



**SLOVENSKI STANDARD**  
**SIST EN 4114:2024**

**01-februar-2024**

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**Aeronavtika - Objemke v obliki zanke (P-oblika) iz aluminijeve zlitine z zaščitno prevleko iz gume - Mere, mase**

Aerospace series - Clamps, loop ("P" type) in aluminium alloy, with rubber cushioning - Dimensions, masses

Luft- und Raumfahrt - Schellen in Schlaufenform (P-Form) aus Aluminiumlegierung mit Profilgummi - Maße, Massen

Série aérospatiale - Colliers en "P" en alliage d'aluminium avec profilé en élastomère - Dimensions, masses

**Ta slovenski standard je istoveten z: EN 4114:2023**

[SIST EN 4114:2024](#)

<https://standards.renishaw.com/standards/sist/694273-1024-1110-870731cc01230710/sist-en-4114-2024>

**ICS:**

49.025.20	Aluminij	Aluminium
49.025.40	Guma in polimerni materiali	Rubber and plastics
49.030.99	Drugi vezni elementi	Other fasteners

**SIST EN 4114:2024**

**en,fr,de**



EUROPEAN STANDARD

**EN 4114**

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2023

ICS 49.030.99

Supersedes EN 4114:2009

English Version

## Aerospace series - Clamps, loop ("P" type) in aluminium alloy with rubber cushioning - Dimensions, masses

Série aérospatiale - Colliers, boucle en P en alliage d'aluminium avec profilé en élastomère - Dimensions, masses

Luft- und Raumfahrt - Schellen in Schlaufenform (P-Form) aus Aluminiumlegierung mit Profilgummi - Maße, Massen

This European Standard was approved by CEN on 15 October 2023.

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.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

# Document Preview

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

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## European foreword

This document (EN 4114:2023) 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 document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, 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 June 2024, and conflicting national standards shall be withdrawn at the latest by June 2024.

This document supersedes EN 4114:2009.

EN 4114:2023 includes the following significant technical changes with respect to EN 4114:2009:

- normative references were updated;
- abbreviation “FPM” was changed to “FKM” throughout the document.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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**EN 4114:2023 (E)****1 Scope**

This document specifies the required characteristics of loop style clamps (“P” type) in aluminium alloy with various cushion materials.

These clamps are used for supporting aerospace pipe assemblies and electrical cable bundles.

They are used up to 80 °C max.

Usage at a higher temperature is at the option of the user.

For temperature range and environmental considerations, see the various cushion material standards.

**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 2261, *Aerospace series — Silicone rubber (VMQ) — Hardness 70 IRHD*

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

EN 2437, *Aerospace series — Chromate conversion coatings (yellow) for aluminium and aluminium alloys*

EN 2566, *Aerospace series — Fluorocarbon rubber (FKM) — Hardness 70 IRHD*

EN 2693, *Aerospace series — Aluminium alloy AL-P5086-H111 — Sheet and strip —  $0,3 \text{ mm} \leq a \leq 6 \text{ mm}$*

EN 3078:—<sup>1</sup> *Aerospace series — P, Q and saddle clamps with rubber cushion — Technical specification*

EN 3825, *Aerospace series — Fluorosilicone rubber (FVMQ) — Hardness 60 IRHD*

EN 3826, *Aerospace series — Fluorosilicone rubber (FVMQ) — Hardness 70 IRHD*

EN 4115, *Aerospace series — Cushion, rubber for clamps — Dimensions, masses*

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**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/>

<sup>1</sup> Published as ASD-STAN Prestandard at the date of publication of this standard by AeroSpace and Defence Industries Association of Europe – Standardization (ASD-STAN) (<https://asd-stan.org/>).