

Indexing Plungers

Fine / Coarse Threaded

Fine Threaded / Coarse Threaded

RoHS 10

Screw	Return Type	Rest Position Type	Knob		Main Body		Pin			Spring	(Lock Nut)	
			Material	Surface Treatment	Material	Surface Treatment	Material	Hardness	Surface Treatment	Material	Surface Treatment	
Fine Thread	PXA	PXYA	Nylon 6 (Mat Black)	Black Oxide	12L13 Carbon Steel	Black Oxide	1045 Carbon Steel or Equivalent	50~60 HRC min.	Black Oxide	JIS SWP-B Spring Steel	1045 Carbon Steel or Equivalent	Black Oxide
	PXK	PXYK			303 Stainless Steel					Nickel Plating	303 Stainless Steel	—
	SXPA	—			—					—	—	—
	SXPK	SXYK			—					—	—	—
Coarse Thread	PMXA	PMXYA	12L13 Carbon Steel	Trivalent Chromate	303 Stainless Steel	—	—	—	301 Stainless Steel	—	—	
	PMXK	PMXYK							1045 Carbon Steel or Equivalent	Trivalent Chromate		

Return Type

Fine Thread With Lock Nut

Rest Position Type

Fine Thread With Lock Nut

Return Type

Coarse Thread With Lock Nut

Rest Position Type

Coarse Thread With Lock Nut

*The nut is not in close contact under the neck because of the radius.

Fine Thread

kgf=Nx0.101972

Part Number	Type	M	Pitch (Fine Thread)	D	D ₁	B	S min.	L		Load (N)								Mass (g)						
								Return Type	Rest Position	L ₁	L ₂	L ₃	L ₄	L ₅	S _{w1}	S _{w2}	PXA / PXYA		SXPA		PXA	PXK	PXYA	PXYK
																	min.	max.	min.	max.				
PXA	BLPS	10	1.0	21	13.8	5	5	45	51	17	5	15	5	12	17	7	17	6	15	20	27	23	30	
PXK																								
SXPA																								
SXPK	BLPF	12	1.5	25	16.2	6	6	54.5	61	20	6	17	6	14	18	9	24	8	21	32	42	38	48	
PXYA																								
PXYK																								
PMXA	BLPS	16	1.5	31	21.9	8	8 (7)	69	75.5	26	8	23	8	19	24	11	30	9	26	70	90	79	99	
PMXK																								
PMXYA																								

Min. S dimension of Rest Position Type M16 is shown in the ().

Coarse Thread

Part Number	Type	M	Pitch (Coarse)	D	D ₁	B	S min.	L		Load (N)								Mass (g)						
								Return Type	Rest Position	L ₁	L ₂	L ₃	L ₄	L ₅	S _{w1}	S _{w2}	min.		max.		PMXA	PMXK	PMXYA	PMXYK
																	min.	max.	min.	max.				
PMXA	BLPS	6M	1.0	12	6.9	4	4	30.5	33	12	4.5	10	3.2	7	6	10	3	12	5	9	4	8		
PMXK																								
PMXYA																								
PMXYK																								
PMXA	BLPF	8M	1.25	16	9.2	5	5	40	43.5	16	6	14	4	9.5	8	13	5	24	10	15	11	16		
PMXK																								
PMXYA																								
PMXYK																								
PMXA	BLPS	10M	1.5	18	11.5	6	6	49	52	20	7.5	18	5	10.5	10	16	5	21	17	24	18	15		
PMXK																								
PMXA	BLPF	12M	1.75	21	13.8	8	8	59	63.5	24	9	22	6	13.5	12	18	6	22	31	41	36	46		
PMXK																								

Part Number Example Part Number **SXPA16** - **PMXK10M**

Ensure the Coarse Thread Type (PMXA / PMXK / PMXYA / PMXYK) do not exceed the tightening torques shown in the table to the right. Features of the Return Type and Rest Position Type P:1764.

M	Allowable Tightening Torque (Nm)
6	2
8	7
10	15
12	20

Ball Lock Pins

Spring / Push Pin

Ball Lock Pins – Spring Pin

RoHS 10

Type		Ball		Pin		Handle		Ring	
L Selectable	L Dimension Configurable	Material	Hardness	Material	Surface Treatment	Material	Surface Treatment	Material	Surface Treatment
BLPS	BLPF	440C Stainless Steel	HRC 55 min.	1045 Carbon Steel or Equivalent	Electroless Nickel Plating	1213 Carbon Steel	Electroless Nickel Plating	JIS-SWRH Carbon Steel	Nickel Plating

Application Example

Selectable L-Dimension

Part Number	Type	B	L Selection					B ₁	ℓ ₁	D	ℓ ₂	E
			5	6	8	10	12					
BLPS		30	25	30	40	50	5.5	6	11	22	25	
			25	30	40	50	7	7	11	22	25	
			25	30	40	50	9.5	8	11	22	25	
			25	30	40	50	12	9	16	27	25	
			25	30	40	50	14.5	10	16	27	25	
			25	30	40	50	19	14	19	32	25	

Configurable L-Dimension

Part Number	Type	B	L Selection					B ₁	ℓ ₁	D	ℓ ₂	E
			5mm Increment	5	6	8	10					
BLPF		50-100	10-30	5.5	6	11	22	25				
			15-50	7	7	11	22	25				
			20-100	9.5	8	11	22	25				
			25-100	12	9	16	27	25				
			30-100	14.5	10	16	27	25				
			50-100	19	14	19	32	25				

Part Number Example Part Number **BLPS8** - **25**
 Part Number **BLPF10** - **45**

B	Mating Hole Recommended Dim.	Resistance when Removed (N)	Pin Fracture Load (kN)	Mass (g)
5	5 ^{+0.07} ₀	9	5	19-22
6	6 ^{+0.07} ₀	9	7	21-28
8	8 ^{+0.09} ₀	9	13	27-58
10	10 ^{+0.09} ₀	20	20	59-105
12	12 ^{+0.11} ₀	30	29	73-135
16	16 ^{+0.11} ₀	50	51	159-237

Ball Lock Pins – Push Pin

Ball Lock Pins – Push Pin

RoHS 10

Type	Ball		Pin 1 Material	Pin 2 Material	Spring Material	Knob Material
	Material	Hardness				
BLP	440C Stainless Steel	55 HRC min.	630 Stainless Steel Equivalent	303 Stainless Steel	631 Stainless Steel	Nylon 6 (Black / Orange)

(1) When the button is pushed, the ball lock is released. The pin can be inserted into a hole as the balls are retracted inside the pin.

(2) When the button is released, the pin is locked as the balls extend outward from the pin.

(3) When the button is pushed again, the ball lock is released and the pin is pulled out.

Part Number	Type	B	L					D	D ₁	B ₁	ℓ ₁	ℓ ₂	Mating Hole Recommended Dimensions	Shear Load (kN)	Mass (g)				
			5	6	8	10	12									16			
BLP		38	10	15	20	25	30	16	5.5	6	31.5	5 ^{+0.07} ₀	11	30-32					
			10	15	20	25	30								40	50	6 ^{+0.07} ₀	17	31-39
			20	25	30	40	50								8 ^{+0.09} ₀	34	38-47		
			25	30	40	50	60								10 ^{+0.09} ₀	56	76-97		
			40	50	60	80	12 ^{+0.11} ₀								78	100-135			
			60	80	100	16 ^{+0.11} ₀	138								171-232				

Part Number Example Part Number **BLP8** - **25**