ALTECH SYSTEMS

Product Technical Statement

SKYRAIL CG-T SERIES

Glass Balustrade System (Top Fixed)

Product Description

The Skyrail CG-T Series is the ultimate and premium **Top Fixed** glass balustrade and fencing system, distinguished by its ability to offer unimpeded views combined with exceptional strength and safety in modern architectural applications.

Available in glass only configuration, using sentry type laminated glass; or with an interlinking handrail using toughened safety glass.

Engineered for versatility, the Skyrail CG-T Series has a number of innovative features:

- Its push-pull base design enables glass install and alignment from the inside; negating the requirement for scaffolding.
- The base channel can incorporate a fin post at ends to support an interlinking handrail and therefore not need to fix to the building wall.

The Skyrail CG-T has a continuous base channel profile and when powdercoated offers a sleek linear design. This adaptability ensures the system can be seamlessly integrated into a variety of applications, such as balconies and staircases and pool fencing.

All Altech balustrades come with a project-specific PS1.

Key Features

- Top fixed
- Continuous base channel system with an internal clamp for securing glass panels.
- Glass panels do not require drilling or pre-formed holes for installation.
- Suitable for 13.52 mm and 15.52 mm SentryGlas with no top rail required.
- Compatible with 12 mm and 15 mm toughened glass (a top rail is required for balustrade applications).
- Engineered to meet all wind zones up to Extra High (EH).
- Designed to comply with live load requirements for residential and equivalent commercial occupancies in accordance with NZS1170, Table 3.3.
- Base channel allows for the attachment of a fin post to support a top interlinking rail, eliminating the need for fixing to a building wall where no adjacent structure exists.
- Compatible with both waterproof and floating deck systems.
- Suitable for installation on timber, concrete, and steel substrates.
- Fully interoperable with other Altech balustrade products.
- Available in a wide range of durable powder-coated or anodised finishes.
- Warranty coverage includes: 5 years on materials (excluding surface coatings), 2 years on workmanship, and 20 years on Dulux Duratec powder coating (other coating warranties apply as per the surface coating applicator).

Product Technical Statement

Scope of Use

Skyrail CG-T Series is suitable for a wide range of residential and commercial applications, including:

- Decks, balconies, ramps, stairs, and pool fencing
- Screens in conjunction with balustrading
- Occupancies where people congregate

The system is designed to meet the requirements of the following occupancy types in as defined in NZS 1170:

- A (Domestic and residential)
- A Other (External balconies)
- B, E (Offices and workspaces)
- C3 (Areas without obstacles)

Skyrail CG-T Series has been engineered to fix to a range of substrates, including timber, concrete, and steel substrates, and is suitable for;

- All wind zones including very high and extra high as defined by NZS 3604
- Coastal, geothermal, and industrial environments

Limitations of Use

All Skyrail CG-T extrusions, components, and hardware must be supplied by Altech Systems NZ Ltd or JW Projects Ltd.

All Skyrail CG-T balustrade installations must be supported by a Producer Statement (PS1 – Design), available from Altech Systems Ltd.

- Any deviation from standard fabrication or installation methods must be accompanied by a site-specific PS1 issued by a suitably qualified design professional.
- Aluminium extrusions are manufactured to 6060 T5 or T6 specifications to ensure strength and durability.
- Installation must be carried out by an Altech Systems NZ Ltd approved installer in accordance with its technical documentation.

Statement of Building Code Compliance

All products are designed by a Chartered Engineer and are manufactured and tested in accordance with the relevant sections of the New Zealand Building Code and New Zealand Standards listed below:

New Zealand Building Code Clauses

- B1 Structure – B1.3.1, B1.3.2, B1.3.3 (C, F, H, J, M), B1.3.4
- B2 Durability – B2.3.1 (B), B2.3.2 (A, B)
- D1 Access Routes – D1.3.3 (J, K)
- F2 Hazardous Building Materials – F2.3.1, F2.3.3 (A, B)
- F4 Safety From Falling – F4.3.1
- F9 Swimming Pools – F9.3.1, F9.3.3

Other Compliance Documents

- NZS 1170 – Loadings
- NZS 4223.1 and 4223.3 – Glazing in Buildings
- AS/NZS 1664 – Aluminium Structures
- Powder Coating Systems – Compliant with Window & Glass Association NZ Powder Coating Quality Assurance Systems (PQAS)
- Powder coated surface finishes – Formulated to meet AS 3715 and AAMA 2605
- Anodised surface finishes – Compliant with WGANZ Voluntary Specification SFA 3503-03-2005

Warranty

Altech Systems NZ Ltd offers the following warranties for the Skyrail CG-T Series:

- Workmanship: 2-year warranty
- Materials (excluding surface finishes): 5-year warranty
- Surface Finishes: Covered by the applicator or manufacturer's warranty. The duration of this warranty may vary depending on the specified coating system.

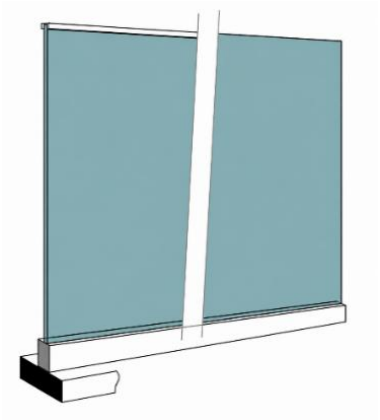
Altech Systems Ltd recommends the use of Duratec or an equivalent high-performance surface finish specification, which may offer up to 20 years durability warranty and 20 years colour warranty, subject to environmental conditions and compliance with the coating manufacturer's maintenance requirements. For further information on warranties, please refer to the Altech Systems "Balustrade Warranty" document.

In Service History

Skyrail balustrades have been in use since the early 1990s, installed on thousands of balconies, landings, stairs, and pool areas throughout New Zealand. Some of the earliest installations are still performing to a high standard and remain in excellent condition.

Notable projects include

- Edgerley Apartments
- Ocean Point Apartments
- Queens Park Residences
- Edition Apartments



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