

SLOVENSKI STANDARD

SIST EN 4710-01:2019

01-januar-2019

Nadomešča:

SIST EN 4710-001:2015

**Aeronavtika - Spončni sistemi za hitro sprostitev za nestrukturno uporabo - 01.
del: Tehnična specifikacija**

Aerospace series - Quick release fastening systems for non-structural applications - Part
01: Technical specification

Luft- und Raumfahrt - Schnellverschlüsse für nicht-strukturelle Anwendungen - Teil 01:
Technische Lieferbedingungen

Série aérospatiale - Fixations rapides filetées pour applications non-structurales - Partie
01 : Spécification technique

Ta slovenski standard je istoveten z: EN 4710-01:2018

ICS:

49.030.01 Vezni elementi na splošno Fasteners in general

SIST EN 4710-01:2019

en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 4710-01

October 2018

ICS 49.035

Supersedes EN 4710-01:2015

English Version

**Aerospace series - Quick release fastening systems for
non-structural applications - Part 01: Technical
specification**

Série aérospatiale - Fixations rapides filetées pour
applications non-structurales - Partie 01 : Spécification
technique

Luft- und Raumfahrt - Schnellverschlüsse für nicht-
strukturelle Anwendungen - Teil 01: Technische
Lieferbedingungen

This European Standard was approved by CEN on 20 May 2018.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Requirements	5
5 Inspections and tests	5
5.1 Qualification test	5
5.2 First article inspection	6
5.3 Conformance/acceptance test.....	6
5.4 Requirements, inspections and tests	6
6 Test equipment and parameters	10
6.1 Ultimate tensile load	10
6.2 Ultimate shear load	10
6.3 Push-in load.....	10
6.4 Torque-out load	10
7 Quality assurance.....	10
7.1 Approval of manufacturers	10
7.2 Qualification test	10
8 Sampling.....	10
8.1 Acceptance test sample	10
8.2 Qualification test sample	11
Annex A (informative) Standard evolution form	13

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SIST EN 4710-01:2019

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European foreword

This document (EN 4710-01:2018) 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 April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.

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

This document supersedes EN 4710-01:2015.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 4710-01:2018 (E)**1 Scope**

This European Standard specifies the required characteristics, inspections, tests, quality assurance requirements, conditions for qualification acceptance and delivery of quick release fastening systems.

This European Standard applies to all fastening systems for use in fuselage interior equipment and non-structural or secondary structural area.

It may be applied when referred to in the product standard or in a design specification.

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.

EN 2424, *Aerospace series — Marking of aerospace products*

EN 2826, *Aerospace series — Burning behaviour of nonmetallic materials under the influence of radiating heat and flames — Determination of gas components in the smoke*

EN 3844-2, *Aerospace series — Flammability of nonmetallic materials — Part 2: Small burner test, horizontal — Determination of the horizontal flame propagation*

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

EN 9102:2015, *Aerospace series — Quality systems — First article inspection requirements*

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

EN 10204, *Metallic products — Types of inspection documents*

EN ISO 8785, *Geometrical product specification (GPS) — Surface imperfections — Terms, definitions and parameters (ISO 8785)*

EN ISO 9001, *Quality management systems — Requirements (ISO 9001)*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227)*

FAR/JAR/CS 25.853, *Compartment Interiors*¹⁾

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

3.1**fasteners**

quick release fastening systems are parts, capable of being easily and quickly operated, with or without usage of special tools for closing and opening, for fastening and release of parts such as covers, linings, equipment, etc.

3.2**lot**

finished parts of the same dimensions, made from the same material, produced in the same production run, heat treated and surface protected in the same manner and submitted for testing at the same time

3.3**qualification test**

a test or series of tests to demonstrate that the products comply with the requirements stipulated in this specification and/or in a product standard and are accomplished according to documented parameters and under reproducible conditions

3.4**acceptance test**

a test or series of tests to demonstrate that the characteristics of manufactured products comply with the requirements

3.5

First Article Inspection (FAI) – also referred to as production process verification a planned, complete, independent, and documented inspection and verification process to ensure that prescribed production processes have produced an item conforming to engineering drawings, DPD, planning, purchase order, engineering specifications, and/or other applicable design document [SOURCE: EN 9102:2015, 3.10]

3.6**tolerance compensation**

ability of the spring clamp to cover assembly and installation tolerances

4 Requirements

See Table 1, if not specified in the relevant product standard.

5 Inspections and tests**5.1 Qualification test**

All product qualification activities shall be carried out in accordance with a Qualification Test Program prepared by the manufacturer and approved by the customer in accordance with EN 9133.

The satisfactory results of all tests, collected in a referenced Qualification Test Report, in accordance with EN 9133 or equivalent, shall be the basis of qualification for delivery to the customer.

The Qualification Test Report shall be carried out by the manufacturer's quality assurance department on a sample of parts that have been selected from a representative manufacturing batch. Similar parts may be used as a basis for qualification testing, and results formulated by analogy may be used providing prior agreement has been reached between the customer and the manufacturer. The nature and extent of further qualification tests have to be agreed upon separately between manufacturer and customer. The qualification procedure shall be accompanied by a mandated body which has to sign the QTP and QTR.

EN 4710-01:2018 (E)

5.2 First article inspection

The manufacturer shall conduct a First Article Inspection on all initially manufactured parts, components, sub-assemblies and assemblies, as well as on the first complete manufacturing batch in accordance with accepted production practices and procedures. The vendor shall record the results of each First Article Inspection in an agreed report. The first components supplied to the customer shall be accompanied by a valid set of documentation and the First Article Inspection report. The vendor shall be informed in writing by the customer of any discrepancies that withhold approval.

5.3 Conformance/acceptance test

Unless otherwise specified, acceptance tests for each part shall be carried out by the manufacturer. The purpose of the acceptance test is to ensure conformity with specified requirements using approved testing methods. In cases where a manufacturer is not able to carry out the required tests due to the lack of suitable facilities or installations, they shall be carried out by suitable test facilities. The quantity of samples can be adjusted to respective production situation via inspection plan specification, i.e. at the discretion of the quality assurance management. This is based on continuous production monitoring according to the rules of statistical quality assurance. Changes to the acceptance test shall only be with written approval with the customer. Each delivery shall be accompanied by conformance test results and certified as defined in Table 1.

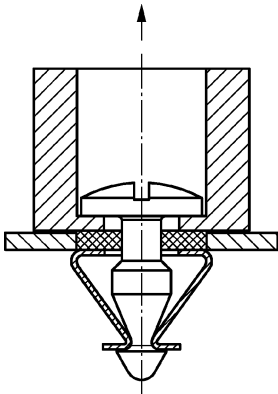
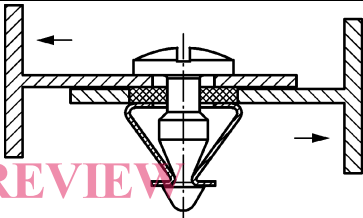
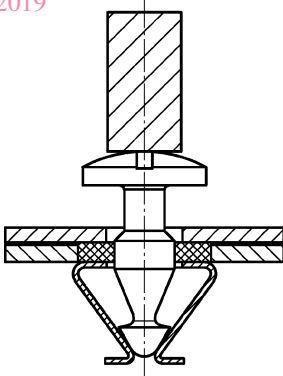
5.4 Requirements, inspections and tests

See Table 1.

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Table 1 — Requirements, inspections and tests

Clause	Characteristic	Requirements	Clause	Inspections and tests	A ^a	Q _b
4.1	Materials	In accordance with the specifications of the relevant product standards.	5.4.1	The chemical composition shall be evidenced, i.e. by an inspection certificate according to EN 10204 issued by the semi-finished product manufacturer.	X	X
4.2	Dimensions and masses	In accordance with the relevant product standards.	5.4.2	The dimensions and masses have to be documented according to EN 9102:2015.	X	X
4.3	Surface		5.4.3	Surface		
4.3.1	Surface defects	All surfaces shall be free from surface defects as defined in EN ISO 8785.	5.4.3.1	Visual examination as specified between customer and manufacturer	X	X
4.3.2	Surface treatment	In accordance with the relevant product standards.	5.4.3.2	The surface treatment as applied shall be substantiated, i.e. by an inspection certificate according to EN 10204.	X	X

Clause	Characteristic	Requirements	Clause	Inspections and tests	A ^a	Q _b
4.4	Mechanical properties		5.4.4	Mechanical properties		
4.4.1	Ultimate tensile load	In accordance with the relevant product standards.	5.4.4.1	 <p>According to 6.1.</p>	—	X
4.4.2	Ultimate shear load	In accordance with the relevant product standards.	5.4.4.2	 <p>According to 6.2.</p>	—	X
4.4.3	Push-in load	There shall be no permanent deformation after applying the loads specified in the relevant product standards.	5.4.4.3	 <p>According to 6.3.</p>	—	X