INTERNATIONAL STANDARD

ISO
9255

Second edition
2008-08-15

Aerospace — Bolts, normal spline head, normal shank, short or medium length MJ threads, metallic material, coated or uncoated, strength classes less than or equal to 1 100 MPa — Dimensions

Aéronautique et espace — Vis à tête cannelée normale, avec tige normale et filetages MJ courts ou de longueur moyenne, en matériau métallique, revêtues ou non revêtues, des classes de résistance inférieures ou égales à 1 100 MPa — Dimensions

iTeh STANDARD PREVIEW

(standards.iteh.ai)

ISO 9255:2008
https://standards.iteh.ai/catalog/standards/sist/da6901bc-1404-43b5-a111-
0ffda80ff114/iso-9255-2008

COPYRIGHT PROTECTED DOCUMENT

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9255 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 9255:1993), which has been technically revised.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Aerospace — Bolts, normal spline head, normal shank, short or medium length MJ threads, metallic material, coated or uncoated, strength classes less than or equal to 1 100 MPa — Dimensions

1 Scope

This International Standard specifies the dimensions of normal spline head bolts, with close or large tolerance normal shank and short or medium length MJ threads, in metallic material, coated or uncoated, with strength classes less than or equal to 1 100 MPa.

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

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 286-2, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts*

ISO 3353-1, *Aerospace — Lead and runout threads — Part 1: Rolled external threads*

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

ISO 7403, *Aerospace — Spline drives — Wrenching configuration — Metric series*

ISO 7913, *Aerospace — Bolts and screws, metric — Tolerances of form and position*

3 Configuration and dimensions

See Figure 1 and Table 1.

Dimensions and tolerances are expressed in millimetres. They are applicable after any coating (tolerance on shank diameter before coating is also specified for heat cured matrix coatings), but before the application of any lubricant.

Details of form not stated are left to the manufacturer's discretion.

Tolerances of form and position shall be as specified in ISO 7913 if not otherwise stated on product standard.

Dimensions in millimetres

Break sharp edges 0,1 to 0,4
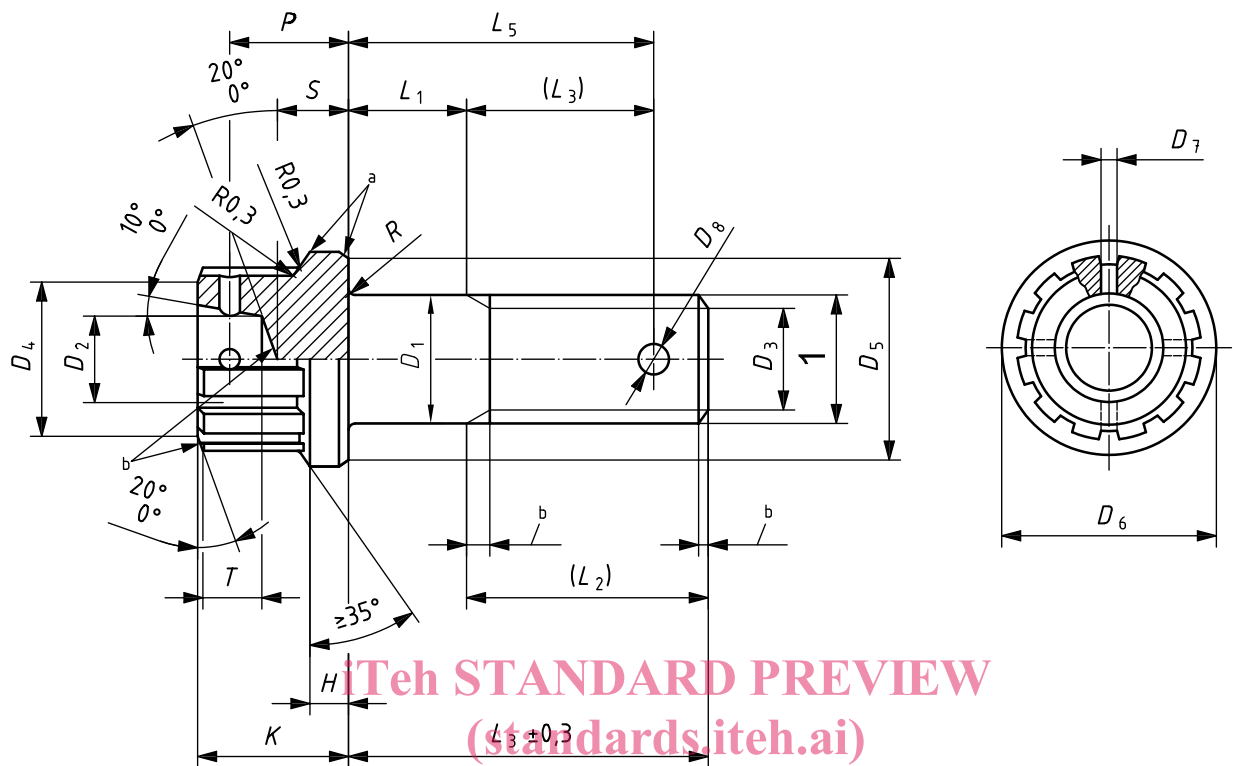
Key

1   thread

a   Rounded or chamfered in this area.

b   Shape optional.

c   In accordance with ISO 3353-1.

Figure 1

iTeh STANDARD PREVIEW

(standards.iteh.ai)

[Blank page]

Table 1

Diameter code	Thread [a]	D_1						D_2	D_3		D_4	D_5	D_6	D_7 Four holes, equi-distant, optional	D_8 One hole, optional
		nom.	Coated bolts			Uncoated bolts									
			Tol.			Tol.									
			before coating[b]	close	large	close	large	$^{+0,5}_{0}$	nom.	Tol.	min.	min.	max.	H13[c]	H13[c]
040	MJ4 × 0,7-4h6h	4	−0,030 −0,045	−0,010 −0,035	h12[c]	f7[c]	h12[c]	–	3	$^{0}_{−0,5}$	6	7,5	8,3	1	1,1
050	MJ5 × 0,8-4h6h	5						3,2	3,4	± 0,5	7	8,3	9,1		1,5
060	MJ6 × 1-4h6h	6						4,1	4,2		8	9,8	10,6	1,4	
070	MJ7 × 1-4h6h	7						4,9	5,2		9	11,3	12,1		1,9
080	MJ8 × 1-4h6h	8	−0,033 −0,048	−0,013 −0,038				5,2	6,2		10	12,8	13,6		
100	MJ10 × 1,25-4h6h	10						6,7	7,9		12	15,7	16,7	1,6	2,4
120	MJ12 × 1,25-4h6h	12	−0,036 −0,051	−0,016 −0,041				8	9,8		14	18,8	19,9		

Table 1 (*continued*)

H	K	$L_1 \pm 0,2$ [d]	L_2		L_3		P	R		S	T	Wrenching dash number [e]
			Thread		**Thread**							
min.	h15 [c]		short	medium	short	medium		nom.	Tol.	$^{+0,4}_{0}$	min.	
0,8	5,5	2 to 40	7,5	10	5	6	3,5	0,4		–	2,5	060
1	6,5	3 to 50	9	12	6	7,5	4,5	0,5		2,5	2,8	070
1,2	7,5	3 to 60	10	14	7	8,5	5,2		$^{0}_{-0,2}$	2,8	3,5	080
1,4	8,2	4 to 70	11	15	7	9,5	5,9	0,7		3,3	3,8	090
1,6	8,6	4 to 80	11,5	16,5	7,5	10,5	6,3			3,7	3,9	100
2	10,1	5 to 100	14,5	20,5	9	13	7,7	0,8		4,7	4,2	120
2,4	11,4	6 to 120	16	22,5	10	14,5	8,8	0,9	$^{0}_{-0,3}$	5,6	4,5	140

[a] In conformity with ISO 5855-2, except for the maximum thread major diameter, d_{max}, of bolts with a close tolerance on D_1, which shall be equal to $(D_{1,min} - 0,025)$.

[b] Heat cured organic matrix coatings for close tolerance normal shanks.

[c] See ISO 286-2.

[d] Increments: 1 for $L_1 \leqslant 30$;
2 for $30 < L_1 \leqslant 100$;
4 for $L_1 > 100$.

If greater lengths are required, they shall be chosen using these increments.

[e] In conformity with ISO 7403 over T min.