
Aeronavtika - Adapter, cevni priključek 24°, konica do 35 000 kPa (5080 psi), vrata za navojni priključek z zapornim obročem - Palčne mere - Geometrijski načrt

Aerospace series - Adaptor, Pipe coupling 24° Cone up to 35 000 kPa (5 080 psi) Port for Ring locked fitting - Inch Series - Geometric configuration

Luft- und Raumfahrt - Adapter, Rohrverschraubung 24° Konus bis 35 000 kPa (5 080 psi) Einschraublöcher für gerade Anschlussverschraubung mit Sicherungsring - Inch-Reihe - Konstruktionsblatt

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Série aérospatiale - Adapteur, Système de raccordement interface conique 24° jusqu'à 35 000 kPa (5 080 psi) Implantation pour raccord avec bague de sécurité - Série inch - Configuration géométrique

Ta slovenski standard je istoveten z: EN 4834:2018

ICS:

49.080	Letalski in vesoljski hidravlični sistemi in deli	Aerospace fluid systems and components
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SIST EN 4834:2018

en,fr,de

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EUROPEAN STANDARD

EN 4834

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2018

ICS 49.080

English Version

Aerospace series - Adaptor, Pipe coupling 24° Cone up to 35 000 kPa (5 080 psi) Port for Ring locked fitting - Inch Series - Geometric configuration

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This European Standard was approved by CEN on 3 December 2017.

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.

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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 4834:2018) 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 February 2019, and conflicting national standards shall be withdrawn at the latest by February 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.

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 4834:2018 (E)**Introduction**

This European Standard is co-owned standard and a functional equivalent of AS5551. There should be no technical objection to use AS5551 as replacement of EN 4834 parts. Further revisions to this standard shall be coordinated with the SAE committee.

European standards use the International System of units (SI); however, large segments of the aerospace industry make use of other measurement systems as a matter of common working practice. All dimensions and units used in this standard are given in SI units, with other units also indicated for the convenience of the user.

The decimal sign used in European standards is the comma (","); however, the comma is not used in common working practice with non-SI dimensions. Therefore, in common with many other aerospace standards, the decimal point (".") is used in this standard when providing dimensions in inch-pound units.

NOTE The use of non-SI units and the decimal point in this standard does not constitute general acceptance of measurement systems other than SI within European standards.

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1 Scope

This European Standard specifies the dimensions, tolerances and requirements of a port for a fluid connection with ring locked fitting, for use in aircraft systems at nominal operating pressure of 35 000 kPa (5 080 psi) maximum and temperature range of -54 to $+135$ °C (-65 to $+275$ °F).

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 2815, *Aerospace series — Steel FE-PM1802 (X5CrNiCu15-5) — Consumable electrode remelted — Solution treated and precipitation treated — Bar for machining — a or $D \leq 200$ mm — $R_m \geq 965$ MPa*

EN 2817, *Aerospace series — Steel FE-PM1802 (X5CrNiCu15-5) — Consumable electrode remelted — Solution treated and precipitation treated — Bar for machining — a or $D \leq 200$ mm — $R_m \geq 1\,070$ MPa*

EN 4832, *Aerospace series — Pipe coupling 24° Cone up to 35 000 kPa (5 080 psi) Ring-locked fitting and Ring-locked fitting-reducer — Inch Series — Technical specification¹⁾*

EN 4833, *Aerospace series — Pipe coupling 24° Cone up to 35 000 kPa (5 080 psi) Ring-locked fitting — Flared End — Inch Series — with Extra Fine Thread Pitch¹⁾*

EN 4835, *Aerospace series — Installation and removal requirements for Ring locked fitting and reducer, 24° Cone up to 35 000 kPa (5 080 psi) — Inch Series¹⁾*

EN 4836, *Aerospace series — Adaptor, Pipe coupling 24° Cone up to 35 000 kPa (5 080 psi) Ring-locked fitting Reducer — Flared End — with Extra Fine Thread Pitch — Inch Series¹⁾*

ISO 3161, *Aerospace — UNJ threads — General requirements and limit dimensions*

ARP4296, *Drawing interpretations, standard machining practice, tube fittings and connectors, fluid systems²⁾*

1) Published as ASD-STAN Prestandard at the date of publication of this standard (www.asd-stan.org).

2) Published by: SAE International (www.sae.org).

EN 4834:2018 (E)

3 Requirements

3.1 General characteristics

The drill and porting tool method of preparing the machined cavity is mandatory for use with ring locked fitting installed in accordance with EN 4835. The porting tool will size the minor dia and provide balance of cavity configuration ready for broaching serration.

After serrations are broached, chip removal is required.

The minimum boss diameter "B" and boss length "H" shown are to resist adapter installation torque and coupling nut torque. They are satisfactory for use in materials that exhibit minimum shear strengths of 179 MPa (26 ksi). A 10 % increase in the diameters shown is required for sizes -05 through -08, and a 15 % increase in diameters shown for sizes -10 and above when designing in materials whose shear strength is less than 179 MPa (26 ksi). Increase not required for -02 through -04. Using design activity may reduce min "B" in steel bosses. See also EN 4833 or EN 4836 for boss material strength requirements. The boss material for 35 000 kPa (5 080 psi) systems shall be titanium alloy 6AL-4V or CRES 15-5PH in accordance to EN 2815 or EN 2817.

Use of porting tool and broach tool specified is mandatory to provide required port configuration. Further information and tools shall be in accordance with EN 4835.

Interpretation of drawing according to ARP4296.

Surface texture: Unless otherwise specified, machined surface to be 3,175 μm (125 μin) Ra and sealing surface to be 1,6 μm (125 μin) Ra.

3.2 Configuration, dimensions and tolerances

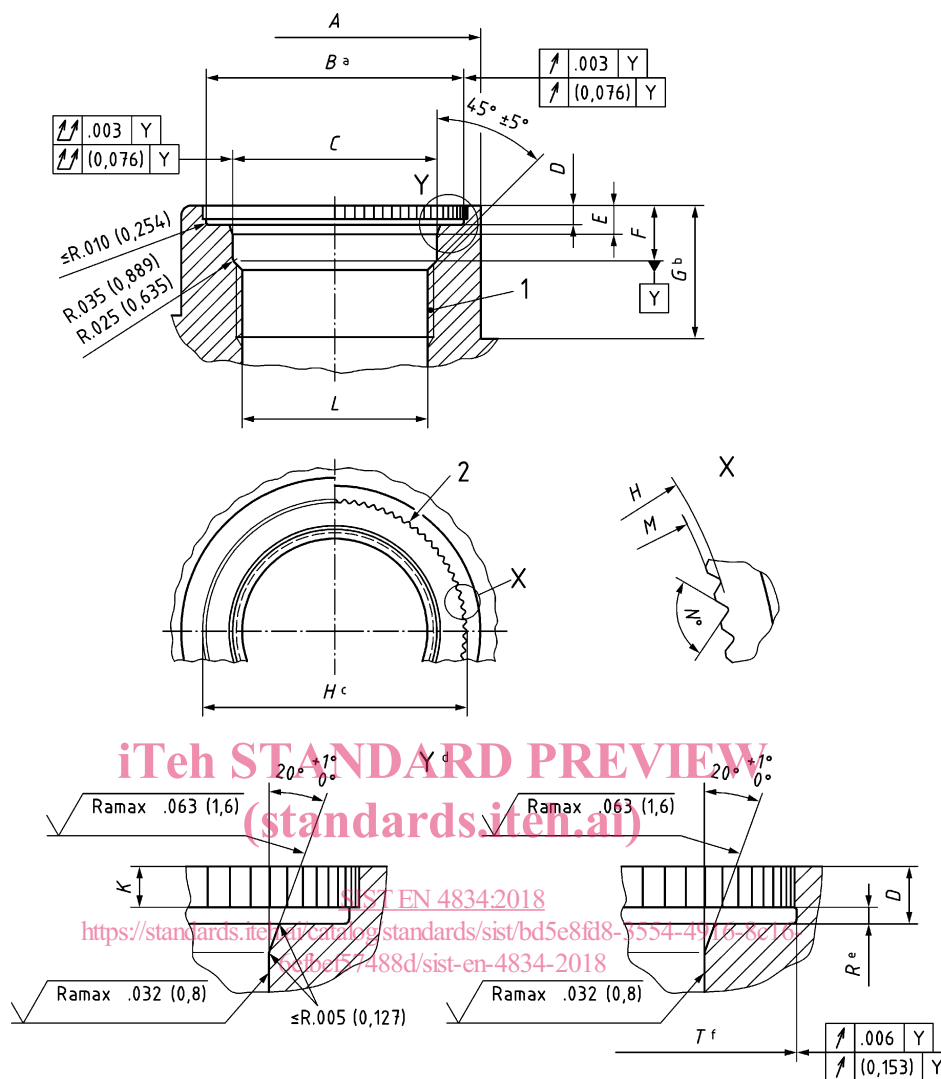
The configuration, dimensions and tolerances shall be in accordance with Figure 1 and Table 1.

Port serrations shall be compliant with Detail Y.

For production, machining tools provided by the fitting manufacturer may be used.

For control, serration control gauges provided by the fitting manufacturer shall be used.

Dimensions in inches (millimetres)

**Key**

- 1 Thread T
 - 2 Number of serration teeth (J)
- a Bore
b Recommended minimum boss length using A dia.
c Serration major diameter
d Detail Y, left side: Style A; right side: Style B, see NOTE
e Undercut width
f Undercut

Unless otherwise specified, the following tolerances are applicable:

- linear dimensions ± 0.005 0 in ($\pm 0,13$ mm), angular tolerances shall be $\pm 0,50$ degree.

NOTE The hole preparation for the serrations without the chip relief groove undercut can be differentiated from the undercut with the groove by designated the first as "Style A" and the second by "Style B" in this way a manufacturer can designate what type of preparation they prefer.

Figure 1 — Configuration, dimensions and tolerances