# International Standard



2340

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION MEXICHADARD OPPAHUBALISATION RALISATION INTERNATIONALE DE NORMALISATION

## Clevis pins without head

Axes d'articulation sans tête

Second edition - 1986-11-01

#### 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 2340 was prepared by Technical Committee ISO/TC 2, Fasteners.

This second edition cancels and replaces the first edition (ISO 2340-1972), of which it constitutes a technical revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

# Clevis pins without head

#### 1 Scope and field of application

This International Standard specifies the characteristics of clevis pins without head, with metric dimensions and nominal diameters, d, from 3 to 100 mm inclusive.

#### 2 References

ISO 1234, Split pins - Metric series.

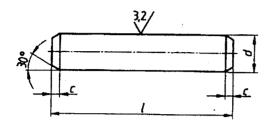
1SO 2081, Metallic coatings - Electroplated coatings of zinc on iron or steel.

ISO 3269, Fasteners - Acceptance inspection.

ISO 4520, Chromate conversion coatings on electroplated zinc and cadmium coatings.

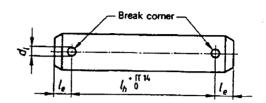
#### 3 Dimensions

Type A
Without split pin holes



Surface roughness values in micrometres

Type B
With split pin holes



#### NOTES

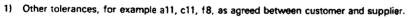
- 1 Other dimensions, angles and surface roughness value, see type A.
- 2 In cases where a distance  $l_{\rm h}$  which is not in accordance with  $l-2l_{\rm e}$  is necessary, this distance should be fixed in the designation (see clause 5), but in no case may the values for  $l_{\rm e}$  be smaller than those given in the table.

NOTE — For railway applications and in cases where the split pins are subjected to alternating transverse forces, it is recommended that the next larger split pin and corresponding hole diameter to that specified be used.

## ISO 2340-1986 (E)

Dimensions in millimetres

d		h11 <sup>11</sup>		_	T _	-	1 -		140												_	_			_			etres
			3	4	5	6	8	10	12	-	16			-		27	-	_		_		50				80	90	100
d <sub>i</sub>		H13 <sup>21</sup>	0,8	1	1,2	1,6	2	3,2	3,2	4	4	5	5	5	6,3	6,3	8	8	8	8	10	10	10	10	13	13	13	13
c		max.	1	1	2	2	2	2	3	3	3	3	4	4	4	4	4	4	4	4	4	4	6	6	6	6	6	6
1.		min.	1,6	2,2	2,9	3,2	3,5	4,5	5,5	6	6	7	8	8	9	9	10	10	10	10	12	12	14	14	16	16	16	16
	/3)																											-
nom.	min.	max.		,	<b>,</b>																							
6 8	5,75 7,75	6,25 8,25																										
10	9,75	10,25																			•		ł				ı	
12	11,5	12,5											_									-	-	$\vdash$	-	H		
14 16	13,5 15,5	14,5 16,5											1								]		l	1		ıl		
			-4									$\dashv$		$\Box$								Ļ_	_			Щ		
18 20	17,5 19,5	18,5 20,5																								ıİ		
22	21,5	22,5											ĺ													1		
24	23,5	24,5	į																							$\Box$		
26 28	25,5 27,5	26,5 28,5		Rar	nge								l															
30	29,5	30,5								$\dashv$	-	$\dashv$		$\dashv$			Н	-	-				-		Н	$\dashv$		
32 35	31,5	32,5											ŀ	1													- 1	
35	34,5	35,5																	_							. 1		
40	39,5	40,5					l																					
45 50	44,5 49,5	45,5 50,5					0	•						ŀ														1
56	54,25	55,75										$\dashv$	_	┪				$\dashv$	-	$\dashv$	$\dashv$				-	$\dashv$	$\dashv$	
60	59,25	60.75						1					ļ								ł						- 1	
65	64,25	65,75										_	_	$\dashv$												_	_	
70 75	69,25 74,25	70,75 75,75								- 1		1		.			- 1								ļ			
80	79,25	80,75								C.	om:	mei	cia:	۱ ا					1	$\dashv$								
85	84,25	85,75									$\dashv$	$\dashv$	_	$\dashv$		-			-	ᅦ	$\dashv$	_				$\dashv$	$\dashv$	$\dashv$
90 95	89,25 94,25	90,75										- 1						Ì	ı	1							1	
		95,75						<u> </u>		_	_	_	4	_		_	_	_	_		_				_	_	$\dashv$	
100 120	99,25 119,25	100,75 120,75	- 1						ı										44.	-							-	
140	139,25	140,75						•	$\dashv$								1	eng 	₹ <b>ns</b> 	ļ					$\dashv$			
160	159,25	160,75							$\neg$	٦		$\exists$	$\dashv$	$\dashv$				7	$\dashv$		$\dashv$				-	7	+	ㅓ
180 200	179,25	180,75			l			ſ	İ	Ì	$\neg$	_		1					1			ł				Ī	一	_]
200	199,25	200,75											$\perp$				ļ			1	l				_			1



<sup>2)</sup> Hole diameter  $d_1$  = nominal size of the split pin (see ISO 1234).

<sup>3)</sup> For nominal lengths above 200 mm, steps of 20 mm.

## 4 Specifications and reference International Standards

Material	St = Free-cutting steel, hardness 125 to 245 HV. Other materials as agreed between customer and supplier.								
	Plain, i.e. pins to be supplied in natural finish treated with a rust-preventative lubricant, unless otherwise specified by agreement between customer and supplier.								
Surface finish	Preferred coatings are black oxide, phosphate coating or zinc plating with chromate conversion coating (see ISO 2081 and ISO 4520).  Other coatings as agreed between customer and supplier. All tolerances shall apply prior to the application of a plating or coating.								
Workmanship	Parts shall be uniform in quality and free of irregularities or detrimental defects.  No burns shall appear on any part of the pin.								
Acceptability	The acceptance procedure is covered in ISO 3269.								

#### 5 Designation

Example for the designation of a clevis pin, steel, type B, with nominal diameter d=20 mm and nominal length l=100 mm:

Clevis pin ISO 2340 - B - 20 × 100 - St

Example for the same pin with split pin holes of  $\phi$  6,3 mm :

Clevis pin ISO 2340 - B - 20 × 100 × 6.3 - St

Example for the same pin with distance  $I_h = 80 \text{ mm}$ :

Clevis pin ISO 2340 - B - 20 imes 100 imes 6,3 imes 80 - St

Example for the same pin with standard split pin holes :

Clevis pin ISO 2340 - B - 20 imes 100 imes 80 - St