INTERNATIONAL STANDARD

ISO 3209

Third edition
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Aerospace — Nuts, anchor, self-locking, floating, two lug, with counterbore, with MJ threads, classifications: 1 100 MPa (at ambient temperature)/ 235 °C, 1 100 MPa (at ambient temperature)/315 °C and 1 100 MPa (at ambient temperature)/ 425 °C — Dimensions

Aéronautique et espace — Écrous à river, à freinage interne, flottants, double patte, avec chambrage, à filetage MJ, classifications: 1 100 MPa (à température ambiante)/235 °C, 1 100 MPa (à température ambiante)/315 °C et 1 100 MPa (à température ambiante)/425 °C — Dimensions

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

The committee responsible for this document is ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 4, *Aerospace fastener systems*.

This third edition cancels and replaces the second edition (ISO 3209:1998), of which it constitutes a minor revision.

Introduction

The dimensions specified in this International Standard have been determined to allow production of a part which will satisfy the requirements of the procurement specification ISO 5858.

Aerospace — Nuts, anchor, self-locking, floating, two lug, with counterbore, with MJ threads, classifications: 1 100 MPa (at ambient temperature)/235 °C, 1 100 MPa (at ambient temperature)/315 °C and 1 100 MPa (at ambient temperature)/425 °C — Dimensions

1 Scope

This International Standard specifies the dimensions of self-locking, floating, two lug anchor nuts, with counterbore, with MJ threads, of classifications: 1 100 MPa/235 °C, 1 100 MPa/315 °C and 1 100 MPa/425 °C.

NOTE 1 1 100 MPa corresponds to the minimum tensile stress which the nut is able to withstand at ambient temperature without breaking or cracking when tested with a bolt of a higher strength class.

NOTE 2 235 °C, 315 °C and 425 °C corresponds to the maximum temperature that the nut is able to withstand without permanent alteration to its original characteristics, after ambient temperature has been restored. The maximum temperature is conditioned by the surface treatment.

This International Standard is only applicable for the compilation of aerospace product standards.

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.

ISO 5855–2, *Aerospace — MJ threads — Part 2: Limit dimensions for bolts and nuts*

ISO 5858, *Aerospace — Nuts, self-locking, with maximum operating temperature less than or equal to 425 °C — Procurement specification*

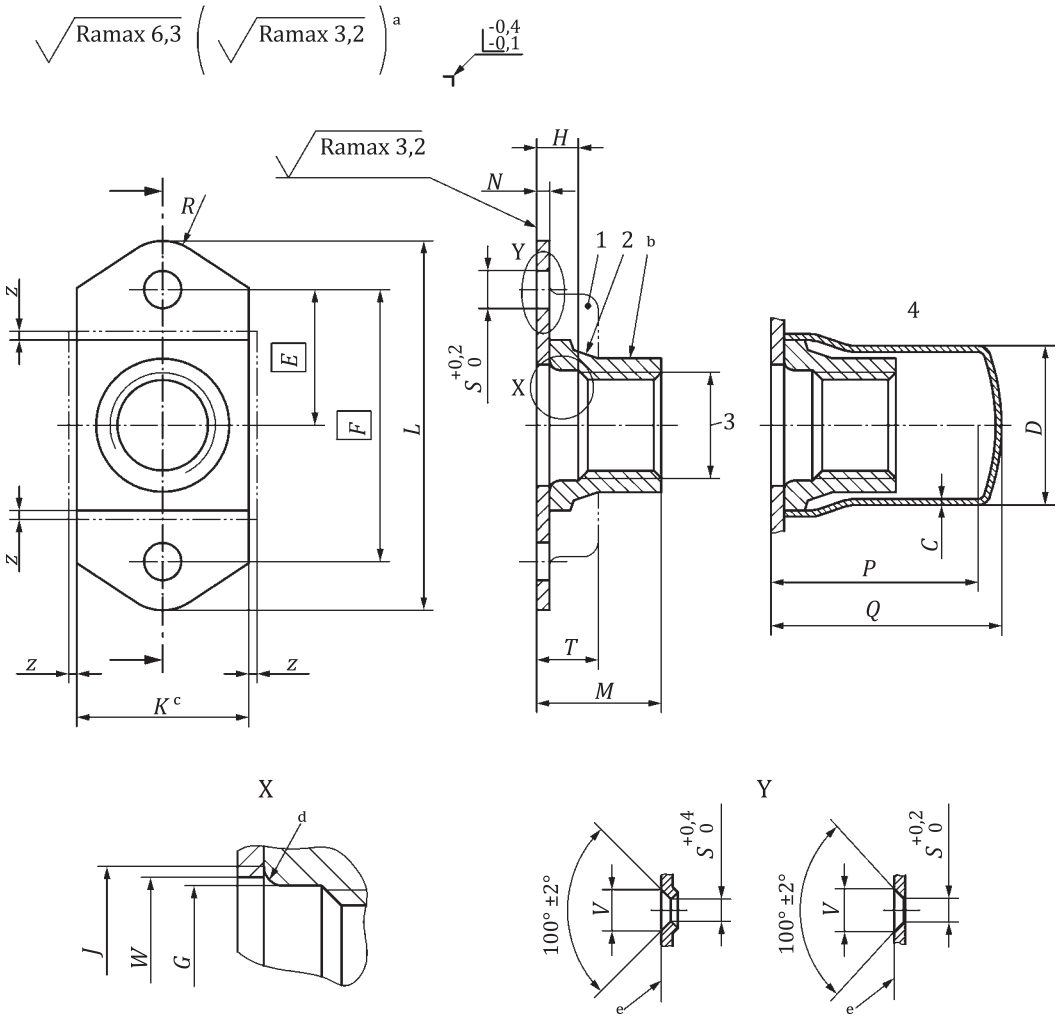
ISO 8788, *Aerospace — Nuts, metric — Tolerances of form and position*

3 Configuration and dimensions

See Figure 1 and Table 1. Dimensions and tolerances are expressed in millimetres. They apply after any surface coating(s) but before the application of any lubricant.

The metallic cap (optional) shall remain joined to the nut at the maximum operating temperature (type of attachment at the user's discretion). See ISO 5858 for the test conditions.

Tolerances of form and position shall conform to those specified in ISO 8788. Details of form not stated are at the manufacturer's discretion.



Key

1 cage

2 threaded element

3 thread

a These values, in micrometres, apply before any surface coating(s) is/are applied. The values do not apply to threads, punched holes or shear edges the surface texture of which will be as achieved by the usual manufacturing methods.

b Form out-of-round in this area to achieve the self-locking torque requirement, tooling marks permissible in this area.

c Float inclusive.

d Radius or chamfer.

e Detail Y alternatives: countersunk rivet holes (when specified by purchaser) may be dimpled or cut countersunk (at manufacturer's option).

Figure 1 — Configuration and dimensions

Table 1 — Dimensions

Dimensions in millimetres

Diameter code	**Thread**[a]	*C* max.	*D* max.	*E*	*F*	*G* min.	*H* min.	*J*[b] max.	*K* max.	*L* max.	*M* max.	*N* max.	*P* max.	*Q* max.	*R* ~	*S*	*T* max.	*V* ±0,25	*W* min.	**Radial float** *Z* min.
030	MJ3 × 0,5–4H6H	—	—	8,50	17,00	—	—	4,60	11,00	23,20	4,00	0,90	—	—	3,00	2,50	4,50	4,80	4,50	0,50
040	MJ4 × 0,7–4H6H	0,40	6,60			4,40	2,20	6,20			5,80		11,00	13,00					5,50	
050	MJ5 × 0,8–4H6H		8,10	9,50	19,00	5,50	2,40	7,30	12,00	25,20	6,90		11,40	13,40					6,50	0,70
060	MJ6 × 1–4H5H		9,20	11,00	22,00	6,50	2,70	8,70	13,50	29,20	8,10		12,70	14,70	3,50		4,60		7,50	
080	MJ8 × 1–4H5H	0,50	12,80			8,50		10,90	16,00		9,90	1,10	15,00	18,00		3,00	5,50	5,70	9,50	0,75
100	MJ10 × 1,25–4H5H		15,00	13,00	26,00	10,50	3,00	12,90	18,00	35,20	12,00		20,20	22,00	4,50	3,50	6,00	6,60	11,50	

[a] In accordance with ISO 5855-2. In the self-locking zone, the tolerances apply before forming out of-round.

[b] Measured at sharp corners (chamfered) or point of tangency (radiused).

[c] Maximum protrusion of the bolt.

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