INTERNATIONAL STANDARD

ISO 10096

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Aerospace — Nuts, hexagonal, slotted (castellated), reduced height, reduced across flats, with MJ threads, classifications: 450 MPa (at ambient temperature)/425 °C, 600 MPa (at ambient temperature)/235 °C, 600 MPa (at ambient temperature)/315 °C, 600 MPa (at ambient temperature)/650 °C, 900 MPa (at ambient temperature)/235 °C, 900 MPa (at ambient temperature)/730 °C and 1 100 MPa (at ambient temperature)/600 °C — Dimensions

Aéronautique et espace — Écrous hexagonaux à créneaux, hauteur réduite, surplats réduits, à filetage MJ, classifications: 450 MPa (à température ambiante)/425 °C, 600 MPa (à température ambiante)/235 °C, 600 MPa (à température ambiante)/315 °C, 600 MPa (à température ambiante)/650 °C, 900 MPa (à température ambiante)/235 °C, 900 MPa (à température ambiante)/730 °C et 1 100 MPa (à température ambiante)/600 °C — Dimensions

Reference number
ISO 10096:1997(E)

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 10096 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 9139.

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1 Scope

This International Standard specifies the dimensions of hexagon slotted (castellated) nuts, reduced height, reduced across flats, with MJ threads, of classifications: 450 MPa[1)]/425 °C[2)], 600 MPa[1)]/235 °C[2)], 600 MPa[1)]/315 °C[2)], 600 MPa[1)]/650 °C[2)], 900 MPa[1)]/235 °C[2)], 900 MPa[1)]/730 °C[2)] and 1 100 MPa[1)]/600 °C[2)].

These nuts are intended to be used with split pins in conformity with ISO 1234.

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 1234:—[3)], *Split pins.*

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

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

ISO 9139:—[4)], *Aerospace — Nuts, plain or slotted (castellated) — Procurement specification.*

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.

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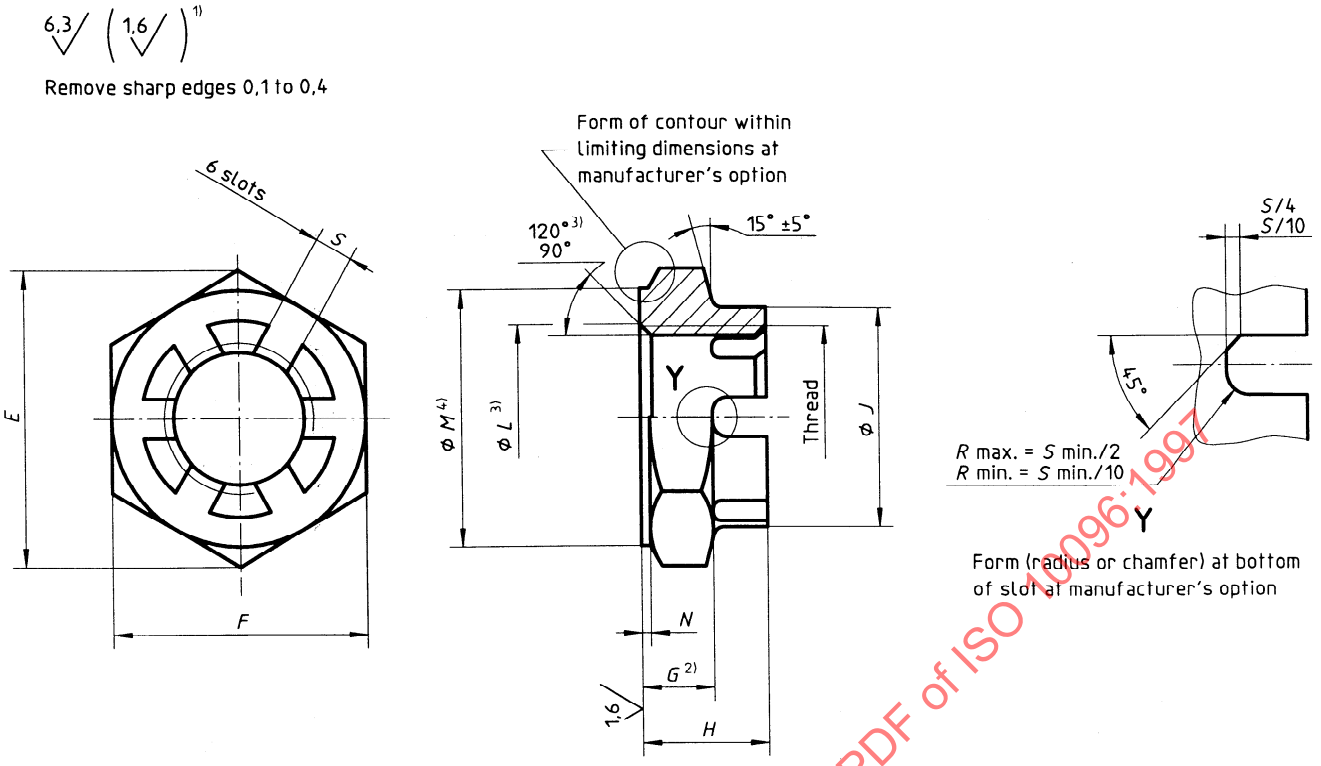
1) Corresponds to the minimum tensile stress which the nut is able to withstand at ambient temperature without breaking or cracking when tested with a bolt of a higher strength class.

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.

3) To be published. (Revision of ISO 1234:1976)

4) To be published.



NOTE — Tolerances of form and position shall conform to 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) Applies to:
- height below slots;
- height of flats.

3) This dimension also applies to the upper chamfer. All forms of entry (chamfer or radius) permissible within these limiting dimensions.

4) Diameter *M* may be tangential to, but shall not intrude on the flats.

Figure 1

Table 1

Diameter code	Thread[1]	*E* min.	*F* h13	*G* h14	*H* ± 0,25	*J* ± 0,25	*L* $^{+0,8}_{0}$	*M* min.	*N* $^{0}_{-0,3}$	*S* H14	Maximum split pin diameter[2]
100	MJ10×1,25 – 4H5H	15,5	14	4	7,6	12,5	10,3	13,2	0,6	2,6	2,3
120	MJ12×1,25 – 4H5H	18,9	17	4,8	8,4	14,5	12,3	16			
140	MJ14×1,5 – 4H5H	21,1	19	5,6	10	17	14,4	18		3,2	2,9
160	MJ16×1,5 – 4H5H	24,5	22	6,4	10,8	19	16,4	21			
180	MJ18×1,5 – 4H5H	26,8	24	7,2	12,4	22	18,4	23		4	3,7
200	MJ20×1,5 – 4H5H	30,2	27	8	13,2	24	20,4	26			
220	MJ22×1,5 – 4H5H	33,6	30	8,8	14	27	22,4	29			
240	MJ24×2 – 4H5H	35,8	32	9,6	15,3	30	24,5	30,9			

1) In accordance with ISO 5855-2

2) For information, in conformity with ISO 1234 for the split pin maximum diameter but not for the split pin maximum diameter/thread diameter combination