

Roller Plungers

Bolt / Flange Mount

Roller Plungers – Bolt

| Type | Main Body | | Pin | | Bearing | Bushing | Spring | Accessories (Nut x 2 pcs.) | | |
|------------|-----------|---------------------------------|----------------------------|---------------------------------|----------------------------|---------------------|--------------------------|----------------------------|---------------------------------|----------------------------|
| | Material | Surface Treatment | Material | Surface Treatment | Material | Material | Material | Material | Surface Treatment | |
| Light Load | RBPJ | 1045 Carbon Steel or Equivalent | Electroless Nickel Plating | 1045 Carbon Steel or Equivalent | Electroless Nickel Plating | 52100 Bearing Steel | High-Tensile Brass Alloy | 304 Stainless Steel | 1018 Carbon Steel or Equivalent | Electroless Nickel Plating |
| Heavy Load | RBSJ | 1045 Carbon Steel or Equivalent | Electroless Nickel Plating | 1045 Carbon Steel or Equivalent | Electroless Nickel Plating | 52100 Bearing Steel | High-Tensile Brass Alloy | 304 Stainless Steel | 1018 Carbon Steel or Equivalent | Electroless Nickel Plating |

RoHS10

| Part Number | Type | M (course) | d | b | E | L ₁ | M | Nut | | | Load (N) | |
|-------------|------|------------|----|---|------|----------------|----------|-----|------|----|----------|------|
| | | | | | | | | B | (C) | T | min. | max. |
| Light Load | RBPJ | 16 | 10 | 4 | 9 | 25 | 16 x 2.0 | 24 | 27.7 | 10 | 1.6 | 4.8 |
| | | 20 | 19 | 6 | 11.5 | 30 | 20 x 2.5 | 30 | 34.6 | 12 | | |
| Heavy Load | RBSJ | 16 | 10 | 4 | 9 | 25 | 16 x 2.0 | 24 | 27.7 | 10 | 2.9 | 8.4 |
| | | 20 | 19 | 6 | 11.5 | 30 | 20 x 2.5 | 30 | 34.6 | 12 | | |

Part Number Example

Part Number: **RBPJ20**

Roller Plungers – Flange Mount

| Type | Main Body | | Pin | | Bearing | Bushing | Spring | |
|----------------|-----------|---------------------------------|----------------------------|---------------------------------|----------------------------|---------------------|--------------------------|---------------------|
| | Material | Surface Treatment | Material | Surface Treatment | Material | Material | Material | |
| Side Mount | TBPJ | 1045 Carbon Steel or Equivalent | Electroless Nickel Plating | 1045 Carbon Steel or Equivalent | Electroless Nickel Plating | 52100 Bearing Steel | High-Tensile Brass Alloy | 304 Stainless Steel |
| Vertical Mount | SBPJ | 1045 Carbon Steel or Equivalent | Electroless Nickel Plating | 1045 Carbon Steel or Equivalent | Electroless Nickel Plating | 52100 Bearing Steel | High-Tensile Brass Alloy | 304 Stainless Steel |

RoHS10

| Part Number | Type | No. | d | b | D | E | L ₁ | Load (N) | |
|-------------|---------------------|-----|----|---|----|------|----------------|----------|------|
| | | | | | | | | min. | max. |
| Light Load | TBPJ Side Mount | 1 | 14 | 5 | 10 | 11 | 25 | 3 | 5.1 |
| | | 1A | 19 | 6 | 11 | 12.8 | 27.5 | | |
| Heavy Load | TBPJ Side Mount | 2 | 14 | 5 | 10 | 11 | 25 | 6.1 | 10.4 |
| | | 2A | 19 | 6 | 11 | 12.8 | 27.5 | | |
| Light Load | SBPJ Vertical Mount | 1 | 14 | 5 | 10 | 11 | 25 | 3 | 5.1 |
| | | 1A | 19 | 6 | 11 | 12.8 | 27.5 | | |
| Heavy Load | SBPJ Vertical Mount | 2 | 14 | 5 | 10 | 11 | 25 | 6.1 | 10.4 |
| | | 2A | 19 | 6 | 11 | 12.8 | 27.5 | | |

⊖ No. 1A and 2A have larger bearing dia. than that of conventional products.

Part Number Example

Part Number: **TBPJ2A**

Application Example

Feature
The stroke is longer (5–10 mm) than that of ball plungers (0.2–2.5 mm).

Spring Plungers

Standard / Steel

Spring Plungers – Steel

| Load Category | Type | | Body | | | Pin | | | Spring | Operating Temperature |
|---------------|------------------|---------------------|--|-------------------|-------------------|---------------------------------|-----------------------------------|--------------------|--------|-----------------------|
| | Standard | Without Thread-Lock | Material | Hardness | Surface Treatment | Material | Hardness | Surface Treatment | | |
| Steel Nose | Ultra Light Load | PJS | M3–M12 SCM435 | 29–35 HRC min. | Black Oxide | 1045 Carbon Steel or Equivalent | 57–63 HRC min. (Carburized) | Trivalent Chromate | SWP-B | -30–80°C |
| | Light Load | PJL | | | | | | | | |
| | Heavy Load | PJH | | | | | | | | |
| Plastic Tip | Ultra Light Load | NPJS | M16– 1045 Carbon Steel or Equivalent | 29–35 HRC min. | Black Oxide | Polyacetal | — | — | — | — |
| | Light Load | NPJL | | | | | | | | |
| | Heavy Load | NPJH | | | | | | | | |

RoHS10

⊖ Thread Locking Treatment is not provided on M3 and M4.
 ⊖ Thread Locking Treatment: To fix the position of the ball plunger, use a micro-encapsulated anaerobic adhesive. Once parts have been loosened, adhesion is lost. Use an anaerobic thread locking compound when reassembling.
 ⊖ The adhesive is most effective if left on the part for 72 hours or more in 25°C. It should be noted if the parts are left for short period of time and in low temperature, the thread-lock will be less-effective.

Standard

| Part Number | Type | M (Coarse) | S | d | ℓ | L | | B | Ultra Light Load | | Light Load | | Heavy Load | | Extra Heavy Load | | |
|-------------|------|------------|---|---|---|----------------------------------|------------------|---|------------------|---------|------------|------|------------|------|------------------|--------|------|
| | | | | | | Ultra Light / Light / Heavy Load | Extra Heavy Load | | min. | N Load | max. | min. | N Load | max. | min. | N Load | max. |
| | | | | | | 3 | **1.5 | | 1.1 | 10 (15) | 10 | 15 | 0.9 | 0.05 | 0.32 | 0.44 | 1.6 |

⊖ ℓ dimensions with () are applicable to the Extra Heavy Load Type.

kgf=Nx0.101972

Without Thread Locking Adhesive

| Part Number | Type | M (Coarse) | S | d | ℓ | L | | B | Ultra Light Load | | Light Load | | Heavy Load | | Extra Heavy Load | |
|-------------|-----------|------------|-----|---------|----|----------------------------------|------------------|------|------------------|--------|------------|------|------------|------|------------------|--------|
| | | | | | | Ultra Light / Light / Heavy Load | Extra Heavy Load | | min. | N Load | max. | min. | N Load | max. | min. | N Load |
| 5 | Steel Tip | 3 | 2.0 | 20 (27) | 20 | 27 | 1.5 | 0.74 | 2.95 | 1.5 | 9.8 | 2.0 | 22.5 | 11.0 | 30.4 | |
| | | | | | | | | | | | | | | | | 27 |

⊖ ℓ dimensions with () are applicable to the Extra Heavy Load Type.

Part Number Example

Part Number: **NPJH3-1.5**
PJS-N10-5