
**Parallel pins, of hardened steel and
martensitic stainless steel (Dowel pins)**

Goupilles cylindriques en acier trempé et en acier inoxydable martensitique



Foreword

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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 8734 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

This second edition cancels and replaces the first edition (ISO 8734:1987), which has been technically revised.

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Parallel pins of hardened steel and martensitic stainless steel (Dowel pins)

1 Scope

This International Standard specifies the characteristics of parallel pins (dowel pins) of steel, through hardened or case hardened and martensitic stainless steel with nominal diameters, d , from 1 mm to 20 mm inclusive.

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.

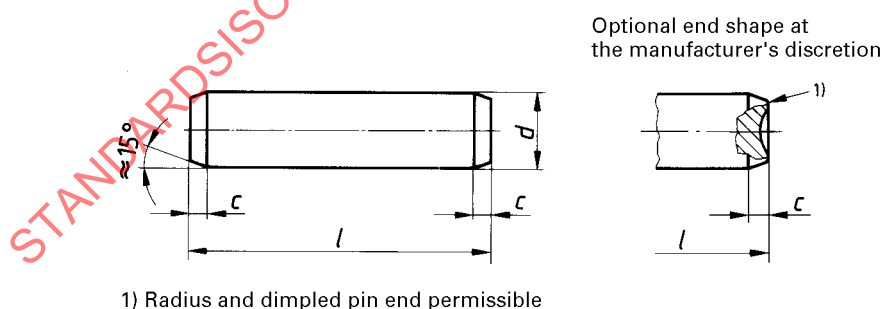
ISO 3269:1988, *Fasteners – Acceptance inspection*.

ISO 3506-1:1997, *Corrosion-resistant stainless steel fasteners – Part 1: Bolts, screws and studs*.

ISO 4042:–¹⁾, *Fasteners – Electroplated coatings*.

3 Dimensions

See figure 1 and table 1.



1) Radius and dimpled pin end permissible

Figure 1

1) To be published. (Revision of ISO 4042:1989)

Table 1 — Dimensions

Dimensions in millimetres															
<i>d</i>	m6 ¹⁾		1	1,5	2	2,5	3	4	5	6	8	10	12	16	20
<i>c</i>	≈		0,2	0,3	0,35	0,4	0,5	0,63	0,8	1,2	1,6	2	2,5	3	3,5
<i>l</i> ²⁾															
nom.	min.	max.													
3	2,75	3,25													
4	3,75	4,25													
5	4,75	5,25													
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													

1) Other tolerances as agreed between customer and supplier.

2) For nominal lengths above 100 mm, steps of 20 mm.

4 Requirements and reference International Standards

See table 2.

Table 2 — Requirements and reference International Standards

Material ¹⁾	Steel			Martensitic stainless steel
	St			C1 in accordance with ISO 3506-1
	Type A pin through hardened	Type B pin case hardened		hardened and tempered to a hardness of 460 HV30 to 560 HV30
	Chemical composition limits (check analysis) %			
	C 0,95 to 1,1 Si 0,15 to 0,35 Mn 0,25 to 0,4 P 0,03 max. S 0,025 max. Cr 1,35 to 1,65 Hardness: 550 HV30 to 650 HV30	either C 0,06 to 0,13 Si 0,1 to 0,4 Mn 0,25 to 0,6 P 0,025 max. S 0,05 max. at the supplier's discretion Surface hardness: 600 HV1 to 700 HV1 Hardness at case depth 0,25 to 0,4 mm: 550 HV1 min.	or C 0,15 max. Si 0,10 max. Mn 0,9 to 1,3 P 0,07 max. S 0,15 to 0,35 Pb 0,15 to 0,35	
Surface			Plain, i.e. pins to be supplied in natural finish.	
Plain, i.e. pins to be supplied in natural finish, treated with a protective lubricant, unless otherwise specified by agreement between customer and supplier.				
If pins are surface coated appropriate plating or coating processes should be employed to avoid hydrogen embrittlement. When pins are electro-plated or phosphate-coated, they shall be suitably treated immediately after plating or coating to obviate detrimental hydrogen embrittlement, although freedom from hydrogen embrittlement ist not absolutely guaranteed (see ISO 4042). All tolerances shall apply prior to the application of a plating or coating.				
Surface roughness	Ra ≤ 0,8 μm			
Workmanship	Pins shall be 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.			
1) Other materials as agreed between customer and supplier.				

5 Designation

EXAMPLE 1

A through hardened steel parallel pin type A, with nominal diameter $d = 6$ mm and nominal length $l = 30$ mm is designated as follows:

Parallel pin ISO 8734 – 6 × 30 – A – St

EXAMPLE 2

A martensitic stainless steel parallel pin of grade C1, with nominal diameter $d = 6$ mm and nominal length $l = 30$ mm is designated as follows:

Parallel pin ISO 8734 – 6 × 30 – C1

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