

# Micro Spring Pins / Spring Plungers

## Tapped Plungers

**Micro Spring Pins**

Type	(1) Pin End		(2) Pin		(3) Spring	(4) Sleeve		(5) Collar
	Material	Material	Hardness	Surface Treatment	Material	Material	Surface Treatment	Material
JJPPN	Polyacetal	SK	Heat Treated Hardness HV 620~720	Electroless Nickel Plating Nickel Plating	304 Stainless Steel	SK	Electroless Nickel Plating Nickel Plating	BS (Brass)

**Load**

min. (Stroke 0) max. (Stroke max)

⚠ Stroke should not exceed S dimension, otherwise the spring may be damaged.  
⚠ Tighten the nut with forces under 23.43N for M2, 98.07N for M3-5.

Type	Part Number	M	D	Stroke S	H	m	B	L <sub>1</sub>	T	L	t	(d)	d <sub>1</sub>	(L <sub>2</sub> )	Load (N)	
															min.	max.
JJPPN	2 (Fine Thread)	1.5	8	2.5	2	3.5	14	0.5	9	0.8	1.7	1	4.2	0.202	0.883	
	3 (Coarse Thread)	2.5	11	3.5	2.5	6	19	1	15	1	2.25	1.72	7	0.392	3.432	
	4 (Coarse Thread)	3.5	5.5	4.5	4	3.45	7	0.762	1.245							
	5 (Coarse Thread)	4.5	5.5	4	3.45	7	1.245	7	1.245							

**Part Number Example** Part Number - D - S  
JJPPN4 - 3.5

**Part Number Alterations** Part Number - D - (NT)  
JJPPN2 - 1.5 - NT1

**Application Example**

**Nuts Included**

**Code** NT

**Spec.** One nut is included with NT1, 2 nuts with NT2.  
Ordering Code: NT1 ⚠ Applicable to M2 only

**Tapped Spring Plunger**

Type	Body			Pin			Spring Material	Operating Temperature
	Material	Hardness	Surface Treatment	Material	Hardness	Surface Treatment		
Light Load PJLTP	1045 Carbon Steel or Equivalent	29~35 HRC min.	Black Oxide	1045 Carbon Steel or Equivalent	57~63 HRC min. (Carburized)	Electroless Nickel Plating	JIS SWP-B Spring Steel	-30~80°C
Heavy Load PJHTP	1045 Carbon Steel or Equivalent	29~35 HRC min.	Black Oxide	1045 Carbon Steel or Equivalent	57~63 HRC min. (Carburized)	Black Oxide	JIS SWP-B Spring Steel	-30~80°C

kgf=Nx0.101972

Type	Part Number	M (Coarse)	Stroke S	d	L	L <sub>1</sub>	M <sub>1</sub> (Coarse)	L <sub>2</sub>	W	T	B	Light Load Load (N)		Heavy Load Load (N)		
												min.	max.	min.	max.	
PJLTP PJHTP	12	15	20	5.5	51	35	M3	6	4	4	4	2.3	19.4	5.1	53.6	
												4.1	22.5	8.7	56.1	
												9.7	39.7	14.2	79.4	
	16	20	8	60	35	85	35	M4	8	7	5	5	8.6	40.1	16.8	80.4
													17.0	38.0	19.8	81.2
													14.4	79.4	22.5	147.1
20	30	10	60	45	72	45	M5	10	8	6	6	13.9	83.4	23.0	157.9	
												13.6	88.3	18.6	154.0	

**Part Number Example** Part Number - S  
PJLTP12 - 20  
PJHTP16 - 15

# Spring Plungers

## With Hex Socket / With Hex Nose

**Spring Plungers – with Hex Socket**

Type	Body			Pin			Spring Material	Operating Temperature
	Material	Hardness	Surface Treatment	Material	Hardness	Surface Treatment		
PJLH Light Load	1045 Carbon Steel or Equivalent	29~35 HRC min.	Black Oxide	1045 Carbon Steel or Equivalent	57~63 HRC min. (Carburized)	Trivalent Chromate	JIS SWP-B Spring Steel	-30~80°C

⚠ To fix the position of the ball plunger, microencapsulated anaerobic adhesive is applied. Once the parts have been loosened, adhesion is lost. Use an anaerobic thread locking compound when reassembling.  
⚠ The adhesive is most effective if left on the part for 72 hours or more in 25°C. It should be noted if the parts are left for a short period of time and in low temperature, the thread locking adhesive will be less-effective.

kgf=Nx0.101972

Type	Part Number	M	S	d	L <sub>1</sub>	L	B <sub>1</sub>	B <sub>2</sub>	Light Load N (kgf)	
									min.	max.
PJLH	8	3	5	3	25	25	2.5	3	5.8 (0.6)	9.8 (1.0)
									2.7 (0.3)	9.8 (1.0)
	10	5	4	30	34	38	3	4	5.8 (0.6)	14.7 (1.5)
									2.6 (0.3)	14.7 (1.5)
	12	5	5	35	35	40	4	5	5.6 (0.6)	14.7 (1.5)
									3.0 (0.3)	19.7 (2.0)

**Part Number Example** Part Number - S  
PJLH 8 - 3

**Application Example**

**Spring Plungers – Hex Nose**

Type	Body			Pin			Spring Material	Operating Temperature
	Material	Hardness	Surface Treatment	Material	Hardness	Surface Treatment		
Light Load PJLR	1045 Carbon Steel or Equivalent	29~35 HRC	Black Oxide	1045 Carbon Steel or Equivalent	57~63 HRC min. (Carburized)	Trivalent Chromate	JIS SWP-B Spring Steel	-30~80°C
Heavy Load PJHR	1045 Carbon Steel or Equivalent	29~35 HRC	Black Oxide	1045 Carbon Steel or Equivalent	57~63 HRC min. (Carburized)	Black Oxide	JIS SWP-B Spring Steel	-30~80°C

⚠ To fix the position of the ball plunger, microencapsulated anaerobic adhesive is applied. Once the parts have been loosened, adhesion is lost, use an anaerobic adhesive when reassembling.  
⚠ The adhesive is most effective if left on the part for 72 hours or more in 25°C. Note if the parts are left for short period of time and in low temperature, the thread-lock will be less-effective.

kgf=Nx0.101972

Type	Part Number	M	S	M x P (Coarse)	H	R	L	B	Light Load Load N (kgf)		Heavy Load Load N (kgf)	
									min.	max.	min.	max.
PJLR PJHR	10	15	10	10 x 1.5	4	2.2	30	3	2.8 (0.3)	14.1 (1.4)	11.4 (1.2)	51.0 (5.2)
									2.9 (0.3)	14.6 (1.5)	9.5 (1.0)	60.8 (6.2)
									3.5 (0.4)	17.1 (1.7)	5.6 (0.6)	41.0 (4.2)
									2.5 (0.3)	21.1 (2.2)	5.2 (0.5)	55.9 (5.7)
									2.3 (0.2)	19.4 (2.0)	5.1 (0.5)	53.6 (5.5)
									12.1 (1.2)	38.0 (3.9)	26.5 (2.7)	78.0 (8.0)
	16	15	20	16 x 2.0	7	4.1	35	5	9.7 (1.0)	39.7 (4.1)	14.2 (1.5)	79.4 (8.1)
									8.6 (0.9)	40.1 (4.1)	16.8 (1.7)	80.4 (8.2)

**Part Number Example** Part Number - S  
PJLR10 - 10

**Application Example**