ALTECH SYSTEMS

Product Technical Statement

SKYRAIL Af SERIES

Aluminium Fin Slat Balustrade System

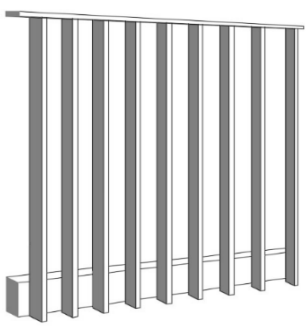
Product Description

The Skyrail Af Series is a premium aluminium balustrade and fencing system that stands out for its distinctive modern design, defined by a refined “fin array” baluster layout. This signature feature delivers a sleek, continuous architectural aesthetic, making it an ideal choice for contemporary residential and commercial applications.

Engineered for flexibility, the Skyrail Af Series supports multiple installation options, including both face-fixed and top-mounted configurations. This allows it to adapt effortlessly to a wide range of structural and site conditions, from balconies and staircases to boundary and privacy fencing.

The Af Series’ system offers a diverse selection of fin sizes, spacing options, and top rail profiles, enabling tailored design solutions that align with specific project requirements and architectural visions. Whether the goal is to achieve a bold linear statement or a more subtle, refined look, the Af Series provides the tools to bring unique design concepts to life—without compromising structural integrity or compliance.

All Altech balustrades come with a project specific PS1



Key Features

- Continuous aluminium fin balusters, suitable for face-fixed or top-mounted installation which is customisable
- Post options include a “faux” post or fins mounted in front of the post/rail support structure
- Designed for full compatibility, the system is fully interchangeable with a range of other Altech balustrade products, offering flexibility to customise and integrate into any project requirement
- Available in a wide range of fin widths — including 50mm, 75mm, 115mm — with bespoke sizing available
- Skyrail Af series is compatible with both waterproof and floating deck systems
- Suitable for direct fixing to building structures with cavity cladding
- Finished in a durable powder coat with a wide colour selection, or anodised for a premium finish
- Due to the Skyrail Af Series being customizable, options to have an integrated handrail are available
- Can be fixed to a range of substrates, including timber, concrete, and steel
- 5 year warranty on materials, (excluding surface coating), 2 year warranty on workmanship, 10 year warranty on powder-coating, 20 year warranty on Dulux Duratec powder-coating. (Refer to surface coating applicator for all other surface coating warranty periods)

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Scope of Use

The Skyrail Af Series is suitable for a wide range of residential and commercial applications, including:

- Decks, balconies, ramps, stairs, and pool fencing
- Gate systems, with a range of compatible design options

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

- A (Domestic and residential)
- A Other (External balconies)
- B (Offices and workspaces)
- C3 (Areas where people may congregate)
- E (Educational facilities)

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

- Engineered for performance in all wind zones including very high and extra high as defined by NZS 3604
- Suitable for use in coastal, geothermal, and industrial environments

Limitations of Use

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

- All Skyrail Af 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 Af 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

- The Barrington
- Edgerley Apartments
- Fruitvale Apartments
- Hadlow Apartments
- Lyncroft Apartments
- William Blofield, Kainga Ora
- Asure Quality Facilities
- Remuera Gardens Retirement Village
- Victoria Lane Apartments