



BSI Standards Publication

Aircraft — Passenger doors interface requirements for connection of passenger boarding bridge or passenger transfer vehicle

Part 1: Main deck doors

National foreword

This British Standard is the UK implementation of ISO 7718-1:2016. It supersedes BS ISO 7718-1:2009 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/57, Air Cargo & Ground Support Equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

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

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2016-12-15

**Aircraft — Passenger doors interface
requirements for connection of
passenger boarding bridge or
passenger transfer vehicle —**

**Part 1:
Main deck doors**

*Aéronefs — Exigences d'interface des portes passagers pour
accouplement d'une passerelle passagers ou de véhicules de transfert
de passagers —*

Partie 1: Portes de pont principal



Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 9, *Air cargo and ground equipment*.

This second edition cancels and replaces the first edition (ISO 7718-1:2009), of which it constitutes a minor revision with the following changes:

- the title has been modified by adding “passenger transfer vehicle”;
- [Figure 1](#) has been modified;
- in [4.3](#), minimum aircraft door sill height was increased from 1,60 m (63 in) to 1,80 m (71 in); and
- additional editorial changes have been made, such as by adding a table of contents.

A list of all parts in the ISO 7718 series can be found on the ISO website.

Introduction

This document specifies minimum requirements for dimensions and unobstructed space around main deck passenger doors on the outer skin of civil transport aircraft, applicable when these doors are designed to accept the connection of existing passenger boarding bridges or transfer vehicles.

Throughout this document, the minimum essential criteria are identified by the keyword “shall”. Recommended criteria are identified by the keyword “should” and, while not mandatory, are considered to be of primary importance in providing easily and economically handled aircraft, as well as preventing damage to the aircraft caused by the passenger boarding bridge or transfer vehicle. Deviation from recommended criteria can only occur, after careful consideration, if positively required by basic aircraft-design factors with a significant operational cost impact.

Aircraft — Passenger doors interface requirements for connection of passenger boarding bridge or passenger transfer vehicle —

Part 1: Main deck doors

1 Scope

This document specifies minimum requirements for dimensions and unobstructed space around main deck passenger doors of future types of civil-passenger transport aircraft when they are intended to be compatible with the thousands of passenger boarding bridges and passenger transfer vehicles existing, or being planned, in airports worldwide.

This document is not applicable to existing models of civil transport aircraft, or derivative models with entry into service up to year 2000 with the same fuselage, for which the aircraft-mating section of passenger boarding bridges or passenger transfer vehicles is expected to be compatible with ISO 16004.

It is not the intent of this document to restrict in any way the basic design of any future types of civil-passenger transport aircraft. However, it aims at clarifying, for aircraft-design engineers, the design characteristics which would make it difficult or impossible for a new type of aircraft to adequately connect with existing airport passenger boarding bridges or passenger transfer vehicles. If basic aircraft-design requirements impose on a future model certain dimensional characteristics not complying with this document, note that:

- either alternative methods of embarking/disembarking passengers will need to be implemented, such as integral aircraft stairs, etc.;
- or existing passenger boarding bridges and/or passenger transfer vehicles in the airports where such a new type of aircraft is to operate will require some degree of modification/reworking;
- or additional interface devices/equipment will be required in order to connect such a new type of aircraft with existing passenger boarding bridges and passenger transfer vehicles.

Each case results in increased aircraft-handling constraints and operating cost.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 16004, *Aircraft ground equipment — Passenger boarding bridge or transfer vehicle — Interface requirements with aircraft doors*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>

— ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Requirements

4.1 Minimum unobstructed space

4.1.1 Unobstructed space shall be provided for the connection of the passenger boarding bridge or passenger transfer vehicle, as shown by the hatched area in [Figure 1](#). The area surrounded by the dotted line represents the opening of the bridge or vehicle.

4.1.2 This area shall be kept completely clear of any external features such as aerials, drains, pitot heads, static ports, sensors, incidence probes, aerodynamic strakes, access panels, etc.

4.1.3 Integral aircraft stairs, which do not interfere with the connection of a passenger boarding bridge or passenger transfer vehicle, or with the aircraft when in the retracted position, are permitted in this area.

4.1.4 Protrusions intended to divert rainwater away from the door opening are permitted in this area, provided they are not deemed part of the aircraft's structural or aerodynamic integrity and they do not interfere with the deployment of the PBB canopy.

Existing models of civil transport aircraft present a variety of flight-safety-sensitive items in the unobstructed area defined above. They shall be protected against inadvertent interference by provisions built into the aircraft mating section of passenger boarding bridges or passenger transfer vehicles in accordance with ISO 16004. The no-interference areas accordingly specified on ground equipment are included in the unobstructed area defined above for future aircraft.

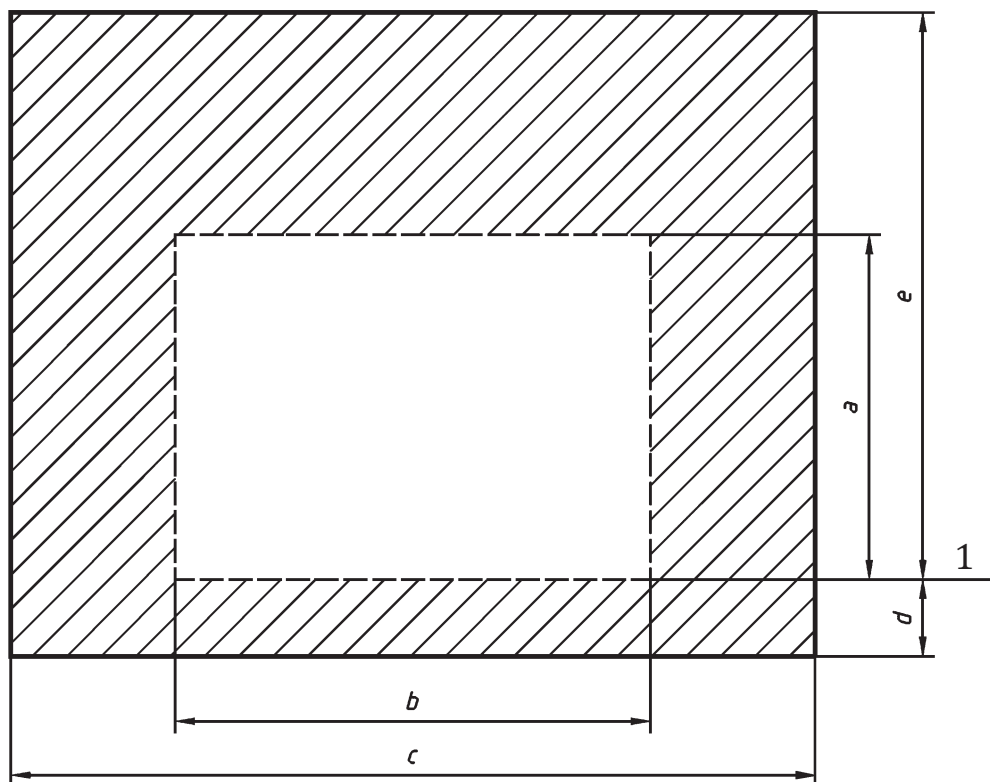
4.2 Minimum radius of the fuselage

The cross-sectional radius of the fuselage in any part of the area defined in [Figure 1](#) should not be less than 1,6 m (63 in).

4.3 Door-sill height

The passenger door sill height above the ground, at any part of its excursion range during normal airport servicing/transit operations, should be between 1,8 m (71 in) and 5,4 m (213 in).

Dimensions in millimetres (inches)



Key

1 door sill height

Dimension	Maximum value	Minimum value	Note
<i>a</i>	2 100 (82.7)	—	Dimension of the bridge opening
<i>b</i>	2 850 (112.2)	—	
<i>c</i>	—	4 800 (189.0)	
<i>d</i>	—	500 (19.7)	
<i>e</i>	—	3 400 (133.8)	

Figure 1 — Unobstructed space to be provided in the vicinity of passenger doors

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