
Aerospace — Nuts, bihexagonal, self-locking, with counterbore and MJ threads, classifications:

**1 100 MPa (at ambient temperature)/425 °C,
1 100 MPa (at ambient temperature)/650 °C,
1 210 MPa (at ambient temperature)/425 °C,
1 210 MPa (at ambient temperature)/730 °C,
1 550 MPa (at ambient temperature)/235 °C,
1 550 MPa (at ambient temperature)/425 °C
and
1 550 MPa (at ambient temperature)/600 °C
— Dimensions**

Aéronautique et espace — Écrous bihexagonaux à freinage interne, avec chambrage et filetage MJ, classifications: 1 100 MPa (à température ambiante)/425 °C, 1 100 MPa (à température ambiante)/650 °C, 1 210 MPa (à température ambiante)/425 °C, 1 210 MPa (à température ambiante)/730 °C, 1 550 MPa (à température ambiante)/235 °C, 1 550 MPa (à température ambiante)/425 °C and 1 550 MPa (à température ambiante)/600 °C — Dimensions



Foreword

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International Standard ISO 13589 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 4, *Aerospace fastener systems*.

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Introduction

The dimensions specified in this International Standard have been determined to satisfy the requirements of the procurement specification of ISO 5858 or ISO 8641, depending on the classification of the nut.

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1 Scope

This International Standard specifies the dimensions of bihexagonal nuts with counterbore and MJ threads and a self-locking feature achieved by forming the upper portion out-of-round, for classifications: 1 100 MPa¹/425 °C², 1 100 MPa¹/650 °C², 1 210 MPa¹/425 °C², 1 210 MPa¹/730 °C², 1 550 MPa¹/235 °C², 1 550 MPa¹/425 °C² and 1 550 MPa¹/600 °C².

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

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4095:1998, *Aerospace — Bi-hexagonal drives — Wrenching configuration — Metric series.*

ISO 5855-2:1988, *Aerospace — MJ threads — Part 2: Limit dimensions for bolts and nuts.*

ISO 5858:1991, *Aerospace — Self-locking nuts with maximum operating temperature less than or equal to 425 °C — Procurement specification.*

ISO 8641:1987, *Aerospace — Self-locking nuts with maximum operating temperature greater than 425 °C — Procurement specification.*

ISO 8788:1987, *Aerospace — Fasteners — Tolerances of form and position for 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.

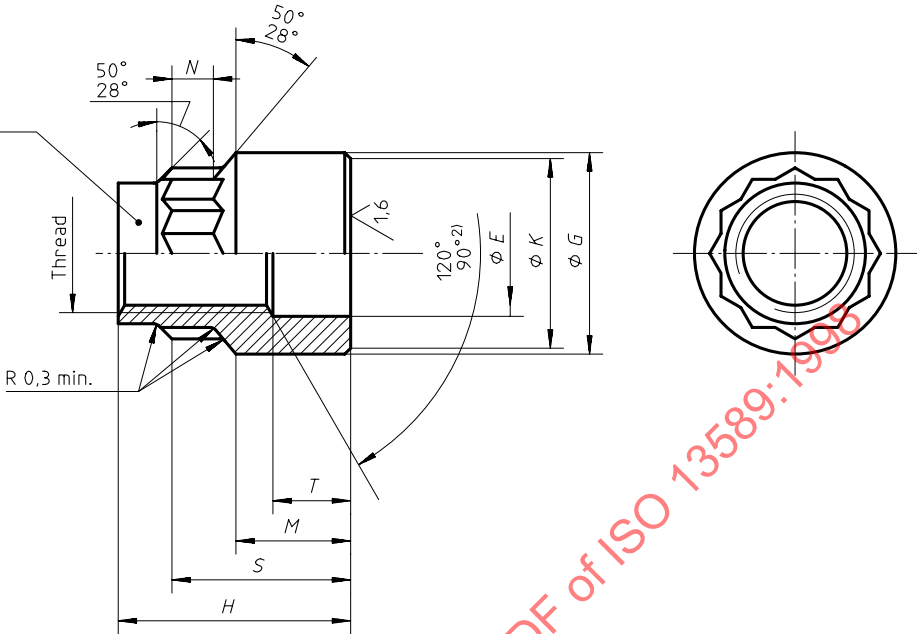
1) Corresponds to the minimum tensile stress which the nut is able to withstand at ambient temperature without breaking or cracking when tested with a bolt of a higher strength class.

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 material or by the surface treatment.

$6,3 / (1,6)^{1)}$

Remove sharp edges 0,1 to 0,4

Form out-of-round in this area to achieve the self-locking requirement (tooling marks permissible)



NOTE — Tolerances of form and position shall be in conformity with those specified in ISO 8788. Details of form not stated are at the manufacturer's discretion.

- 1) These values, in micrometres, apply before any surface coating(s) is (are) applied. The values do not apply to threads the surface texture of which will be as achieved by the usual manufacturing methods.
- 2) All forms of entry (radius or chamfer) permissible within these limiting dimensions.

Figure 1

Table 1

Diameter code	Thread ¹⁾	E		G	H	K	M	N	S	T ± 0,2	Wrenching dash number ²⁾
		max.	min.	max.	max.	min.	min.	min.	max.		
050	MJ5×0,8-4H6H	5,8	5,2	9,1	11,5	8,3	5,7	2	9,4	4,5	07
060	MJ6×1-4H5H	7,1	6,3	10,6	12,9	9,8	5,95	2,3	10,3	4,75	08
070	MJ7×1-4H5H	8,1	7,3	12,1	14,1	11,3	6,2	2,6	11,1	5	09
080	MJ8×1-4H5H	9,1	8,3	13,6	15,7	12,8	6,45	2,8	12,2	5,25	10
100	MJ10×1,25-4H5H	11,1	10,3	16,8	18,5	15,8	6,7	3,1	14,3	5,5	12

1) In accordance with ISO 5855-2. In the self-locking zone, the tolerances apply before forming out-of-round.
2) In conformity with ISO 4095 over N min.