

**Aerospace series - Clamps, loop ("P" type) in corrosion
resisting steel, passivated with rubber cushioning -
Dimensions, masses**

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 4113:2009 sisaldab Euroopa standardi EN 4113:2009 ingliskeelset teksti.

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This standard is ratified with the order of Estonian Centre for Standardisation dated 31.12.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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English Version

Aerospace series - Clamps, loop ("P" type) in corrosion resisting steel, passivated with rubber cushioning - Dimensions, masses

Série aérospatiale - Colliers en "P" en acier résistant à la corrosion, passivés avec profilé en élastomère - Dimensions, masses

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

This European Standard was approved by CEN on 5 October 2009.

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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 Management Centre has the same status as the official versions.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 4113:2009) 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of an identical text or by endorsement, at the latest by April 2010, and conflicting national standards shall be withdrawn at the latest by April 2010.

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.

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1 Scope

This European Standard specifies the required characteristics of loop style clamps ("P" type) in corrosion resisting steel, passivated with various cushion materials.

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

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

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.

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

EN 2424:2008, *Aerospace series — Marking of aerospace products*

EN 2516, *Aerospace series — Passivation of corrosion resisting steels and decontamination of nickel base alloys*

EN 2566, *Aerospace series — Fluorocarbon rubber <FPM> — Hardness 70 — Characteristics¹⁾*

EN 3078, *Aerospace series — P, Q and saddle clamps with rubber cushion — Technical specification¹⁾*

EN 3488, *Aerospace series — Steel FE-PA3601 (X6CrNiTi18-10) — Air melted — Softened — Sheet and strip — $a \leq 6 \text{ mm}$ — $500 \text{ MPa} \leq R_m \leq 700 \text{ MPa}$*

EN 3825, *Aerospace series — Fluorosilicone rubber (FVMQ) — Hardness 60 IRHD¹⁾*

EN 3826, *Aerospace series — Fluorosilicone rubber (FVMQ) — Hardness 70 IRHD¹⁾*

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

EN 10088 (all parts), *Stainless steels*

3 Required characteristics

3.1 Materials

According to Table 1.

Clamp: According to EN 3488 (alternative material 1.4541 according to EN 10088).

Cushion: According to EN 4115.

1) Published as ASD Prestandard at the date of publication of this standard.