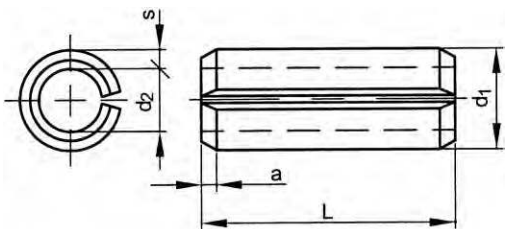


Spring-type straight pin slotted, heavy duty



ISO 8752
 DIN 1481
 BS 7060

Technical Data

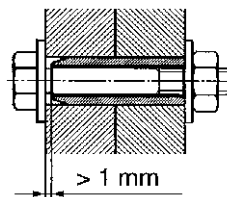
d (nom.)	a (min.)	d ₁ (max.)	d ₁ (min.)	d ₂ ≈	s	V
1.5	0.25	1.8	1.7	1.1	0.3	1.58
2	0.35	2.4	2.3	1.5	0.4	2.82
2.5	0.4	2.9	2.8	1.8	0.5	4.38
3	0.5	3.5	3.3	2.1	0.6	6.32
3.5	0.6	4	3.8	2.3	0.75	9.06
4	0.65	4.6	4.4	2.8	0.8	11.24
4.5	0.8	5.1	4.9	2.9	1	15.36
5	0.9	5.6	5.4	3.4	1	17.54
6	1.2	6.7	6.4	3.9	1.25	26.04
7 (#DIN)	2	7.8	7.5	4.5	1.5	31.4
8	1.6	8.8	8.5	5.5	1.5	42.76
9 (#DIN)	2	9.8	9.5	5.5	2	60.66
10	2	10.8	10.5	6.5	2	70.16
12	2	12.8	12.5	7.5	2.5	104.1
13	2	13.8	13.5	8.5	2.5	115.1
14	2	14.8	14.4	8.5	3	144.7
16	2	16.8	16.5	10.5	3	171
18	2	18.9	18.5	11.5	3.5	222.5
20	3	20.9	20.5	12.5	4	280.6

- V = Shear strength double min. in kN.
- For the hole diameter d(nom.) with tolerance field H12 is recommended.

Special features spring-type straight pins:

- are used to connect two or more construction elements to each other
- highly suitable to absorb shear forces
- to avoid movements in light bolt connections spring-type straight pins can be used accordingly to information stated below:

d (nom.) spring-type straight pin	6	8	10	12	16	18
intended for bolt size	M3	M4	M5	M6	M8	M10
associated washers acc. to DIN 7349	3,2	4,3	5,3	6,4	8,4	10,5



CONTINUED



Spring-type straight pin slotted, heavy duty

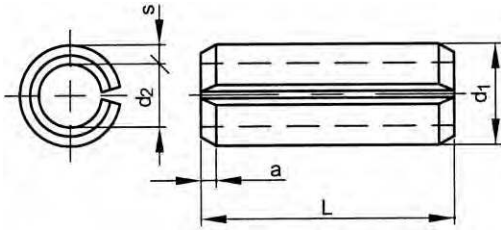
Material Spring steel 420-560 HV30



d (nom.) x L		d (nom.) x L		d (nom.) x L	
1,5X6MM	200	4X12MM	200	8X16MM	500
1,5X8MM	200	4X14MM	200	8X20MM	50
1,5X10MM	200	4X16MM	200	8X24MM	50
1,5X12MM	200	4X18MM	200	8X26MM	50
1,5X16MM	200	4X20MM	200	8X30MM	50
1,5X20MM	200	4X22MM	200	8X32MM	50
		4X24MM	200	8X35MM	50
2X4MM	200	4X26MM	200	8X40MM	50
2X8MM	200	4X28MM	200	8X45MM	50
2X10MM	200	4X30MM	200	8X50MM	50
2X12MM	200	4X32MM	100	8X55MM	50
2X14MM	200	4X35MM	100	8X60MM	50
2X16MM	200	4X40MM	100	8X70MM	25
2X20MM	200	4X45MM	100	8X80MM	25
2X24MM	200	4X50MM	100	8X100MM	10
2X26MM	200	4X60MM	100		
2X30MM	200			10X20MM	50
2X40MM	200	4,5X10MM	200	10X22MM	50
		4,5X12MM	200	10X24MM	50
2,5X6MM	1	4,5X14MM	200	10X26MM	50
2,5X8MM	200	4,5X16MM	200	10X30MM	50
2,5X10MM	200	4,5X20MM	200	10X35MM	50
2,5X12MM	200	4,5X30MM	100	10X40MM	25
2,5X16MM	200	4,5X40MM	200	10X45MM	25
2,5X18MM	200	4,5X45MM	100	10X50MM	25
2,5X20MM	200	4,5X50MM	200	10X55MM	25
2,5X24MM	200	4,5X60MM	200	10X60MM	25
2,5X26MM	200			10X70MM	25
2,5X28MM	200	5X10MM	200	10X75MM	25
2,5X30MM	200	5X12MM	200	10X80MM	10
2,5X35MM	200	5X16MM	100	10X90MM	10
2,5X40MM	200	5X18MM	100	10X100MM	10
		5X20MM	100		
3X6MM	200	5X24MM	100	12X24MM	25
3X8MM	200	5X26MM	100	12X30MM	25
3X10MM	200	5X28MM	100	12X36MM	25
3X12MM	200	5X30MM	100	12X40MM	25
3X14MM	200	5X32MM	100	12X45MM	100
3X16MM	200	5X35MM	100	12X50MM	10
3X18MM	200	5X40MM	100	12X60MM	10
3X20MM	200	5X45MM	100	12X65MM	10
3X22MM	200	5X50MM	100	12X70MM	10
3X24MM	200	5X55MM	100	12X80MM	10
3X26MM	200	5X60MM	100	12X90MM	10
3X28MM	200	5X70MM	50	12X100MM	10
3X30MM	200	5X80MM	50	12X120MM	10
3X32MM	200				
3X35MM	200	6X12MM	200	16X36MM	5
3X40MM	200	6X16MM	100	16X40MM	5
3X45MM	200	6X18MM	100	16X50MM	5
3X50MM	200	6X20MM	100	16X60MM	5
		6X22MM	100	16X70MM	5
3,5X10MM	200	6X24MM	100	16X75MM	5
3,5X12MM	200	6X26MM	100	16X80MM	5
3,5X16MM	200	6X28MM	100	16X90MM	5
3,5X18MM	200	6X30MM	100	16X100MM	5
3,5X20MM	200	6X32MM	100	16X120MM	5
3,5X22MM	200	6X35MM	100		
3,5X24MM	200	6X40MM	100	18X50MM	5
3,5X26MM	200	6X45MM	50		
3,5X30MM	200	6X50MM	50	20X60MM	5
3,5X32MM	200	6X55MM	50	20X70MM	5
3,5X35MM	200	6X60MM	50	20X80MM	5
3,5X40MM	200	6X65MM	50	20X85MM	5
3,5X45MM	200	6X70MM	50	20X90MM	5
3,5X50MM	200	6X80MM	50	20X95MM	5
		6X90MM	50	20X100MM	5
4X8MM	200	6X100MM	50	20X120MM	5
4X10MM	200				

- Warning: electro-galvanizing of these products may cause hydrogen embrittlement.

Spring-type straight pin heavy type A2



DIN	≈1481
ISO	≈8752
BS	≈7060



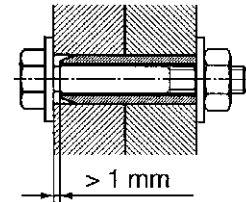
Technical Data

d (nom.)	a	d ₁ (max.)	d ₁ (min.)	d ₂ ≈	s	V
1	0.15	1.3	1.2	0.8	0.2	0.44
1.5	0.25	1.8	1.7	1.1	0.3	0.98
2	0.35	2.4	2.3	1.5	0.4	1.8
2.5	0.4	2.9	2.8	1.8	0.5	2.84
3	0.5	3.5	3.3	2.1	0.6	4.06
3.5	0.6	4	3.8	2.3	0.75	9.06
4	0.65	4.6	4.4	2.8	0.8	7.24
4.5	0.8	5.1	4.9	2.9	1	15.36
5	0.9	5.6	5.4	3.4	1	10.74
6	1.2	6.7	6.4	3.9	1.25	16.16
8	2	8.8	8.5	5.5	1.5	26.46
10	2	10.8	10.5	6.5	2	42.14
12	2	12.8	12.5	7.5	2.5	-

- V = Shear strength double min. in kN.
- The austenetic steel type is at the manufacturer's discretion, and can vary from the steel types stated in DIN 267-11.
- For the hole diameter d(nom.) with tolerance field H12 is recommended.
- a: Bevelled edges of 30° on both sides for sizes up to and including 6mm, pins over 6mm have a single bevelled edge of 15°.

Special features spring-type straight pins:

- are used to connect two or more construction elements to each other
- highly suitable to absorb shear forces
- to avoid movements in light bolt connections, spring-type straight pins can be used according to information stated below:



d (nom.) spring-type straight pin slotted	6	8	10	12	16	18
intended for bolt size	M3	M4	M5	M6	M8	M10
associated washers acc. to DIN 7349	3,2	4,3	5,3	6,4	8,4	10,5

Spring-type straight pin heavy type A2

Material Stainless steel A2

d (nom.) x L		d (nom.) x L		d (nom.) x L	
1X4MM*	1000	1,5X20MM	200	2,5X4MM*	1000
1X5MM*	1000	2X4MM*	1000	2,5X5MM*	1000
1X10MM*	1000	2X5MM*	1000	2,5X6MM*	1000
1X12MM*	1000	2X6MM*	200	2,5X8MM*	1000
1X14MM*	1000	2X8MM	200	2,5X10MM*	1000
1X16MM*	1000	2X10MM	200	2,5X12MM	200
1X18MM*	1000	2X12MM	200	2,5X14MM	200
1,5X4MM*	1000	2X14MM*	1000	2,5X16MM	200
1,5X5MM*	1000	2X16MM	200	2,5X18MM*	1000
1,5X6MM	200	2X18MM*	1000	2,5X20MM	200
1,5X8MM	200	2X20MM	200	2,5X22MM*	1000
1,5X10MM	200	2X22MM*	1000	2,5X24MM	200
1,5X12MM	200	2X24MM	200	2,5X26MM	200
1,5X14MM*	1000	2X26MM*	1000	2,5X28MM	200
1,5X16MM	200	2X30MM	200	2,5X30MM	200
1,5X18MM*	1000			3X4MM*	1000

CONTINUED



Spring-type straight pin heavy type A2

d (nom.) x L		d (nom.) x L		d (nom.) x L	
3X5MM*	1000	4,5X16MM*	500	8X10MM*	500
3X6MM*	1000	4,5X18MM*	500	8X12MM*	500
3X8MM	200	4,5X20MM*	500	8X14MM*	500
3X10MM	200	4,5X24MM*	500	8X16MM*	500
3X12MM	200	4,5X26MM*	500	8X18MM*	500
3X14MM	200	4,5X28MM*	500	8X20MM*	500
3X16MM	200	4,5X30MM*	500	8X22MM*	500
3X18MM	200	4,5X32MM*	500	8X24MM*	500
3X20MM	200	4,5X36MM*	500	8X26MM*	250
3X22MM*	1000	4,5X40MM*	500	8X28MM*	250
3X24MM	200	4,5X45MM*	500	8X30MM	50
3X26 MM	200	4,5X50MM*	500	8X32MM*	250
3X28MM*	1000			8X35MM	50
3X30MM	200	5X6MM*	500	8X40MM	50
3X32MM	200	5X8MM*	500	8X45MM*	250
3X35MM	200	5X10MM*	500	8X50MM	50
3X40MM	200	5X12MM*	500	8X55MM*	250
		5X14MM*	500	8X60MM	50
3,5X8MM*	1000	5X16MM	100	8X65MM*	250
3,5X10MM*	1000	5X18MM*	500	8X70MM	50
3,5X12MM*	1000	5X20MM	100	8X75MM*	250
3,5X14MM*	1000	5X22MM*	500	8X80MM	50
3,5X16MM*	1000	5X24MM	100	8X85MM*	200
3,5X18MM*	1000	5X26MM	100	8X90MM*	100
3,5X20MM*	1000	5X30MM	100	8X100MM	50
3,5X22MM*	1000	5X32MM*	500		
3,5X24MM*	1000	5X35MM	100	10X12MM*	500
3,5X26MM*	1000	5X36 MM	100	10X14MM*	500
3,5X28MM*	1000	5X40MM	100	10X16MM*	500
3,5X30MM*	1000	5X45MM	100	10X18MM*	500
3,5X32MM*	1000	5X50MM	100	10X20MM	50
3,5X36MM*	1000	5X55MM*	250	10X22MM*	500
3,5X40MM*	1000	5X60MM	100	10X25MM*	500
		5X65MM*	250	10X26MM*	500
4X4MM*	500	5X70MM	100	10X28MM*	500
4X5MM*	500			10X30MM	50
4X6MM*	500	6X12MM	100	10X32MM*	500
4X8MM*	500	6X14MM*	500	10X35MM	25
4X10MM*	500	6X16MM	100	10X36MM*	250
4X12MM	200	6X18MM*	500	10X40MM	25
4X14MM	200	6X20MM	500	10X45MM*	250
4X16MM	200	6X22MM*	500	10X50MM	25
4X18MM*	500	6X24MM	100	10X55MM*	200
4X20MM	200	6X26MM	100	10X60MM	25
4X22MM*	500	6X28MM*	500	10X65MM*	200
4X24MM	200	6X30MM	100	10X70MM	25
4X26MM	200	6X32MM	100	10X75MM*	100
4X28MM*	500	6X35MM	50	10X80MM	10
4X30MM	200	6X36MM	100	10X85MM*	100
4X32MM	100	6X40MM	100	10X90MM*	100
4X35MM	50	6X45MM*	250	10X95MM*	100
4X40MM	100	6X50MM	50	10X100MM	10
4X45MM*	500	6X55MM*	250	10X120MM*	50
4X50MM	100	6X60MM	50		
		6X65MM*	250	12X30MM	200
4,5X10MM*	500	6X70MM	50		
4,5X12MM*	500	6X75MM*	250		
4,5X14MM*	500	6X80MM	50		