Steel and metal *staircase* specification

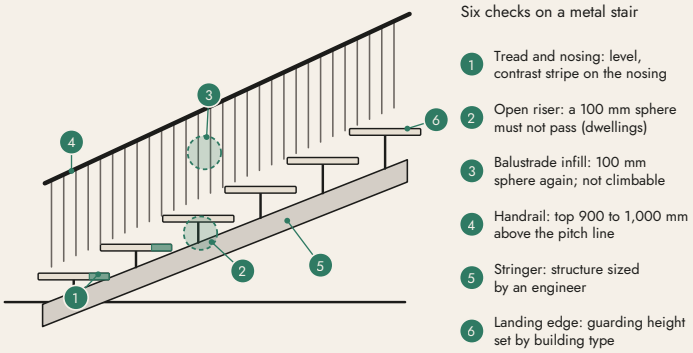
What Building Control checks on a steel or metal stair, with the Approved Document K (2013, England) paragraph for each and the points that only an engineer can settle. General guidance, not engineering advice.

Compliance guidance. Figures are from Approved Document K, 2013 edition, for England. Wales, Scotland and Northern Ireland have their own guidance. The British Standards named were not read, and no structural load, deflection or fixing size is given. This is guidance, not engineering or legal advice: your building control body and a chartered structural engineer decide.

AT A GLANCE

Item	Approved Document K, 2013 (England)	Para	What to write or check
Rise and going	Table 1.1. Private stair: rise 150 to 220 mm, going 220 to 300 mm, pitch 42° at most. Utility: 150 to 190, 250 to 400. General access: 150 to 170, 250 to 400.	1.3	Survey the floor-to-floor height, then set out.
Open risers	Dwellings: allowed if treads overlap 16 mm or more and a 100 mm sphere cannot pass. Other buildings and common stairs in flats: risers not open.	1.6, 1.9, 1.10	Show overlap and sphere check, or closed risers.
Nosings	Other buildings: contrasting, 55 mm wide or more on tread and riser; any protrusion 25 mm or less. Common stairs in flats: 50 to 65 mm tread, 30 to 55 mm riser.	1.7, 1.10	Contrasting nosing strip or edge.
Handrails	Top 900 to 1,000 mm from the pitch line; both sides if the stair is 1,000 mm or wider. Slip-resistant surface that does not get excessively hot or cold.	1.34, 1.36	Height from the pitch line; name metal and finish.
Guarding and infill	Other buildings: at two or more risers. Dwellings: at a drop over 600 mm. Height per Diagram 3.1. Where under-fives may be present: 100 mm sphere cannot pass, not readily climbed.	1.38 to 1.41, 3.3	Sphere check on baluster gaps. See the balustrade sheet.
Spiral, helical, industrial	Spiral and helical: BS 5395-2. Industrial stairs: BS 5395-3 or BS 4211 (ladders).	1.28, 1.33	Ask the engineer and Building Control.
Loads on guarding	BS EN 1991-1-1 with its UK National Annex and PD 6688-1-1; BS 6180 for barriers. No load is quoted here.	3.2c	The engineer states the load case.

Measured in millimetres. The paragraph numbers are those of the 2013 edition. Table 1.1 and the other dimensions are quoted as printed.



Six checks on a steel stair. Schematic, not to scale; spheres drawn larger than the openings. Original drawing by Make Bespoke Studio, after ADK (2013).

SPECIFICATION WORDING

STAIR GEOMETRY AND CATEGORY

Stair [S1] is a [private stair in a dwelling / stair in a building other than a dwelling / common stair in a block of flats] and is to comply with Approved Document K (2013 edition, England). Rise [ ] mm (Table 1.1 range for the category) and going [ ] mm, constant throughout each flight, maximum pitch [42°] for a private stair. Finished floor-to-floor height [ ] mm to be verified on site before shop drawings.

OPEN RISERS (DWELLING) OR CLOSED RISERS

[Dwelling: open risers. Treads overlap by not less than [16] mm and no opening allows a 100 mm diameter sphere to pass.] [Other buildings and common stairs in flats: risers closed.] The sphere check is to be shown on the shop drawing.

NOSINGS AND TREAD SURFACE

Tread nosings to contrast visually with the tread and riser, [55] mm wide on tread and riser, protruding no more than [25] mm. Tread surface [finish] to be supported by a slip-resistance test report for the surface and finish as supplied, wet and dry, to [method and edition to be stated by the specifier].

HANDRAILS AND GUARDING

Handrail [diameter and metal] with its top [900 to 1,000] mm above the pitch line, on [both sides / one side], continuous at landings, with a [finish] that is slip-resistant and contrasts with its background. Guarding [900] mm on flights and [1,100] mm on landings, infill such that a 100 mm sphere cannot pass and it cannot readily be climbed. Loads per [standards confirmed by the engineer].

STRUCTURE AND RESPONSIBILITY

Stringers, tread supports, fixings and connections to be designed by [name], chartered structural engineer, with calculations issued before fabrication. Fixing method, anchor type and deflection limit to be stated by the engineer. Substitution of section, material or fixing requires written approval.

TERMS USED

Rise
The vertical distance between the top surfaces of successive treads.

Pitch line
The sloping line connecting the nosings of a flight. Handrail height is measured from it.

Nosing
The front edge of a tread. Approved Document K asks for it to contrast visually in most buildings.

Open riser
A step with a gap between treads instead of a closed riser. Allowed in dwellings only, with limits.

STANDARDS AND SOURCES

- Approved Document K: Protection from falling, collision and impact, 2013 edition, for use in England: gov.uk page shows publication 3 January 2013; text read 7 Nov 2026.
- gov.uk: Have your say on the future of Part K: call for evidence, Oct 2026; search results only.
- BS 5395-2 (helical and spiral stairs), BS 5395-3 (industrial stairs), BS 4211 (ladders): cited by ADK; not read; BS 5395-2 shown under revision: confirm.
- BS 5395-1:2010 (straight stairs and winders): listed current; not read; not cited by ADK 2013.
- BS EN 1991-1-1 with UK National Annex, PD 6688-1-1, BS 6180:2011: cited by para 3.2; not read.

Full guide: https://makebespoke.com/trade/technical/steel-and-metal-staircase-specification. Make Bespoke Studio coordinates manufacture through its partner workshops. Figures are guidance only and your specification governs; some may be superseded, so contact the studio to verify.