

SAMPLE — LIVE DEMO OUTPUT · DEMONSTRATION RATES

Steel access staircase — geometry to code, members sized

Inputs: floor-to-floor height 3.00 m · clear width 1.00 m · straight layout · margin 15% (demonstration)

1 • Geometry solution

STEP	WORKING	RESULT	CHECK
Riser count	ceil(3000 / 180 max) — max riser 180 mm	17 risers	✓
Riser height	3000 / 17	176 mm	≤ 180 ✓
Going	comfort rule 620 – 2R, banded 250–300	267 mm	✓
Comfort check	2R + G = 2×176 + 267	619 mm	550–700 ✓
Pitch angle	atan(176 / 267)	33.5°	≤ 38° ✓
Flights	max 16 risers per flight → 9 + 8 risers	2 flights, 1 landing	✓
Plan run	treads + landing depth 1.00 m	5.01 m	—

2 • Stringer selection

CANDIDATE	KG/M	SPAN CAPACITY	REQUIRED SPAN	VERDICT
PFC 150×75	17.9	3.20 m	2.66 m	SELECTED ✓
PFC 200×75	23.4	4.20 m	—	not required

Method note. Every figure above is deterministic arithmetic from published section data — no AI in the numbers. The checks shown are the same pass/fail gates the live engine enforces while you drag the sliders.