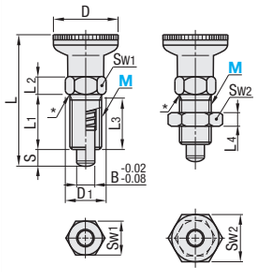
Indexing Plungers
Fine Thread / Coarse Thread

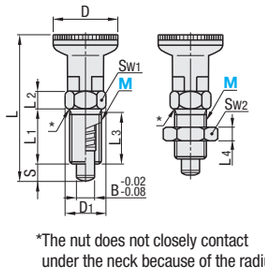
■Fine Thread / Coarse Thread

Screw	Returning	Rest Position	Knob M Material	Main Body M Material	Main Body S Surface Treatment	Pin M Material	Pin H Hardness	Pin S Surface Treatment	Spring M Material	(Lock Nut) M Material	(Lock Nut) S Surface Treatment
Fine Thread	PXA	PXYA	Nylon 6 (Mat Black)	SUM22L	Black Oxide	S45C	50~60HRC	Black Oxide	SWP-B	-	-
	PXK	PXYK								S45C	Black Oxide
	SXPA	-		SUS303	-	SUS303	-	Nickel Plating	SUS301	-	-
	SXPK	SXYK								SUS303	-
Coarse Thread	PMXA	PMXYA		SUM22L	Trivalent Chromate			-		-	-
	PMXK	PMXYK								S45C	Trivalent Chromate

[Fine Thread] Returning — Without Lock Nut / With Lock Nut

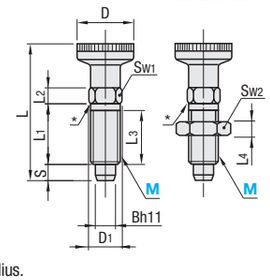


[Fine Thread] Rest Position — Without Lock Nut / With Lock Nut

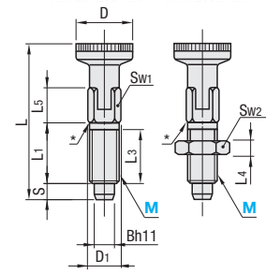


*The nut does not closely contact under the neck because of the radius.

[Coarse Thread] Returning — Without Lock Nut / With Lock Nut



[Coarse Thread] Rest Position — Without Lock Nut / With Lock Nut



■Tolerance

B	h11
4	0 -0.075
5	
6	0 -0.090
8	

• Features of the Returning Type and Rest Position Type ☞P.1779

■Fine Thread

M	Pitch (Fine Thread)	D	D1	B	S min.	L Returning	L Rest Position	L1	L2	L3	L4	SW1	SW2	Load (N) PXA, PXK, PXYA, PXYK min.	Load (N) PXA, PXK, PXYA, PXYK max.	Load (N) SXPA, SXPK, SXYK min.	Load (N) SXPA, SXPK, SXYK max.	Mass (g) PXA SXPA	Mass (g) PXK SXPK	Mass (g) PXYA	Mass (g) PXYK SXYK
10	1.0	21	13.8	5	5	45	51	17	5	15	5	12	17	7	17	6	15	20	27	23	30
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
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

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

kgf=Nx0.101972

Part Number Type	M	Unit Price Returning PXA	SXPA	PXK	SXPK	Rest Position PXYA	PXYK	SXYK
PXA PXK PXYA PXYK (Stainless Steel) SXPA SXPK SXYK	10							
	12							
	16							

■Coarse Thread

Part Number Type	M	Pitch (Coarse Thread)	D	D1	B	S min.	L Returning	L Rest Position	L1	L2	L3	L4	L5	SW1	SW2	Load (N) min.	Load (N) max.	Mass (g) PMXA	Mass (g) PMXK	Mass (g) PMXYA	Mass (g) PMXYK	Unit Price PMXA PMXYA	Unit Price PMXK PMXYK
PMXA	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	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		
PMXYA	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		
PMXYK	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		

kgf=Nx0.101972

Ordering Example — Part Number: SXPA16, PMXK10M

Since the Coarse Thread Type (PMXA, PMXK, PMXYA, PMXYK) are thin threaded, do not exceed the tightening torques shown in the table to the right.

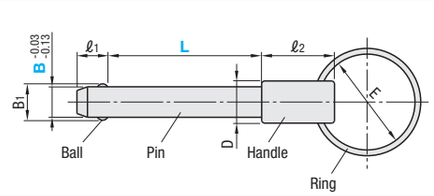
M	Allowable Tightening Torque (N · m)
6	2
8	7
10	15
12	20

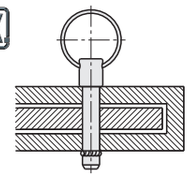
Ball Lock Pins
Spring Type / Push Type

■Features: Locks with the spring force. Priced at approx. 1/3 of the Push Type.

■Ball Lock Pins - Spring Type

Type L Selectable	Type L Configurable	Ball M Material	Ball H Hardness	Pin M Material	Pin S Surface Treatment	Handle M Material	Handle S Surface Treatment	Ring M Material	Ring S Surface Treatment
BLPS	BLPF	SUS440C	HRC55~	S45C	Electroless Nickel Plating	SUM23	Electroless Nickel Plating	SWRH	Nickel Plating





■L Selectable

Part Number Type	B	L Selection	B1	ℓ1	D	ℓ2	E	Unit Price L=25	L=30	L=40	L=50	L=60
BLPS	5	30	5.5	6	11	22	25	-		-	-	-
	6	25 30 40 50	7	7	11	22	25					-
	8	25 30 40 50	9.5	8	11	22	25					-
	10	25 30 40 50 60	12	9	16	27	25					
	12	60	14.5	10	16	27	25	-	-	-	-	
	16	60	19	14	19	32	25	-	-	-	-	

■L Configurable

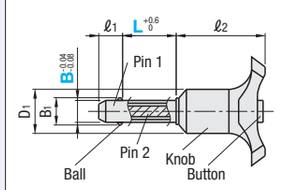
Part Number Type	B	L 5mm Increment	B1	ℓ1	D	ℓ2	E	Unit Price
BLPF	5	10~30	5.5	6	11	22	25	
	6	15~50	7	7	11	22	25	
	8	20~100	9.5	8	11	22	25	
	10	25~100	12	9	16	27	25	
	12	30~100	14.5	10	16	27	25	
	16	50~100	19	14	19	32	25	

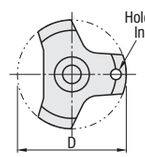
Ordering Example — Part Number: BLPS8 - 25, BLPF10 - 45

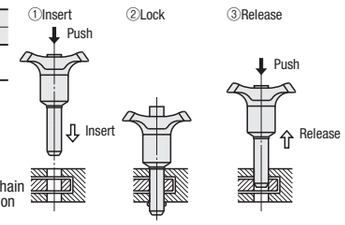
B	Mating Hole Recommended Dimensions	Resistance when Removed (N)	Pin Fracture Load (kN)	Mass (g)
5	$5^{+0.07}_{0}$	9	5	19~22
6	$6^{+0.07}_{0}$	9	7	21~28
8	$8^{+0.09}_{0}$	9	13	27~58
10	$10^{+0.09}_{0}$	20	20	59~105
12	$12^{+0.11}_{0}$	30	29	73~135
16	$16^{+0.11}_{0}$	50	51	159~237

■Ball Lock Pins - Push Type

Type	Ball M Material	Ball H Hardness	Pin 1 M Material	Pin 2 M Material	Spring M Material	Knob M Material
BLP	SUS440C	55HRC~	SUS630 Equivalent	SUS303	SUS631J1	Nylon 6 (Black, Orange)







①When the button is pushed, the ball lock is released. The pin can be inserted into a hole as the balls draw in the pin.
②When the button is released, the pin is locked as the balls extend outward from the pin.
③When the button is pushed again, the ball lock is released and the pin is pulled out.

Part Number Type	B	L	D	D1	B1	ℓ1	ℓ2	Mating Hole Recommended Dimensions	Shear Load (kN)	Mass (g)	Unit Price L=10~25	L=30~50	L=60, 80	L=100
BLP	5	10 15 20 25 30	38	16	5.5	6	31.5	$5^{+0.07}_{0}$	24	30~32			-	-
	6	10 15 20 25 30 40 50			7	7		$6^{+0.07}_{0}$	35	31~39			-	-
	8	20 25 30 40 50			9.5	8		$8^{+0.09}_{0}$	63	38~47			-	-
	10	25 30 40 50 60	43	23	12	9	36	$10^{+0.09}_{0}$	100	76~97				-
	12	40 50 60 80			14.5	10		$12^{+0.11}_{0}$	144	100~135	-			-
	16	60 80 100			19	14		$16^{+0.11}_{0}$	257	171~232	-	-		

Ordering Example — Part Number: BLP8 - 25