

# Posts for Tension Springs

Groove Type / Roller Type

**Groove Type**

**Dimension Selectable**

**BSPO**  
**SBSPQ**  
(Stainless Steel)

**Full Thread under Head**

**BSPOZ**  
**SBSPQZ**  
(Stainless Steel)

RoHS10

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

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

Type	Material	Surface Treatment	Accessory / Material
BSPO	S45C Equivalent	Black Oxide	Nut 1 pc. (JIS Class 1) SWCH Equivalent
SBSPQ	SUS303	-	Nut 1 pc. (JIS Class 1) SUS304 Equivalent

Part Number	Type	D	L					M (Coarse)	ℓ*	A	F	H	T	d	BSPO		SBSPQ	
			15	20	25	30	35								40	Unit Price	Volume Discount Rate	Unit Price
Dimension Selectable BSPO SBSPQ (Stainless Steel)	3	3	15	20	25	30	35	40	M3	10	1.0	3	1.0	1.8	1 - 49 pc(s)	50 - 100 pcs	1 - 49 pc(s)	50 - 100 pcs
	4	4	15	20	25	30	35	40	50	M4	1.2	3	2.0					
	5	5	15	20	25	30	35	40	50	M5	2.0	4	2.0					
	6	6	15	20	25	30	35	40	45	50	60	M6	16	2.0				
	8	8	20	25	30	35	40	45	50	60	70	M8	20	3.0	4	2.5		
	10	10	30	35	40	45	50	60	70	M10	25	3.0	4	2.5				
12	12	40	50	60	70			M12	30	4.0	4.0	1.8	6.5					

Part Number	Type	D	L					M (Coarse)	A	F	H	T	d	BSPOZ		SBSPQZ	
			10	15	20	25	30							Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
Full Thread under Head BSPOZ SBSPQZ (Stainless Steel)	3	3	10	15	20	25	M3	1.0	3	1.0	1.0	1.8	1 - 49 pc(s)	50 - 100 pcs	1 - 49 pc(s)	50 - 100 pcs	
	4	4	10	15	20	25	30	M4	1.2	3	1.0	2.0					
	5	5	15	20	25	30	35	M5	2.0	4	2.0	3.0					
	6	6	20	25	30	35	45	M6	16	4	2.0	3.6					
	8	8	25	30	35	45	55	65	M8	3.0	4	5.0					
	10	10	30	35	45	55	65	M10	25	4	2.5	6.0					
12	12	35	45	55			M12	4.0	4.0	1.8	6.5						

Ordering Example: Part Number **BSPO8** - **L** **40**

**Roller Type**

**YSPO**  
**YJPO**

Components	Material / Treatment	YSPO	YJPO
① Roller	Material: SUS303 Surface Treatment: Electroless Nickel Plating Hardness: Hv1000 (Effective Depth 0.01)	Polyacetal (White)	-
② Main Body, Washer	Material: S45C Surface Treatment: Electroless Nickel Plating	SUS303	-
③ Screw	Material: SUSXM7	SUSXM7	-

Part Number	Type	D	Mounting Length (L)	① Roller				② Main Body, Washer				Accessory ③ Screw	Applicable Tension Spring	Unit Price	Volume Discount Rate		
				L1	D1	d	R	L2	Y	M	E				B	1 - 10 pc(s)	11 - 20
YSPO YJPO	8	8	8	2.5	5.5	4.5	1	5.5	5.5	M4	10	7	SCB2-5	D8			
	9	9	3	6.5	5.5	1.5	6.5	6	M5	8	10	8	SCB2-5	D9 · D10			
	12	11	3.5	8	7	2	7.5	7.5	M6	12	10	10	SCB3-5	D12 · D14			
	15	13	4	10	8	2.5	8.5	9.5	M8	16	13	13	SCB3-5	D16 · D18			
18	16	4	13	11	2.5	8.5	12	M8	16	13	13	SCB3-5	D20 · D24				

Ordering Example: Part Number **YSPO12**

Alterations

Alterations	Y Dimensions	E Dimensions
Code	YC	EC
Spec.	Changes Y dimension. Y < YC ≤ 30 Specify in 1mm Increment	Changes E dimension. M ≤ EC ≤ Mx5 Specify in 1mm Increment

Ordering Example: Part Number **YSPO9** - **YC/EC** **12**

# Disk Springs

RoHS10

**SRBN**  
**SSRBN**  
(Stainless Steel)

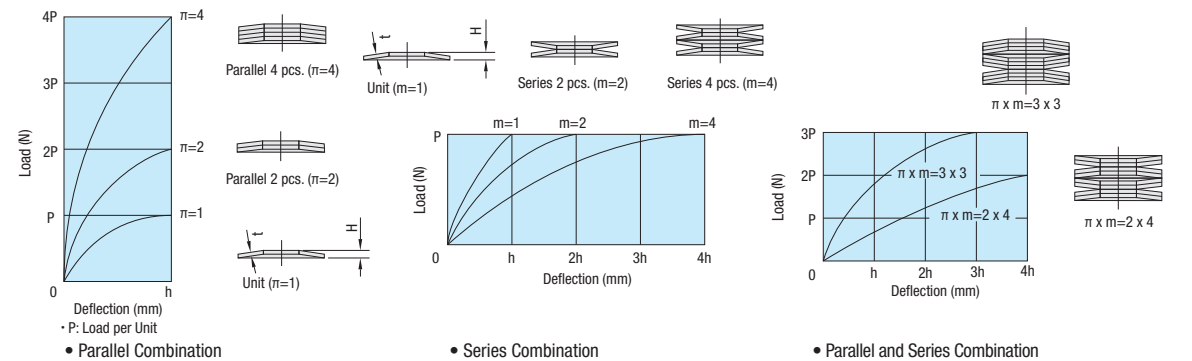
t	Load Tolerance (75% Deflection)
0.3~1.1	+25% -7.5%
1.2~3	+15% -7.5%

Type	Material	Surface Treatment	Hardness
SRBN8-45	S65C	Black Oxide	42~48HRC
SRBN50	SUP10	D45 and 50 are not treated.	
SSRBN	SUS304-CSP	-	37~46HRC

Part Number	Load Type	D	d	t	H	h	Load (75% Deflection) N		SRBN			SSRBN		
							SRBN	SSRBN	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
							1 - 49 pc(s)	50 - 74	75 - 99	100 - 500	1 - 49 pc(s)	50 - 74	75 - 99	100 - 500
8	A	0	4.2	0.3	0.55	0.25	133	117.7						
	B						0.20	234	205.9					
10	A	-0.15	5.2	0.4	0.70	0.30	232	205.9						
	B						0.25	360	323.6					
12.5	A	0	6.2	0.5	0.85	0.35	333	294.2						
	B						0.30	769	657.1					
14	A	+0.15	7.2	0.7	1.00	0.40	316	274.6						
	B						0.30	921	794.3					
16	A	0	8.2	0.6	1.05	0.45	459	411.9						
	B						0.35	1,120	1,029.7					
18	A	-0.20	9.2	0.7	1.20	0.50	630	568.8						
	B						1.0	1,400	1,274.9					
20	A	0	10.2	0.8	1.35	0.55	812	745.3						
	B						1.1	1,550	1,520					
22.5	A	0	11.2	0.8	1.45	0.65	766	706.1						
	B						1.2(1.25)	1,7(1.75)	1,870	1,931.9				
25	A	-0.25	12.2	0.9	1.60	0.70	929	863						
	B						1.6(1.5)	2.15(2.05)	3,770	2,922.4				
28	A	0	14.2	1.0	1.80	0.80	1,180	1,127.8						
	B						1.6(1.5)	2.25(2.15)	3,680	2,843.9				
31.5	A	+0.20	16.3	1.2(1.25)	2.1(2.15)	0.90	1,810	1,912.3						
	B						1.8(1.75)	2.5(2.45)	4,490	3,873.6				
35.5	A	0	18.3	1.2(1.25)	2.2(2.25)	1.00	1,590	1,696.6						
	B						2.0	2.80	5,460	5,197.5				
40	A	-0.30	20.4	1.6(1.5)	2.75(2.65)	1.15	3,290	2,618.4						
	B						2.0(2.25)	3.1(3.15)	6,000	6,501.8				
45	A	0	22.4	1.8(1.75)	3.1(3.05)	1.30	4,130	3,648.1						
	B						2.5	3.50	8,040	7,698.2				
50	A	+0.25	25.4	2.0	3.40	1.40	5,110	4,765.2						
	B						3.0	4.10	13,400	11,964				

t and H dimensions for SSRBN are shown in ( ). (Different from JIS) kgf=Nx0.101972 Load is reference value.

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



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

Ordering Example: Part Number **SRBN22.5** - **Load Type** **A**, **B**