

THERMOSASH

Channel Glazing

CHANNEL GLAZE SYSTEMS & INTEGRATED GLASS FINS



Thermosash
BUILDING ENVELOPE SOLUTIONS™

Thermosash Commercial Ltd

158 Central Park Drive, Henderson
Auckland 0610, New Zealand

www.thermosash.co.nz



Westgate Library
AUCKLAND

Our Aluminium is green to the core.

Thermosash is partnered with a NZ-owned extruder providing the lowest embodied carbon aluminium readily available in New Zealand*. The combination of high recycled content and low carbon virgin material forms the high quality extrusion that Thermosash uses.

*Achieving Toitū Carbonreduce certification which far out performs the global average. (Independent audits to stringent European standard PAS 2050 are regularly undertaken, please contact us for the most up to date carbonreduce CO2e/kg of aluminium figures).

Thermosash recycles 100% of all metal waste products produced during manufacturing operations.

We exclusively use local powder coatners who have stringent chemical handling processes and reuse or responsibly dispose of all waste powder.



Commercial Bay
AUCKLAND CBD



Lumley Tower
AUCKLAND CBD



Boxer Hills Club
ARROWTOWN



OVERVIEW

CHANNEL GLAZING

Channel glazing is a method of window glazing which uses a “U” shaped aluminium channel with metal or rubber gaskets to hold the glass in place. Generally where large panes of glass are installed, they are integrated with an engineered glass fin or a tension truss system.

There are no framing or joints between the panels providing a seamless horizontal and vertical continuity of light and visual flow. Channel glazing delivers a unique visual experience in its ability to enhance light, space and atmosphere. Occupants experience a greater sense of connection to their exterior surroundings and benefit from the natural light.



PRODUCT SPECIFICATION

MASTERSPEC

We recommend using Masterspec 4251T Commercial Windows when specifying this system type.

CAD DOWNLOADS

Channel Glazing CAD downloads are available from our website:

<https://www.thermosash.co.nz/downloads-resources/cad-downloads/channel-glazing-downloads/>

PRODUCT PERFORMANCE

KEY FEATURES

- Extremely versatile product - providing a modern low profile window suite
- Seamless incorporation of auto sliders, frameless glass doors etc.
- Glazing Channel can be recessed
- Frames and glazing are site installed
- Fins or a tension truss system can be integrated for large panes of glass
- Thermosash offers full service of consulting, engineering, procurement of glass or fittings, manufacturing and installation

BUILDING CODE PERFORMANCE

Thermosash engineers to the design and performance requirements of each individual project in compliance with the relevant codes - details are provided in the BPIR documents which can be downloaded:

<https://www.thermosash.co.nz/downloads-resources/bpir-documents/>

PERFORMANCE TESTING

Independently laboratory tested to IANZ (International Accreditation New Zealand)

B1/VM1	AS/NZS1170 Structural Design Actions
B2/AS1	Durability [based on in-service history]
F2	NZS4223 Glazing in Buildings
E2	NZS/AS4284:2008 Water / Air Pressure/ Air Leakage - exceeds minimum requirements

CAPABILITIES

SECTION SIZES

Commonly 30mm-50mm (or engineered to be greater at the head to allow for seismic movement).

MAXIMUM SPANNING ABILITY

Thermosash specifically engineers the best solution for your project taking into consideration span, structural system, load imposed by glass thickness, seismic, wind & snow loading. The spanning ability will vary depending on the above conditions.

INTEGRATED ELEMENTS

Channel glazing can be integrated with;

- glass fins
- tension truss system and structural fittings
- auto sliders
- frameless glass auto doors and sliders
- revolving doors

INTENDED USE

CLASSIFICATION

Commercial, Industrial and Communal Residential use in accordance with A1 Building Use Classification and A3 Building Importance levels 1-5.

BUILDING TYPE

- High-rise
- Mid-rise
- Low-rise
- Specific design

BUILDING LOCATION

Thermosash provides custom specific design solutions taking into consideration wind zones, climate zones, corrosion zones, seismic risk areas and building importance levels for each project.

CONDITIONS OF USE

The architect, engineer or specifier must confirm all of the project requirements prior to fabrication, including but not limited to climate conditions, glass selections, structural differential movement reports, performance requirements for glass, surface finishes and hardware.



MATERIALS

MATERIAL COMPOSITION

Each project will have specific engineered and designed component solutions, fabricated in New Zealand and provided as a complete custom system, which incorporates common materials such as: Aluminium, Stainless Steel, Structural Silicone, Galvanized steel bolts, Glass (type dependent on project requirements), PVB (Polyvinyl butyral).

Each project is a fully specific designed and engineered solution utilising common components, fabricated in New Zealand.

MAINTENANCE REQUIREMENTS

A maintenance manual is provided on completion of a project for all the elements integrated within a project. Compliance to a maintenance schedule is essential to maintaining the quality of the installed product over time. Using Thermosash-approved facade maintenance contractor/personnel ensures the highest standards are met.

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.

WARRANTY

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. All warranties are subject to service and maintenance requirements.

SUSTAINABILITY

SUSTAINABLE MANUFACTURING

Thermosash manufactures all system components in New Zealand, and primarily source materials where available from the New Zealand market. Our precision machinery ensures optimised material usage with 100% of all metal waste products recycled in the factory, saving on-site waste. We recycle 100% uncontaminated soft plastics, timber, cardboard, paper and 99.5% commercial float glass and IGUs.

LOW CARBON ALUMINIUM EXTRUSIONS

Thermosash DecarbAL™ delivers a super low sustainable embodied carbon footprint per kilogram of aluminium. At the heart of Thermosash's sustainability journey is a partnership with a local New Zealand owned remelt facility producing extrusions with 80% recycled content and low carbon virgin material. Our aluminium supplier is audited annually, for up to date carbon figures please contact us.

LOW CARBON GLASS

Thermosash's commitment to sustainability also extends to our glass selection. With access to worldwide low-carbon glass suppliers, we ensure that our projects benefit from environmentally friendly and high performance glazing options, further reducing the carbon footprint

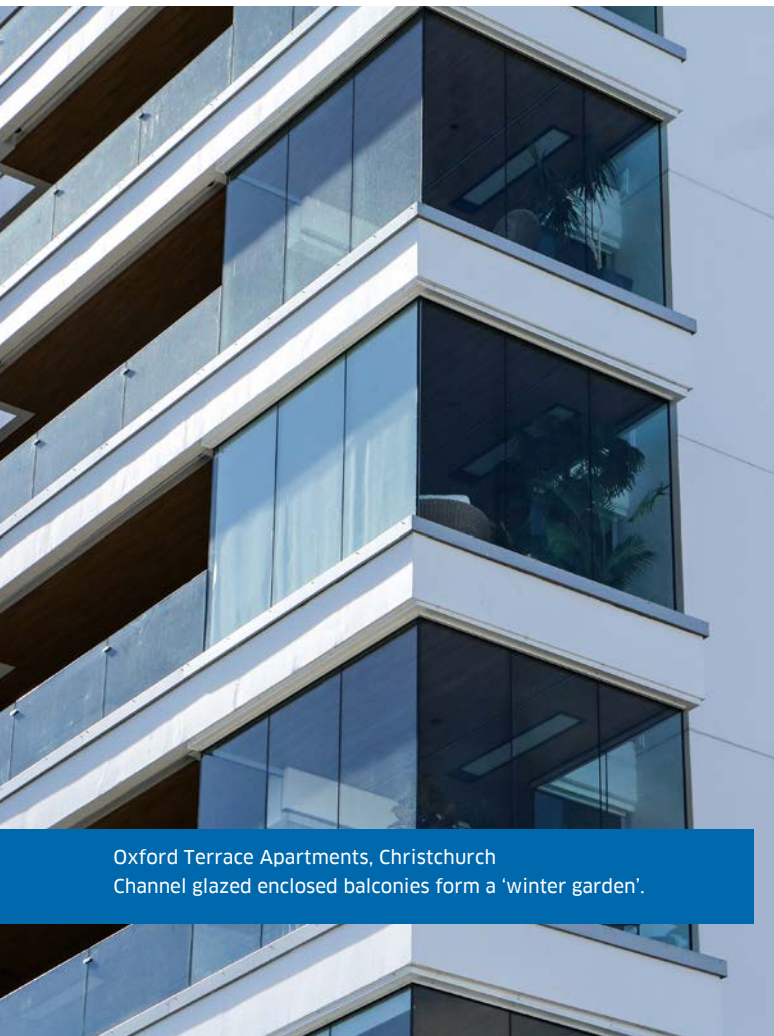
FACADE OPTIMISATION STRATEGIES

To achieve optimised high performance outcomes we offer our clients the option of a Project Sustainability Analysis that covers different aspects of the full sustainability cycle. When specifying our facade systems, clients can engage us to implement one or several of our Facade Optimisation Strategies to achieve their project sustainability goals. To gain the most from our strategies, talk to us early on in the design phase of your project.

Our Thermosash Sustainability Team can assess and provide analysis reports on embodied and operational carbon engineering optimisation and costs, energy and comfort optimisation and costs, as well as assistance with Green Star credits - these strategies help to guide material selection, shape a more efficient design and provide clarity on ROI payback periods.

REDUCTION OF OPERATIONAL EMISSIONS

Through a full measurement and target reductions audit undertaken by Toitū Envirocare, Thermosash Commercial Ltd achieved Carbonreduce Certification. This provides a baseline for subsequent emission reduction targets going forwards. Please contact us for up to date certification figures.



Oxford Terrace Apartments, Christchurch
Channel glazed enclosed balconies form a 'winter garden'.



BENEFITS OF A THERMOSASH CUSTOM FACADE SOLUTION

Thermosash is a New Zealand based business and has been engineering and manufacturing specific design facade solutions across the country since 1973. We deliver solutions using our trusted and proven systems, offering increased value in terms of;

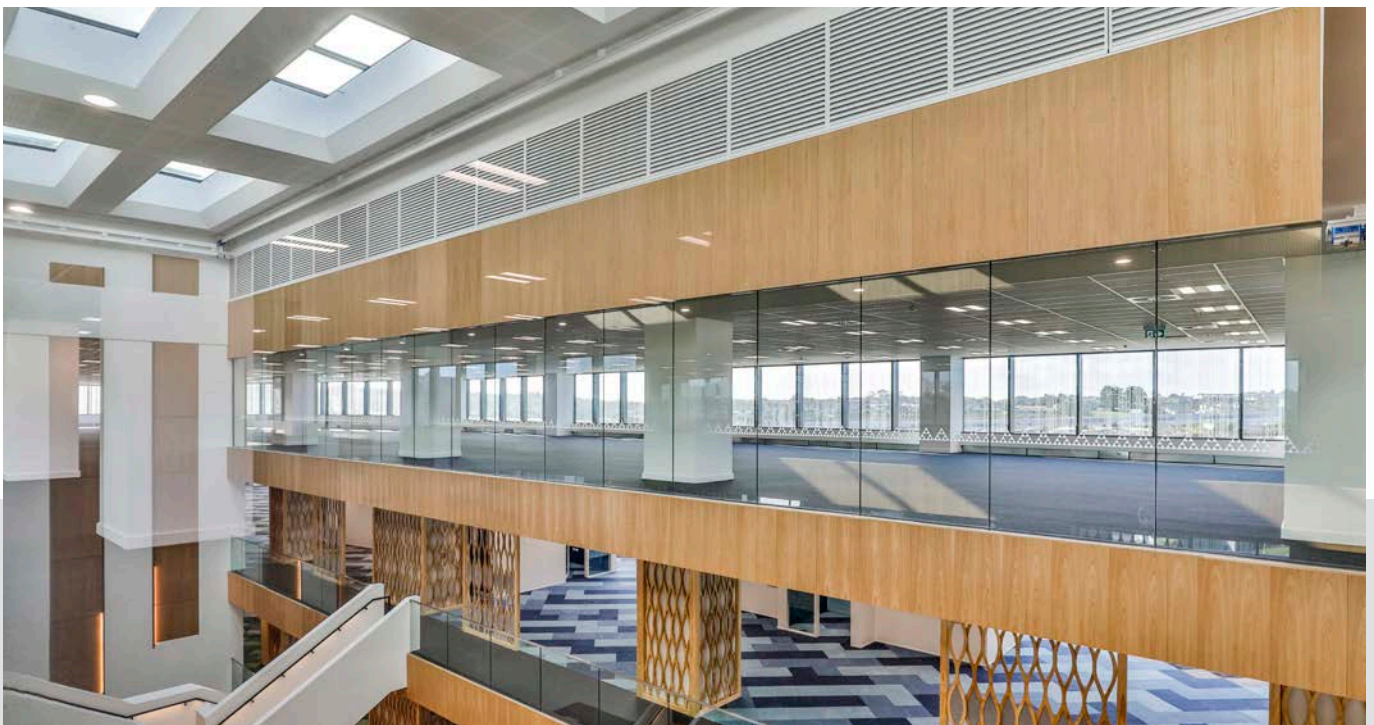
- +50 years of experience and expertise in the facade solutions industry in New Zealand, and ongoing trust within the industry
- In-house expertise across the entire process
- Proven experience in complex project delivery
- Totally integrated service with ECI /ECE - engineering, producer statement generation, full shop drawings, manufacture and installation.
- Custom engineered high performance solutions tailored to architectural, environmental and structural requirements
- Durability of systems and longevity of product lifespan
- Responsible procurement and waste management
- Design and detail to accommodate seismic loads and inter-storey differential movement, as well as wind and other live loads
- Risk mitigation through one provider and one warranty - no multiple trades required
- Local precision manufacturing in Auckland, Wellington & Christchurch with logistical site delivery
- Expert installation with well-considered strategies and safety methodologies

PREFABRICATED UNITISED SYSTEM ADVANTAGES

- Off-site fabrication and glazing reduces on-site waste and clutter
- Unitised panels can seamlessly incorporate a variety of cladding materials and integrated elements
- Engineered to accommodate project specific environmental conditions and design constraints for high performance outcomes
- Quality assurance and control is implemented across the fabrication process and during on-site installation
- Site installation is quicker due to the modular construction - enclosing buildings rapidly and reducing on-site programme time
- On-site delays are reduced during inclement weather - fabrication can continue even if site falls behind and Unitised panels can be placed on completed floors in loading crates ready for installation on a just-in-time basis.
- Scaffold and crane requirements are dramatically reduced

COST SAVINGS

- Reduced number of junctions with other trades if Thermosash engineers, manufactures and installs the building envelope elements such as curtainwall, glazed and non-vision unitised panels, rainscreen, skylights, mechanical air louvres, solar shading and integrated elements, architectural metal folding, canopies, balustrades, flashings etc.
- Reduced number of council inspections during construction and possible delays, saving on compliance costs
- Specifically designed and engineered facade solutions that offer high performance and durability which contribute to cost savings on operational energy and maintenance over the lifespan of the building, and maximises ROI

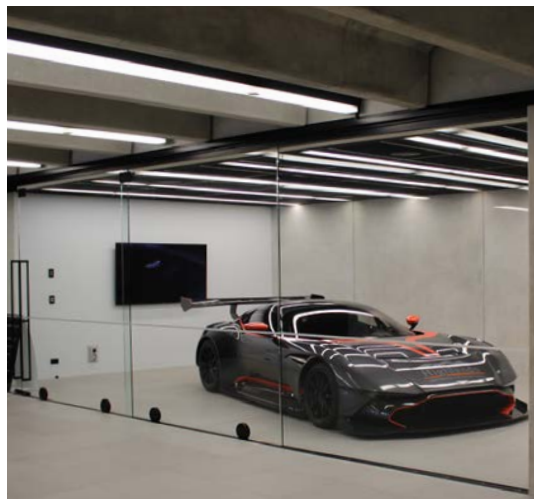


6-8 Munroe Lane, Auckland

INTERNAL CHANNEL GLAZING TO UPPER LEVEL OVERLOOKING THE ATRIUM



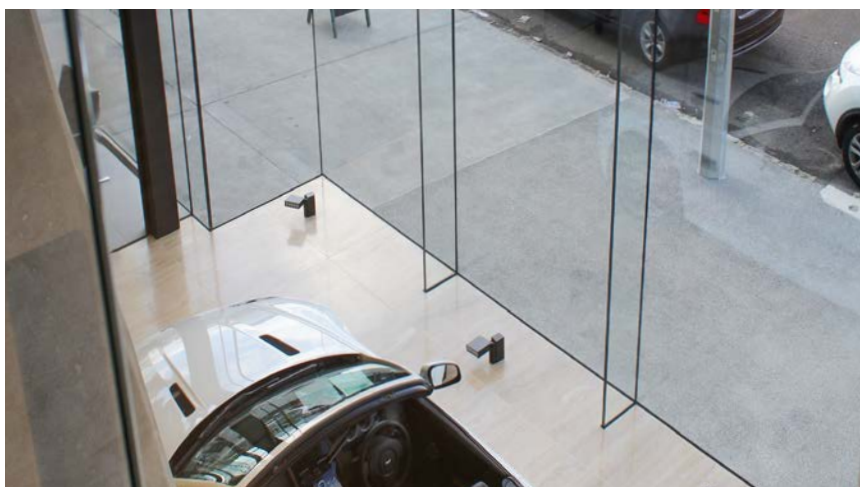
Channel glazed front entrance with integrated framed glass auto doors



Channel glazed showroom with large integrated glass sliding door.



Channel glazed offices with top hung glass slider



Channel glazing with integrated glass vertical fins



Giltrap Prestige Building, 119 Gt North Road, Auckland
SHOWROOM WITH CHANNEL GLAZING AND INTEGRATED GLASS VERTICAL FINES



Aotea Events Centre, Auckland CBD - channel glazed atrium incorporating glass auto doors



Royal Sun Alliance, Auckland - light weight structural tension cables and support fixtures on straight and angled channel glazing, provides minimal intrusive wind bracing



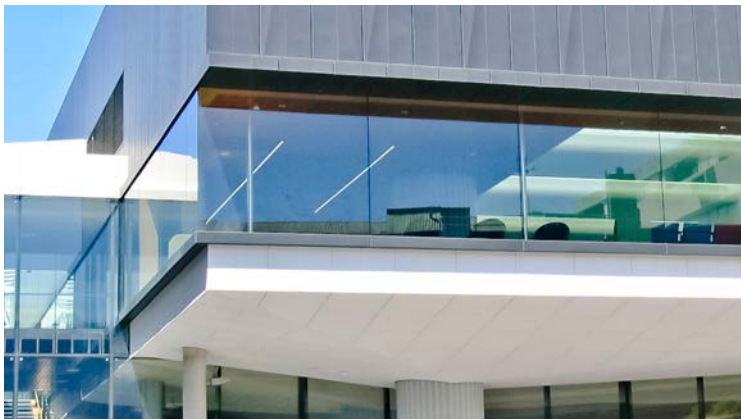
Medcar Porche, Christchurch - showroom with recessed channel glazing and integrated glass fins



Constellation Bus Station, Auckland - channel glazed pedestrian overpass



UOA Engineering 405 - channel glazed entrance with frameless glass doors



Victoria University Wellington, The Hub, Kelburn Campus - channel glazing to upper level



Lumley Tower, Auckland - channel glazed entrance incorporating revolving door

OUR BRANCHES

AUCKLAND

158-164 Central Park Drive
Auckland 0610, New Zealand
PO BOX 100-340 North Shore,
Auckland 0745, New Zealand
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WELLINGTON

17-19 Marine Parade, Petone,
Lower Hutt 5012, New Zealand
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Lower Hutt 5045 New Zealand
04 939 4500

LEVIN

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Lower Hutt 5045 New Zealand
06 949 1717

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Thermosash are members of:



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