



DIN EN ISO 13337-2009

Spiing-type straight pins,light duty

Amendant record:
DIN 7346:1959-11,1960-07,1978-11
DIN EN ISO 13337:1998-02

Table 1 — Dimensions

nominal diameter <i>d</i>			2	2,5	3	3,5	4	4,5	5	6	8	10	12	13
<i>d</i>	before mounting	Max	2,4	2,9	3,5	4,0	4,6	5,1	5,6	6,7	8,8	10,8	12,8	13,8
		min	2,3	2,8	3,3	3,8	4,4	4,9	5,4	6,4	8,5	10,5	12,5	13,5
<i>d</i> ₁	before mounting	reference	1,9	2,3	2,7	3,1	3,4	3,9	4,4	4,9	7,0	8,5	10,5	11,0
C	Max		0,4	0,45	0,45	0,5	0,7	0,7	0,7	0,9	1,8	2,4	2,4	2,4
	min		0,2	0,25	0,25	0,3	0,5	0,5	0,5	0,7	1,5	2,0	2,0	2,0
<i>h</i>			0,2	0,25	0,3	0,35	0,5	0,5	0,5	0,75	0,75	1,0	1,0	1,2
Minmum shear strength,double,kN ①			1,5	2,4	3,5	4,6	8	8,8	10,4	18	24	40	48	66
nominal diameter <i>d</i>			14	16	18	20	21	25	28	30	35	40	45	50
<i>d</i>	before mounting	Max	14,8	16,8	18,9	20,9	21,9	25,9	28,9	30,9	35,9	40,9	45,9	50,9
		min	14,5	16,5	18,5	20,5	21,5	25,5	28,5	30,5	35,5	40,5	45,5	50,5
<i>d</i> ₁	before mounting	reference	11,5	13,5	15,0	16,5	17,5	21,5	23,5	25,5	28,5	32,5	37,5	40,5
C	Max		2,4	2,4	2,4	2,4	2,4	3,4	3,4	3,4	3,6	4,6	4,6	4,6
	min		2,0	2,0	2,0	2,0	2,0	3,0	3,0	3,0	3,0	4,0	4,0	4,0
<i>h</i>			1,5	1,5	1,7	2,0	2,0	2,0	2,5	2,5	3,5	4,0	4,0	5,0
Minmum shear strength,double,kN ①			84	98	126	158	168	202	280	302	490	634	720	1 000

Table 2 — Requirements and reference International Standards

Material②	steel		Austenitic stainless steel	Martensitic stainless steel
	St		A	C
	Chemical composition limits (check analysis) %			
	Plain carbon steel	Silicon manganese steel	C≤0.15 Mn≤2.00 Si≤1.50 Cr:16~20 Ni:6~12 P≤0.045 S≤0.03 Mo≤0.8 Cold worked	C≥0.15 Mn≤1.00 Si≤1.00 Cr:11.5~14 Ni≤1.00 P≤0.04 S≤0.03 Hardened and tempered to a Vickers hardness of 440HV~560HV
	C≥0.65 Mn≥0.6 Hardened and tempered to a Vickers hardness of 420 HV to 520 HV or isotherma lquenching: 500HV~560HV	C≥0.5 Si≥1.5 Mn≥0.7 Hardened and tempered to a Vickers hardness of: 420HV~560HV		Hardened: see ISO 6507-1
	Hardened: see ISO 6507-1			
Surface condition	Plain, i.e. pins to be supplied in natural finish, treated with a protective lubricant,unless otherwise specified by agreementbe tween customer and supplier. If pins are surface coated 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 (see ISO 4042). All tolerances shall apply prior to the application of a plating or coating.		Plain, i.e. pins to be supplied in natural finish.	
Application	The diameter of the hole into which the spring pin is to be inserted shall be equal to the nominal diameter <i>d</i> , of the mating pin and to tolerance class H12. When the elastic pin is inserted into the minimum allowable hole, the slot should not be fully closed.			
Shear strength test	The test shall be in accordance with ISO 8749			

①,Applicable only to steel and martensitic stainless steel products; no double-sided shear load values are specified for austenitic stainless steel elastic pins.

● $d_2 < d$;

● $d \geq 10 \text{ mm}$. The manufacturer may choose a single-sided chamfered design;

● h (Tolerance): $h \leq 10 \text{ mm} \Rightarrow +0.25$ $10 < h \leq 50 \text{ mm} \Rightarrow +0.5$ $50 < h \leq 200 \text{ mm} \Rightarrow +0.75$

② Other materials as agreed between customer and supplier.