

BS EN 4697:2016



BSI Standards Publication

Aerospace series — General and installation requirements for passenger seat fittings

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National foreword

This British Standard is the UK implementation of EN 4697:2016. It supersedes BS EN 4697:2012 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/12, Aerospace fasteners and fastening systems.

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

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April 2016

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English Version

**Aerospace series - General and installation requirements
for passenger seat fittings**

Série aérospatiale - Exigences générales et
d'installation pour siège passager

Luft- und Raumfahrt - Allgemeine und Einbau
Anforderungen an die Sitzanbindung von
Passagiersitzen

This European Standard was approved by CEN on 27 September 2015.

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European foreword

This document (EN 4697:2016) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016.

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

This document supersedes EN 4697:2012.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the installation and removal requirements and the space envelopes for passenger seat fittings on aircraft. The purpose is to reduce the installation time and the tooling required for seat installation by standardizing the seat attachment fasteners (fittings).

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.

EN 9100, *Quality Management Systems — Requirements for Aviation, Space and Defence Organizations*

EN 9133, *Aerospace series — Quality management systems — Qualification procedure for aerospace standard parts*

AMS 1424J, *Deicing/Anti-Icing Fluid, Aircraft*¹⁾

AMS 1428F, *Fluid, Aircraft De-icing/Anti-Icing, Non-Newtonian, (Pseudoplastic)*¹⁾

AMS 1550B, *Cleaner, Water Base, Aircraft Interior Hard Surface Materials*¹⁾

AMS 1630C, *Cleaner, Carpet Shampoo Type*¹⁾

AMS 1631C, *Cleaner, Carpet Water Extraction Type*¹⁾

AS8049B, *Performance Standard for Seats in Civil Rotorcraft, Transport Aircraft and General Aviation Aircraft*¹⁾

CS-25 Amendment 5, 5th September 2008, *Certification Specification for Large Aeroplanes*²⁾

FAR 25 Amendment 127, 28th October 2008, *Airworthiness Standards: Transportation Category Airplanes*³⁾

RTCA DO-160F, 6th December 2007, *Environmental Conditions and Test Procedures for Airborne Equipment*⁴⁾

¹⁾ Published by: SAE National (US) Society of Automotive Engineers (<http://www.sae.org/>).

²⁾ Published by: European Aviation Safety Agency (EASA), Postfach 101253, D-50452 Koeln, Germany.

³⁾ Published by: FAA National (US) Federal Aviation Administration (<http://www.faa.gov/>).

⁴⁾ Published by: Radio Technical Commission for Aeronautics (RTCA), 1828 L Street, NW, Suite 805 Washington, DC 20036, USA.

3 Abbreviations

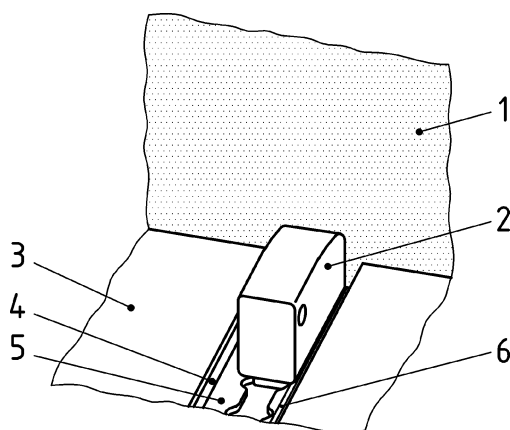
For the purposes of this standard, the following abbreviations apply.

A/C	Aircraft.
Acc.	According.
Fwd	Forward.
SLD	Shear Locking Device.

4 Requirements

4.1 General

The fitting design shall fit within the given space envelope, according to Figure 1 and Figure 6.



Key

- 1 Monument
- 2 Fitting body
- 3 Carpet
- 4 Floor panel
- 5 Seat rail
- 6 Raceway

Figure 1 — Fitting environment 1

All fittings attached to seat legs shall be pre-set to the correct seat track dimensions with fine adjustment of the fitting during installation not being necessary.

Minimum front to rear fitting distance shall be 482,6 mm (19") between the extreme studs of each fitting.

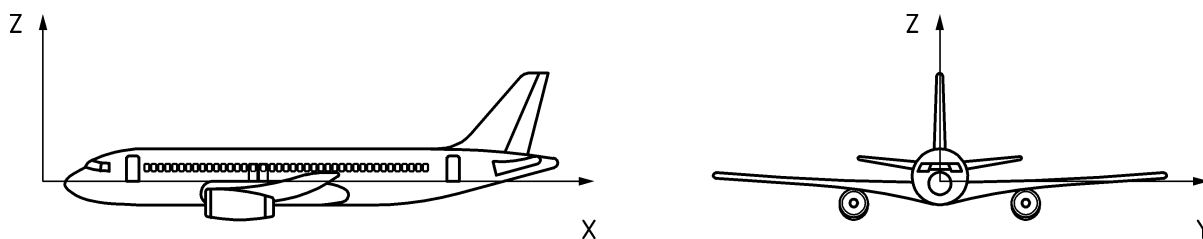


Figure 2 — Aircraft Coordinate System

The front attachment fasteners shall cover the tolerances in X-direction (see Figure 2) that might occur due to installation tolerances (of the seat leg and of the A/C structure).

The fitting weight shall be according to Table 1.

Table 1 — Fitting classes

Fitting class	Fitting	Weight g
A	Rear triple stud fitting	≤ 150
B		≤ 250
C	Rear quadruple stud fitting	≤ 200
D		≤ 290
E	Forward single stud fitting	≤ 50
F		≤ 90

Maintenance or repair work on the seat track shall be taken into account during fitting design. Details see Figure 3.

Dimensions in millimetres

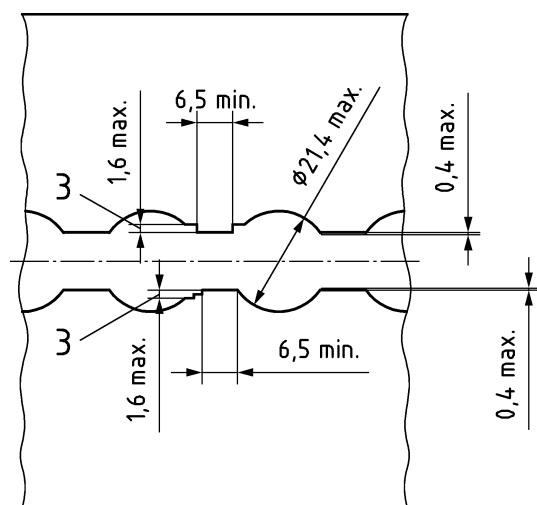


Figure 3a — Seat track top view

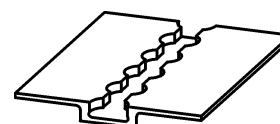


Figure 3b — Seat track 3 D view

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