

# Ball Plungers

## Plastic Body / Fine Thread / Short

**Plastic Body**

RoHS 10

Type	Body		Ball		Spring	Operating Temperature
	Material	Material	Material	Hardness	Material	
Metal Ball	Light Load	<b>BSMN</b>	Polyacetal (Black)	SUS440C	55HRC~	SUS304
	Heavy Load	<b>BSZN</b>	Nylon 66 (White)			SUS631J1
Plastic Ball	Light Load	<b>BNMN</b>	Polyacetal (Black)	Polyacetal (White)		SUS304
	Heavy Load	<b>BNZN</b>	Nylon 66 (White)			SUS631J1

Part Number		M (Coarse)	d	S	L	a	Load (N)				Unit Price			
Type							Light Load		Heavy Load		BSMN	BSZN	BNMN	BNZN
Metal Ball	Plastic Ball	6	3.2	0.8	13	1	0.2	5	8	16				
<b>BSMN</b>	<b>BNMN</b>	8	4	1	15	1.2	2	12	15	30				
<b>BSZN</b>	<b>BNZN</b>	10	4.8	1.2	16	1.5	2.5	16	20	39				

Has no slit for a wrench on the tip.

kgf=Nx0.101972

Ordering Example

Part Number: **BSZN6**

**Fine Thread**

RoHS 10

Type	Body			Ball		Spring	Spacer	Operating Temperature
	Material	Hardness	Surface Treatment	Material	Hardness	Material	Material	
Light Load	<b>BMPJ</b>	S45C	29~35HRC	Black Oxide	SUJ2	55HRC~	SWP-B	SUS304
Heavy Load	<b>BMSJ</b>							

**EX Features**  
Fine threads provide an easy fine adjustment of strokes.

Part Number		Pitch (Fine)	Metal Ball		L	l	B	Light Load (N)		Heavy Load (N)		Unit Price
Type	M (Fine)		d	S				min.	max.	min.	max.	
Light Load	3	0.35	1.5	0.5	7	1	1.5	1	2	1.5	2.9	
	4	0.5	2.5		9	1.5	2	2	4.9	3.9	9.8	
Heavy Load	5	0.5	3	0.8	12	2	2.5	2.9	9.8	4.9	19.6	
	6	0.75	3		13	2.5	3	4.9	14.7	9.8	29.4	
	8	0.75	4	1	15	2.5	4	6.9	19.6	12.7	39.2	

Thread locking treatment not applied.

kgf=Nx0.101972

Ordering Example

Part Number: **BMPJ5**

**Short**

RoHS 10

Type	Body	Ball		Spring	Spacer	Operating Temperature
	Material	Material	Hardness	Material	Material	
<b>BPK</b>	SUSXM7	SUS440C	59~66HRC	SUS304-WPB	SUS304	-30~240°C

**Features:** As the overall length is shorter than conventional ball plungers by about 30%, it does not stick out even if mounted to a thin plate.

Part Number		M (Coarse)	d	S	L	l	B	Load (N)		Unit Price
Type								min.	max.	
<b>BPK</b>	3	2	0.5	5	1	1.5	(1.0)	(2.0)		
	4	2.5	0.8	6	1.2	2	(1.1)	(3.7)		
	5	3		8	1.9	2.5	(2.2)	(5.9)		
	6	4	1	9	1.8	3	(4.6)	(8.7)		
	8	5	1.2	10	1.8	4	(7.5)	(11.9)		

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

Ordering Example

Part Number: **BPK4**