International Standard

ISO 7718-1

Third edition
2025-03

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
ISO 7718-1:2025(en)

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Published in Switzerland

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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 document 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 of the voluntary nature of standards, 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 9, *Air cargo and ground equipment*.

This third edition cancels and replaces the second edition (ISO 7718-1:2016), which has been technically revised.

The main changes are as follows:

— the requirements have been revised to be more precise.

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

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Throughout this document, the minimum essential criteria are expressed as requirements (identified by the verbal form “shall”). Recommended criteria (identified by the verbal form “should”) are, while not mandatory, 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.

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 conforming to this document:

— alternative methods of embarking or disembarking passengers must be implemented, such as integral aircraft stairs;

— existing passenger boarding bridges or passenger transfer vehicles, or both, in the airports where such a new type of aircraft is to operate must undergo some degree of modification or reworking; or

— additional interface devices or equipment must be used 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.

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 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.

This document is not applicable to existing models of civil transport aircraft, or derivative models with entry into service up to the 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.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Requirements

4.1 Minimum obstructed space

4.1.1 Unobstructed space on the fuselage of the aircraft 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 hatched area represents the minimum area of unobstructed space.

In Figure 1, the area inside the dotted line represents the maximum area of cabin doors (door opening included open door).

4.1.2 The hatched area in Figure 1 shall be kept completely clear of any external features such as aerials, drains, pitot heads, static ports, sensors, incidence probes, aerodynamic strakes or access panels.

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, may appear in the hatched area in Figure 1.

4.1.4 Protrusions intended to divert rainwater away from the door opening may appear in the hatched area in Figure 1, provided they are not deemed part of the aircraft's structural or aerodynamic integrity and they do not interfere with the deployment of the Passenger Boarding Bridge canopy.

Existing models of civil transport aircraft present a variety of flight-safety-sensitive items in the unobstructed area defined in Figure 1. They shall be protected against inadvertent interference by provisions built into the aircraft mating section of passenger boarding bridges or passenger transfer vehicles. The no-interference areas accordingly specified on ground equipment are included in the unobstructed area defined in Figure 1 for future aircraft.

NOTE For previous aircraft types, refer to ISO 16004.

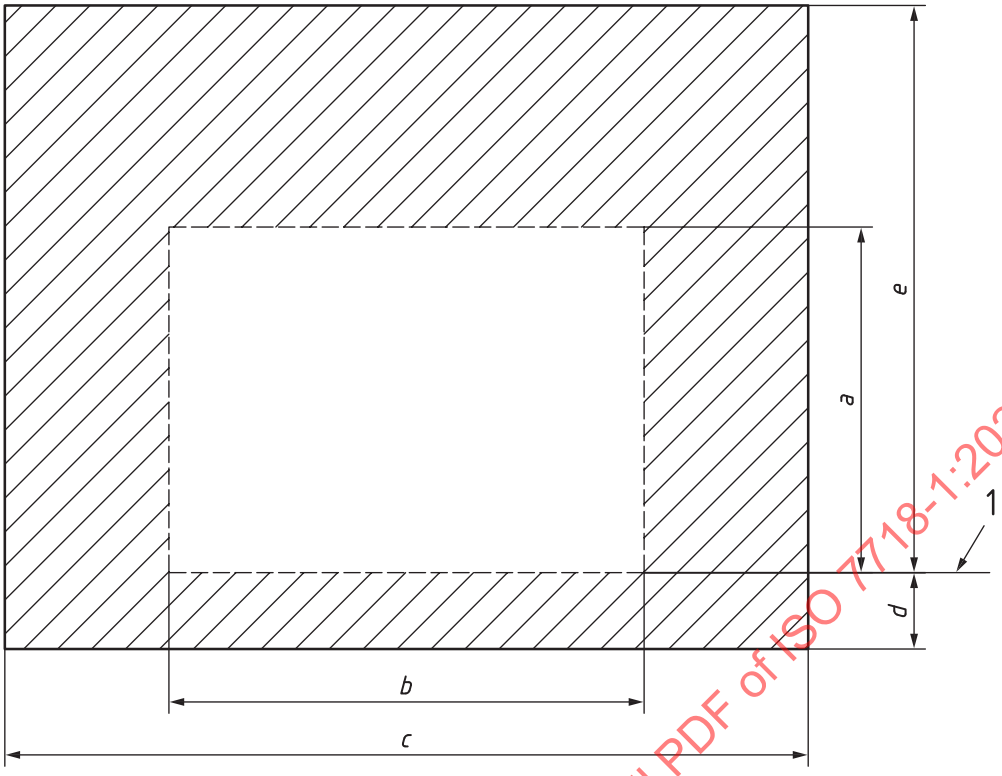
4.2 Minimum radius of the fuselage

The cross-sectional radius of the fuselage in any part of the hatched 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 or 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

Parameter	Maximum value	Minimum value	Note
a Cabin door height	2 100 (82,7)	—	Cabin door opening (including opened door)
b Cabin door width	2 850 (112,2)	—	
c Unobstructed width	—	4 800 (189,0)	—
d Unobstructed height below door sill	—	500 (19,7)	—
e Unobstructed height above door sill	—	3 400 (133,8)	—

Figure 1 — Unobstructed area to be provided in the vicinity of cabin doors