BRITISH STANDARD AEROSPACE SERIES

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ISO 12268:
1997

Aerospace — Nuts, hexagonal, plain, 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

ICS 49.030.30

National foreword

This British Standard reproduces verbatim ISO 12268:1997 and implements it as the UK national standard.

The UK participation in its preparation was entrusted by Technical Committee ACE/12, Aerospace fasteners and fastening systems, to Subcommittee ACE/12/1, Aerospace fasteners and fastening systems (international), which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled "International Standards Correspondence Index", or by using the "Find" facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ISO title page, pages ii to iv, pages 1 and 2 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on 15 October 1997

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INTERNATIONAL STANDARD

ISO 12268

First edition
1997-08-01

Aerospace — Nuts, hexagonal, plain, 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 ordinaires, 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 12268:1997(E)

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Descriptors: Aircraft industry, fasteners, MJ threads, nuts (fasteners), hexagonal nuts, classification, form specifications, 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 12268 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.

1 Scope

This International Standard specifies the dimensions of plain, hexagonal 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)].

Nuts provided with holes are intended to be used with lockwire in conformity with ISO 245.

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 245:1986, *Aircraft — Lockwire.*

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

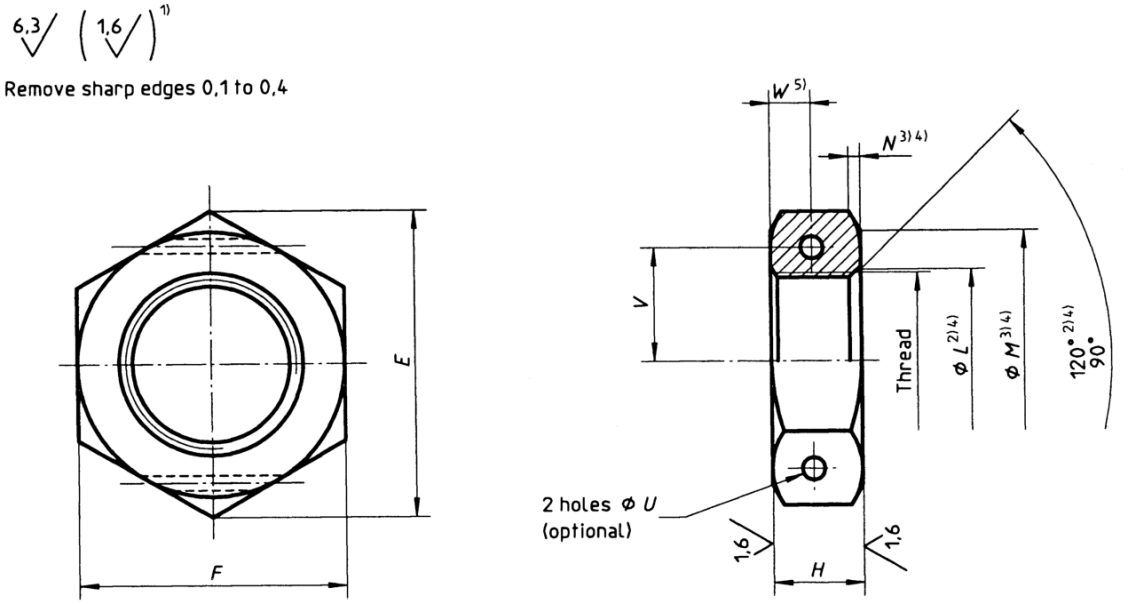
ISO 8788:1987, *Aerospace — Fasteners — Tolerances of form and position for nuts.*

ISO 9139:—, *Aerospace — Nuts, plain or slotted (castellated) — Procurement specification*[3)].

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.
[3)] To be published.



NOTE Tolerances of form and position shall conform to those specified in ISO 8788.

1) These values, in micrometers, 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 (chamfer or radius) permissible within these limiting dimensions.

3) Form of contour, within limiting dimensions, is left to the manufacturer's discretion. Diameter *M* may be tangential to, but shall not intrude on the flats.

4) Applicable to both faces.

5) From either face.

Figure 1

Table 1

Diameter code	**Thread**[a]	*E* min.	*F* h13	*H* h14	*L* +0,8 0	*M* min.	*N* 0 −0,3	*U* H13	*V* − 0,2	*W* min.	**Lockwire diameter**[b]
100	MJ10.1,25 – 4H5H	15,5	14	5	10,3	13,2		1	5,9	2,1	0,8
120	MJ12.1,25 – 4H5H	18,9	17	6	12,3	16			7,2	2,6	
140	MJ14.1,5 – 4H5H	21,1	19	7	14,4	18			8,2	3,1	
160	MJ16.1,5 – 4H5H	24,5	22	8	16,4	21	0,6		9,7	3,6	
180	MJ18.1,5 – 4H5H	26,8	24	9	18,4	23		1,5	10,8	4,1	1,25
200	MJ20.1,5 – 4H5H	30,2	27	10	20,4	26			12,5	4,6	
220	MJ22.1,5 – 4H5H	33,6	30	11	22,4	29			13,9	5	
240	MJ24.2 – 4H5H	35,8	32	12	24,5	30,9			14,9	5,5	

[a] In accordance with ISO 5855-2
[b] For information, in conformity with ISO 245

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