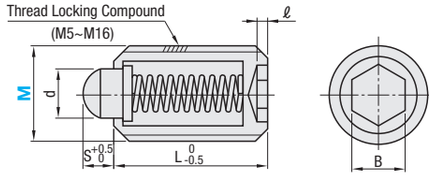
Short Spring Plungers
Steel / Stainless Steel

■Steel

Load Category		Type Standard	Type No Thread Locking Compound	Body M Material	Body H Hardness	Body S Surface Treatment	Pin M Material	Pin H Hardness	Pin S Surface Treatment	Spring M Material	Operating Temperature
Steel Tip	Ultra Light Load	SPJS	SPJS-N	EN 1.7220 Equiv.	29~35HRC	Black Oxide	EN 1.1191 Equiv.	57~63HRC (Carburized)	Trivalent Chromate	JIS-SWP-B	-30~80°C
	Light Load	SPJL	SPJL-N								
	Heavy Load	SPJH	SPJH-N						Black Oxide		
	Extra Heavy Load	SPJF	SPJF-N			Electroless Nickel Plating					
Plastic Tip	Ultra Light Load	SPRRS	SPRRS-N			Black Oxide	Polyacetal	-	-		
	Light Load	SPRM	SPRM-N								
	Heavy Load	SPRH	-								
	Extra Heavy Load	SPRF	SPRF-N			Electroless Nickel Plating					



- 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

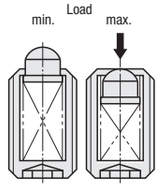
Part Number Type	M (Coarse)	d	S	L	ℓ	B	Ultra Light Load Load (N) min.	Ultra Light Load Load (N) max.	Light Load Load (N) min.	Light Load Load (N) max.	Heavy Load Load (N) min.	Heavy Load Load (N) max.	Extra Heavy Load Load (N) min.	Extra Heavy Load Load (N) max.	Unit Price SPJL SPJH	Unit Price SPJS SPJF	Unit Price SPRRS, SPRM SPRH, SPRF
(Steel Tip) SPJS SPJL SPJH SPJF / (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		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.

kgf=Nx0.101972

■No Thread Locking Compound

Part Number Type	M (Coarse)	d	S	L	ℓ	B	Ultra Light Load Load (N) min.	Ultra Light Load Load (N) max.	Light Load Load (N) min.	Light Load Load (N) max.	Heavy Load Load (N) min.	Heavy Load Load (N) max.	Extra Heavy Load Load (N) min.	Extra Heavy Load Load (N) max.	Unit Price
(Steel Tip) SPJS-N SPJL-N SPJH-N SPJF-N / (Plastic Tip) SPRRS-N SPRM-N SPRF-N	5	2.7	1.5	12	2	2.5	0.53	2.53	2	9.8	4.9	14.7	4.1	24.9	
	6	3.2		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	



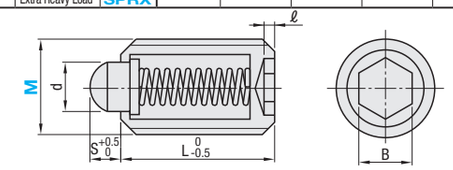
- No slits for swaging on the tip.
- Min. is the initial load, and max. is the load when the tip is fully compressed.

kgf=Nx0.101972

Ordering Example: Part Number — SPJL12, SPJS-N5

■Stainless Steel

Load Category		Type	Body M Material	Pin M Material	Pin H Hardness	Spring M Material	Operating Temperature
Stainless Steel Tip	Ultra Light Load	SPJY	EN 1.4301 Equiv.	EN 1.4125 Equiv.	55HRC~	EN 1.4568 Equiv.	-30~260°C
	Light Load	SPJK					
	Heavy Load	SPJZ					
	Extra Heavy Load	SPJX					
Plastic Tip	Ultra Light Load	SPRY		Polyacetal	-		-30~80°C
	Light Load	SPRK					
	Heavy Load	SPRZ					
	Extra Heavy Load	SPRX					



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

- 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.

kgf=Nx0.101972

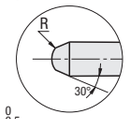
Ordering Example: Part Number — SPJZ10

Micro Spring Plungers
Standard / Short / Set Screw

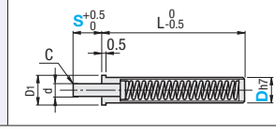
■Standard

Load Category	Type Flat	Type Spherical	Type Taper R	Body M Material	Pin M Material	Spring M Material	Operating Temperature
Light Load	MPFL	MPJL	MPTL	EN 1.4305 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.	-30°~140°C
Heavy Load	MPFH	MPJH	-				

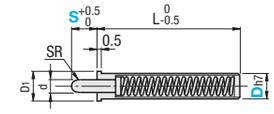
Tapered R Portion



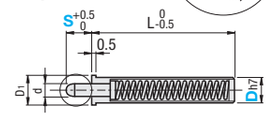
Flat



Spherical



Taper R



Part Number Type	Dh7	S	d	D1	L	C	R	Light Load N min.	Light Load N Load	Light Load N max.	Heavy Load N min.	Heavy Load N Load	Heavy Load N max.	Unit Price
(Flat) MPFL MPFH (Spherical) MPJL MPJH (Taper R) MPTL	1.5	1.5	0.5	2	13	0.05	0.15	0.49		0.98	0.93		1.86	
	2	1.5	1	2.5	16	0.1	0.3	0.49		0.98	1.96		3.92	
		3			26			0.49		0.98	1.67		3.73	
	3	3	2	3.5	16	0.15	0.5	0.49		1.47	2.45		3.92	
		6			26			0.49		1.47	2.26		3.73	
	4	3	3	4.5	15	0.2	1	0.59		1.47	3.43		5.3	
		6			20			0.49		2.06	2.45		5.3	
		9			32			0.69		3.92	2.94		6.47	
	5	4	4	5.5	17	0.3	1.5	0.64		1.96	3.73		6.96	
		8			24			0.78		3.82	3.04		7.06	
		12			32			0.83		5.79	2.75		7.06	

- Recommended Diameter of Mounting Hole : Dh7
- Use adhesive to prevent loosening.

kgf=Nx0.101972

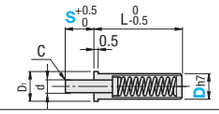
Ordering Example: Part Number — MPJL2 - 1.5

■Features: Shorter in dimensions by 30~50% compared to the conventional products. Can be used in the limited space.

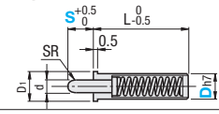
■Short

Load Category	Type Flat	Type Spherical	Body M Material	Pin M Material	Spring M Material	Operating Temperature
Light Load	MPFS	MPJS	EN 1.4305 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.	-30~140°C

Flat



Spherical



Part Number Type	Dh7	S	d	D1	L	C	Light Load (N) min.	Light Load (N) max.	Unit Price
(Flat) MPFS (Spherical) MPJS	1.5	1.5	0.5	2	9.5	0.05	0.49	0.98	
	2	1.5	1	2.5	8	0.1	0.49	0.98	
	3	3	2	3.5	10	0.15	0.49	1.47	
	4	3	3	4.5	10	0.2	0.59	1.47	
	5	4	4	5.5	11.5	0.3	0.64	1.96	

- Recommended Diameter of Mounting Hole : Dh7
- Use adhesive to prevent loosening.

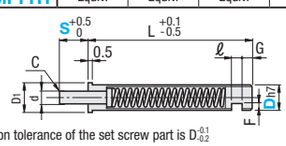
Ordering Example: Part Number — MPFS4 - 3

■Features: Slits are applied for side-mounting with a set screw.

■Set Screw

Load Category	Type Flat	Body M Material	Pin M Material	Spring M Material	Operating Temperature
Light Load	MPFLT	EN 1.4305 Equiv.	EN 1.4301 Equiv.	EN 1.4301 Equiv.	-30°~140°C
Heavy Load	MPFHT				

Flat



- The D dimension tolerance of the set screw part is D -0.1 -0.2

Ordering Example: Part Number — MPFLT3 - 6

Part Number Type	Dh7	S	d	D1	L	ℓ	F	G	C	Light Load N min.	Light Load N Load	Light Load N max.	Heavy Load N min.	Heavy Load N Load	Heavy Load N max.	Unit Price
(Flat) MPFLT MPFHT	1.5	1.5	0.5	2	17.5	2.5	0.5	1	0.05	0.49		0.98	0.93		1.86	
	2	1.5	1	2.5	20.5	2.5	0.5	1	0.1	0.49		0.98	1.96		3.92	
		3			30.5					0.49		0.98	1.67		3.73	
	3	3	2	3.5	20.5	2.5	0.5	1	0.15	0.49		1.47	2.45		3.92	
		6			30.5					0.49		1.47	2.26		3.73	
	4	3	3	4.5	20.5	3.5	0.8	1	0.2	0.59		1.47	3.43		5.3	
		6			25.5					0.49		2.06	2.45		5.3	
		9			37.5					0.69		3.92	2.94		6.47	
	5	4	4	5.5	22.5	3.5	0.8	1	0.3	0.64		1.96	3.73		6.96	
		8			29.5					0.78		3.82	3.04		7.06	
		12			37.5					0.83		5.79	2.75		7.06	

- Recommended Diameter of Mounting Hole: Dh7
- Use adhesive to prevent loosening.

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