


# Posts for Tension Springs

Groove Type / Roller Type

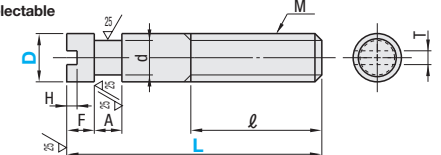
**Groove Type**



RoHS

**Dimension Selectable**

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

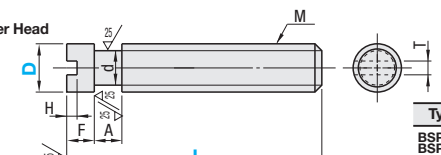


The  $\ell$  dimensions marked with \* in the specification table are for dimensions in the right table.

Type	D-L	$\ell$
BSPO	5-15	8
	6-15	7
	6-20	12
SBSPQ	8-20	11
	8-25	16
SBSPQ	10-30	17
	10-35	22
	12-40	20

**Full Thread under Head**

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



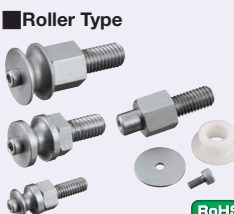
Type	M Material	S Surface Treatment	A Accessory / Material
BSPO	S45C Equivalent	Black Oxide	Nut 1 pc. (JIS Class 1) SWCH Equivalent
SBSPQ	SUS303	-	Nut 1 pc. (JIS Class 1) SUS304 Equivalent

Part Number	Type	D	L						M (Coarse)	$\ell^*$	A	F	H	T	d	BSPO		SBSPQ	
			15	20	25	30	35	40								Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
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	3	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	2.5	1.8						

Part Number	Type	D	L						M (Coarse)	A	F	H	T	d	BSPOZ		SBSPQZ	
			10	15	20	25	30	35							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	1.8	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	3	1.0	3.0					
	6	6	20	25	30	35	45		M6	16	2.0	1.2	3.6					
	8	8	25	30	35	45	55	65	M8	3.0	4	2.5	5.0					
	10	10	30	35	45	55	65		M10	25	3.0	4	6.0					
12	12	35	45	55				M12	4.0	4	2.5	6.5						

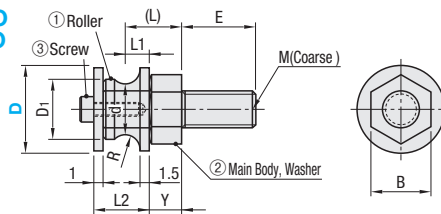
Ordering Example: Part Number **BSPO8** - **L** **40**

**Roller Type**



RoHS

**YJPO**  
**YSPO**



Components	Material / Treatment	YSPO	YJPO
① Roller	M Material: SUS303	Polyacetal (White)	
	S Surface Treatment: Electroless Nickel Plating		
	H Hardness: Hv1000 (Effective Depth 0.01)		
② Main Body, Washer	M Material: S45C	SUS303	
	S Surface Treatment: Electroless Nickel Plating		
③ Screw	M 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	D 8			
	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	M6	12	10	10	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	Y Dimensions		E Dimensions	
	Y	YC	E	EC
Code	YC		EC	
Spec.	Changes Y dimension. Y < YC ≤ 30 Specify in 1mm Increment		Changes E dimension. M ≤ EC ≤ Mx5 Specify in 1mm Increment	

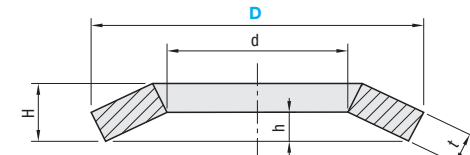
Alterations: Part Number - **YC/EC**  
**YSPO9** - **YC10**

# Disk Springs



RoHS

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



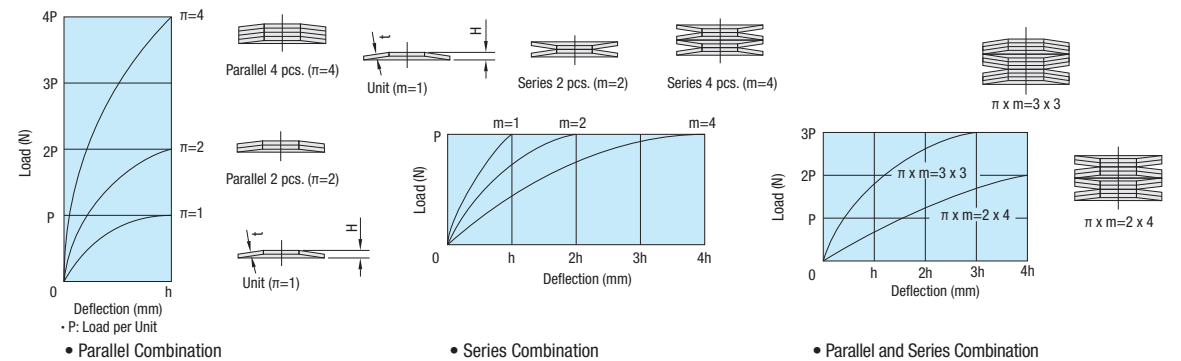
t	Load Tolerance (75% Deflection)
0.3~1.1	+25% -7.5%
1.2~3	+15% -7.5%

Type	M Material	S Surface Treatment	H Hardness
SRBN8-45	S65C	Black Oxide	42~48HRC
SRBN50	SUP10	D45 and 50 are not treated.	42~48HRC
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						20	234	205.9					
10	A	-0.15	5.2	0.4	0.70	0.30	232	205.9						
	B						25	360	323.6					
12.5	A	0	6.2	0.5	0.85	0.35	333	294.2						
	B						30	769	657.1					
14	A	+0.15	7.2	0.7	1.00	0.40	316	274.6						
	B						30	769	657.1					
16	A	0	8.2	0.8	1.10	0.30	921	794.3						
	B						45	459	411.9					
18	A	-0.20	9.2	0.9	1.25	0.35	1,120	1,029.7						
	B						45	459	411.9					
20	A	0	10.2	1.0	1.40	0.40	1,380	1,274.9						
	B						45	459	411.9					
22.5	A	+0.25	11.2	1.1	1.55	0.45	2,040	1,520						
	B						45	459	411.9					
25	A	0	12.2	1.2	1.75	0.50	1,870	1,931.9						
	B						45	459	411.9					
28	A	+0.20	14.2	1.6	2.15	0.55	3,770	2,922.4						
	B						45	459	411.9					
31.5	A	0	16.3	1.8	2.5	0.65	3,680	2,843.9						
	B						45	459	411.9					
35.5	A	+0.15	18.3	2.0	2.80	0.80	5,460	5,197.5						
	B						45	459	411.9					
40	A	0	20.4	2.0	2.75	1.15	3,290	2,618.4						
	B						45	459	411.9					
45	A	+0.25	22.4	2.0	3.15	0.90	6,000	6,501.8						
	B						45	459	411.9					
50	A	0	25.4	3.0	4.10	1.10	13,400	11,964						
	B						45	459	411.9					

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**