


Posts for Tension Springs

Groove Type / Roller Type

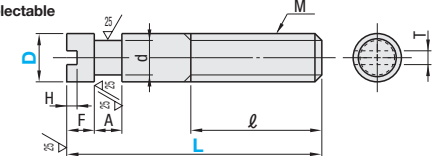
Groove Type



RoHS10

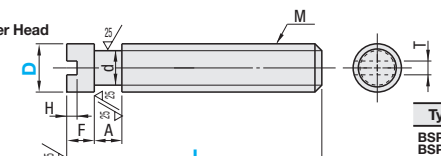
Dimension Selectable

BSPO
SBSPQ
(Stainless Steel)



Full Thread under Head

BSPOZ
SBSPQZ
(Stainless Steel)



∠ (25/)

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

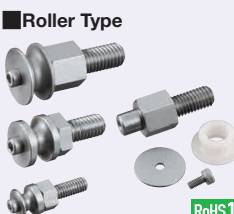
| Type | D-L | ∠ |
|--------|-------|----|
| BSPO | 5-15 | 8 |
| | 6-15 | 7 |
| | 6-20 | 12 |
| SBSPQ | 8-25 | 11 |
| | 8-25 | 16 |
| BSPOZ | 10-30 | 17 |
| | 10-35 | 22 |
| SBSPQZ | 12-40 | 20 |

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

| Part Number | | BSPOZ | | | | | | | | | | SBSPQZ | | | | | | | | | |
|--|----|-------|----|-----|-----|----|-----|-----|-----|-----|--------------|--------------|--------------|--------------|---|---|---|------------|----------------------|------------|----------------------|
| Type | D | L | | | | | | | | | | M (Coarse) | A | F | H | T | d | Unit Price | Volume Discount Rate | Unit Price | Volume Discount Rate |
| Full Thread under Head BSPOZ SBSPQZ (Stainless Steel) | 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 | 10 | 15 | 20 | 25 | 30 | M4 | 1.2 | | | | | | | | | | | | | |
| | 5 | 15 | 20 | 25 | 30 | 35 | M5 | 2.0 | | | | | | | | | | | | | |
| | 6 | 20 | 25 | 30 | 35 | 45 | M6 | | | | | | | | | | | | | | |
| | 8 | 25 | 30 | 35 | 45 | 55 | 65 | M8 | 3.0 | 4 | 2.0 | | | | | | | | | | |
| | 10 | 30 | 35 | 45 | 55 | 65 | M10 | | | 2.5 | | | | | | | | | | | |
| 12 | 35 | 45 | 55 | M12 | 4.0 | | | 1.8 | 6.5 | | | | | | | | | | | | |

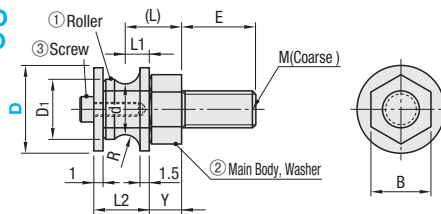
Ordering Example: Part Number **BSPO8** - **L** **40**

Roller Type



RoHS10

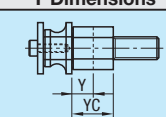
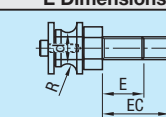
YSPO
YJPO



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

| Part Number | | Mounting Length (L) | ① Roller | | | | ② Main Body, Washer | | | | Accessory | Applicable Tension Spring | Unit Price | Volume Discount Rate | | |
|--------------|----|---------------------|----------|-----|-----|-----|---------------------|-----|----|----|-----------|---------------------------|--------------|----------------------|-------|--------|
| Type | D | (L) | L1 | D1 | d | R | L2 | Y | M | E | B | ③ Screw | 1 ~ 10 pc(s) | 11-20 | 21-50 | 51-100 |
| 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 | 8 | | | D9 · D10 | | | |
| | 12 | 11 | 3.5 | 8 | 7 | | 7.5 | 7.5 | M6 | 12 | 10 | | D12 · D14 | | | |
| | 15 | 13 | 4 | 10 | 8 | 2 | 9.5 | 9.5 | M8 | 16 | 13 | | D16 · D18 | | | |
| 18 | 16 | 4 | 13 | 11 | 2.5 | 8.5 | 12 | M8 | 16 | 13 | | D20 · D24 | | | | |


Ordering Example: Part Number **YSPO12**

| 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 |

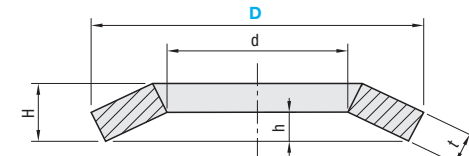
Alterations: Part Number - **YC/EC**
YSPO9 - **YC10**

Disk Springs

SRBN
SSRBN
(Stainless Steel)



RoHS10



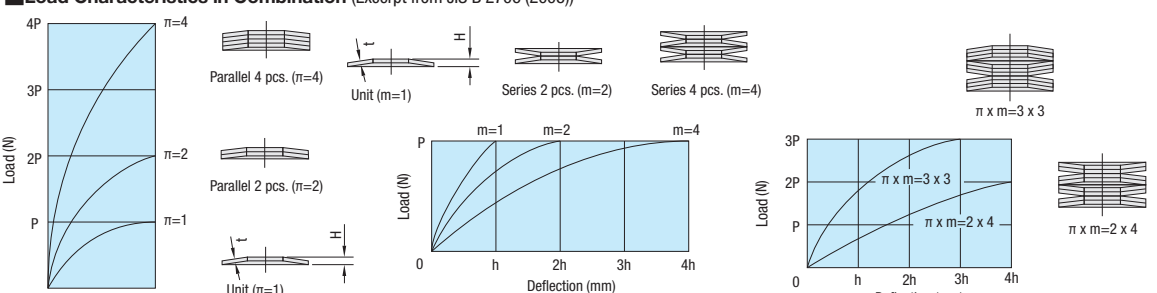
| t | Load Tolerance (75% Deflection) |
|---------|---------------------------------|
| 0.3~1.1 | +25% -7.5% |
| 1.2~3 | +15% -7.5% |

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

| Part Number | Load Type | D | d | t | H | h | SRBN | | | | SSRBN | | | | | |
|-------------|-----------|-------|------|-------|-------|------|----------------|--------|------------|-------|----------------------|---------|------------|-------|----------------------|---------|
| | | | | | | | 75% Deflection | | Unit Price | | Volume Discount Rate | | Unit Price | | Volume Discount Rate | |
| | | | | | | | SRBN | SSRBN | 1-49 | 50-74 | 75-99 | 100-500 | 1-49 | 50-74 | 75-99 | 100-500 |
| 8 | A | 0 | 4.2 | 0.3 | 0.55 | 0.25 | 118 | 102 | | | | | | | | |
| | B | | | | | | 206 | 179 | | | | | | | | |
| 10 | A | -0.15 | 5.2 | 0.4 | 0.60 | 0.30 | 206 | 179 | | | | | | | | |
| | B | | | 0.5 | 0.75 | 0.25 | 324 | 282 | | | | | | | | |
| 12.5 | A | 0 | 6.2 | 0.5 | 0.85 | 0.35 | 294 | 256 | | | | | | | | |
| | B | | | 0.7 | 1.00 | 0.30 | 657 | 572 | | | | | | | | |
| 14 | A | 0 | 7.2 | 0.5 | 0.90 | 0.40 | 275 | 239 | | | | | | | | |
| | B | | | 0.8 | 1.10 | 0.30 | 794 | 691 | | | | | | | | |
| 16 | A | -0.20 | 8.2 | 0.6 | 1.05 | 0.45 | 412 | 358 | | | | | | | | |
| | B | | | 0.9 | 1.25 | 0.35 | 1,030 | 896 | | | | | | | | |
| 18 | A | 0 | 9.2 | 0.7 | 1.20 | 0.50 | 569 | 495 | | | | | | | | |
| | B | | | 1.0 | 1.40 | 0.40 | 1,275 | 1,109 | | | | | | | | |
| 20 | A | 0 | 10.2 | 0.8 | 1.35 | 0.55 | 745 | 648 | | | | | | | | |
| | B | | | 1.1 | 1.55 | 0.45 | 1,520 | 1,322 | | | | | | | | |
| 22.5 | A | 0 | 11.2 | 0.8 | 1.45 | 0.65 | 706 | 614 | | | | | | | | |
| | B | | | 1.25* | 1.75* | 0.50 | 1,932 | 1,681 | | | | | | | | |
| 25 | A | -0.25 | 12.2 | 0.9 | 1.60 | 0.70 | 863 | 751 | | | | | | | | |
| | B | | | 1.5* | 2.05* | 0.55 | 2,922 | 2,542 | | | | | | | | |
| 28 | A | 0 | 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 | 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 | 0 | 18.3 | 1.25* | 2.25* | 1.00 | 1,697 | 1,476 | | | | | | | | |
| | B | | | 2.0 | 2.80 | 0.80 | 5,198 | 4,522 | | | | | | | | |
| 40 | A | -0.30 | 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 | 0 | 22.4 | 1.75* | 3.05* | 1.30 | 3,648 | 3,174 | | | | | | | | |
| | B | | | 2.5 | 3.50 | 1.00 | 7,698 | 6,697 | | | | | | | | |
| 50 | A | 0 | 25.4 | 2.0 | 3.40 | 1.40 | 4,765 | 4,146 | | | | | | | | |
| | B | | | 3.0 | 4.10 | 1.10 | 11,964 | 10,409 | | | | | | | | |

* Sizes marked with * differ from JIS standards.
 * Load is reference value. kgf=Nx0.101972

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.

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