BRITISH STANDARD

BS A 307:1994
ISO 9254:1993

Bolts, normal spline head, normal or pitch diameter shank, long length MJ threads, metallic material, coated or uncoated, strength classes less than or equal to 1100 MPa — Dimensions

UDC 621.882.21:629.7

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Aerospace Standards Policy Committee (ACE/-) to Technical Committee ACE/12, upon which the following bodies were represented:

The Association of Electronics, Telecommunications and Business Equipment Industries

British Industrial Fastners Federation

Ministry of Defence

Society of British Aerospace Companies Ltd.

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Contents

National foreword

This British Standard has been prepared under the direction of the Aerospace Standards Policy Committee. It is identical with ISO 9254:1993 *Aerospace — Bolts, normal spline head, normal or pitch diameter shank, long length MJ threads, metallic material, coated or uncoated, strength classes less than or equal to 1 100 MPa — Dimensions* published by the International Organization for Standardization (ISO).

Cross-references

International Standard	Corresponding British Standard
ISO 286-2:1988	BS EN 20286 *ISO system of limits and fits.* Part 2:1992 *Tables of standard tolerance grades and limit deviations for holes and shafts* (Identical)
ISO 3353:1992	BS 2A 231:1993 *Rolled threads for bolts. Lead and runout requirements* (Identical)
ISO 5855-2:1988	BS 6293 *Aerospace MJ threads* Part 2:1994 *Limit dimensions for bolts and nuts* (Identical)
ISO 7403:1983	BS A 294:1984 *Specification for spline drive wrenching configurations. Metric series* (Identical)

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 4, an inside back cover 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.

1 Scope

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

It is intended for the drawing up 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 286-2:1988, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts.*

ISO 3353:1992, *Aerospace — Rolled threads for bolts — Lead and runout requirements.*

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

ISO 7403:1983, *Fasteners for aerospace construction — Spline drive wrenching configuration — Metric series.*

3 Configuration and dimensions

See Figure 1 and Table 1. Dimensions and tolerances are expressed in millimetres. They are applicable after any surface coating, but before the application of any lubricant.

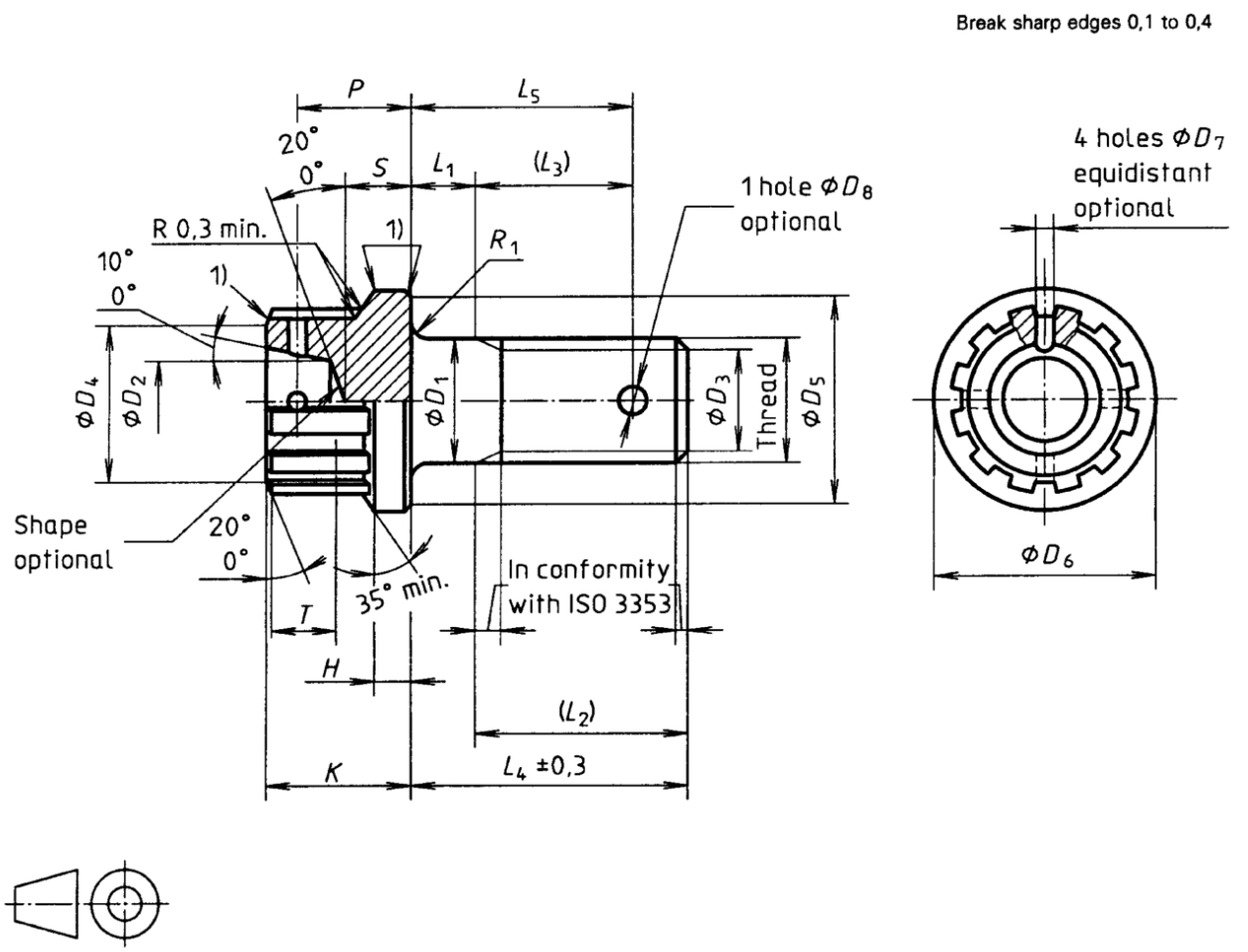

Figure 1

Table 1

Diameter code	Thread[a]	D_1 Normal nom.	D_1 Normal tol.	D_1 Pitch diameter nom.	D_1 Pitch diameter tol.	D_2 +0,5 –0	D_3 nom.	D_3 tol.	D_4 min.	D_5 min.	D_6 max.	D_7 H13[b]
040	MJ4 × 0,7 – 4h6h	4	h12[b]	3,54	± 0,13	—	3	0 –0,5	6	7,5	8,3	1
050	MJ5 × 0,8 – 4h6h	5		4,48		3,2	3,4	± 0,5	7	8,3	9,1	
060	MJ6 × 1 – 4h6h	6		5,35		4,1	4,2		8	9,8	10,6	1,4
070	MJ7 × 1 – 4h6h	7		6,35		4,9	5,2		9	11,3	12,1	
080	MJ8 × 1 – 4h6h	8		7,35		5,2	6,2		10	12,8	13,6	
100	MJ10 × 1,25 – 4h6h	10		9,19		6,7	7,9		12	15,7	16,7	1,6
120	MJ12 × 1,25 – 4h6h	12		11,19		8	9,8		14	18,8	19,9	

Diameter code	H min.	K h15[b]	L_1[cde] min.	L_2[cde] max.	L_3	L_4[e] nom.	L_4[e] tol.	P	R_1 nom.	R_1 tol.	S +0,4 –0	T min.	Wrenching dash number[f]
040	0,8	5,5	0,4	2	14	16 to 56	± 0,3	3,5	0,4	0 –0,2	—	2,5	060
050	1	6,5	0,5	4	16	20 to 70		4,5	0,5		2,5	2,8	070
060	1,2	7,5	0,7		18	22 to 84		5,2	0,7		2,8	3,5	080
070	1,4	8,2			20	24 to 98		5,9			3,3	3,8	090
080	1,6	8,6			22	26 to 112		6,3			3,7	3,9	100
100	2	10,1	0,8	6	26	32 to 140		7,7	0,8		4,7	4,2	120
120	2,4	11,4	0,9		30	36 to 168		8,8	0,9	0 –0,3	5,6	4,5	140

[a] In conformity with ISO 5855-2.
[b] See ISO 286-2.
[c] First length, corresponding to first L_4 length.
[d] Conditions L_1 min. and L_2 max. cannot be obtained simultaneously.
[e] Increments:
2 for $L_4 \leqslant 100$
4 for $L_4 > 100$
If greater lengths are required, they shall be chosen using these increments.
[f] In conformity with ISO 7403 over T min.

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List of references

See national foreword.

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