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ISO
8750

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

Spring-type straight pins — Coiled, standard duty

Goupilles élastiques spiralées — Série moyenne

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ISO 8750:1987

<https://standards.iteh.ai/catalog/standards/sist/2526bcd9-1a65-4dd2-97f0-3288a18d2ca8/iso-8750-1987>

Reference number
ISO 8750:1987 (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.

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 8750 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

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.

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Spring-type straight pins — Coiled, standard duty

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1 Scope and field of application

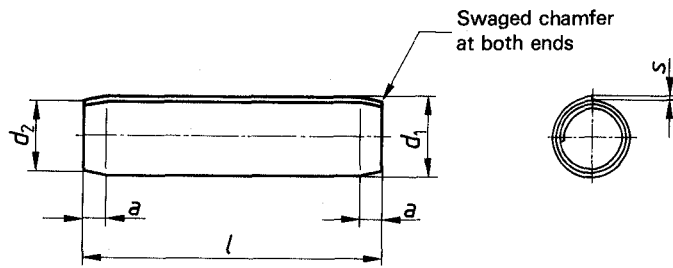
This International Standard specifies the characteristics of standard duty coiled spring-type straight pins with metric dimensions and nominal diameters, d_1 , from 0,8 to 20 mm inclusive.

NOTE — Spring-type straight pins, coiled, heavy duty, and spring-type straight pins, coiled, light duty are the subjects of ISO 8748 and ISO 8751 respectively.

2 References

- ISO 3269, *Fasteners — Acceptance inspection.*
- ISO 8748, *Spring-type straight pins — Coiled, heavy duty.*
- ISO 8749, *Pins and grooved pins — Shear test.*
- ISO 8751, *Spring-type straight pins — Coiled, light duty.*

3 Dimensions



Dimensions in millimetres

		nom.	0,8	1	1,2	1,5	2	2,5	3	3,5	4	5	6	8	10	12	14	16	20
d_1	before mounting	min.	0,85	1,05	1,25	1,62	2,13	2,65	3,15	3,67	4,2	5,25	6,25	8,3	10,35	12,4	14,45	16,45	20,4
		max.	0,91	1,15	1,35	1,73	2,25	2,78	3,3	3,84	4,4	5,5	6,5	8,63	10,8	12,85	14,95	17	21,1
d_2	before mounting	max.	0,75	0,95	1,15	1,4	1,9	2,4	2,9	3,4	3,9	4,85	5,85	7,8	9,75	11,7	13,6	15,6	19,6
a		≈	0,3	0,3	0,4	0,5	0,7	0,7	0,9	1	1,1	1,3	1,5	2	2,5	3	3,5	4	4,5
s			0,07	0,08	0,1	0,13	0,17	0,21	0,25	0,29	0,33	0,42	0,5	0,67	0,84	1	1,2	1,3	1,7
Minimum shear strength, double kN			0,4	0,6	0,9	1,45	2,5	3,9	5,5	7,5	9,6	15	22	39	62	89	120	155	250

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nom.		$l^{1)}$																		
		min.																		
		max.																		
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																		
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																		

Range

of

commercial

lengths

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

4 Application

The bore diameter of the spring pin hole shall be equal to the nominal diameter, d_1 , of the mating pin, and to tolerance H12. For pins with nominal diameter 1,2 mm and under, the tolerance on the hole shall be H10.

5 Specifications and reference International Standards

Material	St = Steel meeting the following analyses [% (m/m)] :															
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">All pin diameters</td> <td style="width: 50%; text-align: center;">Alternative for pin diameters over 12 mm</td> </tr> <tr> <td style="text-align: center;">C > 0,64</td> <td style="text-align: center;">C > 0,38</td> </tr> <tr> <td style="text-align: center;">Mn > 0,60</td> <td style="text-align: center;">Mn > 0,70</td> </tr> <tr> <td style="text-align: center;">Si > 0,15</td> <td style="text-align: center;">Si > 0,20</td> </tr> <tr> <td style="text-align: center;">Cr > 0,50 (opt.)</td> <td style="text-align: center;">Cr > 0,80</td> </tr> <tr> <td style="text-align: center;">P < 0,04</td> <td style="text-align: center;">V > 0,15</td> </tr> <tr> <td style="text-align: center;">S < 0,05</td> <td style="text-align: center;">P < 0,035</td> </tr> <tr> <td></td> <td style="text-align: center;">S < 0,04</td> </tr> </table>	All pin diameters	Alternative for pin diameters over 12 mm	C > 0,64	C > 0,38	Mn > 0,60	Mn > 0,70	Si > 0,15	Si > 0,20	Cr > 0,50 (opt.)	Cr > 0,80	P < 0,04	V > 0,15	S < 0,05	P < 0,035	
All pin diameters	Alternative for pin diameters over 12 mm															
C > 0,64	C > 0,38															
Mn > 0,60	Mn > 0,70															
Si > 0,15	Si > 0,20															
Cr > 0,50 (opt.)	Cr > 0,80															
P < 0,04	V > 0,15															
S < 0,05	P < 0,035															
	S < 0,04															
	Hardened and tempered to a Vickers hardness 420 to 520 HV. Other materials as agreed between customer and supplier.															
Surface 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.															
	Appropriate plating or coating processes should be employed to avoid hydrogen embrittlement. When pins are electroplated or phosphate-coated, they shall be suitably treated immediately after plating or coating to obviate detrimental hydrogen embrittlement, although freedom from hydrogen embrittlement is not absolutely guaranteed. Preferred coatings are chemical black oxide or non-electrolytic zinc plating. 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.															
Shear strength test	The test shall be in accordance with ISO 8749.															
Acceptability	The acceptance procedure is covered in ISO 3269.															

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6 Designation

Example for the designation of a steel spring-type straight pin, coiled, standard duty, with nominal diameter $d_1 = 6$ mm and nominal length $l = 30$ mm :

Spring pin ISO 8750 - 6 × 30 - St

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UDC 621.886.15

Descriptors : fasteners, pins (mechanics), spring pins, specifications, dimensions, designation.

Price based on 3 pages
