

THE OUTDOOR LOOK

## Fully Frameless Balustrade Technical Compliance & Safety Standards

### Introduction

The Fully Frameless Balustrade System is engineered and manufactured to meet modern safety and structural standards for use across residential and commercial environments.

This guide outlines the technical specifications, load ratings, and compliance standards applicable to the system, ensuring both installers and end users can maintain confidence in its performance.

### System Overview

The system features a base-mounted aluminium channel with adjustable wedge clamps for easy alignment and secure locking of glass panels. It delivers a post-free, minimal aesthetic while maintaining compliance with UK building codes.

### Applications:

- Residential and commercial decks
- Balconies and terraces
- Poolside areas and stairway landings

### Technical Specifications

#### Glass Panels:

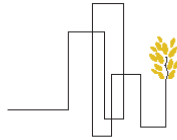
- Thickness: 15 mm, 17.5 mm, 19 mm, and 21.5 mm toughened or laminated glass
- Standards: BS EN 12150 (Toughened Safety Glass), BS EN 14449 (Laminated Safety Glass)

#### Aluminium Channel:

- Material: Structural-grade aluminium alloy
- Finishes: Satin anodised, powder-coated black, or mill finish
- Channel Lengths: 2.5 m and 5 m
- Mounting: Base-mounted using mechanical anchors
- Height to Glass (with packers): 22 mm

#### Design Features:

- Wedge-lock system for fast and accurate glass adjustment
- Requires four wedges per running metre
- Optional finishing trims available for aesthetic concealment



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#### Structural Performance & Load Testing

Tested in accordance with:

- **BS 6180:2011 – Barriers in and about buildings**
- **BS EN 1991-1-1 – Eurocode 1: Actions on structures**

#### Performance Results:

- **Residential Use (Category A):** 0.74 kN/m uniform line load achieved
- **Commercial Use (Category C1/C3):** 1.5 kN/m with laminated glass

These results confirm the system's suitability for both domestic and light commercial applications when installed as specified.

#### Safety Standards & Material Certification

##### Glass:

- Must comply with BS EN 12150 or BS EN 14449.
- All edges to be polished or arrissed.
- Laminated glass recommended where fall protection is critical.

##### Aluminium Components:

- Manufactured in accordance with BS EN 755 and BS EN 12020 standards.
- Surface finishes tested for corrosion and abrasion resistance.

##### Fixings & Anchors:

- To meet BS 8539:2012 – Code of Practice for Anchor Installation.
- Use only compatible stainless steel or galvanised anchors.

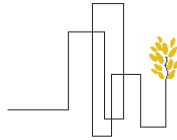
#### Installation Compliance

##### Installer Responsibilities:

- Installations must be performed by competent professionals.
- Verify substrate strength and ensure anchors meet load requirements.
- Conform to UK Building Regulations Part K (Protection from falling).

##### Site Considerations:

- Channels must be installed level with correct drainage orientation.
- Avoid dissimilar metal contact.
- Use non-acidic sealants and ensure all fixings are corrosion resistant.



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## **Fully Frameless Balustrade Technical Compliance & Safety Standards**

### **Maintenance & Inspection Requirements**

- Inspect all components annually, or every 6 months in coastal conditions.
- Check for corrosion, glass movement, or wedge loosening.
- Replace damaged packers, wedges, or seals immediately.
- Maintain an inspection record for compliance and warranty validation.

### **Health & Safety Guidance**

- Use PPE (gloves, safety glasses, and footwear) during handling and installation.
- Never drill or modify glass panels.
- Use certified lifting equipment for large panels.
- Isolate the work area during installation to prevent public access.

### **Environmental Responsibility**

- Aluminium channels and glass are fully recyclable.
- Packaging materials are recyclable or sourced sustainably.
- Designed for long service life with minimal maintenance.

### **Compliance Summary**

The Fully Frameless Balustrade System complies with:

- BS 6180:2011 – Barriers in and about buildings
- BS EN 12150 / BS EN 14449 – Safety glass standards
- BS EN 755 / BS EN 12020 – Aluminium profile standards
- BS 8539:2012 – Anchors and fixings
- BS EN 1991-1-1 – Structural loading
- Part K – UK Building Regulations