

# Southern41™ Thermal

## Specifier & Builder guide to the Southern41™ Thermal aluminium joinery system

Continuous innovation and a focus on creating healthier homes form the core of the Southern41™ Thermal System.

Powered by



# Southern41™ Thermal

## A unique system for a healthy home, all year 'round

Southern41™ Thermal is a 41mm residential aluminium joinery system with a unique thermal break built into the frame to improve the insulation of your home, making it ideal for use in any climate.

Modern and sleek flat faced frame profiles are available across all frame types. Flat faced frames seamlessly blend with our Pacific52™ Thermal system, where required.

The unique Southern41™ thermal break not only builds on the impressive insulating properties of double glazing, it also delivers unparalleled structural strength whilst combining traditional and modern aesthetic options. All to provide you a comfier, healthier home, all year round.

All products within the Southern41™ Thermal range can accommodate double glazed units up to 30mm in width.

Just as double glazing prevents warmth or coldness from escaping through glass, the thermal break in an aluminium frame does the same for your joinery by stopping any heat transfer via the metal. The result is an increased R-value enabling Southern41™ Thermal to provide maximum protection against condensation making it easier for you to maintain your home at an optimal 'healthy home' minimum temperature of 18° Celsius, not to mention the significant energy savings on offer.

The R-value\* is a measure of how well a product insulates – the greater the value the greater the insulation properties.

But what is it exactly that makes Southern41™ Thermal different from other thermally broken products available in New Zealand?

As they say, the devil is in the detail. Southern41™ thermally broken joinery is made using the 'Pour and Debridge' manufacturing method. This involves filling (the 'Pour') a channel designed into the aluminium frame with a resin. The back of the channel is then milled out (the 'Debridge') to sever the link between the front and the back of the aluminium and create a 5mm thermal break in the frame.

The resin is incredibly strong so the Southern41™ Thermal System can withstand virtually any climatic conditions, including Extra High wind zones. In fact, Southern41™ Thermal is so strong it exhibits the same performance characteristics of a regular aluminium section. This great strength also makes Southern41™ Thermal suitable for larger windows and doors, with door unit up to 2.4m\* for hinged and bifold doors, weighing up to 60kgs and up to 2.6m\* high for sliding panels, these weighing up to 220kg, both offer wide glass openings for impressive uninterrupted views and access.

The Southern41™ Thermal System can accommodate almost any combination of window and door configuration, while the framing itself has a sleek square profile, not rounded, to suit modern architectural aesthetics. Innovative products such as the iconic Ranchslider™, functional Levelstep™, and the premium Euroslider™ are all available within the system.

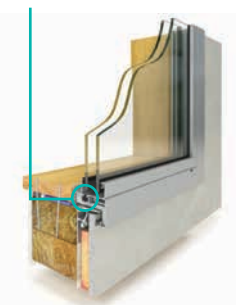
Suitable across multiple market segments; Standard Residential-Mid Level Architectural homes, Multi-residential, Light Commercial Applications and A&A (Additions and Alterations).

Performance up to and exceeding Extra High wind zone rating.



\*2.4m high is recommended. Larger sizes may be possible, please contact your local fabricator for advice

The thermal break provides added insulation for your windows and doors



*Eurostacker™ Door*

*Eurostacker™ Door*



## Mix and Match

Ability to use Southern41™ Thermal and Pacific52™ Thermal systems on the same build project, whilst maintaining a consistent appearance and thermal performance.

### Features & Benefits

- Cost competitive joinery
- High end finishes in standard joinery offering
- Full range of product solutions from one supplier
- Advanced architectural design for a reasonable price
- Ease of specification – off the shelf detailing

## Patented Connection System for integral structures

(Mullions, Transoms Interlockers)

### Features & Benefits

- Secure/Stronger jointing with no frame penetration to eliminate water ingress
- Controlled extrusion drainage path, channels water out efficiently
- Reduced use of visible hole plugs for aesthetics
- Bespoke Jointer sleeve / soaker systems exclusive to Altus, used for “specials” to deliver increased strength of joints over traditional methods (wall corners, e.g., Box & Bay Windows)
- Peace of mind

## High Performance Upgrades

- High performing drainage as standard
- 19mm flange cover for weather protection across all cladding types
- High performance Euroslider™ and Eurostacker™ threshold for heavy weather areas

### Features & Benefits

- Compliant joinery
- Peace of mind
- Bespoke joinery offer – custom designed to meet New Zealand standards & weather conditions
- Cost competitive joinery
- Ease of specification

## Innovative Product Offerings

Wide range of offerings across the residential ranges such as:

- Euroslider™ premium slider & stacker doors
- Fixed light adaptor that creates even height rails and maximum opening features for a finished look
- Smoothtech™ track as standard for easy glide sliding doors
- Continuous panel seals at bifold hinged junctions maintain weatherproofing
- Kleenline™ - Sash window frame platform cover, for a premium finished window look with benefits of being easy to clean
- Aluvent™ Passive Ventilation for a breathable home – can be included into any portion of the window or door unit

### Features & Benefits

- One-stop shop
- Sellable features for end customer
- High end finish for standard joinery offering
- Freedom of design and function
- Showcase designs in standard products

## Structural strength

Structural integrity allows a product to maintain its original performance throughout its life. This is particularly important in extreme climatic conditions, such as very high or extra high winds.

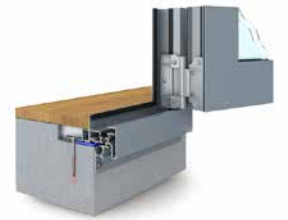
Shear resistance measures the product’s ability to maintain its composite structure when force is applied. Southern41™ Thermal has three times the shear strength of other thermal products. It also has a high elongation (65%), which reflects structural strength through its ability to bend without breaking.

As this table shows, Southern41™ Thermal has strength implications in its ability to maintain the composite structure.

Structural Strength	Structural Polyurethane	
	SI	IP
Shear Strength (AAMA TIR-A8) 100 mm	12,000 N	2500 lbf
Elongation (ASTM D 638)	65%	



Hinge Door Head



Hinge Door Sill



Patented mullion connection system



Euroslider Door



Eurostacker Door

## Sliding and Stacking Doors

- Specified for up to 2.4m\* high x 1.5m\* wide sliding panels weighing up to 220kg
- Euroslider™ & Eurostacker™ premium options with flat sill feature for ease of cleaning in high dust and debris areas
- Kiwi classic Ranchslider™ & Ranchstacker™ styles available with optional Levelstep™ sills for a true flush threshold
- Smoothtech™ Chevron track, standard on all sliding doors - one of the smoothest sliding door tracks in New Zealand
- Biparting and Corner Biparting options where moving doors meet in the centre, creating unique openings and a feeling of pillar-less space
- Even height rails and maximum opening features offer unique aesthetic benefits
- ACT Interlocker Softener – reduces the impact and sound when doors engage



Ranchstacker™

## Bifold, French and Hinged Doors

- Bifold panels are specified for up to 2.4m high x 0.9m wide weighing up to 60kg
  - Large 50mm panel depths provide superior strength for all wind zones
- Options for Top Hung or Bottom Rolling Bifold Doors
  - Top Hung doors protect rollers from dust and harm and can have an option of a flush sill for a clean look and easy cleaning. Top hung bifold doors require engineered lintels to carry the loads
  - Bottom Rolling doors are durable and can suit larger spans across wide openings
- Clean stiles when door is open for improved aesthetics
- French & Hinged door panels: up to 2.7m high x 1m wide



Bifold Door

## Awning & Casement Windows

- Awning & Casement window sashes are specified for up to 1.6m high x 0.8m wide
- Kleenline™ - Sash window frame platform cover, for a premium finished window look with benefits of being easy to clean



Casement Windows

Your Local Fabricator:

## Sharing your vision

[altus.co.nz](http://altus.co.nz)

Technical Enquiry: 0800 925 500  
Email: [technical@altus.co.nz](mailto:technical@altus.co.nz)

General Enquiry: 0800 4 ALTUS (425 887)  
Email: [altus.enquiry@altus.co.nz](mailto:altus.enquiry@altus.co.nz)

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