

Short Spring Plungers

Steel / Stainless Steel

Steel



RoHS 10

Load Category		Type		Body		Pin			Spring		Operating Temperature
		Standard	No. Thread Locking Compound	Material	Hardness	Surface Treatment	Material	Hardness	Surface Treatment	Material	
Steel Tip	Ultra Light Load	SPJS	SPJS-N	SCM435	29~35HRC	Black Oxide	S45C	57~63HRC (Carburized)	Trivalent Chromate	SWP-B	-30~80°C
	Light Load	SPJL	SPJL-N						Black Oxide		
	Heavy Load	SPJH	SPJH-N			Electroless Nickel Plating					
	Extra Heavy Load	SPJF	SPJF-N								
Plastic Tip	Ultra Light Load	SPRRS	SPRRS-N	SCM435	29~35HRC	Black Oxide	Polyacetal	-	-	SWP-B	-30~80°C
	Light Load	SPRM	SPRM-N						Electroless Nickel Plating		
	Heavy Load	SPRH	-								
	Extra Heavy Load	SPRF	SPRF-N								

Thread Locking Compound

(M5~M16)

M

d

L

L0

+0.5

-0.5

B

❗ Thread-Lock Untreated Type is not available for M3 or M4 (M3 and M4 Standard Type are not thread-locking treated.)

❗ Thread Locking Treatment

Micro-encapsulated anaerobic adhesive used to hold objects in place. Once parts have been loosened, adhesion is lost. Use an anaerobic thread locking compound when reassembling.

Standard

Part Number	Type	M (Coarse)	d	S	L	ℓ	B	Ultra Light Load		Light Load		Heavy Load		Extra Heavy Load		Unit Price		
								min.	max.	min.	max.	min.	max.	min.	max.	SPJL	SPJH	SPRRS, SPRM, SPRH, SPRF
(Steel Tip)	SPJS, SPJL, SPJH, SPJF	3	1.2	1	7	1	1.5	0.11	0.48	0.4	1.5	0.8	2.0	-	-			
		4	2.1	1.2	9	1.5	2	0.49	1.55	1.6	5.0	2.0	9.0	4.4	11.9			
		5	2.7	1.5	12	2	2.5	0.53	2.53	2.0	7.8	4.9	14.7	4.1	24.9			
		6	3.2	1.5	13	2.5	3	0.89	3.11	2.9	9.8	5.9	19.6	7.7	30.6			
		8	4	2	15	2.5	4	0.9	3.14	2.9	9.8	5.9	19.6	8.6	43			
		10	5	2.5	16	3	5	1.76	4.71	4.9	14.7	9.8	29.4	14.1	53.1			
		12	6	3.5	20	3	6	1.96	4.82	4.9	14.7	9.8	29.4	23.1	58.3			
		16	8	4.5	22	3	8	3.29	9	9.8	29.4	19.6	58.8	26.6	78.8			
(Plastic Tip)	SPRRS, SPRM, SPRH, SPRF	3	1.2	1	7	1	1.5	0.11	0.48	0.4	1.5	0.8	2.0	-	-			
		4	2.1	1.2	9	1.5	2	0.49	1.55	1.6	5.0	2.0	9.0	4.4	11.9			
		5	2.7	1.5	12	2	2.5	0.53	2.53	2.0	7.8	4.9	14.7	4.1	24.9			
		6	3.2	1.5	13	2.5	3	0.89	3.11	2.9	9.8	5.9	19.6	7.7	30.6			
		8	4	2	15	2.5	4	0.9	3.14	2.9	9.8	5.9	19.6	8.6	43			
		10	5	2.5	16	3	5	1.76	4.71	4.9	14.7	9.8	29.4	14.1	53.1			
		12	6	3.5	20	3	6	1.96	4.82	4.9	14.7	9.8	29.4	23.1	58.3			
		16	8	4.5	22	3	8	3.29	9	9.8	29.4	19.6	58.8	26.6	78.8			

No slits for swaging on the tip.
Min. is the initial load, and max. is the load when the tip is fully compressed.
Extra Heavy Load Type is available from M4 size.

No Thread Locking Compound

Part Number	Type	M (Coarse)	d	S	L	ℓ	B	Ultra Light Load		Light Load		Heavy Load		Extra Heavy Load		Unit Price		
								min.	max.	min.	max.	min.	max.	min.	max.	SPJS	SPJL	SPJH, SPJF
(Steel Tip)	SPJS-N, SPJL-N, SPJH-N, SPJF-N	5	2.7	1.5	12	2	2.5	0.53	2.53	2	7.8	4.9	14.7	4.1	24.9			
		6	3.2	1.5	13	2.5	3	0.89	3.11	2.9	9.8	5.9	19.6	7.7	30.6			
		8	4	2	15	2.5	4	0.9	3.14	2.9	9.8	5.9	19.6	8.6	43			
		10	5	2.5	16	3	5	1.76	4.71	4.9	14.7	9.8	29.4	14.1	53.1			
		12	6	3.5	20	3	6	1.96	4.82	4.9	14.7	9.8	29.4	23.1	58.3			
		16	8	4.5	22	3	8	3.29	9	9.8	29.4	19.6	58.8	26.6	78.8			
(Plastic Tip)	SPRRS-N, SPRM-N, SPRH-N, SPRF-N	5	2.7	1.5	12	2	2.5	0.53	2.53	2	7.8	4.9	14.7	4.1	24.9			
		6	3.2	1.5	13	2.5	3	0.89	3.11	2.9	9.8	5.9	19.6	7.7	30.6			
		8	4	2	15	2.5	4	0.9	3.14	2.9	9.8	5.9	19.6	8.6	43			
		10	5	2.5	16	3	5	1.76	4.71	4.9	14.7	9.8	29.4	14.1	53.1			
		12	6	3.5	20	3	6	1.96	4.82	4.9	14.7	9.8	29.4	23.1	58.3			
		16	8	4.5	22	3	8	3.29	9	9.8	29.4	19.6	58.8	26.6	78.8			

No slits for swaging on the tip.
Min. is the initial load, and max. is the load when the tip is fully compressed.

Ordering Example: Part Number SPJL12, SPJS-N5

Stainless Steel



RoHS 10

Load Category	Type	Body		Pin		Spring	Operating Temperature
		Material	Hardness	Material	Hardness		
Stainless Steel Tip	Ultra Light Load	SPJY	SPJK	SUS304	SUS440C	55HRC~	-30~260°C
	Light Load	SPJZ	SPJZ				
	Heavy Load	SPJX	SPJX				
	Extra Heavy Load	SPRY	SPRY				
Plastic Tip	Ultra Light Load	SPRK	SPRZ	Equivalent	Polyacetal	-	-30~80°C
	Light Load	SPRK	SPRZ				
	Heavy Load	SPRK	SPRZ				
	Extra Heavy Load	SPRK	SPRZ				

Thread Locking Treatment is not applied.

Part Number		M (Coarse)	d	S	L	ℓ	B	Ultra Light Load (SPJY, SPRY)		Light Load (SPJK, SPRK)		Heavy Load (SPJZ, SPRZ)		Extra Heavy Load (SPJX, SPRX)		Unit Price	
Type	Load (N)							Load (N)	min.	max.	min.	max.	min.	max.	min.		max.
(Stainless Steel Tip)		3	1.2	1	7	1	1.5	0.11	0.49	0.5	1.51	0.8	2.0	-	-		
SPJY		4	2.1	1.2	9	1.5	2	0.51	1.54	1.6	4.8	2.0	9.0	4.0	11.5		
SPJK		5	2.7		12	2	2.5	0.62	2.49	2	7.9	5.1	14.7	6.0	24.2		
SPJZ		6	3.2	1.5	13	2.5	3	0.97	3.06	2.8	9.9	5.5	19.6	9.4	29.5		
SPJX		8	4	2	15	2.5	4	1.16	3.26	3.6	10.9	6.1	19.6	13.5	43.7		
(Plastic Tip)		10	5	2.5	16	3	5	1.54	4.76	4.2	14.6	9.6	29.4	19.1	53.3		
SPRY		12	6	3.5	20	3	6	1.81	4.82	4.6	14.8	10.4	29.4	24.5	58.8		
SPRK		16	8	4.5	22	3	8	3.1	9.1	9.9	29.3	18.0	58.8	26.6	78.7		
SPRZ																	
SPRX																	

No slits for swaging on the tip.
Min. is the initial load, and max. is the load when the tip is fully compressed.
Thread locking treatment is not applied.

Ordering Example: Part Number SPJZ10

Micro Spring Plungers

Standard / Short / Set Screw

Standard



Load Category	Type			Body	Pin	Spring	Operating
	Flat	Spherical	Taper R	Material	Material	Material	Temperature
	Light Load	MPFL	MPJL	MPTL			
Heavy Load	MPFH	MPJH	-	SUS303	SUS304	SUS304	-30°~140°C

Flat

Technical drawing of a Flat type pin. Dimensions include D1, d, g, L-0.5, S+0.5, and a detail view showing a flat top surface with a width of 0.5 and a chamfer C.

Spherical

Technical drawing of a Spherical type pin. Dimensions include D1, d, g, L-0.5, S+0.5, and a detail view showing a spherical top surface with a radius SR and a width of 0.5.

Taper R

Technical drawing of a Taper R type pin. Dimensions include D1, d, g, L-0.5, S+0.5, and a detail view showing a tapered top surface with a 30-degree angle and a width of 0.5.

Tapered R Portion

Circular detail view of the tapered R portion of the pin, showing a 30-degree angle and a radius R.