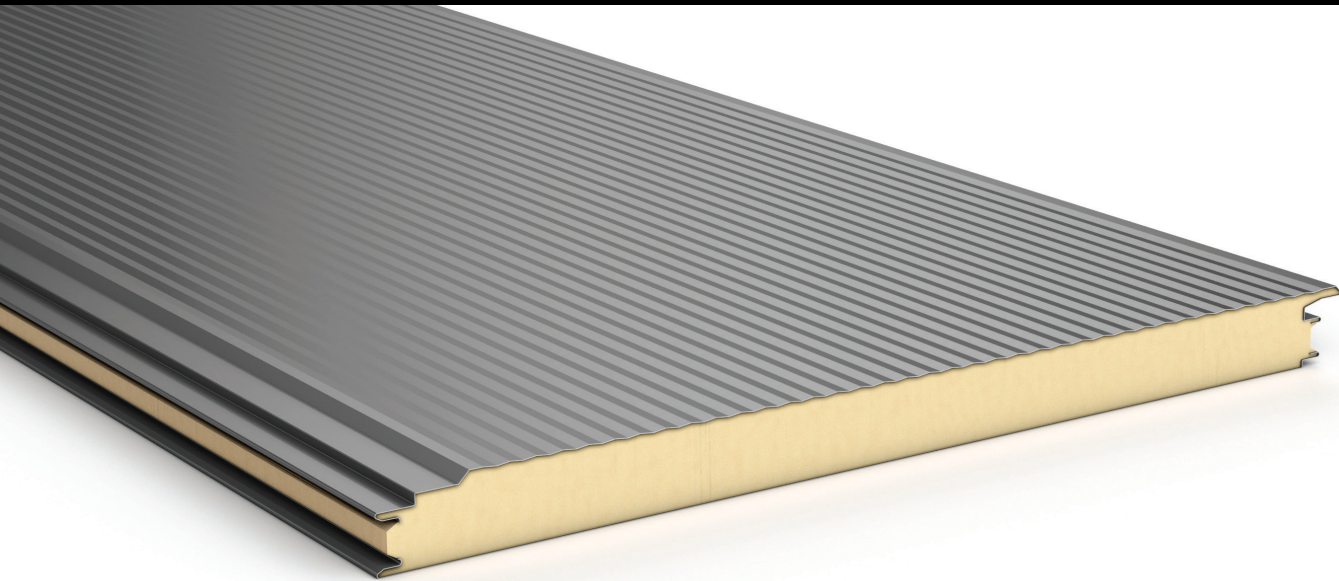


CQ1000AWP Architectural Wall Panel

Technical Specification



Product Information



Conqueror's Architectural Wall Panels are designed to be used for an external facade element and can be installed horizontally or vertically. They are suitable across a broad range of applications.

System Key Benefits

- Manufactured in Christchurch, New Zealand.
- Suitable for wall applications for both new buildings and renovations
- Composite panel allows a faster installation time than standard built-up wall systems
- Range of colours and coatings available
- High thermal performance PIR foam
- Architectural Wall Panels are available in lengths up to 12m

Product Properties

Core	Polyisocyanurate (PIR) foam
External facing*	0.55 mm thick G300S AM150 Maxam® coated steel to AS 1397
Internal facing	0.55 mm thick Z275 CP G300S coated steel to AS 1397
Width	1,000 mm cover width (standard)
Length	As required, 2.4 m – 12 m
Thickness	100 mm

Note: Other steel thicknesses and coatings available on request.

Panel Performance

A - Core Thickness (mm)	100
Material R Value @ 15°C (m ² .K/W)*	4.31
Installed R Value @ 15°C (m ² .K/W)**	4.43
Weight (kg/m ²)***	14.8

* Material R value = the aged thermal value @ 15°C, as independently tested and calculated to the requirements of AS/NZS 4859 Parts 1 & 2: 2018. Note this is for the product only before installation.

** Installed R value = the thermal resistance of the installed product plus air films as per NZS 4214.

*** Actual weight subject to vary ±10% due to manufacturing and raw material tolerances.

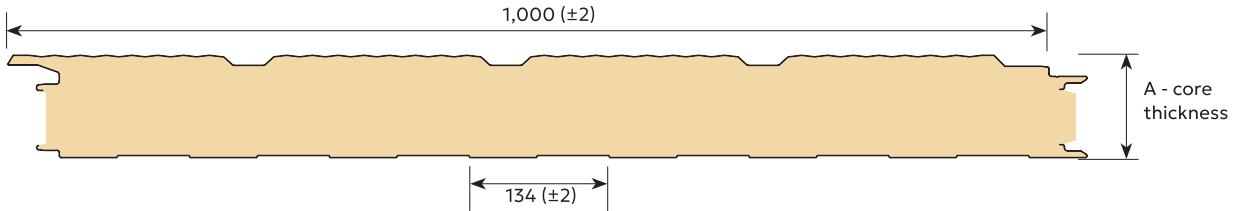
Fire Performance

Internal Surface Finish (Walls & Ceiling) (to ISO 9705)	
Group 1S	
Foam Plastic Core	
Meets the requirements of AS1366.2	
External Radiation (NZBC C.5.8) (to ISO 5660-1)	
Building Code Document	Cladding Material Type
NZBC Acceptable Solutions C/AS1 Table 5.1	< 100kW/m ² and < 25 MJ/m ²
NZBC Acceptable Solutions C/AS2 Table C1.3	Type A



Profile Options

Wave - Triple Rib



Wave - Single Rib



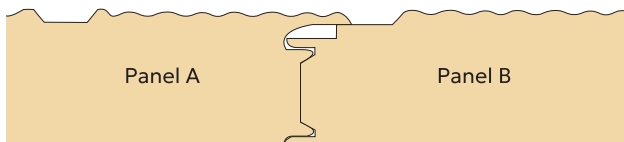
Wave



All dimensions in mm.

Joint Detail

Engineered tongue and groove joint.



Acoustic Properties

Frequency	125	250	500	1000	2000	4000	STC	R _w
Hz	17.2	18.2	19.1	24.8	37.3	39.5	21	24

Tested to ISO 10140-2 on 100 mm panel.

Colours

The external steel skins are Colorsteel® Maxam, provided by NZ Steel.

Standard external colours are shown below, other Colorsteel® colours are available on request. Please be aware some NZ Steel dark colours are not recommended and may affect the available warranty. Lesser spans also apply to dark colours.

Example colours as shown here are indicative only due to digital and printing processes. If in doubt request a steel colour swatch prior to ordering.



Packaging & Delivery

Lead times vary depending on the applicable coil colour ordered. Non-stocked coatings / colours require extra lead time. Protective film is applied to the steel facing during the production process. Conqueror PIR panels are stacked flat. The number of panels in each pack depends on panel length.

Handling guidelines are available from Conqueror.

Helping Your Steel Cladding Last Longer

All cladding products are subject to the cumulative effects of weather. Regular washing of steel products increases their durability by limiting their attack from airborne salts, pollutants and other build up.

Wall cladding requires manual washing to prevent build-up of contaminants that aren't removed by rain washing. Wall cladding may be manually washed with water and either a sponge or a soft nylon-bristled brush.

Other areas that do not receive adequate rain washing (known as unwashed areas) require more extensive manual washing. These areas include soffits, undersides of gutters, fascias and sheltered areas of garage doors, as well as any external objects such as air conditioning units, television aerials, flues and solar panels.

Product Information

Spans — External Wall

Assumptions:

- For hidden fixings, fixing capacity will govern panel spans. If additional spans are required, then the panel can be face fixed. Please contact Conqueror Technical for more information.
- The span/load table is valid for ambient internal application. For intermediate values, linear interpolation may be used.
- Values have been calculated using the method described in BS EN 14509:2013 for light coloured panels.
- ULS load capacity applied to Single, Double and Triple spans.
- SLS Single Span is the same as ULS.

Pressure (force acting inward) kPa 

		Span L (m)															
		1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8
ULS	Single Span	5.11	4.6	4.18	3.83	3.54	3.28	3.28	3.06	2.87	2.7	2.55	2.42	2.3	2.19	2.09	1.92
SLS	Double Span	3.69	3.28	2.95	2.68	2.45	2.26	2.1	1.96	1.83	1.72	1.63	1.54	1.47	1.4	1.33	1.28
SLS	Triple Span	3.91	3.51	3.18	2.91	2.68	2.49	2.32	2.17	2.05	1.93	1.83	1.74	1.66	1.58	1.51	1.45

Suction (force acting outward) kPa 

		Span L (m)															
		1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8
ULS	Single Span	9.11	8.2	7.45	6.83	5.95	5.13	4.47	3.93	3.48	3.1	2.78	2.51	2.28	2.08	1.9	1.75
SLS	Double Span	9.11	8.2	7.45	6.83	5.95	5.13	4.47	3.78	3.15	2.63	2.17	1.82	1.54	1.31	1.13	0.98
SLS	Triple Span	9.11	8.2	7.45	6.83	5.95	5.13	4.44	3.77	3.24	2.82	2.47	2.18	1.92	1.71	1.53	1.37

Standard Fixing Pattern - Note additional capacity can be achieved with face fixing of the panel (contact Kingspan)

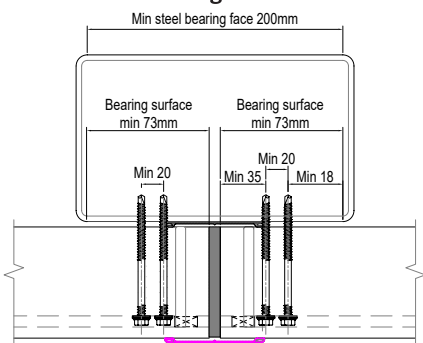
Fixings ULS Loads* kPa



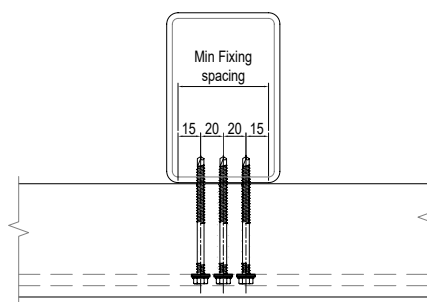
		Span L (m)															
		1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8
Single Span**		4.06	3.66	3.33	3.05	2.81	2.61	2.44	2.29	2.15	2.03	1.93	1.83	1.74	1.66	1.59	1.52
Double Span***		2.44	2.19	2.00	1.83	1.69	1.57	1.46	1.37	1.29	1.22	1.16	1.10	1.05	1.00	0.95	0.91
Triple Span***		2.77	2.49	2.27	2.08	1.92	1.78	1.66	1.56	1.47	1.39	1.31	1.25	1.19	1.13	1.08	1.04

* Based on pull over load of 1.829kN Ejot Fixing with 16mm washer

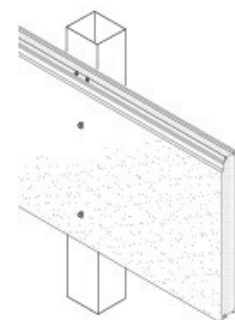
** based on 2 fixings



** based on 3 fixings



Additional Face Fixings if Required



NOTE: For extreme wind loads - additional face fixing may be required

Other Span Considerations

Dark colours

- The use of dark colours causes additional thermal load on panels reducing spans. Spans on dark coloured panels should be factored down for this reason.
- Please contact Conqueror for specific calculations.

Warranty

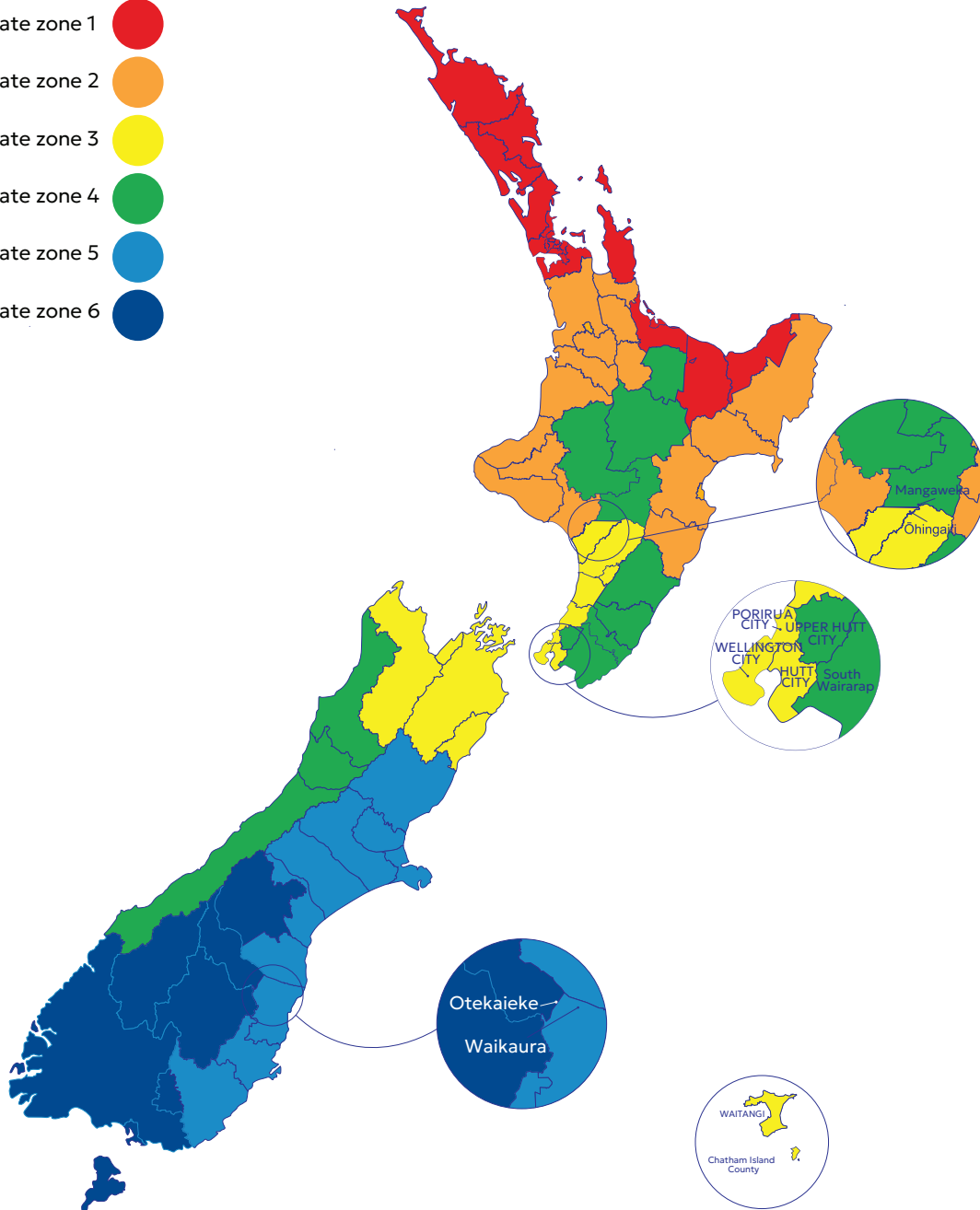
In business, your reputation is everything and minimising risk makes sound business sense. Conqueror's range for thermal insulated cladding will give you the peace of mind you've chosen a quality material that conforms to relevant New Zealand standards and backed by a warranty you can count on.



New Zealand Thermal Requirements

Based on the Ministry of Business, Innovation and Employment's H1 Energy Efficiency Acceptable Solution H1/AS1 (Fifth Edition Amendment 1, effective 4 August 2022) and H1 Energy Efficiency Acceptable Solution H1/AS2 (Fifth Edition Amendment 1, effective 4 August 2022)

- Climate zone 1 ●
- Climate zone 2 ●
- Climate zone 3 ●
- Climate zone 4 ●
- Climate zone 5 ●
- Climate zone 6 ●



Residential Requirements

(Based on H1/AS1 Table 2.1.2.2B)

	Minimum Construction R-values (m ² .K/W)					
	Climate Zone 1	Climate Zone 2	Climate Zone 3	Climate Zone 4	Climate Zone 5	Climate Zone 6
Wall	R2.0	R2.0	R2.0	R2.0	R2.0	R2.0
Core thickness required (mm)	100	100	100	100	100	100

Commercial Requirements

(Based on H1/AS2 Table 2.1.2.2B)

	Minimum Construction R-values (m ² .K/W)					
	Climate Zone 1	Climate Zone 2	Climate Zone 3	Climate Zone 4	Climate Zone 5	Climate Zone 6
Wall	R2.2	R2.4	R2.7	R3.0	R3.0	R3.2
Core thickness required (mm)	100	100	100	100	100	100

Product Information

Design Details

Refer to Conqueror website (conqueror.co.nz) for design details.



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