SLOVENSKI STANDARD
SIST EN 6101:2023

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Nadomešča:
SIST EN 6101:2016

Aeronavtika - Kovice, 100° srednje ugrezna glava, ozka toleranca - Palčne mere

Aerospace series - Rivet, 100° medium flush head, close tolerance - Inch series

Luft- und Raumfahrt - Vollniet, 100° Medium Senkkopf, enge Toleranz - Inch-Reihe

Série aérospatiale - Rivets de précision, tête fraisée moyenne 100° - Série en inches

Ta slovenski standard je istoveten z: **EN 6101:2022**

ICS:

21.060.40	Kovice	Rivets
49.030.60	Kovice	Rivets

SIST EN 6101:2023 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 6101

December 2022

ICS 49.030.60

Supersedes EN 6101:2016

English Version

Aerospace series - Rivet, 100° medium flush head, close tolerance - Inch series

Série aérospatiale - Rivets de précision, tête fraisée moyenne 100° - Série en inches

Luft- und Raumfahrt - Vollniet, 100° Medium Senkkopf, enge Toleranz - Inch-Reihe

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 6101:2022) 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of an identical text or by endorsement, at the latest by June 2023, and conflicting national standards shall be withdrawn at the latest by June 2023.

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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.

Introduction

This document is published at Airbus agreed version prEN 6101 edition P3. Former issue 1 and 2 and drafts may exist of Airbus development only but without any ASD–STAN official publication. In consequence configuration management discrepancies with these unofficial documents are under Airbus responsibility.

1 Scope

This document specifies the dimensions, tolerances and mass of rivets with 100° medium flush head, close tolerance, inch series, for aerospace application.

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 2114, *Aerospace series — Aluminium 1050A-H14 — Wire for solid rivets — D ≤ 10 mm*

EN 2115, *Aerospace series — Aluminium alloy 2117-T42 — Wire for solid rivets — D ≤ 10 mm*

EN 2116, *Aerospace series — Aluminium alloy 2017A-T42 — Wire for solid rivets — D ≤ 10 mm*

EN 2117, *Aerospace series — Aluminium alloy AL-P5056A (5056A)-H32 — Wire for solid rivets — D ≤ 10 mm*

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

EN 2941, *Aerospace series — Nickel alloy rivets — Technical specification*

EN 3115, *Aerospace series — Aluminium alloy 7050-T73 — Wire for solid rivets — D ≤ 10 mm*

EN 4372, *Aerospace series — Heat resisting nickel alloy with copper NI-PD9001 (NiCu31) — Wire for solid rivets — D ≤ 10 mm*

prEN 6104, *Aerospace series — Rivets, solid, in aluminium or aluminium alloy — Inch series — Technical specification*[1]

prEN 6118, *Aerospace series — Process specification — Aluminium base protection for fasteners*[1]

ISO 8080, *Aerospace — Anodic treatment of titanium and titanium alloys — Sulfuric acid process*

MIL-A-8625, *Anodic Coatings for Aluminum and Aluminum Alloys*[2]

MIL-DTL-5541, *Chemical Conversion Coatings on Aluminium and Aluminium Alloys*[2]

NASM5674, *Rivets, Structural, Aluminium Alloy, Titanium Columbium Alloy, General Specification for*[3]

NAS9800, *Head protrusion gaging, 100° flush head fasteners, gage block, gage diameters and stylus*[3]

SAE AMS 4982, *Titanium Alloy Wire 44.5 Cb*[4]

SAE AMS-QQ-P-416, *Plating, Cadmium (Electrodeposited)*[4]

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1 Published as ASD-STAN Prestandard at the date of publication of this European standard by AeroSpace and Defence Industries Association of Europe – Standardization (ASD-STAN) (www.asd-stan.org).

2 Published by: Department of Defense (DoD), the Pentagon, Washington, D.C., 20307, USA.

3 Published by: Aerospace Industries Association of America, Inc. (AIA), 1250 Eye Street, N.W., Washington, D.C. 20005-3924, USA.

4 Published by: Society of Automotive Engineers (SAE), 400 Commonwealth Drive, Warrendale, PA 15096-0001, USA.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Requirements

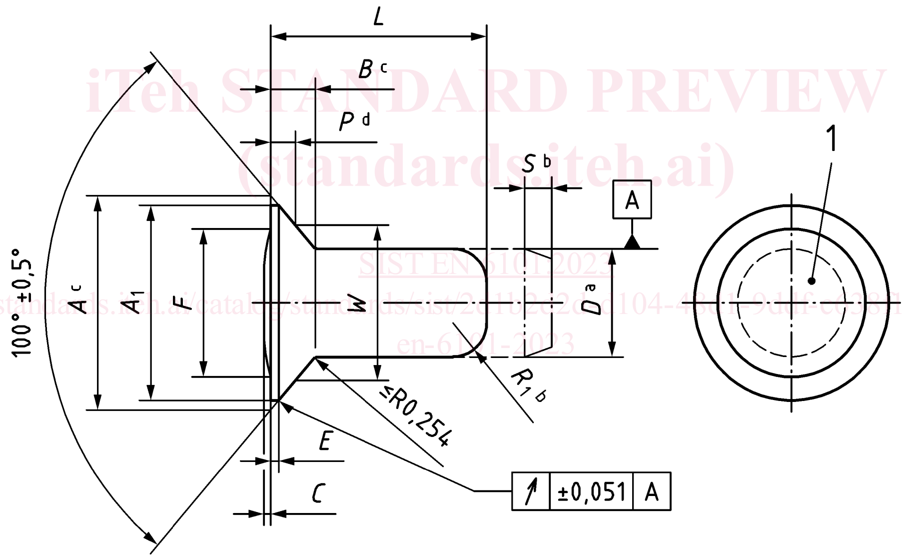
4.1 Configuration, dimensions, tolerances and masses

The configuration shall be according to Figure 1.

The dimensions, tolerances and mass shall be according to Figure 1 and Table 1, Table 2, and Table 3.

The dimensions and tolerances of oversizes (for repair purposes only) shall be according to Figure 1 and Table 2, and Table 3.

Dimensions and tolerances are expressed in millimetres.



Key

1 Marking (see Clause 6)

a 0,025 mm shank diameter increase is permissible within 2,54 mm of the base of the head

b Chamfered ends with radius to the R_1 dimensions or a 20° chamfer to "*S*" dimension

c Maximum head diameters are to theoretical sharp corners as measured by projection

d Measurement method for inspection of head characteristics in accordance with NAS9800

NOTE Angular misalignment of rivet head to rivet shank axis 0,5° max.

Figure 1 — Configuration

Table 1 — Dimensions and tolerances

Diameter code	*D* Nominal diameter ±0,03	*A* max.	*A* min.	A_1 min.	*B* Ref.	*C* +0,05 0	*E* Ref.	*F* ±0,13	*P* max.	*P* min.	R_1 ±0,25	*S* ±0,25	*W* max.	*W* min.
2	1,58	2,90	2,80	2,44	0,53	0,08	0,08 to 0,15	2,07	0,287	0,238	0,48	0,41	2,228	2,223
3	2,38	4,55	4,45	4,09	0,89			3,29	0,471	0,419	0,74	0,58	3,443	3,438
4	3,18	5,70	5,60	5,24	1,04			4,14	0,545	0,492	0,99	0,79	4,418	4,413
5	3,97	7,18	7,10	6,74	1,33			5,25	0,861	0,810	1,24	0,99	5,151	5,146
6	4,76	8,43	8,35	7,99	1,52	0,10		6,20	0,946	0,894	1,50	1,19	6,200	6,195
7	5,56	9,67	9,59	9,23	1,70			7,15	1,001	0,948	1,75	1,37	7,310	7,305
8	6,36	11,02	10,92	10,56	1,93			8,15	1,103	1,040	1,98	1,57	8,420	8,415
10	7,93	13,75	13,65	13,29	2,42			10,15	1,471	1,402	2,49	1,98	10,279	10,274
12	9,53	16,42	16,32	15,96	2,87			12,15	1,734	1,660	2,97	2,39	12,329	12,324

Table 2 — Dimensions and tolerances for oversize rivets

Diameter code	*D* Nominal diameter ±0,03	*A* max.	*A* min.	A_1 min.	*B* Ref.	*C* +0,05 0	*E* Ref.	*F* ±0,13	*P* max.	*P* min.	R_1 ±0,25	*S* ±0,25	*W* max.	*W* min.
3X	2,78	4,55	4,45	4,09	0,72	0,08	0,08 to 0,15	3,29	0,471	0,419	0,74	0,58	3,443	3,438
4X	3,58	5,70	5,60	5,24	0,87			4,14	0,545	0,492	0,99	0,79	4,418	4,413
5X	4,37	7,18	7,10	6,74	1,16			5,25	0,861	0,810	1,24	0,99	5,151	5,146
6X	5,16	8,43	8,35	7,99	1,36	0,10		6,20	0,946	0,894	1,50	1,19	6,200	6,195
7X	5,96	9,67	9,59	9,23	1,54			7,15	1,001	0,948	1,75	1,37	7,310	7,305

Table 3 — Length code and masses

Length[a, b]		Diameter code								
		2	3 3X	4 4X	5 5X	6 6X	7 7X	8	10	12
Code	*L* ± 0,254	Mass[c] kg/1 000 parts								
03	4,76	0,02	0,07	0,12	—	—	—	—	—	—
04	6,35	0,04	0,09	0,16	0,26	—	—	—	—	—
05	7,94	0,05	0,11	0,20	0,32	0,46	—	—	—	—
06	9,53	0,05	0,13	0,23	0,37	0,54	0,74	—	—	—
07	11,11	0,06	0,15	0,27	0,43	0,62	0,85	1,13	—	—
08	12,70	0,07	0,17	0,30	0,48	0,70	0,96	1,27	—	—
09	14,29	0,08	0,19	0,34	0,54	0,78	1,07	1,41	2,26	—
10	15,88	0,09	0,21	0,37	0,59	0,85	1,17	1,55	2,47	3,65
11	17,46	0,10	0,23	0,41	0,64	0,93	1,28	1,69	2,69	3,96
12	19,05	0,11	0,25	0,44	0,70	1,01	1,39	1,83	2,91	4,28
13	20,64	0,12	0,27	0,48	0,75	1,09	1,50	1,97	3,13	4,59
14	22,23	0,12	0,29	0,51	0,81	1,17	1,60	2,11	3,35	4,91
15	23,81	0,13	0,31	0,55	0,86	1,25	1,71	2,25	3,57	5,22
16	25,40	0,14	0,33	0,58	0,92	1,33	1,82	2,40	3,79	5,54
17	26,99	—	0,35	0,62	0,97	1,41	1,93	2,54	4,00	5,86
18	28,58	—	0,37	0,65	1,03	1,49	2,03	2,68	4,22	6,17
20	31,75	—	0,41	0,72	1,14	1,64	2,25	2,96	4,66	6,80
22	34,93	—	0,45	0,79	1,25	1,80	2,46	3,24	5,10	7,44
24	38,10	—	—	0,86	1,36	1,96	2,68	3,52	5,53	8,07

[a] Lengths missing in table can be created in 1/16 inch (1,59 mm) steps, e.g. length code 19 corresponds to: 19/16 inch (30,16 mm).

[b] 1/32 inch (0,79 mm) length increments may be obtained by adding code 5 after the last digit of part number, e.g. length code 06-5 corresponds to: 6/16 inch (9,53 mm) + 1/32 inch (0,79 mm) = 13/32 inch (10,32 mm).

[c] Mass based on aluminium alloy with a density of 2,79 kg/dm^3, refer to Table 4 for conversion factors.

4.2 Material and surface treatment

Material and surface treatment should be in accordance with Table 4.