

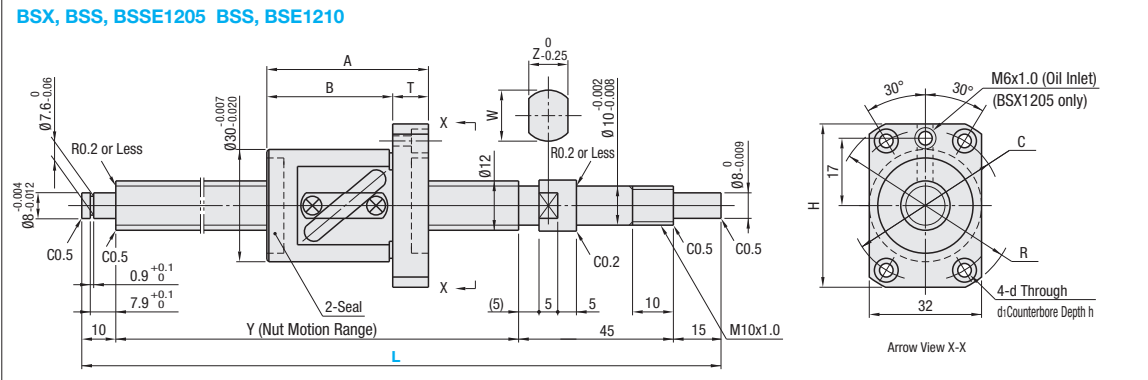
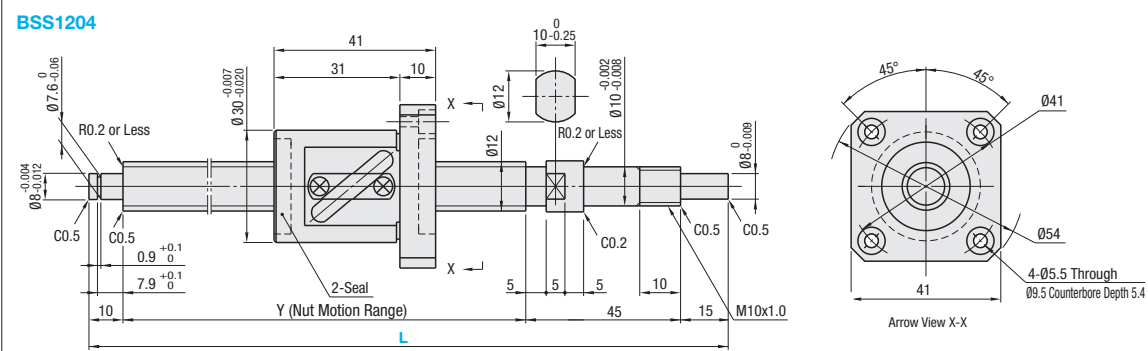
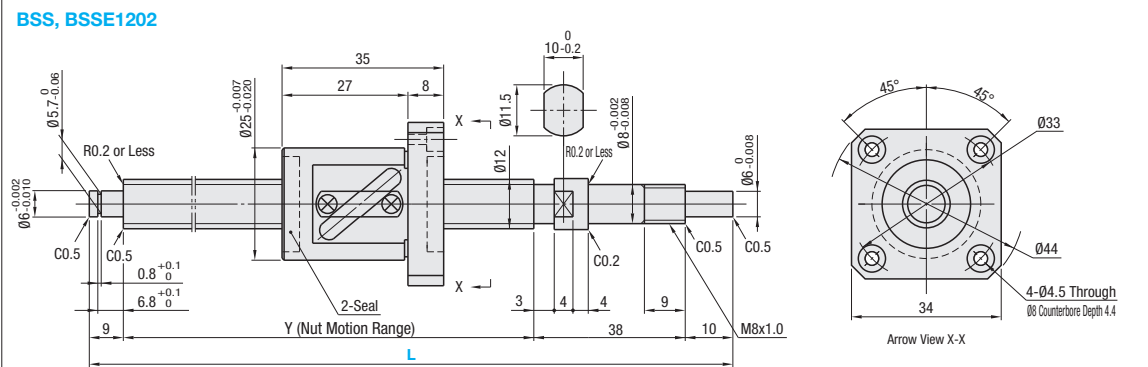
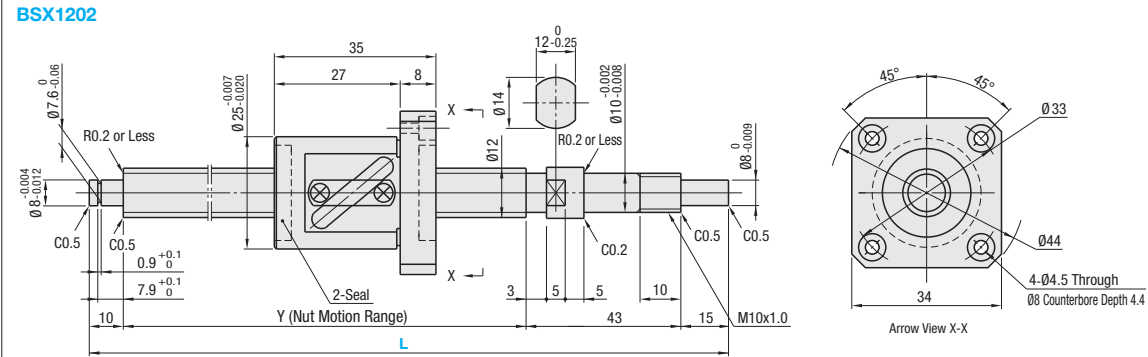
Precision Ball Screws Standard Nut - Shaft Dia. 12, Lead 2, 4, 5, 10

Accuracy Grade C3, C5, C7

Points of comparison between similar products | Consider using this product if the usage environment is a high-load, and high-frequency drive application.

| Nut Type | Type | Accuracy Grade | Shaft Dia. | Lead | Screw Shaft | | Nut | |
|--------------|------|----------------|------------|-------------|-------------|------------------------------|------------------|---------------------|
| | | | | | Material | Hardness | Material | Hardness |
| Standard Nut | BSX | C3 | 12 | 2, 5 | *AISI4150 | *Induction Hardened 58-62HRC | EN 1.7264 Equiv. | Carburized 58-62HRC |
| | BSS | C5 | | 2, 4, 5, 10 | | | | |
| | BSSE | C7 | | 2, 5, 10 | | | | |

*For 1202, screw shaft material EN 1.7242 Equiv. is carburized.



| Nut Type | Accuracy Grade | Part Number Type | Screw Shaft O.D. | Lead | 1mm Increment L | Y | A | B | T | Z | W | H | R | C | d | d1 | h | Ball Dia. | Ball Center Dia. | Screw Root Dia. | Number of Circuits | Basic Load Rating | | Axial Play | Preload Torque N, cm | Twisting Direction | | | | |
|--------------|----------------|------------------|------------------|------|-----------------|------|----|----|----|----|----|----|----|----|-----|-----|-----|-----------|------------------|-----------------|--------------------|-------------------|----------------|-------------|----------------------|--------------------|---------------|-------------|-------|--|
| | | | | | | | | | | | | | | | | | | | | | | C (Dynamic) kN | Co (Static) kN | | | | | | | |
| Standard Nut | C3 | BSX | 12 | 02 | 150~390 | L-68 | | | | | | | | | | | | | 1.5875 | 12.3 | (10.6) | 2.5 turns | 1.54 | 2.05 | 0 (Preloaded) | 0.4~3.2 | Right | | | |
| | C5 | BSS | | | 150~445 | L-57 | | | | | | | | | | | | | | 2.45 | 4.1 | | 0.005 or Less | 1.0 or Less | | | | | | |
| | C7 | BSSE | | | 150~400 | L-70 | | | | | | | | | | | | | | 3.6 | 6.75 | | 0.005 or Less | 1.0 or Less | | | | | | |
| | C3 | BSX | | | 150~440 | L-70 | 44 | 34 | 10 | 12 | 14 | 45 | 50 | 40 | 4.5 | 8 | 4.4 | | | | 2.3812 | 12.6 | (10.1) | 1 row | 3.74 | 4.9 | 0 (Preloaded) | 1.5~5.0 | Right | |
| | C5 | BSS | | | 150~450 | L-70 | 49 | 37 | 12 | 10 | 12 | 48 | 54 | 41 | 5.5 | 9.5 | 5.4 | | | | 3.175 | 12.8 | (9.5) | | 5.95 | 9.8 | 0.005 or Less | 1.0 or Less | | |
| | C7 | BSSE | | | 200~600 | L-70 | | | | | | | | | | | | | | | 3.85 | 5.9 | 0.005 or Less | | 2.0 or Less | | | | | |

Ordering Example

| | | |
|-------------|---|----------------------|
| Part Number | - | L |
| BSX1202 | - | 300 |
| BSS1210L | - | 420 (L Type Greased) |
| BSSE1210G | - | 420 (G Type Greased) |

| Accuracy Grade | Part Number | Unit Price 1 - 4 pc(s) | | | | | | | | | | | |
|----------------|-------------|------------------------|------|------|------|------|------|------|------|------|------|------|------|
| | | L150 | L200 | L201 | L251 | L291 | L296 | L301 | L391 | L401 | L441 | L446 | L451 |
| C3 | BSX1202 | 199 | | 250 | 290 | 295 | 300 | 390 | 400 | 440 | 445 | 450 | 600 |
| C5 | BSS1202 | | | | | | | | | | | | |
| C7 | BSSE1202 | | | | | | | | | | | | |
| C5 | BSX1204 | | | | | | | | | | | | |
| C3 | BSX1205 | | | | | | | | | | | | |
| C5 | BSS1205 | | | | | | | | | | | | |
| C7 | BSSE1205 | | | | | | | | | | | | |
| C5 | BSS1210 | | | | | | | | | | | | |
| C7 | BSSE1210 | | | | | | | | | | | | |

Alterations

| | | | | |
|-------------|---|-----|---|-------------------|
| Part Number | - | L | - | (FC, KC ... etc.) |
| BSX1202 | - | 300 | - | SWC13 |

| Alterations | Code | Spec. | | | | | | | | | | | | | | | |
|--|------|---|------|---|----------|------|-----|----------|------|--|--|------|-----|----------|------|--|--|
| No Machining on Support Side Shaft End | NC | No machining added on the support side shaft end. Ordering Code NC | | | | | | | | | | | | | | | |
| Ball Nut Orientation Reversed | RLC | Changes the nut direction. Ordering Code RLC | | | | | | | | | | | | | | | |
| No Retaining Ring Groove on Support Side Shaft End | RNC | No Retaining Ring Groove on Support Side Shaft End. Ordering Code RNC Combination with FC is not available. | | | | | | | | | | | | | | | |
| Change Support Side Shaft End Machining | GC | Changes the machining on the support side. Q is selectable from 6 or 8. Y dimension is shortened. G=1mm Increment Ordering Code GC-Q8-G20 5≤G≤Q×3 Not applicable to 1202 of C5 and C7. | | | | | | | | | | | | | | | |
| Change Support Side Shaft End Length | FC | Changes the length of the support side shaft end. FC=1mm Increment Ordering Code EN-JL 1030 Equiv. <table border="1"> <tr> <th>Size</th> <th>ℓ</th> <th>FC Range</th> </tr> <tr> <td>1202</td> <td>6.8</td> <td>10≤FC≤20</td> </tr> <tr> <td>1204</td> <td></td> <td></td> </tr> <tr> <td>1205</td> <td>7.9</td> <td>11≤FC≤20</td> </tr> <tr> <td>1210</td> <td></td> <td></td> </tr> </table> Y dimension is shortened. | Size | ℓ | FC Range | 1202 | 6.8 | 10≤FC≤20 | 1204 | | | 1205 | 7.9 | 11≤FC≤20 | 1210 | | |
| Size | ℓ | FC Range | | | | | | | | | | | | | | | |
| 1202 | 6.8 | 10≤FC≤20 | | | | | | | | | | | | | | | |
| 1204 | | | | | | | | | | | | | | | | | |
| 1205 | 7.9 | 11≤FC≤20 | | | | | | | | | | | | | | | |
| 1210 | | | | | | | | | | | | | | | | | |

| Alterations | Code | Spec. |
|--|----------|--|
| Keyway on Fixed Side Shaft End | KC | Adds a keyway on the fixed side shaft end. KC=1mm Increment Ordering Code KC10 3≤KC≤14(9) |
| Keyway on Fixed Side Shaft End | KLC | Adds a keyway at a customer specified area on the fixed side shaft end. (Keyway dim. is same as KC.) K, S=1mm Increment Ordering Code KLC-K5-S1 4≤K+S≤14(9) |
| Flat Machined on Fixed Side Shaft End | SC | Adds a flat on the fixed side shaft end. SC=1mm Increment Ordering Code SC7 5≤SC≤14(9) |
| 2 Flats Machined on Fixed Side Shaft End | SWC, SGC | Adds two flats on the fixed side shaft end. JIS-SWC: 90° Position SGC: 120° Position Ordering Code SWC10 5≤SWC, SGC≤14(9) |

Dimensions in () are for 1202.

Peripherals: Combination of the following parts is available.



Combination with Support Units

| Ball Screw Part Number | Recommended Support Unit | | Page |
|------------------------|--------------------------|-------------|------|
| | Type | Part Number | |
| BSX | 12 | BRW 10 | P767 |
| | | BUR 10 | P768 |
| | | BSW 10 | P761 |
| | | BUN 10 | P762 |
| | | BUN 10 | P762 |
| | 10 | BRW 8 | P767 |
| | | BUR 6 | P768 |
| | | BSW 8 | P761 |
| | | BUN 8 | P762 |
| | | BUN 8 | P762 |
| BSSE | 12 | BRW 10S | P767 |
| | | BUR 10 | P768 |
| | | BSW 10S | P761 |
| | 10 | BUN 10 | P762 |
| | | BUN 10 | P762 |

Combination with Nut Brackets

| Ball Screw Part Number | Recommended Nut Bracket | | Page |
|------------------------|-------------------------|-------------|------|
| | Type | Part Number | |
| BSX | 12 | BNFB 1202S | P780 |
| | | BNFM 1204S | P780 |
| | | BNFR 1205S | P780 |
| | | BNFA 1210S | P780 |
| | | | |

A variety of materials and surface treatments for Nut Brackets are available. (P780)

Notes

- Filled with lithium soap based grease (Alvania Grease S2 made by Showa Shell Sekiyu K.K.)
- Cautions: Do not let the nuts overrun or remove the nuts from the screw shafts. It may cause the balls to fall out or damage the ball recirculation parts.
- Various grease options are available. For Days to Ship, Price and specifications, see P686. BSX is not applicable.
- For accuracy of Ball Screws, see P2223 and P2224.
- For details of Support Units, see P753 - P778.
- Use one of the support unit accessory collars on the fastening nut side.

Other than the part numbers shown above, Support Units with various configurations and surface treatments are also available. (P761-P778)