
**Aerospace — Nuts, barrel, self-locking,
floating, self-aligning, with MJ threads,
classifications: 900 MPa (at ambient
temperature)/235 °C, 1 100 MPa (at ambient
temperature)/235 °C, 1 250 MPa (at ambient
temperature)/235 °C and 1 550 MPa (at
ambient temperature)/235 °C —
Dimensions**

*Aéronautique et espace — Écrous à portée cylindrique, à freinage interne,
flottants, orientables, à filetage MJ; classifications: 900 MPa (à température
ambiante)/235 °C; 1 100 MPa (à température ambiante)/235 °C,
1 250 MPa (à température ambiante)/235 °C et 1 550 MPa
(à température ambiante)/235 °C — Dimensions*



Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 12278 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 4, *Aerospace fastener systems*.

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ISO 12278:1999

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International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

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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 5858:1999, *Aerospace — Self-locking nuts with maximum operating temperature less than or equal to 425 °C — Procurement specification*.

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1 Scope

This International Standard specifies the dimensions of self-locking, floating, self-aligning barrel nuts, with MJ threads, for classifications 900 MPa¹/235 °C², 1 100 MPa¹/235 °C², 1 250 MPa¹/235 °C² and 1 550 MPa¹/235 °C².

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

2 Normative reference

ISO 12278:1999

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The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 5855-2:1999, *Aerospace — MJ threads — Part 2: Limit dimensions for bolts and nuts*.

3 Configuration and dimensions

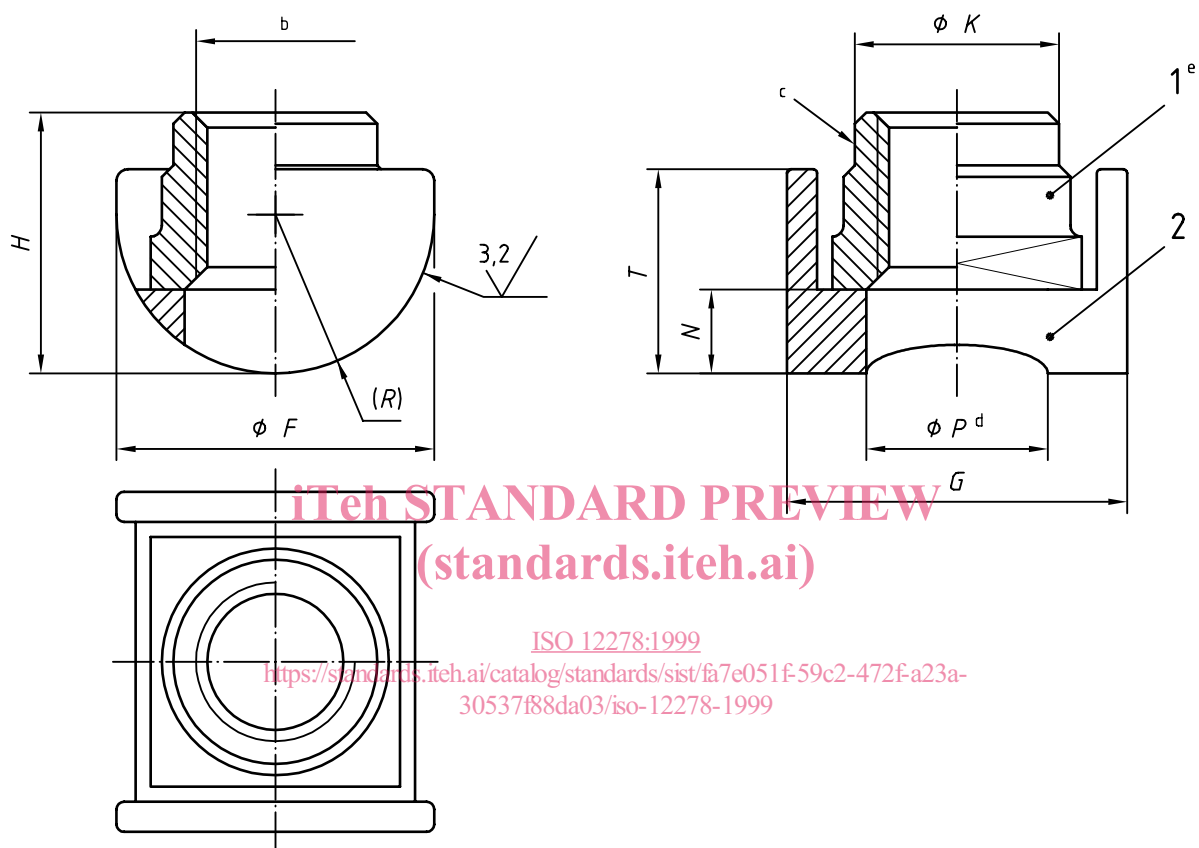
See Figure 1 and Table 1. Dimensions and tolerances are expressed in millimetres. They apply after any surface coating(s) but before the application of any lubricant.

¹) 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.

²) 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.

$$6,3 / \left(3,2 \right)^a$$

Remove sharp edges 0,1 to 0,4.



Key

- 1 Thread element
- 2 Cradle

NOTE Details of form not stated are at the manufacturer's option.

^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 Thread

^c Form out-of-round in this area to achieve the self-locking torque requirement. Tooling marks permissible in this area.

^d Means of retaining nut in cradle are manufacturer's option providing envelope and performance requirements are met.

^e Radial float: 0,4 min.

Figure 1

Table 1

Diameter code	Thread ^a	F $\begin{smallmatrix} 0 \\ -0,1 \end{smallmatrix}$	G $\pm 0,25$	H max.	K max.	N $\begin{smallmatrix} 0 \\ -0,25 \end{smallmatrix}$	P $\begin{smallmatrix} +0,25 \\ 0 \end{smallmatrix}$	T max.	Installation hole size
060	MJ6 $\times$ 1–4H5H	12,9	14	10,6	9,5	3,35	6,8	8,2	13
070	MJ7 $\times$ 1–4H5H	13,9	15	11,5	9,8	3,7	7,8	9,5	14
080	MJ8 $\times$ 1–4H5H	14,9	17	12	10,2		8,8	9,9	15
100	MJ10 $\times$ 1,25–4H5H	17,9	20	15	12,5	4,6	10,8	12	18
120	MJ12 $\times$ 1,25–4H5H	21,9	24	18,1	15,7	5,7	12,8	14,2	22
140	MJ14 $\times$ 1,5–4H5H	25,9	28	22,2	17,2	6,5	14,8	16,5	26
160	MJ16 $\times$ 1,5–4H5H	29,9	32	25,7	19,5	7,55	16,8	18,6	30
180	MJ18 $\times$ 1,5–4H5H	32,9	36	26,2	22	8,45	18,8	20,8	33
200	MJ20 $\times$ 1,5–4H5H	36,9	40	29,3	25,5	9,6	20,8	23	37
220	MJ22 $\times$ 1,5–4H5H	40,9	44	32,1	26	10,35	22,8	25,2	41
240	MJ24 $\times$ 2–4H5H	43,9	48	35	28,6	11,25	24,8	27,5	44
270	MJ27 $\times$ 2–4H5H	49,9	54	39,3	31,5	12,55	27,8	30,7	50
300	MJ30 $\times$ 2–4H5H	55,9	60	43,7	34,8	13,95	30,8	34	56
330	MJ33 $\times$ 2–4H5H	61,9	66	48,1	38	15,35	33,8	37,3	62
360	MJ36 $\times$ 2–4H5H	67,9	72	52,4	41,5	16,65	36,8	40,6	68
390	MJ39 $\times$ 2–4H5H	73,9	78	56,8	45	18,05	39,8	44	74

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

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