

APPENDIX F
HANDRAILS AND GRAB RAILS
(Normative)

F1 Scope

This Appendix describes the type and basic installation requirements for handrails, lift support rails and grab rails as used in this Standard.

F2 General

Handrails and grab rails serve different functions. A handrail is used as a guide for general support and to occasionally take full weight both in regular use and for accidental slip, trip or stumble. A grab rail is usually of smaller diameter and is more often used to take the full weight of a person with a disability. Full weight is applied both as a direct downwards force, e.g. in maintaining balance, and as a leverage force e.g. when lifting the body.

Many people brace their forearms between a rail and the wall to give them more leverage and stability.

F3 Handrails

F3.1 Shape

F3.1.1 Length

A handrail shall be continuous along the length of a ramp or staircase, except when there are doorways opening off a landing.

F3.1.2 Grip shape

The handrail shall be rounded with an outside dimension of between 32 mm and 45 mm and shall provide a secure grip, see figure F1. The ideal handrail is a circular section.

F3.1.3 Obstructions

There shall be no obstruction to the movement of the hand along the length.

F3.1.4 End of handrail indicator

A domed button to indicate the imminent termination of the rail shall be fixed at 150 mm from the end of the rail (see figure 23).

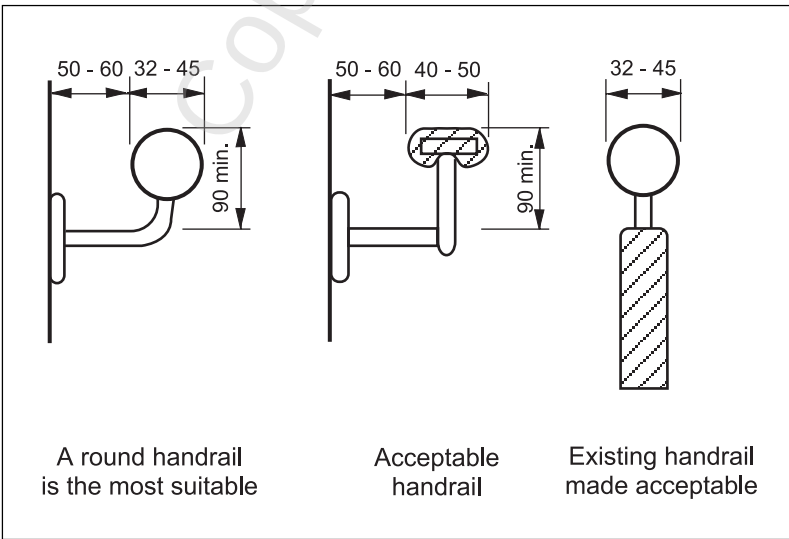


Figure F1 – Handrails

CF5.2

Highly polished surfaces provide insufficient grip.

F4 Installation of handrails

F4.1 Clear length

Handrails shall be installed so that there is a clear space of 50 – 60 mm between the handrail and the wall for its full length.

F4.2 Stairs, ramps etc.

F4.2.1

The handrail shall extend past the start and finish of the stairs or ramp by at least 300 mm (see figures 22 and 23).

F4.2.2

Handrails shall be installed at the height required by this Standard, refer to 6.4.2.6 and 8.6.

F5 Grab rails

F5.1 Shape

Grab rails shall allow an opposing grip by the full hand and shall be of circular section of 30 – 40 mm, see figure F2.

F5.2 Grip

The surface of grab rails at the point of use shall be non-slip.

F6 Installation of grab rails

F6.1 Clear length

Grab rails shall be installed so that there is a clear space of 50 mm minimum between the rail and the wall for the full length.

F6.2 Installation

Grab rails are primarily intended for use in toilets, showers and bathrooms, refer to section 10.

F7 Load-bearing test for handrails and grab rails

Handrails and grab rails and the method of fixing to their support shall be capable of sustaining a force of 1100 N (110 kg) applied in any direction at any point. The force shall be applied for a period of 2 minutes after which there shall be no sign of fracture of the fixings points nor shall there be deformation greater than 5 mm. With the force removed, there shall be no permanent deformation greater than 1 mm.

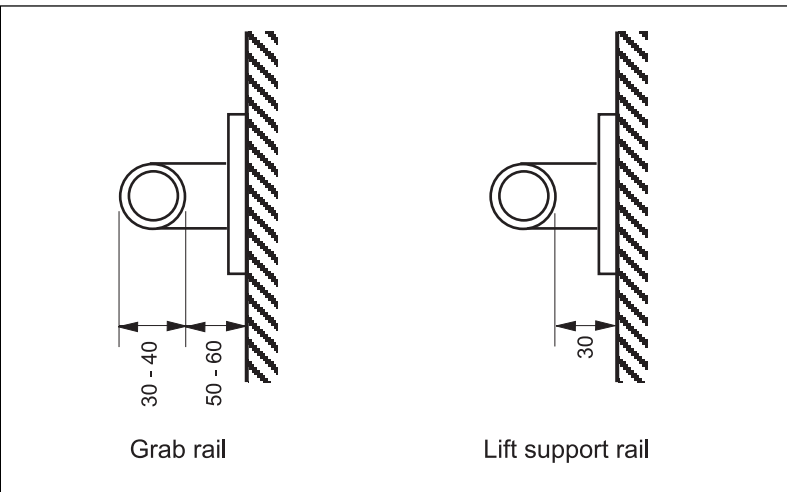


Figure F2 – Size and spacing of a grab rail