SLOVENSKI STANDARD
SIST EN 6069:2010

01-januar-2010

Aeronavtika - Kovice, 100° zmanjšana ugrezna glava, ozka toleranca - Colski tip

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

Luft- und Raumfahrt - Vollniet, 100° Reduzierter Senkkopf, enge Toleranz - Zoll-Reihe

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

Ta slovenski standard je istoveten z: **EN 6069:2009**

ICS:

49.030.60	Kovice	Rivets

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English Version

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

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

Luft- und Raumfahrt - Vollniet, 100° Reduzierter Senkkopf, enge Toleranz - Zoll-Reihe

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

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Foreword

This document (EN 6069:2009) 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of an identical text or by endorsement, at the latest by May 2010, and conflicting national standards shall be withdrawn at the latest by May 2010.

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1 Scope

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

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 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 2424:2008, *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 ≤ 10mm*

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

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

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

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

AMS 4982, *Titanium alloy wire 44.5 Cb*[2)]

MIL-DTL-5541, *Military specification, Chemical conversion coatings on aluminium and aluminium alloys*[3)]

MIL-A-8625, *Military specification, Anodic coatings for aluminium and aluminium alloys*[3)]

NASM5674, *Rivets, structural, aluminium alloy, titanium columbium alloy, general specification for*[4)]

NAS9800, *Head protrusion gaging, 100° flush head fasteners, gage block, gage diameters and stylus*[4)]

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

2) Published by: Society of Automotive Engineers (SAE), (www.sae.org).

3) Published by: American Society for Testing and Materials (ASTM), (www.astm.org).

4) Published by: Aerospace Industries Association/ National Aerospace Standards (AIA/NAS), (www.aia.aerospace.org).

3 Requirements

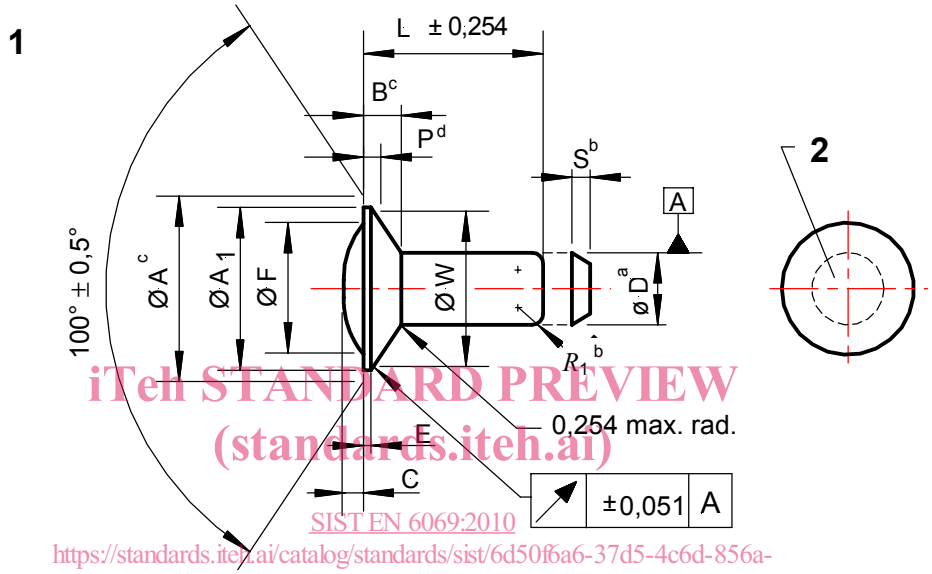
3.1 Configuration, dimensions, tolerances and mass

The configuration shall conform to Figure 1.

The dimensions, tolerances and mass shall conform to Figure 1 and Tables 1 and 3.

Dimensions and tolerances of oversizes (for repair purposes only) shall conform to Figure 1 and Tables 2 and 3.

Dimensions and tolerances are expressed in millimetres.



Key

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

2 Marking (see Clause 5).

[a] 0,025 mm shank diameter increase is permissible within 2,54 mm of the based of the head.

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

[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.

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	F ± 0,13	P max.	P min.	R_1 ± 0,25	S ± 0,25	W max.	W min.
3	2,38	3,709	3,623	3,263	0,54	0,08	0,08 to 0,15	2,31	0,291	0,248	0,74	0,58	3,028	3,023
4	3,18	4,923	4,835	4,475	0,71			3,53	0,336	0,291	0,99	0,79	4,135	4,130
5	3,97	6,226	6,141	5,781	0,93			4,83	0,457	0,412	1,24	0,99	5,151	5,146
6	4,76	7,635	7,543	7,183	1,19	0,10		5,15	0,610	0,559	1,50	1,19	6,200	6,195
7	5,56	8,880	8,790	8,430	1,38			7,00	0,670	0,612	1,75	1,37	7,310	7,305
8	6,36	10,014	9,907	9,547	1,51			8,15	0,677	0,618	1,98	1,57	8,420	8,415

Table 2 — Dimensions and tolerances for oversize rivets

Diameter code	D ± 0,03	A max.	A min.	A_1 min.	B Ref.	C + 0,05 0	E	F ± 0,13	P max.	P min.	R_1 ± 0,25	S ± 0,25	W max.	W min.
5X	4,37	6,630	6,540	6,18	0,93	0,08	0,08 to 0,15	5,10	0,628	0,578	1,24	0,99	5,151	5,146
6X	5,16	8,040	7,950	7,59	1,19	0,10		6,25	0,781	0,728	1,50	1,19	6,200	6,195
7X	5,96	9,280	9,190	8,83	1,38			7,25	0,836	0,782	1,75	1,37	7,310	7,305

Table 3 — Length code and mass

Length [a, b]		Diameter code					
		3	4	5	6	7	8
code	$L \pm 0{,}254$	Mass [c] kg/ 1 000 parts					
03	4,76	0,06	0,11	–	–	–	–
04	6,35	0,08	0,15	0,24	–	–	–
05	7,94	0,10	0,18	0,29	0,43	–	–
06	9,52	0,12	0,22	0,35	0,51	0,71	–
07	11,11	0,14	0,25	0,40	0,59	0,81	1,07
08	12,70	0,16	0,29	0,46	0,67	0,92	1,21
09	14,29	0,18	0,32	0,51	0,75	1,03	1,35
10	15,87	0,20	0,36	0,57	0,83	1,14	1,49
11	17,46	0,22	0,40	0,62	0,90	1,24	1,63
12	19,05	0,24	0,43	0,68	0,98	1,35	1,77
13	20,64	0,26	0,47	0,73	1,06	1,46	1,91
14	22,22	0,28	0,50	0,79	1,14	1,57	2,05
15	23,81	0,30	0,54	0,84	1,22	1,67	2,19
16	25,40	0,32	0,57	0,90	1,30	1,78	2,34
17	26,99	–	0,61	0,95	1,38	1,89	2,48
18	28,57	–	0,64	1,01	1,46	2,00	2,62
20	31,75	–	0,71	1,11	1,61	2,21	2,90
22	34,92	–	0,78	1,22	1,77	2,43	3,18
24	38,10	–	0,85	1,33	1,93	2,64	3,46
28	44,45	–	–	1,55	2,24	3,07	4,02
32	50,80	–	–	1,77	2,56	3,50	4,59
40	63,50	–	–	–	–	4,36	5,71

[a] Length 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.