

Wire Balustrade System

Technical Specification & Safe Use — swageless 316 stainless steel wire system

This sheet describes the swageless wire balustrade system supplied by The Outdoor Look: 316 marine-grade stainless steel posts, 3 mm wire rope and swageless tensioning fittings, finished with a 48.3 mm stainless handrail at 1100 mm. It sets out the specification, the setting-out rules every job is worked to, and the limits on where the system may be used.

This system is not a guarding barrier. It is supplied for fall heights below 600 mm only. The wires sit at 132 mm centres, so a 100 mm sphere passes between them and the system does not meet the infill requirement for guarding under UK building regulations. Where guarding is required, specify an aluminium or glass balustrade system instead.

01 WHERE THIS SYSTEM CAN BE USED

UK building regulations require guarding wherever there is a drop of more than 600 mm. Guarding must be at least 1100 mm high for external balconies, terraces and decking, and the infill must prevent a 100 mm sphere passing through any gap. This system meets the height requirement but not the infill requirement.

Suitable for

- Deck edges close to ground level
- Garden terraces and patio edges
- Raised borders and planting edges
- Low steps where the drop is under 600 mm
- Coastal and inland locations

Not suitable for

- Balconies
- Raised decking or terraces with a drop over 600 mm
- Stairs or landings where guarding is required
- Any location where children have access to a drop
- Commercial or public areas requiring guarding

Where guarding is required, use a system designed for it. If you are unsure which applies to your project, confirm with your local building control or call 01282 526428.

02 PRODUCT & MATERIAL SPECIFICATION

System type	Tensioned horizontal wire infill on bolt-down posts, with handrail
Material / grade	316 marine-grade stainless steel throughout
Finish	Satin
Post	48.3 mm diameter × 972 mm tube · welded base plate · bolt down

Overall height	1100.30 mm, underside of base to top of rail
Finished height	1100 mm
Base plate	115.6 mm diameter plate · 120 mm with cover
Base fixing holes	4 × 10.4 mm and 8 × 6.5 mm countersunk, all on a 94.8 mm PCD
Wire	3.0 mm 316 stainless rope · 7 wires per run
Wire spacing	132 mm centres · lowest wire 128 mm above the base
Wire hole heights	128, 260, 392, 524, 656, 788 and 920 mm above the base
Eyebolt thread	M6
Handrail	48.3 mm stainless tube in an adjustable saddle, cut to size on site
Saddle	Adjustable, supplied loose with each drilled post, bonded into the post top
Fixings	Ground fixings not supplied — substrate-appropriate fixings by installer

03 POST TYPES

TYPE	WIRE HARDWARE	WEIGHT	USED WHERE
Start / End post	7 × M6 eyebolts, one face	3.7 kg	Each end of a run
Mid post	14 × M6 eyebolts, two opposite faces	3.7 kg	A wire stops and restarts mid-run
Corner post	14 × M6 eyebolts, two faces at 90°	3.7 kg	A change of direction
Through post	7 × 6 mm plain holes, no eyebolts	3.7 kg	Wire passes through along a straight run
Plain post	Undrilled, supplied 1100 mm long	4.65 kg	Stair runs — drilled on site to the pitch

04 SETTING OUT

PARAMETER	VALUE	BASIS
Maximum post centres	1500 mm	The Outdoor Look standard
Maximum wire span between tensioners	10 m	The Outdoor Look standard
Wires per run	7	Fixed by post drilling
Tensioners per tensioned run	7 turnbuckle + 7 plain buckle	Fixed by wire count
Minimum run length	300 mm	Practical minimum

The 1500 mm maximum post centre is **our own figure, not a manufacturer specification**. The component manufacturer publishes a lower figure of 1200 mm. Every job we set out works to our 1500 mm maximum, and it must not be presented as a supplier or standard figure.

A wire terminates at each end of a run, at every corner, either side of a gate opening, at any change of pitch, and at any break required by the 10 m maximum. Each separately tensioned length takes 7 turnbuckle connectors and 7 plain buckle connectors whatever its length — so a long straight run is the most economical shape and a layout of short legs costs more in fittings than its length suggests.

05 STRUCTURAL PERFORMANCE

No load test data is held for this system.

The components are factored and the supplier publishes no load figures for the assembled system, the base plate, or the post under wire tension. We do not quote a load rating we cannot evidence, and no such rating should be inferred from this sheet or from any figure quoted elsewhere for wire barriers generally.

Because the system is supplied only for fall heights below 600 mm, no guarding load case arises under UK building regulations. Where any structural performance requirement exists for a specific project, establishing it is the responsibility of the specifier or building designer, and this system should not be assumed to meet it.

06 MATERIAL STANDARDS

STANDARD	COVERS
BS EN 10088	Stainless steel material performance
ISO 3506	Mechanical properties of stainless steel fasteners

316 is the most corrosion-resistant stainless grade in common architectural use and is suitable for coastal locations with routine cleaning. Wire rope construction is to be confirmed with the supplier and is deliberately not stated here.

07 CONDITIONS OF INSTALLATION

- Confirm the fall height is below 600 mm before installing
- Verify the substrate will carry the posts and the applied wire tension
- Use 316-grade stainless fixings — dissimilar metals cause galvanic corrosion
- Ground fixings are not supplied; each base takes four, and the correct fixing depends entirely on the surface
- Set every post plumb and allow anchors to cure fully before any wire is tensioned
- Tension only after all posts and eyebolts are secure, working from the bottom wire upward
- Tension until taut with no visible sag — over-tensioning loads the eyebolts and bases without improving the balustrade
- Leave no sharp or exposed wire ends accessible
- Do not drill or modify factory-drilled posts after installation

Stair runs

Plain posts are supplied undrilled. Holes are drilled on site at 132 mm centres, angled to the pitch of the stairs, so the wires line through with the factory-drilled posts at each end of the flight. A drill wanders on a round tube — use a jig or have the posts drilled in a workshop. Wires that are not parallel are clearly visible on a finished balustrade and cannot be

corrected afterwards.

08 INSPECTION & HANDLING

- Inspect every 6 to 12 months and check tension on all 7 wires
- Expect to re-tension once a few weeks after installation as the wires settle — this is normal and is not a fault
- Check welded bases for movement and eyebolts for tightness
- Replace any frayed or kinked wire immediately
- Wear gloves and eye protection when handling and cutting stainless wire
- Use wire rope cutters sized for 3 mm stainless; do not bend wire by hand
- Secure the work area while tensioning

All stainless steel and wire components are fully recyclable. Packaging is recyclable and responsibly sourced.

This sheet describes the wire balustrade system only. Responsibility for the supporting structure, the substrate fixings, and confirming that the fall height is below 600 mm rests with the installer or building designer. This document supersedes "Technical Compliance & Safety Standards", which is withdrawn.