



浙江创诺汽车零部件有限公司
地址: 浙江嘉兴南湖区七星镇东大路599号
电话: 0086-573-82033057
传真: 0086-573-82510684
网址: <http://www.channovprecision.com>
邮箱: info@channovprecision.com

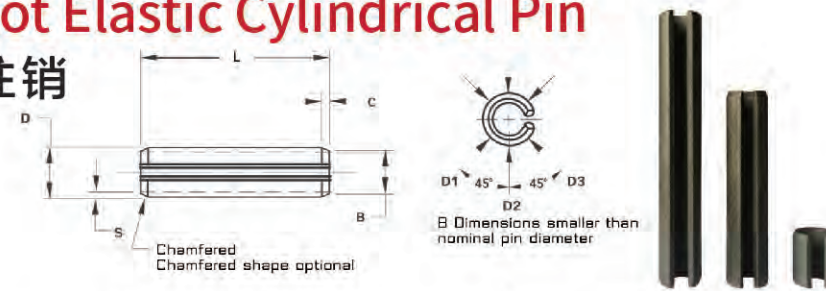
ZHEJIANG CHANNOV AUTO PARTS CO.,LTD.
No.599, Qixing East Road, Nanhu District, Jiaxing, Zhejiang, China
Tel: 0086-573-82033057
Fax: 0086-573-82510684
Http: <http://www.channovprecision.com>
E-mail: info@channovprecision.com

**ZHEJIANG
CHANNOV**
AUTO PARTS CO.,LTD.

浙江创诺汽车零部件有限公司

Light Straight Slot Elastic Cylindrical Pin 轻型直槽弹性圆柱销

- ISO 13337
- DIN 7346



Unit:mm

Nominal pin diameter	Diameter D		Chamfer length C		wall thickness S	Recommended hole size		Recommended hole size Carbon steel and martensitic stainless steel
	min	max	min	max		min	max	
2	2.3	2.4	0.20	0.40	0.20	2.0	2.10	1.50
2.5	2.8	2.9	0.25	0.45	0.25	2.5	2.60	2.40
3	3.3	3.5	0.25	0.45	0.30	3.0	3.10	3.50
3.5	3.8	4	0.30	0.50	0.35	3.5	3.62	4.60
4	4.4	4.6	0.50	0.70	0.50	4.0	4.12	8.00
4.5	4.9	5.1	0.50	0.70	0.50	4.5	4.62	8.80
5	5.4	5.6	0.50	0.70	0.50	5.0	5.12	10.40
6	6.4	6.7	0.70	0.90	0.75	6.0	6.12	18.00
8	8.5	8.8	1.50	1.80	0.75	8.0	8.15	24.00
10	10.5	10.8	2.00	2.40	1.00	10.0	10.15	40.00
12	12.5	12.8	1.00	2.00	1.00	12.0	12.18	48.00
13	13.5	13.8	1.20	2.00	1.20	13.0	13.18	66.00
14	14.5	14.8	2.00	2.40	1.50	14.0	14.18	84.00
16	16.5	16.8	2.00	2.40	1.50	16.0	16.18	98.00
18	18.5	18.9	2.00	2.40	1.70	18.0	18.18	126.00
20	20.5	20.9	2.00	3.40	2.00	20.0	20.21	158.00

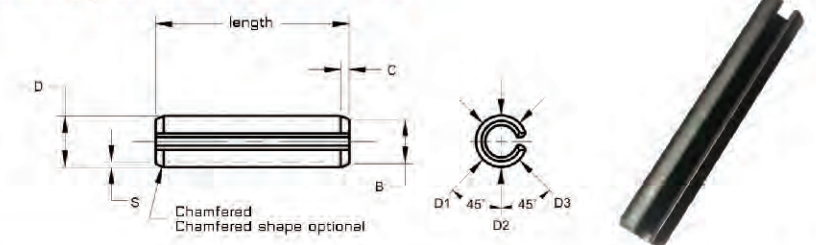
Standard length

length	Nominal diameter															
	1.5	2	2.5	3	3.5	4	4.5	5	6	8	10	12	14	16	18	20
4																
5																
6																
8																
10																
12																
14																
16																
18																
20																
22																
24																
26																
28																
30																
32																
35																
40																
45																
50																
55																
60																
65																
70																
75																
80																
85																
90																
95																
100																

Nominal pin length Length tolerance
length tolerance-ISO 8752
4-10mm ±0.25mm
12-50mm ±0.50mm
55-100mm ±0.75mm
Length tolerance-DIN14819 reference
4-10mm +0.5mm
12-50mm +1.0mm
55-100mm +1.5mm

Straight Slot Elastic Cylindrical Pin 直槽弹性圆柱销

- ASME B18.8.4M
- 美标公制尺寸



Unit:mm

Nominal pin diameter	Pin diameter D		chamfer diameter B	Chamfer length C		Wall thickness S	Recommended hole size		Minimum double shear strength	
	min ¹	max ²		min	max		min	max	Carbon steel and martensitic stainless steel	Austenitic stainless steel
1.5	1.58	1.66	1.4	0.15	0.7	0.35	1.5	1.56	1.8	1.00
2	2.10	2.19	1.9	0.2	0.8	0.45	2.0	2.07	3.5	2.0
2.5	2.62	2.72	2.4	0.2	0.9	0.55	2.5	2.58	5.5	3.2
3	3.14	3.25	2.9	0.2	1.0	0.65	3.0	3.10	7.8	4.5
4	4.16	4.30	3.9	0.3	1.2	0.8	4.0	4.12	12.3	7.2
5	5.17	5.33	4.8	0.3	1.4	1.0	5.0	5.12	19.6	11.4
6	6.18	6.36	5.8	0.4	1.6	1.2	6.0	6.12	28.5	16.6
8	8.22	8.45	7.8	0.4	2.0	1.6	8.0	8.15	48.8	28.4
10	10.25	10.51	9.7	0.5	2.4	2.0	10.0	10.15	79.1	46.1
12	12.28	12.55	11.7	0.6	2.8	2.5	12.0	12.18	111.6	60.7
14 ↑	14.30	14.60	13.7	0.8	2.8	3.0	14.0	14.18	170.0 ³	--
16 ↑	16.32	16.65	15.6	1.0	3.0	3.0	16.0	16.18	190.0 ³	--
18 ↑	18.35	18.71	17.6	1.2	3.2	3.5	18.0	18.18	250.0 ³	--
20 ↑	20.40	20.80	19.5	1.4	3.4	4.0	20.0	20.21	320.0 ³	--

¹The minimum diameter is the average of D1, D2, and D3. ²The maximum diameter is measured with a gauge. ³Carbon steel only

Standard metric size

length	Nominal diameter															
	1.5	2	2.5	3	4	5	6	8	10	12	14 ↑	16 ↑	18 ↑	20 ↑		
4																
5																
6																
8																
10																
12																
14																
16																
18																
20																
22																
24																
26																
28																
30																
32																
35																
40																
45																
50																
55																
60																
65																
70																
75																
80																
85																
90																
95																
100																

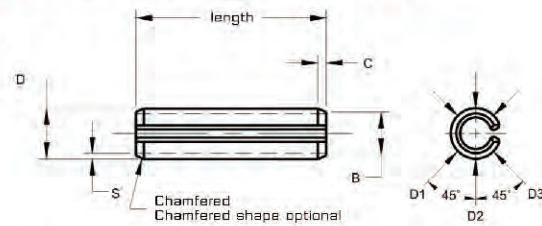
Nominal pin length Length tolerance
longest 24mm ±0.40mm
exceed 24-50mm ±0.50mm
exceed 50-75mm ±0.60mm
exceed 75mm ±0.75mm

↑ Compliant but not HSME 18.8.4M

Straight Slot Elastic Cylindrical Pin

直槽弹性圆柱销

- ASME 日18.8.2
- 美标英制尺寸



Unit:inch

Nominal pin diameter		Pin diameter D		Chamfer diameter B	Chamfer length C		Wall thickness s	Aecommeded hole size		Minimum double shear strength			
										Carbon steel and martensitic stainless steel		Austenitic stainless steel	
		min ¹	max ²		max	min		max	nom	min	max	Lb	kN
1/16	0.062	0.066	0.069	0.059	0.007	0.028	0.012	0.062	0.065	430	2	250	1.1
5/64	0.078	0.083	0.086	0.075	0.008	0.032	0.018	0.078	0.081	800	3.56	460	2.05
3/32	0.94	0.099	0.103	0.091	0.008	0.038	0.022	0.094	0.097	1150	5.12	670	2.98
1/8	0.125	0.131	0.135	0.122	0.008	0.044	0.028	0.125	0.129	1875	8.34	1090	4.85
5/32	0.156	0.162	0.167	0.151	0.01	0.048	0.032	0.156	0.16	2750	12.23	1600	7.12
3/16	0.187	0.194	0.199	0.182	0.011	0.055	0.04	0.187	0.192	4150	18.46	2425	10.79
7/32	0.219	0.226	0.232	0.214	0.011	0.065	0.048	0.219	0.224	5850	26.02	3400	15.12
1/4	0.250	0.258	0.264	0.245	0.012	0.065	0.048	0.250	0.256	7050	31.36	4100	18.24
5/16	0.312	0.321	0.33	0.306	0.014	0.080	0.062	0.312	0.318	10800	48.04	6300	28.02
3/8	0.375	0.385	0.395	0.368	0.016	0.095	0.077	0.375	0.382	16300	72.5	9500	42.25
7/16	0.437	0.448	0.459	0.430	0.017	0.095	0.077	0.437	0.445	19800	88.08	11500	51.16
1/2	0.500	0.513	0.524	0.485	0.025	0.11	0.094	0.500	0.51	27100	120.55	15800	70.28
5/8	0.625	0.640	0.653	0.608	0.03	0.125	0.118	0.625	0.637	42500	189.06	--	--
3/4	0.750	0.768	0.784	0.730	0.045	0.15	0.145	0.750	0.764	62500	278.02	--	--

Standard size

length	Nominal diameter													
	1/16	5/64	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	5/8	3/4
3/16														
1/4														
5/16														
3/8														
7/16														
1/2														
9/16														
5/8														
11/16														
3/4														
13/16														
7/8														
15/16														
1														
1-1/8														
1-1/4														
1-3/8														
1-1/2														
1-5/8														
1-3/4														
1-7/8														
2														
2-1/4														
2-1/2														
2-3/4														
3														
3-1/4														
3-1/2														
3-3/4														
4														

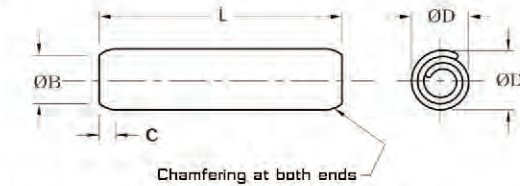
Nominal cylindrical pin length length tolerance

longest 1 "	±0.015
exceed 1"-2"	±0.020
exceed 2"-3"	±0.025
exceed 3"-4"	±0.030
exceed 4"	±0.035

Heavy-duty rolled elastic cylindrical pin

重型轧制弹性圆柱销

- ISO 8748
- ASME B18.8.3M
- 公制尺寸



			Nominal diameter									
diameter	Φ	max min	1.5	2	2.5	3	4	5	6	8	10	12
			1.71	2.21	2.73	3.25	4.3	5.35	6.40	8.55	10.65	12.75
Chamter	B diameter C length	max min	1.61	2.11	2.62	3.12	4.15	5.15	6.18	8.25	10.3	12.35
			1.40	1.90	2.40	2.90	3.90	4.85	5.85	7.80	9.75	11.70
Recommended hole size		max min	0.50	0.70	0.70	0.90	1.10	1.30	1.50	2.00	2.50	3.00
			1.60	2.10	2.60	3.10	4.12	5.12	6.15	8.15	10.15	12.18
		max min	1.50	2.00	2.50	3.00	4.00	5.00	6.00	8.00	10.00	12.00

*All dimensions apply before plating

Minimum double shear strength

Minimum double shear strength	1.5	2	2.5	3	4	5	6	8	10	12
Carbon steel/alloy steel Chromium stainless steels	1.9	3.5	5.5	7.6	13.5	20	30	53	84	120
Nickel stainless steel	1.45	2.5	3.8	5.7	10	15.5	23	41	64	91

*Shear test in accordance with HSME B18.8.3M and ISO8749

Standard length

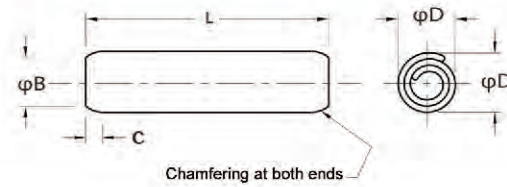
Nominal length		1.5	2	2.5	3	4	5	6	8	10	12
Nominal length	4										
	5										
	6										
	8										
	10										
	12										
	14										
	16										
	18										
	20										
	22										
	24										
	26										
	28										
	30										
	32										
	35										
	40										
	45										
	50										
	55										
	60										
	65										
	70										
	75										
	80										
	85										
	90										
	95										
	100										

Applicable to all materials except alloy steel

↑ The cylindrical pin must pass through the hole gauge by its own weight

Standard type elastic cylindrical pin 标准型弹性圆柱销

- ISO 8750
- ASME B18.8.3M



			Nominal diameter														
diameter	φ		0.8	1	1.2	1.5	2	2.5	3	4	5	6	8	10	12	16	20
Chamfer	B diameter	max	0.91	1.15	1.35	1.73	2.25	2.78	3.30	4.40	5.50	6.50	8.63	10.80	12.85	17.00	21.10
		min	0.85	1.05	1.25	1.62	2.13	2.65	3.15	4.20	5.25	6.25	8.30	10.35	12.40	16.45	20.40
Recommended hole size		max	0.75	0.95	1.15	1.40	1.90	2.40	2.90	3.90	4.85	5.85	7.80	9.75	11.70	15.60	19.60
		min	0.30	0.30	0.40	0.50	0.70	0.70	0.90	1.10	1.30	1.50	2.00	2.50	3.00	4.00	4.50

*All dimensions apply before plating

Minimum double shear strength

Nominal diameter	0.8	1	1.2	1.5	2	2.5	3	4	5	6	8	10	12	16	20
Carbon steel/alloy steel Nickel stainless steels	0.4	0.6	0.9	1.45	2.5	3.9	5.5	9.6	15	22	39	39	89	155	250
Chromiumstainless steel	0.3	0.45	0.65	1.05	1.9	2.9	4.2	7.6	11.5	16.8	30	30	67	--	--

*Shear test in accordance with HSME B18.8.3M and ISO8749

Standard length

Nominal length	0.8	1	1.2	1.5	2	2.5	3	4	5	6	8	10	12	16	20
Length	5														
	6														
	8														
	10														
	12														
	14														
	16														
	18														
	20														
	22														
	24														
	26														
	28														
	30														
	35														
	40														
	45														
	50														
	55														
	60														
	65														
	75														
	80														
	85														
	90														
	95														
	100														

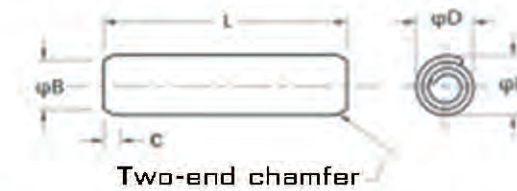
Applicable for stainless steel

Applicable to all materials
except alloy steel

Applicable to all types of alloy steel

Light-duty rolled elastic pin 轻型滚动弹性销

- ISO 8750
- ASME B18.8.3M



Nominal diameter			1.5	2	2.5	3	4	5	6
Diameter	φD	max	1.75	2.28	2.82	3.35	4.45	5.5	6.55
		Minimums	1.62	2.13	2.65	3.15	4.2	5.2	6.25
Chamfer Angle	B diameter	max	1.4	1.9	2.4	2.9	3.9	4.85	5.85
	C length	Aeference	0.5	0.7	0.7	0.9	1.1	1.3	1.5
Recommended hole size		max	1.6	2.1	2.6	3.1	4.12	5.12	6.12
		Minimums	1.5	2	2.5	3	4	5	6

All sizes apply before plating

Minimum Double Shear strength in Kn

Nominal diameter	1.5	2	2.5	3	4	5	6
Carbon steel alloy steel	0.8	1.5	2.3	3.3	5.7	9	13
Chrome stainless steel							
Nickel stainless steel	0.65	1.1	1.8	2.5	4.4	7	10

Standard length

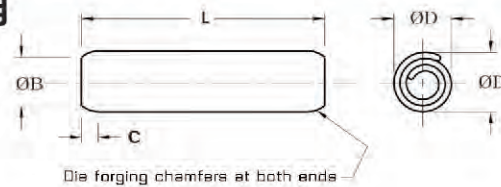
Nominal length		1.5	2	2.5	3	4	5	6
Nominal length	10							
	12							
	14							
	16							
	18							
	20							
	22							
	24							
	26							
	28							
	30							
	35							
	40							
	45							
	50							
	55							
	60							

Suitable for chromium stainless
steel and nickel stainless steel

Suitable for all materials except alloy steel

Heavy-duty rolled elastic cylindrical pin 重型轧制弹性圆柱销

- ASME B18.8.2
- 英制尺寸



Nominal diameter			62	78	94	125	156	187	250	312	375	500	
			1/16	5/64	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	
Φ	ΦD	max min	70	86	103	136	168	202	268	334	400	532	
			66	82	98	130	161	194	258	332	386	514	
Chamter	ΦB	Maximum reference	59	75	91	121	152	182	243	304	366	488	
	C length		28	32	38	44	48	55	65	80	95	110	
Recommended hole size			max	65	81	97	129	160	192	256	319	383	510
			min	62	78	94	125	156	187	250	312	375	500

*All sizes apply before plating.

Minimum double shear strength in pounds

Nominal diameter			62	78	94	125	156	187	250	312	375	500
			1/16	5/64	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2
Carbon steel/alloy steel Chrome stainless steel*			475	800	1150	2000	3100	4500	7800	12000	12000	32000
Nickel stainless steel*			360	575	825	1700	2400	3500	6200	9300	9300	25000

Standard length

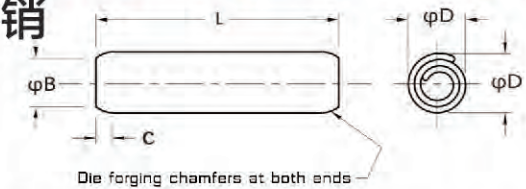
Nominal diameter			62	78	94	125	156	187	250	312	312	500
			1/16	5/64	3/32	1/8	5/32	3/16	1/4	5/16	5/16	1/2
Length	187	3/16										
	250	1/4										
	312	5/16										
	375	3/8										
	437	7/16										
	500	1/2										
	562	9/16										
	625	5/8										
	750	3/4										
	875	7/8										
	1000	1										
	1250	1-1/4										
	1500	1-1/2										
	1750	1-3/4										
	2000	2										
	2250	2-1/4										
	2500	2-1/2										
	2750	2-3/4										
	3000	3										
	3250	3-1/4										
	3500	3-1/2										
	3750	3-3/4										
	4000	4										
			universal Millimeter and inch cylindrical pins mm inch Φ Φ 2.0 78 5/64 4.0 156 5/32 8.0 321 5/16									
			Cylindrical pin length Nominal cylindrical pin size L≤2000 2000<L≤3000 3000<L cylindrical pin Length L≤1000 1000<L≤2000 2000<L Length tolerance Φ1/16-3/8 ±0.010 ±0.015 ±0.025 Φ1/2 ±0.025 ±0.025 ±0.025 Straightness tolerance Gauge ±0.005 1.000 2.000 3.000									
			007 010 013									

Suitable for all materials-except alloy steel
pecial sizes, loads, materials and surface treatments are available on request, including il-free cylindrical pins

↑ The cyindrical pin must pass through the hale gauge by it own weight, where the length of th hale gauge is equal to the length of the cyindrical pinpu 1 imah(25.4 mm), and the diameter of the hole is equal to the maximum cylindrical pin diameter plus straightness tolerance.

Standard typerolled elastic cylindrical pin 标准滚筒式弹性圆柱销

- ASME B18.8.2
- 英制尺寸



Nominal diameter			31	47	62	78	94	125	156	187	250	312	375	500	625	750
			1/32	3/64	1/16	5/64	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8	3/4
Φ	ΦD	max	35	52	72	88	105	138	171	205	271	337	403	535	661	787
		min	33	49	67	83	99	131	163	196	260	324	388	516	642	768
Chamter	ΦB	Maximum	29	45	59	75	91	121	152	182	243	304	366	488	613	738
	C length	reference	24	24	28	32	38	44	48	55	65	80	95	110	125	150
Recommendedhole size			32	48	65	81	97	129	160	192	256	319	383	510	635	760
			31	47	62	78	94	125	156	187	250	312	375	500	625	750

*All sizes apply before plating.

Minimum double shear strength in kN

Nominal diameter			31	47	62	78	94	125	156	187	250	312	375	500	625	750
			1/32	3/64	1/16	5/64	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8	3/4
Carbon steel/alloy steel Chrome stainless steel			90	190	330	550	775	1400	2200	3150	5500	8700	12600	22500	35000	50000
Nickel stainless steel			65	145	265	425	600	1100	1700	2400	4300	6700	9600	17500	--	--

Standard length

Nominal diameter			31	47	62	78	94	125	156	187	250	312	375	500	625	750	
			1/32	3/64	1/16	5/64	3/32	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8	3/4	
Length	125	1/8															Universal
	187	3/16															Millimeter and inch
	250	1/4															cylindrical pins
	312	5/16															mm inch
	375	3/8															031 1/32 0.8
	437	7/16															047 3/64 1.2
	500	1/2															078 5/64 2.0
	562	9/16															156 5/32 4.0
	625	5/8															312 5/16 8.0
	750	3/4															625 5/8 16.0
	875	7/8															
	1000	1															
	1250	1-1/4															
	1500	1-1/2															
	1750	1-3/4															
	2000	2															
	2250	2-1/4															
	2500	2-1/2															
	2750	2-3/4															
	3000	3															
	3250	3-1/4															
	3500	3-1/2															
	3750	3-3/4															
	4000	4															
			Cylindrical pin length														
			Nominal cylindrical pin size				Length tolerance										
			L≤2000				Φ1/16-3/8				Φ1/2						
			2000<L≤3000				±0.010				±0.025						
			3000<L				±0.015				±0.025						
							±0.025				±0.025						
			cylindrical pin				Straightness				Gauge						
			Length				tolerance				±0.005						
			L≤1000				007				1.000						
			1000<L≤2000				010				2.000						
			2000<L				013				3.000						

available for chrome and nickelstainless steel only Suitable for all materials -except alloy steel Only for alloy steel

↑ The cyindrical pin must pass through the hole gauge by its own weight, where the length of the hole gaug is qual t the length of the cyindrical pin pus 1 inch(25.4 mm), and the diameter of the hale is equal to the maximum cylindrical pin diameter plus straightness tolerance.

Light-duty rolled elastic pin 轻型滚动弹性销

- ASME B18.8.2
- 英制尺寸

Nominal diameter			62	78	94	125	156	187	250
			1/16	5/64	3/32	1/8	5/32	3/16	1/4
Φ	ΦD	max	73	89	106	139	171	207	273
		min	67	83	99	131	163	196	260
Chamter	ΦB	Maximum reference	59	75	91	121	152	182	243
	C length		28	32	38	44	48	55	65
Recommended hole size	max		65	81	97	129	160	192	256
	min		62	78	94	125	156	187	250

*All sizes apply before plating.

Minimum double shear strength in kN

Nominal diameter			62	78	94	125	156	187	250
			1/16	5/64	3/32	1/8	5/32	3/16	1/4
Carbon steel/alloy steel Chrome stainless steel			205	325	475	825	1300	1900	3300
Nickel stainless steel			160	250	360	650	1000	1450	2600

*Shear test according to ASME B18.8.2.

Standard length

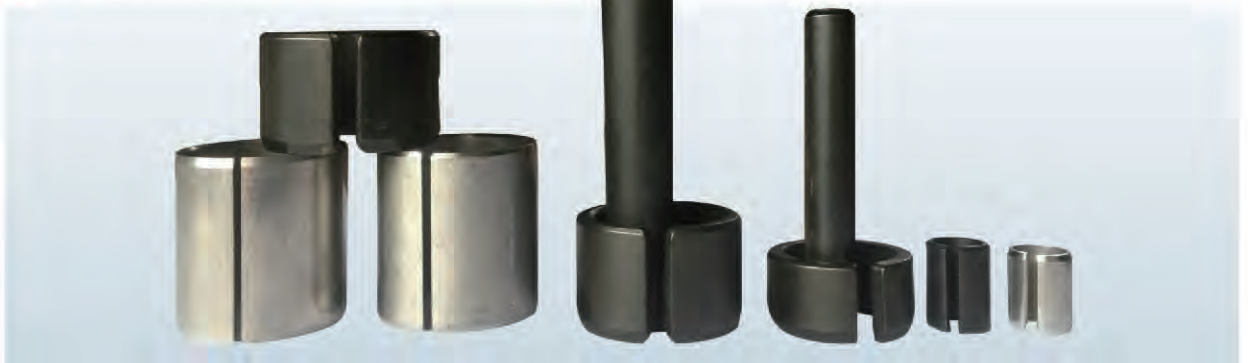
Nominal diameter			62	78	94	125	156	187	250
			1/16	5/64	3/32	1/8	5/32	3/16	1/4
Length	250	1/4							
	312	5/16							
	375	3/8							
	437	7/16							
	500	1/2							
	562	9/16							
	625	5/8							
	750	3/4							
	875	7/8							
	1000	1							
	1250	1-1/4							
	1500	1-1/2							
	1750	1-3/4							
	2000	2							
	2250	2-1/4							
	2500	2-1/2							
Cylindrical pin length			length tolerance						
Nominal cylindrical pin size			1/16-1/4						
			±0.010						
			±0.015						
cylindrical pin			Straightness						
Length			tolerance						
			±0.005						
			1.000						
			2.000						
			3.000						

available for chrome and nickelstainless steel only Suitable for all materials-exceptalloy steel

↑ The cylitdrcal pin must pass through the hole gauge by its own weight, where the length of the hole gauge is equal to the length of theylindrial in pus 1 inch (25.4 mm), and the diamater af the hole is equal to the maximum cylindrical pin diameter plus straightness tolerance.



Standard spacer 标准垫片



CHANNDV provides the standard range of spacers, including British and metric specifications, two kindsof wall thickness and several kinds of materials. When the British size is converted to metric size, very wide range of sizes is available and vice versa.The standard spacers are as follows:

Reduce costs,especially in medium or low volume applications,without tooling and mold costsChannov's product inventory can ensure timely delivery and reduce the initial order of customersNo need to develop internal standards and specifications,saving design time

metric size

Standard spacer size			3mm	3.5mm	4mm	5mm	6mm	8mm	10mm	12mm	14mm	16mm	20mm	24mm
Heavy wall	inside diameter	min	3.15	3.65	4.15	5.2	6.2	8.2	10.2	12.25	14.25	16.25	20.4	24.4
		max	3.3	3.8	4.3	5.4	6.4	8.5	10.5	12.7	14.8	16.8	21	25.2
	wall thickness		0.5	0.5	0.7	0.7	0.9	1.1	1.2	1.6	1.8	1.8	2	2.4
	outside diameter		4.25	4.75	5.65	6.7	8.1	10.55	12.75	15.7	17.75	20.15	24.7	29.6
Standard wall	inside diameter	min	3.1	3.6	4.1	5.1	6.1	8.1	10.1	12.15	--	16.15	20.2	--
		max	3.3	3.85	4.35	5.4	6.4	8.6	10.6	13	--	17.1	21.2	--
	wall thickness		0.7	0.9	1	1.2	1.5	1.7	2	2.2	--	2.6	2.8	--
	outside diameter		4.6	5.55	6	7.65	9.25	11.75	14.35	17	--	21.85	26.3	--

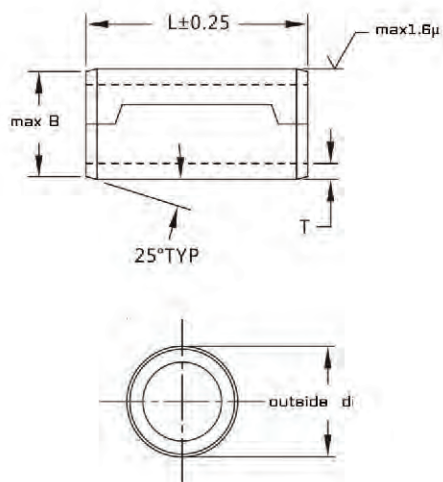
Standard size

Nominal diameter		3mm	3.5mm	4mm	5mm	6mm	8mm	10mm	12mm	14mm	16mm	20mm	24mm
Length	4												
	5												
	6												
	8												
	10												
	12												
	14												
	16												
	18												
	20												
	22												
	25												
	28												
	30												
	35												
	40												
	45												
	50												
	55												
	60												
	65												
	70												
	75												
	80												
	85												
	90												
	95												
	100												
	110												
	120												
	130												
	140												
	150												

Precision locating pin 精密定位销

- Precision alignment pins are designed to ensure
- precise alignment and significantly reduce costs

The precision locating pin is designed to directly replace the solid cylindrical locating pin of ISO8734 standard, and is used in applications requiring precise alignment and positioning



- Precision hollow cylinder outer diameter can ensure that the pipe fitting alignment dimension is accurate to within 20 μm
- 1.6 micron surface treatment and accurate chamfering can prevent scratches or scratches during installation
- The roll forming design makes the cost much less than the solid locating pin
- The hollow feature allows it to weigh less than a solid pin and can leave a gap for bolts, liquids, or gases

Technical specifications

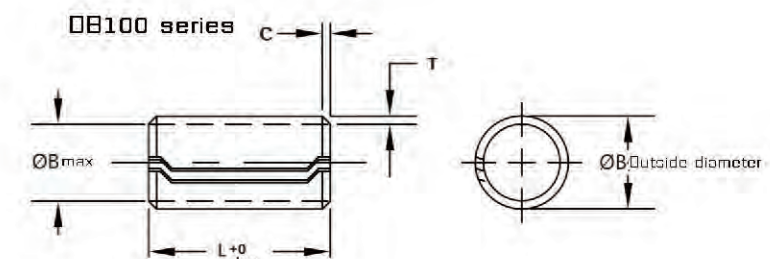
Standard material	Standard surface treatment
low carbon	Oiling

Standard length

Nominal outer diameter	Outside diameter		B max (mm)	T (mm)	Recommended hole size		length (mm)							
	(mm)													
	min	max			min	max	6	8	12	15	20	24	30	32
6	6.004	6.012	0.55	0.9	5.987	6.000								
8	8.006	8.015	0.75	1.2	7.987	8.000								
10	10.006	10.015	1.05	1.6	9.987	10.000								
12	12.007	12.018	1.2	1.8	11.985	12.000								
16	16.007	16.018	1.5	2.2	15.985	16.000								

Positioning bushing 定位衬套

The locating bushing is used to tie in with the Bolt fixing part, and after installation the bolt will pass through the inner hole of the bushing. There is no longer a need for separate holes for positioning sales. Hardened positioning bushings also absorb shear loads. Isolate the bolts from these forces



Dimensional data

Metric system									
Diameter of standard locating pin	Minimum inside diameter installation	Outside diameter		Wall thickness s T ²	Chamfer Angle C ²	ΦB Max	Recommended Φ hole size		Minimum Simple Shear force (KN) ³
		Minimums	Max				Minimums	Max	
6	6.2	7.92	8.18	0.7	1.4	7.5	7.67	7.8	10.9
8	8.2	10.35	10.61	0.9	1.4	9.85	10.1	10.23	18.7
10	10.2	12.75	13.01	1.1	1.4	12.2	12.25	12.63	28.4
12	12.25	15.5	15.76	1.45	1.8	14.85	15.25	15.38	45.4
16	16.14	20.25	20.51	1.8	1.8	19.5	20	20.13	74.6

Metric system									
Diameter of standard locating pin	Minimum inside diameter installation	Outside diameter		Wall thickness s T ²	Chamfer Angle C ²	ΦB Max	Recommended Φ hole size		Minimum Simple Shear force (KN) ³
		Minimums	Max				Minimums	Max	
250 1/4	256	325	335	028	050	308	315	320	2.500
312 5/16	318	401	411	035	050	381	391	396	4.000
375 3/8	381	479	489	042	050	457	469	474	5.750
500 1/2	510	640	650	057	060	615	630	635	10.500

Metric system						
Nominal scale	Length L					
Bolt						
Diameter	12	15	20	25	30	35
6						
8			Length tolerance ±0.0mm-1.0mm			
10						
12						
16						

Inches					
Nominal scale		Length L			
Bolt		500	750	1000	1250
Diameter		1/2	3/4	1	1-1/4
025	1/4				
312	5/16				
375	3/8				
500	1/2				

1. when installed in recommended Hole Sutra.
2. is a reference size only.
3. The minimum one-way Shear Force was measured by reference to ISO8749 and Appendix of Hameb 18.8.2.
The test is only applicable to bushings of length greater than times straight.
For special product orders with coating. All dimensions are pre-coated.
4. can be catomized according to the requirements of larger size and special size.

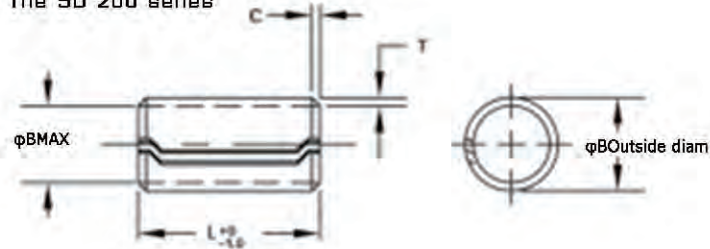
Elastic locating pin

弹性定位销

The elastic locating pin is used to accurately locate each component. They are shaped using mandrel rolls. To make sure that the shape of the circle, it is recommended that one half of the hole tolerance be allocated to the hole at one end of the pin. The other half goes to the hole you want to mate with.



The SD 200 series



Materials	Surface treatment
B Carbon Steel	Common , oiled

Dimensional

Metric system								
Diameter of standard locating pin	Φ Outside diameter		Wall thickness T ¹	Chamfer Angle C ¹	ΦB Max	Recommended Φ hole size		Minimum Simple Shear force (kN) ³
	Minimums	Max				Minimums	Max	
6	6.25	6.5	0.55	1	5.85	6	6.13	6.6
8	8.5	8.5	0.7	1.4	7.8	8	8.13	11.5
10	10.25	10.5	0.9	1.4	9.75	10	10.13	18.5
12	12.25	12.5	1.1	1.4	11.7	12	12.13	27.1

Metric system									
Nominal scale	Length L								
Bolt									
Diameter	12	15	20	25	30				
6									
8									
10									
12									

- 1.eference Dimension Only
- 2.Minimum one-way Shear Force.Test methodsrefer to Iso8749 Test only for bushing with length greater than times straight. For special product orderswith coating. All dimensions are pre-coated. Can Be customized to larger size and special size. Available in inch size according to special requirements.

Material analysis

材质分析

常规材质	Corrosion-resistant steel grades												
材质简称 Short name	AlSI ASTM	材质编号 Material no	学名Norm	C	Si	Mn	P max	S max	Cr	V	Mo	Ni	N
C675	1070	1.231	DIN EN10132-4	0.6-0.73	0.15-0.35	0.60-0.90	0.025	0.025	MAX0.04		MAX0.10	MAX0.40	
S1crV4	6150	1.8159	DIN EN10132-4	0.47-0.55	MAX0.40	0.70-1.10	0.025	0.025	0.90-1.20	0.10-0.25	MAX0.10	MAX0.40	

抗腐蚀材质	Corrosion-resistant steel grades												
材质简称 Short name	AlSI ASTM	材质编号 Material no	学名Norm	C	Si	Mn	P max	S max	Cr	V	Mo	Ni	N
X10CrNi18-8	301	1.431	DIN EN10151	0.05-0.15	max.2.0	max.2.0	0.045	0.015	16.0-19.0		max.0.8	6.0-9.5	
XsCrNiMo17-12-2	316	1.4401	DIN EN10151	max.0.07	max.1.0	max.2.0	0.045	0.015	16.5-18.5		2.0-2.5	10.0-13.0	max.0.11
XsCrNi18-10	304	1.4301	DIN EN10151	max.0.07	max.1.0	max.2.0	0.045	0.015	17.5-19.5			8.0-10.5	max.0.11
X30C13	420	1.4028	DIN EN10151	0.26-0.35	max.1.0	max.1.5	0.04	0.03	12.0-14.0				

Surface treatment analysis

表面处理分析

表面处理 Finish	盐雾测试锈蚀时间 (小时) (DIN50021) Salt spray testtime
磷酸盐膜 Phosphating salt film	24
薄锌层系列 (同等CEOMET, DELTA Zinc layer system)	480
机械镀锌 Mechanical zinc plating	196
金属锌涂层+钝化 Zinc coating+passivating	96