



PW 400, 600, 800, 1000

Highrise unitised curtainwall Suites



THEIRMOSSASH

Since 1985 Thermosash Commercial Ltd has developed a totally integrated high rise, performance, unitised panel wall suite to enable all the product's aesthetic features to be used on the one project. These products are also used on low rise applications where large spans or large panes of glass require higher strength systems. They have been used on major high profile projects throughout New Zealand and extensively off-shore in Thailand and India:

- PW400** ➤ 4-sided mechanically entrapped curtainwall system
- PW500** ➤ Vertical butt glazed (horizontal emphasis) curtainwall system
- PW800** ➤ Horizontal butt glazed (vertical emphasis) curtainwall system
- PW1000** ➤ Flush glazed, 4-sided structurally glazed curtainwall system

NOTE: Integrated opening sashes also available with these systems

All projects are analysed on an engineering basis to comply with NZS4203:1992 and AS/NZS4284:1995. Thermosash unitised systems are generally floor-to-floor height panel units, totally fabricated and glazed in factory conditions to ensure rigid quality controls during manufacture and (particularly) structural silicone application during glazing.

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.

These products allow rapid site installation to enable buildings to be closed in within a week a floor cycle.

These engineered facade products are designed to accommodate:

- building movements - both vertical and horizontal
- differential rates of thermal expansion and contraction
- connection details to accommodate construction tolerances
- structural member strengths comply with Code or project Specification
- glass design and it's integration with the glazing system to ensure glass warranties are complied with.

The weathering design of these suites follows recognised international curtainwall design principles - rainscreen pressure equalisation - which requires primary and secondary weathering. The rainscreen acts as a primary water-stop, the second airseal and cavity acts as a backup to collect and drain away any water that manages to penetrate the primary rainscreen barrier.

All internal cavities of the system are designed to be pressure equalised (i.e. no pressure differential between the outside face and any internal cavity). This feature allows the water which penetrates the rainscreen to drain freely back to the exterior. The rear air seal is critical to the system's weathering performance as air infiltration acts as the medium which transports water through to the building's interior, i.e. it is the prime cause of any leakage.

The commercial construction industry today relies more and more on the curtainwall industry for total cladding of commercial highrise buildings. This has evolved for a number of reasons:

- Glass is needed to allow the transmission of natural light - for this reason, as a natural progression, the building industry has turned to the commercial window industry to develop the necessary skills and products required to provide a total performance warranty for the external skin.
- Main Contractors have shown a preference for total cladding as it eliminates the junctions between trades and allows more construction tolerance in the erection of the structural skeleton.
- It reduces construction time due to pre-fabrication of materials off-site, with resultant reduction of construction financing costs. This helps to off-set the higher cost of the curtain wall package over other more traditional cladding systems, e.g. pre-cast panels.
- Initially, this resulted in total facades of glass; today, this has extended to include aluminium panel, stone, stainless steel, etc.
- Total cladding packages are flexible and versatile. The design options for Architects from the combinations of materials and colours available today are almost limitless.

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.

Facade Laboratory Testing

Thermosash owns and operates the largest facade testing facility in New Zealand where we test our systems and custom designed suites to ensure compliance with AS/NZS 4284:1995.

Guarantee

The standard guarantee is 5 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.

 Front cover (Artist's perspective):

Price WaterhouseCoopers Tower, Quay Street, Auckland
Architect/Engineers: Stephenson & Turner NZ Ltd
Main Contractor: The Fletcher Construction Company Ltd
Thermosash: PW1000 highrise panel wall system with
A.C.M.: Reynobond® composite aluminium panel
cladding.
Solar Shading: Dasolas® Unisun F 480mm solar shading
to Podium.
Glass: 12.76mm laminate B2-20 Sky on Green



**National Mutual Refurbishment,
Shortland Street, Auckland**

Architect: Peddle Thorp & Aitken
 Main Contractor: Bovis Lend Lease Pty Ltd
 Thermosash: PW800 customised unitised panel curtainwall system completed using Thermosash's flexideck access system for the tower's facade replacement. The tower remained fully tenanted during refurbishment.



Stock Exchange Building, Auckland

Architect: Walker Co Partnership
 Contractor: Angus Construction Ltd
 Thermosash: PW400 unitised curtainwall with 8mm grey body tint glass and architectural aluminium sheet.



Suvit Plaza, Bangkok, Thailand

Completed under a Technology Agreement between Euroasia Mercantile Co of Thailand and Thermosash Commercial Limited.

System: PW1000 highrise panel wall system with Reynobond® composite aluminium cladding and Asahi high performance blue glass.



Dilworth House, 71 Gt. South Road, Auckland

Architect: Creative Spaces Limited
 Main Contractor: Mainzeal Property & Construction Ltd
 Thermosash: PW1000 highrise unitised curtainwall



Above left and above right:

Museum of New Zealand, Wellington

Architect: JasMax Architects
 Main Contractor: The Fletcher Construction Company Limited

Thermosash: Several systems including PW600 panel wall



111 Carlton Gore Road, Newmarket, Auckland

Architect: JasMax Architects
 Contractor: Argon Construction Ltd
 Thermosash: PW1000 (customised) highrise panel wall system to entry



Above:
Capital Court, New Delhi, India
 Completed under a Technology Agreement between AI Karma of India and Thermosash Commercial Limited.
 System: PW1000 unitised curtainwall



Above:
Gallagher House Head Office, Hamilton
 Architect: Chibnall Swann Architects
 Main Contractor: Mainzeal Property & Construction Ltd
 Thermosash: PW1000 unitised panel wall system with 6mm Greylite glass/Tempaclad. Flush glazed 4 sided structural silicone.



Left (Artist's perspective):
Lambton Tower, Wellington
 Architect: Peddle Thorp & Aitken
 Main Contractor: The Fletcher Construction Company Ltd
 Thermosash: PW400, PW600, PW1000 highrise unitised curtainwall



Above (Artist's perspective):
Spencer on Byron Tower, Takapuna, Auckland
 Architect: ADC Architects
 Main Contractor: Multiplex Constructions NZ Ltd
 Thermosash: PW400 highrise panel wall system
 Glass: 6mm grey tint annealed with 6mm single coat standard Tempaclad to spandrels

For further information and enquiries contact:



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