

BS 1245:2012



BSI Standards Publication

Pedestrian doorsets and door frames made from steel sheet – Specification

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Summary of pages

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 June 2012. It was prepared by Subcommittee B/538/2, *Doors*, under the authority of Technical Committee B/538, *Doors, windows, shutters, hardware and curtain walling*. A list of organizations represented on these committees can be obtained on request to their secretary.

Supersession

This British Standard supersedes BS 1245:1975, which is withdrawn.

Relationship with other publications

This British Standard is related to the following other standards.

- BS EN 14351-1 is the harmonized European product standard for windows and external pedestrian doorsets without resistance to fire and smoke leakage characteristics. It gives a list of performance characteristics and classifications of performance, but does not give guidance on determining the appropriate classification for any specific application.
- BS 6375 is the national application document in the UK, giving performance requirements and guidance for the selection of appropriate classes of performance from BS EN 14351-1.
- BS 8213-4 provides guidance on the survey and installation of replacement external pedestrian doorsets.

Information about this document

This is a full revision of the standard, and introduces the following principal changes:

- changes taking into account the publication of the harmonized European standard BS EN 14351 to remove any conflict between the standards ¹⁾;
- information on how the requirements relate to the European Construction Products Directive [1].

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

¹⁾ At the time of publication of this edition of BS 1245, only BS EN 14351-1 has been published. Part 2 is in preparation. Part 3 (also in preparation) has been redesignated prEN 16034.

Particular attention is drawn to the Building Regulations 2010 [2], and to the corresponding Building (Scotland) Regulations 2004 [3] and Building Regulations (Northern Ireland) 2000 [4].



1 Scope

This British Standard specifies requirements for the design, fabrication and performance of pedestrian doorsets with leaves manufactured from steel skins with a minimum thickness of 1.0 mm, where all surfaces are steel and the edges are steel and mechanically fixed. It applies to doors whose leaves are infilled with materials of either recycled cardboard honeycomb or mineral wool.

It covers both complete doorsets, and door frames that could be used for doorsets with non-metallic leaves.

It applies to doors fitted into frames in a factory, to be installed vertically (within 15°) into buildings, as single or double units, in coupled assemblies when appropriate, of the following types:

- a) single leaf single-swing doors with or without side and over panels;
- b) double leaf single-swing doors with or without side and over panels;
- c) single leaf double-swing doors with or without side and over panels;
- d) double leaf double-swing doors with or without side and over panels.

It is applicable to assemblies up to the point of installation.

This British Standard does not specify requirements for fire resistance or smoke control characteristics.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 6100-1 (BS ISO 6707-1), *Building and civil engineering – Vocabulary – Part 1: General terms*

BS 6100-12, *Building and civil engineering – Vocabulary – Part 12: Plant, equipment and persons*

BS 6262 (all parts), *Glazing for buildings*

BS 6375 (all parts), *Performance of windows and doors*

BS 8000-7, *Workmanship on building sites – Part 7: Code of practice for glazing*

BS EN 1279 (all parts), *Glass in building – Insulating glass units*

BS EN 1670:2007, *Building hardware – Corrosion resistance – Requirements and test methods*

BS EN 1935, *Building hardware – Single-axis hinges – Requirements and test methods*

BS EN 10088-2, *Stainless steels – Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*

BS EN 10152, *Electrolytically zinc coated cold rolled steel flat products for cold forming – Technical delivery conditions*

BS EN 10346:2009, *Continuously hot-dip coated steel flat products – Technical delivery conditions*

BS EN 12519, *Windows and pedestrian doors – Terminology*

BS EN 13141-1, *Ventilation for buildings – Performance testing of components/products for residential ventilation – Part 1: Externally and internally mounted air transfer devices*

BS EN 13142, *Ventilation for buildings – Components/products for residential ventilation – Required and optional performance characteristics*

BS EN ISO 4042, *Fasteners – Electroplated coatings*

BS EN ISO 9227, *Corrosion tests in artificial atmospheres – Salt spray tests*

3 Terms and definitions

For the purposes of this British Standard, the terms and definitions given in BS 6100-1, BS 6100-12, BS EN 12519 and the following apply.

3.1 coupled assembly

two or more doorsets mechanically joined to fill an opening

NOTE This was previously known as a composite assembly.

3.2 door frame

part of a doorset surrounding a door leaf and to which the door leaf is hinged

3.3 door leaf

moving element within a doorset

3.4 doorset

complete unit, as installed, comprising door leaf, door frame, any associated side panels and/or top lights, and any operating hardware, locks and accessories

NOTE This is also known as a door assembly.

3.5 fixing

component that is used to secure separate parts of a doorset to each other, to secure an item of hardware to a door part, or to secure a completed doorset into the structure of a building

3.6 glazing gasket

plastic or synthetic rubber member used between the glazing and the frame and/or between the glazing and the glazing bead

3.7 hardware

device attached to a structural member of a doorset to facilitate opening, closing or making the product secure in the frame

3.8 sill

horizontal bottom member of a door frame

NOTE This is sometimes referred to as a threshold.

3.9 ventilation device

ventilator other than an opening light incorporated into a doorset

NOTE 1 A permanent ventilation device provides continuous ventilation. A controlled device can be closed and may be adjusted to provide ventilation.

NOTE 2 A ventilation device is referred to as an “air transfer device” in BS EN 13142 and is frequently referred to as a “trickle ventilator” in the UK.

3.10 weatherseal

resilient material designed to reduce air infiltration and water penetration

NOTE This is sometimes referred to as a weatherstrip.

3.11 work size

width and height of the doorset to be supplied, as agreed between the manufacturer and the customer, established from a designed or built structural opening

4 Handing

The handing shall be in accordance the specification provided.

Where the manufacturer is specifying the handing, the specification shall conform to Annex A.

NOTE Where the manufacturer is not specifying the handing, care should be taken to check the handing designation. See Annex A.

5 Components**5.1 Steel materials**

NOTE 1 Typical external steel door leaves are 40 mm to 55 mm, and the steel skins are normally 1.0 mm or 1.2 mm. Internal door leaves can be of reduced thickness and have lighter gauge skins. Some special doors for acoustic and/or security performance can be thicker and have skins of greater thickness.

Door leaves and frames shall be fabricated from one of the following:

- mild steel sheet, electro zinc coated conforming to BS EN 10152;
- mild steel sheet, hot-dip zinc coated, conforming to BS EN 10346:2009, coating designation Z275;
- austenitic stainless steel sheet or strip conforming to BS EN 10088-2.

Where metal reinforcement is used it shall be manufactured from one of the following metals:

- a) mild steel strip, hot-dip zinc coated, conforming to BS EN 10346:2009, coating designation Z275. This type of reinforcement shall be only used in profiles or systems designed and sealed so that no exterior moisture can come into contact with the reinforcement;
- b) mild steel sections which are subsequently given a corrosion-resistant coating in order to conform to the requirements in a);
- c) austenitic stainless steel sheet or strip conforming to BS EN 10088-2.

NOTE 2 This type of reinforcement can be used in any type of profile or system.

5.2 Infill material

Door leaves shall be infilled with material from one of the following:

- recycled cardboard honeycomb of a cell size of 27 mm to 28 mm and a minimum weight of 170 gsm;
- mineral wool or other insulation slabs which require additional stiffeners to reinforce the steel skins.

5.3 Hardware and hardware reinforcements

5.3.1 Locks and latches

Locks and/or latches shall be fitted using the lock/latch manufacturer's installation instructions using a lock box reinforcement, of sufficient thickness to accommodate the hardware manufacturer's recommended machine screw fixings, fixed inside the door leaf.

NOTE 1 A typical lock preparation detail is shown in Figure 1. Other arrangements are possible.

NOTE 2 Guidance on the positioning of lock/latch and operating furniture is given in BS 8300 and Figure 2. Other arrangements are possible.

Figure 1 Typical isometric lock preparation detail in door leaf

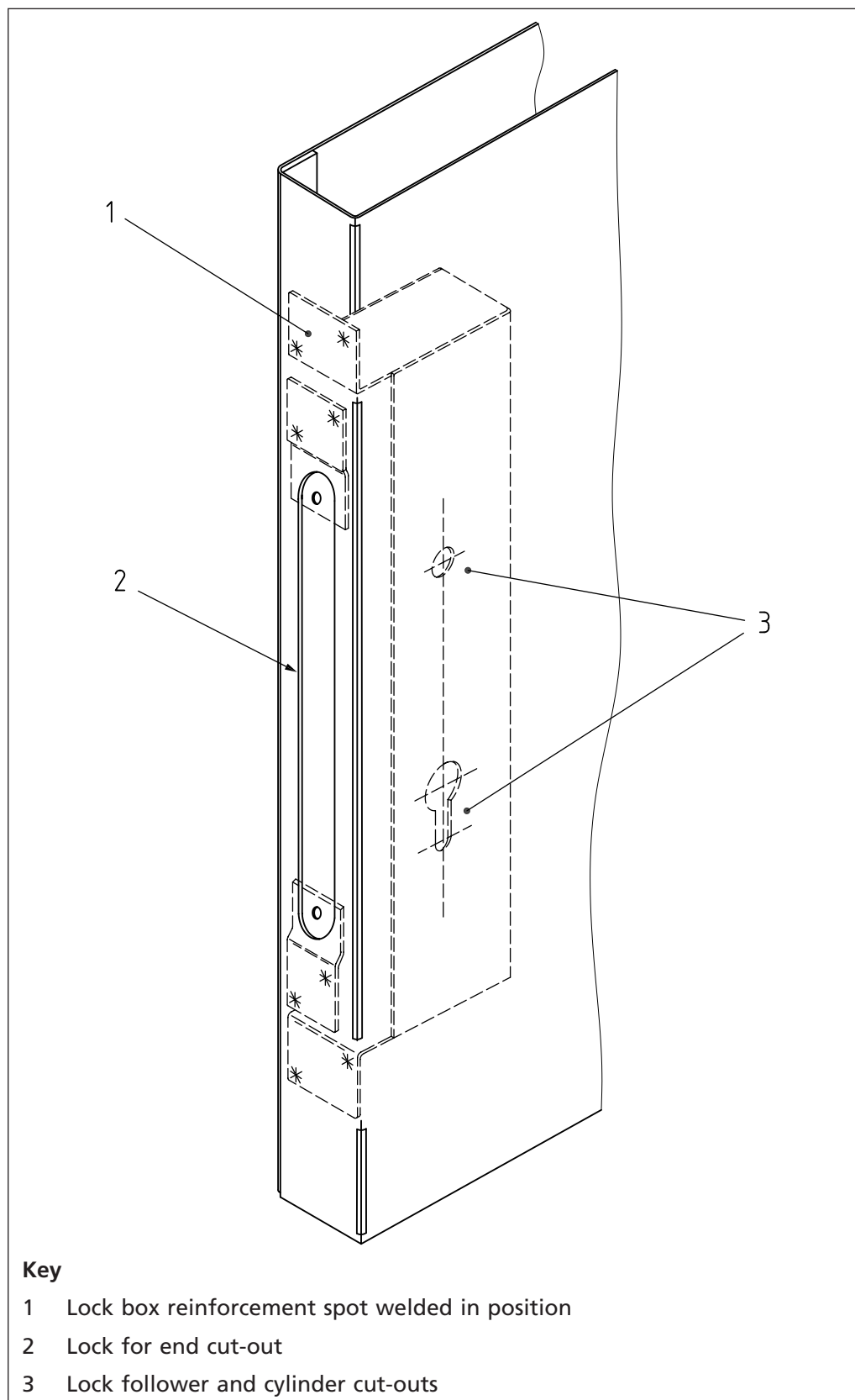


Figure 2 Typical doorset configurations and hardware locations

