Posts for Tension Springs

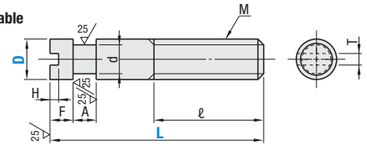
Groove / Roller

Posts for Tension Springs – Groove

RoHS10

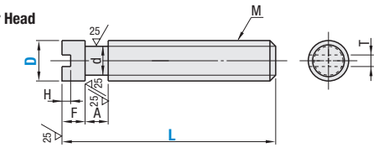
ℓ Dimension Selectable

BSPO
SBSPO
(Stainless Steel)



Full Thread Under Head

BSPOZ
SBSPOZ
Stainless Steel



The ℓ dimensions marked with * in the specification table are for dimensions in the right table.

Type	D - L	ℓ
BSPO	5-15	8
	6-15	7
	6-20	12
	8-20	11
SBSPO	8-25	16
	10-30	17
	10-35	22
	12-40	20

Type	Material	Surface Treatment	Accessories Material
BSPO BSPOZ	1045 Carbon Steel or Equivalent	Black Oxide	Nut 1 pc. (JIS Class 1) SWCH Carbon Steel Equivalent
SBSPO SBSPOZ	303 Stainless Steel	—	Nut 1 pc. (JIS Class 1) 304 Stainless Steel

Part Number Type	D	L										M (Coarse)	ℓ*	A	F	H	T	d
L Dimension Selectable BSPO SBSPO Stainless Steel	3	15	20	25	30	35	40					M3	10	1.0	3	1.0	1.2	1.8
	4	15	20	25	30	35	40		50			M4		1.2				2.0
	5	*15	20	25	30	35	40		50			M5		2.0	4	2.0		3.0
	6	*15	*20	25	30	35	40	45	50	60		M6	16	3.0				3.6
	8		*20	*25	30	35	40	45	50	60	70	M8	20			2.5		5.0
	10				*30	*35	40	45	50	60	70	M10	25					6.0
	12						*40		50	60	70	M12	30	4.0			1.8	6.5

Part Number Type	D	L										M (Coarse)	A	F	H	T	d
Full Thread Under Head BSPOZ SBSPOZ Stainless Steel	3	10	15	20	25							M3	1.0	3	1.0	1.2	1.8
	4	10	15	20	25	30						M4	1.2				2.0
	5		15	20	25	30	35					M5	2.0	4	2.0		3.0
	6			20	25	30	35	45				M6	3.0				3.6
	8				25	30	35	45	55	65		M8			2.5		5.0
	10					30	35	45	55	65		M10					6.0
	12						35	45	55			M12	4.0			1.8	6.5

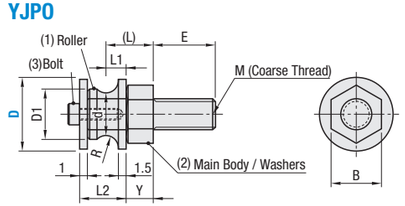
Part Number Example

Part Number	-	L
BSP08	-	40

Posts for Tension Springs – Rollers

RoHS10

YSPO
YJPO



Components	Material / Treatment	YSPO	YJPO
(1) Roller	Material	303 Stainless Steel	Polyacetal (White)
	Surface Treatment	Electroless Nickel Plating	—
	Hardness	Hv1000 Effective Depth 0.01	—
(2) Main Body, Washer	Material	1045 Carbon Steel or Equivalent	303 Stainless Steel
	Surface Treatment	Electroless Nickel Plating	—
(3) Screw	Material	302HQ Stainless Steel	302HQ Stainless Steel

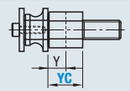
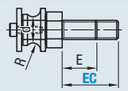
Part Number Type	D	Mounting length (L)	(1) Rollers L_1	D_1	d	R	(2) Main Body L_2	Y	M	E	B	Accessories (3) Screws	Applicable Tension Springs
YSPO YJPO	8	8	2.5	5.5	4.5	1	5.5	5.5	M4	10	7	SCB2-5	D 8
	9	9	3	6.5	5.5	1.5	6.5	6	M5	12	8		D9 / D10
	12	11	3.5	8	7	2	7.5	7.5	M6		10		D12 / D14
	15	13		10	8			9.5				SCB3-5	D16 / D18
	18	16	4	13	11	2.5	8.5	12	M8	16	13		D20 / D24

Part Number Example

Part Number
YSP012

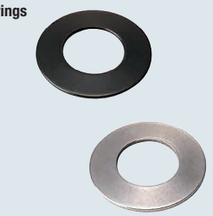
Part Number Alterations

Part Number	-	YC(EC)
YSP09	-	YC10

Alterations	Y Dimensions	E Dimensions
		
Code	YC	EC
Spec.	Changes the Y Dimension. Y<YC≦30 Specify in 1 mm Increment	Changes the E Dimension. M≦EC≦Mx5 Specify in 1 mm Increment

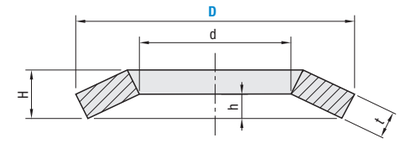
Disk Springs

Disk Springs



RoHS10

SRBN
SSRBN
Stainless Steel



t	Load Tolerance (75% Deflection)
0.3–1.1	+25% -7.5%
1.2–3	+15% -7.5%

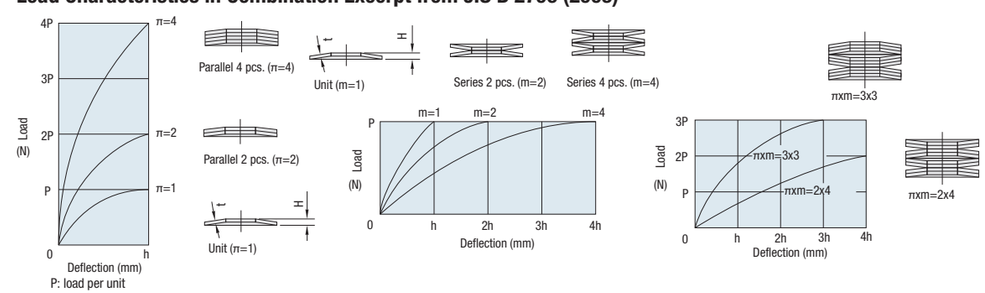
Type	Material	Surface Treatment	Hardness
SRBN	1065 or 1070 Carbon Steel	Black Oxide D45 and 50 are not treated.	42–50 HRC min.
SSRBN	304 Stainless Steel	—	37–46 HRC min.

JIS B 2706-1995
JIS B 2706-1995 Equivalent

Part Number Type	D	Load Type	D	d		t	H		h	Load N 75% Deflection SRBN	SSRBN
SRBN SSRBN Stainless Steel	8	A	0 -0.15	4.2	+0.15 0	0.3	0.55	±0.10	0.25	118	102
		B				0.4	0.60		0.20	206	179
	10	A		5.2		0.4	0.70		0.30	206	179
		B				0.5	0.75		0.25	324	282
	12.5	A	0 -0.20	6.2		0.5	0.85		0.35	294	256
		B				0.7	1.00		0.30	657	572
	14	A		7.2		0.5	0.90		0.40	275	239
		B				0.8	1.10		0.30	794	691
	16	A		8.2		0.6	1.05		0.45	412	358
		B				0.9	1.25		0.35	1,030	896
	18	A		9.2		0.7	1.20		0.50	569	495
		B				1.0	1.40	±0.15	0.40	1,275	1,109
	20	A	0 -0.25	10.2	+0.20 0	0.8	1.35	±0.10	0.55	745	648
		B				1.1	1.55	±0.15	0.45	1,520	1,322
	22.5	A		11.2		0.8	1.45	±0.10	0.65	706	614
		B				1.25*	1.75*	±0.15	0.50	1,932	1,681
	25	A		12.2		0.9	1.60	±0.10	0.70	863	751
		B				1.5*	2.05*	±0.15	0.55	2,922	2,542
	28	A		14.2		1.0	1.80		0.80	1,128	981
		B				1.5*	2.15*		0.65	2,844	2,474
	31.5	A	0 -0.30	16.3		1.25*	2.15*		0.90	1,912	1,664
		B				1.75*	2.45*		0.70	3,874	3,370
	35.5	A		18.3	+0.25 0	1.25*	2.25*		1.00	1,697	1,476
		B				2.0	2.80		0.80	5,198	4,522
	40	A		20.4		1.5*	2.65*		1.15	2,618	2,278
		B				2.25*	3.15*		0.90	6,502	5,657
	45	A		22.4		1.75*	3.05*		1.30	3,648	3,174
		B				2.5	3.50	±0.2	1.00	7,698	6,697
	50	A		25.4		2.0	3.40	±0.15	1.40	4,765	4,146
		B				3.0	4.10	±0.2	1.10	11,964	10,409

Sizes marked with * differ from JIS standards.
Load is reference value. kgf=N×0.101972

Load Characteristics in Combination Excerpt from JIS B 2706 (2003)



Parallel Combination **Series Combination** **Parallel and Series Combination**

A guide is necessary to keep the springs aligned.
Please use the disc springs of same size and load only.

Part Number Example

Part Number	-	Load Type A / B
SRBN22.5	-	A