

**Bolts, normal
bihexagonal head,
normal shank, short
or medium length
MJ threads, metallic
material, coated or
uncoated, strength
classes less than or
equal to 1100 MPa —
Dimensions**

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 Fasteners Federation
Ministry of Defence
Society of British Aerospace Companies Ltd.

This British Standard, having been prepared under the direction of the Aerospace Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 15 August 1994

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National foreword

This British Standard has been prepared under the direction of the Aerospace Standards Policy Committee. It is identical with ISO 3185:1993 *Aerospace — Bolts, normal bihexagonal 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*, published by the International Organization for Standardization (ISO).

Cross-references

International Standard	Corresponding British Standard
ISO 286-2:1988	BS EN 20286 <i>ISO system of limits and fits</i> . Part 2:1992 <i>Tables of standard tolerance grades and limit deviations for holes and shafts</i> (Identical)
ISO 3353:1992	BS 2A 231:1993 <i>Rolled threads for bolts. Lead and runout requirements</i> (identical)
ISO 5855-2:1988	BS 6293 <i>Aerospace — MJ threads</i> . Part 2:1994 <i>Limit dimensions for bolts and nuts</i> (Identical)

The Technical Committee has reviewed the provisions of ISO 4095:1978, to which normative reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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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 bihexagonal 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.

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 4095:1978, *Fasteners for aerospace construction — Bi-hexagonal wrenching configuration*.

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

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.

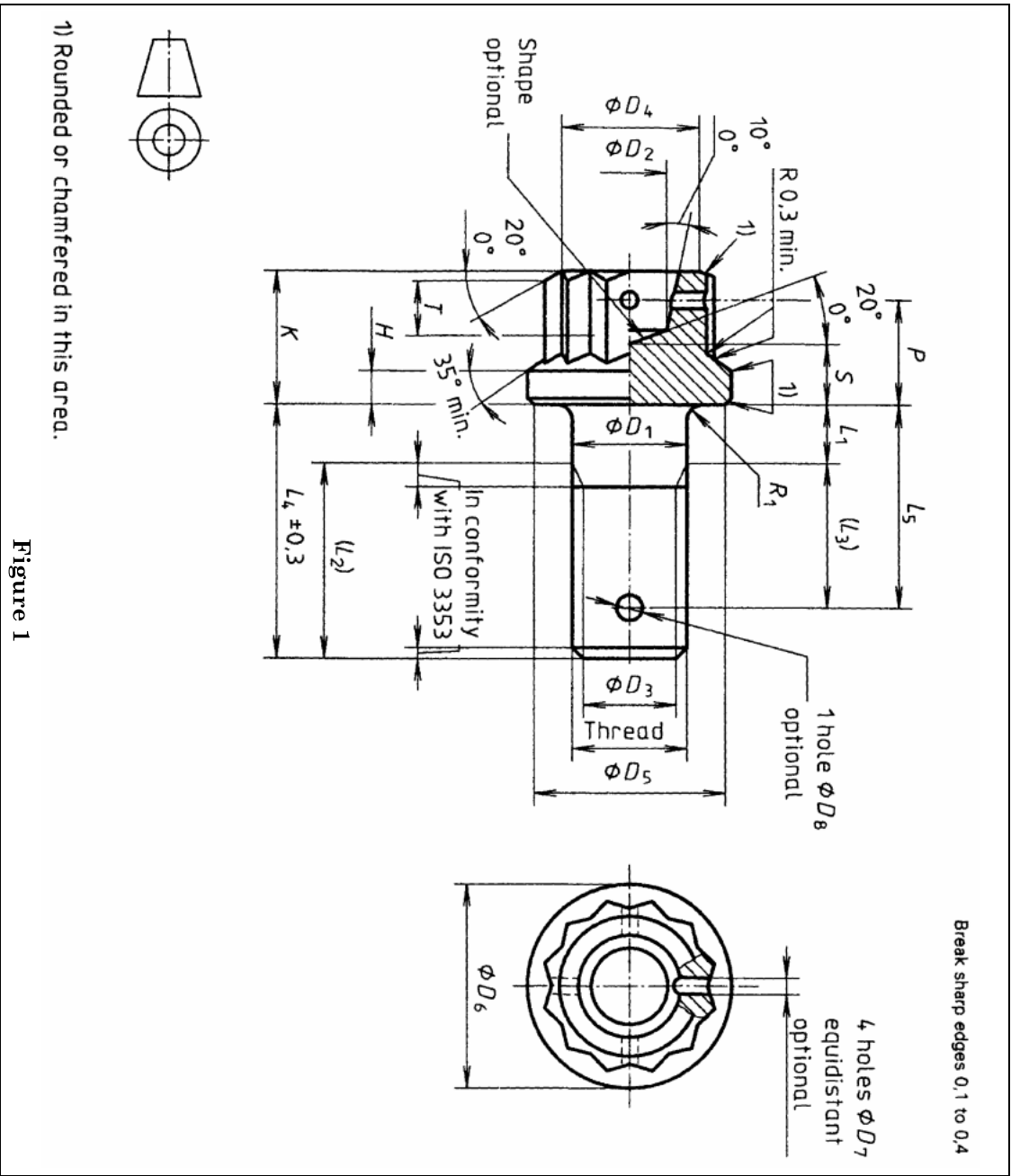


Table 1

Diameter code	Thread ^a	D_1						D_2 $\begin{smallmatrix} +0,5 \\ 0 \end{smallmatrix}$	D_3		D_4 min.	D_5 min.	D_6 max.	D_7 H13 ^b	D_8 H13 ^b
		nom.	Coated bolts		Uncoated bolts		nom.		tol.						
			tol.		tol.										
			close	large	close	large									
040	MJ4 × 0,7 – 4h6h	4					—	3	$\begin{smallmatrix} 0 \\ -0,5 \end{smallmatrix}$	5,8	7,5	8,3	1	1,1	
050	MJ5 × 0,8 – 4h6h	5	h12 ^b	f7 ^b	h12 ^b	± 0,5	3,2	3,4	± 0,5	6,8	8,3	9,1		1,4	1,5
060	MJ6 × 1 – 4h6h	6					4,1	4,2		7,8	9,8	10,6			
070	MJ7 × 1 – 4h6h	7					4,9	5,2		8,8	11,3	12,1	1,9		
080	MJ8 × 1 – 4h6h	8	± 0,2	5,2	6,2	9,8	12,8	13,6	1,6	2,4					
100	MJ10 × 1,25 – 4h6h	10		6,7	7,9	11,8	15,7	16,7							
120	MJ12 × 1,25 – 4h6h	12		8	9,8	13,7	18,8	19,9							

Diameter code	H	K	L_1^c		L_2		L_3		P	R_1		S $\begin{smallmatrix} +0,4 \\ 0 \end{smallmatrix}$	T min.	Wrenching dash number ^d
	min.	h15 ^b	nom.	tol.	Thread		Thread			nom.	tol.			
					short	medium	short	medium						
040	0,8	5,5	2 to 40	± 0,2	7,5	10	5	6	3,5	0,4	$\begin{smallmatrix} 0 \\ -0,2 \end{smallmatrix}$	—	2,5	06
050	1	6,5	3 to 50		9	12	6	7,5	4,5	0,5		2,5	2,8	07
060	1,2	7,5	3 to 60		10	14	7	8,5	5,2	0,7		2,8	3,5	08
070	1,4	8,2	4 to 70		11	15		9,5	5,9			3,3	3,8	09
080	1,6	8,6	4 to 80		11,5	16,5	7,5	10,5	6,3	3,7		3,9	10	
100	2	10,1	5 to 100		14,5	20,5	9	13	7,7	0,8		4,7	4,2	12
120	2,4	11,4	6 to 120		16	22,5	10	14,5	8,8	0,9		$\begin{smallmatrix} 0 \\ -0,3 \end{smallmatrix}$	5,6	4,5

^a In conformity with ISO 5855-2, except for the maximum major diameter “ d ” of bolts with a close tolerance on D_1 , which shall be equal to D_1 min. – 0,025.

^b See ISO 286-2.

^c Increments:
1 for $L_1 \leq 30$
2 for $30 < L_1 \leq 100$
4 for $L_1 > 100$
If greater lengths are required, they shall be chosen using these increments.

^d In conformity with ISO 4095 over T min.

List of references

See national foreword.

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