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**Aerospace — Nuts, anchor, self-locking,  
fixed, single lug, reduced series, 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, fixes, simple  
patte, série réduite, 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*



## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 3191 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 4, *Aerospace fastener systems*.

This second edition cancels and replaces the first edition (ISO 3191:1985), which has been technically revised.

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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 satisfy the requirements of the procurement specification of ISO 5858.

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# Aerospace — Nuts, anchor, self-locking, fixed, single lug, reduced series, 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, fixed, single lug anchor nuts, reduced series, with counterbore, with MJ threads, for classifications: 1 100 MPa<sup>1)</sup>/235 °C<sup>2)</sup>, 1 100 MPa<sup>1)</sup>/315 °C<sup>2)</sup> and 1 100 MPa<sup>1)</sup>/425 °C<sup>2)</sup>.

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 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 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.

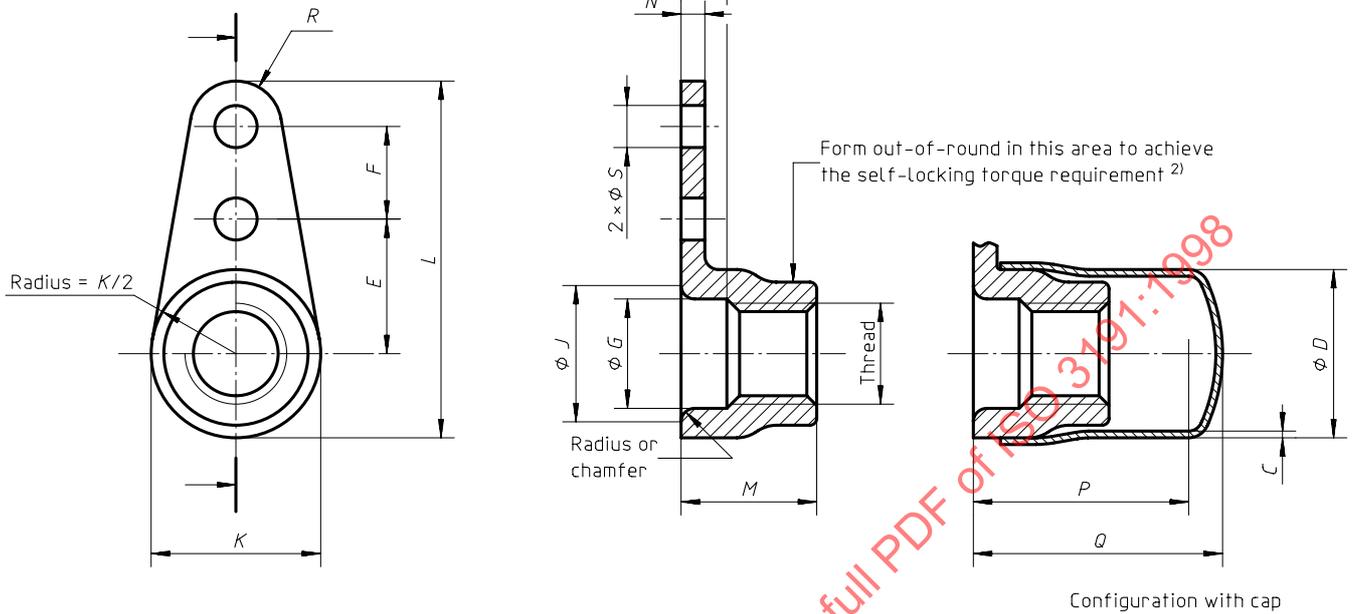
The metallic cap (optional) shall remain joined (type of attachment at the user's discretion) to the nut at the maximum operating temperature. See test conditions specified in ISO 5858.

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.

$$6,3 / \left( \sqrt[3]{3,2} \right)^{11}$$

Remove sharp edges 0,1 to 0,4



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

1) 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.

2) Tooling marks permissible in this area

Figure 1

Table 1

Diameter code	Thread <sup>1)</sup>	C	D	E	F	G	H	J <sup>2)</sup>	K	L	M	N	P <sup>3)</sup>	Q	R	S	
		max.	max.			min.	min.	max.	max.	max.	max.	max.	max.	max.	max.	max.	+ 0,2 0
040	MJ4x0,7 – 4H6H	0,4	6,6	6	5,5	4,4	2,2	6,2	8	18,2	5,8	1,1	11	13	2,5	2,5	
050	MJ5x0,8 – 4H6H		8,1	7		5,5	5,5	2,4	7,3	9	19,7		6,9	11,4			13,4
060	MJ6x1 – 4H5H		9,2	8		5,5	6,5	2,7	8,7	10	21,7		8,1	1,4			12,7

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

2) Measured at sharp corners (chamfered) or point of tangency (radiused).

3) Maximum protrusion of the bolt.