20 years of life
Built with premium materials for long-lasting use, offering durability for up to two decades.

Anti-Cracking
Strong structure prevents cracking, maintaining a smooth and durable finish .

Anti Fall Off
Installation system ensures panels stay firmly in place, even under harsh conditions.

Fire Resistant
Provides added safety with fire resistance.

Application

- Exterior Walls
- Internal Walls
- Lightweight Structures
- Renovations & Facades

Scope and Intended Use

This installation guide provides general requirements and recommendations for the installation of Devox Instapanels when used for internal and external applications.
The guide covers:

- Acceptable substrates
- General fixing principles
- Weatherproofing and moisture management considerations
- Installation sequencing and detailing principles

This guide is intended for use by competent builders and installers familiar with general building construction practices.

Intended Applications

The panels are intended for use as:

- External wall cladding (non-structural)
- Internal wall linings and feature walls

When installed externally, the panels must form part of a complete external wall system incorporating appropriate structural support, weather-resistive elements, and detailing.

Limitations of Use

The panels and system:

- Do not provide structural support, bracing, or loadbearing capacity
- Are not intended to act as the primary waterproofing or drainage layer
- Have not been tested for applications that require an FRL and its performance in this situation cannot be assumed
- Must not be installed less than 900mm from an allotment boundary or 1800mm from another building as defined in the NCC

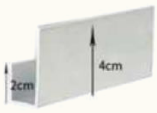
Structural design, fire performance, and condensation risk must be assessed as part of the overall wall system design in accordance with project-specific requirements and applicable building regulations. Ensure installation of an approved/compliant vapor permeable membrane as per manufacturers requirements.

Installation sequence for Horizontal installation

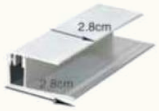
o Start with the installation of starter channel. Screw fix at no further than 450mm apart.
o Measure the cladding panels to fit the installation area. Use appropriate tolls and PPE to cut panels as required (e.g. angle grinder or a circular saw)
o Install the bottom wall panel into the grove of starter/side channel.
o Screw the top edge of wall panel at no further than 450mm apart. Screws to go through the tongue end of the panel, not through the insulated core.
o Apply appropriate sealant on the side of wall panel before placing adjacent panel.
o Install subsequent panels on top of the first panel by aligning the groove of the second panel with the tongue of the first panel. Ensure proper interlocking of both panels. Continue fixing securely while checking alignment.
o Seal joints and edges as required.
o Before installing the top panel, measure and install the closing kit first.
o Adjust the top panel between the second last panel and closing kit and screw fix to the closing kit.
o Finally install the closing groove with the closing cap.

Note: panels can be installed in both staggered as well as straight manner. Ensure all screw fixings are made into framing. When installing on ground level, builder/carpenter to make sure that clearance to finished ground level shall be to BCA requirements. Cover all exposed edges with trims or angles for a finished look and to ensure that the insulation core is not directly exposed to water. Where higher wind loads or unusual conditions exist, project-specific assessment of fixings may be required.

Installation Accessories



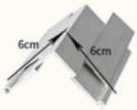
Starting Part



Closing Part



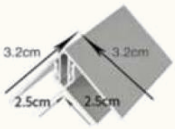
Center Joint



Big Outside Corner



Big Door/window Corner



Inside/Outside Corner



Invisible Starting Point

General System Principles

The PU insulated wall cladding panel functions as a lightweight external or internal cladding only. All structural loads must be resisted by the supporting substrate or wall framing.
Fixings, battens, and substrates must be designed and installed to independently satisfy structural and durability requirements.
External wall performance relies on effective moisture management, movement allowance, and correct detailing, including substrate preparation, fixings, joint sealing, and flashings.

General Requirements

The supporting substrate must:

- Be designed and constructed to resist all applicable loads independently of the panels (AS 1684 for Residential Timber Framed Construction, or NASG Standard Residential and low-rise steel framing or another approved standard)
- Be reasonably flat, plumb, square and straight
- Provide sufficient fixing capacity for the selected fixings
- Be suitable for the intended exposure environment

In all cases of framing, DEVOX Instapanels may only be installed on steel or timber wall framing with a maximum stud spacing of 450mm

The designer and builder must ensure that the building including all drainage holes and integral flashings in all penetrations will prevent the ingress of rainwater behind the Instapanel and will drain to the outside of the building

The panels must not be used to compensate for deficiencies in the supporting structure or substrate.

Do not install in any area where cladding could be in contact with standing water.

General Fixing Requirements

DEVOX Instapanels must be fixed in a manner that:

- Provides secure, long-term attachment to the supporting substrate
- Accommodates thermal and moisture-related movement
- Avoids damage to the panel faces and insulation core
- Is suitable for the exposure environment

Fixings must be selected to suit:

- Substrate type
- Panel thickness
- Exposure conditions (including corrosion environment)

General recommendations are to use 10G Bugle head, coarse thread Class 3 (Class 4 or 304 or 316 stainless for corrosive environments) to suit steel or timber substrate. Screws must comply with the corrosion protection requirements of AS 4773.

Minimum 25mm penetration into timber wall framing and minimum 3 full threads through steel wall framing.

Timber Framed Walls

Timber framing is an acceptable substrate for both internal and external installations.

For external installations:

- Timber framed walls typically incorporate a wall wrap or sarking acting as a weather-resistive barrier
- Existing flashings and moisture management elements must remain continuous and effective
- Panels may be installed:
- Directly to timber studs (not recommended unless approved by the project engineer), or
- To timber battens fixed to studs, where improved alignment, drainage, or ventilation is required

Timber battens MGP10, Treated Pine H2/H3 Kiln Dried 40mm x 25mm battens complying with AS 1684.
The panel system must not interfere with the performance of the underlying weather-resistive barrier.

Fixings for Timber Substrates

For timber framing or timber battens:

- Use corrosion-resistant self-drilling or self-tapping timber screws
- Fixings must be suitable for external use where applicable
- Fixings must achieve adequate embedment into timber framing or battens
- Fixing heads should be seated flush with the panel face without over-compression
- Where required, washers may be used to distribute load and protect the panel face

Light Gauge Steel Framed Walls

Installation Considerations

Panels may be installed:

- Directly to steel studs (not recommended unless approved by the project engineer), or
- To steel battens or top hats fixed to the framing
- Care must be taken to:
- Select fixings compatible with steel thickness
- Avoid over-tightening fixings, which may damage the panel face or insulation core

For external walls, existing sarking, flashings, and moisture control elements must remain functional and continuous.

Fixings for Steel Substrates

For light gauge steel framing or steel battens:

- Use corrosion-resistant self-drilling metal screws
- Fixings must be suitable for the thickness and grade of steel used
- Care must be taken to avoid stripping threads in thin steel sections
- Fixings must be installed perpendicular to the panel face
- Over-tightening must be avoided to prevent face deformation

Solid Masonry Substrates
(Concrete, Concrete Block, Solid Brick)

Solid masonry walls may be used as a substrate for panel installation. The masonry substrate must be:

- Structurally sound
- Free from loose material or surface degradation
- Reasonably flat and aligned

For external installations, the preferred installation method is to fix the panels to:

- Timber battens, or
- Steel battens / top hats
- Battens must be securely fixed to the masonry substrate and designed to:
- Provide a stable fixing base
- Improve alignment and flatness
- Allow for drainage and ventilation behind the panels

This approach is strongly recommended to improve durability and moisture management performance.

Direct Fixing to Masonry
(Conditional)

Direct fixing of panels to solid masonry substrates may be permitted only where all of the following conditions are met:

- The substrate is flat, sound, and suitable for direct fixing
- The wall is already weather-resistant or appropriately detailed
- Adequate sealing is provided at joints, penetrations, and edges
- No reliance is placed on the panels for primary drainage or waterproofing

Where these conditions cannot be satisfied, battens must be used.

Fixings for Masonry Substrates

Where panels or battens are fixed to solid masonry substrates:

- Use appropriate masonry anchors or masonry screws
- Fixings must be compatible with the masonry type (concrete, block, or solid brick)
- Holes must be drilled to the correct diameter and depth
- Fixings must be installed in sound masonry, not mortar joints unless specifically designed for that purpose
- All penetrations must be sealed to prevent moisture ingress

Where battens are used, fixings must first secure the battens to the masonry substrate, with panels then fixed to the battens.

Brick Veneer Construction

Direct fixing of panels to brick veneer alone is not recommended.
Brick veneer is not intended to support cladding loads or provide a suitable fixing substrate.

Where brick veneer construction is present, panels must be installed:

- To battens fixed back to the structural frame, or
- To an alternative structurally adequate support system designed for the application

Corrosion Resistance

Fixings used externally must have a corrosion resistance suitable for the exposure environment, including:

- Atmospheric exposure
- Coastal or industrial conditions

As a minimum:

- External fixings should be corrosion-resistant (e.g. galvanised or equivalent)
- Higher corrosion resistance may be required in aggressive environments
- Fixing selection must consider compatibility with adjacent materials to avoid galvanic corrosion.

Sealing at Fixings

For external installations:

- All fixings that penetrate the panel face must be sealed as required to prevent moisture ingress
- Sealing must be compatible with the panel materials and exposure conditions

This is particularly important where fixings penetrate through the external face into the supporting structure.

Storage, Handling and Panel Preparation

Storage and Handling

Panels must be stored and handled in a manner that prevents damage prior to installation.

Store panels:

- Flat and fully supported
- Off the ground
- Under cover and protected from weather

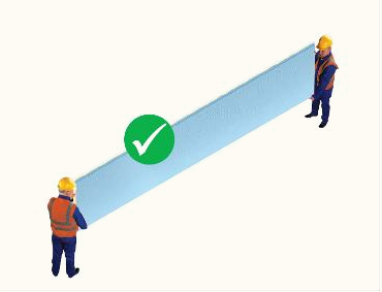
Protect panels from:

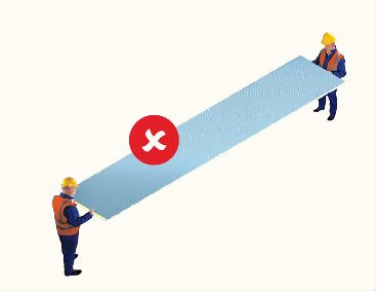
- Moisture ingress
- Impact or point loading

Panels must be lifted and carried carefully to avoid:

- Bending or twisting
- Damage to edges or corners
- Delamination of panel faces

Damaged panels must not be installed.





Pre-Installation Checks

Before installation commences, confirm that:

- The supporting substrate is complete and structurally adequate
- Substrate alignment, plumb, and flatness are within acceptable tolerances
- Required battens, top hats, or support members are securely fixed
- Flashings, sarking, or wall wraps (where applicable) are installed and continuous

Any defects or irregularities must be rectified prior to panel installation.

Setting Out and Alignment

Accurate set-out is essential to achieve a satisfactory finished appearance and performance.

- Establish a straight and level starting line at the base of the wall
- Confirm panel orientation (vertical or horizontal) prior to fixing
- Check alignment regularly during installation

Where required:

- Allow for expansion gaps at edges, terminations, and interfaces
- Ensure joints are consistent and evenly spaced

Panels must not be forced into position.

Panel Cutting and Preparation

Panels may be cut to size as required to suit openings, edges, and terminations.

- Use cutting tools suitable for metal-faced panels
- Support panels adequately during cutting to prevent vibration or damage
- Avoid crushing or tearing the insulation core

All cut edges must be:

- Clean and free of debris
- Sealed or protected as required to prevent moisture ingress and degradation of the insulation core

Temporary Protection During Installation

During construction, installed panels must be protected from:

- Damage by other trades
- Excessive moisture exposure
- Impact or abrasion

Protective coverings should be removed progressively to avoid trapping moisture against the panel surface.

Weatherproofing, Drainage and Moisture Management

General Principles

When installed externally, PU Polyurethane Insulated Wall Cladding Panels form part of a multi-layer external wall system. The panels provide an external cladding and insulation layer but are not intended to act as the primary waterproofing or drainage system.

The external wall system must be detailed and constructed to:

- Resist wind-driven rain
- Manage incidental moisture ingress
- Allow moisture to drain and/or dry
- Maintain durability of all components over the service life

These principles are consistent with accepted Australian cladding practice and must be considered for all external installations.

Weather-Resistive Barrier and Primary Moisture Control

For framed wall construction (timber or steel):

A suitable weather-resistive barrier (WRB) such as wall wrap or sarking must be installed behind the panels

The WRB must be:

- Continuous
- Properly lapped and sealed
- Integrated with flashings at openings and interfaces

The PU panel must not interfere with the continuity or function of the WRB.
For masonry construction:

- Masonry walls must be assessed for moisture exposure and weather resistance
- Where the masonry wall does not provide a reliable moisture barrier, a drained cavity or battened installation must be used

Drainage and Ventilation Strategy

Drainage and Ventilation Strategy

External wall systems must be designed to assume that some water may pass beyond the outer cladding layer. A drainage strategy must therefore be incorporated to manage incidental moisture.

Drainage and ventilation may be achieved by:

- A drained cavity behind the cladding, and/or
- Existing drainage planes within framed wall construction

Masonry Substrates

For external installations over solid masonry substrates:

- The preferred installation method is to fix panels to timber battens or steel top hats
- Battens create:
  - -A drained cavity behind the panels
  - -Improved drying potential
  - -Tolerance for substrate irregularities

The cavity should:

- Be continuous where practicable
- Allow moisture to drain downward to the base of the wall
- Avoid obstructions that may trap water

Direct fixing to masonry without a cavity is not recommended where moisture exposure is significant.

Timber and Steel Framed Walls

For framed wall construction:

- Drainage and moisture control is typically provided by:
  - -Wall wrap or sarking
  - -Flashings
  - -Framing cavity design

Panels may be installed as the outer cladding layer provided that:

- The underlying WRB remains continuous and effective
- Drainage paths are not obstructed
- Flashings are correctly integrated

Where additional drainage or ventilation is required, the use of battens may be adopted.

Flashings and Interface Detailing

Flashings are critical to the performance of the external wall system and must be provided at all relevant locations.

Flashings must be installed at, but not limited to:

- Base of walls
- Head and sill of windows and doors
- Roof-to-wall junctions
- Horizontal joints and changes in cladding direction
- Interfaces with adjacent materials

Flashings must be detailed to:

- Direct water away from the wall system
- Prevent water ingress behind the panels
- Integrate with the WRB or drainage plane

Drainage and Ventilation Strategy

Joints, Sealing and Penetrations
Panel Joints

- External panel joints exposed to weather must be sealed as required
- Sealants must be:
  - -Suitable for external exposure
  - -Compatible with panel materials
- Joint detailing must avoid water traps and ponding

Condensation Considerations

In certain climates and building uses, condensation may occur within wall systems.

The overall wall build-up should be assessed for:

- Interstitial condensation risk
- Vapour movement and drying potential

Condensation management is a system-level consideration and must be addressed as part of the overall wall design in accordance with good building practice.

What the Panels Do and Do Not Do

For clarity:
The panels provide a weather-protective external cladding layer

The panels do not provide:

- Primary waterproofing
- Primary drainage
- Vapour control

Correct weatherproofing performance depends on the complete wall system, including substrates, barriers, flashings, and detailing.

Warranty

Devox Instapanel warrants for a period of ten (10) years (“the warranty period”) from the date of purchase that all Devox products (“the product”) will be free from defects due to faulty manufacture or materials, and will be resistant to cracking, rotting, fire and damage to the extent set out in Devox’s published literature current at the time of installation, and strictly subject to the conditions set out below.

Nothing in this document shall exclude or modify any legal rights of any person under the Trade Practices Act or otherwise which cannot be excluded or modified at law.

The Warranty is strictly subject to the following conditions:
1. The product, and any other products including fasteners and jointing systems, applied to or used in conjunction with the product must be used and installed strictly in accordance with the recommended installation methods at the time of installation.

2. Under no circumstances will Devox be liable for defects arising from:
(a) A failure to use and/or install the product, or any products, strictly in accordance with the product manual.
(b) Defective materials not supplied by Devox; or
(c) Impact.

3. Devox will not be liable for breach of Warranty, and no breach of Warranty claim will be accepted, unless the Claimant makes a written claim and provides proof of purchase within 30 days of the alleged defect becoming apparent.

4. This Warranty is not transferable under any circumstances without the prior written consent of Devox.

5. A Claimant's sole remedy for breach of Warranty is (at Devox ‘s option) that Devox will either replace or repair the defect, supply replacement product, or pay for the cost of replacement or rectification of the affected product.

6. Under no circumstances shall Devox be liable for any consequential loss, property damage or personal injury, economic loss or loss of profits, arising in Contract or negligence or howsoever arising. Without limiting the foregoing, Devox will not be liable for any claims, damages or defects arising from or in any way attributable to poor or defective workmanship, defective materials or poor design or detailing, settlement or structural movement and/or movement of materials to which the product is attached, incorrect design of the structure, in the event of but not limited to earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions, normal wear and tear, or growth of any organism on any product surface.

7. The express warranties set out above are in lieu of all other representations, warranties or conditions, express or implied including but not limited to implied warranties or conditions of merchantable quality and fitness for a particular purpose, and those arising by statute or otherwise in law or from a course of dealing or use of trade and which are excluded to the fullest extent permitted by law.