PW1000 4 sided flush glaze unitised

Product Technical Statement: 102841

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Flush glazed, 4 sided structurally glazed curtain wall system

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Level of assurance needed to demonstrate NZ Building Code Compliance

MEDIUM

Supporting documentation should include technical information by manufacturer and either an independent assessment or reference to an industry-based scheme

PW1000 confirms that this minimum level of assurance has been met or exceeded by the following:
Self Engineer
Thermosash PW1000 BPIR Brochure

BPIR

The following information has been provided by PW1000 demonstrating how this product complies with the Building Product Information Requirements.

Technical Statement

Product Class

CLASS 2

Product Description

The Thermosash PW1000 is a structurally glazed unitised curtainwall suite designed for high-rise or low-rise applications where the projecthas large spans or large panes of glass requiring higher strength or specific design systems. The advantage of this system is, that whilst itutilises a mullion and transom system internally to hold the glass or other elements, the surface is generally free from any visible aluminiumstructural element - providing a smooth panel face.

- PW1000 – Non-Thermally Broken
- PW1000 TI – Thermally Isolated
- PW1000 TB – Thermally Broken

Scope of use

INTENDED USEA1 BUILDING USE CLASSIFICATION

- Housing
- Communal residential
- Communal non-residential
- Commercial
- Industrial
- Ancillary

A3 BUILDING IMPORTANCE LEVELS
- Importance level 1
- Importance level 2
- Importance level 3
- Importance level 4
- Importance level 5

BUILDING TYPE
- High-rise
- Mid-rise
- Low-rise
- Specific design

BUILDING PART
- Building envelope
- Exterior façade
- Exterior doors and windows
- Internal partition
- Shopfront
- Suitable for use in areas requiring safety glass

BUILDING LOCATION
- Suitable for New Zealand wind zones*
- Suitable for New Zealand climate zones*
- Suitable for New Zealand corrosion zones*
- Suitable for New Zealand seismic risk areas*
- Suitable for New Zealand building importance levels

**Subject to specific design, building design and specific test parameters

Company Contact Details

Thermosash
BUILDING ENVELOPE SOLUTIONS

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Website:	www.thermosash.co.nz

New Zealand Building Code (NZBC)

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- **Clause B1 Structure:** Performance B1.3.1, B1.3.2, B1.3.3, B1.3.3(g), B1.3.3(h), B1.3.3(j), B1.3.4

  NZBC Clause B1 Structure

  COMPLIANCE BY B1/VM1 (project-specific design)

  Compliance with B1 is shown by way of engineering calculations and/or testing, and reports are attached to the compliance pathway submission.

- **Clause B2 Durability:** Performance B2.3.1, B2.3.1(b), B2.3.1(c)

  NZBC Clause B2 Durability

  ACCEPTABLE SOLUTIONS B2/AS1There are no Acceptable Solutions available for aluminium and steel, and protection is provided through surface treatment in accordance with:• AS/NZS 2312:2014 - Guide to the protection of structural steel against atmospheric corrosion by the use• of protective coatings.• AAMA 2605-05 - Voluntary specification, performance requirements and test procedures for superior performing organic coatings on aluminium extrusions and panels.• AS 37155:2002 - Metal finishing thermoset powder coatings for architectural applications of aluminium and aluminium alloys.• AS 1231:2000 - Aluminium and aluminium alloys - anodic oxidation coatings.• WANZ - Specification for powder coatings on architectural aluminium products.• SNZ TS 3404:2018 - Durability requirements for steel structures and components

  COMPLIANCE BY B2/VM1

  All elements of the Thermosash product/system are specified by Thermosash to (with only normal maintenance) satisfy the performance requirements of the Building Code for 5 years (Surface Finish), 15 years(System), 50 years (Fixings/Connections) as appropriate.Generally, all elements are designed from aluminium. Where engineering requirements demand stronger materials stainless steel (304 or 316 as appropriate), or steel (coated to SNZ TS 3404:2018) will be used.

- **Clause E2 External moisture:** Performance E2.3.1, E2.3.2

  NZBC Clause E2 External Moisture

  COMPLIANCE BY E2 ALTERNATIVE SOLUTION

  Compliance of E2 Alternative Solution testing to AS/NZS4284 and good practice detailing as shown by way of testing, and test results are attached to every compliance pathway submission. Any complex/high risk details that arise will be checked specifically for weather tightness by our in-house Producer Statement Author following best practice design principles, making use of pressure-equalised drained cavities and specialist expertise and experience.If required Thermosash can complete QA/QC site water testing in accordance with the following:AAMA 501.2 test - Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems (for fixed elements).

- **Clause F2 Hazardous building materials:** Performance F2.3.1, F2.3.2

  NZBC Clause F2 Hazardous Materials

  COMPLIANCE BY F2/AS1 NZS4223.3

  Thermosash can confirm there are no hazardous materials except glass within our systems. Compliance with F2 Hazardous Materials for glass is shown by compliance with NZS4223.3 or specific design. Compliance with F2 Hazardous Materials for Porcelain will be shown by physical testing of samples.

- **Clause F4 Safety from falling:** Performance F4.3.1

  NZBC Clause F4 Safety from falling

  COMPLIANCE BY NZS/AS 1170.1Thermosash follows the safety in design intent on the architectural drawings and designs the doors/windows/curtainwall for C3 barrier loads where protecting a fall greater than 1 m NZS/AS 1170.1. Thermosash's responsibility is limited to the door/window/curtainwall.

- **Clause H1 Energy efficiency :** Performance H1.3.1, H1.3.2E

  NZBC Clause H1 Energy Efficiency

  COMPLIANCE BY H1/AS2 – IF APPLICABLE
  COMPLIANCE BY H1/VM2 – IF APPLICABLE

  In the event that our curtainwall solution is required to comply with Building Code H1 Energy Efficiency, compliance will be shown by way of Engineer's report, using calculation methods contained in NZBC Acceptable Solution H1/AS1 or H1/AS2 or the modelling methods contained in NZBC Verification methods H1/VM1 or H1/VM2 and include test results attached to a compliance pathway submission.

Evidence

The product meets the requirements set out in the following documents, or relevant parts of cited standards within the documents:

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THERMOSASH COMPLIANCE STATEMENT

Thermosash expertly engineers and designs each bespoke facade to the design and performance requirements of the individual project.We ensure that all compliance claims are backed by a comprehensive set of documents, including a PS1, PS3 and PS4, as well as a submitted compliance pathway.

Thermosash Group owns and operates the largest facade testing facility in New Zealand (WEC) where we test our systems and custom-designed suites to ensure compliance with the codes or project-specific requirements.

All the Thermosash suites are independently laboratory tested to IANZ(International Accreditation New Zealand).

Supporting Evidence

The product has and can make available the following additional evidence to support the above statements:

Self Engineer
Thermosash PW1000 BPIR Brochure

Product Criteria

Design requirements

Integrated Elements Almost an unlimited type of materials can be integrated into a unitised panel, including different glass types, metals, brackets to receive externally mounted fins, louvres, venetians or building signage for example. **Thermosash Services** Thermosash can provide further technical support, design and performance data on request. We are able to provide a full design and costing service covering the many technical and performance aspects associated with a particular building design. We can design, fabricate, install and glaze our systems anywhere in New Zealand or overseas either in conjunction with our local specialists or directly through our own organisation.

Installation requirements

Prefabrication
Panel wall systems are manufactured and glazed in a factory environment, stored and only transported to site when needed.

These pre-fabricated and glazed panels are delivered to the floors in crates and positioned by floor mounted cranes or monorail units. The panels have interlocking legs, requiring sequential placement around the building floor before the next level can be installed.

It is highly recommended that the units are installed from ground up in predetermined directional order to maintain the best detail connection between panels. Special methodologies need to be considered when recladding a building demands a top down approach.

Maintenance requirements

Looking After Your Building
Maintaining glass, metals and stone are all particular to the environment that they are placed in: eg. marine, environmental pollution, exposure to natural washing, etc.

It is recommended by almost all material suppliers that building washing should occur every 3-6 months to prevent staining to glass and prevent environmental pollutants from corroding metals and to maintain the material warranties.

A full maintenance manual is provided on completion of a project for all the elements integrated within a project.

Warrantees

The standard warranty is 10 years from the date of practical completion for these products. This covers workmanship and weather tightness,providing the subcontract includes fabrication, installation and glazing of all components.

- Structural integrity (framing, brackets, fixings) - 50 years
- Material and components life to first maintenance - 10 years
- Surface finish / seals / hardware - 5 years

Company Product Information

Quality Assurance

ISO 9001 (Quality Management)

Relationships

New Zealand Made

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Member of New Zealand Green Building Council

Accredited by International Accreditation New Zealand

Building Product Information Requirements

Manufacturer

Legal Trading Name:
Thermosash Commercial Limited

Business Email:
admin@thermosash.co.nz

Company Website:
www.thermosash.co.nz

Contact Number/s:
+64 09-4444944

Product Identifier

• PW1000 – NON-THERMALLY BROKEN • PW1000 TI – THERMALLY ISOLATED • PW1000 TB – THERMALLY BROKEN

Warnings

This product has no warnings associated with it.

Date last validated: **29 January 2025**

Date last updated: **29 January 2025**