

Section 1

STAIRS AND LADDERS

Steepness of stairs

Rise and going

1.1 The requirement will be satisfied if, in a flight, the steps all have the same rise and the same going to the dimensions shown in 1.3 or comply with 1.4 and 1.5.

1.2 Three categories of stairs are considered in this Approved Document:

“Private” intended to be used for only one dwelling.

“Institutional and assembly” serving a place where a substantial number of people will gather.

“Other” in all other buildings.

1.3 Indication of the practical limits for rise and going, for each category of stair which satisfies the requirements, is given below.

a. **Private stair:** Any rise between 155mm and 220mm used with any going between 245mm and 260mm, or

Any rise between 165mm and 200mm used with any going between 223mm and 300mm.

b. **Institutional and assembly stair:** Any rise between 135mm** and 180mm** used with any going between 280mm and 340mm.

c. **Other stair:** Any rise between 150mm** and 190mm** used with any going between 250mm and 320mm.

1.4 Table 1 gives the maximum rise and minimum going for the three stair categories.

Table 1 Rise and going

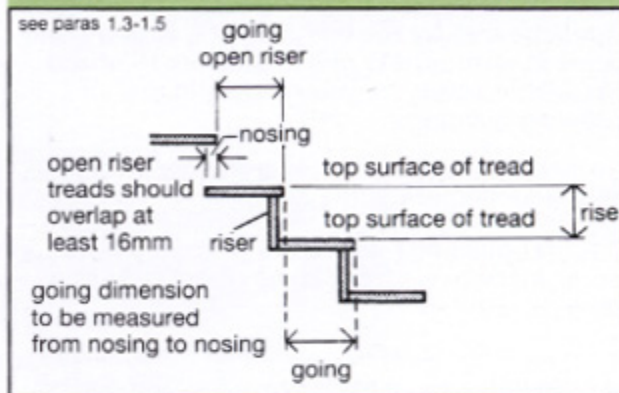
	Maximum Rise (mm)	Minimum Going (mm)
1. Private stair	220†	220†
2. Institutional and assembly stair	180**	280*
3. Other stair	190**	250

Note:

† The maximum pitch for a private stair is 42°
 * If the area of a floor of the building is less than 100m², the going may be reduced to 250mm

** For maximum rise for stairs providing the means of access for disabled people reference should be made to Approved Document M: Access and facilities for disabled people.

Diagram 1 Measuring rise and going



1.5 The normal relationship between the dimensions of the rise and going is that twice the rise plus the going ($2R + G$) should be between 550mm and 700mm.

Diagram 1 shows how to measure the rise and going (for steps with tapered treads, see also paragraphs 1.18 - 1.20).

1.6 In assembly buildings, the gangways may need to be at different pitches to maintain sightlines for spectators and this may affect the main stairs, etc.

The maximum pitch for gangways for seated spectators is 35°.

Alternative approach

1.7 The requirement for steepness of stairs can be met by following the relevant recommendations in BS 5395 *Stairs, ladders and walkways Part 1: 1977 Code of practice for the design of straight stairs*:

Construction of steps

1.8 Steps should have level treads. Steps may have open risers, but treads should then overlap each other by at least 16mm. For steps in buildings providing the means of access for disabled people reference should be made to Approved Document M: Access and facilities for disabled people.

1.9 All stairs which have open risers and are likely to be used by children under 5 years should be constructed so that a 100mm diameter sphere cannot pass through the open risers.