INTERNATIONAL STANDARD

ISO 7718-1

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

Part 1: Main deck doors

Aéronefs — Exigences d'interface des portes passagers pour accouplement d'une passerelle passagers —
Partie 1: Portes de pont principal

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 7718-1 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 9, *Air cargo and ground equipment*.

This first edition of ISO 7718-1, together with ISO 7718-2, cancels and replaces ISO 7718:2003, which has been technically revised.

ISO 7718 consists of the following parts, under the general title *Aircraft — Passenger doors interface requirements for connection of passenger boarding bridge*:

— *Part 1: Main deck doors*

— *Part 2: Upper deck doors*

Introduction

This part of ISO 7718 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 part of ISO 7718, 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 should 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 —

Part 1: Main deck doors

1 Scope

This part of ISO 7718 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 part of ISO 7718 is not applicable to existing models of civil transport aircraft, or derivative models 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.

This part of ISO 7718 is not intended to restrict in any way the basic design of any future types of civil-passenger transport aircraft. However, it aims to clarify for aircraft-design engineers the design characteristics that would make it difficult, or impossible, for a new type of aircraft to connect adequately with existing airport passenger boarding bridges or passenger transfer vehicles.

If, on a future model, basic aircraft-design requirements impose certain dimensional characteristics that do not comply with this part of ISO 7718, one of the following will apply, and in each case, aircraft-handling constraints and operating costs will increase:

— alternative methods of embarking/disembarking passengers (e.g. integral aircraft stairs) will need to be implemented; or

— existing passenger boarding bridges and/or passenger transfer vehicles will need to be modified/reworked to some extent in the airports where this type of new aircraft will operate; or

— additional interface devices/equipment will be needed to connect this type of new aircraft with existing passenger boarding bridges and passenger transfer vehicles.

2 Normative references

The following referenced documents are indispensable for the application 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 — Requirements for interface with aircraft doors*

3 Requirements

3.1 Minimum unobstructed space

3.1.1 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.

3.1.2 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.

3.1.3 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.

3.1.4 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.

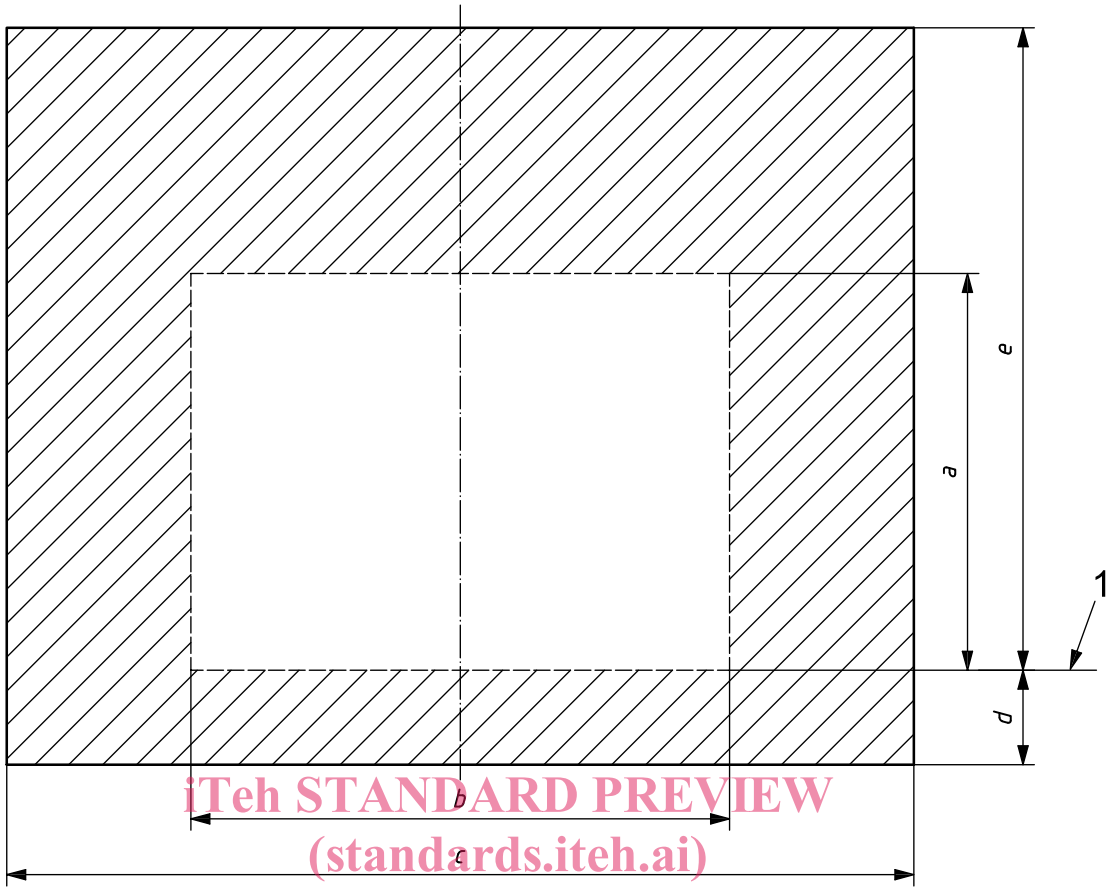
Existing models of civil transport aircraft present a variety of flight-safety-sensitive items in the unobstructed area defined above. They shall be protected against inadvertent interference by provisions built into the aircraft-mating section of passenger boarding bridges or passenger transfer vehicles 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.

3.2 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).

3.3 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 1,6 m (63 in) and 5,4 m (213 in).



Key

1 door-sill height

Dimension	Maximum value	Minimum value
a [a]	2 100 mm (82,7 in)	—
b [a]	2 850 mm (112,2 in)	—
c	—	4 800 mm (189,0 in)
d	—	500 mm (19,7 in)
e	—	3 400 mm (133,8 in)

[a] Dimension of the bridge opening.

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

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