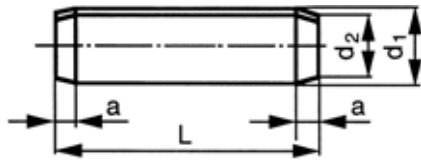


## Spring-type straight pin (spiral pin) coiled, standard duty



ISO 8750  
 DIN 7343  
 NEN 2553

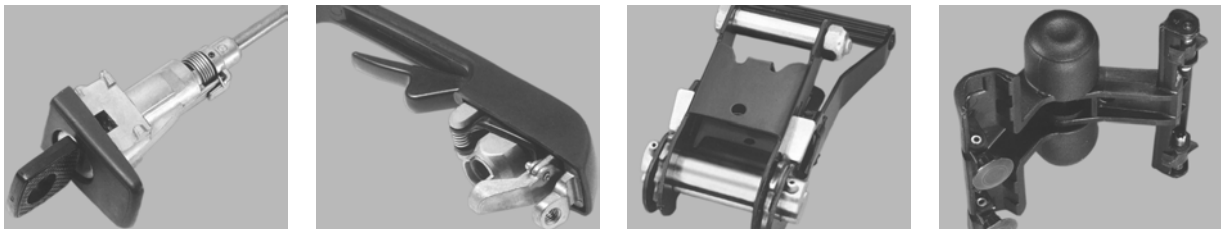


### Technical data

d (nom.)	d <sub>1</sub> (min.)	d <sub>1</sub> (max.)	d <sub>2</sub>	a ≈	V
1	1,05	1,15	0,95	0,3	0,6
1,5	1,62	1,73	1,4	0,5	1,45
2	2,13	2,25	1,9	0,7	2,5
2,5	2,65	2,78	2,4	0,7	3,9
3	3,15	3,3	2,9	0,9	5,5
4	4,2	4,4	3,9	1,1	9,6
5	5,25	5,5	4,85	1,3	15
6	6,25	6,5	5,85	1,5	22
8	8,3	8,63	7,8	2	39
10	10,35	10,8	9,75	2,5	62
12	12,4	12,85	11,7	3	89
14	14,45	14,95	13,6	3,5	120
16	16,45	17	15,6	4	155

- V = Shear strength double min. in kN.
- Special features of spring-type straight pins (spiral pins):
- Are used for the dismantable connection (positioning) of two or more parts and can also be applied as shafts and hinge-, stop- or carrierpins.
- Due to the spiral shaped cross section (approx. 2.1/4 coils) the spring-type straight pins (spiral pins) are very flexible and suitable to be used more times for dynamic loads. Equal stress distribution throughout its cross section against the hole wall produces a good press fit, which can absorb shear forces unaffected by the direction.
- Swaged chamfer at both ends, so they can easily be inserted and installed automatically.
- For the hole diameter d (nom.) the tolerance H12 is recommended except for d (nom.)1mm, the tolerance H10 is recommended.

### Examples of application



### 39140 Spring-type straight pin (spiral pin) coiled, standard duty

L09A

**Material** Spring steel 420-560 HV30  
**Packaging** Standard



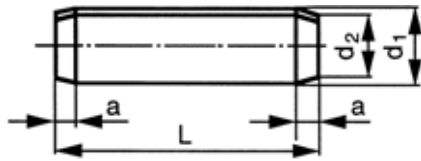
d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number
1,5X4MM	200	<a href="#">39140.015.004</a>	2,5X10MM	200	<a href="#">39140.025.010</a>	3X28MM	200	<a href="#">39140.030.028</a>
1,5X6MM	200	<a href="#">39140.015.006</a>	2,5X12MM	200	<a href="#">39140.025.012</a>	3X30MM	200	<a href="#">39140.030.030</a>
1,5X8MM	200	<a href="#">39140.015.008</a>	2,5X14MM	200	<a href="#">39140.025.014</a>			
1,5X10MM	200	<a href="#">39140.015.010</a>	2,5X16MM	200	<a href="#">39140.025.016</a>	4X10MM	200	<a href="#">39140.040.010</a>
1,5X12MM	200	<a href="#">39140.015.012</a>	2,5X18MM	200	<a href="#">39140.025.018</a>	4X12MM	200	<a href="#">39140.040.012</a>
1,5X14MM	200	<a href="#">39140.015.014</a>	2,5X20MM	200	<a href="#">39140.025.020</a>	4X16MM	200	<a href="#">39140.040.016</a>
1,5X16MM	200	<a href="#">39140.015.016</a>	2,5X24MM	200	<a href="#">39140.025.024</a>	4X18MM	200	<a href="#">39140.040.018</a>
						4X20MM	200	<a href="#">39140.040.020</a>
2X6MM	200	<a href="#">39140.020.006</a>	3X8MM	200	<a href="#">39140.030.008</a>	4X22MM	200	<a href="#">39140.040.022</a>
2X8MM	200	<a href="#">39140.020.008</a>	3X10MM	200	<a href="#">39140.030.010</a>	4X24MM	200	<a href="#">39140.040.024</a>
2X10MM	200	<a href="#">39140.020.010</a>	3X12MM	200	<a href="#">39140.030.012</a>	4X26MM	200	<a href="#">39140.040.026</a>
2X12MM	200	<a href="#">39140.020.012</a>	3X14MM	200	<a href="#">39140.030.014</a>	4X28MM	200	<a href="#">39140.040.028</a>
2X14MM	200	<a href="#">39140.020.014</a>	3X16MM	200	<a href="#">39140.030.016</a>	4X30MM	200	<a href="#">39140.040.030</a>
2X16MM	200	<a href="#">39140.020.016</a>	3X20MM	200	<a href="#">39140.030.020</a>	4X32MM	100	<a href="#">39140.040.032</a>
2X20MM	200	<a href="#">39140.020.020</a>	3X22MM	200	<a href="#">39140.030.022</a>	4X35MM	100	<a href="#">39140.040.035</a>
			3X24MM	200	<a href="#">39140.030.024</a>	4X40MM	100	<a href="#">39140.040.040</a>
2,5X8MM	200	<a href="#">39140.025.008</a>	3X26MM	200	<a href="#">39140.030.026</a>			

**39140 Spring-type straight pin (spiral pin) coiled, standard duty**

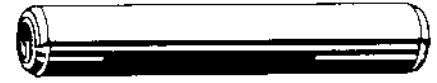
d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number
5X12MM	200	<a href="#">39140.050.012</a>	6X50MM	50	<a href="#">39140.060.050</a>			
5X16MM	200	<a href="#">39140.050.016</a>				12X30MM	25	<a href="#">39140.120.030</a>
5X20MM	100	<a href="#">39140.050.020</a>	8X20MM	100	<a href="#">39140.080.020</a>	12X35MM	25	<a href="#">39140.120.035</a>
5X22MM	100	<a href="#">39140.050.022</a>	8X24MM	100	<a href="#">39140.080.024</a>	12X40MM	25	<a href="#">39140.120.040</a>
5X24MM	100	<a href="#">39140.050.024</a>	8X30MM	50	<a href="#">39140.080.030</a>	12X50MM	10	<a href="#">39140.120.050</a>
5X26MM	100	<a href="#">39140.050.026</a>	8X32MM	50	<a href="#">39140.080.032</a>	12X55MM	10	<a href="#">39140.120.055</a>
5X28MM	100	<a href="#">39140.050.028</a>	8X35MM	50	<a href="#">39140.080.035</a>	12X60MM	10	<a href="#">39140.120.060</a>
5X30MM	100	<a href="#">39140.050.030</a>	8X40MM	50	<a href="#">39140.080.040</a>	12X70MM	10	<a href="#">39140.120.070</a>
5X32MM	100	<a href="#">39140.050.032</a>	8X50MM	50	<a href="#">39140.080.050</a>	12X80MM	10	<a href="#">39140.120.080</a>
5X35MM	100	<a href="#">39140.050.035</a>	8X60MM	50	<a href="#">39140.080.060</a>	12X85MM	10	<a href="#">39140.120.085</a>
5X40MM	100	<a href="#">39140.050.040</a>	8X70MM	25	<a href="#">39140.080.070</a>	12X90MM	10	<a href="#">39140.120.090</a>
5X45MM	100	<a href="#">39140.050.045</a>				12X100MM	10	<a href="#">39140.120.100</a>
			10X20MM	50	<a href="#">39140.100.020</a>	12X120MM	10	<a href="#">39140.120.120</a>
6X12MM	200	<a href="#">39140.060.012</a>	10X22MM	50	<a href="#">39140.100.022</a>			
6X16MM	200	<a href="#">39140.060.016</a>	10X24MM	50	<a href="#">39140.100.024</a>	16X40MM	5	<a href="#">39140.160.040</a>
6X20MM	100	<a href="#">39140.060.020</a>	10X28MM	50	<a href="#">39140.100.028</a>	16X50MM	5	<a href="#">39140.160.050</a>
6X24MM	100	<a href="#">39140.060.024</a>	10X30MM	50	<a href="#">39140.100.030</a>	16X60MM	5	<a href="#">39140.160.060</a>
6X26MM	100	<a href="#">39140.060.026</a>	10X35MM	25	<a href="#">39140.100.035</a>	16X80MM	5	<a href="#">39140.160.080</a>
6X28MM	100	<a href="#">39140.060.028</a>	10X40MM	25	<a href="#">39140.100.040</a>	16X90MM	5	<a href="#">39140.160.090</a>
6X30MM	100	<a href="#">39140.060.030</a>	10X45MM	25	<a href="#">39140.100.045</a>	16X100MM	5	<a href="#">39140.160.100</a>
6X32MM	100	<a href="#">39140.060.032</a>	10X50MM	25	<a href="#">39140.100.050</a>	16X120MM	5	<a href="#">39140.160.120</a>
6X35MM	100	<a href="#">39140.060.035</a>	10X60MM	25	<a href="#">39140.100.060</a>			
6X40MM	100	<a href="#">39140.060.040</a>	10X70MM	25	<a href="#">39140.100.070</a>			
6X45MM	50	<a href="#">39140.060.045</a>	10X80MM	10	<a href="#">39140.100.080</a>			

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

## Spring-type straight pin (spiral pin) coiled, standard duty A2



ISO ≈8750  
 DIN ≈7343  
 NEN ≈2553



### Technical data

d (nom.)	d <sub>1</sub> (min.)	d <sub>1</sub> (max.)	d <sub>2</sub>	a ≈	V
1	1,05	1,15	0,95	0,3	0,45
1,5	1,62	1,73	1,4	0,5	1,05
2	2,13	2,25	1,9	0,7	1,9
2,5	2,65	2,78	2,4	0,7	2,9
3	3,15	3,3	2,9	0,9	4,2
4	4,2	4,4	3,9	1,1	7,6
5	5,25	5,5	4,85	1,3	11,5
6	6,25	6,5	5,85	1,5	16,8
8	8,3	8,63	7,8	2	30

- V = Shear strength double min. in kN.
- Special features of spring-type straight pins (spiral pins):
- Are used for the dismantlable connection (positioning) of two or more parts and can also be applied as shafts and hinge-, stop- or carrierpins.
- Due to the spiral shaped cross section (approx. 2.1/4 coils) the spring-type straight pins (spiral pins) are very flexible and suitable to be used more times for dynamic loads.
- Equal stress distribution throughout its cross section against the hole wall produces a good press fit, which can absorb shear forces unaffected by the direction.
- Swaged chamfer at both ends, so they can easily be inserted and installed automatically.
- 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 H12 is recommended except for d (nom.) 1mm the tolerance H10 is recommended.

### 51430 Spring-type straight pin (spiral pin) coiled, standard duty

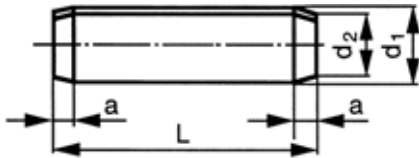
R09A

**Material** Stainless steel A2  
**Packaging** Standard



d x L	☒	Art.number	d x L	☒	Art.number	d x L	☒	Art.number
1X4MM	200	<a href="#">51430.010.004</a>	3X12MM	200	<a href="#">51430.030.012</a>	5X30MM	100	<a href="#">51430.050.030</a>
1X6MM	200	<a href="#">51430.010.006</a>	3X14MM	200	<a href="#">51430.030.014</a>	5X32MM	100	<a href="#">51430.050.032</a>
1X8MM	200	<a href="#">51430.010.008</a>	3X16MM	200	<a href="#">51430.030.016</a>	5X35MM	100	<a href="#">51430.050.035</a>
1X10MM	200	<a href="#">51430.010.010</a>	3X18MM	200	<a href="#">51430.030.018</a>	5X40MM	100	<a href="#">51430.050.040</a>
1X12MM	200	<a href="#">51430.010.012</a>	3X20MM	200	<a href="#">51430.030.020</a>	5X45MM	100	<a href="#">51430.050.045</a>
			3X22MM	200	<a href="#">51430.030.022</a>			
1,5X4MM	200	<a href="#">51430.015.004</a>	3X24MM	200	<a href="#">51430.030.024</a>	6X12MM	200	<a href="#">51430.060.012</a>
1,5X5MM	200	<a href="#">51430.015.005</a>	3X26MM	200	<a href="#">51430.030.026</a>	6X14MM	200	<a href="#">51430.060.014</a>
1,5X8MM	200	<a href="#">51430.015.008</a>	3X28MM	200	<a href="#">51430.030.028</a>	6X16MM	200	<a href="#">51430.060.016</a>
1,5X10MM	200	<a href="#">51430.015.010</a>	3X30MM	200	<a href="#">51430.030.030</a>	6X18MM	100	<a href="#">51430.060.018</a>
1,5X12MM	200	<a href="#">51430.015.012</a>				6X20MM	100	<a href="#">51430.060.020</a>
1,5X14MM	200	<a href="#">51430.015.014</a>	4X8MM	200	<a href="#">51430.040.008</a>	6X22MM	100	<a href="#">51430.060.022</a>
1,5X16MM	200	<a href="#">51430.015.016</a>	4X10MM	200	<a href="#">51430.040.010</a>	6X24MM	100	<a href="#">51430.060.024</a>
			4X12MM	200	<a href="#">51430.040.012</a>	6X26MM	100	<a href="#">51430.060.026</a>
2X6MM	200	<a href="#">51430.020.006</a>	4X14MM	200	<a href="#">51430.040.014</a>	6X28MM	100	<a href="#">51430.060.028</a>
2X8MM	200	<a href="#">51430.020.008</a>	4X16MM	200	<a href="#">51430.040.016</a>	6X30MM	100	<a href="#">51430.060.030</a>
2X10MM	200	<a href="#">51430.020.010</a>	4X18MM	200	<a href="#">51430.040.018</a>	6X32MM	100	<a href="#">51430.060.032</a>
2X12MM	200	<a href="#">51430.020.012</a>	4X20MM	200	<a href="#">51430.040.020</a>	6X35MM	100	<a href="#">51430.060.035</a>
2X14MM	200	<a href="#">51430.020.014</a>	4X22MM	200	<a href="#">51430.040.022</a>	6X40MM	100	<a href="#">51430.060.040</a>
2X16MM	200	<a href="#">51430.020.016</a>	4X24MM	200	<a href="#">51430.040.024</a>	6X45MM	100	<a href="#">51430.060.045</a>
2X18MM	200	<a href="#">51430.020.018</a>	4X26MM	200	<a href="#">51430.040.026</a>	6X50MM	100	<a href="#">51430.060.050</a>
2X20MM	200	<a href="#">51430.020.020</a>	4X28MM	200	<a href="#">51430.040.028</a>			
			4X30MM	200	<a href="#">51430.040.030</a>	8X16MM	100	<a href="#">51430.080.016</a>
2,5X8MM	200	<a href="#">51430.025.008</a>	4X35MM	100	<a href="#">51430.040.035</a>	8X20MM	100	<a href="#">51430.080.020</a>
2,5X10MM	200	<a href="#">51430.025.010</a>	4X40MM	100	<a href="#">51430.040.040</a>	8X24MM	100	<a href="#">51430.080.024</a>
2,5X12MM	200	<a href="#">51430.025.012</a>				8X26MM	50	<a href="#">51430.080.026</a>
2,5X14MM	200	<a href="#">51430.025.014</a>	5X12MM	200	<a href="#">51430.050.012</a>	8X28MM	50	<a href="#">51430.080.028</a>
2,5X16MM	200	<a href="#">51430.025.016</a>	5X14MM	200	<a href="#">51430.050.014</a>	8X30MM	50	<a href="#">51430.080.030</a>
2,5X18MM	200	<a href="#">51430.025.018</a>	5X16MM	200	<a href="#">51430.050.016</a>	8X32MM	50	<a href="#">51430.080.032</a>
2,5X20MM	200	<a href="#">51430.025.020</a>	5X18MM	100	<a href="#">51430.050.018</a>	8X35MM	50	<a href="#">51430.080.035</a>
2,5X24MM	200	<a href="#">51430.025.024</a>	5X20MM	100	<a href="#">51430.050.020</a>	8X40MM	50	<a href="#">51430.080.040</a>
			5X24MM	100	<a href="#">51430.050.024</a>	8X45MM	50	<a href="#">51430.080.045</a>
3X8MM	200	<a href="#">51430.030.008</a>	5X26MM	100	<a href="#">51430.050.026</a>	8X50MM	50	<a href="#">51430.080.050</a>
3X10MM	200	<a href="#">51430.030.010</a>	5X28MM	100	<a href="#">51430.050.028</a>			

## Spring-type straight pin (spiral pin) coiled, heavy duty



ISO 8748  
DIN 7344  
NEN 2554



### Technical data

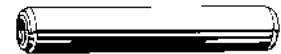
d (nom.)	d <sub>1</sub> (min.)	d <sub>1</sub> (max.)	d <sub>2</sub>	a ≈	V
1,5	1,61	1,71	1,4	0,5	1,9
2	2,11	2,21	1,9	0,7	3,5
2,5	2,62	2,73	2,4	0,7	5,5
3	3,12	3,25	2,9	0,9	7,6
4	4,15	4,3	3,9	1,1	13,5
5	5,15	5,35	4,85	1,3	20
6	6,18	6,4	5,85	1,5	30

- V = Shear strength double min. in kN.
- Special features of spring-type straight pins (spiral pins):
- Are used for the dismantlable connection (positioning) of two or more parts and can also be applied as shafts and hinge-, stop- or carrierpins.
- Due to the spiral shaped cross section (approx. 2. 1/4 coils) the spring-type straight pins (spiral pins) are very flexible and suitable to be used more times for dynamic loads. Equal stress distribution throughout its cross section against the hole wall produces a good press fit, which can.
- Absorb shear forces unaffected by the direction.
- Swaged chamfer at both ends, so they can easily be inserted and installed automatically.
- For the hole diameter d (nom.) the tolerance H12 is recommended except for d (nom.)1mm, the tolerance H10 is recommended.

#### 39150 Spring-type straight pin (spiral pin) coiled, heavy duty

L09A

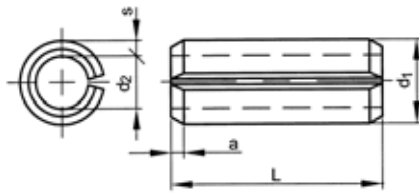
**Material** Spring steel 420-560 HV30  
**Packaging** Standard



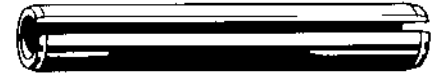
d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number
1,5X4MM	200	<a href="#">39150.015.004</a>	3X10MM	200	<a href="#">39150.030.010</a>	5X16MM	200	<a href="#">39150.050.016</a>
1,5X5MM	200	<a href="#">39150.015.005</a>	3X12MM	200	<a href="#">39150.030.012</a>	5X18MM	100	<a href="#">39150.050.018</a>
1,5X6MM	200	<a href="#">39150.015.006</a>	3X14MM	200	<a href="#">39150.030.014</a>	5X20MM	100	<a href="#">39150.050.020</a>
1,5X8MM	200	<a href="#">39150.015.008</a>	3X16MM	200	<a href="#">39150.030.016</a>	5X22MM	100	<a href="#">39150.050.022</a>
1,5X10MM	200	<a href="#">39150.015.010</a>	3X20MM	200	<a href="#">39150.030.020</a>	5X24MM	100	<a href="#">39150.050.024</a>
1,5X12MM	200	<a href="#">39150.015.012</a>	3X22MM	200	<a href="#">39150.030.022</a>	5X26MM	100	<a href="#">39150.050.026</a>
1,5X14MM	200	<a href="#">39150.015.014</a>	3X24MM	200	<a href="#">39150.030.024</a>	5X28MM	100	<a href="#">39150.050.028</a>
1,5X16MM	200	<a href="#">39150.015.016</a>	3X28MM	200	<a href="#">39150.030.028</a>	5X30MM	100	<a href="#">39150.050.030</a>
			3X30MM	200	<a href="#">39150.030.030</a>	5X32MM	100	<a href="#">39150.050.032</a>
2X6MM	200	<a href="#">39150.020.006</a>				5X35MM	100	<a href="#">39150.050.035</a>
2X8MM	200	<a href="#">39150.020.008</a>	4X10MM	200	<a href="#">39150.040.010</a>	5X40MM	100	<a href="#">39150.050.040</a>
2X10MM	200	<a href="#">39150.020.010</a>	4X12MM	200	<a href="#">39150.040.012</a>	5X45MM	100	<a href="#">39150.050.045</a>
2X12MM	200	<a href="#">39150.020.012</a>	4X14MM	200	<a href="#">39150.040.014</a>			
2X14MM	200	<a href="#">39150.020.014</a>	4X16MM	200	<a href="#">39150.040.016</a>	6X14MM	100	<a href="#">39150.060.014</a>
2X16MM	200	<a href="#">39150.020.016</a>	4X18MM	200	<a href="#">39150.040.018</a>	6X16MM	100	<a href="#">39150.060.016</a>
2X20MM	200	<a href="#">39150.020.020</a>	4X20MM	200	<a href="#">39150.040.020</a>	6X18MM	100	<a href="#">39150.060.018</a>
			4X22MM	200	<a href="#">39150.040.022</a>	6X20MM	100	<a href="#">39150.060.020</a>
2,5X10MM	200	<a href="#">39150.025.010</a>	4X24MM	200	<a href="#">39150.040.024</a>	6X22MM	100	<a href="#">39150.060.022</a>
2,5X12MM	200	<a href="#">39150.025.012</a>	4X26MM	200	<a href="#">39150.040.026</a>	6X24MM	100	<a href="#">39150.060.024</a>
2,5X14MM	200	<a href="#">39150.025.014</a>	4X28MM	200	<a href="#">39150.040.028</a>	6X26MM	100	<a href="#">39150.060.026</a>
2,5X16MM	200	<a href="#">39150.025.016</a>	4X30MM	200	<a href="#">39150.040.030</a>	6X28MM	100	<a href="#">39150.060.028</a>
2,5X18MM	200	<a href="#">39150.025.018</a>	4X32MM	100	<a href="#">39150.040.032</a>	6X30MM	100	<a href="#">39150.060.030</a>
2,5X20MM	200	<a href="#">39150.025.020</a>	4X35MM	100	<a href="#">39150.040.035</a>	6X32MM	100	<a href="#">39150.060.032</a>
2,5X22MM	200	<a href="#">39150.025.022</a>	4X40MM	100	<a href="#">39150.040.040</a>	6X35MM	100	<a href="#">39150.060.035</a>
2,5X24MM	200	<a href="#">39150.025.024</a>				6X40MM	100	<a href="#">39150.060.040</a>
			5X12MM	200	<a href="#">39150.050.012</a>	6X50MM	100	<a href="#">39150.060.050</a>
3X8MM	200	<a href="#">39150.030.008</a>	5X14MM	200	<a href="#">39150.050.014</a>			

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

## Spring-type straight pin slotted, heavy duty



ISO 8752  
 DIN 1481  
 NEN 2458  
 BS 7060



### Technical data

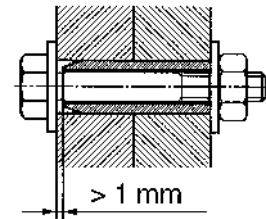
d (nom.)	d <sub>1</sub> (min.)	d <sub>1</sub> (max.)	d <sub>2</sub> ≈	s	a (min.)	V
1,5	1,7	1,8	1,1	0,3	0,25	1,58
2	2,3	2,4	1,5	0,4	0,35	2,82
2,5	2,8	2,9	1,8	0,5	0,4	4,38
3	3,3	3,5	2,1	0,6	0,5	6,32
3,5	3,8	4	2,3	0,75	0,6	9,06
4	4,4	4,6	2,8	0,8	0,65	11,24
4,5	4,9	5,1	2,9	1	0,8	15,36
5	5,4	5,6	3,4	1	0,9	17,54
6	6,4	6,7	3,9	1,25	1,2	26,04
7 (#DIN)	7,5	7,8	4,5	1,5	2	31,4
8	8,5	8,8	5,5	1,5	1,6	42,76
9 (#DIN)	9,5	9,8	5,5	2	2	60,66
10	10,5	10,8	6,5	2	2	70,16
12	12,5	12,8	7,5	2,5	2	104,1
13	13,5	13,8	8,5	2,5	2	115,1
14	14,4	14,8	8,5	3	2	144,7
16	16,5	16,8	10,5	3	2	171
18	18,5	18,9	11,5	3,5	2	222,5
20	20,5	20,9	12,5	4	3	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



### 39100 Spring-type straight pin slotted, heavy duty

L09A

**Material** Spring steel 420-560 HV30  
**Packaging** Standard



9

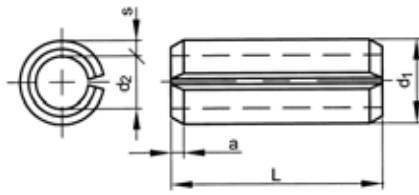
d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number
1,5X6MM	200	<a href="#">39100.015.006</a>	2,5X8MM	200	<a href="#">39100.025.008</a>	3X14MM	200	<a href="#">39100.030.014</a>
1,5X8MM	200	<a href="#">39100.015.008</a>	2,5X10MM	200	<a href="#">39100.025.010</a>	3X16MM	200	<a href="#">39100.030.016</a>
1,5X10MM	200	<a href="#">39100.015.010</a>	2,5X12MM	200	<a href="#">39100.025.012</a>	3X18MM	200	<a href="#">39100.030.018</a>
1,5X12MM	200	<a href="#">39100.015.012</a>	2,5X16MM	200	<a href="#">39100.025.016</a>	3X20MM	200	<a href="#">39100.030.020</a>
1,5X16MM	200	<a href="#">39100.015.016</a>	2,5X18MM	200	<a href="#">39100.025.018</a>	3X22MM	200	<a href="#">39100.030.022</a>
1,5X20MM	200	<a href="#">39100.015.020</a>	2,5X20MM	200	<a href="#">39100.025.020</a>	3X24MM	200	<a href="#">39100.030.024</a>
2X4MM	200	<a href="#">39100.020.004</a>	2,5X24MM	200	<a href="#">39100.025.024</a>	3X26MM	200	<a href="#">39100.030.026</a>
2X8MM	200	<a href="#">39100.020.008</a>	2,5X26MM	200	<a href="#">39100.025.026</a>	3X28MM	200	<a href="#">39100.030.028</a>
2X10MM	200	<a href="#">39100.020.010</a>	2,5X28MM	200	<a href="#">39100.025.028</a>	3X30MM	200	<a href="#">39100.030.030</a>
2X12MM	200	<a href="#">39100.020.012</a>	2,5X30MM	200	<a href="#">39100.025.030</a>	3X32MM	200	<a href="#">39100.030.032</a>
2X14MM	200	<a href="#">39100.020.014</a>	2,5X35MM	200	<a href="#">39100.025.035</a>	3X35MM	200	<a href="#">39100.030.035</a>
2X16MM	200	<a href="#">39100.020.016</a>	2,5X40MM	200	<a href="#">39100.025.040</a>	3X40MM	200	<a href="#">39100.030.040</a>
2X20MM	200	<a href="#">39100.020.020</a>				3X45MM	200	<a href="#">39100.030.045</a>
2X24MM	200	<a href="#">39100.020.024</a>	3X6MM	200	<a href="#">39100.030.006</a>	3X50MM	200	<a href="#">39100.030.050</a>
2X26MM	200	<a href="#">39100.020.026</a>	3X8MM	200	<a href="#">39100.030.008</a>			
2X30MM	200	<a href="#">39100.020.030</a>	3X10MM	200	<a href="#">39100.030.010</a>	3,5X10MM	200	<a href="#">39100.035.010</a>
2X40MM	200	<a href="#">39100.020.040</a>	3X12MM	200	<a href="#">39100.030.012</a>	3,5X12MM	200	<a href="#">39100.035.012</a>
						3,5X16MM	200	<a href="#">39100.035.016</a>

**39100 Spring-type straight pin slotted, heavy duty**

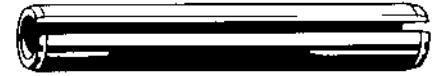
d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number
3,5X18MM	200	<a href="#">39100.035.018</a>	5X32MM	100	<a href="#">39100.050.032</a>	10X24MM	50	<a href="#">39100.100.024</a>
3,5X20MM	200	<a href="#">39100.035.020</a>	5X35MM	100	<a href="#">39100.050.035</a>	10X26MM	50	<a href="#">39100.100.026</a>
3,5X22MM	200	<a href="#">39100.035.022</a>	5X40MM	100	<a href="#">39100.050.040</a>	10X30MM	50	<a href="#">39100.100.030</a>
3,5X26MM	200	<a href="#">39100.035.026</a>	5X45MM	100	<a href="#">39100.050.045</a>	10X35MM	50	<a href="#">39100.100.035</a>
3,5X30MM	200	<a href="#">39100.035.030</a>	5X50MM	100	<a href="#">39100.050.050</a>	10X40MM	25	<a href="#">39100.100.040</a>
3,5X32MM	200	<a href="#">39100.035.032</a>	5X55MM	100	<a href="#">39100.050.055</a>	10X45MM	25	<a href="#">39100.100.045</a>
3,5X35MM	200	<a href="#">39100.035.035</a>	5X60MM	100	<a href="#">39100.050.060</a>	10X50MM	25	<a href="#">39100.100.050</a>
3,5X40MM	200	<a href="#">39100.035.040</a>	5X70MM	50	<a href="#">39100.050.070</a>	10X55MM	25	<a href="#">39100.100.055</a>
3,5X45MM	200	<a href="#">39100.035.045</a>	5X80MM	50	<a href="#">39100.050.080</a>	10X60MM	25	<a href="#">39100.100.060</a>
3,5X50MM	200	<a href="#">39100.035.050</a>				10X70MM	25	<a href="#">39100.100.070</a>
			6X12MM	200	<a href="#">39100.060.012</a>	10X75MM	25	<a href="#">39100.100.075</a>
4X8MM	200	<a href="#">39100.040.008</a>	6X16MM	100	<a href="#">39100.060.016</a>	10X80MM	10	<a href="#">39100.100.080</a>
4X10MM	200	<a href="#">39100.040.010</a>	6X18MM	100	<a href="#">39100.060.018</a>	10X90MM	10	<a href="#">39100.100.090</a>
4X12MM	200	<a href="#">39100.040.012</a>	6X20MM	100	<a href="#">39100.060.020</a>	10X100MM	10	<a href="#">39100.100.100</a>
4X14MM	200	<a href="#">39100.040.014</a>	6X22MM	100	<a href="#">39100.060.022</a>			
4X16MM	200	<a href="#">39100.040.016</a>	6X24MM	100	<a href="#">39100.060.024</a>	12X24MM	25	<a href="#">39100.120.024</a>
4X18MM	200	<a href="#">39100.040.018</a>	6X26MM	100	<a href="#">39100.060.026</a>	12X30MM	25	<a href="#">39100.120.030</a>
4X20MM	200	<a href="#">39100.040.020</a>	6X28MM	100	<a href="#">39100.060.028</a>	12X36MM	25	<a href="#">39100.120.036</a>
4X22MM	200	<a href="#">39100.040.022</a>	6X30MM	100	<a href="#">39100.060.030</a>	12X40MM	25	<a href="#">39100.120.040</a>
4X24MM	200	<a href="#">39100.040.024</a>	6X32MM	100	<a href="#">39100.060.032</a>	12X45MM	100	<a href="#">39100.120.045</a>
4X26MM	200	<a href="#">39100.040.026</a>	6X35MM	100	<a href="#">39100.060.035</a>	12X50MM	10	<a href="#">39100.120.050</a>
4X28MM	200	<a href="#">39100.040.028</a>	6X40MM	100	<a href="#">39100.060.040</a>	12X60MM	10	<a href="#">39100.120.060</a>
4X30MM	200	<a href="#">39100.040.030</a>	6X45MM	50	<a href="#">39100.060.045</a>	12X65MM	10	<a href="#">39100.120.065</a>
4X32MM	100	<a href="#">39100.040.032</a>	6X50MM	50	<a href="#">39100.060.050</a>	12X70MM	10	<a href="#">39100.120.070</a>
4X35MM	100	<a href="#">39100.040.035</a>	6X55MM	50	<a href="#">39100.060.055</a>	12X80MM	10	<a href="#">39100.120.080</a>
4X40MM	100	<a href="#">39100.040.040</a>	6X60MM	50	<a href="#">39100.060.060</a>	12X90MM	10	<a href="#">39100.120.090</a>
4X45MM	100	<a href="#">39100.040.045</a>	6X65MM	50	<a href="#">39100.060.065</a>	12X100MM	10	<a href="#">39100.120.100</a>
4X50MM	100	<a href="#">39100.040.050</a>	6X70MM	50	<a href="#">39100.060.070</a>			
4X60MM	100	<a href="#">39100.040.060</a>	6X80MM	50	<a href="#">39100.060.080</a>	16X36MM	5	<a href="#">39100.160.036</a>
			6X90MM	50	<a href="#">39100.060.090</a>	16X40MM	5	<a href="#">39100.160.040</a>
4,5X10MM	200	<a href="#">39100.045.010</a>	6X100MM	50	<a href="#">39100.060.100</a>	16X50MM	5	<a href="#">39100.160.050</a>
4,5X12MM	200	<a href="#">39100.045.012</a>				16X60MM	5	<a href="#">39100.160.060</a>
4,5X14MM	200	<a href="#">39100.045.014</a>	8X16MM	500	<a href="#">39100.080.016</a>	16X70MM	5	<a href="#">39100.160.070</a>
4,5X16MM	200	<a href="#">39100.045.016</a>	8X20MM	50	<a href="#">39100.080.020</a>	16X75MM	5	<a href="#">39100.160.075</a>
4,5X20MM	200	<a href="#">39100.045.020</a>	8X24MM	50	<a href="#">39100.080.024</a>	16X80MM	5	<a href="#">39100.160.080</a>
4,5X30MM	100	<a href="#">39100.045.030</a>	8X26MM	50	<a href="#">39100.080.026</a>	16X90MM	5	<a href="#">39100.160.090</a>
4,5X40MM	100	<a href="#">39100.045.040</a>	8X30MM	50	<a href="#">39100.080.030</a>	16X100MM	5	<a href="#">39100.160.100</a>
4,5X45MM	100	<a href="#">39100.045.045</a>	8X32MM	50	<a href="#">39100.080.032</a>	16X120MM	5	<a href="#">39100.160.120</a>
4,5X50MM	200	<a href="#">39100.045.050</a>	8X35MM	50	<a href="#">39100.080.035</a>			
4,5X60MM	200	<a href="#">39100.045.060</a>	8X40MM	50	<a href="#">39100.080.040</a>	20X60MM	5	<a href="#">39100.200.060</a>
			8X45MM	50	<a href="#">39100.080.045</a>	20X70MM	5	<a href="#">39100.200.070</a>
5X10MM	200	<a href="#">39100.050.010</a>	8X50MM	50	<a href="#">39100.080.050</a>	20X80MM	5	<a href="#">39100.200.080</a>
5X12MM	200	<a href="#">39100.050.012</a>	8X55MM	50	<a href="#">39100.080.055</a>	20X85MM	5	<a href="#">39100.200.085</a>
5X16MM	100	<a href="#">39100.050.016</a>	8X60MM	50	<a href="#">39100.080.060</a>	20X90MM	5	<a href="#">39100.200.090</a>
5X18MM	100	<a href="#">39100.050.018</a>	8X70MM	25	<a href="#">39100.080.070</a>	20X95MM	5	<a href="#">39100.200.095</a>
5X20MM	100	<a href="#">39100.050.020</a>	8X80MM	25	<a href="#">39100.080.080</a>	20X100MM	5	<a href="#">39100.200.100</a>
5X24MM	100	<a href="#">39100.050.024</a>	8X100MM	10	<a href="#">39100.080.100</a>	20X120MM	5	<a href="#">39100.200.120</a>
5X26MM	100	<a href="#">39100.050.026</a>						
5X28MM	100	<a href="#">39100.050.028</a>	10X20MM	50	<a href="#">39100.100.020</a>			
5X30MM	100	<a href="#">39100.050.030</a>	10X22MM	50	<a href="#">39100.100.022</a>			

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

## Spring-type straight pin slotted, light duty



ISO 13337  
 DIN 7346  
 NEN 2459



### Technical data

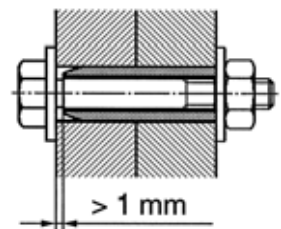
d (nom.)	d <sub>1</sub> (min.)	d <sub>1</sub> (max.)	d <sub>2</sub> ≈	s	a	V
2	2,3	2,4	1,9	0,2	0,2	1,5
2,5	2,8	2,9	2,3	0,25	0,25	2,4
3	3,3	3,5	2,7	0,3	0,25	3,5
4	4,4	4,6	3,4	0,5	0,5	8
5	5,4	5,6	4,4	0,5	0,5	10,4
6	6,4	6,7	4,9	0,75	0,7	18
8	8,5	8,8	7	0,75	1,5	24
10	10,5	10,8	8,5	1	2	40
13	13,5	13,8	11	1,25	2	66

- V = Shear strength double min. in kN.
- For the hole diameter d(nom.) with tolerance field H12 is recommended.
- a: pins over 10mm have a single bevelled edge.

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 acc. to information below

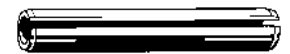
d (nom.) spring type straight pin slotted	6	7	8	11	13	16	18
intended for bolt size	M4	M5	M6	M8	M10	M12	M14
associated washers acc. to DIN 125-1A	4,3	5,3	6,4	8,4	10,5	13	15



### 39060 Spring-type straight pin slotted, light duty

L09A

**Material** Spring steel 420-560 HV30  
**Packaging** Standard



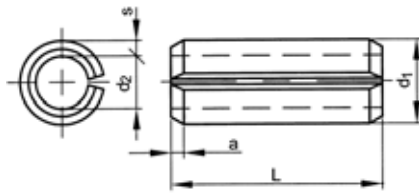
d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number
2X8MM	200	<a href="#">39060.020.008</a>	4X10MM	200	<a href="#">39060.040.010</a>	6X20MM	100	<a href="#">39060.060.020</a>
2X10MM	200	<a href="#">39060.020.010</a>	4X12MM	200	<a href="#">39060.040.012</a>	6X24MM	100	<a href="#">39060.060.024</a>
2X12MM	200	<a href="#">39060.020.012</a>	4X14MM	200	<a href="#">39060.040.014</a>	6X28MM	100	<a href="#">39060.060.028</a>
2X14MM	200	<a href="#">39060.020.014</a>	4X16MM	200	<a href="#">39060.040.016</a>	6X30MM	100	<a href="#">39060.060.030</a>
2X16MM	200	<a href="#">39060.020.016</a>	4X18MM	200	<a href="#">39060.040.018</a>	6X32MM	100	<a href="#">39060.060.032</a>
2X18MM	200	<a href="#">39060.020.018</a>	4X20MM	200	<a href="#">39060.040.020</a>	6X36MM	100	<a href="#">39060.060.036</a>
2X20MM	200	<a href="#">39060.020.020</a>	4X22MM	200	<a href="#">39060.040.022</a>	6X40MM	100	<a href="#">39060.060.040</a>
2X24MM	200	<a href="#">39060.020.024</a>	4X24MM	200	<a href="#">39060.040.024</a>	6X50MM	50	<a href="#">39060.060.050</a>
2X28MM	200	<a href="#">39060.020.028</a>	4X28MM	200	<a href="#">39060.040.028</a>			
			4X30MM	200	<a href="#">39060.040.030</a>	8X10MM	100	<a href="#">39060.080.010</a>
2,5X6MM	200	<a href="#">39060.025.006</a>	4X36MM	100	<a href="#">39060.040.036</a>	8X12MM	100	<a href="#">39060.080.012</a>
2,5X8MM	200	<a href="#">39060.025.008</a>	4X40MM	100	<a href="#">39060.040.040</a>	8X16MM	100	<a href="#">39060.080.016</a>
2,5X10MM	200	<a href="#">39060.025.010</a>	4X45MM	100	<a href="#">39060.040.045</a>	8X20MM	100	<a href="#">39060.080.020</a>
2,5X12MM	200	<a href="#">39060.025.012</a>	4X50MM	100	<a href="#">39060.040.050</a>	8X22MM	100	<a href="#">39060.080.022</a>
2,5X14MM	200	<a href="#">39060.025.014</a>				8X24MM	100	<a href="#">39060.080.024</a>
2,5X16MM	200	<a href="#">39060.025.016</a>	5X6MM	200	<a href="#">39060.050.006</a>	8X26MM	100	<a href="#">39060.080.026</a>
2,5X20MM	200	<a href="#">39060.025.020</a>	5X8MM	200	<a href="#">39060.050.008</a>	8X30MM	50	<a href="#">39060.080.030</a>
2,5X24MM	200	<a href="#">39060.025.024</a>	5X10MM	200	<a href="#">39060.050.010</a>	8X32MM	50	<a href="#">39060.080.032</a>
2,5X30MM	200	<a href="#">39060.025.030</a>	5X12MM	200	<a href="#">39060.050.012</a>	8X36MM	50	<a href="#">39060.080.036</a>
			5X16MM	200	<a href="#">39060.050.016</a>	8X40MM	50	<a href="#">39060.080.040</a>
3X8MM	200	<a href="#">39060.030.008</a>	5X20MM	100	<a href="#">39060.050.020</a>	8X45MM	50	<a href="#">39060.080.045</a>
3X10MM	200	<a href="#">39060.030.010</a>	5X28MM	100	<a href="#">39060.050.028</a>	8X50MM	50	<a href="#">39060.080.050</a>
3X12MM	200	<a href="#">39060.030.012</a>	5X30MM	100	<a href="#">39060.050.030</a>			
3X16MM	200	<a href="#">39060.030.016</a>	5X36MM	100	<a href="#">39060.050.036</a>	10X12MM	50	<a href="#">39060.100.012</a>
3X20MM	200	<a href="#">39060.030.020</a>	5X40MM	100	<a href="#">39060.050.040</a>	10X16MM	50	<a href="#">39060.100.016</a>
3X22MM	200	<a href="#">39060.030.022</a>				10X20MM	50	<a href="#">39060.100.020</a>
3X24MM	200	<a href="#">39060.030.024</a>	6X10MM	200	<a href="#">39060.060.010</a>	10X24MM	50	<a href="#">39060.100.024</a>
3X30MM	200	<a href="#">39060.030.030</a>	6X12MM	200	<a href="#">39060.060.012</a>	10X30MM	50	<a href="#">39060.100.030</a>
3X36MM	200	<a href="#">39060.030.036</a>	6X16MM	200	<a href="#">39060.060.016</a>	10X40MM	25	<a href="#">39060.100.040</a>
3X40MM	200	<a href="#">39060.030.040</a>				10X50MM	25	<a href="#">39060.100.050</a>

39060 Spring-type straight pin slotted, light duty				←				
d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number
10X60MM	25	<a href="#">39060.100.060</a>						

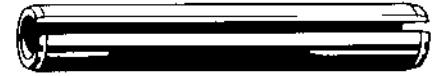
- Warning: electro-galvanizing of these products may cause hydrogen embrittlement.



## Spring-type straight pin heavy type A2



ISO ≈8752  
 DIN ≈1481  
 NEN ≈2458  
 BS ≈7060



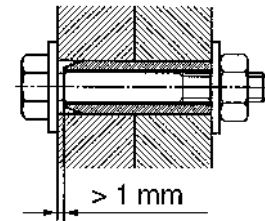
### Technical data

d (nom.)	d <sub>1</sub> (min.)	d <sub>1</sub> (max.)	d <sub>2</sub> ≈	s	a	V-1	V-2
1	1,2	1,3	0,8	0,2	0,15	0,22	0,44
1,5	1,7	1,8	1,1	0,3	0,25	0,49	0,98
2	2,3	2,4	1,5	0,4	0,35	0,9	1,8
2,5	2,8	2,9	1,8	0,5	0,4	1,42	2,84
3	3,3	3,5	2,1	0,6	0,5	2,03	4,06
4	4,4	4,6	2,8	0,8	0,65	3,62	7,24
5	5,4	5,6	3,4	1	0,9	5,37	10,74
6	6,4	6,7	3,9	1,25	1,2	8,08	16,16
8	8,5	8,8	5,5	1,5	2	13,23	26,46
10	10,5	10,8	6,5	2	2	21,07	42,14

- V-1 = Shear strength single min. in kN.
- V-2 = 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:

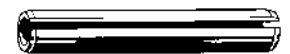


d (nom.) spring-type straight pin slotted	6	8	10	12	16	18
intended for bolt size	M3	M4	M5	M6	M8	M10
associated washers acc. to DIN 7349	3,2	4,3	5,3	6,4	8,4	10,5

### 51428 Spring-type straight pin heavy type A2

R09A

**Material** Stainless steel A2  
**Packaging** Standard



9

d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number	d (nom.) x L	☒	Art.number
1,5X6MM	200	<a href="#">51428.015.006</a>	3X12MM	200	<a href="#">51428.030.012</a>	5X26MM	100	<a href="#">51428.050.026</a>
1,5X8MM	200	<a href="#">51428.015.008</a>	3X14MM	200	<a href="#">51428.030.014</a>	5X28MM	100	<a href="#">51428.050.028</a>
1,5X10MM	200	<a href="#">51428.015.010</a>	3X16MM	200	<a href="#">51428.030.016</a>	5X30MM	100	<a href="#">51428.050.030</a>
1,5X12MM	200	<a href="#">51428.015.012</a>	3X18MM	200	<a href="#">51428.030.018</a>	5X35MM	100	<a href="#">51428.050.035</a>
1,5X16MM	200	<a href="#">51428.015.016</a>	3X20MM	200	<a href="#">51428.030.020</a>	5X40MM	100	<a href="#">51428.050.040</a>
1,5X20MM	200	<a href="#">51428.015.020</a>	3X24MM	200	<a href="#">51428.030.024</a>	5X45MM	100	<a href="#">51428.050.045</a>
			3X30MM	200	<a href="#">51428.030.030</a>	5X50MM	100	<a href="#">51428.050.050</a>
2X6MM	200	<a href="#">51428.020.006</a>	3X32MM	200	<a href="#">51428.030.032</a>	5X60MM	100	<a href="#">51428.050.060</a>
2X8MM	200	<a href="#">51428.020.008</a>	3X35MM	200	<a href="#">51428.030.035</a>	5X70MM	100	<a href="#">51428.050.070</a>
2X10MM	200	<a href="#">51428.020.010</a>	3X40MM	200	<a href="#">51428.030.040</a>			
2X12MM	200	<a href="#">51428.020.012</a>				6X12MM	100	<a href="#">51428.060.012</a>
2X16MM	200	<a href="#">51428.020.016</a>	4X12MM	200	<a href="#">51428.040.012</a>	6X16MM	100	<a href="#">51428.060.016</a>
2X20MM	200	<a href="#">51428.020.020</a>	4X14MM	200	<a href="#">51428.040.014</a>	6X20MM	500	<a href="#">51428.060.020</a>
2X24MM	200	<a href="#">51428.020.024</a>	4X16MM	200	<a href="#">51428.040.016</a>	6X24MM	100	<a href="#">51428.060.024</a>
2X30MM	200	<a href="#">51428.020.030</a>	4X20MM	200	<a href="#">51428.040.020</a>	6X26MM	100	<a href="#">51428.060.026</a>
			4X24MM	200	<a href="#">51428.040.024</a>	6X30MM	100	<a href="#">51428.060.030</a>
2,5X12MM	200	<a href="#">51428.025.012</a>	4X26MM	200	<a href="#">51428.040.026</a>	6X32MM	100	<a href="#">51428.060.032</a>
2,5X14MM	200	<a href="#">51428.025.014</a>	4X30MM	200	<a href="#">51428.040.030</a>	6X35MM	50	<a href="#">51428.060.035</a>
2,5X16MM	200	<a href="#">51428.025.016</a>	4X32MM	100	<a href="#">51428.040.032</a>	6X40MM	100	<a href="#">51428.060.040</a>
2,5X20MM	200	<a href="#">51428.025.020</a>	4X35MM	50	<a href="#">51428.040.035</a>	6X50MM	50	<a href="#">51428.060.050</a>
2,5X24MM	200	<a href="#">51428.025.024</a>	4X40MM	100	<a href="#">51428.040.040</a>	6X60MM	50	<a href="#">51428.060.060</a>
2,5X26MM	200	<a href="#">51428.025.026</a>	4X50MM	100	<a href="#">51428.040.050</a>	6X70MM	50	<a href="#">51428.060.070</a>
2,5X30MM	200	<a href="#">51428.025.030</a>				6X80MM	50	<a href="#">51428.060.080</a>
			5X16MM	100	<a href="#">51428.050.016</a>			
3X8MM	200	<a href="#">51428.030.008</a>	5X20MM	100	<a href="#">51428.050.020</a>	8X30MM	50	<a href="#">51428.080.030</a>
3X10MM	200	<a href="#">51428.030.010</a>	5X24MM	100	<a href="#">51428.050.024</a>	8X35MM	50	<a href="#">51428.080.035</a>