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**Aerospace — Screws, pan head,  
internal offset cruciform ribbed  
or unribbed drive, stepped 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 cylindrique, à empreinte cruciforme déportée, avec ou sans saillies antidérapantes, à fût dégagé 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*

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# Contents

	Page
Foreword.....	iv
<b>1 Scope.....</b>	<b>1</b>
<b>2 Normative references.....</b>	<b>1</b>
<b>3 Configuration and dimensions.....</b>	<b>1</b>

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## 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

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 12260:1996), of which it constitutes a minor revision.

# Aerospace — Screws, pan head, internal offset cruciform ribbed or unribbed drive, stepped 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 pan head screws with internal offset cruciform ribbed or unribbed drive, stepped shank, 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 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 286-2, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts*

ISO 3353 (all parts), *Aerospace — Lead and runout threads*

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

ISO 7913:1994, *Aerospace — Bolts and screws, metric — Tolerances of form and position*

ISO 14275, *Aerospace — Drives, internal, offset cruciform, ribbed — Metric series*

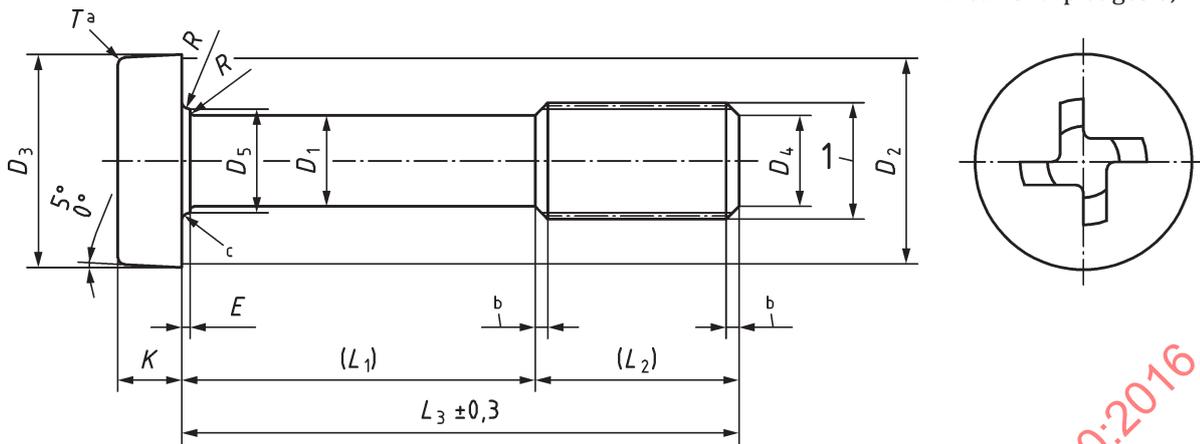
ISO 14276, *Aerospace — Drives, internal, offset cruciform — Metric series*

## 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.

Tolerances of form and position are specified in ISO 7913.

Break sharp edges 0,1 to 0,4



**Key**

- 1 thread
- a Shape optional.
- b In accordance with ISO 3353 (all parts).

**Figure 1**

**Table 1**

Diameter code	Thread <sup>a</sup>	$D_1$	$D_2$	$D_3$	$D_4$		$D_5$	$E$	$K$		$L_1^c$	$L_2$ Thread		$R$		$T$		Drive code <sup>d</sup>
		h12 <sup>b</sup>	min.	$\begin{matrix} 0 \\ -0,3 \end{matrix}$	nom.	tol.	h12 <sup>b</sup>	$\begin{matrix} +0,2 \\ 0 \end{matrix}$	nom.	tol.	$\pm 0,2$	short	medium	nom.	tol.	max.	min.	
040	MJ4×0,7 – 4h6h	3,0	6,7	8	3,0	$\begin{matrix} 0 \\ -0,5 \end{matrix}$	4	0,4	2,4	$\begin{matrix} 0 \\ -0,2 \end{matrix}$	2 to 40	7,5	10,0	0,4		1,6	0,4	R4
050	MJ5×0,8 – 4h6h	3,9	8,7	10	3,4		5	0,5	3,0		3 to 50	9,0	12,0	0,5		2,0	0,5	R5
060	MJ6×1 – 4h6h	4,6	10,7	12	4,2		6		3,6		3 to 60	10,0	14,0		$\begin{matrix} 0 \\ -0,2 \end{matrix}$	2,4	0,6	R6
070	MJ7×1 – 4h6h	5,6	12,7	14	5,2	$\pm 0,5$	7	0,7	4,2		4 to 70	11,0	15,0	0,7		2,8	0,7	
080	MJ8×1 – 4h6h	6,6	14,7	16	6,2			8		4,8	$\begin{matrix} 0 \\ -0,3 \end{matrix}$	4 to 80	11,5	16,5		3,2	0,8	R8
100	MJ10×1,25 – 4h6h	8,3	18,7	20	7,9		10	0,8	6		5 to 100	14,5	20,5	0,8		4,0	1,0	R10
120	MJ12×1,25 – 4h6h	10,3	22,7	24	9,8		12	0,9	7,2		6 to 120	16,0	22,5	0,9	$\begin{matrix} 0 \\ -0,3 \end{matrix}$	4,8	1,2	R12

a In accordance with ISO 5855-2.

b See ISO 286-2.

c Increments:  
 1 for  $L_1 \leq 30$   
 2 for  $30 < L_1 \leq 100$   
 4 for  $L_1 > 100$

d In accordance with ISO 14275 or ISO 14276.