# Urethane Molded Bearings

## Inner Wheel Protruded

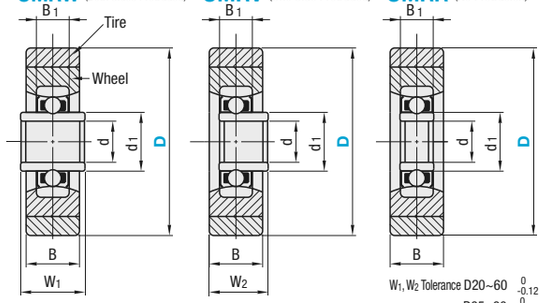
■Urethane Molded Bearings
- Inner Wheel Protruded (For Light Load)



RoHS

■For Light Load

UMRW (Both Sides Protruded) UMRV (One Side Protruded) UMRR (No Protrusion)




W1, W2 Tolerance D20~60 $^{0}_{-0.12}$
D65~80 $^{0}_{-0.15}$

Operating Temperature Range: -20°C~40°C

| | Material |
|---|---|
| Tire Section | Thermoplastic Ether Type Urethane (Black, Shore A95) |
| Wheel Section | Thermoplastic Lactone Type Urethane (Black) |
| Bearing | Outer Ring, Inner Ring, Balls: EN 1.3505 Equiv. |
| | Shield: Rubber |

(P) The structure of D20 to D35 is single layer (only for tire section).

■Urethane Molded Bearings
- Inner Wheel Protruded (For Heavy Load)



RoHS

■For Heavy Load

UMRHW (Both Sides Protruded) UMRHV (One Side Protruded)




W1, W2 Tolerance D30~60 $^{0}_{-0.12}$
D65, 70 $^{0}_{-0.15}$

Operating Temperature Range: -20°C~40°C

| | Material |
|---|---|
| Tire Section | Thermosetting Ether Type Urethane (Brown, Shore A95) |
| Bearing | Outer Ring, Inner Ring, Balls: EN 1.3505 Equiv. |
| | Shield: Steel |

■For Light Load

| Part Number Type | D | d | d Tolerance UMRW, UMRV | d Tolerance UMRR | d1 | B | B1 | W1 | W2 | Allowable Load N (Reference Value) | Mass (g) UMRW | Mass (g) UMRV | Mass (g) UMRR | Unit Price UMRW | Unit Price UMRV | Unit Price UMRR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UMRW (Both Sides Protruded) UMRV (One Side Protruded) UMRR (No Protrusion) | 20 | 6 | 0 -0.02 | 0 -0.008 | 8.6 | 8 | 5 | 11 | 9.5 | 55 | 7 | 6 | 5 | | | |
| | 25 | | | | 9.3 | 9 | 6 | 12 | 10.5 | 79 | 12 | 11 | 10 | | | |
| | 30 | 8 | 0 -0.04 | | 12 | 11 | 7 | 15 | 13 | 108 | 21 | 19 | 17 | | | |
| | 35 | | | | | | | | | 147 | 24 | 22 | 20 | | | |
| | 40 | 10 | | | 14 | 12 | 8 | 16 | 14 | 196 | 34 | 32 | 30 | | | |
| | 45 | 12 | +0.005 -0.012 | | 18.3 (16.8) | 14 | 10 | 18 | 16 | 245 | 60 | 55 | 50 | | | |
| | 50 | | | | | | | | | 274 | 66 | 61 | 56 | | | |
| | 55 | 15 | | | 21.6 (20.0) | 15 | 11 | 19 | 17 | 314 | 82 | 76 | 70 | | | |
| | 60 | | | | | | | | | 343 | 90 | 83 | 77 | | | |
| | 65 | 17 | | | 24.6 (23.0) | 16 | 12 | 20 | 18 | 392 | 120 | 112 | 104 | | | |
| | 70 | | | | | | | | | 441 | 130 | 121 | 113 | | | |
| | 75 | 20 | | 0 -0.01 | 29.3 (27.6) | 18 | 14 | 22 | 20 | 510 | 188 | 175 | 164 | | | |
| | 80 | | | | | | | | | 589 | 199 | 187 | 176 | | | |

( ) of d1 dimension is applicable to UMRR.

kgf=Nx0.101972

■For Heavy Load

| Part Number Type | D | d | d Tolerance | d1 | d2 | B | W1 | W2 | Allowable Load N (Reference Value) | Mass (g) UMRHW | Mass (g) UMRHV | Unit Price UMRHW | Unit Price UMRHV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UMRHW (Both Sides Protruded) UMRHV (One Side Protruded) | 30 | 8 | 0 -0.04 | 12.0 | 22 | 11 | 15 | 13 | 303 | 24 | 23 | | |
| | 35 | | | | | | | | 347 | 28 | 27 | | |
| | 40 | 12 | | 18.3 | 32 | 14 | 18 | 16 | 474 | 62 | 59 | | |
| | 45 | 15 | | 21.4 | 35 | 15 | 19 | 17 | 579 | 78 | 75 | | |
| | 50 | 20 | | 25.1 | 37 | 16 | 20 | 18 | 660 | 84 | 82 | | |
| | 55 | 20 | +0.005 -0.012 | 29.3 | 47 | 18 | 22 | 20 | 794 | 157 | 151 | | |
| | 60 | | | | | | | | 829 | 167 | 162 | | |
| | 65 | 25 | | 33.8 | 52 | 19 | 23 | 21 | 918 | 199 | 191 | | |
| | 70 | | | | | | | | 1050 | 210 | 202 | | |

kgf=Nx0.101972

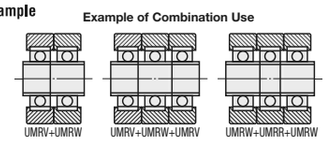
Ordering Example — Part Number: UMRW40, UMRHV55

■Features

- As the bearing inner rings protrude, there is no need to combine stepped shafts or collars for mounting.
- The urethane section is of a tire and wheel layered construction (Except for D20 ~ D35 are single layer). Economical small diameter shafts can be used even for large diameter rollers.
- The bearings used have special configuration to prevent the urethane from detaching.
- Though it excels in oil resistance, applying solvents may cause swelling and reduction in strength.

Example

Example of Combination Use



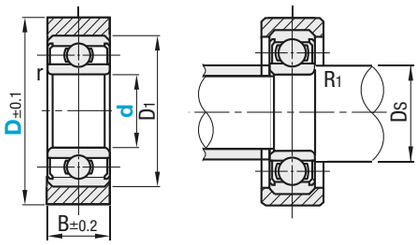

# Urethane Press-Fit Bearings

■Features: Can be purchased at low price and quick delivery as compared to conventional Molded Bearings.



RoHS

C-UMBB

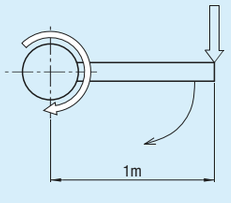
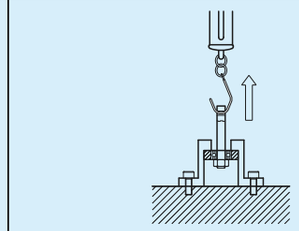



(P) For bearing detailed dimensions, see P.989.

M Material: Polyurethane (Black) Bearing: Steel
H Hardness: Shore A90

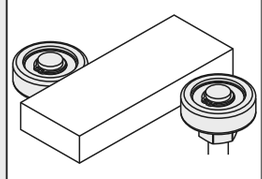
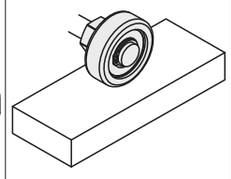
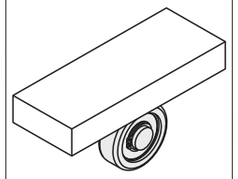
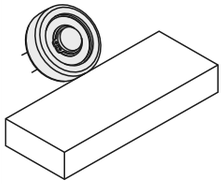
| Part Number Type | d | D | B | D1 | r (min) | Relative Dimension Ds (min) | Relative Dimension R1 (max) | Bearing Used | Unit Price |
|---|---|---|---|---|---|---|---|---|---|
| C-UMBB | 4 | 13 | 4 | 9 | 0.15 | 5 | 0.1 | 684ZZ | |
| | 5 | 16 | 4* | 13 | 0.2 | 6.6 | 0.2 | 695ZZ | |
| | 6 | 20 | 5 | 15 | 0.2 | 7.6 | 0.2 | 696ZZ | |

*Note that B dimension is different in C-UMBB5-16, and UMBB5-16 that appears on P.1151. In UMBB5-16, B=5. Moreover in C-UMBB5-16, Urethane Molded Bearings Shafts included on P.1155 are also not available.

| Item | Magnitude of the force to peel Urethane from bearing | |
|---|---|---|
| | Rotation direction | Cross direction |
| Measurement Method |   |  |

| Product Type | | Press-fit Bearing | Molded Bearing | Press-fit Bearing | Molded Bearing |
|---|---|---|---|---|---|
| Size | 4-13 | 4kgf · m or more | 8kgf · m or more | 6kgf | No peeling at 20kgf |
| | 5-16 | 4kgf · m or more | 8kgf · m or more | 7kgf | |
| | 6-20 | 4kgf · m or more | 8kgf · m or more | 10kgf | |

Example

| Application direction | Sideways | Top | Bottom | Slanting |
|---|---|---|---|---|
| |  |  |  |  |
| Recommended Product | Press-fit Bearing | Press-fit Bearing | Lightweight: Press-Fit Bearings HeavyWeight: Molded Bearings | Molded Bearing |

(P) Note that even if it is applied from top, side and bottom, if there is unbalanced load due to mounting accuracy or backlash of work, or when used in high rotation, Urethane of the Press-Fit Bearing may come off.

Ordering Example — Part Number: C-UMBB4 - 13

# Silicon Rubber / Urethane Molded Bearings

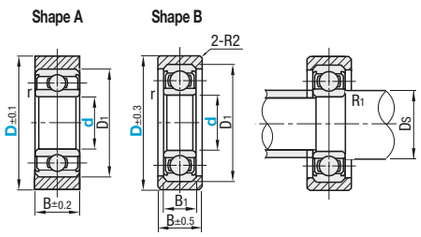
## Flat



RoHS

Urethane (white) may turn yellow over time.

| Type Bearing Steel | Type Bearing Stainless Steel | Material | Hardness | Color |
|---|---|---|---|---|
| UMBBK | UMSBK | Urethane | Shore A95 | Black |
| UMBBKW | UMSBKW | | | White |
| UMBB | UMSB | | Shore A90 | Black |
| UMBW | UMSW | | | White |
| UMBG | UMSG | | Shore A70 | Black |
| UMBGW | UMSGW | | | White |
| UMBL | - | | Shore A50 | Black |
| UMBLW | - | | | White |
| UMBD | - | Antistatic Urethane | Shore A90 | Gray |
| SUMBB | SUMSB | Silicon Rubber | Shore A70 | Light Gray |




Bearing Accuracy JIS B 1514, 0 Class

For bearing detailed dimensions, see **P.989**.

### Shape A

| Part Number Type | d | D | Allowable Load N (kgf) Urethane Shore A95 | Urethane Shore A90 | Urethane Shore A70 | Urethane Shore A50 | Silicon Shore A70 | B | D1 | r (min.) | Relative Dimension Ds (min.) | Ds (max.) | R1 (max.) | Used Bearing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Urethane UMBBK UMSBK | 3 | 10 | 38(3.8) | 28(2.8) | 9(0.9) | 4(0.4) | 7(0.7) | 3 | 7 | 0.1 | 3.9 | 4.1 | 0.1 | W683ZZA |
| | | 12 | 53(5.4) | 34(3.5) | 10(1) | 6(0.6) | 9.8(1) | | | | | | | |
| UMBKW UMSBKW | *4 | 13 | 66(6.7) | 44(4.5) | 13(1.3) | 7(0.7) | 13(1.3) | 4 | 9 | 0.15 | 5 | 5.2 | | W684AX50ZZ |
| UMBB UMSB | | 16 | 79(8.1) | 59(6) | 16(1.6) | 6(0.6) | 18(1.8) | 5 | 13 | 0.2 | 5.6 | 6.2 | 0.2 | 624ZZ |
| UMBW *UMSW | *5 | 16 | 79(8.1) | | 16(1.6) | | | | | | 6.6 | 6.9 | | WBC5-13ZZ |
| UMBG *UMSG | | 20 | 102(10.4) | 78(8) | 20(2) | 9(0.9) | 24(2.4) | | 16 | 0.3 | 7 | 7.6 | 0.3 | 625ZZ |
| UMBGW *UMSGW | *6 | 20 | 114(11.7) | | 23(2.3) | 15(1.5) | | | 15 | 0.2 | 7.6 | 7.8 | 0.2 | 696ZZ |
| UMBL | | 28 | 218(22.2) | 157(16) | 44(4.5) | 39(4) | 47(4.8) | 6 | 19 | 0.3 | 8 | 9.5 | 0.3 | 626ZZ |
| UMBLW | *8 | 28 | 208(21.2) | | 42(4.3) | 35(3.6) | | 7 | 22 | | 10 | 12.2 | | 608ZZ |
| Antistatic Urethane UMBD | | 30A | - | 176(18) | 81(8.3) | 65(6.7) | 53(5.4) | | | | | | | 608ZZ |
| | 10 | 30A | | | 94(9.6) | 51(5.2) | | 8 | 26 | | 12 | 13.5 | | 6000ZZ |
| | | 40A | - | 274(28) | 136(13.9) | 93(9.5) | 82(8.4) | 9 | 30 | 0.6 | 14 | 16 | 0.6 | 6200ZZ |
| Silicon Rubber SUMBB *SUMSB | 15 | 40A | | | 122(12.4) | 96(9.9) | | | 32 | 0.3 | 17 | 19 | 0.3 | 6002ZZ |
| | | 45A | - | 343(35) | 109(11.1) | 102(10.5) | 103(10.5) | 11 | 35 | 0.6 | 19 | 20 | 0.6 | 6202ZZ |
| | | 45A | | | 130(13.3) | 98(10.1) | | 9 | 37 | 0.3 | 22 | 24 | 0.3 | 6904ZZ |
| | 20 | 55A | - | 490(50) | 225(22.9) | 176(18.1) | 147(15) | 14 | 47 | 1 | 25 | 28 | 1 | 6204ZZ |
| | 25 | 65A | - | 750(70) | 333(34) | 250(25.8) | 226(23) | 15 | 52 | | 30 | 32 | | 6205ZZ |

Only d4 ~ 8 are available for * marked types.
See price chart for available sizes.
Allowable load is for reference.

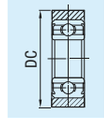
Ordering Example: Part Number - D → UMBB10 - 30A

### Shape B

| Part Number Type | d | D | Allowable Load N (kgf) Urethane Shore A95 | Urethane Shore A90 | Urethane Shore A70 | Urethane Shore A50 | Silicon Shore A70 | B | D1 | B1 | r (min.) | Relative Dimension Ds (min.) | Ds (max.) | R1 (max.) | Used Bearing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Urethane UMBBK UMSBK | 8 | 30 | 248(25.3) | 176(18) | 81(8.3) | 65(6.7) | 53(5.4) | 11 | 22 | 7 | 0.3 | 10 | 12.2 | 0.3 | 608ZZ |
| UMBBKW UMSBKW | 10 | 30 | 201(20.5) | | 94(9.6) | 51(5.2) | | | 26 | 8 | | 12 | 13.5 | | 6000ZZ |
| UMBB UMSB | | 40 | 412(42) | 274(18) | 136(13.9) | 93(9.5) | 82(8.4) | | 30 | 9 | 0.6 | 14 | 16 | 0.6 | 6200ZZ |
| UMBW UMSW | 15 | 40 | 369(37.6) | | 122(12.4) | 96(9.9) | | 12 | 32 | | 0.3 | 17 | 19 | 0.3 | 6002ZZ |
| UMBG UMSG | | 45 | 534(54.5) | 343(35) | 109(11.1) | 102(10.5) | 103(10.5) | 15 | 35 | 11 | 0.6 | 19 | 20 | 0.6 | 6202ZZ |
| UMBGW UMSGW | | 45 | 391(39.9) | | 130(13.3) | 98(10.1) | | 12 | 37 | 9 | 0.3 | 22 | 24 | 0.3 | 6904ZZ |
| UMBL | 20 | 55 | 674(68.7) | 490(50) | 225(22.9) | 176(18.1) | 147(15) | 18 | 47 | 14 | 1 | 25 | 28 | 1 | 6204ZZ |
| UMBLW Antistatic Urethane UMBD Silicon Rubber SUMBB SUMSB | 25 | 65 | 999(101.9) | 750(70) | 333(34) | 250(25.8) | 226(23) | 19 | 52 | 15 | | 30 | 32 | | 6205ZZ |

See price chart for available sizes.
Allowable load is for reference.

Alterations: Part Number - D - (DC) → UMBB6 - 20 - DC18

| Alteration | Code | Spec. |
|---|---|---|
|  | DC | 0.D. Dimension Changes the D dimension in 1mm increment. D1+2≤DC≤D-1 Ordering Code: DC18 |



### Properties of Antistatic Urethane

| Item | Unit | UMBD |
|---|---|---|
| Specific Volume Resistivity | Ω·cm | $2.1 \times 10^8$ |
| Surface Resistivity | Ω | $4.0 \times 10^9$ |

Test Conditions (Temperature 30°C / Humidity 60%)
Listed values are not guaranteed values but an example of measured values.

| d | D | Unit Price: Steel Bearing Urethane Shore A95 UMBBK UMBBKW | Urethane Shore A90 UMBB UMBW | Urethane Shore A70 UMBG | Urethane Shore A70 UMBGW | Urethane Shore A50 UMBL | Urethane Shore A50 UMBLW | Antistatic Urethane Shore A90 UMBD | Silicon Shore A70 SUMBB | Stainless Steel Bearing Urethane Shore A95 UMSBK UMSBKW | Urethane Shore A90 UMSB | Urethane Shore A90 UMSW | Urethane Shore A70 UMSG | Urethane Shore A70 UMSGW | Silicon Shore A70 SUMSB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 10 | | | | | | | | | - | - | - | - | - | - |
| | 12 | | | | | | | | | - | - | - | - | - | - |
| 4 | 13 | | | | | | | | | | | | | | |
| | 16 | | | | | | | | | | | | | | |
| 5 | 16 | | | | | | | | | | | | | | |
| | 20 | | | | | | | | | | | | | | |
| 6 | 20 | | | | | | | | | | | | | | |
| | 28 | | | | | | | | | | | | | | |
| 8 | 28 | | | | | | | | | | | | | | |
| | 30 | | | | | | | | | | | | | | |
| | 30A | - | | - | | - | | - | - | - | | - | - | - | - |
| 10 | 30 | | | | | | | | | | | - | - | - | - |
| | 40 | | | | | | | | | | | - | - | - | - |
| | 30A | - | | - | | - | | - | - | - | | - | - | - | - |
| | 40A | - | | - | | - | | - | - | - | | - | - | - | - |
| 15 | 40 | | | | | | | | | | | - | - | - | - |
| | 45 | | | | | | | | | | | - | - | - | - |
| | 40A | - | | - | | - | | - | - | - | | - | - | - | - |
| | 45A | - | | - | | - | | - | - | - | | - | - | - | - |
| 20 | 45 | | | | | | | | | | | - | - | - | - |
| | 55 | | | | | | | | | - | - | - | - | - | - |
| | 45A | - | | - | | - | | - | - | - | | - | - | - | - |
| | 55A | - | | - | | - | | - | - | - | - | - | - | - | - |
| 25 | 65 | | | | | | | | | - | - | - | - | - | - |
| | 65A | - | | - | | - | | - | - | - | | - | - | - | - |

# Silicon Rubber / Urethane Molded Bearings

## R Type / Hubbed Type

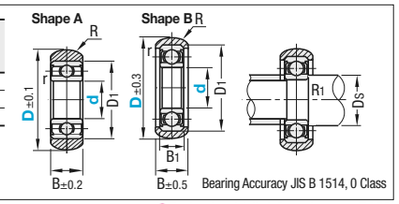
### R Type



RoHS

Urethane (white) may turn yellow over time.

| Type Bearing Steel | Type Bearing Stainless Steel | Material | Hardness | Color |
|---|---|---|---|---|
| UMBBR | UMSBR | Urethane | Shore A90 | Black |
| UMBWR | UMSWR | | | White |
| SUMBBR | - | Silicon Rubber | Shore A70 | Light Gray |




Bearing Accuracy JIS B 1514, 0 Class

For bearing detailed dimensions, see **P.989**.

### Shape A

| Part Number Type | d | D | Allowable Load N (kgf) Urethane Shore A90 | Silicon Shore A70 | B | D1 | r (min.) | R | Relative Dimension Ds (min.) | Ds (max.) | R1 (max.) | Bearing Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Urethane UMBBR *UMSBR UMBWR *UMSWR Silicon Rubber SUMBBR | 3 | 12 | 34 (3.5) | 9.8 (1) | 3 | 7 | 0.1 | 5 | 3.9 | 4.1 | 0.1 | W683ZZA |
| | *4 | 13 | 44 (4.5) | 13 (1.3) | 4 | 9 | 0.15 | | 5 | 5.2 | | W684AX50ZZ |
| | | 16 | 59 (6) | 18 (1.8) | 5 | 13 | 0.2 | | 5.6 | 6.2 | 0.2 | 624ZZ |
| | *5 | 16 | | | | | | | 6.6 | 6.9 | | WBC5-13ZZ |
| | | 20 | 78 (8) | 24 (2.4) | | 16 | 0.3 | | 7 | 7.6 | 0.3 | 625ZZ |
| | *6 | 20 | | | | 15 | 0.2 | | 7.6 | 7.8 | 0.2 | 696ZZ |
| | | 28 | 157 (16) | 47 (4.8) | 6 | 19 | 0.3 | | 8 | 9.5 | 0.3 | 626ZZ |
| | *8 | 28 | 176 (18) | | 7 | 22 | | | 10 | 12.2 | | 608ZZ |

Only d4 ~ 8 are available for * marked types.
Allowable load is for reference.

Ordering Example: Part Number - D → UMBBR25 - 65

### Shape B

| Part Number Type | d | D | Allowable Load N (kgf) Urethane Shore A90 | Silicon Shore A70 | B | D1 | B1 | r (min.) | R | Relative Dimension Ds (min.) | Ds (max.) | R1 (max.) | Bearing Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Urethane UMBBR UMSBR UMBWR UMSWR Silicon Rubber SUMBBR | 8 | 30 | 176(18) | 53(5.4) | 11 | 22 | 7 | 0.3 | 15 | 10 | 12.2 | 0.3 | 608ZZ |
| | 10 | 30 | | | | 26 | 8 | | | 12 | 13.5 | | 6000ZZ |
| | | 40 | 274(18) | 82(8.4) | | 30 | 9 | 0.6 | | 14 | 16 | 0.6 | 6200ZZ |
| | 15 | 40 | | | 12 | 32 | | 0.3 | | 17 | 19 | 0.3 | 6002ZZ |
| | | 45 | 343(35) | 103(10.5) | 15 | 35 | 11 | 0.6 | | 19 | 20 | 0.6 | 6202ZZ |
| | 20 | 45 | | | 12 | 37 | 9 | 0.3 | | 22 | 24 | 0.3 | 6904ZZ |
| | | 55 | 490(50) | 147(15) | 18 | 47 | 14 | 1 | 20 | 25 | 28 | 1 | 6204ZZ |
| | 25 | 65 | 750(70) | 226(23) | 19 | 52 | 15 | | | 30 | 32 | | 6205ZZ |

Allowable load is for reference.

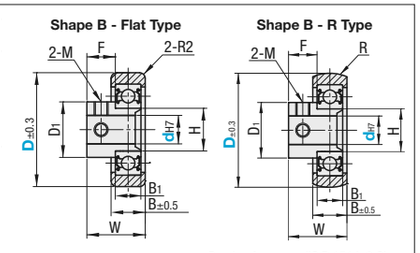
| d | D | Unit Price: Steel Bearing Urethane (Shore A90) UMBBR UMBWR | Steel Bearing Silicon Rubber (Shore A70) SUMBBR | Stainless Steel Bearing Urethane (Shore A90) UMSBR UMSWR |
|---|---|---|---|---|
| 3 | 12 | | | - |
| 4 | 13 | | | |
| | 16 | | | |
| 5 | 16 | | | |
| | 20 | | | |
| 6 | 20 | | | |
| | 28 | | | |
| 8 | 28 | | | |
| | 30 | | | |
| 10 | 30 | | | - |
| | 40 | | | - |
| 15 | 40 | | | - |
| | 45 | | | - |
| 20 | 45 | | | - |
| | 55 | | | - |
| 25 | 65 | | | - |

### Hubbed Type



RoHS

| Type | Type | Bearing | Material | Hardness | Hub Material | Color |
|---|---|---|---|---|---|---|
| UMBBKBOS | Flat | Steel | Urethane | A95 | Free Cutting Steel (Electroless Nickel Plating) | Black |
| UMBBBOS | | | | A90 | | |
| UMBGBOS | | | | A70 | | |
| UMBLBOS | | | | A50 | | |
| UMBBBOSR | R Type | | | A90 | | |




Bearing Accuracy JIS B 1514, 0 Class

For bearing detailed dimensions, see **P.989**.

| Part Number Type | d | D | Allowable Load N (kgf) Shore A95 | Shore A90 | Shore A70 | Shore A50 | W | B | D1 | B1 | H | F | M | R | Used Bearing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UMBBKBOS | 6 | 30 | 201(20.5) | 176(18) | 94(9.6) | 51(5.2) | 19.5 | 11 | 13 | 8 | 10 | 10 | 4 | 15 | 6000ZZ |
| UMBBBOS | 8 | 40 | 369(37.6) | 274(18) | 122(12.4) | 96(9.9) | 20.5 | 12 | 19 | 9 | 15 | | | | 6002ZZ |
| UMBGBOS | 10 | 40 | | | | | | | | | | | | | |
| UMBLBOS | 15 | 45 | 391(39.9) | 343(35) | 130(13.3) | 98(10.1) | 22.5 | | 23 | | 20 | 12 | 5 | | 6904ZZ |
| UMBBBOSR | 20 | 65 | 999(101.9) | 750(70) | 333(34) | 250(25.8) | 29.0 | 19 | 30 | 15 | 25 | | | 20 | 6205ZZ |

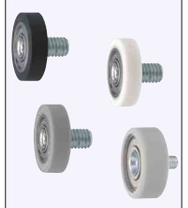
Ordering Example: Part Number - D → UMBBBOS6 - 30

| d | D | Unit Price: Flat Shore A95 UMBBKBOS | Flat Shore A90 UMBBBOS | Flat Shore A70 UMBGBOS | Flat Shore A50 UMBLBOS | R Type Shore A90 UMBBBOSR |
|---|---|---|---|---|---|---|
| 6 | 30 | | | | | |
| 8 | 40 | | | | | |
| 10 | 40 | | | | | |
| 15 | 45 | | | | | |
| 20 | 65 | | | | | |

# Silicon Rubber / Urethane Molded Bearings

## Threaded Flat

RoHS



Urethane (white) may turn yellow over time.

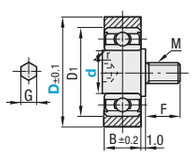
| Type Flat | | M Material | H Hardness | Color | Bearing | Shaft | |
|---|---|---|---|---|---|---|---|
| Standard Threaded | Long Threaded | | | | | M Material | S Surface Treatment |
| UMBKH | UMBKT | Urethane | Shore A95 | Black | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating |
| UMSBKH | UMSBKT | | | | EN 1.4125 Equiv. | EN 1.4305 Equiv. | - |
| UMBKWH | UMBKWT | | | White | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating *1 |
| UMSBKWH | UMSBKWT | | | | EN 1.4125 Equiv. | EN 1.4305 Equiv. | - |
| UMBH | UMBT | | Shore A90 | Black | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating |
| UMSBH | UMSBT | | | | EN 1.4125 Equiv. | EN 1.4305 Equiv. | - |
| UMBWH | UMBWT | | | White | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating *1 |
| UMSWH | UMSWT | | | | EN 1.4125 Equiv. | EN 1.4305 Equiv. | - |
| UMBGH | - | | Shore A70 | Black | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating |
| UMBLH | - | | Shore A50 | Black | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating |
| UMBLWH | UMBLWT | | | White | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating *1 |
| SUMBH | SUMBT | Silicon Rubber | Shore A70 | Light Gray | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating |
| SUMSBH | SUMSBT | | | | EN 1.4125 Equiv. | EN 1.4305 Equiv. | - |
| UMBDH | UMBDT | Antistatic Urethane (Gray) | Shore A90 | Gray | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating |

Bearing Accuracy JIS B 1514, 0 Class

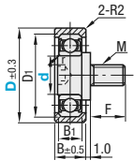
*1 Surface treatment is changed from Trivalent Chromate to Electroless Nickel Plating.

No undercutting on threads.

**Shape A**




**Shape B**




For bearing detailed dimensions, see **P.989**.

### Shape A

| Part Number Type | d | D | M (Coarse) | F Standard | F Long | Allowable Load N (kgf) Urethane Shore A95 | Urethane Shore A90 | Urethane Shore A70 | Urethane Shore A50 | Silicon Shore A70 | B | D1 | r (min.) | G | Used Bearing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Standard Threaded / Long Threaded | 3 | 10 | M3 | 4 | 6 | 38(3.8) | 28(2.8) | 9(0.9) | 4(0.4) | 7(0.7) | 3 | 7 | 0.1 | 1.5 | W683ZZA |
| UMBKH / UMBKT | 3 | 12 | | | | 53(5.4) | 34(3.5) | 10(1) | 6(0.6) | 9.8(1) | | | | | |
| UMSBKH / UMSBKT | *4 | 13 | M4 | 5 | 8 | 66(6.7) | 44(4.5) | 13(1.3) | 7(0.7) | 13(1.3) | 4 | 9 | 0.15 | | W684AX50ZZ |
| UMBKWH / UMBKWT | | 16 | | | | 79(8.1) | 59(6) | 16(1.6) | 6(0.6) | 18(1.8) | 5 | 13 | 0.2 | | 624ZZ |
| UMSBKWH / UMSBKWT | *5 | 16 | | | | 79(8.1) | | 16(1.6) | | | | | | 2.5 | WBC5-13ZZ |
| UMBH / UMBT | | 20 | | | | 102(10.4) | 78(8) | 20(2) | 9(0.9) | 24(2.4) | | 16 | 0.3 | | 625ZZ |
| UMSBH / UMSBT | *6 | 20 | M6 | 8 | 12 | 114(11.7) | | 23(2.3) | 15(1.5) | | | 15 | 0.2 | | 696ZZ |
| UMBWH / UMBWT | | 28 | | | | 218(22.2) | 157(16) | 44(4.5) | 39(4) | 47(4.8) | 6 | 19 | | | 626ZZ |
| UMSWH / UMSWT | *8 | 28 | | | | 208(21.2) | | 42(4.3) | 35(3.6) | | 7 | 22 | 0.3 | 4 | 608ZZ |
| UMBGH | | 30A | | | | - | 176(18) | 81(8.3) | 65(6.7) | 53(5.4) | | | | | 608ZZ |
| UMBLH | 10 | 30A | | | | | | 94(9.6) | 51(5.2) | | 8 | 26 | | | 6000ZZ |
| UMBLWH / UMBLWT | | 40A | | | | - | 274(28) | 136(13.9) | 93(9.5) | 82(8.4) | 9 | 30 | 0.6 | 5 | 6200ZZ |
| *SUMBH / *SUMBT | 15 | 40A | | | | | | 122(12.4) | 96(9.9) | | | 32 | 0.3 | | 6002ZZ |
| SUMSBH / SUMSBT | | 45A | M10 | 12 | 20 | - | 343(35) | 109(11.1) | 102(10.5) | 103(10.5) | 11 | 35 | 0.6 | | 6202ZZ |
| UMBDH / UMBDT | 20 | 45A | | | | | | 130(13.3) | 98(10.1) | | 9 | 37 | 0.3 | 8 | 6904ZZ |
| | | 55A | | | | - | 490(50) | 225(22.9) | 176(18.1) | 147(15) | 14 | 47 | 1 | | 6204ZZ |
| | 25 | 65A | | | | - | 750(70) | 333(34) | 250(25.8) | 226(23) | 15 | 52 | | 10 | 6205ZZ |

Only d4 ~ 8 are available for * marked types.

See price chart for available sizes.

Allowable load is for reference.

Ordering Example: Part Number - D → UMBH10 - 30A

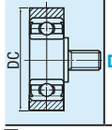
### Shape B

| Part Number Type | d | D | M (Coarse) | F Standard | F Long | Allowable Load N (kgf) Urethane Shore A95 | Urethane Shore A90 | Urethane Shore A70 | Urethane Shore A50 | Silicon Shore A70 | B | D1 | B1 | r (min.) | G | Used Bearing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Standard Threaded / Long Threaded | 8 | 30 | M6 | 8 | 12 | 248(25.3) | 176(18) | 81(8.3) | 65(6.7) | 53(5.4) | 11 | 22 | 7 | 0.3 | 4 | 608ZZ |
| UMBKH / UMBKT | 10 | 30 | | | | 201(20.5) | | 94(9.6) | 51(5.2) | | | 26 | 8 | | 5 | 6000ZZ |
| UMSBKH / UMSBKT | | 40 | | | | 412(42) | 274(28) | 136(13.9) | 93(9.5) | 82(8.4) | | 30 | 9 | 0.6 | | 6200ZZ |
| UMBKWH / UMBKWT | | 40 | M10 | 12 | 20 | 369(37.6) | | 122(12.4) | 96(9.9) | | 12 | 32 | | 0.3 | | 6002ZZ |
| UMSBKWH / UMSBKWT | 15 | 45 | | | | 534(54.5) | 343(35) | 109(11.1) | 102(10.5) | 103(10.5) | 15 | 35 | 11 | 0.6 | | 6202ZZ |
| UMBH / UMBT | | 45 | | | | 391(39.9) | | 130(13.3) | 98(10.1) | | 12 | 37 | 9 | 0.3 | 8 | 6904ZZ |
| UMSBH / UMSBT | 20 | 55 | | | | 674(68.7) | 490(50) | 225(22.9) | 176(18.1) | 147(15) | 18 | 47 | 14 | 1 | | 6204ZZ |
| UMBWH / UMBWT | | 65 | | | | 999(101.9) | 750(70) | 333(34) | 250(25.8) | 226(23) | 19 | 52 | 15 | | 10 | 6205ZZ |
| UMSWH / UMSWT | 25 | | | | | | | | | | | | | | | |
| UMBGH | | | | | | | | | | | | | | | | |
| UMBLH | | | | | | | | | | | | | | | | |
| UMBLWH / UMBLWT | | | | | | | | | | | | | | | | |
| SUMBH / SUMBT | | | | | | | | | | | | | | | | |
| SUMSBH / SUMSBT | | | | | | | | | | | | | | | | |
| UMBDH / UMBDT | | | | | | | | | | | | | | | | |

See price chart for available sizes.

Allowable load is for reference.

Alterations: Part Number - D - (DC) → UMBH6 - 20 - DC18

| Alteration | Code | Spec. |
|---|---|---|
|  | DC | O.D. Dimension Changes the D dimension in 1mm increment. D1+2≤DC≤D-1 Ordering Code: DC18 |



**Properties of Antistatic Urethane**

| Item | Unit | UMBDH, UMBDT |
|---|---|---|
| Specific Volume Resistivity | Ω・cm | $2.1 \times 10^8$ |
| Surface Resistivity | Ω | $4.0 \times 10^9$ |

Test Conditions (Temperature 30°C / Humidity 60%)

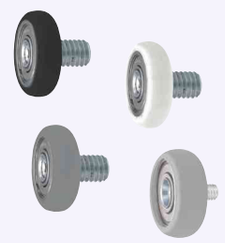
Listed values are not guaranteed values but an example of measured values.

| d | D | Unit Price: Urethane (Shore A95) Steel Bearing: UMBKH UMBKWH UMBKT UMBKWT | Urethane (Shore A95) Stainless Steel Bearing: UMSBKH UMSBKWH UMSBKT UMSBKWT | Urethane (Shore A90) Steel Bearing: UMBH UMBWH UMBT UMBWT | Urethane (Shore A90) Stainless Steel Bearing: UMSBH | UMSWH | UMSBT | UMSWT | Urethane (Shore A70) Steel Bearing: UMBGH | Urethane (Shore A50) Steel Bearing: UMBLH UMBLWH UMBLWT | Silicon Rubber (Shore A70) Steel Bearing: SUMBH SUMBT | Silicon Rubber (Shore A70) Stainless Steel Bearing: SUMSBH SUMSBT | Antistatic Urethane (Shore A90) Steel Bearing: UMBDH UMBDT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 10 | | - | | - | - | - | - | | | | - | - |
| | 12 | | - | | - | - | - | - | | | | - | |
| 4 | 13 | | | | | | | | | | | | |
| | 16 | | | | | | | | | | | | |
| 5 | 16 | | | | | | | | | | | | |
| | 20 | | | | | | | | | | | | |
| 6 | 20 | | | | | | | | | | | | |
| | 28 | | | | | | | | | | | | |
| 8 | 28 | | | | | | | | | | | | |
| | 30 | | | | | | | | | | | | |
| | 30A | - | - | | | | | - | - | - | - | - | - |
| 10 | 30 | | | | | | | | | | | | |
| | 40 | | | | | | | - | | | | - | |
| | 30A | - | - | | | - | | - | - | - | - | - | - |
| | 40A | - | - | | | - | | - | - | - | - | - | - |
| 15 | 40 | | | | | | | - | | | | - | |
| | 45 | | | | | | | - | | | | - | |
| 15 | 40A | - | - | | | - | | - | - | - | - | - | - |
| | 45A | - | - | | | - | | - | - | - | - | - | - |
| 20 | 45 | | | | | | | - | | | | - | |
| | 55 | | - | | - | | - | - | | | | - | |
| | 45A | - | - | | | - | | - | - | - | - | - | - |
| | 55A | - | - | | - | - | - | - | - | - | - | - | - |
| 25 | 65 | | - | | - | | - | - | | | | - | |
| | 65A | - | - | | - | - | - | - | - | - | - | - | - |

# Silicon Rubber / Urethane Molded Bearings

## Threaded Arc

RoHS



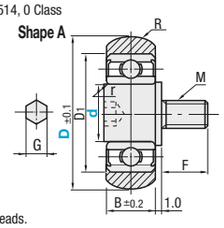
Urethane (white) may turn yellow over time.

| Type R Type | | M Material | H Hardness | Color | Bearing | Shaft | |
|---|---|---|---|---|---|---|---|
| Standard Threaded | Long Threaded | | | | | M Material | S Surface Treatment |
| UMBRH | UMBRT | Urethane | Shore A90 | Black | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating |
| UMSBRH | - | | | | EN 1.4125 Equiv. | EN 1.4305 Equiv. | - |
| UMBWRH | UMBWRT | | | White | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating *1 |
| UMSWRH | UMSWRT | | | | EN 1.4125 Equiv. | EN 1.4305 Equiv. | - |
| UMBGRH | - | | Shore A70 | Black | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating |
| UMBGWRH | - | | | White | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating *1 |
| SUMBRH | SUMBRT | Silicon Rubber | Shore A70 | Light Gray | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating |
| SUMSBRH | SUMSBRT | | | | EN 1.4125 Equiv. | EN 1.4305 Equiv. | - |
| UMBDRH | UMBDRT | Antistatic Urethane (Gray) | Shore A90 | Gray | EN 1.3505 Equiv. | Free Cutting Steel | Electroless Nickel Plating |

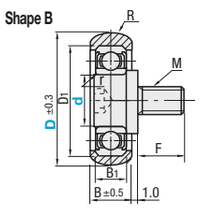
* 1 Surface treatment is changed from Trivalent Chromate to Electroless Nickel Plating.

Bearing Accuracy JIS B 1514, 0 Class

**Shape A**




**Shape B**




No undercutting on threads.

For bearing detailed dimensions, see **P.989**.

### Shape A

| Part Number Type | d | D | M (Coarse) | F Standard | F Long | Allowable Load N (kgf) Urethane Shore A90 | Urethane Shore A70 | Silicon Shore A70 | B | D1 | r (min.) | G | R | Used Bearing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Standard Threaded / Long Threaded | 3 | 12 | M3 | 4 | 6 | 34(3.5) | 10(1) | 9.8(1) | 3 | 7 | 0.1 | 1.5 | 5 | W683ZZA |
| UMBRH / UMBRT | *4 | 13 | M4 | 5 | 8 | 44(4.5) | 13(1.3) | 13(1.3) | 4 | 9 | 0.15 | | | W684AX50ZZ |
| *UMSBRH / UMBWRT | | 16 | | | | 59(6) | 16(1.6) | 18(1.8) | 5 | 13 | 0.2 | | | 624ZZ |
| UMSWRH / UMBGRH | *5 | 16 | | | | | 16(1.6) | | | | | 2.5 | | WBC5-13ZZ |
| UMBGWRH / *SUMBRH | | 20 | | | | 78(8) | 20(2) | 24(2.4) | | 16 | 0.3 | | | 625ZZ |
| SUMSBRH / UMBDRH | *6 | 20 | M6 | 8 | 12 | | 23(2.3) | | | 15 | 0.2 | | | 696ZZ |
| | | 28 | | | | 157(16) | 44(4.5) | 47(4.8) | 6 | 19 | 0.3 | | | 626ZZ |
| | *8 | 28 | | | | 176(18) | 42(4.3) | | 7 | 22 | | 4 | | 608ZZ |

Only d4 ~ 8 are available for * marked types.

Allowable load is for reference.

Ordering Example: Part Number - D → SUMBRH20 - 55

### Shape B

| Part Number Type | d | D | M (Coarse) | F Standard | F Long | Allowable Load N (kgf) Urethane Shore A90 | Urethane Shore A70 | Silicon Shore A70 | B | D1 | B1 | r (min.) | G | R | Used Bearing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Standard Threaded / Long Threaded | 8 | 30 | M6 | 8 | 12 | 176(18) | 81(8.3) | 53(5.4) | 11 | 22 | 7 | 0.3 | 4 | 15 | 608ZZ |
| UMBRH / UMBRT | 10 | 30 | | | | | 94(9.6) | | | 26 | 8 | | 5 | | 6000ZZ |
| UMSBRH | | 40 | | | | 274(28) | 136(13.9) | 82(8.4) | | 30 | 9 | 0.6 | | | 6200ZZ |
| UMBWRH / UMBWRT | | 40 | M10 | 12 | 20 | | 122(12.4) | | 12 | 32 | | 0.3 | | | 6002ZZ |
| UMSWRH / UMSWRT | 15 | 45 | | | | 343(35) | 109(11.1) | 103(10.5) | 15 | 35 | 11 | 0.6 | | | 6202ZZ |
| UMBGRH | | 45 | | | | | 130(13.3) | | 12 | 37 | 9 | 0.3 | 8 | 20 | 6904ZZ |
| UMBGWRH / SUMBRH | 20 | 55 | | | | 490(50) | 225(22.9) | 147(15) | 18 | 47 | 14 | 1 | | | 6204ZZ |
| SUMBRT / SUMSBRT | | 65 | | | | 750(70) | 333(34) | 226(23) | 19 | 52 | 15 | | 10 | | 6205ZZ |
| SUMSBRH / UMBDRT | 25 | | | | | | | | | | | | | | |
| UMBDRH | | | | | | | | | | | | | | | |

Allowable load is for reference.

| d | D | Unit Price: Urethane (Shore A90) Steel Bearing: UMBRH UMBWRH UMBRT UMBWRT | Urethane (Shore A90) Stainless Steel Bearing: UMSBRH UMSWRH UMSWRT | Urethane (Shore A70) Steel Bearing: UMBGRH UMBGWRH | Silicon Rubber (Shore A70) Steel Bearing: SUMBRH SUMBRT | Silicon Rubber (Shore A70) Stainless Steel Bearing: SUMSBRH SUMSBRT | Antistatic Urethane (Shore A90) Steel Bearing: UMBDRH UMBDRT |
|---|---|---|---|---|---|---|---|
| 3 | 12 | | - | | | - | |
| 4 | 13 | | | | | | |
| | 16 | | | | | | |
| 5 | 16 | | | | | | |
| | 20 | | | | | | |
| 6 | 20 | | | | | | |
| | 28 | | | | | | |
| 8 | 28 | | | | | | |
| | 30 | | | | | | |
| 10 | 30 | | - | | | - | |
| | 40 | | - | | | - | |
| 15 | 40 | | - | | | - | |
| | 45 | | - | | | - | |
| 20 | 45 | | - | | | - | |
| | 55 | | - | | | - | |
| 25 | 65 | | - | | | - | |

**Properties of Antistatic Urethane**

| Item | Unit | UMBDRH・UMBDRT |
|---|---|---|
| Specific Volume Resistivity | Ω・cm | $2.1 \times 10^8$ |
| Surface Resistivity | Ω | $4.0 \times 10^9$ |

Test Conditions (Temperature 30°C / Humidity 60%)

Listed values are not guaranteed values but an example of measured values.

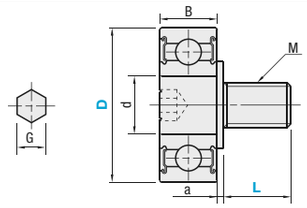
## ■Threaded Bearings



RoHS

**■Features:** As threaded studs are swaged-on, no extra retaining measure is required.

| Type | | Material | | Surface Treatment |
|---|---|---|---|---|
| Standard Threaded | Long Threaded | Bearing | Shaft | Shaft |
| NTBG | NTBGT | Steel | Free Cutting Steel | Electroless Nickel Plating |
| NTSBG | NTSBGT | Stainless Steel | EN 1.4305 Equiv. | - |




The base of thread contains an incomplete thread portion.

| Part Number Type | D | L Standard Threaded | L Long Threaded | B | d | a | G | M (Coarse) | Bearing | Unit Price NTBG | NTSBG | NTBGT | NTSBGT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Standard Threaded NTBG NTSBG | 6 | 4 | 6 | 2.5 | 3 | 1 | 1.5 | M3 | 673ZZ | | | | |
| | 7 | 4 | 6 | 3 | 3 | | | | W683ZZ | | | | |
| | 8 | 5 | 8 | 2.5 | 5 | | | | 675ZZ | | | | |
| | 9 | 5 | 8 | 4 | 4 | | | M4 | W684A×50ZZ | | | | |
| | 13 | 5 | 8 | 5 | 4 | | | | 624ZZ | | | | |
| | 16 | 5 | 8 | 5 | 5 | | 2.5 | | 625ZZ | | | | |
| | 19 | 8 | 12 | 6 | 6 | | | M6 | 626ZZ | | | | |
| | 22 | 8 | 12 | 7 | 8 | | 4 | | 608ZZ | | | | |
| Long Threaded NTBGT NTSBGT | 26 | 8 | 12 | 8 | 10 | 2.5 | 5 | | 6000ZZ | | | | |
| | 30 | 8 | 12 | 9 | 10 | 2 | 5 | | 6200ZZ | | | | |
| | 32 | 12 | 20 | 9 | 15 | 2.5 | 5 | | 6002ZZ | | | | |
| | 35 | 12 | 20 | 11 | 15 | 3 | 5 | | 6202ZZ | | | | |
| | 37 | 12 | 20 | 9 | 20 | 2.5 | 8 | M10 | 6904ZZ | | | | |
| | 47 | 12 | 20 | 14 | 20 | 3 | 8 | | 6204ZZ | | - | | - |
| | 52 | 12 | 20 | 15 | 25 | 3 | 10 | | 6205ZZ | | - | | - |

Ordering Example — Part Number: NTBG16 - 5

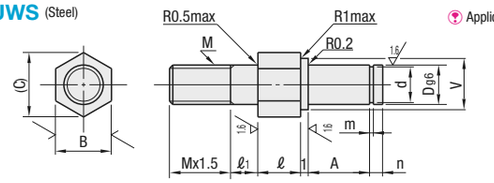
For bearing detailed dimensions, see **P.989, 991**.

## ■Urethane Molded Bearing Shafts



RoHS

**UWS** (Steel)




Applicable to the products on **P.1151, 1152.**

M Material: EN 1.0038 Equiv.
S Surface Treatment: Black Oxide
A Accessory: Nut, Retaining Ring-C Type
(Retaining Ring-E Type for No. 312~830.)

| Part Number Type | No. | Dg6 | A | ℓ | ℓ1 | V | d | Tolerance | M | B | (C) | m Dimension | m Tolerance | n | Applicable Urethane Molded Bearing | | Unit Price |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UWS | 312 | 3 | 3 | 5 | - | 4 | 2.05 | +0.06 0 | 3 | 5 | 5.8 | 0.5 | +0.05 0 | 2 | UMBB | UMBBR | 3-12 |
| | 413 | 4 | 4 | | 1 | 5 | 3.05 | | 4 | 7 | 8.1 | 0.7 | | | UMBW | UMBWR | 4-13 |
| | 416 | | 5 | | | 6 | | | | | | | | | UMBG | | 4-16 |
| | 516 | 5 | 5 | | 2 | 6.9 | 4.05 | +0.075 0 | 5 | 8 | 9.2 | | +0.1 0 | | UMBGW | | 5-16 |
| | 520 | | | | | 7.5 | | | | | | | | | UMBL | | 5-20 |
| | 620 | 6 | 5 | | 3 | 8 | 5.05 | | 6 | 10 | 11.5 | | | | UMBLW | | 6-20 |
| | 628 | | 6 | | | 9 | | | | | | | | | UMBD | | 6-28 |
| | 828 | 8 | 7 | 10 | 4 | 12 | 7.1 | +0.09 0 | 8 | 14 | 16.2 | 0.9 | | 3 | SUMBB | SUMBBR | 8-28 |
| | 830 | | | | | | | | | | | | | | UMSB | UMSBR | 8-30 |
| | 1030 | 10 | 8 | | | 13 | 9.6 | 0 -0.09 | 10 | | | | | | UMSW | UMSWR | 10-30 |
| | 1040 | | 9 | | | 16 | | | | 19 | 21.9 | 1.15 | +0.14 0 | | UMSG | | 10-40 |
| | 1540 | 15 | 9 | 15 | 5 | 18 | 14.3 | 0 -0.11 | 12 | | | | | 4 | UMSGW | | 15-40 |
| | 1545 | | 11 | | | 19 | | | | 21 | 24 | | | | SUMSB | | 15-45 |
| | 2045 | 20 | 9 | | 6 | 23 | 19 | 0 -0.21 | 16 | 27 | 31.2 | 1.35 | | | | | 20-45 |
| | 2055 | | 14 | | | 25 | | | | | | | | | | | 20-55 |

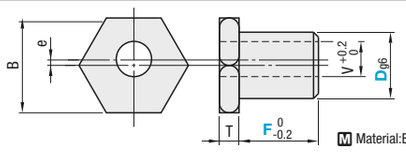
Ordering Example — Part Number: UWS312

## ■Eccentric Bushings

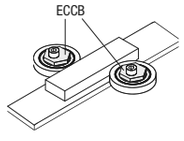


RoHS

**ECCB**




Example




M Material: EN 1.1191 Equiv.

| Part Number Type | Dg6 | F Selection | Applicable Bearing | V | B | T | e | Unit Price |
|---|---|---|---|---|---|---|---|---|
| ECCB | 6 | 5 | 696ZZ | 3 | 10 | 3 | 0.3 | |
| | | 6 | 606ZZ, 626ZZ | | | | | |
| | 8 | 6 | 698ZZ | 4 | 12 | | 0.5 | |
| | | 7 | 608ZZ | | | | | |
| | | 8 | 628ZZ | | | | | |
| | 10 | 6 | 6900ZZ | 5 | 14 | | 1 | |
| | | 8 | 6000ZZ | | | | | |
| | | 9 | 6200ZZ | | | | | |
| | 12 | 6 | 6901ZZ | 6 | 17 | | 1.2 | |
| | | 8 | 6001ZZ | | | | | |
| | | 10 | 6201ZZ | | | | | |
| | 15 | 7 | 6902ZZ | 8 | 19 | | 1.5 | |
| | | 9 | 6002ZZ | | | | | |
| | | 11 | 6202ZZ | | | | | |

Ordering Example — Part Number: ECCB10 - 8

For bearing detailed dimensions, see **P.989**.

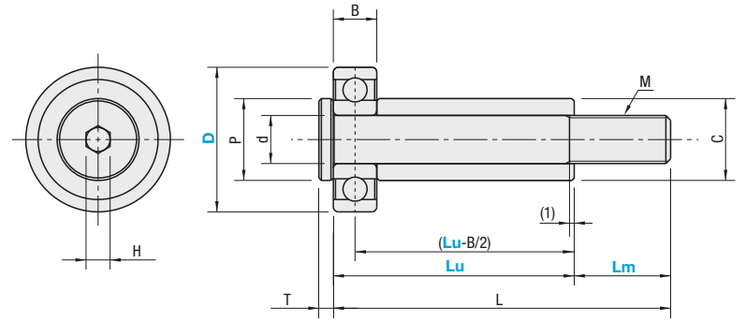


**■Features**: Rollers that use bearings. Spacer thickness can be specified from 1mm, and any mounting height can be selected.



RoHS

Bearing and Spacer can be shipped in an intact state by tightening the gap between O.D. of Pin and I.D. of Spacer. It can prevent falling or missing of parts and reduce time and effort during assembly.




| Type | Bearing | Pin | Spacer | Surface Treatment |
|---|---|---|---|---|
| BWP | EN 1.3505 Equiv. | EN 1.1191 Equiv. | EN 1.0038 Equiv. | Black Oxide |

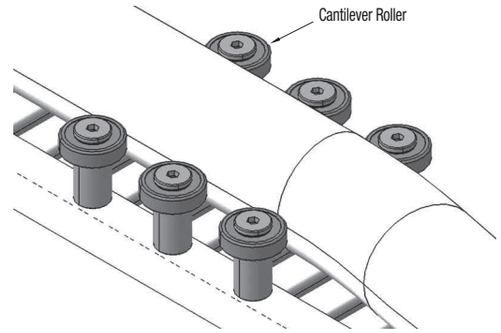
| Part Number Type | D | 1mm Increment Lu | Lm | L | B | d | M (Coarse) | H (Hex Socket) | T | C=P | Bearing Part No. | Unit Price 1 ~ 4 pc(s). |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BWP | 11 | 6~25 | 5~10 | Lu+Lm | 5 | 5 | M5 | 2.5 | 2 | 8 | 685ZZ | |
| | 13 | 5~25 | 5~10 | | 4 | 5 | M5 | 2.5 | | 8 | 695ZZ | |
| | 16 | 6~40 | 8~16 | | 5 | 8 | M8 | 4 | 3 | 11 | 688ZZ | |
| | 19 | 7~40 | 8~16 | | 6 | 8 | M8 | 4 | | 11 | 698ZZ | |
| | 22 | 8~40 | 8~16 | | 7 | 8 | M8 | 4 | | 11 | 608ZZ | |
| | 26 | 9~50 | 10~20 | | 8 | 10 | M10 | 5 | | 14 | 6000ZZ | |
| | 30 | 10~50 | 10~20 | | 9 | 10 | M10 | 5 | | 17 | 6200ZZ | |

Regardless of the specified dimension, (Lm dimension + 1mm) is the threaded section.

Ordering Example — Part Number: BWP11 - Lu: 17 - Lm: 10

Example

**Cable Carry Guide**



# Engineered Plastic Bearings

## ■Flat Type



## ■Retained Type

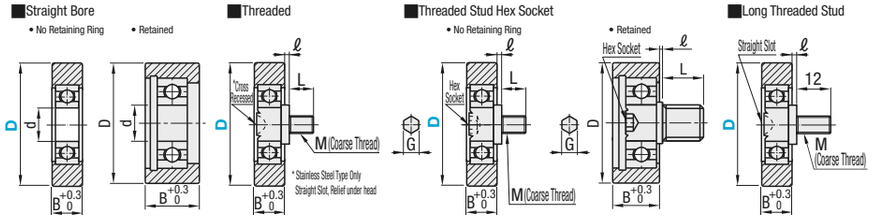


RoHS

| Type | | | | | | Material | | | Surface Treatment |
|---|---|---|---|---|---|---|---|---|---|
| No Retaining Ring | | | | Retained | | Surface Plastic | Bearing | Shaft | Shaft |
| Straight Bore | Threaded Stud | Threaded Stud Hex Socket | Long Threaded Stud | Straight Bore | Threaded Stud Hex Socket | | | | |
| EBSS | EBBS | EBHS | - | - | - | Polyacetal | EN 1.4125 Equiv. | EN 1.4301 Equiv. | - |
| EB | EBB | EBH | EBBL | - | - | | EN 1.3505 Equiv. | JIS-SWCH | Trivalent Chromate |
| EBD | EBBD | - | - | - | - | Antistatic Polyacetal | EN 1.4125 Equiv. | EN 1.4301 Equiv. | - |
| EBC | - | EBBC | - | - | - | | EN 1.4125 Equiv. (Low Dust Generation) | | |
| EBSZ | - | EBHZ | - | - | - | | EN 1.4301 Equiv. (Low Dust Generation) | | |
| - | - | - | - | EBM | EBMH | MC Nylon | EN 1.3505 Equiv. | EN 1.1191 Equiv. | Trivalent Chromate |
| - | - | - | - | EBPE | EBPEH | UHMWPE | | | |

- EBC, EBSZ, EBBC and EBHZ use low dust generation grease and the resin section may be discolored due to reactions with ultraviolet, but the functionality will not be affected.
- Surface resistivity of antistatic polyacetal is $1.5\times10^{11}\Omega$ (Temperature 23°C / Humidity 65%)
- For identification, markings are painted on the side of antistatic polyacetal plastic parts. Wipe off before use.

■Straight Bore ■Threaded ■Threaded Stud Hex Socket ■Long Threaded Stud




Bearing Accuracy JIS B 1514, 0 Class

| Part Number Type | D | Allowable Load N ( ) indicates EN 1.4301 Equiv. | d Polyacetal | d MC Nylon Ultra High-Molecular-Weight Polyethylene | M (Coarse) | L Polyacetal | L MC Nylon Ultra High-Molecular-Weight Polyethylene | ℓ | Hex Socket G | Retaining Ring Size (C Type) (Only for Retained Type) | Bearing Used |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Straight Bore EBSS EB EBD EBC EBSZ EBM EBPE | 13 | 29.4(14.7) | 4 | 5 | - | 4 | 5 | - | 1 | 1.5 | - | L-1040ZZ |
| | 14 | | | | | | | | | | RTWS13 | 695ZZ |
| | 16 | | 5 | 8 | | | | | | | | |
| | 18 | | | | | | | | | | | |
| Threaded Stud EBBS EBB EBBD Threaded Stud Hex Socket EBHS EBH EBBC EBHZ EBMH EBPEH | 19 | 78.4(39.2) | 6 | 6 | 9 | 6 | 8 | 8 | 1 | 2.5 | RTWS15 | 696ZZ |
| | 20 | | | | | | | | | | | |
| | 22 | | | | | | | | | | | |
| | 24 | | | | | | | | | | | |
| | 26 | | | 8 | | | | | | | | |
| | 30 | 176(88) | 8 | 9 | 12 | | | | | 5 | RTWS22 | 608ZZ |
| | 35 | | | | | | | | | | | |
| | 40 | | | | | | | | | | | |
| Long Threaded Stud EBPEH | 45 | 245(122) | 10 | 12 | 14 | 8 | 12 | 12 | 2 | 6 | RTWS30 | 6200ZZ |
| EBBL | 50 | | | | | | | | | | | |

| Unit Price | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Straight Bore | | | | | | | Threaded Stud | | | Threaded Stud Hex Socket | | | | Long Threaded Stud |
| EBSS | EB | EBD | EBC | EBSZ | EBM | EBPE | EBBS | EBB | EBBD | EBHS | EBH | EBBC | EBHZ | EBMH | EPEH | EBBL |
| | | - | - | - | - | - | - | - | - | | | - | - | - | - | - |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | - | | | | |
| | | | - | | | | | | | | | - | | | | |
| | | | - | - | | | | | | | | - | - | | | - |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

See price chart for available sizes. For bearing detailed dimensions, see **P.989**, **991**.

kgf=Nx0.101972

## ■R Type

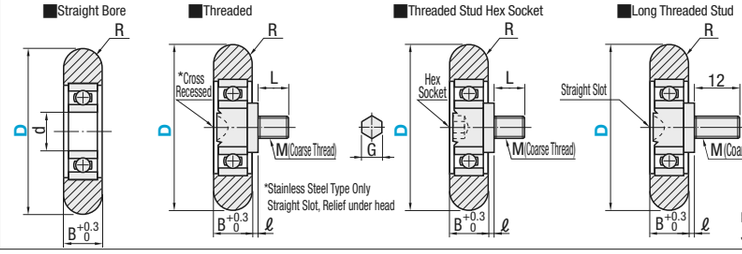


RoHS

| Type | | | | Material | | | Surface Treatment |
|---|---|---|---|---|---|---|---|
| Straight Bore | Threaded Stud | Threaded Stud Hex Socket | Long Threaded Stud | Surface Plastic | Bearing | Shaft | Shaft |
| ERBS | ERBBS | ERBHS | - | Polyacetal | EN 1.4125 Equiv. | EN 1.4301 Equiv. | - |
| ERB | ERBB | ERBH | ERBBL | | EN 1.3505 Equiv. | JIS-SWCH | Trivalent Chromate |
| ERBZ | - | ERBHZ | - | Antistatic Polyacetal | EN 1.4301 Equiv. (Low Dust Generation) | EN 1.4301 Equiv. | - |

- ERBZ and ERBHZ use low dust generation grease and the resin section may be discolored due to reactions with ultraviolet, but the functionality will not be affected.
- Surface resistivity of antistatic polyacetal is $1.5\times10^{11}\Omega$ (Temperature 23°C / Humidity 65%)
- For identification, markings are painted on the side of antistatic polyacetal plastic parts. Wipe off before use.

■Straight Bore ■Threaded ■Threaded Stud Hex Socket ■Long Threaded Stud




Bearing Accuracy JIS B 1514 Class 0

| Part Number Type | D | Allowable Load N ( ) indicates EN 1.4301 Equiv. | d | R | B | M (Coarse) | L | ℓ | Hex Socket G | Bearing Used |
|---|---|---|---|---|---|---|---|---|---|---|
| Straight Bore Hex Socket ERBS ERB ERBZ Threaded Stud Long Threaded Stud ERBBS ERBB | 19 | 78.4(39.2) | 6 | 5 | 6 | 6 | 8 | 1 | 2.5 | 696ZZ |
| | 20 | | | | 7 | | | | | |
| | 22 | | | | 8 | | | 0.5 | | |
| | 24 | | | | | | | | | |
| | 26 | | | | | | | | | |
| | 30 | 176(88) | 8 | | 9 | | | 1 | 5 | 608ZZ |
| | 35 | | | | | | | | | |
| ERBHS ERBH ERBHZ ERBBL | *40 | 245 | 10 | 6 | 12 | 8 | 12 | 2 | 6 | 6200ZZ |
| | *45 | | | | | | | | | |
| | *50 | | | | | | | | | |

| Unit Price | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Straight Bore | | | Threaded Stud | | Threaded Stud Hex Socket | | | | Long Threaded Stud |
| ERBS | ERB | ERBZ | ERBBS | ERBB | ERBHS | ERBH | ERBHZ | ERBBL |
| | | | | | | | | |
| | | | | | | | | |
| | | - | | | | | - | - |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | - | - | - | - | | - | - |

* marked sizes are only available for ERBS, ERB and ERBH.

Plating color may vary depending on production lot but no differences in plating properties.

For bearing detailed dimensions, see **P.989**, **991**.

kgf=Nx0.101972

## ■Flat Type with Bracket



## ■R Type with Bracket

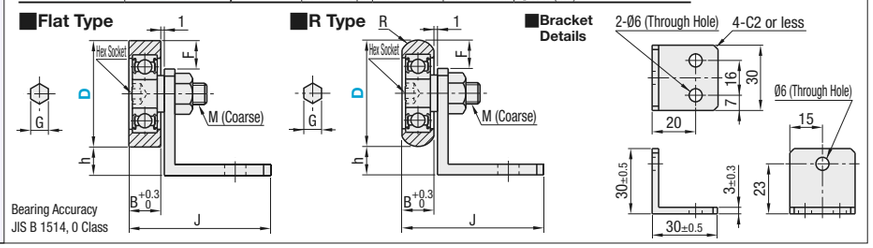


RoHS

| Type | | Material | | | Surface Treatment | Accessory |
|---|---|---|---|---|---|---|
| Flat | R Type | Surface Plastic | Bearing | Shaft | Shaft | |
| ENHS | - | Polyacetal | EN 1.4125 Equiv. | EN 1.4301 Equiv. | - | ①Bracket (Clear Anodize) |
| ENH | ERNH | | EN 1.3505 Equiv. | JIS-SWCH | Trivalent Chromate | ②Nut (M6) |

Engineered Plastic Bearings and accessories are in separate packages.

■Flat Type ■R Type ■Bracket Details




| Part Number Type | D | Allowable Load N ( ) indicates EN 1.4301 Equiv. | F | R | h | B Flat | B R Type | M (Coarse) | J Flat | J R Type | Hex Socket G | Bearing Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flat ENHS ENH R Type ERNH | 24 | 78.4 | 5 | 5 | 11 | 6 | 7 | 6 | 37 | 38 | 2.5 | 696ZZ |
| | 26 | (39.2) | 6 | | 10 | 8 | 8 | | 39 | 39 | 5 | 608ZZ |
| | 30 | 176 | 8 | | 8 | 9 | 9 | | 40 | 40 | | |
| | 35 | (88) | 10.5 | | 5.5 | | | | | | | |

| Unit Price | | |
|---|---|---|
| ENHS | ENH | ERNH |
| | | |
| | | |

For bearing detailed dimensions, see **P.989**.

kgf=Nx0.101972

## ■U Groove



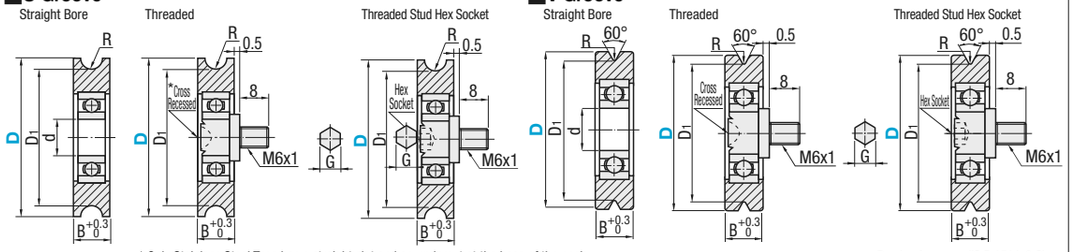
## ■V Groove



RoHS

| Shape | Type | | | Material | | | Surface Treatment |
|---|---|---|---|---|---|---|---|
| | Straight Bore | Threaded Stud | Threaded Stud Hex Socket | Surface Plastic | Bearing | Shaft | Shaft |
| U Groove | EUBS | EUBBS | EUBHS | Polyacetal | EN 1.4125 Equiv. | EN 1.4301 Equiv. | - |
| | EUB | EUBB | EUBH | | EN 1.3505 Equiv. | JIS-SWCH | Trivalent Chromate |
| V Groove | EVB | EVBB | EVBH | | | | |

■U Groove ■V Groove




* Only Stainless Steel Type has a straight slot and an undercut at the base of the neck.

Bearing Accuracy JIS B 1514, 0 Class

| Part Number Type | D | Allowable Load N ( ) indicates EN 1.4301 Equiv. | d | D1 | B | R U Groove | R V Groove | Hex Socket G | Bearing Used |
|---|---|---|---|---|---|---|---|---|---|
| Straight Bore Threaded Stud Threaded Stud Hex Socket EUBS EUBBS EUBHS EUB EUBB EUBH EVB EVBB EVBH | 22 | 78.4 | 6 | 19 | 7 | 2.5 | 0.6 | 2.5 | 696ZZ |
| | 24 | (39.2) | | 21 | | | | | |
| | 30 | 176 | 8 | 27 | 9 | | | 5 | 608ZZ |
| | 35 | (88) | | 31 | | | | | |

| Unit Price | | | | | | |
|---|---|---|---|---|---|---|
| Straight Bore | | Threaded Stud | | Threaded Stud Hex Socket | | |
| EUBS | EUB EVB | EUBBS | EUBB EVBB | EUBHS | EUBH EVBH | |
| | | | | | | |
| | | | | | | |

With the B=7 size U-Groove Threaded Stud Type, the screw head may protrude above the B dimension. For bearing detailed dimensions, see **P.989**.

kgf=Nx0.101972

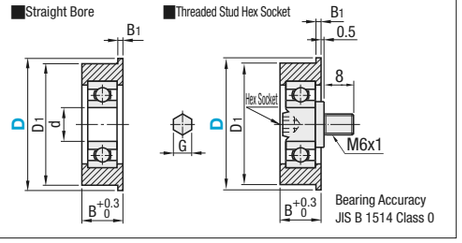
## ■One Side Flanged



RoHS

| Type | | Material | | | Surface Treatment |
|---|---|---|---|---|---|
| Straight Bore | Threaded Stud Hex Socket | Surface Plastic | Bearing | Shaft | Shaft |
| EKB | EKBH | Polyacetal | EN 1.3505 Equiv. | JIS-SWCH | Trivalent Chromate |

■Straight Bore ■Threaded Stud Hex Socket




| Part Number Type | D | Allowable Load N | d | D1 | B | B1 | Hex Socket G | Bearing Used |
|---|---|---|---|---|---|---|---|---|
| EKB (Straight Bore) | 24 | 78.4 | 6 | 20 | 7 | 1.5 | 2.5 | 696ZZ |
| EKBH (Threaded Stud Hex Socket) | 35 | 176 | 8 | 30 | 9 | 2 | 5 | 608ZZ |

| Unit Price | |
|---|---|
| Straight Bore | Threaded Stud Hex Socket |
| EKB | EKBH |
| | |
| | |

For bearing detailed dimensions, see **P.989**.

kgf=Nx0.101972

Ordering Example

| Part Number |
|---|
| EB24 |
| ERB24 |
| EUB24 |
| EKB35 |

Example

