



BSI Standards Publication

Aerospace — Nuts, hexagonal, plain, reduced height, normal across flats, with MJ threads, classifications:
450 MPa (at ambient temperature) /120 °C, 450 MPa (at ambient temperature) /235 °C, 600 MPa (at ambient temperature) /425 °C, 900 MPa (at ambient temperature) /235 °C, 900 MPa (at ambient temperature) /315 °C, 900 MPa (at ambient temperature) /650 °C, 1 100 MPa (at ambient temperature) /235 °C, 1 100 MPa (at ambient temperature) /730 °C and 1 250 MPa (at ambient temperature) /600 °C —
Dimensions

National foreword

This British Standard is the UK implementation of ISO 9609:2016. It supersedes BS A 314:1997 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/12, Aerospace fasteners and fastening systems.

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

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**Aerospace — Nuts, hexagonal, plain, reduced height, normal across flats, with MJ threads, classifications:
450 MPa (at ambient temperature) /120 °C, 450 MPa (at ambient temperature) /235 °C, 600 MPa (at ambient temperature) /425 °C, 900 MPa (at ambient temperature) /235 °C, 900 MPa (at ambient temperature) /315 °C, 900 MPa (at ambient temperature) /650 °C, 1 100 MPa (at ambient temperature) /235 °C, 1 100 MPa (at ambient temperature) /730 °C and 1 250 MPa (at ambient temperature)/600 °C — Dimensions**

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Foreword

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The committee responsible for this document is ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 4, *Aerospace fastener systems*.

This second edition cancels and replaces the first edition (ISO 9609:1996), of which it constitutes a minor revision.

Introduction

The dimensions specified in this International Standard have been determined to satisfy the requirements of the procurement specification which will be the subject of a future International Standard.

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1 Scope

This International Standard specifies the dimensions of plain, hexagonal nuts, reduced height, normal across flats, with MJ threads, of classifications: 450 MPa/120 °C, 450 MPa/235 °C, 600 MPa/425 °C, 900 MPa/235 °C, 900 MPa/315 °C, 900 MPa/650 °C, 1 100 MPa/235 °C, 1 100 MPa/730 °C, and 1 250 MPa/600 °C.

NOTE 1 450 MPa, 600 MPa, 900 MPa, 1 100 MPa and 1 250 MPa 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.

NOTE 2 120 °C, 235 °C, 425 °C, 315 °C, 650 °C, 730 °C and 600 °C corresponds to the 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.

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 documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

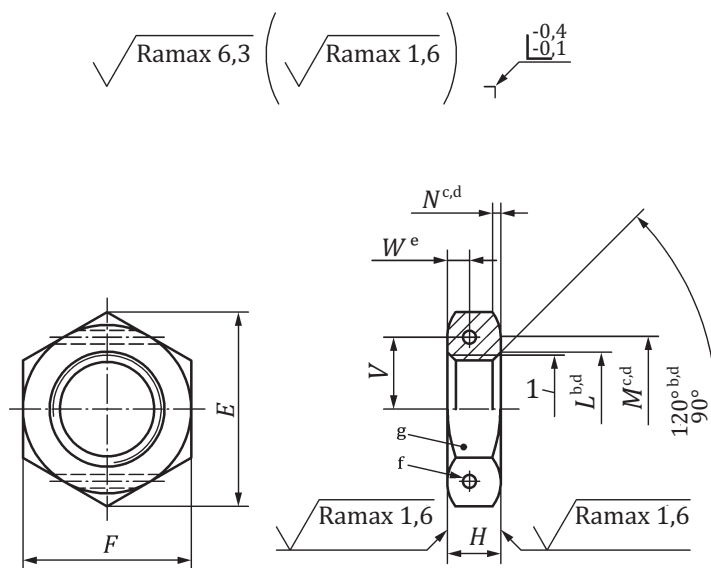
ISO 245, *Aerospace — Lockwire — Diameters*

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

ISO 8788, *Aerospace — Nuts, metric — Tolerances of form and position*

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.



Key

- 1 thread
- a 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.
- b All forms of entry (chamfer or radius) permissible within these limiting dimensions.
- c 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.
- d Applicable to both faces.
- e From either face.
- f 2 holes $\varnothing U$ (optional).
- g Marking.

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

Figure 1 — Configuration and dimensions

Table 1 — Dimensions

Dimensions in millimetres

Diameter code	Thread ^a	E min	F	H	L	M min.	N	U	V	W min.	Lockwire diameter ^b
040	MJ4 × 0,7 – 4H6H	7,6	7	2,6	4,2	6,4	0 –0,3	—	—	—	—
050	MJ5 × 0,8 – 4H6H	8,7	8	3,0	5,2	7,4		—	—	—	—
060	MJ6 × 1 – 4H5H	10,9	10	3,5	6,3	9,3	0,5	1,0	3,9	1,4	0,8
070	MJ7 × 1 – 4H5H	12,0	11	4,0	7,3	10,2			4,4	1,6	
080	MJ8 × 1 – 4H5H	14,3	13		8,3	12,2			5,0		
100	MJ10 × 1,25 – 4H5H	18,9	17	5,0	10,3	16,0	0,6	1,5	6,9	2,1	1,25
120	MJ12 × 1,25 – 4H5H	21,1	19	6,0	12,3	18,0			8,0	2,6	
140	MJ14 × 1,5 – 4H5H	24,5	22	7,0	14,4	21,0			9,6	3,1	
160	MJ16 × 1,5 – 4H5H	26,8	24	8,0	16,4	23,0			10,7	3,6	
180	MJ18 × 1,5 – 4H5H	30,2	27	9,0	18,4	26,0			12,0	4,1	
200	MJ20 × 1,5 – 4H5H	33,6	30	10,0	20,4	29,0			13,4	4,6	
220	MJ22 × 1,5 – 4H5H	35,8	32	11,0	22,4	30,9			14,4	5,0	
240	MJ24 × 2 – 4H5H	40,4	36	12,0	24,5	34,9			16,1	5,5	

^a In accordance with ISO 5855-2.

^b For information, in conformity with ISO 245.

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