


Note that, for some of the types shown here, order might be unable to be received by the MISUMI Malaysia, Indonesia and/or India offices.

Ball Plungers

Economy / Standard

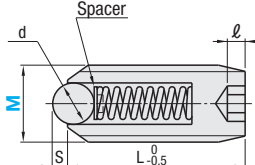
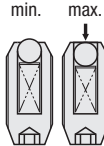
■ **Features:** By omitting heat treating, wrench slot and thread locking treatment, overwhelmingly low price is achieved.

Economy



RoHS10

Type	Body		Ball		Spring	Spacer	Operating Temperature	
	M Material	S Surface Treatment	M Material	H Hardness	M Material	M Material		
Light Load	BPU	SCM435	Trivalent Chromate	SUJ2	55HRC~	SWP-B	SUS304	-30~80°C
Heavy Load	BPM							
Extra Heavy Load	BPQ							

⚠ Values below are not guaranteed values but experimental values.

M	Breaking Torque (N-cm)
3	98
4	98
5	226
6	520
8	1726
10	2746
12	5099
16	7845
20	10787

Part Number	Type	M (Coarse)	d	S	L	ℓ	B	Light Load Load (N)		Heavy Load Load (N)		Extra Heavy Load Load (N)		Unit Price
								min.	max.	min.	max.	min.	max.	
								BPU BPM BPQ	3	1.5	0.5	7	1	
	4	2.5		9	2.4	2	2	4.9	3.9	9.8	2.5	12.5		
	5		0.8	12	2	2.5	2.9	9.8	4.9	19.6	11.2	24.1		
	6	3		13	2.5	3	4.9	14.7	9.8	29.4	17.7	33.4		
	8	4	1	15	2.5	4	6.9	19.6	12.7	39.2	21.4	45.3		
	10	5	1.2	16	3	5	8.8	24.5	18.6	49	23.5	58.7		
	12	7.1	1.8	20	3	6	9.8	29.4	19.6	58.8	24.1	62.3		
	16	9.5	2.5	25	3	8	15.7	49	29.4	98	43.6	116		
	20	11.9	4.5	40	6	10	53.9	98	78.4	147.6	84.6	196.6		


⚠ Has no Slit for a wrench on the tip. It can be installed only by using a hex socket. ⚠ Min. load is the initial load, and max. load is the one when the tip is fully compressed.

Part Number	Unit Price	(Reference)
Type	M (Coarse)	1 ~ 4 pack(s) Price per Unit
PACK-BPU (Light Load)	3	
	4	
	5	
	6	

- ⚠ PACK-BPU is sold by the package.
- ⚠ For package sales, minimum order is 1 pack.
- ⚠ 100 pcs./package
- ⚠ For orders larger than indicated quantity, please request a quotation.

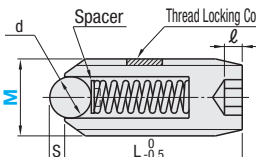
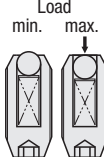
■ **BPJF, BSJF:** BPJ, BSJ (Identical Standard Products mentioned in Press Catalog) are also available.

Standard



RoHS10

Type	Standard		No Thread Locking Compound		Body			Ball		Spring	Spacer	Operating Temperature
	M Material	S Surface Treatment	M Material	H Hardness	S Surface Treatment	M Material	H Hardness	M Material	M Material			
Metal Ball	Ultra Light Load	BPY	BPY-N	SCM435	29~35HRC	Black Oxide	SUJ2	55HRC~	SWP-B	SUS304	-30~80°C	
	Light Load	BPJF	BPJ-N	SUS304 Equivalent	-	-						
	Heavy Load	BSJF	BSJ-N	SCM435	29~35HRC	Electroless Nickel Plating						
Plastic Ball	Ultra Heavy Load	BPW	BPW-N	SCM435	29~35HRC	Electroless Nickel Plating	Polyacetal	-	SWP-B	SUS304	-30~80°C	
	Light Load	NBPS	-	S45C	29~35HRC	Black Oxide						
	Heavy Load	NBSJ	-									
	Extra Heavy Load	NBPW	-									

⚠ Part Number is not RoHS Compliant

- ⚠ Thread Locking Treatment is not provided on M2, M3 and M4 of Standard Type.
- ⚠ Thread Locking Treatment is where anaerobic thread locking compound in micro capsules is used to retain the threads. Once parts have been loosened, adhesion is lost. Use an anaerobic thread locking compound when reassembling.
- ⚠ The thread locking is most effective by leaving the parts for 72 hours or more in 25°C. It should be noted if the parts are left for short period of time and in low temperature, the thread locking compound will be less-effective.

Part Number	Type	Metal Ball		Plastic Ball		L	ℓ	B	Ultra Light Load Load (N)		Light Load Load (N)		Heavy Load Load (N)		Extra Heavy Load Load (N)		Unit Price		
		M (Coarse)	d	S	d				S	min.	max.	min.	max.	min.	max.	min.	max.	Metal Ball	Plastic Ball
		(Metal Ball) BPY (* only)	(Plastic Ball) NBPS (* only)	* 3	1.5				0.5	-	-	7	1	1.5	0.3	0.64	1	2	1.5
		** 4	2.5		2.4		9	1.5	2	0.6	1.6	2	4.9	3.9	9.8	2.5	12.5		
		** 5	3	0.8	3.2	0.8	12	2	2.5	1	3.12	2.9	9.8	4.9	19.6	11.2	24.1		
		** 6	3		3.2		13	2.5	3	1.6	4.85	4.9	14.7	9.8	29.4	17.7	33.4		
		** 8	4	1	4	1.0	15	2.5	4	2.4	6.36	6.9	19.6	12.7	39.2	21.4	45.3		
		** 10	5	1.2	4.8	1.2	16	3	5	3	8.1	8.8	24.5	18.6	49	23.5	58.7		
		** 12	7.1	1.8	7.1	1.8	20	3	6	3.5	9.68	9.8	29.4	19.6	58.8	24.1	62.3		
		** 16	9.5	2.5	9.5	2.5	25	3	8	5.7	15.8	15.7	49	29.4	98	43.6	116		

⚠ M2, M3 and M4 have no slits for a wrench on the tip. Has no Slit for a wrench on the tip. It can be installed only by using a hex socket. ⚠ Min. load is the initial load, and max. load is the one when the tip is fully compressed. kgf=Nx0.101972

■ **No Thread Locking Compound**

Part Number	Type	M (Coarse)	d	S	L	ℓ	B	Ultra Light Load Load (N)		Light Load Load (N)		Heavy Load Load (N)		Extra Heavy Load Load (N)		Unit Price
								min.	max.	min.	max.	min.	max.	min.	max.	
								(Metal Ball) BPY-N BPJ-N BSJ-N BPW-N	5	3	0.8	12	2	2.5	1	
	6	3		13	2.5	3	1.6	4.85	4.9	14.7	9.8	29.4	17.7	33.4		
	8	4	1	15	2.5	4	2.4	6.36	6.9	19.6	12.7	39.2	21.4	45.3		
	10	5	1.2	16	3	5	3	8.1	8.8	24.5	18.6	49	23.5	58.7		
	12	7.1	1.8	20	3	6	3.5	9.68	9.8	29.4	19.6	58.8	24.1	62.3		
	16	9.5	2.5	25	3	8	5.7	15.8	15.7	49	29.4	98	43.6	116		

⚠ Min. load is the initial load, and max. load is the one when the tip is fully compressed.

kgf=Nx0.101972

Ordering Example

Part Number
BPQ8
PACK-BPU8
BPW-N12