

Ball Plungers / Wrenches for Ball Plungers

L Selectable Long / L Selectable Stainless Steel Long

Ball Plungers / Ball Buttons

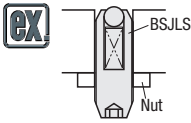
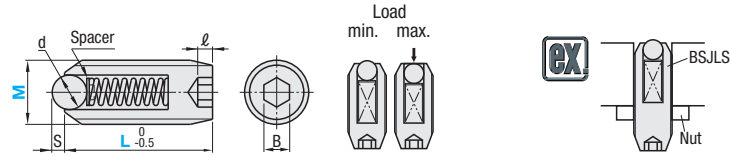
Bolt / Flanged

L Selectable Long



RoHS10

Type	Body			Ball		Spring	Spacer	Operating Temperature	
	Material	Hardness	Surface Treatment	Material	Hardness				
Ultra Light Load	BPJLS	1045 Carbon Steel	29~35HRC	Black Oxide	52100 Bearing Steel	55HRC~	SWP-B	Brass	-30~80°C
Light Load	BPJLS								
Heavy Load	BSJLS								
Extra Heavy Load	BPWLS								
Light Load	NPJRS			Black Oxide	Polyacetal	-			



Part Number	Type	M (Coarse)	L	Metal Ball		Plastic Ball		Ultra Light Load (BPJLS)		Light Load (BPJLS, NPJRS)		Heavy Load (BSJLS)		Extra Heavy Load (BPWLS)		Unit Price	
				d	S	d	S	min.	max.	min.	max.	min.	max.	min.	max.		
Metal Ball BPJLS BSJLS BPWLS	3	20	30	1.5	0.5	-	-	1	1.5	0.3	0.64	1	2	1.5	2.9	2.2	5
	*4	20	30	2.5		2.4	0.7	1.5	2	0.6	1.6	2	4.9	3.9	9.8	2.5	12.6
	*5	30	40	3	0.8	3	0.8	2	2.5	1	3.12	2.9	9.8	4.9	19.6	11.7	25.1
	*6	30	40	3	0.8	3	0.8	2.5	3	1.6	4.85	4.9	14.7	9.8	29.4	18.7	35.3
	*8	40	50	4	1	4	1	2.5	4	2.4	6.36	6.9	19.6	12.7	39.2	24.5	46.8
	*10	40	50	5	1.2	5	1.2	3	5	3	8.1	8.8	24.5	18.6	49	26.7	58.7
Plastic Ball NPJRS (*only)	*12	50	60	7.1	1.8	7	1.8	3	6	3.5	9.68	9.8	29.4	19.6	58.8	26.1	62.3
	*16	50	60	9.5	2.5	9.5	2.5	3	8	5.7	15.8	15.7	49	29.4	98	55.4	116

M3 and M4 have no slits 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

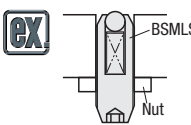
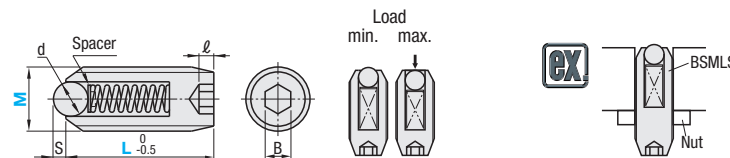
Ordering Example: Part Number BPJLS6 - L 40 Days to Ship [Configure Online](#) Price [Configure Online](#)

L Selectable Stainless Steel Long

RoHS10



Type	Body			Ball		Spring	Spacer	Operating Temperature
	Material	Hardness	Surface Treatment	Material	Hardness			
Ultra Light Load	BSJLS	304 Stainless Steel	440C Stainless Steel	55HRC	631 Stainless Steel	304 Stainless Steel	-30~260°C	
Light Load	BSMLS							
Heavy Load	BSZLS							
Extra Heavy Load	BSXLS							



Part Number	Type	M (Coarse)	L	d	S	l	B	Ultra Light Load (BSJLS)		Light Load (BSMLS)		Heavy Load (BSZLS)		Extra Heavy Load (BSXLS)		Unit Price
								min.	max.	min.	max.	min.	max.	min.	max.	
Metal Ball BSJLS BSMLS BSZLS BSXLS	3	20	30	1.5	0.5	1	1.5	0.3	0.65	1	2	1.5	2.9	2.2	5	
	4	20	30	2.5		1.5	2	0.6	1.62	1.9	4.9	3.9	9.8	2.5	12.5	
	5	30	40	3	0.8	2	2.5	1.1	3.21	3.3	9.8	4.9	19.6	11.2	24.1	
	6	30	40	3	0.8	2.5	3	1.7	4.96	5.1	15.3	9.8	29.4	17.7	33.4	
	8	40	50	4	1	2.5	4	2.5	6.56	5.5	19.1	12.7	39.2	21.4	45.3	
	10	40	50	5	1.2	3	5	3.2	8	8.9	24.1	18.6	49	23.5	60	
Plastic Ball NPJRS (*only)	*12	50	60	7.1	1.8	3	6	3.5	9.8	10.5	29.3	19.6	58.8	24.1	63.7	
	*16	50	60	9.5	2.5	3	8	6.1	15.6	14.9	48.9	29.4	98	43.6	116.3	

M3 and M4 have no slits 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 BSZLS8 - L 40 Days to Ship [Configure Online](#) Price [Configure Online](#)

Wrenches for Ball Plungers

RoHS10



Part Number	Applicable M Size	Applicable Plunger	Unit Price	Volume Discount Rate
BPJG1	5 - 6	P.1499 Standard (Metal Ball Only)	1~3 pc(s).	4~19 pcs.
BPJG2	8	P.1500 Stainless Steel		
BPJG3	10	P.1502 Long / Stainless Steel Long		
BPJG4	12	P.1503 L Selectable Long / L Selectable Stainless Steel Long		
BPJG5	16	P.1504 Flanged		

For orders larger than indicated quantity, please request a quotation.

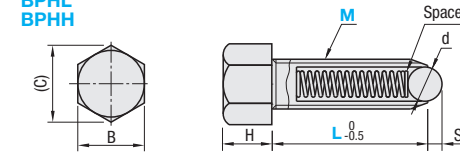
Ordering Example: Part Number BPJG2 Days to Ship [Configure Online](#)

Bolt Type

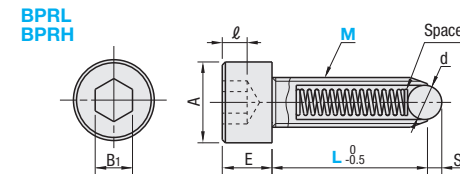


Type	Body			Ball		Spring	Spacer	Operating Temperature	
	Material	Hardness	Surface Treatment	Material	Hardness				
Light Load	Hex Screw	1045 Carbon Steel	29~35HRC	Black Oxide	52100 Bearing Steel	55HRC~	SWP-B	304 Stainless Steel	-30~80°C
Heavy Load									
Light Load	Hex Socket Head Cap Screw								
Heavy Load		4137 Alloy Steel		Electroless Nickel Plating	Steel				

Bolt Type



Hex Socket Head Cap Screw Type



L dimension includes the incomplete threaded portion (Pitch x2).

Part Number	Type	M	L	d	S	A	B	B1	(C)	E	H	l	Load (N)				Unit Price			
													min.	max.	min.	max.	BPHL, BPHH, BPRH	BPHL, BPHH	BPRL, BPRH	
Bolt Type BPHL BPHH	4	*10	*15	*20	30	2.5	7	7	3	8.1	4	2.8	2	1.9	4.9	3.9	9.8			
	5	*15	*20	30	40	3	8.5	8	4	9.2	5	3.5	2.5	3.3	9.8	4.9	19.6			
	6	*15	*20	30	40	3	10	10	5	11.5	6	4	3	5.1	15.3	9.8	29.4			
	8	*15	*20	30	40	4	13	13	6	15	8	5.5	4	5.5	19.1	12.7	39.2			
(Hex Socket Head Cap Screw Type) BPRL BPRH	10	15	*20	30	40	50	5	1.2	16	17	8	19.6	10	7	5	8.9	24.1	18.6	49	
	12		*25	30	40		7.1	1.8	18	19	10	21.9	12	8	6	10.9	29.3	19.6	58.8	
	16			40			9.5	2.5	24	24	14	27.7	16	10	8	14.9	48.9	29.4	98	

L size marked with * is only available for BPHL and BPHH.

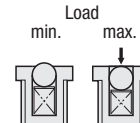
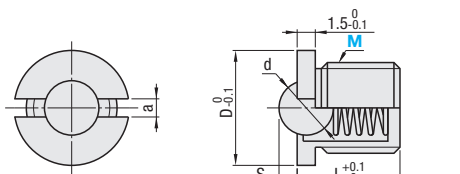
Ordering Example: Part Number BPRL5 - L 30 Days to Ship [Configure Online](#) Price [Configure Online](#)

Flanged

RoHS10



Type	Body			Ball		Spring	Operating Temperature
	Material	Hardness	Surface Treatment	Material	Hardness		
FBPJ	1045 Carbon Steel	29~35HRC	Black Oxide	440C Stainless Steel	55HRC~	631 Stainless Steel	-30~80°C
FBPJS	303 Stainless Steel	-	-	Steel	-	Steel	-30~260°C

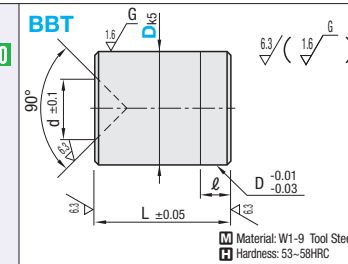


Part Number	Type	M (Coarse)	D	L	S	d	a	FBPJ Load (N)		FBPJS Load (N)		Applicable Wrench	Unit Price	
								min.	max.	min.	max.		FBPJ	FBPJS
FBPJ FBPJS	5	7	5	0.8	3	0.8	0.6	5.6	1.3	6.4	BPJG1			
	6	8	6	1	4	1	2.8	6.3	2.7	8	BPJG2			
	8	10	7	1.6	5		2.9	9.6	1.3	10.2	BPJG3			
	10	12	9	1.9	6.35	1.5	6.4	11.7	6.1	17.2	BPJG4			
	12	14	11.5	2.4	7.94		9	15	2.1	18.8	BPJG5			
	16	18	16	3.2	9.53	2	9.9	21.5	13	25.5	BPJG5			

Ordering Example: Part Number BBT6 Days to Ship [Configure Online](#) Price [Configure Online](#)

For Tapped Type which enables users to change the parts easily, refer to P.1505.

Ball Buttons



Part Number	Type	D	Dk5	L	d	l	Unit Price	Volume Discount Rate		
								1~19 pc(s)	20~49	50~199
BBT	6	6	+0.006 +0.001	8	2	2				
	8	8	+0.007	10	3					
	10	10	+0.001	12	4					
	12	12	+0.009	14	5	3				
	16	16	+0.001	18	8					

When using it in combination with a ball plunger, select the same No. (M=D). (BBT6 is also applicable to M5.)

Ordering Example: Part Number BBT6 Days to Ship [Configure Online](#) Price [Configure Online](#)