
Aeronavtika - Zahteve za namestitev in odstranitev navojnega priključka z zapornim obročem in njegovega reduktorja, 24°, konica do 35 000 kPa (5080 psi) - Palčne mere

Aerospace series - Installation and removal requirements for Ring locked fitting and reducer, 24° Cone up to 35 000 kPa (5 080 psi) - Inch Series

Luft- und Raumfahrt - In- und Ausbaubedingungen für Anschlussverschraubung und Reduzierer mit Sicherungsring 24° Konus bis 35 000 kPa (5 080 psi) - Inch-Reihe
(standards.iteh.ai)

Série aérospatiale - Spécification de montage et démontage des raccords à implanter avec bague de sécurité, interface conique 24° jusqu'à 35 000 kPa (5 080 psi) - Série inch

Ta slovenski standard je istoveten z: EN 4835:2018

ICS:

49.080	Letalski in vesoljski hidravlični sistemi in deli	Aerospace fluid systems and components
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SIST EN 4835:2018

en,fr,de

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EUROPEAN STANDARD

EN 4835

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2018

ICS 49.080

English Version

Aerospace series - Installation and removal requirements for Ring locked fitting and reducer, 24° Cone up to 35 000 kPa (5 080 psi) - Inch Series

Série aérospatiale - Spécification de montage et
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Anschlussverschraubung und Reduzierer mit
Sicherungsring 24° Konus bis 35 000 kPa (5 080 psi) -
Inch-Reihe

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.

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

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European foreword

This document (EN 4835:2018) 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 4835:2018 (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 4835 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 International 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 installation and removal requirements for adaptors and reducers, threaded, with lockring for pipe couplings 24° according to EN 4833 and EN 4836.

This standard establishes an accurate procedure of adaptor installation, removal and reinstallation to ensure the repeatability of the installation operation and to ensure the effective compliance to sealing and locking requirements.

The adaptor shown on all Figures of this standard is given as an example for the 24° internal cone interface according to EN 6123.

This procedure is used for adaptors 24°, for nominal pressure up to 35 000 kPa (5 080 psi).

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 2435-001, *Aerospace series — Paints and varnishes — Corrosion resistant chromated two component cold curing primer — Part 001: Minimum requirements*

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 4834, *Aerospace series — Adaptor, Pipe coupling 24° Cone up to 35 000 kPa (5 080 psi) Port for Ring locked fitting — Inch Series — Geometric configuration¹⁾*

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⁾*

EN 6123, *Aerospace series — Fitting end, 24° internal cone, external thread, flareless type — Extra fine thread pitch — Inch series — Design standard*

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

ISO 16031-1, *Aerospace fluid systems — O-rings, inch series: Inside diameters and cross sections, tolerances and size-identification codes — Part 1: Close tolerances for hydraulic systems*

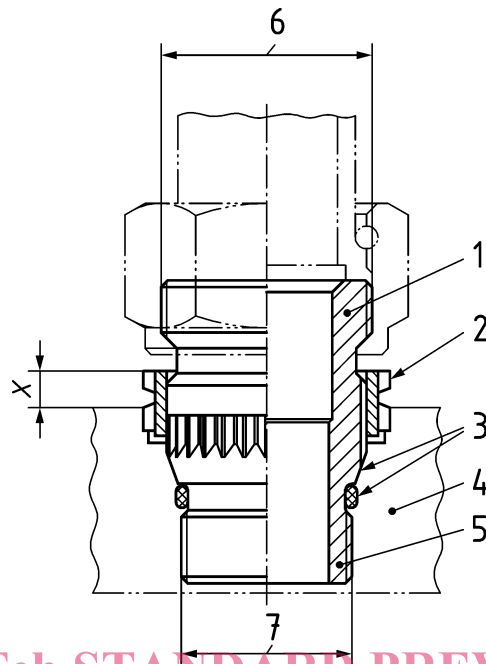
AS8879, *Screw threads — UNJ profile, inch controlled radius root with increased minor diameter²⁾*

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).

3 Installation instructions

3.1 Engineering information



Key

- 1 The fitting assemblies according to EN 4833 and the fitting reducer according to EN 4836 provide a semi-permanent male fitting for use in fluid systems of 35 000 kPa (5 080 psi) and compatible with titanium at $-54\text{ }^{\circ}\text{C}$ to $+135\text{ }^{\circ}\text{C}$ ($-65\text{ }^{\circ}\text{F}$ to $+230\text{ }^{\circ}\text{F}$) temperature range.
- 2 The lockring is driven into the mating port serrations after the fitting assembly or fitting reducer assembly have been torqued. This prevents the fitting assembly from rotating in the port during coupling nut assembly and disassembly and also eliminates the necessity of lock wiring the fitting. Only one wrench is required to install or remove coupling nut.
- 3 Seal is metal to metal with O-ring size according to Table 1. O-ring material compound shall be selected and specified by the using design activity and shall be selected based upon suitability with fluid type and temperature range.
- 4 Tapped hole (boss port side) for the 24° adaptor installation.
- 5 Port side interface of the adaptor according to "3.2 Port preparation".
- 6 Thread A
- 7 Thread B

Figure 1

Table 1 — General information – Ring locked fitting

Dimensions in millimetres

24° coupling code ^a	Adaptor part no. (as per EN 4833)	Thread A ^b ISO 3161 Class 3A	Thread B ^b ISO 3161 Class 3A	O-ring size code (as per ISO 16031-1)	X max.
04	04	0.4375 – 28UNJEF	0.3125 – 24UNJF	010	3,15
06	06	0.5625 – 24UNJEF	0.4375 – 20UNJF	012	3,30
08	08	0.7500 – 20UNJEF	0.5625 – 18UNJF	014	
10	10	0.8750 – 20UNJEF	0.6875 – 24UNJEF	016	
12	12	1.0625 – 18UNJEF	0.8125 – 20UNJEF	018	3,56
16	16	1.3125 – 16UNJ	1.1250 – 18UNJEF	022	
20	20	1.6250 – 16UNJ	1.3125 – 18UNJEF	026	

a Size code corresponds to the nominal tube diameter in 1/16 inch.
b For information only, please refer to EN 6123.

3.2 Port preparation

3.2.1 General

The manufacturing sequence of port preparation is for information only.

Qualification of the assembly is required for each manufacturing sequence and type of tool for a given port material installation method and nominal pressure.

The hole shall conform to EN 4834, using the applicable:

- tools for tap drilling;
- port machining;
- serration broaching;
- thread cutting.

NOTE The design office can specify a hole without serration pre-broaching, when low resistance material is used.

3.2.2 Tap drilling

Drill 0.015 in to 0.030 in smaller than the specified minor diameter modified. The porting tool will size the minor diameter and provide balance of cavity configuration ready for broaching serration.

Drill through or to a depth as required in Table 2. See Figure 3.