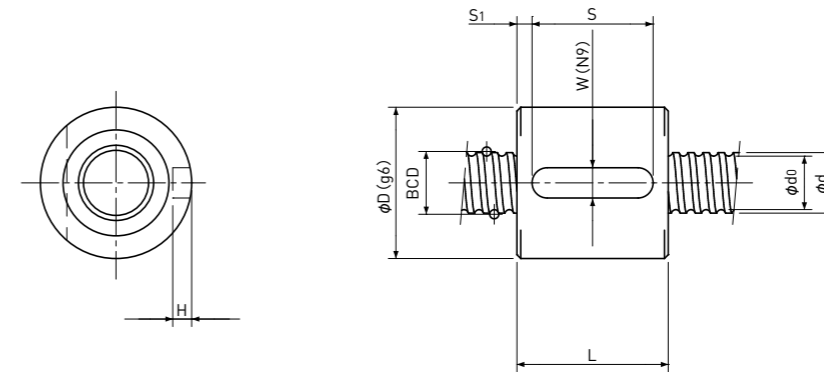


Sleeve type Single Nut

Backlash type/Preload type



Unit : mm

| Ball Nut Model number | Shaft nominal dia. d | Lead | Ball size | BCD | Lead angle | Root dia. d ₀ | Number of Circuit | Basic Load Rating N | | Nut Rigidity N/μm | Nut dimension | | | | | | Ball Nut Model number |
|-----------------------|----------------------|------|-----------|------|------------|--------------------------|-------------------|---------------------|------------|-------------------|---------------|----|---|-----|----|----------------|-----------------------|
| | | | | | | | | Dynamic Ca | Static Coa | | D | L | W | H | S | S ₁ | |
| BS 0301 B | 3 | 1 | 0.6 | 3.18 | 5° 43' | 2.4 | 3.7×1 | 330 / - | 440 / - | 42 / - | 9 | 12 | 2 | 1.2 | 8 | 2 | BS 0301 B |
| BS 0401 A | 4 | 1 | 0.8 | 4.15 | 4° 23' | 3.3 | 2.7×1 | 420 / 270 | 570 / 290 | 40 / 34 | 10 | 12 | 2 | 1.2 | 8 | 2 | BS 0401 A |
| BS 0401 B | 4 | 1 | 0.8 | 4.15 | 4° 23' | 3.3 | 3.7×1 | 560 / 350 | 790 / 400 | 54 / 45 | 11 | 14 | 3 | 1.8 | 8 | 3 | BS 0401 B |
| BS 0402 A | 4 | 2 | 0.8 | 4.15 | 8° 43' | 3.3 | 2.7×1 | 420 / 260 | 570 / 290 | 39 / 33 | 11 | 16 | 3 | 1.8 | 8 | 4 | BS 0402 A |
| BS 0501 B | 5 | 1 | 0.8 | 5.15 | 3° 32' | 4.3 | 3.7×1 | 630 / 400 | 1000 / 500 | 65 / 55 | 12 | 14 | 3 | 1.8 | 8 | 3 | BS 0501 B |
| BS 0504 A | 5 | 4 | 0.8 | 5.15 | 13° 53' | 4.3 | 2.7×1 | 470 / 300 | 720 / 360 | 47 / 39 | 12 | 22 | 3 | 1.8 | 12 | 5 | BS 0504 A |
| BS 0601 B | 6 | 1 | 0.8 | 6.15 | 2° 58' | 5.3 | 3.7×1 | 680 / 430 | 1200 / 610 | 75 / 63 | 13 | 14 | 3 | 1.8 | 10 | 2 | BS 0601 B |
| BS 0601.5 B | 6 | 1.5 | 1.0 | 6.20 | 4° 24' | 5.1 | 3.7×1 | 980 / 620 | 1600 / 800 | 79 / 67 | 14 | 16 | 3 | 1.8 | 10 | 3 | BS 0601.5 B |
| BS 0602 A | 6 | 2 | 1.0 | 6.20 | 5° 52' | 5.1 | 2.7×1 | 750 / 470 | 1200 / 590 | 58 / 49 | 15 | 15 | 3 | 1.8 | 10 | 2.5 | BS 0602 A |
| BS 0602.5 A | 6 | 2.5 | 1.0 | 6.20 | 7° 19' | 5.1 | 2.7×1 | 750 / 470 | 1200 / 590 | 59 / 49 | 15 | 16 | 3 | 1.8 | 10 | 3 | BS 0602.5 A |

| Basic Load Rating N | | Nut Rigidity N/μm |
|---------------------|-------------|-------------------|
| Dynamic Ca | Static Coa | |
| 1000 / 640 | 3300 / 1650 | 164 / 138 |
| | | Preload type |
| | | Backlash type |

Note 1) The diameter of one of the Screw Shaft ends must be less than the Screw Shaft Root diameter, otherwise Ball Nut cannot be installed.

Note 2) Ball Nut dimension is without seal at the both ends.

If the seals are required, Ball Nut dimension should be changed, in that case, please ask KSS. Some type of Ball Nuts cannot equip with seals, please ask KSS representative.

Note 3) The Rigidity values shown in the table are theoretical values of Ball Nut Rigidity calculated from the amount of Elastic Displacement under the following conditions.

Backlash type ; Apply the Axial load equivalent to 30% of the Basic Dynamic Load Rating Ca.

Preload type ; Apply the Preload equivalent to 5% of the Basic Dynamic Load Rating Ca.

For Axial load or Preload condition other than the above,

see the formula in page A823 or page A824, you can calculate Rigidity using this formula.

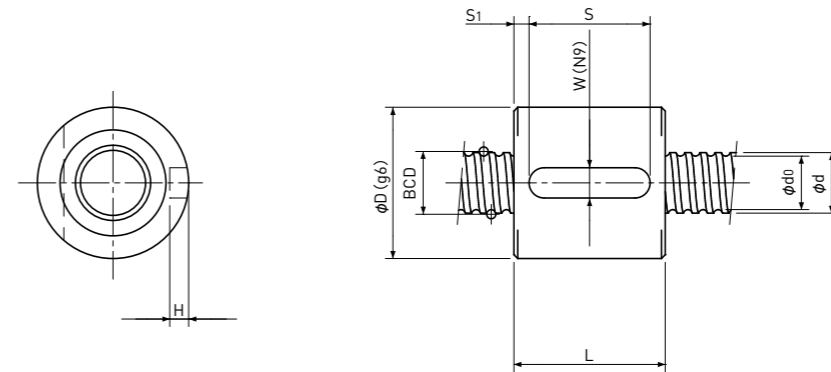
Note 4) All models are Right-hand Screw. If Left-hand Screw is required, please ask KSS representative.

Note 5) Basic Load Rating and Rigidity for Backlash type and Preload type are described in the same cell.

Precision Ball Screws

Sleeve type Single Nut

Backlash type/Preload type



Unit : mm

| Ball Nut Model number | Shaft nominal dia. d | Lead | Ball size | BCD | Lead angle | Root dia. d_0 | Number of Circuit | Basic Load Rating N | | Nut Rigidity $N/\mu m$ | Nut dimension | | | | | | Ball Nut Model number |
|-----------------------|----------------------|------|-----------|------|------------|-----------------|-------------------|---------------------|---------------|------------------------|---------------|----|---|-----|----|-------|-----------------------|
| | | | | | | | | Dynamic C_a | Static C_oa | | D | L | W | H | S | S_1 | |
| BS 0801 B | 8 | 1 | 0.8 | 8.15 | 2° 15' | 7.3 | 3.7×1 | 780 / 490 | 1650 / 820 | 95 / 80 | 16 | 14 | 3 | 1.8 | 10 | 2 | BS 0801 B |
| BS 0801.5 B | 8 | 1.5 | 1.0 | 8.20 | 3° 20' | 7.1 | 3.7×1 | 1100 / 700 | 2200 / 1100 | 99 / 83 | 16 | 16 | 3 | 1.8 | 10 | 3 | BS 0801.5 B |
| BS 0802 B(1) | 8 | 2 | 1.0 | 8.20 | 4° 26' | 7.1 | 3.7×1 | 1100 / 700 | 2200 / 1100 | 99 / 83 | 16 | 18 | 3 | 1.8 | 12 | 3 | BS 0802 B(1) |
| BS 0802 B(2) | 8 | 2 | 1.5875 | 8.30 | 4° 23' | 6.6 | 3.7×1 | 2400 / 1550 | 4100 / 2100 | 111 / 94 | 20 | 20 | 4 | 2.5 | 16 | 2 | BS 0802 B(2) |
| BS 0802.5 A | 8 | 2.5 | 1.5875 | 8.00 | 5° 41' | 6.3 | 2.7×1 | 1850 / - | 3000 / - | 80 / - | 16 | 16 | 3 | 1.8 | 8 | 4 | BS 0802.5 A |
| BS 0802.5 B | 8 | 2.5 | 1.5875 | 8.30 | 5° 29' | 6.6 | 3.7×1 | 2400 / 1550 | 4100 / 2100 | 111 / 93 | 20 | 22 | 4 | 2.5 | 16 | 3 | BS 0802.5 B |
| BS 0803 A | 8 | 3 | 2.0 | 8.30 | 6° 34' | 6.2 | 2.7×1 | 2600 / 1650 | 4200 / 2100 | 85 / 70 | 20 | 22 | 4 | 2.5 | 16 | 3 | BS 0803 A |
| BS 0804 A | 8 | 4 | 2.0 | 8.30 | 8° 43' | 6.2 | 2.7×1 | 2600 / 1650 | 4200 / 2100 | 84 / 70 | 21 | 26 | 4 | 2.5 | 20 | 3 | BS 0804 A |
| BS 0805 A | 8 | 5 | 1.5875 | 8.30 | 10° 51' | 6.6 | 2.7×1 | 1850 / 1150 | 3000 / 1500 | 82 / 67 | 18 | 28 | 4 | 2.5 | 20 | 4 | BS 0805 A |

| Basic Load Rating N | | Nut Rigidity $N/\mu m$ |
|---------------------|---------------|------------------------|
| Dynamic C_a | Static C_oa | |
| 1000 / 640 | 3300 / 1650 | 164 / 138 |
| | | Preload type |
| | | Backlash type |

Note 1) The diameter of one of the Screw Shaft ends must be less than the Screw Shaft Root diameter, otherwise Ball Nut cannot be installed.

Note 2) Ball Nut dimension is without seal at the both ends.

If the seals are required, Ball Nut dimension should be changed, in that case, please ask KSS. Some type of Ball Nuts cannot equip with seals, please ask KSS representative.

Note 3) The Rigidity values shown in the table are theoretical values of Ball Nut Rigidity calculated from the amount of Elastic Displacement under the following conditions.

Backlash type ; Apply the Axial load equivalent to 30% of the Basic Dynamic Load Rating C_a .
Preload type ; Apply the Preload equivalent to 5% of the Basic Dynamic Load Rating C_a .

For Axial load or Preload condition other than the above, see the formula in page A823 or page A824, you can calculate Rigidity using this formula.

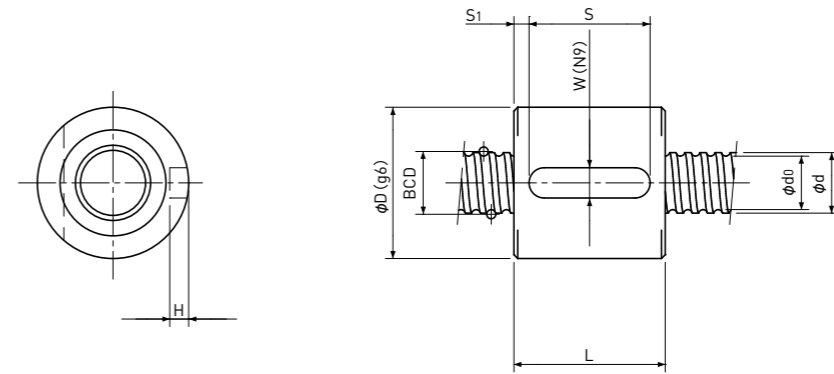
Note 4) All models are Right-hand Screw. If Left-hand Screw is required, please ask KSS representative.

Note 5) Basic Load Rating and Rigidity for Backlash type and Preload type are described in the same cell.

Precision Ball Screws

Sleeve type Single Nut

Backlash type/Preload type



Unit : mm

| Ball Nut Model number | Shaft nominal dia. d | Lead | Ball size | BCD | Lead angle | Root dia. d ₀ | Number of Circuit | Basic Load Rating N | | Nut Rigidity N/μm | Nut dimension | | | | | | Ball Nut Model number |
|-----------------------|----------------------|------|-----------|-------|------------|--------------------------|-------------------|---------------------|-------------|-------------------|---------------|----|---|-----|----|----------------|-----------------------|
| | | | | | | | | Dynamic Ca | Static Coa | | D | L | W | H | S | S ₁ | |
| BS 1001 B | 10 | 1 | 0.8 | 10.15 | 1°48' | 9.3 | 3.7×1 | 840 / 530 | 2000 / 1000 | 113 / 95 | 19 | 14 | 3 | 1.8 | 10 | 2 | BS 1001 B |
| BS 1001.5 B | 10 | 1.5 | 1.0 | 10.20 | 2°41' | 9.1 | 3.7×1 | 1250 / 790 | 2800 / 1400 | 120 / 101 | 19 | 16 | 3 | 1.8 | 10 | 3 | BS 1001.5 B |
| BS 1002 B | 10 | 2 | 1.5875 | 10.30 | 3°32' | 8.6 | 3.7×1 | 2700 / 1750 | 5300 / 2700 | 134 / 112 | 23 | 20 | 5 | 3 | 16 | 2 | BS 1002 B |
| BS 1002.5 B | 10 | 2.5 | 1.5875 | 10.30 | 4°25' | 8.6 | 3.7×1 | 2700 / 1750 | 5300 / 2700 | 133 / 112 | 24 | 22 | 5 | 3 | 16 | 3 | BS 1002.5 B |
| BS 1003 B | 10 | 3 | 2.0 | 10.30 | 5°18' | 8.2 | 3.7×1 | 3900 / 2500 | 7200 / 3600 | 140 / 118 | 24 | 26 | 5 | 3 | 20 | 3 | BS 1003 B |
| BS 1004 A | 10 | 4 | 2.0 | 10.30 | 7°03' | 8.2 | 2.7×1 | 3000 / 1800 | 5200 / 2600 | 104 / 86 | 24 | 26 | 5 | 3 | 20 | 3 | BS 1004 A |
| BS 1005 A(1) | 10 | 5 | 2.0 | 10.30 | 8°47' | 8.2 | 2.7×1 | 3000 / — | 5200 / — | 103 / — | 23 | 26 | 5 | 3 | 16 | 5 | BS 1005 A(1) |
| BS 1005 A(2) | 10 | 5 | 2.0 | 10.30 | 8°47' | 8.2 | 2.7×1 | 3000 / 1800 | 5200 / 2600 | 103 / 85 | 24 | 34 | 5 | 3 | 28 | 3 | BS 1005 A(2) |

| Basic Load Rating N | | Nut Rigidity N/μm |
|---------------------|-------------|-------------------|
| Dynamic Ca | Static Coa | |
| 1000 / 640 | 3300 / 1650 | 164 / 138 |
| | | Preload type |
| | | Backlash type |

Note 1) The diameter of one of the Screw Shaft ends must be less than the Screw Shaft Root diameter, otherwise Ball Nut cannot be installed.

Note 2) Ball Nut dimension is without seal at the both ends.

If the seals are required, Ball Nut dimension should be changed, in that case, please ask KSS. Some type of Ball Nuts cannot equip with seals, please ask KSS representative.

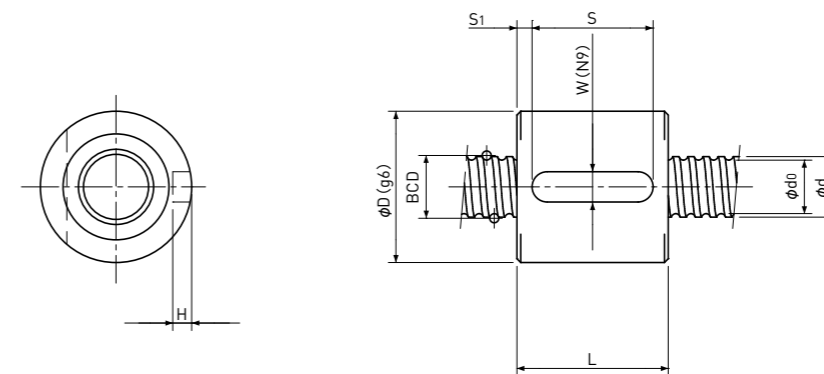
Note 3) The Rigidity values shown in the table are theoretical values of Ball Nut Rigidity calculated from the amount of Elastic Displacement under the following conditions.
Backlash type ; Apply the Axial load equivalent to 30% of the Basic Dynamic Load Rating Ca.
Preload type ; Apply the Preload equivalent to 5% of the Basic Dynamic Load Rating Ca.
For Axial load or Preload condition other than the above, see the formula in page A823 or page A824, you can calculate Rigidity using this formula.

Note 4) All models are Right-hand Screw. If Left-hand Screw is required, please ask KSS representative.
Note 5) Basic Load Rating and Rigidity for Backlash type and Preload type are described in the same cell.

Precision Ball Screws

Sleeve type Single Nut

Backlash type/Preload type



Unit : mm

| Ball Nut Model number | Shaft nominal dia. d | Lead | Ball size | BCD | Lead angle | Root dia. d_0 | Number of Circuit | Basic Load Rating N | | Nut Rigidity N/ μ m | Nut dimension | | | | | | Ball Nut Model number |
|-----------------------|----------------------|------|-----------|-------|------------|-----------------|-------------------|---------------------|--------------|-------------------------|---------------|----|---|-----|----|-------|-----------------------|
| | | | | | | | | Dynamic Ca | Static Coa | | D | L | W | H | S | S_1 | |
| BS 1201 B | 12 | 1 | 0.8 | 12.15 | 1°30' | 11.3 | 3.7×1 | 910 / 570 | 2400 / 1200 | 131 / 110 | 22 | 14 | 4 | 2.5 | 10 | 2 | BS 1201 B |
| BS 1202 B | 12 | 2 | 1.5875 | 12.30 | 2°58' | 10.6 | 3.7×1 | 3000 / 1900 | 6400 / 3200 | 156 / 132 | 25 | 20 | 5 | 3 | 16 | 2 | BS 1202 B |
| BS 1202.5 B | 12 | 2.5 | 1.5875 | 12.30 | 3°42' | 10.6 | 3.7×1 | 3000 / 1850 | 6400 / 3200 | 156 / 130 | 26 | 22 | 5 | 3 | 16 | 3 | BS 1202.5 B |
| BS 1203 B | 12 | 3 | 2.0 | 12.30 | 4°26' | 10.2 | 3.7×1 | 4300 / 2800 | 8700 / 4300 | 162 / 137 | 28 | 26 | 5 | 3 | 20 | 3 | BS 1203 B |
| BS 1204 B | 12 | 4 | 2.381 | 12.30 | 5°55' | 9.8 | 3.7×1 | 5400 / 3400 | 10200 / 5100 | 165 / 139 | 28 | 31 | 5 | 3 | 25 | 3 | BS 1204 B |
| BS 1205 A | 12 | 5 | 2.381 | 12.30 | 7°22' | 9.8 | 2.7×1 | 4100 / 2500 | 7400 / 3700 | 122 / 101 | 28 | 31 | 5 | 3 | 25 | 3 | BS 1205 A |
| BS 1401 B | 14 | 1 | 0.8 | 14.15 | 1°17' | 13.3 | 3.7×1 | 960 / 610 | 2900 / 1450 | 148 / 124 | 26 | 16 | 5 | 3 | 10 | 3 | BS 1401 B |
| BS 1402 B | 14 | 2 | 1.5875 | 14.30 | 2°33' | 12.6 | 3.7×1 | 3200 / 2000 | 7500 / 3800 | 176 / 148 | 26 | 20 | 5 | 3 | 16 | 2 | BS 1402 B |
| BS 1402.5 B | 14 | 2.5 | 1.5875 | 14.30 | 3°11' | 12.6 | 3.7×1 | 3200 / 2000 | 7500 / 3700 | 176 / 148 | 28 | 22 | 5 | 3 | 16 | 3 | BS 1402.5 B |
| BS 1403 B | 14 | 3 | 2.0 | 14.30 | 3°49' | 12.2 | 3.7×1 | 4600 / 2900 | 10100 / 5000 | 184 / 154 | 30 | 26 | 5 | 3 | 20 | 3 | BS 1403 B |
| BS 1404 B | 14 | 4 | 2.381 | 14.30 | 5°05' | 11.8 | 3.7×1 | 5700 / 3600 | 11600 / 5800 | 187 / 157 | 30 | 31 | 5 | 3 | 25 | 3 | BS 1404 B |
| BS 1405 B | 14 | 5 | 2.381 | 14.30 | 6°21' | 11.8 | 3.7×1 | 5700 / 3600 | 11600 / 5800 | 186 / 157 | 30 | 38 | 5 | 3 | 28 | 5 | BS 1405 B |

| Basic Load Rating N | | Nut Rigidity N/ μ m |
|---------------------|-------------|-------------------------|
| Dynamic Ca | Static Coa | |
| 1000 / 640 | 3300 / 1650 | 164 / 138 |

Preload type
Backlash type

Note 1) The diameter of one of the Screw Shaft ends must be less than the Screw Shaft Root diameter, otherwise Ball Nut cannot be installed.

Note 2) Ball Nut dimension is without seal at the both ends.

If the seals are required, Ball Nut dimension should be changed, in that case, please ask KSS. Some type of Ball Nuts cannot equip with seals, please ask KSS representative.

Note 3) The Rigidity values shown in the table are theoretical values of Ball Nut Rigidity calculated from the amount of Elastic Displacement under the following conditions.

Backlash type ; Apply the Axial load equivalent to 30% of the Basic Dynamic Load Rating Ca.

Preload type ; Apply the Preload equivalent to 5% of the Basic Dynamic Load Rating Ca.

For Axial load or Preload condition other than the above,

see the formula in page A823 or page A824, you can calculate Rigidity using this formula.

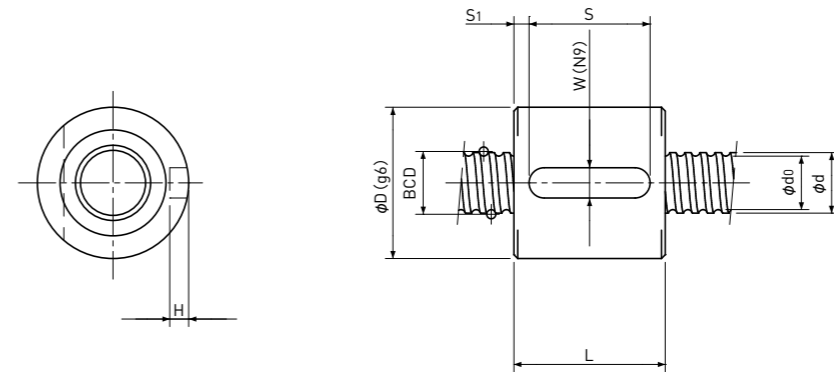
Note 4) All models are Right-hand Screw. If Left-hand Screw is required, please ask KSS representative.

Note 5) Basic Load Rating and Rigidity for Backlash type and Preload type are described in the same cell.

Precision Ball Screws

Sleeve type Single Nut

Backlash type/Preload type



Unit : mm

| Ball Nut Model number | Shaft nominal dia. d | Lead | Ball size | BCD | Lead angle | Root dia. d ₀ | Number of Circuit | Basic Load Rating N | | Nut Rigidity N/μm | Nut dimension | | | | | | Ball Nut Model number |
|-----------------------|----------------------|------|-----------|-------|------------|--------------------------|-------------------|---------------------|--------------|-------------------|---------------|----|---|---|----|----------------|-----------------------|
| | | | | | | | | Dynamic Ca | Static Coa | | D | L | W | H | S | S ₁ | |
| BS 1601 B | 16 | 1 | 0.8 | 16.15 | 1°08' | 15.3 | 3.7×1 | 1000 / 640 | 3300 / 1650 | 164 / 138 | 28 | 16 | 5 | 3 | 10 | 3 | BS 1601 B |
| BS 1602 B | 16 | 2 | 1.5875 | 16.30 | 2°14' | 14.6 | 3.7×1 | 3400 / 2100 | 8600 / 4300 | 197 / 163 | 28 | 20 | 5 | 3 | 16 | 2 | BS 1602 B |
| BS 1603 B | 16 | 3 | 2.0 | 16.30 | 3°21' | 14.2 | 3.7×1 | 4900 / 3100 | 11600 / 5800 | 205 / 172 | 32 | 26 | 5 | 3 | 20 | 3 | BS 1603 B |
| BS 1604 B | 16 | 4 | 2.381 | 16.30 | 4°28' | 13.8 | 3.7×1 | 6200 / 3900 | 13600 / 6800 | 209 / 174 | 34 | 32 | 5 | 3 | 25 | 3.5 | BS 1604 B |
| BS 1605 B | 16 | 5 | 3.175 | 16.50 | 5°31' | 13.2 | 3.7×1 | 9100 / 5700 | 18200 / 9100 | 217 / 182 | 38 | 38 | 5 | 3 | 28 | 5 | BS 1605 B |

| Basic Load Rating N | | Nut Rigidity N/μm |
|---------------------|-------------|-------------------|
| Dynamic Ca | Static Coa | |
| 1000 / 640 | 3300 / 1650 | 164 / 138 |
| | | Preload type |
| | | Backlash type |

Note 1) The diameter of one of the Screw Shaft ends must be less than the Screw Shaft Root diameter, otherwise Ball Nut cannot be installed.

Note 2) Ball Nut dimension is without seal at the both ends.

If the seals are required, Ball Nut dimension should be changed, in that case, please ask KSS. Some type of Ball Nuts cannot equip with seals, please ask KSS representative.

Note 3) The Rigidity values shown in the table are theoretical values of Ball Nut Rigidity calculated from the amount of Elastic Displacement under the following conditions.

Backlash type ; Apply the Axial load equivalent to 30% of the Basic Dynamic Load Rating Ca.

Preload type ; Apply the Preload equivalent to 5% of the Basic Dynamic Load Rating Ca.

For Axial load or Preload condition other than the above,

see the formula in page A823 or page A824, you can calculate Rigidity using this formula.

Note 4) All models are Right-hand Screw. If Left-hand Screw is required, please ask KSS representative.

Note 5) Basic Load Rating and Rigidity for Backlash type and Preload type are described in the same cell.