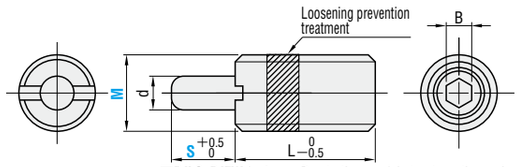
Short type RoHS

Type			Main body			Pin			Spring	Service temperature range
Length	Load		M	H	S	M	H	S	M	
Short (Extremely short)	Light	PJLS / PJFW	S45C	29～35HRC	Fe3O4	S45C	57～63HRC Carburizing	Unichrome plating / Black oxide	SWP—B	—30°～80°



- 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 affective if left on the part for 48 hours and more in 25℃ . Note if the parts are left for short period of time and in low temperature, the thread-lock will be less-effective.
- In attachment or removal, please use the wrench for spring plungers (PJG) in accordance with an example, and do not use the hind hexagon socket.

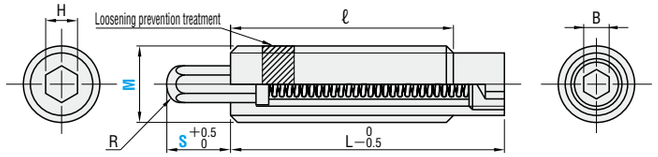
■**PJLS・PJFW features** Due to the special structure, these plungers have a short full length L.

M×P (Coarse thread)	d	S	L PJLS	L PJFW	B	PJLS Load min. N{kgf}	PJLS Load max.	PJFW Load min. N{kgf}	PJFW Load max.	Catalog No. Type	Catalog No. M—S	Base unit price 1～19 pieces PJLS	PJFW
10×1.5	3.8	5	22	—	3	7.6{0.8}	18.1{1.8}	—		PJLS	10— 5		
		10	30			2.9{0.3}	16.4{1.7}				10—10		
12×1.75	5.5	5	22	19	4	5.6{0.6}	18.2{1.9}	5.7{0.6}	16.2{1.7}		12— 5		
		10	30	23		4.8{0.5}	22.4{2.3}	2.7{0.3}	15.9{1.6}		12—10	Quotation	
		15	39	30		6.1{0.6}	22.5{2.3}	2.5{0.3}	16.7{1.7}		12—15		
16×2.0	8	10	—	24	5	—		3.6{0.4}	22.6{2.3}	PJFW	16—10		
		15		33				3.3{0.3}	21.1{2.1}		16—15		
		20		38				3.0{0.3}	21.9{2.2}		16—20		

Load was corrected to the actual measurement from this catalog. There is no change to the product itself.

Hex pin type RoHS

Type		Main body M	Main body H	Main body S	Pin M	Pin H	Pin S	Spring M	Service temperature range
For light load	PJLR	S45C	29～35HRC	Fe3O4	S45C	57～63HRC Carburizing	Unichrome plating Fe3O4	SWP—B	—30°～80°
For heavy load	PJHR								



- 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 affective if left on the part for 72 hours or more in 25℃ . Note if the parts are left for short period of time and in low temperature, the thread-lock will be less-effective.
- In attachment or removal, please do not use the hind hexagon socket.

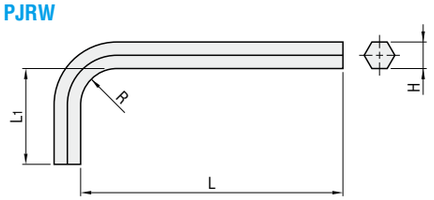
■**Features of PJLR and PJHR** Because the pin shape is hexagonal, the pins can be installed using a wrench. No special wrench is required.

M×P (Coarse thread)	H	R	S	ℓ	L	B	PJLR Load min. N{kgf}	PJLR Load max.	PJHR Load min. N{kgf}	PJHR Load max.	Catalog No. Type	Catalog No. M—S	Base unit price 1～19 pieces
10×1.5	4	1.9	5	30	30	3	2.8{0.3}	14.1{1.4}	11.4{1.2}	51.0{5.2}	PJLR	10— 5	
			10		43		2.9{0.3}	14.6{1.5}	9.5{1.0}	60.8{6.2}		10—10	
12×1.75	5	2.9	5		30	4	3.5{0.4}	17.1{1.7}	5.6{0.6}	41.0{4.2}		12— 5	
			10		43		2.5{0.3}	21.1{2.2}	5.2{0.5}	55.9{5.7}		12—10	Quotation
			15		51		2.3{0.2}	19.4{2.0}	5.1{0.5}	53.6{5.5}		12—15	
16×2.0	7	4.1	10	35	60	5	12.1{1.2}	38.0{3.9}	26.5{2.7}	78.0{8.0}		16—10	
			15		60		9.7{1.0}	39.7{4.1}	14.2{1.5}	79.4{8.1}		16—15	
			20		85		8.6{0.9}	40.1{4.1}	16.8{1.7}	80.4{8.2}	PJHR	16—20	
			30		125		17.0{1.7}	38.0{3.9}	19.8{2.0}	81.2{8.3}		16—30	
			50		155		4.4{0.5}	48.3{4.9}	7.5{0.8}	78.8{8.0}		16—50	
			80		185		2.5{0.3}	51.3{5.2}	3.2{0.3}	103.5{10.6}		16—80	
24×3.0	10	15.0	7	45	60	10	27.8{2.8}	65.9{6.7}	40.7{4.2}	127.9{13.0}		24— 7	
			15		60		25.5{2.6}	106.9{10.9}	46.9{4.8}	226.5{23.1}		24—15	
30×3.5	13	7.6	20		78	14	55.2{5.6}	156.9{16.0}	72.6{7.4}	356.5{36.4}		30—20	

Load was corrected to the actual measurement from this catalog. There is no change to the product itself.

Wrenches for hex pins RoHS

PJRW

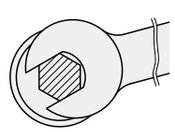


M SNCMXV S Parkerizing

H	L	L1	R	Catalog No. Type	Catalog No. No.	Base unit price 1～19 pieces
7	95	34	7	PJRW	16	Quotation
13	132	50	13		30	

■**PJLR・PJHR features**

1. Because the pin shape is hexagonal, it can be installed using a socket wrench or spanner.
2. If spring damage causes the pin to become indented, a special wrench (PJRW) can be used to remove the pin. For M10・12・24, use a commercially-available wrench.



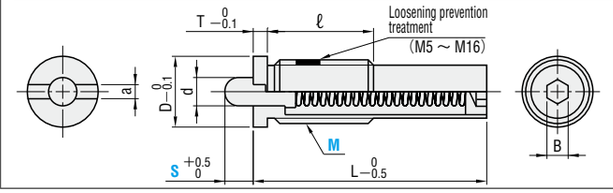
Order — Catalog No. PJLS 12—10 / PJHR 10—10 / PJRW 16

Days to Ship — Quotation

Price — Quotation

Spring plungers with flanges RoHS

Type		Main body M	Main body H	Main body S	Pin M	Pin H	Pin S	Spring M	Service temperature range
For light load	FPJL	S45C	29～35HRC	Black oxide	S45C	57～63HRC Carburizing	Unichrome plating Black oxide	SWP—B	—30°～80°
For heavy load	FPJH								



- Thread-locking adhesive is not applied on M3 and M4.
- 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 affective if left on the part for 72 hours and more in 25℃ . Note if the parts are left for short period of time and in low temperature, the thread-lock will be less-effective.
- In attachment or removal, please use a minus driver or the wrench for spring plungers (PJG) in accordance with an example, and do not use the hind hexagon socket.

Applicable wrench	M×P (Coarse thread)	d	S	D	T	ℓ	L	B	a	FPJL Load min. N{kgf}	FPJL Load max.	FPJH Load min. N{kgf}	FPJH Load max.	Catalog No. Type	Catalog No. M—S	Base unit price 1～19 pieces
—	3×0.5	1.1	1.5	5	1.5	5	10	0.9	0.5	0.44{0.05}	1.6{0.2}	0.9{0.1}	4.2{0.4}	FPJL	3— 1.5	
	3×0.5		3				15			0.29{0.03}	1.0{0.1}	1.1{0.1}	4.9{0.5}		3— 3	
	4×0.7	1.6	2	6	1.8	6	15	1.3	0.7	0.9{0.1}	4.1{0.4}	1.9{0.2}	8.7{0.9}		4— 2	
	4×0.7		4				24			0.7{0.1}	2.2{0.2}	0.29{0.03}	8.3{0.9}		4— 4	
PJG1	5×0.8	2.0	3	7	2.0	8	20	1.5	1.2	1.5{0.2}	9.8{1.0}	2.0{0.2}	22.5{2.3}		5— 3	
	5×0.8		5				27			1.6{0.2}	10.4{1.1}	2.5{0.3}	23.4{2.4}		5— 5	
	6×1.0	2.5	3	8	2.5	9	25	2	1.5	3.4{0.4}	10.4{1.1}	12.5{1.3}	33.8{3.5}		6— 3	
	6×1.0		5				30			1.9{0.2}	9.7{1.0}	6.2{0.6}	32.6{3.3}		6— 5	
PJG2A	8×1.25	3.1	3	10		12	25	2.5		3.5{0.4}	9.4{1.0}	11.7{1.2}	31.2{3.2}		8— 3	
	8×1.25		5				27			2.9{0.3}	9.6{1.0}	8.3{0.9}	31.9{3.3}		8— 5	
	10×1.5	3.8	5	12		15	30	3		2.8{0.3}	14.1{1.4}	11.4{1.2}	51.0{5.2}		10— 5	
	10×1.5		10				43			2.9{0.3}	14.6{1.5}	9.5{1.0}	60.8{6.2}	FPJH	10—10	Quotation
PJG3	12×1.75	5.5	5	14	3.0	20	30	4	2.0	3.5{0.4}	17.1{1.7}	5.6{0.6}	41.0{4.2}		12— 5	
	12×1.75		10				43			2.5{0.3}	21.1{2.2}	5.2{0.5}	55.9{5.7}		12—10	
	12×1.75		15				51			2.3{0.2}	19.4{2.0}	5.1{0.5}	53.6{5.5}		12—15	
PJG4	16×2.0	8.0	10	18		25	60	5		12.1{1.2}	38.0{3.9}	26.5{2.7}	78.0{8.0}		16—10	
	16×2.0		15				60			9.7{1.0}	39.7{4.1}	14.2{1.5}	79.4{8.1}		16—15	
	16×2.0		20				85			8.6{0.9}	40.1{4.1}	16.8{1.7}	80.4{8.2}		16—20	
	16×2.0		30				125			17.0{1.7}	38.0{3.9}	19.8{2.0}	81.2{8.3}		16—30	
	16×2.0		40				125			5.5{0.6}	41.2{4.2}	7.6{0.8}	84.3{8.6}		16—40	

M3 and M4 are installed using a flat head screwdriver. P.866

Load was corrected to the actual measurement from this catalog. There is no change to the product itself.

{kgf}=N×0.101972

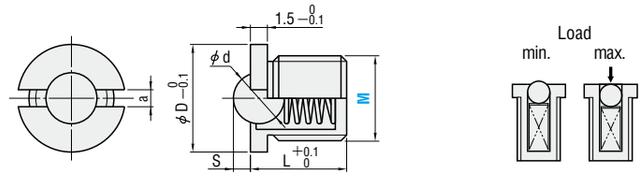
Order — Catalog No. FPJL 10—5

Days to Ship — Quotation

Price — Quotation

Ball plungers with flanges RoHS

Type	Main body M	Main body H	Main body S	Ball M	Ball H	Spring M	Service temperature range
FBPJ	S45C	29～35HRC	Black oxide	SUS440C	55HRC～	SUS631J1	—30°～80°
FBPJS	SUS303	—	—				—30°～260°



Applicable wrench	d	S	D	L	a	FBPJ Load (N) min.	FBPJ Load (N) max.	FBPJS Load (N) min.	FBPJS Load (N) max.	Catalog No. Type	Catalog No. M (Coarse thread)	Base unit price 1～49 pieces FBPJ	FBPJS
BPJG1	3	0.8	7	5	0.8	0.6	5.6	1.3	6.4	FBPJ	5		
BPJG2	4	1.0	8	6	1.0	2.8	6.3	2.7	8.0		6		
BPJG3	5	1.6	10	7	1.5	2.9	9.6	1.3	10.2		8	Quotation	
BPJG4	6.35	1.9	12	9		6.4	11.7	6.1	17.2	FBPJS	10		
BPJG5	7.94	2.4	14	11.5		9.0	15.0	2.1	18.8		12		
	9.53	3.2	18	16	2.0	9.9	21.5	13.0	25.5		16		

{kgf}=N×0.101972

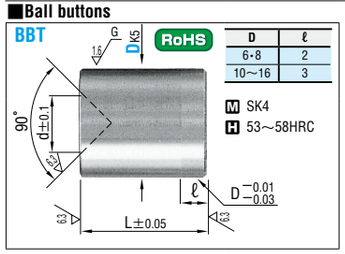
Order — Catalog No. FBPJ 5

Days to Ship — Quotation

Price — Quotation

■Ball buttons

BBT RoHS



D	ℓ
6・8	2
10～16	3

M SK4
H 53～58HRC

DK5	L	d	Catalog No. Type	Catalog No. D	Base unit price 1～19 pieces	Volume discount unit price 20～49	50～199	200～500
6 +0.006 +0.001	8	2	BBT	6				
8 +0.007 +0.001	10	3		8				
10 +0.001	12	4		10	Quotation			
12 +0.009 +0.001	14	5		12				
16	18	8		16				

When using in combination with a ball plunger, use a product with the same No. (M=D). (BBT6 can also be used for M5.)

Order — Catalog No. BBT6

Days to Ship — Quotation

Price — Quotation