

INSUL FRAME

Multi-Residential Wall System
Information Guide



High-Rise Wall System for the Harshest Environment

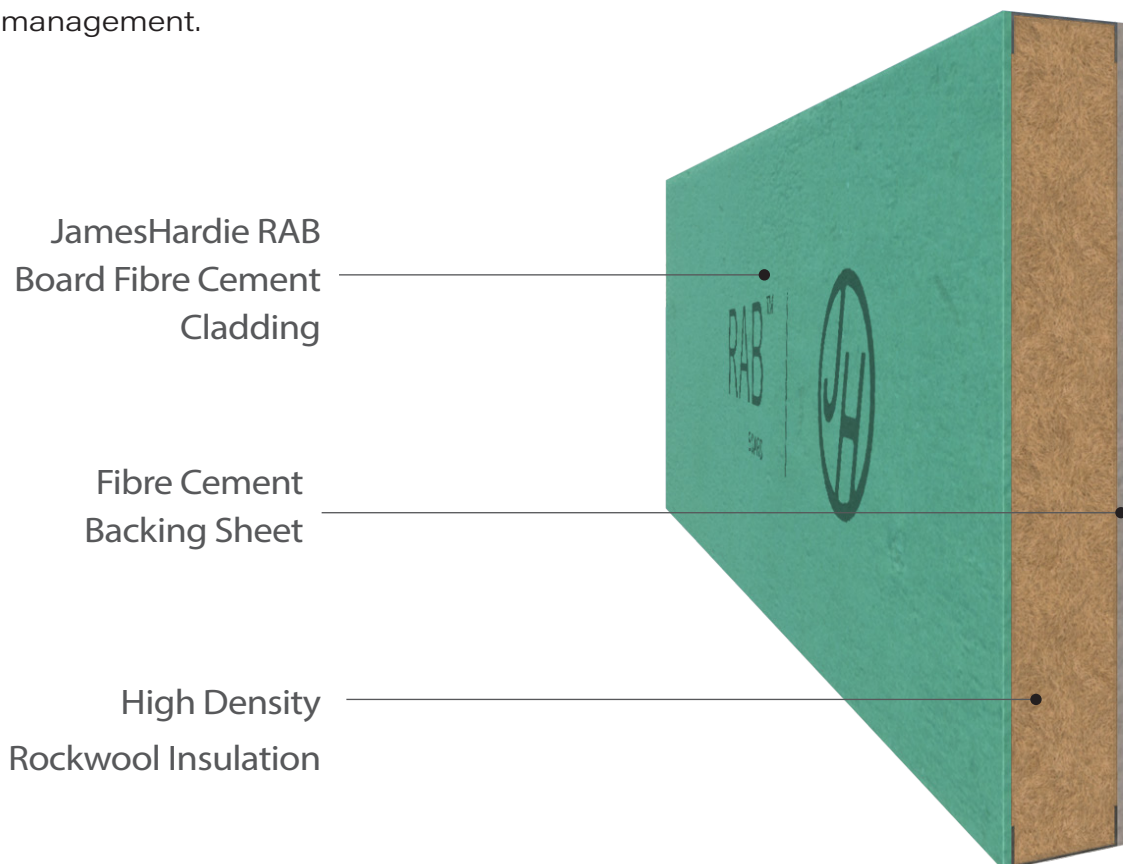
The modular panel presents a new building system aimed at improving the buildings energy efficiency and decrease time spent on site.

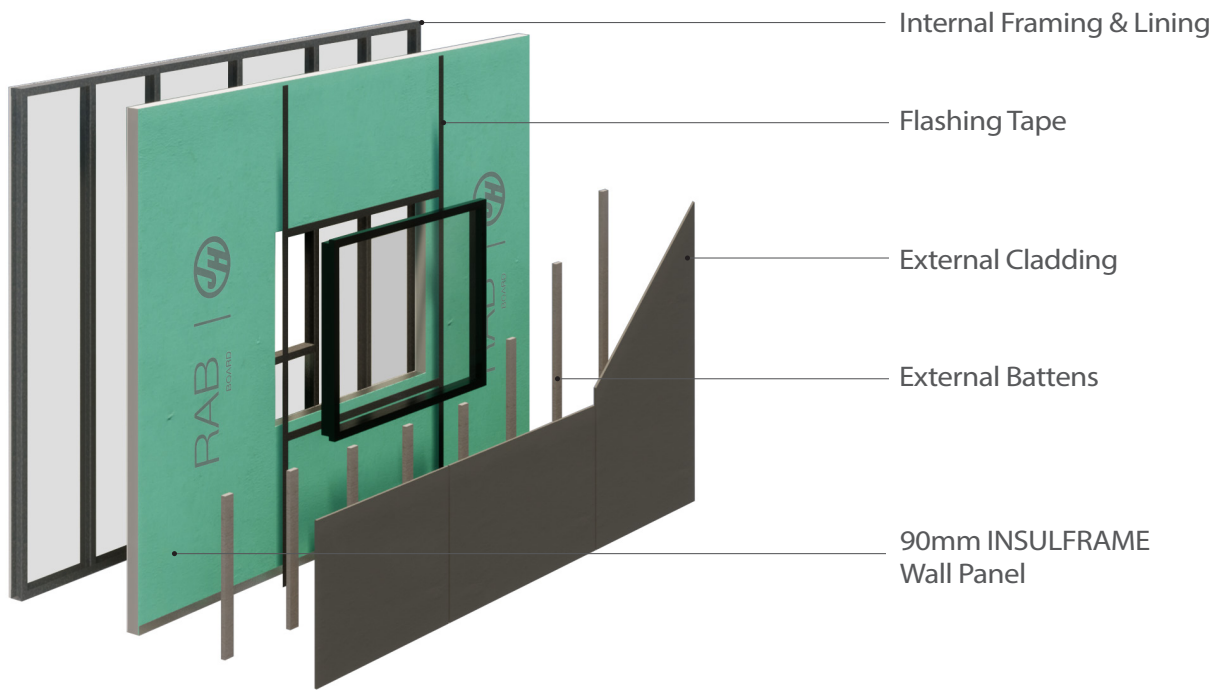
Insulframe Panel Overview

The Insulframe External Wall system is a lightweight wall panel solution that has been developed for multi-residential buildings and focuses on durability, high acoustic and thermal values, improved weatherproofing and condensation management.

Insulframe Panel Composition

At the core of the wall system is a rigid 90mm wall panel, insulated with high-density Rockwool and lined with a breathable fibre cement sheet developed by James Hardie, which acts as an airtight-waterproof barrier to all external weather conditions.





The complete Insulframe Wall System creates a finished facade system that increases the thermal & acoustic properties of the building envelope.

Features & Benefits

- Efficiency On-Site
- Weatherproof
- High Thermal Resistance
- High Acoustic Properties
- Energy Efficient
- Air-Tight Construction
- Ventilated Drainage Cavity for Water Vapour

Insulframe Wall System Overview

Similar to traditional stud-work, Insulframe is installed into floor tracks and deflection head tracks, and provides a rigid frame for external cladding and internal linings. It has been designed to withstand wind loads up to 25 storeys and can support window frames without additional secondary steel.

The system is shop drawn and delivered to site in the predetermined sizes, which allows each level to be installed and closed off within a matter of days, allowing the internal trades and services to progress without risking exposure to the weather.

The system can speed the progress of a build by a significant amount.

The INSULFRAME system provides a range of benefits to all stakeholders of the build, from the developer to the builder, and even through to the occupants of the building...

Benefits to the Developer

Developers using INSULFRAME are able to get a point of difference for their development compared to competing developments using traditional methods that just pass BCA thermal and acoustic compliance.

The interior comfort of the INSULFRAME wall system is a prime selling point for premium apartments, because the thermal and acoustic benefits of the walls become an important part of the buildings make up that wouldn't be available in standard apartment buildings.



"What we appreciate about the panels is that we are able to achieve a significantly higher thermal comfort rating and build in a quicker manner. Furthermore, our residents go out of their way to tell us how happy they are."

- Dave Wilson

Norup + Wilson, Director



"Just to let you know that the unit is so cosy and warm without heating, so the double glazing and insulation material is working a treat. Also I can't hear a soul."

*- Resident #74
The Beach Shack,
Scarborough*



Benefits to the Builder

The advantages of the INSULFRAME system are most prevalent when it comes to the builder. Builders are able to significantly speed up the program with INSULFRAME. Builders can close off levels and make completely waterproof within days after the formwork has been stripped from the slab, if the windows are ready and installed alongside the panels.

Shop drawn panels also means that there is no wastage on-site, and only a few installers required, allowing a much cleaner, less labour intensive site.

The RAB board lining of the INSULFRAME panel can also be left to the external conditions up to 180 days without external cladding, meaning builders can manipulate the program and have all external cladding done later taking it off the critical path.



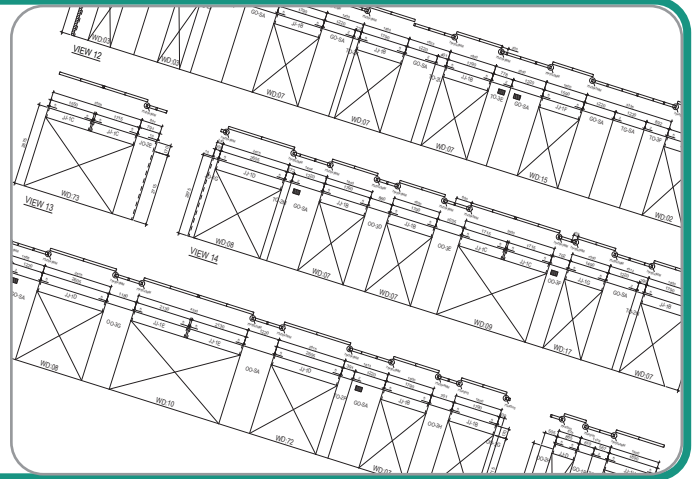
“INSULFRAME provided the project with faster floor by floor lock-up time, due to its installation modular efficiency and improves construction programme.”

- Director, Pyramid Constructions (WA)

Supply & Install Process

Step 1: In-house Design & Fabrication

The INSULFRAME panels are shop-drawn exactly from the floor plan. Panels are manufactured off-site and sequenced on pallets to allow for seamless installation.



Step 2: Delivery & Loading

The INSULFRAME panels are delivered on pallets and craned to each floor. Medium sized flat bed truck delivery's usually carry about 250m² of wall panels on 6 pallets.



Step 3: Panel Installation

Usually, INSULFRAME installers lay track before panels are delivered to site if the site allows it. Once the panels are craned to each floor, the installers work straight away on installing panels into tracks to free up floor space. Panels are then screwed off and joints taped straight after,



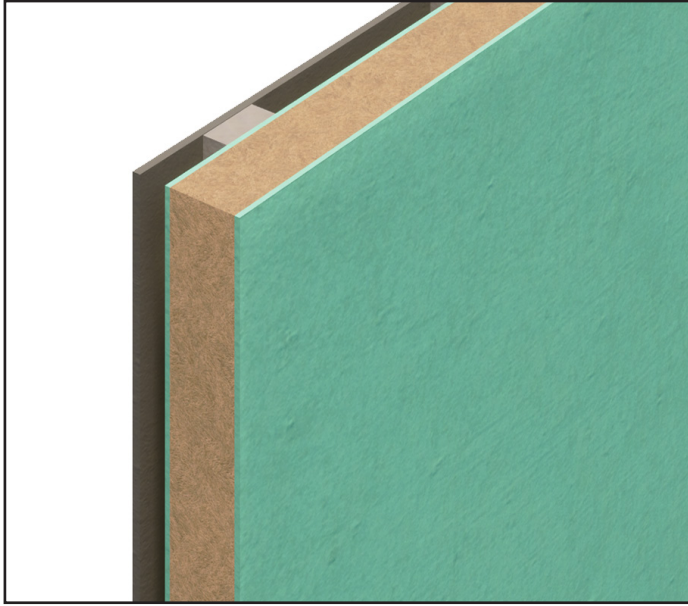
Step 4: Completing System

Once the INSULFRAME panels are installed, the full system can be completed, this is where the walls are waterproofed, windows added and the external cladding and internal linings can be applied.



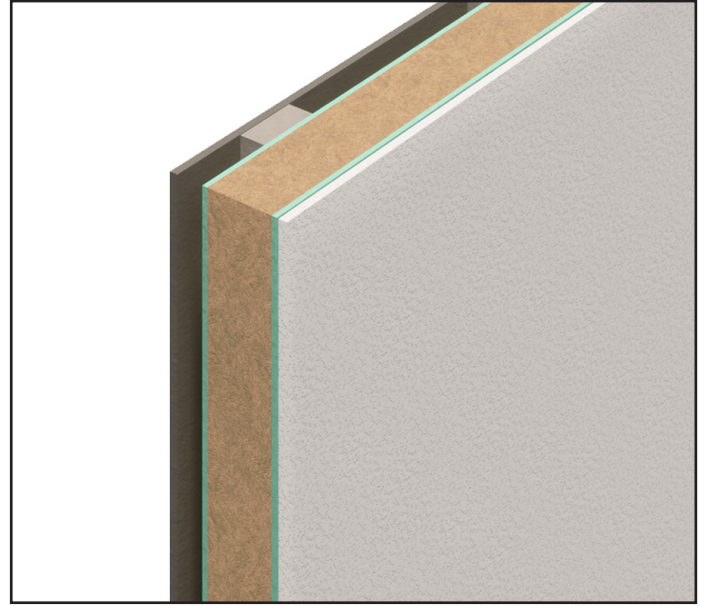
Typical Wall Systems

Insulframe Panel



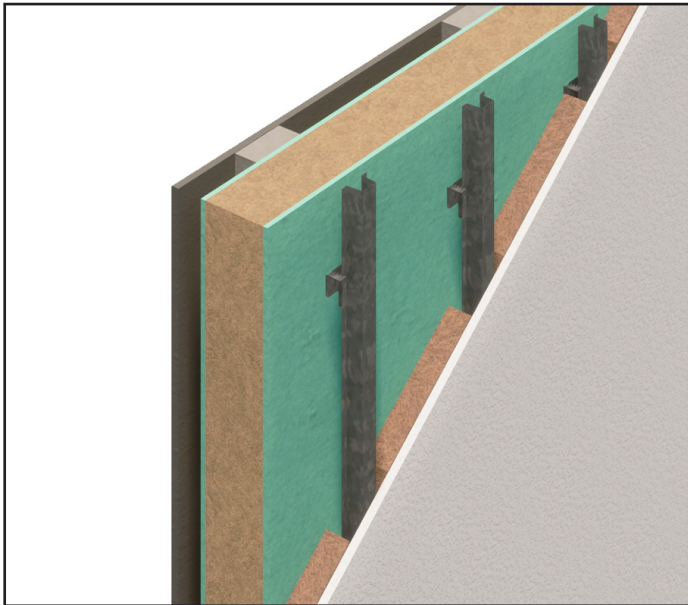
Acoustic	Thermal	Thickness
Rw 43	R 2.2	90 mm

Insulframe Panel w/ Plasterboard Direct Fix



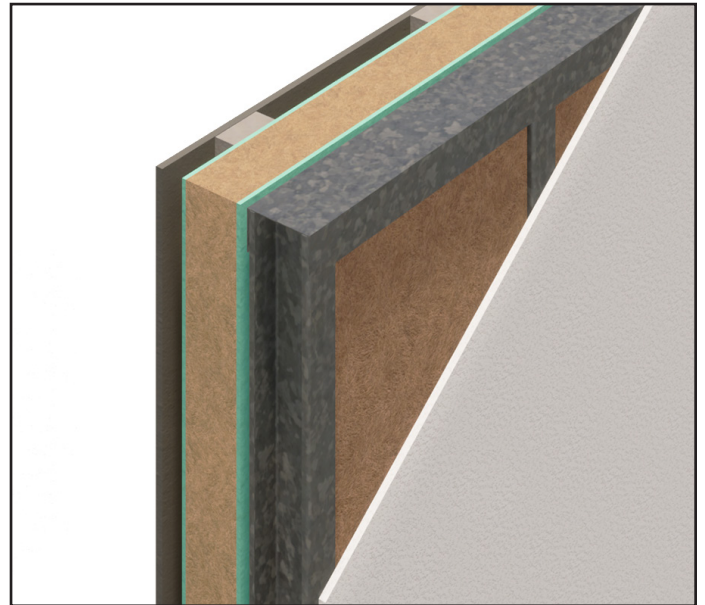
Acoustic	Thermal	Thickness
Rw 56	R 2.3	131 mm

Insulframe Panel w/ 50mm Furring Channel, 50mm Insulation & 13mm Plasterboard



Acoustic	Thermal	Thickness
Rw 58	R 3.8	181 mm

Insulframe Panel w/ 10mm Gap, 76mm Steel Stud, 75mm Insulation & 13mm Plasterboard



Acoustic	Thermal	Thickness
Rw 64, Ctr -16	R 4.2	217 mm

* External Cladding (9mm Fibre Cement, 19mm FC Battens) included in all wall systems specification data. (Except for INSULFRAME Panel)

* See System Details (Page 4) for more details on the internal framing and linings.

* Acoustic Ratings have been predicted using the INSUL software by a qualified acoustic consultant, although need to be confirmed by the project acoustic consultant.

* Thermal ratings are indicative of the already tested insulation and wall lining values.

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Specification & Compliance

Fire Performance

Insulframe panels are comprised of materials deemed non-combustible in the BCA. One Insulframe system which includes an internal stud, 50mm insulation and 13mm plasterboard lining achieves an FRL of -/60/60. There are some differences with the INsulframe panel when it comes to production and installation where the FRL is required which varies the overall price slightly.

More details regarding this system are on Page __. CSIRO fire report can be produced on request.

Structural

Shemco provide a structural certification from our engineer specific to each project, based on in-house load testing that has been completed on the panel.

Acoustic & Thermal

While Shemco provide a structural certification and warranty. The acoustic and thermal values should be confirmed by the project's acoustic and energy consultants, as the build up of the Insulframe panel and the system's additional linings and insulation are all comprised of already tested products, and are subject to change dependant on project requirements. Shemco can produce acoustic prediction certificates on the build up of a number of insulframe systems on request:

Weatherproofing

Insulframe panels RAB board lining is fully waterproof once joints and head track are taped and floor track/slab junction is waterproofed. The external cladding system also then provides a secondary barrier to water ingress and allows a breathable cavity for vapour and condensation management.

BCA Compliance

In terms of compliance, Shemco makes no warranties or assurances on the complete build up of the panel and extra insulation and lining materials. Building designers should use the already tested materials data to come up with acoustic and thermal values.

Detail Design & Construction

Architects detailing Insulframe into architectural designs should treat the Insulframe panel as a 76mm stud system (Boxed section) with 2 x 6mm fibre cement linings fixed to the frame, with Rockwool Insulation. Then to achieve certain fire, acoustic and thermal requirements