

THE OUTDOOR LOOK

## Swageless Wire Balustrade System Technical Compliance & Safety Standards

### Introduction

The Swageless Wire Balustrade System is engineered to meet UK safety, performance, and structural standards. This guide outlines all relevant compliance requirements, technical specifications, and installer responsibilities.

### System Overview

This system consists of:

- 3 mm 316 stainless steel wire rope (7 rows)
- 48.3 mm stainless steel round posts
- Swageless connectors for quick, tool-free assembly
- Pre-assembled posts with 7 or 14 M6 eyebolts
- Saddles suitable for 48.3 mm diameter tube handrail

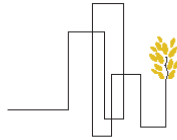
### Suitable for:

- Decking
- Balconies
- Stairways
- Commercial and residential areas
- Coastal and inland locations

### Technical Specifications

#### Wire Rope

- **Diameter:** 3.0 mm
- **Material:** 316 stainless steel
- **Construction:** 7×7 or 7×19 depending on length and flexibility
- **Coatings:** None (bare stainless for maximum grip)



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### Posts

- **Diameter:** 48.3 mm
- **Material:** 316 stainless steel
- **Types:**
  - 14-Hole Corner Post with welded base & eyebolts
  - 14-Hole Mid Post
  - 14-Hole Mid Post (with eyebolts fitted)
  - 7-Hole End/Mid Post with base & eyebolts

### Connectors & Fittings

- Locking Collar for 3 mm Wire
- Swageless Turnbuckle Connector
- Swageless Plain Buckle Connector
- Eyebolt Connector for 3 mm Wire (316)

### Handrail Saddles

- Compatible with **48.3 mm diameter tube**
- Stainless steel 316
- Suitable for level and angled runs

### Structural & Performance Compliance Load Testing & Performance

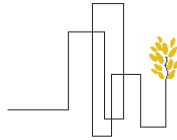
Complies with:

- **BS 6180:2011 – Barriers in and about buildings**
- **BS EN 1991-1-1 – Structural loading**

Typical performance when installed correctly:

- Domestic areas (Category A1/A2): 0.36 kN/m (wire barrier typical rating)
- Commercial/light public applications: As per engineer guidance

Note: Wire balustrades rely heavily on substrate strength, post spacing, and wire tension. Installer must confirm all load requirements.



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### Material Standards

- **BS EN 10088** — Stainless steel material performance
- **ISO 3506** — Stainless steel mechanical properties
- **BS EN 12195** — Wire and tension component safety

### Installer Responsibilities

- Verify substrate load-bearing capacity.
- Use only 316-grade stainless steel fixings.
- Ensure posts are plumb before tensioning wires.
- Tension wire only after all posts and eyebolts are fully secure.
- Maintain uniform gaps and wire spacing (7 rows).
- Ensure no exposed wire ends remain accessible.

### Maintenance & Inspection Requirements

- Inspect every 6–12 months.
- Check tension on all 7 wires.
- Verify integrity of welds on pre-assembled posts.
- Replace any frayed or kinked wire immediately.
- Keep a maintenance log for compliance.

### Health & Safety Guidance

- Wear PPE when handling stainless wire.
- Use correct cutters for 3 mm stainless rope.
- Do not hand-bend wire — use proper tools.
- Secure work area when tensioning wires.
- Never drill or modify posts after installation.

### Environmental Responsibility

- Stainless steel and wire components are fully recyclable.
- Packaging materials are recyclable and responsibly sourced.