

INTERNATIONAL  
STANDARD

**ISO**  
**9255**

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**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 filetage MJ court ou de longueur moyenne, en matériau métallique,  
revêtues ou non revêtues, des classes de résistance inférieures ou égales  
à 1 100 MPa — Dimensions*



Reference number  
ISO 9255:1993(E)

## 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 9255 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Sub-Committee SC 4, *Aerospace fastener systems*.

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# 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.

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.



Table 1

Diameter code	Thread <sup>1)</sup>	D <sub>1</sub>				D <sub>2</sub> <sup>+0,5</sup> <sub>0</sub>	D <sub>3</sub>		D <sub>4</sub> min.	D <sub>5</sub> min.	D <sub>6</sub> max.	D <sub>7</sub> H13 <sup>2)</sup>	D <sub>8</sub> H13 <sup>2)</sup>	
		nom.	Coated bolts		Uncoated bolts		nom.	tol.						
			tol. close	tol. large	tol. close									tol. large
040	MJ4×0,7 – 4h6h	4	-0,010 -0,035	h12 <sup>2)</sup>	f7 <sup>2)</sup>	h12 <sup>2)</sup>	—	3	<sup>0</sup> <sub>-0,5</sub>	6	7,5	8,3	1	1,1
050	MJ5×0,8 – 4h6h	5					3,2	3,4	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	-0,013 -0,038	h12 <sup>2)</sup>	f7 <sup>2)</sup>	h12 <sup>2)</sup>	4,9	5,2	± 0,5	9	11,3	12,1		1,9
080	MJ8×1 – 4h6h	8					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	-0,016 -0,041	8	9,8	14	18,8	19,9						

Diameter code	H min.	K h15 <sup>2)</sup>	L <sub>1</sub> <sup>3)</sup>		L <sub>2</sub>		L <sub>3</sub>		P	R <sub>1</sub>		S <sup>+0,4</sup> <sub>0</sub>	T min.	Wrenching dash number <sup>4)</sup>
			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	<sup>0</sup> <sub>-0,2</sub>	—	2,5	060
050	1	6,5	3 to 50		9	12	6	7,5	4,5	0,5		2,5	2,8	070
060	1,2	7,5	3 to 60		10	14	7	8,5	5,2	0,7		2,8	3,5	080
070	1,4	8,2	4 to 70		11	15		9,5	5,9			3,3	3,8	090
080	1,6	8,6	4 to 80		11,5	16,5	7,5	10,5	6,3	3,7		3,9	100	
100	2	10,1	5 to 100		14,5	20,5	9	13	7,7	0,8		4,7	4,2	120
120	2,4	11,4	6 to 120		16	22,5	10	14,5	8,8	0,9		<sup>0</sup> <sub>-0,3</sub>	5,6	4,5

1) In conformity with ISO 5855-2, except for the maximum major diameter "d" of bolts with a close tolerance on D<sub>1</sub>, which shall be equal to D<sub>1</sub> min. - 0,025.

2) See ISO 286-2.

3) Increments:

1 for L<sub>1</sub> ≤ 30

2 for 30 < L<sub>1</sub> ≤ 100

4 for L<sub>1</sub> > 100

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

4) In conformity with ISO 7403 over T min.

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