BS EN 4551:2014
Incorporating corrigendum November 2015

BSI Standards Publication

Aerospace series — Pipe coupling, 37°, in heat resisting steel — Swivel nuts — Inch series

National foreword

This British Standard is the UK implementation of EN 4551:2014. It supersedes BS EN 4551:2003 which is withdrawn.

BSI as a member of CEN is obliged to publish EN 4551:2014 as a British Standard. However, attention is drawn to the fact that during the development of this European Standard, the UK committee voted against its approval as a European Standard. The reason for this disapproval is that the UK committee considers the standard to describe an item for an interface that does not perform reliably in high pressure Aerospace applications. As a result it has not been used in a new design for some 30 years.

The UK participation in its preparation was entrusted to Technical Committee ACE/69, Aerospace hydraulic systems, fluids and components.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date	Text affected
30 November 2015	Implementation of CEN correction notice 26 November 2014 and 17 December 2014: Figure 1 corrected and header corrected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 4551

October 2014

ICS 49.080

Supersedes EN 4551:2003

English Version

Aerospace series - Pipe coupling, 37°, in heat resisting steel - Swivel nuts - Inch series

Série aérospatiale - Système de raccordement 37°, en acier résistant à chaud - Écrous prisonniers - Série inch

Luft- und Raumfahrt - Rohrverschraubung 37°, aus hochwarmfestem Stahl - Überwurfmuttern - Inch-Reihe

This European Standard was approved by CEN on 4 January 2014.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Contents

Foreword

This document (EN 4551:2014) 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 document supersedes EN 4551:2003.

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 2015, and conflicting national standards shall be withdrawn at the latest by April 2015.

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 characteristics of swivel nuts for inch series pipe couplings, 37°, in heat resisting steel, for aerospace applications.

Nominal pressure: Class D in accordance with ISO 6771.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 2491, *Aerospace series — Molybdenum disulphide dry lubricants — Coating methods*

EN 2786, *Aerospace series — Electrolytic silver plating of fasteners*

EN 3468, *Aerospace series — Steel FE-PA13 — Softened — 500 ≤ R_m ≤ 700 MPa — Forgings — D_e ≤ 100 mm* [1)]

EN 3487, *Aerospace series — Steel FE-PA3601 (X6CrNiTi18-10) — Air melted — Softened — Bar for machining — a or D ≤ 250 mm — 500 MPa ≤ R_m ≤ 700 MPa*

EN 4560, *Aerospace series — Pipe coupling, 37°, spherical, up to 21 000 kPa — Inch series — Technical specification*

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

ISO 6771, *Aerospace — Fluid systems and components — Pressure and temperature classifications*

3 Required characteristics

3.1 Configuration – Dimensions – Tolerances – Masses

See Figure 1 and Table 1 to Table 4. Dimensions and tolerances are in millimetres. They apply before lubrication except for silver plating parts.

Table 1

Code	Locking wire hole option
N	without locking wire hole
Y	with 2 locking wire holes

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

3.2 Materials

EN 3468 with minimum hardness HB > 140 or EN 3487 with minimum hardness HB > 140.

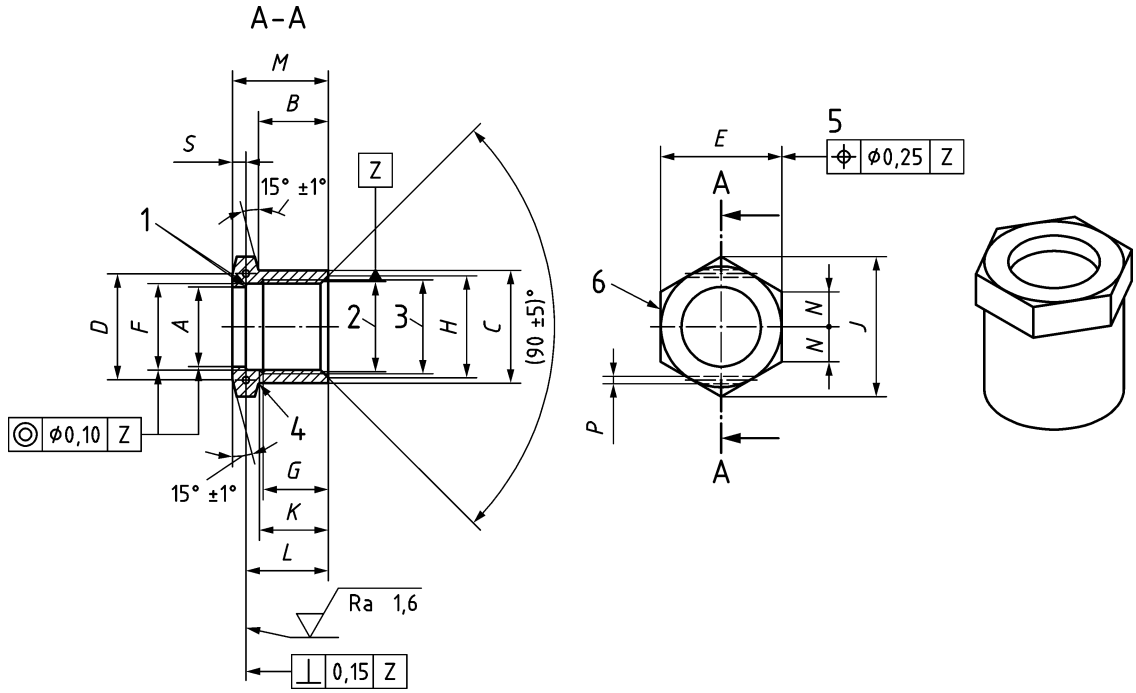
3.3 Surface treatments

Table 2

Code	Surface treatment	Standard
A	None	–
B	Molybdenum disulphide coating	EN 2491
C	Silver plating	EN 2786

R_a 3,2 (R_a 1,6) $^{-0,3}_{-0,1}$ (⌞)

Thread's surface will be achieved by normal methods of manufacture.



Key

1 R 0,13 to R 0,25
2 Pitch diameter
3 Thread
4 R 0,13 to R 1,80
5 Three positions
6 Marking

Figure 1

Table 3

Dimensional code [a]	Nominal diameter	Thread [b]	*A* + 0,1 0	*B*	*C* + 0,25 0	*D* + 0,5 0	*E* + 0,05 − 0,25	*F*	*G* min.	*H* ± 0,4	*J* min.	*K* max.	*L* + 0,25 0	*M*	**Mass** quoted in kg/1 000 parts ≈
03	4,763	375 0-24UNJF-3B	6,15	10,10 10,85	12,30	12,45	12,70	8,55 8,75	7,00	9,90	14,25	10,20	13,90	15,65 16,20	9,95
04	6,350	437 5-20UNJF-3B	7,75	10,45 11,25	13,85	14,00	14,30	9,95 10,15	7,45	11,50	16,00	11,20	14,25	16,05 16,55	11,00
05	7,924	500 0-20UNJF-3B	9,50	10,80 11,55	15,50	15,60	15,90	11,55 11,75	8,45	13,10	17,90	12,20	15,35	17,30 17,80	12,50
06	9,525	562 5-18UNJF-3B	11,15	11,50 12,25	17,10	17,20	17,50	13,00 13,20	9,30	14,70	19,70	12,70	16,05	18,75 19,00	16,30
08	12,700	750 0-16UNJF-3B	14,45	12,15 12,90	21,85	22,00	22,25	17,60 17,80	9,75	19,45	25,10	14,45	18,25	20,80 21,30	26,50
10	15,875	875 0-14UNJF-3B	17,70	15,30 16,05	25,00	25,15	25,40	20,55 20,80	11,50	22,60	28,70	16,94	20,60	23,30 23,80	33,50
12	19,050	1.062 5-12UNJ-3B	21,20	14,55 15,30	29,85	31,50	31,80	25,00 25,25	12,40	27,40	35,90	18,75	21,90	24,35 24,85	56,70
16	25,400	1.312 5-12UNJ-3B	27,65	16,20 16,95	36,30	37,85	38,20	31,35 31,60	13,60	33,70	43,20	19,95	24,30	26,70 27,25	75,40

[a] This code corresponds to the nominal diameter given in 16th of inches within two digits.

[b] Quoted in inches in accordance with ISO 3161.

Table 4

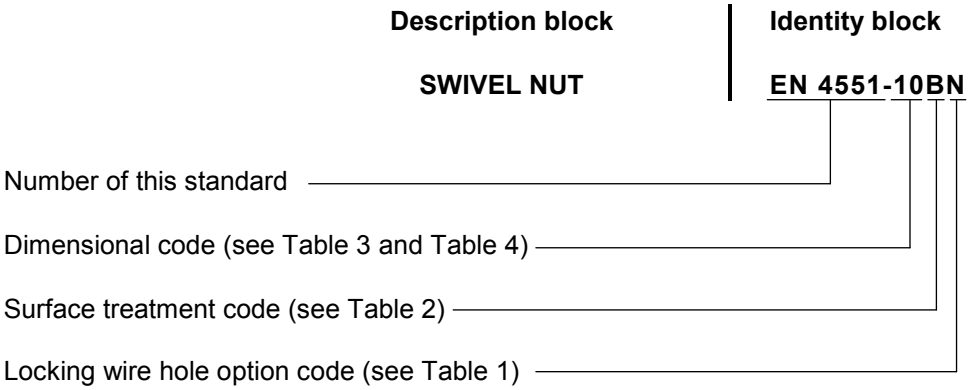
(When locking wire hole option code is “Y”)

Dimensional code [a]	Nominal diameter	*N*	*P*	*S* ± 0,25
03	4,763	5,3 5,6	1,45 1,55	2,55
04	6,350	6,2 6,5	1,45 1,55	2,55
05	7,924	7,1 7,4	1,65 1,90	2,55
06	9,525	7,9 8,1	1,65 1,90	2,55
08	12,700	10,2 10,6	1,65 1,90	3,55
10	15,875	11,8 12,3	1,65 1,90	3,55
12	19,050	14,7 15,2	1,65 1,90	3,55
16	25,400	18,2 18,6	1,65 1,90	3,55

[a] This code corresponds to the nominal diameter given in 16th of inches within two digits.

4 Designation

EXAMPLE



NOTE If necessary, the code I9005 shall be placed between the description block and the identity block.

5 Marking

According to EN 2424, style A and Figure 1.

6 Technical specification

According to EN 4560.

Annex A
(informative)

Standard evolution form

MODIFICATION	REASON AND VALIDATION
Table 3 Before: Dimensions for code 10 D was 23,55 F was 19,15 to 19,40 G was 9,75 J was 26,90 K was 14,45 M was 20,80 to 21,30 After: Dimension for code 10 D is 25,15 F is 20,55 to 20,80 G is 11,50 J is 28,70 K is 16,94 M is 23,30 to 23,80	Values totally incoherent for code 10. Accordance with standard MS9197.

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