

International Standard



2341

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Clevis pins with head

Axes d'articulation avec tête

Second edition — 1986-11-01

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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.

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 2341 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

This second edition cancels and replaces the first edition (ISO 2341:1972), 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 with head

1 Scope and field of application

This International Standard specifies the characteristics of clevis pins with head, with metric dimensions and nominal diameters, d , from 3 to 100 mm inclusive.

2 References

ISO 1234, *Split pins — Metric series.*

ISO 2081, *Metallic coatings — Electroplated coatings of zinc on iron or steel.*

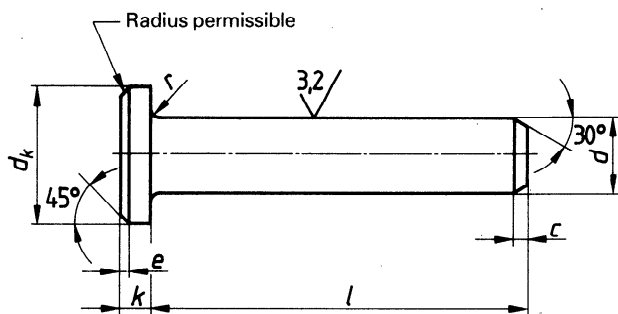
ISO 3269, *Fasteners — Acceptance inspection.*

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

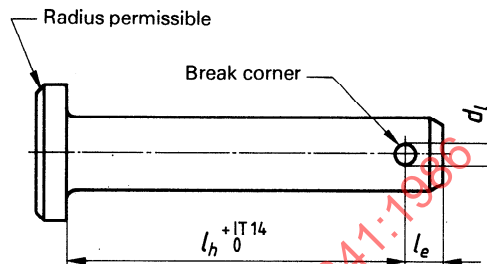
3 Dimensions

Surface roughness values in micrometres

Type A
Without split pin hole



Type B
With split pin hole



NOTES

- 1 Other dimensions, angles and surface roughness value, see type A.
- 2 In cases where a distance l_h which is not in accordance with $l - l_e$ is necessary, this distance should be fixed in the designation (see clause 5), but in no case may the values for l_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.

Dimensions in millimetres

d	$h11^{1)}$	3	4	5	6	8	10	12	14	16	18	20	22	24	27	30	33	36	40	45	50	55	60	70	80	90	100
d_k	$h14$	5	6	8	10	14	18	20	22	25	28	30	33	36	40	44	47	50	55	60	66	72	78	90	100	110	120
d_1	$H13^{2)}$	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
e	$\approx$	0,5	0,5	1	1	1	1	1,6	1,6	1,6	1,6	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3
k	$js14$	1	1	1,6	2	3	4	4	4	4,5	5	5	5,5	6	6	8	8	8	8	9	9	11	12	13	13	13	13
l_e	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
r		0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
$l^{3)}$																											
nom.	min.	max.																									
6	5,75	6,25																									
8	7,75	8,25																									
10	9,75	10,25																									
12	11,5	12,5																									
14	13,5	14,5																									
16	15,5	16,5																									
18	17,5	18,5																									
20	19,5	20,5																									
22	21,5	22,5																									
24	23,5	24,5																									
26	25,5	26,5																									
28	27,5	28,5																									
30	29,5	30,5																									
32	31,5	32,5																									
35	34,5	35,5																									
40	39,5	40,5																									
45	44,5	45,5																									
50	49,5	50,5																									
55	54,25	55,75																									
60	59,25	60,75																									
65	64,25	65,75																									
70	69,25	70,75																									
75	74,25	75,75																									
80	79,25	80,75																									
85	84,25	85,75																									
90	89,25	90,75																									
95	94,25	95,75																									
100	99,25	100,75																									
120	119,25	120,75																									
140	139,25	140,75																									
160	159,25	160,75																									
180	179,25	180,75																									
200	199,25	200,75																									

1) Other tolerances, for example $a11$, $c11$, $f8$, as agreed between customer and supplier.2) Hole diameter d_1 = nominal size of the split pin (see ISO 1234).

3) For nominal lengths above 200 mm, steps of 20 mm.

4 Specifications and reference International Standards

Material	St = Free-cutting steel or cold-heading steel, hardness 125 to 245 HV. Other materials as agreed between customer and supplier.
Surface finish	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.
	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 burrs 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 2341 - B - 20 × 100 - St

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

Clevis pin ISO 2341 - B - 20 × 100 × 6,3 - St

Example for the same pin with distance $l_h = 80$ mm :

Clevis pin ISO 2341 - B - 20 × 100 × 6,3 × 80 - St

Example for the same pin with a standard split pin hole :

Clevis pin ISO 2341 - B - 20 × 100 × 80 - St