

NISTM



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GENERAL CATALOGUE - BEARINGS

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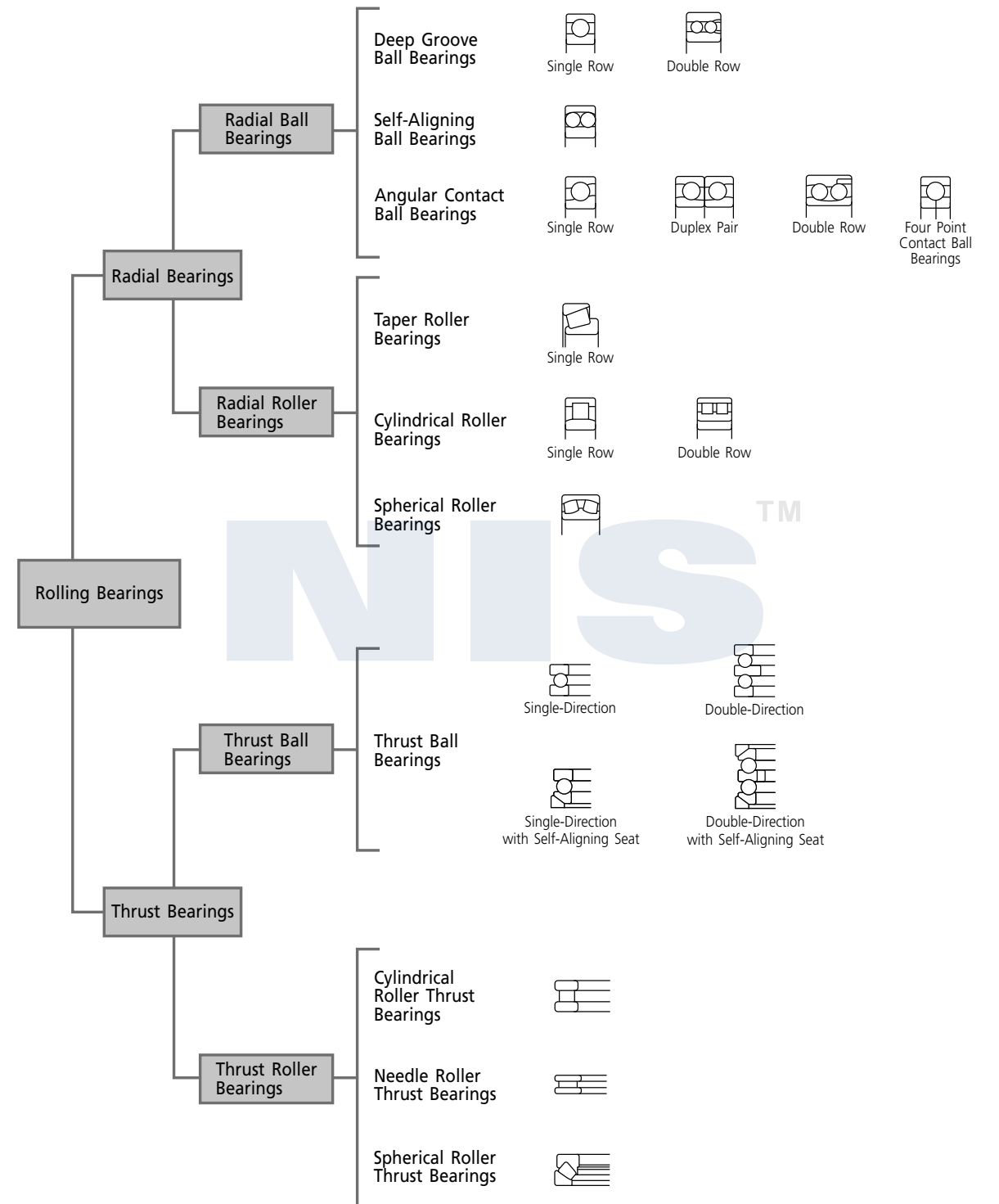


BEARINGS

NISTM

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| Quantity | Unit | Conversion | | | |
|-------------------------|------------------------|---------------------|--------------------------|----------------|-----------------------------|
| Length | inch | 1 mm | 0,03937 in | 1 in | 25,40 mm |
| | foot | 1 m | 3,281 ft | 1 ft | 0,3048 m |
| | yard | 1 m | 1,094 yd | 1 yd | 0,9144 m |
| | mile | 1 km | 0,6214 mile | 1 mile | 1,609 km |
| | | | | | |
| Area | square inch | 1 mm ² | 0,00155 sq.in | 1 sq.in | 645,16 mm ² |
| | square foot | 1 m ² | 10,76 sq.ft | 1 sq.ft | 0,0929 m ² |
| Volume | cubic inch | 1 cm ³ | 0,061 cub.in | 1 cub.in | 16,387 cm ³ |
| | cubic foot | 1 m ³ | 35 cub.ft | 1 cub.ft | 0,02832 m ³ |
| | imperial gallon | 1 l | 0,22 gallon | 1 gallon | 4,5461 l |
| | U.S. gallon | 1 l | 0,2642 U.S. gallon | 1 U.S. gallon | 3,7854 l |
| | | | | | |
| Velocity, Speed | foot per second | 1 m/s | 3,28 ft/s | 1 ft/s | 0,30480 m/s |
| | mile per hour | 1 km/h | 0,6214 mile/h (mph) | 1 mile/h (mph) | 1,609 km/h |
| Mass | ounce | 1 g | 0,03527 oz | 1 oz | 28,350 g |
| | pound | 1 kg | 2,205 lb | 1 lb | 0,45359 kg |
| | short ton | 1 tonne | 1,1023 short ton | 1 short ton | 0,90719 tonne |
| | long ton | 1 tonne | 0,9842 long ton | 1 long ton | 1,0161 tonne |
| | | | | | |
| Density | pound per cubic inch | 1 g/cm ³ | 0,0361 lb/cub.in | 1 lb/cub.in | 27,680 g/cm ³ |
| Force | pound-force | 1 N | 0,225 lbf | 1 lbf | 4,4482 N |
| Pressure, Stress | pounds per square inch | 1 MPa | 145 psi | 1 psi | 6,8948 x 10 ³ Pa |
| Moment | inch pound-force | 1 Nm | 8,85 in.lbf | 1 in.lbf | 0,113 Nm |
| Power | foot-pound per second | 1 W | 0,7376 ft lbf/s | 1 ft lbf/s | 1,3558 W |
| | horsepower | 1 kW | 1,36 HP | 1 HP | 0,736 kW |
| Temperature | degree | Celcius | $t_c = 0,555 (t_f - 32)$ | Fahrenheit | $t_f = 1,8 t_c + 32$ |



| Suitability | Suitability | | | | | | | | | | | |
|---|-------------|------------|---------------|---------------|---------------|-----------------|------------|---------------|-----------------------|--------------|-------------------|--------------|
| | Radial Load | Axial Load | Compound Load | Shield & Seal | Self Aligning | Rings Separable | High Speed | High Rigidity | Low Running Precision | Low Friction | Low Running Noise | Tapered Bore |
| ● Very Good ● Good ○ Possible ○ Limited ← Not Suitable → ← One Way → Double Way | | | | | | | | | | | | |
| Deep Groove Ball Bearing | ● | ○ | ○ | ○ | ○ | ○ | ● | ○ | ● | ● | ● | ○ |
| Self-Aligning Ball Bearing | ○ | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Angular Contact Ball Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Four-Point Ball Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Cylindrical Roller Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Needle Roller Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Spherical Roller Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Taper Roller Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Thrust Cylindrical Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Thrust Cylindrical Roller Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Thrust Needle Roller Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Thrust Spherical Roller Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Self-Aligning Roller Bearing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Bearing Material

| Material | Chinese Standard | Equivalent | | |
|----------------------------|------------------|---------------|------------|---------|
| | | AISI/SAE/ASTM | DIN | JIS |
| High Carbon Chromium Steel | GCr15 | SAE52100 | 100Cr6 | SUJ2 |
| Stainless Steel | 9Cr18 | AISI440C | X102CrMo17 | SUS440C |
| *Cold Rolled Low Carbon | ST14 | ASTM366 | 1623 | 3141 |

Chemical Composition

| Material | Chemical Composition (Symbol) | | | | | | |
|----------------------------|-------------------------------|-----------|-------|--------|--------|-------------|-------|
| | C | Si | Mn | P | S | Cr | Mo |
| High Carbon Chromium Steel | 0.95-1.05 | 0.15-0.35 | ≤0.45 | ≤0.025 | ≤0.025 | 1.40-1.65 | ≤0.08 |
| Stainless Steel | 0.95-1.20 | ≤1.00 | ≤1.00 | ≤0.04 | ≤0.03 | 16.00-18.00 | ≤0.75 |
| *Cold Rolled Low Carbon | ≤0.08 | ≤0.02 | ≤0.4 | ≤0.02 | ≤0.03 | ≤0.06 | - |

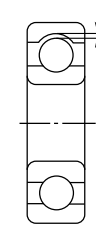
* Cold Rolled Low Carbon is used in drawn cup outer ring of one way clutch bearings.

Internal Radial Clearance

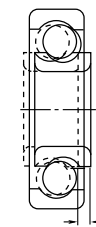
Internal clearance is the distance between outer ring, inner ring and rolling element. It is an important factor that has significant influence on noise, vibration, heat and fatigue life of a bearing. As such, it is critical to select the proper clearance considering the bearing fit, load, speed and operating temperature.

When measuring the internal radial clearance, the bearing is subject to a standard load in order to ensure full contact between all bearing components. Under such a load, the measured clearance is larger than the actual; this is due to elastic deformation. The difference is compensated by the factors given in the table below.

Bearing Internal Clearance



Radial Internal Clearance



Axial Internal Clearance

Internal Radial Clearance of Miniature Bearings

| Clearance Mark | Unit μm | | | | | |
|----------------|---------|-----|-----|-----|-----|-----|
| | MC1 | MC2 | MC3 | MC4 | MC5 | MC6 |
| Clearance | max | min | max | min | max | min |
| | 0 | 5 | 3 | 8 | 5 | 10 |
| Clearance | max | min | max | min | max | min |
| | 8 | 13 | 13 | 20 | 20 | 28 |

Note: 1. Standard clearance is MC3.
2. For measuring clearance, offset by compensation factor listed below.

| Clearance Mark | Unit μm | | | | | |
|---------------------|---------|-----|-----|-----|-----|-----|
| | MC1 | MC2 | MC3 | MC4 | MC5 | MC6 |
| Compensation Factor | 1 | 1 | 1 | 1 | 2 | 2 |

Measuring load is as follows.
Miniature bearing 2.5N (0.25kgf)
Small bearings 4.4N (0.45kgf)

Internal Radial Clearance of Ball Bearings

| Nominal Bore Diameter d (mm) | Clearance | Unit μm | | | | | | | | | |
|------------------------------|-----------|---------|-----|--------|-----|-----|-----|-----|-----|-----|-----|
| | | C2 | | CN(CO) | | C3 | | C4 | | C5 | |
| OVER | INCL | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| 10 (Only) | | 0 | 7 | 2 | 13 | 8 | 23 | 14 | 29 | 20 | 37 |
| 10 | 18 | 0 | 9 | 3 | 18 | 11 | 25 | 18 | 33 | 25 | 45 |
| 18 | 24 | 0 | 10 | 5 | 20 | 13 | 28 | 20 | 36 | 28 | 48 |
| 24 | 30 | 1 | 11 | 5 | 20 | 13 | 28 | 23 | 41 | 30 | 53 |
| 30 | 40 | 1 | 11 | 6 | 20 | 15 | 33 | 28 | 46 | 40 | 64 |
| 40 | 50 | 1 | 11 | 6 | 23 | 18 | 36 | 30 | 51 | 45 | 73 |

Note: 1. For measuring clearance, offset by compensation factor listed below.

| Bore Diameter of Nominal Bearing d (mm) | Measuring Load (N) (kgf) | Compensation Factor | | | | |
|---|--------------------------|---------------------|--------|----|----|----|
| | | C2 | CN(CO) | C3 | C4 | C5 |
| 10 (Included) | 18 | 24.5 (2.6) | 3-4 | 4 | 4 | 4 |
| 18 | 50 | 49 (5) | 4-5 | 5 | 6 | 6 |

Bearing accuracy consists of dimensional accuracy and running accuracy. The normal accuracy grade is P0, a higher grade is P6 and P2 is the highest grade. Application requirements decide which grade accuracy should be applied.

Accuracy Grade Standard Conversion Table

| GB | Equivalents | | | |
|----|--------------|--------|-----|------|
| | ISO | ABMA | DIN | JIS |
| P0 | Normal Class | ABEC 1 | P0 | JIS0 |
| P6 | Class 6 | ABEC 3 | P6 | JIS6 |
| P5 | Class 5 | ABEC 5 | P5 | JIS5 |
| P4 | Class 4 | ABEC 7 | P4 | JIS4 |
| P2 | Class 2 | ABEC 9 | P2 | JIS2 |

- Notes:
1. P0(GB) is normal grade, P6 higher grade and P2 the highest accuracy grade.
 2. GB : Chinese National Standards
 3. ISO : International Standardization Organization
 4. ABMA : The American Bearing Manufacturers Association
 5. DIN : Deutsch Industrie Norm
 6. JIS : Japanese Industrial Standards

Guide for Selection of Bearing Accuracy

| Application | ISO |
|--|-----------------|
| Computer printers, copy machine-feed rollers, micro motors, stepping motors, fan motors, VCR pinch rollers | Normal Class 6 |
| High precision motors, hard disk drive motors, dental spindles, servo motors, encoders, VCR drum spindles, VCR capstan motors, polygonal mirror scanner motors | Class 5 Class 4 |
| High frequency spindles, gyro rotors, gyro gimbals | Class 4 |

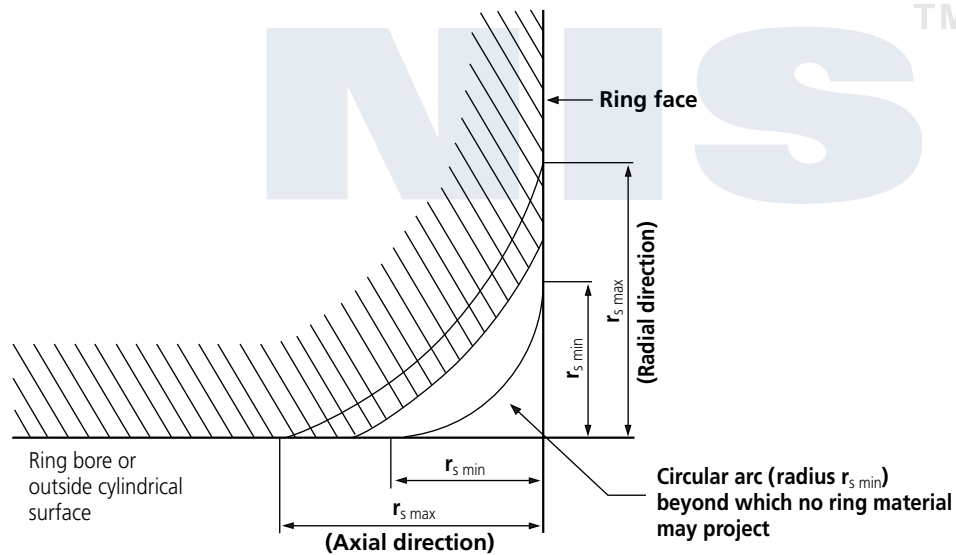
| Symbol | Definition | Inspection |
|----------------|---|------------|
| d | Nominal bore diameter | |
| Δ_{dmp} | Mean bore diameter deviation in a single plane | |
| Δ_{ds} | Deviation of a single bore diameter | |
| V_{dp} | Bore diameter variation in a single radial plane | |
| V_{dmp} | Mean bore diameter variation | |
| Δ_{Bs} | Deviation of a single inner ring width | |
| V_{Bs} | Variation of inner ring width | |
| K_{ia} | Radial runout of assembled bearing inner ring | |
| S_d | Face runout with bore | |
| S_{ia} | Face runout with raceway of assembled bearing inner ring | |
| D | Nominal outside diameter | |
| Δ_{Dmp} | Mean outside diameter deviation in a single plane | |
| Δ_{Ds} | Deviation of a single outside diameter | |
| V_{Dp} | Outside diameter variation in a single radial plane | |
| V_{Dmp} | Mean outside diameter variation | |
| Δ_{Cs} | Deviation of a single outer ring width | |
| V_{Cs} | Variation of outer ring width | |
| Δ_{Dis} | Flange outside diameter deviation | |
| Δ_{Cis} | Flange width deviation | |
| K_{ea} | Radial runout of assembled bearing outer ring | |
| S_D | Variation of outside surface generatrix with inclination of outer ring benchmark face | |
| S_{ea} | Assembled bearing outer ring face runout with raceway | |

Limit Tolerance Values (Metric) of Chamfer Dimensions of Radial Bearings



| $r_{s\ min}$ | d (mm) | | $r_{s\ max}$ | | $r_{a\ max}^{(1)}$ |
|--------------|----------|-------|--------------|-------|--------------------|
| | Over | Incl. | Radial | Axial | |
| 0.05 | - | - | 0.1 | 0.2 | 0.05 |
| 0.08 | - | - | 0.16 | 0.3 | 0.08 |
| 0.1 | - | - | 0.2 | 0.4 | 0.1 |
| 0.15 | - | - | 0.3 | 0.6 | 0.15 |
| 0.2 | - | - | 0.5 | 0.8 | 0.2 |
| 0.3 | - | 40 | 0.6 | 1 | 0.3 |
| | 40 | - | 0.8 | 1 | |
| 0.6 | - | 40 | 1 | 2 | 0.6 |
| | 40 | - | 1.3 | 2 | |
| 1 | - | 50 | 1.5 | 3 | 1 |
| | 50 | - | 1.9 | 3 | |
| 1.1 | - | 120 | 2 | 3.5 | 1 |
| | 120 | - | 2.5 | 4 | |

Unit mm



- $r_{s\ min}$ = smallest permissible single chamfer dimension (minimum limit)
- $r_{s\ max}$ = largest permissible single chamfer dimension (maximum limit)
- $r_{a\ max}$ = largest permissible single shaft and housing fillet radius

Note : The exact shape of the chamfer surface is not specified, but its contour in an axial plane shall not be allowed to project beyond the imaginary circular arc, of radius $r_{s\ min}$, tangential to the ring face and bore or outside cylindrical surface of the ring (see figure).



Normal Tolerances for Radial Bearings (Except Taper Roller Bearings)

Inner Ring

| d | | $\Delta_{dmp}^{1)}$ | | V_{dmp} | K_{ia} |
|------|-------|---------------------|------|-----------|----------|
| over | incl. | high | low | max | max |
| mm | | μm | | μm | μm |
| 2,5 | 10 | 0 | -8 | 6 | 10 |
| 10 | 18 | 0 | -8 | 6 | 10 |
| 18 | 30 | 0 | -10 | 8 | 13 |
| 30 | 50 | 0 | -12 | 9 | 15 |
| 50 | 80 | 0 | -15 | 11 | 20 |
| 80 | 120 | 0 | -20 | 15 | 25 |
| 120 | 180 | 0 | -25 | 19 | 30 |
| 180 | 250 | 0 | -30 | 23 | 40 |
| 250 | 315 | 0 | -35 | 26 | 50 |
| 315 | 400 | 0 | -40 | 30 | 60 |
| 400 | 500 | 0 | -45 | 34 | 65 |
| 500 | 630 | 0 | -50 | 38 | 70 |
| 630 | 800 | 0 | -75 | - | 80 |
| 800 | 1000 | 0 | -100 | - | 90 |
| 1000 | 1250 | 0 | -125 | - | 100 |
| 1250 | 1600 | 0 | -160 | - | 120 |
| 1600 | 2000 | 0 | -200 | - | 140 |

¹⁾ Tolerances for tapered bores (taper 1:12 and 1:30) are given on pages on 84 and 85

Outer Ring

| D | | $\Delta_{Dmp}^{1)}$ | | V_{Dmp} | K_{ea} |
|------|-------|---------------------|------|-----------|----------|
| over | incl. | high | low | max | max |
| mm | | μm | | μm | μm |
| 6 | 18 | 0 | -8 | 6 | 15 |
| 18 | 30 | 0 | -9 | 7 | 15 |
| 30 | 50 | 0 | -11 | 8 | 20 |
| 50 | 80 | 0 | -13 | 10 | 25 |
| 80 | 120 | 0 | -15 | 11 | 35 |
| 120 | 150 | 0 | -18 | 14 | 40 |
| 150 | 180 | 0 | -25 | 19 | 45 |
| 180 | 250 | 0 | -30 | 23 | 50 |
| 250 | 315 | 0 | -35 | 26 | 60 |
| 315 | 400 | 0 | -40 | 30 | 70 |
| 400 | 500 | 0 | -45 | 34 | 80 |
| 500 | 630 | 0 | -50 | 38 | 100 |
| 630 | 800 | 0 | -75 | 55 | 120 |
| 800 | 1000 | 0 | -100 | 75 | 140 |
| 1000 | 1250 | 0 | -125 | - | 160 |
| 1250 | 1600 | 0 | -160 | - | 190 |
| 1600 | 2000 | 0 | -200 | - | 220 |
| 2000 | 2500 | 0 | -250 | - | 250 |

¹⁾ Applies only to bearings of Diameter Series 2, 3 and 4

Normal Tolerances for Radial Bearings (Except Taper Roller Bearings)

Tolerances for Tapered Bore, Taper 1:12

| Tolerances Classes Normal, P6 | | | | | | |
|-------------------------------|-------|------------------|-----|-------------------------------|-------------------|-------------------|
| d | | Δ _{dmp} | | V _{dp} ¹⁾ | Δ _{d1mp} | -Δ _{dmp} |
| over | incl. | high | low | max | high | low |
| mm | | μm | | μm | μm | |
| 18 | 30 | + 21 | 0 | 13 | + 21 | 0 |
| 30 | 50 | + 25 | 0 | 15 | + 25 | 0 |
| 50 | 80 | + 30 | 0 | 19 | + 30 | 0 |
| 80 | 120 | + 35 | 0 | 25 | + 35 | 0 |
| 120 | 180 | + 40 | 0 | 31 | + 40 | 0 |
| 180 | 250 | + 46 | 0 | 38 | + 46 | 0 |
| 250 | 315 | + 52 | 0 | 44 | + 52 | 0 |
| 315 | 400 | + 57 | 0 | 50 | + 57 | 0 |
| 400 | 500 | + 63 | 0 | 56 | + 63 | 0 |
| 500 | 630 | + 70 | 0 | - | + 70 | 0 |
| 630 | 800 | + 80 | 0 | - | + 80 | 0 |
| 800 | 1000 | + 90 | 0 | - | + 90 | 0 |
| 1000 | 1250 | + 105 | 0 | - | + 105 | 0 |
| 1250 | 1600 | + 125 | 0 | - | + 125 | 0 |
| 1600 | 2000 | + 150 | 0 | - | + 150 | 0 |

¹⁾ Applies in any single radial plane of the bore

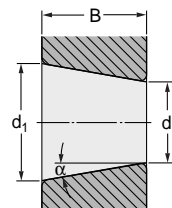
Tolerances for Tapered Bore, Taper 1:30

| Tolerances Classes Normal | | | | | | |
|---------------------------|-------|------------------|-----|-------------------------------|-------------------|-------------------|
| d | | Δ _{dmp} | | V _{dp} ¹⁾ | Δ _{d1mp} | -Δ _{dmp} |
| over | incl. | high | low | max | high | low |
| mm | | μm | | μm | μm | |
| 80 | 120 | + 20 | 0 | 25 | + 40 | 0 |
| 120 | 180 | + 25 | 0 | 31 | + 50 | 0 |
| 180 | 250 | + 30 | 0 | 38 | + 55 | 0 |
| 250 | 315 | + 35 | 0 | 44 | + 60 | 0 |
| 315 | 400 | + 40 | 0 | 50 | + 65 | 0 |
| 400 | 500 | + 45 | 0 | 56 | + 75 | 0 |
| 500 | 630 | + 50 | 0 | 63 | + 85 | 0 |
| 630 | 800 | + 75 | 0 | - | + 100 | 0 |
| 800 | 1000 | + 100 | 0 | - | + 100 | 0 |
| 1000 | 1250 | + 125 | 0 | - | + 115 | 0 |
| 1250 | 1600 | + 160 | 0 | - | + 125 | 0 |
| 1600 | 2000 | + 200 | 0 | - | + 150 | 0 |

¹⁾ Applies in any single radial plane of the bore

Tapered Bores

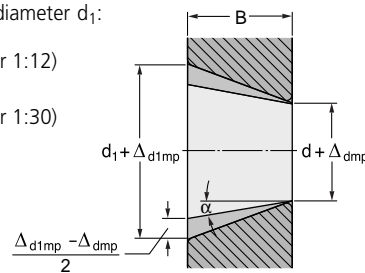
Half angle of taper α:
 α = 2° 23' 9,4" (taper 1:12)
 α = 0° 57' 17,4" (taper 1:30)



Largest theoretical diameter d_1 :

$$d_1 = d + \frac{1}{12} B \text{ (taper 1:12)}$$

$$d_1 = d + \frac{1}{30} B \text{ (taper 1:30)}$$



Normal Tolerances for Taper Roller Bearings (Metric Sizes)

Inner Ring and Bearing Width

| d | | Δ _{dmp} | | V _{dmp} | K _{ia} |
|------|-------|------------------|-------|------------------|-----------------|
| over | incl. | high | low | max | max |
| mm | | μm | | μm | μm |
| 10 | 18 | 0 | - 12 | 9 | 15 |
| 18 | 30 | 0 | - 12 | 9 | 18 |
| 30 | 50 | 0 | - 12 | 9 | 20 |
| 50 | 80 | 0 | - 15 | 11 | 25 |
| 80 | 120 | 0 | - 20 | 15 | 30 |
| 120 | 180 | 0 | - 25 | 19 | 35 |
| 180 | 250 | 0 | - 30 | 23 | 50 |
| 250 | 315 | 0 | - 35 | 26 | 60 |
| 315 | 400 | 0 | - 40 | 30 | 70 |
| 400 | 500 | 0 | - 45 | 34 | 70 |
| 500 | 630 | 0 | - 50 | 38 | 85 |
| 630 | 800 | 0 | - 75 | 56 | 100 |
| 800 | 1000 | 0 | - 100 | 75 | 120 |
| 1000 | 1250 | 0 | - 125 | - | 120 |
| 1250 | 1600 | 0 | - 160 | - | 120 |
| 1600 | 2000 | 0 | - 200 | - | 120 |

Outer Ring

| D | | Δ _{Dmp} | | V _{Dmp} | K _{ea} |
|------|-------|------------------|-------|------------------|-----------------|
| over | incl. | high | low | max | max |
| mm | | μm | | μm | μm |
| 18 | 30 | 0 | - 12 | 9 | 18 |
| 30 | 50 | 0 | - 14 | 11 | 20 |
| 50 | 80 | 0 | - 16 | 12 | 25 |
| 80 | 120 | 0 | - 18 | 14 | 35 |
| 120 | 150 | 0 | - 20 | 15 | 40 |
| 150 | 180 | 0 | - 25 | 19 | 45 |
| 180 | 250 | 0 | - 30 | 23 | 50 |
| 250 | 315 | 0 | - 35 | 26 | 60 |
| 315 | 400 | 0 | - 40 | 30 | 70 |
| 400 | 500 | 0 | - 45 | 34 | 80 |
| 500 | 630 | 0 | - 50 | 38 | 100 |
| 630 | 800 | 0 | - 75 | 55 | 120 |
| 800 | 1000 | 0 | - 100 | 75 | 120 |
| 1000 | 1250 | 0 | - 125 | 94 | 120 |
| 1250 | 1600 | 0 | - 160 | 120 | 120 |
| 1600 | 2000 | 0 | - 200 | - | 120 |
| 2000 | 2500 | 0 | - 250 | - | 120 |

Inner Ring

| d | | Δ_{ds} | |
|--------|--------|------------------|-----|
| | | Tolerances class | |
| Normal | | high | low |
| over | incl. | | |
| mm | | μm | |
| - | 76,2 | + 13 | 0 |
| 76,2 | 101,6 | + 25 | 0 |
| 101,6 | 266,7 | + 25 | 0 |
| 266,7 | 304,8 | + 25 | 0 |
| 304,8 | 609,6 | + 51 | 0 |
| 609,6 | 914,4 | + 76 | 0 |
| 914,4 | 1219,2 | + 102 | 0 |
| 1219,2 | - | + 127 | 0 |

Outer Ring

| D | | Δ_{Ds} | | $K_{ia}, K_{ea}, S_{ia}, S_{ea}$ | | |
|--------|--------|------------------|-----|----------------------------------|-----|-----|
| | | Tolerances class | | Tolerances class | | |
| Normal | | high | low | Normal | CL3 | CL0 |
| over | incl. | | | max | max | max |
| mm | | μm | | μm | | |
| - | 266,7 | + 25 | 0 | 51 | 8 | 4 |
| 266,7 | 304,8 | + 25 | 0 | 51 | 8 | 4 |
| 304,8 | 609,6 | + 51 | 0 | 51 | 18 | 9 |
| 609,6 | 914,4 | + 76 | 0 | 76 | 51 | 26 |
| 914,4 | 1219,2 | + 102 | 0 | 76 | 76 | 38 |
| 1219,2 | - | + 127 | 0 | 76 | 76 | - |

Bearing Life

When bearing rotate, the inner, outer ring and rolling elements are constantly loaded. This produces material fatigue and eventually bearing failure. The total number of revolutions before a failure occurs is called the basic rating life.

Life of individual bearings varies considerably, even if they are of the same size, same material, same heat treatment and are under the same operating condition.

Statistically, the total number of revolutions reached or exceeded by 90% of a sufficiently large group of apparently identical bearings before the first evidence of material fatigue occurs is called the basic rating life.

Basic Dynamic Load Rating

The basic dynamic load rating of a bearing with rotating inner ring and stationary outer ring is that load of constant magnitude and size which a sufficiently large group of apparently identical bearings can endure for a basic rating life of one million revolutions.

Radial bearings take central load. Values given for C in the dimension tables of this catalogue are for standard high chromium steel. 80% to 85% of the chromium steel values should be used for stainless steel.

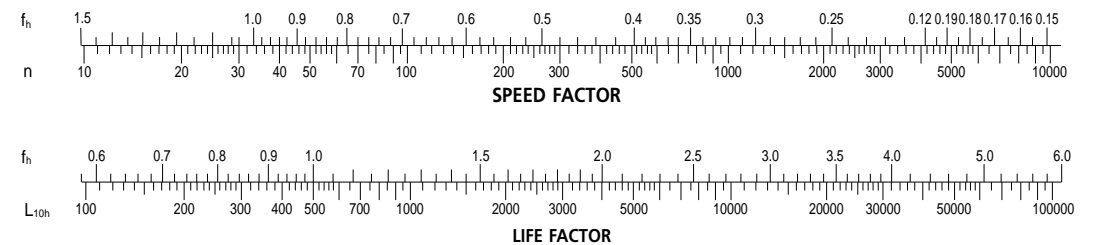
Life Formula

The equation for the basic rating life for dynamically loaded ball bearings is as follow:

$$L_{10} = \left(\frac{C_r}{P}\right)^3 \times 10^6 \text{ (Revolutions)} \quad L_{10h} = \frac{16666}{n} \cdot \left(\frac{C_r}{P}\right)^3 \text{ (Hours)}$$

whereby : L_{10} = Basic Rating Life
 C_r = Basic Dynamic Load Rating (kgf)
 n = R.P.M. (Revolutions Per Minute)
 f_n = Speed Factor
 L_{10h} = Basic Rating Life in Operating Hours
 P = Equivalent Load (kgf)
 f_h = Life Factor

$$L_{10h} = 500 \cdot f_n^3, \quad f_h = f_n \cdot \frac{C_r}{P}, \quad f_n = \left(\frac{33.3}{n}\right)^{1/3}$$



Examples of Rating Life L_{10h} Values Used:

| Operating Conditions | Basic Rating Life L_{10h} |
|---|-----------------------------|
| Infrequent operation. | 500 |
| Short or intermittent operation. Failure has little effect on function. | 4,000 ~ 8,000 |
| Intermittent operation. Failure has significant effect on function. | 8,000 ~ 12,000 |
| 8 hours of non-continuous operation. | 12,000 ~ 20,000 |
| 8 hours of continuous operation. | 20,000 ~ 30,000 |
| 24 hours continuous operation. | 40,000 ~ 60,000 |
| 24 hours of guaranteed trouble-free operation. | 100,000 ~ 200,000 |

Adjusted Life Formula

The above life formula is for general use. In cases where a reliability of over 90% is required and where influences apart from load and speed or operating frequency should be taken into account for the rating life, ISO 281, 1990 gives an extended life formula:

$$L_{na} = a_1 \times a_2 \times a_3 \times \left(\frac{C_r}{P}\right)^3 \quad (\times 10^6 \text{ Revolutions})$$

- whereby : L_{na} = Adjusted rating life in millions of revolutions with a reliability of (100-n) % (n=the reliability rate)
- C_r = Basic Dynamic Load Rating (kgf)
- P = Equivalent Dynamic Load (kgf)
- a_1 = Factor for a reliability other than 90%
- a_2 = Factor for non-conventional materials
- a_3 = Factor for non-conventional operating conditions, in particular lubrication

(1) Reliability Factor a_1

When a reliability of over 90% is required, the corresponding factor should be selected from the following table.

Reliability Factor a_1

| Reliability (%) | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | (99.6) | (99.9) |
|-----------------|------|------|------|------|------|------|------|------|------|------|--------|---------|
| a_1 | 1.00 | 0.92 | 0.84 | 0.77 | 0.64 | 0.62 | 0.53 | 0.44 | 0.33 | 0.21 | (0.10) | (0.037) |

(2) Material Factor a_2

Improvement in manufacturing techniques for raw material and for heat treatment of components have led to an extended fatigue life for bearings.

Our standard bearing material is a superior quality of vacuum degassed steel leading to an extended life for bearings.

The basic load ratings given in this catalogue have been established by taking this longer life into consideration. This gives an increase in the operating life in hours of a factor of 2.2 and a factor of 1.3 for the load carrying capacity. The material factor $a_2 = 1$.

(3) Operating Conditions Factor a_3

This is an adjustment factor to meet non-conventional operating conditions for lubrication, temperature and load. Under good lubrication conditions with a permanent oil film between rolling elements and rings, the factor $a_3 = 1$. In unfavourable conditions ($dm \cdot n \leq 10,000$), a factor $a_3 < 1$ must be selected. dm = mean bearing diameter $(D+d)/2$
 n = operating speed

At temperatures above 120°C, greater dimensional changes occur and the material hardness deteriorates which affects the bearing life.

The operating factor f_t for temperature can be taken from the following table:

Operating Temperature and Life Compensation Factor f_t

| | | | | | | | | |
|------------------------------|------|------|------|------|------|------|------|------|
| Bearing Temperature (°C) | 120 | 150 | 175 | 200 | 225 | 250 | 275 | 300 |
| Temperature Factor (f_t) | 1.00 | 0.90 | 0.85 | 0.75 | 0.65 | 0.60 | 0.52 | 0.45 |

Heat stabilized bearings, where the dimensions are stable above 120°C, are available on request.

Basic Static Load Rating " C_{or} "

The Basic Static Load Rating applies to bearings where rotating motion does not occur only infrequently.

The Basic Load Ratings and Calculation methods in this catalogue are based on methods described in ISO Excessive static load causes brinelling at the contact point between the rolling element and raceway.

As a standard of permissible static load, the basic load rating C_{or} for radial bearings is specified as follows:

Maximum contact pressure at the contact point between rolling element and bearing ring to be 4200 MPa (428.6 kgf/mm²) and total permanent deformation of the bearing of appr. 1/10000th of the rolling element's diameter.

Basic Static Load Rating for stainless steel is 75-80% of that for standard bearing steel.

Equivalent Dynamic Bearing Load " P "

Load conditions on bearing are usually a combination of radial and axial loads. In order to establish the equivalent radial load with definite force and direction and direction we use the following formula:

Radial Load Factor and Axial Load Factor

| $\frac{C_{or}}{F_a}$ | e | $\frac{F_a}{F_r} \leq e$ | | $\frac{F_a}{F_r} > e$ | |
|----------------------|------|--------------------------|---|-----------------------|------|
| | | X | Y | X | Y |
| 5 | 0.35 | 1 | 0 | 0.56 | 1.26 |
| 10 | 0.29 | 1 | 0 | 0.56 | 1.49 |
| 15 | 0.27 | 1 | 0 | 0.56 | 1.64 |
| 20 | 0.25 | 1 | 0 | 0.56 | 1.76 |
| 25 | 0.24 | 1 | 0 | 0.56 | 1.85 |
| 30 | 0.23 | 1 | 0 | 0.56 | 1.92 |
| 50 | 0.20 | 1 | 0 | 0.56 | 2.13 |
| 70 | 0.19 | 1 | 0 | 0.56 | 2.28 |

- $P = XF_r + YF_a$ (kgf)
- X = Radial Load Factor
- Y = Axial Load Factor
- F_r = Radial Load (kgf)
- F_a = Axial Load (kgf)

Equivalent Static Radial Load " P_0 "

For ball bearings subject to both radial and axial load, the static radial load with definite force and direction is called the Equivalent Static Radial Load.

The higher value from the two formulae shown below should be used.

$$P_0 = 0.6 \times F_r + 0.5 \times F_a, \quad P_0 = F_r$$

Safety Modulus

Permissible equivalent static load depends on basic static load rating.

But using limit of bearing change by using condition. Accordingly we use safety modulus which is experimental value.

$$f_s = \frac{C_{or}}{P_0}$$

- f_s : Safety Modulus
- C_{or} : Basic Static Load Rating (N)
- P_0 : Equivalent Static Radial Load (N)

| Using Condition | f_s |
|-----------------------------------|-------|
| Normal Operation | 1.0 |
| Shock Load | 1.5 |
| Silent and High Accurate Rotation | 2.0 |

The Importance of Correct Fitting

A bearing can only perform to its full capacity when it is correctly fitted on the shaft and in the housing. Insufficient interference on fitting surface could cause bearing rings to creep in a circumferential direction. Once this happens, considerable wear occurs on the fitting surface and both shaft and housing are damaged. Furthermore, abrasive particles may enter the bearing causing vibration, excessive heat and damage to raceways. It is therefore necessary to provide bearing rings under rotating load with an adequate interference fit to prevent creep. When using thin-type bearings under low load, the bearings should be fastened by a nut. Statically loaded bearings generally do not need to be fitted with an interference fit. Only when subject to a high degree of vibration do both inner and outer rings require fitting with an interference fit.

Fitting of Bearing and Shaft

| Condition (Steel Shaft) | Shaft Bore Diameter | Shaft Tolerance Class | | |
|--|--|---|-------------------|-------------------|
| | | Thin-Type | Others | |
| Inner Ring Rotating Load or Indeterminate Load Direction | Light Load $\leq 0.06C_r$ or Fluctuating Load | $10 \leq d \leq 18$ $18 \leq d \leq 30$ $30 \leq d \leq 50$ | h5 h5 h5 | js5 js5 js5 |
| | Standard Load = $0.06 \sim 0.12C_r$ | $10 \leq d \leq 18$ $18 \leq d \leq 30$ $30 \leq d \leq 50$ | js5 js5 js5 | j5 k5 k5 |
| Outer Ring Rotating Load | Necessary for Inner Ring turning Easily Around Shaft | All Bore Diameters | g5 | g6 |
| | Unnecessary for Inner Ring Turning Easily Around Shaft | All Bore Diameters | h5 | h6 |

Fitting of Bearing and Housing

| Condition (One-Piece Housing) | Axial Directional Movement of Outer Ring | Tolerance Class of Housing Seats | | |
|-------------------------------|--|----------------------------------|--------|----|
| | | Thin-Type | Others | |
| Inner Ring Rotating Load | Varying Loads | Easy to Move | H6 | H7 |
| | Light or Standard Load | Easy to Move | H7 | H8 |
| | High Temperature of Inner Ring and Shaft | Easy to Move | G6 | G7 |
| | Light or Standard Load | As a Rule, Impossible to Move | K5 | K6 |
| | Precise Rotation | Possible to Move | JS6 | J6 |
| | Quiet Operation | Easy to Move | H6 | H6 |
| Indeterminate Load Direction | Light or Standard Load | In General, Possible to Move | JS6 | J7 |
| | Standard or Heavy Load | As a Rule, Impossible to Move | K5 | K7 |
| | Large Shock Load | Impossible to Move | M5 | M7 |
| Outer Ring Rotating Load | Light or Fluctuating Load | Impossible to Move | M5 | M7 |
| | Standard or Heavy Load | Impossible to Move | N5 | N7 |
| Outer Ring Rotating Load | Thin-Type Housing Seats | Impossible to Move | P6 | P7 |
| | Heavy Load or Large Shock Load | Impossible to Move | P6 | P7 |

Characteristics of Load and Fitting

| ROTATING RING | LOAD | LOAD CONDITION | FITTING | |
|--|----------|--|---|---|
| Inner Ring | Static | Inner Ring Rotating Load Outer Ring Static Load | Interference Fit for Inner Ring Clearance Fit for Outer Ring | |
| Outer Ring | Rotating | | | |
| Outer Ring | Static | Outer Ring Rotating Load Inner Ring Static Load | Clearance Fit for Inner Ring Interference Fit for Outer Ring | |
| Inner Ring | Rotating | | | |
| In the Case of Fluctuating Load Direction or Unbalanced Load | | Rotating or Static | Indeterminate Load Direction | Interference Fit for Inner and Outer Ring |

Tolerance of Shaft (Unit : μm)

| Diameter (mm) | Average Bore Diameter Tolerance of Bearing (Class 0) Δ_{dhp} | | d6 | e6 | f6 | g5 | g6 | h5 | h6 | h7 | h8 | h9 | h10 | js6 | js6 | j6 | j6 | j7 | k6 | k6 | k7 | m5 | m6 | n6 | p6 | r6 | r7 |
|---------------|---|----------|------------|------------|------------|-----------|-----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|
| | Over | Incl. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 6 | 0 -8 | -30 -38 | -20 -28 | -10 -18 | -4 -9 | -4 -12 | 0 -5 | 0 -8 | 0 -12 | 0 -18 | 0 -30 | 0 -48 | ± 2.5 | ± 4 | +3 -2 | +6 -2 | +8 -4 | +6 +1 | +9 +1 | +13 +1 | +9 +4 | +12 +8 | +16 +8 | +20 +12 | +23 +15 | +27 +15 |
| 6 | 10 | 0 -8 | -40 -49 | -25 -34 | -13 -22 | -5 -11 | -5 -14 | 0 -6 | 0 -9 | 0 -15 | 0 -22 | 0 -36 | 0 -58 | ± 3 | ± 4.5 | +4 -2 | +7 -2 | +10 -6 | +7 +1 | +10 +1 | +16 +1 | +12 +6 | +15 +6 | +19 +10 | +24 +15 | +28 +19 | +34 +19 |
| 10 | 18 | 0 -8 | -50 -61 | -32 -43 | -16 -27 | -6 -14 | -6 -17 | 0 -8 | 0 -11 | 0 -18 | 0 -27 | 0 -43 | 0 -70 | ± 4 | ± 5.5 | +5 -3 | +8 -3 | +12 -6 | +9 +1 | +12 +1 | +19 +1 | +15 +7 | +18 +12 | +23 +12 | +29 +18 | +34 +23 | +41 +23 |
| 18 | 30 | 0 -10 | -65 -78 | -40 -53 | -20 -33 | -7 -16 | -7 -20 | 0 -9 | 0 -13 | 0 -21 | 0 -33 | 0 -52 | 0 -84 | ± 4.5 | ± 6.5 | +5 -4 | +9 -4 | +13 -15 | +11 -14 | +15 +2 | +23 +2 | +17 +8 | +21 +15 | +28 +22 | +35 +22 | +41 +28 | +49 +28 |
| 30 | 50 | 0 -12 | -80 -96 | -50 -66 | -25 -41 | -9 -20 | -9 -25 | 0 -11 | 0 -16 | 0 -25 | 0 -39 | 0 -62 | 0 -100 | ± 5.5 | ± 8 | +6 -5 | +11 -5 | +15 -10 | +13 +2 | +18 +2 | +27 +2 | +20 +9 | +25 +9 | +33 +17 | +42 +26 | +50 +34 | +59 +34 |

Tolerance of Housing (Unit : μm)

| Diameter (mm) | Average Bore Diameter Tolerance of Bearing (Class 0) Δ_{dhp} | | E6 | F6 | F7 | G6 | G7 | H6 | H7 | H8 | J6 | J7 | JS6 | JS7 | K5 | K6 | K7 | M5 | M6 | M7 | N5 | N6 | N7 | P6 | P7 |
|---------------|---|----------|------------|------------|------------|------------|------------|----------|----------|------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|------------|------------|-----------|------------|------------|
| | Over | Incl. | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 18 | 0 -8 | +43 +32 | +27 +16 | +34 +16 | +17 +6 | +24 +6 | +11 0 | +18 0 | +27 0 | +6 -5 | +10 -8 | ± 5.5 | ± 9 | +2 -6 | +2 -9 | +6 -12 | -4 -12 | -4 -15 | 0 -18 | -9 -17 | -9 -20 | -5 -23 | -15 -26 | -11 -29 |
| 18 | 30 | 0 -9 | +53 +40 | +33 +20 | +41 +20 | +20 +7 | +28 +7 | +13 0 | +21 0 | +33 -15 | +8 -5 | +12 -9 | ± 6.5 | ± 10 | +1 -8 | +2 -11 | +6 -15 | -5 -14 | -4 -17 | 0 -21 | -12 -21 | -11 -24 | -7 -28 | -18 -31 | -14 -35 |
| 30 | 50 | 0 -11 | +66 +50 | +41 +25 | +50 +25 | +25 +9 | +34 +9 | +16 0 | +25 0 | +39 0 | +10 -6 | +14 -11 | ± 8 | ± 1.2 | +2 -9 | +3 -13 | +7 -18 | -5 -16 | -4 -20 | 0 -25 | -13 -24 | -12 -28 | -8 -33 | -21 -37 | -17 -42 |
| 50 | 80 | 0 -13 | +79 +60 | +49 +30 | +60 +30 | +29 +10 | +40 +10 | +19 0 | +30 0 | +46 0 | +13 -6 | +18 -12 | ± 9.5 | ± 1.5 | +3 -10 | +4 -15 | +9 -21 | -6 -19 | -5 -24 | 0 -30 | -15 -28 | -14 -33 | -9 -39 | -26 -45 | -21 -51 |

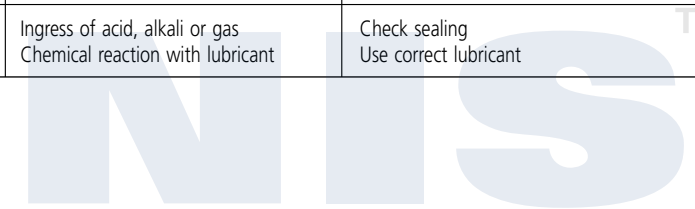
Lubrication is important as it affects the life of bearings significantly. Well lubricated bearings have the following benefits;

- i. Reduce Friction & Abrasion
- ii. Dissipation of Frictional Heat
- iii. Protection from Corrosion & Contaminants
- iv. Reduction of Noise

Commonly Used Greases

| Mfg | Brand | Thickener | Base oil | Drop point °C | Consistency | Operating temperature range °C | Application |
|-----------------|--------------------------|--------------|-----------------------|---------------|-------------|--------------------------------|----------------------------|
| Exxon | Beacon 325 | Lithium | Diester | 193 | 290 | -60 ~ +120 | low temp |
| | Andok B | Nathium | Mineral | 260 | 280 | -40 ~ +120 | general purpose |
| | Andok C | Nathium | Mineral | ≥260 | 205 | -20 ~ +120 | general purpose |
| | Andok 260 | Nathium | Mineral | 200 | 250 | -30 ~ +150 | general purpose |
| Kyodo Yushi | Multemp PS2 | Lithium | Diester | 189 | 280 | -50 ~ +110 | low temp |
| | Multemp SRL | Lithium | Ester | 191 | 245 | -40 ~ +150 | low noise |
| | Multemp SRH | Lithium | Ester | 250 | 201 | -40 ~ +150 | low temp |
| | Multemp SB-M | Diurea | Synthetic oil | 220 | 260 | -40 ~ +200 | high speed/temp |
| Kluber | ET-K | Diurea | Synthetic oil/ester | 260 | 300 | -40 ~ +200 | high temp/speed alternator |
| | Asonic GLY 32 | Lithium | Synthetic | 190 | 265-295 | -50 ~ +140 | low temp |
| | Asonic GHY 72 | Polyhamstoff | Ester Mineral | 250 | 250-280 | -40 ~ +180 | high temp/low noise |
| | Isoflex Super LDS 18 | Lithium | Diester | 190 | 280 | -60 ~ +130 | low temp |
| | Isoflex LDS 18 Special A | Lithium | Diester | 190 | 280 | -60 ~ +130 | low temp |
| | Isoflex Topas NB52 | Barium | Synthetic hydrocarbon | 204 | 280 | -60 ~ +170 | low/high temp |
| | Barrierta L55/2 | PTFE | Fluorinated | | 280 | -35 ~ +260 | low/high temp |
| | Barrierta TK44N2 | Na-Kompies | Silicone | | | -60 ~ +230 | low/high temp |
| | Isoflex NCA 15 | Special Ca | Ester Mineral | 180 | 265-295 | -40 ~ +130 | high speed |
| | Asonic HQ72 -102 | Urea | Ester | 240 | 250-280 | -40 ~ +180 | low/high temp & low noise |
| Dow Corning | Molykote 33M | Lithium | Silicone | 210 | 260 | -70 ~ +180 | low/high temp |
| | Molykote 44M | Lithium | Silicone | 204 | 260 | -40 ~ +200 | high temp |
| | Molykote 55M | Lithium | Silicone | | | -55 ~ +165 | low temp |
| | Molykote BR2 plus | Lithium | Mineral | | 280 | -30 ~ +150 | high speed |
| | Molykote FS1292 | PTFE | Phlorosilicon | ≥232 | 310 | -40 ~ +200 | high speed |
| Shell | Molykote FS3451 | PTFE | Phlorosilicon | ≥260 | 285 | -40 ~ +230 | chemical solvent resistant |
| | Alvania No.2 | Lithium | Mineral | 182 | 272 | -25 ~ +120 | general purpose |
| | Alvania No.3 | Lithium | Mineral | 183 | 233 | -20 ~ +135 | general purpose |
| | Alvania RA | Lithium | Mineral | 183 | 252 | -25 ~ +120 | general purpose |
| | Alvania EP2 | Lithium | Mineral | 185 | 276 | -10 ~ +100 | general purpose |
| | Dolium R | | Mineral | 238 | 281 | -20 ~ +140 | general purpose |
| | Aero Shell NO.5 | Microgel | Mineral | ≥260 | 282 | -10 ~ +130 | general purpose |
| Aero Shell NO.7 | Microgel | Mineral | ≥260 | 288 | -70 ~ +150 | low temp | |
| Mobil Oil | Aero Shell RLQ2 | Lithium | Mineral | 195 | 266 | -50 ~ +150 | low noise/high speed |
| | Mobilux2 | Lithium | Mineral | 190 | 280 | -20 ~ +120 | general purpose |
| | Mobil 22 | Lithium | Dester Mineral | 192 | 274 | -50 ~ +140 | low temp |
| | Mobil 28 | Bentonite | Synthetic hydrocarbon | ≥ 260 | 280 | -60 ~ +180 | low/high temp |
| | Mobiltemp SHC 22 | Glue earth | Synthetic oil | 250 | 265-295 | -50 ~ +180 | high speed/temp |
| Du Pont | Mobiltemp SHC 100 | Glue earth | Synthetic oil | 250 | 265-295 | -40 ~ +200 | high speed/temp |
| | Krytox 240AC | PTFE | Fluorinated | | 282 | -35 ~ +280 | high temp |
| Caltex | Chevron SRI-2 | Urea | Mineral | | 293 | -30 ~ +175 | high temp |
| Hangu | Hangu#2 | - | Mineral | - | - | -20 ~ +120 | general purpose |

| Problems | | Causes | Solutions |
|-----------|-----------------------------|---|--|
| Noise | High pitched metallic noise | Poor lubrication Clearance too small Poor fitting Excessive load | Improve lubrication Correct clearance Investigate mounting method and seating Examine shaft and housing tolerances for closing effect |
| | Low pitched metallic noise | Brinelled raceway surface | Avoid shock loads |
| | Regular noise | Rust and damage Flaking of raceway surface | Check and replace seals and relubricate Improve lubrication and check fitting, clearance and fixing method |
| | Irregular noise | Ingress of foreign matter Excessive clearance Damage and Flaking of railing element | Check and replace seals and relubricate Correct clearance Reduce loads and /or clearance |
| Corrosion | Variable noise | Variable clearance due to temperature changes Damage to raceways | Check fits taking housing material and temperature into consideration Improve lubrication and check fitting, clearance and fixing method |
| | Rust inside bearing | Poor storage Condensation | Careful storage and handling |
| | Rust on fitting surface | Fretting Fluctuating load | Increase interference fit Use oil as lubricant |
| | Corrosion | Ingress of acid, alkali or gas Chemical reaction with lubricant | Check sealing Use correct lubricant |





Deep Groove Ball Bearings

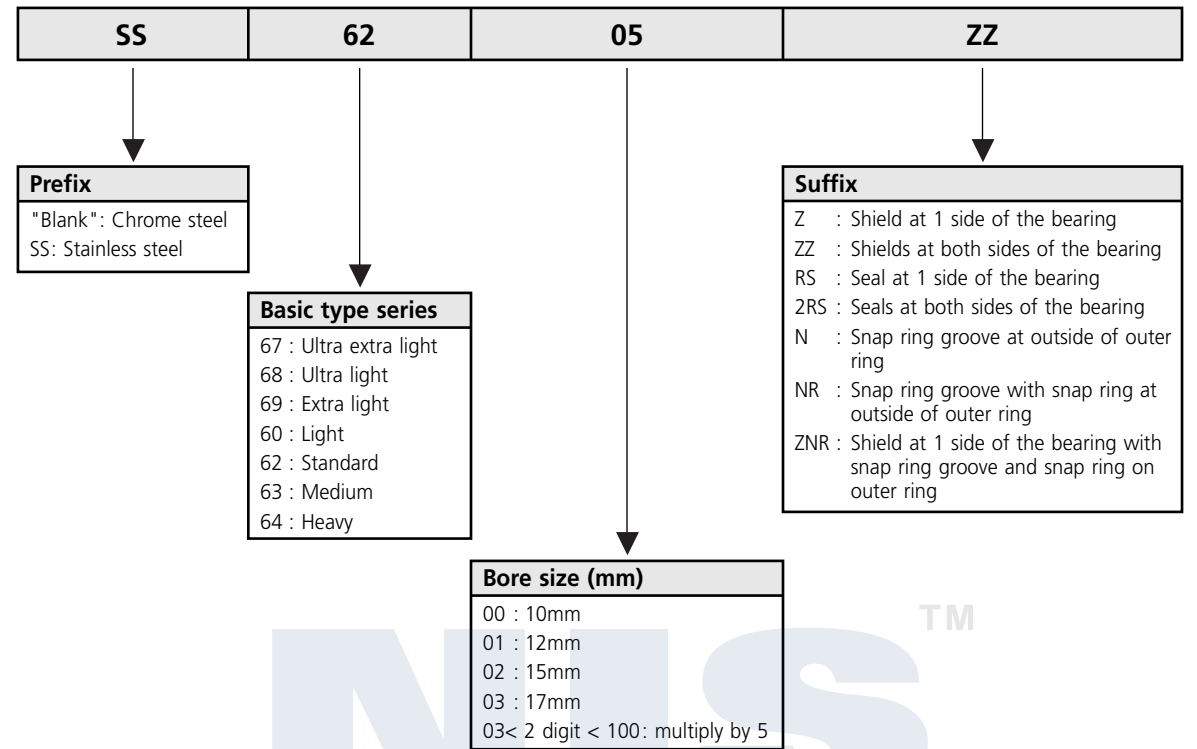
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NIS™

NIS™

Single Row Deep Groove Ball Bearings - Metric

■ Prefix & Suffix

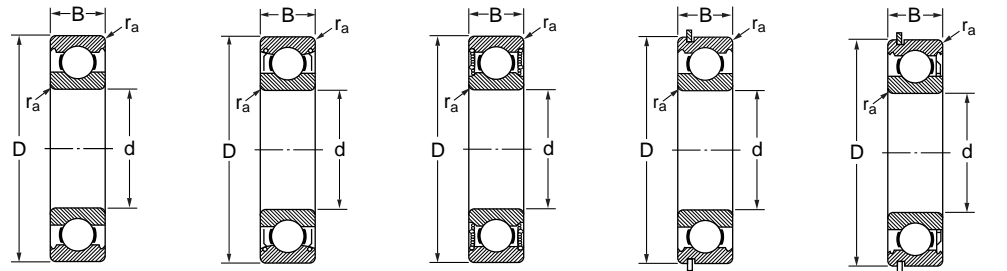


NIS™

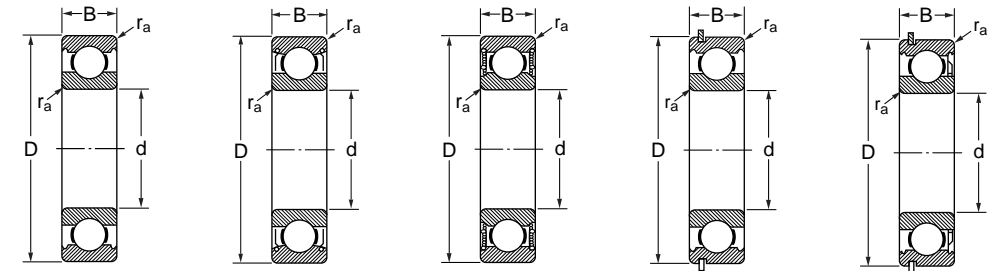
Single Row Deep Groove Ball Bearings - Metric



Single Row Deep Groove Ball Bearings - Metric



OPEN
 With recessed outer ring shoulders
SHIELDS - ZZ
SEALS - 2RS
 Snap ring groove and snap ring in outer ring - NR
 One Z shield, snap ring groove and snap ring - ZNR



OPEN
 With recessed outer ring shoulders
SHIELDS - ZZ
SEALS - 2RS
 Snap ring groove and snap ring in outer ring - NR
 One Z shield, snap ring groove and snap ring - ZNR

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | | |
|------------------|----|----|--------------------|----------------|----------------|--------|--------------------|-------|-------------|----------|--------|-----------------------|----------------|
| d | D | B | C | C ₀ | Grease | Oil | r _a max | kg | Open | Shielded | Sealed | With Snap Ring Groove | With Snap Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | | ZZ | 2RS | N | NR |
| 10 | 15 | 3 | 0.540 | 0.200 | 30,600 | 36,720 | 0.2 | 0.002 | 6700 | ZZ | 2RS | - | - |
| 10 | 19 | 5 | 1.260 | 0.680 | 23,400 | 30,600 | 0.3 | 0.005 | 6800 | ZZ | 2RS | N | NR |
| 10 | 22 | 6 | 2.970 | 1.260 | 22,500 | 28,800 | 0.3 | 0.011 | 6900 | ZZ | 2RS | N | NR |
| 10 | 26 | 8 | 4.130 | 1.790 | 18,000 | 25,200 | 0.3 | 0.019 | 6000 | ZZ | 2RS | N | NR |
| 10 | 26 | 12 | 4.160 | 1.770 | 17,100 | - | 0.3 | 0.025 | 63000 | - | 2RS | - | - |
| 10 | 28 | 8 | 4.130 | 1.790 | 16,200 | 23,400 | 0.3 | 0.022 | 16100 | ZZ | - | - | - |
| 10 | 30 | 9 | 4.590 | 2.150 | 17,100 | 23,400 | 0.6 | 0.032 | 6200 | ZZ | 2RS | N | NR |
| 10 | 30 | 14 | 4.570 | 2.130 | 15,300 | - | 0.6 | 0.040 | 62200 | - | 2RS | - | - |
| 10 | 35 | 11 | 6.890 | 3.140 | 16,200 | 21,600 | 0.6 | 0.053 | 6300 | ZZ | 2RS | N | NR |
| 10 | 35 | 17 | 7.260 | 3.060 | 13,500 | - | 0.6 | 0.060 | 62300 | - | 2RS | - | - |
| 12 | 18 | 4 | 0.580 | 0.250 | 28,800 | 34,560 | 0.2 | 0.002 | 6701 | ZZ | 2RS | - | - |
| 12 | 21 | 5 | 1.260 | 0.810 | 19,800 | 27,000 | 0.3 | 0.007 | 6801 | ZZ | 2RS | N | NR |
| 12 | 24 | 6 | 3.050 | 1.340 | 18,000 | 25,200 | 0.3 | 0.013 | 6901 | ZZ | 2RS | N | NR |
| 12 | 28 | 7 | 4.580 | 2.150 | 17,100 | 23,400 | 0.3 | 0.019 | 16001 | ZZ | - | - | - |
| 12 | 28 | 8 | 4.590 | 2.150 | 17,100 | 23,400 | 0.3 | 0.022 | 6001 | ZZ | 2RS | N | NR |
| 12 | 28 | 12 | 4.570 | 2.130 | 15,300 | - | 0.3 | 0.029 | 63001 | - | 2RS | - | - |
| 12 | 32 | 10 | 6.140 | 2.750 | 16,200 | 21,600 | 0.6 | 0.035 | 6201 | ZZ | 2RS | N | NR |
| 12 | 32 | 14 | 6.210 | 2.790 | 13,500 | - | 0.6 | 0.045 | 62201 | - | 2RS | - | - |
| 12 | 37 | 12 | 8.750 | 4.580 | 15,300 | 19,800 | 1.0 | 0.057 | 6301 | ZZ | 2RS | N | NR |
| 12 | 37 | 17 | 8.780 | 3.740 | 12,600 | - | 1.0 | 0.070 | 62301 | - | 2RS | - | - |
| 15 | 21 | 4 | 0.590 | 0.270 | 24,300 | 29,160 | 0.2 | 0.004 | 6702 | ZZ | 2RS | - | - |
| 15 | 24 | 5 | 1.730 | 1.070 | 18,000 | 25,200 | 0.3 | 0.008 | 6802 | ZZ | 2RS | N | NR |
| 15 | 28 | 7 | 3.600 | 1.820 | 17,100 | 23,400 | 0.3 | 0.018 | 6902 | ZZ | 2RS | N | NR |
| 15 | 32 | 8 | 5.040 | 2.300 | 16,200 | 21,600 | 0.3 | 0.025 | 16002 | ZZ | - | - | - |
| 15 | 32 | 9 | 5.030 | 2.570 | 16,200 | 21,600 | 0.3 | 0.031 | 6002 | ZZ | 2RS | N | NR |
| 15 | 32 | 13 | 5.040 | 2.570 | 12,600 | - | 0.3 | 0.039 | 63002 | - | 2RS | - | - |
| 15 | 35 | 11 | 6.890 | 3.350 | 15,300 | 19,800 | 0.6 | 0.045 | 6202 | ZZ | 2RS | N | NR |
| 15 | 35 | 14 | 7.020 | 3.380 | 11,700 | - | 0.6 | 0.054 | 62202 | - | 2RS | - | - |
| 15 | 42 | 13 | 10.350 | 4.880 | 14,400 | 18,000 | 1.0 | 0.080 | 6302 | ZZ | 2RS | N | NR |
| 15 | 42 | 17 | 10.260 | 4.860 | 10,800 | - | 1.0 | 0.110 | 62302 | - | 2RS | - | - |
| 17 | 23 | 4 | 0.630 | 0.320 | 21,600 | 25,920 | 0.2 | 0.002 | 6703 | ZZ | 2RS | - | - |
| 17 | 26 | 5 | 1.970 | 1.160 | 17,100 | 23,400 | 0.3 | 0.008 | 6803 | ZZ | 2RS | N | NR |

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | | |
|------------------|----|----|--------------------|----------------|----------------|--------|--------------------|-------|-------------|----------|--------|-----------------------|----------------|
| d | D | B | C | C ₀ | Grease | Oil | r _a max | kg | Open | Shielded | Sealed | With Snap Ring Groove | With Snap Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | | ZZ | 2RS | N | NR |
| 17 | 30 | 7 | 3.870 | 2.090 | 16,200 | 21,600 | 0.3 | 0.020 | 6903 | ZZ | 2RS | N | NR |
| 17 | 35 | 8 | 6.140 | 3.050 | 15,300 | 19,800 | 0.3 | 0.027 | 16003 | ZZ | - | - | - |
| 17 | 35 | 10 | 5.400 | 2.930 | 15,300 | 19,800 | 0.3 | 0.040 | 6003 | ZZ | 2RS | N | NR |
| 17 | 35 | 14 | 5.450 | 2.930 | 11,700 | - | 0.3 | 0.052 | 63003 | - | 2RS | - | - |
| 17 | 40 | 12 | 8.630 | 4.310 | 14,400 | 18,000 | 0.6 | 0.064 | 6203 | ZZ | 2RS | N | NR |
| 17 | 40 | 16 | 8.610 | 4.280 | 10,800 | - | 0.6 | 0.083 | 62203 | - | 2RS | - | - |
| 17 | 47 | 14 | 12.150 | 5.930 | 13,500 | 17,100 | 1.0 | 0.109 | 6303 | ZZ | 2RS | N | NR |
| 17 | 47 | 19 | 12.150 | 5.900 | 9,900 | - | 1.0 | 0.150 | 62303 | - | 2RS | - | - |
| 17 | 62 | 17 | 20.250 | 9.720 | 9,900 | 13,500 | 1.0 | 0.268 | 6403 | ZZ | 2RS | N | NR |
| 20 | 27 | 4 | 0.650 | 0.360 | 18,900 | 22,680 | 0.2 | 0.006 | 6704 | ZZ | 2RS | - | - |
| 20 | 32 | 7 | 3.110 | 2.030 | 15,300 | 19,800 | 0.3 | 0.200 | 6804 | ZZ | 2RS | N | NR |
| 20 | 37 | 9 | 5.900 | 3.240 | 15,300 | 19,800 | 0.3 | 0.040 | 6904 | ZZ | 2RS | N | NR |
| 20 | 42 | 8 | 7.110 | 4.010 | 13,500 | 17,100 | 0.3 | 0.050 | 16004 | ZZ | - | - | - |
| 20 | 42 | 12 | 8.450 | 4.520 | 13,500 | 17,100 | 0.6 | 0.068 | 6004 | ZZ | 2RS | N | NR |
| 20 | 42 | 16 | 8.430 | 4.500 | 9,900 | - | 0.6 | 0.086 | 63004 | - | 2RS | - | - |
| 20 | 47 | 14 | 11.520 | 5.990 | 12,600 | 16,200 | 1.0 | 0.103 | 6204 | ZZ | 2RS | N | NR |
| 20 | 47 | 18 | 11.430 | 5.900 | 9,000 | - | 1.0 | 0.130 | 62204 | - | 2RS | - | - |
| 20 | 52 | 15 | 14.220 | 7.100 | 11,700 | 15,300 | 1.0 | 0.142 | 6304 | ZZ | 2RS | N | NR |
| 20 | 52 | 21 | 14.310 | 7.020 | 8,550 | - | 1.0 | 0.200 | 62304 | - | 2RS | - | - |
| 20 | 72 | 19 | 27.900 | 13.680 | 8,550 | 11,700 | 1.0 | 0.400 | 6404 | ZZ | 2RS | N | NR |
| 22 | 44 | 12 | 8.460 | 4.550 | 15,300 | 18,000 | 0.6 | 0.074 | 60/22 | ZZ | 2RS | N | NR |
| 22 | 50 | 14 | 11.610 | 6.120 | 12,600 | 14,400 | 1.0 | 0.119 | 62/22 | ZZ | 2RS | N | NR |
| 22 | 56 | 16 | 16.560 | 8.330 | 11,700 | 14,400 | 1.0 | 0.179 | 63/22 | ZZ | 2RS | N | NR |
| 25 | 32 | 4 | 0.690 | 0.430 | 15,120 | 18,000 | 0.2 | 0.007 | 6705 | ZZ | 2RS | - | - |
| 25 | 37 | 7 | 3.330 | 2.390 | 13,500 | 17,100 | 0.3 | 0.022 | 6805 | ZZ | 2RS | N | NR |
| 25 | 42 | 9 | 6.630 | 4.100 | 12,600 | 16,200 | 0.3 | 0.050 | 6905 | ZZ | 2RS | N | NR |
| 25 | 47 | 8 | 7.580 | 4.640 | 11,700 | 15,300 | 0.3 | 0.060 | 16005 | - | - | - | - |
| 25 | 47 | 12 | 9.000 | 5.270 | 11,700 | 15,300 | 0.6 | 0.078 | 6005 | ZZ | 2RS | N | NR |
| 25 | 47 | 16 | 10.080 | 5.900 | 8,550 | - | 0.6 | 0.100 | 63005 | - | 2RS | - | - |
| 25 | 52 | 15 | 12.600 | 7.100 | 10,800 | 14,400 | 1.0 | 0.127 | 6205 | ZZ | 2RS | N | NR |
| 25 | 52 | 18 | 12.600 | 7.020 | 7,650 | - | 1.0 | 0.150 | 62205 | - | 2RS | - | - |
| 25 | 62 | 17 | 19.980 | 10.350 | 9,000 | 12,600 | 1.0 | 0.219 | 6305 | ZZ | 2RS | N | NR |

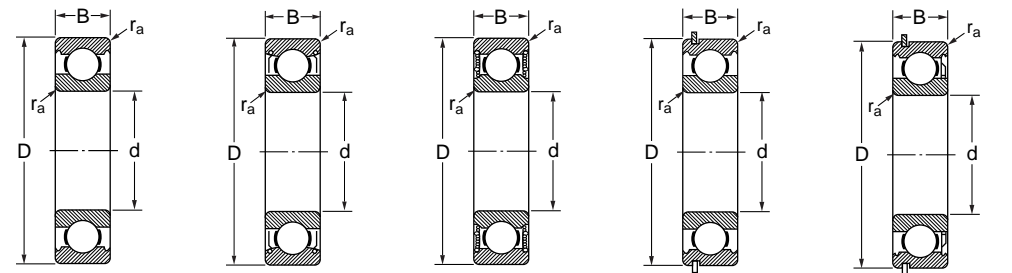
Single Row Deep Groove Ball Bearings - Metric



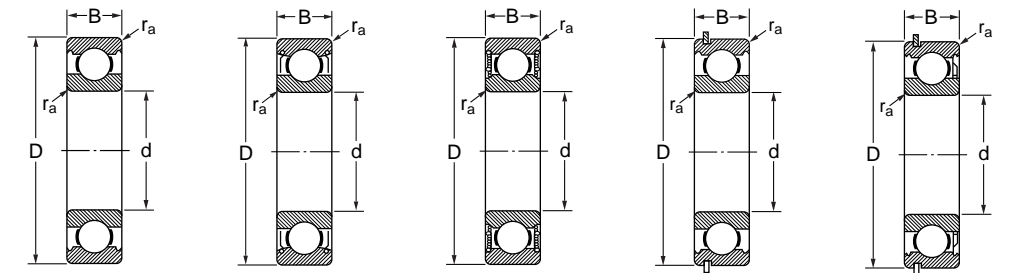
Single Row Deep Groove Ball Bearings - Metric



1.01



OPEN With recessed outer ring shoulders
 SHIELDS - ZZ
 SEALS - 2RS
 Snap ring groove and snap ring in outer ring - NR
 One Z shield, snap ring groove and snap ring - ZNR



OPEN With recessed outer ring shoulders
 SHIELDS - ZZ
 SEALS - 2RS
 Snap ring groove and snap ring in outer ring - NR
 One Z shield, snap ring groove and snap ring - ZNR

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | | |
|------------------|-----|----|--------------------|-----------------------|----------------|--------|--------------------|-------|-------------|-------------|------------|-------------------------|-------------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | Open | Shielded ZZ | Sealed 2RS | With Snap Ring Groove N | With Snap Ring NR |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | | | | | |
| 25 | 62 | 24 | 20.250 | 10.440 | 6,750 | - | 1.0 | 0.320 | 62305 | - | 2RS | - | - |
| 25 | 80 | 21 | 34.380 | 17.280 | 7,650 | 9,900 | 1.5 | 0.529 | 6405 | ZZ | 2RS | N | NR |
| 28 | 52 | 12 | 11.250 | 6.660 | 12,600 | 14,400 | 0.6 | 0.096 | 60/28 | ZZ | 2RS | N | NR |
| 28 | 58 | 16 | 14.940 | 8.550 | 10,800 | 12,600 | 1.0 | 0.175 | 62/28 | ZZ | 2RS | N | NR |
| 28 | 68 | 18 | 24.030 | 12.600 | 9,000 | 11,700 | 1.0 | 0.287 | 63/28 | ZZ | 2RS | N | NR |
| 30 | 42 | 7 | 3.600 | 2.840 | 10,800 | 14,400 | 0.3 | 0.026 | 6806 | ZZ | 2RS | N | NR |
| 30 | 47 | 9 | 6.800 | 4.580 | 10,800 | 14,400 | 0.3 | 0.060 | 6906 | ZZ | 2RS | N | NR |
| 30 | 55 | 9 | 10.080 | 5.630 | 9,000 | 12,600 | 0.3 | 0.085 | 16006 | - | - | - | - |
| 30 | 55 | 13 | 11.880 | 7.470 | 9,000 | 12,600 | 1.0 | 0.110 | 6006 | ZZ | 2RS | N | NR |
| 30 | 55 | 19 | 11.970 | 7.470 | 7,200 | - | 1.0 | 0.160 | 63006 | - | 2RS | - | - |
| 30 | 62 | 16 | 17.550 | 10.350 | 8,550 | 11,700 | 1.0 | 0.200 | 6206 | ZZ | 2RS | N | NR |
| 30 | 62 | 20 | 17.550 | 10.080 | 6,750 | - | 1.0 | 0.240 | 62206 | - | 2RS | - | - |
| 30 | 72 | 19 | 24.300 | 13.680 | 8,100 | 10,800 | 1.0 | 0.349 | 6306 | ZZ | 2RS | N | NR |
| 30 | 72 | 27 | 25.290 | 14.400 | 5,670 | - | 1.0 | 0.480 | 62306 | - | 2RS | - | - |
| 30 | 90 | 23 | 42.750 | 22.050 | 7,200 | 9,000 | 1.5 | 0.710 | 6406 | ZZ | 2RS | N | NR |
| 32 | 58 | 13 | 13.590 | 8.240 | 10,800 | 12,600 | 1.0 | 0.122 | 60/32 | ZZ | 2RS | N | NR |
| 32 | 65 | 17 | 18.630 | 10.440 | 9,000 | 10,800 | 1.0 | 0.225 | 62/32 | ZZ | 2RS | N | NR |
| 32 | 75 | 20 | 26.910 | 15.300 | 8,100 | 9,900 | 1.0 | 0.389 | 63/32 | ZZ | 2RS | N | NR |
| 35 | 47 | 7 | 3.710 | 3.110 | 9,000 | 12,600 | 0.3 | 0.030 | 6807 | ZZ | 2RS | N | NR |
| 35 | 55 | 10 | 8.600 | 6.170 | 8,550 | 11,700 | 0.6 | 0.086 | 6907 | ZZ | 2RS | N | NR |
| 35 | 62 | 9 | 10.350 | 7.920 | 8,100 | 10,800 | 0.3 | 0.100 | 16007 | - | - | - | - |
| 35 | 62 | 14 | 14.580 | 9.450 | 8,100 | 10,800 | 1.0 | 0.148 | 6007 | ZZ | 2RS | N | NR |
| 35 | 62 | 20 | 14.310 | 9.180 | 6,300 | - | 1.0 | 0.210 | 63007 | - | 2RS | - | - |
| 35 | 72 | 17 | 22.950 | 13.680 | 7,650 | 9,900 | 1.0 | 0.288 | 6207 | ZZ | 2RS | N | NR |
| 35 | 72 | 23 | 22.950 | 13.770 | 5,670 | - | 1.0 | 0.370 | 62207 | - | 2RS | - | - |
| 35 | 80 | 21 | 29.880 | 17.280 | 7,200 | 9,000 | 1.5 | 0.455 | 6307 | ZZ | 2RS | N | NR |
| 35 | 80 | 31 | 29.880 | 17.100 | 5,400 | - | 1.5 | 0.660 | 62307 | - | 2RS | - | - |
| 35 | 100 | 25 | 51.120 | 26.550 | 6,030 | 7,650 | 1.5 | 0.926 | 6407 | ZZ | 2RS | N | NR |
| 40 | 52 | 7 | 3.960 | 2.930 | 8,550 | 11,700 | 0.3 | 0.034 | 6808 | ZZ | 2RS | N | NR |
| 40 | 62 | 12 | 10.800 | 8.090 | 8,100 | 10,800 | 0.6 | 0.110 | 6908 | ZZ | 2RS | N | NR |
| 40 | 68 | 9 | 11.250 | 9.180 | 7,650 | 9,900 | 0.3 | 0.130 | 16008 | - | - | - | - |
| 40 | 68 | 15 | 15.300 | 10.620 | 7,650 | 9,900 | 1.0 | 0.185 | 6008 | ZZ | 2RS | N | NR |

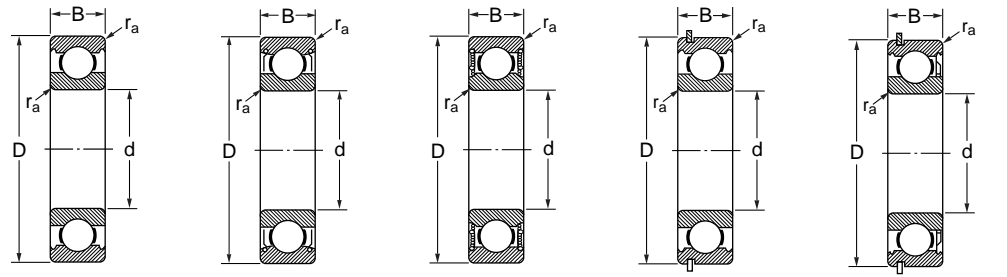
1.01

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | | |
|------------------|-----|----|--------------------|-----------------------|----------------|-------|--------------------|-------|-------------|-------------|------------|-------------------------|-------------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | Open | Shielded ZZ | Sealed 2RS | With Snap Ring Groove N | With Snap Ring NR |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | | | | | |
| 40 | 68 | 21 | 15.120 | 10.440 | 5,670 | - | 1.0 | 0.260 | 63008 | - | 2RS | - | - |
| 40 | 80 | 18 | 26.550 | 16.200 | 7,200 | 9,000 | 1.0 | 0.368 | 6208 | ZZ | 2RS | N | NR |
| 40 | 80 | 23 | 27.630 | 17.100 | 5,040 | - | 1.0 | 0.440 | 62208 | - | 2RS | - | - |
| 40 | 90 | 23 | 36.720 | 21.600 | 6,300 | 8,100 | 1.5 | 0.639 | 6308 | ZZ | 2RS | N | NR |
| 40 | 90 | 33 | 36.900 | 21.600 | 4,500 | - | 1.5 | 0.890 | 62308 | - | 2RS | - | - |
| 40 | 110 | 27 | 58.950 | 33.750 | 5,670 | 7,200 | 2.0 | 1.221 | 6408 | ZZ | 2RS | N | NR |
| 45 | 58 | 7 | 4.190 | 3.890 | 7,650 | 9,900 | 0.3 | 0.040 | 6809 | ZZ | 2RS | N | NR |
| 45 | 68 | 12 | 11.520 | 8.750 | 7,650 | 9,900 | 0.6 | 0.140 | 6909 | ZZ | 2RS | N | NR |
| 45 | 75 | 10 | 11.610 | 9.180 | 7,200 | 9,000 | 0.6 | 0.170 | 16009 | - | - | - | - |
| 45 | 75 | 16 | 18.900 | 13.320 | 7,200 | 9,000 | 1.0 | 0.230 | 6009 | ZZ | 2RS | N | NR |
| 45 | 75 | 23 | 18.720 | 13.140 | 5,040 | - | 1.0 | 0.340 | 63009 | - | 2RS | - | - |
| 45 | 85 | 19 | 28.350 | 18.450 | 6,300 | 8,100 | 1.0 | 0.416 | 6209 | ZZ | 2RS | N | NR |
| 45 | 85 | 23 | 29.880 | 19.440 | 4,500 | - | 1.0 | 0.480 | 62209 | - | 2RS | - | - |
| 45 | 100 | 25 | 47.520 | 28.620 | 5,670 | 7,200 | 1.5 | 0.837 | 6309 | ZZ | 2RS | N | NR |
| 45 | 100 | 36 | 47.430 | 28.350 | 4,050 | - | 1.5 | 1.150 | 62309 | - | 2RS | - | - |
| 45 | 120 | 29 | 69.750 | 40.950 | 5,040 | 6,300 | 2.0 | 1.520 | 6409 | ZZ | 2RS | N | NR |
| 50 | 65 | 7 | 4.590 | 4.220 | 7,200 | 9,000 | 0.3 | 0.057 | 6810 | ZZ | 2RS | N | NR |
| 50 | 72 | 12 | 11.520 | 10.080 | 7,200 | 9,000 | 0.6 | 0.140 | 6910 | ZZ | 2RS | N | NR |
| 50 | 80 | 10 | 14.580 | 11.880 | 6,300 | 8,100 | 0.6 | 0.180 | 16010 | - | - | - | - |
| 50 | 80 | 16 | 19.800 | 14.580 | 6,300 | 8,100 | 1.0 | 0.258 | 6010 | ZZ | 2RS | N | NR |
| 50 | 80 | 23 | 19.440 | 14.400 | 4,500 | - | 1.0 | 0.370 | 63010 | - | 2RS | - | - |
| 50 | 90 | 20 | 31.500 | 20.880 | 6,030 | 7,650 | 1.0 | 0.463 | 6210 | ZZ | 2RS | N | NR |
| 50 | 90 | 23 | 31.590 | 20.880 | 4,320 | - | 1.0 | 0.520 | 62210 | - | 2RS | - | - |
| 50 | 110 | 27 | 55.620 | 34.200 | 5,400 | 6,750 | 2.0 | 1.082 | 6310 | ZZ | 2RS | N | NR |
| 50 | 110 | 40 | 55.620 | 34.200 | 3,870 | - | 2.0 | 1.550 | 62310 | - | 2RS | - | - |
| 50 | 130 | 31 | 82.980 | 49.680 | 4,770 | 6,030 | 2.1 | 1.855 | 6410 | ZZ | 2RS | N | NR |
| 55 | 72 | 9 | 6.050 | 5.850 | 6,750 | 8,550 | 0.3 | 0.083 | 6811 | ZZ | 2RS | N | NR |
| 55 | 80 | 13 | 11.700 | 12.150 | 6,300 | 8,100 | 1.0 | 0.190 | 6911 | ZZ | 2RS | N | NR |
| 55 | 90 | 11 | 14.580 | 15.480 | 5,670 | 7,200 | 0.6 | 0.260 | 16011 | - | - | - | - |
| 55 | 90 | 18 | 27.180 | 19.620 | 5,670 | 7,200 | 1.0 | 0.382 | 6011 | ZZ | 2RS | N | NR |
| 55 | 100 | 21 | 38.880 | 26.280 | 5,400 | 6,750 | 1.5 | 0.603 | 6211 | ZZ | 2RS | N | NR |
| 55 | 100 | 25 | 39.240 | 26.100 | 3,870 | - | 1.5 | 0.700 | 62211 | - | 2RS | - | - |

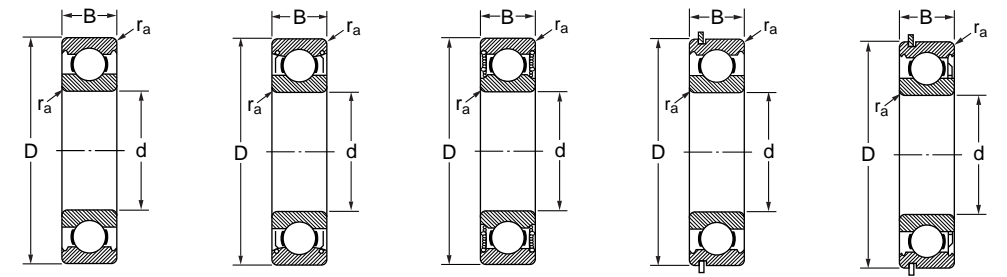
Single Row Deep Groove Ball Bearings - Metric



Single Row Deep Groove Ball Bearings - Metric



OPEN
 With recessed outer ring shoulders
SHIELDS - ZZ
SEALS - 2RS
 Snap ring groove and snap ring in outer ring - NR
 One Z shield, snap ring groove and snap ring - ZNR



OPEN
 With recessed outer ring shoulders
SHIELDS - ZZ
SEALS - 2RS
 Snap ring groove and snap ring in outer ring - NR
 One Z shield, snap ring groove and snap ring - ZNR

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | | |
|------------------|-----|----|--------------------|-----------------------|----------------|-------|--------------------|-------|-------------|-------------|------------|-------------------------|-------------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | Open | Shielded ZZ | Sealed 2RS | With Snap Ring Groove N | With Snap Ring NR |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | | | | | |
| 40 | 68 | 21 | 15.120 | 10.440 | 5,670 | - | 1.0 | 0.260 | 63008 | - | 2RS | - | - |
| 55 | 120 | 29 | 64.350 | 40.320 | 4,770 | 6,030 | 2.0 | 1.350 | 6311 | ZZ | 2RS | N | NR |
| 55 | 120 | 43 | 64.350 | 40.500 | 3,420 | - | 2.0 | 1.950 | 62311 | - | 2RS | - | - |
| 55 | 140 | 33 | 90.000 | 56.250 | 4,320 | 5,400 | 2.1 | 2.316 | 6411 | ZZ | 2RS | N | NR |
| 60 | 78 | 10 | 8.240 | 7.880 | 6,030 | 7,650 | 0.3 | 0.110 | 6812 | ZZ | 2RS | N | NR |
| 60 | 85 | 13 | 12.600 | 12.780 | 5,670 | 7,200 | 1.0 | 0.200 | 6912 | ZZ | 2RS | N | NR |
| 60 | 95 | 11 | 14.850 | 13.500 | 5,400 | 6,750 | 0.6 | 0.280 | 16012 | - | - | - | - |
| 60 | 95 | 18 | 28.350 | 21.780 | 5,400 | 6,750 | 1.0 | 0.420 | 6012 | ZZ | 2RS | N | NR |
| 60 | 110 | 22 | 43.020 | 29.520 | 5,040 | 6,750 | 1.5 | 0.789 | 6212 | ZZ | 2RS | N | NR |
| 60 | 110 | 28 | 47.430 | 32.400 | 3,600 | - | 1.5 | 0.970 | 62212 | - | 2RS | - | - |
| 60 | 130 | 31 | 73.620 | 46.620 | 4,500 | 5,670 | 2.1 | 1.710 | 6312 | ZZ | 2RS | N | NR |
| 60 | 130 | 46 | 73.710 | 46.800 | 3,060 | - | 2.0 | 2.500 | 62312 | - | 2RS | - | - |
| 60 | 150 | 35 | 97.200 | 63.000 | 4,050 | 5,040 | 2.1 | 2.750 | 6412 | ZZ | 2RS | N | NR |
| 65 | 85 | 10 | 9.000 | 8.390 | 5,670 | 7,200 | 0.6 | 0.130 | 6813 | ZZ | 2RS | N | NR |
| 65 | 90 | 13 | 13.050 | 15.750 | 5,400 | 6,750 | 1.0 | 0.220 | 6913 | ZZ | 2RS | N | NR |
| 65 | 100 | 11 | 15.750 | 14.400 | 5,040 | 6,300 | 0.6 | 0.300 | 16013 | - | - | - | - |
| 65 | 100 | 18 | 28.800 | 22.320 | 5,040 | 6,300 | 1.0 | 0.440 | 6013 | ZZ | 2RS | N | NR |
| 65 | 120 | 23 | 51.480 | 36.000 | 4,500 | 5,670 | 1.5 | 0.990 | 6213 | ZZ | 2RS | N | NR |
| 65 | 120 | 31 | 50.310 | 36.450 | 3,240 | - | 1.5 | 1.250 | 62213 | - | 2RS | - | - |
| 65 | 140 | 33 | 84.420 | 54.450 | 4,050 | 5,040 | 2.1 | 2.100 | 6313 | ZZ | 2RS | N | NR |
| 65 | 140 | 48 | 83.070 | 54.000 | 2,880 | - | 2.0 | 3.000 | 62313 | - | 2RS | - | - |
| 65 | 160 | 37 | 106.200 | 70.650 | 3,870 | 4,770 | 2.1 | 3.342 | 6413 | ZZ | 2RS | N | NR |
| 70 | 90 | 10 | 9.450 | 9.720 | 5,400 | 6,750 | 0.6 | 0.140 | 6814 | ZZ | 2RS | N | NR |
| 70 | 100 | 16 | 14.850 | 15.480 | 5,040 | 6,300 | 1.0 | 0.350 | 6914 | ZZ | 2RS | N | NR |
| 70 | 110 | 13 | 18.180 | 16.920 | 4,770 | 6,030 | 0.6 | 0.430 | 16014 | - | - | - | - |
| 70 | 110 | 20 | 34.650 | 27.450 | 4,770 | 6,030 | 1.0 | 0.600 | 6014 | ZZ | 2RS | N | NR |
| 70 | 125 | 24 | 54.720 | 40.500 | 4,320 | 5,400 | 1.5 | 1.050 | 6214 | ZZ | 2RS | N | NR |
| 70 | 125 | 31 | 54.450 | 40.500 | 3,060 | - | 1.5 | 1.300 | 62214 | - | 2RS | - | - |
| 70 | 150 | 35 | 94.500 | 61.200 | 3,870 | 4,770 | 2.1 | 2.500 | 6314 | ZZ | 2RS | N | NR |
| 70 | 150 | 51 | 93.600 | 61.200 | 2,700 | - | 2.0 | 3.550 | 62314 | - | 2RS | - | - |
| 70 | 180 | 42 | 126.000 | 89.550 | 3,420 | 4,320 | 2.5 | 4.850 | 6414 | ZZ | 2RS | N | NR |
| 75 | 95 | 10 | 9.450 | 9.900 | 5,040 | 6,300 | 0.6 | 0.150 | 6815 | ZZ | 2RS | N | NR |

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | | |
|------------------|-----|----|--------------------|-----------------------|----------------|-------|--------------------|--------|-------------|-------------|------------|-------------------------|-------------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | Open | Shielded ZZ | Sealed 2RS | With Snap Ring Groove N | With Snap Ring NR |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | | | | | |
| 75 | 105 | 16 | 16.200 | 15.750 | 4,770 | 6,030 | 1.0 | 0.380 | 6915 | ZZ | 2RS | N | NR |
| 75 | 115 | 13 | 22.500 | 21.420 | 4,500 | 5,670 | 0.6 | 0.460 | 16015 | - | - | - | - |
| 75 | 115 | 20 | 36.180 | 29.880 | 4,500 | 5,670 | 1.0 | 0.640 | 6015 | ZZ | 2RS | N | NR |
| 75 | 130 | 25 | 59.400 | 44.550 | 4,050 | 5,040 | 1.5 | 1.200 | 6215 | ZZ | 2RS | N | NR |
| 75 | 160 | 37 | 100.800 | 69.120 | 3,600 | 4,500 | 2.1 | 3.050 | 6315 | ZZ | 2RS | N | NR |
| 75 | 190 | 45 | 139.500 | 103.500 | 3,240 | 4,050 | 2.5 | 6.800 | 6415 | ZZ | 2RS | N | NR |
| 80 | 100 | 10 | 9.900 | 10.620 | 4,770 | 6,030 | 0.6 | 0.160 | 6816 | ZZ | 2RS | N | NR |
| 80 | 110 | 16 | 16.920 | 22.680 | 4,500 | 5,670 | 1.0 | 0.440 | 6916 | ZZ | 2RS | N | NR |
| 80 | 125 | 14 | 22.680 | 20.412 | 4,320 | 5,400 | 0.6 | 0.600 | 16016 | - | - | - | - |
| 80 | 125 | 22 | 42.750 | 35.820 | 4,320 | 5,400 | 1.0 | 0.821 | 6016 | ZZ | 2RS | N | NR |
| 80 | 140 | 26 | 64.350 | 48.780 | 3,870 | 4,770 | 2.0 | 1.448 | 6216 | ZZ | 2RS | N | NR |
| 80 | 170 | 39 | 109.800 | 77.850 | 3,420 | 4,320 | 2.1 | 3.620 | 6316 | ZZ | 2RS | N | NR |
| 80 | 200 | 48 | 145.800 | 112.500 | 3,060 | 3,870 | 2.5 | 8.000 | 6416 | ZZ | 2RS | N | NR |
| 85 | 100 | 13 | 19.620 | 19.350 | 4,320 | 5,400 | 1.0 | 0.270 | 6817 | ZZ | 2RS | N | NR |
| 85 | 120 | 18 | 25.380 | 24.120 | 4,320 | 5,400 | 1.0 | 0.550 | 6917 | ZZ | 2RS | N | NR |
| 85 | 130 | 14 | 23.220 | 23.580 | 4,050 | 5,040 | 0.6 | 0.630 | 16017 | - | - | - | - |
| 85 | 130 | 22 | 45.720 | 38.520 | 4,050 | 5,040 | 1.0 | 0.890 | 6017 | ZZ | 2RS | N | NR |
| 85 | 150 | 28 | 74.880 | 57.150 | 3,600 | 4,500 | 2.0 | 1.803 | 6217 | ZZ | 2RS | N | NR |
| 85 | 180 | 41 | 118.800 | 86.850 | 3,240 | 4,050 | 2.5 | 4.284 | 6317 | ZZ | 2RS | N | NR |
| 85 | 210 | 52 | 157.500 | 124.200 | 2,880 | 3,600 | 3.0 | 9.500 | 6417 | ZZ | 2RS | - | - |
| 90 | 115 | 13 | 18.900 | 17.100 | 4,050 | 5,040 | 1.0 | 0.280 | 6818 | ZZ | 2RS | N | NR |
| 90 | 125 | 18 | 29.520 | 28.350 | 4,050 | 5,040 | 1.0 | 0.650 | 6918 | ZZ | 2RS | N | NR |
| 90 | 140 | 16 | 30.150 | 30.150 | 3,870 | 4,770 | 1.0 | 0.850 | 16018 | - | - | - | - |
| 90 | 140 | 24 | 52.200 | 44.820 | 3,870 | 4,770 | 1.5 | 1.190 | 6018 | ZZ | 2RS | N | NR |
| 90 | 160 | 30 | 86.220 | 64.350 | 3,420 | 4,320 | 2.0 | 2.170 | 6218 | ZZ | 2RS | N | NR |
| 90 | 190 | 43 | 130.500 | 97.200 | 3,060 | 3,870 | 2.5 | 4.970 | 6318 | ZZ | 2RS | N | NR |
| 90 | 225 | 54 | 172.800 | 142.200 | 2,520 | 3,240 | 3.0 | 11.500 | 6418 | ZZ | 2RS | - | - |
| 95 | 120 | 13 | 14.580 | 16.020 | 3,870 | 4,770 | 1.0 | 0.300 | 6819 | ZZ | 2RS | N | NR |
| 95 | 130 | 18 | 34.200 | 29.250 | 3,870 | 4,770 | 1.0 | 0.610 | 6919 | ZZ | 2RS | N | NR |
| 95 | 145 | 16 | 33.300 | 33.120 | 3,600 | 4,500 | 1.0 | 0.890 | 16019 | - | - | - | - |
| 95 | 145 | 24 | 52.020 | 45.000 | 3,600 | 4,500 | 1.5 | 1.230 | 6019 | ZZ | 2RS | N | NR |
| 95 | 170 | 32 | 99.000 | 74.520 | 3,240 | 4,050 | 2.1 | 2.620 | 6219 | ZZ | 2RS | N | NR |

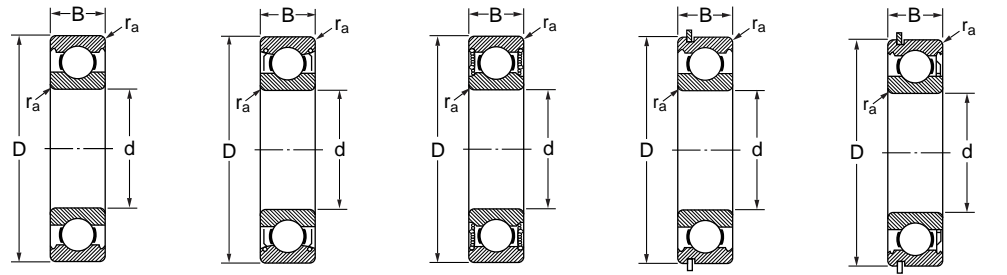
Single Row Deep Groove Ball Bearings - Metric



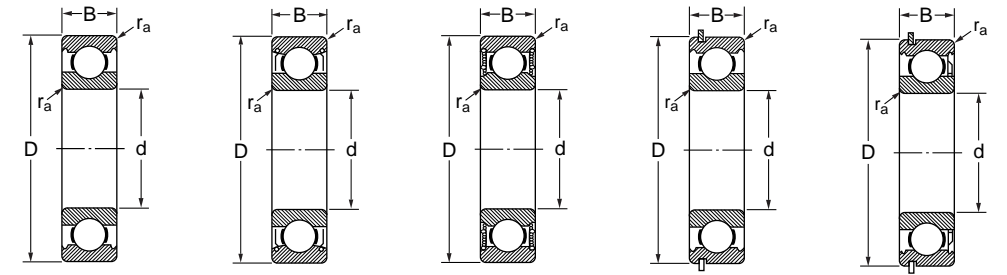
Single Row Deep Groove Ball Bearings - Metric



1.01



OPEN With recessed outer ring shoulders
 SHIELDS - ZZ
 SEALS - 2RS
 Snap ring groove and snap ring in outer ring - NR
 One Z shield, snap ring groove and snap ring - ZNR



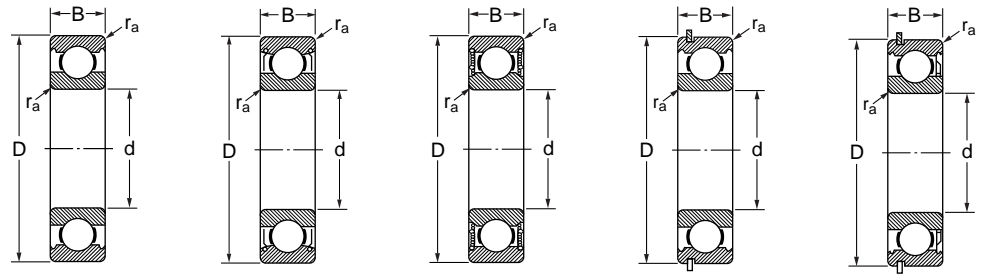
OPEN With recessed outer ring shoulders
 SHIELDS - ZZ
 SEALS - 2RS
 Snap ring groove and snap ring in outer ring - NR
 One Z shield, snap ring groove and snap ring - ZNR

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | | |
|------------------|-----|----|--------------------|-----------------------|----------------|-------|--------------------|--------|-------------|-------------|------------|-------------------------|-------------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | Open | Shielded ZZ | Sealed 2RS | With Snap Ring Groove N | With Snap Ring NR |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | | | | | |
| 95 | 200 | 45 | 139.500 | 109.800 | 2,880 | 3,600 | 2.5 | 5.740 | 6319 | ZZ | 2RS | N | NR |
| 100 | 125 | 13 | 15.300 | 18.720 | 3,600 | 4,500 | 1.0 | 0.310 | 6820 | ZZ | 2RS | N | NR |
| 100 | 140 | 20 | 37.080 | 31.320 | 3,600 | 4,500 | 1.0 | 0.830 | 6920 | ZZ | 2RS | N | NR |
| 100 | 150 | 16 | 34.380 | 34.650 | 3,420 | 4,320 | 1.0 | 0.940 | 16020 | - | - | - | - |
| 100 | 150 | 24 | 58.050 | 50.580 | 3,420 | 4,320 | 1.5 | 1.180 | 6020 | ZZ | 2RS | N | NR |
| 100 | 180 | 34 | 109.800 | 83.520 | 3,060 | 3,870 | 2.1 | 3.190 | 6220 | ZZ | 2RS | N | NR |
| 100 | 215 | 47 | 154.800 | 126.000 | 2,520 | 3,240 | 2.5 | 7.070 | 6320 | ZZ | 2RS | - | - |
| 100 | 250 | 58 | 199.800 | 175.500 | 2,160 | 2,880 | 3.0 | 15.900 | 6420 | ZZ | 2RS | - | - |
| 105 | 130 | 13 | 15.750 | 18.180 | 3,420 | 4,320 | 1.0 | 0.340 | 6821 | ZZ | 2RS | N | NR |
| 105 | 145 | 20 | 37.980 | 36.720 | 3,420 | 4,320 | 1.0 | 0.856 | 6921 | ZZ | 2RS | N | NR |
| 105 | 160 | 18 | 39.150 | 39.780 | 3,240 | 4,050 | 1.0 | 1.200 | 16021 | - | - | - | - |
| 105 | 160 | 26 | 64.620 | 56.880 | 3,240 | 4,050 | 2.0 | 1.520 | 6021 | ZZ | 2RS | N | NR |
| 105 | 190 | 36 | 119.700 | 94.500 | 2,880 | 3,600 | 2.1 | 3.780 | 6221 | ZZ | 2RS | N | NR |
| 105 | 225 | 49 | 163.800 | 139.500 | 2,340 | 3,060 | 2.5 | 8.050 | 6321 | ZZ | 2RS | - | - |
| 110 | 140 | 16 | 20.250 | 22.050 | 3,240 | 4,050 | 1.0 | 0.510 | 6822 | ZZ | 2RS | N | NR |
| 110 | 150 | 20 | 39.150 | 40.050 | 3,240 | 4,050 | 1.0 | 0.893 | 6922 | ZZ | 2RS | N | NR |
| 110 | 170 | 19 | 47.700 | 48.600 | 3,060 | 3,870 | 1.0 | 1.510 | 16022 | - | - | - | - |
| 110 | 170 | 28 | 73.620 | 65.520 | 3,060 | 3,870 | 2.0 | 1.890 | 6022 | ZZ | 2RS | N | NR |
| 110 | 200 | 38 | 129.600 | 105.300 | 2,700 | 3,420 | 2.1 | 4.420 | 6222 | ZZ | 2RS | N | NR |
| 110 | 240 | 50 | 184.500 | 160.200 | 2,160 | 2,880 | 2.5 | 9.530 | 6322 | ZZ | - | - | - |
| 120 | 150 | 16 | 21.600 | 25.200 | 3,060 | 3,870 | 1.0 | 0.600 | 6824 | ZZ | 2RS | N | NR |
| 120 | 165 | 22 | 47.700 | 48.420 | 2,880 | 3,600 | 1.0 | 1.210 | 6924 | ZZ | 2RS | N | NR |
| 120 | 180 | 19 | 48.780 | 51.300 | 2,700 | 3,420 | 1.0 | 1.600 | 16024 | - | - | - | - |
| 120 | 180 | 28 | 78.750 | 71.280 | 2,700 | 3,420 | 2.0 | 1.990 | 6024 | ZZ | 2RS | N | NR |
| 120 | 215 | 40 | 139.500 | 117.900 | 2,340 | 3,060 | 2.1 | 5.300 | 6224 | ZZ | 2RS | - | - |
| 120 | 260 | 55 | 205.200 | 187.200 | 1,980 | 2,700 | 2.5 | 12.200 | 6324 | ZZ | - | - | - |
| 130 | 165 | 18 | 30.540 | 34.830 | 2,916 | 3,483 | 1.0 | 0.850 | 6826 | ZZ | 2RS | N | NR |
| 130 | 180 | 24 | 58.680 | 60.480 | 2,700 | 3,420 | 1.5 | 1.800 | 6926 | ZZ | 2RS | N | NR |
| 130 | 200 | 22 | 55.620 | 60.300 | 2,520 | 3,240 | 1.0 | 2.350 | 16026 | - | - | - | - |
| 130 | 200 | 33 | 94.500 | 87.120 | 2,520 | 3,240 | 2.0 | 3.200 | 6026 | ZZ | 2RS | N | NR |
| 130 | 230 | 40 | 148.500 | 133.200 | 2,160 | 2,880 | 2.5 | 5.900 | 6226 | ZZ | 2RS | - | - |
| 130 | 280 | 58 | 226.800 | 217.800 | 1,710 | 2,340 | 3.0 | 15.200 | 6326 | ZZ | - | - | - |

1.01

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | | |
|------------------|-----|----|--------------------|-----------------------|----------------|-------|--------------------|--------|-------------|-------------|------------|-------------------------|-------------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | Open | Shielded ZZ | Sealed 2RS | With Snap Ring Groove N | With Snap Ring NR |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | | | | | |
| 140 | 175 | 18 | 31.590 | 37.670 | 2,754 | 3,240 | 1.0 | 0.920 | 6828 | ZZ | 2RS | N | NR |
| 140 | 190 | 24 | 59.850 | 58.050 | 2,520 | 3,240 | 1.5 | 1.680 | 6928 | ZZ | 2RS | N | NR |
| 140 | 210 | 22 | 56.700 | 62.820 | 2,160 | 2,880 | 1.0 | 2.840 | 16028 | - | - | - | - |
| 140 | 210 | 33 | 103.500 | 97.200 | 2,160 | 2,880 | 2.0 | 3.420 | 6028 | ZZ | 2RS | N | NR |
| 140 | 250 | 42 | 160.200 | 148.500 | 1,800 | 2,520 | 2.5 | 7.680 | 6228 | ZZ | 2RS | - | - |
| 140 | 300 | 62 | 247.500 | 244.800 | 1,620 | 2,160 | 3.0 | 18.330 | 6328 | ZZ | - | - | - |
| 150 | 190 | 20 | 39.530 | 49.410 | 2,430 | 2,916 | 1.0 | 1.280 | 6830 | ZZ | 2RS | N | NR |
| 150 | 210 | 28 | 71.610 | 75.330 | 2,268 | 2,754 | 2.0 | 3.050 | 6930 | ZZ | 2RS | - | - |
| 150 | 225 | 24 | 66.780 | 74.250 | 1,980 | 2,700 | 1.0 | 3.580 | 16030 | - | - | - | - |
| 150 | 225 | 35 | 118.800 | 112.500 | 1,980 | 2,700 | 2.1 | 4.560 | 6030 | ZZ | 2RS | - | - |
| 150 | 270 | 45 | 181.800 | 178.200 | 1,710 | 2,340 | 2.5 | 9.779 | 6230 | ZZ | - | - | - |
| 150 | 320 | 65 | 259.200 | 265.500 | 1,530 | 1,980 | 3.0 | 21.870 | 6330 | ZZ | - | - | - |
| 160 | 200 | 20 | 38.520 | 53.280 | 2,160 | 2,880 | 1.0 | 1.250 | 6832 | ZZ | 2RS | N | NR |
| 160 | 220 | 28 | 74.770 | 79.380 | 2,106 | 2,592 | 2.0 | 2.750 | 6932 | ZZ | 2RS | - | - |
| 160 | 240 | 25 | 79.650 | 89.820 | 1,800 | 2,520 | 1.5 | 4.200 | 16032 | - | - | - | - |
| 160 | 240 | 38 | 130.500 | 124.200 | 1,800 | 2,520 | 2.1 | 5.150 | 6032 | ZZ | 2RS | - | - |
| 160 | 290 | 48 | 193.500 | 196.200 | 1,620 | 2,160 | 2.5 | 13.500 | 6232 | ZZ | - | - | - |
| 160 | 340 | 68 | 280.800 | 306.000 | 1,440 | 1,800 | 3.0 | 26.430 | 6332 | ZZ | - | - | - |
| 170 | 215 | 22 | 45.000 | 55.080 | 1,980 | 2,700 | 1.0 | 1.810 | 6834 | ZZ | 2RS | - | - |
| 170 | 230 | 28 | 79.650 | 90.000 | 1,800 | 2,520 | 2.0 | 3.400 | 6934 | ZZ | - | - | - |
| 170 | 260 | 28 | 90.000 | 100.800 | 1,710 | 2,340 | 1.5 | 5.770 | 16034 | - | - | - | - |
| 170 | 260 | 42 | 153.000 | 153.000 | 1,710 | 2,340 | 2.1 | 6.500 | 6034 | ZZ | 2RS | - | - |
| 170 | 310 | 52 | 220.500 | 234.000 | 1,530 | 1,980 | 3.0 | 15.241 | 6234 | ZZ | - | - | - |
| 170 | 360 | 72 | 301.500 | 340.200 | 1,350 | 1,710 | 3.0 | 35.200 | 6334 | - | - | - | - |
| 180 | 225 | 22 | 52.200 | 64.980 | 1,800 | 2,520 | 1.0 | 2.000 | 6836 | ZZ | 2RS | - | - |
| 180 | 250 | 33 | 115.200 | 124.200 | 1,710 | 2,340 | 2.0 | 4.800 | 6936 | ZZ | - | - | - |
| 180 | 280 | 31 | 106.200 | 118.800 | 1,620 | 2,160 | 2.0 | 7.600 | 16036 | - | - | - | - |
| 180 | 280 | 46 | 169.200 | 178.200 | 1,620 | 2,160 | 2.1 | 8.510 | 6036 | ZZ | 2RS | - | - |
| 180 | 320 | 52 | 204.300 | 216.900 | 1,440 | 1,800 | 3.0 | 15.518 | 6236 | ZZ | - | - | - |
| 180 | 380 | 75 | 284.400 | 328.500 | 1,296 | 1,620 | 3.0 | 42.500 | 6336 | - | - | - | - |
| 190 | 240 | 24 | 56.250 | 70.380 | 1,710 | 2,340 | 1.5 | 2.550 | 6838 | ZZ | 2RS | - | - |
| 190 | 260 | 33 | 101.700 | 114.300 | 1,620 | 2,160 | 2.0 | 5.250 | 6938 | ZZ | - | - | - |

Single Row Deep Groove Ball Bearings - Metric

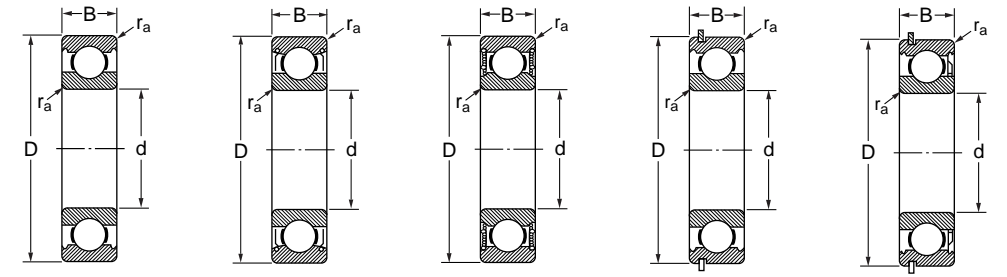


OPEN
 With recessed outer ring shoulders
SHIELDS - ZZ
SEALS - 2RS
 Snap ring groove and snap ring in outer ring - NR
 One Z shield, snap ring groove and snap ring - ZNR

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | | |
|------------------|-----|-----|--------------------|-----------------------|----------------|-------|--------------------|---------|-------------|-------------|------------|-------------------------|-------------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | Open | Shielded ZZ | Sealed 2RS | With Snap Ring Groove N | With Snap Ring NR |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | | | | | |
| 190 | 290 | 31 | 108.000 | 126.000 | 1,530 | 1,980 | 2.0 | 7.890 | 16038 | - | - | - | - |
| 190 | 290 | 46 | 169.200 | 180.000 | 1,530 | 1,980 | 2.1 | 9.400 | 6038 | ZZ | - | - | - |
| 190 | 340 | 55 | 256.500 | 289.800 | 1,350 | 1,710 | 3.0 | 22.300 | 6238 | ZZ | - | - | - |
| 190 | 400 | 78 | 300.600 | 348.300 | 1,260 | 1,539 | 4.0 | 49.000 | 6338 | - | - | - | - |
| 200 | 250 | 24 | 57.150 | 72.900 | 1,620 | 2,160 | 1.5 | 2.700 | 6840 | ZZ | 2RS | - | - |
| 200 | 280 | 38 | 119.700 | 139.500 | 1,530 | 1,980 | 2.1 | 7.400 | 6940 | ZZ | - | - | - |
| 200 | 310 | 34 | 127.800 | 145.800 | 1,620 | 1,800 | 2.0 | 10.100 | 16040 | - | - | - | - |
| 200 | 310 | 51 | 184.500 | 202.500 | 1,440 | 1,800 | 2.1 | 11.640 | 6040 | ZZ | - | - | - |
| 200 | 360 | 58 | 259.200 | 298.800 | 1,260 | 1,620 | 3.0 | 26.700 | 6240 | ZZ | - | - | - |
| 200 | 420 | 80 | 342.000 | 400.500 | 1,170 | 1,440 | 4.0 | 55.300 | 6340 | - | - | - | - |
| 220 | 270 | 24 | 66.150 | 79.200 | 1,530 | 1,980 | 1.5 | 3.000 | 6844 | ZZ | - | - | - |
| 220 | 300 | 38 | 121.500 | 145.800 | 1,440 | 1,800 | 2.1 | 7.600 | 6944 | ZZ | - | - | - |
| 220 | 340 | 37 | 154.800 | 180.000 | 1,260 | 1,620 | 2.1 | 11.500 | 16044 | - | - | - | - |
| 220 | 340 | 56 | 226.800 | 241.200 | 1,260 | 1,620 | 2.5 | 18.000 | 6044 | ZZ | - | - | - |
| 220 | 400 | 65 | 319.500 | 328.500 | 1,080 | 1,440 | 3.0 | 36.500 | 6244 | - | - | - | - |
| 220 | 460 | 88 | 369.000 | 468.000 | 1,080 | 1,350 | 4.0 | 73.900 | 6344 | - | - | - | - |
| 240 | 300 | 28 | 75.150 | 97.200 | 1,350 | 1,710 | 2.0 | 4.500 | 6848 | - | - | - | - |
| 240 | 320 | 38 | 127.800 | 160.200 | 1,260 | 1,620 | 2.1 | 8.200 | 6948 | ZZ | - | - | - |
| 240 | 360 | 37 | 154.800 | 189.000 | 1,080 | 1,440 | 2.1 | 13.900 | 16048 | - | - | - | - |
| 240 | 360 | 56 | 243.000 | 262.800 | 1,080 | 1,440 | 2.5 | 20.000 | 6048 | - | - | - | - |
| 240 | 440 | 72 | 322.200 | 420.300 | 900 | 1,260 | 3.0 | 50.500 | 6248 | - | - | - | - |
| 240 | 500 | 95 | 423.000 | 562.500 | 990 | 1,170 | 4.0 | 94.400 | 6348 | - | - | - | - |
| 260 | 320 | 28 | 85.500 | 115.200 | 1,170 | 1,530 | 2.0 | 4.850 | 6852 | - | - | - | - |
| 260 | 360 | 46 | 189.000 | 241.200 | 1,080 | 1,440 | 2.1 | 13.700 | 6952 | - | - | - | - |
| 260 | 400 | 44 | 211.500 | 279.000 | 990 | 1,350 | 2.5 | 22.500 | 16052 | - | - | - | - |
| 260 | 400 | 65 | 262.800 | 334.800 | 990 | 1,350 | 3.0 | 28.800 | 6052 | - | - | - | - |
| 260 | 480 | 80 | 360.000 | 486.000 | 990 | 1,170 | 4.0 | 67.000 | 6252 | - | - | - | - |
| 260 | 540 | 102 | 454.500 | 639.000 | 900 | 1,080 | 5.0 | 118.000 | 6352 | - | - | - | - |
| 280 | 350 | 33 | 121.500 | 160.200 | 990 | 1,350 | 2.0 | 7.400 | 6856 | - | - | - | - |
| 280 | 380 | 46 | 189.000 | 241.200 | 900 | 1,260 | 2.1 | 15.000 | 6956 | - | - | - | - |
| 280 | 420 | 65 | 274.500 | 367.200 | 855 | 1,170 | 3.0 | 31.200 | 6056 | - | - | - | - |
| 280 | 500 | 80 | 360.000 | 495.000 | 900 | 1,170 | 4.0 | 70.400 | 6256 | - | - | - | - |



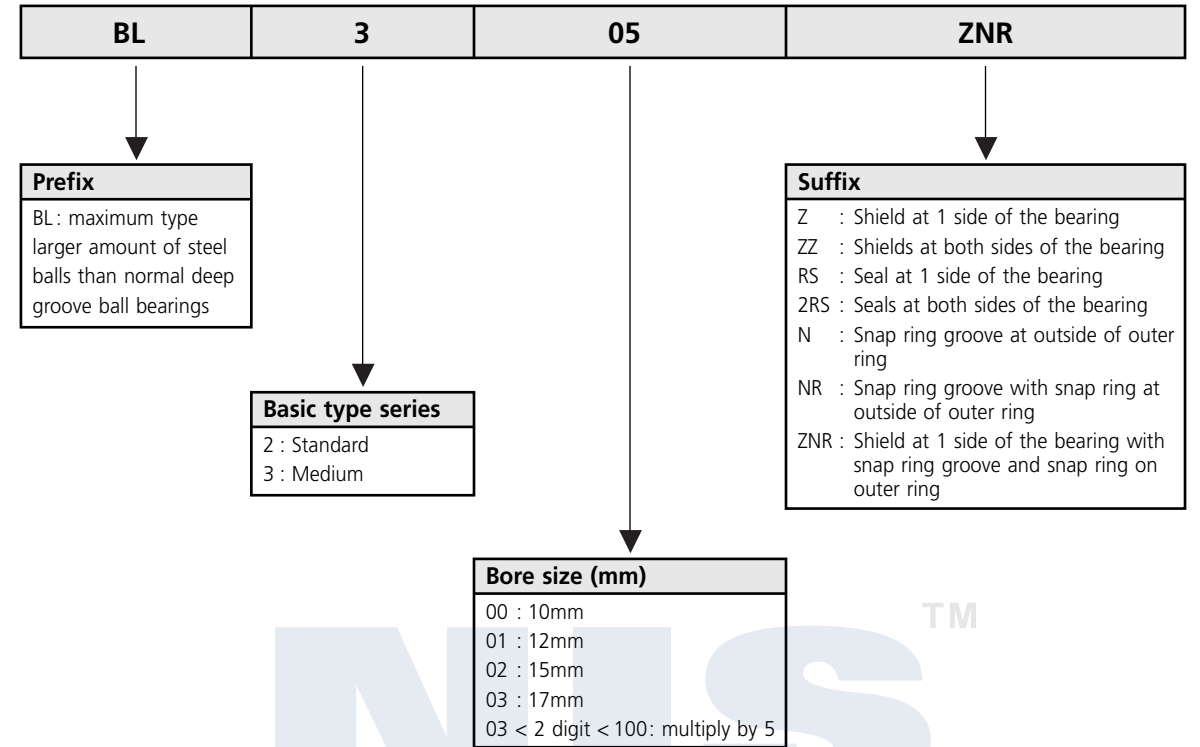
Single Row Deep Groove Ball Bearings - Metric



OPEN
 With recessed outer ring shoulders
SHIELDS - ZZ
SEALS - 2RS
 Snap ring groove and snap ring in outer ring - NR
 One Z shield, snap ring groove and snap ring - ZNR

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | | |
|------------------|-----|----|--------------------|-----------------------|----------------|-------|--------------------|--------|-------------|-------------|------------|-------------------------|-------------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | Open | Shielded ZZ | Sealed 2RS | With Snap Ring Groove N | With Snap Ring NR |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | | | | | |
| 300 | 380 | 38 | 145.800 | 199.800 | 900 | 1,260 | 2.1 | 10.300 | 6860 | - | - | - | - |
| 300 | 420 | 56 | 243.000 | 333.000 | 855 | 1,170 | 2.5 | 23.900 | 6960 | - | - | - | - |
| 300 | 460 | 74 | 289.980 | 405.000 | 972 | 1,215 | 3.0 | 44.000 | 6060 | - | - | - | - |
| 300 | 540 | 85 | 418.500 | 603.000 | 855 | 1,080 | 4.0 | 87.800 | 6260 | - | - | - | - |
| 320 | 400 | 38 | 151.200 | 211.500 | 855 | 1,170 | 2.1 | 10.800 | 6864 | - | - | - | - |
| 320 | 440 | 56 | 247.500 | 352.800 | 810 | 1,080 | 2.5 | 25.300 | 6964 | - | - | - | - |
| 320 | 480 | 74 | 310.500 | 459.000 | 765 | 990 | 3.0 | 46.500 | 6064 | - | - | - | - |
| 340 | 420 | 38 | 144.180 | 222.750 | 972 | 1,215 | 2.0 | 11.500 | 6868 | - | - | - | - |
| 340 | 460 | 56 | 262.800 | 376.200 | 765 | 990 | 2.5 | 26.600 | 6968 | - | - | - | - |
| 340 | 520 | 82 | 342.630 | 518.400 | 810 | 1,053 | 4.0 | 62.000 | 6068 | - | - | - | - |
| 360 | 440 | 38 | 147.420 | 230.850 | 891 | 1,134 | 2.0 | 12.000 | 6872 | - | - | - | - |
| 360 | 540 | 82 | 360.000 | 559.800 | 675 | 855 | 4.0 | 65.300 | 6072 | - | - | - | - |
| 380 | 480 | 46 | 211.500 | 313.200 | 720 | 900 | 2.1 | 20.000 | 6876 | - | - | - | - |
| 400 | 500 | 46 | 200.070 | 328.050 | 810 | 1,053 | 2.0 | 20.500 | 6880 | - | - | - | - |
| 400 | 600 | 90 | 460.800 | 781.200 | 567 | 720 | 4.0 | 88.400 | 6080 | - | - | - | - |
| 420 | 520 | 46 | 203.400 | 344.250 | 770 | 972 | 2.0 | 21.500 | 6884 | - | - | - | - |
| 440 | 540 | 46 | 206.550 | 356.400 | 729 | 891 | 2.0 | 22.500 | 6888 | - | - | - | - |
| 460 | 580 | 56 | 289.800 | 484.200 | 540 | 675 | 2.5 | 35.000 | 6892 | - | - | - | - |

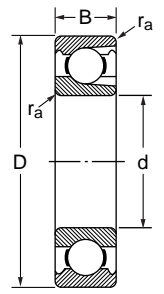
■ Prefix & Suffix



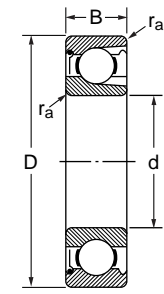
Single Row Deep Groove Ball Bearings with Filling Slot



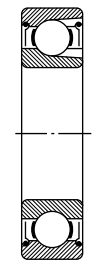
1.02



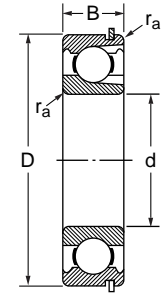
OPEN
With recessed outer ring shoulders



SHIELD - Z



SHIELD - ZZ



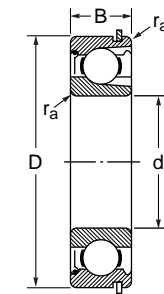
Snap ring groove and snap ring

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass |
|------------------|-----|----|--------------------|----------------------|----------------|--------|--------------------|-------|
| d | D | B | Dynamic | Static | Grease | Oil | r _a max | |
| mm | mm | mm | C kN | C ₀ kN | r/min | r/min | mm | kg |
| 25 | 62 | 17 | 22.990 | 15.485 | 7,600 | 11,400 | 1.0 | 0.246 |
| 30 | 62 | 16 | 19.855 | 15.485 | 7,125 | 10,450 | 1.0 | 0.210 |
| 30 | 72 | 19 | 28.215 | 20.520 | 6,365 | 9,025 | 1.0 | 0.364 |
| 35 | 72 | 17 | 26.125 | 20.900 | 6,365 | 9,025 | 1.0 | 0.307 |
| 35 | 80 | 21 | 35.055 | 27.075 | 5,700 | 8,075 | 1.5 | 0.480 |
| 40 | 80 | 18 | 31.920 | 25.650 | 5,700 | 8,075 | 1.0 | 0.390 |
| 40 | 90 | 23 | 43.415 | 34.200 | 5,035 | 7,125 | 1.5 | 0.685 |
| 45 | 85 | 19 | 33.440 | 28.500 | 5,035 | 7,125 | 1.0 | 0.449 |
| 45 | 100 | 25 | 52.250 | 41.800 | 4,750 | 6,650 | 1.5 | 0.883 |
| 50 | 90 | 20 | 37.145 | 32.775 | 4,750 | 6,650 | 1.0 | 0.504 |
| 50 | 110 | 27 | 61.180 | 49.400 | 4,275 | 5,985 | 2.0 | 1.160 |
| 55 | 100 | 21 | 45.980 | 41.800 | 4,275 | 5,985 | 1.5 | 0.667 |
| 55 | 120 | 29 | 75.240 | 63.650 | 3,800 | 5,320 | 2.0 | 1.490 |
| 60 | 110 | 22 | 55.385 | 51.300 | 4,085 | 5,700 | 1.5 | 0.856 |
| 60 | 130 | 31 | 86.735 | 74.100 | 3,610 | 5,035 | 2.0 | 1.880 |
| 65 | 120 | 23 | 59.565 | 57.000 | 3,610 | 5,035 | 1.5 | 1.090 |
| 65 | 140 | 33 | 96.900 | 85.500 | 3,230 | 4,560 | 2.0 | 2.360 |
| 70 | 125 | 24 | 65.835 | 62.225 | 3,420 | 4,750 | 1.5 | 1.190 |
| 70 | 150 | 35 | 108.300 | 96.900 | 3,040 | 4,275 | 2.0 | 2.870 |
| 75 | 130 | 25 | 68.495 | 68.400 | 3,230 | 4,560 | 1.5 | 1.250 |
| 75 | 160 | 37 | 118.750 | 110.200 | 2,850 | 4,085 | 2.0 | 3.250 |
| 80 | 140 | 26 | 79.990 | 80.750 | 3,040 | 4,275 | 2.0 | 1.550 |
| 80 | 170 | 39 | 131.100 | 122.550 | 2,660 | 3,800 | 2.0 | 3.950 |
| 85 | 150 | 28 | 85.215 | 88.350 | 2,850 | 4,085 | 2.0 | 1.950 |
| 85 | 180 | 41 | 139.650 | 138.700 | 2,470 | 3,610 | 2.5 | 4.600 |
| 90 | 160 | 30 | 106.400 | 108.300 | 2,660 | 3,800 | 2.0 | 2.350 |
| 90 | 190 | 43 | 149.150 | 152.000 | 2,090 | 3,230 | 2.5 | 5.400 |
| 95 | 170 | 32 | 114.950 | 115.900 | 2,470 | 3,610 | 2.0 | 2.700 |
| 100 | 180 | 34 | 127.300 | 133.000 | 2,090 | 3,230 | 2.0 | 3.450 |



Single Row Deep Groove Ball Bearings with Filling Slot

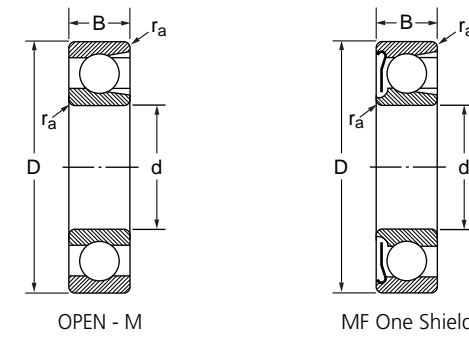
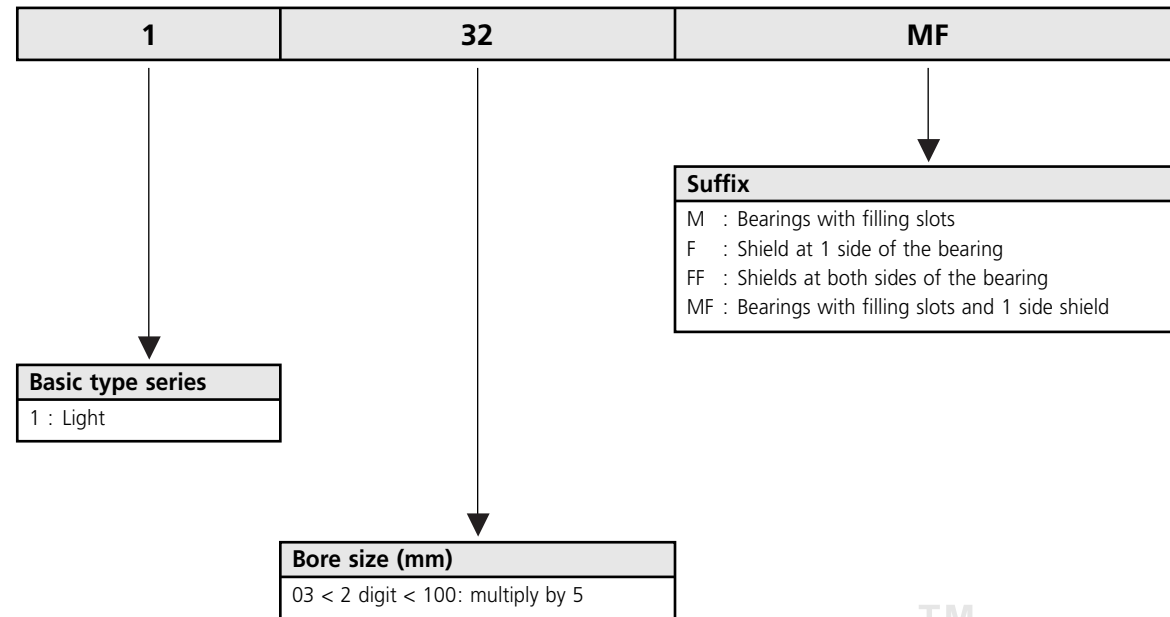
1.02



One Z shield, snap ring groove and snap ring

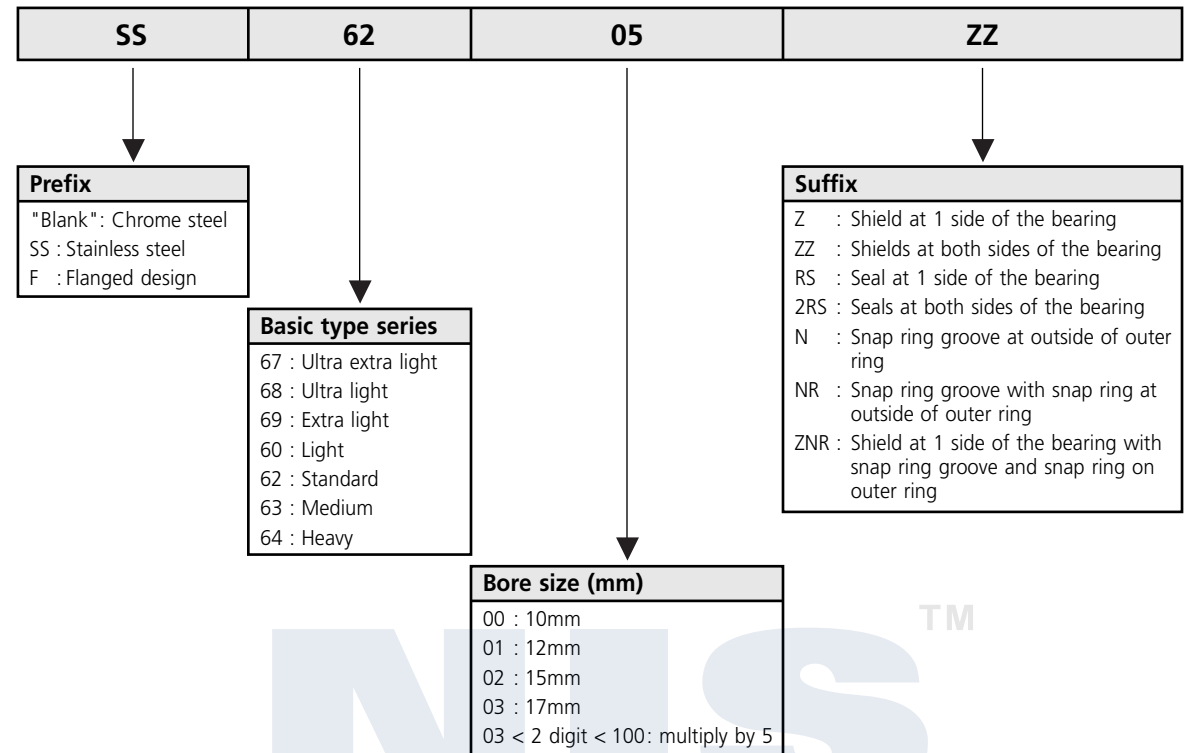
| Open | Designation | | | | |
|-------|-------------|------------|----------------|---------------------------|-----------|
| | One Shield | Two Shield | With Snap Ring | One Shield With Snap Ring | Snap Ring |
| BL305 | Z | ZZ | NR | ZNR | SP 62 |
| BL206 | Z | ZZ | NR | ZNR | SP 62 |
| BL306 | Z | ZZ | NR | ZNR | SP 72 |
| BL207 | Z | ZZ | NR | ZNR | SP 72 |
| BL307 | Z | ZZ | NR | ZNR | SP 80 |
| BL208 | Z | ZZ | NR | ZNR | SP 80 |
| BL308 | Z | ZZ | NR | ZNR | SP 90 |
| BL209 | Z | ZZ | NR | ZNR | SP 85 |
| BL309 | Z | ZZ | NR | ZNR | SP 100 |
| BL210 | Z | ZZ | NR | ZNR | SP 90 |
| BL310 | Z | ZZ | NR | ZNR | SP 110 |
| BL211 | Z | ZZ | NR | ZNR | SP 100 |
| BL311 | Z | ZZ | NR | ZNR | SP 120 |
| BL212 | Z | ZZ | NR | ZNR | SP 110 |
| BL312 | Z | ZZ | NR | ZNR | SP 130 |
| BL213 | Z | ZZ | NR | ZNR | SP 120 |
| BL313 | Z | ZZ | NR | ZNR | SP 140 |
| BL214 | Z | ZZ | NR | ZNR | SP 125 |
| BL314 | Z | ZZ | NR | ZNR | SP 150 |
| BL215 | Z | ZZ | NR | ZNR | SP 130 |
| BL315 | Z | ZZ | - | - | - |
| BL216 | Z | ZZ | NR | ZNR | SP 140 |
| BL316 | Z | ZZ | - | - | - |
| BL217 | Z | ZZ | NR | ZNR | SP 150 |
| BL317 | Z | ZZ | - | - | - |
| BL218 | Z | ZZ | NR | ZNR | SP 160 |
| BL318 | Z | ZZ | - | - | - |
| BL219 | Z | ZZ | - | - | - |
| BL220 | Z | ZZ | - | - | - |

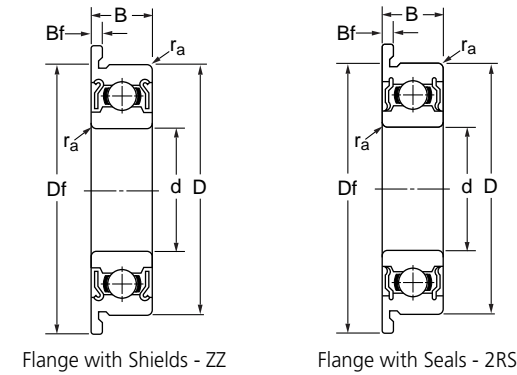
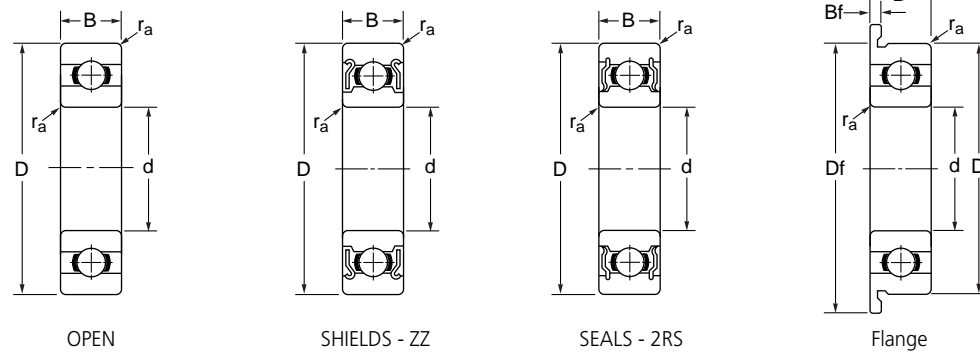
Prefix & Suffix



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|-----|----|--------------------|----------------|----------------|-------|--------------------|-------|-------------|
| d | D | B | Dynamic | Static | Grease | Oil | r _a max | kg | |
| mm | mm | mm | C | C ₀ | r/min | r/min | mm | | |
| 50 | 90 | 11 | 17.77 | 18.62 | 5,320 | 6,460 | 1.0 | 0.277 | 110 M |
| 65 | 115 | 14 | 30.31 | 34.68 | 4,180 | 5,130 | 1.0 | 0.446 | 113 M |
| 85 | 145 | 18 | 55.39 | 64.60 | 3,230 | 3,990 | 1.5 | 0.938 | 117 M |
| 100 | 160 | 28 | 91.96 | 102.60 | 2,850 | 3,515 | 2.0 | 1.339 | 120 M |
| 100 | 160 | 28 | 91.96 | 102.60 | 2,850 | 3,515 | 2.0 | 1.339 | 120 MF |
| 120 | 190 | 32 | 116.85 | 138.70 | 2,375 | 2,945 | 2.0 | 2.232 | 124 M |
| 120 | 190 | 32 | 116.85 | 138.70 | 2,375 | 2,945 | 2.0 | 2.232 | 124 MF |
| 130 | 205 | 34 | 131.10 | 157.70 | 2,185 | 2,660 | 2.0 | 3.393 | 126 M |
| 130 | 205 | 34 | 131.10 | 157.70 | 2,185 | 2,660 | 2.0 | 3.393 | 126 MF |
| 140 | 220 | 36 | 149.15 | 180.50 | 1,995 | 2,470 | 2.0 | 3.616 | 128 M |
| 140 | 220 | 36 | 149.15 | 180.50 | 1,995 | 2,470 | 2.0 | 3.616 | 128 MF |
| 160 | 250 | 40 | 180.50 | 242.25 | 1,805 | 2,185 | 2.0 | 5.446 | 132 M |
| 160 | 250 | 40 | 180.50 | 242.25 | 1,805 | 2,185 | 2.0 | 5.446 | 132 MF |

■ Prefix & Suffix

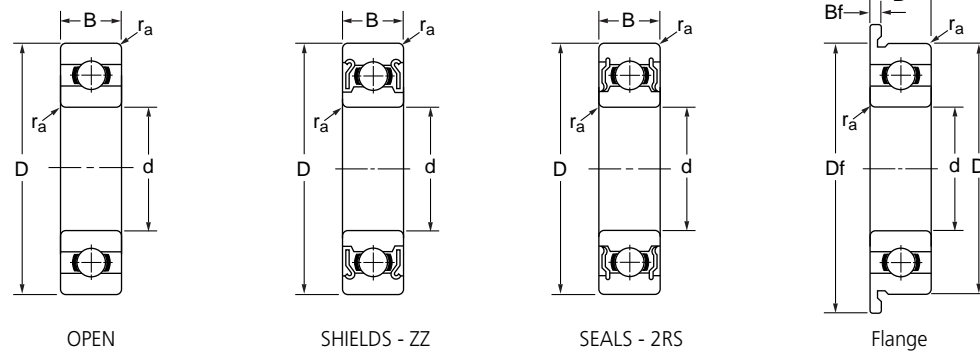




| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | |
|------------------|----|------|----|-----|--------------------|-----------------------|----------------|--------|--------------------|--------|---------------|
| d | D | Df | B | Bf | Dynamic C | Static C ₀ | Grease | Oil | r _a max | Shield | Flange Shield |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | | |
| 10 | 15 | 16.5 | 3 | 0.8 | 0.855 | 0.435 | 15,000 | 17,000 | 0.15 | 1.4 | 1.6 |
| 10 | 15 | 16.5 | 4 | 0.8 | 0.855 | 0.435 | 15,000 | 17,000 | 0.15 | 1.9 | 2.1 |
| 10 | 19 | 21.0 | 5 | 1 | 1.716 | 0.840 | 37,000 | 43,000 | 0.30 | 5.6 | 6.1 |
| 10 | 19 | 21.0 | 7 | 1.5 | 1.716 | 0.840 | 37,000 | 43,000 | 0.30 | 7.4 | 8.1 |
| 10 | 22 | 25.0 | 6 | 1.5 | 2.695 | 1.273 | 34,000 | 41,000 | 0.30 | 10.0 | 11.3 |
| 10 | 26 | - | 8 | - | 3.860 | 1.570 | 31,000 | 36,000 | 0.30 | 19.0 | - |
| 10 | 30 | - | 9 | - | 4.340 | 1.920 | 24,000 | 29,000 | 0.60 | 32.0 | - |
| 10 | 35 | - | 11 | - | 6.870 | 2.750 | 22,000 | 27,000 | 0.60 | 53.0 | - |
| 12 | 18 | 19.5 | 4 | 0.8 | 0.926 | 0.530 | 13,000 | 15,000 | 0.20 | 3.1 | 3.4 |
| 12 | 21 | 23.0 | 5 | 1.1 | 1.915 | 1.041 | 33,000 | 39,000 | 0.30 | 6.5 | 7.1 |
| 12 | 21 | 23.0 | 7 | 1.5 | 1.915 | 1.041 | 33,000 | 39,000 | 0.30 | 8.5 | 9.3 |
| 12 | 24 | 26.5 | 6 | 1.5 | 2.886 | 1.466 | 31,000 | 36,000 | 0.30 | 12.0 | 13.2 |
| 12 | 28 | - | 8 | - | 4.340 | 1.910 | 27,000 | 32,000 | 0.30 | 22.0 | - |
| 12 | 32 | - | 10 | - | 5.770 | 2.450 | 22,000 | 27,000 | 0.60 | 37.0 | - |
| 12 | 37 | - | 12 | - | 8.240 | 3.360 | 20,000 | 25,000 | 1.00 | 60.0 | - |
| 15 | 21 | 22.5 | 4 | 0.8 | 0.937 | 0.582 | 11,000 | 13,000 | 0.20 | 3.6 | 3.9 |
| 15 | 24 | 26.0 | 5 | 1.1 | 2.073 | 1.253 | 28,000 | 33,000 | 0.30 | 7.6 | 8.3 |
| 15 | 24 | 26.0 | 7 | 1.5 | 2.073 | 1.253 | 28,000 | 33,000 | 0.30 | 10.0 | 10.9 |
| 15 | 28 | 30.5 | 7 | 1.5 | 4.321 | 2.259 | 26,000 | 30,000 | 0.30 | 19.0 | 19.9 |
| 15 | 32 | - | 9 | - | 4.750 | 2.270 | 23,000 | 27,000 | 0.30 | 30.0 | - |
| 15 | 35 | - | 11 | - | 6.490 | 3.000 | 20,000 | 24,000 | 0.60 | 45.0 | - |
| 15 | 42 | - | 13 | - | 9.710 | 4.370 | 17,000 | 20,000 | 1.00 | 82.0 | - |
| 17 | 23 | 24.5 | 4 | 0.8 | 1.000 | 0.658 | 9,500 | 11,000 | 0.20 | 4.0 | 4.4 |
| 17 | 26 | 28.0 | 5 | 1.1 | 2.233 | 1.456 | 26,000 | 30,000 | 0.30 | 8.2 | 8.9 |
| 17 | 26 | 28.0 | 7 | 1.5 | 2.233 | 1.456 | 26,000 | 30,000 | 0.30 | 11.0 | 12.0 |
| 17 | 30 | 32.5 | 7 | 1.5 | 4.588 | 2.565 | 23,000 | 28,000 | 0.30 | 20.0 | 21.4 |
| 17 | 35 | - | 10 | - | 5.090 | 2.630 | 21,000 | 25,000 | 0.30 | 39.0 | - |
| 17 | 40 | - | 12 | - | 8.130 | 3.850 | 17,000 | 21,000 | 0.60 | 65.0 | - |
| 17 | 47 | - | 14 | - | 11.550 | 5.330 | 15,000 | 18,000 | 1.00 | 115.0 | - |
| 20 | 27 | 28.5 | 4 | 0.8 | 1.402 | 0.729 | 8,500 | 10,000 | 0.20 | 5.9 | 6.3 |
| 20 | 32 | 35.0 | 7 | 1.5 | 4.015 | 2.462 | 21,000 | 25,000 | 0.30 | 18.0 | 19.8 |
| 20 | 32 | 35.0 | 10 | 2.0 | 4.015 | 2.462 | 21,000 | 25,000 | 0.30 | 24.0 | 26.5 |

| Designation | | | | |
|-------------|-------------|---------|----------------|-------|
| Open | Flange Open | Shields | Flange Shields | Seals |
| 6700 | F 6700 | - | - | - |
| - | - | ZZ | F 6700 ZZ | 2RS |
| 6800 | F 6800 | ZZ | F 6800 ZZ | 2RS |
| 63800 | F 63800 | ZZ | F 63800 ZZ | 2RS |
| 6900 | F 6900 | ZZ | F 6900 ZZ | 2RS |
| 6000 | - | ZZ | - | 2RS |
| 6200 | - | ZZ | - | 2RS |
| 6300 | - | ZZ | - | 2RS |
| 6701 | F 6701 | ZZ | F 6701 ZZ | 2RS |
| 6801 | F 6801 | ZZ | F 6801 ZZ | 2RS |
| 63801 | F 63801 | ZZ | F 63801 ZZ | 2RS |
| 6901 | F 6901 | ZZ | F 6901 ZZ | 2RS |
| 6001 | - | ZZ | - | 2RS |
| 6201 | - | ZZ | - | 2RS |
| 6301 | - | ZZ | - | 2RS |
| 6702 | F 6702 | ZZ | F 6702 ZZ | 2RS |
| 6802 | F 6802 | ZZ | F 6802 ZZ | 2RS |
| 63802 | F 63802 | ZZ | F 63802 ZZ | 2RS |
| 6902 | F 6902 | ZZ | F 6902 ZZ | 2RS |
| 6002 | - | ZZ | - | 2RS |
| 6202 | - | ZZ | - | 2RS |
| 6302 | - | ZZ | - | 2RS |
| 6703 | F 6703 | ZZ | F 6703 ZZ | 2RS |
| 6803 | F 6803 | ZZ | F 6803 ZZ | 2RS |
| 63803 | F 63803 | ZZ | F 63803 ZZ | 2RS |
| 6903 | F 6903 | ZZ | F 6903 ZZ | 2RS |
| 6003 | - | ZZ | - | 2RS |
| 6203 | - | ZZ | - | 2RS |
| 6303 | - | ZZ | - | 2RS |
| 6704 | F 6704 | ZZ | F 6704 ZZ | 2RS |
| 6804 | F 6804 | ZZ | F 6804 ZZ | 2RS |
| 63804 | F 63804 | ZZ | F 63804 ZZ | 2RS |





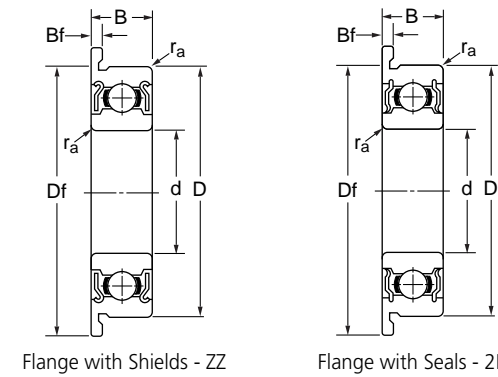
OPEN

SHIELDS - ZZ

SEALS - 2RS

Flange

| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | |
|------------------|----|------|----|-----|--------------------|-----------------------|----------------|--------|--------------------|--------|---------------|
| d | D | Df | B | Bf | Dynamic C | Static C ₀ | Grease | Oil | r _a max | Shield | Flange Shield |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | | |
| 20 | 37 | 40.0 | 9 | 2.0 | 6.381 | 3.682 | 19,000 | 23,000 | 0.30 | 40.0 | 42.8 |
| 20 | 42 | - | 12 | - | 7.960 | 4.050 | 17,000 | 21,000 | 0.60 | 69.0 | - |
| 20 | 47 | - | 14 | - | 10.910 | 5.360 | 15,000 | 17,000 | 1.00 | 106.0 | - |
| 20 | 52 | - | 15 | - | 13.490 | 6.310 | 14,000 | 17,000 | 1.10 | 144.0 | - |
| 25 | 32 | 34.0 | 4 | 1.0 | 1.091 | 0.838 | 7,000 | 8,000 | 0.20 | 7.1 | 7.9 |
| 25 | 37 | 40.0 | 7 | 1.5 | 4.303 | 2.932 | 18,000 | 21,000 | 0.30 | 24.0 | 26.1 |
| 25 | 37 | 40.0 | 10 | 2.0 | 4.303 | 2.932 | 18,000 | 21,000 | 0.30 | 32.0 | 34.1 |
| 25 | 42 | 45.0 | 9 | 2.0 | 7.001 | 4.540 | 16,000 | 19,000 | 0.30 | 47.0 | 50.2 |
| 25 | 47 | - | 12 | - | 8.550 | 4.690 | 15,000 | 18,000 | 0.60 | 80.0 | - |
| 25 | 52 | - | 15 | - | 11.900 | 7.390 | 13,000 | 15,000 | 1.00 | 128.0 | - |
| 25 | 62 | - | 17 | - | 17.490 | 9.060 | 11,000 | 13,000 | 1.10 | 232.0 | - |
| 30 | 37 | 39.0 | 4 | 1.0 | 1.143 | 0.947 | 5,500 | 7,000 | 0.20 | 8.3 | 9.2 |
| 30 | 42 | 45.0 | 7 | 1.5 | 4.538 | 3.402 | 15,000 | 18,000 | 0.30 | 27.0 | 29.4 |
| 30 | 42 | 45.0 | 10 | 2.0 | 4.538 | 3.402 | 15,000 | 18,000 | 0.30 | 36.0 | 39.2 |
| 30 | 47 | 50.0 | 9 | 2.0 | 7.242 | 5.003 | 14,000 | 17,000 | 0.30 | 53.0 | 56.6 |
| 30 | 55 | - | 13 | - | 11.240 | 6.610 | 13,000 | 15,000 | 1.00 | 116.0 | - |
| 30 | 62 | - | 16 | - | 16.530 | 9.080 | 11,000 | 13,000 | 1.00 | 199.0 | - |
| 30 | 72 | - | 19 | - | 22.630 | 12.080 | 9,600 | 12,000 | 1.10 | 346.0 | - |
| 35 | 44 | - | 5 | - | 1.866 | 1.635 | 4,900 | 6,000 | 0.30 | 15.0 | - |
| 35 | 47 | 50.0 | 7 | 1.5 | 4.729 | 3.821 | 13,000 | 16,000 | 0.30 | 32.0 | 34.7 |
| 35 | 55 | 58.0 | 10 | 2.5 | 10.900 | 7.818 | 12,000 | 14,000 | 0.60 | 87.0 | 92.2 |
| 35 | 62 | - | 14 | - | 13.560 | 8.250 | 11,000 | 13,000 | 1.00 | 155.0 | - |
| 35 | 72 | - | 17 | - | 21.810 | 12.360 | 9,200 | 11,000 | 1.10 | 288.0 | - |
| 35 | 80 | - | 21 | - | 28.290 | 15.270 | 8,500 | 10,000 | 1.50 | 457.0 | - |
| 40 | 50 | - | 6 | - | 2.516 | 2.233 | 4,300 | 5,000 | 0.30 | 23 | - |
| 40 | 52 | 55.0 | 7 | 1.5 | 4.923 | 4.178 | 12,000 | 14,000 | 0.30 | 35.0 | 38.0 |
| 40 | 62 | 65.0 | 12 | 2.5 | 13.678 | 9.968 | 11,000 | 13,000 | 0.60 | 131.0 | 137.0 |
| 40 | 68 | - | 15 | - | 14.250 | 9.220 | 10,000 | 12,000 | 1.00 | 192.0 | - |
| 40 | 80 | - | 18 | - | 24.730 | 14.330 | 8,300 | 10,000 | 1.10 | 366.0 | - |
| 45 | 55 | - | 6 | - | 2.580 | 2.397 | 3,900 | 4,600 | 0.30 | 25.0 | - |
| 45 | 58 | 61.0 | 7 | 1.5 | 6.187 | 5.381 | 11,000 | 13,000 | 0.30 | 42.0 | 45.3 |
| 45 | 68 | 71.0 | 12 | 2.5 | 14.100 | 10.830 | 9,700 | 11,000 | 0.60 | 147.0 | 153.0 |

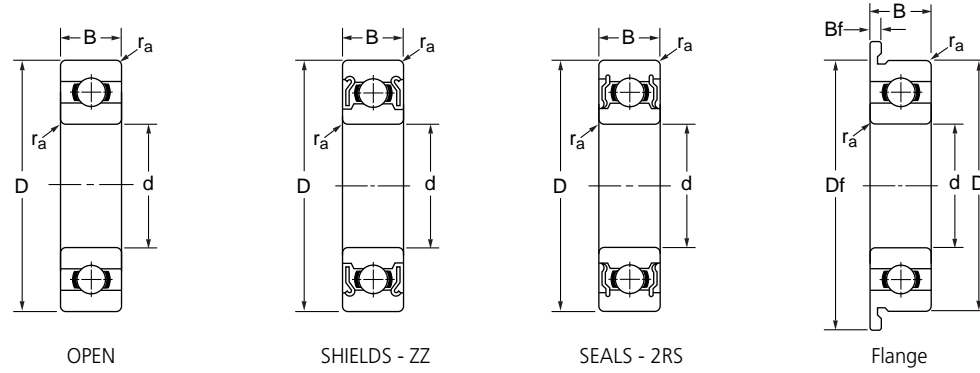


Flange with Shields - ZZ

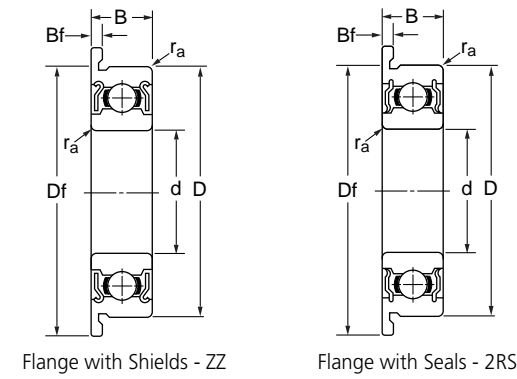
Flange with Seals - 2RS

| Designation | | | | |
|-------------|-------------|---------|----------------|-------|
| Open | Flange Open | Shields | Flange Shields | Seals |
| 6904 | F 6904 | ZZ | F 6904 ZZ | 2RS |
| 6004 | - | ZZ | - | 2RS |
| 6204 | - | ZZ | - | 2RS |
| 6304 | - | ZZ | - | 2RS |
| 6705 | F 6705 | - | - | 2RS |
| 6805 | F 6805 | ZZ | F 6805 ZZ | 2RS |
| 63805 | F 63805 | ZZ | F 63805 ZZ | 2RS |
| 6905 | F 6905 | ZZ | F 6905 ZZ | 2RS |
| 6005 | - | ZZ | - | 2RS |
| 6205 | - | ZZ | - | 2RS |
| 6305 | - | ZZ | - | 2RS |
| 6706 | F 6706 | - | - | - |
| 6806 | F 6806 | ZZ | F 6806Z | 2RS |
| 63806 | F 63806 | ZZ | F 63806 ZZ | 2RS |
| 6906 | F 6906 | ZZ | F 6906 ZZ | 2RS |
| 6006 | - | ZZ | - | 2RS |
| 6206 | - | ZZ | - | 2RS |
| 6306 | - | ZZ | - | 2RS |
| 6707 | - | - | - | 2RS |
| 6807 | F 6807 | ZZ | F 6807 ZZ | 2RS |
| 6907 | F 6907 | ZZ | F 6907 ZZ | 2RS |
| 6007 | - | ZZ | - | 2RS |
| 6207 | - | ZZ | - | 2RS |
| 6307 | - | ZZ | - | 2RS |
| 6708 | - | - | - | 2RS |
| 6808 | F 6808 | ZZ | F 6808 ZZ | 2RS |
| 6908 | F 6908 | ZZ | F 6908 ZZ | 2RS |
| 6008 | - | ZZ | - | 2RS |
| 6208 | - | ZZ | - | 2RS |
| 6709 | - | - | - | 2RS |
| 6809 | F 6809 | ZZ | F 6809 ZZ | 2RS |
| 6909 | F 6909 | ZZ | F 6909 ZZ | 2RS |





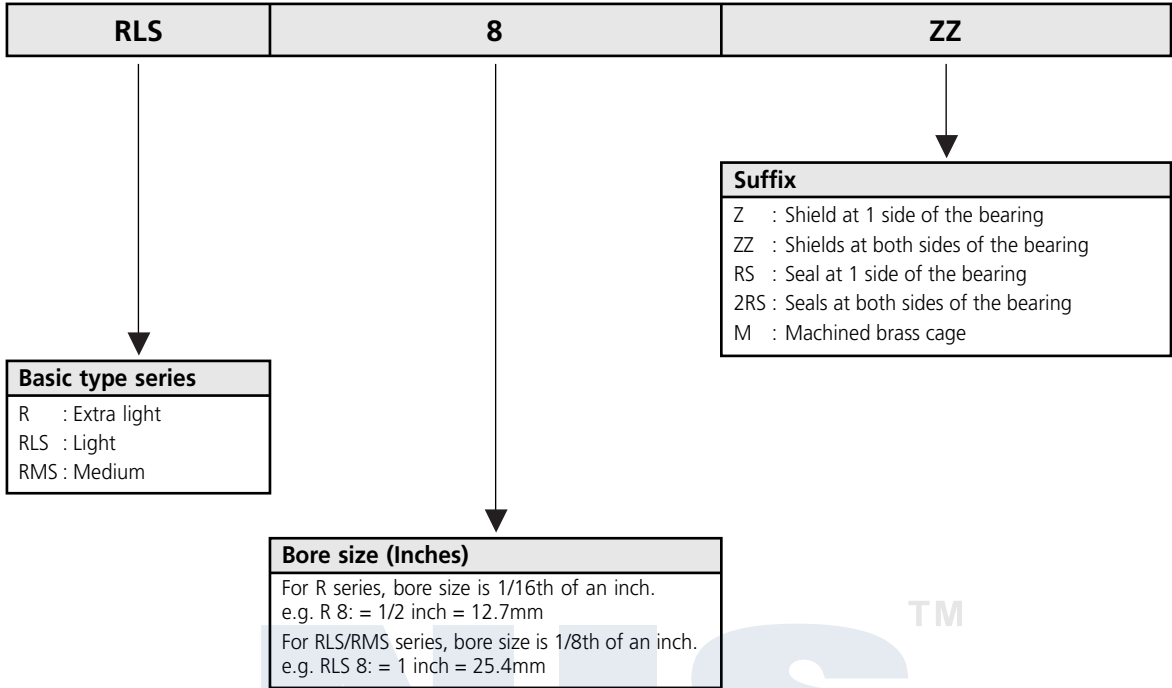
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | |
|------------------|-----|------|----|-----|--------------------|-----------------------|----------------|--------|--------------------|--------|---------------|
| d | D | Df | B | Bf | Dynamic C | Static C ₀ | Grease | Oil | r _a max | Shield | Flange Shield |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | | |
| 45 | 75 | - | 16 | - | 15.150 | 9.660 | 9,200 | 11,000 | 1.00 | 245.0 | - |
| 45 | 85 | - | 19 | - | 27.790 | 16.300 | 7,700 | 9,200 | 1.10 | 407.0 | - |
| 50 | 62 | - | 6 | - | 2.670 | 2.640 | 3,500 | 4,100 | 0.30 | 64.0 | - |
| 50 | 65 | 68.0 | 7 | 1.5 | 6.610 | 6.090 | 9,600 | 11,000 | 0.30 | 52.0 | - |
| 50 | 72 | 75.0 | 12 | 2.5 | 14.540 | 11.710 | 9,000 | 11,000 | 0.60 | 133.0 | - |
| 50 | 80 | - | 16 | - | 18.510 | 13.260 | 8,400 | 9,900 | 1.00 | 261.0 | - |
| 50 | 90 | - | 20 | - | 29.800 | 18.610 | 7,100 | 8,500 | 1.10 | 463.0 | - |
| 55 | 72 | - | 9 | - | 8.800 | 8.100 | 8,700 | 10,000 | 0.30 | 83.0 | - |
| 55 | 80 | - | 13 | - | 16.600 | 14.100 | 8,100 | 9,600 | 1.00 | 190.0 | - |
| 60 | 78 | - | 10 | - | 11.500 | 10.600 | 8,000 | 9,400 | 0.30 | 110.0 | - |
| 60 | 85 | - | 13 | - | 20.200 | 17.300 | 7,500 | 8,900 | 1.00 | 200.0 | - |
| 65 | 85 | - | 10 | - | 11.900 | 11.500 | 7,300 | 8,600 | 0.60 | 130.0 | - |
| 65 | 90 | - | 13 | - | 17.400 | 16.100 | 7,100 | 8,400 | 1.00 | 220.0 | - |
| 70 | 90 | - | 10 | - | 12.100 | 11.900 | 6,800 | 8,100 | 0.60 | 140.0 | - |
| 70 | 100 | - | 16 | - | 23.700 | 21.200 | 6,400 | 7,600 | 1.00 | 350.0 | - |
| 75 | 95 | - | 10 | - | 12.500 | 12.900 | 12,500 | 12,900 | 0.60 | 145.0 | - |
| 75 | 105 | - | 16 | - | 24.400 | 22.600 | 6,100 | 7,200 | 1.00 | 370.0 | - |
| 80 | 100 | - | 10 | - | 127.000 | 13.300 | 12,700 | 13,300 | 0.60 | 150.0 | - |
| 80 | 110 | - | 16 | - | 25.000 | 24.000 | 5,700 | 6,800 | 1.00 | 400.0 | - |
| 85 | 110 | - | 13 | - | 18.700 | 19.000 | 5,600 | 6,600 | 1.00 | 270.0 | - |
| 85 | 120 | - | 18 | - | 31.900 | 29.600 | 5,300 | 6,300 | 1.10 | 550.0 | - |
| 90 | 115 | - | 13 | - | 19.000 | 19.700 | 5,300 | 6,300 | 1.00 | 280.0 | - |
| 90 | 125 | - | 18 | - | 32.800 | 31.600 | 5,100 | 6,000 | 1.10 | 590.0 | - |

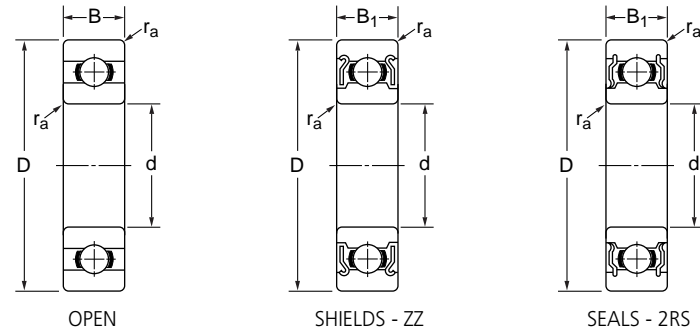


| Designation | | | | |
|-------------|-------------|---------|----------------|-------|
| Open | Flange Open | Shields | Flange Shields | Seals |
| 6009 | - | ZZ | - | 2RS |
| 6209 | - | ZZ | - | 2RS |
| 6710 | - | - | - | 2RS |
| 6810 | F 6810 | ZZ | F 6810 ZZ | 2RS |
| 6910 | F 6910 | ZZ | F 6910 ZZ | 2RS |
| 6010 | - | ZZ | - | 2RS |
| 6210 | - | ZZ | - | 2RS |
| 6811 | - | ZZ | - | 2RS |
| 6911 | - | ZZ | - | 2RS |
| 6812 | - | ZZ | - | 2RS |
| 6912 | - | ZZ | - | 2RS |
| 6813 | - | ZZ | - | 2RS |
| 6913 | - | ZZ | - | 2RS |
| 6814 | - | ZZ | - | 2RS |
| 6914 | - | ZZ | - | 2RS |
| 6815 | - | ZZ | - | 2RS |
| 6915 | - | ZZ | - | 2RS |
| 6816 | - | ZZ | - | 2RS |
| 6916 | - | ZZ | - | 2RS |
| 6817 | - | ZZ | - | 2RS |
| 6917 | - | ZZ | - | 2RS |
| 6818 | - | ZZ | - | 2RS |
| 6918 | - | ZZ | - | 2RS |



■ Prefix & Suffix

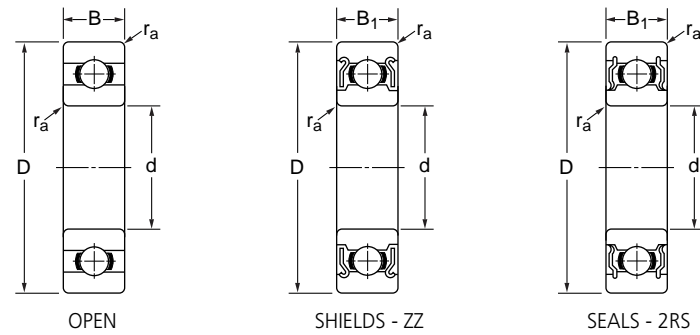




| Basic Dimensions | | | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------------------|----------------|----------------|--------|
| d | | D | | B | | B1 | | Dynamic | Static | Grease | Oil |
| inch | mm | inch | mm | inch | mm | inch | mm | C | C ₀ | r/min | r/min |
| 0.1250 | 3.175 | 0.3750 | 9.525 | 0.1562 | 3.967 | 0.1562 | 3.967 | 0.63 | 0.22 | 56,000 | 67,000 |
| 0.1250 | 3.175 | 0.5000 | 12.700 | 0.1719 | 4.366 | 0.1719 | 4.366 | 0.64 | 0.23 | 53,000 | 63,000 |
| 0.1562 | 3.967 | 0.3125 | 7.938 | 0.1094 | 2.779 | 0.1250 | 3.175 | 0.36 | 0.15 | 53,000 | 63,000 |
| 0.1875 | 4.762 | 0.3125 | 7.938 | 0.1094 | 2.779 | 0.1250 | 3.175 | 0.36 | 0.15 | 53,000 | 63,000 |
| 0.1875 | 4.762 | 0.3750 | 9.525 | 0.1250 | 3.175 | 0.1250 | 3.175 | 0.71 | 0.27 | 50,000 | 60,000 |
| 0.1875 | 4.762 | 0.5000 | 12.700 | 0.1562 | 3.967 | 0.1960 | 4.978 | 1.30 | 0.49 | 43,000 | 53,000 |
| 0.1875 | 4.762 | 0.6250 | 15.875 | 0.1960 | 4.978 | 0.1960 | 4.978 | 1.48 | 0.62 | 38,000 | 45,000 |
| 0.2500 | 6.350 | 0.3750 | 9.525 | 0.1250 | 3.175 | 0.1250 | 3.175 | 0.37 | 0.17 | 48,000 | 56,000 |
| 0.2500 | 6.350 | 0.5000 | 12.700 | 0.1250 | 3.175 | 0.1875 | 4.762 | 1.08 | 0.44 | 40,000 | 50,000 |
| 0.2500 | 6.350 | 0.6250 | 15.875 | 0.1960 | 4.978 | 0.1960 | 4.978 | 1.48 | 0.62 | 38,000 | 45,000 |
| 0.2500 | 6.350 | 0.7500 | 19.050 | 0.2188 | 5.558 | 0.2812 | 7.142 | 2.34 | 0.90 | 36,000 | 43,000 |
| 0.3125 | 7.938 | 0.5000 | 12.700 | 0.1562 | 3.967 | 0.1562 | 3.967 | 0.54 | 0.28 | 40,000 | 48,000 |
| 0.3750 | 9.525 | 0.8750 | 22.225 | 0.2188 | 5.558 | 0.2512 | 7.142 | 3.33 | 1.41 | 32,000 | 38,000 |
| 0.5000 | 12.700 | 1.1250 | 28.575 | 0.2500 | 6.350 | 0.3125 | 7.938 | 5.11 | 2.41 | 27,000 | 32,000 |
| 0.5000 | 12.700 | 1.3125 | 33.337 | 0.3750 | 9.925 | - | - | 4.64 | 1.99 | 15,000 | 19,500 |
| 0.5000 | 12.700 | 1.6250 | 41.275 | 0.6250 | 15.875 | - | - | 8.55 | 4.20 | 13,500 | 16,500 |
| 0.6250 | 15.875 | 1.3750 | 34.925 | 0.2812 | 7.142 | 0.4380 | 8.733 | 6.00 | 3.27 | 21,000 | 25,000 |
| 0.6250 | 15.875 | 1.5625 | 39.688 | 0.4375 | 11.112 | - | - | 7.17 | 3.38 | 12,750 | 15,000 |
| 0.6250 | 15.875 | 1.8125 | 46.038 | 0.6250 | 15.875 | - | - | 10.35 | 5.03 | 12,000 | 14,250 |
| 0.7500 | 19.050 | 1.6250 | 41.275 | 0.3125 | 7.938 | 0.4375 | 11.113 | 9.38 | 5.06 | 17,000 | 21,000 |
| 0.7500 | 19.050 | 1.8750 | 47.625 | 0.5625 | 14.288 | - | - | 9.53 | 4.65 | 11,250 | 13,500 |
| 0.7500 | 19.050 | 2.0000 | 50.800 | 0.6875 | 17.462 | - | - | 11.93 | 5.85 | 10,500 | 12,750 |
| 0.8750 | 22.225 | 2.0000 | 50.800 | 0.5625 | 14.288 | - | - | 11.33 | 5.63 | 10,500 | 12,750 |
| 0.8750 | 22.225 | 2.2500 | 57.150 | 0.6875 | 17.462 | - | - | 13.95 | 6.86 | 9,000 | 11,250 |
| 1.0000 | 25.400 | 2.2500 | 57.150 | 0.6250 | 15.875 | - | - | 1.34 | 6.60 | 8,250 | 10,500 |
| 1.0000 | 25.400 | 2.5000 | 63.500 | 0.7500 | 19.050 | - | - | 15.90 | 7.95 | 7,500 | 9,750 |
| 1.1250 | 28.575 | 2.5000 | 63.500 | 0.6250 | 15.875 | - | - | 14.63 | 7.50 | 7,500 | 9,750 |
| 1.1250 | 28.575 | 2.8125 | 71.438 | 0.8125 | 20.638 | - | - | 20.25 | 10.28 | 7,125 | 9,000 |
| 1.2500 | 31.750 | 2.7500 | 69.850 | 0.6875 | 17.462 | - | - | 16.88 | 8.85 | 7,125 | 9,000 |
| 1.2500 | 31.750 | 3.1250 | 79.375 | 0.8750 | 22.225 | - | - | 24.90 | 13.20 | 6,750 | 8,250 |
| 1.3750 | 34.925 | 3.0000 | 76.200 | 0.6875 | 17.462 | - | - | 19.13 | 10.28 | 6,750 | 8,250 |
| 1.3750 | 34.925 | 3.5000 | 88.900 | 0.8750 | 22.225 | - | - | 30.23 | 16.20 | 6,000 | 7,125 |

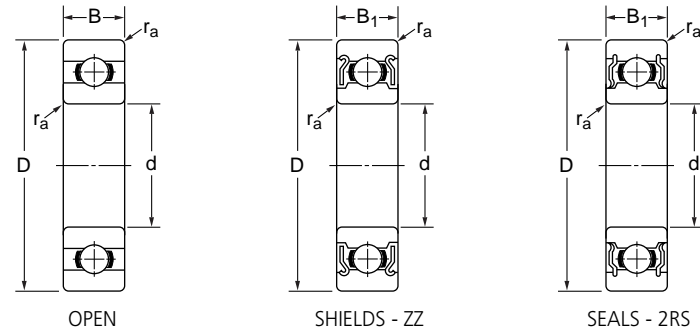
| Chamfer Dimension | | Mass | | Designation | | | |
|--------------------|--------------------|--------|-------|------------------|---------|-----------|-------|
| r _a max | r _a max | | | Reference Number | Open | Shields | Seals |
| 0.0118 | 0.30 | 1.04 | 1.37 | R 2 | R 2* | ZZ* | 2RS |
| 0.0118 | 0.30 | 3.30 | 3.30 | R 2A | R 2A | R 2AZZ | - |
| 0.0039 | 0.10 | 0.51 | 0.61 | RI 5532 | R 155* | R 155ZZS | - |
| 0.0039 | 0.10 | 0.40 | 0.45 | RI 5632 | R 156* | R 156ZZS | - |
| 0.0039 | 0.10 | 0.81 | 0.85 | RI 6632 | R 166* | R 166ZZ | - |
| 0.0118 | 0.30 | 2.21 | 2.95 | R 3 | R 3* | ZZ* | 2RS |
| 0.0118 | 0.30 | 4.75 | 5.08 | R 3A | R 3A | R 3AZZ | 2RS |
| 0.0039 | 0.10 | 0.57 | 0.60 | RI 614 | R 168* | R 168ZZS* | - |
| 0.0059 | 0.15 | 1.60 | 2.32 | RI 814 | R 188* | R 188ZZ* | 2RS |
| 0.0118 | 0.30 | 4.46 | 4.54 | R 4 | R 4* | ZZ* | 2RS |
| 0.0157 | 0.40 | 7.48 | 10.00 | R 4A | R 4A | AZZ | 2RS |
| 0.0059 | 0.15 | 1.39 | 1.57 | RI 8516 | R 1810* | R 1810ZZS | - |
| 0.0157 | 0.40 | 9.02 | 11.70 | RI 1438 | R 6 | ZZ | 2RS |
| 0.0157 | 0.40 | 11.60 | 24.10 | RI 1812 | R 8 | ZZ | 2RS |
| 0.0310 | 0.80 | 40.00 | - | LJ 1/2 | RLS 4 | ZZ | 2RS |
| 0.0620 | 1.60 | 100.00 | - | MJ 1/2 | RMS 4 | ZZ | 2RS |
| 0.0315 | 0.80 | 23.50 | 38.10 | EE 5 | R 10 | ZZ | 2RS |
| 0.0310 | 0.80 | 60.00 | - | LJ 5/8 | RLS 5 | ZZ | 2RS |
| 0.0620 | 1.60 | 120.00 | - | MJ 5/8 | RMS 5 | ZZ | 2RS |
| 0.0315 | 0.80 | 53.10 | 69.30 | EE 6 | R 12 | ZZ | 2RS |
| 0.0620 | 1.60 | 120.00 | - | LJ 3/4 | RLS 6 | ZZ | 2RS |
| 0.0620 | 1.60 | 160.00 | - | MJ 3/4 | RMS 6 | ZZ | 2RS |
| 0.0620 | 1.60 | 120.00 | - | LJ 7/8 | RLS 7 | ZZ | 2RS |
| 0.0620 | 1.60 | 210.00 | - | MJ 7/8 | RMS 7 | ZZ | 2RS |
| 0.0620 | 1.60 | 170.00 | - | LJ 1 | RLS 8 | ZZ | 2RS |
| 0.0940 | 2.40 | 270.00 | - | MJ 1 | RMS 8 | ZZ | 2RS |
| 0.0620 | 1.60 | 220.00 | - | LJ 1.1/8 | RLS 9 | ZZ | 2RS |
| 0.0940 | 2.40 | 370.00 | - | MJ 1.1/8 | RMS 9 | ZZ | 2RS |
| 0.0620 | 1.60 | 290.00 | - | LJ 1.1/4 | RLS 10 | ZZ | 2RS |
| 0.0940 | 2.40 | 490.00 | - | MJ 1.1/4 | RM S10 | ZZ | 2RS |
| 0.0620 | 1.60 | 350.00 | - | LJ 1.3/8 | RLS 11 | ZZ | 2RS |
| 0.0940 | 2.40 | 630.00 | - | MJ 1.3/8 | RMS 11 | ZZ | 2RS |

* Available with inner ring width extended by 0.015" each side.



| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | | | |
|------------------|---------|---------|---------|--------|--------|--------------------|----|----------------|----------------------|--------|-------|
| d | | D | | B | | B1 | | Dynamic | Static | Grease | Oil |
| inch | mm | inch | mm | inch | mm | inch | mm | C kN | C ₀ kN | r/min | r/min |
| 1.5000 | 38.100 | 3.2500 | 82.550 | 0.7500 | 19.050 | - | - | 21.83 | 11.70 | 6,375 | 7,500 |
| 1.5000 | 38.100 | 3.7500 | 95.250 | 0.9375 | 23.812 | - | - | 33.15 | 18.38 | 5,625 | 6,750 |
| 1.6250 | 41.275 | 3.5000 | 88.900 | 0.7500 | 19.050 | - | - | 24.38 | 13.20 | 5,625 | 6,750 |
| 1.6250 | 41.275 | 4.0000 | 101.600 | 0.9375 | 23.812 | - | - | 39.53 | 22.50 | 5,025 | 6,000 |
| 1.7500 | 44.450 | 3.7500 | 95.250 | 0.8125 | 20.638 | - | - | 26.33 | 14.70 | 5,250 | 6,375 |
| 1.7500 | 44.450 | 4.2500 | 107.950 | 1.0625 | 26.988 | - | - | 42.90 | 24.38 | 4,725 | 5,625 |
| 1.8750 | 47.625 | 4.0000 | 101.600 | 0.8125 | 20.638 | - | - | 32.70 | 18.75 | 4,725 | 5,625 |
| 1.8750 | 47.625 | 4.5000 | 114.300 | 1.0625 | 26.988 | - | - | 49.73 | 29.25 | 4,500 | 5,250 |
| 2.0000 | 50.800 | 4.0000 | 101.600 | 0.8125 | 20.638 | - | - | 32.70 | 18.75 | 4,725 | 5,625 |
| 2.0000 | 50.800 | 4.5000 | 114.300 | 1.0625 | 26.988 | - | - | 49.73 | 29.25 | 4,500 | 5,250 |
| 2.2500 | 57.150 | 4.5000 | 114.300 | 0.8750 | 22.225 | - | - | 39.53 | 23.25 | 4,500 | 5,250 |
| 2.2500 | 57.150 | 5.0000 | 127.000 | 1.2500 | 31.750 | - | - | 57.08 | 33.75 | 3,975 | 4,725 |
| 2.5000 | 63.500 | 5.0000 | 127.000 | 0.9375 | 23.812 | - | - | 46.80 | 28.13 | 3,750 | 4,500 |
| 2.5000 | 63.500 | 5.5000 | 139.700 | 1.2500 | 31.750 | - | - | 69.23 | 42.00 | 3,600 | 4,200 |
| 2.7500 | 69.850 | 5.2500 | 133.350 | 0.9375 | 23.812 | - | - | 49.73 | 31.13 | 3,600 | 4,200 |
| 2.7500 | 69.850 | 6.2500 | 158.750 | 1.3750 | 34.925 | - | - | 78.00 | 47.25 | 3,225 | 3,750 |
| 3.0000 | 76.200 | 5.7500 | 146.050 | 1.0625 | 26.988 | - | - | 54.60 | 33.00 | 3,375 | 3,975 |
| 3.0000 | 76.200 | 7.0000 | 177.800 | 1.5625 | 39.688 | - | - | 93.00 | 60.00 | 2,850 | 3,375 |
| 3.2500 | 82.550 | 6.0000 | 152.400 | 1.0625 | 26.988 | - | - | 62.40 | 39.75 | 3,000 | 3,600 |
| 3.2500 | 82.550 | 7.5000 | 190.500 | 1.5625 | 39.688 | - | - | 99.75 | 67.50 | 2,550 | 3,000 |
| 3.5000 | 88.900 | 6.5000 | 165.100 | 1.1250 | 28.575 | - | - | 71.70 | 45.75 | 2,850 | 3,375 |
| 3.5000 | 88.900 | 8.1250 | 206.375 | 1.7500 | 44.450 | - | - | 114.75 | 81.00 | 2,400 | 2,850 |
| 3.7500 | 95.250 | 6.7500 | 171.450 | 1.1250 | 28.575 | - | - | 75.75 | 50.25 | 2,700 | 3,225 |
| 3.7500 | 95.250 | 8.2500 | 209.550 | 1.7500 | 44.450 | - | - | 114.75 | 81.00 | 2,400 | 2,850 |
| 4.0000 | 101.600 | 7.2500 | 184.150 | 1.2500 | 31.750 | - | - | 81.00 | 53.25 | 2,550 | 3,000 |
| 4.0000 | 101.600 | 8.5000 | 215.900 | 1.7500 | 44.450 | - | - | 122.25 | 90.00 | 2,250 | 2,700 |
| 4.2500 | 107.950 | 7.5000 | 133.350 | 1.2500 | 31.750 | - | - | 93.00 | 61.13 | 2,400 | 2,850 |
| 4.2500 | 107.950 | 8.7500 | 222.250 | 1.7500 | 44.450 | - | - | 130.50 | 99.00 | 2,100 | 2,550 |
| 4.5000 | 114.300 | 8.0000 | 203.200 | 1.3125 | 33.338 | - | - | 97.50 | 64.88 | 2,250 | 2,700 |
| 4.5000 | 114.300 | 9.3750 | 238.125 | 2.0000 | 50.800 | - | - | 139.50 | 107.25 | 1,950 | 2,400 |
| 4.7500 | 120.650 | 8.2500 | 209.550 | 1.3125 | 33.338 | - | - | 103.50 | 71.25 | 2,100 | 2,550 |
| 4.7500 | 120.650 | 10.0000 | 254.000 | 2.0000 | 50.800 | - | - | 146.25 | 114.75 | 1,800 | 2,250 |

| Chamfer Dimension | | Mass | | Designation | | | |
|-----------------------|-----------------------|-----------|---|------------------|--------|---------|-------|
| r _s max | r _a max | | | Reference Number | Open | Shields | Seals |
| 0.0940 | 2.40 | 440.00 | - | LJ 1.1/2 | RLS 12 | ZZ | 2RS |
| 0.0940 | 2.40 | 790.00 | - | MJ 1.1/2 | RMS 12 | ZZ | 2RS |
| 0.0940 | 2.40 | 510.00 | - | LJ 1.5/8 | RLS 13 | ZZ | 2RS |
| 0.0940 | 2.40 | 910.00 | - | MJ 1.5/8 | RMS 13 | ZZ | 2RS |
| 0.0940 | 2.40 | 660.00 | - | LJ 1.3/4 | RLS 14 | ZZ | 2RS |
| 0.0940 | 2.40 | 1,130.00 | - | MJ 1.3/4 | RMS 14 | ZZ | 2RS |
| 0.0940 | 2.40 | 740.00 | - | LJ 1.7/8 | RLS 15 | ZZ | 2RS |
| 0.0940 | 2.40 | 1,240.00 | - | MJ 1.7/8 | RMS 15 | ZZ | 2RS |
| 0.0940 | 2.40 | 700.00 | - | LJ 2 | RLS 16 | ZZ | 2RS |
| 0.0940 | 2.40 | 1,190.00 | - | MJ 2 | RMS 16 | ZZ | 2RS |
| 0.0940 | 2.40 | 960.00 | - | LJ 2.1/4 | RLS 18 | - | - |
| 0.1250 | 3.20 | 1,700.00 | - | MJ 2.1/4 | RMS 18 | - | - |
| 0.0940 | 2.40 | 1,260.00 | - | LJ 2.1/2 | RLS 20 | - | - |
| 0.1250 | 3.20 | 2,050.00 | - | MJ 2.1/2 | RMS 20 | - | - |
| 0.0940 | 2.40 | 1,370.00 | - | LJ 2.3/4 | RLS 22 | - | - |
| 0.1250 | 3.20 | 2,970.00 | - | MJ 2.3/4 | RMS 22 | - | - |
| 0.0940 | 2.40 | 1,850.00 | - | LJ 3 | RLS 24 | - | - |
| 0.1560 | 4.00 | 4,410.00 | - | MJ 3 | RMS 24 | - | - |
| 0.0940 | 2.40 | 1,930.00 | - | LJ 3.1/4 | RLS 26 | - | - |
| 0.1560 | 4.00 | 5,000.00 | - | MJ 3.1/4 | RMS 26 | - | - |
| 0.1250 | 3.20 | 2,380.00 | - | LJ 3.1/2 | RLS 28 | - | - |
| 0.1560 | 4.00 | 6,500.00 | - | MJ 3.1/2 | RMS 28 | - | - |
| 0.1250 | 3.20 | 2,510.00 | - | LJ 3.3/4 | RLS 30 | - | - |
| 0.1560 | 4.00 | 6,500.00 | - | MJ 3.3/4 | RMS 30 | - | - |
| 0.1250 | 3.20 | 3,250.00 | - | LJ 4 | RLS 32 | - | - |
| 0.1560 | 4.00 | 8,100.00 | - | MJ 4 | RMS 32 | - | - |
| 0.1250 | 3.20 | 3,920.00 | - | LJ 4.1/4 | RLS 34 | - | - |
| 0.1875 | 4.80 | 8,500.00 | - | MJ 4.1/4 | RMS 34 | - | - |
| 0.1250 | 3.20 | 4,760.00 | - | LJ 4.1/2 | RLS 36 | - | - |
| 0.1875 | 4.80 | 11,700.00 | - | MJ 4.1/2 | RMS 36 | - | - |
| 0.1250 | 3.20 | 5,000.00 | - | LJ 4.3/4 | RLS 38 | - | - |
| 0.1875 | 4.80 | 12,700.00 | - | MJ 4.3/4 | RMS 38 | - | - |



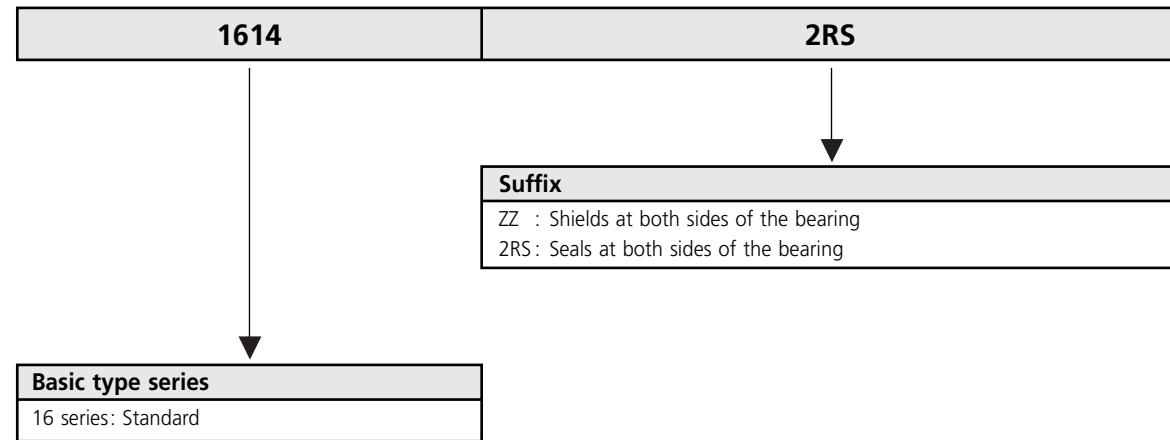
| Basic Dimensions | | | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|---------|---------|--------|--------|------|----|--------------------|----------------------|----------------|-------|
| d | | D | | B | | B1 | | Dynamic | Static | Grease | Oil |
| inch | mm | inch | mm | inch | mm | inch | mm | C kN | C ₀ kN | r/min | r/min |
| 5.0000 | 127.000 | 9.0000 | 228.600 | 1.3750 | 34.925 | - | - | 111.00 | 81.00 | 1,950 | 2,400 |
| 5.0000 | 127.000 | 10.0000 | 254.000 | 2.0000 | 50.800 | - | - | 146.25 | 114.75 | 1,800 | 2,250 |
| 5.5000 | 139.700 | 9.5000 | 241.300 | 1.3750 | 34.925 | - | - | 117.00 | 87.00 | 1,800 | 2,250 |
| 5.5000 | 139.700 | 11.0000 | 279.400 | 2.0000 | 50.800 | - | - | 159.00 | 129.75 | 1,500 | 1,950 |
| 6.0000 | 152.400 | 10.5000 | 266.700 | 1.5625 | 39.688 | - | - | 129.00 | 100.50 | 1,500 | 1,950 |
| 6.5000 | 165.000 | 11.0000 | 279.400 | 1.5625 | 39.688 | - | - | 129.00 | 100.50 | 1,500 | 1,950 |
| 7.0000 | 177.800 | 12.0000 | 304.800 | 1.7500 | 44.450 | - | - | 149.25 | 122.25 | 1,425 | 1,800 |
| 7.5000 | 190.500 | 12.5000 | 317.500 | 1.7500 | 44.450 | - | - | 159.00 | 135.00 | 1,350 | 1,650 |
| 8.0000 | 203.200 | 13.0000 | 330.200 | 1.7500 | 44.450 | - | - | 165.75 | 144.75 | 1,275 | 1,500 |
| 9.0000 | 228.600 | 14.5000 | 368.300 | 2.0000 | 50.800 | - | - | 175.50 | 159.00 | 1,125 | 1,350 |
| 10.0000 | 254.000 | 15.7500 | 400.500 | 2.0000 | 50.800 | - | - | 191.25 | 187.50 | 1,050 | 1,275 |
| 11.5000 | 292.000 | 18.0000 | 457.200 | 2.3750 | 60.325 | - | - | 239.25 | 255.00 | 825 | 1,050 |

| Chamfer Dimension | | Mass | | Designation | | | |
|-----------------------|-----------------------|-----------|---|------------------|---------|---------|-------|
| r _s max | r _s max | | | Reference Number | Open | Shields | Seals |
| 0.1250 | 3.20 | 6,500.00 | - | LJ 5 | RLS 40 | - | - |
| 0.1875 | 4.80 | 12,100.00 | - | MJ 5 | RMS 40 | - | - |
| 0.1250 | 3.20 | 6,900.00 | - | LJ 5.1/2 | RLS 44 | - | - |
| 0.1875 | 4.80 | - | - | MJ 5.1/2 | RMS 44M | - | - |
| 0.1560 | 4.00 | 9,800.00 | - | LJ 6 | RLS 48 | - | - |
| 0.1560 | 4.00 | 10,400.00 | - | LJ 6.1/2 | RLS 52 | - | - |
| 0.1560 | 4.00 | 14,100.00 | - | LJ 7 | RLS 56M | - | - |
| 0.1560 | 4.00 | 15,000.00 | - | LJ 7.1/2 | RLS 60M | - | - |
| 0.1560 | 4.00 | 15,800.00 | - | LJ 8 | RLS 64M | - | - |
| 0.1875 | 4.80 | - | - | LJ 9 | RLS 72M | - | - |
| 0.1875 | 4.80 | - | - | LJ 10 | RLS 80M | - | - |
| 0.1875 | 4.80 | - | - | LJ 11.1/2 | RLS 92M | - | - |

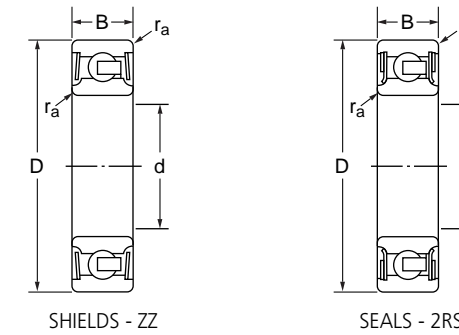
Single Row Deep Groove Ball Bearings - Inch Sizes 1600 Series



Prefix & Suffix



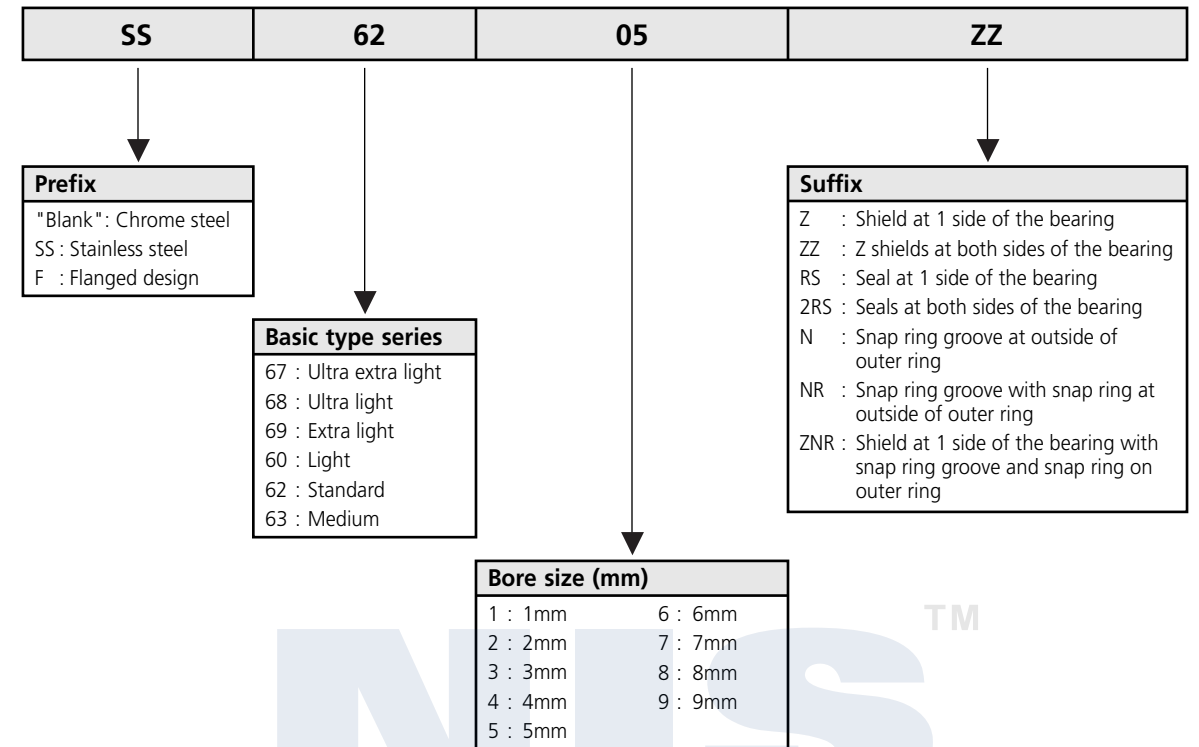
Single Row Deep Groove Ball Bearings - Inch Sizes 1600 Series

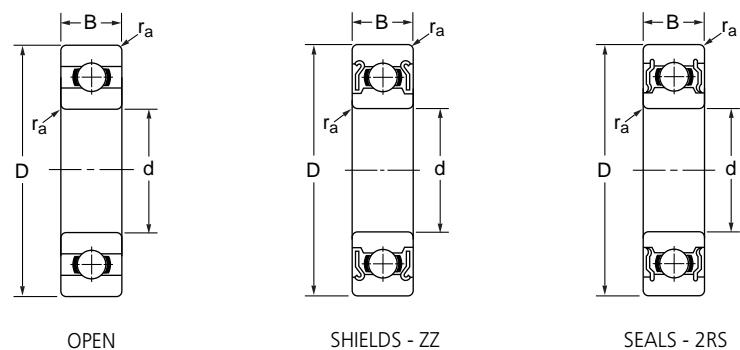


| Basic Dimensions | | | | | | Chamfer Dimension | | Designation |
|------------------|--------|-------|--------|---------|--------|-------------------|----------------|-------------|
| d | | D | | B | | r _a | r _a | |
| inch | mm | inch | mm | inch | mm | inch | mm | |
| 0.188 | 4.763 | 0.688 | 17.463 | *0.250 | 6.350 | 0.012 | 0.305 | 1601 |
| 0.250 | 6.350 | 0.688 | 17.463 | *0.250 | 6.350 | 0.012 | 0.305 | 1602 |
| 0.313 | 7.938 | 0.875 | 22.225 | **0.281 | 7.144 | 0.012 | 0.305 | 1603 |
| 0.375 | 9.525 | 0.875 | 22.225 | **0.281 | 7.144 | 0.015 | 0.381 | 1604 |
| 0.313 | 7.938 | 0.906 | 23.019 | 0.313 | 7.938 | 0.012 | 0.305 | 1605 |
| 0.375 | 9.525 | 0.906 | 23.019 | 0.313 | 7.938 | 0.015 | 0.381 | 1606 |
| 0.438 | 11.113 | 0.906 | 23.019 | 0.313 | 7.938 | 0.015 | 0.381 | 1607 |
| 0.375 | 9.525 | 1.125 | 28.575 | 0.375 | 9.525 | 0.025 | 0.635 | 1614 |
| 0.438 | 11.113 | 1.125 | 28.575 | 0.375 | 9.525 | 0.025 | 0.635 | 1615 |
| 0.500 | 12.700 | 1.125 | 28.575 | 0.375 | 9.525 | 0.025 | 0.635 | 1616 |
| 0.438 | 11.113 | 1.375 | 34.925 | 0.438 | 11.113 | 0.025 | 0.635 | 1620 |
| 0.500 | 12.700 | 1.375 | 34.925 | 0.438 | 11.113 | 0.025 | 0.635 | 1621 |
| 0.563 | 14.288 | 1.375 | 34.925 | 0.438 | 11.113 | 0.025 | 0.635 | 1622 |
| 0.625 | 15.875 | 1.375 | 34.925 | 0.438 | 11.113 | 0.025 | 0.635 | 1623 |
| 0.625 | 15.875 | 1.625 | 41.275 | 0.500 | 12.700 | 0.025 | 0.635 | 1628 |
| 0.750 | 19.050 | 1.625 | 41.275 | 0.500 | 12.700 | 0.025 | 0.635 | 1630 |
| 0.625 | 15.875 | 1.750 | 44.450 | 0.500 | 12.700 | 0.025 | 0.635 | 1633 |
| 0.750 | 19.050 | 1.750 | 44.450 | 0.500 | 12.700 | 0.025 | 0.635 | 1635 |
| 0.750 | 19.050 | 2.000 | 50.800 | 0.563 | 14.288 | 0.035 | 0.889 | 1638 |
| 0.875 | 22.225 | 2.000 | 50.800 | 0.563 | 14.288 | 0.035 | 0.889 | 1640 |
| 1.000 | 25.400 | 2.000 | 50.800 | 0.563 | 14.288 | 0.035 | 0.889 | 1641 |
| 1.125 | 28.575 | 2.500 | 63.500 | 0.625 | 15.875 | 0.035 | 0.889 | 1652 |
| 1.250 | 31.750 | 2.500 | 63.500 | 0.625 | 15.875 | 0.035 | 0.889 | 1654 |
| 1.250 | 31.750 | 2.563 | 65.100 | 0.688 | 17.463 | 0.035 | 0.889 | 1657 |
| 1.313 | 33.350 | 2.563 | 65.100 | 0.688 | 17.463 | 0.035 | 0.889 | 1658 |

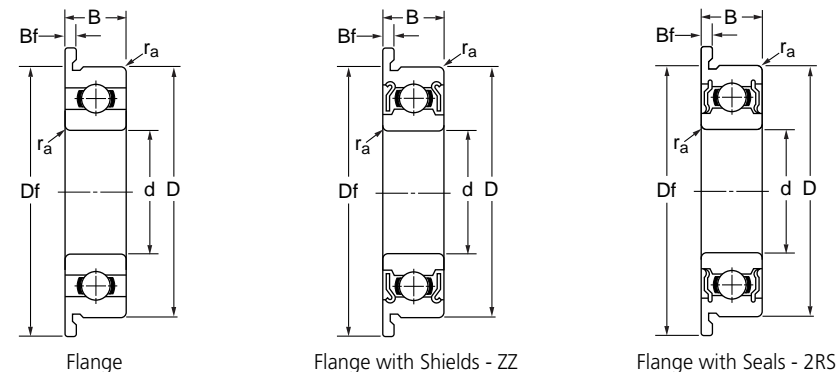
* Width Dimension B for 2RS Types = 0.3125"
 ** Width Dimension B for 2RS Types = 0.34375"

■ Prefix & Suffix

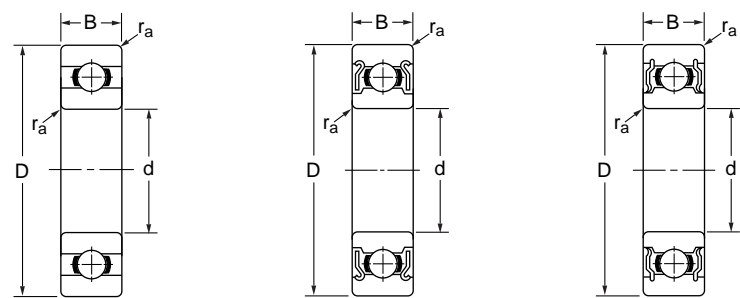




| Basic Dimensions | | | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension |
|------------------|----|------|-----|-----|-----|-----|--------------------|--------------------------|----------------|-------|-----------------------|
| d | D | Df | B | Bf | B1 | Bf1 | Dynamic C | Static C ₀ | Grease | Oil | r _a max |
| mm | mm | mm | mm | mm | mm | mm | kN | kN | r/min | r/min | |
| 1.0 | 3 | 3.8 | 1 | 0.3 | - | - | 96.00 | 26.00 | 130.0 | 150.0 | 0.05 |
| 1.0 | 3 | - | 1.5 | - | - | - | 96.00 | 26.00 | 130.0 | 150.0 | 0.05 |
| 1.0 | 4 | 5.0 | 1.6 | 0.5 | - | - | 141.00 | 37.00 | 100.0 | 120.0 | 0.10 |
| 1.2 | 4 | 4.8 | 1.8 | 0.4 | 2.5 | - | 112.00 | 33.00 | 110.0 | 130.0 | 0.10 |
| 1.5 | 4 | 5.0 | 1.2 | 0.4 | 2.0 | 0.6 | 112.00 | 33.00 | 100.0 | 120.0 | 0.05 |
| 1.5 | 5 | 6.5 | 2 | 0.6 | 2.6 | 0.8 | 169.00 | 50.00 | 85.0 | 100.0 | 0.15 |
| 1.5 | 6 | 7.5 | 2.5 | 0.6 | 3.0 | 0.8 | 330.00 | 99.00 | 75.0 | 90.0 | 0.15 |
| 2.0 | 4 | - | 1.2 | - | 2.0 | - | 124.00 | 40.00 | 91.0 | 104.0 | 0.05 |
| 2.0 | 5 | 6.1 | 1.5 | 0.5 | 2.3 | 0.6 | 169.00 | 50.00 | 85.0 | 100.0 | 0.08 |
| 2.0 | 5 | 6.2 | 2.0 | 0.6 | 2.5 | 0.6 | 169.00 | 50.00 | 85.0 | 100.0 | 0.10 |
| 2.0 | 6 | 7.5 | 2.3 | 0.6 | 3.0 | 0.8 | 330.00 | 99.00 | 75.0 | 90.0 | 0.15 |
| 2.0 | 6 | 7.2 | 2.5 | 0.6 | 2.5 | - | 330.00 | 99.00 | 75.0 | 90.0 | 0.15 |
| 2.0 | 7 | 8.2 | 2.5 | 0.6 | 3.0 | 0.6 | 386.00 | 129.00 | 63.0 | 75.0 | 0.15 |
| 2.0 | 7 | 8.5 | 2.8 | 0.7 | 3.5 | 0.9 | 386.00 | 129.00 | 60.0 | 71.0 | 0.15 |
| 2.5 | 6 | 7.1 | 1.8 | 0.5 | 2.6 | 0.8 | 209.00 | 74.00 | 71.0 | 80.0 | 0.08 |
| 2.5 | 7 | 8.5 | 2.5 | 0.7 | 3.5 | 0.9 | 386.00 | 129.00 | 63.0 | 75.0 | 0.15 |
| 2.5 | 8 | 9.2 | 2.5 | 0.6 | - | - | 558.00 | 180.00 | 60.0 | 67.0 | 0.20 |
| 2.5 | 8 | 9.5 | 2.8 | 0.7 | 4.0 | 0.9 | 552.00 | 177.00 | 60.0 | 71.0 | 0.15 |
| 3.0 | 6 | 7.2 | 2.0 | 0.6 | 2.5 | 0.6 | 209.00 | 74.00 | 71.0 | 80.0 | 0.10 |
| 3.0 | 7 | 8.1 | 2.0 | 0.5 | 3.0 | 0.8 | 311.00 | 112.00 | 63.0 | 75.0 | 0.10 |
| 3.0 | 8 | 9.2 | 2.5 | 0.6 | 3.0 | - | 395.00 | 141.00 | 60.0 | 67.0 | 0.15 |
| 3.0 | 8 | 9.5 | 3.0 | 0.7 | 4.0 | 0.9 | 558.00 | 180.00 | 60.0 | 67.0 | 0.15 |
| 3.0 | 9 | 10.2 | 2.5 | 0.6 | 4.0 | 0.8 | 571.00 | 189.00 | 56.0 | 67.0 | 0.20 |
| 3.0 | 9 | 10.5 | 3.0 | 0.7 | 5.0 | 1.0 | 571.00 | 189.00 | 56.0 | 67.0 | 0.15 |
| 3.0 | 10 | 11.5 | 4.0 | 1.0 | 4.0 | 1.0 | 631.00 | 219.00 | 50.0 | 60.0 | 0.15 |
| 3.0 | 13 | - | 5.0 | - | 5.0 | - | 1301.00 | 488.00 | 40.0 | 48.0 | 0.20 |
| 4.0 | 7 | 8.2 | 2.0 | 0.6 | - | - | 311.00 | 115.00 | 60.0 | 67.0 | 0.10 |
| 4.0 | 7 | 8.2 | - | - | 2.5 | 0.6 | 255.00 | 108.00 | 60.0 | 67.0 | 0.10 |
| 4.0 | 8 | 9.2 | 2.0 | 0.6 | 3.0 | 0.6 | 395.00 | 141.00 | 56.0 | 67.0 | 0.15 |
| 4.0 | 8 | 9.2 | 2.0 | 0.6 | 3.0 | 0.6 | 395.00 | 141.00 | 56.0 | 67.0 | 0.10 |
| 4.0 | 9 | 10.3 | 2.5 | 0.6 | 4.0 | 1.0 | 641.00 | 227.00 | 53.0 | 63.0 | 0.10 |
| 4.0 | 10 | 11.2 | 3.0 | 0.6 | 4.0 | 0.8 | 711.00 | 272.00 | 48.0 | 56.0 | 0.20 |



| Mass | | | | Designation | | | | | |
|------|------|------|------|------------------|--------|-------------|----------|----------------|-------|
| g | g | g | g | Reference Number | Open | Flange Open | Shields | Flange Shields | Seals |
| 0.03 | 0.04 | - | - | L 310 | 681 | F 681 | - | - | - |
| 0.05 | - | - | - | L 310W51 | MR 31 | - | - | - | - |
| 0.11 | 0.14 | - | - | R 410 | 691 | F 691 | - | - | - |
| 0.10 | 0.12 | 0.14 | - | R 412 | MR 41X | MF 41X | MR 41XZZ | - | - |
| 0.10 | 0.12 | 0.14 | 0.17 | L 415 | 681X | F 681X | 681XZZ | F 681XZZ | - |
| 0.20 | 0.26 | 0.25 | 0.33 | R 515 | 691X | F 691X | 691XZZ | F 691XZZ | - |
| 0.31 | 0.38 | 0.40 | 0.50 | R 615 | 601X | F 601X | 601XZZ | F 601XZZ | - |
| 0.05 | - | 0.07 | - | 672 | 672 | - | 672ZZ | - | - |
| 0.15 | 0.19 | 0.20 | 0.24 | L 520 | 682 | F 682 | 682ZZ | F 682ZZ | - |
| 0.14 | 0.19 | 0.20 | 0.25 | L 520W02 | MR 52 | MF 52 | MR 52ZZ | MF 52ZZ | - |
| 0.28 | 0.35 | 0.35 | 0.45 | R 620 | 692 | F 692 | 692ZZ | F 692ZZ | - |
| 0.28 | 0.34 | 0.33 | - | R 620W52 | MR 62 | MF 62 | MR 62ZZ | - | - |
| 0.43 | 0.50 | 0.53 | 0.60 | R 720Y52 | MR 72 | MF 72 | MR 72ZZ | MF 72ZZ | - |
| 0.50 | 0.60 | 0.60 | 0.73 | R 720 | 602 | F 602 | 602ZZ | F 602ZZ | - |
| 0.20 | 0.24 | 0.35 | 0.42 | L 625 | 682X | F 682X | 682XZZ | F 682XZZ | - |
| 0.40 | 0.50 | 0.55 | 0.68 | R 725 | 692X | F 692X | 692XZZ | F 692XZZ | - |
| 0.52 | 0.60 | - | - | R 825Y52 | MR 82X | MF 82X | - | - | - |
| 0.61 | 0.72 | 0.85 | 0.99 | R 825 | 602X | F 602X | 602XZZ | F 602X | - |
| 0.20 | 0.26 | 0.28 | 0.34 | L 630 | MR 63 | MF 63 | MR 63ZZ | MF 63ZZ | - |
| 0.32 | 0.37 | 0.45 | 0.53 | L 730 | 683 | F 683 | 683ZZ | F 683ZZ | - |
| 0.51 | 0.59 | 0.67 | - | R 830Y52 | MR 83 | MF 83 | MR 83ZZ | - | - |
| 0.60 | 0.71 | 0.80 | 0.94 | R 830 | 693 | F 693 | 693ZZ | F 693ZZ | 2RS |
| 0.75 | 0.83 | 1.15 | 1.30 | R 930Y52 | MR 93 | MF 93 | MR 93ZZ | MF 93ZZ | - |
| 0.84 | 0.96 | 1.13 | 1.61 | R 930 | 603 | F 603 | 603ZZ | F 603ZZ | - |
| 1.45 | 1.65 | 1.65 | 1.85 | R 1030 | 623 | F 623 | 623ZZ | F 623ZZ | 2RS |
| 3.27 | - | 3.43 | - | 633 | 633 | - | 633ZZ | - | 2RS |
| 0.23 | 0.30 | - | - | L 740 | MR 74 | MF 74 | - | - | - |
| - | - | 0.33 | 0.40 | L 740 | - | - | MR 74ZZ | MF 74ZZ | - |
| 0.39 | 0.47 | 0.56 | 0.64 | L 840 | MR 84 | MF 84 | - | - | - |
| 0.39 | 0.47 | 0.56 | 0.64 | L 840 | - | - | MR 84ZZ | MF 84ZZ | - |
| 0.65 | 0.74 | 1.00 | 1.15 | L 940 | 684 | F 684 | 684ZZ | F 684ZZ | 2RS |
| 0.96 | 1.04 | 1.33 | 1.50 | L 1040 | MR 104 | MF 104 | - | - | 2RS |

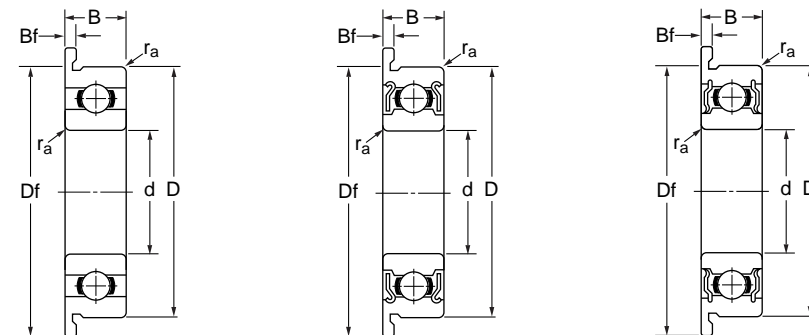


OPEN

SHIELDS - ZZ

SEALS - 2RS

| Basic Dimensions | | | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension |
|------------------|----|------|-----|-----|-----|-----|--------------------|-----------------------|----------------|-------|--------------------|
| d | D | Df | B | Bf | B1 | Bf1 | Dynamic C | Static C ₀ | Grease | Oil | r _a max |
| mm | mm | mm | mm | mm | mm | mm | kN | kN | r/min | r/min | |
| 4.0 | 10 | 11.2 | 3.0 | 0.6 | 4.0 | 0.8 | 711.00 | 272.00 | 48.0 | 56.0 | 0.15 |
| 4.0 | 11 | 12.5 | 4.0 | 1.0 | 4.0 | 1.0 | 957.00 | 350.00 | 48.0 | 56.0 | 0.15 |
| 4.0 | 12 | 13.5 | 4.0 | 1.0 | 4.0 | 1.0 | 957.00 | 350.00 | 48.0 | 56.0 | 0.20 |
| 4.0 | 13 | 15.0 | 5.0 | 1.0 | 5.0 | 1.0 | 1301.00 | 488.00 | 40.0 | 48.0 | 0.20 |
| 4.0 | 16 | 18.0 | 5.0 | 1.0 | 5.0 | 1.0 | 1340.00 | 523.00 | 36.0 | 43.0 | 0.30 |
| 5.0 | 8 | 9.2 | 2.0 | 0.6 | - | - | 308.00 | 120.00 | 53.0 | 63.0 | 0.10 |
| 5.0 | 8 | 9.2 | - | - | 2.5 | 0.6 | 218.00 | 90.00 | 53.0 | 63.0 | 0.10 |
| 5.0 | 9 | 10.2 | 2.5 | 0.6 | 3.0 | 0.6 | 431.00 | 169.00 | 50.0 | 60.0 | 0.15 |
| 5.0 | 10 | 11.2 | 3.0 | 0.6 | 4.0 | 0.8 | 431.00 | 169.00 | 50.0 | 60.0 | 0.15 |
| 5.0 | 11 | 12.6 | - | - | 4.0 | 0.8 | 716.00 | 282.00 | 45.0 | 53.0 | 0.15 |
| 5.0 | 11 | 12.5 | 3.0 | 0.8 | 5.0 | 1.0 | 716.00 | 282.00 | 45.0 | 53.0 | 0.15 |
| 5.0 | 13 | 15.0 | 4.0 | 1.0 | 4.0 | 1.0 | 1077.00 | 432.00 | 43.0 | 50.0 | 0.20 |
| 5.0 | 14 | 16.0 | 5.0 | 1.0 | 5.0 | 1.0 | 1329.00 | 507.00 | 40.0 | 50.0 | 0.20 |
| 5.0 | 16 | 18.0 | 5.0 | 1.0 | 5.0 | 1.0 | 1729.00 | 675.00 | 36.0 | 43.0 | 0.30 |
| 5.0 | 19 | 22.0 | 6.0 | 1.5 | 6.0 | 1.5 | 2336.00 | 896.00 | 32.0 | 40.0 | 0.30 |
| 6.0 | 10 | 11.2 | 2.5 | 0.6 | 3.0 | 0.6 | 496.00 | 218.00 | 45.0 | 53.0 | 0.15 |
| 6.0 | 10 | 11.2 | 2.5 | 0.6 | 3.0 | 0.6 | 496.00 | 218.00 | 45.0 | 53.0 | 0.10 |
| 6.0 | 12 | 13.2 | 3.0 | 0.6 | 4.0 | 0.8 | 716.00 | 295.00 | 43.0 | 50.0 | 0.20 |
| 6.0 | 12 | 13.2 | 3.0 | 0.6 | 4.0 | 0.8 | 716.00 | 295.00 | 43.0 | 50.0 | 0.15 |
| 6.0 | 13 | 15.0 | 3.5 | 1.0 | 5.0 | 1.1 | 1082.00 | 442.00 | 40.0 | 50.0 | 0.15 |
| 6.0 | 15 | 17.0 | 5.0 | 1.2 | 5.0 | 1.2 | 1340.00 | 523.00 | 40.0 | 45.0 | 0.20 |
| 6.0 | 16 | - | 5.0 | - | 5.0 | - | 1340.00 | 523.00 | 40.0 | 45.0 | 0.20 |
| 6.0 | 17 | 19.0 | 6.0 | 1.2 | 6.0 | 1.2 | 2263.00 | 846.00 | 38.0 | 45.0 | 0.30 |
| 6.0 | 19 | 22.0 | 6.0 | 1.5 | 6.0 | 1.5 | 2336.00 | 896.00 | 32.0 | 40.0 | 0.30 |
| 6.0 | 22 | - | 7.0 | - | 7.0 | - | 3333.00 | 1423.00 | 30.0 | 36.0 | 0.30 |
| 7.0 | 11 | 12.2 | 2.5 | 0.6 | 3.0 | 0.6 | 455.00 | 202.00 | 43.0 | 50.0 | 0.15 |
| 7.0 | 11 | 12.2 | 2.5 | 0.6 | 3.0 | 0.6 | 455.00 | 202.00 | 43.0 | 50.0 | 0.10 |
| 7.0 | 13 | 14.2 | 3.0 | 0.6 | 4.0 | 0.8 | 541.00 | 276.00 | 40.0 | 48.0 | 0.20 |
| 7.0 | 13 | 14.2 | 3.0 | 0.6 | 4.0 | 0.8 | 541.00 | 276.00 | 40.0 | 48.0 | 0.15 |
| 7.0 | 14 | 16.0 | 3.5 | 1.0 | 5.0 | 1.1 | 1173.00 | 513.00 | 40.0 | 50.0 | 0.15 |
| 7.0 | 17 | 19.0 | 5.0 | 1.2 | 5.0 | 1.2 | 1605.00 | 719.00 | 36.0 | 43.0 | 0.30 |
| 7.0 | 19 | 22.0 | 6.0 | 1.5 | 6.0 | 1.5 | 2336.00 | 896.00 | 36.0 | 43.0 | 0.30 |

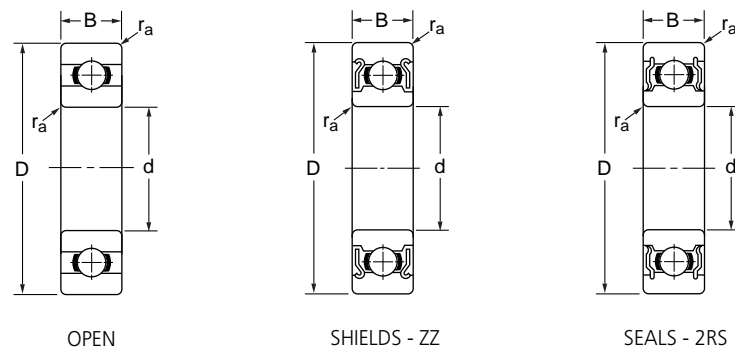


Flange

Flange with Shields - ZZ

Flange with Seals - 2RS

| Mass | | | | Designation | | | | | |
|-------|------|-------|------|------------------|--------|-------------|----------|----------------|-------|
| | | | | Reference Number | Open | Flange Open | Shields | Flange Shields | Seals |
| g | g | g | g | | | | | | |
| 0.96 | 1.04 | 1.33 | 1.50 | L 1040 | - | - | MR 104ZZ | MF 104ZZ | 2RS |
| 1.69 | 1.91 | 1.75 | 1.97 | R 1140 | 694 | F 694 | 694ZZ | F 694ZZ | 2RS |
| 2.19 | 2.42 | 2.34 | 2.57 | R 1240 | 604 | F 604 | 604ZZ | F 604ZZ | 2RS |
| 3.10 | 3.44 | 3.20 | 3.54 | R 1340 | 624 | F 624 | 624ZZ | F 624ZZ | 2RS |
| 5.24 | 5.66 | 5.44 | 5.86 | R 1640 | 634 | F 634 | 634ZZ | F 634ZZ | 2RS |
| 0.25 | 0.33 | - | - | L 850 | MR 85 | MF 85 | - | - | - |
| - | - | 0.34 | 0.42 | L 850 | - | - | MR 85ZZ | MF 85ZZ | - |
| 0.54 | 0.62 | 0.58 | 0.66 | L 950 | MR 95 | MF 95 | MR 95ZZ | MF 95ZZ | - |
| 0.91 | 1.00 | 1.26 | 1.38 | L 1050 | MR 105 | MF 105 | MR 105ZZ | MF 105ZZ | 2RS |
| - | - | 0.62 | 0.81 | L 1150Y04 | - | - | MR 115ZZ | MF 115ZZ | 2RS |
| 1.16 | 1.33 | 1.93 | 2.15 | L 1150 | 685 | F 685 | 685ZZ | F 685ZZ | 2RS |
| 2.39 | 2.73 | 2.31 | 2.65 | R 1350 | 695 | F 695 | 695ZZ | F 695ZZ | 2RS |
| 3.46 | 3.83 | 3.75 | 4.12 | R 1450 | 605 | F 605 | 605ZZ | F 605ZZ | 2RS |
| 4.95 | 5.37 | 5.10 | 5.52 | R 1650 | 625 | F 625 | 625ZZ | F 625ZZ | 2RS |
| 8.50 | 9.26 | 8.89 | 9.65 | R 1950 | 635 | F 635 | 635ZZ | F 635ZZ | 2RS |
| 0.55 | 0.64 | 0.70 | 0.79 | L 1060 | MR 106 | MF 106 | - | - | - |
| 0.55 | 0.64 | 0.70 | 0.79 | L 1060 | - | - | MR 106ZZ | MF 106ZZ | - |
| 1.25 | 1.44 | 1.66 | 1.86 | L 1260 | MR 126 | MF 126 | - | - | 2RS |
| 1.25 | 1.44 | 1.66 | 1.86 | L 1260 | - | - | MR 126ZZ | MF 126ZZ | 2RS |
| 1.87 | 2.21 | 2.68 | 3.06 | L 1360 | 686 | F 686 | 686ZZ | F 686ZZ | 2RS |
| 3.85 | 4.24 | 3.65 | 4.04 | R 1560 | 696 | F 696 | 696ZZ | F 696ZZ | 2RS |
| - | - | 4.59 | - | 696A | - | - | 696AZZ | - | 2RS |
| 5.94 | 6.47 | 6.89 | 7.42 | R 1760 | 606 | F 606 | 606ZZ | F 606ZZ | 2RS |
| 8.12 | 9.25 | 8.65 | 9.78 | R 1960 | 626 | F 626 | 626ZZ | F 626ZZ | 2RS |
| 13.90 | - | 14.50 | - | 636 | 636 | - | 636ZZ | - | 2RS |
| 0.59 | 0.69 | 0.71 | 0.81 | L 1170 | MR 117 | MF 117 | - | - | - |
| 0.59 | 0.69 | 0.71 | 0.81 | L 1170 | - | - | MR 117ZZ | MF 117ZZ | - |
| 1.52 | 1.64 | 2.01 | 2.17 | L 1370 | MR 137 | MF 137 | - | - | - |
| 1.52 | 1.64 | 2.01 | 2.17 | L 1370 | - | - | MR 137ZZ | MF 137ZZ | - |
| 2.03 | 2.40 | 2.95 | 3.35 | L 1470 | 687 | F 687 | 687ZZ | F 687ZZ | 2RS |
| 5.26 | 5.79 | 5.01 | 5.54 | 697 | 697 | F 697 | 697ZZ | F 697ZZ | 2RS |
| 7.80 | 8.93 | 8.24 | 9.37 | R 1970 | 607 | F 607 | 607ZZ | F 607ZZ | 2RS |

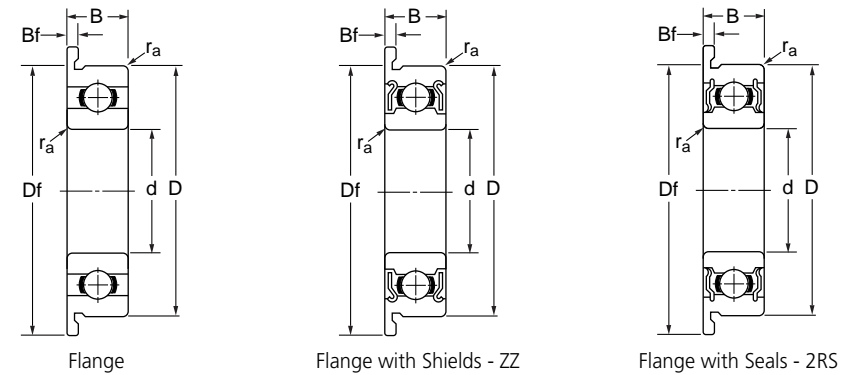


OPEN

SHIELDS - ZZ

SEALS - 2RS

| Basic Dimensions | | | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension |
|------------------|----|------|-----|-----|------|-----|--------------------|--------------------------|----------------|-------|-----------------------|
| d | D | Df | B | Bf | B1 | Bf1 | Dynamic C | Static C ₀ | Grease | Oil | r _a max |
| mm | mm | mm | mm | mm | mm | mm | kN | kN | r/min | r/min | |
| 7.0 | 22 | 25.0 | 7.0 | 1.5 | 7.0 | 1.5 | 3287.00 | 1379.00 | 30.0 | 36.0 | 0.30 |
| 7.0 | 26 | - | 9.0 | - | 9.0 | - | 4563.00 | 1983.00 | 28.0 | 34.0 | 0.30 |
| 8.0 | 12 | 13.2 | 2.5 | 0.6 | 3.5 | 0.8 | 543.00 | 274.00 | 40.0 | 48.0 | 0.15 |
| 8.0 | 12 | 13.2 | 2.5 | 0.6 | 3.5 | 0.8 | 543.00 | 274.00 | 40.0 | 48.0 | 0.10 |
| 8.0 | 14 | 15.6 | 3.5 | 0.8 | 4.0 | 0.8 | 817.00 | 386.00 | 38.0 | 45.0 | 0.20 |
| 8.0 | 14 | 15.6 | 3.5 | 0.8 | 4.0 | 0.8 | 817.00 | 386.00 | 38.0 | 45.0 | 0.15 |
| 8.0 | 16 | 18.0 | 4.0 | 1.0 | 5.0 | 1.1 | 1252.00 | 592.00 | 36.0 | 43.0 | 0.20 |
| 8.0 | 19 | 22.0 | 6.0 | 1.5 | 6.0 | 1.5 | 2237.00 | 917.00 | 36.0 | 43.0 | 0.30 |
| 8.0 | 22 | 25.0 | 7.0 | 1.5 | 7.0 | 1.5 | 3293.00 | 1379.00 | 34.0 | 40.0 | 0.30 |
| 8.0 | 24 | - | 8 | - | 8.0 | - | 3333.00 | 1432.00 | 28.0 | 34.0 | 0.30 |
| 8.0 | 28 | - | 9 | - | 9.0 | - | 4563.00 | 1983.00 | 28.0 | 34.0 | 0.30 |
| 9.0 | 14 | 15.5 | 3 | 0.8 | 4.5 | 0.8 | 919.00 | 468.00 | 36.0 | 42.0 | 0.10 |
| 9.0 | 17 | 19.0 | 4 | 1.0 | 5.0 | 1.1 | 1327.00 | 668.00 | 36.0 | 43.0 | 0.20 |
| 9.0 | 20 | 23.0 | 6 | 1.5 | 6.0 | 1.5 | 2467.00 | 1081.00 | 34.0 | 40.0 | 0.30 |
| 9.0 | 24 | 27.0 | 7 | 1.5 | 7.0 | 1.5 | 3356.00 | 1444.00 | 32.0 | 38.0 | 0.30 |
| 9.0 | 26 | - | 8 | - | 8.0 | - | 4563.00 | 1983.00 | 28.0 | 34.0 | 0.60 |
| 9.0 | 30 | - | 10 | - | 10.0 | - | 4659.00 | 2080.00 | 24.0 | 30.0 | 0.60 |



Flange

Flange with Shields - ZZ

Flange with Seals - 2RS

| Mass | | | | Designation | | | | | |
|-------|-------|-------|-------|------------------|--------|-------------|----------|----------------|-------|
| g | g | g | g | Reference Number | Open | Flange Open | Shields | Flange Shields | Seals |
| 12.70 | 14.00 | 13.10 | 14.40 | R 2270 | 627 | F 627 | 627ZZ | F 627ZZ | 2RS |
| 24.20 | - | 25.80 | - | 637 | 637 | - | 637ZZ | - | 2RS |
| 0.70 | 0.81 | 0.99 | 1.14 | L 1280 | MR 128 | MF 128 | - | - | - |
| 0.70 | 0.81 | 0.99 | 1.14 | L 1280 | - | - | MR 128ZZ | MF 128ZZ | - |
| 1.90 | 2.13 | 2.19 | 2.42 | L 1480 | MR 148 | MF 148 | - | - | 2RS |
| 1.90 | 2.13 | 2.19 | 2.42 | L 1480 | - | - | MR 148ZZ | MF 148ZZ | 2RS |
| 3.11 | 3.53 | 4.05 | 4.51 | L 1680 | 688 | F 688 | 688ZZ | F 688ZZ | 2RS |
| 7.12 | 8.50 | 7.57 | 8.70 | R 1980 | 698 | F 698 | 698ZZ | F 698ZZ | 2RS |
| 11.80 | 13.10 | 12.90 | 14.20 | R 2280 | 608 | F 608 | 608ZZ | F 608ZZ | 2RS |
| 17.10 | - | 18.50 | - | 628 | 628 | - | 628ZZ | - | 2RS |
| 28.10 | - | 30.30 | - | 638 | 638 | - | 638ZZ | - | 2RS |
| 1.35 | 1.57 | 1.98 | 2.20 | 679 | 679 | F 679 | 679ZZ | F 679ZZ | - |
| 3.41 | 3.85 | 4.38 | 4.87 | L 1790 | 689 | F 689 | 689ZZ | F 689ZZ | 2RS |
| 8.38 | 9.57 | 8.54 | 9.73 | L 2090 | 699 | F 699 | 699ZZ | F 699ZZ | 2RS |
| 14.70 | 16.10 | 16.00 | 17.40 | 609 | 609 | F 609 | 609ZZ | F 609ZZ | 2RS |
| 19.00 | - | 21.80 | - | R 2690 | 629 | - | 629ZZ | - | 2RS |
| 36.20 | - | 37.10 | - | 639 | 639 | - | 639ZZ | - | 2RS |

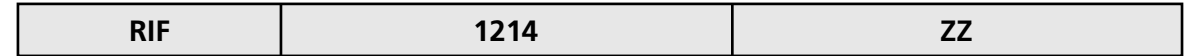
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Single Row Deep Groove Ball Bearings, Miniature - Inch Sizes

1.08

■ Prefix & Suffix



Prefix

| |
|----------------------|
| RI : Chrome steel |
| SS : Stainless steel |
| F : Flanged design |

Suffix

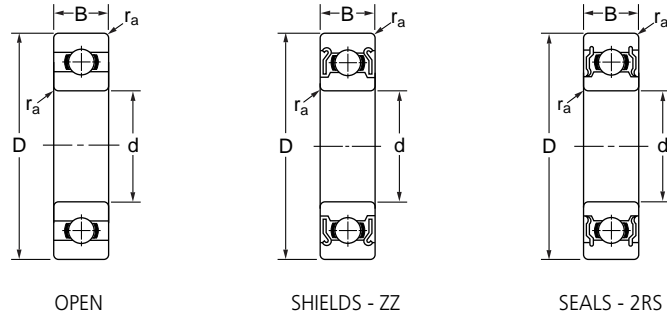
| |
|---|
| Z : Shield at 1 side of the bearing |
| ZZ : Z shields at both sides of the bearing |
| RS : Seal at 1 side of the bearing |
| 2RS : Seals at both sides of the bearing |
| A : Deviating dimensions from standard design |

Basic Type Series

| |
|-----------------|
| Standard series |
|-----------------|

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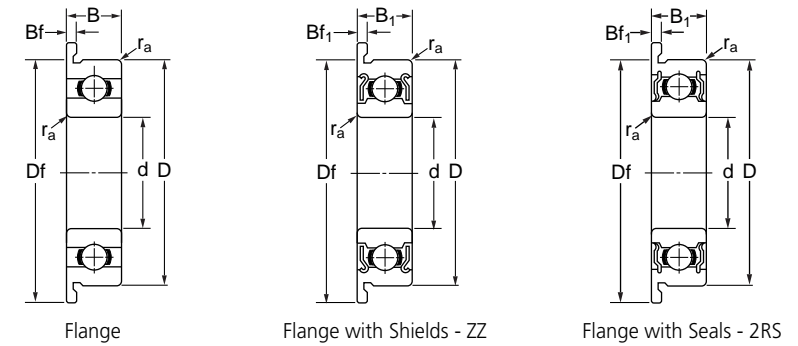
Single Row Deep Groove Ball Bearings, Miniature - Inch Sizes



| Basic Dimensions | | | | | | | | | | | | | Basic Load Ratings | | |
|------------------|-------|--------|--------|--------|--------|--------|-------|--------|-------|--------|-------|--------|--------------------|---------|----------------|
| d | | D | | Df | | B | | Bf | | B1 | | Bf1 | | Dynamic | Static |
| inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | C | C ₀ |
| | | | | | | | | | | | | | kN | kN | |
| 0.0400 | 1.016 | 0.1250 | 3.175 | 0.1710 | 4.343 | 0.0469 | 1.191 | 0.0130 | 0.330 | - | - | - | - | 106.00 | 28.00 |
| 0.0469 | 1.191 | 0.1562 | 3.967 | 0.2030 | 5.156 | 0.0625 | 1.588 | 0.0130 | 0.330 | 0.0937 | 2.380 | 0.0310 | 0.787 | 112.00 | 33.00 |
| 0.0550 | 1.397 | 0.1875 | 4.762 | 0.2340 | 5.944 | 0.0781 | 1.984 | 0.0230 | 0.584 | 0.1094 | 2.779 | 0.0310 | 0.787 | 232.00 | 67.00 |
| 0.0781 | 1.984 | 0.2500 | 6.350 | 0.2960 | 7.518 | 0.0937 | 2.380 | 0.0230 | 0.584 | 0.1406 | 3.571 | 0.0310 | 0.787 | 284.00 | 96.00 |
| 0.0937 | 2.380 | 0.1875 | 4.762 | 0.2340 | 5.944 | 0.0625 | 1.588 | 0.0180 | 0.457 | - | - | - | - | 189.00 | 60.00 |
| 0.0937 | 2.380 | 0.1875 | 4.762 | 0.2340 | 5.944 | - | - | - | - | 0.0937 | 2.380 | 0.0310 | 0.787 | 144.00 | 53.00 |
| 0.0937 | 2.380 | 0.3125 | 7.938 | 0.3590 | 9.119 | 0.1094 | 2.779 | 0.0230 | 0.584 | 0.1406 | 3.571 | 0.0310 | 0.787 | 552.00 | 176.00 |
| 0.1250 | 3.175 | 0.2500 | 6.350 | 0.2960 | 7.518 | 0.0937 | 2.380 | 0.0230 | 0.584 | 0.1094 | 2.779 | 0.0310 | 0.787 | 311.00 | 110.00 |
| 0.1250 | 3.175 | 0.2500 | 6.350 | 0.2960 | 7.518 | 0.0937 | 2.380 | 0.0230 | 0.584 | 0.1094 | 2.779 | 0.0310 | 0.787 | 284.00 | 96.00 |
| 0.1250 | 3.175 | 0.3125 | 7.938 | 0.3590 | 9.119 | 0.1094 | 2.779 | 0.0230 | 0.584 | 0.1406 | 3.571 | 0.0310 | 0.787 | 558.00 | 180.00 |
| 0.1250 | 3.175 | 0.3750 | 9.525 | 0.4220 | 10.719 | 0.1094 | 2.779 | 0.0230 | 0.584 | 0.1406 | 3.571 | 0.0310 | 0.787 | 640.00 | 227.00 |
| 0.1250 | 3.175 | 0.3750 | 9.525 | 0.4400 | 11.176 | 0.1562 | 3.967 | 0.0300 | 0.762 | 0.1562 | 3.967 | 0.0300 | 0.762 | 631.00 | 219.00 |
| 0.1250 | 3.175 | 0.5000 | 12.700 | - | - | 0.1719 | 4.366 | - | - | 0.1719 | 4.366 | - | - | 640.00 | 227.00 |
| 0.1562 | 3.967 | 0.3125 | 7.938 | 0.3590 | 9.119 | 0.1094 | 2.779 | 0.0230 | 0.584 | 0.1250 | 3.175 | 0.0360 | 0.914 | 359.00 | 150.00 |
| 0.1875 | 4.762 | 0.3125 | 7.938 | 0.3590 | 9.119 | 0.1094 | 2.779 | 0.0230 | 0.584 | 0.1250 | 3.175 | 0.0360 | 0.914 | 359.00 | 150.00 |
| 0.1875 | 4.762 | 0.3750 | 9.525 | 0.4220 | 10.719 | 0.1250 | 3.175 | 0.0230 | 0.584 | 0.1250 | 3.175 | 0.0310 | 0.787 | 709.00 | 272.00 |
| 0.1875 | 4.762 | 0.5000 | 12.700 | 0.5650 | 14.351 | 0.1960 | 4.978 | 0.0420 | 1.067 | - | - | - | - | 1301.00 | 488.00 |
| 0.1875 | 4.762 | 0.5000 | 12.700 | 0.5650 | 14.351 | 0.1562 | 3.967 | - | - | 0.1960 | 4.978 | 0.0420 | 1.067 | 1301.00 | 488.00 |
| 0.1875 | 4.762 | 0.6250 | 15.875 | - | - | 0.1960 | 4.978 | - | - | 0.1960 | 4.978 | - | - | 1480.00 | 621.00 |
| 0.2500 | 6.350 | 0.3750 | 9.525 | 0.4220 | 10.719 | 0.1250 | 3.175 | 0.0230 | 0.584 | 0.1250 | 3.175 | 0.0360 | 0.914 | 373.00 | 172.00 |
| 0.2500 | 6.350 | 0.5000 | 12.700 | 0.5470 | 13.894 | 0.1250 | 3.175 | 0.0230 | 0.584 | 0.1875 | 4.762 | 0.0450 | 1.143 | 1082.00 | 442.00 |
| 0.2500 | 6.350 | 0.6250 | 15.875 | 0.6900 | 17.526 | 0.1960 | 4.978 | 0.0420 | 1.067 | 0.1960 | 4.978 | 0.0633 | 1.607 | 1480.00 | 621.00 |
| 0.2500 | 6.350 | 0.7500 | 19.050 | - | - | 0.2188 | 5.558 | - | - | 0.2812 | 7.142 | - | - | 2336.00 | 896.00 |
| 0.3125 | 7.938 | 0.5000 | 12.700 | 0.5470 | 13.894 | 0.1562 | 3.967 | 0.0310 | 0.787 | 0.1562 | 3.967 | 0.0310 | 0.787 | 542.00 | 276.00 |
| 0.3750 | 9.525 | 0.8750 | 22.225 | 0.9690 | 24.613 | 0.2188 | 5.558 | 0.0620 | 1.575 | 0.2512 | 7.142 | 0.0620 | 1.575 | 3332.00 | 1411.00 |



Single Row Deep Groove Ball Bearings, Miniature - Inch Sizes



| Limiting Speed | | Chamfer Dimension | | Mass | | | | Designation | | | | | |
|----------------|-------|--------------------|--------------------|------|-------------|--------|---------------|------------------|---------|-------------|-----------|----------------|-------|
| Grease | Oil | | | Open | Flange Open | Shield | Flange Shield | Reference Number | Open | Flange Open | Shields | Flange Shields | Seals |
| r/min | r/min | r _s max | r _s max | g | g | g | g | | | | | | |
| 130.0 | 150.0 | 0.0039 | 0.10 | 0.05 | 0.07 | - | - | RI 2 | R 09 | - | FR 09 | - | - |
| 110.0 | 130.0 | 0.0039 | 0.10 | 0.10 | 0.12 | 0.15 | 0.20 | RI 2.1/2 | R 0* | FR 0* | R 0ZZ* | FR 0ZZ* | - |
| 90.0 | 110.0 | 0.0039 | 0.10 | 0.15 | 0.19 | 0.19 | 0.25 | RI 3 | R 1* | FR 1* | R 1ZZ* | FR 1ZZ* | - |
| 67.0 | 80.0 | 0.0039 | 0.10 | 0.40 | 0.46 | 0.53 | 0.6 | RI 4 | R 1-4* | FR 1-4* | R 1-4ZZ* | FR 1-4ZZ* | - |
| 80.0 | 95.0 | 0.0039 | 0.10 | 0.10 | 0.13 | - | - | RI 3332 | R 133 | FR 133 | - | - | - |
| 80.0 | 95.0 | 0.0039 | 0.10 | - | - | 0.15 | 0.21 | RI 3332 | - | - | R 133ZZ* | FR 133ZZ* | - |
| 60.0 | 71.0 | 0.0059 | 0.15 | 0.60 | 0.67 | 1.15 | 1.25 | RI 5 | R 1-5* | FR 1-5* | R 1-5ZZ* | FR 1-5ZZ* | - |
| 67.0 | 80.0 | 0.0039 | 0.10 | 0.27 | 0.33 | 0.32 | 0.4 | RI 418 | R 144J* | FR 144J* | R 144JZZ* | FR 144JZZ* | - |
| 67.0 | 80.0 | 0.0039 | 0.10 | 0.27 | 0.33 | 0.40 | 0.48 | RI 418 | R 144* | FR 144* | R 144ZZ* | FR 144ZZ* | - |
| 60.0 | 67.0 | 0.0039 | 0.10 | 0.50 | 0.57 | 0.74 | 0.84 | RI 518 | R 2-5* | FR 2-5* | R 2-5ZZ* | FR 2-5ZZ* | - |
| 53.0 | 63.0 | 0.0059 | 0.15 | 0.96 | 1.05 | 1.23 | 1.35 | RI 618 | R 2-6* | FR 2-6* | R 2-6ZZ* | FR 2-6ZZ* | - |
| 56.0 | 67.0 | 0.0118 | 0.30 | 1.04 | 1.02 | 1.37 | 1.53 | R 2 | R 2* | FR 2* | R 2ZZ* | FR 2ZZ* | - |
| 53.0 | 63.0 | 0.0118 | 0.30 | 3.03 | - | 3.30 | - | R 2A | R 2A | - | R 2AZZ | - | - |
| 53.0 | 63.0 | 0.0039 | 0.10 | 0.51 | 0.58 | 0.61 | 0.72 | RI 5532 | R 155* | FR 155* | R 155ZZ* | FR 155ZZ* | - |
| 53.0 | 63.0 | 0.0039 | 0.10 | 0.40 | 0.47 | 0.45 | 0.56 | RI 5632 | R 156* | FR 156* | R 156ZZ* | FR 156ZZ* | - |
| 50.0 | 60.0 | 0.0039 | 0.10 | 0.81 | 0.90 | 0.85 | 0.97 | RI 6632 | R 166* | FR 166* | R 166ZZ* | FR 166ZZ* | - |
| 43.0 | 53.0 | 0.0118 | 0.30 | - | 2.50 | - | - | R 3 | - | FR 3* | - | - | - |
| 43.0 | 53.0 | 0.0118 | 0.30 | 2.21 | - | 2.95 | 3.24 | R 3 | R 3* | - | R 3ZZ* | - | 2RS |
| 38.0 | 45.0 | 0.0118 | 0.30 | 4.75 | - | 5.08 | - | R 3A | R 3A | - | R 3AZZ | - | 2RS |
| 48.0 | 56.0 | 0.0039 | 0.10 | 0.57 | 0.66 | 0.60 | 0.73 | RI 614 | R 168* | FR 168* | R 168ZZ* | FR 168ZZ* | - |
| 40.0 | 50.0 | 0.0059 | 0.15 | 1.60 | 1.71 | 2.32 | 2.54 | RI 814 | R 188* | FR 188* | R 188ZZ* | FR 188ZZ* | 2RS |
| 38.0 | 45.0 | 0.0118 | 0.30 | 4.46 | 4.82 | 4.54 | 4.90 | R 4 | R 4* | FR 4* | R 4ZZ* | FR 4ZZ* | 2RS |
| 36.0 | 43.0 | 0.0157 | 0.40 | 7.48 | - | 10.00 | - | RI 1214 | R 4A | - | R 4AZZ | - | 2RS |
| 40.0 | 48.0 | 0.0059 | 0.15 | 1.39 | 1.54 | 1.57 | 1.72 | RI 8516 | R 1810* | FR 1810 | R 1810ZZ | FR 1810ZZ* | - |
| 32.0 | 38.0 | 0.0157 | 0.40 | 9.02 | 9.71 | 11.70 | 12.40 | RI 1438 | R 6 | FR 6* | R 6ZZ | FR 6ZZ* | 2RS |

* Available with inner ring width extended by 0.015" each side.

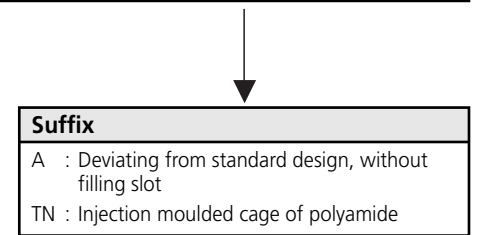
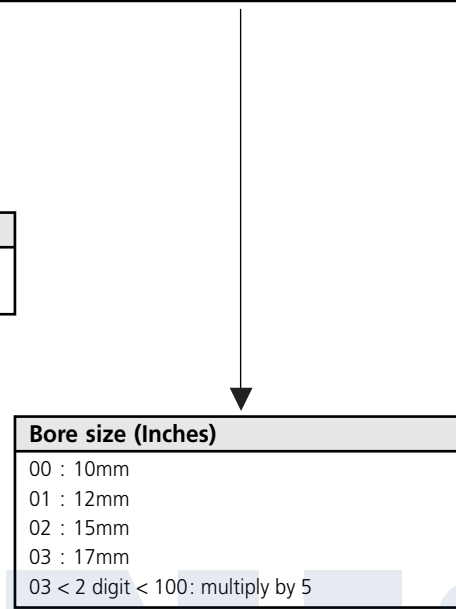
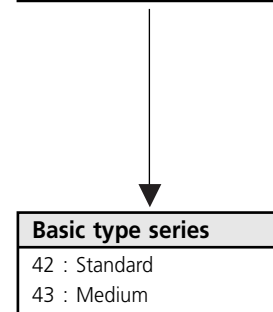
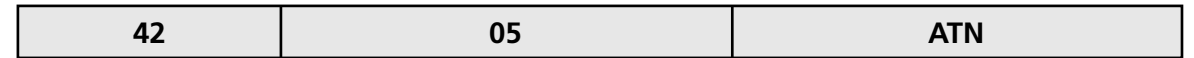
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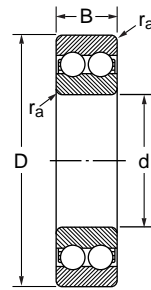
Double Row Deep Groove Ball Bearings

1.09

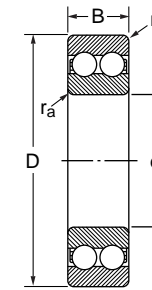
■ Prefix & Suffix



NIS™



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|-----|----|--------------------|-------------|----------------|--------|-------------------|-----------|-------------|
| d | D | B | Dynamic | Static | Grease | Oil | | r_a max | |
| mm | mm | mm | C kN | C_0 kN | r/min | r/min | mm | kg | |
| 10 | 30 | 14 | 8.769 | 4.940 | 17,100 | 20,900 | 0.6 | 0.049 | 4200 ATN |
| 12 | 32 | 14 | 10.070 | 5.890 | 16,150 | 19,000 | 0.6 | 0.053 | 4201 ATN |
| 12 | 37 | 14 | 12.350 | 7.410 | 14,250 | 17,100 | 1.0 | 0.092 | 4301 ATN |
| 15 | 35 | 14 | 11.305 | 7.125 | 13,300 | 16,150 | 0.6 | 0.059 | 4202 ATN |
| 15 | 42 | 17 | 14.060 | 9.025 | 11,400 | 14,250 | 1.0 | 0.120 | 4302 ATN |
| 17 | 40 | 16 | 14.060 | 9.025 | 11,400 | 14,250 | 0.6 | 0.090 | 4203 ATN |
| 17 | 47 | 19 | 18.525 | 12.540 | 9,500 | 12,350 | 1.0 | 0.160 | 4303 ATN |
| 20 | 47 | 18 | 16.910 | 11.875 | 9,500 | 12,350 | 1.0 | 0.140 | 4204 ATN |
| 20 | 52 | 21 | 22.230 | 15.200 | 9,025 | 11,400 | 1.0 | 0.210 | 4304 ATN |
| 25 | 52 | 18 | 18.050 | 13.870 | 8,550 | 10,450 | 1.0 | 0.160 | 4205 ATN |
| 25 | 62 | 24 | 30.305 | 21.280 | 8,075 | 9,500 | 1.0 | 0.340 | 4305 ATN |
| 30 | 62 | 20 | 24.700 | 19.760 | 7,600 | 9,025 | 1.0 | 0.260 | 4206 ATN |
| 30 | 72 | 27 | 38.950 | 28.500 | 6,650 | 8,075 | 1.0 | 0.500 | 4306 ATN |
| 35 | 72 | 23 | 33.345 | 27.075 | 6,365 | 7,600 | 1.0 | 0.400 | 4207 ATN |
| 35 | 80 | 31 | 48.165 | 36.100 | 5,985 | 7,125 | 1.5 | 0.690 | 4307 ATN |
| 40 | 80 | 23 | 35.245 | 30.875 | 5,700 | 6,650 | 1.0 | 0.500 | 4208 ATN |
| 40 | 90 | 33 | 53.105 | 42.750 | 5,320 | 6,365 | 1.5 | 0.950 | 4308 ATN |
| 45 | 85 | 23 | 37.050 | 34.200 | 5,320 | 6,365 | 1.0 | 0.540 | 4209 ATN |
| 45 | 100 | 36 | 65.455 | 53.200 | 4,750 | 5,700 | 1.5 | 1.250 | 4309 ATN |
| 50 | 90 | 23 | 38.950 | 38.000 | 4,750 | 5,700 | 1.0 | 0.580 | 4210 ATN |
| 50 | 110 | 40 | 77.805 | 66.025 | 4,275 | 5,035 | 2.0 | 1.700 | 4310 ATN |



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|-----|----|--------------------|-------------|----------------|-------|-------------------|-----------|-------------|
| d | D | B | Dynamic | Static | Grease | Oil | | r_a max | |
| mm | mm | mm | C kN | C_0 kN | r/min | r/min | mm | kg | |
| 55 | 100 | 25 | 42.655 | 41.800 | 4,560 | 5,320 | 1.5 | 0.800 | 4211 ATN |
| 55 | 120 | 43 | 92.625 | 78.850 | 4,085 | 4,750 | 2.0 | 2.150 | 4311 ATN |
| 60 | 110 | 28 | 54.340 | 52.250 | 4,275 | 5,035 | 1.5 | 1.100 | 4212 ATN |
| 60 | 130 | 46 | 106.400 | 93.100 | 3,610 | 4,275 | 2.0 | 2.650 | 4312 ATN |
| 65 | 120 | 31 | 64.220 | 63.650 | 3,800 | 4,560 | 1.5 | 1.450 | 4213 ATN |
| 65 | 140 | 48 | 114.950 | 100.700 | 3,420 | 4,085 | 2.0 | 3.250 | 4313 ATN |
| 70 | 125 | 31 | 66.690 | 69.825 | 3,420 | 4,085 | 1.5 | 1.500 | 4214 ATN |
| 70 | 150 | 51 | 131.100 | 118.750 | 3,040 | 3,610 | 2.0 | 3.950 | 4314 ATN |
| 75 | 130 | 31 | 69.160 | 76.000 | 3,230 | 3,800 | 1.5 | 1.600 | 4215 ATN |
| 75 | 160 | 55 | 148.200 | 135.850 | 2,850 | 3,420 | 2.0 | 4.800 | 4315 ATN |
| 80 | 140 | 33 | 76.570 | 85.500 | 3,040 | 3,610 | 2.0 | 2.000 | 4216 ATN |
| 85 | 150 | 36 | 88.920 | 96.900 | 2,850 | 3,420 | 2.0 | 2.550 | 4217 ATN |
| 90 | 160 | 40 | 106.400 | 115.900 | 2,660 | 3,230 | 2.0 | 3.200 | 4218 ATN |
| 100 | 180 | 46 | 133.000 | 148.200 | 2,280 | 2,850 | 2.0 | 4.700 | 4220 ATN |

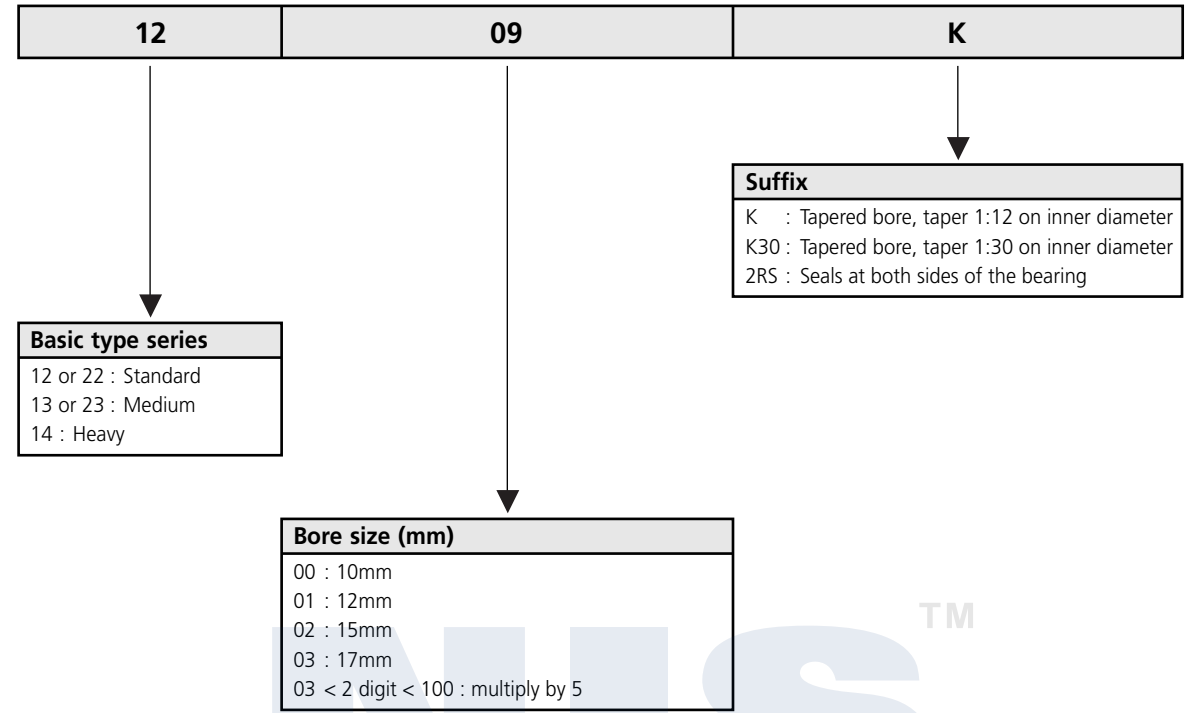


Self Aligning Ball Bearings

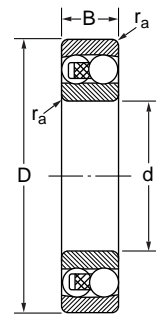
| | Page |
|---|------|
| 2.01 Self aligning ball bearings | 76 |
| 2.02 Self aligning ball bearings with adapter sleeve | 81 |
| 2.03 Self aligning ball bearings with adapter sleeve - Inch shaft | 83 |

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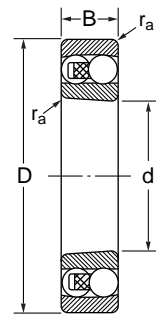
■ Prefix & Suffix



NIS™

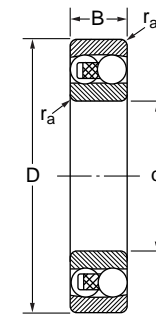


Cylindrical bore

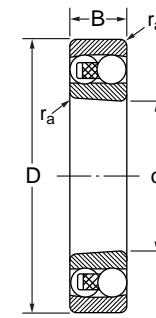


Tapered bore

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | |
|------------------|----|----|--------------------|-----------------------|----------------|--------|--------------------|-------|-------------|-----|---|------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | | Seal | 2RS | K | 2RSK |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | | | |
| 5 | 19 | 6 | 2.385 | 0.456 | 30,400 | 36,100 | 0.3 | 0.009 | 135 | - | - | - |
| 6 | 19 | 6 | 2.385 | 0.456 | 30,400 | 36,100 | 0.3 | 0.009 | 126 | - | - | - |
| 7 | 22 | 7 | 2.518 | 0.532 | 28,500 | 34,200 | 0.3 | 0.014 | 127 | - | - | - |
| 8 | 22 | 7 | 2.518 | 0.532 | 28,500 | 34,200 | 0.3 | 0.014 | 108 | - | - | - |
| 9 | 26 | 8 | 3.705 | 0.774 | 24,700 | 30,400 | 0.6 | 0.022 | 129 | - | - | - |
| 10 | 30 | 9 | 5.254 | 1.121 | 22,800 | 28,500 | 0.6 | 0.034 | 1200 | - | - | - |
| 10 | 30 | 14 | 7.657 | 1.644 | 20,900 | 26,600 | 0.6 | 0.042 | 2200 | 2RS | - | - |
| 12 | 32 | 10 | 5.928 | 1.359 | 20,900 | 26,600 | 0.6 | 0.040 | 1201 | 2RS | - | - |
| 12 | 32 | 14 | 8.094 | 1.805 | 19,000 | 24,700 | 0.6 | 0.048 | 2201 | - | - | - |
| 12 | 37 | 12 | 8.892 | 2.052 | 17,100 | 20,900 | 1.0 | 0.067 | 1301 | - | - | - |
| 12 | 37 | 17 | 11.115 | 2.565 | 16,150 | 19,000 | 1.0 | 0.082 | 2301 | - | - | - |
| 15 | 35 | 11 | 7.040 | 1.672 | 18,050 | 22,800 | 0.6 | 0.049 | 1202 | - | - | - |
| 15 | 35 | 14 | 8.275 | 1.938 | 17,100 | 20,900 | 0.6 | 0.055 | 2202 | 2RS | - | - |
| 15 | 42 | 13 | 10.260 | 2.470 | 16,150 | 19,000 | 1.0 | 0.094 | 1302 | - | - | - |
| 15 | 42 | 17 | 11.305 | 2.755 | 14,250 | 17,100 | 1.0 | 0.110 | 2302 | 2RS | - | - |
| 17 | 40 | 12 | 8.398 | 2.090 | 17,100 | 20,900 | 0.6 | 0.073 | 1203 | - | - | - |
| 17 | 40 | 16 | 10.070 | 2.423 | 16,150 | 19,000 | 0.6 | 0.085 | 2203 | 2RS | - | - |
| 17 | 47 | 14 | 12.065 | 3.230 | 13,300 | 16,150 | 1.0 | 0.130 | 1303 | - | - | - |
| 17 | 47 | 19 | 13.870 | 3.373 | 12,350 | 15,200 | 1.0 | 0.160 | 2303 | 2RS | - | - |
| 20 | 47 | 14 | 12.065 | 3.230 | 14,250 | 17,100 | 1.0 | 0.120 | 1204 | - | K | - |
| 20 | 47 | 18 | 15.960 | 3.943 | 13,300 | 16,150 | 1.0 | 0.140 | 2204 | 2RS | - | - |
| 20 | 52 | 15 | 13.585 | 3.800 | 11,400 | 14,250 | 1.0 | 0.165 | 1304 | - | K | - |
| 20 | 52 | 21 | 17.290 | 4.513 | 10,450 | 13,300 | 1.0 | 0.193 | 2304 | 2RS | - | - |
| 25 | 52 | 15 | 13.585 | 3.800 | 12,350 | 15,200 | 1.0 | 0.140 | 1205 | - | K | - |
| 25 | 52 | 18 | 15.960 | 4.180 | 10,450 | 13,300 | 1.0 | 0.160 | 2205 | 2RS | K | 2RSK |
| 25 | 62 | 17 | 18.050 | 5.130 | 9,025 | 11,400 | 1.0 | 0.260 | 1305 | - | K | - |
| 25 | 62 | 24 | 22.990 | 6.223 | 9,025 | 11,400 | 1.0 | 0.319 | 2305 | 2RS | K | 2RSK |
| 30 | 62 | 16 | 14.820 | 4.418 | 9,500 | 12,350 | 1.0 | 0.220 | 1206 | - | K | - |
| 30 | 62 | 20 | 22.610 | 6.365 | 9,025 | 11,400 | 1.0 | 0.249 | 2206 | 2RS | K | 2RSK |
| 30 | 72 | 19 | 21.375 | 6.460 | 8,550 | 10,450 | 1.0 | 0.390 | 1306 | - | K | - |
| 30 | 72 | 27 | 29.640 | 8.360 | 8,075 | 9,500 | 1.0 | 0.480 | 2306 | 2RS | K | 2RSK |
| 30 | 90 | 28 | 56.240 | 16.150 | 6,365 | 7,600 | 1.5 | 1.000 | 1406 | - | - | - |

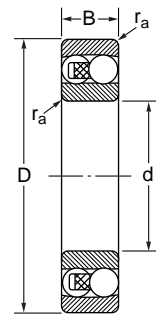


Cylindrical bore

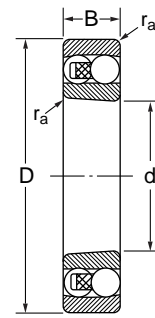


Tapered bore

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | |
|------------------|-----|----|--------------------|-----------------------|----------------|--------|--------------------|-------|-------------|-----|---|------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | | Seal | 2RS | K | 2RSK |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | | | |
| 35 | 72 | 17 | 18.050 | 5.700 | 8,550 | 10,450 | 1.0 | 0.320 | 1207 | - | K | - |
| 35 | 72 | 23 | 29.165 | 8.360 | 8,075 | 9,500 | 1.0 | 0.378 | 2207 | 2RS | K | 2RSK |
| 35 | 80 | 21 | 25.175 | 8.075 | 7,125 | 8,550 | 1.5 | 0.510 | 1307 | - | K | - |
| 35 | 80 | 31 | 37.715 | 10.640 | 6,650 | 8,075 | 1.5 | 0.642 | 2307 | 2RS | K | 2RSK |
| 35 | 100 | 30 | 59.280 | 17.100 | 5,985 | 7,125 | 1.5 | 1.300 | 1407 | - | - | - |
| 40 | 80 | 18 | 18.905 | 6.603 | 8,075 | 9,500 | 1.0 | 0.420 | 1208 | - | K | - |
| 40 | 80 | 23 | 30.305 | 9.500 | 7,125 | 8,550 | 1.0 | 0.477 | 2208 | 2RS | K | 2RSK |
| 40 | 90 | 23 | 32.110 | 10.640 | 6,365 | 7,600 | 1.5 | 0.720 | 1308 | - | K | - |
| 40 | 90 | 33 | 51.300 | 15.200 | 5,985 | 7,125 | 1.5 | 0.889 | 2308 | 2RS | K | 2RSK |
| 40 | 110 | 33 | 72.295 | 22.420 | 5,035 | 5,985 | 2.0 | 1.700 | 1408 | - | - | - |
| 45 | 85 | 19 | 21.755 | 7.410 | 7,125 | 8,550 | 1.0 | 0.470 | 1209 | - | K | - |
| 45 | 85 | 23 | 30.875 | 10.070 | 6,650 | 8,075 | 1.0 | 0.522 | 2209 | 2RS | K | 2RSK |
| 45 | 100 | 25 | 37.050 | 12.730 | 5,985 | 7,125 | 1.5 | 0.960 | 1309 | - | K | - |
| 45 | 100 | 36 | 60.515 | 18.335 | 5,320 | 6,365 | 1.5 | 1.200 | 2309 | 2RS | K | 2RSK |
| 45 | 120 | 35 | 83.980 | 26.125 | 4,750 | 5,700 | 2.0 | 2.150 | 1409 | - | - | - |
| 50 | 90 | 20 | 25.175 | 8.693 | 6,650 | 8,075 | 1.0 | 0.530 | 1201 | - | K | - |
| 50 | 90 | 23 | 32.110 | 10.640 | 5,985 | 7,125 | 1.0 | 0.564 | 2210 | 2RS | K | 2RSK |
| 50 | 110 | 27 | 41.420 | 13.300 | 5,320 | 6,365 | 2.0 | 1.250 | 1310 | - | K | - |
| 50 | 110 | 40 | 60.515 | 19.000 | 5,035 | 5,985 | 2.0 | 1.580 | 2310 | 2RS | K | 2RSK |
| 50 | 130 | 37 | 95.950 | 30.400 | 4,560 | 5,320 | 2.0 | 2.650 | 1410 | - | - | - |
| 55 | 100 | 21 | 26.220 | 10.070 | 5,985 | 7,125 | 1.5 | 0.710 | 1211 | - | K | - |
| 55 | 100 | 25 | 37.050 | 12.730 | 5,700 | 6,650 | 1.5 | 0.746 | 2211 | 2RS | K | 2RSK |
| 55 | 120 | 29 | 48.165 | 17.100 | 4,750 | 5,700 | 2.0 | 1.600 | 1311 | - | K | - |
| 55 | 120 | 43 | 72.295 | 22.800 | 4,560 | 5,320 | 2.0 | 2.030 | 2311 | - | K | - |
| 55 | 140 | 40 | 105.450 | 34.675 | 4,085 | 4,750 | 2.0 | 3.250 | 1411 | - | - | - |
| 60 | 110 | 22 | 29.640 | 11.590 | 5,320 | 6,365 | 1.5 | 0.900 | 1212 | - | K | - |
| 60 | 110 | 28 | 46.360 | 16.150 | 5,035 | 5,985 | 1.5 | 1.030 | 2212 | 2RS | K | 2RSK |
| 60 | 130 | 31 | 55.575 | 20.900 | 4,275 | 5,035 | 2.0 | 2.030 | 1312 | - | K | - |
| 60 | 130 | 46 | 82.745 | 27.075 | 4,275 | 5,035 | 2.0 | 2.600 | 2312 | - | K | - |
| 60 | 150 | 42 | 118.750 | 39.425 | 3,610 | 4,275 | 2.0 | 3.950 | 1412 | - | - | - |
| 65 | 120 | 23 | 33.345 | 13.300 | 5,035 | 5,985 | 1.5 | 1.150 | 1213 | - | K | - |
| 65 | 120 | 31 | 54.340 | 19.000 | 4,750 | 5,700 | 1.5 | 1.400 | 2213 | 2RS | K | 2RSK |

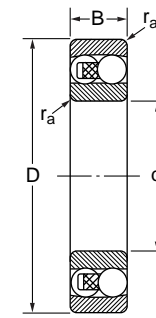


Cylindrical bore

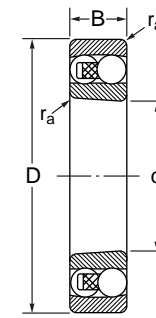


Tapered bore

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | |
|------------------|-----|----|--------------------|----------------|----------------|-------|-------------------|--------|-------------|-----|---|------|
| d | D | B | Dynamic | Static | Grease | Oil | r_a | | Seal | 2RS | K | 2RSK |
| mm | mm | mm | C | C ₀ | r/min | r/min | max | kg | | | | |
| | | | kN | kN | | | mm | | | | | |
| 65 | 140 | 33 | 61.750 | 24.225 | 4,085 | 4,750 | 2.0 | 2.540 | 1313 | - | K | - |
| 65 | 140 | 48 | 90.820 | 30.875 | 3,800 | 4,560 | 2.0 | 3.200 | 2313 | - | K | - |
| 70 | 125 | 24 | 32.775 | 13.015 | 4,750 | 5,700 | 1.5 | 1.300 | 1214 | - | - | - |
| 70 | 125 | 31 | 41.990 | 16.150 | 4,560 | 5,320 | 1.5 | 1.520 | 2214 | 2RS | - | - |
| 70 | 150 | 35 | 70.395 | 26.125 | 3,800 | 4,560 | 2.0 | 3.190 | 1314 | - | - | - |
| 70 | 150 | 51 | 105.450 | 35.625 | 3,610 | 4,275 | 2.0 | 3.900 | 2314 | - | - | - |
| 75 | 130 | 25 | 37.050 | 14.820 | 4,560 | 5,320 | 1.5 | 1.410 | 1215 | - | K | - |
| 75 | 130 | 31 | 41.990 | 17.100 | 4,275 | 5,035 | 1.5 | 1.600 | 2215 | - | K | - |
| 75 | 160 | 37 | 75.335 | 28.500 | 3,610 | 4,275 | 2.0 | 3.650 | 1315 | - | K | - |
| 75 | 160 | 55 | 117.800 | 40.850 | 3,230 | 3,800 | 2.0 | 4.770 | 2315 | - | K | - |
| 80 | 140 | 26 | 37.715 | 16.150 | 4,275 | 5,035 | 2.0 | 1.730 | 1216 | - | K | - |
| 80 | 140 | 33 | 61.750 | 24.225 | 3,800 | 4,560 | 2.0 | 1.970 | 2216 | - | K | - |
| 80 | 170 | 39 | 83.980 | 31.825 | 3,420 | 4,085 | 2.0 | 4.310 | 1316 | - | K | - |
| 80 | 170 | 58 | 128.250 | 46.550 | 3,040 | 3,610 | 2.0 | 5.540 | 2316 | - | K | - |
| 85 | 150 | 28 | 46.360 | 19.760 | 3,800 | 4,560 | 2.0 | 2.090 | 1217 | - | K | - |
| 85 | 150 | 36 | 55.575 | 22.420 | 3,610 | 4,275 | 2.0 | 2.480 | 2217 | - | K | - |
| 85 | 180 | 41 | 92.625 | 36.100 | 3,230 | 3,800 | 2.5 | 5.130 | 1317 | - | K | - |
| 85 | 180 | 60 | 133.000 | 48.450 | 2,850 | 3,420 | 2.5 | 6.560 | 2317 | - | K | - |
| 90 | 160 | 30 | 54.340 | 22.420 | 3,610 | 4,275 | 2.0 | 2.550 | 1218 | - | K | - |
| 90 | 160 | 40 | 66.690 | 27.075 | 3,420 | 4,085 | 2.0 | 3.130 | 2218 | - | K | - |
| 90 | 190 | 43 | 111.150 | 41.800 | 3,040 | 3,610 | 2.5 | 5.940 | 1318 | - | K | - |
| 90 | 190 | 64 | 145.350 | 54.150 | 2,660 | 3,230 | 2.5 | 7.760 | 2318 | - | K | - |
| 95 | 170 | 32 | 60.515 | 25.650 | 3,420 | 4,085 | 2.0 | 3.210 | 1219 | - | K | - |
| 95 | 170 | 43 | 79.040 | 32.775 | 3,230 | 3,800 | 2.0 | 3.870 | 2219 | - | K | - |
| 95 | 200 | 45 | 126.350 | 48.450 | 2,850 | 3,420 | 2.5 | 6.840 | 1319 | - | K | - |
| 95 | 200 | 67 | 156.750 | 60.800 | 2,470 | 3,040 | 2.5 | 9.010 | 2319 | - | K | - |
| 100 | 180 | 34 | 65.455 | 28.500 | 3,230 | 3,800 | 2.0 | 3.820 | 1220 | - | K | - |
| 100 | 180 | 46 | 92.625 | 38.848 | 3,040 | 3,610 | 2.0 | 4.530 | 2220 | - | K | - |
| 100 | 215 | 47 | 135.850 | 54.150 | 2,660 | 3,230 | 2.5 | 8.460 | 1320 | - | K | - |
| 100 | 215 | 73 | 180.500 | 76.000 | 2,280 | 2,850 | 2.5 | 11.600 | 2320 | - | K | - |
| 105 | 190 | 36 | 70.395 | 30.875 | 3,040 | 3,610 | 2.0 | 4.520 | 1221 | - | K | - |
| 105 | 190 | 50 | 102.600 | 42.750 | 2,850 | 3,420 | 2.0 | 5.640 | 2221 | - | K | - |



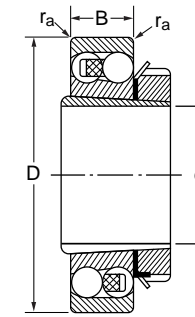
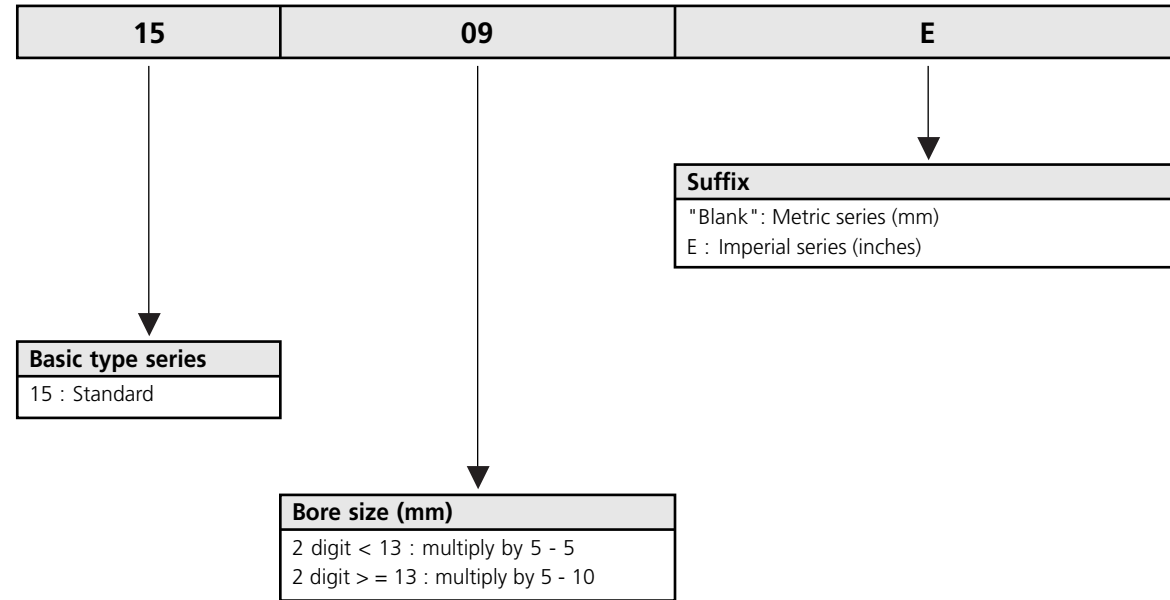
Cylindrical bore



Tapered bore

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | | |
|------------------|-----|----|--------------------|----------------|----------------|-------|-------------------|--------|-------------|-----|---|------|
| d | D | B | Dynamic | Static | Grease | Oil | r_a | | Seal | 2RS | K | 2RSK |
| mm | mm | mm | C | C ₀ | r/min | r/min | max | kg | | | | |
| | | | kN | kN | | | mm | | | | | |
| 110 | 200 | 38 | 83.980 | 37.050 | 2,850 | 3,420 | 2.0 | 5.330 | 1222 | - | K | - |
| 110 | 200 | 53 | 117.800 | 49.400 | 2,660 | 3,230 | 2.0 | 6.640 | 2222 | - | K | - |
| 110 | 240 | 50 | 154.850 | 68.400 | 2,280 | 2,850 | 2.5 | 12.000 | 1322 | - | K | - |
| 110 | 240 | 80 | 205.200 | 90.250 | 2,090 | 2,660 | 2.5 | 17.400 | 2322 | - | K | - |
| 120 | 215 | 42 | 113.050 | 50.350 | 2,660 | 3,230 | 2.0 | 6.750 | 1224 | - | K | - |
| 130 | 230 | 46 | 120.650 | 55.575 | 2,470 | 3,040 | 2.5 | 8.300 | 1226 | - | - | - |

■ Prefix & Suffix

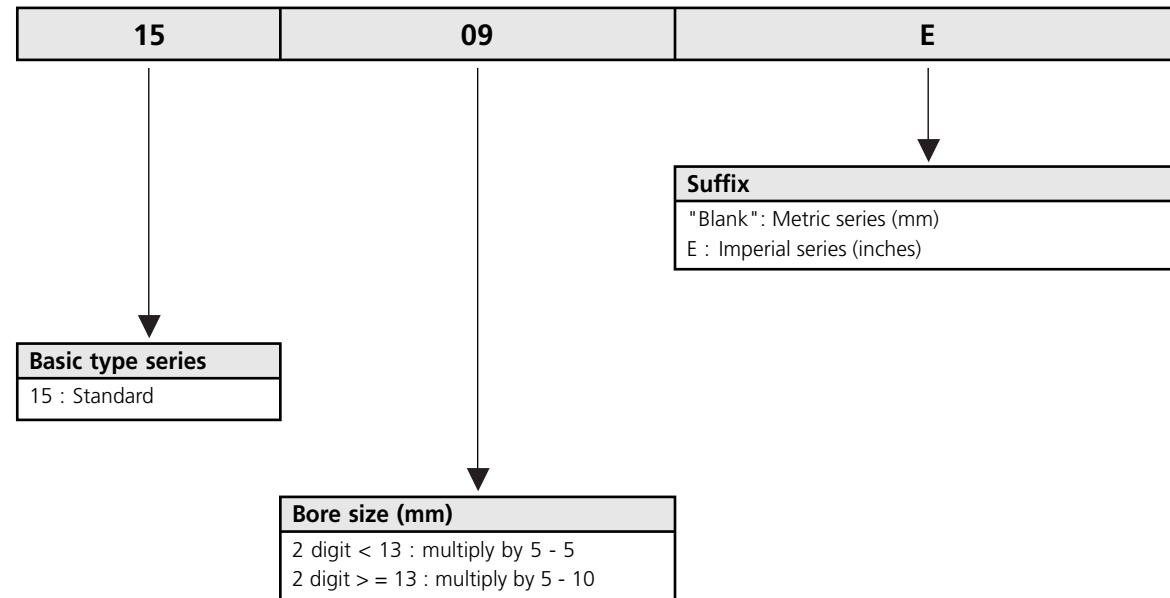


| Basic Dimensions | | | Mass | Designation | | |
|------------------|-----|----|-------|-------------|----------------|--------|
| d | D | B | | Unit | Bearing Number | Sleeve |
| mm | mm | mm | kg | | | |
| 20 | 52 | 15 | 0.208 | 1505 | 1205 K | H 205 |
| 25 | 62 | 16 | 0.315 | 1506 | 1206 K | H 206 |
| 30 | 72 | 17 | 0.445 | 1507 | 1207 K | H 207 |
| 35 | 80 | 18 | 0.585 | 1508 | 1208 K | H 208 |
| 40 | 85 | 19 | 0.686 | 1509 | 1209 K | H 209 |
| 45 | 90 | 20 | 0.789 | 1510 | 1210 K | H 210 |
| 50 | 100 | 21 | 1.000 | 1511 | 1211 K | H 211 |
| 55 | 110 | 22 | 1.530 | 1512 | 1212 K | H 212 |
| 60 | 120 | 23 | 1.550 | 1513 | 1213 K | H 213 |
| 65 | 130 | 25 | 2.110 | 1515 | 1215 K | H 215 |
| 70 | 140 | 26 | 2.520 | 1516 | 1216 K | H 216 |

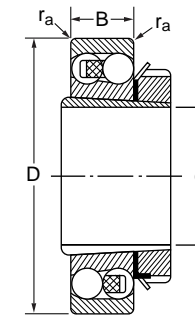
Self Aligning Ball Bearings with Adapter Sleeve - Inch Shaft



Prefix & Suffix



Self Aligning Ball Bearings with Adapter Sleeve - Inch Shaft



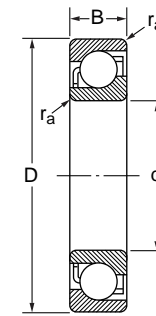
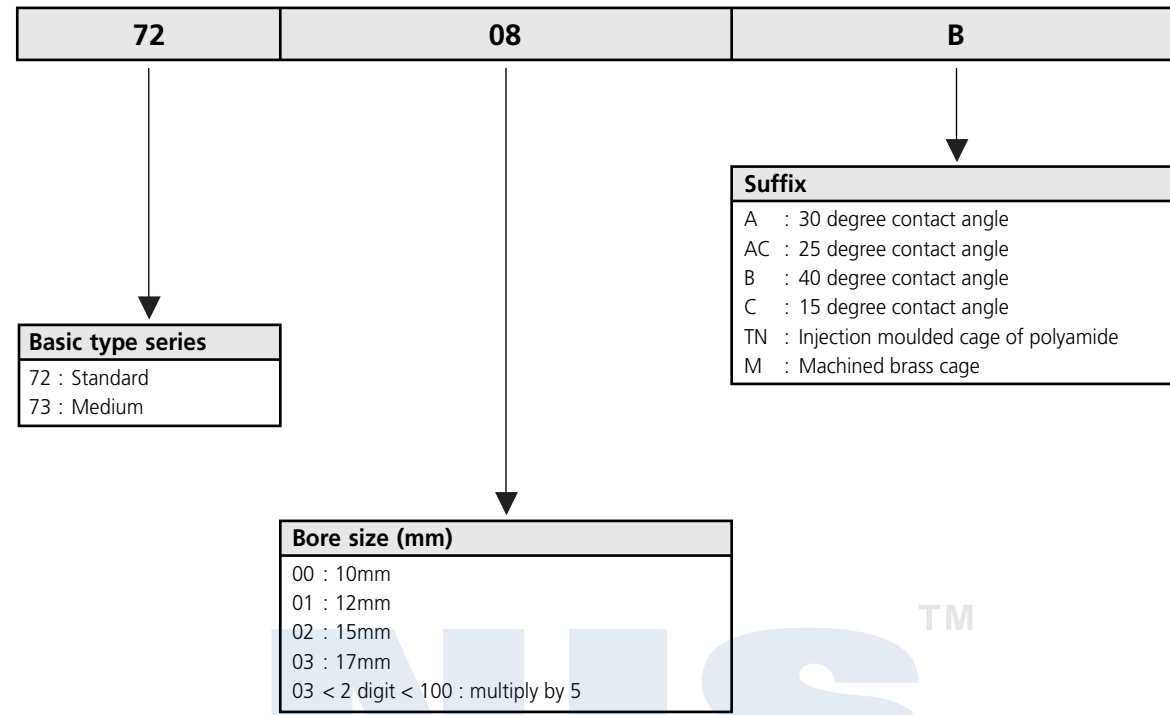
| Basic Dimensions | | | | Mass | Designation | | |
|------------------|-------|-----|----|-------|-------------|----------------|--------|
| d | | D | B | | Unit | Bearing Number | Sleeve |
| inch | mm | mm | mm | kg | | | |
| 0.75 | 19.05 | 52 | 15 | 0.208 | 1505 E | 1205 K | HE 205 |
| 1 | 25.4 | 62 | 16 | 0.315 | 1506 E | 1206 K | HE 206 |
| 1.25 | 31.75 | 80 | 18 | 0.585 | 1508 E | 1208 K | HE 208 |
| 1.5 | 38.1 | 85 | 19 | 0.686 | 1509 E | 1209 K | HE 209 |
| 1.75 | 44.45 | 90 | 20 | 0.789 | 1510 E | 1210 K | HE 210 |
| 2 | 50.8 | 100 | 21 | 1.000 | 1511 E | 1211 K | HE 211 |
| 2.25 | 57.15 | 120 | 23 | 1.550 | 1513 E | 1213 K | HE 213 |
| 2.5 | 63.5 | 130 | 25 | 2.110 | 1515 E | 1215 K | HE 215 |
| 2.75 | 69.85 | 140 | 26 | 2.520 | 1516 E | 1216 K | HE 216 |



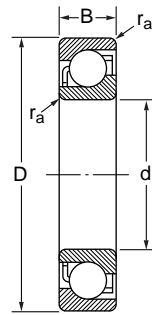
Angular Contact Ball Bearings

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| 3.03 Double row angular contact ball bearings | 96 |
| 3.04 Four point contact ball bearings | 99 |

■ Prefix & Suffix

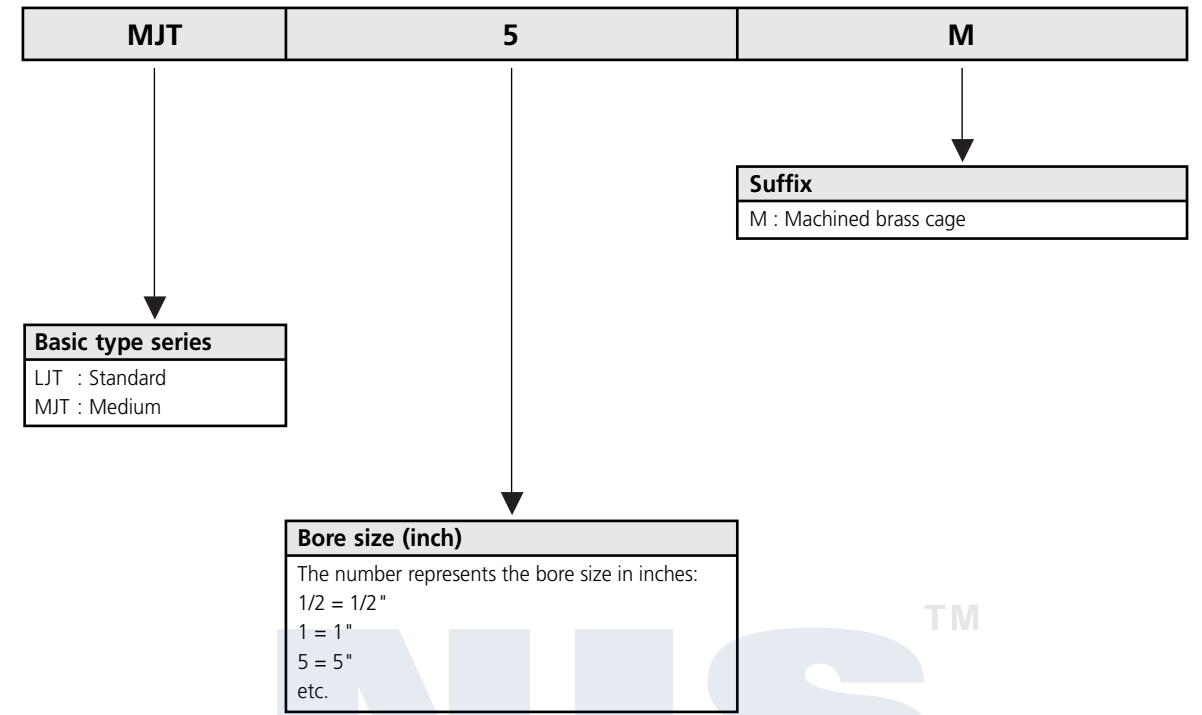


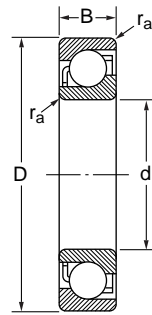
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|---------|---------|--------------------|--------------------------------|-----------------|--------------|-----------------------------|-------|-------------|
| d mm | D mm | B mm | Dynamic C kN | Static C ₀ kN | Grease r/min | Oil r/min | r _a max mm | kg | |
| 10 | 30 | 9 | 6.669 | 3.183 | 18,050 | 26,600 | 0.6 | 0.030 | 7200 B |
| 12 | 32 | 10 | 7.230 | 3.610 | 17,100 | 24,700 | 0.6 | 0.038 | 7201 B |
| 12 | 37 | 12 | 10.070 | 4.750 | 16,150 | 22,800 | 1.0 | 0.062 | 7301 B |
| 15 | 35 | 11 | 8.398 | 4.560 | 16,150 | 22,800 | 0.6 | 0.046 | 7202 B |
| 15 | 42 | 13 | 12.350 | 6.365 | 14,250 | 19,000 | 1.0 | 0.086 | 7302 B |
| 17 | 40 | 12 | 10.545 | 5.795 | 14,250 | 19,000 | 0.6 | 0.068 | 7203 B |
| 17 | 47 | 14 | 15.105 | 7.885 | 12,350 | 17,100 | 1.0 | 0.118 | 7303 B |
| 20 | 47 | 14 | 13.300 | 7.885 | 11,400 | 16,150 | 1.0 | 0.109 | 7204 B |
| 20 | 52 | 15 | 18.050 | 9.880 | 10,450 | 15,200 | 1.0 | 0.150 | 7304 B |
| 25 | 52 | 15 | 14.820 | 9.690 | 9,500 | 14,250 | 1.0 | 0.133 | 7205 B |
| 25 | 62 | 17 | 24.700 | 14.820 | 8,550 | 12,350 | 1.0 | 0.241 | 7305 B |
| 30 | 62 | 16 | 22.610 | 14.820 | 8,075 | 11,400 | 1.0 | 0.202 | 7206 B |
| 30 | 72 | 19 | 32.775 | 20.140 | 7,600 | 10,450 | 1.0 | 0.354 | 7306 B |
| 35 | 72 | 17 | 29.165 | 19.760 | 7,600 | 10,450 | 1.0 | 0.294 | 7207 B |
| 35 | 80 | 21 | 37.050 | 23.275 | 7,125 | 9,500 | 1.5 | 0.474 | 7307 B |
| 40 | 80 | 18 | 34.580 | 24.700 | 6,650 | 9,025 | 1.0 | 0.383 | 7208 B |
| 40 | 90 | 23 | 46.930 | 31.825 | 6,365 | 8,550 | 1.5 | 0.648 | 7308 B |
| 45 | 85 | 19 | 35.815 | 26.600 | 6,365 | 8,550 | 1.0 | 0.421 | 7209 B |
| 45 | 100 | 25 | 57.475 | 39.425 | 5,700 | 7,600 | 1.5 | 0.869 | 7309 B |
| 50 | 90 | 20 | 37.050 | 28.975 | 5,700 | 7,600 | 1.0 | 0.477 | 7210 B |
| 50 | 110 | 27 | 70.395 | 48.450 | 5,035 | 6,650 | 2.0 | 1.120 | 7310 B |
| 55 | 100 | 21 | 46.360 | 36.100 | 5,320 | 7,125 | 1.5 | 0.627 | 7211 B |
| 55 | 120 | 29 | 80.940 | 57.000 | 4,560 | 5,985 | 2.0 | 1.450 | 7311 B |
| 60 | 110 | 22 | 54.340 | 43.225 | 4,750 | 6,365 | 1.5 | 0.815 | 7212 B |
| 60 | 130 | 31 | 90.820 | 66.025 | 4,275 | 5,700 | 2.0 | 1.780 | 7312 B |
| 65 | 120 | 23 | 62.985 | 51.300 | 4,275 | 5,700 | 1.5 | 1.050 | 7213 B |
| 65 | 140 | 33 | 102.600 | 76.000 | 4,085 | 5,320 | 2.0 | 2.170 | 7313 B |
| 70 | 125 | 24 | 67.925 | 57.000 | 4,085 | 5,320 | 1.5 | 1.140 | 7214 B |
| 70 | 150 | 35 | 113.050 | 85.500 | 3,610 | 4,750 | 2.0 | 2.650 | 7314 B |
| 75 | 130 | 25 | 69.160 | 60.800 | 4,085 | 5,320 | 1.5 | 1.220 | 7215 B |
| 75 | 160 | 37 | 126.350 | 100.700 | 3,420 | 4,560 | 2.0 | 3.190 | 7315 B |
| 80 | 140 | 26 | 79.040 | 69.825 | 3,610 | 4,750 | 2.0 | 1.490 | 7216 B |



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|-----|----|--------------------|-----------------------|----------------|-------|--------------------|--------|-------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | |
| 80 | 170 | 39 | 135.850 | 112.100 | 3,230 | 4,275 | 2.0 | 3.790 | 7316 B |
| 85 | 150 | 28 | 90.820 | 78.850 | 3,420 | 4,560 | 2.0 | 1.870 | 7217 B |
| 85 | 180 | 41 | 145.350 | 125.400 | 3,040 | 4,085 | 2.5 | 4.420 | 7317 B |
| 90 | 160 | 30 | 102.600 | 91.675 | 3,230 | 4,275 | 2.0 | 2.290 | 7218 B |
| 90 | 190 | 43 | 156.750 | 138.700 | 2,850 | 3,800 | 2.5 | 5.170 | 7318 B |
| 95 | 170 | 32 | 117.800 | 102.600 | 3,040 | 4,085 | 2.0 | 2.740 | 7219 B |
| 95 | 200 | 45 | 169.100 | 154.850 | 2,660 | 3,610 | 2.5 | 5.980 | 7319 B |
| 100 | 180 | 34 | 128.250 | 115.900 | 2,850 | 3,800 | 2.0 | 3.280 | 7220 B |
| 100 | 215 | 47 | 192.850 | 180.500 | 2,470 | 3,420 | 2.5 | 7.430 | 7320 B |
| 105 | 190 | 36 | 140.600 | 130.150 | 2,660 | 3,610 | 2.0 | 3.920 | 7221 B |
| 105 | 225 | 49 | 201.400 | 197.600 | 2,280 | 3,230 | 2.5 | 9.430 | 7321 B |
| 110 | 200 | 38 | 154.850 | 145.350 | 2,470 | 3,420 | 2.0 | 4.580 | 7222 B |
| 110 | 240 | 50 | 213.750 | 212.800 | 2,090 | 3,040 | 2.5 | 11.200 | 7322 B |
| 120 | 215 | 40 | 156.750 | 154.850 | 2,090 | 3,040 | 2.0 | 6.260 | 7224 B |
| 120 | 260 | 55 | 226.100 | 237.500 | 1,805 | 2,660 | 2.5 | 14.400 | 7324 B |
| 130 | 230 | 40 | 176.700 | 183.350 | 1,805 | 2,660 | 2.5 | 7.100 | 7226 B |
| 130 | 280 | 58 | 238.450 | 256.500 | 1,710 | 2,470 | 3.0 | 17.600 | 7326 B |
| 140 | 250 | 42 | 172.900 | 186.200 | 1,710 | 2,470 | 2.5 | 8.940 | 7228 B |

Prefix & Suffix

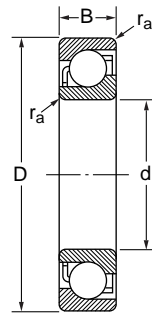




| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|--------|--------|---------|--------|--------|--------------------|----------------------|----------------|--------|
| d | | D | | B | | Dynamic | Static | Grease | Oil |
| inch | mm | inch | mm | inch | mm | C kN | C ₀ kN | r/min | r/min |
| 0.3750 | 9.525 | 1.5000 | 38.100 | 0.5625 | 14.288 | 10.450 | 4.845 | 10,300 | 20,500 |
| 0.5000 | 12.700 | 1.3125 | 33.338 | 0.3750 | 9.525 | 7.790 | 3.553 | 10,600 | 21,000 |
| 0.5000 | 12.700 | 1.6250 | 41.275 | 0.6250 | 15.875 | 11.780 | 5.605 | 9,300 | 18,500 |
| 0.6250 | 15.875 | 1.5625 | 39.688 | 0.4375 | 11.113 | 11.590 | 5.605 | 9,100 | 18,000 |
| 0.6250 | 15.875 | 1.8125 | 46.038 | 0.6250 | 15.875 | 15.105 | 7.600 | 8,300 | 16,500 |
| 0.7500 | 19.050 | 1.8750 | 47.625 | 0.5625 | 14.288 | 15.105 | 7.600 | 7,800 | 15,500 |
| 0.7500 | 19.050 | 2.0000 | 50.800 | 0.6875 | 17.463 | 17.955 | 8.930 | 7,500 | 15,000 |
| 0.8750 | 22.225 | 2.0000 | 50.800 | 0.5625 | 14.288 | 16.055 | 8.265 | 7,200 | 14,400 |
| 0.8750 | 22.225 | 2.2500 | 57.150 | 0.6875 | 17.463 | 20.995 | 10.925 | 6,700 | 13,400 |
| 1.0000 | 25.400 | 2.2500 | 57.150 | 0.6250 | 15.875 | 24.035 | 12.825 | 6,500 | 12,900 |
| 1.0000 | 25.400 | 2.5000 | 63.500 | 0.7500 | 19.050 | 25.650 | 13.965 | 6,100 | 12,100 |
| 1.1250 | 28.575 | 2.5000 | 63.500 | 0.6250 | 15.875 | 24.035 | 12.920 | 5,900 | 11,700 |
| 1.1250 | 28.575 | 2.8125 | 71.438 | 0.8125 | 20.638 | 34.960 | 19.475 | 5,400 | 10,900 |
| 1.2500 | 31.750 | 2.7500 | 69.850 | 0.6875 | 17.463 | 25.840 | 13.965 | 5,400 | 10,700 |
| 1.2500 | 31.750 | 3.1250 | 79.375 | 0.8750 | 22.225 | 41.515 | 23.940 | 4,900 | 9,800 |
| 1.3750 | 34.925 | 3.0000 | 76.200 | 0.6875 | 17.463 | 35.150 | 20.235 | 4,900 | 9,800 |
| 1.3750 | 34.925 | 3.5000 | 88.900 | 0.8750 | 22.225 | 47.975 | 27.455 | 4,400 | 8,900 |
| 1.5000 | 38.100 | 3.2500 | 82.550 | 0.7500 | 19.050 | 39.520 | 22.990 | 4,500 | 9,100 |
| 1.5000 | 38.100 | 3.7500 | 95.250 | 0.9375 | 23.813 | 52.250 | 30.400 | 4,100 | 8,300 |
| 1.6250 | 41.275 | 3.5000 | 88.900 | 0.7500 | 19.050 | 41.515 | 24.700 | 4,200 | 8,400 |
| 1.6250 | 41.275 | 4.0000 | 101.600 | 0.9375 | 23.813 | 62.225 | 36.765 | 3,900 | 7,700 |
| 1.7500 | 44.450 | 3.7500 | 95.250 | 0.8125 | 20.638 | 48.925 | 29.070 | 3,900 | 7,900 |
| 1.7500 | 44.450 | 4.2500 | 107.950 | 1.0625 | 26.988 | 67.450 | 40.185 | 3,600 | 7,200 |
| 1.8750 | 47.625 | 4.0000 | 101.600 | 0.8125 | 20.638 | 53.675 | 33.535 | 3,600 | 7,200 |
| 1.8750 | 47.625 | 4.5000 | 114.300 | 1.0625 | 26.988 | 78.375 | 47.500 | 3,300 | 6,700 |
| 2.0000 | 50.800 | 4.0000 | 101.600 | 0.8125 | 20.638 | 53.675 | 33.535 | 3,600 | 7,200 |
| 2.0000 | 50.800 | 4.5000 | 114.300 | 1.0625 | 26.988 | 78.375 | 47.500 | 3,300 | 6,700 |
| 2.2500 | 57.150 | 4.5000 | 114.300 | 0.8750 | 22.225 | 62.225 | 38.665 | 3,200 | 6,400 |
| 2.2500 | 57.150 | 5.0000 | 127.000 | 1.2500 | 31.750 | 95.950 | 59.375 | 3,000 | 5,900 |
| 2.5000 | 63.500 | 5.0000 | 127.000 | 0.9375 | 23.813 | 76.950 | 50.350 | 2,900 | 5,700 |
| 2.5000 | 63.500 | 5.5000 | 139.700 | 1.2500 | 31.750 | 108.300 | 70.300 | 2,700 | 5,400 |
| 2.7500 | 69.850 | 5.2500 | 133.350 | 0.9375 | 23.813 | 80.275 | 53.675 | 2,700 | 5,400 |

| Chamfer Dimension | Mass | Designation | Interchange |
|--------------------------|-------|-------------|-------------|
| r _a max mm | kg | | |
| 0.8 | 0.091 | MJT 3/8 | - |
| 0.8 | 0.045 | LJT 1/2 | - |
| 0.8 | 0.113 | MJT 1/2 | - |
| 0.8 | 0.059 | LJT 5/8 | ALS 5 |
| 0.8 | 0.141 | MJT 5/8 | - |
| 1.6 | 0.127 | LJT 3/4 | ALS 6 |
| 1.6 | 0.186 | MJT 3/4 | AMS 6 |
| 1.6 | 0.145 | LJT 7/8 | ALS 7 |
| 1.6 | 0.236 | MJT 7/8 | AMS 7 |
| 1.6 | 0.204 | LJT 1 | ALS 8 |
| 2.4 | 0.313 | MJT 1 | AMS 8 |
| 1.6 | 0.249 | LJT 1 1/8 | ALS 9 |
| 2.4 | 0.422 | MJT 1 1/8 | AMS 9 |
| 1.6 | 0.336 | LJT 1 1/4 | ALS 10 |
| 2.4 | 0.553 | MJT 1 1/4 | AMS 10 |
| 1.6 | 0.408 | LJT 1 3/8 | ALS 11 |
| 2.4 | 0.726 | MJT 1 3/8 | AMS 11 |
| 2.4 | 0.499 | LJT 1 1/2 | ALS 12 |
| 2.4 | 0.885 | MJT 1 1/2 | AMS 12 |
| 2.4 | 0.594 | LJT 1 5/8 | ALS 13 |
| 2.4 | 1.010 | MJT 1 5/8 | AMS 13 |
| 2.4 | 0.726 | LJT 1 3/4 | ALS 14 |
| 2.4 | 1.290 | MJT 1 3/4 | AMS 14 |
| 2.4 | 0.835 | LJT 1 7/8 | ALS 15 |
| 2.4 | 1.460 | MJT 1 7/8 | AMS 15 |
| 2.4 | 0.807 | LJT 2 | ALS 16 |
| 2.4 | 1.410 | MJT 2 | AMS 16 |
| 2.4 | 1.090 | LJT 2 1/4 | ALS 18 |
| 3.2 | 2.000 | MJT 2 1/4 | AMS 18 |
| 2.4 | 1.430 | LJT 2 1/2 | ALS 20 |
| 3.2 | 2.440 | MJT 2 1/2 | AMS 20 |
| 2.4 | 1.540 | LJT 2 3/4 | ALS 22 |





| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|---------|---------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | | D | | B | | Dynamic C | Static C ₀ | Grease | Oil |
| inch | mm | inch | mm | inch | mm | kN | kN | r/min | r/min |
| 2.7500 | 69.850 | 6.2500 | 158.750 | 1.3750 | 34.925 | 137.750 | 91.675 | 2,400 | 4,700 |
| 3.0000 | 76.200 | 5.7500 | 146.050 | 1.0625 | 26.988 | 89.775 | 62.225 | 2,400 | 4,900 |
| 3.0000 | 76.200 | 7.0000 | 177.800 | 1.5625 | 39.688 | 162.450 | 115.900 | 2,100 | 4,200 |
| 3.2500 | 82.550 | 6.0000 | 152.400 | 1.0625 | 26.988 | 100.700 | 68.875 | 2,300 | 4,600 |
| 3.2500 | 82.550 | 7.5000 | 190.500 | 1.5625 | 39.688 | 171.000 | 125.400 | 1,900 | 3,800 |
| 3.3750 | 85.725 | 7.5000 | 190.500 | 1.5625 | 39.688 | 171.000 | 125.400 | 1,900 | 3,800 |
| 3.5000 | 88.900 | 6.5000 | 165.100 | 1.1250 | 28.575 | 108.300 | 77.425 | 2,100 | 4,200 |
| 3.5000 | 88.900 | 8.1250 | 206.375 | 1.7500 | 44.450 | 188.100 | 143.450 | 1,800 | 3,500 |
| 3.7500 | 95.250 | 6.7500 | 171.450 | 1.1250 | 28.575 | 115.900 | 84.075 | 2,000 | 4,000 |
| 3.7500 | 95.250 | 8.2500 | 209.550 | 1.7500 | 44.450 | 197.600 | 154.850 | 1,700 | 3,400 |
| 4.0000 | 101.600 | 7.2500 | 184.150 | 1.2500 | 31.750 | 133.000 | 97.850 | 1,800 | 3,700 |
| 4.0000 | 101.600 | 8.5000 | 215.900 | 1.7500 | 44.450 | 207.100 | 165.300 | 1,600 | 3,200 |
| 4.2500 | 107.950 | 7.5000 | 190.500 | 1.2500 | 31.750 | 141.550 | 104.500 | 1,700 | 3,500 |
| 4.2500 | 107.950 | 8.7500 | 222.250 | 1.7500 | 44.450 | 207.100 | 165.300 | 1,500 | 3,100 |
| 4.5000 | 114.300 | 8.0000 | 203.200 | 1.3125 | 33.338 | 154.850 | 117.800 | 1,600 | 3,200 |
| 4.5000 | 114.300 | 9.3750 | 238.125 | 2.0000 | 50.800 | 221.350 | 182.400 | 1,400 | 2,900 |
| 4.7500 | 120.650 | 8.2500 | 209.550 | 1.3125 | 33.338 | 159.600 | 124.450 | 1,500 | 3,100 |
| 4.7500 | 120.650 | 10.0000 | 254.000 | 2.0000 | 50.800 | 257.450 | 224.200 | 1,300 | 2,600 |
| 5.0000 | 127.000 | 9.0000 | 228.600 | 1.3750 | 34.925 | 178.600 | 141.550 | 1,400 | 2,800 |
| 5.0000 | 127.000 | 10.0000 | 254.000 | 2.0000 | 50.800 | 257.450 | 224.200 | 1,300 | 2,600 |
| 5.5000 | 139.700 | 9.5000 | 241.300 | 1.3750 | 34.925 | 194.750 | 159.600 | 1,300 | 2,600 |
| 5.5000 | 139.700 | 11.0000 | 279.400 | 2.0000 | 50.800 | 283.100 | 258.400 | 1,200 | 2,300 |
| 6.0000 | 152.400 | 10.5000 | 266.700 | 1.5625 | 39.688 | 216.600 | 188.100 | 1,200 | 2,300 |
| 6.0000 | 152.400 | 12.0000 | 304.800 | 2.2500 | 57.150 | 315.400 | 302.100 | 1,000 | 2,100 |
| 6.5000 | 165.100 | 11.0000 | 279.400 | 1.5625 | 39.688 | 221.350 | 196.650 | 1,100 | 2,200 |
| 6.5000 | 165.100 | 13.0000 | 330.200 | 2.5000 | 63.500 | 348.650 | 347.700 | 950 | 1,900 |

| Chamfer Dimension | Mass | Designation | Interchange |
|-----------------------|--------|-------------|-------------|
| r _a max mm | kg | | |
| 3.2 | 3.550 | MJT 2 3/4 | AMS 22 |
| 2.4 | 2.110 | LJT 3 | ALS 24 |
| 4.0 | 5.170 | MJT 3 | AMS 24 |
| 3.2 | 2.240 | LJT 3 1/4 | ALS 26 |
| 4.0 | 5.940 | MJT 3 1/4 | AMS 26 |
| 4.0 | 5.810 | MJT 3 3/8 | - |
| 3.2 | 2.780 | LJT 3 1/2 | ALS 28 |
| 4.0 | 7.800 | MJT 3 1/2 | AMS 28 |
| 3.2 | 2.910 | LJT 3 3/4 | ALS 30 |
| 4.0 | 7.760 | MJT 3 3/4 | AMS 30 |
| 3.2 | 3.580 | LJT 4E | ALS 32 |
| 4.0 | 8.120 | MJT 4E | AMS 32 |
| 3.2 | 3.780 | LJT 4 1/4 | ALS 34 |
| 5.0 | 8.570 | MJT 4 1/4 | - |
| 3.2 | 4.760 | LJT 4 1/2 | ALS 36 |
| 5.0 | 11.400 | MJT 4 1/2 | AMS 36 |
| 3.2 | 4.850 | LJT 4 3/4 | - |
| - | 13.100 | MJT 4 3/4 | - |
| 3.2 | 6.350 | LJT 5E | ALS 40 |
| - | 12.800 | MJT 5E | - |
| 3.2 | 6.800 | LJT 5 1/2 | ALS 44 |
| - | 15.700 | MJT 5 1/2 | - |
| 3.2 | 9.890 | LJT 6E | ALS 48 |
| - | 20.900 | MJT 6E | - |
| 3.2 | 10.700 | LJT 6 1/2 | - |
| - | 28.100 | MJT 6 1/2 | - |

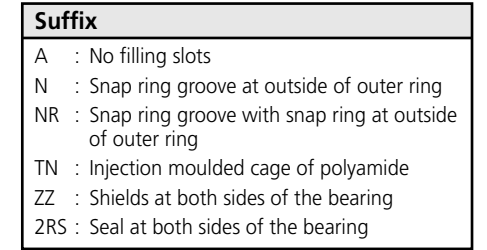
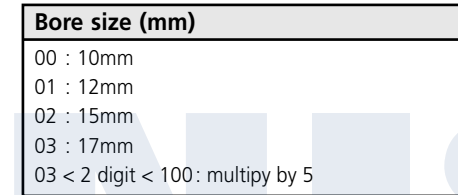
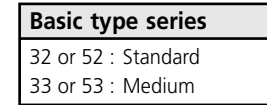
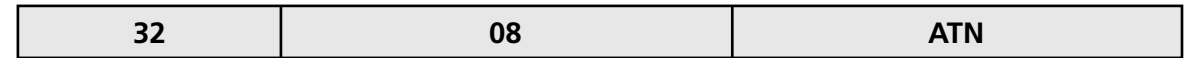


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3.02

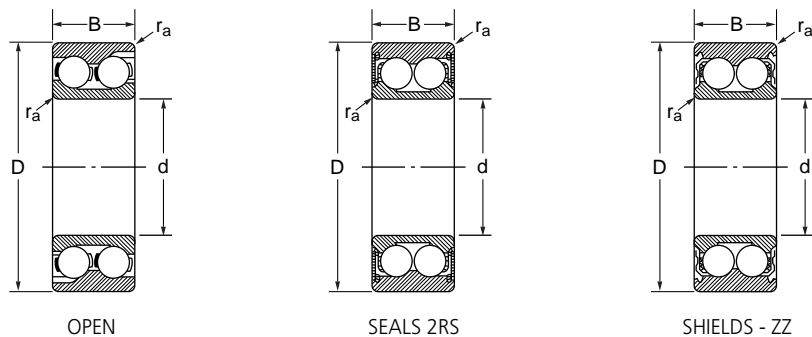
NIS™

■ Prefix & Suffix

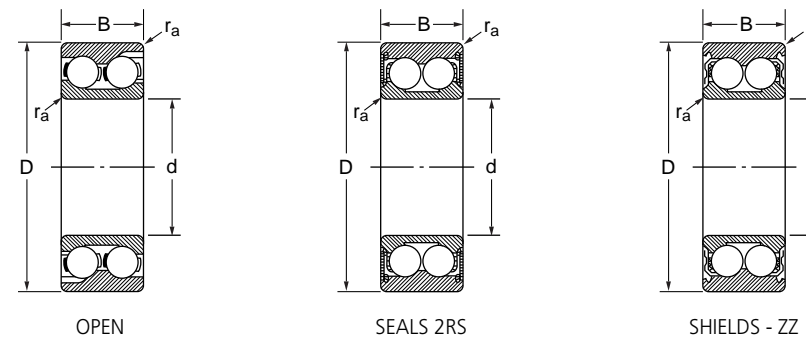


NIS™

Double Row Angular Contact Ball Bearings



Double Row Angular Contact Ball Bearings



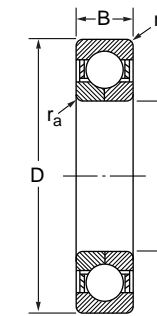
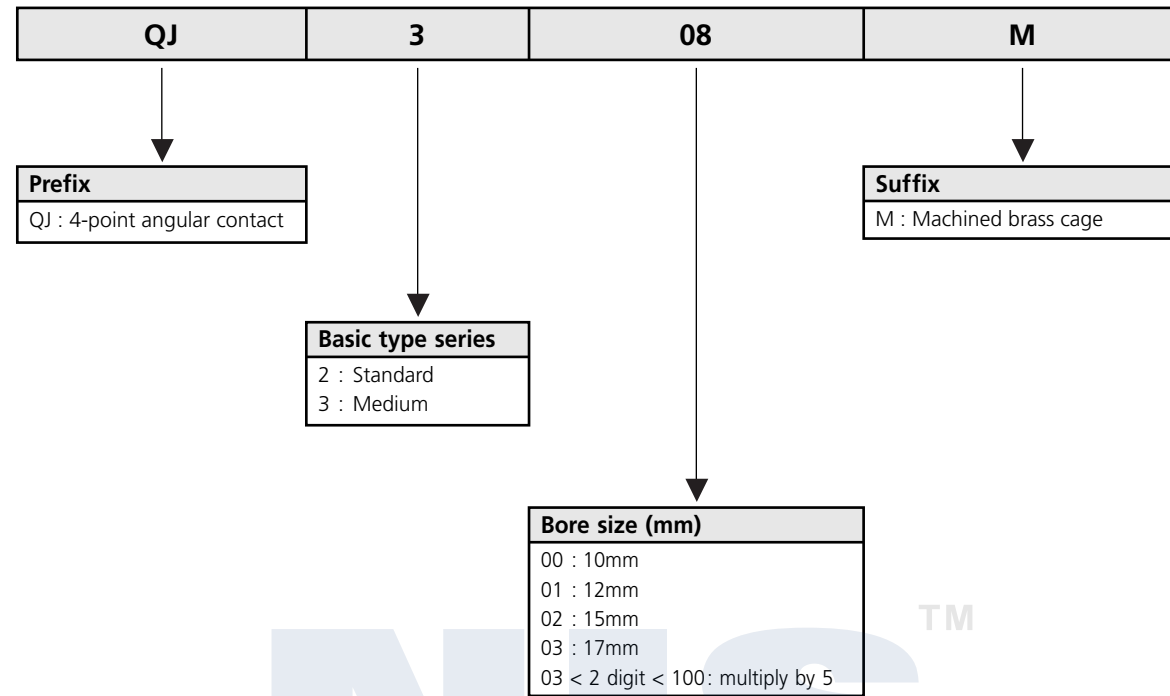
3.03

3.03

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | |
|------------------|-----|------|--------------------|-----------------------|----------------|--------|--------------------|-------|-------------|---------|-------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | Open | Shields | Seals |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | Open | ZZ | 2RS |
| 10 | 30 | 14 | 7.040 | 4.085 | 15,200 | 20,900 | 0.6 | 0.051 | 3200 ATN | ZZ | 2RS |
| 12 | 32 | 15.9 | 9.595 | 5.320 | 14,250 | 19,000 | 0.6 | 0.058 | 3201 ATN | ZZ | 2RS |
| 15 | 35 | 15.9 | 10.640 | 6.460 | 11,400 | 16,150 | 0.6 | 0.066 | 3202 ATN | ZZ | 2RS |
| 15 | 42 | 19 | 14.345 | 8.693 | 9,500 | 14,250 | 1.0 | 0.130 | 3302 ATN | ZZ | 2RS |
| 17 | 40 | 17.5 | 13.300 | 8.218 | 9,500 | 14,250 | 0.6 | 0.100 | 3203 ATN | ZZ | 2RS |
| 17 | 47 | 22.2 | 20.140 | 11.875 | 9,025 | 13,300 | 1.0 | 0.180 | 3303 ATN | ZZ | 2RS |
| 20 | 47 | 20.6 | 17.670 | 11.400 | 8,550 | 12,350 | 1.0 | 0.160 | 3204 ATN | ZZ | 2RS |
| 20 | 52 | 22.2 | 20.995 | 13.585 | 8,075 | 11,400 | 1.0 | 0.220 | 3304 ATN | ZZ | 2RS |
| 25 | 52 | 20.6 | 19.285 | 13.300 | 7,600 | 10,450 | 1.0 | 0.180 | 3205 ATN | ZZ | 2RS |
| 25 | 62 | 25.4 | 29.640 | 19.760 | 7,125 | 9,500 | 1.0 | 0.350 | 3305 ATN | ZZ | 2RS |
| 30 | 62 | 23.8 | 26.695 | 19.000 | 6,650 | 9,025 | 1.0 | 0.290 | 3206 ATN | ZZ | 2RS |
| 30 | 72 | 30.2 | 43.415 | 40.375 | 5,985 | 8,075 | 1.0 | 0.530 | 3306 ATN | ZZ | 2RS |
| 35 | 72 | 27 | 35.245 | 26.125 | 5,700 | 7,600 | 1.0 | 0.440 | 3207 ATN | ZZ | 2RS |
| 35 | 80 | 34.9 | 51.205 | 48.450 | 5,320 | 7,125 | 1.5 | 0.730 | 3307 ATN | ZZ | 2RS |
| 40 | 80 | 30.2 | 42.655 | 31.825 | 5,320 | 7,125 | 1.0 | 0.580 | 3208 ATN | ZZ | 2RS |
| 40 | 90 | 36.5 | 56.240 | 40.850 | 4,750 | 6,365 | 1.5 | 0.950 | 3308 ATN | ZZ | 2RS |
| 45 | 85 | 30.2 | 45.125 | 36.100 | 4,750 | 6,365 | 1.0 | 0.630 | 3209 ATN | ZZ | 2RS |
| 45 | 100 | 39.7 | 68.495 | 69.825 | 4,275 | 5,700 | 1.5 | 1.400 | 3309 ATN | ZZ | 2RS |
| 50 | 90 | 30.2 | 45.125 | 37.050 | 4,560 | 5,985 | 1.0 | 0.660 | 3210 ATN | ZZ | 2RS |
| 50 | 110 | 44.4 | 83.600 | 91.675 | 3,800 | 5,035 | 2.0 | 1.950 | 3310 ATN | - | - |
| 55 | 100 | 33.3 | 54.340 | 63.650 | 4,085 | 5,320 | 1.5 | 1.050 | 3211 ATN | - | - |
| 55 | 120 | 49.2 | 90.440 | 102.600 | 3,610 | 4,750 | 2.0 | 2.550 | 3311 ATN | - | - |
| 60 | 110 | 36.5 | 68.495 | 80.750 | 3,610 | 4,750 | 1.5 | 1.400 | 3212 ATN | - | - |
| 60 | 130 | 54 | 106.400 | 120.650 | 3,230 | 4,275 | 2.0 | 3.250 | 3312 ATN | - | - |
| 65 | 120 | 38.1 | 74.195 | 90.250 | 3,420 | 4,560 | 1.5 | 1.750 | 3213 ATN | - | - |
| 65 | 140 | 58.7 | 121.600 | 142.500 | 3,040 | 4,085 | 2.0 | 4.100 | 3313 ATN | - | - |
| 70 | 125 | 39.7 | 72.675 | 93.100 | 3,040 | 4,085 | 1.5 | 1.900 | 3214 ATN | - | - |
| 70 | 150 | 63.5 | 139.650 | 164.350 | 2,660 | 3,610 | 2.0 | 5.050 | 3314 ATN | - | - |
| 75 | 130 | 41.3 | 79.990 | 104.500 | 3,040 | 4,085 | 1.5 | 2.100 | 3215 ATN | - | - |
| 75 | 160 | 68.3 | 149.150 | 176.700 | 2,470 | 3,420 | 2.0 | 6.150 | 3315 ATN | - | - |
| 80 | 140 | 44.4 | 95.950 | 127.300 | 2,660 | 3,610 | 2.0 | 2.650 | 3216 ATN | - | - |
| 80 | 170 | 68.3 | 167.200 | 201.400 | 2,280 | 3,230 | 2.0 | 6.950 | 3316 ATN | - | - |

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | | |
|------------------|-----|------|--------------------|-----------------------|----------------|-------|--------------------|--------|-------------|---------|-------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | Open | Shields | Seals |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | Open | ZZ | 2RS |
| 85 | 150 | 49.2 | 104.500 | 138.700 | 2,470 | 3,420 | 2.0 | 3.400 | 3217 ATN | - | - |
| 85 | 180 | 73 | 184.300 | 228.000 | 2,090 | 3,040 | 2.5 | 8.300 | 3317 ATN | - | - |
| 90 | 160 | 52.4 | 121.600 | 164.350 | 2,280 | 3,230 | 2.0 | 4.150 | 3218 ATN | - | - |
| 90 | 190 | 73 | 209.000 | 270.750 | 1,900 | 2,850 | 2.5 | 9.250 | 3318 ATN | - | - |
| 95 | 170 | 55.6 | 139.650 | 193.800 | 2,090 | 3,040 | 2.0 | 5.000 | 3219 ATN | - | - |
| 95 | 200 | 77.8 | 226.100 | 299.250 | 1,805 | 2,660 | 2.5 | 11.000 | 3319 ATN | - | - |
| 100 | 180 | 60.3 | 149.150 | 209.000 | 1,900 | 2,850 | 2.0 | 6.100 | 3220 ATN | - | - |
| 100 | 215 | 82.6 | 242.250 | 337.250 | 1,710 | 2,470 | 2.5 | 13.500 | 3320 ATN | - | - |
| 110 | 200 | 69.8 | 180.500 | 256.50 | 1,805 | 2,660 | 2.0 | 8.800 | 3222 ATN | - | - |
| 110 | 240 | 92.1 | 277.400 | 403.75 | 1,615 | 2,280 | 2.5 | 19.000 | 3322 ATN | - | - |

■ Prefix & Suffix

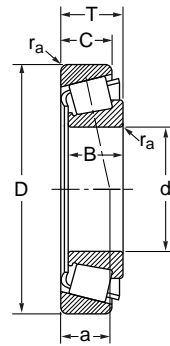


| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|-----|----|--------------------|----------------------|----------------|--------|--------------------|-------|-------------|
| d | D | B | Dynamic | Static | Grease | Oil | r _a max | kg | |
| mm | mm | mm | C kN | C ₀ kN | r/min | r/min | mm | | |
| 17 | 40 | 12 | 15.105 | 10.070 | 13,300 | 18,050 | 0.6 | 0.082 | QJ 203 |
| 17 | 47 | 14 | 22.230 | 14.250 | 11,400 | 16,150 | 1.0 | 0.140 | QJ 303 |
| 20 | 52 | 15 | 28.120 | 19.000 | 9,500 | 14,250 | 1.0 | 0.180 | QJ 304 |
| 25 | 52 | 15 | 23.845 | 19.000 | 9,025 | 13,300 | 1.0 | 0.160 | QJ 205 |
| 30 | 62 | 16 | 33.345 | 27.075 | 8,075 | 11,400 | 1.0 | 0.240 | QJ 206 |
| 30 | 72 | 19 | 46.930 | 37.050 | 7,125 | 9,500 | 1.0 | 0.420 | QJ 306 |
| 35 | 72 | 17 | 43.890 | 37.050 | 7,125 | 9,500 | 1.0 | 0.350 | QJ 207 |
| 35 | 80 | 21 | 56.240 | 44.175 | 6,650 | 9,025 | 1.5 | 0.570 | QJ 307 |
| 40 | 80 | 18 | 50.065 | 42.750 | 6,365 | 8,550 | 1.0 | 0.450 | QJ 208 |
| 40 | 90 | 23 | 67.925 | 55.575 | 5,985 | 8,075 | 1.5 | 0.780 | QJ 308 |
| 45 | 85 | 19 | 55.575 | 48.450 | 5,985 | 8,075 | 1.0 | 0.520 | QJ 209 |
| 45 | 100 | 25 | 88.920 | 72.675 | 5,320 | 7,125 | 1.5 | 1.050 | QJ 309 |
| 50 | 90 | 20 | 58.710 | 53.200 | 5,320 | 7,125 | 1.0 | 0.590 | QJ 210 |
| 50 | 110 | 27 | 105.450 | 86.925 | 4,750 | 6,365 | 2.0 | 1.350 | QJ 310 |
| 55 | 100 | 21 | 75.335 | 72.675 | 5,035 | 6,650 | 1.5 | 0.770 | QJ 211 |
| 55 | 120 | 29 | 120.650 | 102.600 | 4,275 | 5,700 | 2.0 | 1.750 | QJ 311 |
| 60 | 110 | 22 | 87.685 | 82.175 | 4,560 | 5,985 | 1.5 | 0.990 | QJ 212 |
| 60 | 130 | 31 | 138.700 | 118.750 | 4,085 | 5,320 | 2.0 | 2.150 | QJ 312 |
| 65 | 120 | 23 | 98.800 | 98.800 | 4,085 | 5,320 | 1.5 | 1.200 | QJ 213 |
| 65 | 140 | 33 | 156.750 | 138.700 | 3,800 | 5,035 | 2.0 | 2.700 | QJ 313 |
| 70 | 125 | 24 | 108.300 | 108.300 | 4,085 | 5,320 | 1.5 | 1.300 | QJ 214 |
| 70 | 150 | 35 | 176.700 | 157.700 | 3,420 | 4,560 | 2.0 | 3.150 | QJ 314 |
| 75 | 130 | 25 | 111.150 | 115.900 | 3,800 | 5,035 | 1.5 | 1.450 | QJ 215 |
| 80 | 140 | 26 | 131.100 | 138.700 | 3,420 | 4,560 | 2.0 | 1.850 | QJ 216 |
| 85 | 150 | 28 | 140.600 | 152.000 | 3,230 | 4,275 | 2.0 | 2.250 | QJ 217 |

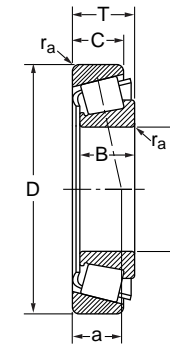


Taper Roller Bearings

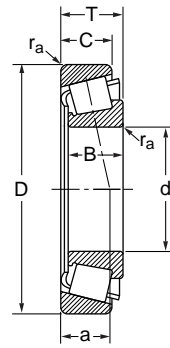
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| 4.01 Single row taper roller bearings | 103 |
| 4.02 Single row taper roller bearings - Inch sizes | 113 |



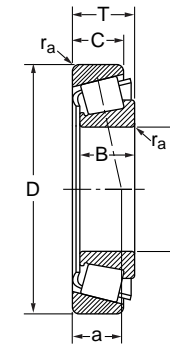
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|----|-------|----|------|--------------------|-----------------------|----------------|--------|-------------------------|------------------------|-------|-------------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil | Cone r _a max | Cup r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 15 | 35 | 11.75 | 11 | 10 | 14.060 | 12.540 | 10,450 | 14,250 | 0.6 | 0.6 | 0.053 | 30202 |
| 15 | 42 | 14.25 | 13 | 11 | 22.420 | 20.045 | 9,025 | 12,350 | 1.0 | 1.0 | 0.098 | 30302 |
| 17 | 40 | 13.25 | 12 | 11 | 19.095 | 18.905 | 9,025 | 12,350 | 1.0 | 1.0 | 0.079 | 30203 |
| 17 | 40 | 17.25 | 16 | 14 | 21.565 | 22.135 | 9,025 | 12,350 | 1.0 | 1.0 | 0.103 | 32203 |
| 17 | 47 | 15.25 | 14 | 12 | 27.740 | 25.365 | 8,075 | 11,400 | 1.0 | 1.0 | 0.134 | 30303 |
| 20 | 42 | 15 | 15 | 12 | 23.370 | 26.030 | 8,550 | 11,400 | 0.6 | 0.6 | 0.097 | 32004 X |
| 20 | 47 | 15.25 | 14 | 12 | 26.505 | 27.075 | 7,600 | 10,450 | 1.0 | 1.0 | 0.127 | 30204 |
| 20 | 47 | 19.25 | 18 | 15 | 28.025 | 28.975 | 8,075 | 10,450 | 1.0 | 1.0 | 0.161 | 32204 X |
| 20 | 52 | 16.25 | 15 | 13 | 33.250 | 31.825 | 7,125 | 9,500 | 1.0 | 1.0 | 0.172 | 30304 |
| 20 | 52 | 22.25 | 21 | 18 | 43.225 | 45.125 | 7,600 | 10,450 | 1.0 | 1.0 | 0.241 | 32304 |
| 22 | 44 | 15 | 15 | 11.5 | 24.320 | 27.930 | 8,075 | 10,450 | 0.6 | 0.6 | 0.103 | 320/22 X |
| 22 | 50 | 15.25 | 14 | 12 | 28.500 | 30.400 | 7,125 | 9,500 | 1.0 | 1.0 | 0.139 | 302/22 |
| 22 | 50 | 19.25 | 18 | 15 | 34.675 | 38.475 | 7,125 | 10,450 | 1.0 | 1.0 | 0.180 | 322/22 |
| 22 | 56 | 17.25 | 16 | 14 | 31.350 | 29.925 | 6,745 | 9,025 | 1.0 | 1.0 | 0.203 | 303/22 |
| 25 | 47 | 15 | 15 | 11.5 | 26.030 | 31.350 | 7,600 | 10,450 | 0.6 | 0.6 | 0.116 | 32005 X |
| 25 | 47 | 17 | 17 | 14 | 29.450 | 36.100 | 7,600 | 10,450 | 0.6 | 0.6 | 0.131 | 33005 |
| 25 | 52 | 16.25 | 15 | 13 | 30.400 | 33.250 | 6,745 | 9,500 | 1.0 | 1.0 | 0.157 | 30205 |
| 25 | 52 | 19.25 | 18 | 15 | 36.575 | 41.325 | 7,125 | 9,500 | 1.0 | 1.0 | 0.189 | 32205 |
| 25 | 52 | 22 | 22 | 18 | 45.125 | 53.675 | 7,125 | 9,500 | 1.0 | 1.0 | 0.221 | 33205 |
| 25 | 62 | 18.25 | 17 | 13 | 29.925 | 29.450 | 5,700 | 7,600 | 1.5 | 1.5 | 0.265 | 30305 D |
| 25 | 62 | 18.25 | 17 | 15 | 45.125 | 43.700 | 5,985 | 8,075 | 1.5 | 1.5 | 0.270 | 30305 |
| 25 | 62 | 25.25 | 24 | 20 | 59.375 | 62.700 | 5,985 | 8,075 | 1.5 | 1.5 | 0.376 | 32305 |
| 28 | 52 | 16 | 16 | 12 | 30.400 | 37.050 | 6,745 | 9,025 | 1.0 | 1.0 | 0.146 | 320/28 X |
| 28 | 58 | 17.25 | 16 | 14 | 37.525 | 39.425 | 5,985 | 8,550 | 1.0 | 1.0 | 0.203 | 302/28 |
| 28 | 58 | 20.25 | 19 | 16 | 45.125 | 51.300 | 5,985 | 8,550 | 1.0 | 1.0 | 0.243 | 322/28 |
| 28 | 68 | 19.75 | 18 | 15 | 52.250 | 52.725 | 5,700 | 7,600 | 1.5 | 1.5 | 0.341 | 303/28 |
| 30 | 55 | 17 | 17 | 13 | 34.200 | 42.275 | 6,365 | 8,550 | 1.0 | 1.0 | 0.172 | 32006 X |
| 30 | 55 | 20 | 20 | 16 | 39.900 | 51.300 | 6,365 | 8,550 | 1.0 | 1.0 | 0.208 | 33006 |
| 30 | 62 | 17.25 | 16 | 14 | 40.850 | 45.125 | 5,700 | 7,600 | 1.0 | 1.0 | 0.238 | 30206 |
| 30 | 62 | 21.25 | 20 | 17 | 49.400 | 57.000 | 5,700 | 8,075 | 1.0 | 1.0 | 0.297 | 32206 |
| 30 | 62 | 25 | 25 | 19.5 | 63.175 | 75.525 | 5,700 | 7,600 | 1.0 | 1.0 | 0.355 | 33206 |
| 30 | 72 | 20.75 | 19 | 14 | 39.425 | 39.900 | 4,750 | 6,745 | 1.0 | 1.0 | 0.378 | 30306 D |



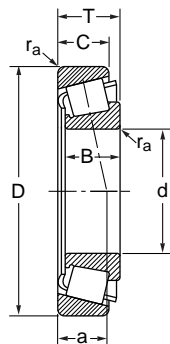
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|-------|----|------|--------------------|-----------------------|----------------|-------|-------------------------|------------------------|-------|-------------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil | Cone r _a max | Cup r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 30 | 72 | 20.75 | 19 | 16 | 56.525 | 57.000 | 5,035 | 7,125 | 1.5 | 1.5 | 0.403 | 30306 |
| 30 | 72 | 28.75 | 27 | 23 | 76.000 | 84.075 | 5,320 | 7,125 | 1.5 | 1.5 | 0.570 | 32306 |
| 32 | 58 | 17 | 17 | 13 | 35.625 | 44.650 | 5,985 | 8,075 | 1.0 | 1.0 | 0.191 | 320/32 X |
| 32 | 65 | 18.25 | 17 | 15 | 46.075 | 51.300 | 5,320 | 7,600 | 1.0 | 1.0 | 0.277 | 302/32 |
| 32 | 65 | 22.25 | 21 | 18 | 53.200 | 61.750 | 5,700 | 7,600 | 1.0 | 1.0 | 0.336 | 322/32 |
| 32 | 75 | 21.75 | 20 | 17 | 61.750 | 66.025 | 5,035 | 6,745 | 1.5 | 1.5 | 0.435 | 303/32 |
| 35 | 55 | 14 | 14 | 11.5 | 26.030 | 37.050 | 5,985 | 8,075 | 0.6 | 0.6 | 0.123 | 32907 |
| 35 | 62 | 18 | 18 | 14 | 41.325 | 52.725 | 5,320 | 7,600 | 1.0 | 1.0 | 0.230 | 32007 X |
| 35 | 62 | 21 | 21 | 17 | 46.550 | 61.750 | 5,320 | 7,600 | 1.0 | 1.0 | 0.267 | 33007 |
| 35 | 72 | 18.25 | 17 | 15 | 51.300 | 56.525 | 5,035 | 6,745 | 1.5 | 1.5 | 0.340 | 30207 |
| 35 | 72 | 24.25 | 23 | 19 | 66.975 | 79.325 | 5,035 | 6,745 | 1.5 | 1.5 | 0.456 | 32207 |
| 35 | 72 | 28 | 28 | 22 | 82.175 | 102.600 | 5,035 | 6,745 | 1.5 | 1.5 | 0.540 | 33207 |
| 35 | 80 | 22.75 | 21 | 15 | 58.900 | 64.600 | 4,085 | 5,700 | 2.0 | 1.5 | 0.520 | 30307 D |
| 35 | 80 | 22.75 | 21 | 18 | 72.200 | 75.050 | 4,560 | 6,365 | 2.0 | 1.5 | 0.538 | 30307 |
| 35 | 80 | 32.75 | 31 | 25 | 94.050 | 105.450 | 4,750 | 6,365 | 2.0 | 1.5 | 0.765 | 32307 |
| 40 | 62 | 15 | 15 | 12 | 32.300 | 44.650 | 5,320 | 7,125 | 0.6 | 0.6 | 0.161 | 32908 |
| 40 | 68 | 19 | 19 | 14.5 | 49.875 | 67.450 | 5,035 | 6,745 | 1.0 | 1.0 | 0.280 | 32008 X |
| 40 | 68 | 22 | 22 | 18 | 56.050 | 77.425 | 5,035 | 6,745 | 1.0 | 1.0 | 0.322 | 33008 |
| 40 | 80 | 19.75 | 18 | 16 | 60.325 | 66.500 | 4,560 | 5,985 | 1.5 | 1.5 | 0.438 | 30208 |
| 40 | 80 | 24.75 | 23 | 19 | 73.150 | 85.975 | 4,560 | 5,985 | 1.5 | 1.5 | 0.549 | 32208 |
| 40 | 80 | 32 | 32 | 25 | 101.650 | 130.150 | 4,560 | 5,985 | 1.5 | 1.5 | 0.744 | 33208 |
| 40 | 90 | 25.25 | 23 | 17 | 76.000 | 85.025 | 3,610 | 5,035 | 2.0 | 1.5 | 0.728 | 30308 D |
| 40 | 90 | 25.25 | 23 | 20 | 85.975 | 95.950 | 4,085 | 5,320 | 2.0 | 1.5 | 0.758 | 30308 |
| 40 | 90 | 35.25 | 33 | 27 | 114.000 | 137.750 | 4,085 | 5,700 | 2.0 | 1.5 | 1.050 | 32308 |
| 45 | 68 | 15 | 15 | 12 | 32.775 | 47.975 | 4,750 | 6,365 | 0.6 | 0.6 | 0.187 | 32909 |
| 45 | 75 | 20 | 20 | 15.5 | 57.000 | 78.850 | 4,275 | 5,985 | 1.0 | 1.0 | 0.354 | 32009 X |
| 45 | 75 | 24 | 24 | 19 | 63.650 | 89.775 | 4,560 | 5,985 | 1.0 | 1.0 | 0.414 | 33009 |
| 45 | 80 | 26 | 26 | 20.5 | 79.800 | 107.350 | 4,275 | 5,700 | 1.5 | 1.5 | 0.552 | 33109 |
| 45 | 85 | 20.75 | 19 | 16 | 65.075 | 75.525 | 4,085 | 5,700 | 1.5 | 1.5 | 0.488 | 30209 |
| 45 | 85 | 24.75 | 23 | 19 | 78.850 | 96.900 | 4,085 | 5,700 | 1.5 | 1.5 | 0.602 | 32209 |
| 45 | 85 | 32 | 32 | 25 | 105.450 | 139.650 | 4,085 | 5,700 | 1.5 | 1.5 | 0.817 | 33209 |
| 45 | 100 | 27.25 | 25 | 18 | 90.725 | 103.550 | 3,230 | 4,560 | 2.0 | 1.5 | 0.956 | 30309 D |



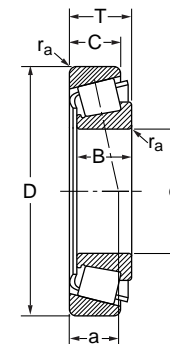
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|-------|----|------|--------------------|----------------|----------------|-------|-------------------------|------------------------|-------|-------------|
| d | D | T | B | C | C | C ₀ | Grease | Oil | Cone r _a max | Cup r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 45 | 100 | 27.25 | 25 | 22 | 106.400 | 120.650 | 3,610 | 5,035 | 2.0 | 1.5 | 1.010 | 30309 |
| 45 | 100 | 38.25 | 36 | 30 | 136.800 | 168.150 | 3,610 | 5,035 | 2.0 | 1.5 | 1.420 | 32309 |
| 50 | 72 | 15 | 15 | 12 | 34.200 | 51.300 | 4,275 | 5,985 | 0.6 | 0.6 | 0.193 | 32910 |
| 50 | 80 | 20 | 20 | 15.5 | 57.950 | 82.650 | 4,085 | 5,700 | 1.0 | 1.0 | 0.380 | 32010 X |
| 50 | 80 | 24 | 24 | 19 | 66.975 | 98.800 | 4,085 | 5,700 | 1.0 | 1.0 | 0.452 | 33010 |
| 50 | 85 | 26 | 26 | 20 | 84.550 | 119.700 | 4,085 | 5,320 | 1.5 | 1.5 | 0.597 | 33110 |
| 50 | 90 | 21.75 | 20 | 17 | 72.200 | 86.925 | 3,800 | 5,035 | 1.5 | 1.5 | 0.558 | 30210 |
| 50 | 90 | 24.75 | 23 | 19 | 83.125 | 103.550 | 3,800 | 5,035 | 1.5 | 1.5 | 0.644 | 32210 |
| 50 | 90 | 32 | 32 | 24.5 | 112.100 | 156.750 | 3,800 | 5,035 | 1.5 | 1.5 | 0.867 | 33210 |
| 50 | 110 | 29.25 | 27 | 19 | 108.300 | 125.400 | 3,040 | 4,085 | 2.0 | 2.0 | 1.260 | 30310 D |
| 50 | 110 | 29.25 | 27 | 23 | 123.500 | 140.600 | 3,230 | 4,560 | 2.0 | 2.0 | 1.280 | 30310 |
| 50 | 110 | 42.25 | 40 | 33 | 167.200 | 209.000 | 3,420 | 4,560 | 2.0 | 2.0 | 1.880 | 32310 |
| 55 | 80 | 17 | 17 | 14 | 43.225 | 70.775 | 4,085 | 5,320 | 1.0 | 1.0 | 0.282 | 32911 |
| 55 | 90 | 23 | 23 | 17.5 | 77.425 | 111.150 | 3,610 | 5,035 | 1.5 | 1.5 | 0.568 | 32011 X |
| 55 | 90 | 27 | 27 | 21 | 86.925 | 131.100 | 3,610 | 5,035 | 1.5 | 1.5 | 0.657 | 33011 |
| 55 | 95 | 30 | 30 | 23 | 106.400 | 150.100 | 3,610 | 4,750 | 1.5 | 1.5 | 0.877 | 33111 |
| 55 | 100 | 22.75 | 21 | 18 | 89.775 | 107.350 | 3,420 | 4,750 | 2.0 | 1.5 | 0.736 | 30211 |
| 55 | 100 | 26.75 | 25 | 21 | 104.500 | 130.150 | 3,420 | 4,750 | 2.0 | 1.5 | 0.860 | 32211 |
| 55 | 100 | 35 | 35 | 27 | 133.950 | 183.350 | 3,420 | 4,750 | 2.0 | 1.5 | 1.180 | 33211 |
| 55 | 120 | 31.5 | 29 | 21 | 124.450 | 145.350 | 2,660 | 3,800 | 2.0 | 2.0 | 1.580 | 30311 D |
| 55 | 120 | 31.5 | 29 | 25 | 142.500 | 162.450 | 3,040 | 4,085 | 2.0 | 2.0 | 1.630 | 30311 |
| 55 | 120 | 45.5 | 43 | 35 | 193.800 | 245.100 | 3,040 | 4,085 | 2.0 | 2.0 | 2.390 | 32311 |
| 60 | 85 | 17 | 17 | 14 | 46.550 | 80.275 | 3,610 | 5,035 | 1.0 | 1.0 | 0.306 | 32912 |
| 60 | 95 | 23 | 23 | 17.5 | 81.225 | 120.650 | 3,420 | 4,750 | 1.5 | 1.5 | 0.608 | 32012 X |
| 60 | 95 | 27 | 27 | 21 | 91.200 | 142.500 | 3,420 | 4,750 | 1.5 | 1.5 | 0.713 | 33012 |
| 60 | 100 | 30 | 30 | 23 | 109.250 | 157.700 | 3,230 | 4,560 | 1.5 | 1.5 | 0.910 | 33112 |
| 60 | 110 | 23.75 | 22 | 19 | 98.800 | 116.850 | 3,230 | 4,275 | 2.0 | 1.5 | 0.930 | 30212 |
| 60 | 110 | 29.75 | 28 | 24 | 124.450 | 158.650 | 3,230 | 4,275 | 2.0 | 1.5 | 1.180 | 32212 |
| 60 | 110 | 38 | 38 | 29 | 157.700 | 219.450 | 3,230 | 4,275 | 2.0 | 1.5 | 1.560 | 33212 |
| 60 | 130 | 33.5 | 31 | 22 | 143.450 | 168.150 | 2,470 | 3,610 | 2.5 | 2.0 | 1.980 | 30312 D |
| 60 | 130 | 33.5 | 31 | 26 | 165.300 | 190.950 | 2,850 | 3,800 | 2.5 | 2.0 | 2.030 | 30312 |
| 60 | 130 | 48.5 | 46 | 37 | 221.350 | 280.250 | 2,850 | 3,800 | 2.5 | 2.0 | 2.960 | 32312 |



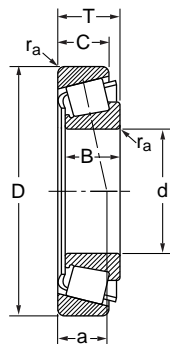
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|-------|----|------|--------------------|----------------|----------------|-------|-------------------------|------------------------|-------|-------------|
| d | D | T | B | C | C | C ₀ | Grease | Oil | Cone r _a max | Cup r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 65 | 90 | 17 | 17 | 14 | 46.550 | 82.175 | 3,420 | 4,750 | 1.0 | 1.0 | 0.323 | 32913 |
| 65 | 100 | 23 | 23 | 17.5 | 82.175 | 125.400 | 3,230 | 4,275 | 1.5 | 1.5 | 0.646 | 32013 X |
| 65 | 100 | 27 | 27 | 21 | 92.625 | 148.200 | 3,230 | 4,275 | 1.5 | 1.5 | 0.760 | 33013 |
| 65 | 110 | 34 | 34 | 26.5 | 140.600 | 207.100 | 3,040 | 4,085 | 1.5 | 1.5 | 1.320 | 33113 |
| 65 | 120 | 24.75 | 23 | 20 | 115.900 | 143.450 | 2,850 | 3,800 | 2.0 | 1.5 | 1.180 | 30213 |
| 65 | 120 | 32.75 | 31 | 27 | 149.150 | 191.900 | 2,850 | 3,800 | 2.0 | 1.5 | 1.550 | 32213 |
| 65 | 120 | 41 | 41 | 32 | 191.900 | 267.900 | 2,850 | 3,800 | 2.0 | 1.5 | 2.040 | 33213 |
| 65 | 140 | 36 | 33 | 23 | 164.350 | 194.750 | 2,280 | 3,230 | 2.5 | 2.0 | 2.430 | 30313 D |
| 65 | 140 | 36 | 33 | 28 | 190.000 | 221.350 | 2,470 | 3,420 | 2.5 | 2.0 | 2.510 | 30313 |
| 65 | 140 | 51 | 48 | 39 | 253.650 | 323.000 | 2,660 | 3,610 | 2.5 | 2.0 | 3.600 | 32313 |
| 70 | 100 | 20 | 20 | 16 | 66.500 | 107.350 | 3,040 | 4,275 | 1.0 | 1.0 | 0.494 | 32914 |
| 70 | 110 | 25 | 25 | 19 | 98.800 | 150.100 | 3,040 | 4,085 | 1.5 | 1.5 | 0.869 | 32014 X |
| 70 | 110 | 31 | 31 | 25.5 | 120.650 | 193.800 | 2,850 | 4,085 | 1.5 | 1.5 | 1.110 | 33014 |
| 70 | 120 | 37 | 37 | 29 | 168.150 | 248.900 | 2,850 | 3,800 | 2.0 | 1.5 | 1.710 | 33114 |
| 70 | 125 | 26.25 | 24 | 21 | 125.400 | 154.850 | 2,660 | 3,800 | 2.0 | 1.5 | 1.300 | 30214 |
| 70 | 125 | 33.25 | 31 | 27 | 149.150 | 194.750 | 2,660 | 3,800 | 2.0 | 1.5 | 1.660 | 32214 |
| 70 | 125 | 41 | 41 | 32 | 198.550 | 284.050 | 2,660 | 3,800 | 2.0 | 1.5 | 2.150 | 33214 |
| 70 | 150 | 38 | 35 | 25 | 182.400 | 217.550 | 2,090 | 3,040 | 2.5 | 2.0 | 2.940 | 30314 D |
| 70 | 150 | 38 | 35 | 30 | 215.650 | 254.600 | 2,280 | 3,230 | 2.5 | 2.0 | 3.030 | 30314 |
| 70 | 150 | 54 | 51 | 42 | 285.000 | 370.500 | 2,470 | 3,230 | 2.5 | 2.0 | 4.350 | 32314 |
| 75 | 105 | 20 | 20 | 16 | 68.875 | 114.000 | 3,040 | 4,085 | 1.0 | 1.0 | 0.530 | 32915 |
| 75 | 115 | 25 | 25 | 19 | 103.550 | 162.450 | 2,850 | 3,800 | 1.5 | 1.5 | 0.925 | 32015 X |
| 75 | 115 | 31 | 31 | 25.5 | 126.350 | 209.000 | 2,850 | 3,800 | 1.5 | 1.5 | 1.180 | 33015 |
| 75 | 125 | 37 | 37 | 29 | 172.900 | 261.250 | 2,660 | 3,610 | 2.0 | 2.0 | 1.800 | 33115 |
| 75 | 130 | 27.25 | 25 | 22 | 135.850 | 172.900 | 2,660 | 3,610 | 2.0 | 1.5 | 1.430 | 30215 |
| 75 | 130 | 33.25 | 31 | 27 | 156.750 | 208.050 | 2,660 | 3,610 | 2.0 | 1.5 | 1.720 | 32215 |
| 75 | 130 | 41 | 41 | 31 | 204.250 | 299.250 | 2,660 | 3,610 | 2.0 | 1.5 | 2.250 | 33215 |
| 75 | 160 | 40 | 37 | 26 | 200.450 | 238.450 | 2,090 | 2,850 | 2.5 | 2.0 | 3.470 | 30315 D |
| 75 | 160 | 40 | 37 | 31 | 240.350 | 285.000 | 2,280 | 3,040 | 2.5 | 2.0 | 3.630 | 30315 |
| 75 | 160 | 58 | 55 | 45 | 323.000 | 422.750 | 2,280 | 3,040 | 2.5 | 2.0 | 5.310 | 32315 |
| 80 | 110 | 20 | 20 | 16 | 71.250 | 121.600 | 2,850 | 3,800 | 1.0 | 1.0 | 0.560 | 32916 |
| 80 | 125 | 29 | 29 | 22 | 133.000 | 210.900 | 2,660 | 3,420 | 1.5 | 1.5 | 1.320 | 32016 X |



| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|-------|----|----|--------------------|-----------------------|----------------|-------|-------------------------|------------------------|-------|-------------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil | Cone r _a max | Cup r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 80 | 130 | 37 | 37 | 29 | 176.700 | 274.550 | 2,470 | 3,420 | 2.0 | 1.5 | 1.880 | 33116 |
| 80 | 140 | 28.25 | 26 | 22 | 149.150 | 185.250 | 2,470 | 3,230 | 2.0 | 2.0 | 1.690 | 30216 |
| 80 | 140 | 35.25 | 33 | 28 | 182.400 | 241.300 | 2,470 | 3,230 | 2.0 | 2.0 | 2.130 | 32216 |
| 80 | 140 | 46 | 46 | 35 | 243.200 | 365.750 | 2,470 | 3,230 | 2.0 | 2.0 | 2.930 | 33216 |
| 80 | 170 | 42.5 | 39 | 27 | 223.250 | 268.850 | 1,900 | 2,660 | 2.5 | 2.0 | 4.070 | 30316 D |
| 80 | 170 | 42.5 | 39 | 33 | 262.200 | 313.500 | 2,090 | 2,850 | 2.5 | 2.0 | 4.270 | 30316 |
| 80 | 170 | 61.5 | 58 | 48 | 365.750 | 479.750 | 2,090 | 2,850 | 2.5 | 2.0 | 6.350 | 32316 |
| 85 | 120 | 23 | 23 | 18 | 88.825 | 149.150 | 2,660 | 3,610 | 1.5 | 1.5 | 0.800 | 32917 |
| 85 | 130 | 29 | 29 | 22 | 135.850 | 219.450 | 2,470 | 3,420 | 1.5 | 1.5 | 1.380 | 32017 X |
| 85 | 140 | 41 | 41 | 32 | 218.500 | 346.750 | 2,280 | 3,230 | 2.0 | 2.0 | 2.510 | 33117 |
| 85 | 150 | 30.5 | 28 | 24 | 174.800 | 221.350 | 2,280 | 3,040 | 2.0 | 2.0 | 2.120 | 30217 |
| 85 | 150 | 38.5 | 36 | 30 | 199.500 | 263.150 | 2,280 | 3,040 | 2.0 | 2.0 | 2.640 | 32217 |
| 85 | 150 | 49 | 49 | 37 | 266.950 | 394.250 | 2,280 | 3,040 | 2.0 | 2.0 | 3.570 | 33217 |
| 85 | 180 | 44.5 | 41 | 28 | 247.950 | 299.250 | 1,805 | 2,470 | 3.0 | 2.5 | 4.880 | 31317 |
| 85 | 180 | 44.5 | 41 | 28 | 247.950 | 299.250 | 1,805 | 2,470 | 3.0 | 2.5 | 4.880 | 30317 D |
| 85 | 180 | 44.5 | 41 | 34 | 294.500 | 356.250 | 1,900 | 2,660 | 3.0 | 2.5 | 5.080 | 30317 |
| 85 | 180 | 63.5 | 60 | 49 | 389.500 | 508.250 | 1,900 | 2,660 | 3.0 | 2.5 | 7.310 | 32317 |
| 90 | 125 | 23 | 23 | 18 | 92.150 | 158.650 | 2,470 | 3,420 | 1.5 | 1.5 | 0.841 | 32918 |
| 90 | 140 | 32 | 32 | 24 | 161.500 | 259.350 | 2,280 | 3,040 | 2.0 | 1.5 | 1.780 | 32018 X |
| 90 | 150 | 45 | 45 | 35 | 246.050 | 384.750 | 2,280 | 3,040 | 2.0 | 2.0 | 3.140 | 33118 |
| 90 | 160 | 32.5 | 30 | 26 | 190.950 | 243.200 | 2,090 | 2,850 | 2.0 | 2.0 | 2.600 | 30218 |
| 90 | 160 | 42.5 | 40 | 34 | 243.200 | 332.500 | 2,090 | 2,850 | 2.0 | 2.0 | 3.410 | 32218 |
| 90 | 190 | 46.5 | 43 | 30 | 237.500 | 277.400 | 1,710 | 2,280 | 3.0 | 2.5 | 5.400 | 30318 D |
| 90 | 190 | 46.5 | 43 | 30 | 250.800 | 299.250 | 1,710 | 2,280 | 3.0 | 2.5 | 5.520 | 31318 |
| 90 | 190 | 46.5 | 43 | 36 | 289.750 | 342.000 | 1,805 | 2,470 | 3.0 | 2.5 | 5.670 | 30318 |
| 90 | 190 | 67.5 | 64 | 53 | 427.500 | 560.500 | 1,900 | 2,470 | 3.0 | 2.5 | 8.600 | 32318 |
| 95 | 130 | 23 | 23 | 18 | 93.100 | 163.400 | 2,280 | 3,230 | 1.5 | 1.5 | 0.877 | 32919 |
| 95 | 145 | 32 | 32 | 24 | 164.350 | 268.850 | 2,280 | 3,040 | 2.0 | 1.5 | 1.880 | 32019 X |
| 95 | 170 | 34.5 | 32 | 27 | 211.850 | 271.700 | 2,090 | 2,660 | 2.5 | 2.0 | 3.130 | 30219 |
| 95 | 170 | 45.5 | 43 | 37 | 274.550 | 380.000 | 2,090 | 2,660 | 2.5 | 2.0 | 4.220 | 32219 |
| 95 | 200 | 49.5 | 45 | 32 | 294.500 | 356.250 | 1,615 | 2,280 | 3.0 | 2.5 | 6.640 | 30319 D |
| 95 | 200 | 49.5 | 45 | 38 | 318.250 | 380.000 | 1,805 | 2,470 | 3.0 | 2.5 | 6.550 | 30319 |

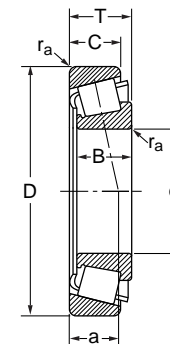


| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|-------|----|----|--------------------|-----------------------|----------------|-------|-------------------------|------------------------|--------|-------------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil | Cone r _a max | Cup r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 95 | 200 | 71.5 | 67 | 55 | 437.000 | 570.000 | 1,805 | 2,470 | 3.0 | 2.5 | 9.650 | 32319 |
| 100 | 140 | 25 | 25 | 20 | 111.150 | 194.750 | 2,090 | 3,040 | 1.5 | 1.5 | 1.180 | 32920 |
| 100 | 150 | 32 | 32 | 24 | 167.200 | 279.300 | 2,090 | 2,850 | 2.0 | 1.5 | 1.950 | 32020 X |
| 100 | 180 | 37 | 34 | 29 | 242.250 | 313.500 | 1,900 | 2,470 | 2.5 | 2.0 | 3.780 | 30220 |
| 100 | 180 | 49 | 46 | 39 | 308.750 | 427.500 | 1,900 | 2,470 | 2.5 | 2.0 | 5.050 | 32220 |
| 100 | 215 | 51.5 | 47 | 39 | 346.750 | 413.250 | 1,615 | 2,280 | 3.0 | 2.5 | 7.940 | 30320 |
| 100 | 215 | 77.5 | 73 | 60 | 536.750 | 717.250 | 1,615 | 2,280 | 3.0 | 2.5 | 12.700 | 32320 |
| 105 | 145 | 25 | 25 | 20 | 113.050 | 201.400 | 2,090 | 2,850 | 1.5 | 1.5 | 1.230 | 32921 |
| 105 | 160 | 35 | 35 | 26 | 193.800 | 323.000 | 1,900 | 2,660 | 2.0 | 2.0 | 2.480 | 32021 X |
| 105 | 190 | 39 | 36 | 30 | 266.000 | 346.750 | 1,805 | 2,470 | 2.5 | 2.0 | 4.520 | 30221 |
| 105 | 190 | 53 | 50 | 43 | 342.000 | 484.500 | 1,805 | 2,470 | 2.5 | 2.0 | 6.260 | 32221 |
| 105 | 225 | 53.5 | 49 | 41 | 375.250 | 446.500 | 1,520 | 2,090 | 3.0 | 2.5 | 9.110 | 30321 |
| 105 | 225 | 81.5 | 77 | 63 | 555.750 | 741.000 | 1,615 | 2,090 | 3.0 | 2.5 | 14.200 | 32321 |
| 110 | 150 | 25 | 25 | 20 | 116.850 | 212.800 | 2,090 | 2,660 | 1.5 | 1.5 | 1.290 | 32922 |
| 110 | 170 | 38 | 38 | 29 | 224.200 | 370.500 | 1,900 | 2,470 | 2.0 | 2.0 | 3.090 | 32022 X |
| 110 | 200 | 41 | 38 | 32 | 299.250 | 399.000 | 1,710 | 2,280 | 2.5 | 2.0 | 5.280 | 30222 |
| 110 | 200 | 56 | 53 | 46 | 380.000 | 536.750 | 1,710 | 2,280 | 2.5 | 2.0 | 7.350 | 32222 |
| 110 | 240 | 54.5 | 50 | 42 | 460.750 | 565.250 | 1,425 | 1,900 | 3.0 | 2.5 | 11.000 | 30322 |
| 110 | 240 | 84.5 | 80 | 65 | 641.250 | 864.500 | 1,425 | 1,900 | 3.0 | 2.5 | 17.100 | 32322 |
| 120 | 165 | 29 | 29 | 23 | 149.150 | 268.850 | 1,805 | 2,470 | 1.5 | 1.5 | 1.800 | 32924 |
| 120 | 180 | 38 | 38 | 29 | 229.900 | 384.750 | 1,710 | 2,280 | 2.0 | 2.0 | 3.270 | 32024 X |
| 120 | 215 | 43.5 | 40 | 34 | 318.250 | 427.500 | 1,520 | 2,090 | 2.5 | 2.0 | 6.280 | 30224 |
| 120 | 215 | 61.5 | 58 | 50 | 418.000 | 603.250 | 1,520 | 2,090 | 2.5 | 2.0 | 9.000 | 32224 |
| 120 | 260 | 59.5 | 55 | 46 | 508.250 | 622.250 | 1,330 | 1,805 | 3.0 | 2.5 | 13.900 | 30324 |
| 120 | 260 | 90.5 | 86 | 69 | 731.500 | 1007.000 | 1,330 | 1,805 | 3.0 | 2.5 | 21.800 | 32324 |
| 130 | 180 | 32 | 30 | 26 | 158.650 | 266.950 | 1,710 | 2,280 | 2.0 | 1.5 | 2.250 | 32926 |
| 130 | 200 | 45 | 45 | 34 | 304.000 | 508.250 | 1,520 | 2,090 | 2.0 | 2.0 | 5.060 | 32026 X |
| 130 | 230 | 43.75 | 40 | 34 | 313.500 | 413.250 | 1,425 | 1,900 | 3.0 | 2.5 | 6.830 | 30226 |
| 130 | 230 | 67.75 | 64 | 54 | 503.500 | 750.500 | 1,425 | 1,900 | 3.0 | 2.5 | 11.300 | 32226 |
| 130 | 280 | 63.75 | 58 | 49 | 517.750 | 641.250 | 1,235 | 1,710 | 4.0 | 3.0 | 16.600 | 30326 |
| 130 | 280 | 98.75 | 93 | 78 | 788.500 | 1092.500 | 1,235 | 1,710 | 4.0 | 3.0 | 26.600 | 32326 |
| 140 | 190 | 32 | 30 | 26 | 164.350 | 285.000 | 1,615 | 2,090 | 2.0 | 1.5 | 2.390 | 32928 |



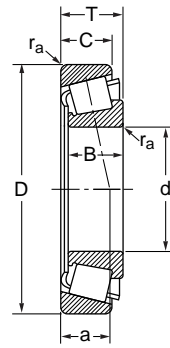
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| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|--------|-----|-----|--------------------|----------------|----------------|-------|-------------------------|------------------------|--------|-------------|
| d | D | T | B | C | C | C ₀ | Grease | Oil | Cone r _a max | Cup r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 140 | 210 | 45 | 45 | 34 | 308.750 | 527.250 | 1,520 | 2,090 | 2.0 | 2.0 | 5.320 | 32028 X |
| 140 | 250 | 45.75 | 42 | 36 | 370.500 | 489.250 | 1,330 | 1,805 | 3.0 | 2.5 | 8.740 | 30228 |
| 140 | 250 | 71.75 | 68 | 58 | 579.500 | 869.250 | 1,330 | 1,805 | 3.0 | 2.5 | 14.300 | 32228 |
| 140 | 300 | 67.75 | 62 | 53 | 570.000 | 703.000 | 1,140 | 1,520 | 4.0 | 3.0 | 21.100 | 30328 |
| 140 | 300 | 107.75 | 102 | 85 | 935.750 | 1368.000 | 1,140 | 1,520 | 4.0 | 3.0 | 33.900 | 32328 |
| 150 | 210 | 38 | 36 | 31 | 234.650 | 418.000 | 1,425 | 1,900 | 2.0 | 2.0 | 4.050 | 32930 |
| 150 | 225 | 48 | 48 | 36 | 356.250 | 617.500 | 1,330 | 1,900 | 2.5 | 2.0 | 6.600 | 32030 X |
| 150 | 270 | 49 | 45 | 38 | 413.250 | 541.500 | 1,235 | 1,615 | 3.0 | 2.5 | 11.200 | 30230 |
| 150 | 270 | 77 | 73 | 60 | 565.250 | 855.000 | 1,235 | 1,615 | 3.0 | 2.5 | 17.800 | 32230 |
| 150 | 320 | 72 | 65 | 55 | 655.500 | 817.000 | 1,045 | 1,425 | 4.0 | 3.0 | 25.000 | 30330 |
| 150 | 320 | 114 | 108 | 90 | 1064.000 | 1615.000 | 1,045 | 1,425 | 4.0 | 3.0 | 41.400 | 32330 |
| 160 | 220 | 38 | 36 | 31 | 237.500 | 432.250 | 1,330 | 1,805 | 2.0 | 2.0 | 4.320 | 32932 |
| 160 | 240 | 51 | 51 | 38 | 403.750 | 712.500 | 1,235 | 1,710 | 2.5 | 2.0 | 7.930 | 32032 X |
| 160 | 290 | 52 | 48 | 40 | 446.500 | 579.500 | 1,140 | 1,520 | 3.0 | 2.5 | 13.700 | 30232 |
| 160 | 290 | 84 | 80 | 67 | 688.750 | 1064.000 | 1,140 | 1,520 | 3.0 | 2.5 | 22.700 | 32232 |
| 160 | 340 | 75 | 68 | 58 | 726.750 | 912.000 | 950 | 1,330 | 4.0 | 3.0 | 29.200 | 30332 |
| 160 | 340 | 121 | 114 | 95 | 1149.500 | 1681.500 | 950 | 1,330 | 4.0 | 3.0 | 48.300 | 32332 |
| 170 | 230 | 38 | 36 | 31 | 245.100 | 460.750 | 1,235 | 1,710 | 2.0 | 2.0 | 4.300 | 32934 |
| 170 | 260 | 57 | 57 | 43 | 479.750 | 845.500 | 1,140 | 1,615 | 2.5 | 2.0 | 10.600 | 32034 X |
| 170 | 310 | 57 | 52 | 43 | 498.750 | 655.500 | 1,045 | 1,425 | 4.0 | 3.0 | 16.100 | 30234 |
| 170 | 310 | 91 | 86 | 71 | 793.250 | 1254.000 | 1,045 | 1,425 | 4.0 | 3.0 | 27.600 | 32234 |
| 170 | 360 | 80 | 72 | 62 | 802.750 | 1026.000 | 903 | 1,235 | 4.0 | 3.0 | 33.500 | 30334 |
| 170 | 360 | 127 | 120 | 100 | 1301.500 | 1947.500 | 950 | 1,235 | 4.0 | 3.0 | 57.000 | 32334 |
| 180 | 250 | 45 | 42 | 36 | 294.500 | 541.500 | 1,140 | 1,615 | 2.0 | 2.0 | 6.220 | 32936 |
| 180 | 280 | 64 | 64 | 48 | 608.000 | 1073.500 | 1,140 | 1,520 | 2.5 | 2.0 | 14.300 | 32036 X |
| 180 | 320 | 57 | 52 | 43 | 494.000 | 660.250 | 1,045 | 1,330 | 4.0 | 3.0 | 16.600 | 30236 |
| 180 | 320 | 91 | 86 | 71 | 831.250 | 1311.000 | 950 | 1,330 | 4.0 | 3.0 | 28.500 | 32236 |
| 180 | 380 | 83 | 75 | 64 | 888.250 | 1168.500 | 855 | 1,235 | 4.0 | 3.0 | 39.300 | 30336 |
| 180 | 380 | 134 | 126 | 106 | 1444.000 | 2175.500 | 903 | 1,235 | 4.0 | 3.0 | 66.800 | 32336 |
| 190 | 260 | 45 | 42 | 36 | 318.250 | 612.750 | 1,140 | 1,520 | 2.0 | 2.0 | 6.590 | 32938 |
| 190 | 290 | 64 | 64 | 48 | 617.500 | 1111.500 | 1,045 | 1,425 | 2.5 | 2.0 | 14.900 | 32038 X |
| 190 | 340 | 60 | 55 | 46 | 551.000 | 750.500 | 950 | 1,235 | 4.0 | 3.0 | 20.100 | 30238 |



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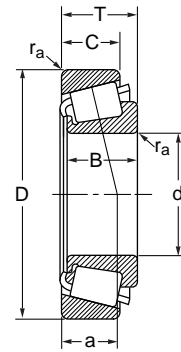
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|------|-----|-----|--------------------|----------------|----------------|-------|-------------------------|------------------------|---------|-------------|
| d | D | T | B | C | C | C ₀ | Grease | Oil | Cone r _a max | Cup r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 190 | 340 | 97 | 92 | 75 | 931.000 | 1472.500 | 950 | 1,235 | 4.0 | 3.0 | 34.100 | 32238 |
| 190 | 400 | 86 | 78 | 65 | 959.500 | 1273.000 | 808 | 1,140 | 5.0 | 4.0 | 46.000 | 30338 |
| 190 | 400 | 140 | 132 | 109 | 1577.000 | 2451.000 | 808 | 1,140 | 5.0 | 4.0 | 78.900 | 32338 |
| 200 | 280 | 51 | 48 | 41 | 389.500 | 741.000 | 1,045 | 1,425 | 2.5 | 2.0 | 9.260 | 32940 |
| 200 | 310 | 70 | 70 | 53 | 722.000 | 1301.500 | 950 | 1,330 | 2.5 | 2.0 | 18.900 | 32040 X |
| 200 | 360 | 64 | 58 | 48 | 612.750 | 845.500 | 855 | 1,235 | 4.0 | 3.0 | 23.800 | 30240 |
| 200 | 360 | 104 | 98 | 82 | 1035.500 | 1662.500 | 903 | 1,235 | 4.0 | 3.0 | 42.000 | 32240 |
| 200 | 420 | 89 | 80 | 67 | 978.500 | 1320.500 | 808 | 1,140 | 5.0 | 4.0 | 52.300 | 30340 |
| 200 | 420 | 146 | 138 | 115 | 1729.000 | 2726.500 | 760 | 1,045 | 5.0 | 4.0 | 90.950 | 32340 |
| 220 | 300 | 51 | 48 | 41 | 403.750 | 812.250 | 950 | 1,330 | 2.5 | 2.0 | 10.100 | 32944 |
| 220 | 340 | 76 | 76 | 57 | 840.750 | 1529.500 | 903 | 1,235 | 3.0 | 2.5 | 24.400 | 32044 X |
| 220 | 400 | 72 | 65 | 54 | 769.500 | 1092.500 | 808 | 1,045 | 4.0 | 3.0 | 33.600 | 30244 |
| 220 | 400 | 114 | 108 | 90 | 1273.000 | 2099.500 | 808 | 1,045 | 4.0 | 3.0 | 57.400 | 32244 |
| 220 | 460 | 97 | 88 | 73 | 1358.500 | 1890.500 | 713 | 950 | 5.0 | 4.0 | 72.400 | 30344 |
| 220 | 460 | 154 | 145 | 122 | 1919.000 | 3040.000 | 713 | 950 | 5.0 | 4.0 | 114.000 | 32344 |
| 240 | 320 | 51 | 48 | 41 | 413.250 | 859.750 | 903 | 1,235 | 2.5 | 2.0 | 10.700 | 32948 |
| 240 | 360 | 76 | 76 | 57 | 874.000 | 1643.500 | 808 | 1,140 | 3.0 | 2.5 | 26.200 | 32048 X |
| 240 | 440 | 79 | 72 | 60 | 940.500 | 1330.000 | 713 | 950 | 4.0 | 3.0 | 45.200 | 30248 |
| 240 | 440 | 127 | 120 | 100 | 1548.500 | 2593.500 | 713 | 950 | 4.0 | 3.0 | 78.000 | 32248 |
| 240 | 500 | 105 | 95 | 80 | 1577.000 | 2223.000 | 637 | 903 | 5.0 | 4.0 | 92.600 | 30348 |
| 240 | 500 | 165 | 155 | 132 | 2394.000 | 3895.000 | 637 | 855 | 5.0 | 4.0 | 145.000 | 32348 |
| 260 | 360 | 63.5 | 60 | 52 | 598.500 | 1197.000 | 808 | 1,045 | 2.5 | 2.0 | 18.100 | 32952 |
| 260 | 400 | 87 | 87 | 65 | 1102.000 | 2052.000 | 760 | 1,045 | 4.0 | 3.0 | 38.500 | 32052 X |
| 260 | 480 | 89 | 80 | 67 | 1130.500 | 1615.000 | 637 | 855 | 5.0 | 4.0 | 60.700 | 30252 |
| 260 | 480 | 137 | 130 | 106 | 1805.000 | 3135.000 | 637 | 903 | 5.0 | 4.0 | 103.000 | 32252 |
| 280 | 380 | 63.5 | 60 | 52 | 603.250 | 1235.000 | 713 | 950 | 2.5 | 2.0 | 19.100 | 32956 |
| 280 | 420 | 87 | 87 | 65 | 1121.000 | 2128.000 | 675 | 950 | 4.0 | 3.0 | 40.600 | 32056 X |
| 280 | 500 | 89 | 80 | 67 | 1178.000 | 1805.000 | 599 | 808 | 5.0 | 4.0 | 66.300 | 30256 |
| 280 | 500 | 137 | 130 | 106 | 1852.500 | 3277.500 | 599 | 808 | 5.0 | 4.0 | 109.000 | 32256 |
| 300 | 420 | 76 | 72 | 62 | 850.250 | 1729.000 | 675 | 903 | 3.0 | 2.5 | 30.500 | 32960 |
| 300 | 460 | 100 | 100 | 74 | 1368.000 | 2565.000 | 637 | 855 | 4.0 | 3.0 | 56.600 | 32060 X |
| 300 | 540 | 96 | 85 | 71 | 1368.000 | 1995.000 | 570 | 760 | 5.0 | 4.0 | 80.600 | 30260 |



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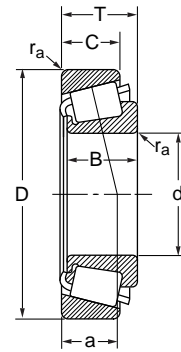
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|-----|-----|-----|--------------------|--------------------------|----------------|-------|-------------------------------|------------------------------|---------|-------------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil | Cone r _a max | Cup r _a max | kg | - |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 300 | 540 | 149 | 140 | 115 | 2109.000 | 3515.000 | 570 | 760 | 5.0 | 4.0 | 132.000 | 32260 |
| 320 | 440 | 76 | 72 | 63 | 855.000 | 1786.000 | 637 | 855 | 3.0 | 2.5 | 32.000 | 32964 |
| 320 | 480 | 100 | 100 | 74 | 1434.500 | 2764.500 | 599 | 808 | 4.0 | 3.0 | 60.000 | 32064 X |
| 320 | 580 | 104 | 92 | 75 | 1558.000 | 2299.000 | 504 | 713 | 5.0 | 4.0 | 99.300 | 30264 |
| 340 | 460 | 76 | 72 | 63 | 864.500 | 1843.000 | 599 | 808 | 3.0 | 2.5 | 33.600 | 32968 |
| 360 | 480 | 76 | 72 | 62 | 897.750 | 1995.000 | 570 | 760 | 3.0 | 2.5 | 35.800 | 32972 |
| 380 | 520 | 87 | 82 | 71 | 1149.500 | 2422.500 | 532 | 713 | 4.0 | 3.0 | 49.500 | 32976 |
| 400 | 540 | 87 | 82 | 71 | 1187.500 | 2565.000 | 504 | 675 | 4.0 | 3.0 | 52.700 | 32980 |

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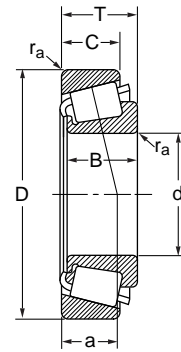
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|--------|--------|--------|--------|--------------------|-----------------------|----------------|--------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 12.000 | 31.991 | 10.008 | 10.785 | 7.938 | 9.785 | 8.455 | 11,700 | 16,200 |
| 12.700 | 34.988 | 10.998 | 10.988 | 8.730 | 11.115 | 10.355 | 10,800 | 14,400 |
| 15.000 | 34.988 | 10.998 | 10.988 | 8.730 | 11.115 | 10.355 | 10,800 | 14,400 |
| 15.875 | 34.988 | 10.998 | 10.998 | 8.712 | 13.110 | 12.730 | 9,900 | 13,500 |
| 15.875 | 39.992 | 12.014 | 11.153 | 9.525 | 14.155 | 14.915 | 8,550 | 11,700 |
| 15.875 | 41.275 | 14.288 | 14.681 | 11.112 | 20.235 | 18.905 | 9,000 | 11,700 |
| 15.875 | 42.862 | 14.288 | 14.288 | 9.525 | 16.435 | 16.340 | 7,650 | 10,800 |
| 15.875 | 42.862 | 16.670 | 16.670 | 13.495 | 25.555 | 24.985 | 8,550 | 11,700 |
| 15.875 | 44.450 | 15.494 | 14.381 | 11.430 | 22.610 | 22.705 | 7,650 | 9,900 |
| 15.875 | 49.225 | 19.845 | 21.539 | 14.288 | 35.625 | 35.150 | 7,650 | 9,900 |
| 16.000 | 47.000 | 21.000 | 21.000 | 16.000 | 33.250 | 34.675 | 8,100 | 10,800 |
| 16.993 | 39.992 | 12.014 | 11.153 | 9.525 | 14.155 | 14.915 | 8,550 | 11,700 |
| 17.455 | 36.525 | 11.112 | 11.112 | 7.938 | 11.020 | 10.450 | 9,000 | 12,600 |
| 17.462 | 39.878 | 13.843 | 14.605 | 10.668 | 21.375 | 21.375 | 9,000 | 11,700 |
| 17.462 | 47.000 | 14.381 | 14.381 | 11.112 | 22.610 | 22.705 | 7,650 | 9,900 |
| 19.050 | 39.992 | 12.014 | 11.153 | 9.525 | 14.155 | 14.915 | 8,550 | 11,700 |
| 19.050 | 45.237 | 15.494 | 16.637 | 12.065 | 27.075 | 27.455 | 8,100 | 10,800 |
| 19.050 | 47.000 | 14.381 | 14.381 | 11.112 | 22.610 | 22.705 | 7,650 | 9,900 |
| 19.050 | 49.225 | 18.034 | 19.050 | 14.288 | 35.625 | 35.150 | 7,650 | 9,900 |
| 19.050 | 49.225 | 19.845 | 21.539 | 14.288 | 35.625 | 35.150 | 7,650 | 9,900 |
| 19.050 | 49.225 | 21.209 | 19.050 | 17.462 | 35.625 | 35.150 | 7,650 | 9,900 |
| 19.050 | 49.225 | 23.020 | 21.539 | 17.462 | 35.625 | 35.150 | 7,650 | 9,900 |
| 19.050 | 53.975 | 22.225 | 21.839 | 15.875 | 38.475 | 37.525 | 6,750 | 9,000 |
| 19.990 | 47.000 | 14.381 | 14.381 | 11.112 | 22.610 | 22.705 | 7,650 | 9,900 |
| 20.000 | 51.994 | 15.011 | 14.260 | 12.700 | 24.700 | 26.505 | 6,750 | 9,000 |
| 20.625 | 49.225 | 23.020 | 21.539 | 17.462 | 35.625 | 35.150 | 7,650 | 9,900 |
| 20.638 | 49.225 | 19.845 | 19.845 | 15.875 | 34.200 | 35.150 | 7,200 | 9,900 |
| 21.430 | 50.005 | 17.526 | 18.288 | 13.970 | 36.575 | 38.000 | 7,200 | 9,900 |
| 22.000 | 45.237 | 15.494 | 16.637 | 12.065 | 27.740 | 31.825 | 7,650 | 9,900 |
| 22.000 | 45.975 | 15.494 | 16.637 | 12.065 | 27.740 | 31.825 | 7,650 | 9,900 |
| 22.225 | 50.005 | 13.495 | 14.260 | 9.525 | 24.700 | 26.505 | 6,750 | 9,000 |
| 22.225 | 50.005 | 17.526 | 18.288 | 13.970 | 36.575 | 38.000 | 7,200 | 9,900 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|----------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 0.8 | 1.3 | 0.040 | A 2047 | A 2126 |
| 1.3 | 1.3 | 0.055 | A 4050 | A 4138 |
| 0.8 | 1.3 | 0.051 | A 4059 | A 4138 |
| 1.3 | 1.3 | 0.049 | L21549 | L21511 |
| 1.3 | 1.3 | 0.075 | A 6062 | A 6157 |
| 1.3 | 2.0 | 0.096 | 03062 | 03162 |
| 1.5 | 1.5 | 0.101 | 11590 | 11520 |
| 1.5 | 1.5 | 0.123 | 17580 | 17520 |
| 1.5 | 1.5 | 0.120 | 05062 | 05175 |
| 0.8 | 1.3 | 0.204 | 09062 | 09195 |
| 1.0 | 2.0 | 0.197 | HM 81649 | HM 81610 |
| 0.8 | 1.3 | 0.073 | A 6067 | A 6157 |
| 1.5 | 1.5 | 0.050 | A 50669 | A 5144 |
| 1.3 | 1.3 | 0.083 | LM 11749 | LM 11710 |
| 0.8 | 1.3 | 0.129 | 05068 | 05185 |
| 1.0 | 1.3 | 0.068 | A 6075 | A 6157 |
| 1.3 | 1.3 | 0.125 | LM 11949 | LM 11910 |
| 1.3 | 1.3 | 0.124 | 05075 | 05185 |
| 1.3 | 1.3 | 0.180 | 09067 | 09195 |
| 1.3 | 1.3 | 0.189 | 09078 | 09195 |
| 1.3 | 1.5 | 0.200 | 09067 | 09196 |
| 1.5 | 3.5 | 0.206 | 09074 | 09194 |
| 1.5 | 2.3 | 0.253 | 21075 | 21212 |
| 1.5 | 1.3 | 0.120 | 05079 | 05185 |
| 1.5 | 1.3 | 0.166 | 07079 | 07204 |
| 1.5 | 1.5 | 0.200 | 09081 | 09196 |
| 1.5 | 1.5 | 0.181 | 12580 | 12520 |
| 1.3 | 1.3 | 0.174 | M 12649 | M 12610 |
| 1.3 | 1.3 | 0.116 | LM 12749 | LM 12710 |
| 1.3 | 1.3 | 0.121 | LM 12749 | LM 12711 |
| 1.3 | 1.0 | 0.132 | 07087 | 07196 |
| 1.3 | 1.3 | 0.170 | M 12648 | M 12610 |



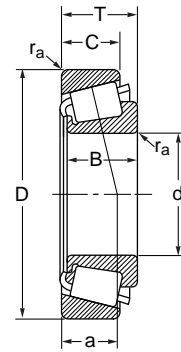
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|--------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 22.225 | 52.388 | 19.368 | 20.168 | 14.288 | 38.475 | 40.850 | 6,750 | 9,000 |
| 22.225 | 53.975 | 19.368 | 20.168 | 14.288 | 38.475 | 40.850 | 6,750 | 9,000 |
| 22.225 | 56.896 | 19.368 | 19.837 | 15.875 | 36.100 | 38.475 | 6,390 | 8,550 |
| 22.225 | 57.150 | 22.225 | 22.225 | 17.462 | 45.600 | 47.500 | 6,390 | 8,550 |
| 22.606 | 47.000 | 15.500 | 15.500 | 12.000 | 24.985 | 28.500 | 7,200 | 9,900 |
| 23.812 | 50.292 | 14.224 | 14.732 | 10.668 | 26.220 | 30.400 | 6,390 | 9,000 |
| 23.812 | 56.896 | 19.368 | 19.837 | 15.875 | 36.100 | 38.475 | 6,390 | 8,550 |
| 24.000 | 55.000 | 25.000 | 25.000 | 21.000 | 47.025 | 52.250 | 6,390 | 8,550 |
| 24.981 | 51.994 | 15.011 | 14.260 | 12.700 | 24.700 | 26.505 | 6,750 | 9,000 |
| 24.981 | 52.001 | 15.011 | 14.260 | 12.700 | 24.700 | 26.505 | 6,750 | 9,000 |
| 24.981 | 62.000 | 16.002 | 16.566 | 14.288 | 35.150 | 37.525 | 5,670 | 7,650 |
| 25.000 | 50.005 | 13.495 | 14.260 | 9.525 | 24.700 | 26.505 | 6,750 | 9,000 |
| 25.000 | 51.994 | 15.011 | 14.260 | 12.700 | 24.700 | 26.505 | 6,750 | 9,000 |
| 25.400 | 50.005 | 13.495 | 14.260 | 9.525 | 24.700 | 26.505 | 6,750 | 9,000 |
| 25.400 | 50.005 | 13.495 | 14.260 | 9.525 | 24.700 | 26.505 | 6,750 | 9,000 |
| 25.400 | 50.292 | 14.224 | 14.732 | 10.668 | 26.220 | 30.400 | 6,390 | 9,000 |
| 25.400 | 57.150 | 17.462 | 17.462 | 13.495 | 37.525 | 43.225 | 6,030 | 8,100 |
| 25.400 | 57.150 | 19.431 | 19.431 | 14.732 | 40.375 | 46.550 | 6,030 | 8,100 |
| 25.400 | 59.530 | 23.368 | 23.114 | 18.288 | 47.500 | 55.100 | 5,670 | 8,100 |
| 25.400 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 25.400 | 63.500 | 20.638 | 20.638 | 15.875 | 43.700 | 50.350 | 5,400 | 7,200 |
| 25.400 | 64.292 | 21.433 | 21.433 | 16.670 | 48.450 | 61.275 | 5,040 | 7,200 |
| 25.400 | 65.088 | 22.225 | 21.463 | 15.875 | 42.750 | 45.125 | 5,040 | 7,200 |
| 25.400 | 68.262 | 22.225 | 22.225 | 17.462 | 52.250 | 60.800 | 5,040 | 6,750 |
| 25.400 | 72.233 | 25.400 | 25.400 | 19.842 | 60.325 | 79.325 | 4,500 | 6,390 |
| 25.400 | 72.626 | 24.608 | 24.257 | 17.462 | 57.000 | 55.100 | 5,040 | 6,750 |
| 26.988 | 50.292 | 14.224 | 14.732 | 10.668 | 26.220 | 30.400 | 6,390 | 9,000 |
| 26.988 | 57.150 | 19.845 | 19.355 | 15.875 | 38.000 | 42.275 | 6,030 | 8,100 |
| 26.988 | 60.325 | 19.842 | 17.462 | 15.875 | 37.525 | 43.225 | 6,030 | 8,100 |
| 26.988 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 28.575 | 57.150 | 19.845 | 19.355 | 15.875 | 38.000 | 42.275 | 6,030 | 8,100 |
| 28.575 | 59.131 | 15.875 | 16.764 | 11.811 | 32.775 | 39.425 | 5,670 | 7,650 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|-----------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 1.5 | 1.5 | 0.204 | 1380 | 1328 |
| 1.5 | 1.5 | 0.219 | 1380 | 1329 |
| 1.3 | 1.3 | 0.254 | 1755 | 1729 |
| 0.8 | 1.5 | 0.289 | 1280 | 1220 |
| 1.5 | 1.0 | 0.132 | LM 72849 | LM 72810 |
| 1.5 | 1.3 | 0.136 | L 44640 | L 44610 |
| 0.8 | 1.3 | 0.245 | 1779 | 1729 |
| 2.0 | 2.0 | 0.288 | JHM 33449 | JHM 33410 |
| 1.5 | 1.3 | 0.146 | 07098 | 07204 |
| 1.5 | 2.0 | 0.146 | 07098 | 07205 |
| 1.5 | 1.5 | 0.256 | 17098 | 17244 |
| 1.5 | 1.0 | 0.120 | 07097 | 07196 |
| 1.5 | 1.3 | 0.146 | 07097 | 07204 |
| 3.3 | 1.0 | 0.117 | 07100 SA | 07196 |
| 1.0 | 1.0 | 0.119 | 07100 | 07196 |
| 1.3 | 1.3 | 0.129 | L 44643 | L 44610 |
| 1.3 | 1.5 | 0.221 | 15578 | 15520 |
| 1.5 | 1.5 | 0.245 | M 84548 | M 84510 |
| 0.8 | 1.5 | 0.324 | M 84249 | M 84210 |
| 0.8 | 1.3 | 0.303 | 15101 | 15245 |
| 3.5 | 1.5 | 0.333 | 15100 | 15250 X |
| 1.5 | 1.5 | 0.374 | M 86643 | M 86610 |
| 1.5 | 1.5 | 0.356 | 23100 | 23256 |
| 0.8 | 1.5 | 0.432 | 02473 | 02420 |
| 0.8 | 2.3 | 0.586 | HM 88630 | HM 88610 |
| 2.3 | 1.5 | 0.497 | 41100 | 41286 |
| 3.5 | 1.3 | 0.120 | L 44649 | L 44610 |
| 3.3 | 1.5 | 0.229 | 1997 X | 1922 |
| 3.5 | 1.5 | 0.264 | 15580 | 15523 |
| 0.8 | 1.3 | 0.292 | 15106 | 15245 |
| 3.5 | 1.5 | 0.218 | 1988 | 1922 |
| 3.5 | 1.3 | 0.209 | LM 67043 | LM 67010 |



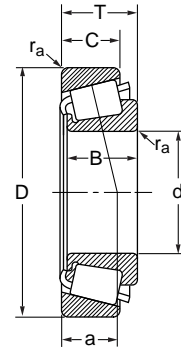
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|--------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 28.575 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 28.575 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 28.575 | 64.292 | 21.433 | 21.433 | 16.670 | 48.450 | 61.275 | 5,040 | 7,200 |
| 28.575 | 68.262 | 22.225 | 22.225 | 17.462 | 52.250 | 60.800 | 5,040 | 6,750 |
| 28.575 | 72.626 | 24.608 | 24.257 | 17.462 | 57.000 | 55.100 | 5,040 | 6,750 |
| 28.575 | 72.626 | 24.608 | 24.257 | 17.462 | 57.000 | 55.100 | 5,040 | 6,750 |
| 28.575 | 73.025 | 22.225 | 22.225 | 17.462 | 51.775 | 61.275 | 4,770 | 6,390 |
| 29.000 | 50.292 | 14.224 | 14.732 | 10.668 | 25.460 | 32.300 | 6,390 | 8,550 |
| 29.367 | 66.421 | 23.812 | 25.433 | 19.050 | 61.750 | 69.350 | 5,400 | 7,200 |
| 30.000 | 62.000 | 16.002 | 16.566 | 14.288 | 35.150 | 37.525 | 5,670 | 7,650 |
| 30.000 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 30.000 | 63.500 | 20.638 | 20.638 | 15.875 | 43.700 | 50.350 | 5,400 | 7,200 |
| 30.000 | 72.000 | 19.000 | 18.923 | 15.875 | 49.400 | 53.200 | 5,040 | 6,750 |
| 30.112 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 30.162 | 58.738 | 14.684 | 15.080 | 10.716 | 27.360 | 31.825 | 5,400 | 7,200 |
| 30.162 | 64.292 | 21.433 | 21.433 | 16.670 | 48.450 | 61.275 | 5,040 | 7,200 |
| 30.162 | 68.262 | 22.225 | 22.225 | 17.462 | 52.725 | 66.975 | 4,770 | 6,750 |
| 30.162 | 69.850 | 23.812 | 25.357 | 19.050 | 67.450 | 79.800 | 5,040 | 6,750 |
| 30.162 | 69.850 | 23.812 | 25.357 | 19.050 | 67.450 | 79.800 | 5,040 | 6,750 |
| 30.162 | 76.200 | 24.608 | 24.074 | 16.670 | 64.125 | 66.025 | 4,500 | 6,030 |
| 30.213 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 30.213 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 30.213 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 30.955 | 64.292 | 21.433 | 21.433 | 16.670 | 48.450 | 61.275 | 5,040 | 7,200 |
| 31.750 | 58.738 | 14.684 | 15.080 | 10.716 | 27.360 | 31.825 | 5,400 | 7,200 |
| 31.750 | 59.131 | 15.875 | 16.764 | 11.811 | 32.775 | 39.425 | 5,670 | 7,650 |
| 31.750 | 62.000 | 18.161 | 19.050 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 31.750 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 31.750 | 62.000 | 19.050 | 20.638 | 14.288 | 43.700 | 50.350 | 5,400 | 7,200 |
| 31.750 | 63.500 | 20.638 | 20.638 | 15.875 | 43.700 | 50.350 | 5,400 | 7,200 |
| 31.750 | 68.262 | 22.225 | 22.225 | 17.462 | 52.250 | 60.800 | 5,040 | 6,750 |
| 31.750 | 68.262 | 22.225 | 22.225 | 17.462 | 52.725 | 66.975 | 4,770 | 6,750 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|----------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 3.5 | 1.3 | 0.280 | 15112 | 15245 |
| 0.8 | 1.3 | 0.281 | 15113 | 15245 |
| 1.5 | 1.5 | 0.351 | M 86647 | M 86610 |
| 0.8 | 1.5 | 0.409 | 02474 | 02420 |
| 4.8 | 1.5 | 0.469 | 41125 | 41286 |
| 1.5 | 1.5 | 0.472 | 41126 | 41286 |
| 0.8 | 3.3 | 0.481 | 02872 | 02820 |
| 3.5 | 1.3 | 0.115 | L 45449 | L 45410 |
| 3.5 | 1.3 | 0.407 | 2690 | 2631 |
| 1.5 | 1.5 | 0.227 | 17118 | 17244 |
| 1.3 | 1.3 | 0.270 | 15117 | 15245 |
| 1.3 | 1.3 | 0.302 | 15117 | 15250 |
| 1.5 | 1.5 | 0.388 | 26118 | 26283 |
| 0.8 | 1.3 | 0.270 | 15116 | 15245 |
| 3.5 | 1.0 | 0.177 | 08118 | 08231 |
| 1.5 | 1.5 | 0.339 | M 86649 | M 86610 |
| 2.3 | 1.5 | 0.409 | M 88043 | M 88010 |
| 2.3 | 1.3 | 0.466 | 2558 | 2523 |
| 0.8 | 1.3 | 0.467 | 2559 | 2523 |
| 1.5 | 3.3 | 0.529 | 43118 | 43300 |
| 3.5 | 1.3 | 0.267 | 15118 | 15245 |
| 0.8 | 1.3 | 0.269 | 15120 | 15245 |
| 1.5 | 1.3 | 0.269 | 15119 | 15245 |
| 1.5 | 1.5 | 0.333 | M 86648 A | M 86610 |
| 1.0 | 1.0 | 0.170 | 08125 | 08231 |
| 3.5 | 1.3 | 0.189 | LM 67048 | LM 67010 |
| 3.5 | 1.3 | 0.246 | 15123 | 15245 |
| 0.8 | 1.3 | 0.257 | 15126 | 15245 |
| 3.5 | 1.3 | 0.255 | 15125 | 15245 |
| 0.8 | 1.3 | 0.289 | 15126 | 15250 |
| 3.5 | 1.5 | 0.381 | 02475 | 02420 |
| 1.5 | 1.5 | 0.396 | M 88046 | M 88010 |



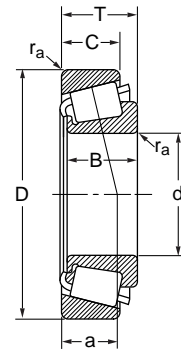
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|--------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 31.750 | 69.012 | 19.845 | 19.583 | 15.875 | 44.650 | 53.200 | 5,040 | 6,750 |
| 31.750 | 69.012 | 26.982 | 26.721 | 15.875 | 44.650 | 53.200 | 5,040 | 6,750 |
| 31.750 | 69.850 | 23.812 | 25.357 | 19.050 | 67.450 | 79.800 | 5,040 | 6,750 |
| 31.750 | 69.850 | 23.812 | 25.357 | 19.050 | 67.450 | 79.800 | 5,040 | 6,750 |
| 31.750 | 72.626 | 30.162 | 29.997 | 23.812 | 75.525 | 85.500 | 4,770 | 6,750 |
| 31.750 | 73.025 | 29.370 | 27.783 | 23.020 | 70.300 | 95.000 | 4,500 | 6,390 |
| 31.750 | 80.000 | 21.000 | 22.403 | 17.826 | 65.075 | 71.725 | 4,050 | 5,670 |
| 32.000 | 72.233 | 25.400 | 25.400 | 19.842 | 60.325 | 79.325 | 4,500 | 6,390 |
| 33.338 | 66.675 | 20.638 | 20.638 | 15.875 | 43.700 | 50.825 | 5,040 | 6,750 |
| 33.338 | 68.262 | 22.225 | 22.225 | 17.462 | 52.725 | 66.975 | 4,770 | 6,750 |
| 33.338 | 69.012 | 19.845 | 19.583 | 15.875 | 44.650 | 53.200 | 5,040 | 6,750 |
| 33.338 | 69.012 | 19.845 | 19.583 | 15.875 | 44.650 | 53.200 | 5,040 | 6,750 |
| 33.338 | 69.850 | 23.812 | 25.357 | 19.050 | 67.450 | 79.800 | 5,040 | 6,750 |
| 33.338 | 72.000 | 19.000 | 18.923 | 15.875 | 49.400 | 53.200 | 5,040 | 6,750 |
| 33.338 | 72.626 | 30.162 | 29.997 | 23.812 | 75.525 | 85.500 | 4,770 | 6,750 |
| 33.338 | 73.025 | 29.370 | 27.783 | 23.020 | 70.300 | 95.000 | 4,500 | 6,390 |
| 33.338 | 76.200 | 29.370 | 28.575 | 23.020 | 74.575 | 100.700 | 4,320 | 6,030 |
| 33.338 | 76.200 | 29.370 | 28.575 | 23.020 | 74.575 | 100.700 | 4,320 | 6,030 |
| 33.338 | 79.375 | 25.400 | 24.074 | 17.462 | 64.125 | 66.025 | 4,500 | 6,030 |
| 34.925 | 65.088 | 18.034 | 18.288 | 13.970 | 45.125 | 54.625 | 5,040 | 6,750 |
| 34.925 | 65.088 | 20.320 | 18.288 | 16.256 | 45.125 | 54.625 | 5,040 | 6,750 |
| 34.925 | 66.675 | 20.638 | 20.638 | 16.670 | 50.350 | 59.375 | 5,040 | 6,750 |
| 34.925 | 69.012 | 19.845 | 19.583 | 15.875 | 44.650 | 53.200 | 5,040 | 6,750 |
| 34.925 | 69.012 | 19.845 | 19.583 | 15.875 | 44.650 | 53.200 | 5,040 | 6,750 |
| 34.925 | 72.233 | 25.400 | 25.400 | 19.842 | 60.325 | 79.325 | 4,500 | 6,390 |
| 34.925 | 73.025 | 22.225 | 22.225 | 17.462 | 51.775 | 61.275 | 4,770 | 6,390 |
| 34.925 | 73.025 | 22.225 | 23.812 | 17.462 | 60.325 | 73.150 | 4,770 | 6,390 |
| 34.925 | 73.025 | 23.812 | 24.608 | 19.050 | 67.450 | 81.700 | 4,770 | 6,390 |
| 34.925 | 73.025 | 23.812 | 24.608 | 19.050 | 67.450 | 81.700 | 4,770 | 6,390 |
| 34.925 | 76.200 | 29.370 | 28.575 | 23.020 | 74.575 | 100.700 | 4,320 | 6,030 |
| 34.925 | 76.200 | 29.370 | 28.575 | 23.020 | 74.575 | 100.700 | 4,320 | 6,030 |
| 34.925 | 76.200 | 29.370 | 28.575 | 23.020 | 74.575 | 100.700 | 4,320 | 6,030 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|----------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 3.5 | 1.3 | 0.354 | 14125 A | 14276 |
| 4.3 | 3.3 | 0.421 | 14123 A | 14274 |
| 0.8 | 1.3 | 0.451 | 2580 | 2523 |
| 3.5 | 1.3 | 0.449 | 2582 | 2523 |
| 0.8 | 3.3 | 0.593 | 3188 | 3120 |
| 1.3 | 3.3 | 0.621 | HM 88542 | HM 88510 |
| 0.8 | 1.3 | 0.565 | 346 | 332 |
| 3.3 | 2.3 | 0.525 | HM 88638 | HM 88610 |
| 3.5 | 1.5 | 0.317 | 1680 | 1620 |
| 0.8 | 1.5 | 0.382 | M 88048 | M 88010 |
| 3.5 | 3.3 | 0.339 | 14130 | 14274 |
| 0.8 | 1.3 | 0.344 | 14131 | 14276 |
| 3.5 | 1.3 | 0.432 | 2585 | 2523 |
| 3.5 | 1.5 | 0.363 | 26131 | 26283 |
| 0.8 | 3.3 | 0.573 | 3197 | 3120 |
| 0.8 | 3.3 | 0.604 | HM 88547 | HM 88510 |
| 3.8 | 0.8 | 0.680 | HM 89444 | HM 89411 |
| 0.8 | 3.3 | 0.678 | HM 89443 | HM 89410 |
| 3.5 | 1.5 | 0.568 | 43131 | 43312 |
| 3.5 | 1.3 | 0.259 | LM 48548 | LM 48510 |
| 3.5 | 1.3 | 0.280 | LM 48548 | LM 48511 |
| 3.5 | 2.3 | 0.306 | M 38549 | M 38510 |
| 3.5 | 1.3 | 0.329 | 14138 A | 14276 |
| 1.5 | 1.3 | 0.331 | 14137 A | 14276 |
| 2.3 | 2.3 | 0.495 | HM 88649 | HM 88610 |
| 0.8 | 3.3 | 0.426 | 02878 | 02820 |
| 3.5 | 3.3 | 0.441 | 2877 | 2820 |
| 1.5 | 0.8 | 0.473 | 25877 | 25821 |
| 3.5 | 2.3 | 0.469 | 25878 | 25820 |
| 0.8 | 0.8 | 0.664 | HM 89446 A | HM 89411 |
| 3.5 | 0.8 | 0.661 | HM 89446 | HM 89411 |
| 3.5 | 3.3 | 0.657 | HM 89446 | HM 89410 |



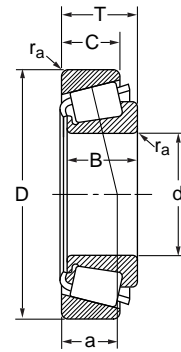
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|--------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 34.925 | 76.200 | 29.370 | 28.575 | 23.812 | 76.475 | 91.675 | 4,500 | 6,030 |
| 34.925 | 79.375 | 29.370 | 29.771 | 23.812 | 83.600 | 100.700 | 4,320 | 6,030 |
| 34.976 | 68.262 | 15.875 | 16.520 | 11.908 | 42.750 | 50.825 | 4,770 | 6,390 |
| 34.976 | 72.085 | 22.385 | 19.583 | 18.415 | 44.650 | 53.200 | 5,040 | 6,750 |
| 34.976 | 80.000 | 21.006 | 20.940 | 15.875 | 53.675 | 61.275 | 4,500 | 6,030 |
| 35.000 | 59.131 | 15.875 | 16.764 | 11.938 | 33.250 | 44.650 | 5,400 | 7,200 |
| 35.000 | 59.975 | 15.875 | 16.764 | 11.938 | 33.250 | 44.650 | 5,400 | 7,200 |
| 35.000 | 62.000 | 16.700 | 17.000 | 13.600 | 36.100 | 47.500 | 5,040 | 7,200 |
| 35.000 | 62.000 | 16.700 | 17.000 | 13.600 | 36.100 | 47.500 | 5,040 | 7,200 |
| 35.000 | 65.987 | 20.638 | 20.638 | 16.670 | 50.350 | 59.375 | 5,040 | 6,750 |
| 35.000 | 73.025 | 26.988 | 26.975 | 22.225 | 71.725 | 84.075 | 4,770 | 6,750 |
| 35.717 | 72.233 | 25.400 | 25.400 | 19.842 | 60.325 | 79.325 | 4,500 | 6,390 |
| 36.487 | 73.025 | 23.812 | 24.608 | 19.050 | 67.450 | 81.700 | 4,770 | 6,390 |
| 36.512 | 76.200 | 29.370 | 28.575 | 23.020 | 74.575 | 100.700 | 4,320 | 6,030 |
| 36.512 | 79.375 | 29.370 | 29.771 | 23.812 | 83.600 | 100.700 | 4,320 | 6,030 |
| 36.512 | 88.501 | 25.400 | 23.698 | 17.462 | 69.350 | 76.950 | 3,600 | 5,040 |
| 36.512 | 93.662 | 31.750 | 31.750 | 26.195 | 104.500 | 134.900 | 3,600 | 5,040 |
| 38.000 | 63.000 | 17.000 | 17.000 | 13.500 | 36.575 | 49.400 | 5,040 | 6,750 |
| 38.100 | 63.500 | 12.700 | 11.908 | 9.525 | 22.895 | 28.975 | 4,770 | 6,390 |
| 38.100 | 65.088 | 18.034 | 18.288 | 13.970 | 40.375 | 52.250 | 4,770 | 6,750 |
| 38.100 | 65.088 | 18.034 | 18.288 | 13.970 | 40.375 | 52.250 | 4,770 | 6,750 |
| 38.100 | 65.088 | 19.812 | 18.288 | 15.748 | 40.375 | 52.250 | 4,770 | 6,750 |
| 38.100 | 68.262 | 15.875 | 16.520 | 11.908 | 42.750 | 50.825 | 4,770 | 6,390 |
| 38.100 | 69.012 | 19.050 | 19.050 | 15.083 | 46.550 | 57.950 | 4,770 | 6,390 |
| 38.100 | 69.012 | 19.050 | 19.050 | 15.083 | 46.550 | 57.950 | 4,770 | 6,390 |
| 38.100 | 72.238 | 20.638 | 20.638 | 15.875 | 46.075 | 56.525 | 4,770 | 6,390 |
| 38.100 | 73.025 | 23.812 | 25.654 | 19.050 | 69.825 | 86.450 | 4,500 | 6,030 |
| 38.100 | 76.200 | 23.812 | 25.654 | 19.050 | 69.825 | 86.450 | 4,500 | 6,030 |
| 38.100 | 76.200 | 23.812 | 25.654 | 19.050 | 69.825 | 86.450 | 4,500 | 6,030 |
| 38.100 | 79.375 | 29.370 | 29.771 | 23.812 | 83.600 | 100.700 | 4,320 | 6,030 |
| 38.100 | 80.035 | 24.608 | 23.698 | 18.512 | 65.550 | 80.275 | 4,050 | 5,670 |
| 38.100 | 82.550 | 29.370 | 28.575 | 23.020 | 82.650 | 111.150 | 4,050 | 5,400 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 1.5 | 3.3 | 0.639 | 31594 | 31520 |
| 3.5 | 3.3 | 0.707 | 3478 | 3420 |
| 1.5 | 1.5 | 0.269 | 19138 | 19268 |
| 1.3 | 2.3 | 0.408 | 14139 | 14283 |
| 1.5 | 1.5 | 0.507 | 28138 | 28315 |
| 3.5 | 1.3 | 0.173 | L 68149 | L 68110 |
| 3.5 | 1.3 | 0.181 | L 68149 | L 68111 |
| 3.5 | 1.0 | 0.211 | LM 78349 | LM 78310 |
| 3.5 | 1.5 | 0.211 | LM 78349 | LM 78310 A |
| 3.5 | 2.3 | 0.296 | M 38547 | M 38511 |
| 3.5 | 0.8 | 0.521 | 23691 | 23621 |
| 3.5 | 2.3 | 0.486 | HM 88648 | HM 88610 |
| 1.5 | 0.8 | 0.458 | 25880 | 25821 |
| 3.5 | 3.3 | 0.637 | HM 89449 | HM 89410 |
| 0.8 | 3.3 | 0.688 | 3479 | 3420 |
| 2.3 | 1.5 | 0.747 | 44143 | 44348 |
| 1.5 | 3.3 | 1.170 | 46143 | 46368 |
| 3.5 | 1.3 | 0.203 | JL 69349 | JL 69310 |
| 1.5 | 0.8 | 0.155 | 13889 | 13830 |
| 2.3 | 1.3 | 0.239 | LM 29749 | LM 29710 |
| 3.5 | 1.3 | 0.237 | LM 29748 | LM 29710 |
| 2.3 | 1.3 | 0.254 | LM 29749 | LM 29711 |
| 1.5 | 1.5 | 0.246 | 19150 | 19268 |
| 2.0 | 2.3 | 0.297 | 13687 | 13621 |
| 3.5 | 0.8 | 0.296 | 13685 | 13620 |
| 3.5 | 1.3 | 0.358 | 16150 | 16284 |
| 3.5 | 0.8 | 0.447 | 2788 | 2735 X |
| 3.5 | 3.3 | 0.499 | 2788 | 2720 |
| 3.5 | 0.8 | 0.503 | 2788 | 2729 |
| 3.5 | 3.3 | 0.663 | 3490 | 3420 |
| 0.8 | 1.5 | 0.571 | 27880 | 27820 |
| 0.8 | 3.3 | 0.765 | HM 801346 | HM 801310 |



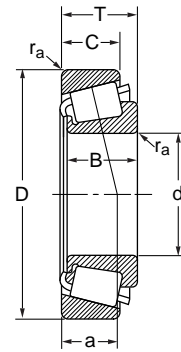
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|--------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 38.100 | 88.501 | 25.400 | 23.698 | 17.462 | 69.350 | 76.950 | 3,600 | 5,040 |
| 38.100 | 88.501 | 26.988 | 29.083 | 22.225 | 91.675 | 103.550 | 4,050 | 5,400 |
| 38.100 | 95.250 | 30.958 | 28.301 | 20.638 | 83.125 | 92.150 | 3,240 | 4,770 |
| 39.688 | 73.025 | 25.654 | 22.098 | 21.336 | 59.375 | 76.000 | 4,500 | 6,030 |
| 39.688 | 76.200 | 23.812 | 25.654 | 19.050 | 69.825 | 86.450 | 4,500 | 6,030 |
| 39.688 | 80.167 | 29.370 | 30.391 | 23.812 | 87.875 | 102.600 | 4,320 | 5,670 |
| 40.000 | 80.000 | 21.000 | 22.403 | 17.826 | 65.075 | 71.725 | 4,050 | 5,670 |
| 40.000 | 80.000 | 21.000 | 22.403 | 17.826 | 65.075 | 71.725 | 4,050 | 5,670 |
| 40.000 | 88.501 | 25.400 | 23.698 | 17.462 | 69.350 | 76.950 | 3,600 | 5,040 |
| 41.000 | 68.000 | 17.500 | 18.000 | 13.500 | 41.325 | 55.100 | 4,770 | 6,390 |
| 41.275 | 73.025 | 16.667 | 17.462 | 12.700 | 42.275 | 51.300 | 4,320 | 6,030 |
| 41.275 | 73.431 | 19.558 | 19.812 | 14.732 | 51.775 | 63.650 | 4,320 | 6,030 |
| 41.275 | 73.431 | 21.430 | 19.812 | 16.604 | 51.775 | 63.650 | 4,320 | 6,030 |
| 41.275 | 76.200 | 18.009 | 17.384 | 14.288 | 40.375 | 48.450 | 4,050 | 5,670 |
| 41.275 | 76.200 | 22.225 | 23.020 | 17.462 | 62.700 | 77.900 | 4,320 | 6,030 |
| 41.275 | 76.200 | 25.400 | 23.020 | 20.638 | 62.700 | 77.900 | 4,320 | 6,030 |
| 41.275 | 79.375 | 23.812 | 25.400 | 19.050 | 73.150 | 93.575 | 4,320 | 5,670 |
| 41.275 | 80.000 | 21.000 | 22.403 | 17.826 | 65.075 | 71.725 | 4,050 | 5,670 |
| 41.275 | 80.000 | 21.000 | 22.403 | 17.826 | 65.075 | 71.725 | 4,050 | 5,670 |
| 41.275 | 80.167 | 25.400 | 25.400 | 20.638 | 73.150 | 93.575 | 4,320 | 5,670 |
| 41.275 | 82.550 | 26.543 | 25.654 | 20.193 | 74.575 | 96.900 | 3,870 | 5,400 |
| 41.275 | 85.725 | 30.162 | 30.162 | 23.812 | 86.450 | 109.250 | 3,870 | 5,400 |
| 41.275 | 87.312 | 30.162 | 30.886 | 23.812 | 91.200 | 114.000 | 3,870 | 5,400 |
| 41.275 | 88.501 | 25.400 | 23.698 | 17.462 | 69.350 | 76.950 | 3,600 | 5,040 |
| 41.275 | 88.900 | 30.162 | 29.370 | 23.020 | 91.675 | 122.550 | 3,600 | 5,040 |
| 41.275 | 88.900 | 30.162 | 29.370 | 23.020 | 91.675 | 122.550 | 3,600 | 5,040 |
| 41.275 | 90.488 | 39.688 | 40.386 | 33.338 | 132.050 | 171.000 | 3,870 | 5,040 |
| 41.275 | 93.662 | 31.750 | 31.750 | 26.195 | 104.500 | 134.900 | 3,600 | 5,040 |
| 41.275 | 95.250 | 30.162 | 29.370 | 23.020 | 100.700 | 135.850 | 3,420 | 4,770 |
| 41.275 | 98.425 | 30.958 | 28.301 | 20.638 | 83.125 | 92.150 | 3,240 | 4,770 |
| 42.862 | 76.992 | 17.462 | 17.145 | 11.908 | 41.800 | 51.300 | 4,050 | 5,400 |
| 42.862 | 82.550 | 19.842 | 19.837 | 15.080 | 55.575 | 65.550 | 4,050 | 5,670 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|-----------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 2.3 | 1.5 | 0.729 | 44150 | 44348 |
| 3.5 | 1.5 | 0.829 | 418 | 414 |
| 1.5 | 0.8 | 1.030 | 53150 | 53375 |
| 0.8 | 2.3 | 0.435 | M 201047 | M 201011 |
| 3.5 | 3.3 | 0.479 | 2789 | 2720 |
| 0.8 | 3.3 | 0.659 | 3386 | 3320 |
| 3.5 | 1.3 | 0.484 | 344 | 332 |
| 0.8 | 1.3 | 0.485 | 344 A | 332 |
| 2.3 | 1.5 | 0.708 | 44157 | 44348 |
| 3.5 | 1.5 | 0.242 | LM 300849 | LM 300811 |
| 3.5 | 1.5 | 0.285 | 18590 | 18520 |
| 3.5 | 0.8 | 0.334 | LM 501349 | LM 501310 |
| 3.5 | 0.8 | 0.355 | LM 501349 | LM 501314 |
| 1.5 | 1.5 | 0.341 | 11162 | 11300 |
| 3.5 | 0.8 | 0.429 | 24780 | 24720 |
| 3.5 | 2.3 | 0.468 | 24780 | 24721 |
| 3.5 | 0.8 | 0.535 | 26882 | 26822 |
| 0.8 | 1.3 | 0.471 | 336 | 332 |
| 3.5 | 1.3 | 0.469 | 342 | 332 |
| 3.5 | 3.3 | 0.568 | 26882 | 26820 |
| 3.5 | 3.3 | 0.636 | M 802048 | M 802011 |
| 3.5 | 3.3 | 0.791 | 3877 | 3820 |
| 0.8 | 3.3 | 0.836 | 3576 | 3525 |
| 2.3 | 1.5 | 0.692 | 44162 | 44348 |
| 3.5 | 3.3 | 0.901 | HM 803146 | HM 803110 |
| 0.8 | 3.3 | 0.904 | HM 803145 | HM 803110 |
| 3.5 | 3.3 | 1.248 | 4388 | 4335 |
| 0.8 | 3.3 | 1.100 | 46162 | 46368 |
| 3.5 | 3.3 | 1.080 | HM 804840 | HM 804810 |
| 1.5 | 0.8 | 1.060 | 53162 | 53387 |
| 1.5 | 1.5 | 0.326 | 12168 | 12303 |
| 2.3 | 1.5 | 0.459 | 22168 | 22325 |



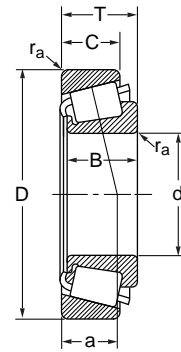
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 42.862 | 82.931 | 23.812 | 25.400 | 19.050 | 72.675 | 94.050 | 4,050 | 5,400 |
| 42.862 | 82.931 | 26.988 | 25.400 | 22.225 | 72.675 | 94.050 | 4,050 | 5,400 |
| 42.875 | 76.200 | 25.400 | 25.400 | 20.638 | 73.150 | 93.575 | 4,320 | 5,670 |
| 42.875 | 80.000 | 21.000 | 22.403 | 17.826 | 65.075 | 71.725 | 4,050 | 5,670 |
| 42.875 | 82.931 | 26.988 | 25.400 | 22.225 | 72.675 | 94.050 | 4,050 | 5,400 |
| 42.875 | 83.058 | 23.812 | 25.400 | 19.050 | 72.675 | 94.050 | 4,050 | 5,400 |
| 43.000 | 74.988 | 19.368 | 19.837 | 14.288 | 49.875 | 64.600 | 4,320 | 5,670 |
| 44.450 | 80.962 | 19.050 | 17.462 | 14.288 | 42.750 | 54.150 | 3,870 | 5,400 |
| 44.450 | 82.931 | 23.812 | 25.400 | 19.050 | 72.675 | 94.050 | 4,050 | 5,400 |
| 44.450 | 83.058 | 23.812 | 25.400 | 19.050 | 72.675 | 94.050 | 4,050 | 5,400 |
| 44.450 | 87.312 | 30.162 | 30.886 | 23.812 | 91.200 | 114.000 | 3,870 | 5,400 |
| 44.450 | 88.900 | 30.162 | 29.370 | 23.020 | 91.675 | 122.550 | 3,600 | 5,040 |
| 44.450 | 93.264 | 30.162 | 30.302 | 23.812 | 97.850 | 129.200 | 3,420 | 4,770 |
| 44.450 | 93.662 | 31.750 | 31.750 | 25.400 | 114.000 | 139.650 | 3,600 | 5,040 |
| 44.450 | 93.662 | 31.750 | 31.750 | 25.400 | 114.000 | 139.650 | 3,600 | 5,040 |
| 44.450 | 93.662 | 31.750 | 31.750 | 26.195 | 104.500 | 134.900 | 3,600 | 5,040 |
| 44.450 | 95.250 | 27.783 | 29.901 | 22.225 | 100.700 | 119.700 | 3,870 | 5,040 |
| 44.450 | 95.250 | 30.162 | 29.370 | 23.020 | 100.700 | 135.850 | 3,420 | 4,770 |
| 44.450 | 95.250 | 30.958 | 28.301 | 20.638 | 83.125 | 92.150 | 3,240 | 4,770 |
| 44.450 | 95.250 | 30.958 | 28.301 | 20.638 | 83.125 | 92.150 | 3,240 | 4,770 |
| 44.450 | 95.250 | 30.958 | 28.301 | 20.638 | 83.125 | 92.150 | 3,240 | 4,770 |
| 44.450 | 95.250 | 30.958 | 28.301 | 22.225 | 95.000 | 115.900 | 3,240 | 4,500 |
| 44.450 | 95.250 | 30.958 | 28.575 | 22.225 | 95.000 | 115.900 | 3,240 | 4,500 |
| 44.450 | 98.425 | 30.958 | 28.301 | 20.638 | 83.125 | 92.150 | 3,240 | 4,770 |
| 44.450 | 103.188 | 43.658 | 44.475 | 36.512 | 169.100 | 226.100 | 3,420 | 4,500 |
| 44.450 | 104.775 | 36.512 | 36.512 | 28.575 | 132.050 | 182.400 | 3,060 | 4,320 |
| 44.450 | 107.950 | 27.783 | 29.317 | 22.225 | 110.200 | 141.550 | 3,060 | 4,320 |
| 44.450 | 111.125 | 30.162 | 26.909 | 20.638 | 87.875 | 104.500 | 2,880 | 3,870 |
| 44.450 | 114.300 | 44.450 | 44.450 | 34.925 | 163.400 | 194.750 | 3,240 | 4,320 |
| 44.983 | 82.931 | 23.812 | 25.400 | 19.050 | 72.675 | 94.050 | 4,050 | 5,400 |
| 45.000 | 93.264 | 20.638 | 22.225 | 15.082 | 73.150 | 88.350 | 3,420 | 4,770 |
| 45.230 | 79.985 | 19.842 | 20.638 | 15.080 | 58.900 | 74.575 | 4,050 | 5,400 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|-----------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 2.3 | 0.8 | 0.586 | 25578 | 25520 |
| 2.3 | 2.3 | 0.631 | 25578 | 25523 |
| 3.5 | 1.5 | 0.473 | 26884 | 26823 |
| 3.5 | 1.3 | 0.451 | 342 S | 332 |
| 3.5 | 2.3 | 0.629 | 25577 | 25523 |
| 3.5 | 3.3 | 0.582 | 25577 | 25521 |
| 1.5 | 1.3 | 0.346 | 16986 | 16929 |
| 0.3 | 1.5 | 0.396 | 13175 | 13318 |
| 3.5 | 0.8 | 0.562 | 25580 | 25520 |
| 3.5 | 3.3 | 0.560 | 25580 | 25521 |
| 3.5 | 3.3 | 0.781 | 3578 | 3525 |
| 3.5 | 3.3 | 0.850 | HM 803149 | HM 803110 |
| 3.5 | 3.2 | 0.970 | 3782 | 3720 |
| 0.8 | 3.3 | 1.019 | 49176 | 49368 |
| 3.5 | 3.3 | 1.016 | 49175 | 49368 |
| 3.5 | 3.3 | 1.040 | 46176 | 46368 |
| 3.5 | 2.3 | 0.939 | 438 | 432 |
| 3.5 | 3.3 | 1.031 | HM 804843 | HM 804810 |
| 3.5 | 0.8 | 0.937 | 53177 | 53375 |
| 1.3 | 0.8 | 0.939 | 53176 | 53375 |
| 2.0 | 0.8 | 0.939 | 53178 | 53375 |
| 1.3 | 0.8 | 1.040 | HM 903247 | HM 903210 |
| 3.5 | 0.8 | 1.024 | HM 903249 | HM 903210 |
| 3.5 | 0.8 | 1.010 | 53177 | 53387 |
| 1.3 | 3.3 | 1.867 | 5356 | 5335 |
| 3.5 | 3.3 | 1.642 | HM 807040 | HM 807010 |
| 3.5 | 0.8 | 1.350 | 460 | 453 A |
| 3.5 | 3.3 | 1.381 | 55175 | 55437 |
| 3.5 | 3.3 | 2.284 | 65385 | 65320 |
| 1.5 | 0.8 | 0.557 | 25584 | 25520 |
| 0.8 | 1.3 | 0.666 | 376 | 374 |
| 2.0 | 1.3 | 0.410 | 17887 | 17831 |



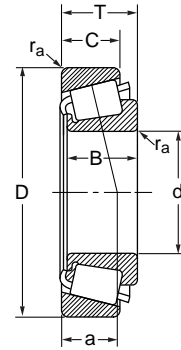
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 45.242 | 73.431 | 19.558 | 19.812 | 15.748 | 50.825 | 71.250 | 4,320 | 5,670 |
| 45.242 | 77.788 | 19.842 | 19.842 | 15.080 | 53.200 | 67.450 | 4,050 | 5,670 |
| 45.242 | 77.788 | 21.430 | 19.842 | 16.667 | 53.200 | 67.450 | 4,050 | 5,670 |
| 45.618 | 82.931 | 23.812 | 25.400 | 19.050 | 72.675 | 94.050 | 4,050 | 5,400 |
| 45.618 | 82.931 | 26.988 | 25.400 | 22.225 | 72.675 | 94.050 | 4,050 | 5,400 |
| 46.000 | 75.000 | 18.000 | 18.000 | 14.000 | 48.450 | 67.925 | 4,050 | 5,670 |
| 46.038 | 79.375 | 17.462 | 17.462 | 13.495 | 43.700 | 54.150 | 4,050 | 5,400 |
| 46.038 | 80.962 | 19.050 | 17.462 | 14.288 | 42.750 | 54.150 | 3,870 | 5,400 |
| 46.038 | 85.000 | 20.638 | 21.692 | 17.462 | 67.925 | 77.425 | 3,870 | 5,400 |
| 46.038 | 85.000 | 25.400 | 25.608 | 20.638 | 75.525 | 99.750 | 3,870 | 5,400 |
| 46.038 | 95.250 | 27.783 | 29.901 | 22.225 | 100.700 | 119.700 | 3,870 | 5,040 |
| 47.625 | 88.900 | 20.638 | 22.225 | 16.513 | 69.350 | 80.750 | 3,600 | 5,040 |
| 47.625 | 88.900 | 25.400 | 25.400 | 19.050 | 81.700 | 101.650 | 3,600 | 5,040 |
| 47.625 | 95.250 | 30.162 | 29.370 | 23.020 | 100.700 | 135.850 | 3,420 | 4,770 |
| 47.625 | 101.600 | 34.925 | 36.068 | 26.988 | 130.150 | 160.550 | 3,420 | 4,500 |
| 47.625 | 111.125 | 30.162 | 26.909 | 20.638 | 87.875 | 104.500 | 2,880 | 3,870 |
| 47.625 | 112.712 | 30.162 | 26.909 | 20.638 | 87.875 | 104.500 | 2,880 | 3,870 |
| 47.625 | 117.475 | 33.338 | 31.750 | 23.812 | 130.150 | 148.200 | 2,880 | 3,870 |
| 47.625 | 123.825 | 36.512 | 32.791 | 25.400 | 135.850 | 152.000 | 2,700 | 3,600 |
| 48.412 | 95.250 | 30.162 | 29.370 | 23.020 | 100.700 | 135.850 | 3,420 | 4,770 |
| 48.412 | 95.250 | 30.162 | 29.370 | 23.020 | 100.700 | 135.850 | 3,420 | 4,770 |
| 49.212 | 104.775 | 36.512 | 36.512 | 28.575 | 132.050 | 182.400 | 3,060 | 4,320 |
| 49.212 | 114.300 | 44.450 | 44.450 | 36.068 | 186.200 | 230.850 | 3,060 | 4,320 |
| 50.000 | 82.000 | 21.500 | 21.500 | 17.000 | 67.450 | 91.200 | 3,870 | 5,040 |
| 50.000 | 82.550 | 21.590 | 22.225 | 16.510 | 67.450 | 91.200 | 3,870 | 5,040 |
| 50.000 | 88.900 | 20.638 | 22.225 | 16.513 | 69.350 | 80.750 | 3,600 | 5,040 |
| 50.000 | 90.000 | 28.000 | 28.000 | 23.000 | 98.800 | 129.200 | 3,600 | 5,040 |
| 50.000 | 105.000 | 37.000 | 36.000 | 29.000 | 132.050 | 182.400 | 3,060 | 4,320 |
| 50.800 | 80.962 | 18.258 | 18.258 | 14.288 | 50.350 | 76.950 | 3,870 | 5,040 |
| 50.800 | 82.550 | 23.622 | 22.225 | 18.542 | 67.450 | 91.200 | 3,870 | 5,040 |
| 50.800 | 82.931 | 21.590 | 22.225 | 16.510 | 67.450 | 91.200 | 3,870 | 5,040 |
| 50.800 | 85.000 | 17.462 | 17.462 | 13.495 | 46.075 | 59.850 | 3,870 | 5,040 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|-------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 3.5 | 0.8 | 0.315 | LM 102949 | LM 102910 |
| 3.5 | 0.8 | 0.368 | LM 603049 | LM 603011 |
| 3.5 | 0.8 | 0.386 | LM 603049 | LM 603012 |
| 3.5 | 0.8 | 0.546 | 25590 | 25520 |
| 3.5 | 2.3 | 0.591 | 25590 | 25523 |
| 2.3 | 1.5 | 0.305 | LM 503349 | LM 503310 |
| 2.8 | 1.5 | 0.337 | 18690 | 18620 |
| 0.8 | 1.5 | 0.380 | 13181 | 13318 |
| 2.3 | 1.3 | 0.505 | 359 S | 354 A |
| 3.5 | 1.3 | 0.920 | 2984 | 2924 |
| 3.5 | 0.8 | 0.917 | 436 | 432 A |
| 3.5 | 1.3 | 0.547 | 369 A | 362 A |
| 3.5 | 3.3 | 0.673 | M 804049 | M 804010 |
| 3.5 | 3.3 | 0.980 | HM 804846 | HM 804810 |
| 3.5 | 3.3 | 1.310 | 528 | 522 |
| 3.5 | 3.3 | 1.331 | 55187 | 55437 |
| 3.5 | 3.3 | 1.370 | 55187 | 55443 |
| 3.5 | 3.3 | 1.742 | 66187 | 66462 |
| 3.5 | 3.3 | 2.080 | 72187 | 72487 |
| 3.5 | 3.3 | 0.964 | HM 804849 | HM 804810 |
| 2.3 | 3.3 | 0.968 | HM 804848 | HM 804810 |
| 3.5 | 0.8 | 1.538 | HM 807044 | HM 807011 |
| 3.5 | 3.3 | 2.267 | HH 506348 | HH 506310 |
| 3.0 | 0.5 | 0.435 | JLM 104948 | JLM 104910 |
| 0.5 | 1.3 | 0.449 | LM 104947 A | LM 104911 |
| 2.3 | 1.3 | 0.517 | 366 | 362 A |
| 3.0 | 2.5 | 0.753 | JM 205149 | JM 205110 |
| 3.0 | 2.5 | 1.533 | JHM 807045 | JHM 807012 |
| 1.5 | 1.5 | 0.358 | L 305649 | L 305610 |
| 3.5 | 0.8 | 0.459 | LM 104949 | LM 104911 A |
| 3.5 | 1.3 | 0.441 | LM 104949 | LM 104912 |
| 3.5 | 1.5 | 0.375 | 18790 | 18720 |



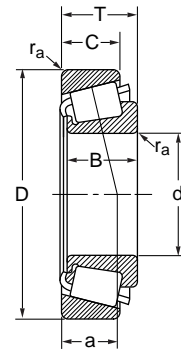
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 50.800 | 85.725 | 19.050 | 18.263 | 12.700 | 40.375 | 51.300 | 3,600 | 4,770 |
| 50.800 | 88.900 | 20.638 | 22.225 | 16.513 | 69.350 | 80.750 | 3,600 | 5,040 |
| 50.800 | 88.900 | 20.638 | 22.225 | 16.513 | 69.350 | 80.750 | 3,600 | 5,040 |
| 50.800 | 92.075 | 24.608 | 25.400 | 19.845 | 80.275 | 111.150 | 3,600 | 4,770 |
| 50.800 | 93.264 | 30.162 | 30.302 | 23.812 | 97.850 | 129.200 | 3,420 | 4,770 |
| 50.800 | 93.264 | 30.162 | 30.302 | 23.812 | 97.850 | 129.200 | 3,420 | 4,770 |
| 50.800 | 95.250 | 27.783 | 28.575 | 22.225 | 104.500 | 136.800 | 3,420 | 4,770 |
| 50.800 | 101.600 | 31.750 | 31.750 | 25.400 | 112.100 | 142.500 | 3,240 | 4,500 |
| 50.800 | 101.600 | 34.925 | 36.068 | 26.988 | 130.150 | 160.550 | 3,420 | 4,500 |
| 50.800 | 101.600 | 34.925 | 36.068 | 26.988 | 130.150 | 160.550 | 3,420 | 4,500 |
| 50.800 | 104.775 | 36.512 | 36.512 | 28.575 | 132.050 | 182.400 | 3,060 | 4,320 |
| 50.800 | 104.775 | 36.512 | 36.512 | 28.575 | 132.050 | 182.400 | 3,060 | 4,320 |
| 50.800 | 108.966 | 34.925 | 36.512 | 26.988 | 137.750 | 171.950 | 3,240 | 4,320 |
| 50.800 | 111.125 | 30.162 | 26.909 | 20.638 | 107.350 | 144.400 | 2,700 | 3,870 |
| 50.800 | 111.125 | 30.162 | 26.909 | 20.638 | 87.875 | 104.500 | 2,880 | 3,870 |
| 50.800 | 123.825 | 36.512 | 32.791 | 25.400 | 153.900 | 189.050 | 2,520 | 3,600 |
| 50.800 | 123.825 | 36.512 | 32.791 | 25.400 | 135.850 | 152.000 | 2,700 | 3,600 |
| 50.800 | 127.000 | 44.450 | 44.450 | 34.925 | 189.050 | 245.100 | 2,700 | 3,600 |
| 50.800 | 127.000 | 50.800 | 52.388 | 41.275 | 224.200 | 285.000 | 2,880 | 3,870 |
| 52.388 | 92.075 | 24.608 | 25.400 | 19.845 | 80.275 | 111.150 | 3,600 | 4,770 |
| 52.388 | 100.000 | 25.000 | 22.225 | 21.824 | 73.150 | 88.350 | 3,420 | 4,770 |
| 52.388 | 111.125 | 30.162 | 26.909 | 20.638 | 87.875 | 104.500 | 2,880 | 3,870 |
| 53.975 | 104.775 | 39.688 | 40.157 | 33.338 | 142.500 | 199.500 | 3,240 | 4,320 |
| 53.975 | 107.950 | 36.512 | 36.957 | 28.575 | 136.800 | 172.900 | 3,240 | 4,320 |
| 53.975 | 122.238 | 33.338 | 31.750 | 23.812 | 128.250 | 148.200 | 2,700 | 3,600 |
| 53.975 | 123.825 | 36.512 | 32.791 | 25.400 | 135.850 | 152.000 | 2,700 | 3,600 |
| 53.975 | 123.825 | 36.512 | 32.791 | 25.400 | 153.900 | 189.050 | 2,520 | 3,600 |
| 53.975 | 123.825 | 38.100 | 36.678 | 30.162 | 152.950 | 209.950 | 2,700 | 3,600 |
| 53.975 | 127.000 | 44.450 | 44.450 | 34.925 | 189.050 | 245.100 | 2,700 | 3,600 |
| 53.975 | 127.000 | 50.800 | 52.388 | 41.275 | 224.200 | 285.000 | 2,880 | 3,870 |
| 53.975 | 130.175 | 36.512 | 33.338 | 23.812 | 126.350 | 146.300 | 2,340 | 3,240 |
| 55.000 | 90.000 | 23.000 | 23.000 | 18.500 | 75.050 | 105.450 | 3,420 | 4,770 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 1.5 | 1.5 | 0.404 | 18200 | 18337 |
| 3.5 | 1.3 | 0.504 | 368 A | 362 A |
| 1.5 | 1.3 | 0.507 | 368 | 362 A |
| 3.5 | 0.8 | 0.707 | 28580 | 28521 |
| 0.8 | 0.8 | 0.865 | 3775 | 3730 |
| 3.5 | 0.8 | 0.861 | 3780 | 3730 |
| 3.5 | 2.3 | 0.868 | 33889 | 33821 |
| 3.5 | 3.3 | 1.133 | 49585 | 49520 |
| 0.8 | 3.3 | 1.238 | 529 | 522 |
| 3.5 | 3.3 | 1.235 | 529 X | 522 |
| 3.5 | 0.8 | 1.500 | HM 807046 | HM 807011 |
| 3.5 | 3.3 | 1.495 | HM 807046 | HM 807010 |
| 3.5 | 3.3 | 1.537 | 59200 | 59429 |
| 3.5 | 3.3 | 1.359 | 55200 C | 55437 |
| 3.5 | 3.3 | 1.281 | 55200 | 55437 |
| 3.5 | 3.3 | 2.120 | 72200 C | 72487 |
| 3.5 | 3.3 | 2.010 | 72200 | 72487 |
| 3.5 | 3.3 | 2.890 | 65200 | 65500 |
| 3.5 | 3.3 | 3.300 | 6279 | 6220 |
| 3.5 | 0.8 | 0.682 | 28584 | 28521 |
| 2.3 | 2.0 | 0.827 | 377 | 372 |
| 3.5 | 3.3 | 1.251 | 55206 | 55437 |
| 3.5 | 3.3 | 1.555 | 4595 | 4535 |
| 3.5 | 3.3 | 1.450 | 539 | 532 X |
| 3.5 | 3.3 | 1.758 | 66584 | 66520 |
| 3.5 | 3.3 | 1.950 | 72212 | 72487 |
| 3.5 | 3.3 | 2.060 | 72212 C | 72487 |
| 3.5 | 3.3 | 2.254 | 557 S | 552 A |
| 3.5 | 3.3 | 2.790 | 65212 | 65500 |
| 3.5 | 3.3 | 3.190 | 6280 | 6220 |
| 3.5 | 3.3 | 2.175 | HM 911242 | HM 911210 |
| 1.5 | 0.5 | 0.564 | JLM 506849 | JLM 506810 |



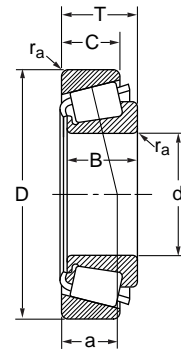
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 50.800 | 85.725 | 19.050 | 18.263 | 12.700 | 40.375 | 51.300 | 3,600 | 4,770 |
| 55.000 | 95.000 | 29.000 | 29.000 | 23.500 | 105.450 | 144.400 | 3,420 | 4,500 |
| 55.000 | 96.838 | 21.000 | 21.946 | 15.875 | 76.475 | 95.000 | 3,240 | 4,500 |
| 55.000 | 110.000 | 39.000 | 39.000 | 32.000 | 168.150 | 213.750 | 3,060 | 4,050 |
| 55.000 | 115.000 | 41.021 | 41.275 | 31.496 | 163.400 | 203.300 | 2,880 | 4,050 |
| 55.562 | 97.630 | 24.608 | 24.608 | 19.446 | 84.550 | 122.550 | 3,240 | 4,500 |
| 55.562 | 122.238 | 43.658 | 43.764 | 36.512 | 188.100 | 277.400 | 2,700 | 3,600 |
| 55.562 | 123.825 | 36.512 | 32.791 | 25.400 | 135.850 | 152.000 | 2,700 | 3,600 |
| 55.562 | 123.825 | 36.512 | 32.791 | 25.400 | 153.900 | 189.050 | 2,520 | 3,600 |
| 57.150 | 96.838 | 21.000 | 21.946 | 15.875 | 76.475 | 95.000 | 3,240 | 4,500 |
| 57.150 | 96.838 | 21.000 | 21.946 | 15.875 | 76.475 | 95.000 | 3,240 | 4,500 |
| 57.150 | 96.838 | 25.400 | 21.946 | 20.275 | 76.475 | 95.000 | 3,240 | 4,500 |
| 57.150 | 98.425 | 21.000 | 21.946 | 17.826 | 76.475 | 95.000 | 3,240 | 4,500 |
| 57.150 | 104.775 | 30.162 | 29.317 | 24.605 | 110.200 | 141.550 | 3,060 | 4,320 |
| 57.150 | 104.775 | 30.162 | 29.317 | 24.605 | 110.200 | 141.550 | 3,060 | 4,320 |
| 57.150 | 104.775 | 30.162 | 30.958 | 23.812 | 123.500 | 161.500 | 3,060 | 4,320 |
| 57.150 | 104.775 | 30.162 | 30.958 | 23.812 | 123.500 | 161.500 | 3,060 | 4,320 |
| 57.150 | 122.238 | 33.338 | 31.750 | 23.812 | 128.250 | 148.200 | 2,700 | 3,600 |
| 57.150 | 123.825 | 36.512 | 32.791 | 25.400 | 153.900 | 189.050 | 2,520 | 3,600 |
| 57.150 | 123.825 | 38.100 | 36.678 | 30.162 | 152.950 | 209.950 | 2,700 | 3,600 |
| 57.150 | 140.030 | 36.512 | 33.236 | 23.520 | 144.400 | 173.850 | 2,340 | 3,240 |
| 57.150 | 144.983 | 36.000 | 33.236 | 23.007 | 144.400 | 173.850 | 2,340 | 3,240 |
| 57.150 | 149.225 | 53.975 | 54.229 | 44.450 | 272.650 | 389.500 | 2,340 | 3,060 |
| 57.531 | 96.838 | 21.000 | 21.946 | 15.875 | 76.475 | 95.000 | 3,240 | 4,500 |
| 58.738 | 112.712 | 33.338 | 30.048 | 26.988 | 114.000 | 164.350 | 2,880 | 3,870 |
| 60.000 | 95.000 | 24.000 | 24.000 | 19.000 | 82.175 | 118.750 | 3,240 | 4,500 |
| 60.000 | 104.775 | 21.433 | 22.000 | 15.875 | 79.325 | 101.650 | 3,060 | 4,050 |
| 60.000 | 110.000 | 22.000 | 21.996 | 18.824 | 81.225 | 107.350 | 2,880 | 3,870 |
| 60.000 | 122.238 | 33.338 | 31.750 | 23.812 | 128.250 | 148.200 | 2,700 | 3,600 |
| 60.325 | 100.000 | 25.400 | 25.400 | 19.845 | 86.450 | 128.250 | 3,060 | 4,320 |
| 60.325 | 101.600 | 25.400 | 25.400 | 19.845 | 86.450 | 128.250 | 3,060 | 4,320 |
| 60.325 | 122.238 | 38.100 | 36.678 | 30.162 | 152.950 | 209.950 | 2,700 | 3,600 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 1.5 | 1.5 | 0.404 | 18200 | 18337 |
| 1.5 | 2.5 | 0.850 | JM 207049 | JM 207010 |
| 2.3 | 0.8 | 0.634 | 385 | 382 A |
| 3.0 | 2.5 | 1.697 | JH 307749 | JH 307710 |
| 3.0 | 3.0 | 1.897 | 622 X | 614 X |
| 3.5 | 0.8 | 0.769 | 28680 | 28622 |
| 1.3 | 3.3 | 2.575 | 5566 | 5535 |
| 3.5 | 3.3 | 1.910 | 72218 | 72487 |
| 3.5 | 3.3 | 2.020 | 72218 C | 72487 |
| 3.5 | 0.8 | 0.599 | 387 A | 382 A |
| 2.3 | 0.8 | 0.602 | 387 | 382 A |
| 3.5 | 2.3 | 0.669 | 387 A | 382 S |
| 3.5 | 0.8 | 0.646 | 387 A | 382 |
| 3.5 | 3.3 | 1.068 | 469 | 453 X |
| 2.3 | 3.3 | 1.070 | 462 | 453 X |
| 0.8 | 3.3 | 1.099 | 45289 | 45220 |
| 0.8 | 0.8 | 1.110 | 45289 | 45221 |
| 3.5 | 3.3 | 1.698 | 66587 | 66520 |
| 3.5 | 3.3 | 1.980 | 72225 C | 72487 |
| 3.5 | 3.3 | 2.174 | 555 S | 552 A |
| 3.5 | 2.3 | 2.596 | 78225 | 78551 |
| 3.5 | 3.5 | 2.760 | 78225 | 78571 |
| 3.5 | 3.3 | 5.120 | 6455 | 6420 |
| 3.5 | 0.8 | 0.595 | 388 A | 382 A |
| 3.5 | 3.3 | 1.440 | 3981 | 3926 |
| 5.0 | 2.5 | 0.630 | JLM 508748 | JLM 508710 |
| 2.3 | 2.0 | 0.745 | 39236 | 39412 |
| 0.8 | 1.3 | 0.905 | 397 | 394 A |
| 3.5 | 3.3 | 1.628 | 66585 | 66520 |
| 3.5 | 3.3 | 0.770 | 28985 | 28921 |
| 3.5 | 3.3 | 0.810 | 28985 | 28920 |
| 2.3 | 3.3 | 2.022 | 558 | 553 X |



| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 60.325 | 122.238 | 38.100 | 38.354 | 29.718 | 178.600 | 232.750 | 2,700 | 3,600 |
| 60.325 | 122.238 | 43.658 | 43.764 | 36.512 | 188.100 | 277.400 | 2,700 | 3,600 |
| 60.325 | 127.000 | 44.450 | 44.450 | 34.925 | 189.050 | 245.100 | 2,700 | 3,600 |
| 60.325 | 130.175 | 41.275 | 41.275 | 31.750 | 185.250 | 249.850 | 2,520 | 3,420 |
| 60.325 | 135.755 | 53.975 | 56.007 | 44.450 | 250.800 | 337.250 | 2,520 | 3,420 |
| 61.912 | 136.525 | 46.038 | 46.038 | 36.512 | 221.350 | 351.500 | 2,340 | 3,060 |
| 61.912 | 146.050 | 41.275 | 39.688 | 25.400 | 183.350 | 213.750 | 2,160 | 3,060 |
| 61.912 | 152.400 | 47.625 | 46.038 | 31.750 | 225.150 | 253.650 | 2,160 | 3,060 |
| 63.500 | 94.458 | 19.050 | 19.050 | 15.083 | 56.050 | 95.000 | 3,240 | 4,320 |
| 63.500 | 104.775 | 21.433 | 22.000 | 15.875 | 79.325 | 101.650 | 3,060 | 4,050 |
| 63.500 | 107.950 | 25.400 | 25.400 | 19.050 | 85.500 | 131.100 | 2,880 | 3,870 |
| 63.500 | 110.000 | 22.000 | 21.996 | 18.824 | 81.225 | 107.350 | 2,880 | 3,870 |
| 63.500 | 110.000 | 22.000 | 21.996 | 18.824 | 81.225 | 107.350 | 2,880 | 3,870 |
| 63.500 | 112.712 | 30.162 | 30.048 | 23.812 | 114.000 | 164.350 | 2,880 | 3,870 |
| 63.500 | 112.712 | 30.162 | 30.162 | 23.812 | 134.900 | 191.900 | 2,880 | 3,870 |
| 63.500 | 112.712 | 33.338 | 30.048 | 26.988 | 114.000 | 164.350 | 2,880 | 3,870 |
| 63.500 | 122.238 | 38.100 | 38.354 | 29.718 | 178.600 | 232.750 | 2,700 | 3,600 |
| 63.500 | 122.238 | 38.100 | 38.354 | 29.718 | 178.600 | 232.750 | 2,700 | 3,600 |
| 63.500 | 122.238 | 38.100 | 38.354 | 29.718 | 178.600 | 232.750 | 2,700 | 3,600 |
| 63.500 | 122.238 | 43.658 | 43.764 | 36.512 | 188.100 | 277.400 | 2,700 | 3,600 |
| 63.500 | 123.825 | 38.100 | 36.678 | 30.162 | 152.950 | 209.950 | 2,700 | 3,600 |
| 63.500 | 127.000 | 36.512 | 36.170 | 28.575 | 157.700 | 222.300 | 2,520 | 3,420 |
| 63.500 | 130.175 | 41.275 | 41.275 | 31.750 | 185.250 | 249.850 | 2,520 | 3,420 |
| 63.500 | 136.525 | 36.512 | 33.236 | 23.520 | 144.400 | 173.850 | 2,340 | 3,240 |
| 63.500 | 136.525 | 41.275 | 41.275 | 31.750 | 185.250 | 249.850 | 2,520 | 3,420 |
| 63.500 | 140.030 | 36.512 | 33.236 | 23.520 | 144.400 | 173.850 | 2,340 | 3,240 |
| 64.963 | 127.000 | 36.512 | 36.170 | 28.575 | 157.700 | 222.300 | 2,520 | 3,420 |
| 65.000 | 105.000 | 24.000 | 23.000 | 18.500 | 88.350 | 119.700 | 3,060 | 4,050 |
| 65.000 | 110.000 | 28.000 | 28.000 | 22.500 | 114.000 | 164.350 | 2,880 | 3,870 |
| 65.000 | 120.000 | 29.002 | 29.007 | 23.444 | 116.850 | 160.550 | 2,700 | 3,600 |
| 65.000 | 120.000 | 39.000 | 38.500 | 32.000 | 175.750 | 236.550 | 2,700 | 3,600 |
| 65.088 | 135.755 | 53.975 | 56.007 | 44.450 | 250.800 | 337.250 | 2,520 | 3,420 |

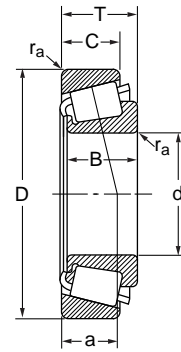
| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 8.0 | 1.5 | 2.034 | HM 212044 | HM 212010 |
| 0.8 | 3.3 | 2.425 | 5582 | 5535 |
| 3.5 | 3.3 | 2.590 | 65237 | 65500 |
| 3.5 | 3.3 | 2.582 | 637 | 633 |
| 3.5 | 3.3 | 3.840 | 6376 | 6320 |
| 3.5 | 3.3 | 3.471 | H 715334 | H 715311 |
| 3.5 | 3.3 | 3.098 | H 913842 | H 913810 |
| 3.5 | 3.3 | 3.980 | 9180 | 9121 |
| 1.5 | 1.5 | 0.460 | L 610549 | L 610510 |
| 2.0 | 2.0 | 0.687 | 39250 | 39412 |
| 1.5 | 3.3 | 0.942 | 29586 | 29520 |
| 3.5 | 1.3 | 0.843 | 395 | 394 A |
| 1.5 | 1.3 | 0.846 | 390 A | 394 A |
| 3.5 | 3.2 | 1.243 | 3982 | 3920 |
| 3.5 | 3.3 | 1.258 | 39585 | 39520 |
| 3.5 | 3.3 | 1.330 | 3982 | 3926 |
| 7.0 | 3.3 | 1.938 | HM 212047 | HM 212011 |
| 7.0 | 1.5 | 1.944 | HM 212047 | HM 212010 |
| 3.5 | 1.5 | 1.954 | HM 212046 | HM 212010 |
| 3.5 | 3.3 | 2.315 | 5584 | 5535 |
| 3.5 | 3.3 | 1.994 | 559 | 522 A |
| 3.5 | 3.3 | 2.115 | 565 | 563 |
| 3.5 | 3.3 | 2.482 | 639 | 633 |
| 2.3 | 3.3 | 2.292 | 78250 | 78537 |
| 3.5 | 3.3 | 2.810 | 639 | 632 |
| 2.3 | 2.3 | 2.436 | 78250 | 78551 |
| 3.5 | 3.3 | 2.065 | 569 | 563 |
| 3.0 | 1.0 | 0.763 | JLM 710949 | JLM 710910 |
| 3.0 | 2.5 | 1.062 | JM 511946 | JM 511910 |
| 2.3 | 3.3 | 1.408 | 478 | 472 A |
| 3.0 | 2.5 | 1.875 | JH 211749 | JH 211710 |
| 3.5 | 3.3 | 3.640 | 6379 | 6320 |



| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|---------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 65.088 | 136.525 | 460.380 | 46.038 | 36.512 | 221.350 | 351.500 | 2,340 | 3,060 |
| 66.675 | 110.000 | 22.000 | 21.996 | 18.824 | 81.225 | 107.350 | 2,880 | 3,870 |
| 66.675 | 110.000 | 22.000 | 21.996 | 18.824 | 81.225 | 107.350 | 2,880 | 3,870 |
| 66.675 | 112.712 | 30.162 | 30.048 | 23.812 | 114.000 | 164.350 | 2,880 | 3,870 |
| 66.675 | 112.712 | 30.162 | 30.048 | 23.812 | 114.000 | 164.350 | 2,880 | 3,870 |
| 66.675 | 112.712 | 30.162 | 30.162 | 23.812 | 134.900 | 191.900 | 2,880 | 3,870 |
| 66.675 | 112.712 | 30.162 | 30.162 | 23.812 | 134.900 | 191.900 | 2,880 | 3,870 |
| 66.675 | 117.475 | 30.162 | 30.162 | 23.812 | 113.050 | 170.050 | 2,700 | 3,600 |
| 66.675 | 122.238 | 38.100 | 36.678 | 30.162 | 152.950 | 209.950 | 2,700 | 3,600 |
| 66.675 | 122.238 | 38.100 | 38.354 | 29.718 | 178.600 | 232.750 | 2,700 | 3,600 |
| 66.675 | 122.238 | 38.100 | 38.354 | 29.718 | 178.600 | 232.750 | 2,700 | 3,600 |
| 66.675 | 123.825 | 38.100 | 36.678 | 30.162 | 152.950 | 209.950 | 2,700 | 3,600 |
| 66.675 | 136.525 | 46.038 | 46.038 | 36.512 | 221.350 | 351.500 | 2,340 | 3,060 |
| 68.262 | 110.000 | 22.000 | 21.996 | 18.824 | 81.225 | 107.350 | 2,880 | 3,870 |
| 68.262 | 120.000 | 29.795 | 29.007 | 24.237 | 116.850 | 160.550 | 2,700 | 3,600 |
| 68.262 | 122.238 | 38.100 | 36.678 | 30.162 | 152.950 | 209.950 | 2,700 | 3,600 |
| 68.262 | 127.000 | 36.512 | 36.170 | 28.575 | 157.700 | 222.300 | 2,520 | 3,420 |
| 68.262 | 136.525 | 41.275 | 41.275 | 31.750 | 217.550 | 282.150 | 2,340 | 3,240 |
| 68.262 | 136.525 | 46.038 | 46.038 | 36.512 | 221.350 | 351.500 | 2,340 | 3,060 |
| 68.262 | 152.400 | 47.625 | 46.038 | 31.750 | 225.150 | 253.650 | 2,160 | 3,060 |
| 69.850 | 112.712 | 22.225 | 21.996 | 15.875 | 80.750 | 107.350 | 2,700 | 3,600 |
| 69.850 | 112.712 | 25.400 | 25.400 | 19.050 | 91.200 | 144.400 | 2,520 | 3,600 |
| 69.850 | 117.475 | 30.162 | 30.162 | 23.812 | 113.050 | 170.050 | 2,700 | 3,600 |
| 69.850 | 120.000 | 32.545 | 32.545 | 26.195 | 144.400 | 213.750 | 2,700 | 3,600 |
| 69.850 | 120.650 | 25.400 | 25.400 | 19.050 | 91.200 | 144.400 | 2,520 | 3,600 |
| 69.850 | 127.000 | 36.512 | 36.170 | 28.575 | 157.700 | 222.300 | 2,520 | 3,420 |
| 69.850 | 130.175 | 41.275 | 41.275 | 31.750 | 185.250 | 249.850 | 2,520 | 3,420 |
| 69.850 | 146.050 | 41.275 | 39.688 | 25.400 | 183.350 | 213.750 | 2,160 | 3,060 |
| 69.850 | 146.050 | 41.275 | 41.275 | 31.750 | 196.650 | 281.200 | 2,160 | 2,880 |
| 69.850 | 149.225 | 53.975 | 54.229 | 44.450 | 272.650 | 389.500 | 2,340 | 3,060 |
| 69.850 | 150.089 | 44.450 | 46.672 | 36.512 | 251.750 | 351.500 | 2,160 | 2,880 |
| 70.000 | 110.000 | 26.000 | 25.000 | 20.500 | 93.575 | 144.400 | 2,700 | 3,600 |

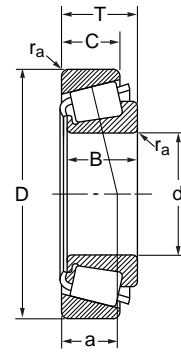
| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 3.5 | 3.3 | 3.361 | H 715340 | H 715311 |
| 0.8 | 1.3 | 0.791 | 395 A | 394 A |
| 3.5 | 1.3 | 0.787 | 395 S | 394 A |
| 3.5 | 3.2 | 1.166 | 3984 | 3920 |
| 5.5 | 3.2 | 1.160 | 3994 | 3920 |
| 3.5 | 0.8 | 1.187 | 39590 | 39521 |
| 3.5 | 3.3 | 1.181 | 39590 | 39520 |
| 3.5 | 3.3 | 1.353 | 33262 | 33462 |
| 3.5 | 3.3 | 1.832 | 560 | 553 X |
| 3.5 | 1.5 | 1.854 | HM 212049 | HM 212010 |
| 3.5 | 3.3 | 1.848 | HM 212049 | HM 212011 |
| 3.5 | 3.3 | 1.904 | 560 | 552 A |
| 3.5 | 3.3 | 3.301 | H 715341 | H 715311 |
| 2.3 | 1.3 | 0.760 | 399 A | 394 A |
| 3.5 | 2.0 | 1.355 | 480 | 472 |
| 3.5 | 3.3 | 1.782 | 560 S | 553 X |
| 3.5 | 3.3 | 1.975 | 570 | 563 |
| 3.5 | 3.3 | 2.746 | H 414245 | H 414210 |
| 3.5 | 3.3 | 3.241 | H 715343 | H 715311 |
| 3.5 | 3.3 | 3.740 | 9185 | 9121 |
| 1.5 | 0.8 | 0.800 | LM 613449 | LM 613410 |
| 1.5 | 3.3 | 0.968 | 29675 | 29620 |
| 3.5 | 3.3 | 1.272 | 33275 | 33462 |
| 3.5 | 3.3 | 1.497 | 47487 | 47420 |
| 1.5 | 3.3 | 1.184 | 29675 | 29630 |
| 3.5 | 0.8 | 1.928 | 566 | 563 X |
| 3.5 | 3.3 | 2.272 | 643 | 633 |
| 3.5 | 3.3 | 2.848 | H 913849 | H 913810 |
| 3.5 | 3.3 | 3.241 | 655 | 653 |
| 5.0 | 3.3 | 4.580 | 6454 | 6420 |
| 3.5 | 3.3 | 3.890 | 745 A | 742 |
| 1.0 | 2.5 | 0.908 | JLM 813049 | JLM 813010 |

4.02



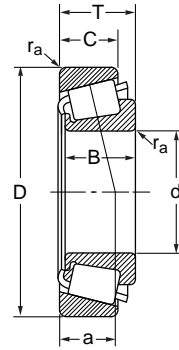
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 70.000 | 115.000 | 29.000 | 29.000 | 23.000 | 119.700 | 168.150 | 2,700 | 3,600 |
| 70.000 | 120.000 | 29.795 | 29.007 | 24.237 | 116.850 | 160.550 | 2,700 | 3,600 |
| 71.438 | 117.475 | 30.162 | 30.162 | 23.812 | 113.050 | 170.050 | 2,700 | 3,600 |
| 71.438 | 120.000 | 32.545 | 32.545 | 26.195 | 144.400 | 213.750 | 2,700 | 3,600 |
| 71.438 | 127.000 | 36.512 | 36.170 | 28.575 | 157.700 | 222.300 | 2,520 | 3,420 |
| 71.438 | 127.000 | 36.512 | 36.170 | 28.575 | 157.700 | 222.300 | 2,520 | 3,420 |
| 71.438 | 130.175 | 41.275 | 41.275 | 31.750 | 185.250 | 249.850 | 2,520 | 3,420 |
| 71.438 | 136.525 | 41.275 | 41.275 | 31.750 | 185.250 | 249.850 | 2,520 | 3,420 |
| 71.438 | 136.525 | 41.275 | 41.275 | 31.750 | 217.550 | 282.150 | 2,340 | 3,240 |
| 71.438 | 136.525 | 46.038 | 46.038 | 36.512 | 221.350 | 351.500 | 2,340 | 3,060 |
| 73.025 | 112.712 | 25.400 | 25.400 | 19.050 | 91.200 | 144.400 | 2,520 | 3,600 |
| 73.025 | 117.475 | 30.162 | 30.162 | 23.812 | 113.050 | 170.050 | 2,700 | 3,600 |
| 73.025 | 127.000 | 36.512 | 36.170 | 28.575 | 157.700 | 222.300 | 2,520 | 3,420 |
| 73.025 | 146.050 | 41.275 | 41.275 | 31.750 | 196.650 | 281.200 | 2,160 | 2,880 |
| 73.025 | 149.225 | 53.975 | 54.229 | 44.450 | 272.650 | 389.500 | 2,340 | 3,060 |
| 73.817 | 127.000 | 36.512 | 36.170 | 28.575 | 157.700 | 222.300 | 2,520 | 3,420 |
| 74.612 | 150.000 | 41.275 | 41.275 | 31.750 | 196.650 | 281.200 | 2,160 | 2,880 |
| 75.000 | 115.000 | 25.000 | 25.000 | 19.000 | 95.950 | 142.500 | 2,700 | 3,600 |
| 75.000 | 120.000 | 31.000 | 29.500 | 25.000 | 122.550 | 188.100 | 2,520 | 3,420 |
| 75.000 | 145.000 | 51.000 | 51.000 | 42.000 | 272.650 | 389.500 | 2,340 | 3,060 |
| 76.200 | 121.442 | 24.608 | 23.012 | 17.462 | 84.550 | 117.800 | 2,520 | 3,420 |
| 76.200 | 127.000 | 30.162 | 31.000 | 22.225 | 127.300 | 185.250 | 2,520 | 3,420 |
| 76.200 | 127.000 | 30.162 | 31.001 | 22.225 | 127.300 | 185.250 | 2,520 | 3,420 |
| 76.200 | 133.350 | 33.338 | 33.338 | 26.195 | 146.300 | 225.150 | 2,340 | 3,240 |
| 76.200 | 135.732 | 44.450 | 46.101 | 34.925 | 205.200 | 323.000 | 2,340 | 3,240 |
| 76.200 | 136.525 | 30.162 | 29.769 | 22.225 | 123.500 | 182.400 | 2,340 | 3,060 |
| 76.200 | 136.525 | 30.162 | 29.769 | 22.225 | 123.500 | 182.400 | 2,340 | 3,060 |
| 76.200 | 139.992 | 36.512 | 36.098 | 28.575 | 166.250 | 247.000 | 2,340 | 3,060 |
| 76.200 | 149.225 | 53.975 | 54.229 | 44.45 | 272.650 | 389.500 | 2,340 | 3,060 |
| 76.200 | 152.400 | 39.688 | 36.322 | 30.162 | 173.850 | 270.750 | 1,980 | 2,880 |
| 76.200 | 152.400 | 41.275 | 41.275 | 31.750 | 196.650 | 281.200 | 2,160 | 2,880 |
| 76.200 | 161.925 | 49.212 | 46.038 | 31.750 | 235.600 | 275.500 | 1,980 | 2,700 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 3.0 | 2.5 | 1.162 | JM 612949 | JM 612910 |
| 2.0 | 2.0 | 1.315 | 484 | 472 |
| 3.5 | 3.3 | 1.231 | 33281 | 33462 |
| 3.5 | 3.3 | 1.460 | 47490 | 47420 |
| 6.4 | 3.3 | 1.865 | 567 S | 563 |
| 3.5 | 3.3 | 1.885 | 567 A | 563 |
| 6.4 | 3.3 | 2.202 | 645 | 633 |
| 3.5 | 3.3 | 2.540 | 644 | 632 |
| 3.5 | 3.3 | 2.626 | H 414249 | H 414210 |
| 3.5 | 3.3 | 3.111 | H 715345 | H 715311 |
| 3.5 | 3.3 | 0.893 | 29685 | 29620 |
| 3.5 | 3.3 | 1.188 | 33287 | 33462 |
| 3.5 | 3.3 | 1.825 | 567 | 563 |
| 3.5 | 3.3 | 3.131 | 657 | 653 |
| 3.5 | 3.3 | 4.430 | 6460 | 6420 |
| 0.8 | 3.3 | 1.805 | 568 | 563 |
| 3.5 | 3.0 | 3.302 | 658 | 653 X |
| 3.0 | 2.5 | 0.910 | JLM 714149 | JLM 714110 |
| 3.0 | 2.5 | 1.299 | JM 714249 | JM 714210 |
| 3.0 | 2.5 | 3.830 | JH 415647 | JH 415610 |
| 2.0 | 2.0 | 0.966 | 34300 | 34478 |
| 3.5 | 3.3 | 1.468 | 42687 | 42620 |
| 6.4 | 3.3 | 1.448 | 42688 | 42620 |
| 0.8 | 3.3 | 1.967 | 47680 | 47620 |
| 3.5 | 3.3 | 2.747 | 5760 | 5735 |
| 3.5 | 3.3 | 1.820 | 495 A | 493 |
| 6.4 | 3.3 | 1.810 | 495 AX | 493 |
| 3.5 | 3.3 | 2.398 | 575 | 572 |
| 3.5 | 3.3 | 4.270 | 6461 | 6420 |
| 3.5 | 3.2 | 3.260 | 590 A | 592 A |
| 3.5 | 3.3 | 3.370 | 659 | 652 |
| 3.5 | 3.3 | 4.220 | 9285 | 9220 |



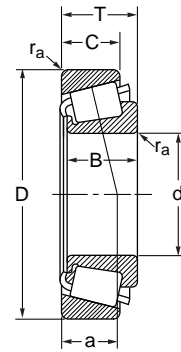
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 76.200 | 161.925 | 53.975 | 55.100 | 42.862 | 308.750 | 456.000 | 1,980 | 2,700 |
| 76.200 | 161.925 | 53.975 | 55.100 | 42.862 | 308.750 | 456.000 | 1,980 | 2,700 |
| 76.200 | 161.925 | 53.975 | 55.100 | 42.862 | 308.750 | 456.000 | 1,980 | 2,700 |
| 76.200 | 168.275 | 53.975 | 56.363 | 41.275 | 327.750 | 446.500 | 1,980 | 2,700 |
| 76.200 | 168.275 | 53.975 | 56.363 | 41.275 | 327.750 | 446.500 | 1,980 | 2,700 |
| 76.200 | 171.450 | 49.212 | 46.038 | 31.750 | 244.150 | 294.500 | 1,800 | 2,520 |
| 76.200 | 177.800 | 55.562 | 50.800 | 34.925 | 244.150 | 294.500 | 1,800 | 2,520 |
| 77.788 | 121.442 | 24.608 | 23.012 | 17.462 | 84.550 | 117.800 | 2,520 | 3,420 |
| 77.788 | 127.000 | 30.162 | 31.000 | 22.225 | 127.300 | 185.250 | 2,520 | 3,420 |
| 77.788 | 135.733 | 44.450 | 46.101 | 34.925 | 205.200 | 323.000 | 2,340 | 3,240 |
| 79.375 | 146.050 | 41.275 | 41.275 | 31.750 | 196.650 | 281.200 | 2,160 | 2,880 |
| 79.375 | 150.089 | 44.450 | 46.672 | 36.512 | 251.750 | 351.500 | 2,160 | 2,880 |
| 80.000 | 130.000 | 35.000 | 34.000 | 28.500 | 157.700 | 238.450 | 2,340 | 3,240 |
| 80.962 | 136.525 | 30.162 | 29.769 | 22.225 | 123.500 | 182.400 | 2,340 | 3,060 |
| 80.962 | 139.700 | 36.512 | 36.098 | 28.575 | 166.250 | 247.000 | 2,340 | 3,060 |
| 80.962 | 139.992 | 36.512 | 36.098 | 28.575 | 166.250 | 247.000 | 2,340 | 3,060 |
| 82.550 | 125.412 | 25.400 | 25.400 | 19.845 | 96.900 | 155.800 | 2,340 | 3,240 |
| 82.550 | 133.350 | 30.162 | 29.769 | 22.225 | 123.500 | 182.400 | 2,340 | 3,060 |
| 82.550 | 133.350 | 33.338 | 33.338 | 26.195 | 146.300 | 225.150 | 2,340 | 3,240 |
| 82.550 | 133.350 | 33.338 | 33.338 | 26.195 | 146.300 | 225.150 | 2,340 | 3,240 |
| 82.550 | 133.350 | 33.338 | 33.338 | 26.195 | 146.300 | 225.150 | 2,340 | 3,240 |
| 82.550 | 133.350 | 39.688 | 39.688 | 32.545 | 170.050 | 294.500 | 2,340 | 3,240 |
| 82.550 | 136.525 | 30.162 | 29.769 | 22.225 | 123.500 | 182.400 | 2,340 | 3,060 |
| 82.550 | 139.700 | 36.512 | 36.098 | 28.575 | 166.250 | 247.000 | 2,340 | 3,060 |
| 82.550 | 139.992 | 36.512 | 36.098 | 28.575 | 166.250 | 247.000 | 2,340 | 3,060 |
| 82.550 | 139.992 | 36.512 | 36.098 | 28.575 | 166.250 | 247.000 | 2,340 | 3,060 |
| 82.550 | 146.050 | 41.275 | 41.275 | 31.750 | 196.650 | 281.200 | 2,160 | 2,880 |
| 82.550 | 150.000 | 44.455 | 46.672 | 35.000 | 251.750 | 351.500 | 2,160 | 2,880 |
| 82.550 | 150.089 | 44.450 | 46.672 | 36.512 | 251.750 | 351.500 | 2,160 | 2,880 |
| 82.550 | 152.400 | 41.275 | 41.275 | 31.750 | 196.650 | 281.200 | 2,160 | 2,880 |
| 82.550 | 161.925 | 47.625 | 48.260 | 38.100 | 260.300 | 370.500 | 1,980 | 2,700 |
| 82.550 | 161.925 | 53.975 | 55.100 | 42.862 | 308.750 | 456.000 | 1,980 | 2,700 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|-----------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 3.5 | 3.3 | 5.410 | 6576 | 6535 |
| 6.4 | 3.3 | 5.400 | 6575 | 6535 |
| 6.4 | 0.8 | 5.410 | 6575 | 6536 |
| 6.4 | 3.3 | 5.850 | 843 | 832 |
| 0.8 | 3.3 | 5.870 | 837 | 832 |
| 3.5 | 3.3 | 4.980 | 9380 | 9321 |
| 3.5 | 3.3 | 5.950 | 9378 | 9320 |
| 3.5 | 2.0 | 0.928 | 34306 | 34478 |
| 3.5 | 3.3 | 1.414 | 42690 | 42620 |
| 3.5 | 3.3 | 2.677 | 5795 | 5735 |
| 3.5 | 3.3 | 2.881 | 661 | 653 |
| 3.5 | 3.3 | 3.490 | 750 | 742 |
| 3.0 | 2.5 | 1.763 | JM 515649 | JM 515610 |
| 3.5 | 3.3 | 1.680 | 496 | 493 |
| 3.5 | 3.3 | 2.214 | 581 | 572 X |
| 3.5 | 3.3 | 2.228 | 581 | 572 |
| 3.5 | 1.5 | 1.095 | 27687 | 27620 |
| 3.5 | 3.3 | 1.514 | 495 | 492 A |
| 3.5 | 3.3 | 1.757 | 47686 | 47620 |
| 0.8 | 3.3 | 1.757 | 47685 | 47620 |
| 6.8 | 3.3 | 1.737 | 47687 | 47620 |
| 6.8 | 3.3 | 2.117 | HM 516448 | HM 516410 |
| 3.5 | 3.3 | 1.630 | 495 | 493 |
| 3.5 | 3.3 | 2.164 | 580 | 572 X |
| 3.5 | 3.3 | 2.178 | 580 | 572 |
| 6.8 | 3.3 | 2.158 | 582 | 572 |
| 3.5 | 3.3 | 2.741 | 663 | 653 |
| 3.5 | 3.3 | 3.300 | 749 A | 743 |
| 3.5 | 3.3 | 3.330 | 749 A | 742 |
| 3.5 | 3.3 | 3.110 | 663 | 652 |
| 3.5 | 3.3 | 4.400 | 757 | 752 |
| 3.5 | 3.3 | 5.070 | 6559 | 6535 |



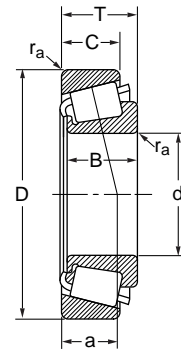
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 82.550 | 168.275 | 47.625 | 48.260 | 38.100 | 260.300 | 370.500 | 1,980 | 2,700 |
| 82.550 | 168.275 | 53.975 | 56.363 | 41.275 | 327.750 | 446.500 | 1,980 | 2,700 |
| 83.345 | 125.412 | 25.400 | 25.400 | 19.845 | 96.900 | 155.800 | 2,340 | 3,240 |
| 83.345 | 125.412 | 25.400 | 25.400 | 19.845 | 96.900 | 155.800 | 2,340 | 3,240 |
| 84.138 | 136.525 | 30.162 | 29.769 | 22.225 | 123.500 | 182.400 | 2,340 | 3,060 |
| 84.138 | 146.050 | 41.275 | 41.275 | 31.750 | 196.650 | 281.200 | 2,160 | 2,880 |
| 84.138 | 171.450 | 49.212 | 46.038 | 31.750 | 244.150 | 294.500 | 1,800 | 2,520 |
| 85.000 | 130.000 | 30.000 | 29.000 | 24.000 | 131.100 | 210.900 | 2,340 | 3,240 |
| 85.000 | 130.000 | 30.000 | 29.000 | 24.000 | 131.100 | 210.900 | 2,340 | 3,240 |
| 85.000 | 140.000 | 39.000 | 38.000 | 31.500 | 191.900 | 289.750 | 2,160 | 3,060 |
| 85.000 | 150.000 | 46.000 | 46.000 | 38.000 | 261.250 | 370.500 | 2,160 | 2,880 |
| 85.026 | 150.089 | 44.450 | 46.672 | 36.512 | 251.750 | 351.500 | 2,160 | 2,880 |
| 85.026 | 150.089 | 44.450 | 46.672 | 36.512 | 251.750 | 351.500 | 2,160 | 2,880 |
| 85.725 | 133.350 | 30.162 | 29.769 | 22.225 | 123.500 | 182.400 | 2,340 | 3,060 |
| 85.725 | 136.525 | 30.162 | 29.769 | 22.225 | 123.500 | 182.400 | 2,340 | 3,060 |
| 85.725 | 142.138 | 42.862 | 42.862 | 34.133 | 209.950 | 342.000 | 2,160 | 3,060 |
| 85.725 | 146.050 | 41.275 | 41.275 | 31.750 | 196.650 | 281.200 | 2,160 | 2,880 |
| 85.725 | 146.050 | 41.275 | 41.275 | 31.750 | 196.650 | 281.200 | 2,160 | 2,880 |
| 85.725 | 152.400 | 39.688 | 36.322 | 30.162 | 173.850 | 270.750 | 1,980 | 2,880 |
| 85.725 | 161.925 | 47.625 | 48.260 | 38.100 | 260.300 | 370.500 | 1,980 | 2,700 |
| 85.725 | 168.275 | 41.275 | 41.275 | 30.162 | 211.850 | 327.750 | 1,800 | 2,520 |
| 87.312 | 190.500 | 57.150 | 57.531 | 46.038 | 370.500 | 494.000 | 1,710 | 2,340 |
| 88.900 | 149.225 | 31.750 | 28.971 | 24.608 | 133.000 | 207.100 | 1,980 | 2,700 |
| 88.900 | 152.400 | 39.688 | 36.322 | 30.162 | 173.850 | 270.750 | 1,980 | 2,880 |
| 88.900 | 152.400 | 39.688 | 39.688 | 30.162 | 240.350 | 346.750 | 1,980 | 2,880 |
| 88.900 | 161.925 | 47.625 | 48.260 | 38.100 | 260.300 | 370.500 | 1,980 | 2,700 |
| 88.900 | 161.925 | 47.625 | 48.260 | 38.100 | 260.300 | 370.500 | 1,980 | 2,700 |
| 88.900 | 161.925 | 53.975 | 55.100 | 42.862 | 308.750 | 456.000 | 1,980 | 2,700 |
| 88.900 | 168.275 | 47.625 | 48.260 | 38.100 | 260.300 | 370.500 | 1,980 | 2,700 |
| 88.900 | 168.275 | 53.975 | 56.363 | 41.275 | 327.750 | 446.500 | 1,980 | 2,700 |
| 88.900 | 190.500 | 57.150 | 57.531 | 44.450 | 337.250 | 475.000 | 1,710 | 2,340 |
| 88.900 | 190.500 | 57.150 | 57.531 | 46.038 | 370.500 | 494.000 | 1,710 | 2,340 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 3.5 | 3.3 | 4.890 | 757 | 753 |
| 3.5 | 3.3 | 5.500 | 842 | 832 |
| 3.5 | 1.5 | 1.075 | 27690 | 27620 |
| 0.8 | 1.5 | 1.080 | 27689 | 27620 |
| 3.5 | 3.3 | 1.590 | 498 | 493 |
| 3.5 | 3.3 | 2.681 | 664 | 653 |
| 3.5 | 3.3 | 4.620 | 9385 | 9321 |
| 6.0 | 2.5 | 1.392 | JM 716648 | JM 716610 |
| 3.0 | 2.5 | 1.404 | JM 716649 | JM 716610 |
| 3.0 | 2.5 | 2.318 | JHM 516849 | JHM 516810 |
| 3.0 | 2.5 | 3.380 | JH 217249 | JH 217210 |
| 3.5 | 3.3 | 3.210 | 749 | 742 |
| 5.0 | 3.3 | 3.210 | 749 S | 742 |
| 3.5 | 3.3 | 1.421 | 497 | 492 A |
| 3.5 | 3.3 | 1.537 | 497 | 493 |
| 4.8 | 3.3 | 2.681 | HM 617049 | HM 617010 |
| 6.4 | 3.3 | 2.601 | 665 A | 653 |
| 3.5 | 3.3 | 2.611 | 665 | 653 |
| 3.5 | 3.2 | 2.910 | 596 | 592 A |
| 3.5 | 3.3 | 4.240 | 758 | 752 |
| 3.5 | 3.3 | 4.150 | 677 | 672 |
| 8.0 | 3.3 | 7.750 | HH 221432 | HH 221410 |
| 3.0 | 3.3 | 2.101 | 42350 | 42587 |
| 3.5 | 3.2 | 2.790 | 593 | 592 A |
| 6.4 | 3.3 | 2.886 | HM 518445 | HM 518410 |
| 3.5 | 3.3 | 4.080 | 759 | 752 |
| 7.0 | 3.3 | 4.060 | 766 | 752 |
| 3.5 | 3.3 | 4.700 | 6580 | 6535 |
| 3.5 | 3.3 | 4.570 | 759 | 753 |
| 3.5 | 3.3 | 5.130 | 850 | 832 |
| 8.0 | 3.3 | 7.540 | 855 | 854 |
| 8.0 | 3.3 | 7.650 | HH 221434 | HH 221410 |



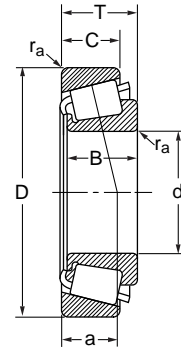
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 90.000 | 145.000 | 35.000 | 34.000 | 27.000 | 180.500 | 270.750 | 2,160 | 2,880 |
| 90.000 | 147.000 | 40.000 | 40.000 | 32.500 | 217.550 | 327.750 | 2,160 | 2,880 |
| 90.000 | 155.000 | 44.000 | 44.000 | 35.500 | 260.300 | 375.250 | 1,980 | 2,700 |
| 90.488 | 161.925 | 47.625 | 48.260 | 38.100 | 260.300 | 370.500 | 1,980 | 2,700 |
| 92.075 | 146.050 | 33.338 | 34.925 | 26.195 | 160.550 | 266.000 | 2,160 | 2,880 |
| 92.075 | 148.430 | 28.575 | 28.971 | 21.433 | 133.000 | 207.100 | 1,980 | 2,700 |
| 92.075 | 152.400 | 39.688 | 36.322 | 30.162 | 173.850 | 270.750 | 1,980 | 2,880 |
| 92.075 | 152.400 | 39.688 | 36.322 | 30.162 | 173.850 | 270.750 | 1,980 | 2,880 |
| 92.075 | 168.275 | 41.275 | 41.275 | 30.162 | 211.850 | 327.750 | 1,800 | 2,520 |
| 92.075 | 190.500 | 57.150 | 57.531 | 44.450 | 337.250 | 475.000 | 1,710 | 2,340 |
| 93.662 | 148.430 | 28.575 | 28.971 | 21.433 | 133.000 | 207.100 | 1,980 | 2,700 |
| 93.662 | 149.225 | 31.750 | 28.971 | 24.608 | 133.000 | 207.100 | 1,980 | 2,700 |
| 93.662 | 152.400 | 39.688 | 36.322 | 30.162 | 173.850 | 270.750 | 1,980 | 2,880 |
| 95.000 | 150.000 | 35.000 | 34.000 | 27.000 | 173.850 | 270.750 | 1,980 | 2,880 |
| 95.250 | 146.050 | 33.338 | 34.925 | 26.195 | 160.550 | 266.000 | 2,160 | 2,880 |
| 95.250 | 148.430 | 28.575 | 28.971 | 21.433 | 133.000 | 207.100 | 1,980 | 2,700 |
| 95.250 | 149.225 | 31.750 | 28.971 | 24.608 | 133.000 | 207.100 | 1,980 | 2,700 |
| 95.250 | 152.400 | 39.688 | 36.322 | 30.162 | 173.850 | 270.750 | 1,980 | 2,880 |
| 95.250 | 152.400 | 39.688 | 36.322 | 33.338 | 173.850 | 270.750 | 1,980 | 2,880 |
| 95.250 | 168.275 | 41.275 | 41.275 | 30.162 | 211.850 | 327.750 | 1,800 | 2,520 |
| 95.250 | 171.450 | 47.625 | 48.260 | 38.100 | 267.900 | 394.250 | 1,800 | 2,520 |
| 95.250 | 180.975 | 47.625 | 48.006 | 38.100 | 245.100 | 356.250 | 1,800 | 2,340 |
| 95.250 | 190.500 | 57.150 | 57.531 | 44.450 | 337.250 | 475.000 | 1,710 | 2,340 |
| 95.250 | 190.500 | 57.150 | 57.531 | 46.038 | 370.500 | 494.000 | 1,710 | 2,340 |
| 96.838 | 148.430 | 28.575 | 28.971 | 21.433 | 133.000 | 207.100 | 1,980 | 2,700 |
| 96.838 | 149.225 | 31.750 | 28.971 | 24.606 | 133.000 | 207.100 | 1,980 | 2,700 |
| 98.425 | 161.925 | 36.512 | 36.116 | 26.195 | 181.450 | 294.500 | 1,800 | 2,520 |
| 98.425 | 168.275 | 41.275 | 41.275 | 30.162 | 211.850 | 327.750 | 1,800 | 2,520 |
| 98.425 | 180.975 | 47.625 | 48.006 | 38.100 | 245.100 | 356.250 | 1,800 | 2,340 |
| 98.425 | 190.500 | 57.150 | 57.531 | 44.450 | 337.250 | 475.000 | 1,710 | 2,340 |
| 98.425 | 190.500 | 57.150 | 57.531 | 46.038 | 370.500 | 494.000 | 1,710 | 2,340 |
| 99.982 | 190.500 | 57.150 | 57.531 | 46.038 | 370.500 | 494.000 | 1,710 | 2,340 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 3.0 | 2.5 | 2.150 | JM 718149 | JM 718110 |
| 7.0 | 3.5 | 2.566 | HM 218248 | HM 218210 |
| 3.0 | 2.5 | 3.330 | JHM 318448 | JHM 318410 |
| 3.5 | 3.3 | 3.990 | 760 | 752 |
| 3.5 | 3.3 | 2.124 | 47890 | 47820 |
| 3.5 | 3.0 | 1.843 | 42362 | 42584 |
| 3.5 | 3.2 | 2.660 | 598 | 592 A |
| 6.4 | 3.2 | 2.650 | 598 A | 592 A |
| 3.5 | 3.3 | 3.860 | 681 | 672 |
| 8.0 | 3.3 | 7.330 | 857 | 854 |
| 3.0 | 3.0 | 1.793 | 42368 | 42584 |
| 3.0 | 3.3 | 1.951 | 42368 | 42587 |
| 3.5 | 3.2 | 2.600 | 597 | 592 A |
| 3.0 | 2.5 | 2.225 | JM 719149 | JM 719113 |
| 3.5 | 3.3 | 1.994 | 47896 | 47820 |
| 3.0 | 3.0 | 1.733 | 42375 | 42584 |
| 3.5 | 3.3 | 1.891 | 42376 | 42587 |
| 3.5 | 3.2 | 2.530 | 594 | 592 A |
| 3.5 | 3.3 | 2.590 | 594 | 592 |
| 3.5 | 3.3 | 3.710 | 683 | 672 |
| 3.5 | 3.3 | 4.580 | 77375 | 77675 |
| 3.5 | 3.3 | 5.240 | 776 | 772 |
| 8.0 | 3.3 | 7.120 | 864 | 854 |
| 8.0 | 3.3 | 7.240 | HH 221440 | HH 221410 |
| 3.5 | 3.0 | 1.683 | 42381 | 42584 |
| 3.5 | 3.3 | 1.841 | 42381 | 42587 |
| 3.5 | 3.3 | 2.832 | 52387 | 52637 |
| 3.5 | 3.3 | 3.560 | 685 | 672 |
| 3.5 | 3.3 | 5.050 | 779 | 772 |
| 3.5 | 3.3 | 6.930 | 866 | 854 |
| 3.5 | 3.3 | 7.050 | HH 221442 | HH 221410 |
| 6.4 | 3.3 | 6.920 | HH 221447 | HH 221410 |



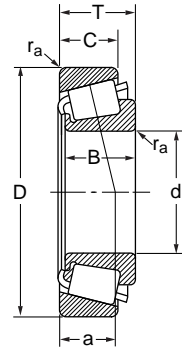
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 100.000 | 150.000 | 32.000 | 30.000 | 26.000 | 138.700 | 223.250 | 1,980 | 2,700 |
| 100.000 | 155.000 | 36.000 | 35.000 | 28.000 | 181.450 | 308.750 | 1,800 | 2,520 |
| 100.000 | 160.000 | 41.000 | 40.000 | 32.000 | 227.050 | 361.000 | 1,800 | 2,520 |
| 100.012 | 157.162 | 36.512 | 36.116 | 26.195 | 181.450 | 294.500 | 1,800 | 2,520 |
| 101.600 | 157.162 | 36.512 | 36.116 | 26.195 | 181.450 | 294.500 | 1,800 | 2,520 |
| 101.600 | 161.925 | 36.512 | 36.116 | 26.195 | 181.450 | 294.500 | 1,800 | 2,520 |
| 101.600 | 168.275 | 41.275 | 41.275 | 30.162 | 211.850 | 327.750 | 1,800 | 2,520 |
| 101.600 | 180.975 | 47.625 | 48.006 | 38.100 | 245.100 | 356.250 | 1,800 | 2,340 |
| 101.600 | 190.500 | 57.150 | 57.531 | 44.450 | 337.250 | 475.000 | 1,710 | 2,340 |
| 101.600 | 190.500 | 57.150 | 57.531 | 46.038 | 370.500 | 494.000 | 1,710 | 2,340 |
| 101.600 | 212.725 | 66.675 | 66.675 | 53.975 | 541.500 | 769.500 | 1,530 | 1,980 |
| 104.775 | 180.975 | 47.625 | 48.006 | 38.100 | 245.100 | 356.250 | 1,800 | 2,340 |
| 104.775 | 180.975 | 47.625 | 48.006 | 38.100 | 245.100 | 356.250 | 1,800 | 2,340 |
| 104.775 | 190.500 | 47.625 | 49.212 | 34.925 | 281.200 | 441.750 | 1,620 | 2,160 |
| 106.362 | 165.100 | 36.512 | 36.512 | 26.988 | 185.250 | 304.000 | 1,800 | 2,340 |
| 107.950 | 158.750 | 23.020 | 21.438 | 15.875 | 96.900 | 156.750 | 1,800 | 2,520 |
| 107.950 | 159.987 | 34.925 | 34.925 | 26.988 | 155.800 | 299.250 | 1,800 | 2,520 |
| 107.950 | 161.925 | 34.925 | 34.925 | 26.988 | 155.800 | 266.000 | 1,800 | 2,520 |
| 107.950 | 165.100 | 36.512 | 36.512 | 26.988 | 185.250 | 304.000 | 1,800 | 2,340 |
| 107.950 | 190.500 | 47.625 | 49.212 | 34.925 | 281.200 | 441.750 | 1,620 | 2,160 |
| 107.950 | 212.725 | 66.675 | 66.675 | 53.975 | 541.500 | 769.500 | 1,530 | 1,980 |
| 109.987 | 159.987 | 34.925 | 34.925 | 26.988 | 155.800 | 299.250 | 1,800 | 2,520 |
| 109.987 | 159.987 | 34.925 | 34.925 | 26.988 | 155.800 | 299.250 | 1,800 | 2,520 |
| 109.992 | 177.800 | 41.275 | 41.275 | 30.162 | 220.400 | 356.250 | 1,620 | 2,340 |
| 110.000 | 165.000 | 35.000 | 35.000 | 26.500 | 185.250 | 304.000 | 1,800 | 2,340 |
| 110.000 | 180.000 | 47.000 | 46.000 | 38.000 | 294.500 | 465.500 | 1,710 | 2,340 |
| 111.125 | 190.500 | 47.625 | 49.212 | 34.925 | 281.200 | 441.750 | 1,620 | 2,160 |
| 114.300 | 152.400 | 21.433 | 21.433 | 16.670 | 85.025 | 169.100 | 1,800 | 2,520 |
| 114.300 | 177.800 | 41.275 | 41.275 | 30.162 | 220.400 | 356.250 | 1,620 | 2,340 |
| 114.300 | 180.000 | 34.925 | 31.750 | 25.400 | 165.300 | 241.300 | 1,620 | 2,160 |
| 114.300 | 190.500 | 47.625 | 49.212 | 34.925 | 281.200 | 441.750 | 1,620 | 2,160 |
| 114.300 | 212.725 | 66.675 | 66.675 | 53.975 | 451.250 | 665.000 | 1,530 | 2,160 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 2.3 | 2.3 | 1.886 | JLM 820048 | JLM 820012 |
| 3.0 | 2.5 | 2.452 | JM 720249 | JM 720210 |
| 3.0 | 2.5 | 3.064 | JHM 720249 | JHM 720210 |
| 3.5 | 3.3 | 2.512 | 52393 | 52618 |
| 3.5 | 3.3 | 2.452 | 52400 | 52618 |
| 3.5 | 3.3 | 2.692 | 52400 | 52637 |
| 3.5 | 3.3 | 3.390 | 687 | 672 |
| 3.5 | 3.3 | 4.870 | 780 | 772 |
| 8.0 | 3.3 | 6.680 | 861 | 854 |
| 8.0 | 3.3 | 6.790 | HH 221449 | HH 221410 |
| 7.0 | 3.3 | 11.200 | HH 224335 | HH 224310 |
| 7.0 | 3.3 | 4.650 | 787 | 772 |
| 3.5 | 3.3 | 4.670 | 782 | 772 |
| 3.5 | 3.3 | 5.710 | 71412 | 71750 |
| 3.5 | 3.3 | 2.731 | 56418 | 56650 |
| 3.5 | 3.3 | 1.374 | 37425 | 37625 |
| 3.5 | 3.3 | 2.434 | LM 522546 | LM 522510 |
| 3.5 | 3.3 | 2.420 | 48190 | 48120 |
| 3.5 | 3.3 | 2.661 | 56425 | 56650 |
| 3.5 | 3.3 | 5.500 | 71425 | 71750 |
| 8.0 | 3.3 | 10.640 | HH 224340 | HH 224310 |
| 3.5 | 3.3 | 2.334 | LM 522549 | LM 522510 |
| 8.0 | 3.3 | 2.314 | LM 522548 | LM 522510 |
| 3.5 | 3.3 | 3.750 | 64433 | 64700 |
| 3.0 | 2.5 | 2.482 | JM 822049 | JM 822010 |
| 3.0 | 2.5 | 4.630 | JHM 522649 | JHM 522610 |
| 3.5 | 3.3 | 5.290 | 71437 | 71750 |
| 1.5 | 1.5 | 1.069 | L 623149 | L 623110 |
| 3.5 | 3.3 | 3.500 | 64450 | 64700 |
| 3.5 | 0.8 | 2.950 | 68450 | 68709 |
| 3.5 | 3.3 | 5.080 | 71450 | 71750 |
| 7.0 | 3.3 | 10.120 | 938 | 932 |



| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 114.300 | 212.725 | 66.675 | 66.675 | 53.975 | 541.500 | 769.500 | 1,530 | 1,980 |
| 115.087 | 190.500 | 47.625 | 49.212 | 34.925 | 281.200 | 441.750 | 1,620 | 2,160 |
| 117.475 | 180.975 | 34.925 | 31.750 | 25.400 | 165.300 | 241.300 | 1,620 | 2,160 |
| 120.000 | 170.000 | 25.400 | 25.400 | 19.050 | 123.500 | 208.050 | 1,710 | 2,340 |
| 120.000 | 174.625 | 35.720 | 36.512 | 27.783 | 201.400 | 365.750 | 1,710 | 2,340 |
| 120.650 | 182.562 | 39.688 | 38.100 | 33.338 | 216.600 | 422.750 | 1,620 | 2,160 |
| 120.650 | 206.375 | 47.625 | 47.625 | 34.925 | 304.000 | 503.500 | 1,440 | 1,980 |
| 123.825 | 182.562 | 39.688 | 38.100 | 33.338 | 216.600 | 422.750 | 1,620 | 2,160 |
| 125.000 | 175.000 | 25.400 | 25.400 | 18.288 | 127.300 | 220.400 | 1,620 | 2,160 |
| 127.000 | 165.895 | 18.258 | 17.462 | 13.495 | 80.275 | 141.550 | 1,710 | 2,340 |
| 127.000 | 182.562 | 39.688 | 38.100 | 33.338 | 216.600 | 422.750 | 1,620 | 2,160 |
| 127.000 | 196.850 | 46.038 | 46.038 | 38.100 | 299.250 | 532.000 | 1,530 | 1,980 |
| 127.000 | 215.900 | 47.625 | 47.625 | 34.925 | 272.650 | 470.250 | 1,350 | 1,800 |
| 128.588 | 206.375 | 47.625 | 47.625 | 34.925 | 304.000 | 503.500 | 1,440 | 1,980 |
| 130.000 | 206.375 | 47.625 | 47.625 | 34.925 | 304.000 | 503.500 | 1,440 | 1,980 |
| 130.175 | 203.200 | 46.038 | 46.038 | 38.100 | 299.250 | 532.000 | 1,530 | 1,980 |
| 130.175 | 206.375 | 47.625 | 47.625 | 34.925 | 304.000 | 503.500 | 1,440 | 1,980 |
| 133.350 | 177.008 | 25.400 | 26.195 | 20.638 | 117.800 | 245.100 | 1,620 | 2,160 |
| 133.350 | 190.500 | 39.688 | 39.688 | 33.338 | 228.000 | 460.750 | 1,530 | 1,980 |
| 133.350 | 196.850 | 46.038 | 46.038 | 38.100 | 299.250 | 532.000 | 1,530 | 1,980 |
| 133.350 | 215.900 | 47.625 | 47.625 | 34.925 | 272.650 | 470.250 | 1,350 | 1,800 |
| 136.525 | 190.500 | 39.688 | 39.688 | 33.338 | 228.000 | 460.750 | 1,530 | 1,980 |
| 136.525 | 217.488 | 47.625 | 47.625 | 34.925 | 272.650 | 470.250 | 1,350 | 1,800 |
| 139.700 | 187.325 | 28.575 | 29.370 | 23.020 | 145.350 | 289.750 | 1,530 | 1,980 |
| 139.700 | 215.900 | 47.625 | 47.625 | 34.925 | 272.650 | 470.250 | 1,350 | 1,800 |
| 139.700 | 254.000 | 66.675 | 66.675 | 47.625 | 489.250 | 788.500 | 1,170 | 1,620 |
| 142.875 | 200.025 | 41.275 | 39.688 | 34.130 | 215.650 | 437.000 | 1,440 | 1,980 |
| 146.050 | 193.675 | 28.575 | 28.575 | 23.020 | 161.500 | 337.250 | 1,440 | 1,980 |
| 146.050 | 236.538 | 57.150 | 56.642 | 44.450 | 432.250 | 684.000 | 1,260 | 1,710 |
| 146.050 | 254.000 | 66.675 | 66.675 | 47.625 | 489.250 | 788.500 | 1,170 | 1,620 |
| 149.225 | 254.000 | 66.675 | 66.675 | 47.625 | 489.250 | 788.500 | 1,170 | 1,620 |
| 152.400 | 254.000 | 66.675 | 66.675 | 47.625 | 489.250 | 788.500 | 1,170 | 1,620 |

| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|-----------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 7.0 | 3.3 | 10.070 | HH 224346 | HH 224310 |
| 3.5 | 3.3 | 5.020 | 71453 | 71750 |
| 3.5 | 3.3 | 2.780 | 68462 | 68712 |
| 3.3 | 3.3 | 1.671 | JL 724348 | JL 724314 |
| 3.5 | 1.5 | 2.766 | M 224748 | M 224710 |
| 3.5 | 3.3 | 3.700 | 48282 | 48220 |
| 3.3 | 3.3 | 6.340 | 795 | 792 |
| 3.5 | 3.3 | 3.510 | 48286 | 48220 |
| 3.3 | 3.3 | 1.763 | JL 725346 | JL 725316 |
| 1.5 | 1.5 | 0.935 | LL 225749 | LL 225710 |
| 3.5 | 3.3 | 3.330 | 48290 | 48220 |
| 3.5 | 3.3 | 5.200 | 67388 | 67322 |
| 3.5 | 3.3 | 6.910 | 74500 | 74850 |
| 3.3 | 3.3 | 5.760 | 799 | 792 |
| 3.5 | 3.3 | 5.660 | 797 | 792 |
| 3.5 | 3.3 | 5.570 | 67389 | 67320 |
| 3.5 | 3.3 | 5.640 | 799 A | 792 |
| 1.5 | 1.5 | 1.730 | L 327249 | L 327210 |
| 3.5 | 3.3 | 3.740 | 48385 | 48320 |
| 3.5 | 3.3 | 4.730 | 67390 | 67322 |
| 3.5 | 3.3 | 6.430 | 74525 | 74850 |
| 3.5 | 3.3 | 3.530 | 48393 | 48320 |
| 3.5 | 3.3 | 6.320 | 74537 | 74856 |
| 1.5 | 1.5 | 2.260 | LM 328448 | LM 328410 |
| 3.5 | 3.3 | 5.920 | 74550 | 74850 |
| 7.0 | 3.3 | 13.820 | 99550 | 99100 |
| 3.5 | 3.3 | 3.820 | 48685 | 48620 |
| 1.5 | 1.5 | 2.365 | 36690 | 36620 |
| 3.5 | 3.3 | 9.000 | HM 231140 | HM 231110 |
| 7.0 | 3.3 | 13.070 | 99575 | 99100 |
| 7.0 | 3.3 | 12.690 | 99587 | 99100 |
| 7.0 | 3.3 | 12.290 | 99600 | 99100 |



| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|--------|--------|--------------------|-----------------------|----------------|-------|
| d | D | T | B | C | Dynamic C | Static C ₀ | Grease | Oil |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min |
| 158.750 | 225.425 | 41.275 | 39.688 | 33.338 | 228.000 | 513.000 | 1,260 | 1,710 |
| 165.100 | 247.650 | 47.625 | 47.625 | 38.100 | 327.750 | 669.750 | 1,170 | 1,530 |
| 170.000 | 230.000 | 39.000 | 38.000 | 31.000 | 264.100 | 494.000 | 1,170 | 1,620 |
| 170.000 | 240.000 | 46.000 | 44.500 | 37.000 | 361.000 | 684.000 | 1,170 | 1,620 |
| 174.625 | 247.650 | 47.625 | 47.625 | 38.100 | 327.750 | 669.750 | 1,170 | 1,530 |
| 177.800 | 227.012 | 30.162 | 30.162 | 23.020 | 171.950 | 394.250 | 1,170 | 1,620 |
| 177.800 | 247.650 | 47.625 | 47.625 | 38.100 | 327.750 | 669.750 | 1,170 | 1,530 |
| 177.800 | 260.350 | 53.975 | 53.975 | 41.275 | 432.250 | 793.250 | 1,080 | 1,530 |
| 190.000 | 260.000 | 46.000 | 44.000 | 36.500 | 351.500 | 693.500 | 990 | 1,440 |
| 190.500 | 266.700 | 47.625 | 46.833 | 38.100 | 327.750 | 684.000 | 990 | 1,350 |
| 200.000 | 300.000 | 65.000 | 62.000 | 51.000 | 584.250 | 1073.500 | 900 | 1,260 |
| 203.200 | 282.575 | 46.038 | 46.038 | 36.512 | 346.750 | 760.000 | 900 | 1,260 |
| 206.375 | 282.575 | 46.038 | 46.038 | 36.512 | 346.750 | 760.000 | 900 | 1,260 |

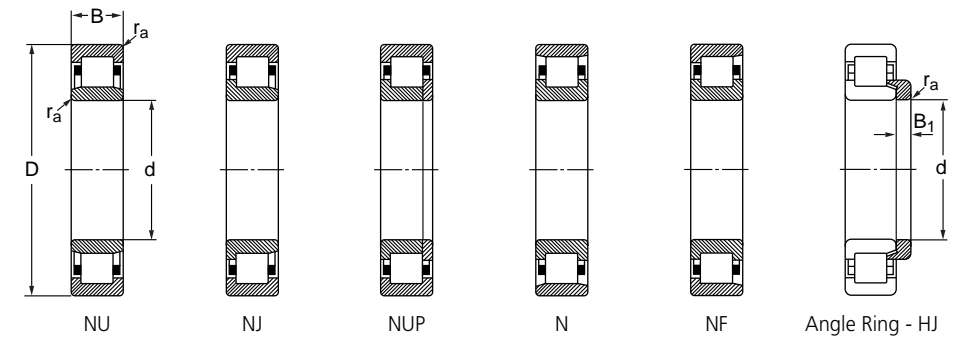
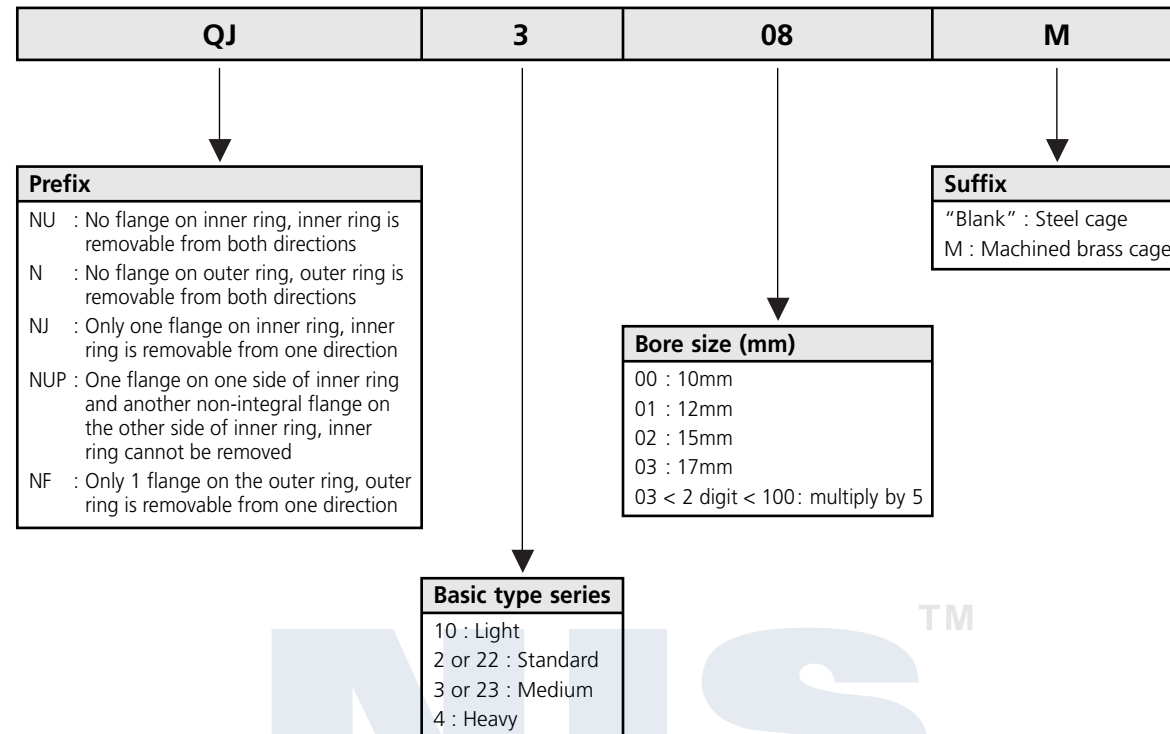
| Chamfer Dimension | | Mass | Designation | |
|----------------------------|---------------------------|---------------|-------------|------------|
| Cone r _a max mm | Cup r _a max mm | Cone + Cup kg | cone | cup |
| 3.5 | 3.3 | 5.350 | 46780 | 46720 |
| 3.5 | 3.3 | 8.160 | 67780 | 67720 |
| 3.0 | 2.5 | 4.400 | JHM 534149 | JHM 534110 |
| 3.0 | 2.5 | 6.440 | JM 734449 | JM 734410 |
| 3.5 | 3.3 | 7.210 | 67787 | 67720 |
| 1.5 | 1.5 | 3.007 | 36990 | 36990 |
| 3.5 | 3.3 | 6.890 | 67790 | 67720 |
| 3.5 | 3.3 | 9.350 | M 236849 | M 236810 |
| 3.0 | 2.5 | 6.930 | JM 738249 | JM 738210 |
| 3.5 | 3.3 | 8.040 | 67885 | 67820 |
| 3.5 | 2.5 | 15.490 | JHM 840449 | JHM 840410 |
| 3.5 | 3.3 | 8.850 | 67983 | 67920 |
| 3.5 | 3.3 | 8.480 | 67985 | 67920 |



Cylindrical Roller Bearings

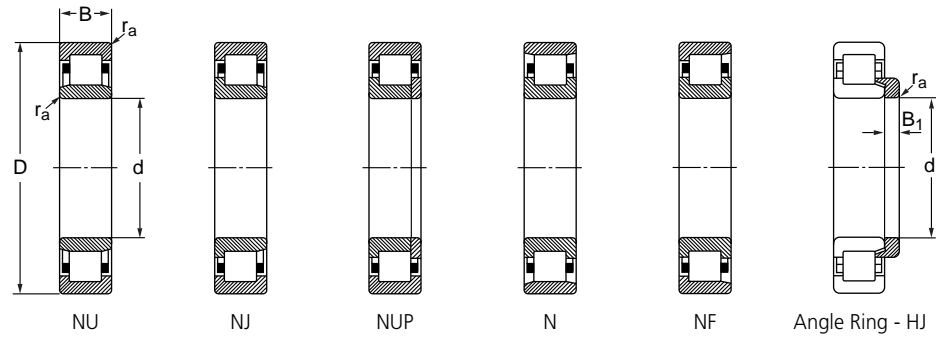
| | Page |
|---|------|
| 5.01 Single row cylindrical roller bearings | 153 |
| 5.02 Double row cylindrical roller bearings | 168 |
| 5.03 Double row full complement cylindrical roller bearings | 171 |
| 5.04 Single row cylindrical roller bearings - Inch sizes | 174 |

■ Prefix & Suffix



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|----|----|--------------------|-----------------------|----------------|--------|-------------------|--------------------|-------------|------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a | r _a max | Bearings | Angle Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | |
| 15 | 35 | 11 | 11.875 | 9.690 | 17,100 | 20,900 | 0.6 | 0.047 | NU 202 | HJ 202 |
| 15 | 35 | 11 | 11.875 | 9.690 | 17,100 | 20,900 | 0.6 | 0.049 | NJ 202 | HJ 202 |
| 15 | 42 | 13 | 18.430 | 14.535 | 15,200 | 18,050 | 1.0 | 0.086 | NU 302 | HJ 302 |
| 15 | 42 | 13 | 18.430 | 14.535 | 15,200 | 18,050 | 1.0 | 0.088 | NJ 302 | HJ 302 |
| 17 | 40 | 12 | 16.340 | 13.585 | 15,200 | 18,050 | 0.6 | 0.068 | NU 203 | HJ 203 |
| 17 | 40 | 12 | 16.340 | 13.585 | 15,200 | 18,050 | 0.6 | 0.070 | NJ 203 | HJ 203 |
| 17 | 40 | 12 | 16.340 | 13.585 | 15,200 | 18,050 | 0.6 | 0.073 | NUP 203 | - |
| 17 | 40 | 12 | 16.340 | 13.585 | 15,200 | 18,050 | 0.6 | 0.066 | N 203 | - |
| 17 | 40 | 16 | 22.610 | 20.520 | 15,200 | 18,050 | 0.6 | 0.092 | NU 2203 | HJ 2203 |
| 17 | 40 | 16 | 22.610 | 20.520 | 15,200 | 18,050 | 0.6 | 0.095 | NJ 2203 | HJ 2203 |
| 17 | 40 | 16 | 22.610 | 20.520 | 15,200 | 18,050 | 0.6 | 0.097 | NUP 2203 | - |
| 17 | 47 | 14 | 23.370 | 19.380 | 13,300 | 16,150 | 1.0 | 0.120 | NU 303 | HJ 303 |
| 17 | 47 | 14 | 23.370 | 19.380 | 13,300 | 16,150 | 1.0 | 0.120 | NJ 303 | HJ 303 |
| 17 | 47 | 14 | 23.370 | 19.380 | 13,300 | 16,150 | 1.0 | 0.130 | NUP 303 | - |
| 17 | 47 | 14 | 23.370 | 19.380 | 13,300 | 16,150 | 1.0 | 0.120 | N 303 | - |
| 20 | 47 | 14 | 23.845 | 20.900 | 12,350 | 15,200 | 1.0 | 0.110 | NU 204 | HJ 204 |
| 20 | 47 | 14 | 23.845 | 20.900 | 12,350 | 15,200 | 1.0 | 0.110 | NJ 204 | HJ 204 |
| 20 | 47 | 14 | 23.845 | 20.900 | 12,350 | 15,200 | 1.0 | 0.120 | NUP 204 | - |
| 20 | 47 | 14 | 23.845 | 20.900 | 12,350 | 15,200 | 1.0 | 0.110 | N 204 | - |
| 20 | 47 | 18 | 28.215 | 26.125 | 12,350 | 15,200 | 1.0 | 0.140 | NU 2204 | HJ 2204 |
| 20 | 47 | 18 | 28.215 | 26.125 | 12,350 | 15,200 | 1.0 | 0.140 | NJ 2204 | HJ 2204 |
| 20 | 52 | 15 | 29.260 | 24.700 | 11,400 | 14,250 | 1.0 | 0.150 | NU 304 | HJ 304 |
| 20 | 52 | 15 | 29.260 | 24.700 | 11,400 | 14,250 | 1.0 | 0.150 | NJ 304 | HJ 304 |
| 20 | 52 | 15 | 29.260 | 24.700 | 11,400 | 14,250 | 1.0 | 0.160 | NUP 304 | - |
| 20 | 52 | 15 | 29.260 | 24.700 | 11,400 | 14,250 | 1.0 | 0.150 | N 304 | - |
| 20 | 52 | 21 | 39.235 | 36.100 | 10,450 | 13,300 | 1.0 | 0.210 | NU 2304 | HJ 2304 |
| 20 | 52 | 21 | 39.235 | 36.100 | 10,450 | 13,300 | 1.0 | 0.220 | NJ 2304 | HJ 2304 |
| 20 | 52 | 21 | 39.235 | 36.100 | 10,450 | 13,300 | 1.0 | 0.220 | NUP 2304 | - |
| 25 | 47 | 12 | 13.490 | 12.540 | 14,250 | 17,100 | 0.6 | 0.084 | NU 1005 | - |
| 25 | 52 | 15 | 27.170 | 25.650 | 10,450 | 13,300 | 1.0 | 0.130 | NU 205 | HJ 205 |
| 25 | 52 | 15 | 27.170 | 25.650 | 10,450 | 13,300 | 1.0 | 0.140 | NJ 205 | HJ 205 |
| 25 | 52 | 15 | 27.170 | 25.650 | 10,450 | 13,300 | 1.0 | 0.140 | NUP 205 | - |

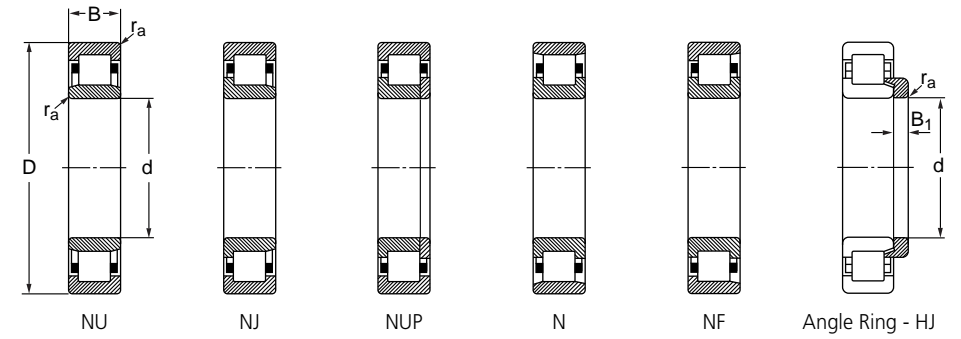
Single Row Cylindrical Roller Bearings



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|----|----|--------------------|-----------------------|----------------|--------|-------------------|--------------------|-------------|------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | | r _a max | Bearings | Angle Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | |
| 25 | 52 | 15 | 27.170 | 25.650 | 10,450 | 13,300 | 1.0 | 0.130 | N 205 | - |
| 25 | 52 | 18 | 32.395 | 32.300 | 10,450 | 13,300 | 1.0 | 0.160 | NU 2205 | HJ 2205 |
| 25 | 52 | 18 | 32.395 | 32.300 | 10,450 | 13,300 | 1.0 | 0.170 | NJ 2205 | HJ 2205 |
| 25 | 52 | 18 | 32.395 | 32.300 | 10,450 | 13,300 | 1.0 | 0.170 | NUP 2205 | - |
| 25 | 62 | 17 | 38.190 | 34.675 | 9,025 | 11,400 | 1.0 | 0.240 | NU 305 | HJ 305 |
| 25 | 62 | 17 | 38.190 | 34.675 | 9,025 | 11,400 | 1.0 | 0.250 | NJ 305 | HJ 305 |
| 25 | 62 | 17 | 38.190 | 34.675 | 9,025 | 11,400 | 1.0 | 0.250 | NUP 305 | - |
| 25 | 62 | 17 | 38.190 | 34.675 | 9,025 | 11,400 | 1.0 | 0.240 | N 305 | - |
| 25 | 62 | 24 | 53.295 | 52.250 | 8,550 | 10,450 | 1.0 | 0.350 | NU 2305 | HJ 2305 |
| 25 | 62 | 24 | 53.295 | 52.250 | 8,550 | 10,450 | 1.0 | 0.360 | NJ 2305 | HJ 2305 |
| 25 | 62 | 24 | 53.295 | 52.250 | 8,550 | 10,450 | 1.0 | 0.380 | NUP 2305 | - |
| 30 | 55 | 13 | 17.005 | 16.435 | 11,400 | 14,250 | 1.0 | 0.120 | NU 1006 | - |
| 30 | 62 | 16 | 36.100 | 34.675 | 9,025 | 11,400 | 1.0 | 0.200 | NU 206 | HJ 206 |
| 30 | 62 | 16 | 36.100 | 34.675 | 9,025 | 11,400 | 1.0 | 0.210 | NJ 206 | HJ 206 |
| 30 | 62 | 16 | 36.100 | 34.675 | 9,025 | 11,400 | 1.0 | 0.220 | NUP 206 | - |
| 30 | 62 | 16 | 36.100 | 34.675 | 9,025 | 11,400 | 1.0 | 0.200 | N 206 | - |
| 30 | 62 | 20 | 45.980 | 46.550 | 9,025 | 11,400 | 1.0 | 0.260 | NU 2206 | HJ 2206 |
| 30 | 62 | 20 | 45.980 | 46.550 | 9,025 | 11,400 | 1.0 | 0.270 | NJ 2206 | HJ 2206 |
| 30 | 62 | 20 | 45.980 | 46.550 | 9,025 | 11,400 | 1.0 | 0.270 | NUP 2206 | - |
| 30 | 62 | 20 | 45.980 | 46.550 | 9,025 | 11,400 | 1.0 | 0.260 | N 2206 | - |
| 30 | 72 | 19 | 48.640 | 45.600 | 8,550 | 10,450 | 1.0 | 0.360 | NU 306 | HJ 306 |
| 30 | 72 | 19 | 48.640 | 45.600 | 8,550 | 10,450 | 1.0 | 0.370 | NJ 306 | HJ 306 |
| 30 | 72 | 19 | 48.640 | 45.600 | 8,550 | 10,450 | 1.0 | 0.380 | NUP 306 | - |
| 30 | 72 | 19 | 48.640 | 45.600 | 8,550 | 10,450 | 1.0 | 0.360 | N 306 | - |
| 30 | 72 | 27 | 70.015 | 71.250 | 7,600 | 9,025 | 1.0 | 0.530 | NU 2306 | HJ 2306 |
| 30 | 72 | 27 | 70.015 | 71.250 | 7,600 | 9,025 | 1.0 | 0.540 | NJ 2306 | HJ 2306 |
| 30 | 72 | 27 | 70.015 | 71.250 | 7,600 | 9,025 | 1.0 | 0.550 | NUP 2306 | - |
| 30 | 90 | 23 | 57.475 | 50.350 | 7,125 | 8,550 | 1.5 | 0.750 | NU 406 | HJ 406 |
| 30 | 90 | 23 | 57.475 | 50.350 | 7,125 | 8,550 | 1.5 | 0.770 | NJ 406 | HJ 406 |
| 35 | 62 | 14 | 34.010 | 36.100 | 9,500 | 12,350 | 1.0 | 0.160 | NU 1007 | - |
| 35 | 72 | 17 | 45.980 | 45.600 | 8,075 | 9,500 | 1.0 | 0.300 | NU 207 | HJ 207 |
| 35 | 72 | 17 | 45.980 | 45.600 | 8,075 | 9,500 | 1.0 | 0.310 | NJ 207 | HJ 207 |

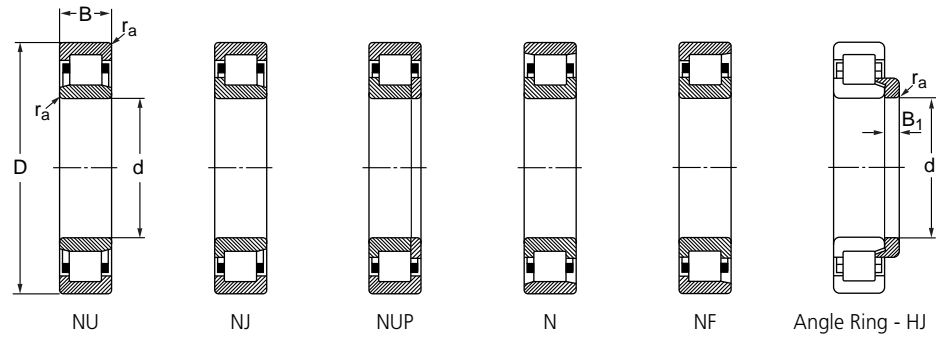


Single Row Cylindrical Roller Bearings



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|-----------------------|----------------|--------|-------------------|--------------------|-------------|------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | | r _a max | Bearings | Angle Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | |
| 35 | 72 | 17 | 45.980 | 45.600 | 8,075 | 9,500 | 1.0 | 0.310 | NUP 207 | - |
| 35 | 72 | 17 | 45.980 | 45.600 | 8,075 | 9,500 | 1.0 | 0.300 | N 207 | - |
| 35 | 72 | 23 | 56.430 | 59.850 | 8,075 | 9,500 | 1.0 | 0.400 | NU 2207 | HJ 2207 |
| 35 | 72 | 23 | 56.430 | 59.850 | 8,075 | 9,500 | 1.0 | 0.410 | NJ 2207 | HJ 2207 |
| 35 | 72 | 23 | 56.430 | 59.850 | 8,075 | 9,500 | 1.0 | 0.420 | NUP 2207 | - |
| 35 | 72 | 23 | 56.430 | 59.850 | 8,075 | 9,500 | 1.0 | 0.400 | N 2207 | - |
| 35 | 80 | 21 | 61.180 | 59.850 | 7,600 | 9,025 | 1.5 | 0.480 | NU 307 | HJ 307 |
| 35 | 80 | 21 | 61.180 | 59.850 | 7,600 | 9,025 | 1.5 | 0.490 | NJ 307 | HJ 307 |
| 35 | 80 | 21 | 61.180 | 59.850 | 7,600 | 9,025 | 1.5 | 0.510 | NUP 307 | - |
| 35 | 80 | 21 | 61.180 | 59.850 | 7,600 | 9,025 | 1.5 | 0.480 | N 307 | - |
| 35 | 80 | 31 | 86.735 | 93.100 | 6,650 | 8,075 | 1.5 | 0.720 | NU 2307 | HJ 2307 |
| 35 | 80 | 31 | 86.735 | 93.100 | 6,650 | 8,075 | 1.5 | 0.730 | NJ 2307 | HJ 2307 |
| 35 | 80 | 31 | 86.735 | 93.100 | 6,650 | 8,075 | 1.5 | 0.750 | NUP 2307 | - |
| 35 | 100 | 25 | 72.675 | 66.025 | 6,365 | 7,600 | 1.5 | 1.000 | NU 407 | HJ 407 |
| 35 | 100 | 25 | 72.675 | 66.025 | 6,365 | 7,600 | 1.5 | 1.050 | NJ 407 | HJ 407 |
| 35 | 100 | 25 | 72.675 | 66.025 | 6,365 | 7,600 | 1.5 | 1.050 | NUP 407 | - |
| 40 | 68 | 15 | 23.845 | 24.700 | 9,025 | 11,400 | 1.0 | 0.220 | NU 1008 | - |
| 40 | 80 | 18 | 51.205 | 50.350 | 7,125 | 8,550 | 1.0 | 0.370 | NU 208 | HJ 208 |
| 40 | 80 | 18 | 51.205 | 50.350 | 7,125 | 8,550 | 1.0 | 0.380 | NJ 208 | HJ 208 |
| 40 | 80 | 18 | 51.205 | 50.350 | 7,125 | 8,550 | 1.0 | 0.400 | NUP 208 | - |
| 40 | 80 | 18 | 51.205 | 50.350 | 7,125 | 8,550 | 1.0 | 0.370 | N 208 | - |
| 40 | 80 | 23 | 66.880 | 71.250 | 7,125 | 8,550 | 1.0 | 0.490 | NU 2208 | HJ 2208 |
| 40 | 80 | 23 | 66.880 | 71.250 | 7,125 | 8,550 | 1.0 | 0.500 | NJ 2208 | HJ 2208 |
| 40 | 80 | 23 | 66.880 | 71.250 | 7,125 | 8,550 | 1.0 | 0.510 | NUP 2208 | - |
| 40 | 80 | 23 | 66.880 | 71.250 | 7,125 | 8,550 | 1.0 | 0.490 | N 2208 | - |
| 40 | 90 | 23 | 76.855 | 74.100 | 6,365 | 7,600 | 1.5 | 0.650 | NU 308 | HJ 308 |
| 40 | 90 | 23 | 76.855 | 74.100 | 6,365 | 7,600 | 1.5 | 0.670 | NJ 308 | HJ 308 |
| 40 | 90 | 23 | 76.855 | 74.100 | 6,365 | 7,600 | 1.5 | 0.680 | NUP 308 | - |
| 40 | 90 | 23 | 76.855 | 74.100 | 6,365 | 7,600 | 1.5 | 0.640 | N 308 | - |
| 40 | 90 | 33 | 106.400 | 114.000 | 5,985 | 7,125 | 1.5 | 0.940 | NU 2308 | HJ 2308 |
| 40 | 90 | 33 | 106.400 | 114.000 | 5,985 | 7,125 | 1.5 | 0.960 | NJ 2308 | HJ 2308 |
| 40 | 90 | 33 | 106.400 | 114.000 | 5,985 | 7,125 | 1.5 | 0.980 | NUP 2308 | - |

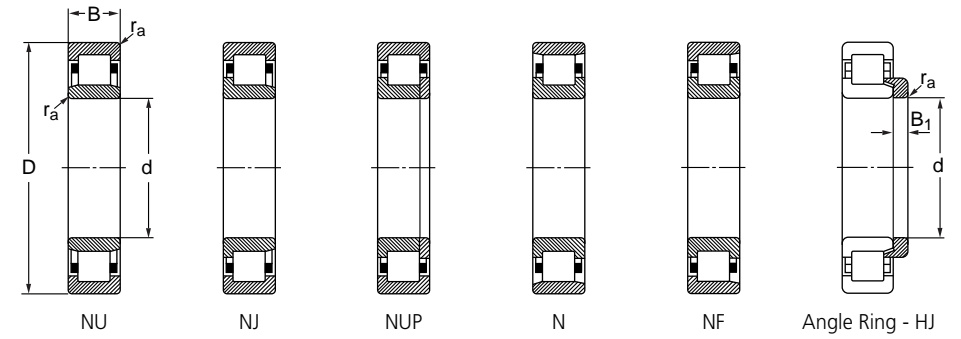
Single Row Cylindrical Roller Bearings



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|-----------------------|----------------|--------|-------------------|--------------------|-------------|------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | | r _a max | Bearings | Angle Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | |
| 40 | 110 | 27 | 91.960 | 85.500 | 5,700 | 6,650 | 2.0 | 1.300 | NU 408 | HJ 408 |
| 40 | 110 | 27 | 91.960 | 85.500 | 5,700 | 6,650 | 2.0 | 1.300 | NJ 408 | HJ 408 |
| 40 | 110 | 27 | 91.960 | 85.500 | 5,700 | 6,650 | 2.0 | 1.350 | NUP 408 | - |
| 45 | 75 | 16 | 42.370 | 49.400 | 8,550 | 10,450 | 1.0 | 0.260 | NU 1009 | - |
| 45 | 85 | 19 | 57.475 | 60.800 | 6,365 | 7,600 | 1.0 | 0.430 | NU 209 | HJ 209 |
| 45 | 85 | 19 | 57.475 | 60.800 | 6,365 | 7,600 | 1.0 | 0.440 | NJ 209 | HJ 209 |
| 45 | 85 | 19 | 57.475 | 60.800 | 6,365 | 7,600 | 1.0 | 0.450 | NUP 209 | - |
| 45 | 85 | 19 | 57.475 | 60.800 | 6,365 | 7,600 | 1.0 | 0.430 | N 209 | - |
| 45 | 85 | 23 | 70.015 | 77.425 | 6,365 | 7,600 | 1.0 | 0.520 | NU 2209 | HJ 2209 |
| 45 | 85 | 23 | 70.015 | 77.425 | 6,365 | 7,600 | 1.0 | 0.540 | NJ 2209 | HJ 2209 |
| 45 | 85 | 23 | 70.015 | 77.425 | 6,365 | 7,600 | 1.0 | 0.550 | NUP 2209 | - |
| 45 | 85 | 23 | 70.015 | 77.425 | 6,365 | 7,600 | 1.0 | 0.520 | N 2209 | - |
| 45 | 100 | 25 | 94.050 | 95.000 | 5,985 | 7,125 | 1.5 | 0.900 | NU 309 | HJ 309 |
| 45 | 100 | 25 | 94.050 | 95.000 | 5,985 | 7,125 | 1.5 | 0.920 | NJ 309 | HJ 309 |
| 45 | 100 | 25 | 94.050 | 95.000 | 5,985 | 7,125 | 1.5 | 0.950 | NUP 309 | - |
| 45 | 100 | 25 | 94.050 | 95.000 | 5,985 | 7,125 | 1.5 | 0.880 | N 309 | - |
| 45 | 100 | 36 | 131.100 | 145.350 | 5,320 | 6,365 | 1.5 | 1.300 | NU 2309 | HJ 2309 |
| 45 | 100 | 36 | 131.100 | 145.350 | 5,320 | 6,365 | 1.5 | 1.300 | NJ 2309 | HJ 2309 |
| 45 | 100 | 36 | 131.100 | 145.350 | 5,320 | 6,365 | 1.5 | 1.350 | NUP 2309 | - |
| 45 | 120 | 29 | 100.700 | 96.900 | 5,320 | 6,365 | 2.0 | 1.650 | NU 409 | HJ 409 |
| 45 | 120 | 29 | 100.700 | 96.900 | 5,320 | 6,365 | 2.0 | 1.650 | NJ 409 | HJ 409 |
| 45 | 120 | 29 | 100.700 | 96.900 | 5,320 | 6,365 | 2.0 | 1.700 | NUP 409 | - |
| 50 | 80 | 16 | 29.260 | 32.775 | 8,075 | 9,500 | 1.0 | 0.310 | NU 1010 | - |
| 50 | 90 | 20 | 61.180 | 66.025 | 5,985 | 7,125 | 1.0 | 0.480 | NU 210 | HJ 210 |
| 50 | 90 | 20 | 61.180 | 66.025 | 5,985 | 7,125 | 1.0 | 0.490 | NJ 210 | HJ 210 |
| 50 | 90 | 20 | 61.180 | 66.025 | 5,985 | 7,125 | 1.0 | 0.510 | NUP 210 | - |
| 50 | 90 | 20 | 61.180 | 66.025 | 5,985 | 7,125 | 1.0 | 0.480 | N 210 | - |
| 50 | 90 | 23 | 74.195 | 83.600 | 5,985 | 7,125 | 1.0 | 0.560 | NU 2210 | HJ 210 |
| 50 | 90 | 23 | 74.195 | 83.600 | 5,985 | 7,125 | 1.0 | 0.580 | NJ 2210 | HJ 210 |
| 50 | 90 | 23 | 74.195 | 83.600 | 5,985 | 7,125 | 1.0 | 0.590 | NUP 2210 | - |
| 50 | 110 | 27 | 104.500 | 106.400 | 4,750 | 5,700 | 2.0 | 1.150 | NU 310 | HJ 310 |
| 50 | 110 | 27 | 104.500 | 106.400 | 4,750 | 5,700 | 2.0 | 1.150 | NJ 310 | HJ 310 |

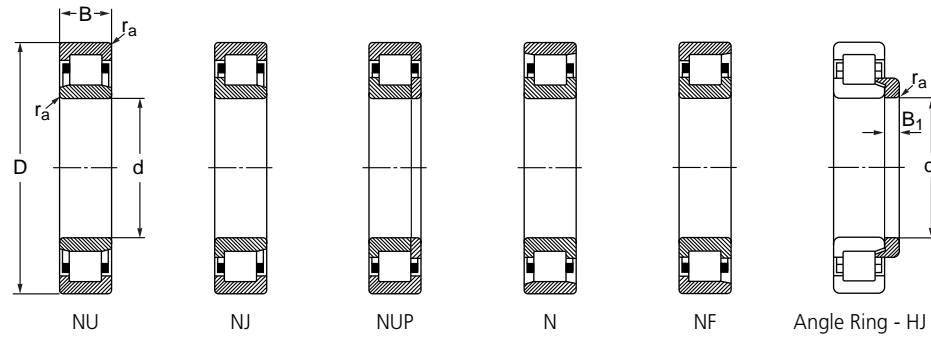


Single Row Cylindrical Roller Bearings



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|-----------------------|----------------|-------|-------------------|--------------------|-------------|------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | | r _a max | Bearings | Angle Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | |
| 50 | 110 | 27 | 104.500 | 106.400 | 4,750 | 5,700 | 2.0 | 1.200 | NUP 310 | - |
| 50 | 110 | 27 | 104.500 | 106.400 | 4,750 | 5,700 | 2.0 | 1.150 | N 310 | - |
| 50 | 110 | 40 | 152.950 | 176.700 | 4,750 | 5,700 | 2.0 | 1.700 | NU 2310 | HJ 2310 |
| 50 | 110 | 40 | 152.950 | 176.700 | 4,750 | 5,700 | 2.0 | 1.750 | NJ 2310 | HJ 2310 |
| 50 | 110 | 40 | 152.950 | 176.700 | 4,750 | 5,700 | 2.0 | 1.800 | NUP 2310 | - |
| 50 | 130 | 31 | 123.500 | 120.650 | 4,750 | 5,700 | 2.0 | 2.000 | NU 410 | HJ 410 |
| 50 | 130 | 31 | 123.500 | 120.650 | 4,750 | 5,700 | 2.0 | 2.050 | NJ 410 | HJ 410 |
| 55 | 90 | 18 | 54.340 | 66.025 | 6,650 | 8,075 | 1.0 | 0.400 | NU 1011 | - |
| 55 | 100 | 21 | 79.990 | 90.250 | 5,700 | 6,650 | 1.5 | 0.660 | NU 211 | HJ 211 |
| 55 | 100 | 21 | 79.990 | 90.250 | 5,700 | 6,650 | 1.5 | 0.670 | NJ 211 | HJ 211 |
| 55 | 100 | 21 | 79.990 | 90.250 | 5,700 | 6,650 | 1.5 | 0.690 | NUP 211 | - |
| 55 | 100 | 21 | 79.990 | 90.250 | 5,700 | 6,650 | 1.5 | 0.660 | N 211 | - |
| 55 | 100 | 25 | 94.050 | 112.100 | 5,700 | 6,650 | 1.5 | 0.790 | NU 2211 | HJ 2211 |
| 55 | 100 | 25 | 94.050 | 112.100 | 5,700 | 6,650 | 1.5 | 0.810 | NJ 2211 | HJ 2211 |
| 55 | 100 | 25 | 94.050 | 112.100 | 5,700 | 6,650 | 1.5 | 0.820 | NUP 2211 | - |
| 55 | 100 | 25 | 94.050 | 112.100 | 5,700 | 6,650 | 1.5 | 0.790 | N 2211 | - |
| 55 | 120 | 29 | 131.100 | 135.850 | 4,560 | 5,320 | 2.0 | 1.450 | NU 311 | HJ 311 |
| 55 | 120 | 29 | 131.100 | 135.850 | 4,560 | 5,320 | 2.0 | 1.500 | NJ 311 | HJ 311 |
| 55 | 120 | 29 | 131.100 | 135.850 | 4,560 | 5,320 | 2.0 | 1.550 | NUP 311 | - |
| 55 | 120 | 29 | 131.100 | 135.850 | 4,560 | 5,320 | 2.0 | 1.450 | N 311 | - |
| 55 | 120 | 43 | 190.950 | 220.400 | 4,560 | 5,320 | 2.0 | 2.200 | NU 2311 | HJ 2311 |
| 55 | 120 | 43 | 190.950 | 220.400 | 4,560 | 5,320 | 2.0 | 2.250 | NJ 2311 | HJ 2311 |
| 55 | 120 | 43 | 190.950 | 220.400 | 4,560 | 5,320 | 2.0 | 2.300 | NUP 2311 | - |
| 55 | 140 | 33 | 134.900 | 133.000 | 4,560 | 5,320 | 2.0 | 2.500 | NU 411 | HJ 411 |
| 55 | 140 | 33 | 134.900 | 133.000 | 4,560 | 5,320 | 2.0 | 2.550 | NJ 411 | HJ 411 |
| 55 | 140 | 33 | 134.900 | 133.000 | 4,560 | 5,320 | 2.0 | 2.600 | NUP 411 | - |
| 60 | 95 | 18 | 35.530 | 41.800 | 6,365 | 7,600 | 1.0 | 0.480 | NU 1012 | - |
| 60 | 110 | 22 | 88.825 | 96.900 | 5,035 | 5,985 | 1.5 | 0.810 | NU 212 | HJ 212 |
| 60 | 110 | 22 | 88.825 | 96.900 | 5,035 | 5,985 | 1.5 | 0.830 | NJ 212 | HJ 212 |
| 60 | 110 | 22 | 88.825 | 96.900 | 5,035 | 5,985 | 1.5 | 0.860 | NUP 212 | - |
| 60 | 110 | 22 | 88.825 | 96.900 | 5,035 | 5,985 | 1.5 | 0.810 | N 212 | - |
| 60 | 110 | 28 | 121.600 | 145.350 | 5,035 | 5,985 | 1.5 | 1.100 | NU 2212 | HJ 212 |

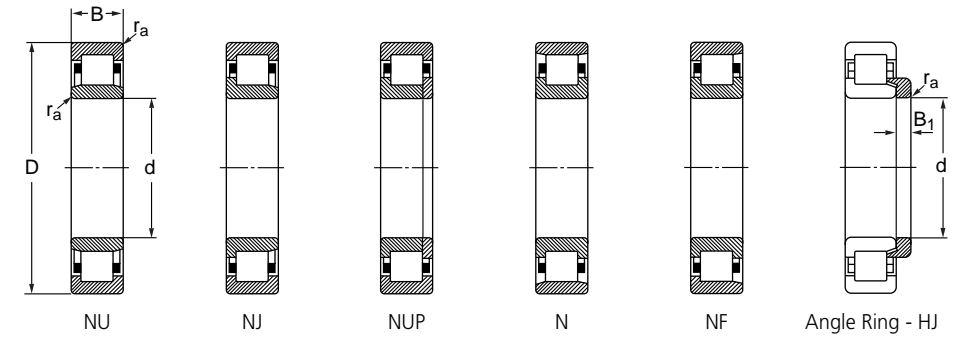
Single Row Cylindrical Roller Bearings



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|-----------------------|----------------|-------|-------------------|--------------------|-------------|------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | | r _a max | Bearings | Angle Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | |
| 60 | 110 | 28 | 121.600 | 145.350 | 5,035 | 5,985 | 1.5 | 1.100 | NJ 2212 | HJ 212 |
| 60 | 110 | 28 | 121.600 | 145.350 | 5,035 | 5,985 | 1.5 | 1.150 | NUP 2212 | - |
| 60 | 110 | 28 | 121.600 | 145.350 | 5,035 | 5,985 | 1.5 | 1.100 | N 2212 | - |
| 60 | 130 | 31 | 143.450 | 152.000 | 4,085 | 4,750 | 2.0 | 1.800 | NU 312 | HJ 312 |
| 60 | 130 | 31 | 143.450 | 152.000 | 4,085 | 4,750 | 2.0 | 1.900 | NJ 312 | HJ 312 |
| 60 | 130 | 31 | 143.450 | 152.000 | 4,085 | 4,750 | 2.0 | 1.950 | NUP 312 | - |
| 60 | 130 | 31 | 143.450 | 152.000 | 4,085 | 4,750 | 2.0 | 1.800 | N 312 | - |
| 60 | 130 | 46 | 212.800 | 251.750 | 4,085 | 4,750 | 2.0 | 2.750 | NU 2312 | HJ 2312 |
| 60 | 130 | 46 | 212.800 | 251.750 | 4,085 | 4,750 | 2.0 | 2.800 | NJ 2312 | HJ 2312 |
| 60 | 130 | 46 | 212.800 | 251.750 | 4,085 | 4,750 | 2.0 | 2.850 | NUP 2312 | - |
| 60 | 150 | 35 | 159.600 | 164.350 | 4,085 | 4,750 | 2.0 | 3.000 | NU 412 | HJ 412 |
| 60 | 150 | 35 | 159.600 | 164.350 | 4,085 | 4,750 | 2.0 | 3.100 | NJ 412 | HJ 412 |
| 60 | 150 | 35 | 159.600 | 164.350 | 4,085 | 4,750 | 2.0 | 3.150 | NUP 412 | - |
| 65 | 100 | 18 | 36.100 | 44.175 | 5,985 | 7,125 | 1.0 | 0.510 | NU 1013 | - |
| 65 | 120 | 23 | 100.700 | 112.100 | 4,560 | 5,320 | 1.5 | 1.050 | NU 213 | HJ 213 |
| 65 | 120 | 23 | 100.700 | 112.100 | 4,560 | 5,320 | 1.5 | 1.100 | NJ 213 | HJ 213 |
| 65 | 120 | 23 | 100.700 | 112.100 | 4,560 | 5,320 | 1.5 | 1.100 | NUP 213 | - |
| 65 | 120 | 23 | 100.700 | 112.100 | 4,560 | 5,320 | 1.5 | 1.050 | N 213 | - |
| 65 | 120 | 31 | 139.650 | 171.000 | 4,560 | 5,320 | 1.5 | 1.400 | NU 2213 | HJ 2213 |
| 65 | 120 | 31 | 139.650 | 171.000 | 4,560 | 5,320 | 1.5 | 1.450 | NJ 2213 | HJ 2213 |
| 65 | 120 | 31 | 139.650 | 171.000 | 4,560 | 5,320 | 1.5 | 1.500 | NUP 2213 | - |
| 65 | 140 | 33 | 173.850 | 186.200 | 3,800 | 4,560 | 2.0 | 2.250 | NU 313 | HJ 313 |
| 65 | 140 | 33 | 173.850 | 186.200 | 3,800 | 4,560 | 2.0 | 2.300 | NJ 313 | HJ 313 |
| 65 | 140 | 33 | 173.850 | 186.200 | 3,800 | 4,560 | 2.0 | 2.350 | NUP 313 | - |
| 65 | 140 | 33 | 173.850 | 186.200 | 3,800 | 4,560 | 2.0 | 2.250 | N 313 | - |
| 65 | 140 | 48 | 238.450 | 275.500 | 3,800 | 4,560 | 2.0 | 3.300 | NU 2313 | HJ 2313 |
| 65 | 140 | 48 | 238.450 | 275.500 | 3,800 | 4,560 | 2.0 | 3.350 | NJ 2313 | HJ 2313 |
| 65 | 140 | 48 | 238.450 | 275.500 | 3,800 | 4,560 | 2.0 | 3.450 | NUP 2313 | - |
| 65 | 160 | 37 | 173.850 | 180.500 | 3,800 | 4,560 | 2.0 | 3.600 | NU 413 | HJ 413 |
| 65 | 160 | 37 | 173.850 | 180.500 | 3,800 | 4,560 | 2.0 | 3.650 | NJ 413 | HJ 413 |
| 70 | 110 | 20 | 53.295 | 63.840 | 5,700 | 6,650 | 1.0 | 0.700 | NU 1014 | - |
| 70 | 125 | 24 | 113.050 | 130.150 | 4,275 | 5,035 | 1.5 | 1.150 | NU 214 | HJ 214 |

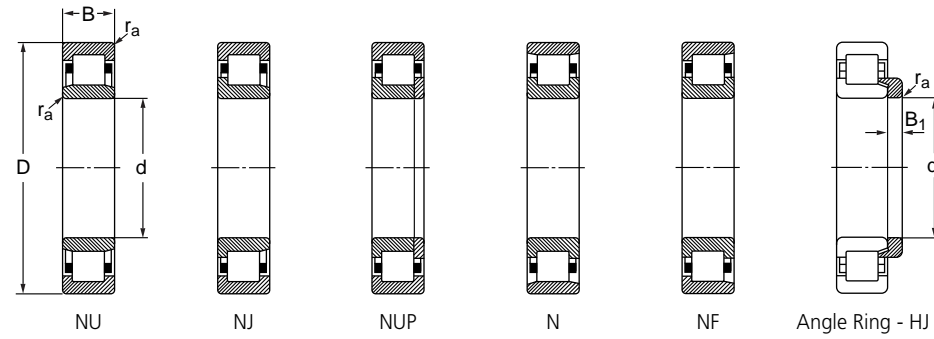


Single Row Cylindrical Roller Bearings

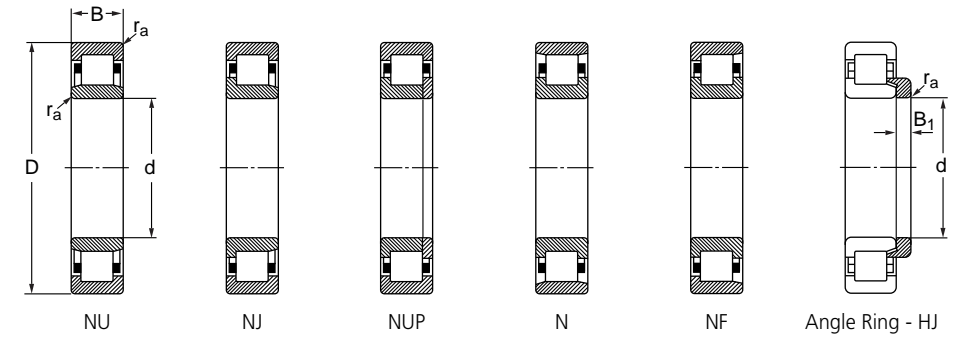


| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|-----------------------|----------------|-------|-------------------|--------------------|-------------|------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | | r _a max | Bearings | Angle Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | |
| 70 | 125 | 24 | 113.050 | 130.150 | 4,275 | 5,035 | 1.5 | 1.150 | NJ 214 | HJ 214 |
| 70 | 125 | 24 | 113.050 | 130.150 | 4,275 | 5,035 | 1.5 | 1.200 | NUP 214 | - |
| 70 | 125 | 24 | 113.050 | 130.150 | 4,275 | 5,035 | 1.5 | 1.150 | N 214 | - |
| 70 | 125 | 31 | 146.300 | 183.350 | 4,275 | 5,035 | 1.5 | 1.500 | NU 2214 | HJ 2214 |
| 70 | 125 | 31 | 146.300 | 183.350 | 4,275 | 5,035 | 1.5 | 1.550 | NJ 2214 | HJ 2214 |
| 70 | 125 | 31 | 146.300 | 183.350 | 4,275 | 5,035 | 1.5 | 1.550 | NUP 2214 | - |
| 70 | 150 | 35 | 194.750 | 216.600 | 3,420 | 4,085 | 2.0 | 2.750 | NU 314 | HJ 314 |
| 70 | 150 | 35 | 194.750 | 216.600 | 3,420 | 4,085 | 2.0 | 2.800 | NJ 314 | HJ 314 |
| 70 | 150 | 35 | 194.750 | 216.600 | 3,420 | 4,085 | 2.0 | 2.850 | NUP 314 | - |
| 70 | 150 | 35 | 194.750 | 216.600 | 3,420 | 4,085 | 2.0 | 2.750 | N 314 | - |
| 70 | 150 | 51 | 261.250 | 308.750 | 3,420 | 4,085 | 2.0 | 4.000 | NU 2314 | HJ 2314 |
| 70 | 150 | 51 | 261.250 | 308.750 | 3,420 | 4,085 | 2.0 | 4.050 | NJ 2314 | HJ 2314 |
| 70 | 150 | 51 | 261.250 | 308.750 | 3,420 | 4,085 | 2.0 | 4.150 | NUP 2314 | - |
| 70 | 180 | 42 | 217.550 | 228.000 | 3,420 | 4,085 | 2.5 | 5.250 | NU 414 | HJ 414 |
| 70 | 180 | 42 | 217.550 | 228.000 | 3,420 | 4,085 | 2.5 | 5.350 | NJ 414 | HJ 414 |
| 75 | 115 | 20 | 55.385 | 67.450 | 5,320 | 6,365 | 1.0 | 0.740 | NU 1015 | - |
| 75 | 130 | 25 | 123.500 | 148.200 | 4,275 | 5,035 | 1.5 | 1.250 | NU 215 | HJ 215 |
| 75 | 130 | 25 | 123.500 | 148.200 | 4,275 | 5,035 | 1.5 | 1.300 | NJ 215 | HJ 215 |
| 75 | 130 | 25 | 123.500 | 148.200 | 4,275 | 5,035 | 1.5 | 1.300 | NUP 215 | - |
| 75 | 130 | 25 | 123.500 | 148.200 | 4,275 | 5,035 | 1.5 | 1.250 | N 215 | - |
| 75 | 130 | 31 | 152.950 | 197.600 | 4,275 | 5,035 | 1.5 | 1.600 | NU 2215 | HJ 2215 |
| 75 | 130 | 31 | 152.950 | 197.600 | 4,275 | 5,035 | 1.5 | 1.600 | NJ 2215 | HJ 2215 |
| 75 | 130 | 31 | 152.950 | 197.600 | 4,275 | 5,035 | 1.5 | 1.650 | NUP 2215 | - |
| 75 | 160 | 37 | 229.900 | 251.750 | 3,230 | 3,800 | 2.0 | 3.300 | NU 315 | HJ 315 |
| 75 | 160 | 37 | 229.900 | 251.750 | 3,230 | 3,800 | 2.0 | 3.350 | NJ 315 | HJ 315 |
| 75 | 160 | 37 | 229.900 | 251.750 | 3,230 | 3,800 | 2.0 | 3.450 | NUP 315 | - |
| 75 | 160 | 37 | 229.900 | 251.750 | 3,230 | 3,800 | 2.0 | 3.300 | N 315 | - |
| 75 | 160 | 55 | 313.500 | 380.000 | 3,230 | 3,800 | 2.0 | 4.900 | NU 2315 | HJ 2315 |
| 75 | 160 | 55 | 313.500 | 380.000 | 3,230 | 3,800 | 2.0 | 5.000 | NJ 2315 | HJ 2315 |
| 75 | 160 | 55 | 313.500 | 380.000 | 3,230 | 3,800 | 2.0 | 5.100 | NUP 2315 | - |
| 75 | 190 | 45 | 250.800 | 266.000 | 3,230 | 3,800 | 2.5 | 6.250 | NU 415 | HJ 415 |
| 75 | 190 | 45 | 250.800 | 266.000 | 3,230 | 3,800 | 2.5 | 6.400 | NJ 415 | HJ 415 |

Single Row Cylindrical Roller Bearings



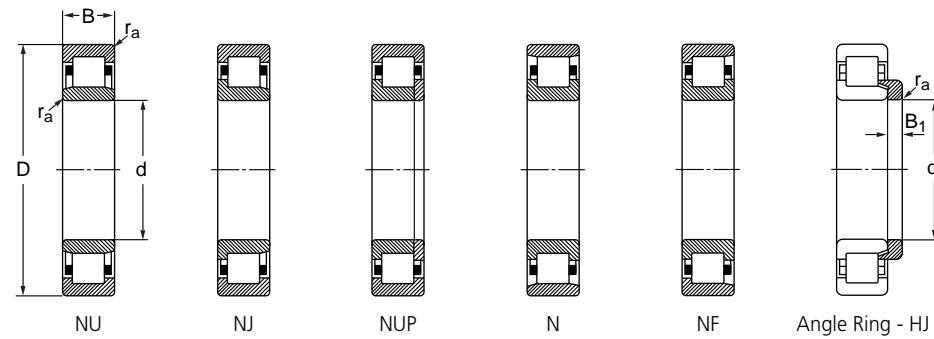
Single Row Cylindrical Roller Bearings



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|-------------|----------------|-------|-------------------|-----------|-------------|------------|
| d | D | B | Dynamic | Static | Grease | Oil | | r_a | Bearings | Angle Ring |
| mm | mm | mm | C kN | C_0 kN | r/min | r/min | mm | max kg | | |
| 80 | 125 | 22 | 62.700 | 77.425 | 5,035 | 5,985 | 1.0 | 0.990 | NU 1016 | - |
| 80 | 140 | 26 | 131.100 | 157.700 | 3,800 | 4,560 | 2.0 | 1.500 | NU 216 | HJ 216 |
| 80 | 140 | 26 | 131.100 | 157.700 | 3,800 | 4,560 | 2.0 | 1.550 | NJ 216 | HJ 216 |
| 80 | 140 | 26 | 131.100 | 157.700 | 3,800 | 4,560 | 2.0 | 1.600 | NUP 216 | - |
| 80 | 140 | 26 | 131.100 | 157.700 | 3,800 | 4,560 | 2.0 | 1.500 | N 216 | - |
| 80 | 140 | 33 | 177.650 | 232.750 | 3,800 | 4,560 | 2.0 | 2.000 | NU 2216 | HJ 216 |
| 80 | 140 | 33 | 177.650 | 232.750 | 3,800 | 4,560 | 2.0 | 2.050 | NJ 2216 | HJ 216 |
| 80 | 140 | 33 | 177.650 | 232.750 | 3,800 | 4,560 | 2.0 | 2.050 | NUP 2216 | - |
| 80 | 170 | 39 | 247.000 | 275.500 | 3,040 | 3,610 | 2.0 | 3.950 | NU 316 | HJ 316 |
| 80 | 170 | 39 | 247.000 | 275.500 | 3,040 | 3,610 | 2.0 | 4.000 | NJ 316 | HJ 316 |
| 80 | 170 | 39 | 247.000 | 275.500 | 3,040 | 3,610 | 2.0 | 4.100 | NUP 316 | - |
| 80 | 170 | 39 | 247.000 | 275.500 | 3,040 | 3,610 | 2.0 | 3.900 | N 316 | - |
| 80 | 170 | 58 | 340.100 | 418.000 | 3,040 | 3,610 | 2.0 | 5.850 | NU 2316 | HJ 2316 |
| 80 | 170 | 58 | 340.100 | 418.000 | 3,040 | 3,610 | 2.0 | 5.950 | NJ 2316 | HJ 2316 |
| 80 | 170 | 58 | 340.100 | 418.000 | 3,040 | 3,610 | 2.0 | 6.100 | NUP 2316 | - |
| 80 | 200 | 48 | 287.850 | 304.000 | 3,040 | 3,610 | 2.5 | 7.300 | NU 416 | HJ 416 |
| 80 | 200 | 48 | 287.850 | 304.000 | 3,040 | 3,610 | 2.5 | 7.450 | NJ 416 | HJ 416 |
| 85 | 130 | 22 | 64.790 | 82.175 | 4,750 | 5,700 | 1.0 | 1.050 | NU 1017 | - |
| 85 | 150 | 28 | 156.750 | 190.000 | 3,610 | 4,275 | 2.0 | 1.900 | NU 217 | HJ 217 |
| 85 | 150 | 28 | 156.750 | 190.000 | 3,610 | 4,275 | 2.0 | 1.950 | NJ 217 | HJ 217 |
| 85 | 150 | 28 | 156.750 | 190.000 | 3,610 | 4,275 | 2.0 | 2.000 | NUP 217 | - |
| 85 | 150 | 28 | 156.750 | 190.000 | 3,610 | 4,275 | 2.0 | 1.900 | N 217 | - |
| 85 | 150 | 36 | 205.200 | 266.000 | 3,610 | 4,275 | 2.0 | 2.450 | NU 2217 | HJ 217 |
| 85 | 150 | 36 | 205.200 | 266.000 | 3,610 | 4,275 | 2.0 | 2.550 | NJ 2217 | HJ 217 |
| 85 | 150 | 36 | 205.200 | 266.000 | 3,610 | 4,275 | 2.0 | 2.550 | NUP 2217 | - |
| 85 | 180 | 41 | 282.150 | 318.250 | 2,850 | 3,420 | 2.5 | 4.700 | NU 317 | HJ 317 |
| 85 | 180 | 41 | 282.150 | 318.250 | 2,850 | 3,420 | 2.5 | 4.800 | NJ 317 | HJ 317 |
| 85 | 180 | 41 | 282.150 | 318.250 | 2,850 | 3,420 | 2.5 | 4.900 | NUP 317 | - |
| 85 | 180 | 41 | 282.150 | 318.250 | 2,850 | 3,420 | 2.5 | 4.700 | N 317 | - |
| 85 | 180 | 60 | 376.200 | 465.500 | 2,850 | 3,420 | 2.5 | 6.850 | NU 2317 | HJ 2317 |
| 85 | 180 | 60 | 376.200 | 465.500 | 2,850 | 3,420 | 2.5 | 7.000 | NJ 2317 | HJ 2317 |
| 85 | 180 | 60 | 376.200 | 465.500 | 2,850 | 3,420 | 2.5 | 7.150 | NUP 2317 | - |

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|-------------|----------------|-------|-------------------|-----------|-------------|------------|
| d | D | B | Dynamic | Static | Grease | Oil | | r_a | Bearings | Angle Ring |
| mm | mm | mm | C kN | C_0 kN | r/min | r/min | mm | max kg | | |
| 85 | 210 | 52 | 303.050 | 318.250 | 2,850 | 3,420 | 3.0 | 8.700 | NU 417 | HJ 417 |
| 85 | 210 | 52 | 303.050 | 318.250 | 2,850 | 3,420 | 3.0 | 8.900 | NJ 417 | HJ 417 |
| 90 | 140 | 24 | 76.855 | 98.800 | 4,560 | 5,320 | 1.5 | 1.350 | NU 1018 | - |
| 90 | 160 | 30 | 173.850 | 209.000 | 3,420 | 4,085 | 2.0 | 2.350 | NU 218 | HJ 218 |
| 90 | 160 | 30 | 173.850 | 209.000 | 3,420 | 4,085 | 2.0 | 2.400 | NJ 218 | HJ 218 |
| 90 | 160 | 30 | 173.850 | 209.000 | 3,420 | 4,085 | 2.0 | 2.450 | NUP 218 | - |
| 90 | 160 | 30 | 173.850 | 209.000 | 3,420 | 4,085 | 2.0 | 2.350 | N 218 | - |
| 90 | 160 | 40 | 229.900 | 299.250 | 3,420 | 4,085 | 2.0 | 3.150 | NU 2218 | HJ 2218 |
| 90 | 160 | 40 | 229.900 | 299.250 | 3,420 | 4,085 | 2.0 | 3.200 | NJ 2218 | HJ 2218 |
| 90 | 160 | 40 | 229.900 | 299.250 | 3,420 | 4,085 | 2.0 | 3.300 | NUP 2218 | - |
| 90 | 190 | 43 | 303.050 | 342.000 | 2,660 | 3,230 | 2.5 | 5.450 | NU 318 | HJ 318 |
| 90 | 190 | 43 | 303.050 | 342.000 | 2,660 | 3,230 | 2.5 | 5.550 | NJ 318 | HJ 318 |
| 90 | 190 | 43 | 303.050 | 342.000 | 2,660 | 3,230 | 2.5 | 5.650 | NUP 318 | - |
| 90 | 190 | 43 | 303.050 | 342.000 | 2,660 | 3,230 | 2.5 | 5.400 | N 318 | - |
| 90 | 190 | 64 | 418.000 | 513.000 | 2,660 | 3,230 | 2.5 | 8.000 | NU 2318 | HJ 2318 |
| 90 | 190 | 64 | 418.000 | 513.000 | 2,660 | 3,230 | 2.5 | 8.150 | NJ 2318 | HJ 2318 |
| 90 | 190 | 64 | 418.000 | 513.000 | 2,660 | 3,230 | 2.5 | 8.300 | NUP 2318 | - |
| 90 | 225 | 54 | 361.000 | 394.250 | 2,660 | 3,230 | 3.0 | 10.500 | NU 418 | HJ 418 |
| 90 | 225 | 54 | 361.000 | 394.250 | 2,660 | 3,230 | 3.0 | 10.500 | NJ 418 | HJ 418 |
| 95 | 145 | 24 | 79.990 | 104.500 | 4,275 | 5,035 | 1.5 | 1.400 | NU 1019 | - |
| 95 | 170 | 32 | 209.000 | 251.750 | 3,230 | 3,800 | 2.0 | 2.850 | NU 219 | HJ 219 |
| 95 | 170 | 32 | 209.000 | 251.750 | 3,230 | 3,800 | 2.0 | 2.900 | NJ 219 | HJ 219 |
| 95 | 170 | 32 | 209.000 | 251.750 | 3,230 | 3,800 | 2.0 | 3.000 | NUP 219 | - |
| 95 | 170 | 32 | 209.000 | 251.750 | 3,230 | 3,800 | 2.0 | 2.850 | N 219 | - |
| 95 | 170 | 43 | 271.700 | 356.250 | 3,230 | 3,800 | 2.0 | 3.850 | NU 2219 | HJ 2219 |
| 95 | 170 | 43 | 271.700 | 356.250 | 3,230 | 3,800 | 2.0 | 3.950 | NJ 2219 | HJ 2219 |
| 95 | 170 | 43 | 271.700 | 356.250 | 3,230 | 3,800 | 2.0 | 4.000 | NUP 2219 | - |
| 95 | 170 | 43 | 271.700 | 356.250 | 3,230 | 3,800 | 2.0 | 3.850 | N 2219 | - |
| 95 | 200 | 45 | 323.950 | 370.500 | 2,470 | 3,040 | 2.5 | 6.250 | NU 319 | HJ 319 |
| 95 | 200 | 45 | 323.950 | 370.500 | 2,470 | 3,040 | 2.5 | 6.450 | NJ 319 | HJ 319 |
| 95 | 200 | 45 | 323.950 | 370.500 | 2,470 | 3,040 | 2.5 | 6.250 | N 319 | - |
| 95 | 200 | 67 | 444.600 | 555.750 | 2,470 | 3,040 | 2.5 | 9.350 | NU 2319 | HJ 2319 |

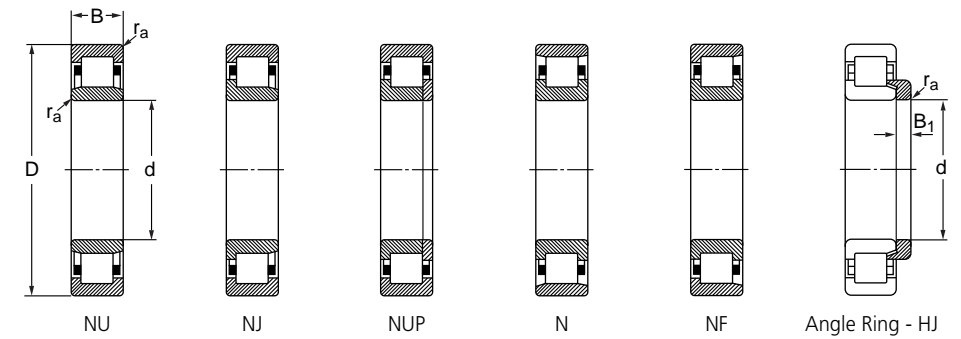
Single Row Cylindrical Roller Bearings



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|-------------|----------------|-------|-------------------|-----------|-------------|------------|
| d | D | B | Dynamic | Static | Grease | Oil | | r_a | Bearings | Angle Ring |
| mm | mm | mm | C kN | C_0 kN | r/min | r/min | mm | max kg | | |
| 95 | 200 | 67 | 444.600 | 555.750 | 2,470 | 3,040 | 2.5 | 9.550 | NJ 2319 | HJ 2319 |
| 95 | 200 | 67 | 444.600 | 555.750 | 2,470 | 3,040 | 2.5 | 9.750 | NUP 2319 | - |
| 95 | 240 | 55 | 392.350 | 432.250 | 2,470 | 3,040 | 3.0 | 13.500 | NU 419 | HJ 419 |
| 95 | 240 | 55 | 392.350 | 432.250 | 2,470 | 3,040 | 3.0 | 13.500 | NJ 419 | HJ 419 |
| 100 | 150 | 24 | 81.510 | 108.300 | 4,085 | 4,750 | 1.5 | 1.450 | NU 1020 | - |
| 100 | 180 | 34 | 238.450 | 289.750 | 3,040 | 3,610 | 2.0 | 3.450 | NU 220 | HJ 220 |
| 100 | 180 | 34 | 238.450 | 289.750 | 3,040 | 3,610 | 2.0 | 3.500 | NJ 220 | HJ 220 |
| 100 | 180 | 34 | 238.450 | 289.750 | 3,040 | 3,610 | 2.0 | 3.600 | NUP 220 | - |
| 100 | 180 | 34 | 238.450 | 289.750 | 3,040 | 3,610 | 2.0 | 3.450 | N 220 | - |
| 100 | 180 | 46 | 319.200 | 427.500 | 3,040 | 3,610 | 2.0 | 4.750 | NU 2220 | HJ 2220 |
| 100 | 180 | 46 | 319.200 | 427.500 | 3,040 | 3,610 | 2.0 | 4.800 | NJ 2220 | HJ 2220 |
| 100 | 180 | 46 | 319.200 | 427.500 | 3,040 | 3,610 | 2.0 | 4.900 | NUP 2220 | - |
| 100 | 215 | 47 | 371.450 | 418.000 | 2,280 | 2,850 | 2.5 | 7.600 | NU 320 | HJ 320 |
| 100 | 215 | 47 | 371.450 | 418.000 | 2,280 | 2,850 | 2.5 | 7.800 | NJ 320 | HJ 320 |
| 100 | 215 | 47 | 371.450 | 418.000 | 2,280 | 2,850 | 2.5 | 7.950 | NUP 320 | - |
| 100 | 215 | 47 | 371.450 | 418.000 | 2,280 | 2,850 | 2.5 | 7.550 | N 320 | - |
| 100 | 215 | 73 | 553.850 | 698.250 | 2,280 | 2,850 | 2.5 | 12.000 | NU 2320 | HJ 2320 |
| 100 | 215 | 73 | 553.850 | 698.250 | 2,280 | 2,850 | 2.5 | 12.000 | NJ 2320 | HJ 2320 |
| 100 | 215 | 73 | 553.850 | 698.250 | 2,280 | 2,850 | 2.5 | 12.500 | NUP 2320 | - |
| 100 | 250 | 58 | 407.550 | 451.250 | 2,280 | 2,850 | 3.0 | 14.000 | NU 420 | HJ 420 |
| 100 | 250 | 58 | 407.550 | 451.250 | 2,280 | 2,850 | 3.0 | 14.000 | NJ 420 | HJ 420 |
| 105 | 160 | 26 | 95.950 | 130.150 | 3,800 | 4,560 | 2.0 | 1.850 | NU 1021 | - |
| 105 | 190 | 36 | 250.800 | 299.250 | 2,850 | 3,420 | 2.0 | 4.000 | NU 221 | HJ 221 |
| 105 | 190 | 36 | 250.800 | 299.250 | 2,850 | 3,420 | 2.0 | 4.100 | NJ 221 | HJ 221 |
| 105 | 190 | 36 | 250.800 | 299.250 | 2,850 | 3,420 | 2.0 | 4.200 | NUP 221 | - |
| 105 | 190 | 36 | 250.800 | 299.250 | 2,850 | 3,420 | 2.0 | 3.950 | N 221 | - |
| 105 | 225 | 49 | 418.000 | 475.000 | 2,090 | 2,660 | 2.5 | 8.800 | NU 321 | HJ 321 |
| 105 | 225 | 49 | 418.000 | 475.000 | 2,090 | 2,660 | 2.5 | 8.950 | NJ 321 | HJ 321 |
| 105 | 225 | 49 | 418.000 | 475.000 | 2,090 | 2,660 | 2.5 | 8.650 | N 321 | - |
| 105 | 260 | 60 | 475.950 | 541.500 | 2,090 | 2,660 | 3.0 | 19.000 | NU 421 | HJ 421 |
| 110 | 170 | 28 | 121.600 | 157.700 | 3,610 | 4,275 | 2.0 | 2.300 | NU 1022 | - |
| 110 | 200 | 38 | 277.400 | 346.750 | 2,660 | 3,230 | 2.0 | 4.800 | NU 222 | HJ 222 |

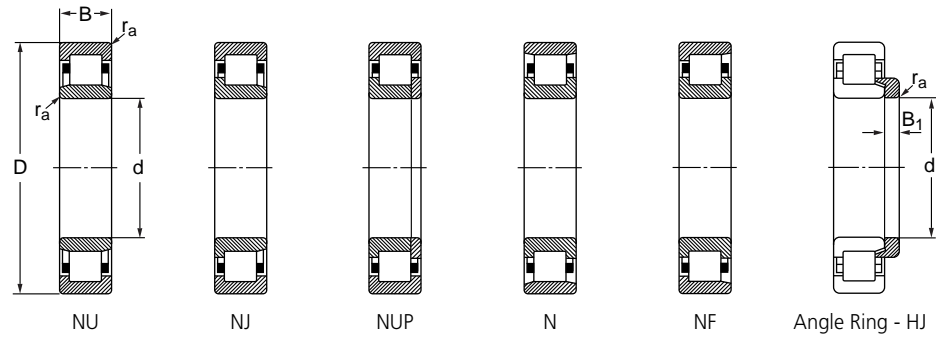


Single Row Cylindrical Roller Bearings



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|-------------|----------------|-------|-------------------|-----------|-------------|------------|
| d | D | B | Dynamic | Static | Grease | Oil | | r_a | Bearings | Angle Ring |
| mm | mm | mm | C kN | C_0 kN | r/min | r/min | mm | max kg | | |
| 110 | 200 | 38 | 277.400 | 346.750 | 2,660 | 3,230 | 2.0 | 4.900 | NJ 222 | HJ 222 |
| 110 | 200 | 38 | 277.400 | 346.750 | 2,660 | 3,230 | 2.0 | 5.000 | NUP 222 | - |
| 110 | 200 | 38 | 277.400 | 346.750 | 2,660 | 3,230 | 2.0 | 4.800 | N 222 | - |
| 110 | 200 | 53 | 361.000 | 494.000 | 2,660 | 3,230 | 2.0 | 6.700 | NU 2222 | HJ 2222 |
| 110 | 200 | 53 | 361.000 | 494.000 | 2,660 | 3,230 | 2.0 | 6.850 | NJ 2222 | HJ 2222 |
| 110 | 200 | 53 | 361.000 | 494.000 | 2,660 | 3,230 | 2.0 | 7.000 | NUP 2222 | - |
| 110 | 240 | 50 | 444.600 | 513.000 | 1,900 | 2,470 | 2.5 | 10.500 | NU 322 | HJ 322 |
| 110 | 240 | 50 | 444.600 | 513.000 | 1,900 | 2,470 | 2.5 | 10.500 | NJ 322 | HJ 322 |
| 110 | 240 | 50 | 444.600 | 513.000 | 1,900 | 2,470 | 2.5 | 11.000 | NUP 322 | - |
| 110 | 240 | 50 | 444.600 | 513.000 | 1,900 | 2,470 | 2.5 | 10.500 | N 322 | - |
| 110 | 240 | 80 | 647.900 | 855.000 | 1,900 | 2,470 | 2.5 | 17.000 | NU 2322 | HJ 2322 |
| 110 | 240 | 80 | 647.900 | 855.000 | 1,900 | 2,470 | 2.5 | 17.000 | NJ 2322 | HJ 2322 |
| 110 | 240 | 80 | 647.900 | 855.000 | 1,900 | 2,470 | 2.5 | 17.500 | NUP 2322 | - |
| 110 | 280 | 65 | 496.850 | 555.750 | 1,900 | 2,470 | 3.0 | 20.000 | NU 422 | HJ 422 |
| 110 | 280 | 65 | 496.850 | 555.750 | 1,900 | 2,470 | 3.0 | 20.000 | NJ 422 | HJ 422 |
| 120 | 180 | 28 | 127.300 | 173.850 | 3,230 | 3,800 | 2.0 | 2.450 | NU 1024 | - |
| 120 | 215 | 40 | 323.950 | 408.500 | 2,280 | 2,850 | 2.0 | 5.750 | NU 224 | HJ 224 |
| 120 | 215 | 40 | 323.950 | 408.500 | 2,280 | 2,850 | 2.0 | 5.850 | NJ 224 | HJ 224 |
| 120 | 215 | 40 | 323.950 | 408.500 | 2,280 | 2,850 | 2.0 | 6.000 | NUP 224 | - |
| 120 | 215 | 40 | 323.950 | 408.500 | 2,280 | 2,850 | 2.0 | 5.700 | N 224 | - |
| 120 | 215 | 58 | 434.150 | 598.500 | 2,280 | 2,850 | 2.0 | 8.300 | NU 2224 | HJ 2224 |
| 120 | 215 | 58 | 434.150 | 598.500 | 2,280 | 2,850 | 2.0 | 8.500 | NJ 2224 | HJ 2224 |
| 120 | 215 | 58 | 434.150 | 598.500 | 2,280 | 2,850 | 2.0 | 8.650 | NUP 2224 | - |
| 120 | 260 | 55 | 512.050 | 589.000 | 1,805 | 2,280 | 2.5 | 13.500 | NU 324 | HJ 324 |
| 120 | 260 | 55 | 512.050 | 589.000 | 1,805 | 2,280 | 2.5 | 13.500 | NJ 324 | HJ 324 |
| 120 | 260 | 55 | 512.050 | 589.000 | 1,805 | 2,280 | 2.5 | 14.000 | NUP 324 | - |
| 120 | 260 | 55 | 512.050 | 589.000 | 1,805 | 2,280 | 2.5 | 13.000 | N 324 | - |
| 120 | 260 | 86 | 752.400 | 988.000 | 1,805 | 2,280 | 2.5 | 24.000 | NU 2324 | HJ 2324 |
| 120 | 260 | 86 | 752.400 | 988.000 | 1,805 | 2,280 | 2.5 | 24.500 | NJ 2324 | HJ 2324 |
| 120 | 260 | 86 | 752.400 | 988.000 | 1,805 | 2,280 | 2.5 | 25.000 | NUP 2324 | - |
| 120 | 310 | 72 | 611.800 | 698.250 | 1,805 | 2,280 | 4.0 | 28.000 | NU 424 | HJ 424 |
| 120 | 310 | 72 | 611.800 | 698.250 | 1,805 | 2,280 | 4.0 | 28.500 | NJ 424 | HJ 424 |

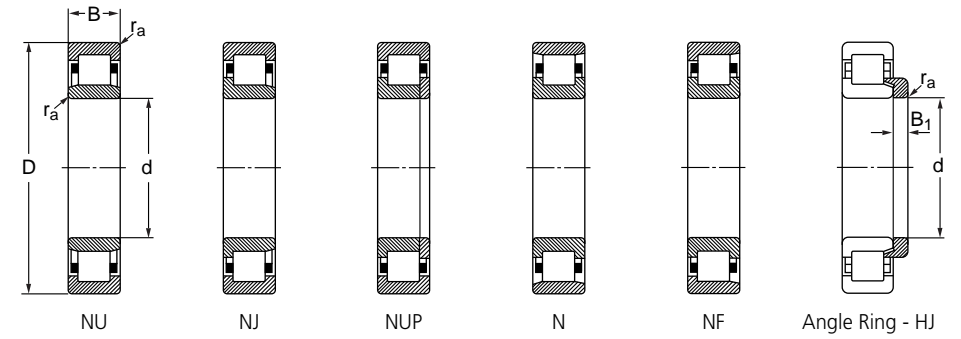
Single Row Cylindrical Roller Bearings



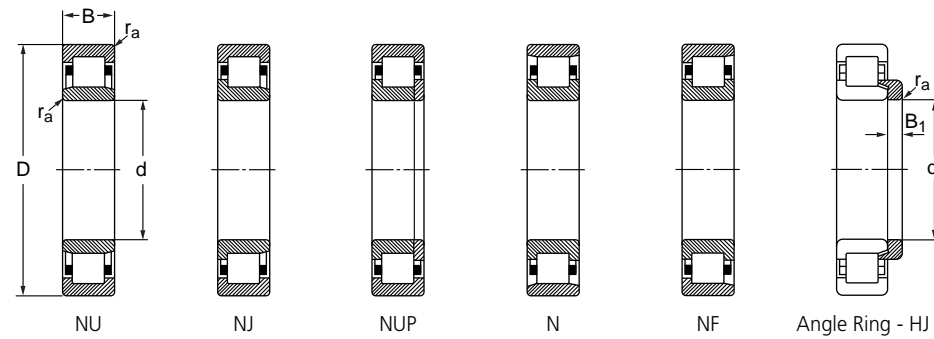
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|-----|--------------------|-----------------------|----------------|-------|-------------------|--------|-------------|------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a | | Bearings | Angle Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | |
| 130 | 200 | 33 | 156.750 | 212.800 | 3,040 | 3,610 | 2.0 | 3.750 | NU 1026 | - |
| 130 | 230 | 40 | 340.100 | 432.250 | 2,090 | 2,660 | 2.5 | 6.450 | NU 226 | HJ 226 |
| 130 | 230 | 40 | 340.100 | 432.250 | 2,090 | 2,660 | 2.5 | 6.600 | NJ 226 | HJ 226 |
| 130 | 230 | 40 | 340.100 | 432.250 | 2,090 | 2,660 | 2.5 | 6.700 | NUP 226 | - |
| 130 | 230 | 40 | 340.100 | 432.250 | 2,090 | 2,660 | 2.5 | 6.450 | N 226 | - |
| 130 | 230 | 64 | 501.600 | 698.250 | 2,090 | 2,660 | 2.5 | 10.500 | NU 2226 | HJ 2226 |
| 130 | 230 | 64 | 501.600 | 698.250 | 2,090 | 2,660 | 2.5 | 10.500 | NJ 2226 | HJ 2226 |
| 130 | 230 | 64 | 501.600 | 698.250 | 2,090 | 2,660 | 2.5 | 11.000 | NUP 2226 | - |
| 130 | 280 | 58 | 595.650 | 712.500 | 1,710 | 2,090 | 3.0 | 18.500 | NU 326 | HJ 326 |
| 130 | 280 | 58 | 595.650 | 712.500 | 1,710 | 2,090 | 3.0 | 19.000 | NJ 326 | HJ 326 |
| 130 | 280 | 58 | 595.650 | 712.500 | 1,710 | 2,090 | 3.0 | 19.500 | NUP 326 | - |
| 130 | 280 | 58 | 595.650 | 712.500 | 1,710 | 2,090 | 3.0 | 18.500 | N 326 | - |
| 130 | 280 | 93 | 888.250 | 1187.500 | 1,710 | 2,090 | 3.0 | 30.000 | NU 2326 | HJ 2326 |
| 130 | 280 | 93 | 888.250 | 1187.500 | 1,710 | 2,090 | 3.0 | 30.500 | NJ 2326 | HJ 2326 |
| 130 | 280 | 93 | 888.250 | 1187.500 | 1,710 | 2,090 | 3.0 | 31.000 | NUP 2326 | - |
| 140 | 210 | 33 | 163.400 | 232.750 | 2,850 | 3,420 | 2.0 | 4.000 | NU 1028 | - |
| 140 | 250 | 42 | 371.450 | 484.500 | 1,900 | 2,470 | 2.5 | 8.300 | NU 228 | HJ 228 |
| 140 | 250 | 42 | 371.450 | 484.500 | 1,900 | 2,470 | 2.5 | 8.500 | NJ 228 | HJ 228 |
| 140 | 250 | 42 | 371.450 | 484.500 | 1,900 | 2,470 | 2.5 | 8.650 | NUP 228 | - |
| 140 | 250 | 42 | 292.600 | 380.000 | 2,280 | 2,850 | 2.5 | 8.300 | N 228 | - |
| 140 | 250 | 68 | 543.400 | 788.500 | 1,900 | 2,470 | 2.5 | 13.500 | NU 2228 | HJ 2228 |
| 140 | 250 | 68 | 543.400 | 788.500 | 1,900 | 2,470 | 2.5 | 13.500 | NJ 2228 | HJ 2228 |
| 140 | 250 | 68 | 543.400 | 788.500 | 1,900 | 2,470 | 2.5 | 14.000 | NUP 2228 | - |
| 140 | 300 | 62 | 647.900 | 788.500 | 1,710 | 2,090 | 3.0 | 22.500 | NU 328 | HJ 328 |
| 140 | 300 | 62 | 647.900 | 788.500 | 1,710 | 2,090 | 3.0 | 23.000 | NJ 328 | HJ 328 |
| 140 | 300 | 62 | 647.900 | 788.500 | 1,710 | 2,090 | 3.0 | 23.500 | NUP 328 | - |
| 140 | 300 | 62 | 564.300 | 674.500 | 1,805 | 2,280 | 3.0 | 20.000 | N 328 | - |
| 140 | 300 | 102 | 997.500 | 1358.500 | 1,710 | 2,090 | 3.0 | 37.000 | NU 2328 | HJ 2328 |
| 140 | 300 | 102 | 997.500 | 1358.500 | 1,710 | 2,090 | 3.0 | 37.500 | NJ 2328 | HJ 2328 |
| 150 | 225 | 35 | 184.300 | 261.250 | 2,470 | 3,040 | 2.0 | 4.850 | NU 1030 | - |
| 150 | 270 | 45 | 423.700 | 570.000 | 1,805 | 2,280 | 2.5 | 10.500 | NU 230 | HJ 230 |
| 150 | 270 | 45 | 423.700 | 570.000 | 1,805 | 2,280 | 2.5 | 10.500 | NJ 230 | HJ 230 |



Single Row Cylindrical Roller Bearings

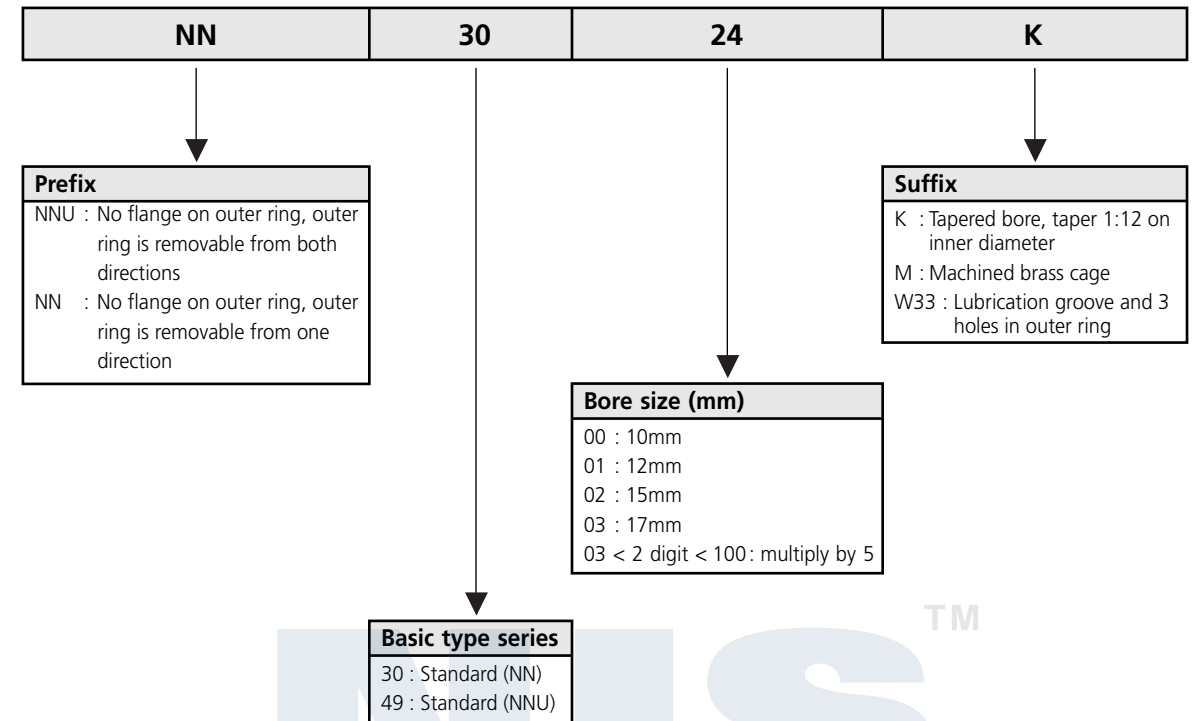


| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|-----|--------------------|-----------------------|----------------|-------|-------------------|--------|-------------|------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a | | Bearings | Angle Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | |
| 150 | 270 | 45 | 423.700 | 570.000 | 1,805 | 2,280 | 2.5 | 10.500 | NUP 230 | - |
| 150 | 270 | 45 | 340.100 | 441.750 | 1,900 | 2,470 | 2.5 | 10.500 | N 230 | - |
| 150 | 270 | 73 | 595.650 | 883.500 | 1,805 | 2,280 | 2.5 | 19.000 | NU 2230 | HJ 2230 |
| 150 | 270 | 73 | 595.650 | 883.500 | 1,805 | 2,280 | 2.5 | 19.500 | NJ 2230 | HJ 2230 |
| 150 | 320 | 65 | 741.950 | 916.750 | 1,615 | 1,900 | 3.0 | 27.500 | NU 330 | HJ 330 |
| 150 | 320 | 65 | 741.950 | 916.750 | 1,615 | 1,900 | 3.0 | 28.000 | NJ 330 | HJ 330 |
| 150 | 320 | 65 | 741.950 | 916.750 | 1,615 | 1,900 | 3.0 | 28.500 | N 330 | - |
| 150 | 320 | 108 | 1130.500 | 1548.500 | 1,615 | 1,900 | 3.0 | 45.000 | NU 2330 | HJ 2330 |
| 150 | 320 | 108 | 1130.500 | 1548.500 | 1,615 | 1,900 | 3.0 | 46.000 | NJ 2330 | HJ 2330 |
| 150 | 320 | 108 | 1130.500 | 1548.500 | 1,615 | 1,900 | 3.0 | 46.500 | NUP 2330 | - |
| 160 | 240 | 38 | 217.550 | 308.750 | 2,280 | 2,850 | 2.0 | 5.950 | NU 1032 | - |
| 160 | 290 | 48 | 475.950 | 646.000 | 1,710 | 2,090 | 2.5 | 15.000 | NU 232 | HJ 232 |
| 160 | 290 | 48 | 475.950 | 646.000 | 1,710 | 2,090 | 2.5 | 15.000 | NJ 232 | HJ 232 |
| 160 | 290 | 48 | 475.950 | 646.000 | 1,710 | 2,090 | 2.5 | 15.500 | NUP 232 | - |
| 160 | 290 | 48 | 475.950 | 646.000 | 1,710 | 2,090 | 2.5 | 15.000 | N 232 | - |
| 160 | 290 | 80 | 768.550 | 1140.000 | 1,710 | 2,090 | 2.5 | 24.000 | NU 2232 | HJ 2232 |
| 160 | 290 | 80 | 768.550 | 1140.000 | 1,710 | 2,090 | 2.5 | 24.500 | NJ 2232 | HJ 2232 |
| 160 | 340 | 68 | 836.000 | 1026.000 | 1,425 | 1,710 | 3.0 | 32.500 | NU 332 | - |
| 160 | 340 | 68 | 836.000 | 1026.000 | 1,425 | 1,710 | 3.0 | 33.000 | NJ 332 | - |
| 160 | 340 | 114 | 1254.000 | 1767.000 | 1,425 | 1,710 | 3.0 | 53.000 | NU 2332 | HJ 2332 |
| 160 | 340 | 114 | 1254.000 | 1767.000 | 1,425 | 1,710 | 3.0 | 54.000 | NJ 2332 | HJ 2332 |
| 170 | 260 | 42 | 261.250 | 380.000 | 2,090 | 2,660 | 2.0 | 7.900 | NU 1034 | - |
| 170 | 310 | 52 | 585.200 | 774.250 | 1,710 | 2,090 | 3.0 | 19.000 | NU 234 | HJ 234 |
| 170 | 310 | 52 | 585.200 | 774.250 | 1,710 | 2,090 | 3.0 | 19.500 | NJ 234 | HJ 234 |
| 170 | 310 | 52 | 585.200 | 774.250 | 1,710 | 2,090 | 3.0 | 20.000 | NUP 234 | - |
| 170 | 310 | 86 | 919.600 | 1358.500 | 1,710 | 2,090 | 3.0 | 30.000 | NU 2234 | - |
| 170 | 360 | 72 | 768.550 | 988.000 | 1,520 | 1,805 | 3.0 | 38.500 | NU 334 | HJ 334 |
| 170 | 360 | 72 | 904.400 | 1121.000 | 1,330 | 1,615 | 3.0 | 38.500 | N 334 | - |
| 170 | 360 | 120 | 1168.500 | 1710.000 | 1,330 | 1,615 | 3.0 | 63.000 | NU 2334 | - |
| 180 | 280 | 46 | 319.200 | 451.250 | 1,900 | 2,470 | 2.0 | 10.500 | NU 1036 | - |
| 180 | 320 | 52 | 595.650 | 807.500 | 1,615 | 1,900 | 3.0 | 19.500 | NU 236 | HJ 236 |
| 180 | 320 | 52 | 595.650 | 807.500 | 1,615 | 1,900 | 3.0 | 20.000 | NJ 236 | HJ 236 |

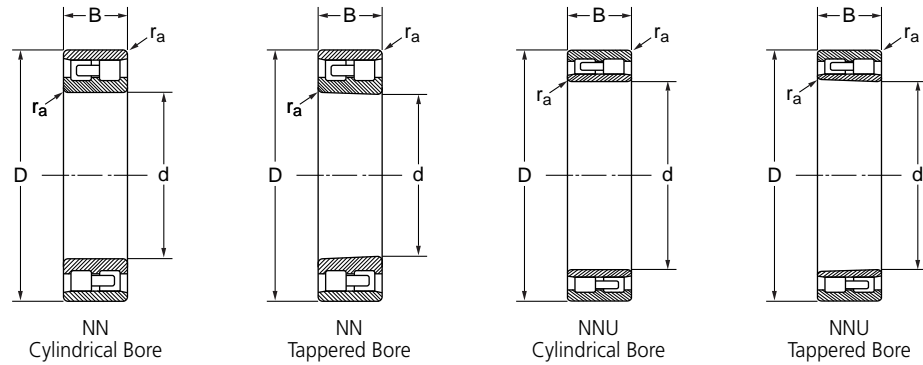


| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|-----|--------------------|-----------------------|----------------|-------|-------------------|--------------------|-------------|------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | | r _a max | Bearings | Angle Ring |
| mm | mm | mm | kN | kN | r/min | r/min | mm | kg | | |
| 180 | 320 | 52 | 595.650 | 807.500 | 1,615 | 1,900 | 3.0 | 21.000 | NUP 236 | - |
| 180 | 320 | 86 | 959.500 | 1425.000 | 1,615 | 1,900 | 3.0 | 31.500 | NU 2236 | HJ 2236 |
| 180 | 320 | 86 | 959.500 | 1425.000 | 1,615 | 1,900 | 3.0 | 31.500 | NJ 2236 | HJ 2236 |
| 180 | 380 | 75 | 867.350 | 1121.000 | 1,425 | 1,710 | 3.0 | 42.500 | NU 336 | HJ 336 |
| 180 | 380 | 126 | 1330.000 | 1938.000 | 1,235 | 1,520 | 3.0 | 73.000 | NU 2336 | HJ 2336 |
| 190 | 290 | 46 | 329.650 | 475.000 | 1,900 | 2,470 | 2.0 | 10.000 | NU 1038 | HJ 1038 |
| 190 | 340 | 55 | 658.350 | 916.750 | 1,520 | 1,805 | 3.0 | 23.500 | NU 238 | HJ 238 |
| 190 | 340 | 55 | 658.350 | 916.750 | 1,520 | 1,805 | 3.0 | 24.500 | NJ 238 | HJ 238 |
| 190 | 340 | 55 | 658.350 | 916.750 | 1,520 | 1,805 | 3.0 | 25.500 | NUP 238 | - |
| 190 | 340 | 92 | 1045.000 | 1577.000 | 1,520 | 1,805 | 3.0 | 39.000 | NU 2238 | HJ 2238 |
| 190 | 400 | 78 | 1083.000 | 1425.000 | 1,140 | 1,425 | 4.0 | 50.000 | NU 338 | HJ 338 |
| 190 | 400 | 132 | 1738.500 | 2422.500 | 1,140 | 1,425 | 4.0 | 82.500 | NU 2338 | - |
| 200 | 310 | 51 | 361.000 | 541.500 | 1,805 | 2,280 | 2.0 | 14.000 | NU 1040 | HJ 1040 |
| 200 | 360 | 58 | 726.750 | 1007.000 | 1,425 | 1,710 | 3.0 | 28.500 | NU 240 | HJ 240 |
| 200 | 360 | 58 | 726.750 | 1007.000 | 1,425 | 1,710 | 3.0 | 29.000 | NJ 240 | HJ 240 |
| 200 | 360 | 58 | 726.750 | 1007.000 | 1,425 | 1,710 | 3.0 | 27.500 | NUP 240 | - |
| 200 | 360 | 98 | 1168.500 | 1805.000 | 1,425 | 1,710 | 3.0 | 46.000 | NU 2240 | HJ 2240 |
| 200 | 420 | 80 | 940.500 | 1254.000 | 1,235 | 1,520 | 4.0 | 56.000 | NU 340 | HJ 340 |
| 200 | 420 | 138 | 1947.500 | 2707.500 | 1,140 | 1,425 | 4.0 | 96.000 | NU 2340 | - |
| 220 | 340 | 56 | 470.250 | 698.250 | 1,710 | 2,090 | 2.5 | 18.500 | NU 1044 | HJ 1044 |
| 220 | 400 | 65 | 726.750 | 1026.000 | 1,425 | 1,710 | 3.0 | 38.500 | NU 244 | HJ 244 |
| 220 | 400 | 65 | 726.750 | 1026.000 | 1,425 | 1,710 | 3.0 | 39.000 | NJ 244 | HJ 244 |
| 220 | 400 | 65 | 726.750 | 1026.000 | 1,425 | 1,710 | 3.0 | 39.500 | NUP 244 | - |
| 220 | 400 | 108 | 1491.500 | 2166.000 | 1,235 | 1,520 | 3.0 | 62.500 | NU 2244 | HJ 2244 |
| 220 | 460 | 88 | 1149.500 | 1548.500 | 1,140 | 1,425 | 4.0 | 72.500 | NU 344 | HJ 344 |
| 220 | 460 | 145 | 2213.500 | 3087.500 | 950 | 1,235 | 4.0 | 120.000 | NU 2344 | HJ 2344 |
| 240 | 360 | 56 | 496.850 | 760.000 | 1,615 | 1,900 | 2.5 | 20.000 | NU 1048 | HJ1048 |
| 240 | 440 | 72 | 904.400 | 1301.500 | 1,235 | 1,520 | 3.0 | 51.000 | NU 248 | HJ 248 |
| 240 | 440 | 72 | 904.400 | 1301.500 | 1,235 | 1,520 | 3.0 | 52.500 | NJ 248 | HJ 248 |
| 240 | 440 | 72 | 904.400 | 1301.500 | 1,235 | 1,520 | 3.0 | 53.500 | NUP 248 | - |
| 240 | 440 | 120 | 1377.500 | 2242.000 | 1,140 | 1,425 | 3.0 | 84.000 | NU 2248 | HJ 2248 |
| 240 | 500 | 95 | 1377.500 | 1900.000 | 950 | 1,235 | 4.0 | 94.500 | NU 348 | HJ 348 |
| 240 | 500 | 155 | 2014.000 | 3087.500 | 903 | 1,140 | 4.0 | 155.000 | NU 2348 | HJ 2348 |

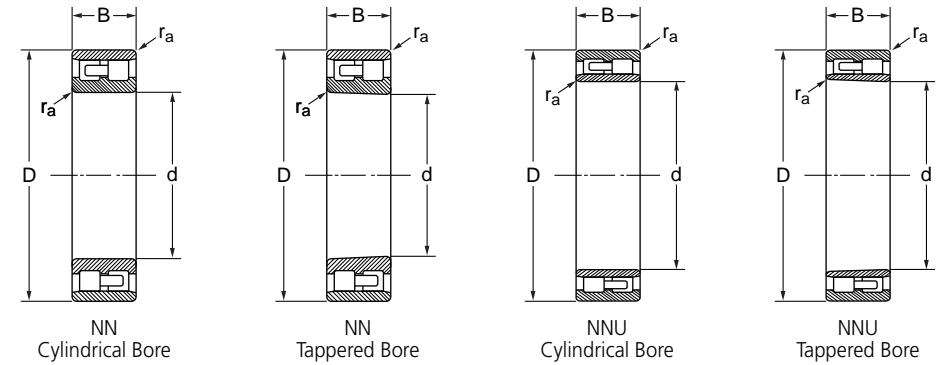
Prefix & Suffix



Double Row Cylindrical Roller Bearings



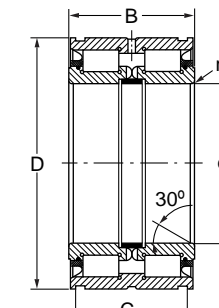
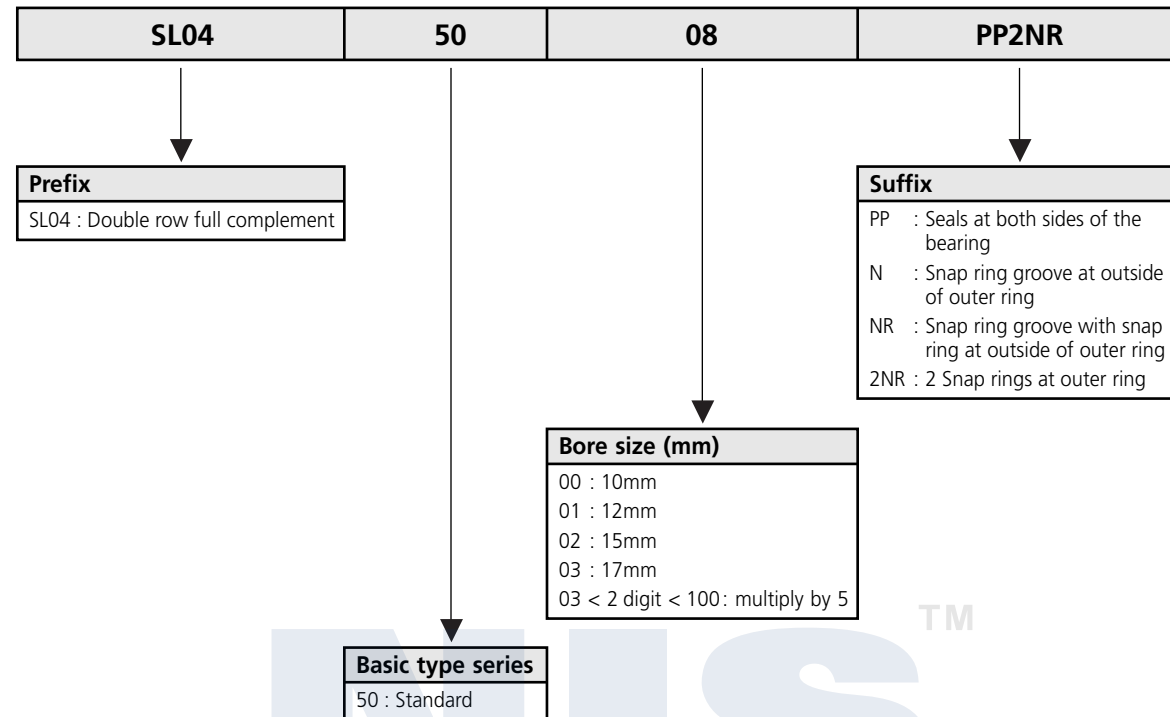
Double Row Cylindrical Roller Bearings



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|----------------------|----------------|--------|-------------------|--------------------|------------------|--------------|
| d | D | B | Dynamic | Static | Grease | Oil | | r _a max | Cylindrical Bore | Tapered Bore |
| mm | mm | mm | C kN | C ₀ kN | r/min | r/min | mm | kg | | |
| 25 | 47 | 16 | 24.510 | 28.500 | 13,300 | 16,150 | 0.6 | 0.127 | NN 3005 | NN 3005 K |
| 30 | 55 | 19 | 29.450 | 36.100 | 11,400 | 13,300 | 1.0 | 0.198 | NN 3006 | NN 3006 K |
| 35 | 62 | 20 | 37.525 | 47.500 | 9,500 | 11,400 | 1.0 | 0.258 | NN 3007 | NN 3007 K |
| 40 | 68 | 21 | 41.325 | 52.725 | 8,550 | 10,450 | 1.0 | 0.309 | NN 3008 | NN 3008 K |
| 45 | 75 | 23 | 49.400 | 65.075 | 8,075 | 9,500 | 1.0 | 0.407 | NN 3009 | NN 3009 K |
| 50 | 80 | 23 | 50.350 | 68.875 | 7,125 | 8,550 | 1.0 | 0.436 | NN 3010 | NN 3010 K |
| 55 | 90 | 26 | 66.025 | 91.675 | 6,365 | 7,600 | 1.0 | 0.650 | NN 3011 | NN 3011 K |
| 60 | 95 | 26 | 69.825 | 100.700 | 5,985 | 7,125 | 1.0 | 0.697 | NN 3012 | NN 3012 K |
| 65 | 100 | 26 | 73.150 | 110.200 | 5,700 | 6,745 | 1.0 | 0.746 | NN 3013 | NN 3013 K |
| 70 | 110 | 30 | 92.625 | 140.600 | 5,320 | 6,365 | 1.0 | 1.070 | NN 3014 | NN 3014 K |
| 75 | 115 | 30 | 91.675 | 141.550 | 5,035 | 5,985 | 1.0 | 1.120 | NN 3015 | NN 3015 K |
| 80 | 125 | 34 | 113.050 | 176.700 | 4,560 | 5,700 | 1.0 | 1.550 | NN 3016 | NN 3016 K |
| 85 | 130 | 34 | 118.750 | 190.950 | 4,275 | 5,320 | 1.0 | 1.630 | NN 3017 | NN 3017 K |
| 90 | 140 | 37 | 135.850 | 216.600 | 4,085 | 4,750 | 1.5 | 2.090 | NN 3018 | NN 3018 K |
| 95 | 145 | 37 | 142.500 | 233.700 | 3,800 | 4,750 | 1.5 | 2.190 | NN 3019 | NN 3019 K |
| 100 | 140 | 40 | 147.250 | 280.250 | 3,800 | 4,750 | 1.0 | 1.900 | NNU 4920 | NNU 4920 K |
| 100 | 150 | 37 | 149.150 | 251.750 | 3,800 | 4,560 | 1.5 | 2.280 | NN 3020 | NN 3020 K |
| 105 | 145 | 40 | 152.950 | 299.250 | 3,610 | 4,560 | 1.0 | 1.990 | NNU 4921 | NNU 4921 K |
| 105 | 160 | 41 | 188.100 | 304.000 | 3,610 | 4,275 | 2.0 | 2.880 | NN 3021 | NN 3021 K |
| 110 | 150 | 40 | 158.650 | 318.250 | 3,420 | 4,275 | 1.0 | 2.070 | NNU 4922 | NNU 4922 K |
| 110 | 170 | 45 | 217.550 | 356.250 | 3,230 | 4,085 | 2.0 | 3.710 | NN 3022 | NN 3022 K |
| 120 | 165 | 45 | 173.850 | 342.000 | 3,040 | 3,800 | 1.0 | 2.850 | NNU 4924 | NNU 4924 K |
| 120 | 180 | 46 | 227.050 | 384.750 | 3,040 | 3,610 | 2.0 | 4.040 | NN 3024 | NN 3024 K |
| 130 | 180 | 50 | 260.300 | 517.750 | 2,850 | 3,610 | 1.5 | 3.850 | NNU 4926 | NNU 4926 K |
| 130 | 200 | 52 | 269.800 | 451.250 | 2,850 | 3,420 | 2.0 | 5.880 | NN 3026 | NN 3026 K |
| 140 | 190 | 50 | 268.850 | 555.750 | 2,660 | 3,420 | 1.5 | 4.090 | NNU 4928 | NNU 4928 K |
| 140 | 210 | 53 | 283.100 | 489.250 | 2,660 | 3,230 | 2.0 | 6.340 | NN 3028 | NN 3028 K |
| 150 | 210 | 60 | 332.500 | 679.250 | 2,470 | 3,040 | 2.0 | 6.390 | NNU 4930 | NNU 4930 K |
| 150 | 225 | 56 | 318.250 | 555.750 | 2,470 | 2,850 | 2.0 | 7.770 | NN 3030 | NN 3030 K |
| 160 | 220 | 60 | 346.750 | 722.000 | 2,280 | 2,850 | 2.0 | 6.760 | NNU 4932 | NNU 4932 K |
| 160 | 240 | 60 | 356.250 | 627.000 | 2,280 | 2,660 | 2.0 | 9.410 | NN 3032 | NN 3032 K |
| 170 | 230 | 60 | 356.250 | 764.750 | 2,280 | 2,660 | 2.0 | 7.120 | NNU 4934 | NNU 4934 K |

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation | |
|------------------|-----|-----|--------------------|----------------------|----------------|-------|-------------------|--------------------|------------------|--------------|
| d | D | B | Dynamic | Static | Grease | Oil | | r _a max | Cylindrical Bore | Tapered Bore |
| mm | mm | mm | C kN | C ₀ kN | r/min | r/min | mm | kg | | |
| 170 | 260 | 67 | 427.500 | 764.750 | 2,090 | 2,470 | 2.0 | 12.800 | NN 3034 | NN 3034 K |
| 180 | 250 | 69 | 456.000 | 969.000 | 2,090 | 2,470 | 2.0 | 10.400 | NNU 4936 | NNU 4936 K |
| 180 | 280 | 74 | 536.750 | 945.250 | 1,900 | 2,280 | 2.0 | 16.800 | NN 3036 | NN 3036 K |
| 190 | 260 | 69 | 460.750 | 1007.000 | 1,900 | 2,470 | 2.0 | 10.900 | NNU 4938 | NNU 4938 K |
| 190 | 290 | 75 | 565.250 | 1026.000 | 1,900 | 2,280 | 2.0 | 17.800 | NN 3038 | NN 3038 K |
| 200 | 280 | 80 | 541.500 | 1159.000 | 1,805 | 2,280 | 2.0 | 15.300 | NNU 4940 | NNU 4940 K |
| 200 | 310 | 82 | 622.250 | 1111.500 | 1,710 | 2,090 | 2.0 | 22.700 | NN 3040 | NN 3040 K |
| 220 | 300 | 80 | 570.000 | 1263.500 | 1,615 | 2,090 | 2.0 | 16.600 | NNU 4944 | NNU 4944 K |
| 220 | 340 | 90 | 774.250 | 1406.000 | 1,615 | 1,900 | 2.5 | 29.600 | NN 3044 | NN 3044 K |
| 240 | 320 | 80 | 593.750 | 1377.500 | 1,520 | 1,900 | 2.0 | 18.000 | NNU 4948 | NNU 4948 K |
| 240 | 360 | 92 | 812.250 | 1520.000 | 1,425 | 1,710 | 2.5 | 32.700 | NN 3048 | NN 3048 K |
| 260 | 360 | 100 | 888.250 | 1995.000 | 1,330 | 1,710 | 2.0 | 31.100 | NNU 4952 | NNU 4952 K |
| 260 | 400 | 104 | 978.500 | 1824.000 | 1,330 | 1,615 | 3.0 | 47.700 | NN 3052 | NN 3052 K |
| 280 | 380 | 100 | 912.000 | 2118.500 | 1,235 | 1,615 | 2.0 | 33.000 | NNU 4956 | NNU 4956 K |
| 280 | 420 | 106 | 1026.000 | 1976.000 | 1,235 | 1,425 | 3.0 | 51.100 | NN 3056 | NN 3056 K |
| 300 | 420 | 118 | 1168.500 | 2726.500 | 1,140 | 1,425 | 2.5 | 51.800 | NNU 4960 | NNU 4960 K |
| 300 | 460 | 118 | 1225.500 | 2337.000 | 1,140 | 1,330 | 3.0 | 70.700 | NN 3060 | NN 3060 K |
| 320 | 440 | 118 | 1197.000 | 2897.500 | 1,045 | 1,330 | 2.5 | 54.900 | NNU 4964 | NNU 4964 K |
| 320 | 480 | 121 | 1282.500 | 2536.500 | 1,045 | 1,235 | 3.0 | 76.600 | NN 3064 | NN 3064 K |
| 340 | 520 | 133 | 1586.500 | 3135.000 | 950 | 1,140 | 4.0 | 102.000 | NN 3068 | NN 3068 K |
| 360 | 540 | 134 | 1615.000 | 3277.500 | 903 | 1,140 | 4.0 | 107.000 | NN 3072 | NN 3072 K |

■ Prefix & Suffix



SL04 50..PP

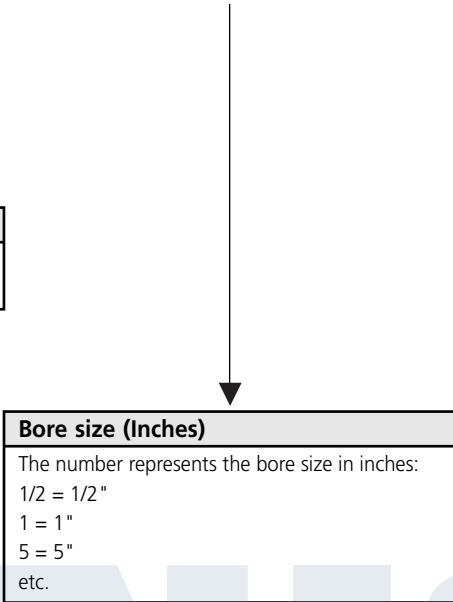
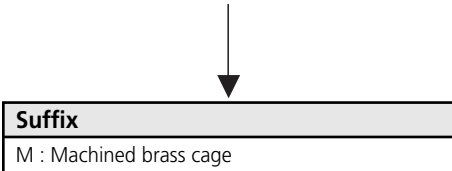
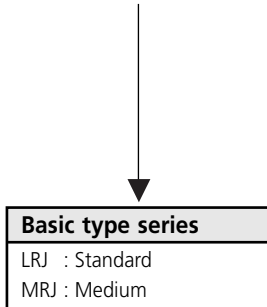
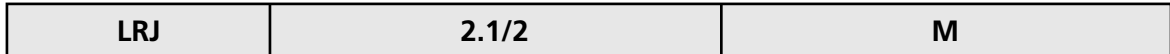
| Basic Dimensions | | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | | |
|------------------|-----|----|----------------|--------------------|------------------------|----------------|--------------------|--------|--------------|-----------|--------------|
| d | D | B | C ₁ | Dynamic C | Static C _{0r} | Grease | r _a max | kg | Bearings | Snap Ring | Reining Ring |
| mm | mm | mm | +0.2 | kN | kN | r/min | mm | | | | |
| 20 | 42 | 30 | 24.7 | 40.500 | 49.000 | 4,000 | 0.3 | 0.200 | SL04 5004 PP | WRE 42 | 42 X 1.75 |
| 25 | 47 | 30 | 24.7 | 44.500 | 58.000 | 3,600 | 0.3 | 0.240 | SL04 5005 PP | WRE 47 | 47 X 1.75 |
| 30 | 55 | 34 | 28.2 | 50.000 | 67.000 | 3,000 | 0.3 | 0.370 | SL04 5006 PP | WRE 55 | 55 X 2 |
| 35 | 62 | 36 | 30.2 | 63.000 | 88.000 | 2,600 | 0.3 | 0.480 | SL04 5007 PP | WRE 62 | 62 X 2 |
| 40 | 68 | 38 | 32.2 | 76.000 | 103.000 | 2,400 | 0.6 | 0.560 | SL04 5008 PP | WRE 68 | 68 X 2.5 |
| 45 | 75 | 40 | 34.2 | 92.000 | 130.000 | 2,200 | 0.6 | 0.700 | SL04 5009 PP | WRE 75 | 75 X 2.5 |
| 50 | 80 | 40 | 34.2 | 97.000 | 142.000 | 2,000 | 0.6 | 0.760 | SL04 5010 PP | WRE 80 | 80 X 2.5 |
| 55 | 90 | 46 | 40.2 | 115.000 | 175.000 | 1,800 | 0.6 | 1.180 | SL04 5011 PP | WRE 90 | 90 X 3 |
| 60 | 95 | 46 | 40.2 | 120.000 | 189.000 | 1,700 | 0.6 | 1.260 | SL04 5012 PP | WRE 95 | 95 X 3 |
| 65 | 100 | 46 | 40.2 | 125.000 | 203.000 | 1,600 | 0.6 | 1.330 | SL04 5013 PP | WRE 100 | 100 X 3 |
| 70 | 110 | 54 | 48.2 | 168.000 | 265.000 | 1,400 | 0.6 | 1.870 | SL04 5014 PP | WRE 110 | 110 X 4 |
| 75 | 115 | 54 | 48.2 | 194.000 | 300.000 | 1,400 | 0.6 | 1.960 | SL04 5015 PP | WRE 115 | 115 X 4 |
| 80 | 125 | 60 | 54.2 | 203.000 | 325.000 | 1,300 | 0.6 | 2.710 | SL04 5016 PP | WRE 125 | 125 X 4 |
| 85 | 130 | 60 | 54.2 | 211.000 | 350.000 | 1,200 | 0.6 | 2.830 | SL04 5017 PP | WRE 130 | 130 X 4 |
| 90 | 140 | 67 | 59.2 | 305.000 | 510.000 | 1,100 | 0.6 | 3.710 | SL04 5018 PP | WRE 140 | 140 X 4 |
| 95 | 145 | 67 | 59.2 | 315.000 | 530.000 | 1,100 | 0.6 | 3.880 | SL04 5019 PP | WRE 145 | 145 X 4 |
| 100 | 150 | 67 | 59.2 | 330.000 | 550.000 | 1,000 | 0.6 | 3.950 | SL04 5020 PP | WRE 150 | 150 X 4 |
| 110 | 170 | 80 | 70.2 | 395.000 | 680.000 | 900 | 0.6 | 6.570 | SL04 5022 PP | WRE 170 | 170 X 4 |
| 120 | 180 | 80 | 71.2 | 410.000 | 740.000 | 900 | 0.6 | 7.040 | SL04 5024 PP | WRE 180 | 180 X 4 |
| 130 | 200 | 95 | 83.2 | 540.000 | 960.000 | 800 | 0.6 | 10.500 | SL04 5026 PP | WRE 200 | 200 X 4 |
| 140 | 210 | 95 | 83.2 | 610.000 | 1100.000 | 750 | 0.6 | 11.100 | SL04 5028 PP | WRE 210 | 210 X 5 |

NIS™

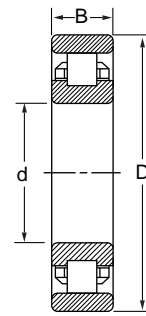
NIS™

Single Row Cylindrical Roller Bearings - Inch Sizes

■ Prefix & Suffix



NIS™



LRJ, MRJ

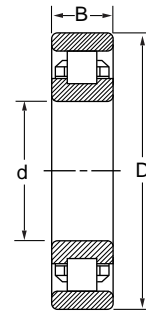
| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|----------|--------|---------|--------------------|----------------------|----------------|--------|
| d | | D | | B | | Dynamic | Static | Grease | Oil |
| inch | mm | inch | mm | inch | mm | C kN | C ₀ kN | r/min | r/min |
| 0.5000 | 12.7000 | 1.3125 | 33.3375 | 0.3750 | 9.5250 | 9.358 | 6.603 | 12,065 | 19,950 |
| 0.5000 | 12.7000 | 1.6250 | 41.2750 | 0.6250 | 15.8750 | 16.245 | 12.160 | 10,260 | 17,100 |
| 0.6250 | 15.8750 | 1.5625 | 39.6875 | 0.4375 | 11.1125 | 11.875 | 9.453 | 17,100 | 17,100 |
| 0.6250 | 15.8750 | 1.8125 | 46.0375 | 0.6250 | 15.8750 | 17.860 | 14.060 | 9,215 | 15,200 |
| 0.7500 | 19.0500 | 1.8750 | 47.6250 | 0.5625 | 14.2875 | 21.660 | 18.430 | 14,725 | 19,475 |
| 0.7500 | 19.0500 | 2.0000 | 50.8000 | 0.6875 | 17.4625 | 27.265 | 23.085 | 14,250 | 19,000 |
| 0.8750 | 22.2250 | 2.0000 | 50.8000 | 0.5625 | 14.2875 | 23.370 | 19.760 | 13,680 | 18,525 |
| 0.8750 | 22.2250 | 2.2500 | 57.1500 | 0.6875 | 17.4625 | 23.845 | 20.045 | 12,255 | 16,625 |
| 1.0000 | 25.4000 | 2.2500 | 57.1500 | 0.6250 | 15.8750 | 29.545 | 26.505 | 12,255 | 16,625 |
| 1.0000 | 25.4000 | 2.5000 | 63.5000 | 0.7500 | 19.0500 | 33.250 | 29.070 | 11,590 | 15,675 |
| 1.1250 | 28.5750 | 2.5000 | 63.5000 | 0.6250 | 15.8750 | 31.445 | 29.735 | 11,020 | 14,725 |
| 1.1250 | 28.5750 | 2.8125 | 71.4375 | 0.8125 | 20.6375 | 43.225 | 39.805 | 9,975 | 13,395 |
| 1.2500 | 31.7500 | 2.7500 | 69.8500 | 0.6875 | 17.4625 | 39.995 | 36.005 | 10,070 | 13,585 |
| 1.2500 | 31.7500 | 3.1250 | 79.3750 | 0.8750 | 22.2250 | 55.100 | 49.875 | 8,930 | 12,065 |
| 1.3750 | 34.9250 | 3.0000 | 76.2000 | 0.6875 | 17.4625 | 39.995 | 36.385 | 9,595 | 13,015 |
| 1.3750 | 34.9250 | 3.5000 | 88.9000 | 0.8750 | 22.2250 | 62.700 | 54.625 | 8,455 | 11,400 |
| 1.5000 | 38.1000 | 3.2500 | 82.5500 | 0.7500 | 19.0500 | 51.300 | 46.360 | 8,550 | 11,495 |
| 1.5000 | 38.1000 | 3.7500 | 95.2500 | 0.9375 | 23.8125 | 68.875 | 65.075 | 7,885 | 10,640 |
| 1.6250 | 41.2750 | 3.5000 | 88.9000 | 0.7500 | 19.0500 | 54.625 | 51.300 | 7,980 | 10,735 |
| 1.6250 | 41.2750 | 4.0000 | 101.6000 | 0.9375 | 23.8125 | 81.225 | 78.850 | 4,275 | 7,125 |
| 1.7500 | 44.4500 | 3.7500 | 95.2500 | 0.8125 | 20.6375 | 64.600 | 59.850 | 7,410 | 9,975 |
| 1.7500 | 44.4500 | 4.2500 | 107.9500 | 1.0625 | 26.9875 | 93.575 | 88.350 | 6,840 | 9,215 |
| 1.8750 | 47.6250 | 4.0000 | 101.6000 | 0.8125 | 20.6375 | 68.400 | 75.050 | 6,745 | 9,120 |
| 1.8750 | 47.6250 | 4.5000 | 114.3000 | 1.0625 | 26.9875 | 93.575 | 89.775 | 6,460 | 8,740 |
| 2.0000 | 50.8000 | 4.0000 | 101.6000 | 0.8125 | 20.6375 | 68.400 | 75.050 | 6,745 | 9,120 |
| 2.0000 | 50.8000 | 4.5000 | 114.3000 | 1.0625 | 26.9875 | 93.575 | 89.775 | 6,460 | 8,740 |
| 2.2500 | 57.1500 | 4.5000 | 114.3000 | 0.8750 | 22.2250 | 83.125 | 85.025 | 6,080 | 8,170 |
| 2.2500 | 57.1500 | 5.0000 | 127.0000 | 1.2500 | 31.7500 | 129.200 | 131.100 | 5,510 | 7,410 |
| 2.5000 | 63.5000 | 5.0000 | 127.0000 | 0.9375 | 23.8125 | 96.900 | 108.300 | 5,225 | 7,125 |
| 2.5000 | 63.5000 | 5.5000 | 139.7000 | 1.2500 | 31.7500 | 155.800 | 158.650 | 4,940 | 6,745 |
| 2.7500 | 69.8500 | 5.2500 | 133.3500 | 0.9375 | 23.8125 | 101.650 | 115.900 | 5,035 | 6,840 |
| 2.7500 | 69.8500 | 6.2500 | 158.7500 | 1.3750 | 34.9250 | 194.750 | 205.200 | 2,660 | 4,465 |

| Chamfer Dimension | Mass | Designation | Interchange |
|--------------------------|-------|-------------|-------------|
| r _a max mm | kg | | |
| 1.6 | 0.038 | LRJ 1/2 | - |
| 1.6 | 0.107 | MRJ 1/2 | - |
| 1.6 | 0.066 | LRJ 5/8 | - |
| 1.6 | 0.121 | MRJ 5/8 | CRM 5 |
| 1.6 | 0.121 | LRJ 3/4 | CRL 6 |
| 1.6 | 0.172 | MRJ 3/4 | CRM 6 |
| 1.6 | 0.130 | LRJ 7/8 | CRL 7 |
| 2.4 | 0.191 | MRJ 7/8 | CRM 7 |
| 1.6 | 0.186 | LRJ 1 | CRL 8 |
| 2.4 | 0.288 | MRJ 1 | CRM 8 |
| 1.6 | 0.235 | LRJ 1.1/8 | CRL 9 |
| 2.4 | 0.393 | MRJ 1.1/8 | CRM 9 |
| 1.6 | 0.298 | LRJ 1.1/4 | CRL 10 |
| 2.4 | 0.511 | MRJ 1.1/4 | CRM 10 |
| 1.6 | 0.366 | LRJ 1.3/8 | CRL 11 |
| 2.4 | 0.659 | MRJ 1.3/8 | CRM 11 |
| 2.4 | 0.443 | LRJ 1.1/2 | CRL 12 |
| 2.4 | 0.841 | MRJ 1.1/2 | CRM 12 |
| 2.4 | 0.530 | LRJ 1.5/8 | CRL 13 |
| 2.4 | 0.971 | MRJ 1.5/8 | CRM 13 |
| 2.4 | 0.637 | LRJ 1.3/4 | CRL 14 |
| 2.4 | 1.190 | MRJ 1.3/4 | CRM 14 |
| 2.4 | 0.798 | LRJ 1.7/8 | CRL 15 |
| 2.4 | 1.330 | MRJ 1.7/8 | CRM 15 |
| 2.4 | 0.758 | LRJ 2 | CRL 16 |
| 2.4 | 1.280 | MRJ 2 | CRM 16 |
| 2.4 | 1.010 | LRJ 2.1/4 | CRL 18 |
| 3.2 | 1.800 | MRJ 2.1/4 | CRM 18 |
| 2.4 | 1.360 | LRJ 2.1/2 | CRL 20 |
| 3.2 | 2.170 | MRJ 2.1/2 | CRM 20 |
| 2.4 | 1.480 | LRJ 2.3/4 | CRL 22 |
| 3.2 | 3.420 | MRJ 2.3/4 | CRM 22 |



5.04

5.04



LRJ, MRJ

| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|----------|---------|----------|--------|---------|--------------------|-----------------------|----------------|-------|
| d | | D | | B | | Dynamic C | Static C ₀ | Grease | Oil |
| inch | mm | inch | mm | inch | mm | kN | kN | r/min | r/min |
| 3.0000 | 76.2000 | 5.7500 | 146.0500 | 1.0625 | 26.9875 | 132.050 | 139.650 | 4,655 | 6,270 |
| 3.0000 | 76.2000 | 7.0000 | 177.8000 | 1.5625 | 39.6875 | 222.300 | 235.600 | 3,990 | 5,415 |
| 3.2500 | 82.5500 | 6.0000 | 152.4000 | 1.0625 | 26.9875 | 143.450 | 163.400 | 2,565 | 4,370 |
| 3.2500 | 82.5500 | 7.5000 | 190.5000 | 1.5625 | 39.6875 | 249.850 | 270.750 | 2,185 | 3,705 |
| 3.5000 | 88.9000 | 6.5000 | 165.1000 | 1.1250 | 28.5750 | 159.600 | 179.550 | 3,990 | 5,415 |
| 3.5000 | 88.9000 | 8.1250 | 206.3750 | 1.7500 | 44.4500 | 262.200 | 295.450 | 1,995 | 3,325 |
| 3.7500 | 95.2500 | 6.7500 | 171.4500 | 1.1250 | 28.5750 | 182.400 | 218.500 | 2,280 | 3,705 |
| 3.7500 | 95.2500 | 8.2500 | 209.5500 | 1.7500 | 44.4500 | 262.200 | 295.450 | 1,995 | 3,325 |
| 4.0000 | 101.6000 | 7.2500 | 184.1500 | 1.2500 | 31.7500 | 164.350 | 208.050 | 1,995 | 3,420 |
| 4.0000 | 101.6000 | 8.5000 | 215.9000 | 1.7500 | 44.4500 | 286.900 | 341.050 | 1,805 | 2,945 |
| 4.2500 | 107.9500 | 7.5000 | 190.5000 | 1.2500 | 31.7500 | 210.900 | 256.500 | 1,995 | 3,325 |
| 4.2500 | 107.9500 | 8.7500 | 222.2500 | 1.7500 | 44.4500 | 286.900 | 341.050 | 1,805 | 2,945 |
| 4.5000 | 114.3000 | 8.0000 | 203.2000 | 1.3125 | 33.3375 | 217.550 | 273.600 | 1,805 | 3,040 |
| 4.5000 | 114.3000 | 9.3750 | 238.1250 | 2.0000 | 50.8000 | 396.150 | 454.100 | 1,615 | 2,755 |
| 4.7500 | 120.6500 | 8.2500 | 209.5500 | 1.3125 | 33.3375 | 250.800 | 314.450 | 1,805 | 2,945 |
| 4.7500 | 120.6500 | 10.0000 | 254.0000 | 2.0000 | 50.8000 | 454.100 | 539.600 | 1,425 | 2,470 |
| 5.0000 | 127.0000 | 9.0000 | 228.6000 | 1.3750 | 34.9250 | 266.950 | 350.550 | 1,615 | 2,660 |
| 5.0000 | 127.0000 | 10.0000 | 254.0000 | 2.0000 | 50.8000 | 454.100 | 539.600 | 1,425 | 2,470 |
| 5.5000 | 139.7000 | 9.5000 | 241.3000 | 1.3750 | 34.9250 | 273.600 | 369.550 | 1,520 | 2,470 |
| 5.5000 | 139.7000 | 11.0000 | 279.4000 | 2.0000 | 50.8000 | 517.750 | 634.600 | 2,185 | 2,945 |
| 6.0000 | 152.4000 | 10.5000 | 266.7000 | 1.5625 | 39.6875 | 308.750 | 427.500 | 1,235 | 2,090 |
| 6.0000 | 152.4000 | 12.0000 | 304.8000 | 2.2500 | 57.1500 | 608.000 | 755.250 | 950 | 1,900 |
| 6.5000 | 165.1000 | 11.0000 | 279.4000 | 1.5625 | 39.6875 | 350.550 | 483.550 | 1,045 | 2,090 |
| 6.5000 | 165.1000 | 13.0000 | 330.2000 | 2.5000 | 63.5000 | 711.550 | 893.000 | 1,805 | 2,375 |
| 7.0000 | 177.8000 | 12.0000 | 304.8000 | 1.7500 | 44.4500 | 453.150 | 612.750 | 903 | 1,805 |
| 7.0000 | 177.8000 | 13.5000 | 342.9000 | 2.5000 | 63.5000 | 709.650 | 902.500 | 855 | 1,710 |

| Chamfer Dimension | Mass | Designation | Interchange |
|-----------------------|--------|-------------|-------------|
| r _a max mm | kg | | |
| 2.4 | 1.910 | LRJ 3 | CRL 24 |
| 4.0 | 4.740 | MRJ 3 | CRM 24 |
| 2.6 | 2.140 | LRJ 3.1/4 | CRL 26 |
| 4.0 | 5.670 | MRJ 3.1/4 | CRM 26 |
| 3.2 | 2.560 | LRJ 3.1/2 | CRL 28 |
| 4.0 | 7.480 | MRJ 3.1/2 | CRM 28 |
| 3.2 | 2.800 | LRJ 3.3/4 | CRL 30 |
| 4.0 | 7.530 | MRJ 3.75 | CRM 30 |
| 3.2 | 3.600 | LRJ 4 | CRL 32 |
| 4.0 | 7.800 | MRJ 4 | CRM 32 |
| 3.2 | 3.770 | LRJ 4.1/4 | CRL 34 |
| 4.8 | 8.160 | MRJ 4.1/4 | CRM 34 |
| 3.2 | 4.670 | LRJ 4.1/2 | CRL 36 |
| 4.8 | 10.800 | MRJ 4.1/2 | CRM 36 |
| 3.2 | 4.810 | LRJ 4.3/4 | CRL 38 |
| 4.8 | 12.300 | MRJ 4.3/4 | CRM 38 |
| 3.2 | 6.490 | LRJ 5 | CRL 40 |
| 4.8 | 11.700 | MRJ 5 | CRM 40 |
| 3.2 | 6.710 | LRJ 5.1/2 | CRL 44 |
| 4.8 | 15.100 | MRJ 5.1/2 | CRM 44 |
| 4.8 | 9.620 | LRJ 6 | CRL 48 |
| 4.8 | 19.600 | MRJ 6 | CRM 48 |
| 4.8 | 9.980 | LRJ 6.1/2 | CRL 52 |
| 4.8 | 26.600 | MRJ 6.1/2 | CRM 52 |
| 4.0 | 14.100 | LRJ 7 | CRL 56 |
| 4.8 | 27.500 | MRJ 7 | CRM 56 |

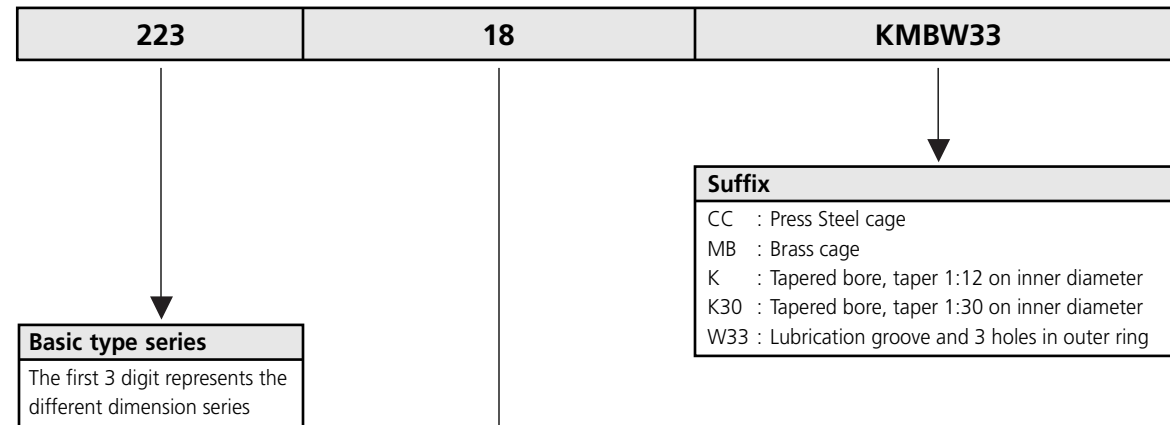




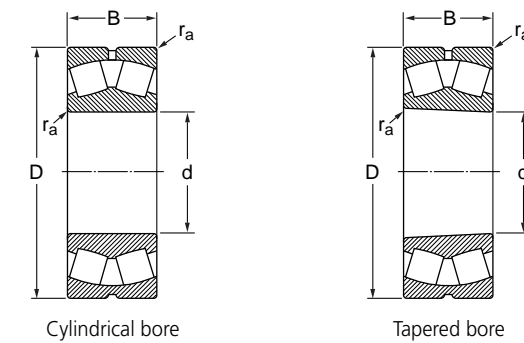
Spherical Roller Bearings

| | Page |
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| 6.01 Spherical Roller bearings | 181 |
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| 6.03 Spherical Roller thrust bearings | 195 |

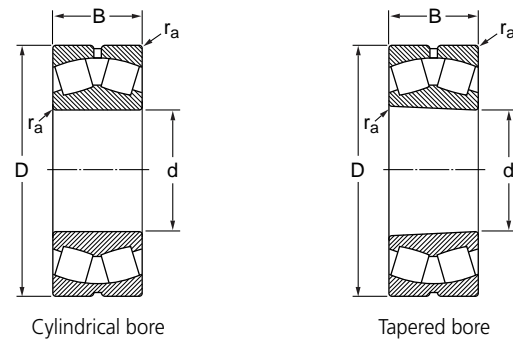
■ Prefix & Suffix



| Bore size (mm) |
|------------------------------------|
| 00 : 10mm |
| 01 : 12mm |
| 02 : 15mm |
| 03 : 17mm |
| 03 < 2 digit < 100 : multiply by 5 |



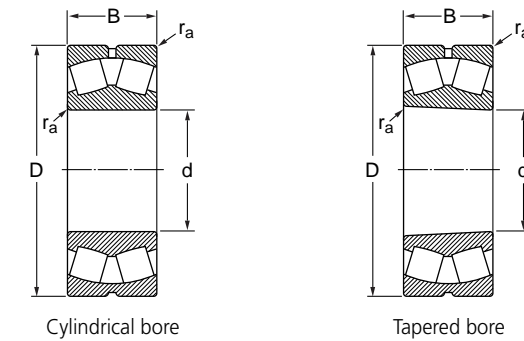
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|--------------------|----------------|----------------|-------------------|-------|--------------------------------|--------------|
| d | D | B | Dynamic | Static | Oil | r _a | | Bearings with Cylindrical Bore | Tapered Bore |
| mm | mm | mm | C | C ₀ | r/min | max | kg | | |
| | | | kN | kN | | mm | | | |
| 25 | 52 | 18 | 46.550 | 41.800 | 16,150 | 1.0 | 0.260 | 22205 MBW33 | 22205 KMBW33 |
| 25 | 62 | 17 | 39.330 | 39.425 | 11,400 | 1.0 | 0.280 | 21305 MBW33 | 21305 KMBW33 |
| 30 | 62 | 20 | 60.800 | 57.000 | 13,300 | 1.0 | 0.290 | 22206 MBW33 | 22206 KMBW33 |
| 30 | 72 | 19 | 52.440 | 57.950 | 9,500 | 1.0 | 0.410 | 21306 MBW33 | 21306 KMBW33 |
| 35 | 72 | 23 | 82.175 | 80.750 | 11,400 | 1.0 | 0.450 | 22207 MBW33 | 22207 KMBW33 |
| 35 | 80 | 21 | 62.320 | 68.400 | 9,025 | 1.5 | 0.550 | 21307 MBW33 | 21307 KMBW33 |
| 40 | 80 | 23 | 91.675 | 85.500 | 10,450 | 1.0 | 0.530 | 22208 MBW33 | 22208 KMBW33 |
| 40 | 90 | 23 | 98.800 | 102.600 | 9,025 | 1.5 | 0.750 | 21308 MBW33 | 21308 KMBW33 |
| 40 | 90 | 33 | 142.500 | 133.000 | 7,600 | 1.5 | 1.050 | 22308 MBW33 | 22308 KMBW33 |
| 45 | 85 | 23 | 96.900 | 93.100 | 9,500 | 1.0 | 0.580 | 22209 MBW33 | 22209 KMBW33 |
| 45 | 100 | 25 | 118.750 | 120.650 | 8,075 | 1.5 | 0.990 | 21309 MBW33 | 21309 KMBW33 |
| 45 | 100 | 36 | 173.850 | 173.850 | 6,650 | 1.5 | 1.400 | 22309 MBW33 | 22309 KMBW33 |
| 50 | 90 | 23 | 98.800 | 102.600 | 9,025 | 1.0 | 0.630 | 22210 MBW33 | 22210 KMBW33 |
| 50 | 110 | 27 | 148.200 | 157.700 | 7,125 | 2.0 | 1.350 | 21310 MBW33 | 21310 KMBW33 |
| 50 | 110 | 40 | 209.000 | 212.800 | 5,985 | 2.0 | 1.900 | 22310 MBW33 | 22310 KMBW33 |
| 55 | 100 | 25 | 118.750 | 120.650 | 8,075 | 1.5 | 0.840 | 22211 MBW33 | 22211 KMBW33 |
| 55 | 120 | 29 | 148.200 | 157.700 | 7,125 | 2.0 | 1.700 | 21311 MBW33 | 21311 KMBW33 |
| 55 | 120 | 43 | 256.500 | 266.000 | 5,320 | 2.0 | 2.450 | 22311 MBW33 | 22311 KMBW33 |
| 60 | 110 | 28 | 148.200 | 157.700 | 7,125 | 1.5 | 1.150 | 22212 MBW33 | 22212 KMBW33 |
| 60 | 130 | 31 | 201.400 | 228.000 | 5,985 | 2.0 | 2.100 | 21312 MBW33 | 21312 KMBW33 |
| 60 | 130 | 46 | 294.500 | 318.250 | 5,035 | 2.0 | 3.100 | 22312 MBW33 | 22312 KMBW33 |
| 65 | 120 | 31 | 183.350 | 205.200 | 6,650 | 1.5 | 1.550 | 22213 MBW33 | 22213 MBW33 |
| 65 | 140 | 33 | 224.200 | 256.500 | 5,700 | 2.0 | 2.550 | 21313 MBW33 | 21313 MBW33 |
| 65 | 140 | 48 | 323.000 | 342.000 | 4,750 | 2.0 | 3.750 | 22313 MBW33 | 22313 MBW33 |
| 70 | 125 | 31 | 197.600 | 216.600 | 6,365 | 1.5 | 1.550 | 22214 MBW33 | 22214 MBW33 |
| 70 | 150 | 35 | 270.750 | 308.750 | 5,320 | 2.0 | 3.100 | 21314 MBW33 | 21314 MBW33 |
| 70 | 150 | 51 | 380.000 | 408.500 | 4,275 | 2.0 | 4.550 | 22314 MBW33 | 22314 MBW33 |
| 75 | 130 | 31 | 201.400 | 228.000 | 5,985 | 1.5 | 1.700 | 22215 MBW33 | 22215 KMBW33 |
| 75 | 160 | 37 | 270.750 | 308.750 | 5,320 | 2.0 | 3.750 | 21315 MBW33 | 21315 KMBW33 |
| 75 | 160 | 55 | 418.000 | 451.250 | 4,085 | 2.0 | 5.550 | 22315 MBW33 | 22315 KMBW33 |
| 80 | 140 | 33 | 224.200 | 256.500 | 5,700 | 2.0 | 2.100 | 22216 MBW33 | 22216 KMBW33 |
| 80 | 170 | 39 | 308.750 | 356.250 | 5,035 | 2.0 | 4.450 | 21316 MBW33 | 21316 KMBW33 |



Cylindrical bore

Tapered bore

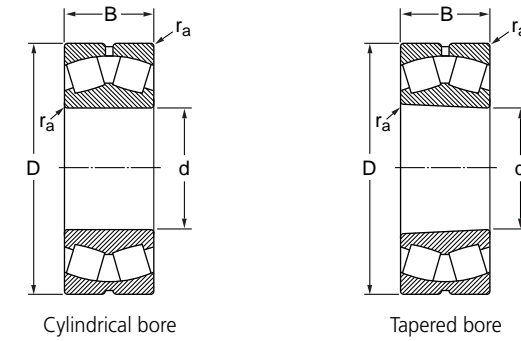
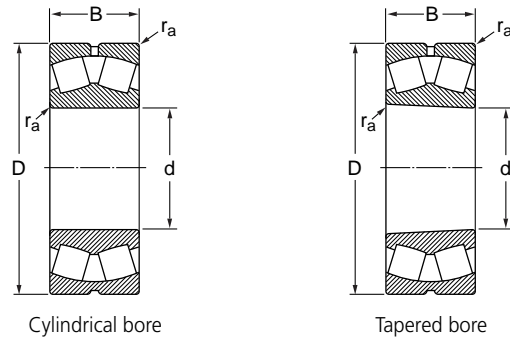
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|---------|---------|--------------------|--------------------------------|----------------|-----------------------------|--------|-----------------------------------|----------------|
| d mm | D mm | B mm | Dynamic C kN | Static C ₀ kN | Oil r/min | r _a max mm | kg | Bearings with Cylindrical Bore | Tapered Bore |
| 80 | 170 | 58 | 465.500 | 513.000 | 3,800 | 2.0 | 6.600 | 22316 MBW33 | 22316 KMBW33 |
| 85 | 150 | 36 | 270.750 | 308.750 | 5,320 | 2.0 | 2.650 | 22217 MBW33 | 22217 KMBW33 |
| 85 | 180 | 41 | 308.750 | 356.250 | 5,035 | 2.5 | 5.200 | 21317 MBW33 | 21317 KMBW33 |
| 85 | 180 | 60 | 522.500 | 589.000 | 3,610 | 2.5 | 7.650 | 22317 MBW33 | 22317 KMBW33 |
| 90 | 160 | 40 | 308.750 | 356.250 | 5,035 | 2.0 | 3.400 | 22218 MBW33 | 22218 KMBW33 |
| 90 | 160 | 52.4 | 337.250 | 418.000 | 3,610 | 2.0 | 4.650 | 23218 MBW33 | 23218 KMBW33 |
| 90 | 190 | 43 | 361.000 | 427.500 | 4,560 | 2.5 | 6.100 | 21318 MBW33 | 21318 KMBW33 |
| 90 | 190 | 64 | 579.500 | 660.250 | 3,420 | 2.5 | 9.050 | 22318 MBW33 | 22318 KMBW33 |
| 95 | 170 | 43 | 361.000 | 427.500 | 4,560 | 2.0 | 4.150 | 22219 MBW33 | 22219 KMBW33 |
| 95 | 200 | 45 | 403.750 | 465.500 | 4,275 | 2.5 | 7.050 | 21319 MBW33 | 21319 KMBW33 |
| 95 | 200 | 67 | 636.500 | 726.750 | 3,230 | 2.5 | 10.500 | 22319 MBW33 | 22319 KMBW33 |
| 100 | 150 | 50 | 270.750 | 394.250 | 3,800 | 1.5 | 3.150 | 24020 MBW33 | 24020 K30MBW33 |
| 100 | 165 | 52 | 346.750 | 465.500 | 3,800 | 2.0 | 4.550 | 23120 MBW33 | 23120 KMBW33 |
| 100 | 165 | 65 | 432.250 | 608.000 | 3,040 | 2.0 | 5.650 | 24120 MBW33 | 24120 K30MBW33 |
| 100 | 180 | 46 | 403.750 | 465.500 | 4,275 | 2.0 | 4.900 | 22220 MBW33 | 22220 KMBW33 |
| 100 | 180 | 60.3 | 451.250 | 570.000 | 3,230 | 2.0 | 6.850 | 23220 MBW33 | 23220 KMBW33 |
| 100 | 215 | 47 | 403.750 | 465.500 | 4,275 | 2.5 | 8.600 | 21320 MBW33 | 21320 KMBW33 |
| 100 | 215 | 73 | 774.250 | 902.500 | 2,850 | 2.5 | 13.500 | 22320 MBW33 | 22320 KMBW33 |
| 110 | 170 | 45 | 294.500 | 418.000 | 4,085 | 2.0 | 3.800 | 23022 MBW33 | 23022 KMBW33 |
| 110 | 170 | 60 | 394.250 | 589.000 | 3,420 | 2.0 | 5.000 | 24022 MBW33 | 24022 K30MBW33 |
| 110 | 180 | 56 | 408.500 | 555.750 | 3,420 | 2.0 | 5.750 | 23122 MBW33 | 23122 KMBW33 |
| 110 | 180 | 69 | 494.000 | 712.500 | 2,850 | 2.0 | 7.100 | 24122 MBW33 | 24122 K30MBW33 |
| 110 | 200 | 53 | 532.000 | 608.000 | 3,800 | 2.0 | 7.000 | 22222 MBW33 | 22222 KMBW33 |
| 110 | 200 | 69.8 | 570.000 | 726.750 | 3,040 | 2.0 | 9.850 | 23222 MBW33 | 23222 KMBW33 |
| 110 | 240 | 80 | 902.500 | 1,064.000 | 2,660 | 2.5 | 18.400 | 22322 MBW33 | 22322 KMBW33 |
| 120 | 180 | 46 | 337.250 | 484.500 | 3,800 | 2.0 | 4.200 | 23024 MBW33 | 23024 KMBW33 |
| 120 | 180 | 60 | 408.500 | 636.500 | 3,230 | 2.0 | 5.450 | 24024 MBW33 | 24024 K30MBW33 |
| 120 | 200 | 62 | 484.500 | 660.250 | 3,230 | 2.0 | 8.000 | 23124 MBW33 | 23124 KMBW33 |
| 120 | 200 | 80 | 622.250 | 902.500 | 2,470 | 2.0 | 10.300 | 24124 MBW33 | 24124 K30MBW33 |
| 120 | 215 | 58 | 598.500 | 726.750 | 3,610 | 2.0 | 8.700 | 22224 MBW33 | 22224 KMBW33 |
| 120 | 215 | 76 | 660.250 | 883.500 | 2,660 | 2.0 | 12.000 | 23224 MBW33 | 23224 KMBW33 |
| 120 | 260 | 86 | 916.750 | 1,064.000 | 2,470 | 2.5 | 23.000 | 22324 MBW33 | 22324 KMBW33 |



Cylindrical bore

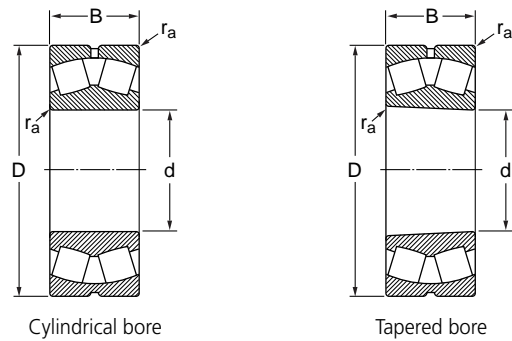
Tapered bore

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|---------|---------|--------------------|--------------------------------|----------------|-----------------------------|--------|-----------------------------------|----------------|
| d mm | D mm | B mm | Dynamic C kN | Static C ₀ kN | Oil r/min | r _a max mm | kg | Bearings with Cylindrical Bore | Tapered Bore |
| 130 | 200 | 52 | 408.500 | 579.500 | 3,420 | 2.0 | 6.000 | 23026 MBW33 | 23026 KMBW33 |
| 130 | 200 | 69 | 513.000 | 774.250 | 2,850 | 2.0 | 8.050 | 24026 MBW33 | 24026 K30MBW33 |
| 130 | 210 | 64 | 532.000 | 741.000 | 3,040 | 2.0 | 8.800 | 23126 MBW33 | 23126 KMBW33 |
| 130 | 210 | 80 | 646.000 | 950.000 | 2,280 | 2.0 | 11.000 | 24126 MBW33 | 24126 K30MBW33 |
| 130 | 230 | 64 | 698.250 | 883.500 | 3,420 | 2.5 | 11.000 | 22226 MBW33 | 22226 KMBW33 |
| 130 | 230 | 80 | 741.000 | 1,007.000 | 2,470 | 2.5 | 14.500 | 23226 MBW33 | 23226 KMBW33 |
| 130 | 280 | 93 | 1,064.000 | 1,254.000 | 2,280 | 3.0 | 29.000 | 22326 MBW33 | 22326 KMBW33 |
| 140 | 210 | 53 | 441.750 | 646.000 | 3,230 | 2.0 | 6.550 | 23028 MBW33 | 23028 KMBW33 |
| 140 | 210 | 69 | 541.500 | 855.000 | 2,660 | 2.0 | 8.550 | 24028 MBW33 | 24028 K30MBW33 |
| 140 | 225 | 68 | 598.500 | 855.000 | 2,660 | 2.0 | 10.500 | 23128 MBW33 | 23128 KMBW33 |
| 140 | 225 | 85 | 726.750 | 1,102.000 | 2,280 | 2.0 | 13.500 | 24128 MBW33 | 24128 K30MBW33 |
| 140 | 250 | 68 | 674.500 | 855.000 | 3,040 | 2.5 | 14.000 | 22228 MBW33 | 22228 KMBW33 |
| 140 | 250 | 88 | 869.250 | 1,187.500 | 2,280 | 2.5 | 19.000 | 23228 MBW33 | 23228 KMBW33 |
| 140 | 300 | 102 | 1,225.500 | 1,482.000 | 2,090 | 3.0 | 36.500 | 22328 MBW33 | 22328 KMBW33 |
| 150 | 225 | 56 | 484.500 | 712.500 | 3,040 | 2.0 | 7.950 | 23030 MBW33 | 23030 KMBW33 |
| 150 | 225 | 75 | 622.250 | 988.000 | 2,470 | 2.0 | 10.500 | 24030 MBW33 | 24030 K30MBW33 |
| 150 | 250 | 80 | 788.500 | 1,140.000 | 2,470 | 2.0 | 16.000 | 23130 MBW33 | 23130 KMBW33 |
| 150 | 250 | 100 | 969.000 | 1,453.500 | 2,090 | 2.0 | 20.000 | 24130 MBW33 | 24130 K30MBW33 |
| 150 | 270 | 73 | 807.500 | 1,026.000 | 2,850 | 2.5 | 18.000 | 22230 MBW33 | 22230 KMBW33 |
| 150 | 270 | 96 | 1,026.000 | 1,387.000 | 2,090 | 2.5 | 24.500 | 23230 MBW33 | 23230 KMBW33 |
| 150 | 320 | 108 | 1,387.000 | 1,672.000 | 1,900 | 3.0 | 43.500 | 22330 MBW33 | 22330 KMBW33 |
| 160 | 240 | 60 | 555.750 | 836.000 | 2,850 | 2.0 | 9.700 | 23032 MBW33 | 23032 KMBW33 |
| 160 | 240 | 80 | 712.500 | 1,140.000 | 2,280 | 2.0 | 13.000 | 24032 MBW33 | 24032 K30MBW33 |
| 160 | 270 | 86 | 931.000 | 1,301.500 | 2,280 | 2.0 | 20.500 | 23132 MBW33 | 23132 KMBW33 |
| 160 | 270 | 109 | 1,121.000 | 1,672.000 | 1,805 | 2.0 | 25.000 | 24132 MBW33 | 24132 K30MBW33 |
| 160 | 290 | 80 | 950.000 | 1,225.500 | 2,660 | 2.5 | 22.500 | 22232 MBW33 | 22232 KMBW33 |
| 160 | 290 | 104 | 1,159.000 | 1,577.000 | 2,090 | 2.5 | 31.000 | 23232 MBW33 | 23232 KMBW33 |
| 160 | 340 | 114 | 1,520.000 | 1,862.000 | 1,805 | 3.0 | 52.000 | 22332 MBW33 | 22332 KMBW33 |
| 170 | 260 | 67 | 674.500 | 1,007.000 | 2,660 | 2.0 | 13.000 | 23034 MBW33 | 23034 KMBW33 |
| 170 | 260 | 90 | 883.500 | 1,387.000 | 2,280 | 2.0 | 17.500 | 24034 MBW33 | 24034 K30MBW33 |
| 170 | 280 | 88 | 988.000 | 1,425.000 | 2,280 | 2.0 | 22.000 | 23134 MBW33 | 23134 KMBW33 |
| 170 | 280 | 109 | 1,159.000 | 1,767.000 | 1,805 | 2.0 | 27.500 | 24134 MBW33 | 24134 K30MBW33 |



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|-----|-----|--------------------|-----------------------|----------------|--------------------|--------|--------------------------------|----------------|
| d | D | B | Dynamic C | Static C ₀ | Oil | r _a max | | Bearings with Cylindrical Bore | Tapered Bore |
| mm | mm | mm | kN | kN | r/min | mm | kg | | |
| 170 | 310 | 86 | 1,064.000 | 1,387.000 | 2,470 | 3.0 | 28.500 | 22234 MBW33 | 22234 KMBW33 |
| 170 | 310 | 110 | 1,330.000 | 1,833.500 | 1,900 | 3.0 | 37.500 | 23234 MBW33 | 23234 KMBW33 |
| 170 | 360 | 120 | 1,672.000 | 2,052.000 | 1,710 | 3.0 | 61.000 | 22334 MBW33 | 22334 KMBW33 |
| 180 | 250 | 52 | 409.450 | 788.500 | 2,660 | 2.0 | 7.900 | 23936 MBW33 | 23936 KMBW33 |
| 180 | 280 | 74 | 788.500 | 1,187.500 | 2,470 | 2.0 | 17.000 | 23036 MBW33 | 23036 KMBW33 |
| 180 | 280 | 100 | 1,026.000 | 1,643.500 | 2,090 | 2.0 | 23.000 | 24036 MBW33 | 24036 K30MBW33 |
| 180 | 300 | 96 | 1,140.000 | 1,672.000 | 2,090 | 2.5 | 28.000 | 23136 MBW33 | 23136 KMBW33 |
| 180 | 300 | 118 | 1,330.000 | 2,052.000 | 1,615 | 2.5 | 34.500 | 24136 MBW33 | 24136 K30MBW33 |
| 180 | 320 | 86 | 1,121.000 | 1,482.000 | 2,470 | 3.0 | 29.500 | 22236 MBW33 | 22236 KMBW33 |
| 180 | 320 | 112 | 1,425.000 | 2,014.000 | 1,805 | 3.0 | 39.500 | 23236 MBW33 | 23236 KMBW33 |
| 180 | 380 | 126 | 1,900.000 | 2,327.500 | 1,615 | 3.0 | 71.500 | 22336 MBW33 | 22336 KMBW33 |
| 190 | 260 | 52 | 393.300 | 760.000 | 2,470 | 2.0 | 8.300 | 23938 MBW33 | 23938 KMBW33 |
| 190 | 290 | 75 | 821.750 | 1,273.000 | 2,280 | 2.0 | 18.000 | 23038 MBW33 | 23038 KMBW33 |
| 190 | 290 | 100 | 1,064.000 | 1,710.000 | 1,900 | 2.0 | 24.500 | 24038 MBW33 | 24038 K30MBW33 |
| 190 | 320 | 104 | 1,301.500 | 1,976.000 | 1,900 | 2.5 | 35.000 | 23138 MBW33 | 23138 KMBW33 |
| 190 | 320 | 128 | 1,520.000 | 2,375.000 | 1,520 | 2.5 | 43.000 | 24138 MBW33 | 24138 K30MBW33 |
| 190 | 340 | 92 | 1,206.500 | 1,615.000 | 2,280 | 3.0 | 36.500 | 22238 MBW33 | 22238 KMBW33 |
| 190 | 340 | 120 | 1,577.000 | 2,280.000 | 1,710 | 3.0 | 48.000 | 23238 MBW33 | 23238 KMBW33 |
| 190 | 400 | 132 | 2,014.000 | 2,517.500 | 1,520 | 4.0 | 82.500 | 22338 MBW33 | 22338 KMBW33 |
| 200 | 280 | 60 | 518.700 | 988.000 | 2,280 | 2.0 | 11.500 | 23940 MBW33 | 23940 KMBW33 |
| 200 | 310 | 82 | 950.000 | 1,453.500 | 2,090 | 2.0 | 23.300 | 23040 MBW33 | 23040 KMBW33 |
| 200 | 310 | 109 | 1,225.500 | 2,014.000 | 1,805 | 2.0 | 31.000 | 24040 MBW33 | 24040 K30MBW33 |
| 200 | 340 | 112 | 1,520.000 | 2,242.000 | 1,805 | 2.5 | 43.000 | 23140 MBW33 | 23140 KMBW33 |
| 200 | 340 | 140 | 1,710.000 | 2,660.000 | 1,425 | 2.5 | 53.500 | 24140 MBW33 | 24140 K30MBW33 |
| 200 | 360 | 98 | 1,387.000 | 1,833.500 | 2,090 | 3.0 | 43.500 | 22240 MBW33 | 22240 KMBW33 |
| 200 | 360 | 128 | 1,767.000 | 2,565.000 | 1,615 | 3.0 | 58.000 | 23240 MBW33 | 23240 KMBW33 |
| 200 | 420 | 138 | 2,204.000 | 2,755.000 | 1,425 | 4.0 | 95.000 | 22340 MBW33 | 22340 KMBW33 |
| 220 | 300 | 60 | 518.700 | 1,026.000 | 2,090 | 2.0 | 12.500 | 23944 MBW33 | 23944 KMBW33 |
| 220 | 340 | 90 | 1,159.000 | 1,767.000 | 1,900 | 2.5 | 30.500 | 23044 MBW33 | 23044 KMBW33 |
| 220 | 340 | 118 | 1,482.000 | 2,470.000 | 1,615 | 2.5 | 40.000 | 24044 MBW33 | 24044 K30MBW33 |
| 220 | 370 | 120 | 1,710.000 | 2,612.500 | 1,615 | 3.0 | 53.500 | 23144 MBW33 | 23144 KMBW33 |
| 220 | 370 | 150 | 2,014.000 | 3,182.500 | 1,330 | 3.0 | 67.000 | 24144 MBW33 | 24144 K30MBW33 |

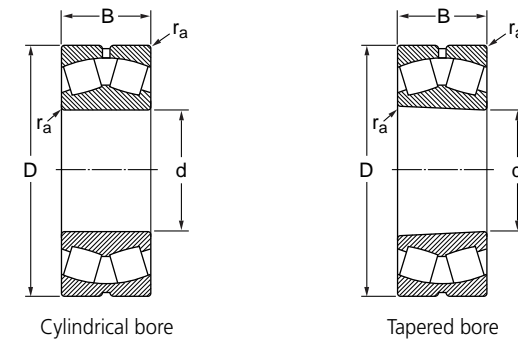
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|-----|-----|--------------------|-----------------------|----------------|--------------------|---------|--------------------------------|----------------|
| d | D | B | Dynamic C | Static C ₀ | Oil | r _a max | | Bearings with Cylindrical Bore | Tapered Bore |
| mm | mm | mm | kN | kN | r/min | mm | kg | | |
| 220 | 400 | 108 | 1,672.000 | 2,242.000 | 1,900 | 3.0 | 60.500 | 22244 MBW33 | 22244 KMBW33 |
| 220 | 400 | 144 | 2,242.000 | 3,277.500 | 1,425 | 3.0 | 81.500 | 23244 MBW33 | 23244 KMBW33 |
| 220 | 460 | 145 | 2,565.000 | 3,277.500 | 1,330 | 4.0 | 120.000 | 22344 MBW33 | 22344 KMBW33 |
| 240 | 320 | 60 | 535.800 | 1,102.000 | 1,900 | 2.0 | 13.500 | 23948 MBW33 | 23948 KMBW33 |
| 240 | 360 | 92 | 1,225.500 | 1,976.000 | 1,805 | 2.5 | 33.500 | 23048 MBW33 | 23048 KMBW33 |
| 240 | 360 | 118 | 1,520.000 | 2,565.000 | 1,520 | 2.5 | 43.000 | 24048 MBW33 | 24048 K30MBW33 |
| 240 | 400 | 128 | 1,976.000 | 3,040.000 | 1,520 | 3.0 | 66.500 | 23148 MBW33 | 23148 KMBW33 |
| 240 | 400 | 160 | 2,280.000 | 3,705.000 | 1,235 | 3.0 | 83.000 | 24148 MBW33 | 24148 K30MBW33 |
| 240 | 440 | 120 | 2,090.000 | 2,850.000 | 1,710 | 3.0 | 83.000 | 22248 MBW33 | 22248 KMBW33 |
| 240 | 440 | 160 | 2,755.000 | 4,085.000 | 1,235 | 3.0 | 110.000 | 23248 MBW33 | 23248 KMBW33 |
| 240 | 500 | 155 | 2,945.000 | 3,800.000 | 1,235 | 4.0 | 115.000 | 22348 MBW33 | 22348 KMBW33 |
| 260 | 360 | 75 | 836.000 | 1,710.000 | 1,805 | 2.0 | 23.500 | 23952 MBW33 | 23952 KMBW33 |
| 260 | 400 | 104 | 1,520.000 | 2,422.500 | 1,615 | 3.0 | 48.500 | 23052 MBW33 | 23052 KMBW33 |
| 260 | 400 | 140 | 1,938.000 | 3,277.500 | 1,330 | 3.0 | 65.500 | 24052 MBW33 | 24052 K30MBW33 |
| 260 | 440 | 144 | 2,422.500 | 3,705.000 | 1,330 | 3.0 | 90.500 | 23152 MBW33 | 23152 KMBW33 |
| 260 | 440 | 180 | 2,850.000 | 4,560.000 | 1,140 | 3.0 | 110.000 | 24152 MBW33 | 24152 K30MBW33 |
| 260 | 480 | 130 | 2,517.500 | 3,372.500 | 1,520 | 4.0 | 110.000 | 22252 MBW33 | 22252 KMBW33 |
| 260 | 480 | 174 | 3,087.500 | 4,512.500 | 1,140 | 4.0 | 140.000 | 23252 MBW33 | 23252 KMBW33 |
| 260 | 540 | 165 | 3,372.500 | 4,322.500 | 1,045 | 5.0 | 190.000 | 22352 MBW33 | 22352 KMBW33 |
| 280 | 380 | 75 | 802.750 | 1,672.000 | 1,615 | 2.0 | 25.000 | 23956 MBW33 | 23956 KMBW33 |
| 280 | 420 | 106 | 1,643.500 | 2,707.500 | 1,520 | 3.0 | 52.500 | 23056 MBW33 | 23056 KMBW33 |
| 280 | 420 | 140 | 2,052.000 | 3,610.000 | 1,330 | 3.0 | 69.500 | 24056 MBW33 | 24056 K30MBW33 |
| 280 | 460 | 146 | 2,517.500 | 4,037.500 | 1,235 | 4.0 | 97.000 | 23156 MBW33 | 23156 KMBW33 |
| 280 | 460 | 180 | 2,945.000 | 4,845.000 | 1,045 | 4.0 | 120.000 | 24156 MBW33 | 24156 K30MBW33 |
| 280 | 500 | 130 | 2,565.000 | 3,562.500 | 1,425 | 4.0 | 115.000 | 22256 MBW33 | 22256 KMBW33 |
| 280 | 500 | 176 | 3,087.500 | 4,655.000 | 1,045 | 4.0 | 150.000 | 23256 MBW33 | 23256 KMBW33 |
| 280 | 580 | 175 | 3,800.000 | 4,940.000 | 1,045 | 5.0 | 235.000 | 22356 MBW33 | 22356 KMBW33 |
| 300 | 380 | 60 | 623.200 | 1,520.000 | 1,615 | 2.0 | 16.500 | 23860 MBW33 | 23860 KMBW33 |
| 300 | 420 | 90 | 1,140.000 | 2,375.000 | 1,520 | 2.5 | 39.500 | 23960 MBW33 | 23960 KMBW33 |
| 300 | 460 | 118 | 2,014.000 | 3,277.500 | 1,425 | 3.0 | 71.500 | 23060 MBW33 | 23060 KMBW33 |
| 300 | 460 | 160 | 2,565.000 | 4,512.500 | 1,140 | 3.0 | 97.000 | 24060 MBW33 | 24060 K30MBW33 |
| 300 | 500 | 160 | 3,040.000 | 4,845.000 | 1,140 | 4.0 | 125.000 | 23160 MBW33 | 23160 KMBW33 |



Cylindrical bore

Tapered bore

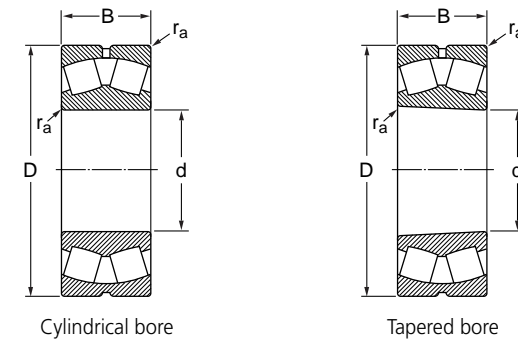
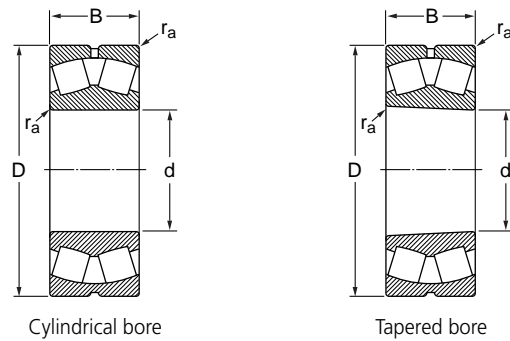
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|-----|-----|--------------------|-----------------------|----------------|--------------------|---------|--------------------------------|----------------|
| d | D | B | Dynamic C | Static C ₀ | Oil | r _a max | | Bearings with Cylindrical Bore | Tapered Bore |
| mm | mm | mm | kN | kN | r/min | mm | kg | | |
| 300 | 500 | 200 | 3,562.500 | 5,985.000 | 95 | 4.0 | 160.000 | 24160 MBW33 | 24160 K30MBW33 |
| 300 | 540 | 140 | 2,992.500 | 4,037.500 | 1,330 | 4.0 | 145.000 | 22260 MBW33 | 22260 KMBW33 |
| 300 | 540 | 192 | 3,705.000 | 5,557.500 | 95 | 4.0 | 190.000 | 23260 MBW33 | 23260 KMBW33 |
| 320 | 440 | 90 | 1,358.500 | 2,565.000 | 1,425 | 2.5 | 42.000 | 23964 MBW33 | 23964 KMBW33 |
| 320 | 480 | 121 | 2,128.000 | 3,610.000 | 1,330 | 3.0 | 78.000 | 23064 MBW33 | 23064 KMBW33 |
| 320 | 480 | 160 | 2,707.500 | 4,845.000 | 1,140 | 3.0 | 100.000 | 24064 MBW33 | 24064 K30MBW33 |
| 320 | 540 | 176 | 3,562.500 | 5,700.000 | 1,045 | 4.0 | 165.000 | 23164 MBW33 | 23164 KMBW33 |
| 320 | 540 | 218 | 4,037.500 | 6,745.000 | 85 | 4.0 | 210.000 | 24164 MBW33 | 24164 K30MBW33 |
| 320 | 580 | 150 | 3,420.000 | 4,655.000 | 1,235 | 4.0 | 175.000 | 22264 MBW33 | 22264 KMBW33 |
| 320 | 580 | 208 | 4,180.000 | 6,365.000 | 903 | 4.0 | 240.000 | 23264 MBW33 | 23264 KMBW33 |
| 340 | 460 | 90 | 1,387.000 | 2,660.000 | 1,330 | 2.5 | 45.500 | 23968 MBW33 | 23968 KMBW33 |
| 340 | 520 | 133 | 2,565.000 | 4,322.500 | 1,235 | 4.0 | 105.000 | 23068 MBW33 | 23068 KMBW33 |
| 340 | 520 | 180 | 3,277.500 | 5,890.000 | 1,045 | 4.0 | 140.000 | 24068 MBW33 | 24068 K30MBW33 |
| 340 | 580 | 190 | 4,037.500 | 6,460.000 | 950 | 4.0 | 210.000 | 23168 MBW33 | 23168 KMBW33 |
| 340 | 580 | 243 | 5,035.000 | 8,217.500 | 808 | 4.0 | 280.000 | 24168 MBW33 | 24168 K30MBW33 |
| 340 | 620 | 224 | 4,845.000 | 7,410.000 | 760 | 5.0 | 295.000 | 23268 CAW33 | 23268 CAKW33 |
| 360 | 480 | 90 | 1,330.000 | 2,612.500 | 1,235 | 2.5 | 46.000 | 23972 MBW33 | 23972 KMBW33 |
| 360 | 540 | 134 | 2,612.500 | 4,560.000 | 1,140 | 4.0 | 110.000 | 23072 MBW33 | 23072 KMBW33 |
| 360 | 540 | 180 | 3,372.500 | 6,222.500 | 950 | 4.0 | 145.000 | 24072 MBW33 | 24072 K30MBW33 |
| 360 | 600 | 192 | 4,085.000 | 6,602.500 | 950 | 4.0 | 220.000 | 23172 MBW33 | 23172 KMBW33 |
| 360 | 600 | 243 | 5,320.000 | 8,835.000 | 760 | 4.0 | 280.000 | 24172 MBW33 | 24172 K30MBW33 |
| 360 | 650 | 170 | 4,085.000 | 5,890.000 | 808 | 5.0 | 255.000 | 22272 CAW33 | 22272 CAKW33 |
| 360 | 650 | 232 | 5,130.000 | 7,885.000 | 713 | 5.0 | 335.000 | 23272 CAW33 | 23272 CAKW33 |
| 380 | 520 | 106 | 1,862.000 | 3,610.000 | 1,140 | 3.0 | 69.000 | 23976 MBW33 | 23976 KMBW33 |
| 380 | 560 | 135 | 2,755.000 | 4,750.000 | 1,140 | 4.0 | 115.000 | 23076 MBW33 | 23076 KMBW33 |
| 380 | 560 | 180 | 3,420.000 | 6,460.000 | 903 | 4.0 | 150.000 | 24076 MBW33 | 24076 K30MBW33 |
| 380 | 620 | 194 | 4,180.000 | 6,745.000 | 950 | 4.0 | 230.000 | 23176 CAW33 | 23176 CAKW33 |
| 380 | 620 | 243 | 5,415.000 | 9,310.000 | 808 | 4.0 | 300.000 | 24176 CAW33 | 24176 CAK30W33 |
| 380 | 680 | 240 | 5,557.500 | 8,692.500 | 713 | 5.0 | 375.000 | 23276 CAW33 | 23276 CAKW33 |
| 400 | 540 | 106 | 1,900.000 | 3,705.000 | 1,140 | 3.0 | 71.000 | 23980 MBW33 | 23980 KMBW33 |
| 400 | 600 | 148 | 3,087.500 | 5,415.000 | 1,045 | 4.0 | 150.000 | 23080 MBW33 | 23080 KMBW33 |
| 400 | 600 | 200 | 4,085.000 | 7,600.000 | 855 | 4.0 | 205.000 | 24080 MBW33 | 24080 K30MBW33 |



Cylindrical bore

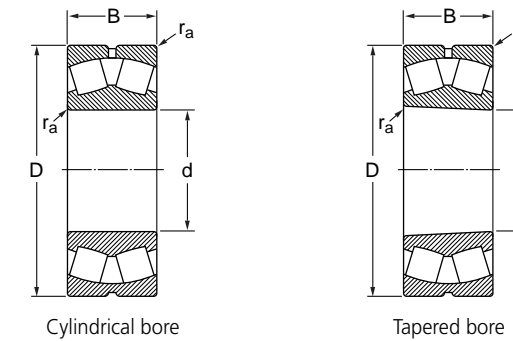
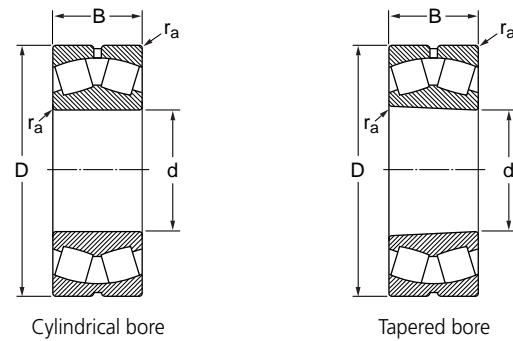
Tapered bore

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|-----|-----|--------------------|-----------------------|----------------|--------------------|---------|--------------------------------|----------------|
| d | D | B | Dynamic C | Static C ₀ | Oil | r _a max | | Bearings with Cylindrical Bore | Tapered Bore |
| mm | mm | mm | kN | kN | r/min | mm | kg | | |
| 400 | 650 | 200 | 4,417.500 | 7,267.500 | 903 | 5.0 | 265.000 | 23180 CAW33 | 23180 CAKW33 |
| 400 | 650 | 250 | 5,890.000 | 10,070.000 | 760 | 5.0 | 340.000 | 24180 CAW33 | 24180 CAK30W33 |
| 400 | 720 | 256 | 6,222.500 | 9,880.000 | 637 | 5.0 | 450.000 | 23280 CAW33 | 23280 CAKW33 |
| 400 | 820 | 243 | 7,125.000 | 9,880.000 | 713 | 6.0 | 650.000 | 22380 CAW33 | 22380 CAKW33 |
| 420 | 560 | 106 | 1,938.000 | 3,942.500 | 1,045 | 3.0 | 74.500 | 23984 MBW33 | 23984 KMBW33 |
| 420 | 620 | 150 | 3,230.000 | 5,700.000 | 1,045 | 4.0 | 155.000 | 23084 CAW33 | 23084 CAKW33 |
| 420 | 620 | 200 | 4,180.000 | 7,885.000 | 855 | 4.0 | 210.000 | 24084 CAW33 | 24084 CAK30W33 |
| 420 | 700 | 224 | 5,320.000 | 8,835.000 | 855 | 5.0 | 350.000 | 23184 CAW33 | 23184 CAKW33 |
| 420 | 700 | 280 | 6,982.500 | 11,970.000 | 665 | 5.0 | 445.000 | 24184 CAW33 | 24184 CAK30W33 |
| 420 | 760 | 272 | 6,982.500 | 11,020.000 | 599 | 6.0 | 535.000 | 23284 CAW33 | 23284 CAKW33 |
| 440 | 600 | 118 | 2,327.500 | 4,655.000 | 950 | 3.0 | 99.500 | 23988 MBW33 | 23988 KMBW33 |
| 440 | 650 | 157 | 3,467.500 | 6,222.500 | 950 | 5.0 | 180.000 | 23088 CAW33 | 23088 CAKW33 |
| 440 | 650 | 212 | 4,560.000 | 8,692.500 | 808 | 5.0 | 245.000 | 24088 CAW33 | 24088 CAK30W33 |
| 440 | 720 | 226 | 5,700.000 | 9,500.000 | 808 | 5.0 | 360.000 | 23188 CAW33 | 23188 CAKW33 |
| 440 | 720 | 280 | 7,125.000 | 12,540.000 | 665 | 5.0 | 460.000 | 24188 CAW33 | 24188 CAK30W33 |
| 440 | 790 | 280 | 7,410.000 | 11,875.000 | 570 | 6.0 | 590.000 | 23288 CAW33 | 23288 CAKW33 |
| 460 | 580 | 118 | 1,700.500 | 4,655.000 | 1,045 | 2.5 | 75.500 | 24892 CAW33 | 24892 CAK30W33 |
| 460 | 620 | 118 | 2,375.000 | 4,750.000 | 950 | 3.0 | 105.000 | 23992 CAW33 | 23992 CAKW33 |
| 460 | 680 | 163 | 3,705.000 | 6,602.500 | 903 | 5.0 | 205.000 | 23092 CAW33 | 23092 CAKW33 |
| 460 | 680 | 218 | 4,940.000 | 9,500.000 | 760 | 5.0 | 275.000 | 24092 CAW33 | 24092 CAK30W33 |
| 460 | 760 | 240 | 6,080.000 | 10,260.000 | 760 | 6.0 | 440.000 | 23192 CAW33 | 23192 CAKW33 |
| 460 | 760 | 300 | 7,885.000 | 13,870.000 | 637 | 6.0 | 560.000 | 24192 CAW33 | 24192 CAK30W33 |
| 460 | 830 | 296 | 8,075.000 | 13,015.000 | 532 | 6.0 | 695.000 | 23292 CAW33 | 23292 CAKW33 |
| 480 | 600 | 90 | 1,368.000 | 3,562.500 | 1,045 | 2.5 | 61.000 | 23896 CAW33 | 23896 CAKW33 |
| 480 | 650 | 128 | 2,755.000 | 5,415.000 | 950 | 4.0 | 125.000 | 23996 CAW33 | 23996 CAKW33 |
| 480 | 700 | 165 | 3,705.000 | 6,460.000 | 903 | 5.0 | 215.000 | 23096 CAW33 | 23096 CAKW33 |
| 480 | 700 | 218 | 5,035.000 | 9,880.000 | 713 | 5.0 | 285.000 | 24096 CAW33 | 24096 CAK30W33 |
| 480 | 790 | 248 | 6,602.500 | 11,400.000 | 713 | 6.0 | 485.000 | 23196 CAW33 | 23196 CAKW33 |
| 480 | 790 | 308 | 8,550.000 | 14,820.000 | 599 | 6.0 | 605.000 | 24196 CAW33 | 24196 CAK30W33 |
| 480 | 870 | 310 | 8,835.000 | 14,250.000 | 504 | 6.0 | 800.000 | 23296 CAW33 | 23296 CAKW33 |
| 500 | 620 | 90 | 1,406.000 | 3,800.000 | 950 | 2.5 | 62.000 | 238/500 CAW33 | 238/500 CAKW33 |
| 500 | 670 | 128 | 2,755.000 | 5,700.000 | 903 | 4.0 | 130.000 | 239/500 CAW33 | 239/500 CAKW33 |



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|------|-----|--------------------|-----------------------|----------------|--------------------|----------|--------------------------------|------------------|
| d | D | B | Dynamic C | Static C ₀ | Oil | r _a max | | Bearings with Cylindrical Bore | Tapered Bore |
| mm | mm | mm | kN | kN | r/min | mm | kg | | |
| 500 | 720 | 167 | 3,942.500 | 7,410.000 | 855 | 5.0 | 225.000 | 230/500 CAW33 | 230/500 CAKW33 |
| 500 | 720 | 218 | 5,225.000 | 10,450.000 | 665 | 5.0 | 295.000 | 240/500 CAW33 | 240/500 CAK30W33 |
| 500 | 830 | 264 | 7,267.500 | 12,255.000 | 665 | 6.0 | 580.000 | 231/500 CAW33 | 231/500 CAKW33 |
| 500 | 830 | 325 | 9,310.000 | 16,150.000 | 570 | 6.0 | 700.000 | 241/500 CAW33 | 241/500 CAK30W33 |
| 500 | 920 | 336 | 10,070.000 | 16,435.000 | 475 | 6.0 | 985.000 | 232/500 CAW33 | 232/500 CAKW33 |
| 530 | 650 | 118 | 1,748.000 | 5,035.000 | 903 | 2.5 | 86.000 | 248/530 CAW33 | 248/530 CAK30W33 |
| 530 | 710 | 136 | 3,040.000 | 6,365.000 | 855 | 4.0 | 155.000 | 239/530 CAW33 | 239/530 CAKW33 |
| 530 | 780 | 185 | 4,845.000 | 8,835.000 | 760 | 5.0 | 310.000 | 230/530 CAW33 | 230/530 CAKW33 |
| 530 | 780 | 250 | 6,365.000 | 12,540.000 | 637 | 5.0 | 410.000 | 240/530 CAW33 | 240/530 CAK30W33 |
| 530 | 870 | 272 | 7,742.500 | 13,300.000 | 637 | 6.0 | 645.000 | 231/530 CAW33 | 231/530 CAKW33 |
| 530 | 870 | 335 | 10,070.000 | 18,050.000 | 532 | 6.0 | 830.000 | 241/530 CAW33 | 241/530 CAK30W33 |
| 530 | 980 | 355 | 10,545.000 | 19,380.000 | 456 | 8.0 | 1200.000 | 232/530 CAW33 | 232/530 CAKW33 |
| 560 | 750 | 140 | 3,277.500 | 6,840.000 | 808 | 4.0 | 175.000 | 239/560 CAW33 | 239/560 CAKW33 |
| 560 | 820 | 195 | 5,320.000 | 9,690.000 | 713 | 5.0 | 355.000 | 230/560 CAW33 | 230/560 CAKW33 |
| 560 | 820 | 258 | 6,982.500 | 13,870.000 | 599 | 5.0 | 465.000 | 240/560 CAW33 | 240/560 CAK30W33 |
| 560 | 920 | 280 | 8,692.500 | 15,200.000 | 599 | 6.0 | 740.000 | 231/560 CAW33 | 231/560 CAKW33 |
| 560 | 920 | 355 | 11,400.000 | 20,520.000 | 475 | 6.0 | 985.000 | 241/560 CAW33 | 241/560 CAK30W33 |
| 560 | 1030 | 365 | 10,925.000 | 20,900.000 | 409 | 8.0 | 1350.000 | 232/560 CAW33 | 232/560 CAKW33 |
| 600 | 800 | 150 | 3,705.000 | 7,885.000 | 713 | 4.0 | 220.000 | 239/600 CAW33 | 239/600 CAKW33 |
| 600 | 870 | 200 | 5,700.000 | 10,830.000 | 665 | 5.0 | 405.000 | 230/600 CAW33 | 230/600 CAKW33 |
| 600 | 870 | 272 | 7,742.500 | 16,150.000 | 532 | 5.0 | 520.000 | 240/600 CAW33 | 240/600 CAK30W33 |
| 600 | 980 | 300 | 9,690.000 | 17,100.000 | 532 | 6.0 | 895.000 | 231/600 CAW33 | 231/600 CAKW33 |
| 600 | 980 | 375 | 10,925.000 | 22,420.000 | 456 | 6.0 | 1200.000 | 241/600 CAW33 | 241/600 CAK30W33 |
| 600 | 1090 | 388 | 12,445.000 | 24,225.000 | 380 | 8.0 | 1600.000 | 232/600 CAW33 | 232/600 CAKW33 |
| 630 | 780 | 112 | 2,080.500 | 5,795.000 | 713 | 3.0 | 120.000 | 238/630 CAW33 | 238/630 CAKW33 |
| 630 | 850 | 165 | 4,417.500 | 9,310.000 | 665 | 5.0 | 280.000 | 239/630 CAW33 | 239/630 CAKW33 |
| 630 | 920 | 212 | 6,365.000 | 11,875.000 | 637 | 6.0 | 485.000 | 230/630 CAW33 | 230/630 CAKW33 |
| 630 | 920 | 290 | 8,360.000 | 17,100.000 | 504 | 6.0 | 645.000 | 240/630 CAW33 | 240/630 CAK30W33 |
| 630 | 1030 | 315 | 9,975.000 | 19,760.000 | 504 | 6.0 | 1050.000 | 231/630 CAW33 | 231/630 CAKW33 |
| 630 | 1030 | 400 | 12,065.000 | 25,650.000 | 428 | 6.0 | 1400.000 | 241/630 CAW33 | 241/630 CAK30W33 |
| 670 | 820 | 112 | 2,137.500 | 6,080.000 | 665 | 3.0 | 130.000 | 238/670 CAW33 | 238/670 CAKW33 |
| 670 | 820 | 150 | 2,954.500 | 9,025.000 | 665 | 3.0 | 172.000 | 248/670 CAW33 | 248/670 CAK30W33 |

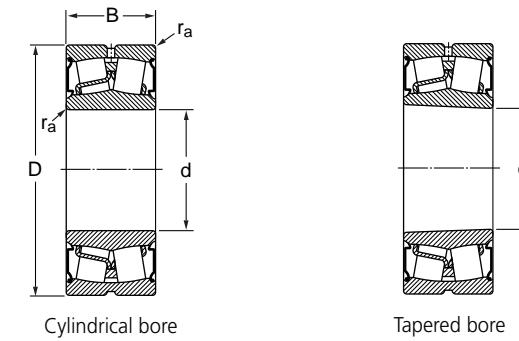
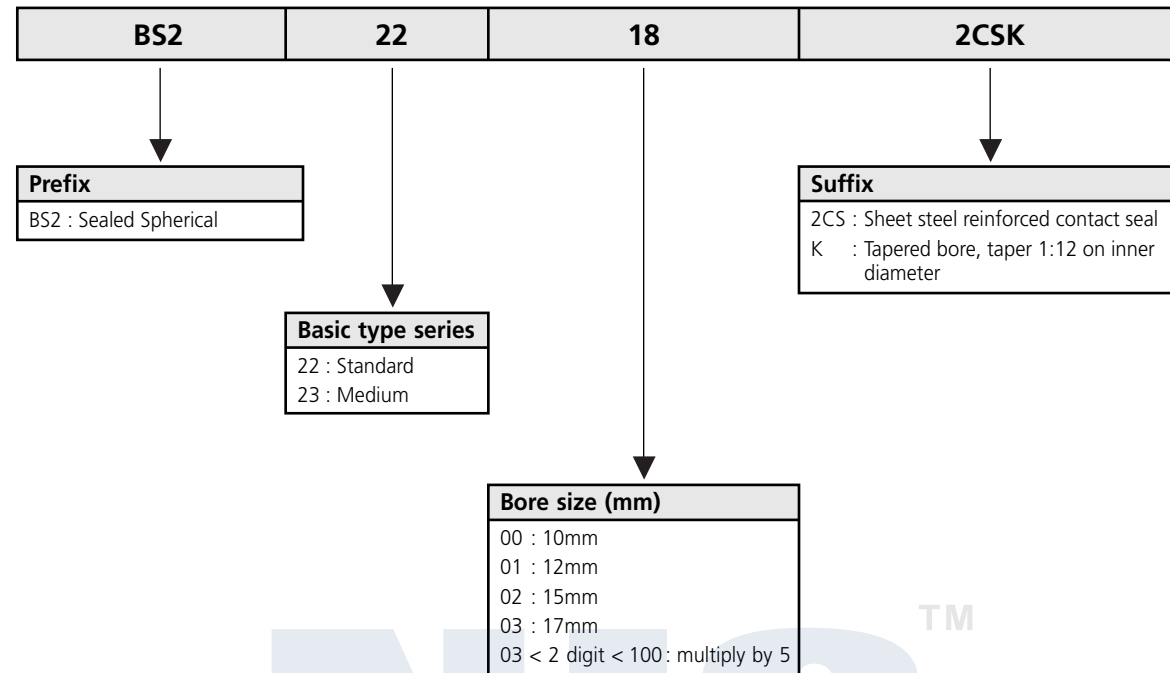
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|------|-----|--------------------|-----------------------|----------------|--------------------|----------|--------------------------------|------------------|
| d | D | B | Dynamic C | Static C ₀ | Oil | r _a max | | Bearings with Cylindrical Bore | Tapered Bore |
| mm | mm | mm | kN | kN | r/min | mm | kg | | |
| 670 | 900 | 170 | 4,750.000 | 10,260.000 | 637 | 5.0 | 315.000 | 239/670 CAW33 | 239/670 CAKW33 |
| 670 | 980 | 230 | 7,267.500 | 13,870.000 | 570 | 6.0 | 600.000 | 230/670 CAW33 | 230/670 CAKW33 |
| 670 | 980 | 308 | 9,500.000 | 19,380.000 | 475 | 6.0 | 790.000 | 240/670 CAW33 | 240/670 CAK30W33 |
| 670 | 1090 | 336 | 10,355.000 | 21,280.000 | 475 | 6.0 | 1250.000 | 231/670 CAW33 | 231/670 CAKW33 |
| 670 | 1090 | 412 | 13,110.000 | 27,550.000 | 380 | 6.0 | 1600.000 | 241/670 CAW33 | 241/670 CAK30W33 |
| 670 | 1220 | 438 | 14,630.000 | 28,975.000 | 342 | 10.0 | 2270.000 | 232/670 CAW33 | 232/670 CAKW33 |
| 710 | 870 | 118 | 2,451.000 | 7,125.000 | 637 | 3.0 | 153.000 | 238/710 CAW33 | 238/710 CAKW33 |
| 710 | 950 | 180 | 5,320.000 | 11,400.000 | 570 | 5.0 | 365.000 | 239/710 CAW33 | 239/710 CAKW33 |
| 710 | 950 | 243 | 6,460.000 | 14,820.000 | 475 | 5.0 | 495.000 | 249/710 CAW33 | 249/710 CAK30W33 |
| 710 | 1030 | 236 | 7,885.000 | 15,485.000 | 532 | 6.0 | 670.000 | 230/710 CAW33 | 230/710 CAKW33 |
| 710 | 1030 | 315 | 9,880.000 | 20,900.000 | 428 | 6.0 | 895.000 | 240/710 CAW33 | 240/710 CAK30W33 |
| 710 | 1150 | 345 | 11,590.000 | 24,700.000 | 428 | 8.0 | 1450.000 | 231/710 CAW33 | 231/710 CAKW33 |
| 710 | 1150 | 438 | 14,440.000 | 30,875.000 | 361 | 8.0 | 1900.000 | 241/710 CAW33 | 241/710 CAK30W33 |
| 710 | 1280 | 450 | 16,720.000 | 32,775.000 | 304 | 10.0 | 2610.000 | 232/710 CAW33 | 232/710 CAKW33 |
| 750 | 920 | 128 | 2,783.500 | 8,075.000 | 570 | 4.0 | 180.000 | 238/750 CAW33 | 238/750 CAKW33 |
| 750 | 1000 | 185 | 5,700.000 | 12,540.000 | 532 | 5.0 | 420.000 | 239/750 CAW33 | 239/750 CAKW33 |
| 750 | 1000 | 250 | 7,267.500 | 17,100.000 | 456 | 5.0 | 560.000 | 249/750 CAW33 | 249/750 CAK30W33 |
| 750 | 1090 | 250 | 9,167.500 | 17,670.000 | 504 | 6.0 | 795.000 | 230/750 CAW33 | 230/750 CAKW33 |
| 750 | 1090 | 335 | 10,830.000 | 22,800.000 | 409 | 6.0 | 1065.000 | 240/750 CAW33 | 240/750 CAK30W33 |
| 750 | 1220 | 365 | 13,110.000 | 27,550.000 | 409 | 8.0 | 1700.000 | 231/750 CAW33 | 231/750 CAKW33 |
| 750 | 1220 | 475 | 16,435.000 | 35,625.000 | 342 | 8.0 | 2100.000 | 241/750 CAW33 | 241/750 CAK30W33 |
| 750 | 1360 | 475 | 17,765.000 | 34,675.000 | 285 | 12.0 | 3050.000 | 232/750 CAW33 | 232/750 CAKW33 |
| 800 | 980 | 180 | 3,933.000 | 12,255.000 | 532 | 4.0 | 300.000 | 248/800 CAW33 | 248/800 CAK30W33 |
| 800 | 1060 | 195 | 6,080.000 | 13,585.000 | 504 | 5.0 | 470.000 | 239/800 CAW33 | 239/800 CAKW33 |
| 800 | 1060 | 258 | 7,600.000 | 18,335.000 | 409 | 5.0 | 640.000 | 249/800 CAW33 | 249/800 CAK30W33 |
| 800 | 1150 | 258 | 9,500.000 | 19,000.000 | 456 | 6.0 | 895.000 | 230/800 CAW33 | 230/800 CAKW33 |
| 800 | 1150 | 345 | 11,875.000 | 26,125.000 | 380 | 6.0 | 1200.000 | 240/800 CAW33 | 240/800 CAK30W33 |
| 800 | 1280 | 375 | 14,060.000 | 29,925.000 | 380 | 8.0 | 1920.000 | 231/800 CAW33 | 231/800 CAKW33 |
| 800 | 1280 | 475 | 17,480.000 | 38,475.000 | 304 | 8.0 | 2300.000 | 241/800 CAW33 | 241/800 CAK30W33 |
| 850 | 1030 | 136 | 3,173.000 | 9,500.000 | 504 | 4.0 | 240.000 | 238/850 CAW33 | 238/850 CAKW33 |
| 850 | 1120 | 200 | 6,602.500 | 14,820.000 | 456 | 5.0 | 560.000 | 239/850 CAW33 | 239/850 CAKW33 |
| 850 | 1120 | 272 | 8,835.000 | 21,660.000 | 380 | 5.0 | 740.000 | 249/850 CAW33 | 249/850 CAK30W33 |



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|------|-----|--------------------|-----------------------|----------------|--------------------|----------|--------------------------------|-------------------|
| d | D | B | Dynamic C | Static C ₀ | Oil | r _a max | | Bearings with Cylindrical Bore | Tapered Bore |
| mm | mm | mm | kN | kN | r/min | mm | kg | | |
| 850 | 1220 | 272 | 8,901.500 | 20,520.000 | 428 | 6.0 | 1050.000 | 230/850 CAW33 | 230/850 CAKW33 |
| 850 | 1220 | 365 | 12,065.000 | 29,925.000 | 342 | 6.0 | 1410.000 | 240/850 CAW33 | 240/850 CAK30W33 |
| 850 | 1360 | 400 | 15,295.000 | 32,775.000 | 342 | 10.0 | 2200.000 | 231/850 CAW33 | 231/850 CAKW33 |
| 850 | 1360 | 500 | 19,190.000 | 42,750.000 | 285 | 10.0 | 2710.000 | 241/850 CAW33 | 241/850 CAK30W33 |
| 900 | 1090 | 190 | 4,427.000 | 14,535.000 | 456 | 4.0 | 370.000 | 248/900 CAW33 | 248/900 CAK30W33 |
| 900 | 1180 | 206 | 7,125.000 | 16,150.000 | 428 | 5.0 | 605.000 | 239/900 CAW33 | 239/900 CAKW33 |
| 900 | 1280 | 280 | 9,595.000 | 22,040.000 | 380 | 6.0 | 1200.000 | 230/900 CAW33 | 230/900 CAKW33 |
| 900 | 1280 | 375 | 12,920.000 | 32,775.000 | 323 | 6.0 | 1570.000 | 240/900 CAW33 | 240/900 CAK30W33 |
| 900 | 1420 | 515 | 20,330.000 | 46,550.000 | 266 | 10.0 | 3350.000 | 241/900 CAW33 | 241/900 CAK30W33 |
| 950 | 1250 | 224 | 6,887.500 | 18,620.000 | 409 | 6.0 | 755.000 | 239/950 CAW33 | 239/950 CAKW33 |
| 950 | 1250 | 300 | 8,740.000 | 24,700.000 | 323 | 6.0 | 1015.000 | 249/950 CAW33 | 249/950 CAK30W33 |
| 950 | 1360 | 300 | 11,400.000 | 27,075.000 | 361 | 6.0 | 1450.000 | 230/950 CAW33 | 230/950 CAKW33 |
| 950 | 1360 | 412 | 14,060.000 | 37,050.000 | 285 | 6.0 | 1990.000 | 240/950 CAW33 | 240/950 CAK30W33 |
| 950 | 1500 | 545 | 22,705.000 | 52,250.000 | 247 | 10.0 | 3535.000 | 241/950 CAW33 | 241/950 CAK30W33 |
| 1000 | 1220 | 165 | 4,427.000 | 13,585.000 | 380 | 5.0 | 410.000 | 238/1000 CAW33 | 238/1000 CAKW33 |
| 1000 | 1320 | 315 | 9,880.000 | 27,550.000 | 304 | 6.0 | 1200.000 | 249/1000 CAW33 | 249/1000 CAK30W33 |
| 1000 | 1420 | 308 | 12,065.000 | 28,975.000 | 342 | 6.0 | 1600.000 | 230/1000 CAW33 | 230/1000 CAKW33 |
| 1000 | 1420 | 412 | 14,630.000 | 38,475.000 | 266 | 6.0 | 2140.000 | 240/1000 CAW33 | 240/1000 CAK30W33 |
| 1000 | 1580 | 462 | 20,330.000 | 45,600.000 | 266 | 10.0 | 3500.000 | 231/1000 CAW33 | 231/1000 CAKW33 |
| 1000 | 1580 | 580 | 25,365.000 | 58,900.000 | 228 | 10.0 | 4300.000 | 241/1000 CAW33 | 241/1000 CAK30W33 |

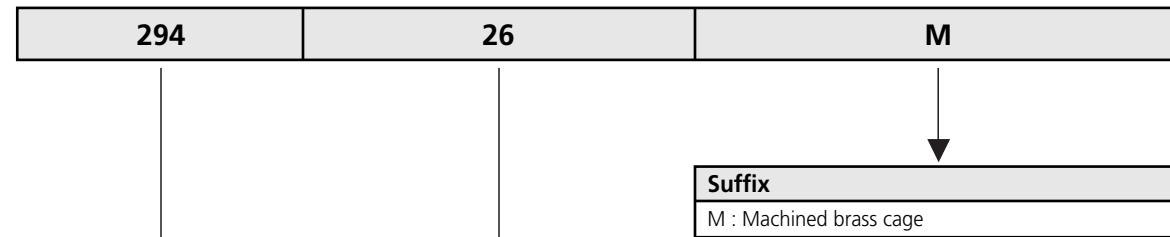
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|------|-----|--------------------|-----------------------|----------------|--------------------|----------|--------------------------------|-------------------|
| d | D | B | Dynamic C | Static C ₀ | Oil | r _a max | | Bearings with Cylindrical Bore | Tapered Bore |
| mm | mm | mm | kN | kN | r/min | mm | kg | | |
| 1060 | 1280 | 165 | 4,531.500 | 14,250.000 | 361 | 5.0 | 435.000 | 238/1060 CAW33 | 238/1060 CAKW33 |
| 1060 | 1280 | 218 | 5,795.000 | 19,000.000 | 361 | 5.0 | 570.000 | 248/1060 CAW33 | 248/1060 CAK30W33 |
| 1060 | 1400 | 250 | 9,072.500 | 24,700.000 | 342 | 6.0 | 1100.000 | 239/1060 CAW33 | 239/1060 CAKW33 |
| 1060 | 1400 | 335 | 10,925.000 | 30,875.000 | 266 | 6.0 | 1400.000 | 249/1060 CAW33 | 249/1060 CAK30W33 |
| 1060 | 1500 | 325 | 13,110.000 | 32,300.000 | 304 | 8.0 | 2250.000 | 230/1060 CAW33 | 230/1060 CAKW33 |
| 1060 | 1500 | 438 | 16,435.000 | 43,225.000 | 247 | 8.0 | 2515.000 | 240/1060 CAW33 | 240/1060 CAK30W33 |
| 1120 | 1360 | 243 | 6,887.500 | 22,800.000 | 323 | 5.0 | 735.000 | 248/1120 CAW33 | 248/1120 CAK30W33 |
| 1120 | 1460 | 335 | 11,115.000 | 32,775.000 | 247 | 6.0 | 1500.000 | 249/1120 CAW33 | 249/1120 CAK30W33 |
| 1120 | 1580 | 462 | 17,765.000 | 47,500.000 | 228 | 8.0 | 2925.000 | 240/1120 CAW33 | 240/1120 CAK30W33 |
| 1180 | 1420 | 180 | 5,576.500 | 17,670.000 | 304 | 5.0 | 575.000 | 238/1180 CAW33 | 238/1180 CAKW33 |
| 1180 | 1420 | 243 | 7,324.500 | 25,650.000 | 304 | 5.0 | 770.000 | 248/1180 CAW33 | 248/1180 CAK30W33 |
| 1180 | 1540 | 272 | 10,545.000 | 29,450.000 | 285 | 6.0 | 1400.000 | 239/1180 CAW33 | 239/1180 CAKW33 |
| 1180 | 1540 | 355 | 12,920.000 | 38,475.000 | 228 | 6.0 | 1800.000 | 249/1180 CAW33 | 249/1180 CAK30W33 |
| 1250 | 1750 | 375 | 17,005.000 | 42,750.000 | 228 | 8.0 | 2840.000 | 230/1250 CAW33 | 230/1250 CAKW33 |
| 1320 | 1600 | 280 | 9,291.000 | 31,825.000 | 247 | 5.0 | 1160.000 | 248/1320 CAW33 | 248/1320 CAK30W33 |
| 1320 | 1720 | 400 | 15,295.000 | 46,550.000 | 190 | 6.0 | 2500.000 | 249/1320 CAW33 | 249/1320 CAK30W33 |
| 1500 | 1820 | 315 | 12,065.000 | 42,750.000 | 190 | 6.0 | 1710.000 | 248/1500 CAW33 | 248/1500 CAK30W33 |
| 1800 | 2180 | 375 | 16,720.000 | 59,850.000 | 124 | 6.0 | 2900.000 | 248/1800 CAW33 | 248/1800 CAK30W33 |

■ Prefix & Suffix



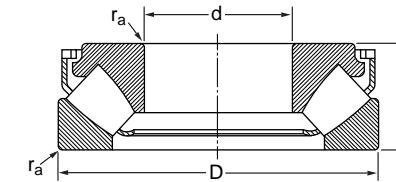
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|---------|---------|--------------------|--------------------------------|-----------------|-----------------------------|-------|-----------------------------------|---------------|
| d mm | D mm | B mm | Dynamic C kN | Static C ₀ kN | Grease r/min | r _a max mm | kg | Bearings with Cylindrical Bore | Tapered Bore |
| 25 | 52 | 23 | 46.550 | 41.800 | 3,420 | 1.0 | 0.310 | BS2-2205-2CS | - |
| 30 | 62 | 25 | 60.800 | 57.000 | 2,660 | 1.0 | 0.340 | BS2-2206-2CS | - |
| 35 | 72 | 28 | 82.175 | 80.750 | 2,280 | 1.0 | 0.520 | BS2-2207-2CS | - |
| 40 | 80 | 28 | 91.675 | 85.500 | 2,090 | 1.0 | 0.570 | BS2-2208-2CS | BS2-2208-2CSK |
| 40 | 90 | 38 | 142.500 | 133.000 | 1,805 | 1.5 | 1.200 | BS2-2308-2CS | - |
| 45 | 85 | 28 | 96.900 | 93.100 | 1,900 | 1.0 | 0.660 | BS2-2209-2CS | BS2-2209-2CSK |
| 50 | 90 | 28 | 98.800 | 102.600 | 1,805 | 1.0 | 0.700 | BS2-2210-2CS | BS2-2210-2CSK |
| 55 | 100 | 31 | 118.750 | 120.650 | 1,615 | 1.5 | 1.000 | BS2-2211-2CS | BS2-2211-2CSK |
| 55 | 120 | 49 | 256.500 | 266.000 | 1,330 | 2.0 | 2.800 | BS2-2311-2CS | - |
| 60 | 110 | 34 | 148.200 | 157.700 | 1,520 | 1.5 | 1.300 | BS2-2212-2CS | BS2-2212-2CSK |
| 65 | 120 | 38 | 183.350 | 205.200 | 1,425 | 1.5 | 1.600 | BS2-2213-2CS | BS2-2213-2CSK |
| 70 | 125 | 38 | 197.600 | 216.600 | 1,330 | 1.5 | 1.800 | BS2-2214-2CS | BS2-2214-2CSK |
| 75 | 130 | 38 | 201.400 | 228.000 | 1,235 | 1.5 | 2.100 | BS2-2215-2CS | BS2-2215-2CSK |
| 75 | 160 | 64 | 418.000 | 451.250 | 903 | 2.0 | 6.500 | BS2-2315-2CS | - |
| 80 | 140 | 40 | 224.200 | 256.500 | 1,140 | 2.0 | 2.400 | BS2-2216-2CS | BS2-2216-2CSK |
| 85 | 150 | 44 | 270.750 | 308.750 | 1,045 | 2.0 | 3.000 | BS2-2217-2CS | BS2-2217-2CSK |
| 90 | 160 | 48 | 308.750 | 356.250 | 950 | 2.0 | 3.700 | BS2-2218-2CS | BS2-2218-2CSK |

■ Prefix & Suffix

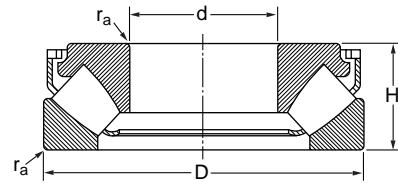


Basic type series
292 : Standard
293 : Medium
294 : Heavy

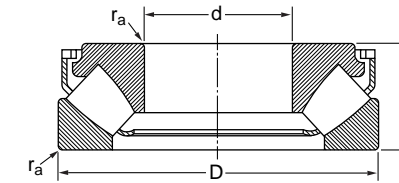
Bore size (mm)
00 : 10mm
01 : 12mm
02 : 15mm
03 : 17mm
03 < 2 digit < 100 : multiply by 5



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|-----|-----|--------------------|----------------------|----------------|-------|--------------------|--------|-------------|
| d | D | B | Dynamic | Static | Grease | Oil | r _a max | kg | |
| mm | mm | mm | C kN | C ₀ kN | r/min | r/min | mm | | |
| 60 | 130 | 42 | 327.750 | 869.250 | 1,710 | 2,470 | 1.5 | 2.600 | 29412 |
| 65 | 140 | 45 | 377.150 | 1026.000 | 1,615 | 2,280 | 2.0 | 3.200 | 29413 |
| 70 | 150 | 48 | 426.550 | 1187.500 | 1,520 | 2,090 | 2.0 | 3.900 | 29414 |
| 75 | 160 | 51 | 492.100 | 1358.500 | 1,520 | 2,090 | 2.0 | 4.700 | 29415 |
| 80 | 170 | 54 | 546.250 | 1548.500 | 1,425 | 1,900 | 2.0 | 5.600 | 29416 |
| 85 | 150 | 39 | 317.300 | 1007.000 | 1,520 | 2,090 | 1.5 | 2.750 | 29317 |
| 85 | 180 | 58 | 601.350 | 1710.000 | 1,235 | 1,710 | 2.0 | 6.750 | 29417 |
| 90 | 155 | 39 | 327.750 | 1026.000 | 1,520 | 2,090 | 1.5 | 2.850 | 29318 |
| 90 | 190 | 60 | 666.900 | 1900.000 | 1,235 | 1,710 | 2.0 | 7.750 | 29418 |
| 100 | 170 | 42 | 387.600 | 1225.500 | 1,425 | 1,900 | 1.5 | 3.650 | 29320 |
| 100 | 210 | 67 | 819.850 | 2375.000 | 1,045 | 1,520 | 2.5 | 10.500 | 29420 |
| 110 | 190 | 48 | 508.250 | 1643.500 | 1,235 | 1,710 | 2.0 | 5.300 | 29322 |
| 110 | 230 | 73 | 959.500 | 2850.000 | 903 | 1,330 | 2.5 | 13.500 | 29422 |
| 120 | 210 | 54 | 623.200 | 2014.000 | 1,045 | 1,520 | 2.0 | 7.350 | 29324 |
| 120 | 250 | 78 | 1111.500 | 3277.500 | 855 | 1,235 | 3.0 | 17.500 | 29424 |
| 130 | 225 | 58 | 715.350 | 2375.000 | 950 | 1,425 | 2.0 | 9.000 | 29326 |
| 130 | 270 | 85 | 1311.000 | 3847.500 | 808 | 1,140 | 3.0 | 22.000 | 29426 |
| 140 | 240 | 60 | 802.750 | 2707.500 | 903 | 1,330 | 2.0 | 10.500 | 29328 |
| 140 | 280 | 85 | 1330.000 | 4085.000 | 808 | 1,140 | 3.0 | 23.000 | 29428 |
| 150 | 215 | 39 | 327.750 | 1301.500 | - | 1,710 | 1.5 | 4.550 | 29230 |
| 150 | 250 | 60 | 819.850 | 2707.500 | 903 | 1,330 | 2.0 | 11.000 | 29330 |
| 150 | 300 | 90 | 1529.500 | 4845.000 | 760 | 1,045 | 3.0 | 28.000 | 29430 |
| 160 | 225 | 39 | 339.150 | 1387.000 | - | 1,615 | 1.5 | 4.800 | 29232 |
| 160 | 270 | 67 | 959.500 | 3277.500 | 808 | 1,140 | 2.5 | 14.500 | 29332 |
| 160 | 320 | 95 | 1700.500 | 5320.000 | 713 | 950 | 4.0 | 33.500 | 29432 |
| 170 | 240 | 42 | 387.600 | 1577.000 | - | 1,520 | 1.5 | 5.950 | 29234 |
| 170 | 280 | 67 | 997.500 | 3372.500 | 808 | 1,140 | 2.5 | 15.000 | 29334 |
| 170 | 340 | 103 | 1919.000 | 6222.500 | 665 | 903 | 4.0 | 44.500 | 29434 |
| 180 | 250 | 42 | 399.000 | 1672.000 | - | 1,520 | 1.5 | 6.250 | 29236 |
| 180 | 300 | 73 | 1178.000 | 4085.000 | 760 | 1,045 | 2.5 | 19.500 | 29336 |
| 180 | 360 | 109 | 2137.500 | 6982.500 | 637 | 855 | 4.0 | 52.500 | 29436 |
| 190 | 270 | 48 | 492.100 | 2090.000 | - | 1,330 | 2.0 | 8.700 | 29238 |



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|-----|-----|--------------------|-----------------------|----------------|-------|--------------------|---------|-------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | |
| 190 | 320 | 78 | 1330.000 | 4512.500 | 713 | 950 | 3.0 | 23.500 | 29338 |
| 190 | 380 | 115 | 2356.000 | 7600.000 | 599 | 808 | 4.0 | 60.500 | 29438 |
| 200 | 280 | 48 | 508.250 | 2166.000 | - | 1,330 | 2.0 | 8.900 | 29240 |
| 200 | 340 | 85 | 1529.500 | 5225.000 | 665 | 903 | 3.0 | 29.500 | 29340 |
| 200 | 400 | 122 | 2622.000 | 8550.000 | 570 | 760 | 4.0 | 72.000 | 29440 |
| 220 | 300 | 48 | 518.700 | 2280.000 | - | 1,235 | 2.0 | 10.000 | 29244 |
| 220 | 360 | 85 | 1643.500 | 5985.000 | 665 | 903 | 3.0 | 33.500 | 29344 |
| 220 | 420 | 122 | 2736.000 | 9167.500 | 532 | 713 | 5.0 | 75.000 | 29444 |
| 240 | 340 | 60 | 759.050 | 3277.500 | - | 1,045 | 2.0 | 16.500 | 29248 |
| 240 | 380 | 85 | 1700.500 | 6222.500 | 637 | 855 | 3.0 | 35.500 | 29348 |
| 240 | 440 | 122 | 2840.500 | 9690.000 | 532 | 713 | 5.0 | 80.000 | 29448 |
| 260 | 360 | 60 | 776.150 | 3467.500 | - | 1,045 | 2.0 | 18.500 | 29252 |
| 260 | 420 | 95 | 2109.000 | 7885.000 | 570 | 760 | 4.0 | 49.000 | 29352 |
| 260 | 480 | 132 | 3334.500 | 12255.000 | 475 | 637 | 5.0 | 105.000 | 29452 |
| 280 | 380 | 60 | 819.850 | 3800.000 | - | 950 | 2.0 | 19.500 | 29256 |
| 280 | 440 | 95 | 2080.500 | 8217.500 | 570 | 760 | 4.0 | 53.000 | 29356 |
| 280 | 520 | 145 | 4094.500 | 14535.000 | 456 | 599 | 5.0 | 135.000 | 29456 |
| 300 | 420 | 73 | 1016.500 | 4560.000 | - | 855 | 2.5 | 30.500 | 29260 |
| 300 | 480 | 109 | 2536.500 | 10070.000 | 504 | 665 | 4.0 | 75.000 | 29360 |
| 300 | 540 | 145 | 4151.500 | 15770.000 | 428 | 570 | 5.0 | 140.000 | 29460 |
| 320 | 440 | 73 | 1054.500 | 4845.000 | - | 808 | 2.5 | 33.000 | 29264 |
| 320 | 500 | 109 | 2736.000 | 10640.000 | 475 | 637 | 4.0 | 78.000 | 29364 |
| 320 | 580 | 155 | 4702.500 | 18050.000 | 409 | 532 | 6.0 | 175.000 | 29464 |
| 340 | 460 | 73 | 1073.500 | 5130.000 | - | 808 | 2.5 | 33.500 | 29268 |
| 340 | 540 | 122 | 2574.500 | 10450.000 | - | 570 | 4.0 | 105.000 | 29368 |
| 340 | 620 | 170 | 5462.500 | 21280.000 | 361 | 475 | 6.0 | 220.000 | 29468 |
| 360 | 500 | 85 | 1387.000 | 6460.000 | - | 713 | 3.0 | 52.000 | 29272 |
| 360 | 560 | 122 | 2622.000 | 11020.000 | - | 570 | 4.0 | 110.000 | 29372 |
| 360 | 640 | 170 | 5082.500 | 20140.000 | - | 475 | 6.0 | 230.000 | 29472 |
| 380 | 520 | 85 | 1501.000 | 7267.500 | - | 665 | 3.0 | 53.000 | 29276 |
| 380 | 600 | 132 | 3173.000 | 13300.000 | - | 504 | 5.0 | 140.000 | 29376 |
| 380 | 670 | 175 | 5576.500 | 22800.000 | - | 456 | 6.0 | 260.000 | 29476 |



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|-----|-----|--------------------|-----------------------|----------------|-------|--------------------|---------|-------------|
| d | D | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | |
| mm | mm | mm | kN | kN | r/min | r/min | mm | | |
| 400 | 540 | 85 | 1529.500 | 7600.000 | - | 665 | 3.0 | 55.500 | 29280 |
| 400 | 620 | 132 | 3277.500 | 13870.000 | - | 504 | 5.0 | 150.000 | 29380 |
| 400 | 710 | 185 | 6232.000 | 25175.000 | - | 428 | 6.0 | 310.000 | 29480 |
| 420 | 580 | 95 | 1890.500 | 9310.000 | - | 599 | 4.0 | 75.500 | 29284 |
| 420 | 650 | 140 | 3553.000 | 15200.000 | - | 475 | 5.0 | 170.000 | 29384 |
| 420 | 730 | 185 | 6393.500 | 26125.000 | - | 409 | 6.0 | 325.000 | 29484 |
| 440 | 600 | 95 | 1966.500 | 9880.000 | - | 599 | 4.0 | 78.000 | 29288 |
| 440 | 680 | 145 | 4265.500 | 18335.000 | - | 456 | 5.0 | 180.000 | 29388 |
| 440 | 780 | 206 | 7429.000 | 30400.000 | - | 361 | 8.0 | 410.000 | 29488 |

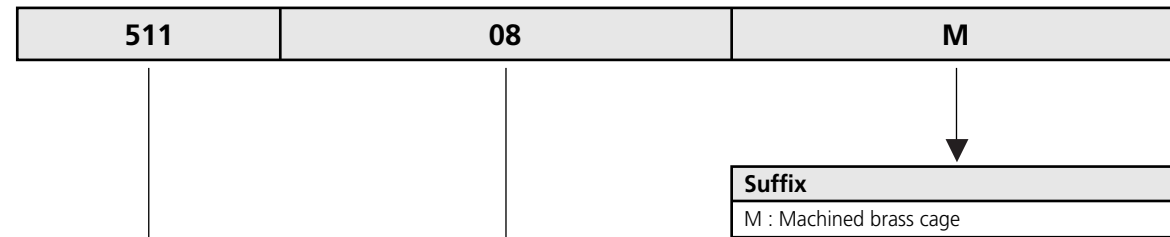


7.00

Thrust Bearings

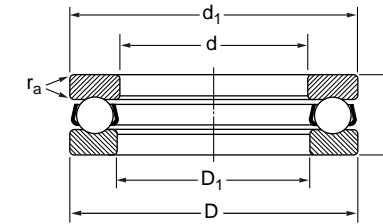
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| 7.01 Single direction thrust ball bearings | 201 |
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| 7.06 Cylindrical roller thrust | 224 |
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■ Prefix & Suffix

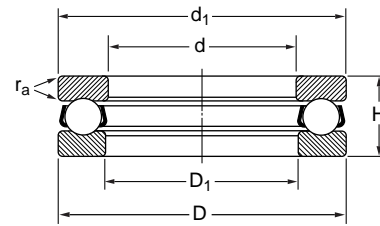


| |
|--------------------------|
| Basic type series |
| 511 : Light |
| 512 : Standard |
| 513 : Medium |
| 514 : Heavy |

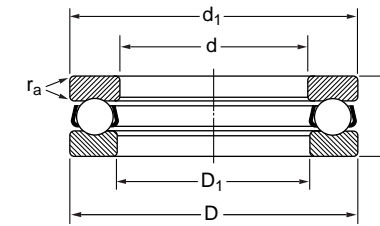
| |
|------------------------------------|
| Bore size (mm) |
| 00 : 10mm |
| 01 : 12mm |
| 02 : 15mm |
| 03 : 17mm |
| 03 < 2 digit < 100 : multiply by 5 |



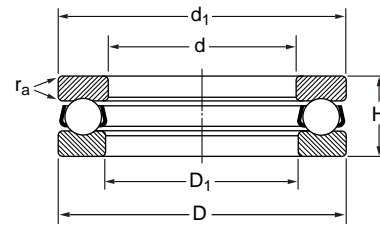
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|----------------|-----|----------------|----|--------------------|-----------------------|----------------|-------|--------------------|-------|-------------|
| d | D ₁ | D | d ₁ | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | | |
| 10 | 11 | 24 | 24 | 9 | 9.453 | 13.300 | 6,650 | 9,025 | 0.3 | 0.020 | 51100 |
| 10 | 12 | 26 | 26 | 11 | 12.065 | 16.150 | 5,700 | 7,600 | 0.6 | 0.031 | 51200 |
| 12 | 13 | 26 | 26 | 9 | 9.880 | 14.535 | 6,365 | 8,550 | 0.3 | 0.022 | 51101 |
| 12 | 14 | 28 | 28 | 11 | 12.635 | 18.050 | 5,700 | 7,600 | 0.6 | 0.034 | 51201 |
| 15 | 16 | 28 | 28 | 9 | 8.892 | 13.300 | 5,985 | 8,075 | 0.3 | 0.023 | 51102 |
| 15 | 17 | 32 | 32 | 12 | 15.675 | 23.750 | 5,035 | 6,650 | 0.6 | 0.046 | 51202 |
| 17 | 18 | 30 | 30 | 9 | 9.263 | 14.535 | 5,985 | 8,075 | 0.3 | 0.025 | 51103 |
| 17 | 19 | 35 | 35 | 12 | 16.340 | 26.125 | 4,750 | 6,365 | 0.6 | 0.053 | 51203 |
| 20 | 21 | 35 | 35 | 10 | 12.065 | 19.760 | 5,320 | 7,125 | 0.3 | 0.038 | 51104 |
| 20 | 22 | 40 | 40 | 14 | 21.375 | 35.625 | 4,275 | 5,700 | 0.6 | 0.083 | 51204 |
| 25 | 26 | 42 | 42 | 11 | 15.105 | 27.550 | 4,560 | 5,985 | 0.6 | 0.056 | 51105 |
| 25 | 27 | 47 | 47 | 15 | 26.220 | 47.500 | 3,800 | 5,035 | 0.6 | 0.110 | 51205 |
| 25 | 27 | 52 | 52 | 18 | 32.775 | 52.250 | 3,230 | 4,275 | 1.0 | 0.170 | 51305 |
| 25 | 27 | 60 | 60 | 24 | 52.535 | 85.500 | 2,470 | 3,420 | 1.0 | 0.340 | 51405 |
| 30 | 32 | 47 | 47 | 11 | 15.960 | 31.825 | 4,275 | 5,700 | 0.6 | 0.063 | 51106 |
| 30 | 32 | 52 | 52 | 16 | 24.225 | 45.125 | 3,420 | 4,560 | 0.6 | 0.130 | 51206 |
| 30 | 32 | 60 | 60 | 21 | 35.815 | 62.225 | 2,660 | 3,610 | 1.0 | 0.260 | 51306 |
| 30 | 32 | 70 | 70 | 28 | 69.160 | 118.750 | 1,900 | 2,850 | 1.0 | 0.520 | 51406 |
| 35 | 37 | 52 | 52 | 12 | 16.530 | 35.625 | 4,085 | 5,320 | 0.6 | 0.080 | 51107 |
| 35 | 37 | 62 | 62 | 18 | 33.345 | 63.650 | 2,850 | 3,800 | 1.0 | 0.220 | 51207 |
| 35 | 37 | 68 | 68 | 24 | 46.930 | 83.600 | 2,280 | 3,230 | 1.0 | 0.380 | 51307 |
| 35 | 37 | 80 | 80 | 32 | 82.745 | 148.200 | 1,710 | 2,470 | 1.0 | 0.760 | 51407 |
| 40 | 42 | 60 | 60 | 13 | 22.230 | 47.500 | 3,610 | 4,750 | 0.6 | 0.120 | 51108 |
| 40 | 42 | 68 | 68 | 19 | 44.460 | 93.100 | 2,660 | 3,610 | 1.0 | 0.280 | 51208 |
| 40 | 42 | 78 | 78 | 26 | 58.710 | 106.400 | 1,900 | 2,850 | 1.0 | 0.530 | 51308 |
| 40 | 42 | 90 | 90 | 36 | 106.400 | 193.800 | 1,615 | 2,280 | 1.0 | 1.100 | 51408 |
| 45 | 47 | 65 | 65 | 14 | 22.990 | 54.150 | 3,230 | 4,275 | 0.6 | 0.140 | 51109 |
| 45 | 47 | 73 | 73 | 20 | 37.050 | 76.000 | 2,470 | 3,420 | 1.0 | 0.300 | 51209 |
| 45 | 47 | 85 | 85 | 28 | 72.295 | 133.000 | 1,805 | 2,660 | 1.0 | 0.660 | 51309 |
| 45 | 47 | 100 | 100 | 39 | 123.500 | 228.000 | 1,520 | 2,090 | 1.0 | 1.400 | 51409 |
| 50 | 52 | 70 | 70 | 14 | 24.225 | 59.850 | 3,040 | 4,085 | 0.6 | 0.160 | 51110 |
| 50 | 52 | 78 | 78 | 22 | 46.930 | 100.700 | 2,280 | 3,230 | 1.0 | 0.370 | 51210 |



| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|----------------|-----|----------------|----|--------------------|-----------------------|----------------|-------|--------------------|-------|-------------|
| d | D ₁ | D | d ₁ | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | | |
| 50 | 52 | 95 | 95 | 31 | 83.980 | 164.350 | 1,710 | 2,470 | 1.0 | 0.940 | 51310 |
| 50 | 52 | 110 | 110 | 43 | 151.050 | 294.500 | 1,425 | 1,900 | 1.5 | 2.000 | 51410 |
| 55 | 57 | 78 | 78 | 16 | 29.165 | 74.100 | 2,660 | 3,610 | 0.6 | 0.230 | 51111 |
| 55 | 57 | 90 | 90 | 25 | 58.710 | 127.300 | 1,805 | 2,660 | 1.0 | 0.590 | 51211 |
| 55 | 57 | 105 | 105 | 35 | 98.800 | 197.600 | 1,520 | 2,090 | 1.0 | 1.300 | 51311 |
| 55 | 57 | 120 | 120 | 48 | 169.100 | 342.000 | 1,235 | 1,710 | 1.5 | 2.550 | 51411 |
| 60 | 62 | 85 | 85 | 17 | 34.580 | 88.350 | 2,470 | 3,420 | 1.0 | 0.200 | 51112 |
| 60 | 62 | 95 | 95 | 26 | 59.280 | 133.000 | 1,805 | 2,660 | 1.0 | 0.650 | 51212 |
| 60 | 62 | 110 | 110 | 35 | 95.950 | 197.600 | 1,520 | 2,090 | 1.0 | 1.350 | 51312 |
| 60 | 62 | 130 | 130 | 51 | 189.050 | 380.000 | 1,045 | 1,520 | 1.5 | 3.100 | 51412 M |
| 65 | 67 | 90 | 90 | 18 | 3.515 | 93.100 | 2,280 | 3,230 | 1.0 | 0.330 | 51113 |
| 65 | 67 | 100 | 100 | 27 | 6.052 | 142.500 | 1,710 | 2,470 | 1.0 | 0.780 | 51213 |
| 65 | 67 | 115 | 115 | 36 | 100.700 | 209.000 | 1,425 | 1,900 | 1.0 | 1.500 | 51313 |
| 65 | 68 | 140 | 140 | 56 | 205.200 | 427.500 | 950 | 1,425 | 2.0 | 4.000 | 51413 M |
| 70 | 72 | 95 | 95 | 18 | 35.815 | 98.800 | 2,280 | 3,230 | 1.0 | 0.350 | 51114 |
| 70 | 72 | 105 | 105 | 27 | 61.750 | 152.000 | 1,710 | 2,470 | 1.0 | 0.790 | 51214 |
| 70 | 72 | 125 | 125 | 40 | 128.250 | 285.000 | 1,330 | 1,805 | 1.0 | 2.000 | 51314 |
| 70 | 73 | 150 | 150 | 60 | 222.300 | 475.000 | 903 | 1,330 | 2.0 | 5.000 | 51414 M |
| 75 | 77 | 100 | 100 | 19 | 41.990 | 130.150 | 2,090 | 3,040 | 1.0 | 0.400 | 51115 |
| 75 | 77 | 110 | 110 | 27 | 64.220 | 161.500 | 1,615 | 2,280 | 1.0 | 0.830 | 51215 |
| 75 | 77 | 135 | 135 | 44 | 154.850 | 342.000 | 1,140 | 1,615 | 1.5 | 2.600 | 51315 |
| 75 | 78 | 160 | 160 | 65 | 238.450 | 532.000 | 855 | 1,235 | 2.0 | 6.750 | 51415 M |
| 80 | 82 | 105 | 105 | 19 | 42.655 | 133.000 | 1,900 | 2,850 | 1.0 | 0.420 | 51116 |
| 80 | 82 | 115 | 115 | 28 | 72.295 | 180.500 | 1,615 | 2,280 | 1.0 | 0.910 | 51216 |
| 80 | 82 | 140 | 140 | 44 | 151.050 | 342.000 | 1,140 | 1,615 | 1.5 | 2.700 | 51316 |
| 80 | 83 | 170 | 170 | 68 | 256.500 | 589.000 | 808 | 1,140 | 2.0 | 7.950 | 51416 M |
| 85 | 87 | 110 | 110 | 19 | 43.890 | 142.500 | 1,900 | 2,850 | 1.0 | 0.440 | 51117 |
| 85 | 88 | 125 | 125 | 31 | 92.625 | 237.500 | 1,520 | 2,090 | 1.0 | 1.200 | 51217 |
| 85 | 88 | 150 | 150 | 49 | 180.500 | 403.750 | 1,045 | 1,520 | 1.5 | 3.550 | 51317 |
| 85 | 88 | 180 | 177 | 72 | 271.700 | 646.000 | 808 | 1,140 | 2.0 | 9.450 | 51417 M |
| 90 | 92 | 120 | 120 | 22 | 56.240 | 180.500 | 1,710 | 2,470 | 1.0 | 0.670 | 51118 |
| 90 | 93 | 135 | 135 | 35 | 113.050 | 285.000 | 1,425 | 1,900 | 1.0 | 1.700 | 51218 |

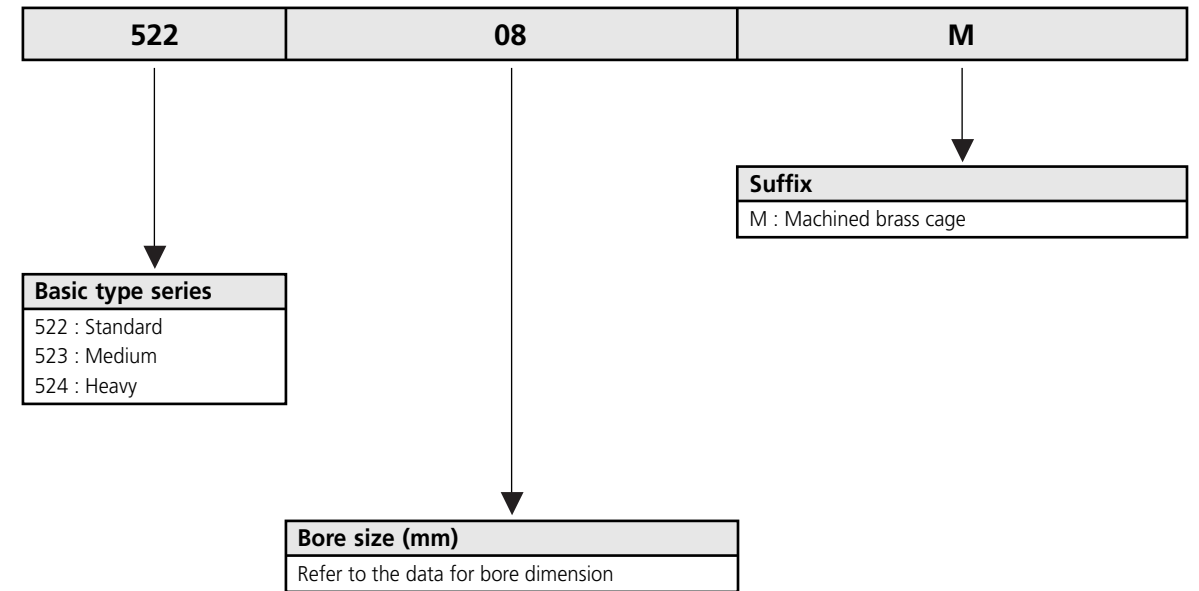


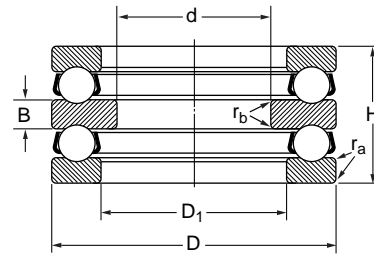
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|----------------|-----|----------------|-----|--------------------|-----------------------|----------------|-------|--------------------|--------|-------------|
| d | D ₁ | D | d ₁ | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | | |
| 90 | 93 | 155 | 155 | 50 | 185.250 | 441.750 | 950 | 1,425 | 1.5 | 3.800 | 51318 |
| 90 | 93 | 190 | 187 | 77 | 291.650 | 712.500 | 760 | 1,045 | 2.0 | 11.000 | 51418 M |
| 100 | 102 | 135 | 135 | 25 | 80.940 | 256.500 | 162 | 2,280 | 1.0 | 0.970 | 51120 |
| 100 | 103 | 150 | 150 | 38 | 117.800 | 304.000 | 1,235 | 1,710 | 1.0 | 2.200 | 51220 |
| 100 | 103 | 170 | 170 | 55 | 217.550 | 532.000 | 903 | 1,330 | 1.5 | 4.950 | 51320 |
| 100 | 103 | 210 | 205 | 85 | 352.450 | 916.750 | 665 | 903 | 2.5 | 15.000 | 51420 M |
| 110 | 112 | 145 | 145 | 25 | 82.745 | 275.500 | 1,520 | 2,090 | 1.0 | 1.050 | 51122 |
| 110 | 113 | 160 | 160 | 38 | 123.500 | 342.000 | 1,140 | 1,615 | 1.0 | 2.400 | 51222 |
| 110 | 113 | 190 | 187 | 63 | 262.200 | 684.000 | 808 | 1,140 | 2.0 | 7.850 | 51322 M |
| 110 | 113 | 230 | 225 | 95 | 389.500 | 1083.000 | 599 | 808 | 2.5 | 20.000 | 51422 M |
| 120 | 122 | 155 | 155 | 25 | 83.980 | 294.500 | 1,520 | 2,090 | 1.0 | 1.150 | 51124 |
| 120 | 123 | 170 | 170 | 39 | 133.000 | 38.000 | 1,045 | 1,520 | 1.0 | 2.650 | 51224 |
| 120 | 123 | 210 | 210 | 70 | 308.750 | 869.250 | 760 | 1,045 | 2.0 | 11.000 | 51324 M |
| 120 | 123 | 250 | 245 | 102 | 401.850 | 1159.000 | 570 | 760 | 3.0 | 25.500 | 51424 M |
| 130 | 132 | 170 | 170 | 30 | 105.450 | 370.500 | 1,330 | 1,805 | 1.0 | 1.850 | 51126 |
| 130 | 133 | 190 | 187 | 45 | 176.700 | 513.000 | 903 | 1,330 | 1.5 | 4.000 | 51226 |
| 130 | 134 | 225 | 220 | 75 | 340.100 | 1007.000 | 713 | 950 | 2.0 | 13.000 | 51326 M |
| 130 | 134 | 270 | 265 | 110 | 494.000 | 1520.000 | 532 | 713 | 3.0 | 32.000 | 51426 M |
| 140 | 142 | 180 | 178 | 31 | 105.450 | 380.000 | 1,235 | 1,710 | 1.0 | 2.050 | 51128 |
| 140 | 143 | 200 | 197 | 46 | 180.500 | 541.500 | 903 | 1,330 | 1.5 | 4.350 | 51228 |
| 140 | 144 | 240 | 235 | 80 | 377.150 | 1159.000 | 665 | 903 | 2.0 | 15.500 | 51328 M |
| 140 | 144 | 280 | 275 | 112 | 494.000 | 1520.000 | 504 | 665 | 3.0 | 34.500 | 51428 M |
| 150 | 152 | 190 | 188 | 31 | 105.450 | 380.000 | 1,140 | 1,615 | 1.0 | 2.200 | 51130 M |
| 150 | 153 | 215 | 212 | 50 | 226.100 | 698.250 | 855 | 1,235 | 1.5 | 6.100 | 51230 M |
| 150 | 154 | 250 | 245 | 80 | 389.500 | 1225.500 | 637 | 855 | 2.0 | 16.500 | 51330 M |
| 150 | 154 | 300 | 295 | 120 | 531.050 | 1710.000 | 475 | 637 | 3.0 | 42.500 | 51430 M |
| 160 | 162 | 200 | 198 | 31 | 106.400 | 403.750 | 1,140 | 1,615 | 1.0 | 2.350 | 51132 M |
| 160 | 163 | 225 | 222 | 51 | 229.900 | 741.000 | 808 | 1,140 | 1.5 | 6.550 | 51232 M |
| 160 | 164 | 270 | 265 | 87 | 426.550 | 1425.000 | 599 | 808 | 2.5 | 21.000 | 51332 M |
| 170 | 172 | 215 | 213 | 34 | 126.350 | 475.000 | 1,045 | 1,520 | 1.0 | 3.300 | 51134 M |
| 170 | 173 | 240 | 237 | 55 | 271.700 | 883.500 | 760 | 1,045 | 1.5 | 8.150 | 51234 M |
| 170 | 174 | 280 | 275 | 87 | 444.600 | 1520.000 | 570 | 760 | 2.5 | 22.000 | 51334 M |



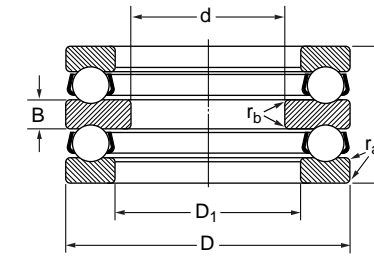
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | Designation |
|------------------|----------------|-----|----------------|-----|--------------------|-----------------------|----------------|-------|--------------------|--------|-------------|
| d | D ₁ | D | d ₁ | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | | |
| 180 | 183 | 225 | 222 | 34 | 128.250 | 503.500 | 950 | 1,425 | 1.0 | 3.500 | 51136 M |
| 180 | 183 | 250 | 245 | 56 | 281.200 | 950.000 | 760 | 1,045 | 1.5 | 8.600 | 51236 M |
| 180 | 184 | 300 | 295 | 95 | 494.000 | 1738.500 | 532 | 713 | 2.5 | 28.500 | 51336 M |
| 190 | 193 | 240 | 237 | 37 | 163.400 | 622.250 | 903 | 1,330 | 1.0 | 4.050 | 51138 M |
| 190 | 194 | 270 | 265 | 62 | 315.400 | 1102.000 | 713 | 950 | 2.0 | 12.000 | 51238 M |
| 200 | 203 | 250 | 247 | 37 | 159.600 | 622.250 | 903 | 1,330 | 1.0 | 4.250 | 51140 M |
| 200 | 204 | 280 | 275 | 62 | 321.100 | 1159.000 | 713 | 950 | 2.0 | 12.000 | 51240 M |
| 200 | 205 | 340 | 335 | 110 | 592.800 | 2280.000 | 456 | 599 | 3.0 | 44.500 | 51340 M |
| 220 | 223 | 270 | 267 | 37 | 169.100 | 698.250 | 855 | 1,235 | 1.0 | 4.600 | 51144 M |
| 220 | 224 | 300 | 295 | 63 | 333.450 | 1254.000 | 665 | 903 | 2.0 | 13.000 | 51244 M |
| 240 | 243 | 300 | 297 | 45 | 222.300 | 916.750 | 760 | 1,045 | 1.5 | 7.550 | 51148 M |
| 240 | 244 | 340 | 335 | 78 | 438.900 | 1767.000 | 570 | 760 | 2.0 | 23.000 | 51248 M |
| 260 | 263 | 320 | 317 | 45 | 226.100 | 969.000 | 760 | 1,045 | 1.5 | 8.100 | 51152 M |
| 260 | 264 | 360 | 355 | 79 | 451.250 | 1900.000 | 532 | 713 | 2.0 | 25.000 | 51252 M |
| 280 | 283 | 350 | 347 | 53 | 303.050 | 1273.000 | 665 | 903 | 1.5 | 12.000 | 51156 M |
| 280 | 284 | 380 | 375 | 80 | 469.300 | 2052.000 | 532 | 713 | 2.0 | 26.500 | 51256 M |
| 300 | 304 | 380 | 376 | 62 | 345.800 | 1520.000 | 599 | 808 | 2.0 | 17.500 | 51160 M |
| 300 | 304 | 420 | 415 | 95 | 574.750 | 2612.500 | 456 | 599 | 2.5 | 42.000 | 51260 M |
| 320 | 324 | 400 | 396 | 63 | 352.450 | 1615.000 | 570 | 760 | 2.0 | 19.000 | 51164 M |
| 320 | 325 | 440 | 435 | 95 | 543.400 | 2565.000 | 428 | 570 | 2.5 | 45.500 | 51264 M |
| 340 | 344 | 420 | 416 | 64 | 358.150 | 1710.000 | 570 | 760 | 2.0 | 20.500 | 51168 M |
| 340 | 345 | 460 | 455 | 96 | 574.750 | 2755.000 | 428 | 570 | 2.5 | 48.500 | 51268 M |
| 360 | 364 | 440 | 436 | 65 | 370.500 | 1805.000 | 532 | 713 | 2.0 | 22.000 | 51172 M |
| 360 | 365 | 500 | 495 | 110 | 703.950 | 3610.000 | 380 | 504 | 3.0 | 70.000 | 51272 M |
| 380 | 384 | 460 | 456 | 65 | 377.150 | 1900.000 | 532 | 713 | 2.0 | 23.000 | 51176 M |
| 380 | 385 | 520 | 515 | 112 | 691.600 | 3610.000 | 361 | 475 | 3.0 | 73.000 | 51276 M |
| 400 | 404 | 480 | 476 | 65 | 382.850 | 2014.000 | 504 | 665 | 2.0 | 24.000 | 51180 M |
| 420 | 424 | 500 | 496 | 65 | 389.500 | 2090.000 | 504 | 665 | 2.0 | 25.500 | 51184 M |
| 440 | 444 | 540 | 536 | 80 | 500.650 | 2850.000 | 428 | 570 | 2.0 | 42.000 | 51188 M |
| 460 | 464 | 560 | 556 | 80 | 500.650 | 2850.000 | 428 | 570 | 2.0 | 43.500 | 51192 M |
| 480 | 484 | 580 | 576 | 80 | 513.000 | 3087.500 | 409 | 532 | 2.0 | 45.500 | 51196 M |

Prefix & Suffix



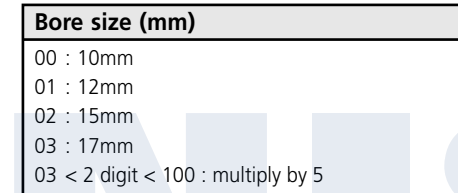
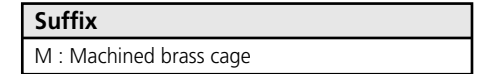
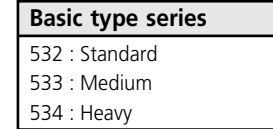
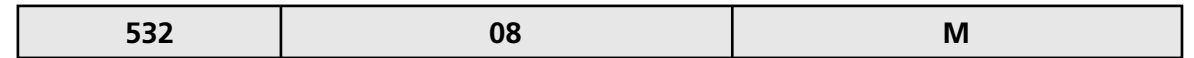


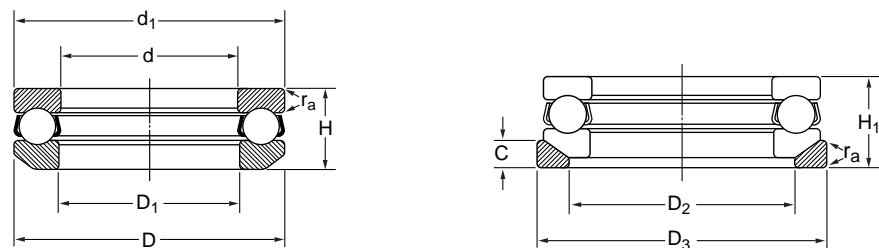
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|----------------|-----|----|----|--------------------|--------------------------|----------------|-------|-----------------------|-----------------------|-------|-------------|
| d | D ₁ | D | H | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | r _b max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 10 | 17 | 32 | 22 | 5 | 15.675 | 23.750 | 5,035 | 6,650 | 0.6 | 0.3 | 0.081 | 52202 |
| 15 | 22 | 40 | 26 | 6 | 21.375 | 35.625 | 4,275 | 5,700 | 0.6 | 0.3 | 0.150 | 52204 |
| 20 | 27 | 47 | 28 | 7 | 26.220 | 47.500 | 3,800 | 5,035 | 0.6 | 0.3 | 0.220 | 52205 |
| 20 | 27 | 52 | 34 | 8 | 32.775 | 52.250 | 3,230 | 4,275 | 1.0 | 0.3 | 0.330 | 52305 |
| 20 | 32 | 70 | 52 | 12 | 69.160 | 118.750 | 1,900 | 2,850 | 1.0 | 0.6 | 1.000 | 52406 |
| 25 | 32 | 52 | 29 | 7 | 24.225 | 45.125 | 3,420 | 4,560 | 0.6 | 0.3 | 0.250 | 52206 |
| 25 | 32 | 60 | 38 | 9 | 35.815 | 62.225 | 2,660 | 3,610 | 1.0 | 0.3 | 0.470 | 52306 |
| 25 | 37 | 80 | 59 | 14 | 82.745 | 148.200 | 1,710 | 2,470 | 1.0 | 0.6 | 1.450 | 52407 |
| 30 | 37 | 62 | 34 | 8 | 33.345 | 63.650 | 2,850 | 3,800 | 1.0 | 0.3 | 0.410 | 52207 |
| 30 | 42 | 68 | 36 | 9 | 44.460 | 93.100 | 2,660 | 3,610 | 1.0 | 0.6 | 0.550 | 52208 |
| 30 | 37 | 68 | 44 | 10 | 46.930 | 83.600 | 2,280 | 3,230 | 1.0 | 0.3 | 0.680 | 52307 |
| 30 | 42 | 78 | 49 | 12 | 58.710 | 106.400 | 1,900 | 2,850 | 1.0 | 0.6 | 1.050 | 52308 |
| 30 | 42 | 90 | 65 | 15 | 106.400 | 193.800 | 1,615 | 2,280 | 1.0 | 0.6 | 2.050 | 52408 |
| 35 | 47 | 73 | 37 | 9 | 37.050 | 76.000 | 2,470 | 3,420 | 1.0 | 0.6 | 0.600 | 52209 |
| 35 | 47 | 85 | 52 | 12 | 72.295 | 133.000 | 1,805 | 2,660 | 1.0 | 0.6 | 1.250 | 52309 |
| 35 | 47 | 100 | 72 | 17 | 123.500 | 228.000 | 1,520 | 2,090 | 1.0 | 0.6 | 2.700 | 52409 |
| 40 | 52 | 78 | 39 | 9 | 46.930 | 100.700 | 2,280 | 3,230 | 1.0 | 0.6 | 0.710 | 52210 |
| 40 | 52 | 95 | 58 | 14 | 83.980 | 164.350 | 1,710 | 2,470 | 1.0 | 0.6 | 1.750 | 52310 |
| 45 | 57 | 90 | 45 | 10 | 58.710 | 127.300 | 1,805 | 2,660 | 1.0 | 0.6 | 1.100 | 52211 |
| 45 | 57 | 105 | 64 | 15 | 98.800 | 197.600 | 1,520 | 2,090 | 1.0 | 0.6 | 2.400 | 52311 |
| 45 | 57 | 120 | 87 | 20 | 169.100 | 342.000 | 1,235 | 1,710 | 1.5 | 0.6 | 4.700 | 52411 |
| 50 | 62 | 95 | 46 | 10 | 59.280 | 133.000 | 1,805 | 2,660 | 1.0 | 0.6 | 1.200 | 52212 |
| 50 | 62 | 110 | 64 | 15 | 95.950 | 197.600 | 1,520 | 2,090 | 1.0 | 0.8 | 2.550 | 52312 |
| 50 | 62 | 130 | 93 | 21 | 189.050 | 380.000 | 1,045 | 1,520 | 1.5 | 0.6 | 6.350 | 52412 M |
| 55 | 67 | 100 | 47 | 10 | 60.515 | 142.500 | 1,710 | 2,470 | 1.0 | 0.6 | 1.350 | 52213 |
| 55 | 67 | 115 | 65 | 15 | 100.700 | 209.000 | 1,425 | 1,900 | 1.0 | 0.6 | 2.750 | 52313 |
| 55 | 72 | 125 | 72 | 16 | 128.250 | 285.000 | 1,330 | 1,805 | 1.0 | 1.0 | 3.650 | 52314 |
| 60 | 77 | 110 | 47 | 10 | 64.220 | 161.500 | 1,615 | 2,280 | 1.0 | 1.0 | 1.550 | 52215 |
| 60 | 77 | 135 | 79 | 18 | 154.850 | 342.000 | 1,140 | 1,615 | 1.5 | 1.0 | 4.800 | 52315 |
| 65 | 82 | 115 | 48 | 10 | 72.295 | 180.500 | 1,615 | 2,280 | 1.0 | 1.0 | 1.700 | 52216 |
| 65 | 82 | 140 | 79 | 18 | 151.050 | 342.000 | 1,140 | 1,615 | 1.5 | 1.0 | 4.940 | 52316 |
| 70 | 88 | 125 | 55 | 12 | 92.625 | 237.500 | 1,520 | 2,090 | 1.0 | 1.0 | 2.400 | 52217 |



| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | Designation |
|------------------|----------------|-----|-----|----|--------------------|--------------------------|----------------|-------|-----------------------|-----------------------|--------|-------------|
| d | D ₁ | D | H | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | r _b max | kg | |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | | |
| 75 | 93 | 135 | 62 | 14 | 113.050 | 285.000 | 1,425 | 1,900 | 1.0 | 1.0 | 3.200 | 52218 |
| 85 | 103 | 150 | 67 | 15 | 117.800 | 304.000 | 1,235 | 1,710 | 1.0 | 1.0 | 4.200 | 52220 |
| 85 | 103 | 170 | 97 | 21 | 217.550 | 532.000 | 903 | 1,330 | 1.5 | 1.0 | 8.950 | 52320 |
| 95 | 113 | 160 | 67 | 15 | 123.500 | 342.000 | 1,140 | 1,615 | 1.0 | 1.0 | 4.650 | 52222 |
| 100 | 123 | 170 | 68 | 15 | 133.000 | 380.000 | 1,045 | 1,520 | 1.0 | 1.0 | 5.250 | 52224 |
| 100 | 123 | 210 | 123 | 27 | 308.750 | 869.250 | 760 | 1,045 | 2.0 | 1.0 | 19.500 | 52324 |
| 110 | 133 | 190 | 80 | 18 | 176.700 | 513.000 | 903 | 1,330 | 1.5 | 1.0 | 8.000 | 52226 |
| 120 | 143 | 200 | 81 | 18 | 180.500 | 541.500 | 903 | 1,330 | 1.5 | 1.0 | 8.650 | 52228 |
| 130 | 153 | 215 | 89 | 20 | 226.100 | 698.250 | 855 | 1,235 | 1.5 | 1.0 | 11.500 | 52230 M |
| 130 | 154 | 250 | 140 | 31 | 389.500 | 1225.500 | 637 | 855 | 2.0 | 1.0 | 27.000 | 52330 M |
| 140 | 163 | 225 | 90 | 20 | 229.900 | 741.000 | 808 | 1,140 | 1.5 | 1.0 | 12.000 | 52232 M |
| 150 | 173 | 240 | 97 | 21 | 271.700 | 883.500 | 760 | 1,045 | 1.5 | 1.0 | 15.000 | 52234 M |
| 150 | 183 | 250 | 98 | 21 | 281.200 | 950.000 | 760 | 1,045 | 1.5 | 2.0 | 16.000 | 52236 M |

■ Prefix & Suffix

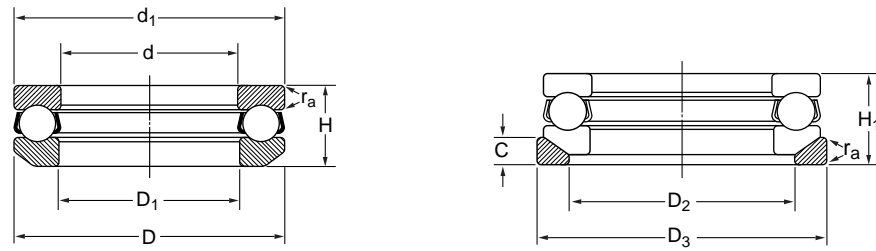




| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | |
|------------------|----------------|-----|----------------|------|--------------------|-----------------------|----------------|-------|--------------------|---------|----------------|
| d | D ₁ | D | d ₁ | H | Dynamic C | Static C ₀ | Grease | Oil | r _a max | Bearing | Seating washer |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | kg | kg |
| 12 | 14 | 28 | 28 | 11.4 | 12.635 | 18.050 | 5,700 | 7,600 | 0.6 | 0.033 | 0.012 |
| 15 | 17 | 32 | 32 | 13.3 | 15.675 | 23.750 | 5,035 | 6,650 | 0.6 | 0.049 | 0.014 |
| 17 | 19 | 35 | 35 | 13.2 | 16.340 | 26.125 | 4,750 | 6,365 | 0.6 | 0.056 | 0.015 |
| 20 | 22 | 40 | 40 | 14.7 | 21.375 | 35.625 | 4,275 | 5,700 | 0.6 | 0.082 | 0.020 |
| 25 | 27 | 47 | 47 | 16.7 | 26.220 | 47.500 | 3,800 | 5,035 | 0.6 | 0.120 | 0.032 |
| 30 | 32 | 52 | 52 | 17.8 | 24.225 | 45.125 | 3,420 | 4,560 | 0.6 | 0.140 | 0.038 |
| 30 | 32 | 60 | 60 | 22.6 | 35.815 | 62.225 | 2,660 | 3,610 | 1.0 | 0.270 | 0.056 |
| 35 | 37 | 62 | 62 | 19.9 | 33.345 | 63.650 | 2,850 | 3,800 | 1.0 | 0.220 | 0.057 |
| 35 | 37 | 68 | 68 | 25.6 | 46.930 | 83.600 | 2,280 | 3,230 | 1.0 | 0.380 | 0.084 |
| 40 | 42 | 68 | 68 | 20.3 | 44.460 | 93.100 | 2,660 | 3,610 | 1.0 | 0.280 | 0.070 |
| 40 | 42 | 78 | 78 | 28.5 | 58.710 | 106.400 | 1,900 | 2,850 | 1.0 | 0.550 | 0.120 |
| 40 | 42 | 90 | 90 | 38.2 | 106.400 | 193.800 | 1,615 | 2,280 | 1.0 | 1.100 | 0.250 |
| 45 | 47 | 73 | 73 | 21.3 | 37.050 | 76.000 | 2,470 | 3,420 | 1.0 | 0.300 | 0.087 |
| 45 | 47 | 85 | 85 | 30.1 | 72.295 | 133.000 | 1,805 | 2,660 | 1.0 | 0.660 | 0.170 |
| 45 | 47 | 100 | 100 | 42.4 | 123.500 | 228.000 | 1,520 | 1,900 | 1.0 | 1.450 | 0.320 |
| 50 | 52 | 78 | 78 | 23.5 | 46.930 | 100.700 | 2,280 | 3,230 | 1.0 | 0.370 | 0.100 |
| 50 | 52 | 95 | 95 | 34.4 | 83.980 | 164.350 | 1,710 | 2,470 | 1.0 | 0.970 | 0.230 |
| 50 | 52 | 110 | 110 | 45.6 | 151.050 | 294.500 | 1,425 | 1,900 | 1.5 | 1.900 | 0.410 |
| 55 | 57 | 90 | 90 | 27.3 | 58.710 | 127.300 | 1,805 | 2,660 | 1.0 | 0.600 | 0.150 |
| 55 | 57 | 105 | 105 | 39.3 | 98.800 | 197.600 | 1,520 | 2,090 | 1.0 | 1.400 | 0.280 |
| 60 | 62 | 95 | 95 | 28 | 59.280 | 133.000 | 1,805 | 2,660 | 1.0 | 0.660 | 0.160 |
| 60 | 62 | 110 | 110 | 38.3 | 95.950 | 197.600 | 1,520 | 2,090 | 1.0 | 1.400 | 0.310 |
| 60 | 62 | 130 | 130 | 54 | 189.050 | 380.000 | 1,045 | 1,520 | 1.5 | 3.100 | 0.710 |
| 65 | 67 | 100 | 100 | 28.7 | 60.515 | 142.500 | 1,710 | 2,470 | 1.0 | 0.730 | 0.180 |
| 65 | 67 | 115 | 115 | 39.4 | 100.700 | 209.000 | 1,425 | 1,900 | 1.0 | 1.550 | 0.340 |
| 70 | 72 | 105 | 105 | 28.8 | 61.750 | 152.000 | 1,710 | 2,470 | 1.0 | 0.780 | 0.190 |
| 70 | 72 | 125 | 125 | 44.2 | 128.250 | 285.000 | 1,330 | 1,805 | 1.0 | 2.100 | 0.410 |
| 70 | 73 | 150 | 150 | 63.6 | 222.300 | 475.000 | 903 | 1,330 | 2.0 | 5.500 | 1.000 |
| 75 | 77 | 110 | 110 | 28.3 | 64.220 | 161.500 | 1,615 | 2,280 | 1.0 | 0.810 | 0.210 |
| 75 | 77 | 135 | 135 | 48.1 | 154.850 | 342.000 | 1,140 | 1,615 | 1.5 | 2.650 | 0.550 |
| 75 | 78 | 160 | 160 | 69 | 238.450 | 532.000 | 855 | 1,235 | 2.0 | 6.850 | 1.250 |
| 80 | 82 | 115 | 115 | 29.5 | 72.295 | 180.500 | 1,615 | 2,280 | 1.0 | 0.900 | 0.220 |

| Designation | | Secondary Dimensions | | | |
|-------------|----------------|----------------------|----------------|------|----------------|
| Bearing | Seating washer | D ₂ | D ₃ | C | H ₁ |
| 53201 | U 201 | 20 | 30 | 3.5 | 13 |
| 53202 | U 202 | 24 | 35 | 4 | 15 |
| 53203 | U 203 | 26 | 38 | 4 | 15 |
| 53204 | U 204 | 30 | 42 | 5 | 17 |
| 53205 | U 205 | 36 | 50 | 5.5 | 19 |
| 53206 | U 206 | 42 | 55 | 5.5 | 20 |
| 53306 | U 306 | 45 | 62 | 7 | 25 |
| 53207 | U 207 | 48 | 65 | 7 | 22 |
| 53307 | U 307 | 52 | 72 | 7.5 | 28 |
| 53208 | U 208 | 55 | 72 | 7 | 23 |
| 53308 | U 308 | 60 | 82 | 8.5 | 31 |
| 53408 | U 408 | 65 | 95 | 12 | 42 |
| 53209 | U 209 | 60 | 78 | 7.5 | 24 |
| 53309 | U 309 | 65 | 90 | 10 | 33 |
| 53409 | U 409 | 72 | 105 | 12.5 | 46 |
| 53210 | U 210 | 62 | 82 | 7.5 | 26 |
| 53310 | U 310 | 72 | 100 | 11 | 37 |
| 53410 | U 410 | 80 | 115 | 14 | 50 |
| 53211 | U 211 | 72 | 95 | 9 | 30 |
| 53311 | U 311 | 80 | 110 | 11.5 | 42 |
| 53212 | U 212 | 78 | 100 | 9 | 31 |
| 53312 | U 312 | 85 | 115 | 11.5 | 42 |
| 53412 | U 412 | 95 | 135 | 16 | 58 |
| 53213 | U 213 | 82 | 105 | 9 | 32 |
| 53313 | U 313 | 90 | 120 | 12.5 | 43 |
| 53214 | U 214 | 88 | 110 | 9 | 32 |
| 53314 | U 314 | 98 | 130 | 13 | 48 |
| 53414 | U 414 | 110 | 155 | 19.5 | 69 |
| 53215 | U 215 | 92 | 115 | 9.5 | 32 |
| 53315 | U 315 | 105 | 140 | 15 | 52 |
| 53415 | U 415 | 115 | 165 | 21 | 75 |
| 53216 | U 216 | 98 | 120 | 10 | 33 |





| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass | |
|------------------|----------------|-----|----------------|------|--------------------|-----------------------|----------------|-------|--------------------|---------|----------------|
| d | D ₁ | D | d ₁ | H | Dynamic C | Static C ₀ | Grease | Oil | r _a max | Bearing | Seating washer |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | kg | kg |
| 80 | 82 | 140 | 140 | 47.6 | 151.050 | 342.000 | 1,140 | 1,615 | 1.5 | 2.750 | 0.570 |
| 80 | 83 | 170 | 170 | 72.2 | 256.500 | 589.000 | 808 | 1,140 | 2.0 | 8.000 | 1.400 |
| 85 | 88 | 125 | 125 | 33.1 | 92.625 | 237.500 | 1,520 | 2,090 | 1.0 | 1.200 | 0.290 |
| 85 | 88 | 150 | 150 | 53.1 | 180.500 | 403.750 | 1,045 | 1,520 | 1.5 | 3.550 | 0.810 |
| 90 | 93 | 135 | 135 | 38.5 | 113.050 | 285.000 | 1,425 | 1,900 | 1.0 | 1.700 | 0.420 |
| 90 | 93 | 155 | 155 | 54.6 | 185.250 | 441.750 | 950 | 1,425 | 1.5 | 3.850 | 0.840 |
| 90 | 93 | 190 | 187 | 81.2 | 291.650 | 712.500 | 760 | 1,045 | 2.0 | 11.000 | 1.900 |
| 100 | 103 | 150 | 150 | 40.9 | 117.800 | 304.000 | 1,235 | 1,710 | 1.0 | 2.200 | 0.500 |
| 100 | 103 | 170 | 170 | 59.2 | 217.550 | 532.000 | 903 | 1,330 | 1.5 | 5.000 | 0.950 |
| 100 | 103 | 210 | 205 | 90 | 352.450 | 916.750 | 665 | 903 | 2.5 | 15.000 | 2.900 |
| 110 | 113 | 160 | 160 | 40.2 | 123.500 | 342.000 | 1,140 | 1,615 | 1.0 | 2.350 | 0.560 |
| 110 | 113 | 190 | 187 | 67.2 | 262.200 | 684.000 | 808 | 1,140 | 2.0 | 7.800 | 1.300 |
| 120 | 123 | 170 | 170 | 40.8 | 133.000 | 380.000 | 1,045 | 1,520 | 1.0 | 2.550 | 0.650 |
| 120 | 123 | 210 | 205 | 74.1 | 308.750 | 869.250 | 760 | 1,045 | 2.0 | 10.500 | 2.000 |
| 130 | 133 | 190 | 187 | 47.9 | 176.700 | 513.000 | 903 | 1,330 | 1.5 | 3.950 | 0.900 |
| 140 | 143 | 200 | 197 | 48.6 | 180.500 | 541.500 | 903 | 1,330 | 1.5 | 4.250 | 1.200 |

| Designation | | Secondary Dimensions | | | |
|-------------|----------------|----------------------|----------------|------|----------------|
| Bearing | Seating washer | D ₂ | D ₃ | C | H ₁ |
| 53316 | U 316 | 110 | 145 | 15 | 52 |
| 53416 | U 416 | 125 | 175 | 22 | 78 |
| 53217 | U 217 | 105 | 130 | 11 | 37 |
| 53317 | U 317 | 115 | 155 | 17.5 | 58 |
| 53218 | U 218 | 110 | 140 | 13.5 | 42 |
| 53318 | U 318 | 120 | 160 | 18 | 59 |
| 53418 | U 418 | 140 | 195 | 25.5 | 88 |
| 53220 | U 220 | 125 | 155 | 14 | 45 |
| 53320 | U 320 | 135 | 175 | 18 | 64 |
| 53420 | U 420 | 155 | 220 | 27 | 98 |
| 53222 | U 222 | 135 | 165 | 14 | 45 |
| 53322 | U 322 | 150 | 195 | 20.5 | 72 |
| 53224 | U 224 | 145 | 175 | 15 | 46 |
| 53324 | U 324 | 165 | 220 | 22 | 80 |
| 53226 | U 226 | 160 | 195 | 17 | 53 |
| 53228 | U 228 | 170 | 210 | 17 | 55 |



7.03

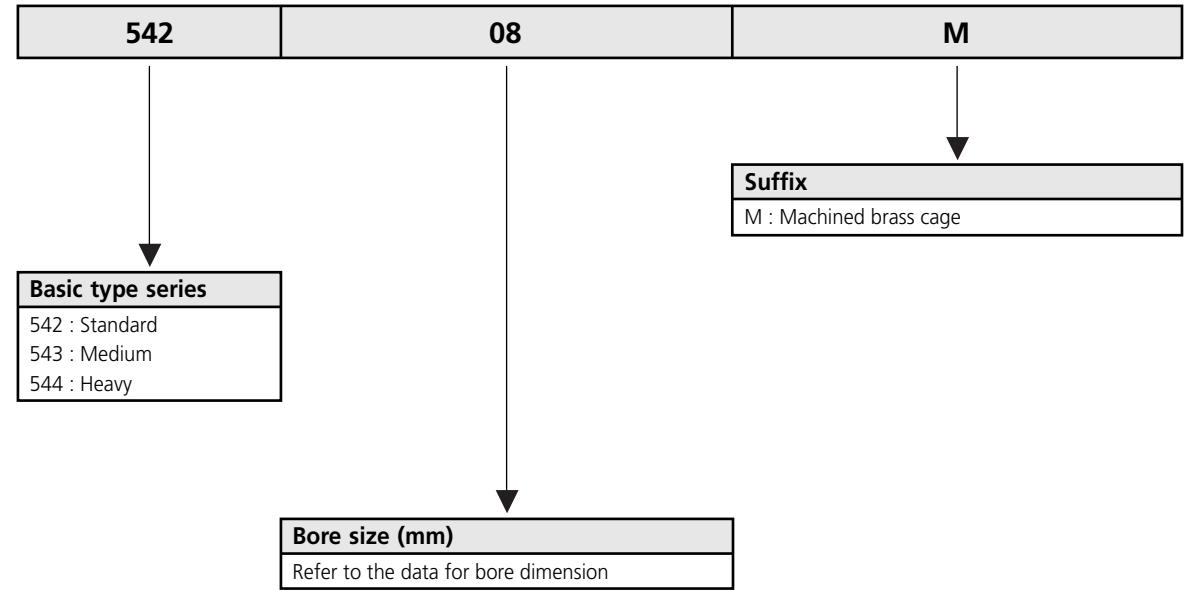
7.03

NIS™

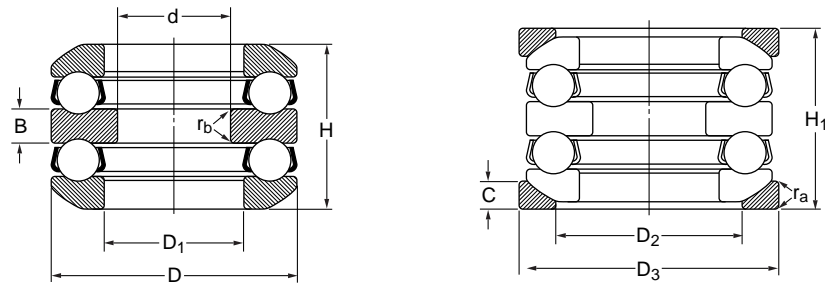
NIS™

Double Direction Thrust Ball Bearings with Aligning Seat

■ Prefix & Suffix



NIS™



| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | | Mass | |
|------------------|----------------|-----|-------|----|--------------------|--------------------------|----------------|-------|-----------------------|-----------------------|---------|-------------------|
| d | D ₁ | D | H | B | Dynamic C | Static C ₀ | Grease | Oil | r _a max | r _b max | Bearing | Seating washer |
| mm | mm | mm | mm | mm | kN | kN | r/min | r/min | mm | mm | kg | kg |
| 25 | 32 | 60 | 41.3 | 9 | 35.815 | 62.225 | 2,660 | 3,610 | 1.0 | 0.3 | 0.470 | 0.056 |
| 30 | 37 | 62 | 37.8 | 8 | 33.345 | 63.650 | 2,850 | 3,800 | 1.0 | 0.3 | 0.420 | 0.057 |
| 30 | 42 | 68 | 38.6 | 9 | 44.460 | 93.100 | 2,660 | 3,610 | 1.0 | 0.6 | 0.560 | 0.070 |
| 30 | 37 | 68 | 47.2 | 10 | 46.930 | 83.600 | 2,280 | 3,230 | 1.0 | 0.3 | 0.680 | 0.084 |
| 30 | 42 | 78 | 54.1 | 12 | 58.710 | 106.400 | 1,900 | 2,850 | 1.0 | 0.6 | 1.050 | 0.120 |
| 35 | 47 | 85 | 56.3 | 12 | 72.295 | 133.000 | 1,805 | 2,660 | 1.0 | 0.6 | 1.250 | 0.170 |
| 35 | 47 | 100 | 78.9 | 17 | 123.500 | 228.000 | 1,520 | 2,090 | 1.0 | 0.6 | 2.700 | 0.320 |
| 40 | 52 | 95 | 64.7 | 14 | 83.980 | 164.350 | 1,710 | 2,470 | 1.0 | 0.6 | 1.850 | 0.230 |
| 40 | 52 | 110 | 83.2 | 18 | 151.050 | 294.500 | 1,425 | 1,900 | 1.5 | 0.6 | 3.550 | 0.460 |
| 45 | 57 | 90 | 49.6 | 10 | 58.710 | 127.300 | 1,805 | 2,660 | 1.0 | 0.6 | 1.150 | 0.150 |
| 50 | 62 | 110 | 70.7 | 15 | 95.950 | 197.600 | 1,520 | 2,090 | 1.0 | 0.6 | 2.600 | 0.310 |
| 65 | 82 | 140 | 86.1 | 18 | 151.050 | 342.000 | 1,140 | 1,615 | 1.5 | 1.0 | 5.050 | 0.570 |
| 65 | 83 | 170 | 128.5 | 27 | 256.500 | 589.000 | 808 | 1,140 | 2.0 | 1.0 | 14.000 | 1.400 |
| 70 | 88 | 150 | 92.5 | 19 | 180.500 | 403.750 | 1,045 | 1,520 | 1.5 | 1.0 | 6.350 | 0.810 |
| 80 | 103 | 210 | 159.9 | 33 | 352.450 | 916.750 | 665 | 903 | 2.5 | 1.0 | 26.000 | 2.900 |

| Designation | | Secondary Dimensions | | | |
|-------------|-------------------|----------------------|----------------|------|----------------|
| Bearing | Seating washer | D ₂ | D ₃ | C | H ₁ |
| 54306 | U 306 | 45 | 62 | 7 | 46 |
| 54207 | U 207 | 48 | 65 | 7 | 42 |
| 54208 | U 208 | 55 | 72 | 7 | 44 |
| 54307 | U 307 | 52 | 72 | 7.5 | 52 |
| 54308 | U 308 | 60 | 82 | 8.5 | 59 |
| 54309 | U 309 | 65 | 90 | 10 | 62 |
| 54409 | U 409 | 72 | 105 | 12.5 | 86 |
| 54310 | U 310 | 72 | 100 | 11 | 70 |
| 54410 | U 410 | 80 | 115 | 14 | 92 |
| 54211 | U 211 | 72 | 95 | 9 | 55 |
| 54312 | U 312 | 85 | 115 | 11.5 | 78 |
| 54316 | U 316 | 110 | 145 | 15 | 95 |
| 54416 | U 416 | 125 | 175 | 22 | 140 |
| 54317 | U 317 | 115 | 155 | 17.5 | 105 |
| 54420 | U 420 | 155 | 220 | 27 | 176 |



7.04

7.04

NIS™

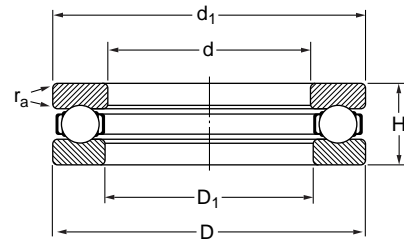
■ Prefix & Suffix



Basic type series
O : Standard

Bore size (inch)
Bore size is 1/8th of an inch.
e.g. 18 = 18/8 = 2.1/4"

NIS™

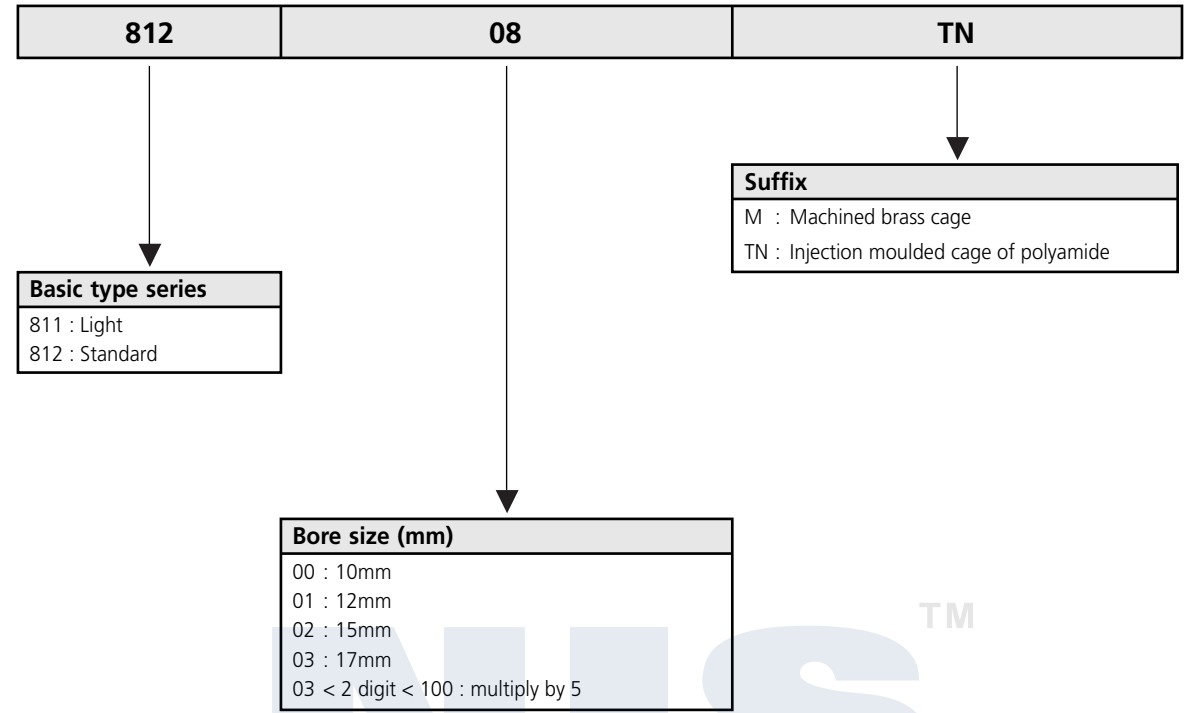


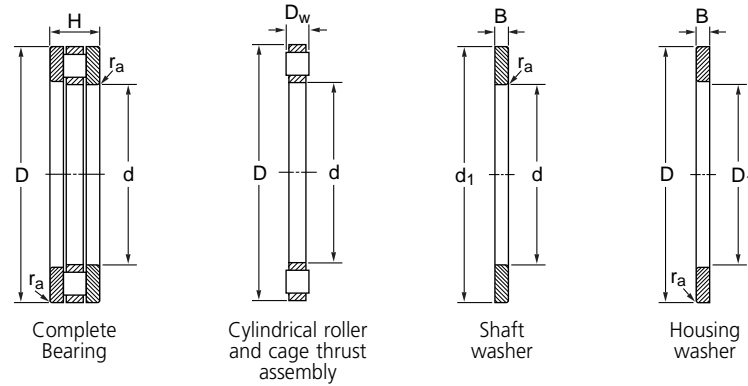
| Basic Dimensions | | | | | | | | | | Basic Load Ratings | |
|------------------|---------|----------------|---------|-------|---------|----------------|---------|-------|--------|--------------------|----------------|
| d | | D ₁ | | D | | d ₁ | | H | | Dynamic | Static |
| inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | C | C ₀ |
| | | | | | | | | | | kN | kN |
| 0.625 | 15.875 | 0.641 | 16.281 | 1.406 | 35.712 | 1.375 | 34.925 | 0.625 | 15.875 | 15.200 | 23.750 |
| 0.750 | 19.050 | 0.766 | 19.456 | 1.531 | 38.887 | 1.500 | 38.100 | 0.625 | 15.875 | 16.435 | 28.500 |
| 0.875 | 22.225 | 0.891 | 22.631 | 1.656 | 42.062 | 1.625 | 41.275 | 0.625 | 15.875 | 16.720 | 30.875 |
| 1.000 | 25.400 | 1.016 | 25.806 | 1.781 | 45.237 | 1.750 | 44.450 | 0.625 | 15.875 | 17.385 | 33.725 |
| 1.125 | 28.575 | 1.141 | 28.981 | 1.906 | 48.412 | 1.875 | 47.625 | 0.625 | 15.875 | 18.335 | 38.000 |
| 1.250 | 31.750 | 1.266 | 32.156 | 2.094 | 53.181 | 2.063 | 52.400 | 0.719 | 18.256 | 21.280 | 44.175 |
| 1.375 | 34.925 | 1.391 | 35.322 | 2.219 | 56.356 | 2.188 | 55.563 | 0.719 | 18.256 | 21.660 | 46.550 |
| 1.500 | 38.100 | 1.516 | 38.497 | 2.344 | 59.531 | 2.313 | 58.738 | 0.719 | 18.256 | 22.800 | 53.200 |
| 1.625 | 41.275 | 1.641 | 41.672 | 2.469 | 62.706 | 2.438 | 61.913 | 0.719 | 18.256 | 20.140 | 50.350 |
| 1.750 | 44.450 | 1.766 | 44.847 | 2.688 | 68.263 | 2.656 | 67.469 | 0.750 | 19.050 | 23.750 | 58.900 |
| 1.875 | 47.625 | 1.891 | 48.022 | 2.813 | 71.438 | 2.781 | 70.644 | 0.750 | 19.050 | 26.600 | 67.450 |
| 2.000 | 50.800 | 2.031 | 51.594 | 2.969 | 75.406 | 2.938 | 74.613 | 0.750 | 19.050 | 27.550 | 71.250 |
| 2.250 | 57.150 | 2.281 | 57.944 | 3.344 | 84.931 | 3.313 | 84.138 | 0.875 | 22.225 | 38.475 | 98.800 |
| 2.375 | 60.325 | 2.406 | 61.119 | 3.594 | 91.281 | 3.563 | 90.488 | 1.000 | 25.400 | 44.175 | 115.900 |
| 2.500 | 63.500 | 2.531 | 64.294 | 3.719 | 94.456 | 3.688 | 93.663 | 1.000 | 25.400 | 45.125 | 120.650 |
| 2.750 | 69.850 | 2.781 | 70.644 | 4.031 | 102.394 | 4.000 | 101.600 | 1.000 | 25.400 | 55.575 | 152.000 |
| 2.875 | 73.025 | 2.906 | 73.819 | 4.156 | 105.569 | 4.125 | 104.775 | 1.000 | 25.400 | 57.000 | 157.700 |
| 3.000 | 76.200 | 3.063 | 77.788 | 4.375 | 111.125 | 4.313 | 109.538 | 1.125 | 28.575 | 57.000 | 157.700 |
| 3.500 | 88.900 | 3.563 | 90.488 | 5.063 | 128.588 | 5.000 | 127.000 | 1.250 | 31.750 | 77.425 | 224.200 |
| 4.000 | 101.600 | 4.063 | 103.188 | 5.813 | 147.638 | 5.750 | 146.050 | 1.375 | 34.925 | 95.000 | 285.000 |
| 4.500 | 114.300 | 4.563 | 115.888 | 6.563 | 166.688 | 6.500 | 165.100 | 1.750 | 44.450 | 133.000 | 394.250 |
| 5.000 | 127.000 | 5.063 | 128.588 | 7.313 | 185.738 | 7.250 | 184.150 | 2.000 | 50.800 | 157.700 | 484.500 |
| 5.500 | 139.700 | 5.563 | 141.288 | 8.063 | 204.788 | 8.000 | 203.200 | 2.188 | 55.563 | 190.000 | 570.000 |

| Limiting Speed | | Chamfer Dimension | Mass | Designation | Interchange |
|----------------|-------|--------------------|-------|-------------|-------------|
| Grease | Oil | r _a max | | | |
| r/min | r/min | mm | kg | | |
| 4,275 | 5,700 | 0.3 | 0.085 | O 5 | LT 5/8 |
| 4,085 | 5,320 | 0.3 | 0.099 | O 6 | LT 3/4 |
| 3,800 | 5,035 | 0.3 | 0.106 | O 7 | LT 7/8 |
| 3,610 | 4,750 | 0.6 | 0.113 | O 8 | LT 1 |
| 3,610 | 4,750 | 0.6 | 0.122 | O 9 | LT 1.1/8 |
| 3,230 | 4,275 | 0.6 | 0.177 | O 10 | LT 1.1/4 |
| 3,040 | 4,085 | 0.6 | 0.181 | O 11 | LT 1.3/8 |
| 3,040 | 4,085 | 0.6 | 0.200 | O 12 | LT 1.1/2 |
| 2,850 | 3,800 | 0.6 | 0.213 | O 13 | LT 1.5/8 |
| 2,660 | 3,610 | 0.6 | 0.276 | O 14 | LT 1.3/4 |
| 2,660 | 3,610 | 0.6 | 0.291 | O 15 | LT 1.7/8 |
| 2,470 | 3,420 | 0.6 | 0.304 | O 16 | LT 2 |
| 2,090 | 3,040 | 1.0 | 0.454 | O 18 | LT 2.1/4 |
| 1,805 | 2,660 | 1.0 | 0.581 | O 19 | LT 2.3/8 |
| 1,805 | 2,660 | 1.0 | 0.640 | O 20 | LT 2.1/2 |
| 1,710 | 2,470 | 1.0 | 0.680 | O 22 | LT 2.3/4 |
| 1,710 | 2,470 | 1.0 | 0.708 | O 23 | LT 2.7/8 |
| 1,615 | 2,280 | 1.0 | 0.948 | O 24 | LT 3 |
| 1,520 | 2,090 | 1.0 | 1.390 | O 28 | LT 3.1/2 |
| 1,330 | 1,805 | 1.0 | 2.000 | O 32 | LT 4 |
| 950 | 1,425 | 1.0 | 3.130 | O 36 | LT 4.1/2 |
| 903 | 1,330 | 1.0 | 4.470 | O 40 | LT 5 |
| 808 | 1,140 | 1.0 | 5.990 | O 44 | LT 5.1/2 |

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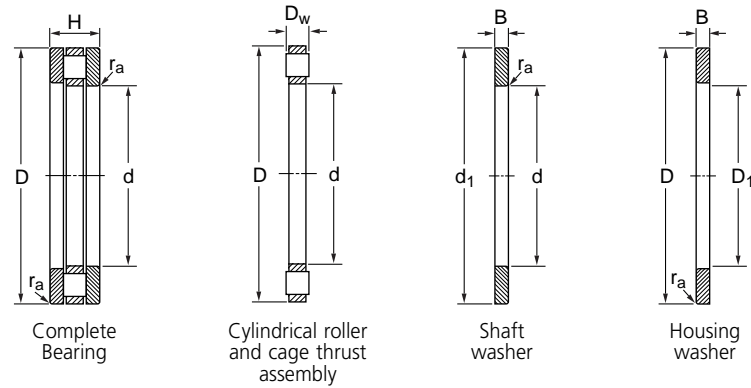
■ Prefix & Suffix





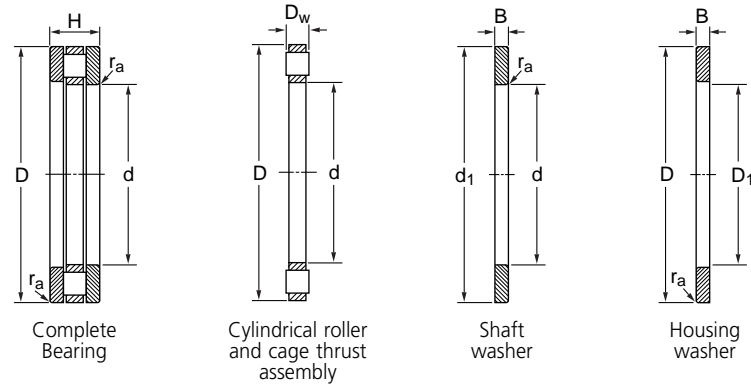
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass |
|------------------|---------|---------|--------------------|--------------------------------|-----------------|--------------|-----------------------------|-------|
| d mm | D mm | B mm | Dynamic C kN | Static C ₀ kN | Grease r/min | Oil r/min | r _a max mm | kg |
| 15 | 28 | 9 | 10.640 | 25.650 | 3,040 | 4,085 | 0.3 | 0.024 |
| 20 | 35 | 10 | 17.670 | 45.600 | 2,660 | 3,610 | 0.3 | 0.037 |
| 25 | 42 | 11 | 23.750 | 66.025 | 2,090 | 3,040 | 0.6 | 0.053 |
| 30 | 47 | 11 | 25.650 | 74.100 | 1,900 | 2,850 | 0.6 | 0.057 |
| 30 | 52 | 16 | 47.500 | 127.300 | 1,615 | 2,280 | 0.6 | 0.120 |
| 35 | 52 | 12 | 27.550 | 88.350 | 1,805 | 2,660 | 0.6 | 0.073 |
| 35 | 62 | 18 | 58.900 | 180.500 | 1,425 | 1,900 | 1.0 | 0.200 |
| 40 | 60 | 13 | 40.375 | 130.150 | 1,615 | 2,280 | 0.6 | 0.110 |
| 40 | 68 | 19 | 78.850 | 242.250 | 1,330 | 1,805 | 1.0 | 0.250 |
| 45 | 65 | 14 | 38.475 | 125.400 | 1,520 | 2,090 | 0.6 | 0.130 |
| 45 | 73 | 20 | 82.175 | 256.500 | 1,235 | 1,710 | 1.0 | 0.300 |
| 50 | 70 | 14 | 45.125 | 157.700 | 1,520 | 2,090 | 0.6 | 0.140 |
| 50 | 78 | 22 | 86.925 | 285.000 | 1,140 | 1,615 | 1.0 | 0.360 |
| 55 | 78 | 16 | 66.025 | 270.750 | 1,330 | 1,805 | 0.6 | 0.220 |
| 55 | 90 | 25 | 115.900 | 370.500 | 903 | 1,330 | 1.0 | 0.570 |
| 60 | 85 | 17 | 76.000 | 285.000 | 1,235 | 1,710 | 1.0 | 0.270 |
| 60 | 95 | 26 | 130.150 | 441.750 | 903 | 1,330 | 1.0 | 0.640 |
| 65 | 90 | 18 | 78.850 | 304.000 | 1,140 | 1,615 | 1.0 | 0.310 |
| 65 | 100 | 27 | 133.000 | 465.500 | 855 | 1,235 | 1.0 | 0.720 |
| 70 | 95 | 18 | 82.175 | 327.750 | 1,140 | 1,615 | 1.0 | 0.330 |
| 70 | 105 | 27 | 138.700 | 503.500 | 855 | 1,235 | 1.0 | 0.770 |
| 75 | 100 | 19 | 71.250 | 275.500 | 1,045 | 1,520 | 1.0 | 0.380 |
| 75 | 110 | 27 | 118.750 | 418.000 | 808 | 1,140 | 1.0 | 0.810 |
| 80 | 105 | 19 | 72.675 | 285.000 | 950 | 1,425 | 1.0 | 0.400 |
| 80 | 115 | 28 | 152.000 | 579.500 | 808 | 1,140 | 1.0 | 0.900 |
| 85 | 110 | 19 | 72.675 | 294.500 | 950 | 1,425 | 1.0 | 0.420 |
| 85 | 125 | 31 | 145.350 | 522.500 | 760 | 1,045 | 1.0 | 1.300 |
| 90 | 120 | 22 | 98.800 | 394.250 | 855 | 1,235 | 1.0 | 0.640 |
| 90 | 135 | 35 | 220.400 | 821.750 | 713 | 950 | 1.0 | 1.750 |
| 100 | 135 | 25 | 138.700 | 555.750 | 808 | 1,140 | 1.0 | 1.000 |
| 100 | 150 | 38 | 212.800 | 788.500 | 637 | 855 | 1.0 | 2.200 |
| 110 | 145 | 25 | 145.350 | 598.500 | 760 | 1,045 | 1.0 | 1.100 |

| Designation | | | | Secondary Dimensions | | | |
|------------------|---|--------------|----------------|----------------------|----------------|----------------|------|
| Complete Bearing | Cylindrical roller and cage thrust assembly | Shaft washer | Housing washer | d ₁ | D ₁ | D _w | B |
| 81102 | K 81102 | WS 81102 | GS 81102 | 28 | 16 | 3.5 | 2.75 |
| 81104 | K 81104 | WS 81104 | GS 81104 | 35 | 21 | 4.5 | 2.75 |
| 81105 | K 81105 | WS 81105 | GS 81105 | 42 | 26 | 5 | 3 |
| 81106 | K 81106 | WS 81106 | GS 81106 | 47 | 32 | 5 | 3 |
| 81206 | K 81206 | WS 81206 | GS 81206 | 52 | 32 | 7.5 | 4.25 |
| 81107 | K 81107 | WS 81107 | GS 81107 | 52 | 37 | 5 | 3.5 |
| 81207 | K 81207 | WS 81207 | GS 81207 | 62 | 37 | 7.5 | 5.25 |
| 81108 | K 81108 | WS 81108 | GS 81108 | 60 | 42 | 6 | 3.5 |
| 81208 | K 81208 | WS 81208 | GS 81208 | 68 | 42 | 9 | 5 |
| 81109 | K 81109 | WS 81109 | GS 81109 | 65 | 47 | 6 | 4 |
| 81209 | K 81209 | WS 81209 | GS 81209 | 73 | 47 | 9 | 5.5 |
| 81110 | K 81110 | WS 81110 | GS 81110 | 70 | 52 | 6 | 4 |
| 81210 | K 81210 | WS 81210 | GS 81210 | 78 | 52 | 9 | 6.5 |
| 81111 | K 81111 | WS 81111 | GS 81111 | 78 | 57 | 6 | 4 |
| 81211 | K 81211 | WS 81211 | GS 81211 | 90 | 57 | 11 | 7 |
| 81112 | K 81112 | WS 81112 | GS 81112 | 85 | 62 | 7.5 | 4.75 |
| 81212 | K 81212 | WS 81212 | GS 81212 | 95 | 62 | 11 | 7.5 |
| 81113 | K 81113 | WS 81113 | GS 81113 | 90 | 67 | 7.5 | 5.25 |
| 81213 | K 81213 | WS 81213 | GS 81213 | 100 | 67 | 11 | 8 |
| 81114 | K 81114 | WS 81114 | GS 81114 | 95 | 72 | 7.5 | 5.25 |
| 81214 | K 81214 | WS 81214 | GS 81214 | 105 | 72 | 11 | 8 |
| 81115 | K 81115 | WS 81115 | GS 81115 | 100 | 77 | 7.5 | 5.75 |
| 81215 | K 81215 | WS 81215 | GS 81215 | 110 | 77 | 11 | 8 |
| 81116 | K 81116 | WS 81116 | GS 81116 | 105 | 82 | 7.5 | 5.75 |
| 81216 | K 81216 | WS 81216 | GS 81216 | 115 | 82 | 11 | 8.5 |
| 81117 | K 81117 | WS 81117 | GS 81117 | 110 | 87 | 7.5 | 5.75 |
| 81217 | K 81217 | WS 81217 | GS 81217 | 125 | 88 | 12 | 9.5 |
| 81118 | K 81118 | WS 81118 | GS 81118 | 120 | 92 | 9 | 6.5 |
| 81218 | K 81218 | WS 81218 | GS 81218 | 135 | 93 | 14 | 10.5 |
| 81120 | K 81120 | WS 81120 | GS 81120 | 135 | 102 | 11 | 7 |
| 81220 | K 81220 | WS 81220 | GS 81220 | 150 | 103 | 15 | 11.5 |
| 81122 | K 81122 | WS 81122 | GS 81122 | 145 | 112 | 11 | 7 |



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass |
|------------------|---------|---------|--------------------|--------------------------------|-----------------|--------------|-----------------------------|--------|
| d mm | D mm | B mm | Dynamic C kN | Static C ₀ kN | Grease r/min | Oil r/min | r _a max mm | kg |
| 110 | 160 | 38 | 228.000 | 869.250 | 599 | 808 | 1.0 | 2.450 |
| 120 | 155 | 25 | 152.000 | 646.000 | 760 | 1,045 | 1.0 | 1.150 |
| 120 | 170 | 39 | 232.750 | 916.750 | 570 | 760 | 1.0 | 2.700 |
| 130 | 170 | 30 | 173.850 | 741.000 | 665 | 903 | 1.0 | 1.700 |
| 130 | 190 | 45 | 318.250 | 1187.500 | 504 | 665 | 1.5 | 4.200 |
| 140 | 180 | 31 | 183.350 | 807.500 | 637 | 855 | 1.0 | 1.950 |
| 140 | 200 | 46 | 342.000 | 1330.000 | 504 | 665 | 1.5 | 4.550 |
| 150 | 190 | 31 | 190.000 | 855.000 | 599 | 808 | 1.0 | 2.050 |
| 150 | 215 | 50 | 441.750 | 1805.000 | 456 | 599 | 1.5 | 5.900 |
| 160 | 200 | 31 | 193.800 | 916.750 | 599 | 808 | 1.0 | 2.200 |
| 160 | 225 | 51 | 456.000 | 1900.000 | 428 | 570 | 1.5 | 6.200 |
| 170 | 215 | 34 | 247.000 | 1121.000 | 570 | 760 | 1.0 | 2.950 |
| 170 | 240 | 55 | 513.000 | 2166.000 | 409 | 532 | 1.5 | 7.700 |
| 180 | 225 | 34 | 256.500 | 1206.500 | 532 | 713 | 1.0 | 3.050 |
| 180 | 250 | 56 | 522.500 | 2280.000 | 409 | 532 | 1.5 | 8.250 |
| 190 | 240 | 37 | 294.500 | 1387.000 | 504 | 665 | 1.0 | 3.850 |
| 190 | 270 | 62 | 660.250 | 2755.000 | 361 | 475 | 2.0 | 10.500 |
| 200 | 250 | 37 | 294.500 | 1425.000 | 504 | 665 | 1.0 | 4.000 |
| 200 | 280 | 62 | 684.000 | 2945.000 | 361 | 475 | 2.0 | 12.000 |
| 220 | 270 | 37 | 318.250 | 1615.000 | 475 | 637 | 1.0 | 4.500 |
| 220 | 300 | 63 | 712.500 | 3182.500 | 342 | 456 | 2.0 | 13.000 |
| 240 | 300 | 45 | 451.250 | 2327.500 | 409 | 532 | 1.5 | 7.250 |
| 240 | 340 | 78 | 1045.000 | 4655.000 | 285 | 380 | 2.0 | 22.000 |
| 260 | 320 | 45 | 465.500 | 2470.000 | 380 | 504 | 1.5 | 7.850 |
| 260 | 360 | 79 | 1083.000 | 5035.000 | 266 | 361 | 2.0 | 24.000 |
| 280 | 350 | 53 | 646.000 | 3372.500 | 342 | 456 | 1.5 | 10.500 |
| 280 | 380 | 80 | 1102.000 | 5225.000 | 247 | 342 | 2.0 | 26.000 |
| 300 | 380 | 62 | 807.500 | 4180.000 | 304 | 409 | 2.0 | 16.500 |
| 300 | 420 | 95 | 1453.500 | 6840.000 | 209 | 304 | 2.5 | 40.500 |
| 320 | 400 | 63 | 836.000 | 4417.500 | 285 | 380 | 2.0 | 18.000 |
| 320 | 440 | 95 | 1482.000 | 7125.000 | 190 | 285 | 2.5 | 42.500 |
| 340 | 420 | 64 | 855.000 | 4655.000 | 266 | 361 | 2.0 | 19.500 |

| Designation | | | | Secondary Dimensions | | | |
|------------------|---|--------------|----------------|----------------------|----------------|----------------|------|
| Complete Bearing | Cylindrical roller and cage thrust assembly | Shaft washer | Housing washer | d ₁ | D ₁ | D _w | B |
| 81222 | K 81222 | WS 81222 | GS 81222 | 160 | 113 | 15 | 11.5 |
| 81124 | K 81124 | WS 81124 | GS 81124 | 155 | 122 | 11 | 7 |
| 81224 | K 81224 | WS 81224 | GS 81224 | 170 | 123 | 15 | 12 |
| 81126 | K 81126 | WS 81126 | GS 81126 | 170 | 132 | 12 | 9 |
| 81226 | K 81226 | WS 81226 | GS 81226 | 187 | 133 | 19 | 13 |
| 81128 | K 81128 | WS 81128 | GS 81128 | 178 | 142 | 12 | 9.5 |
| 81228 | K 81228 | WS 81228 | GS 81228 | 197 | 143 | 19 | 13.5 |
| 81130 | K 81130 | WS 81130 | GS 81130 | 188 | 152 | 12 | 9.5 |
| 81230 | K 81230 | WS 81230 | GS 81230 | 212 | 153 | 21 | 14.5 |
| 81132 | K 81132 | WS 81132 | GS 81132 | 198 | 162 | 12 | 9.5 |
| 81232 | K 81232 | WS 81232 | GS 81232 | 222 | 163 | 21 | 15 |
| 81134 | K 81134 | WS 81134 | GS 81134 | 213 | 172 | 14 | 10 |
| 81234 | K 81234 | WS 81234 | GS 81234 | 237 | 173 | 22 | 16.5 |
| 81136 | K 81136 | WS 81136 | GS 81136 | 222 | 183 | 14 | 10 |
| 81236 | K 81236 | WS 81236 | GS 81236 | 247 | 183 | 22 | 17 |
| 81138 | K 81138 | WS 81138 | GS 81138 | 237 | 193 | 15 | 11 |
| 81238 | K 81238 | WS 81238 | GS 81238 | 267 | 194 | 26 | 18 |
| 81140 | K 81140 | WS 81140 | GS 81140 | 247 | 203 | 15 | 11 |
| 81240 | K 81240 | WS 81240 | GS 81240 | 277 | 204 | 26 | 18 |
| 81144 | K 81144 | WS 81144 | GS 81144 | 267 | 223 | 15 | 11 |
| 81244 | K 81244 | WS 81244 | GS 81244 | 297 | 224 | 26 | 18.5 |
| 81148 | K 81148 | WS 81148 | GS 81148 | 297 | 243 | 18 | 13.5 |
| 81248 | K 81248 | WS 81248 | GS 81248 | 335 | 244 | 32 | 23 |
| 81152 | K 81152 | WS 81152 | GS 81152 | 317 | 263 | 18 | 13.5 |
| 81252 | K 81252 | WS 81252 | GS 81252 | 355 | 264 | 32 | 23.5 |
| 81156 | K 81156 | WS 81156 | GS 81156 | 347 | 283 | 22 | 15.5 |
| 81256 | K 81256 | WS 81256 | GS 81256 | 375 | 284 | 32 | 24 |
| 81160 | K 81160 | WS 81160 | GS 81160 | 376 | 304 | 25 | 18.5 |
| 81260 | K 81260 | WS 81260 | GS 81260 | 415 | 304 | 38 | 28.5 |
| 81164 | K 81164 | WS 81164 | GS 81164 | 396 | 324 | 25 | 19 |
| 81264 | K 81264 | WS 81264 | GS 81264 | 435 | 325 | 38 | 28.5 |
| 81168 | K 81168 | WS 81168 | GS 81168 | 416 | 344 | 25 | 19.5 |



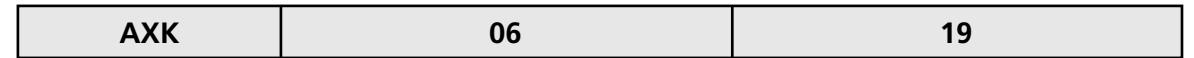
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Chamfer Dimension | Mass |
|------------------|---------|---------|--------------------|--------------------------------|-----------------|--------------|-----------------------------|---------|
| d mm | D mm | B mm | Dynamic C kN | Static C ₀ kN | Grease r/min | Oil r/min | r _a max mm | kg |
| 340 | 460 | 96 | 1548.500 | 7600.000 | 190 | 285 | 2.5 | 47.000 |
| 360 | 440 | 65 | 869.250 | 4750.000 | 266 | 361 | 2.0 | 19.500 |
| 360 | 500 | 110 | 2052.000 | 9880.000 | 171 | 247 | 3.0 | 65.500 |
| 380 | 460 | 65 | 883.500 | 5035.000 | 247 | 342 | 2.0 | 22.000 |
| 380 | 520 | 112 | 2090.000 | 10260.000 | 171 | 247 | 3.0 | 70.000 |
| 400 | 480 | 65 | 916.750 | 5320.000 | 247 | 342 | 2.0 | 23.000 |
| 400 | 540 | 112 | 2128.000 | 10640.000 | 162 | 228 | 3.0 | 73.000 |
| 420 | 500 | 65 | 931.000 | 5557.500 | 228 | 323 | 2.0 | 24.000 |
| 420 | 580 | 130 | 2707.500 | 13300.000 | 152 | 209 | 4.0 | 95.500 |
| 440 | 540 | 80 | 1358.500 | 760.000 | 190 | 285 | 2.0 | 39.500 |
| 440 | 600 | 130 | 2755.000 | 13870.000 | 152 | 209 | 4.0 | 110.000 |

| Designation | | | | Secondary Dimensions | | | |
|------------------|---|--------------|----------------|----------------------|----------------|----------------|------|
| Complete Bearing | Cylindrical roller and cage thrust assembly | Shaft washer | Housing washer | d ₁ | D ₁ | D _w | B |
| 81268 | K 81268 | WS 81268 | GS 81268 | 455 | 345 | 38 | 29 |
| 81172 | K 81172 | WS 81172 | GS 81172 | 436 | 364 | 25 | 20 |
| 81272 | K 81272 | WS 81272 | GS 81272 | 495 | 365 | 45 | 32.5 |
| 81176 | K 81176 | WS 81176 | GS 81176 | 456 | 384 | 25 | 20 |
| 81276 | K 81276 | WS 81276 | GS 81276 | 515 | 385 | 45 | 33.5 |
| 81180 | K 81180 | WS 81180 | GS 81180 | 476 | 404 | 25 | 20 |
| 81280 | K 81280 | WS 81280 | GS 81280 | 535 | 405 | 45 | 33.5 |
| 81184 | K 81184 | WS 81184 | GS 81184 | 495 | 424 | 25 | 20 |
| 81284 | K 81284 | WS 81284 | GS 81284 | 575 | 425 | 52 | 39 |
| 81188 | K 81188 | WS 81188 | GS 81188 | 535 | 444 | 32 | 24 |
| 81288 | K 81288 | WS 81288 | GS 81288 | 595 | 445 | 52 | 39 |

7.06

7.06

■ Assembly



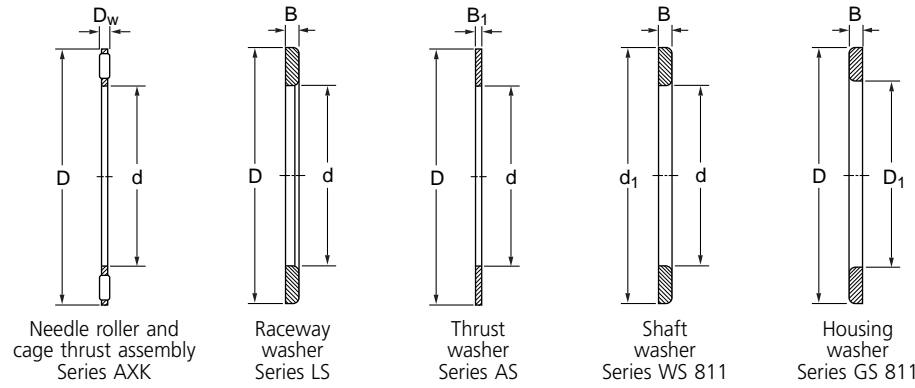
Basic type series
AXK : Roller assembly
AS : Thrust washer
GS : Housing washer
LS : Raceway washer
WS : Shaft washer

Outer diameter (mm)
The 2 digits represents the outer diameter
e.g. 19 = 19mm

Bore size (mm)
The digits represents the bore size.
e.g. 06 = 6mm

NIS™

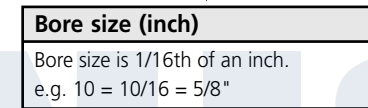
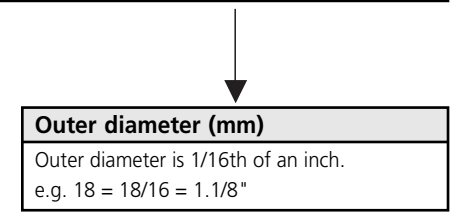
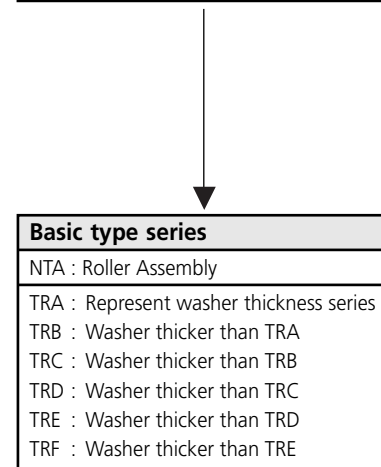
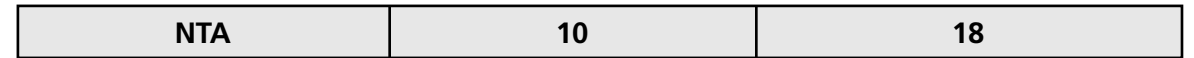
NIS™



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | | Mass | | |
|------------------|---------|---------|--------------------|--------------------------------|-----------------|--------------|---|----------------------------|-----------------|
| d mm | D mm | B mm | Dynamic C kN | Static C ₀ kN | Grease r/min | Oil r/min | Needle roller and cage thrust assembly g | Washers LS, WS, GS g | Washers AS g |
| 5 | 15 | 2 | 4.275 | 9.025 | 4,750 | 6,365 | 0.800 | - | 1.000 |
| 6 | 19 | 2 | 5.985 | 15.200 | 4,275 | 5,700 | 1.000 | 4.000 | 2.000 |
| 8 | 21 | 2 | 6.840 | 19.000 | 4,085 | 5,320 | 2.000 | 4.000 | 2.000 |
| 10 | 24 | 2 | 8.075 | 24.700 | 3,420 | 4,560 | 3.000 | 7.000 | 3.000 |
| 12 | 26 | 2 | 8.693 | 28.500 | 3,230 | 4,275 | 3.000 | 8.000 | 3.000 |
| 15 | 28 | 2 | 9.880 | 35.625 | 3,040 | 4,085 | 4.000 | 9.000 | 3.000 |
| 17 | 30 | 2 | 10.450 | 38.475 | 3,040 | 4,085 | 4.000 | 9.000 | 4.000 |
| 20 | 35 | 2 | 11.400 | 45.125 | 2,660 | 3,610 | 5.000 | 13.000 | 5.000 |
| 25 | 42 | 2 | 12.730 | 57.000 | 2,090 | 3,040 | 7.000 | 19.000 | 7.000 |
| 30 | 47 | 2 | 14.250 | 68.400 | 1,900 | 2,850 | 8.000 | 22.000 | 8.000 |
| 35 | 52 | 2 | 15.770 | 78.850 | 1,805 | 2,660 | 10.000 | 29.000 | 9.000 |
| 40 | 60 | 3 | 23.750 | 108.300 | 1,615 | 2,280 | 16.000 | 40.000 | 12.000 |
| 45 | 65 | 3 | 25.650 | 120.650 | 1,520 | 2,090 | 18.000 | 50.000 | 13.000 |
| 50 | 70 | 3 | 27.075 | 135.850 | 1,520 | 2,090 | 20.000 | 55.000 | 14.000 |
| 55 | 78 | 3 | 32.775 | 176.700 | 1,330 | 1,805 | 28.000 | 88.000 | 18.000 |
| 60 | 85 | 3 | 35.625 | 220.400 | 1,235 | 1,710 | 33.000 | 97.000 | 22.000 |
| 65 | 90 | 3 | 37.050 | 242.250 | 1,140 | 1,615 | 35.000 | 115.000 | 24.000 |
| 70 | 95 | 4 | 46.550 | 242.250 | 1,140 | 1,615 | 60.000 | 125.000 | 25.000 |
| 75 | 100 | 4 | 47.500 | 251.750 | 1,045 | 1,520 | 61.000 | 140.000 | 27.000 |
| 80 | 105 | 4 | 48.450 | 266.000 | 950 | 1,425 | 63.000 | 150.000 | 28.000 |
| 85 | 110 | 4 | 49.400 | 275.500 | 950 | 1,425 | 67.000 | 160.000 | 29.000 |
| 90 | 120 | 4 | 62.225 | 384.750 | 855 | 1,235 | 86.000 | 235.000 | 39.000 |
| 100 | 135 | 4 | 72.675 | 532.000 | 808 | 1,140 | 105.000 | 350.000 | 50.000 |
| 110 | 145 | 4 | 77.425 | 589.000 | 760 | 1,045 | 120.000 | 385.000 | 55.000 |
| 120 | 155 | 4 | 82.175 | 646.000 | 760 | 1,045 | 130.000 | 415.000 | 59.000 |
| 130 | 170 | 5 | 106.400 | 788.500 | 665 | 903 | 205.000 | 665.000 | 65.000 |
| 140 | 180 | 5 | 110.200 | 855.000 | 637 | 855 | 220.000 | 750.000 | 80.000 |
| 150 | 190 | 5 | 114.000 | 902.500 | 599 | 808 | 230.000 | 800.000 | 84.000 |
| 160 | 200 | 5 | 118.750 | 950.000 | 599 | 808 | 245.000 | 840.000 | 90.000 |

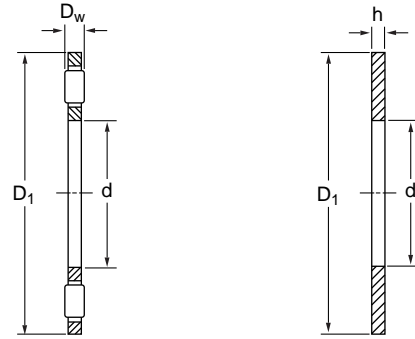
| Needle roller and cage thrust assembly | Raceway washer | Thrust washer | Shaft washer | Housing washer | Secondary Dimensions | | | | |
|--|----------------|---------------|--------------|----------------|----------------------|-----|----------------|------|----------------|
| | | | | | d ₁ | D | D ₁ | B | B ₁ |
| AXK 0515 | - | AS 0515 | - | - | - | 15 | - | - | 1 |
| AXK 0619 | LS 0619 | AS 0619 | - | - | - | 19 | - | 2.75 | 1 |
| AXK 0821 | LS 0821 | AS 0821 | - | - | - | 21 | - | 2.75 | 1 |
| AXK 1024 | LS 1024 | AS 1024 | - | - | - | 24 | - | 2.75 | 1 |
| AXK 1226 | LS 1226 | AS 1226 | - | - | - | 26 | - | 2.75 | 1 |
| AXK 1528 | LS 1528 | AS 1528 | WS 81102 | GS 81102 | 28 | 28 | 16 | 2.75 | 1 |
| AXK 1730 | LS 1730 | AS 1730 | WS 81103 | GS 81103 | 30 | 30 | 18 | 2.75 | 1 |
| AXK 2035 | LS 2035 | AS 2035 | WS 81104 | GS 81104 | 35 | 35 | 21 | 2.75 | 1 |
| AXK 2542 | LS 2542 | AS 2542 | WS 81105 | GS 81105 | 42 | 42 | 26 | 3 | 1 |
| AXK 3047 | LS 3047 | AS 3047 | WS 81106 | GS 81106 | 47 | 47 | 32 | 3 | 1 |
| AXK 3552 | LS 3552 | AS 3552 | WS 81107 | GS 81107 | 52 | 52 | 37 | 3.5 | 1 |
| AXK 4060 | LS 4060 | AS 4060 | WS 81108 | GS 81108 | 60 | 60 | 42 | 3.5 | 1 |
| AXK 4565 | LS 4565 | AS 4565 | WS 81109 | GS 81109 | 65 | 65 | 47 | 4 | 1 |
| AXK 5070 | LS 5070 | AS 5070 | WS 81110 | GS 81110 | 70 | 70 | 52 | 4 | 1 |
| AXK 5578 | LS 5578 | AS 5578 | WS 81111 | GS 81111 | 78 | 78 | 57 | 5 | 1 |
| AXK 6085 | LS 6085 | AS 6085 | WS 81112 | GS 81112 | 85 | 85 | 62 | 4.75 | 1 |
| AXK 6590 | LS 6590 | AS 6590 | WS 81113 | GS 81113 | 90 | 90 | 67 | 5.25 | 1 |
| AXK 7095 | LS 7095 | AS 7095 | WS 81114 | GS 81114 | 95 | 95 | 72 | 5.25 | 1 |
| AXK 75100 | LS 75100 | AS 75100 | WS 81115 | GS 81115 | 100 | 100 | 77 | 5.75 | 1 |
| AXK 80105 | LS 80105 | AS 80105 | WS 81116 | GS 81116 | 105 | 105 | 82 | 5.75 | 1 |
| AXK 85110 | LS 85110 | AS 85110 | WS 81117 | GS 81117 | 110 | 110 | 87 | 5.75 | 1 |
| AXK 90120 | LS 90120 | AS 90120 | WS 81118 | GS 81117 | 120 | 120 | 92 | 6.5 | 1 |
| AXK 100135 | LS 100135 | AS 100135 | WS 81120 | GS 81120 | 135 | 135 | 102 | 7 | 1 |
| AXK 110145 | LS 110145 | AS 110145 | WS 81122 | GS 81122 | 145 | 145 | 112 | 7 | 1 |
| AXK 120155 | LS 120155 | AS 120155 | WS 81124 | GS 81124 | 155 | 155 | 122 | 7 | 1 |
| AXK 130170 | LS 130170 | AS 130170 | WS 81126 | GS 81126 | 170 | 170 | 132 | 9 | 1 |
| AXK 140180 | LS 140180 | AS 140180 | WS 81128 | GS 81128 | 178 | 180 | 142 | 9.5 | 1 |
| AXK 150190 | LS 150190 | AS 150190 | WS 81130 | GS 81130 | 188 | 190 | 152 | 9.5 | 1 |
| AXK 160200 | LS 160200 | AS 160200 | WS 81132 | GS 81132 | 198 | 200 | 162 | 9.5 | 1 |

■ Assembly



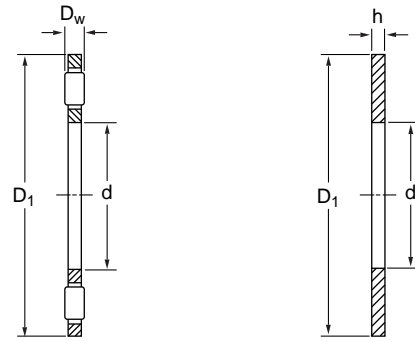
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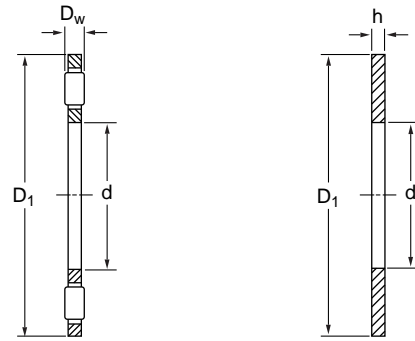
| Basic Dimensions | | | | | | | | Basic Load Ratings | | Limiting Speed |
|------------------|--------|-------|--------|----------------|-------|-------|-------|--------------------|----------------|----------------|
| d | | D | | D _w | | h | | Dynamic | Static | Oil |
| inch | mm | inch | mm | inch | mm | inch | mm | C | C ₀ | r/min |
| 0.250 | 6.350 | 0.688 | 17.463 | 0.078 | 1.984 | 0.032 | 0.813 | 4.862 | 10.231 | 24,700 |
| 0.250 | 6.350 | 0.688 | 17.463 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 0.250 | 6.350 | 0.688 | 17.463 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 0.313 | 7.938 | 0.750 | 19.050 | 0.078 | 1.984 | 0.032 | 0.813 | 5.538 | 12.513 | 22,800 |
| 0.313 | 7.938 | 0.750 | 19.050 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 0.375 | 9.525 | 0.813 | 20.638 | 0.078 | 1.984 | 0.032 | 0.813 | 5.749 | 13.613 | 20,900 |
| 0.375 | 9.525 | 0.813 | 20.638 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 0.375 | 9.525 | 0.813 | 20.638 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 0.500 | 12.700 | 0.938 | 23.813 | 0.078 | 1.984 | 0.032 | 0.813 | 6.806 | 18.178 | 18,050 |
| 0.500 | 12.700 | 0.938 | 23.813 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 0.500 | 12.700 | 0.938 | 23.813 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 0.563 | 14.288 | 1.000 | 25.400 | 0.078 | 1.984 | 0.032 | 0.813 | 7.314 | 20.461 | 17,100 |
| 0.563 | 14.288 | 1.000 | 25.400 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 0.563 | 14.288 | 1.000 | 25.400 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 0.625 | 15.875 | 1.125 | 28.575 | 0.078 | 1.984 | 0.032 | 0.813 | 9.301 | 28.874 | 14,250 |
| 0.625 | 15.875 | 1.125 | 28.575 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 0.625 | 15.875 | 1.125 | 28.575 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 0.625 | 15.875 | 1.125 | 28.575 | 0.078 | 1.984 | 0.123 | 3.124 | | | |
| 0.625 | 15.875 | 1.125 | 28.575 | 0.078 | 1.984 | 0.157 | 3.988 | | | |
| 0.750 | 19.050 | 1.250 | 31.750 | 0.078 | 1.984 | 0.032 | 0.813 | 10.357 | 34.666 | 13,300 |
| 0.750 | 19.050 | 1.250 | 31.750 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 0.750 | 19.050 | 1.250 | 31.750 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 0.750 | 19.050 | 1.250 | 31.750 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 0.750 | 19.050 | 1.250 | 31.750 | 0.078 | 1.984 | 0.157 | 3.988 | | | |
| 0.875 | 22.225 | 1.437 | 36.500 | 0.078 | 1.984 | 0.032 | 0.813 | 12.767 | 47.348 | 1,140 |
| 0.875 | 22.225 | 1.437 | 36.500 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 0.875 | 22.225 | 1.437 | 36.500 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 0.875 | 22.225 | 1.437 | 36.500 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 0.875 | 22.225 | 1.687 | 42.850 | 0.078 | 1.984 | 0.063 | 1.600 | 17.544 | 74.404 | 9,310 |
| 0.875 | 22.225 | 1.687 | 42.850 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 0.875 | 22.225 | 1.687 | 42.850 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 1.000 | 25.400 | 1.562 | 39.675 | 0.078 | 1.984 | 0.032 | 0.813 | 13.148 | 51.153 | 10,450 |

| Mass | | Designation | |
|----------|---------------|-------------|---------------|
| Assembly | Thrust washer | Assembly | Thrust washer |
| g | g | | |
| 1.362 | 1.362 | NTA-411 | TRA-411 |
| | 2.270 | | TRB-411 |
| | 3.632 | | TRC-411 |
| 1.816 | 1.362 | NTA-512 | TRA-512 |
| | 2.724 | | TRB-512 |
| 1.816 | 1.362 | NTA-613 | TRA-613 |
| | 2.724 | | TRB-613 |
| | 4.086 | | TRC-613 |
| 2.270 | 1.816 | NTA-815 | TRA-815 |
| | 3.632 | | TRB-815 |
| | 5.448 | | TRC-815 |
| 2.724 | 2.270 | NTA-916 | TRA-916 |
| | 3.632 | | TRB-916 |
| | 5.902 | | TRC-916 |
| 3.178 | 2.724 | NTA-1018 | TRA-1018 |
| | 5.448 | | TRB-1018 |
| | 8.172 | | TRC-1018 |
| | 10.896 | | TRD-1018 |
| | 13.166 | | TRE-1018 |
| 4.086 | 3.178 | NTA-1220 | TRA-1220 |
| | 5.902 | | TRB-1220 |
| | 9.534 | | TRC-1220 |
| | 11.804 | | TRD-1220 |
| | 14.982 | | TRE-1220 |
| 4.994 | 4.086 | NTA-1423 | TRA-1423 |
| | 7.718 | | TRB-1423 |
| | 11.804 | | TRC-1423 |
| | 15.436 | | TRD-1423 |
| 7.718 | 13.166 | NTC-1427 | TRB-1427 |
| | 19.976 | | TRC-1427 |
| | 25.878 | | TRD-1427 |
| 5.902 | 4.540 | NTA-1625 | TRA-1625 |



| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | | |
|------------------|--------|-------|--------|----------------|-------|--------------------|-------|----------------|-----------------------|--------|
| d | | D | | D _w | | h | | Dynamic C | Static C ₀ | Oil |
| inch | mm | inch | mm | inch | mm | inch | mm | kN | kN | r/min |
| 1.000 | 25.400 | 1.562 | 39.675 | 0.078 | 1.984 | 0.063 | 1.600 | 13.148 | 51.153 | 10,450 |
| 1.000 | 25.400 | 1.562 | 39.675 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 1.000 | 25.400 | 1.562 | 39.675 | 0.078 | 1.984 | 0.157 | 3.988 | | | |
| 1.125 | 28.575 | 1.750 | 44.450 | 0.078 | 1.984 | 0.032 | 0.813 | 15.853 | 67.640 | 9,120 |
| 1.125 | 28.575 | 1.750 | 44.450 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 1.125 | 28.575 | 1.750 | 44.450 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 1.125 | 28.575 | 1.750 | 44.450 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 1.250 | 31.750 | 1.937 | 49.200 | 0.078 | 1.984 | 0.032 | 0.813 | 19.151 | 88.778 | 8,170 |
| 1.250 | 31.750 | 1.937 | 49.200 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 1.250 | 31.750 | 1.937 | 49.200 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 1.250 | 31.750 | 1.937 | 49.200 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 1.250 | 31.750 | 1.937 | 49.200 | 0.078 | 1.984 | 0.188 | 4.775 | | | |
| 1.375 | 34.925 | 2.062 | 52.375 | 0.078 | 1.984 | 0.032 | 0.813 | 20.292 | 98.078 | 7,600 |
| 1.375 | 34.925 | 2.062 | 52.375 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 1.375 | 34.925 | 2.062 | 52.375 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 1.375 | 34.925 | 2.062 | 52.375 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 1.375 | 34.925 | 2.062 | 52.375 | 0.078 | 1.984 | 0.157 | 3.988 | | | |
| 1.375 | 34.925 | 2.062 | 52.375 | 0.078 | 1.984 | 0.188 | 4.775 | | | |
| 1.500 | 38.100 | 2.187 | 55.550 | 0.078 | 1.984 | 0.032 | 0.813 | 22.068 | 112.029 | 7,220 |
| 1.500 | 38.100 | 2.187 | 55.550 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 1.500 | 38.100 | 2.187 | 55.550 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 1.500 | 38.100 | 2.187 | 55.550 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 1.500 | 38.100 | 2.187 | 55.550 | 0.078 | 1.984 | 0.188 | 4.775 | | | |
| 1.750 | 44.450 | 2.500 | 63.500 | 0.078 | 1.984 | 0.032 | 0.813 | 24.054 | 130.630 | 6,460 |
| 1.750 | 44.450 | 2.500 | 63.500 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 1.750 | 44.450 | 2.500 | 63.500 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 1.750 | 44.450 | 2.500 | 63.500 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 1.750 | 44.450 | 2.500 | 63.500 | 0.078 | 1.984 | 0.188 | 4.775 | | | |
| 2.000 | 50.800 | 2.750 | 69.850 | 0.078 | 1.984 | 0.032 | 0.813 | 22.829 | 125.980 | 5,795 |
| 2.000 | 50.800 | 2.750 | 69.850 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 2.000 | 50.800 | 2.750 | 69.850 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 2.000 | 50.800 | 2.750 | 69.850 | 0.078 | 1.984 | 0.126 | 3.200 | | | |

| Mass | | Designation | |
|----------|---------------|-------------|---------------|
| Assembly | Thrust washer | Assembly | Thrust washer |
| g | g | | |
| 5.902 | 8.626 | NTA-1625 | TRB-1625 |
| | 17.252 | | TRD-1625 |
| | 21.338 | | TRE-1625 |
| 8.626 | 5.902 | NTA-1828 | TRA-1828 |
| | 10.896 | | TRB-1828 |
| | 16.798 | | TRC-1828 |
| | 21.792 | | TRD-1828 |
| 9.534 | 6.810 | NTA-2031 | TRA-2031 |
| | 13.620 | | TRB-2031 |
| | 19.976 | | TRC-2031 |
| | 26.332 | | TRD-2031 |
| | 40.860 | | TRF-2031 |
| 10.442 | 7.264 | NTA-2233 | TRA-2233 |
| | 14.982 | | TRB-2233 |
| | 18.160 | | TRC-2233 |
| | 29.510 | | TRD-2233 |
| | 36.774 | | TRE-2233 |
| | 44.038 | | TRF-2233 |
| 11.350 | 7.718 | NTA-2435 | TRA-2435 |
| | 15.436 | | TRB-2435 |
| | 22.700 | | TRC-2435 |
| | 30.418 | | TRD-2435 |
| | 45.400 | | TRF-2435 |
| 14.074 | 9.534 | NTA-2840 | TRA-2840 |
| | 19.976 | | TRB-2840 |
| | 28.602 | | TRC-2840 |
| | 38.136 | | TRD-2840 |
| | 57.204 | | TRF-2840 |
| 14.982 | 10.896 | NTA-3244 | TRA-3244 |
| | 21.792 | | TRB-3244 |
| | 32.688 | | TRC-3244 |
| | 43.584 | | TRD-3244 |



| Basic Dimensions | | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|-------|---------|----------------|-------|-------|--------------------|----------------|----------------|-------|
| d | | D | | D _w | | h | Dynamic | Static | Oil | |
| inch | mm | inch | mm | inch | mm | inch | C | C ₀ | r/min | |
| | | | | | | | kN | kN | | |
| 2.000 | 50.800 | 2.750 | 69.850 | 0.078 | 1.984 | 0.188 | 4.775 | 22.829 | 125.980 | 5,795 |
| 2.125 | 53.975 | 2.875 | 73.025 | 0.078 | 1.984 | 0.032 | 0.813 | 23.209 | 130.630 | 5,510 |
| 2.125 | 53.975 | 2.875 | 73.025 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 2.125 | 53.975 | 2.875 | 73.025 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 2.125 | 53.975 | 2.875 | 73.025 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 2.250 | 57.150 | 3.000 | 76.200 | 0.078 | 1.984 | 0.032 | 0.813 | 23.547 | 135.280 | 5,320 |
| 2.250 | 57.150 | 3.000 | 76.200 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 2.250 | 57.150 | 3.000 | 76.200 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 2.250 | 57.150 | 3.000 | 76.200 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 2.250 | 57.150 | 3.000 | 76.200 | 0.078 | 1.984 | 0.188 | 4.775 | | | |
| 2.250 | 57.150 | 3.125 | 79.375 | 0.125 | 3.175 | - | - | 35.807 | 168.255 | 5,035 |
| 2.500 | 63.500 | 3.250 | 82.550 | 0.078 | 1.984 | 0.032 | 0.813 | 24.266 | 144.581 | 4,845 |
| 2.500 | 63.500 | 3.250 | 82.550 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 2.500 | 63.500 | 3.250 | 82.550 | 0.078 | 1.984 | 0.095 | 2.413 | | | |
| 2.500 | 63.500 | 3.250 | 82.550 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 2.750 | 69.850 | 3.625 | 92.075 | 0.125 | 3.175 | 0.032 | 0.813 | 45.234 | 243.081 | 4,370 |
| 2.750 | 69.850 | 3.625 | 92.075 | 0.125 | 3.175 | 0.063 | 1.600 | | | |
| 2.750 | 69.850 | 3.625 | 92.075 | 0.125 | 3.175 | 0.095 | 2.413 | | | |
| 2.750 | 69.850 | 3.625 | 92.075 | 0.125 | 3.175 | 0.126 | 3.200 | | | |
| 2.750 | 69.850 | 3.625 | 92.075 | 0.125 | 3.175 | 0.188 | 4.775 | | | |
| 3.000 | 76.200 | 3.750 | 95.250 | 0.078 | 1.984 | 0.032 | 0.813 | 25.619 | 163.604 | 4,180 |
| 3.000 | 76.200 | 3.750 | 95.250 | 0.078 | 1.984 | 0.063 | 1.600 | | | |
| 3.000 | 76.200 | 3.750 | 95.250 | 0.078 | 1.984 | 0.126 | 3.200 | | | |
| 3.250 | 82.550 | 4.125 | 104.775 | 0.125 | 3.175 | 0.032 | 0.813 | 49.039 | 280.283 | 3,800 |
| 3.250 | 82.550 | 4.125 | 104.775 | 0.125 | 3.175 | 0.126 | 3.200 | | | |
| 3.750 | 95.250 | 4.625 | 117.475 | 0.125 | 3.175 | 0.032 | 0.813 | 53.267 | 327.209 | 3,325 |
| 3.750 | 95.250 | 4.625 | 117.475 | 0.125 | 3.175 | 0.063 | 1.600 | | | |
| 3.750 | 95.250 | 4.625 | 117.475 | 0.125 | 3.175 | 0.095 | 2.413 | | | |
| 3.750 | 95.250 | 4.625 | 117.475 | 0.125 | 3.175 | 0.126 | 3.200 | | | |
| 4.125 | 104.775 | 5.062 | 128.575 | 0.125 | 3.175 | 0.032 | 0.813 | 60.453 | 394.003 | 3,040 |
| 4.125 | 104.775 | 5.062 | 128.575 | 0.125 | 3.175 | 0.095 | 2.413 | | | |
| 4.125 | 104.775 | 5.062 | 128.575 | 0.125 | 3.175 | 0.126 | 3.200 | | | |
| 4.125 | 104.775 | 5.062 | 128.575 | 0.125 | 3.175 | 0.188 | 4.775 | | | |

| Mass | | Designation | |
|----------|---------------|-------------|---------------|
| Assembly | Thrust washer | Assembly | Thrust washer |
| g | g | | |
| 14.982 | 65.830 | NTA-3244 | TRF-3244 |
| 16.344 | 11.804 | NTA-3446 | TRA-3446 |
| | 23.608 | | TRB-3446 |
| | 35.412 | | TRC-3446 |
| | 46.762 | | TRD-3446 |
| 17.252 | 11.804 | NTA-3648 | TRA-3648 |
| | 21.792 | | TRB-3648 |
| | 36.774 | | TRC-3648 |
| | 47.670 | | TRD-3648 |
| | 71.278 | | TRF-3648 |
| 29.056 | - | NTA-3650 | - |
| 18.614 | 13.166 | NTA-4052 | TRA-4052 |
| | 26.786 | | TRB-4052 |
| | 40.860 | | TRC-4052 |
| | 54.026 | | TRD-4052 |
| 37.228 | 17.706 | NTA-4458 | TRA-4458 |
| | 34.958 | | TRB-4458 |
| | 51.302 | | TRC-4458 |
| | 69.008 | | TRD-4458 |
| | 103.966 | | TRF-4458 |
| 21.792 | 15.436 | NTA-4860 | TRA-4860 |
| | 31.780 | | TRB-4860 |
| | 61.290 | | TRD-4860 |
| 41.768 | 19.976 | NTA-5266 | TRA-5266 |
| | 79.904 | | TRD-5266 |
| 49.940 | 22.700 | NTA-6074 | TRA-6074 |
| | 45.854 | | TRB-6074 |
| | 69.008 | | TRC-6074 |
| | 91.708 | | TRD-6074 |
| 61.744 | 26.786 | NTA-6681 | TRA-6681 |
| | 80.812 | | TRC-6681 |
| | 108.960 | | TRD-6681 |
| | 160.716 | | TRF-6681 |

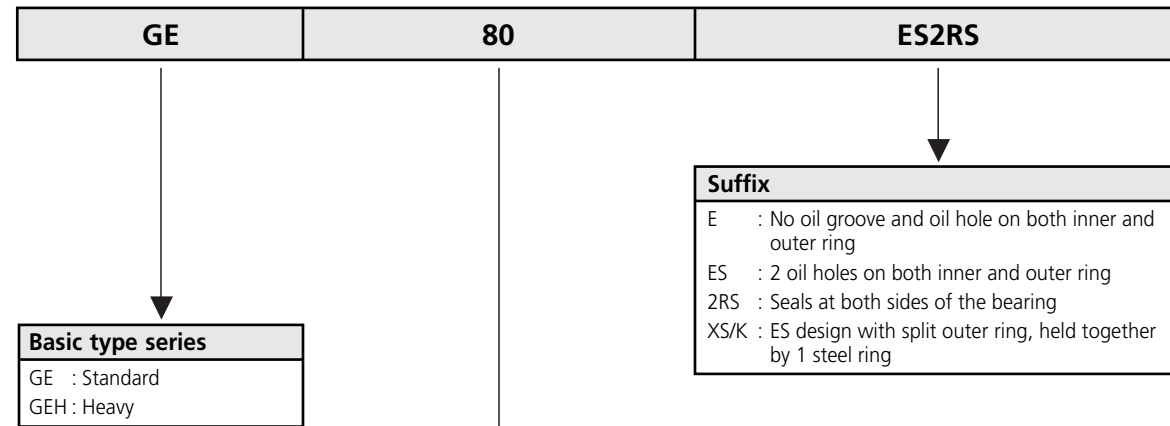




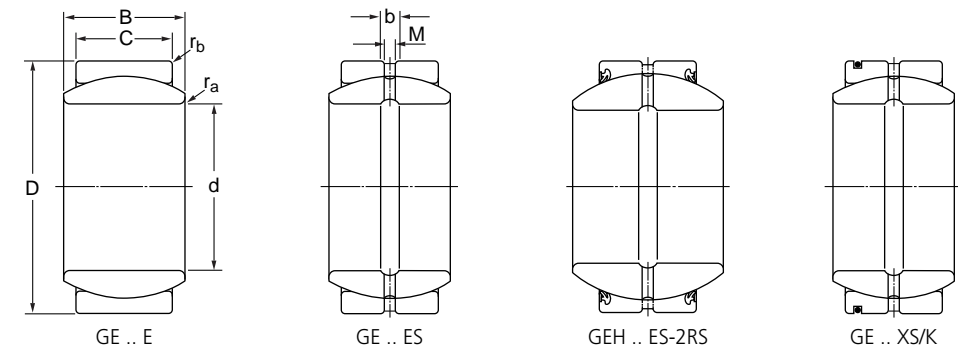
Plain Spherical Bearings

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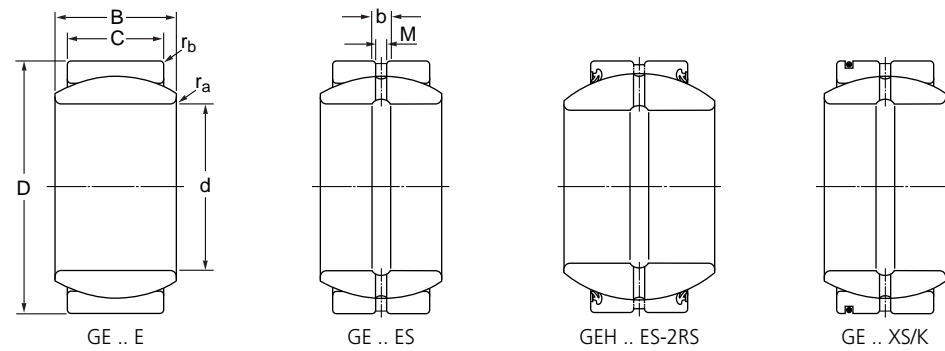
Prefix & Suffix



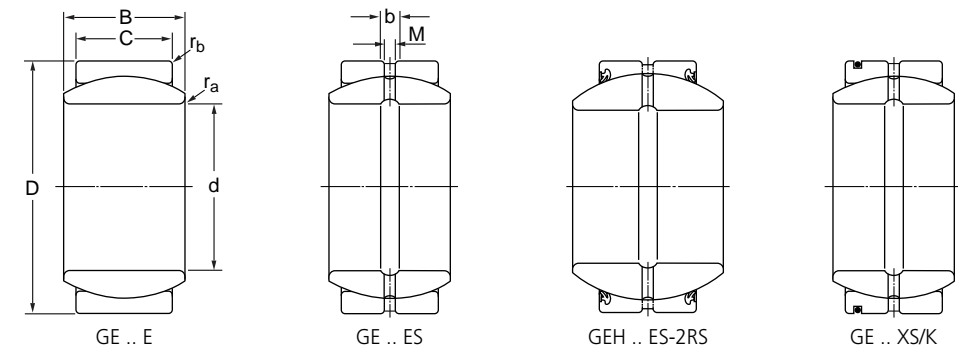
Bore size (mm)
 The digits represents the bore size.
 e.g. 80 = 80mm



| Basic Dimensions | | | | | | Basic Load Ratings | | Chamfer Dimension | | Mass | Designation |
|------------------|----|----|----|-----|-----|--------------------|----------------------|-------------------|----------------|-------|--------------|
| d | D | B | C | b | M | Dynamic | Static | r _a | r _b | kg | |
| mm | mm | mm | mm | mm | mm | C kN | C ₀ kN | max | max | | |
| 4 | 12 | 5 | 3 | - | - | 1.938 | 9.690 | 0.3 | 0.3 | 0.003 | GE 4 E |
| 5 | 14 | 6 | 4 | - | - | 3.230 | 16.150 | 0.3 | 0.3 | 0.004 | GE 5 E |
| 6 | 14 | 6 | 4 | - | - | 3.230 | 16.150 | 0.3 | 0.3 | 0.034 | GE 6 E |
| 8 | 16 | 8 | 5 | - | - | 5.225 | 26.125 | 0.3 | 0.3 | 0.008 | GE 8 E |
| 10 | 19 | 9 | 6 | - | - | 7.743 | 38.475 | 0.3 | 0.3 | 0.012 | GE 10 E |
| 12 | 22 | 10 | 7 | - | - | 10.260 | 51.300 | 0.3 | 0.3 | 0.017 | GE 12 E |
| 12 | 22 | 11 | 9 | - | - | 10.400 | 54.400 | 0.5 | 0.5 | 0.019 | GE 12 XS/K |
| 15 | 26 | 12 | 9 | 2.3 | 1.5 | 16.150 | 80.750 | 0.3 | 0.3 | 0.032 | GE 15 ES |
| 15 | 26 | 12 | 9 | 2.3 | 1.5 | 16.150 | 80.750 | 0.3 | 0.3 | 0.032 | GE 15 ES2RS |
| 15 | 26 | 13 | 11 | 2.3 | 1.5 | 16.000 | 81.600 | 0.5 | 0.5 | 0.028 | GE 15 XS/K |
| 17 | 30 | 14 | 10 | 2.3 | 1.5 | 20.140 | 100.700 | 0.3 | 0.3 | 0.050 | GE 17 ES |
| 17 | 30 | 14 | 10 | 2.3 | 1.5 | 20.140 | 100.700 | 0.3 | 0.3 | 0.050 | GE 17 ES2RS |
| 20 | 32 | 16 | 14 | 2.3 | 1.5 | 26.400 | 132.800 | 0.5 | 0.5 | 0.053 | GE 20 XS/K |
| 20 | 35 | 16 | 12 | 3.1 | 2 | 28.500 | 138.700 | 0.3 | 0.3 | 0.065 | GE 20 ES |
| 20 | 35 | 16 | 12 | 3.1 | 2 | 28.500 | 138.700 | 0.3 | 0.3 | 0.065 | GE 20 ES2RS |
| 20 | 42 | 25 | 16 | 3.1 | 2 | 45.600 | 228.000 | 0.3 | 0.6 | 0.160 | GEH 20 ES2RS |
| 22 | 37 | 19 | 16 | 3.1 | 2 | 34.400 | 173.600 | 0.5 | 0.5 | 0.085 | GE 22 XS/K |
| 25 | 42 | 20 | 16 | 3.1 | 2 | 45.600 | 228.000 | 0.6 | 0.6 | 0.120 | GE 25 ES |
| 25 | 42 | 20 | 16 | 3.1 | 2 | 45.600 | 228.000 | 0.6 | 0.6 | 0.120 | GE 25 ES2RS |
| 25 | 42 | 21 | 18 | 3.9 | 2.5 | 44.000 | 220.000 | 0.5 | 0.5 | 0.116 | GE25 XS/K |
| 25 | 47 | 28 | 18 | 3.1 | 2 | 58.900 | 294.500 | 0.6 | 0.6 | 0.200 | GEH 25 ES2RS |
| 30 | 47 | 22 | 18 | 3.1 | 2 | 58.900 | 294.500 | 0.6 | 0.6 | 0.160 | GE 30 ES |
| 30 | 47 | 22 | 18 | 3.1 | 2 | 58.900 | 294.500 | 0.6 | 0.6 | 0.160 | GE 30 ES2RS |
| 30 | 50 | 27 | 23 | 4.6 | 3 | 69.600 | 351.200 | 1.0 | 1.0 | 0.225 | GE 30 XS/K |
| 30 | 55 | 32 | 20 | 3.9 | 2.5 | 76.000 | 380.000 | 0.6 | 1.0 | 0.350 | GEH 30 ES2RS |
| 35 | 55 | 25 | 20 | 3.9 | 2.5 | 76.000 | 380.000 | 0.6 | 1.0 | 0.230 | GE 35 ES |
| 35 | 55 | 25 | 20 | 3.9 | 2.5 | 76.000 | 380.000 | 0.6 | 1.0 | 0.230 | GE 35 ES2RS |
| 35 | 55 | 30 | 26 | 4.6 | 3 | 88.000 | 441.600 | 1.0 | 1.0 | 0.302 | GE 35 XS/K |
| 35 | 62 | 35 | 22 | 3.9 | 2.5 | 95.000 | 475.000 | 0.6 | 1.0 | 0.470 | GEH 35 ES2RS |
| 40 | 62 | 28 | 22 | 3.9 | 2.5 | 95.000 | 475.000 | 0.6 | 1.0 | 0.320 | GE 40 ES |
| 40 | 62 | 28 | 22 | 3.9 | 2.5 | 95.000 | 475.000 | 0.6 | 1.0 | 0.320 | GE 40 ES2RS |
| 40 | 62 | 33 | 28 | 4.6 | 3 | 104.000 | 523.200 | 1.0 | 1.0 | 0.375 | GE 40 XS/K |



| Basic Dimensions | | | | | | Basic Load Ratings | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|----|----|------|----|--------------------|----------------|-------------------|----------------|-------|--------------|
| d | D | B | C | b | M | Dynamic | Static | r _a | r _b | kg | |
| mm | mm | mm | mm | mm | mm | C | C ₀ | max | max | | |
| | | | | | | kN | kN | | | | |
| 40 | 68 | 40 | 25 | 4.6 | 3 | 120.650 | 608.000 | 0.6 | 1.0 | 0.610 | GEH 40 ES2RS |
| 45 | 68 | 32 | 25 | 4.6 | 3 | 120.650 | 608.000 | 0.6 | 1.0 | 0.460 | GE 45 ES |
| 45 | 68 | 32 | 25 | 4.6 | 3 | 120.650 | 608.000 | 0.6 | 1.0 | 0.460 | GE 45 ES2RS |
| 45 | 72 | 36 | 31 | 4.6 | 3 | 130.400 | 652.800 | 1.0 | 1.0 | 0.598 | GE45 XS/K |
| 45 | 75 | 43 | 28 | 4.6 | 3 | 148.200 | 741.000 | 0.6 | 1.0 | 0.800 | GEH 45 ES2RS |
| 50 | 75 | 35 | 28 | 4.6 | 3 | 148.200 | 741.000 | 0.6 | 1.0 | 0.560 | GE 50 ES |
| 50 | 75 | 35 | 28 | 4.6 | 3 | 148.200 | 741.000 | 0.6 | 1.0 | 0.560 | GE 50 ES2RS |
| 50 | 80 | 42 | 36 | 6.2 | 4 | 176.000 | 880.000 | 1.0 | 1.0 | 0.869 | GE 50 XS/K |
| 50 | 90 | 56 | 36 | 6.2 | 4 | 232.750 | 1159.000 | 0.6 | 1.0 | 1.600 | GEH 50 ES2RS |
| 55 | 90 | 47 | 40 | 6.2 | 4 | 275.200 | 1376.000 | 1.0 | 1.0 | 1.260 | GE 55 XS/K |
| 60 | 90 | 44 | 36 | 6.2 | 4 | 232.750 | 1159.000 | 1.0 | 1.0 | 1.100 | GE 60 ES |
| 60 | 90 | 44 | 36 | 6.2 | 4 | 232.750 | 1159.000 | 1.0 | 1.0 | 1.100 | GE 60 ES2RS |
| 60 | 100 | 53 | 45 | 7.7 | 4 | 275.200 | 1376.000 | 1.0 | 1.0 | 1.720 | GE 60 XS/K |
| 60 | 105 | 63 | 40 | 7.7 | 4 | 299.250 | 1482.000 | 1.0 | 1.0 | 2.400 | GEH 60 ES2RS |
| 65 | 105 | 55 | 47 | 7.7 | 4 | 300.000 | 1496.000 | 1.0 | 1.0 | 2.050 | GE 65 XS/K |
| 70 | 105 | 49 | 40 | 7.7 | 4 | 299.250 | 1482.000 | 1.0 | 1.0 | 1.550 | GE 70 ES |
| 70 | 105 | 49 | 40 | 7.7 | 4 | 299.250 | 1482.000 | 1.0 | 1.0 | 1.550 | GE 70 ES2RS |
| 70 | 110 | 58 | 50 | 7.7 | 4 | 340.000 | 1700.000 | 1.0 | 1.0 | 2.230 | GE 70 XS/K |
| 70 | 120 | 70 | 45 | 7.7 | 4 | 380.000 | 1900.000 | 1.0 | 1.0 | 3.400 | GEH 70 ES2RS |
| 75 | 120 | 64 | 55 | 9.5 | 5 | 408.000 | 2056.000 | 1.0 | 1.0 | 3.010 | GE 75 XS/K |
| 80 | 120 | 55 | 45 | 7.7 | 4 | 380.000 | 1900.000 | 1.0 | 1.0 | 2.300 | GE 80 ES |
| 80 | 120 | 55 | 45 | 7.7 | 4 | 380.000 | 1900.000 | 1.0 | 1.0 | 2.300 | GE 80 ES2RS |
| 80 | 130 | 70 | 60 | 11.3 | 5 | 488.000 | 2448.000 | 1.0 | 1.0 | 3.980 | GE 80 XS/K |
| 80 | 130 | 75 | 50 | 9.5 | 5 | 465.500 | 2327.500 | 1.0 | 1.0 | 4.100 | GEH 80 ES2RS |
| 85 | 135 | 74 | 63 | 11.5 | 5 | 535.200 | 2672.000 | 1.0 | 1.0 | 4.310 | GE 85 XS/K |
| 90 | 130 | 60 | 50 | 9.5 | 5 | 465.500 | 2327.500 | 1.0 | 1.0 | 2.750 | GE 90 ES |
| 90 | 130 | 60 | 50 | 9.5 | 5 | 465.500 | 2327.500 | 1.0 | 1.0 | 2.750 | GE 90 ES2RS |
| 90 | 140 | 76 | 65 | 11.5 | 5 | 574.400 | 2872.000 | 1.0 | 1.0 | 4.720 | GE 90 XS/K |
| 90 | 150 | 85 | 55 | 11.3 | 5 | 579.500 | 2897.500 | 1.0 | 1.0 | 6.300 | GEH 90 ES2RS |
| 95 | 150 | 82 | 70 | 11.5 | 5 | 666.400 | 3332.000 | 1.0 | 1.0 | 6.050 | GE 95 XS/K |
| 100 | 150 | 70 | 55 | 11.3 | 5 | 579.500 | 2897.500 | 1.0 | 1.0 | 4.400 | GE 100 ES |
| 100 | 150 | 70 | 55 | 11.3 | 5 | 579.500 | 2897.500 | 1.0 | 1.0 | 4.400 | GE 100 ES2RS |



| Basic Dimensions | | | | | | Basic Load Ratings | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|-----|-----|------|----|--------------------|----------------|-------------------|----------------|--------|---------------|
| d | D | B | C | b | M | Dynamic | Static | r _a | r _b | kg | |
| mm | mm | mm | mm | mm | mm | C | C ₀ | max | max | | |
| | | | | | | kN | kN | | | | |
| 100 | 160 | 85 | 55 | 11.5 | 5 | 622.250 | 3087.500 | 1.0 | 1.0 | 6.800 | GEH 100 ES2RS |
| 100 | 160 | 88 | 75 | 13.5 | 6 | 764.800 | 3824.000 | 1.5 | 1.5 | 7.430 | GE 100 XS/K |
| 110 | 160 | 70 | 55 | 11.5 | 5 | 622.250 | 3087.500 | 1.0 | 1.0 | 4.800 | GE 110 ES |
| 110 | 160 | 70 | 55 | 11.5 | 5 | 622.250 | 3087.500 | 1.0 | 1.0 | 4.800 | GE 110 ES2RS |
| 110 | 170 | 93 | 80 | 13.5 | 6 | 864.000 | 4352.000 | 1.5 | 1.5 | 8.540 | GE 110 XS/K |
| 110 | 180 | 100 | 70 | 13.5 | 6 | 902.500 | 4512.500 | 1.0 | 1.0 | 11.000 | GEH 110 ES2RS |
| 115 | 180 | 98 | 85 | 13.5 | 6 | 952.000 | 4768.000 | 1.5 | 1.5 | 10.300 | GE 115 XS/K |
| 120 | 180 | 85 | 70 | 13.5 | 6 | 902.500 | 4512.500 | 1.0 | 1.0 | 8.250 | GE 120 ES |
| 120 | 180 | 85 | 70 | 13.5 | 6 | 902.500 | 4512.500 | 1.0 | 1.0 | 8.250 | GE 120 ES2RS |
| 120 | 190 | 105 | 90 | 13.5 | 6 | 1064.000 | 5352.000 | 1.5 | 1.5 | 12.400 | GE120 XS/K |
| 120 | 210 | 115 | 70 | 13.5 | 6 | 1026.000 | 5130.000 | 1.0 | 1.0 | 15.000 | GEH 120 ES2RS |
| 130 | 200 | 110 | 95 | 13.5 | 6 | 1192.000 | 5968.000 | 1.5 | 1.5 | 13.800 | GE 130 XS/K |
| 140 | 210 | 90 | 70 | 13.5 | 6 | 1026.000 | 5130.000 | 1.0 | 1.0 | 11.000 | GE 140 ES |
| 140 | 210 | 90 | 70 | 13.5 | 6 | 1026.000 | 5130.000 | 1.0 | 1.0 | 11.000 | GE 140 ES2RS |
| 150 | 220 | 120 | 105 | 13.5 | 6 | 1456.000 | 7312.000 | 1.5 | 1.5 | 17.100 | GE 150 XS/K |
| 160 | 230 | 105 | 80 | 13.5 | 6 | 1301.500 | 6460.000 | 1.0 | 1.0 | 14.000 | GE 160 ES |
| 160 | 230 | 105 | 80 | 13.5 | 6 | 1301.500 | 6460.000 | 1.0 | 1.0 | 14.000 | GE 160 ES2RS |
| 180 | 260 | 105 | 80 | 13.5 | 6 | 1453.500 | 7267.500 | 1.0 | 1.0 | 18.500 | GE 180 ES |
| 180 | 260 | 105 | 80 | 13.5 | 6 | 1453.500 | 7267.500 | 1.0 | 1.0 | 18.500 | GE 180 ES2RS |
| 200 | 290 | 130 | 100 | 15.5 | 7 | 2014.000 | 10070.000 | 1.0 | 1.0 | 28.000 | GE 200 ES |
| 200 | 290 | 130 | 100 | 15.5 | 7 | 2014.000 | 10070.000 | 1.0 | 1.0 | 28.000 | GE 200 ES2RS |
| 220 | 320 | 135 | 100 | 15.5 | 7 | 2204.000 | 11020.000 | 1.0 | 1.0 | 35.500 | GE 220 ES2RS |
| 240 | 340 | 140 | 100 | 15.5 | 7 | 2422.500 | 12065.000 | 1.0 | 1.0 | 40.000 | GE 240 ES2RS |
| 260 | 370 | 150 | 110 | 15.5 | 7 | 2897.500 | 14535.000 | 1.0 | 1.0 | 51.500 | GE 260 ES2RS |
| 280 | 400 | 155 | 120 | 15.5 | 7 | 3372.500 | 17100.000 | 1.0 | 1.0 | 65.000 | GE 280 ES2RS |
| 300 | 430 | 165 | 120 | 15.5 | 7 | 3610.000 | 18050.000 | 1.0 | 1.0 | 78.500 | GE 300 ES2RS |

NIS™

NIS™

Spherical Plain Bearing, Steel/Steel - Inch Sizes

■ Prefix & Suffix

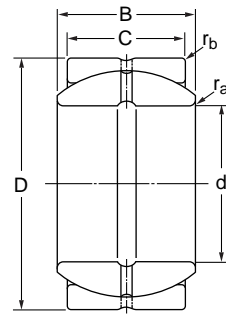
GEGZ 280 ES2RS

Basic type series
GEZ : Standard
GEHZ : Heavy

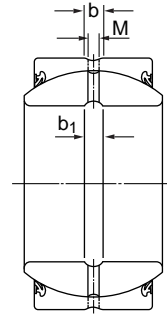
Suffix
ES : 2 oil holes on both inner and outer ring
2RS : Seals at both sides of the bearing

Bore size (inch)
First digit : Unit figure of inch
Last 2 digit : 1/16th of an inch
e.g. Bore size of 208 = 2 + 8/16 = 2.1/2"

NIS™



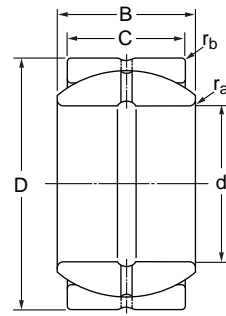
GEZ .. ES
GEGZ .. ES



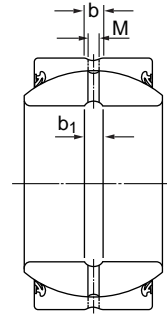
GEZ .. ES-2RS
GEGZ .. ES-2RS

| Basic Dimensions | | | | | | | | Basic Load Ratings | | Chamfer Dimension | | | |
|------------------|--------|---------|--------|--------|--------|--------|--------|--------------------|----------|-------------------|-------|-------|-------|
| d | | D | | B | | C | | Dynamic | Static | r_a | r_a | r_b | r_b |
| mm | inch | mm | inch | mm | inch | mm | inch | C | C_0 | max | max | max | max |
| | | | | | | | | kN | kN | | | | |
| 12.700 | 0.5000 | 22.225 | 0.8750 | 11.100 | 0.4370 | 9.525 | 0.3750 | 13.300 | 39.425 | 0.15 | 0.006 | 0.60 | 0.024 |
| 15.875 | 0.6250 | 26.988 | 1.0625 | 13.894 | 0.5470 | 11.913 | 0.4690 | 20.520 | 62.225 | 0.15 | 0.006 | 1.00 | 0.039 |
| 19.050 | 0.7500 | 31.750 | 1.2500 | 16.662 | 0.6560 | 14.275 | 0.5620 | 29.925 | 88.350 | 0.30 | 0.012 | 1.00 | 0.039 |
| 22.225 | 0.8750 | 36.513 | 1.4375 | 19.431 | 0.7650 | 16.662 | 0.6560 | 40.375 | 120.650 | 0.30 | 0.012 | 1.00 | 0.039 |
| 25.400 | 1.0000 | 41.275 | 1.6250 | 22.225 | 0.8750 | 19.050 | 0.7500 | 53.200 | 157.700 | 0.30 | 0.012 | 1.00 | 0.039 |
| 31.750 | 1.2500 | 50.800 | 2.0000 | 27.762 | 1.0930 | 23.800 | 0.9370 | 82.175 | 247.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 31.750 | 1.2500 | 61.913 | 2.4375 | 35.306 | 1.3900 | 28.575 | 1.1250 | 100.000 | 300.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 34.925 | 1.3750 | 55.563 | 2.1875 | 30.150 | 1.1870 | 26.187 | 1.0310 | 98.800 | 294.500 | 0.60 | 0.024 | 1.00 | 0.039 |
| 38.100 | 1.5000 | 61.913 | 2.4375 | 33.325 | 1.3120 | 28.575 | 1.1250 | 118.750 | 356.250 | 0.60 | 0.024 | 1.00 | 0.039 |
| 38.100 | 1.5000 | 71.438 | 2.8125 | 40.132 | 1.5800 | 33.325 | 1.3120 | 136.000 | 408.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 44.450 | 1.7500 | 71.438 | 2.8125 | 38.887 | 1.5310 | 33.325 | 1.3120 | 161.500 | 484.500 | 0.60 | 0.024 | 1.00 | 0.039 |
| 44.450 | 1.7500 | 80.963 | 3.1875 | 46.228 | 1.8200 | 38.100 | 1.5000 | 179.200 | 536.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 50.800 | 2.0000 | 80.963 | 3.1875 | 44.450 | 1.7500 | 38.100 | 1.5000 | 212.800 | 636.500 | 0.60 | 0.024 | 1.00 | 0.039 |
| 50.800 | 2.0000 | 90.488 | 3.5625 | 52.578 | 2.0700 | 42.850 | 1.6870 | 224.000 | 680.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 57.150 | 2.2500 | 90.488 | 3.5625 | 50.130 | 1.9690 | 42.850 | 1.6870 | 266.000 | 807.500 | 0.60 | 0.024 | 1.00 | 0.039 |
| 57.150 | 2.2500 | 100.013 | 3.9375 | 58.877 | 2.3180 | 47.625 | 1.8750 | 284.000 | 848.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 63.500 | 2.5000 | 100.013 | 3.9375 | 55.550 | 2.1870 | 47.625 | 1.8750 | 327.750 | 988.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 63.500 | 2.5000 | 111.125 | 4.3750 | 64.643 | 2.5450 | 52.375 | 2.0620 | 332.000 | 1000.000 | 1.00 | 0.039 | 1.00 | 0.039 |
| 69.850 | 2.7500 | 111.125 | 4.3750 | 61.112 | 2.4060 | 52.375 | 2.0620 | 403.750 | 1206.500 | 0.60 | 0.024 | 1.00 | 0.039 |
| 69.850 | 2.7500 | 120.650 | 4.7500 | 70.866 | 2.7900 | 57.150 | 2.2500 | 400.000 | 1200.000 | 1.00 | 0.039 | 1.00 | 0.039 |
| 76.200 | 3.0000 | 120.650 | 4.7500 | 66.675 | 2.6250 | 57.150 | 2.2500 | 475.000 | 1425.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 76.200 | 3.0000 | 130.175 | 5.1250 | 76.759 | 3.0220 | 61.900 | 2.4370 | 468.000 | 1408.000 | 1.00 | 0.039 | 1.00 | 0.039 |
| 82.550 | 3.2500 | 130.175 | 5.1250 | 72.238 | 2.8440 | 61.900 | 2.4370 | 555.750 | 1672.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 82.550 | 3.2500 | 139.700 | 5.5000 | 82.931 | 3.2650 | 66.675 | 2.6250 | 544.000 | 1632.000 | 1.00 | 0.039 | 1.00 | 0.039 |

| Mass | Designation | Secondary Dimensions | | | | | | | |
|-------|-------------|----------------------|------|--------|-------|-------|-------|-------|-------|
| | | b | | b_1 | | M | | | |
| kg | | mm | inch | mm | inch | mm | inch | | |
| 0.020 | GEZ 008 ES | - | - | 2.600 | 0.102 | 2.500 | 0.098 | 1.500 | 0.059 |
| 0.035 | GEZ 010 ES | - | - | 3.200 | 0.126 | 3.000 | 0.118 | 2.500 | 0.098 |
| 0.055 | GEZ 012 ES | - | - | 3.200 | 0.126 | 3.000 | 0.118 | 2.500 | 0.098 |
| 0.085 | GEZ 014 ES | - | - | 3.200 | 0.126 | 3.000 | 0.118 | 2.500 | 0.098 |
| 0.120 | GEZ 100 ES | GEZ 100 ES2RS | - | 3.200 | 0.126 | 3.000 | 0.118 | 2.500 | 0.098 |
| 0.230 | GEZ 104 ES | GEZ 104 ES2RS | - | 4.800 | 0.189 | 5.000 | 0.197 | 4.000 | 0.158 |
| 0.454 | GEGZ 104 ES | GEGZ 104 ES2RS | - | 4.800 | 0.189 | 5.000 | 0.197 | 4.000 | 0.158 |
| 0.350 | GEZ 106 ES | GEZ 106 ES2RS | - | 4.800 | 0.189 | 5.000 | 0.197 | 4.000 | 0.158 |
| 0.420 | GEZ 108 ES | GEZ 108 ES2RS | - | 4.800 | 0.189 | 5.000 | 0.197 | 4.000 | 0.158 |
| 0.726 | GEGZ 108 ES | GEGZ 108 ES2RS | - | 4.800 | 0.189 | 5.000 | 0.197 | 4.000 | 0.158 |
| 0.640 | GEZ 112 ES | GEZ 112 ES2RS | - | 4.800 | 0.189 | 5.000 | 0.197 | 4.000 | 0.158 |
| 1.140 | GEGZ 112 ES | GEGZ 112 ES2RS | - | 4.800 | 0.189 | 5.000 | 0.197 | 4.000 | 0.158 |
| 0.930 | GEZ 200 ES | GEZ 200 ES2RS | - | 4.800 | 0.189 | 5.000 | 0.197 | 4.000 | 0.158 |
| 1.680 | GEGZ 200 ES | GEGZ 200 ES2RS | - | 5.700 | 0.224 | 5.000 | 0.197 | 4.000 | 0.158 |
| 1.300 | GEZ 204 ES | GEZ 204 ES2RS | - | 5.700 | 0.224 | 5.000 | 0.197 | 4.000 | 0.158 |
| 2.010 | GEGZ 204 ES | GEGZ 204 ES2RS | - | 9.000 | 0.354 | 8.000 | 0.315 | 6.500 | 0.256 |
| 1.850 | GEZ 208 ES | GEZ 208 ES2RS | - | 9.000 | 0.354 | 8.000 | 0.315 | 6.500 | 0.256 |
| 2.950 | GEGZ 208 ES | GEGZ 208 ES2RS | - | 9.000 | 0.354 | 8.000 | 0.315 | 6.500 | 0.256 |
| 2.400 | GEZ 212 ES | GEZ 212 ES2RS | - | 9.000 | 0.354 | 8.000 | 0.315 | 6.500 | 0.256 |
| 3.630 | GEGZ 212 ES | GEGZ 212 ES2RS | - | 9.000 | 0.354 | 8.000 | 0.315 | 6.500 | 0.256 |
| 3.100 | GEZ 300 ES | GEZ 300 ES2RS | - | 9.000 | 0.354 | 8.000 | 0.315 | 6.500 | 0.256 |
| 4.360 | GEGZ 300 ES | GEGZ 300 ES2RS | - | 9.300 | 0.366 | 8.000 | 0.315 | 6.500 | 0.256 |
| 3.800 | GEZ 304 ES | GEZ 304 ES2RS | - | 9.300 | 0.366 | 8.000 | 0.315 | 6.500 | 0.256 |
| 5.310 | GEGZ 304 ES | GEGZ 304 ES2RS | - | 10.500 | 0.413 | 8.000 | 0.315 | 6.500 | 0.256 |



GEZ .. ES
GEGZ .. ES

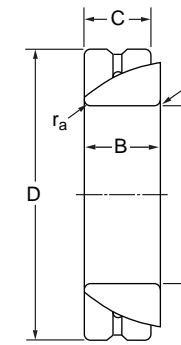
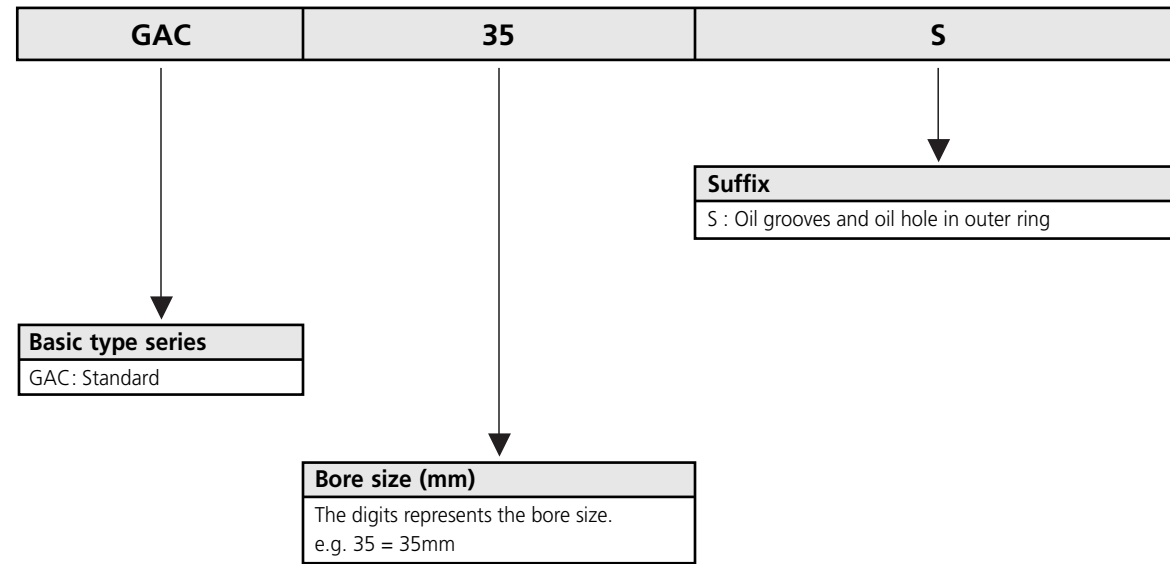


GEZ .. ES-2RS
GEGZ .. ES-2RS

| Basic Dimensions | | | | | | | | Basic Load Ratings | | Chamfer Dimension | | | |
|------------------|--------|---------|--------|---------|--------|---------|--------|--------------------|----------|-------------------|-------|-------|-------|
| d | | D | | B | | C | | Dynamic | Static | r_a | r_a | r_b | r_b |
| mm | inch | mm | inch | mm | inch | mm | inch | C | C_0 | max | max | max | max |
| | | | | | | | | kN | kN | | | | |
| 88.900 | 3.5000 | 139.700 | 5.5000 | 77.775 | 3.0620 | 66.675 | 2.6250 | 646.000 | 1938.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 88.900 | 3.5000 | 149.225 | 5.8750 | 90.424 | 3.5600 | 71.425 | 2.8120 | 624.000 | 1888.000 | 1.00 | 0.039 | 1.00 | 0.039 |
| 95.250 | 3.7500 | 149.225 | 5.8750 | 83.337 | 3.2810 | 71.425 | 2.8120 | 741.000 | 2242.000 | 0.60 | 0.024 | 1.00 | 0.039 |
| 95.250 | 3.7500 | 158.750 | 6.2500 | 94.945 | 3.7380 | 76.200 | 3.0000 | 720.000 | 2120.000 | 1.00 | 0.039 | 1.00 | 0.039 |
| 101.600 | 4.0000 | 158.750 | 6.2500 | 88.900 | 3.5000 | 76.200 | 3.0000 | 855.000 | 2517.500 | 0.60 | 0.024 | 1.00 | 0.039 |
| 101.600 | 7.0000 | 177.800 | 7.0000 | 107.315 | 4.2250 | 85.725 | 3.3750 | 896.000 | 2720.000 | 1.00 | 0.039 | 1.00 | 0.039 |
| 114.300 | 4.5000 | 177.800 | 7.0000 | 100.000 | 3.9370 | 85.725 | 3.3750 | 1064.000 | 3230.000 | 1.00 | 0.039 | 1.00 | 0.039 |
| 114.300 | 4.5000 | 196.850 | 7.7500 | 119.126 | 4.6900 | 95.250 | 3.7500 | 1120.000 | 3320.000 | 1.00 | 0.039 | 1.00 | 0.039 |
| 120.650 | 4.7500 | 187.325 | 7.3750 | 105.562 | 4.1560 | 90.475 | 3.5620 | 1187.500 | 3562.500 | 1.00 | 0.039 | 1.00 | 0.039 |
| 127.000 | 5.0000 | 196.850 | 7.7500 | 111.125 | 4.3750 | 95.250 | 3.7500 | 1330.000 | 3942.500 | 1.00 | 0.039 | 1.00 | 0.039 |
| 139.700 | 5.5000 | 222.250 | 8.7500 | 125.730 | 4.9500 | 104.775 | 4.1250 | 1384.000 | 4160.000 | 1.00 | 0.039 | 1.00 | 0.039 |
| 152.400 | 6.0000 | 222.250 | 8.7500 | 120.650 | 4.7500 | 104.775 | 4.1250 | 1643.500 | 4940.000 | 1.00 | 0.039 | 1.00 | 0.039 |

| Mass | Designation | | Secondary Dimensions | | | | | |
|--------|-------------|----------------|----------------------|-------|----------------|-------|-------|-------|
| | | | b | | b ₁ | | M | |
| kg | | | mm | inch | mm | inch | mm | inch |
| 4.800 | GEZ 308 ES | GEZ 308 ES2RS | 10.500 | 0.413 | 8.000 | 0.315 | 6.500 | 0.256 |
| 6.810 | GEGZ 308 ES | GEGZ 308 ES2RS | 10.500 | 0.413 | 10.000 | 0.394 | 8.000 | 0.315 |
| 5.800 | GEZ 312 ES | GEZ 312 ES2RS | 10.500 | 0.413 | 8.000 | 0.315 | 6.500 | 0.256 |
| 8.850 | GEGZ 312 ES | GEGZ 312 ES2RS | 10.500 | 0.413 | 10.000 | 0.394 | 8.000 | 0.315 |
| 7.000 | GEZ 400 ES | GEZ 400 ES2RS | 10.500 | 0.413 | 10.000 | 0.394 | 8.000 | 0.315 |
| 10.200 | GEGZ 400 ES | GEGZ 400 ES2RS | 11.000 | 0.433 | 10.000 | 0.394 | 8.000 | 0.315 |
| 9.800 | GEZ 408 ES | GEZ 408 ES2RS | 11.000 | 0.433 | 10.000 | 0.394 | 8.000 | 0.315 |
| 13.600 | GEGZ 408 ES | GEGZ 408 ES2RS | 11.000 | 0.433 | 10.000 | 0.394 | 8.000 | 0.315 |
| 11.500 | GEZ 412 ES | GEZ 412 ES2RS | 11.000 | 0.433 | 10.000 | 0.394 | 8.000 | 0.315 |
| 13.500 | GEZ 500 ES | GEZ 500 ES2RS | 11.000 | 0.433 | 10.000 | 0.394 | 8.000 | 0.315 |
| 20.400 | GEGZ 508 ES | GEGZ 508 ES2RS | 15.000 | 0.591 | 11.000 | 0.433 | 8.000 | 0.315 |
| 17.500 | GEZ 600 ES | GEZ 600 ES2RS | 15.000 | 0.591 | 11.000 | 0.433 | 8.000 | 0.315 |

■ Prefix & Suffix



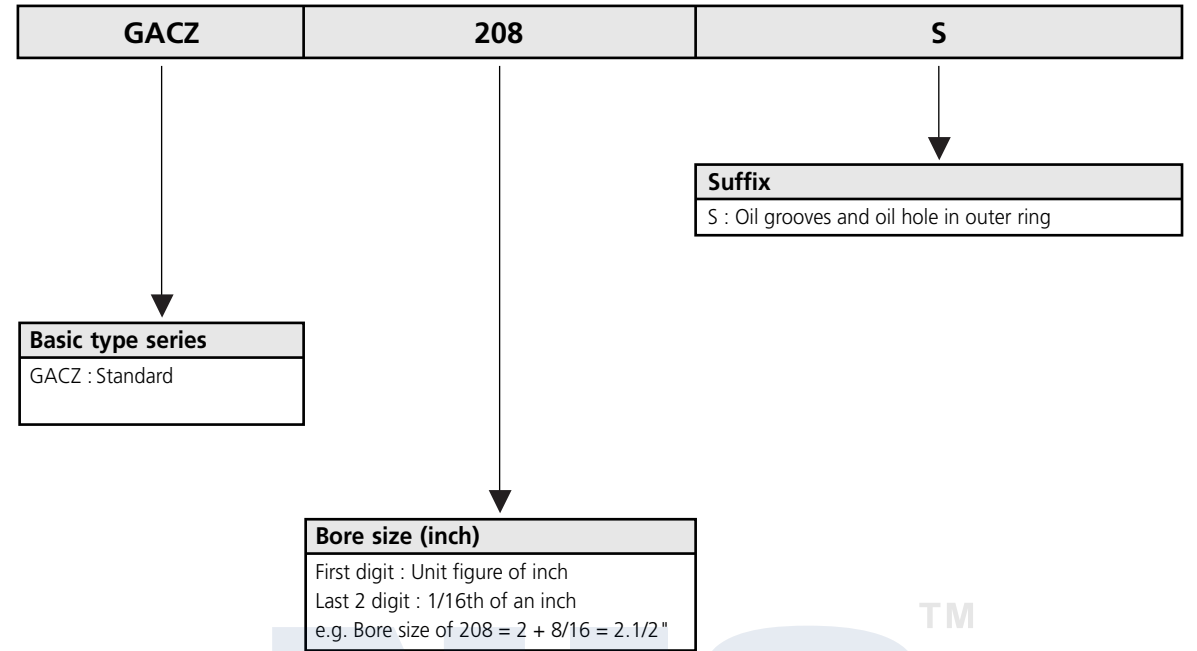
| Basic Dimensions | | | | Basic Load Ratings | | Chamfer Dimension | | Mass | Designation |
|------------------|-----|----|------|--------------------|---------|-------------------|-------|-------|-------------|
| d | D | B | C | Dynamic | Static | r_a | r_b | | |
| mm | mm | mm | mm | C | C_0 | max | max | kg | |
| | | | | kN | kN | | | | |
| 25 | 47 | 15 | 14 | 19.494 | 36.053 | 0.6 | 0.3 | 0.140 | GAC 25 S |
| 30 | 55 | 17 | 15 | 24.368 | 44.935 | 1.0 | 0.3 | 0.210 | GAC 30 S |
| 35 | 62 | 18 | 16 | 29.331 | 54.340 | 1.0 | 0.3 | 0.270 | GAC 35 S |
| 40 | 68 | 19 | 17 | 35.198 | 64.790 | 1.0 | 0.3 | 0.330 | GAC 40 S |
| 45 | 75 | 20 | 18 | 41.064 | 76.808 | 1.0 | 0.3 | 0.420 | GAC 45 S |
| 50 | 80 | 20 | 19 | 47.833 | 88.825 | 1.0 | 0.3 | 0.460 | GAC 50 S |
| 60 | 95 | 23 | 21 | 62.724 | 117.040 | 1.5 | 0.6 | 0.730 | GAC 60 S |
| 70 | 110 | 25 | 23 | 79.420 | 149.435 | 1.5 | 0.6 | 1.050 | GAC 70 S |
| 80 | 125 | 29 | 25.5 | 99.275 | 183.920 | 1.5 | 0.6 | 1.550 | GAC 80 S |
| 90 | 140 | 32 | 28 | 120.935 | 225.720 | 2.0 | 0.6 | 2.100 | GAC 90 S |
| 100 | 150 | 32 | 31 | 153.425 | 282.150 | 2.0 | 0.6 | 2.350 | GAC 100 S |
| 110 | 170 | 38 | 34 | 180.500 | 334.400 | 2.5 | 0.6 | 3.700 | GAC 110 S |
| 120 | 180 | 38 | 37 | 216.600 | 397.100 | 2.5 | 0.6 | 4.000 | GAC 120 S |

NIS™

NIS™

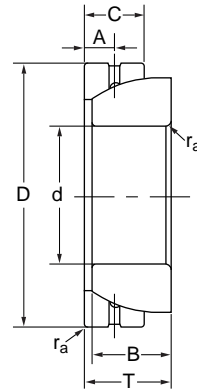
Angular Contact Spherical Plain Bearing, Steel/Steel - Inch Sizes

■ Prefix & Suffix



NIS™

Angular Contact Spherical Plain Bearing,
Steel/Steel - Inch Sizes



Basic Dimensions

| d | | D | | T | | B | | C | | A | |
|---------|-------|---------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch |
| 12.700 | 0.500 | 22.225 | 0.875 | 7.620 | 0.300 | 6.860 | 0.270 | 4.830 | 0.190 | 2.390 | 0.094 |
| 15.875 | 0.625 | 26.988 | 1.063 | 9.400 | 0.370 | 8.640 | 0.340 | 6.350 | 0.250 | 2.770 | 0.109 |
| 19.050 | 0.750 | 31.750 | 1.250 | 11.180 | 0.440 | 10.410 | 0.410 | 7.870 | 0.310 | 3.180 | 0.125 |
| 22.225 | 0.875 | 36.512 | 1.438 | 13.210 | 0.520 | 12.190 | 0.480 | 9.650 | 0.380 | 4.370 | 0.172 |
| 25.400 | 1.000 | 41.275 | 1.625 | 15.240 | 0.600 | 13.970 | 0.550 | 11.180 | 0.440 | 5.160 | 0.203 |
| 31.750 | 1.250 | 50.800 | 2.000 | 18.800 | 0.740 | 17.780 | 0.700 | 13.970 | 0.550 | 5.940 | 0.234 |
| 34.925 | 1.375 | 55.562 | 2.188 | 21.340 | 0.840 | 19.560 | 0.770 | 15.240 | 0.600 | 7.140 | 0.281 |
| 38.100 | 1.500 | 61.912 | 2.438 | 23.110 | 0.910 | 21.340 | 0.840 | 16.760 | 0.660 | 7.920 | 0.312 |
| 44.450 | 1.750 | 71.438 | 2.813 | 27.180 | 1.070 | 24.890 | 0.980 | 20.070 | 0.790 | 8.330 | 0.328 |
| 50.800 | 2.000 | 80.962 | 3.188 | 31.240 | 1.230 | 28.700 | 1.130 | 23.370 | 0.920 | 9.520 | 0.375 |
| 57.150 | 2.250 | 90.488 | 3.563 | 35.310 | 1.390 | 32.260 | 1.270 | 26.670 | 1.050 | 11.510 | 0.453 |
| 63.500 | 2.500 | 100.013 | 3.938 | 39.120 | 1.540 | 36.070 | 1.420 | 29.970 | 1.180 | 12.070 | 0.500 |
| 69.850 | 2.750 | 111.125 | 4.375 | 43.180 | 1.700 | 39.620 | 1.560 | 32.380 | 1.275 | 13.080 | 0.515 |
| 76.200 | 3.000 | 120.650 | 4.750 | 47.240 | 1.860 | 43.430 | 1.710 | 35.690 | 1.405 | 14.680 | 0.578 |
| 82.550 | 3.250 | 130.175 | 5.125 | 51.560 | 2.030 | 47.240 | 1.860 | 39.240 | 1.545 | 16.660 | 0.656 |
| 88.900 | 3.500 | 139.700 | 5.500 | 55.370 | 2.180 | 50.800 | 2.000 | 42.540 | 1.675 | 17.860 | 0.703 |
| 95.250 | 3.750 | 149.225 | 5.875 | 59.440 | 2.340 | 54.610 | 2.150 | 45.850 | 1.805 | 19.430 | 0.765 |
| 101.600 | 4.000 | 158.750 | 6.250 | 63.500 | 2.500 | 58.420 | 2.300 | 49.150 | 1.935 | 19.840 | 0.781 |
| 114.300 | 4.500 | 177.800 | 7.000 | 71.120 | 2.800 | 65.790 | 2.590 | 55.750 | 2.195 | 22.220 | 0.875 |
| 127.000 | 5.000 | 196.850 | 7.750 | 79.500 | 3.130 | 73.150 | 2.880 | 62.360 | 2.455 | 25.400 | 1.000 |
| 152.400 | 6.000 | 222.250 | 8.750 | 85.720 | 3.375 | 78.740 | 3.100 | 66.420 | 2.615 | 34.800 | 1.370 |



Angular Contact Spherical Plain Bearing,
Steel/Steel - Inch Sizes

| Basic Load Ratings | | Chamfer Dimension | | Mass | Designation |
|--------------------|----------|--------------------|----------------------|--------|-------------|
| Dynamic | Static | r_a max mm | r_a max inch | kg | |
| 5.700 | 17.100 | 0.51 | 0.02 | 0.013 | GACZ 008 S |
| 9.500 | 29.450 | 0.76 | 0.03 | 0.025 | GACZ 010 S |
| 15.200 | 44.650 | 1.00 | 0.04 | 0.038 | GACZ 012 S |
| 20.900 | 62.700 | 2.00 | 0.08 | 0.049 | GACZ 014 S |
| 27.550 | 82.650 | 2.00 | 0.08 | 0.085 | GACZ 100 S |
| 44.650 | 134.900 | 2.00 | 0.08 | 0.159 | GACZ 104 S |
| 50.350 | 151.050 | 2.54 | 0.10 | 0.213 | GACZ 106 S |
| 62.700 | 187.150 | 2.54 | 0.10 | 0.301 | GACZ 108 S |
| 86.450 | 259.350 | 2.54 | 0.10 | 0.458 | GACZ 112 S |
| 115.900 | 346.750 | 3.56 | 0.14 | 0.671 | GACZ 200 S |
| 147.250 | 442.700 | 3.56 | 0.14 | 0.948 | GACZ 204 S |
| 186.200 | 559.550 | 3.56 | 0.14 | 1.130 | GACZ 208 S |
| 219.450 | 659.300 | 4.60 | 0.18 | 1.750 | GACZ 212 S |
| 265.050 | 796.100 | 4.60 | 0.18 | 2.280 | GACZ 300 S |
| 315.400 | 945.250 | 4.60 | 0.18 | 2.890 | GACZ 304 S |
| 369.550 | 1108.650 | 4.60 | 0.18 | 3.570 | GACZ 308 S |
| 426.550 | 1280.600 | 4.60 | 0.18 | 4.350 | GACZ 312 S |
| 489.250 | 1467.750 | 4.60 | 0.18 | 5.260 | GACZ 400 S |
| 629.850 | 1890.500 | 4.60 | 0.18 | 7.760 | GACZ 408 S |
| 777.100 | 2332.250 | 4.60 | 0.18 | 11.070 | GACZ 500 S |
| 935.750 | 2807.250 | 4.60 | 0.18 | 17.370 | GACZ 600 S |

TM

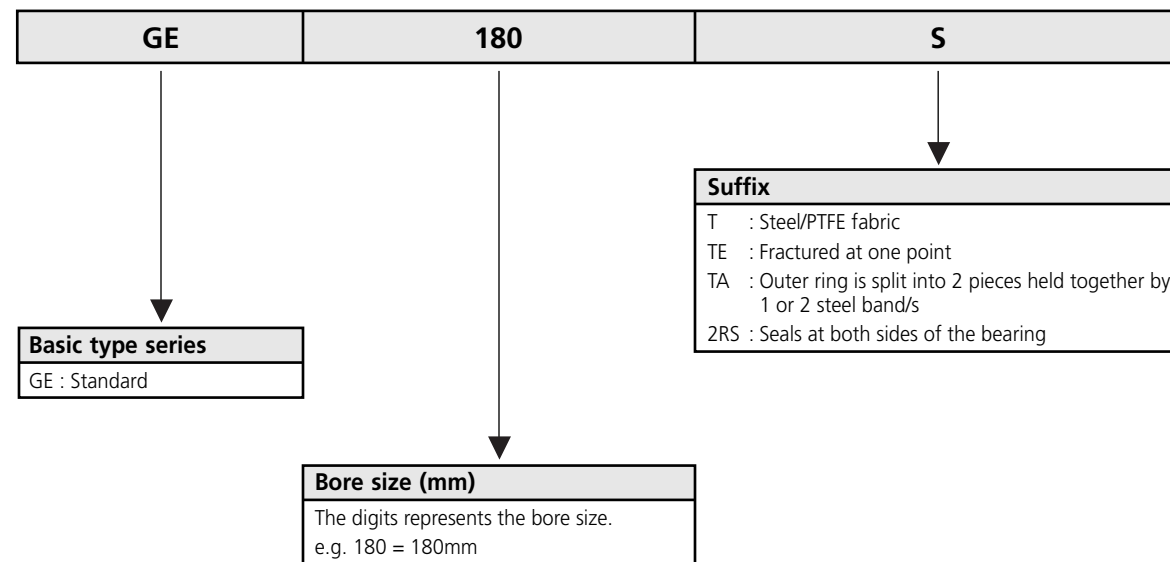
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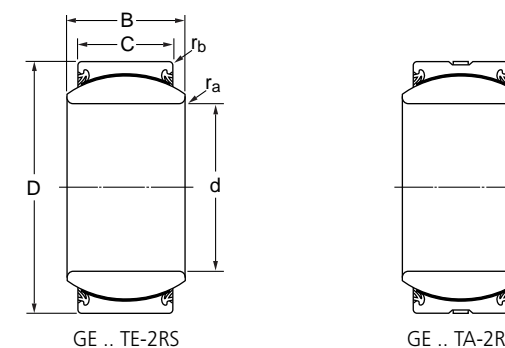
Maintenance-Free Spherical Plain Bearings, Steel/PTFE Fabric



Prefix & Suffix



Maintenance-Free Spherical Plain Bearings, Steel/PTFE Fabric

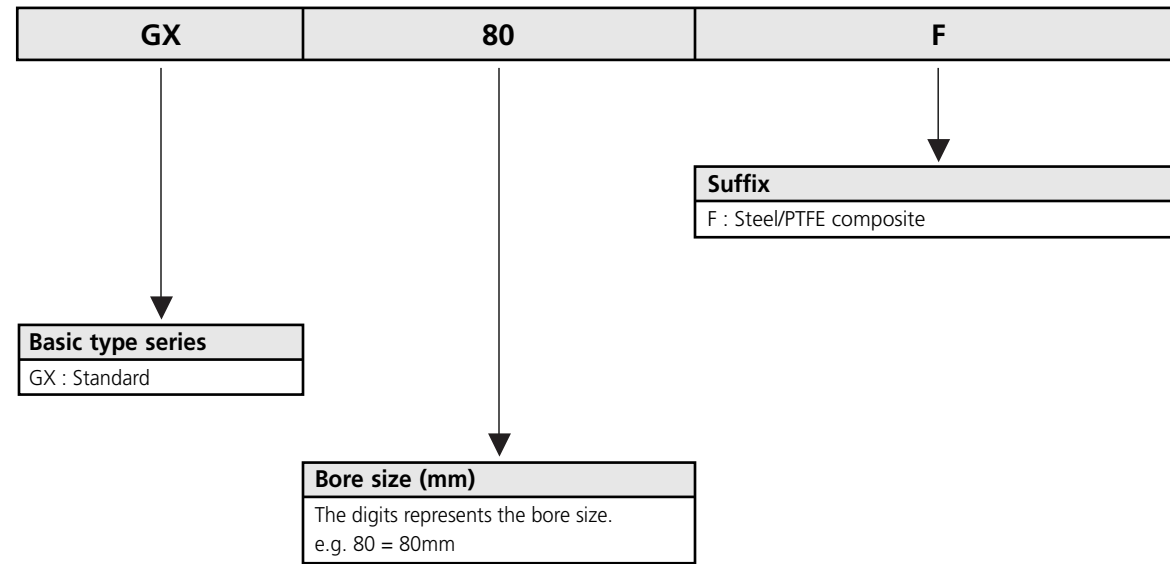


| Basic Dimensions | | | | Basic Load Ratings | | Chamfer Dimension | | Mass | Designation |
|------------------|---------|---------|---------|--------------------|--------------------------------|-----------------------|-----------------------|--------|---------------|
| d mm | D mm | B mm | C mm | Dynamic C kN | Static C ₀ kN | r _a max | r _b max | kg | |
| 25 | 42 | 20 | 16 | 64.600 | 130.150 | 0.6 | 0.6 | 0.120 | GE 25 TE 2RS |
| 30 | 47 | 22 | 18 | 83.600 | 167.200 | 0.6 | 0.6 | 0.160 | GE 30 TE 2RS |
| 35 | 55 | 25 | 20 | 106.400 | 212.800 | 0.6 | 1.0 | 0.230 | GE 35 TE 2RS |
| 40 | 62 | 28 | 22 | 133.000 | 266.000 | 0.6 | 1.0 | 0.320 | GE 40 TE 2RS |
| 45 | 68 | 32 | 25 | 171.000 | 342.000 | 0.6 | 1.0 | 0.460 | GE 45 TE 2RS |
| 50 | 75 | 35 | 28 | 209.000 | 418.000 | 0.6 | 1.0 | 0.560 | GE 50 TE 2RS |
| 60 | 90 | 44 | 36 | 327.750 | 660.250 | 1.0 | 1.0 | 1.100 | GE 60 TE 2RS |
| 70 | 105 | 49 | 40 | 418.000 | 836.000 | 1.0 | 1.0 | 1.550 | GE 70 TE 2RS |
| 80 | 120 | 55 | 45 | 541.500 | 1083.000 | 1.0 | 1.0 | 2.300 | GE 80 TE 2RS |
| 90 | 130 | 60 | 50 | 660.250 | 1301.500 | 1.0 | 1.0 | 2.750 | GE 90 TE 2RS |
| 100 | 150 | 70 | 55 | 821.750 | 1643.500 | 1.0 | 1.0 | 4.400 | GE 100 TA 2RS |
| 110 | 160 | 70 | 55 | 883.500 | 1767.000 | 1.0 | 1.0 | 4.800 | GE 110 TA 2RS |
| 120 | 180 | 85 | 70 | 1273.000 | 2565.000 | 1.0 | 1.0 | 8.250 | GE 120 TA 2RS |
| 140 | 210 | 90 | 70 | 1425.000 | 2850.000 | 1.0 | 1.0 | 11.000 | GE 140 TA 2RS |
| 160 | 230 | 105 | 80 | 1833.500 | 3610.000 | 1.0 | 1.0 | 14.000 | GE 160 TA 2RS |
| 180 | 260 | 105 | 80 | 2052.000 | 4085.000 | 1.0 | 1.0 | 18.500 | GE 180 TA 2RS |
| 200 | 290 | 130 | 100 | 2850.000 | 5700.000 | 1.0 | 1.0 | 28.000 | GE 200 TA 2RS |
| 220 | 320 | 135 | 100 | 3182.500 | 6222.500 | 1.0 | 1.0 | 35.500 | GE 220 TA 2RS |
| 240 | 340 | 140 | 100 | 3420.000 | 6840.000 | 1.0 | 1.0 | 40.000 | GE 240 TA 2RS |
| 260 | 370 | 150 | 110 | 4085.000 | 8217.500 | 1.0 | 1.0 | 51.500 | GE 260 TA 2RS |
| 280 | 400 | 155 | 120 | 4750.000 | 9500.000 | 1.0 | 1.0 | 65.000 | GE 280 TA 2RS |
| 300 | 430 | 165 | 120 | 5130.000 | 10260.000 | 1.0 | 1.0 | 78.500 | GE 300 TA 2RS |

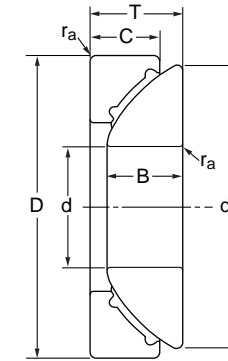
Maintenance-Free Spherical Plain Thrust Bearings, Steel/PTFE Composite



Prefix & Suffix



Maintenance-Free Spherical Plain Thrust Bearings, Steel/PTFE Composite

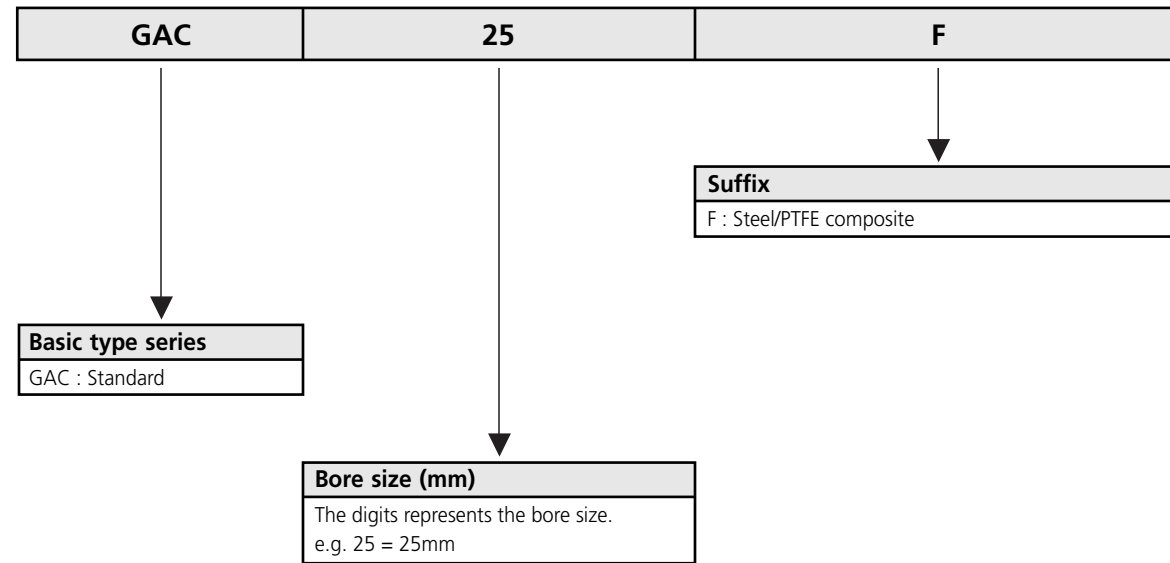


| Basic Dimensions | | | | | | Basic Load Ratings | | Chamfer Dimension | Mass | Designation |
|------------------|-----|------|----------------|------|------|--------------------|----------------------|-----------------------|--------|-------------|
| d | D | T | d ₁ | B | C | Dynamic | Static | r _a max | kg | |
| mm | mm | mm | mm | mm | mm | C kN | C ₀ kN | | | |
| 17 | 47 | 16 | 43.5 | 11.8 | 11.2 | 34.675 | 55.575 | 0.6 | 0.140 | GX 17 F |
| 20 | 55 | 20 | 50 | 14.5 | 13.8 | 44.175 | 69.825 | 1.0 | 0.250 | GX 20 F |
| 25 | 62 | 22.5 | 58.5 | 16.5 | 16.7 | 66.025 | 106.400 | 1.0 | 0.420 | GX 25 F |
| 30 | 75 | 26 | 70 | 19 | 19 | 90.250 | 145.350 | 1.0 | 0.610 | GX 30 F |
| 35 | 90 | 28 | 84 | 22 | 20.7 | 127.300 | 205.200 | 1.0 | 0.980 | GX 35 F |
| 40 | 105 | 32 | 97 | 27 | 21.5 | 164.350 | 261.250 | 1.0 | 1.500 | GX 40 F |
| 45 | 120 | 36.5 | 110 | 31 | 25.5 | 212.800 | 337.250 | 1.0 | 2.250 | GX 45 F |
| 50 | 130 | 42.5 | 120 | 33 | 30.5 | 261.250 | 418.000 | 1.0 | 3.150 | GX 50 F |
| 60 | 150 | 45 | 140 | 37 | 34 | 356.250 | 570.000 | 1.0 | 4.650 | GX 60 F |
| 70 | 160 | 50 | 153 | 42 | 36.5 | 451.250 | 712.500 | 1.0 | 5.400 | GX 70 F |
| 80 | 180 | 50 | 172 | 43.5 | 38 | 541.500 | 869.250 | 1.0 | 6.950 | GX 80 F |
| 100 | 210 | 59 | 198 | 51 | 46 | 698.250 | 1121.000 | 1.0 | 11.000 | GX 100 F |
| 120 | 230 | 64 | 220 | 53.5 | 50 | 836.000 | 1358.500 | 1.0 | 14.000 | GX 120 F |

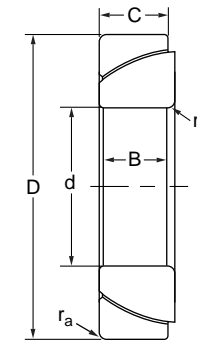
Maintenance-Free Angular Contact Spherical Plain Bearings, Steel/PTFE Composite



Prefix & Suffix



Maintenance-Free Angular Contact Spherical Plain Bearings, Steel/PTFE Composite

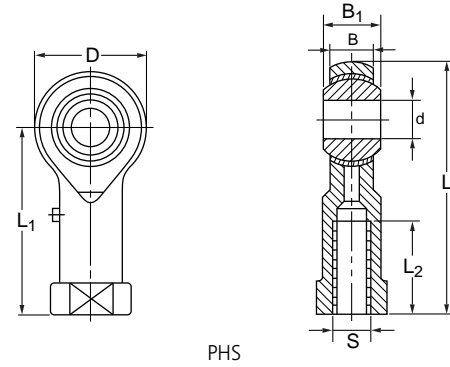


| Basic Dimensions | | | | Basic Load Ratings | | Chamfer Dimension | | Mass | Designation |
|------------------|---------|---------|---------|--------------------|--------------------------------|-----------------------|-----------------------|-------|-------------|
| d mm | D mm | B mm | C mm | Dynamic C kN | Static C ₀ kN | r _a max | r _b max | kg | |
| 25 | 47 | 15 | 14 | 20.520 | 32.775 | 0.6 | 0.3 | 0.140 | GAC 25 F |
| 30 | 55 | 17 | 15 | 25.650 | 40.850 | 1.0 | 0.3 | 0.210 | GAC 30 F |
| 35 | 62 | 18 | 16 | 30.875 | 49.400 | 1.0 | 0.3 | 0.270 | GAC 35 F |
| 40 | 68 | 19 | 17 | 37.050 | 58.900 | 1.0 | 0.3 | 0.330 | GAC 40 F |
| 45 | 75 | 20 | 18 | 43.225 | 69.825 | 1.0 | 0.3 | 0.420 | GAC 45 F |
| 50 | 80 | 20 | 19 | 50.350 | 80.750 | 1.0 | 0.3 | 0.460 | GAC 50 F |
| 60 | 95 | 23 | 21 | 66.025 | 106.400 | 1.5 | 0.6 | 0.730 | GAC 60 F |
| 70 | 110 | 25 | 23 | 83.600 | 135.850 | 1.5 | 0.6 | 1.050 | GAC 70 F |
| 80 | 125 | 29 | 25.5 | 104.500 | 167.200 | 1.5 | 0.6 | 1.550 | GAC 80 F |
| 90 | 140 | 32 | 28 | 127.300 | 205.200 | 2.0 | 0.6 | 2.100 | GAC 90 F |
| 100 | 150 | 32 | 31 | 161.500 | 256.500 | 2.0 | 0.6 | 2.350 | GAC 100 F |
| 110 | 170 | 38 | 34 | 190.000 | 304.000 | 2.5 | 0.6 | 3.700 | GAC 110 F |
| 120 | 180 | 38 | 37 | 228.000 | 361.000 | 2.5 | 0.6 | 4.000 | GAC 120 F |



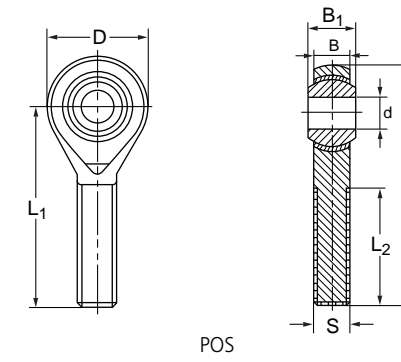
Rod End / Track Rollers

| | Page |
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| 9.01 Rod end with female thread, steel/steel | 269 |
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PHS

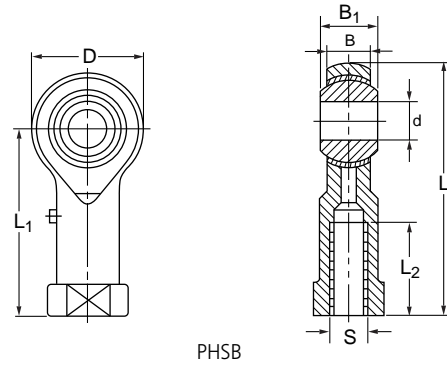
| Basic Dimensions | | | | | | | Basic Load Ratings | | Mass | Designation | | |
|------------------|----|------|----|-----|-----|----|--------------------|----------|----------------|-------------|-------------------|------------------|
| d | D | B | B1 | L | L1 | L2 | Thread | C | C ₀ | g | Right hand thread | Left hand thread |
| mm | mm | mm | mm | mm | mm | mm | S mm | kN | kN | | | |
| 5 | 16 | 6 | 8 | 35 | 27 | 14 | M5 X 0.8 | 313.500 | 551.000 | 16.500 | PHS 5 | PHS 5 L |
| 6 | 18 | 6.75 | 9 | 39 | 30 | 14 | M6 X 1 | 408.500 | 674.500 | 25.000 | PHS 6 | PHS 6 L |
| 8 | 22 | 9 | 12 | 47 | 36 | 17 | M8 X 1.25 | 674.500 | 988.000 | 43.000 | PHS 8 | PHS 8 L |
| 10 | 26 | 10.5 | 14 | 56 | 43 | 21 | M10 X 1.5 | 950.000 | 1292.000 | 72.000 | PHS 10 | PHS 10 L |
| 12 | 30 | 12 | 16 | 65 | 50 | 24 | M12 X 1.75 | 1263.500 | 1643.500 | 107.000 | PHS 12 | PHS 12 L |
| 14 | 34 | 13.5 | 19 | 74 | 57 | 27 | M14 X 2 | 1624.500 | 2023.500 | 160.000 | PHS 14 | PHS 14 L |
| 16 | 38 | 15 | 21 | 83 | 64 | 33 | M16 X 2 | 2033.000 | 2460.500 | 210.000 | PHS 16 | PHS 16 L |
| 18 | 42 | 16.5 | 23 | 92 | 71 | 36 | M18 X 1.5 | 2489.000 | 2926.000 | 295.000 | PHS 18 | PHS 18 L |
| 20 | 46 | 18 | 25 | 100 | 77 | 40 | M20 X 1.5 | 2983.000 | 3439.000 | 380.000 | PHS 20 | PHS 20 L |
| 22 | 50 | 20 | 28 | 109 | 84 | 43 | M22 X 1.5 | 3619.500 | 4047.000 | 490.000 | PHS 22 | PHS 22 L |
| 25 | 60 | 22 | 31 | 124 | 94 | 48 | M24 X 2 | 4474.500 | 7039.500 | 750.000 | PHS 25 | PHS 25 L |
| 28 | 66 | 25 | 35 | 136 | 103 | 53 | M27 X 2 | 5652.500 | 8426.500 | 950.000 | PHS 28 | PHS 28 L |
| 30 | 70 | 25 | 37 | 145 | 110 | 56 | M30 X 2 | 6032.500 | 8930.000 | 1130.000 | PHS 30 | PHS 30 L |



POS

| Basic Dimensions | | | | | | | Basic Load Ratings | | Mass | Designation | | |
|------------------|----|------|----|-----|-----|----|--------------------|----------|----------------|-------------|-------------------|------------------|
| d | D | B | B1 | L | L1 | L2 | Thread | C | C ₀ | g | Right hand thread | Left hand thread |
| mm | mm | mm | mm | mm | mm | mm | S mm | kN | kN | | | |
| 5 | 16 | 6 | 8 | 41 | 33 | 20 | M5 X 0.8 | 313.500 | 323.000 | 12.500 | POS 5 | POS 5 L |
| 6 | 18 | 6.75 | 9 | 45 | 36 | 22 | M6 X 1 | 408.500 | 456.000 | 19.000 | POS 6 | POS 6 L |
| 8 | 22 | 9 | 12 | 53 | 42 | 25 | M8 X 1.25 | 674.500 | 836.000 | 32.000 | POS 8 | POS 8 L |
| 10 | 26 | 10.5 | 14 | 61 | 48 | 29 | M10 X 1.5 | 950.000 | 1292.000 | 54.000 | POS 10 | POS 10 L |
| 12 | 30 | 12 | 16 | 69 | 54 | 33 | M12 X 1.75 | 1263.500 | 1643.500 | 85.000 | POS 12 | POS 12 L |
| 14 | 34 | 13.5 | 19 | 77 | 60 | 36 | M14 X 2 | 1624.500 | 2023.500 | 126.000 | POS 14 | POS 14 L |
| 16 | 38 | 15 | 21 | 85 | 66 | 40 | M16 X 2 | 2033.000 | 2460.500 | 185.000 | POS 16 | POS 16 L |
| 18 | 42 | 16.5 | 23 | 93 | 72 | 44 | M18 X 1.5 | 2489.000 | 2926.000 | 260.000 | POS 18 | POS 18 L |
| 20 | 46 | 18 | 25 | 101 | 78 | 47 | M20 X 1.5 | 2983.000 | 3439.000 | 340.000 | POS 20 | POS 20 L |
| 22 | 50 | 20 | 28 | 109 | 84 | 51 | M22 X 1.5 | 3619.500 | 4047.000 | 435.000 | POS 22 | POS 22 L |
| 25 | 60 | 22 | 31 | 124 | 94 | 57 | M24 X 2 | 4474.500 | 7039.500 | 650.000 | POS 25 | POS 25 L |
| 28 | 66 | 25 | 35 | 136 | 103 | 62 | M27 X 2 | 5652.500 | 8426.500 | 875.000 | POS 28 | POS 28 L |
| 30 | 70 | 25 | 37 | 145 | 110 | 66 | M30 X 2 | 6032.500 | 8930.000 | 1070.000 | POS 30 | POS 30 L |

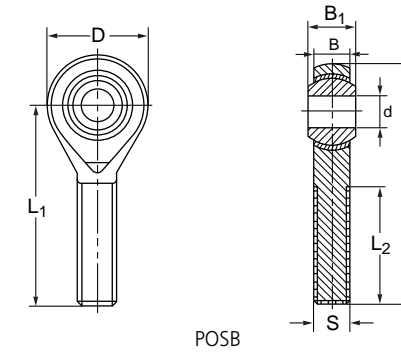
Rod End with Female Thread, Steel/Steel - Inch Sizes



PHSB

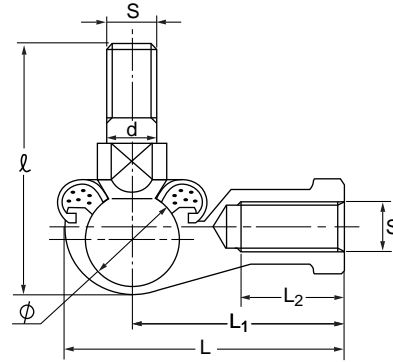
| Basic Dimensions | | | | | | | | Basic Load Ratings | | Mass | Designation | |
|------------------|-------|-------|-------|-------|--------|-------|-----------|--------------------|----------------------|-------|----------------------|---------------------|
| d | D | B | B1 | L | L1 | L2 | S | C kN | C ₀ kN | kg | Right hand thread | Left hand thread |
| 4.83 | 15.88 | 6.35 | 7.92 | 34.93 | 26.97 | 14.27 | 10-32 | 315.000 | 855.000 | 0.015 | PHSB 3 | PHSB 3 L |
| 6.35 | 19.05 | 7.14 | 9.53 | 42.85 | 33.32 | 19.05 | 0.25-28 | 423.000 | 1242.000 | 0.025 | PHSB 4 | PHSB 4 L |
| 7.94 | 22.23 | 8.74 | 11.1 | 46.02 | 34.93 | 19.05 | 0.3125-24 | 621.000 | 1548.000 | 0.036 | PHSB 5 | PHSB 5 L |
| 9.53 | 25.4 | 10.31 | 12.7 | 53.98 | 41.28 | 23.8 | 0.375-24 | 846.000 | 2034.000 | 0.061 | PHSB 6 | PHSB 6 L |
| 11.11 | 28.58 | 11.1 | 14.27 | 60.33 | 46.02 | 26.97 | 0.4375-20 | 1035.000 | 2457.000 | 0.081 | PHSB 7 | PHSB 7 L |
| 12.7 | 33.32 | 12.7 | 15.88 | 70.64 | 53.98 | 30.15 | 0.5-20 | 1359.000 | 3420.000 | 0.133 | PHSB 8 | PHSB 8 L |
| 15.88 | 38.1 | 14.27 | 19.05 | 82.55 | 63.5 | 38.1 | 0.625-18 | 1836.000 | 3690.000 | 0.190 | PHSB 10 | PHSB 10 L |
| 19.05 | 44.45 | 17.45 | 22.23 | 95.25 | 73.03 | 44.45 | 0.75-16 | 2619.000 | 5184.000 | 0.285 | PHSB 12 | PHSB 12 L |
| 25.4 | 69.85 | 25.4 | 34.93 | 139.7 | 104.78 | 53.98 | 1.25-12 | 5445.000 | 7965.000 | 1.000 | PHSB 16 | PHSB 16 L |

Rod End with Male Thread, Steel/Steel - Inch Sizes



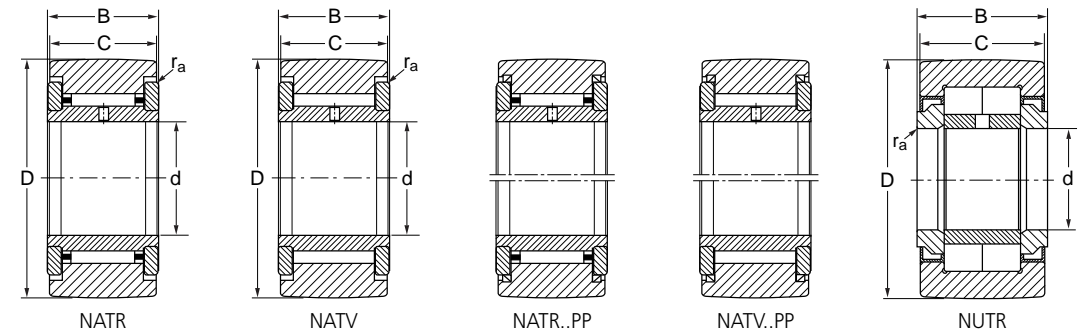
POSB

| Basic Dimensions | | | | | | | | Basic Load Ratings | | Mass | Designation | |
|------------------|-------|-------|-------|-------|--------|-------|-----------|--------------------|----------------------|-------|----------------------|---------------------|
| d | D | B | B1 | L | L1 | L2 | S | C kN | C ₀ kN | kg | Right hand thread | Left hand thread |
| 4.83 | 15.88 | 6.35 | 7.92 | 39.7 | 31.75 | 19.05 | 10-32 | 315.000 | 459.000 | 0.013 | POSB 3 | POSB 3 L |
| 6.35 | 19.05 | 7.14 | 9.53 | 49.2 | 39.67 | 25.4 | 0.25-28 | 423.000 | 837.000 | 0.022 | POSB 4 | POSB 4 L |
| 7.94 | 22.23 | 8.74 | 11.1 | 58.72 | 47.63 | 31.75 | 0.3125-24 | 621.000 | 1341.000 | 0.037 | POSB 5 | POSB 5 L |
| 9.53 | 25.4 | 10.31 | 12.7 | 61.93 | 49.23 | 31.75 | 0.375-24 | 846.000 | 2034.000 | 0.055 | POSB 6 | POSB 6 L |
| 11.11 | 28.58 | 11.1 | 14.27 | 68.28 | 53.98 | 34.93 | 0.4375-20 | 1035.000 | 2457.000 | 0.078 | POSB 7 | POSB 7 L |
| 12.7 | 33.32 | 12.7 | 15.88 | 78.59 | 61.93 | 38.1 | 0.5-20 | 1359.000 | 3420.000 | 0.120 | POSB 8 | POSB 8 L |
| 15.88 | 38.1 | 14.27 | 19.05 | 85.73 | 66.68 | 41.28 | 0.625-18 | 1836.000 | 3690.000 | 0.184 | POSB 10 | POSB 10 L |
| 19.05 | 44.45 | 17.45 | 22.23 | 95.25 | 73.03 | 44.45 | 0.75-16 | 2619.000 | 5184.000 | 0.293 | POSB 12 | POSB 12 L |
| 25.4 | 69.85 | 25.4 | 34.93 | 139.7 | 104.78 | 53.98 | 1.25-12 | 5445.000 | 10350.000 | 1.100 | POSB 16 | POSB 16 L |

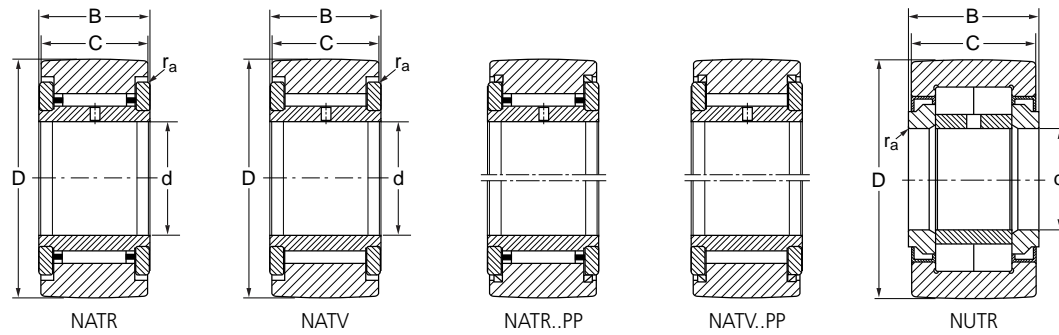


| Basic Dimensions | | | | | | | Basic Load Ratings | Mass | Designation | |
|------------------|-----|------|--------|------------|----|----|--------------------|---------|-------------------|------------------|
| d | L | ℓ | ø | S | L1 | L2 | C ₀ | g | Right hand thread | Left hand thread |
| mm | mm | mm | mm | mm | mm | mm | kN | | | |
| 5 | 35 | 29 | 11.112 | M5 X 0.8 | 27 | 14 | 8.759 | 24.000 | RBL 5D | RBL 5DL |
| 6 | 40 | 35.5 | 12.700 | M6 X 1 | 30 | 14 | 11.495 | 37.000 | RBL 6D | RBL 6DL |
| 8 | 48 | 42.5 | 15.875 | M8 X 1.25 | 36 | 17 | 18.145 | 67.000 | RBL 8D | RBL 8DL |
| 10 | 57 | 50.5 | 19.050 | M10 X 1.25 | 43 | 21 | 26.125 | 110.000 | RBL 10D | RBL 10DL |
| 10 | 57 | 56.5 | 19.050 | M10 X 1.5 | 43 | 21 | 26.125 | 113.000 | RBL 10BD | RBL 10BDL |
| 12 | 66 | 57.5 | 22.225 | M12 X 1.25 | 50 | 25 | 35.625 | 165.000 | RBL 12D | RBL 12DL |
| 12 | 66 | 64.5 | 22.225 | M12 X 1.75 | 50 | 25 | 35.625 | 170.000 | RBL 12BD | RBL 12BDL |
| 14 | 75 | 73.5 | 25.400 | M14 X 1.5 | 57 | 26 | 46.455 | 255.000 | RBL 14D | RBL 14DL |
| 14 | 75 | 79.5 | 25.400 | M14 X 2 | 57 | 26 | 46.455 | 260.000 | RBL 14BD | RBL 14BDL |
| 16 | 84 | 79.5 | 25.400 | M16 X 1.5 | 64 | 32 | 46.455 | 335.000 | RBL 16D | RBL 16DL |
| 16 | 84 | 85.5 | 25.4 | M16 X 2 | 64 | 32 | 46.455 | 340.000 | RBL 16BD | RBL 16BDL |
| 18 | 93 | 90 | 28.575 | M18 X 1.5 | 71 | 34 | 58.805 | 465.000 | RBL 18D | RBL 18DL |
| 20 | 99 | 90 | 28.575 | M20 X 1.5 | 77 | 35 | 58.805 | 540.000 | RBL 20D | RBL 20DL |
| 22 | 109 | 95 | 31.75 | M22 X 1.5 | 84 | 41 | 71.630 | 715.000 | RBL 22D | RBL 22DL |

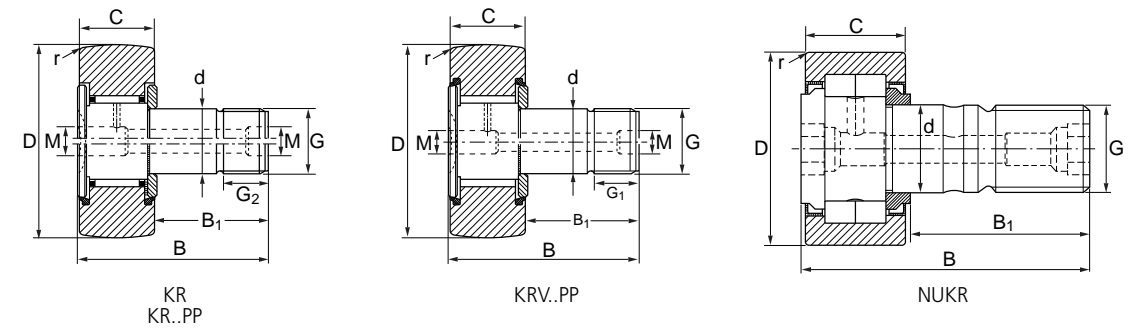
Note:
 Suffix B represents a thicker thread
 Suffix D represents a rubber boot



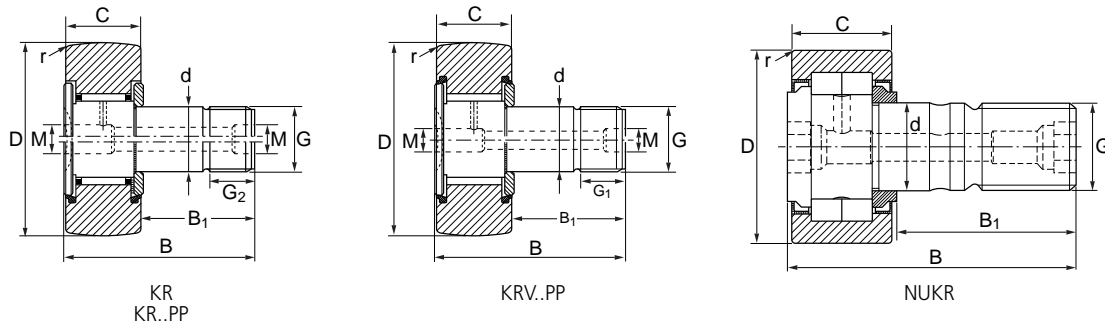
| Basic Dimensions | | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|----|----|----|--------------------|----------------|----------------|--------------------|---------|-------------|------------|
| d | D | C | B | C | C ₀ | r/min | r _a max | g | | |
| mm | mm | mm | mm | kN | kN | | | | | |
| 5 | 16 | 11 | 12 | 2.993 | 3.135 | 13,300 | 0.15 | 14.000 | NATR 5 | NATR 5 PP |
| 5 | 16 | 11 | 12 | 4.608 | 6.175 | 3,610 | 0.15 | 15.000 | NATV 5 | NATV 5 PP |
| 6 | 19 | 11 | 12 | 3.325 | 3.705 | 10,450 | 0.15 | 20.000 | NATR 6 | NATR 6 PP |
| 6 | 19 | 11 | 12 | 5.225 | 7.505 | 2,945 | 0.15 | 21.000 | NATV 6 | NATV 6 PP |
| 8 | 24 | 14 | 15 | 5.225 | 6.080 | 7,125 | 0.30 | 41.000 | NATR 8 | NATR 8 PP |
| 8 | 24 | 14 | 15 | 7.410 | 10.830 | 2,375 | 0.30 | 42.000 | NATV 8 | NATV 8 PP |
| 10 | 30 | 14 | 15 | 6.460 | 7.980 | 5,225 | 0.60 | 64.000 | NATR 10 | NATR 10 PP |
| 10 | 30 | 14 | 15 | 9.025 | 13.870 | 1,995 | 0.60 | 65.000 | NATV 10 | NATV 10 PP |
| 12 | 32 | 14 | 15 | 6.555 | 8.360 | 4,275 | 0.60 | 71.000 | NATR 12 | NATR 12 PP |
| 12 | 32 | 14 | 15 | 9.215 | 14.630 | 1,710 | 0.60 | 72.000 | NATV 12 | NATV 12 PP |
| 15 | 35 | 18 | 19 | 9.215 | 13.395 | 3,420 | 0.60 | 103.000 | NATR 15 | NATR 15 PP |
| 15 | 35 | 18 | 19 | 12.160 | 21.850 | 1,520 | 0.60 | 105.000 | NATV 15 | NATV 15 PP |
| 15 | 35 | 18 | 19 | 14.250 | 15.960 | 6,175 | 0.30 | 99.000 | NUTR 15 | - |
| 15 | 42 | 18 | 19 | 17.195 | 20.805 | 6,175 | 0.30 | 158.000 | NUTR 15 42 | - |
| 17 | 40 | 20 | 21 | 10.355 | 14.725 | 2,755 | 1.00 | 144.000 | NATR 17 | NATR 17 PP |
| 17 | 40 | 20 | 21 | 14.060 | 25.175 | 1,330 | 1.00 | 152.000 | NATV 17 | NATV 17 PP |
| 17 | 40 | 20 | 21 | 17.480 | 21.470 | 5,225 | 0.50 | 147.000 | NUTR 17 | - |
| 17 | 47 | 20 | 21 | 20.235 | 26.600 | 5,225 | 0.50 | 220.000 | NUTR 17 47 | - |
| 20 | 47 | 24 | 25 | 14.725 | 24.225 | 2,280 | 1.00 | 246.000 | NATR 20 | NATR 20 PP |
| 20 | 47 | 24 | 25 | 19.570 | 39.900 | 1,235 | 1.00 | 254.000 | NATV 20 | NATV 20 PP |
| 20 | 47 | 24 | 25 | 26.600 | 33.250 | 3,990 | 0.50 | 245.000 | NUTR 20 | - |
| 20 | 52 | 24 | 25 | 29.925 | 38.950 | 3,990 | 0.50 | 321.000 | NUTR 20 52 | - |
| 25 | 52 | 24 | 25 | 14.630 | 25.175 | 1,710 | 1.00 | 275.000 | NATR 25 | NATR 25 PP |
| 25 | 52 | 24 | 25 | 19.475 | 41.800 | 950 | 1.00 | 285.000 | NATV 25 | NATV 25 PP |
| 25 | 52 | 24 | 25 | 27.550 | 35.625 | 3,230 | 0.50 | 281.000 | NUTR 25 | - |
| 25 | 62 | 24 | 25 | 33.725 | 47.500 | 3,230 | 0.50 | 450.000 | NUTR 25 62 | - |
| 30 | 62 | 28 | 29 | 22.420 | 36.575 | 1,235 | 1.00 | 470.000 | NATR 30 | NATR 30 PP |
| 30 | 62 | 28 | 29 | 28.975 | 58.900 | 808 | 1.00 | 481.000 | NATV 30 | NATV 30 PP |
| 30 | 62 | 28 | 29 | 38.000 | 47.500 | 2,470 | 1.00 | 465.000 | NUTR 30 | - |
| 30 | 72 | 28 | 29 | 45.125 | 60.800 | 2,470 | 0.50 | 697.000 | NUTR 30 72 | - |
| 35 | 72 | 28 | 29 | 24.225 | 42.275 | 950 | 1.10 | 635.000 | - | NATR 35 PP |
| 35 | 72 | 28 | 29 | 31.350 | 69.350 | 713 | 1.10 | 647.000 | - | NATV 35 PP |



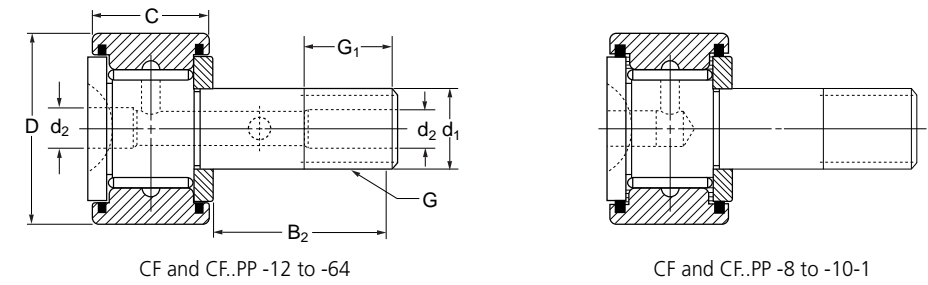
| Basic Dimensions | | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation | |
|------------------|-----|----|----|--------------------|-----------------------|----------------|--------------------|----------|-------------|------------|
| d | D | C | B | Dynamic C | Static C ₀ | r/min | r _a max | g | | |
| mm | mm | mm | mm | kN | kN | | | | | |
| 35 | 72 | 28 | 29 | 42.275 | 57.000 | 1,995 | 0.60 | 630.000 | NUTR 35 | - |
| 35 | 80 | 28 | 29 | 48.450 | 68.400 | 1,995 | 0.60 | 836.000 | NUTR 35 80 | - |
| 40 | 80 | 30 | 32 | 31.350 | 56.050 | 808 | 1.10 | 805.000 | - | NATR 40 PP |
| 40 | 80 | 30 | 32 | 38.950 | 85.500 | 618 | 1.10 | 890.000 | - | NATV 40 PP |
| 40 | 80 | 30 | 32 | 52.250 | 71.250 | 1,520 | 0.60 | 816.000 | NUTR 40 | - |
| 40 | 90 | 30 | 32 | 62.700 | 90.250 | 1,520 | 0.60 | 1129.000 | NUTR 40 90 | - |
| 45 | 85 | 30 | 32 | 53.200 | 74.100 | 1,330 | 0.60 | 883.000 | NUTR 45 | - |
| 45 | 100 | 30 | 32 | 67.450 | 101.650 | 1,330 | 0.60 | 1396.000 | NUTR 45 100 | - |
| 50 | 90 | 30 | 32 | 30.400 | 56.050 | 618 | 1.10 | 960.000 | - | NATR 50 PP |
| 50 | 90 | 30 | 32 | 38.475 | 88.350 | 523 | 1.10 | 990.000 | - | NATV 50 PP |
| 50 | 90 | 30 | 32 | 54.150 | 76.950 | 1,235 | 0.60 | 950.000 | NUTR 50 | - |
| 50 | 110 | 30 | 32 | 72.200 | 114.000 | 1,235 | 0.60 | 1690.000 | NUTR 50 110 | - |



| Basic Dimensions | | | | | | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation |
|------------------|----|----|----|----------------|-----------|----------------|----|--------------------|-----------------------|----------------|--------------------|---------|-------------|
| D | d | C | B | B ₁ | G | G ₁ | M | Dynamic C | Static C ₀ | r/min | r _a max | g | |
| mm | mm | mm | mm | mm | mm | mm | mm | kN | kN | | | | |
| 16 | 6 | 11 | 28 | 16 | M6 X 1 | 8 | 4 | 2.993 | 3.135 | 13,300 | 0.15 | 18.000 | KR 16 |
| 16 | 6 | 11 | 28 | 16 | M6 X 1 | 8 | 4 | 2.993 | 3.135 | 13,300 | 0.15 | 18.000 | KR 16 PP |
| 16 | 6 | 11 | 28 | 16 | M6 X 1 | 8 | 4 | 4.608 | 6.175 | 3,610 | 0.15 | 20.000 | KRV 16 PP |
| 19 | 8 | 11 | 32 | 20 | M8 X 1.25 | 10 | 4 | 3.325 | 3.705 | 10,450 | 0.15 | 28.000 | KR 19 |
| 19 | 8 | 11 | 32 | 20 | M8 X 1.25 | 10 | 4 | 3.325 | 3.705 | 10,450 | 0.15 | 28.000 | KR 19 PP |
| 19 | 8 | 11 | 32 | 20 | M8 X 1.25 | 10 | 4 | 5.225 | 7.505 | 2,945 | 0.15 | 32.000 | KRV 19 PP |
| 22 | 10 | 12 | 36 | 23 | M10 X 1 | 12 | 4 | 4.228 | 4.940 | 7,600 | 0.30 | 48.000 | KR 22 |
| 22 | 10 | 12 | 36 | 23 | M10 X 1 | 12 | 4 | 4.228 | 4.940 | 7,600 | 0.30 | 48.000 | KR 22 PP |
| 22 | 10 | 12 | 36 | 23 | M10 X 1 | 12 | 4 | 5.985 | 8.645 | 2,470 | 0.30 | 49.000 | KRV22 PP |
| 26 | 10 | 12 | 36 | 23 | M10 X 1 | 12 | 4 | 4.845 | 5.890 | 7,600 | 0.30 | 58.000 | KR 26 |
| 26 | 10 | 12 | 36 | 23 | M10 X 1 | 12 | 4 | 4.845 | 5.890 | 7,600 | 0.30 | 58.000 | KR 26 PP |
| 26 | 10 | 12 | 36 | 23 | M10 X 1 | 12 | 4 | 6.935 | 10.735 | 2,470 | 0.30 | 61.000 | KRV 26 PP |
| 30 | 12 | 14 | 40 | 25 | M12 X 1.5 | 13 | 6 | 6.460 | 7.980 | 5,225 | 0.60 | 87.000 | KR 30 |
| 30 | 12 | 14 | 40 | 25 | M12 X 1.5 | 13 | 6 | 6.460 | 7.980 | 5,225 | 0.60 | 87.000 | KR 30 PP |
| 30 | 12 | 14 | 40 | 25 | M12 X 1.5 | 13 | 6 | 9.025 | 13.870 | 1,995 | 0.60 | 95.000 | KRV 30 PP |
| 32 | 12 | 14 | 40 | 25 | M12 X 1.5 | 13 | 6 | 6.745 | 8.550 | 5,225 | 0.60 | 98.000 | KR 32 |
| 32 | 12 | 14 | 40 | 25 | M12 X 1.5 | 13 | 6 | 6.745 | 8.550 | 5,225 | 0.60 | 98.000 | KR 32 PP |
| 32 | 12 | 14 | 40 | 25 | M12 X 1.5 | 13 | 6 | 9.500 | 15.010 | 1,995 | 0.60 | 100.000 | KRV 32 PP |
| 35 | 16 | 18 | 52 | 32.5 | M16 X 1.5 | 17 | 6 | 9.215 | 13.395 | 3,420 | 0.60 | 169.000 | KR 35 |
| 35 | 16 | 18 | 52 | 32.5 | M16 X 1.5 | 17 | 6 | 9.215 | 13.395 | 3,420 | 0.60 | 169.000 | KR 35 PP |
| 35 | 16 | 18 | 52 | 32.5 | M16 X 1.5 | 17 | 6 | 12.160 | 21.850 | 1,520 | 0.60 | 171.000 | KRV 35 PP |
| 35 | 16 | 18 | 52 | 32.5 | M16 X 1.5 | 17 | 6 | 14.250 | 15.960 | 6,175 | 0.60 | 164.000 | NUKR 35 |
| 40 | 18 | 20 | 58 | 36.5 | M18 X 1.5 | 19 | 6 | 10.355 | 14.725 | 2,755 | 1.00 | 247.000 | KR 40 |
| 40 | 18 | 20 | 58 | 36.5 | M18 X 1.5 | 19 | 6 | 10.355 | 14.725 | 2,755 | 1.00 | 247.000 | KR 40 PP |
| 40 | 18 | 20 | 58 | 36.5 | M18 X 1.5 | 19 | 6 | 14.060 | 25.175 | 1,330 | 1.00 | 249.000 | KRV 40 PP |
| 40 | 18 | 20 | 58 | 36.5 | M18 X 1.5 | 19 | 8 | 17.480 | 21.470 | 5,225 | 1.00 | 242.000 | NUKR 40 |
| 47 | 20 | 24 | 66 | 40.5 | M20 X 1.5 | 21 | 8 | 14.725 | 24.225 | 2,280 | 1.00 | 386.000 | KR 47 |
| 47 | 20 | 24 | 66 | 40.5 | M20 X 1.5 | 21 | 8 | 14.725 | 24.225 | 2,280 | 1.00 | 386.000 | KR 47 PP |
| 47 | 20 | 24 | 66 | 40.5 | M20 X 1.5 | 21 | 10 | 26.600 | 33.250 | 3,990 | 1.00 | 380.000 | NUKR 47 |
| 52 | 20 | 24 | 66 | 40.5 | M20 X 1.5 | 21 | 8 | 15.960 | 27.550 | 2,280 | 1.00 | 461.000 | KR 52 |
| 52 | 20 | 24 | 66 | 40.5 | M20 X 1.5 | 21 | 8 | 15.960 | 27.550 | 2,280 | 1.00 | 481.000 | KR 52 PP |
| 52 | 20 | 24 | 66 | 40.5 | M20 X 1.5 | 21 | 10 | 27.550 | 35.625 | 3,230 | 1.00 | 450.000 | NUKR 52 |



| Basic Dimensions | | | | | | | | Basic Load Ratings | | Limiting Speed | Chamfer Dimension | Mass | Designation |
|------------------|----|----|-----|----------------|-----------|----------------|----|--------------------|----------------|----------------|--------------------|----------|-------------|
| D | d | C | B | B ₁ | G | G ₁ | M | Dynamic | Static | | | | |
| mm | mm | mm | mm | mm | mm | mm | mm | C | C ₀ | r/min | r _a max | g | |
| 62 | 24 | 28 | 80 | 49.5 | M24 X 1.5 | 25 | 14 | 38.000 | 47.500 | 2,470 | 1.00 | 795.000 | NUKR 62 |
| 62 | 24 | 29 | 80 | 49.5 | M24 X 1.5 | 25 | 14 | 25.175 | 45.600 | 1,805 | 1.00 | 790.000 | KR 62 PP |
| 62 | 24 | 29 | 80 | 49.5 | M24 X 1.5 | 25 | 14 | 32.300 | 72.200 | 1,045 | 1.00 | 802.000 | KRV 62 PP |
| 72 | 24 | 28 | 80 | 49.5 | M24 X 1.5 | 25 | 14 | 42.275 | 57.000 | 1,995 | 1.10 | 1020.000 | NUKR 72 |
| 72 | 24 | 29 | 80 | 49.5 | M24 X 1.5 | 25 | 14 | 26.600 | 50.350 | 1,805 | 1.10 | 1040.000 | KR 72 PP |
| 72 | 24 | 29 | 80 | 49.5 | M24 X 1.5 | 25 | 14 | 35.150 | 80.750 | 1,045 | 1.10 | 1045.000 | KRV 72 PP |
| 80 | 30 | 35 | 100 | 63 | M30 X 1.5 | 32 | 14 | 37.525 | 73.150 | 1,235 | 1.10 | 1550.000 | KR 80 PP |
| 80 | 30 | 35 | 100 | 63 | M30 X 1.5 | 32 | 14 | 47.025 | 114.000 | 808 | 1.10 | 1561.000 | KRV 80 PP |
| 80 | 30 | 35 | 100 | 63 | M30 X 1.5 | 32 | 14 | 65.550 | 93.100 | 1,710 | 1.10 | 1600.000 | NUKR 80 |
| 90 | 30 | 35 | 100 | 63 | M30 X 1.5 | 32 | 14 | 39.425 | 78.850 | 1,235 | 1.10 | 1950.000 | KR 90 PP |
| 90 | 30 | 35 | 100 | 63 | M30 X 1.5 | 32 | 14 | 50.350 | 123.500 | 808 | 1.10 | 1970.000 | KRV 90 PP |
| 90 | 30 | 35 | 100 | 63 | M30 X 1.5 | 32 | 14 | 75.050 | 111.150 | 1,710 | 1.10 | 1960.000 | NUKR 90 |



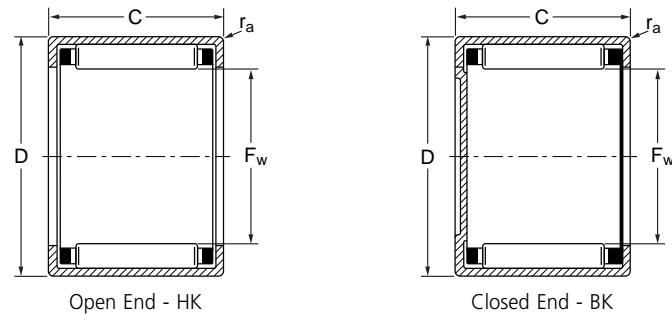
| Basic Dimensions | | | | | | | Basic Load Ratings | | Limiting Speed | Mass | Designation | | Reference Number | |
|------------------|-------|-------|----------------|----------------|----------------|-----------|--------------------|----------------|----------------|-------|---------------|--|------------------|--|
| d ₁ | D | C | B ₂ | G ₁ | d ₂ | G | Dynamic | Static | | | Without seals | With seals and internal thrust washers | Without seals | With seals and internal thrust washers |
| | | | | | | UNF | C | C ₀ | r/min | g | | | | |
| 0.1900 | 0.500 | 0.344 | 0.500 | 0.250 | 0.125 | 10-32 | 4.223 | 4.693 | 6,650 | 0.022 | CF 8 | CF 8 PP | CR 8 | CRS 8 |
| 0.1900 | 0.500 | 0.375 | 0.625 | 0.250 | 0.125 | 10-32 | 4.735 | 5.411 | 6,650 | 0.023 | CF 8-1 | CF 8-1 PP | CR 8-1 | CRS 8-1 |
| 0.2500 | 0.625 | 0.406 | 0.625 | 0.312 | 0.125 | 0.25-28 | 5.749 | 7.483 | 5,225 | 0.041 | CF 10 | CF 10 PP | CR 10 | CRS 10 |
| 0.2500 | 0.625 | 0.438 | 0.750 | 0.312 | 0.125 | 0.25-28 | 6.257 | 8.328 | 5,225 | 0.045 | CF 10-1 | CF 10-1 PP | CR 10-1 | CRS 10-1 |
| 0.3750 | 0.750 | 0.500 | 0.875 | 0.375 | 0.188 | 0.375-24 | 9.850 | 14.416 | 3,705 | 0.076 | CF 12 | CF 12 PP | CR 12 | CRS 12 |
| 0.3750 | 0.875 | 0.500 | 0.875 | 0.375 | 0.188 | 0.375-24 | 9.850 | 14.416 | 3,705 | 0.097 | CF 14 | CF 14 PP | CR 14 | CRS 14 |
| 0.4375 | 1.000 | 0.625 | 1.000 | 0.500 | 0.188 | 0.4375-20 | 12.598 | 21.180 | 2,850 | 0.161 | CF 16 | CF 16 PP | CR 16 | CRS 16 |
| 0.4375 | 1.125 | 0.625 | 1.000 | 0.500 | 0.188 | 0.4375-20 | 12.598 | 21.180 | 2,850 | 0.197 | CF 18 | CF 18 PP | CR 18 | CRS 18 |
| 0.5000 | 1.250 | 0.750 | 1.250 | 0.625 | 0.188 | 0.5-20 | 20.461 | 31.537 | 2,470 | 0.301 | CF 20 | CF 20 PP | CR 20 | CRS 20 |
| 0.5000 | 1.375 | 0.750 | 1.250 | 0.625 | 0.188 | 0.5-20 | 20.461 | 31.537 | 2,470 | 0.354 | CF 22 | CF 22 PP | CR 22 | CRS 22 |
| 0.6250 | 1.500 | 0.875 | 1.500 | 0.750 | 0.188 | 0.625-18 | 26.971 | 38.724 | 2,185 | 0.528 | CF 24 | CF 24 PP | CR 24 | CRS 24 |
| 0.6250 | 1.625 | 0.875 | 1.500 | 0.750 | 0.188 | 0.625-18 | 26.971 | 38.724 | 2,185 | 0.605 | CF 26 | CF 26 PP | CR 26 | CRS 26 |
| 0.7500 | 1.750 | 1.000 | 1.750 | 0.875 | 0.188 | 0.75-16 | 33.989 | 54.112 | 1,805 | 0.848 | CF 28 | CF 28 PP | CR 28 | CRS 28 |
| 0.7500 | 1.875 | 1.000 | 1.750 | 0.875 | 0.188 | 0.75-16 | 33.989 | 54.112 | 1,805 | 0.947 | CF 30 | CF 30 PP | CR 30 | CRS 30 |
| 0.8750 | 2.000 | 1.250 | 2.000 | 1.000 | 0.188 | 0.875-14 | 41.303 | 72.290 | 1,615 | 1.370 | CF 32 | CF 32 PP | CR 32 | CRS 32 |
| 0.8750 | 2.250 | 1.250 | 2.000 | 1.000 | 0.188 | 0.875-14 | 41.303 | 72.290 | 1,615 | 1.670 | CF 36 | CF 36 PP | CR 36 | CRS 36 |
| 1.0000 | 2.500 | 1.500 | 2.250 | 1.125 | 0.188 | 1-14* | 55.803 | 112.452 | 1,330 | 2.500 | CF 40 | CF 40 PP | CR 40 | CRS 40 |
| 1.0000 | 2.750 | 1.500 | 2.250 | 1.125 | 0.188 | 1-14* | 55.803 | 112.452 | 1,330 | 2.930 | CF 44 | CF 44 PP | CR 44 | CRS 44 |
| 1.2500 | 3.000 | 1.750 | 2.500 | 1.250 | 0.250 | 1.25-12 | 71.022 | 169.946 | 941 | 4.200 | CF 48 | CF 48 PP | CR 48 | CRS 48 |
| 1.2500 | 3.250 | 1.750 | 2.500 | 1.250 | 0.250 | 1.25-12 | 71.022 | 169.946 | 941 | 4.810 | CF 52 | CF 52 PP | CR 52 | CRS 52 |
| 1.3750 | 3.500 | 2.000 | 2.750 | 1.375 | 0.250 | 1.375-12 | 105.265 | 215.603 | 903 | 6.420 | CF 56 | CF 56 PP | CR 56 | CRS 56 |
| 1.5000 | 4.000 | 2.250 | 3.500 | 1.500 | 0.250 | 1.5-12 | 131.475 | 305.226 | 741 | 9.460 | CF 64 | CF 64 PP | CR 64 | CRS 64 |

*UNS thread instead of UNF thread

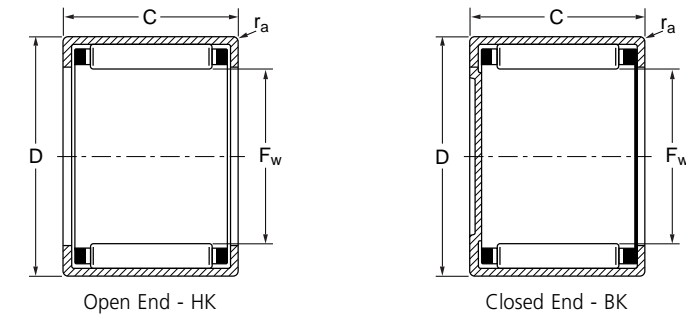


Needle Bearings

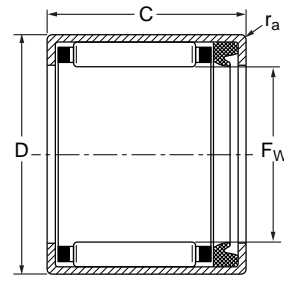
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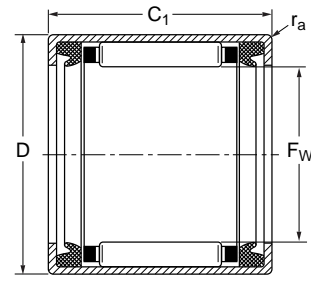
| Basic Dimensions | | | Chamfer Dimension | Basic Load Ratings | | Limiting Speed | Designation | Mass | Designation | Mass |
|----------------------|---------|-----------|-----------------------|--------------------|--------------------------------|----------------|-------------|---------------|-------------|-----------------|
| F _w mm | D mm | C -0.3 | r _a max | Dynamic C kN | Static C ₀ kN | r/min | Open end | Open end g | Closed end | Closed end g |
| 4 | 8 | 8 | 0.3 | 1.691 | 1.245 | 36900 | HK 0408 | 2.0 | BK 0408 | 2.1 |
| 5 | 9 | 9 | 0.4 | 2.280 | 1.891 | 34200 | HK 0509 | 2.0 | BK 0509 | 2.1 |
| 6 | 10 | 8 | 0.4 | 1.929 | 1.568 | 31500 | HK 0608 | 2.1 | - | - |
| 6 | 10 | 9 | 0.4 | 2.708 | 2.470 | 31500 | HK 0609 | 2.5 | BK 0609 | 2.6 |
| 7 | 11 | 9 | 0.4 | 2.945 | 2.803 | 27900 | HK 0709 | 2.6 | BK 0709 | 2.9 |
| 8 | 12 | 8 | 0.4 | 2.613 | 2.470 | 25200 | HK 0808 | 2.7 | BK 0808 | 3.0 |
| 8 | 12 | 10 | 0.4 | 3.610 | 3.753 | 25200 | HK 0810 | 3.0 | BK 0810 | 3.4 |
| 9 | 13 | 8 | 0.4 | 3.373 | 3.563 | 22500 | HK 0908 | 3.0 | - | - |
| 9 | 13 | 10 | 0.4 | 4.038 | 4.418 | 22500 | HK 0910 | 4.0 | BK 0910 | 4.3 |
| 9 | 13 | 12 | 0.4 | 5.035 | 5.985 | 22500 | HK 0912 | 4.6 | BK 0912 | 4.9 |
| 10 | 14 | 10 | 0.4 | 4.180 | 4.845 | 20700 | HK 1010 | 4.1 | BK 1010 | 4.3 |
| 10 | 14 | 12 | 0.4 | 5.225 | 6.460 | 20700 | HK 1012 | 4.8 | BK 1012 | 5.0 |
| 10 | 14 | 15 | 0.4 | 6.460 | 8.360 | 20700 | HK 1015 | 6.0 | BK 1015 | 6.2 |
| 12 | 16 | 10 | 0.4 | 4.703 | 5.890 | 18000 | HK 1210 | 4.6 | BK 1210 | 5.2 |
| 12 | 18 | 12 | 0.8 | 6.175 | 6.935 | 17100 | HK 1212 | 9.0 | BK 1212 | 10.0 |
| 13 | 19 | 12 | 0.8 | 6.460 | 7.505 | 16200 | HK 1312 | 10.0 | BK 1312 | 11.0 |
| 14 | 20 | 12 | 0.8 | 6.745 | 8.075 | 14400 | HK 1412 | 10.5 | BK 1412 | 12.0 |
| 15 | 21 | 12 | 0.8 | 7.505 | 8.930 | 14400 | HK 1512 | 11.0 | BK 1512 | 13.0 |
| 15 | 21 | 16 | 0.8 | 9.975 | 13.680 | 14400 | HK 1516 | 15.0 | BK 1516 | 17.0 |
| 15 | 21 | 22 | 0.8 | 12.730 | 18.525 | 14400 | HK 1522 | 20.0 | - | - |
| 16 | 22 | 12 | 0.8 | 7.220 | 9.215 | 13500 | HK 1612 | 12.0 | BK 1612 | 14.0 |
| 16 | 22 | 16 | 0.8 | 10.355 | 14.535 | 13500 | HK 1616 | 16.0 | BK 1616 | 18.0 |
| 16 | 22 | 22 | 0.8 | 12.445 | 18.430 | 13500 | HK 1622 | 22.0 | BK 1622 | 24.0 |
| 17 | 23 | 12 | 0.8 | 7.505 | 9.785 | 12600 | HK 1712 | 12.0 | - | - |
| 18 | 24 | 12 | 0.8 | 7.695 | 10.355 | 11700 | HK 1812 | 13.0 | BK 1812 | 15.0 |
| 18 | 24 | 16 | 0.8 | 11.020 | 16.435 | 11700 | HK 1816 | 18.0 | BK 1816 | 20.0 |
| 20 | 26 | 10 | 0.8 | 6.080 | 7.790 | 10800 | HK 2010 | 12.0 | - | - |
| 20 | 26 | 12 | 0.8 | 8.170 | 11.495 | 10800 | HK 2012 | 14.0 | - | - |
| 20 | 26 | 16 | 0.8 | 12.065 | 19.095 | 10800 | HK 2016 | 19.0 | BK 2016 | 22.0 |
| 20 | 26 | 20 | 0.8 | 14.915 | 24.700 | 10800 | HK 2020 | 24.0 | BK 2020 | 27.0 |
| 20 | 26 | 30 | 0.8 | 20.710 | 38.000 | 10800 | HK 2030 | 35.0 | - | - |
| 22 | 28 | 10 | 0.8 | 7.125 | 9.975 | 9900 | HK 2210 | 13.0 | - | - |



| Basic Dimensions | | | Chamfer Dimension | Basic Load Ratings | | Limiting Speed | Designation | Mass | Designation | Mass |
|----------------------|---------|-----------|-----------------------|--------------------|--------------------------------|----------------|-------------|---------------|-------------|-----------------|
| F _w mm | D mm | C -0.3 | r _a max | Dynamic C kN | Static C ₀ kN | r/min | Open End | Open End g | Closed End | Closed End g |
| 22 | 28 | 12 | 0.8 | 8.645 | 12.730 | 9900 | HK 2212 | 15.0 | BK 2212 | 18.0 |
| 22 | 28 | 16 | 0.8 | 12.730 | 20.995 | 9900 | HK 2216 | 21.0 | BK 2216 | 24.0 |
| 22 | 28 | 20 | 0.8 | 15.675 | 27.550 | 9900 | HK 2220 | 26.0 | - | - |
| 25 | 32 | 12 | 0.8 | 10.450 | 14.440 | 9000 | HK 2512 | 20.0 | - | - |
| 25 | 32 | 16 | 0.8 | 14.820 | 22.800 | 9000 | HK 2516 | 27.0 | - | - |
| 25 | 32 | 20 | 0.8 | 18.905 | 31.350 | 9000 | HK 2520 | 33.0 | BK 2520 | 38.0 |
| 25 | 32 | 26 | 0.8 | 24.225 | 42.750 | 9000 | HK 2526 | 44.0 | BK 2526 | 48.0 |
| 25 | 32 | 38 | 0.8 | 32.300 | 62.700 | 9000 | HK 2538 | 64.0 | BK 2538 | 68.0 |
| 28 | 35 | 16 | 0.8 | 15.580 | 25.175 | 8100 | HK 2816 | 29.0 | - | - |
| 28 | 35 | 20 | 0.8 | 19.855 | 34.200 | 8100 | HK 2820 | 36.0 | - | - |
| 30 | 37 | 12 | 0.8 | 11.495 | 17.290 | 7650 | HK 3012 | 23.0 | BK 3012 | 28.0 |
| 30 | 37 | 16 | 0.8 | 16.340 | 27.550 | 7650 | HK 3016 | 31.0 | BK 3016 | 38.0 |
| 30 | 37 | 20 | 0.8 | 20.900 | 37.525 | 7650 | HK 3020 | 39.0 | BK 3020 | 47.0 |
| 30 | 37 | 26 | 0.8 | 26.600 | 51.300 | 7650 | HK 3026 | 51.0 | BK 3026 | 58.0 |
| 30 | 37 | 38 | 0.8 | 35.625 | 75.050 | 7650 | HK 3038 | 76.0 | BK 3038 | 84.0 |
| 35 | 42 | 12 | 0.8 | 12.445 | 20.235 | 6750 | HK 3512 | 27.0 | - | - |
| 35 | 42 | 16 | 0.8 | 17.765 | 31.825 | 6750 | HK 3516 | 36.0 | - | - |
| 35 | 42 | 20 | 0.8 | 22.610 | 43.700 | 6750 | HK 3520 | 44.0 | BK 3520 | 53.0 |
| 40 | 47 | 12 | 0.8 | 13.300 | 23.085 | 5850 | HK 4012 | 30.0 | - | - |
| 40 | 47 | 16 | 0.8 | 19.000 | 36.575 | 5850 | HK 4016 | 39.0 | - | - |
| 40 | 47 | 20 | 0.8 | 24.225 | 49.400 | 5850 | HK 4020 | 54.0 | BK 4020 | 62.0 |
| 45 | 52 | 12 | 0.8 | 14.155 | 26.125 | 5400 | HK 4512 | 33.0 | - | - |
| 45 | 52 | 16 | 0.8 | 20.235 | 40.850 | 5400 | HK 4516 | 46.0 | - | - |
| 45 | 52 | 20 | 0.8 | 25.650 | 56.050 | 5400 | HK 4520 | 56.0 | BK 4520 | 72.0 |
| 50 | 58 | 20 | 0.8 | 29.450 | 59.850 | 4500 | HK 5020 | 70.0 | - | - |
| 50 | 58 | 25 | 0.8 | 36.575 | 79.800 | 4500 | HK 5025 | 90.0 | - | - |
| 55 | 63 | 20 | 0.8 | 29.925 | 63.650 | 4230 | HK 5520 | 74.0 | - | - |
| 55 | 63 | 28 | 0.8 | 41.800 | 97.850 | 4230 | HK 5528 | 105.0 | - | - |
| 60 | 68 | 12 | 0.8 | 16.530 | 30.400 | 3960 | HK 6012 | 49.0 | - | - |
| 60 | 68 | 20 | 0.8 | 31.825 | 71.250 | 3960 | HK 6020 | 81.0 | - | - |
| 60 | 68 | 32 | 0.8 | 50.350 | 128.250 | 3960 | HK 6032 | 136.0 | - | - |



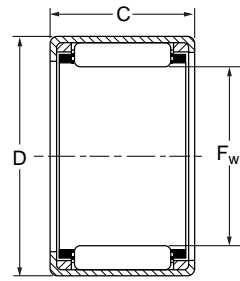
Open end with 1 side seal
- HK..RS



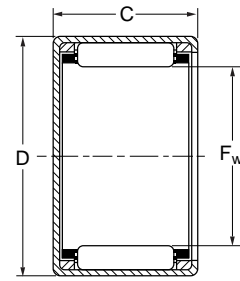
Open end with 2 side seals
- HK..2RS

| Basic Dimensions | | | | Chamfer Dimension | Basic Load Ratings | | Limiting Speed | Designation | Mass | Designation | Mass |
|----------------------|---------|-----------|------------------------|-----------------------|--------------------|--------------------------------|-----------------|-------------------------------|---------------------------------------|-------------------------------|---------------------------------------|
| F _w mm | D mm | C -0.3 | C ₁ -0.3 | r _a max | Dynamic C kN | Static C ₀ kN | Grease r/min | Open end with 1 side seals | Open end with 1 side seals g | Open end with 2 side seals | Open end with 2 side seals g |
| 8 | 12 | 10 | 12 | 0.4 | 2.750 | 2.600 | 20000 | HK 0810 RS | 3.0 | HK 0812.2RS | 3.3 |
| 10 | 14 | 12 | 14 | 0.4 | 4.400 | 5.100 | 17000 | HK 1012 RS | 4.2 | HK 1014.2RS | 4.6 |
| 12 | 18 | 14 | 16 | 0.8 | 6.500 | 7.300 | 14000 | HK 1214 RS | 10.0 | HK 1216.2RS | 11.0 |
| 14 | 20 | 14 | 16 | 0.8 | 7.100 | 8.500 | 12000 | HK 1414 RS | 12.0 | HK 1416.2RS | 13.0 |
| 15 | 21 | 14 | 16 | 0.8 | 7.800 | 9.800 | 11000 | HK 1514 RS | 12.0 | HK 1516.2RS | 15.0 |
| 15 | 21 | 18 | 20 | 0.8 | 10.500 | 14.400 | 11000 | HK 1518 RS | 16.0 | HK 1520.2RS | 18.0 |
| 16 | 22 | 14 | 16 | 0.8 | 7.600 | 9.700 | 11000 | HK 1614 RS | 13.0 | HK 1616.2RS | 14.0 |
| 16 | 22 | - | 20 | 0.8 | 10.900 | 15.300 | 11000 | - | - | HK 1620.2RS | 18.0 |
| 18 | 24 | 14 | 16 | 0.8 | 8.100 | 10.900 | 9500 | HK 1814 RS | 14.0 | HK 1816.2RS | 15.0 |
| 20 | 26 | - | 16 | 0.8 | 8.600 | 12.100 | 8500 | - | - | HK 2016.2RS | 18.0 |
| 20 | 26 | 18 | 20 | 0.8 | 12.700 | 20.100 | 8500 | HK 2018 RS | 21.0 | HK 2020.2RS | 23.0 |
| 22 | 28 | 14 | 16 | 0.8 | 9.100 | 13.400 | 8000 | HK 2214 RS | 16.0 | HK 2216.2RS | 18.0 |
| 22 | 28 | 18 | 20 | 0.8 | 13.400 | 22.100 | 8000 | HK 2218 RS | 24.0 | HK 2220.2RS | 26.0 |
| 25 | 32 | - | 16 | 0.8 | 11.000 | 15.200 | 7000 | - | - | HK 2516.2RS | 27.0 |
| 25 | 32 | 18 | 20 | 0.8 | 15.600 | 24.000 | 7000 | HK 2518 RS | 29.0 | HK 2520.2RS | 31.0 |
| 25 | 32 | - | 24 | 0.8 | 19.900 | 33.000 | 7000 | - | - | HK 2524.2RS | 40.0 |
| 25 | 32 | - | 30 | 0.8 | 25.500 | 45.000 | 7000 | - | - | HK 2530.2RS | 47.0 |
| 28 | 35 | 18 | 20 | 0.8 | 16.400 | 26.500 | 6000 | HK 2818 RS | 31.0 | HK 2820.2RS | 34.0 |
| 30 | 37 | - | 16 | 0.8 | 12.100 | 18.200 | 6000 | - | - | HK 3016.2RS | 31.0 |
| 30 | 37 | 18 | 20 | 0.8 | 17.200 | 29.000 | 6000 | HK 3018 RS | 37.0 | HK 3020.2RS | 36.0 |
| 30 | 37 | - | 24 | 0.8 | 22.000 | 39.500 | 6000 | - | - | HK 3024.2RS | 44.0 |
| 35 | 42 | - | 16 | 0.8 | 13.100 | 21.300 | 5000 | - | - | HK 3516.2RS | 32.0 |
| 35 | 42 | 18 | 20 | 0.8 | 18.700 | 33.500 | 5000 | HK 3518 RS | 39.0 | HK 3520.2RS | 41.0 |
| 40 | 47 | - | 16 | 0.8 | 14.000 | 24.300 | 4500 | - | - | HK 4016.2RS | 37.0 |
| 40 | 47 | 18 | 20 | 0.8 | 20.000 | 38.500 | 4500 | HK 4018 RS | 45.0 | HK 4020.2RS | 48.0 |
| 45 | 52 | 18 | 20 | 0.8 | 21.300 | 43.000 | 4000 | HK 4518 RS | 50.0 | HK 4520.2RS | 54.0 |
| 50 | 58 | 22 | 24 | 0.8 | 31.000 | 63.000 | 3600 | HK 5022 RS | 76.0 | HK 5024.2RS | 81.0 |





BA..Z

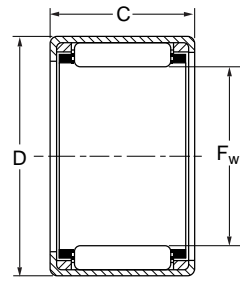


BAM

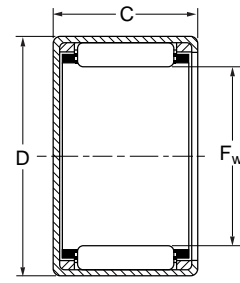
| Basic Dimensions | | | | | | Basic Load Ratings | | Designation | Mass |
|------------------|--------|-------|---------|--------|----------|--------------------|-------------|-------------|------|
| F _w | D | C | Dynamic | Static | Open End | Closed End | Designation | Mass | |
| | | | | | | | | | inch |
| 1/4 | 6.350 | 7/16 | 11.112 | 1/4 | 6.35 | 1.323 | 0.970 | BA 44 Z | 2.1 |
| 1/4 | 6.350 | 7/16 | 11.112 | 5/16 | 7.92 | 1.323 | 0.970 | BA 45 Z | 2.5 |
| 1/4 | 6.350 | 7/16 | 11.112 | 7/16 | 11.13 | 2.381 | 2.117 | BA 47 Z | 3.5 |
| 5/16 | 7.938 | 1/2 | 12.700 | 5/16 | 7.92 | 1.676 | 1.411 | BA 55 Z | 3.0 |
| 5/16 | 7.938 | 1/2 | 12.700 | 3/8 | 9.52 | 2.381 | 2.117 | BA 56 Z | 3.6 |
| 5/16 | 7.938 | 1/2 | 12.700 | 7/16 | 11.13 | 2.999 | 2.911 | BA 57 Z | 4.3 |
| 5/16 | 7.938 | 1/2 | 12.700 | 9/16 | 14.27 | 3.793 | 3.881 | BA 59 Z | 5.4 |
| 3/8 | 9.525 | 9/16 | 14.288 | 5/16 | 7.92 | 2.029 | 1.852 | BA 65 Z | 3.5 |
| 3/8 | 9.525 | 9/16 | 14.288 | 3/8 | 9.52 | 2.822 | 2.734 | BA 66 Z | 4.2 |
| 3/8 | 9.525 | 9/16 | 14.288 | 1/2 | 12.70 | 3.793 | 4.145 | BA 68 Z | 5.7 |
| 3/8 | 9.525 | 9/16 | 14.288 | 9/16 | 14.27 | 4.410 | 5.027 | BA 69 Z | 6.3 |
| 3/8 | 9.525 | 9/16 | 14.288 | 5/8 | 15.88 | 5.116 | 5.998 | BA 610 Z | 7.0 |
| 7/16 | 11.112 | 5/8 | 15.875 | 3/8 | 9.52 | 2.999 | 3.087 | BA 76 Z | 4.8 |
| 7/16 | 11.112 | 5/8 | 15.875 | 7/16 | 11.13 | 3.704 | 4.234 | BA 77 Z | 5.6 |
| 7/16 | 11.112 | 5/8 | 15.875 | 1/2 | 12.70 | 3.969 | 4.586 | BA 78 Z | 6.4 |
| 7/16 | 11.112 | 5/8 | 15.875 | 5/8 | 15.88 | 5.380 | 6.791 | BA 710 Z | 7.9 |
| 1/2 | 12.700 | 11/16 | 17.462 | 5/16 | 7.92 | 2.205 | 2.293 | BA 85 Z | 4.4 |
| 1/2 | 12.700 | 11/16 | 17.462 | 3/8 | 9.52 | 3.087 | 3.440 | BA 86 Z | 5.3 |
| 1/2 | 12.700 | 11/16 | 17.462 | 7/16 | 11.13 | 3.969 | 4.675 | BA 87 Z | 6.3 |
| 1/2 | 12.700 | 11/16 | 17.462 | 1/2 | 12.70 | 4.234 | 5.116 | BA 88 Z | 7.2 |
| 1/2 | 12.700 | 11/16 | 17.462 | 5/8 | 15.88 | 5.733 | 7.497 | BA 810 Z | 8.9 |
| 1/2 | 12.700 | 11/16 | 17.462 | 3/4 | 19.05 | 7.056 | 9.878 | BA 812 Z | 10.6 |
| 9/16 | 14.288 | 3/4 | 19.050 | 5/16 | 7.92 | 2.470 | 2.646 | BA 95 Z | 4.9 |
| 9/16 | 14.288 | 3/4 | 19.050 | 3/8 | 9.52 | 3.440 | 4.057 | BA 96 Z | 5.9 |
| 9/16 | 14.288 | 3/4 | 19.050 | 7/16 | 11.13 | 4.410 | 5.557 | BA 97 Z | 6.9 |
| 9/16 | 14.288 | 3/4 | 19.050 | 1/2 | 12.70 | 4.675 | 6.086 | BA 98 Z | 7.9 |
| 9/16 | 14.288 | 3/4 | 19.050 | 5/8 | 15.88 | 6.350 | 8.908 | BA 910 Z | 9.9 |
| 9/16 | 14.288 | 3/4 | 19.050 | 3/4 | 19.05 | 7.850 | 11.642 | BA 912 Z | 11.7 |
| 5/8 | 15.875 | 13/16 | 20.638 | 5/16 | 7.92 | 2.558 | 2.911 | BA 105 Z | 5.3 |
| 5/8 | 15.875 | 13/16 | 20.638 | 7/16 | 11.13 | 4.498 | 5.998 | BA 107 Z | 7.6 |
| 5/8 | 15.875 | 13/16 | 20.638 | 1/2 | 12.70 | 4.851 | 6.527 | BA 108 Z | 8.7 |
| 5/8 | 15.875 | 13/16 | 20.638 | 5/8 | 15.88 | 6.615 | 9.702 | BA 1010 Z | 10.8 |

| Designation | Mass | Interchange | |
|-------------|------|-------------|------------|
| Open End | | Open End | Closed End |
| BAM | g | SCE | BCE |
| BAM 44 | 2.3 | SCE 44 | BCE 44 |
| BAM 45 | 2.7 | SCE 45 | BCE 45 |
| BAM 47 | 3.7 | SCE 47 | BCE 47 |
| BAM 55 | 3.3 | SCE 55 | BCE 55 |
| BAM 56 | 3.9 | - | - |
| BAM 57 | 4.6 | SCE 57 | BCE 57 |
| BAM 59 | 5.7 | SCE 59 | BCE 59 |
| BAM 65 | 3.9 | SCE 65 | BCE 65 |
| BAM 66 | 4.6 | SCE 66 | BCE 66 |
| BAM 68 | 6.1 | SCE 68 | BCE 68 |
| BAM 69 | 6.7 | SCE 69 | BCE 69 |
| BAM 610 | 7.4 | SCE 610 | BCE 610 |
| BAM 76 | 5.3 | - | - |
| BAM 77 | 6.2 | - | - |
| BAM 78 | 7.0 | SCE 78 | BCE 78 |
| BAM 710 | 8.5 | SCE 710 | BCE 710 |
| BAM 85 | 5.2 | SCE 85 | BCE 85 |
| BAM 86 | 6.1 | SCE 86 | BCE 86 |
| BAM 87 | 7.0 | SCE 87 | BCE 87 |
| BAM 88 | 7.9 | SCE 88 | BCE 88 |
| BAM 810 | 9.6 | SCE 810 | BCE 810 |
| BAM 812 | 11.3 | SCE 812 | BCE 812 |
| BAM 95 | 5.8 | SCE 95 | BCE 95 |
| BAM 96 | 6.8 | SCE 96 | BCE 96 |
| BAM 97 | 7.8 | SCE 97 | BCE 97 |
| BAM 98 | 8.9 | SCE 98 | BCE 98 |
| BAM 910 | 10.8 | SCE 910 | BCE 910 |
| BAM 912 | 12.6 | SCE 912 | BCE 912 |
| BAM 105 | 6.5 | SCE 105 | BCE 105 |
| BAM 107 | 8.7 | SCE 107 | BCE 107 |
| BAM 108 | 9.9 | SCE 108 | BCE 108 |
| BAM 1010 | 12.0 | SCE 1010 | BCE 1010 |





BA..Z

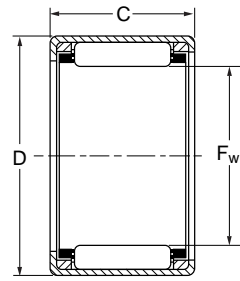


BAM

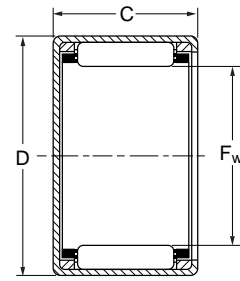
| Basic Dimensions | | | | | | Basic Load Ratings | | Designation | Mass |
|------------------|--------|--------|--------|-------|-------|--------------------|----------------------|--------------------|-----------------|
| F _w | | D | | C | | Dynamic | Static | Open End BA...Z | Closed End g |
| inch | mm | inch | mm | inch | mm | C kN | C ₀ kN | | |
| 5/8 | 15.875 | 13/16 | 20.638 | 3/4 | 19.05 | 8.114 | 12.613 | BA 1012 Z | 12.9 |
| 5/8 | 15.875 | 13/16 | 20.638 | 7/8 | 22.22 | 9.614 | 15.788 | BA 1014 Z | 15.1 |
| 5/8 | 15.875 | 13/16 | 20.638 | 1 | 25.40 | 11.025 | 18.787 | BA 1016 Z | 17.3 |
| 11/16 | 17.462 | 7/8 | 22.225 | 3/8 | 9.52 | 4.057 | 5.380 | BA 116 Z | 7.0 |
| 11/16 | 17.462 | 7/8 | 22.225 | 1/2 | 12.70 | 5.557 | 7.938 | BA 118 Z | 9.5 |
| 11/16 | 17.462 | 7/8 | 22.225 | 5/8 | 15.88 | 7.409 | 11.731 | BA 1110 Z | 11.8 |
| 11/16 | 17.462 | 7/8 | 22.225 | 3/4 | 19.05 | 9.173 | 15.347 | BA 1112 Z | 14.0 |
| 3/4 | 19.050 | 1 | 25.400 | 3/8 | 9.52 | 4.498 | 5.292 | BA 126 Z | 10.0 |
| 3/4 | 19.050 | 1 | 25.400 | 1/2 | 12.70 | 6.174 | 7.850 | BA 128 Z | 13.5 |
| 3/4 | 19.050 | 1 | 25.400 | 5/8 | 15.88 | 8.555 | 11.907 | BA 1210 Z | 17.0 |
| 3/4 | 19.050 | 1 | 25.400 | 3/4 | 19.05 | 10.760 | 15.876 | BA 1212 Z | 20.5 |
| 3/4 | 19.050 | 1 | 25.400 | 7/8 | 22.22 | 12.789 | 19.933 | BA 1214 Z | 23.5 |
| 3/4 | 19.050 | 1 | 25.400 | 1 | 25.40 | 14.641 | 23.814 | BA 1216 Z | 27.0 |
| 13/16 | 20.638 | 1 1/16 | 26.988 | 3/8 | 9.52 | 4.675 | 5.645 | BA 136 Z | 10.7 |
| 13/16 | 20.638 | 1 1/16 | 26.988 | 1/2 | 12.70 | 6.439 | 8.467 | BA 138 Z | 14.5 |
| 13/16 | 20.638 | 1 1/16 | 26.988 | 5/8 | 15.88 | 8.908 | 12.789 | BA 1310 Z | 18.2 |
| 13/16 | 20.638 | 1 1/16 | 26.988 | 3/4 | 19.05 | 11.113 | 17.111 | BA 1312 Z | 22.0 |
| 13/16 | 20.638 | 1 1/16 | 26.988 | 7/8 | 22.22 | 13.230 | 21.433 | BA 1314 Z | 25.0 |
| 13/16 | 20.638 | 1 1/16 | 26.988 | 1 | 25.40 | 15.259 | 25.666 | BA 1316 Z | 28.5 |
| 13/16 | 20.638 | 1 1/16 | 26.988 | 1 1/4 | 31.75 | 19.051 | 34.310 | BA 1320 Z | 35.5 |
| 7/8 | 22.225 | 1 1/8 | 28.575 | 3/8 | 9.52 | 4.851 | 6.086 | BA 146 Z | 11.5 |
| 7/8 | 22.225 | 1 1/8 | 28.575 | 1/2 | 12.70 | 6.703 | 9.085 | BA 148 Z | 15.6 |
| 7/8 | 22.225 | 1 1/8 | 28.575 | 3/4 | 19.05 | 11.554 | 18.346 | BA 1412 Z | 23.5 |
| 7/8 | 22.225 | 1 1/8 | 28.575 | 7/8 | 22.22 | 13.759 | 22.932 | BA 1414 Z | 27.0 |
| 7/8 | 22.225 | 1 1/8 | 28.575 | 1 | 25.40 | 15.788 | 27.430 | BA 1416 Z | 31.0 |
| 7/8 | 22.225 | 1 1/8 | 28.575 | 1 1/8 | 28.58 | 17.816 | 32.017 | BA 1418 Z | 34.5 |
| 7/8 | 22.225 | 1 1/8 | 28.575 | 1 3/8 | 34.92 | 21.609 | 41.101 | BA 1422 Z | 42.5 |
| 15/16 | 23.812 | 1 3/16 | 30.162 | 1/2 | 12.70 | 7.232 | 10.231 | BA 158 Z | 16.5 |
| 15/16 | 23.812 | 1 3/16 | 30.162 | 5/8 | 15.88 | 9.878 | 15.435 | BA 1510 Z | 20.5 |
| 15/16 | 23.812 | 1 3/16 | 30.162 | 1 | 25.40 | 17.023 | 30.870 | BA 1516 Z | 33.0 |
| 1 | 25.400 | 1 1/4 | 31.750 | 3/8 | 9.52 | 5.380 | 7.232 | BA 166 Z | 13.1 |
| 1 | 25.400 | 1 1/4 | 31.750 | 7/16 | 11.13 | 6.968 | 9.967 | BA 167 Z | 15.4 |

| Designation | Mass | Interchange | |
|-----------------|------|-----------------|-------------------|
| | | Open End SCE | Closed End BCE |
| Open End BAM | g | Open End SCE | Closed End BCE |
| BAM 1012 | 14.0 | SCE 1012 | BCE 1012 |
| BAM 1014 | 16.2 | - | - |
| BAM 1016 | 18.4 | - | - |
| BAM 116 | 8.4 | SCE 116 | BCE 116 |
| BAM 118 | 10.8 | SCE 118 | BCE 118 |
| BAM 1110 | 13.2 | SCE 1110 | BCE 1110 |
| BAM 1112 | 15.4 | SCE 1112 | BCE 1112 |
| BAM 126 | 11.7 | SCE 126 | BCE 126 |
| BAM 128 | 15.2 | SCE 128 | BCE 128 |
| BAM 1210 | 18.6 | SCE 1210 | BCE 1210 |
| BAM 1212 | 22.0 | SCE 1212 | BCE 1212 |
| BAM 1214 | 25.0 | - | - |
| BAM 1216 | 28.5 | - | - |
| BAM 136 | 12.6 | SCE 136 | BCE 136 |
| BAM 138 | 16.4 | SCE 138 | BCE 138 |
| BAM 1310 | 20.0 | - | - |
| BAM 1312 | 23.5 | SCE 1312 | BCE 1312 |
| BAM 1314 | 27.0 | SCE 1314 | BCE 1314 |
| BAM 1316 | 30.5 | - | - |
| BAM 1320 | 37.5 | - | - |
| BAM 146 | 13.8 | SCE 146 | BCE 146 |
| BAM 148 | 17.8 | SCE 148 | BCE 148 |
| BAM 1412 | 26.0 | SCE 1412 | BCE 1412 |
| BAM 1414 | 29.5 | - | - |
| BAM 1416 | 33.5 | SCE 1416 | BCE 1416 |
| BAM 1418 | 37.0 | - | - |
| BAM 1422 | 44.5 | - | - |
| BAM 158 | 19.0 | - | - |
| BAM 1510 | 23.0 | - | - |
| BAM 1516 | 35.5 | SCE 1516 | BCE 1516 |
| BAM 166 | 16.0 | - | - |
| BAM 167 | 18.3 | SCE 167 | BCE 167 |





BA..Z

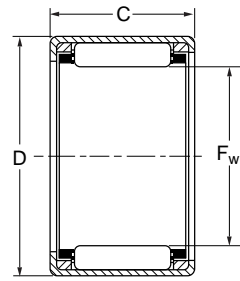


BAM

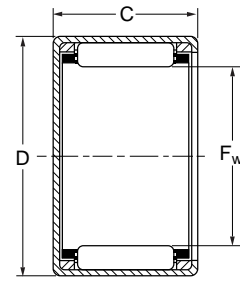
| Basic Dimensions | | | | | | Basic Load Ratings | | Designation | Mass |
|------------------|--------|--------|---------|--------|----------|--------------------|-------------|-------------|------|
| F _w | D | C | Dynamic | Static | Open End | Closed End | Designation | Mass | |
| | | | | | | | | | inch |
| 1 | 25.400 | 1 1/4 | 31.750 | 1/2 | 12.70 | 7.409 | 10.849 | BA 168 Z | 17.7 |
| 1 | 25.400 | 1 1/4 | 31.750 | 5/8 | 15.88 | 10.231 | 16.317 | BA 1610 Z | 22.0 |
| 1 | 25.400 | 1 1/4 | 31.750 | 3/4 | 19.05 | 12.789 | 21.785 | BA 1612 Z | 26.5 |
| 1 | 25.400 | 1 1/4 | 31.750 | 7/8 | 22.22 | 15.259 | 27.342 | BA 1614 Z | 31.0 |
| 1 | 25.400 | 1 1/4 | 31.750 | 1 | 25.40 | 17.464 | 32.634 | BA 1616 Z | 35.5 |
| 1 | 25.400 | 1 1/4 | 31.750 | 1 1/4 | 31.75 | 21.874 | 43.659 | BA 1620 Z | 44.0 |
| 11/16 | 26.988 | 1 5/16 | 33.338 | 5/8 | 15.88 | 10.496 | 17.199 | BA 1710 Z | 23.5 |
| 11/16 | 26.988 | 1 5/16 | 33.338 | 1 | 25.40 | 17.993 | 34.398 | BA 1716 Z | 37.0 |
| 1 1/8 | 28.575 | 1 3/8 | 34.925 | 3/8 | 9.52 | 5.733 | 8.026 | BA 186 Z | 14.5 |
| 1 1/8 | 28.575 | 1 3/8 | 34.925 | 1/2 | 12.70 | 7.762 | 11.995 | BA 188 Z | 19.5 |
| 1 1/8 | 28.575 | 1 3/8 | 34.925 | 3/4 | 19.05 | 13.495 | 24.255 | BA 1812 Z | 29.5 |
| 1 1/8 | 28.575 | 1 3/8 | 34.925 | 1 | 25.40 | 18.434 | 36.250 | BA 1816 Z | 39.0 |
| 1 1/8 | 28.575 | 1 3/8 | 34.925 | 1 1/4 | 31.75 | 23.108 | 48.422 | BA 1820 Z | 48.5 |
| 1 3/16 | 30.162 | 1 1/2 | 38.100 | 5/8 | 15.88 | 13.495 | 20.286 | BA 1910 Z | 32.5 |
| 1 3/16 | 30.162 | 1 1/2 | 38.100 | 1 | 25.40 | 23.197 | 40.748 | BA 1916 Z | 52.0 |
| 1 1/4 | 31.750 | 1 1/2 | 38.100 | 1/2 | 12.70 | 8.203 | 13.230 | BA 208 Z | 21.5 |
| 1 1/4 | 31.750 | 1 1/2 | 38.100 | 5/8 | 15.88 | 11.290 | 19.933 | BA 2010 Z | 27.0 |
| 1 1/4 | 31.750 | 1 1/2 | 38.100 | 3/4 | 19.05 | 14.112 | 26.636 | BA 2012 Z | 32.5 |
| 1 1/4 | 31.750 | 1 1/2 | 38.100 | 1 | 25.40 | 19.316 | 39.866 | BA 2016 Z | 43.0 |
| 1 1/4 | 31.750 | 1 1/2 | 38.100 | 1 1/4 | 31.75 | 24.255 | 53.273 | BA 2020 Z | 53.5 |
| 1 5/16 | 33.338 | 1 5/8 | 41.275 | 1/2 | 12.70 | 9.967 | 14.200 | BA 218 Z | 28.5 |
| 1 5/16 | 33.338 | 1 5/8 | 41.275 | 5/8 | 15.88 | 13.847 | 21.521 | BA 2110 Z | 35.5 |
| 1 5/16 | 33.338 | 1 5/8 | 41.275 | 3/4 | 19.05 | 17.375 | 28.841 | BA 2112 Z | 43.0 |
| 1 3/8 | 34.925 | 1 5/8 | 41.275 | 1/2 | 12.70 | 8.820 | 14.994 | BA 228 Z | 23.5 |
| 1 3/8 | 34.925 | 1 5/8 | 41.275 | 3/4 | 19.05 | 15.170 | 30.164 | BA 2212 Z | 35.5 |
| 1 3/8 | 34.925 | 1 5/8 | 41.275 | 1 | 25.40 | 20.727 | 45.158 | BA 2216 Z | 47.5 |
| 1 3/8 | 34.925 | 1 5/8 | 41.275 | 1 1/4 | 31.75 | 26.019 | 60.329 | BA 2220 Z | 59.0 |
| 1 1/2 | 38.100 | 1 7/8 | 47.625 | 1/2 | 12.70 | 11.642 | 16.052 | BA 248 Z | 38.5 |
| 1 1/2 | 38.100 | 1 7/8 | 47.625 | 5/8 | 15.88 | 16.052 | 24.431 | BA 2410 Z | 48.5 |
| 1 1/2 | 38.100 | 1 7/8 | 47.625 | 3/4 | 19.05 | 20.286 | 32.987 | BA 2412 Z | 58.5 |
| 1 1/2 | 38.100 | 1 7/8 | 47.625 | 7/8 | 22.22 | 23.990 | 41.013 | BA 2414 Z | 69.0 |
| 1 1/2 | 38.100 | 1 7/8 | 47.625 | 1 | 25.40 | 27.959 | 49.833 | BA 2416 Z | 79.0 |

| Designation | Mass | Interchange | |
|-------------|------|-------------|------------|
| | | Open End | Closed End |
| Open End | g | Open End | Closed End |
| BAM | | SCE | BCE |
| BAM 168 | 20.5 | SCE 168 | BCE 168 |
| BAM 1610 | 25.0 | - | - |
| BAM 1612 | 29.5 | SCE 1612 | BCE 1612 |
| BAM 1614 | 33.5 | - | - |
| BAM 1616 | 38.0 | SCE 1616 | BCE 1616 |
| BAM 1620 | 46.5 | - | - |
| BAM 1710 | 26.5 | - | - |
| BAM 1716 | 40.5 | - | - |
| BAM 186 | 18.1 | SCE 186 | BCE 186 |
| BAM 188 | 23.0 | SCE 188 | BCE 188 |
| BAM 1812 | 33.0 | SCE 1812 | BCE 1812 |
| BAM 1816 | 42.5 | SCE 1816 | BCE 1816 |
| BAM 1820 | 52.0 | - | - |
| BAM 1910 | 37.5 | - | - |
| BAM 1916 | 57.0 | SCE 1916 | BCE 1916 |
| BAM 208 | 26.0 | SCE 208 | BCE 208 |
| BAM 2010 | 31.5 | SCE 2010 | BCE 2010 |
| BAM 2012 | 37.0 | SCE 2012 | BCE 2012 |
| BAM 2016 | 47.5 | SCE 2016 | BCE 2016 |
| BAM 2020 | 58.0 | SCE 2020 | BCE 2020 |
| BAM 218 | 35.0 | - | - |
| BAM 2110 | 41.5 | SCE 2110 | BCE 2110 |
| BAM 2112 | 49.0 | - | - |
| BAM 228 | 29.0 | SCE 228 | BCE 228 |
| BAM 2212 | 41.0 | SCE 2212 | BCE 2212 |
| BAM 2216 | 53.0 | SCE 2216 | BCE 2216 |
| BAM 2220 | 64.0 | SCE 2220 | BCE 2220 |
| BAM 248 | 47.5 | SCE 248 | BCE 248 |
| BAM 2410 | 57.5 | SCE 2410 | BCE 2410 |
| BAM 2412 | 67.5 | SCE 2412 | BCE 2412 |
| BAM 2414 | 78.0 | SCE 2414 | BCE 2414 |
| BAM 2416 | 88.0 | SCE 2416 | BCE 2416 |





BA..Z



BAM

| Basic Dimensions | | | | | | Basic Load Ratings | | Designation | Mass |
|------------------|--------|-------|--------|-------|-------|--------------------|----------------------|-------------|------------|
| F _w | | D | | C | | Dynamic | Static | Open End | Closed End |
| inch | mm | inch | mm | inch | mm | C kN | C ₀ kN | BA...Z | g |
| 1 1/2 | 38.100 | 1 7/8 | 47.625 | 1 1/4 | 31.75 | 35.104 | 66.767 | BA 2420 Z | 97.5 |
| 1 5/8 | 41.275 | 2 | 50.800 | 1/2 | 12.70 | 12.348 | 17.816 | BA 268 Z | 41.0 |
| 1 5/8 | 41.275 | 2 | 50.800 | 5/8 | 15.88 | 17.023 | 26.989 | BA 2610 Z | 52.0 |
| 1 5/8 | 41.275 | 2 | 50.800 | 1 | 25.40 | 29.723 | 55.125 | BA 2616 Z | 85.0 |
| 1 5/8 | 41.275 | 2 | 50.800 | 1 1/4 | 31.75 | 37.220 | 73.823 | BA 2620 Z | 105.0 |
| 1 3/4 | 44.45 | 2 1/8 | 53.975 | 3/4 | 19.05 | 22.667 | 40.043 | BA 2812 Z | 67.5 |
| 1 3/4 | 44.45 | 2 1/8 | 53.975 | 1 | 25.40 | 31.223 | 60.593 | BA 2816 Z | 91.0 |
| 1 3/4 | 44.45 | 2 1/8 | 53.975 | 1 1/4 | 31.75 | 39.249 | 81.056 | BA 2820 Z | 112.0 |
| 1 3/4 | 44.45 | 2 1/8 | 53.975 | 1 1/2 | 38.10 | 46.746 | 101.430 | BA 2824 Z | 136.0 |
| 1 7/8 | 47.625 | 2 1/4 | 57.150 | 1/2 | 12.70 | 13.230 | 20.462 | BA 308 Z | 47.5 |
| 1 7/8 | 47.625 | 2 1/4 | 57.150 | 5/8 | 15.88 | 18.257 | 31.046 | BA 3010 Z | 60.0 |
| 1 7/8 | 47.625 | 2 1/4 | 57.150 | 3/4 | 19.05 | 23.108 | 41.895 | BA 3012 Z | 72.5 |
| 1 7/8 | 47.625 | 2 1/4 | 57.150 | 1 | 25.40 | 31.840 | 63.416 | BA 3016 Z | 97.5 |
| 2 | 50.800 | 2 3/8 | 60.325 | 1/2 | 12.70 | 13.847 | 22.226 | BA 328 Z | 50.0 |
| 2 | 50.800 | 2 3/8 | 60.325 | 1 | 25.40 | 33.340 | 68.796 | BA 3216 Z | 104.0 |
| 2 | 50.800 | 2 3/8 | 60.325 | 1 1/4 | 31.75 | 41.895 | 91.728 | BA 3220 Z | 128.0 |
| 2 | 50.800 | 2 3/8 | 60.325 | 1 1/2 | 38.10 | 49.921 | 115.542 | BA 3224 Z | 155.0 |
| 2 1/8 | 53.975 | 2 1/2 | 63.500 | 1/2 | 12.70 | 14.465 | 23.990 | BA 348 Z | 53.0 |
| 2 1/8 | 53.975 | 2 1/2 | 63.500 | 1 | 25.40 | 34.839 | 74.264 | BA 3416 Z | 109.0 |
| 2 1/8 | 53.975 | 2 1/2 | 63.500 | 1 1/2 | 38.10 | 52.126 | 124.362 | BA 3424 Z | 162.0 |
| 2 1/4 | 57.150 | 2 5/8 | 66.675 | 3/4 | 19.05 | 25.666 | 50.891 | BA 3612 Z | 85.5 |
| 2 1/4 | 57.150 | 2 5/8 | 66.675 | 1 | 25.40 | 35.368 | 76.999 | BA 3616 Z | 115.0 |
| 2 1/4 | 57.150 | 2 5/8 | 66.675 | 1 1/4 | 31.75 | 44.453 | 103.194 | BA 3620 Z | 143.0 |

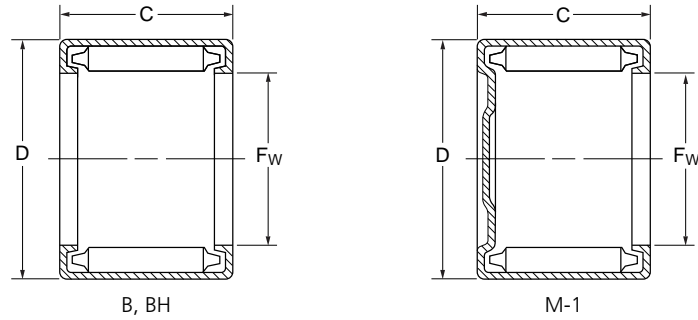
| Designation | Mass | Interchange | |
|-----------------|-------|-----------------|-------------------|
| Open End BAM | g | Open End SCE | Closed End BCE |
| BAM 2420 | 106.0 | SCE 2420 | BCE 2420 |
| BAM 268 | 51.5 | - | - |
| BAM 2610 | 62.5 | SCE 2610 | BCE 2610 |
| BAM 2616 | 95.5 | - | - |
| BAM 2620 | 115.0 | SCE 2620 | BCE 2620 |
| BAM 2812 | 79.5 | SCE 2812 | BCE 2812 |
| BAM 2816 | 103.0 | SCE 2816 | BCE 2816 |
| BAM 2820 | 125.0 | - | - |
| BAM 2824 | 148.0 | SCE 2824 | BCE 2824 |
| BAM 308 | 61.0 | - | - |
| BAM 3010 | 74.0 | - | - |
| BAM 3012 | 86.5 | - | - |
| BAM 3016 | 112.0 | - | - |
| BAM 328 | 66.0 | SCE 328 | BCE 328 |
| BAM 3216 | 119.0 | SCE 3216 | BCE 3216 |
| BAM 3220 | 144.0 | SCE 3220 | BCE 3220 |
| BAM 3224 | 170.0 | - | - |
| BAM 348 | 70.5 | - | - |
| BAM 3416 | 127.0 | SCE 3416 | BCE 3416 |
| BAM 3424 | 180.0 | - | - |
| BAM 3612 | 105.0 | SCE 3612 | BCE 3612 |
| BAM 3616 | 135.0 | SCE 3616 | BCE 3616 |
| BAM 3620 | 163.0 | - | - |



10.03

10.03

Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes



| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|-------|----------------|------|---------|--------------------|--------|----------------|-------|
| F _w | D | C | F _w | C | C | C ₀ | Grease | Oil | |
| | | | | | | | | | inch |
| 1/8 | 3.1750 | 1/4 | 6.3500 | 1/4 | 6.3500 | 1.554 | 1.466 | 7290 | 11700 |
| 5/32 | 3.9700 | 9/32 | 7.1425 | 1/4 | 6.3500 | 1.790 | 1.814 | 6300 | 9900 |
| 5/32 | 3.9700 | 9/32 | 7.1425 | 5/16 | 7.9248 | 2.327 | 2.539 | 6300 | 9900 |
| 3/16 | 4.7625 | 11/32 | 8.7325 | 1/4 | 6.3500 | 1.994 | 1.922 | 6300 | 9900 |
| 3/16 | 4.7625 | 11/32 | 8.7325 | 3/8 | 9.5250 | 3.388 | 3.797 | 6300 | 9900 |
| 1/4 | 6.3500 | 7/16 | 11.1125 | 1/4 | 6.3500 | 2.463 | 2.367 | 5850 | 9000 |
| 1/4 | 6.3500 | 7/16 | 11.1125 | 5/16 | 7.9248 | 3.200 | 3.308 | 5850 | 9000 |
| 1/4 | 6.3500 | 7/16 | 11.1125 | 3/8 | 9.5250 | 4.085 | 4.526 | 5850 | 9000 |
| 1/4 | 6.3500 | 7/16 | 11.1125 | 7/16 | 11.1252 | 4.966 | 5.807 | 5850 | 9000 |
| 5/16 | 7.9375 | 1/2 | 12.7000 | 5/16 | 7.9248 | 3.677 | 4.125 | 4860 | 7470 |
| 5/16 | 7.9375 | 1/2 | 12.7000 | 3/8 | 9.5250 | 4.726 | 5.727 | 4860 | 7470 |
| 5/16 | 7.9375 | 1/2 | 12.7000 | 7/16 | 11.1252 | 5.687 | 7.249 | 4860 | 7470 |
| 5/16 | 7.9375 | 1/2 | 12.7000 | 9/16 | 14.2748 | 7.529 | 10.413 | 4860 | 7470 |
| 5/16 | 7.9375 | 1/2 | 12.7000 | 7/16 | 11.1252 | 6.328 | 6.608 | 6750 | 10800 |
| 5/16 | 7.9375 | 1/2 | 12.7000 | 9/16 | 14.2748 | 8.531 | 9.692 | 6750 | 10800 |
| 3/8 | 9.5250 | 9/16 | 14.2875 | 5/16 | 7.9248 | 4.085 | 4.966 | 4140 | 6390 |
| 3/8 | 9.5250 | 9/16 | 14.2875 | 3/8 | 9.5250 | 5.247 | 6.809 | 4140 | 6390 |
| 3/8 | 9.5250 | 9/16 | 14.2875 | 7/16 | 11.1252 | 6.328 | 8.731 | 4140 | 6390 |
| 3/8 | 9.5250 | 9/16 | 14.2875 | 1/2 | 12.7000 | 7.369 | 10.613 | 4140 | 6390 |
| 3/8 | 9.5250 | 9/16 | 14.2875 | 9/16 | 14.2748 | 8.411 | 12.536 | 4140 | 6390 |
| 3/8 | 9.5250 | 9/16 | 14.2875 | 5/8 | 15.8750 | 9.372 | 14.378 | 4140 | 6390 |
| 3/8 | 9.5250 | 9/16 | 14.2875 | 1/2 | 12.7000 | 8.411 | 9.852 | 5850 | 9000 |
| 7/16 | 11.1125 | 5/8 | 15.8750 | 3/8 | 9.5250 | 5.727 | 7.970 | 3690 | 5670 |
| 7/16 | 11.1125 | 5/8 | 15.8750 | 7/16 | 11.1252 | 6.929 | 10.173 | 3690 | 5670 |
| 7/16 | 11.1125 | 5/8 | 15.8750 | 1/2 | 12.7000 | 8.090 | 12.416 | 3690 | 5670 |
| 7/16 | 11.1125 | 5/8 | 15.8750 | 5/8 | 15.8750 | 10.213 | 16.821 | 3690 | 5670 |
| 7/16 | 11.1125 | 5/8 | 15.8750 | 1/2 | 12.7000 | 9.292 | 11.494 | 5130 | 7920 |
| 1/2 | 12.7000 | 11/16 | 17.4625 | 5/16 | 7.9248 | 4.806 | 6.608 | 3240 | 5040 |
| 1/2 | 12.7000 | 11/16 | 17.4625 | 3/8 | 9.5250 | 6.168 | 9.131 | 3240 | 5040 |
| 1/2 | 12.7000 | 11/16 | 17.4625 | 7/16 | 11.1252 | 7.489 | 11.695 | 3240 | 5040 |
| 1/2 | 12.7000 | 11/16 | 17.4625 | 1/2 | 12.7000 | 8.691 | 14.138 | 3240 | 5040 |
| 1/2 | 12.7000 | 11/16 | 17.4625 | 5/8 | 15.8750 | 11.014 | 19.184 | 3240 | 5040 |

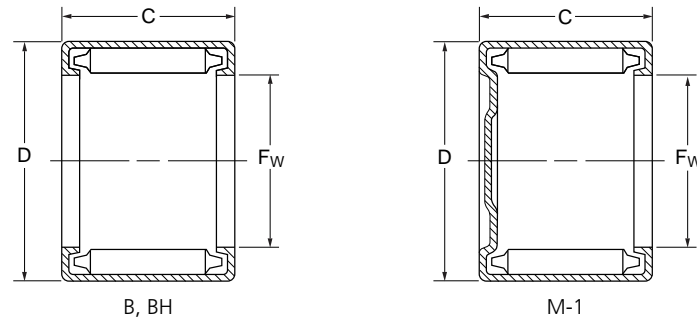


Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

| Mass Approx. | | Interchange | |
|--------------|-------------|-------------|-------------|
| Open Ends | Closed Ends | Open Ends | Closed Ends |
| g | g | | |
| 0.91 | - | B 24 | - |
| 0.91 | - | B 2.1/2 4 | - |
| 1.36 | - | B 2.1/2 5 | - |
| 1.36 | 1.82 | B 34 | M 341 |
| 2.27 | 2.72 | B 35 | M 361 |
| 2.27 | 2.72 | B 44 | M 441 |
| 3.18 | 3.63 | B 45 | M 451 |
| 3.63 | - | B 46 | - |
| 4.09 | 4.99 | B 47 | M 471 |
| 3.63 | 4.09 | B 55 | M 551 |
| 4.54 | - | B 56 | - |
| 4.99 | 5.90 | B 57 | M 571 |
| 6.36 | - | B 59 | - |
| 7.26 | 8.17 | BH 57 | MH 571 |
| 9.08 | - | BH 59 | - |
| 4.09 | 4.54 | B 65 | M 651 |
| 4.99 | 5.45 | B 66 | M 661 |
| 5.90 | - | B 67 | - |
| 6.81 | 7.72 | B 68 | M 681 |
| 7.26 | - | B 69 | - |
| 8.17 | 9.53 | B 610 | M 6101 |
| 9.53 | - | BH 68 | - |
| 5.45 | - | B 76 | - |
| 6.81 | - | B 77 | - |
| 7.72 | 8.63 | B 78 | M 781 |
| 9.53 | - | B 710 | - |
| 10.44 | - | BH 78 | - |
| 5.45 | 6.36 | B 85 | M 851 |
| 6.36 | 7.26 | B 86 | M 861 |
| 7.26 | 8.17 | B 87 | M 871 |
| 8.63 | 9.53 | B 88 | M 881 |
| 10.44 | 11.80 | B 810 | M 8101 |



Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes



| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|-------|---------|------|--------------|--------------------------|--------|----------------|------|
| F _w | D | | C | | Dynamic C | Static C ₀ | Grease | Oil | |
| | inch | mm | inch | mm | | | | | kN |
| 1/2 | 12.7000 | 11/16 | 17.4625 | 3/4 | 19.0500 | 13.217 | 24.270 | 3240 | 5040 |
| 1/2 | 12.7000 | 11/16 | 17.4625 | 7/16 | 11.1252 | 8.531 | 10.613 | 4590 | 7110 |
| 1/2 | 12.7000 | 11/16 | 17.4625 | 1/2 | 12.7000 | 10.053 | 13.136 | 4590 | 7110 |
| 1/2 | 12.7000 | 11/16 | 17.4625 | 5/8 | 15.8750 | 12.936 | 18.183 | 4590 | 7110 |
| 1/2 | 12.7000 | 11/16 | 17.4625 | 3/4 | 19.0500 | 15.660 | 23.189 | 4590 | 7110 |
| 9/16 | 14.2875 | 3/4 | 19.0500 | 5/16 | 7.9248 | 5.166 | 7.489 | 2970 | 4500 |
| 9/16 | 14.2875 | 3/4 | 19.0500 | 3/8 | 9.5250 | 6.608 | 10.293 | 2970 | 4500 |
| 9/16 | 14.2875 | 3/4 | 19.0500 | 7/16 | 11.1252 | 7.970 | 13.136 | 2970 | 4500 |
| 9/16 | 14.2875 | 3/4 | 19.0500 | 1/2 | 12.7000 | 9.292 | 15.980 | 2970 | 4500 |
| 9/16 | 14.2875 | 3/4 | 19.0500 | 5/8 | 15.8750 | 11.775 | 21.627 | 2970 | 4500 |
| 9/16 | 14.2875 | 3/4 | 19.0500 | 3/4 | 19.0500 | 14.098 | 27.314 | 2970 | 4500 |
| 9/16 | 14.2875 | 13/16 | 20.6375 | 1/2 | 12.7000 | 10.773 | 14.819 | 4140 | 6390 |
| 9/16 | 14.2875 | 13/16 | 20.6375 | 5/8 | 15.8750 | 13.857 | 20.466 | 4140 | 6390 |
| 9/16 | 14.2875 | 13/16 | 20.6375 | 3/4 | 19.0500 | 16.781 | 26.113 | 4140 | 6390 |
| 5/8 | 15.8750 | 13/16 | 20.6375 | 5/16 | 7.9248 | 5.447 | 8.330 | 2700 | 4050 |
| 5/8 | 15.8750 | 13/16 | 20.6375 | 7/16 | 11.1252 | 8.451 | 14.618 | 2700 | 4050 |
| 5/8 | 15.8750 | 13/16 | 20.6375 | 1/2 | 12.7000 | 9.812 | 17.742 | 2700 | 4050 |
| 5/8 | 15.8750 | 13/16 | 20.6375 | 5/8 | 15.8750 | 12.456 | 24.030 | 2700 | 4050 |
| 5/8 | 15.8750 | 13/16 | 20.6375 | 3/4 | 19.0500 | 14.899 | 30.318 | 2700 | 4050 |
| 5/8 | 15.8750 | 7/8 | 22.2123 | 1/2 | 12.7000 | 11.454 | 16.461 | 3780 | 5850 |
| 5/8 | 15.8750 | 7/8 | 22.2123 | 5/8 | 15.8750 | 14.738 | 22.748 | 3780 | 5850 |
| 5/8 | 15.8750 | 7/8 | 22.2123 | 3/4 | 19.0500 | 17.822 | 29.036 | 3780 | 5850 |
| 5/8 | 15.8750 | 7/8 | 22.2123 | 1 | 25.4000 | 23.589 | 41.652 | 3780 | 5850 |
| 11/16 | 17.4625 | 7/8 | 22.2123 | 3/8 | 9.5250 | 7.369 | 12.576 | 2430 | 3780 |
| 11/16 | 17.4625 | 7/8 | 22.2123 | 1/2 | 12.7000 | 10.333 | 19.544 | 2430 | 3780 |
| 11/16 | 17.4625 | 7/8 | 22.2123 | 5/8 | 15.8750 | 13.096 | 26.473 | 2430 | 3780 |
| 11/16 | 17.4625 | 7/8 | 22.2123 | 3/4 | 19.0500 | 15.700 | 33.402 | 2430 | 3780 |
| 11/16 | 17.4625 | 15/16 | 23.8125 | 7/16 | 11.1252 | 10.253 | 14.618 | 3510 | 5400 |
| 11/16 | 17.4625 | 15/16 | 23.8125 | 5/8 | 15.8750 | 15.579 | 25.031 | 3510 | 5400 |
| 11/16 | 17.4625 | 15/16 | 23.8125 | 3/4 | 19.0500 | 18.824 | 31.960 | 3510 | 5400 |
| 3/4 | 19.0500 | 1 | 25.4000 | 3/8 | 9.5250 | 8.731 | 12.215 | 3240 | 5040 |
| 3/4 | 19.0500 | 1 | 25.4000 | 1/2 | 12.7000 | 12.696 | 19.785 | 3240 | 5040 |

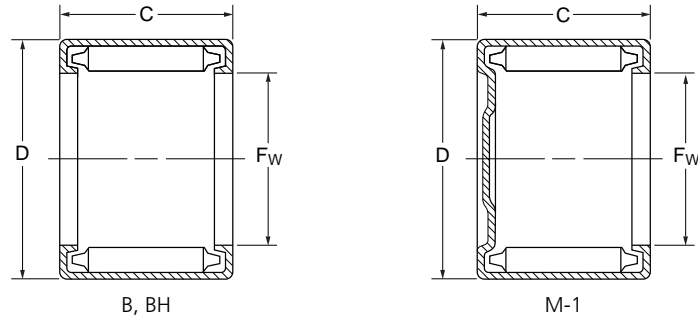


Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

| Mass Approx. | | Interchange | |
|----------------|------------------|-------------|-------------|
| Open Ends g | Closed Ends g | Open Ends | Closed Ends |
| 12.71 | 14.07 | B 812 | M 8121 |
| 10.44 | - | BH 87 | - |
| 11.80 | - | BH 88 | - |
| 14.98 | - | BH 810 | - |
| 17.71 | 19.98 | BH 812 | MH 8121 |
| 5.90 | 6.36 | B 95 | M 951 |
| 6.81 | 8.17 | B 96 | M 961 |
| 8.17 | 9.53 | B 97 | M 971 |
| 9.08 | 10.44 | B 98 | M 981 |
| 11.80 | 13.17 | B 910 | M 9101 |
| 14.07 | 15.44 | B 912 | M 9121 |
| 13.17 | - | BH 98 | - |
| 16.34 | - | BH 910 | - |
| 19.52 | - | BH 912 | - |
| 6.36 | 7.26 | B 105 | M 1051 |
| 9.08 | 9.99 | B 107 | M 1071 |
| 9.99 | 10.44 | B 108 | M 1081 |
| 12.71 | 14.53 | B 1010 | M 10101 |
| 15.44 | 17.25 | B 1012 | M 10121 |
| 14.07 | 15.89 | BH 108 | MH 1081 |
| 17.71 | - | BH 1010 | - |
| 21.34 | - | BH 1012 | - |
| 28.15 | - | BH 1016 | - |
| 8.17 | 9.08 | B 116 | M 1161 |
| 10.90 | 12.26 | B 118 | M 1181 |
| 13.62 | 15.44 | B 1110 | M 11101 |
| 16.34 | 18.61 | B 1112 | M 11121 |
| 13.62 | - | BH 117 | - |
| 19.07 | 21.34 | BH1110 | MH 11101 |
| 23.15 | - | BH 1112 | - |
| 12.26 | 14.07 | B 126 | M 1261 |
| 16.34 | 18.61 | B 128 | M 1281 |



Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes



| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|---------|-------|---------|--------------------|----------------------|----------------|------|
| F _w | | D | | C | | Dynamic | Static | Grease | Oil |
| inch | mm | inch | mm | inch | mm | C kN | C ₀ kN | | |
| 3/4 | 19.0500 | 1 | 25.4000 | 5/8 | 15.8750 | 16.340 | 27.314 | 3240 | 5040 |
| 3/4 | 19.0500 | 1 | 25.4000 | 3/4 | 19.0500 | 19.745 | 34.884 | 3240 | 5040 |
| 13/16 | 20.6375 | 1 1/16 | 26.9875 | 3/8 | 9.5250 | 9.131 | 13.217 | 3060 | 4680 |
| 13/16 | 20.6375 | 1 1/16 | 26.9875 | 1/2 | 12.7000 | 13.257 | 21.427 | 3060 | 4680 |
| 13/16 | 20.6375 | 1 1/16 | 26.9875 | 7/8 | 22.2250 | 24.070 | 46.058 | 3060 | 4680 |
| 13/16 | 20.6375 | 1 1/16 | 26.9875 | 1 | 25.4000 | 27.314 | 54.068 | 3060 | 4680 |
| 13/16 | 20.6426 | 1 1/8 | 28.5750 | 1/2 | 12.7000 | 13.377 | 18.743 | 3690 | 5670 |
| 13/16 | 20.6375 | 1 1/8 | 28.5750 | 5/8 | 15.8750 | 17.742 | 26.914 | 3690 | 5670 |
| 13/16 | 20.6375 | 1 1/8 | 28.5750 | 3/4 | 19.0500 | 21.787 | 35.084 | 3690 | 5670 |
| 7/8 | 22.2250 | 1 1/8 | 28.5750 | 3/8 | 9.5250 | 9.492 | 14.258 | 2790 | 4320 |
| 7/8 | 22.2250 | 1 1/8 | 28.5750 | 1/2 | 12.7000 | 13.817 | 23.069 | 2790 | 4320 |
| 7/8 | 22.2250 | 1 1/8 | 28.5750 | 3/4 | 19.0500 | 21.507 | 40.851 | 2790 | 4320 |
| 7/8 | 22.2250 | 1 1/8 | 28.5750 | 1 | 25.4000 | 28.436 | 58.473 | 2790 | 4320 |
| 7/8 | 22.2250 | 1 1/8 | 28.5750 | 1 1/8 | 28.5750 | 31.720 | 67.284 | 2790 | 4320 |
| 7/8 | 22.2250 | 1 3/16 | 30.1625 | 5/8 | 15.8750 | 18.303 | 28.996 | 3420 | 5292 |
| 7/8 | 22.2250 | 1 3/16 | 30.1625 | 3/4 | 19.0500 | 22.508 | 37.807 | 3420 | 5292 |
| 7/8 | 22.2250 | 1 3/16 | 30.1625 | 1 | 25.4000 | 30.318 | 55.269 | 3420 | 5292 |
| 15/16 | 23.8125 | 1 3/16 | 30.1625 | 1/2 | 12.7000 | 14.338 | 24.751 | 2700 | 4050 |
| 15/16 | 23.8125 | 1 3/16 | 30.1625 | 1 | 25.4000 | 29.517 | 62.478 | 2700 | 4050 |
| 1 | 25.4000 | 1 1/4 | 31.7500 | 3/8 | 9.5250 | 10.213 | 16.300 | 2520 | 3870 |
| 1 | 25.4000 | 1 1/4 | 31.7500 | 7/16 | 11.1252 | 12.576 | 21.307 | 2520 | 3870 |
| 1 | 25.4000 | 1 1/4 | 31.7500 | 1/2 | 12.7000 | 14.859 | 26.393 | 2520 | 3870 |
| 1 | 25.4000 | 1 1/4 | 31.7500 | 5/8 | 15.8750 | 19.104 | 36.486 | 2520 | 3870 |
| 1 | 25.4000 | 1 1/4 | 31.7500 | 3/4 | 19.0500 | 23.109 | 46.458 | 2520 | 3870 |
| 1 | 25.4000 | 1 1/4 | 31.7500 | 1 | 25.4000 | 30.558 | 66.884 | 2520 | 3870 |
| 1 | 25.4000 | 1 5/16 | 33.3375 | 1/2 | 12.7000 | 14.979 | 23.069 | 3060 | 4680 |
| 1 | 25.4000 | 1 5/16 | 33.3375 | 5/8 | 15.8750 | 19.825 | 33.161 | 3060 | 4680 |
| 1 | 25.4000 | 1 5/16 | 33.3375 | 3/4 | 19.0500 | 24.390 | 43.254 | 3060 | 4680 |
| 1 | 25.4000 | 1 5/16 | 33.3375 | 7/8 | 22.2250 | 28.716 | 53.267 | 3060 | 4680 |
| 1 | 25.4000 | 1 5/16 | 33.3375 | 1 | 25.4000 | 32.841 | 63.279 | 3060 | 4680 |
| 1 | 25.4000 | 1 5/16 | 33.3375 | 1 1/4 | 31.7500 | 40.851 | 83.705 | 3060 | 4680 |
| 1 | 25.4000 | 1 5/16 | 33.3375 | 1 1/2 | 38.1000 | 48.060 | 103.730 | 3060 | 4680 |



Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

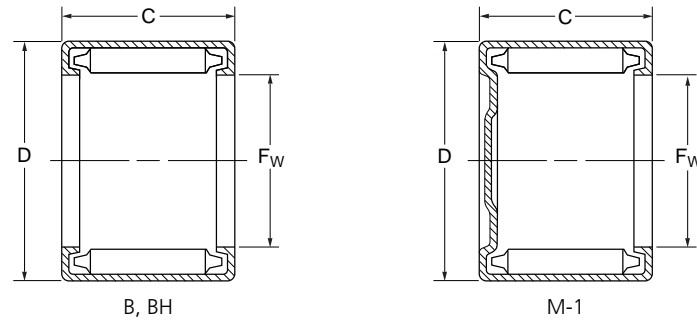
| Mass Approx. | | Interchange | |
|----------------|------------------|-------------|-------------|
| Open Ends g | Closed Ends g | Open Ends | Closed Ends |
| 20.43 | 23.61 | B 1210 | M 12101 |
| 24.52 | 28.15 | B 1212 | M 12121 |
| 13.17 | - | B 136 | - |
| 17.71 | 19.98 | B 138 | M 1381 |
| 30.87 | 34.96 | B 1314 | M 13141 |
| 35.41 | 39.95 | B 1316 | M 13161 |
| 22.70 | 25.88 | BH 138 | MH 1381 |
| 28.60 | 30.87 | BH 1310 | MH 13101 |
| 34.50 | 39.04 | BH 1312 | MH 13121 |
| 14.07 | 15.89 | B 146 | M 1461 |
| 19.07 | 21.79 | B 148 | M 1481 |
| 28.15 | 31.78 | B 1412 | M 14121 |
| 37.68 | 42.68 | B 1416 | M 14161 |
| 42.68 | 48.58 | B 1418 | - |
| 30.42 | 30.42 | BH 1410 | MH 14101 |
| 36.32 | 41.31 | BH 1412 | MH 14121 |
| 48.58 | - | BH 1416 | - |
| 19.98 | - | B 158 | - |
| 39.95 | 45.40 | B 1516 | M 15161 |
| 15.89 | - | B 166 | - |
| 18.61 | 20.88 | B 167 | M 1671 |
| 21.34 | 24.06 | B 168 | M 1681 |
| 26.33 | 29.96 | B 1610 | M 16101 |
| 31.78 | 36.32 | B 1612 | M 16121 |
| 42.68 | 48.12 | B 1616 | M 16161 |
| 27.24 | 30.87 | BH 168 | MH 1681 |
| 34.05 | - | BH 1610 | - |
| 40.86 | 46.31 | BH 1612 | MH 16121 |
| 47.67 | - | BH 1614 | - |
| 54.48 | 61.74 | BH 1616 | MH 16161 |
| 68.10 | - | BH 1620 | - |
| 81.72 | 108.96 | BH 1624 | MH 16241 |



10.04

10.04

Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes



| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|--------|---------|-------|---------|--------------------|----------------------|----------------|------|
| F _w | | D | | C | | Dynamic | Static | Grease | Oil |
| inch | mm | inch | mm | inch | mm | C kN | C ₀ kN | | |
| 1 1/16 | 26.9875 | 1 5/16 | 33.3375 | 5/8 | 15.8750 | 19.745 | 38.768 | 2340 | 3600 |
| 1 1/8 | 28.5750 | 1 3/8 | 34.9250 | 3/8 | 9.5250 | 10.894 | 18.343 | 2250 | 3420 |
| 1 1/8 | 28.5750 | 1 3/8 | 34.9250 | 1/2 | 12.7000 | 15.820 | 29.717 | 2250 | 3420 |
| 1 1/8 | 28.5750 | 1 3/8 | 34.9250 | 5/8 | 15.8750 | 20.345 | 41.252 | 2250 | 3420 |
| 1 1/8 | 28.5750 | 1 3/8 | 34.9250 | 3/4 | 19.0500 | 24.591 | 52.466 | 2250 | 3420 |
| 1 1/8 | 28.5750 | 1 3/8 | 34.9250 | 1 | 25.4000 | 32.561 | 75.294 | 2250 | 3420 |
| 1 1/8 | 28.5750 | 1 1/2 | 38.1000 | 3/4 | 19.0500 | 28.395 | 47.660 | 3240 | 5040 |
| 1 1/8 | 28.5750 | 1 1/2 | 38.1000 | 1 | 25.4000 | 38.288 | 70.088 | 3240 | 5040 |
| 1 1/8 | 28.5750 | 1 1/2 | 38.1000 | 1 1/4 | 31.7500 | 47.660 | 92.916 | 3240 | 5040 |
| 1 3/16 | 30.1625 | 1 1/2 | 38.1000 | 5/8 | 15.8750 | 21.707 | 39.409 | 2610 | 3960 |
| 1 3/16 | 30.1625 | 1 1/2 | 38.1000 | 1 | 25.4000 | 35.965 | 75.294 | 2610 | 3960 |
| 1 1/4 | 31.7500 | 1 1/2 | 38.1000 | 1/2 | 12.7000 | 16.701 | 33.001 | 2070 | 3150 |
| 1 1/4 | 31.7500 | 1 1/2 | 38.1000 | 5/8 | 15.8750 | 21.507 | 45.657 | 2070 | 3150 |
| 1 1/4 | 31.7500 | 1 1/2 | 38.1000 | 3/4 | 19.0500 | 25.992 | 58.073 | 2070 | 3150 |
| 1 1/4 | 31.7500 | 1 1/2 | 38.1000 | 1 | 25.4000 | 34.403 | 83.304 | 2070 | 3150 |
| 1 1/4 | 31.7500 | 1 1/2 | 38.1000 | 1 1/4 | 31.7500 | 42.453 | 108.936 | 2070 | 3150 |
| 1 1/4 | 31.7500 | 1 5/8 | 41.2750 | 1/2 | 12.7000 | 17.702 | 27.034 | 2970 | 4500 |
| 1 1/4 | 31.7500 | 1 5/8 | 41.2750 | 3/4 | 19.0500 | 29.797 | 52.866 | 2970 | 4500 |
| 1 1/4 | 31.7500 | 1 5/8 | 41.2750 | 1 | 25.4000 | 40.451 | 78.098 | 2970 | 4500 |
| 1 1/4 | 31.7500 | 1 5/8 | 41.2750 | 1 1/4 | 31.7500 | 50.463 | 103.329 | 2970 | 4500 |
| 1 5/16 | 33.3375 | 1 5/8 | 41.2750 | 1/2 | 12.7000 | 17.342 | 30.318 | 2340 | 3690 |
| 1 5/16 | 33.3375 | 1 5/8 | 41.2750 | 5/8 | 15.8750 | 22.989 | 43.655 | 2340 | 3690 |
| 1 5/16 | 33.3375 | 1 5/8 | 41.2750 | 1 1/4 | 31.7500 | 47.259 | 110.138 | 2340 | 3690 |
| 1 3/8 | 34.9250 | 1 5/8 | 41.2750 | 1/2 | 12.7000 | 17.582 | 36.325 | 1890 | 2880 |
| 1 3/8 | 34.9250 | 1 5/8 | 41.2750 | 3/4 | 19.0500 | 27.354 | 64.080 | 1890 | 2880 |
| 1 3/8 | 34.9250 | 1 5/8 | 41.2750 | 1 | 25.4000 | 36.165 | 91.715 | 1890 | 2880 |
| 1 3/8 | 34.9250 | 1 5/8 | 41.2750 | 1 1/4 | 31.7500 | 44.456 | 119.750 | 1890 | 2880 |
| 1 3/8 | 34.9250 | 1 3/4 | 44.4500 | 1/2 | 12.7000 | 19.104 | 30.198 | 2700 | 4230 |
| 1 3/8 | 34.9250 | 1 3/4 | 44.4500 | 5/8 | 15.8750 | 25.672 | 44.055 | 2700 | 4230 |
| 1 3/8 | 34.9250 | 1 3/4 | 44.4500 | 3/4 | 19.0500 | 31.760 | 58.073 | 2700 | 4230 |
| 1 3/8 | 34.9250 | 1 3/4 | 44.4500 | 1 | 25.4000 | 42.854 | 85.307 | 2700 | 4230 |
| 1 3/8 | 34.9250 | 1 3/4 | 44.4500 | 1 1/4 | 31.7500 | 53.667 | 113.342 | 2700 | 4230 |



Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

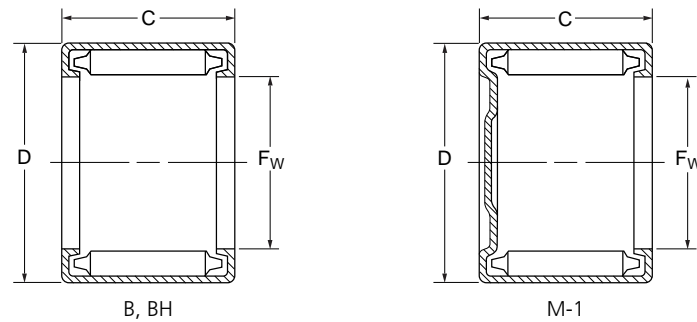
| Mass Approx. | | Interchange | |
|----------------|------------------|-------------|-------------|
| Open Ends g | Closed Ends g | Open Ends | Closed Ends |
| 28.15 | 31.78 | B 1710 | M 17101 |
| 17.71 | 19.98 | B 186 | M 1861 |
| 23.61 | 26.79 | B 188 | M 1881 |
| 29.51 | - | B 1810 | - |
| 35.41 | 39.95 | B 1812 | M 18121 |
| 47.22 | 53.57 | B 1816 | M 18161 |
| 55.84 | 62.65 | BH 1812 | MH 18121 |
| 74.46 | 84.44 | BH 1816 | MH 18161 |
| 93.07 | 105.33 | BH 1820 | MH 18201 |
| 30.87 | - | B 1910 | M 19101 |
| 63.56 | - | B 1916 | - |
| 25.88 | 29.51 | B 208 | M 2081 |
| 32.23 | 36.32 | B 2010 | M 20101 |
| 39.04 | 44.95 | B 2012 | M 20121 |
| 51.76 | 59.02 | B 2016 | M 20161 |
| 64.92 | 73.55 | B 2020 | M 20201 |
| 40.86 | 46.31 | BH 208 | MH 2081 |
| 61.29 | 69.46 | BH 2012 | MH 20121 |
| 81.27 | 92.16 | BH 2016 | MH 20161 |
| 101.70 | 115.32 | BH 2020 | MH 20201 |
| 34.50 | 39.04 | B 218 | M 2181 |
| 43.13 | 49.03 | B 2110 | M 21101 |
| 86.71 | - | B 2120 | - |
| 28.15 | 31.78 | B 228 | M 2281 |
| 42.68 | 48.58 | B 2212 | M 22121 |
| 56.75 | 64.47 | B 2216 | M 22161 |
| 70.82 | 80.36 | B 2220 | M 22201 |
| 44.49 | - | BH 228 | - |
| 55.39 | - | BH 2210 | - |
| 66.28 | 74.91 | BH 2212 | MH 22121 |
| 88.53 | 100.33 | BH 2216 | MH 22161 |
| 110.78 | 125.30 | BH 2220 | - |



10.04

10.04

Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes



| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|---------|---------|---------|-------|---------|--------------------|---------|----------------|------|
| F _w | D | | C | | C | C ₀ | Grease | Oil | |
| | inch | mm | inch | mm | | | | | kN |
| 1 1/2 | 38.1000 | 1 7/8 | 47.6250 | 1/2 | 12.7000 | 20.105 | 33.402 | 2520 | 3870 |
| 1 1/2 | 38.1000 | 1 7/8 | 47.6250 | 5/8 | 15.8750 | 26.874 | 48.461 | 2520 | 3870 |
| 1 1/2 | 38.1000 | 1 7/8 | 47.6250 | 3/4 | 19.0500 | 33.201 | 63.680 | 2520 | 3870 |
| 1 1/2 | 38.1000 | 1 7/8 | 47.6250 | 7/8 | 22.2250 | 39.169 | 78.899 | 2520 | 3870 |
| 1 1/2 | 38.1000 | 1 7/8 | 47.6250 | 1 | 25.4000 | 44.856 | 93.317 | 2520 | 3870 |
| 1 1/2 | 38.1000 | 1 7/8 | 47.6250 | 1 1/4 | 31.7500 | 55.670 | 124.155 | 2520 | 3870 |
| 1 5/8 | 41.2750 | 2 | 50.8000 | 1/2 | 12.7000 | 20.506 | 35.324 | 2340 | 3510 |
| 1 5/8 | 41.2750 | 2 | 50.8000 | 5/8 | 15.8750 | 27.594 | 51.665 | 2340 | 3510 |
| 1 5/8 | 41.2750 | 2 | 50.8000 | 1 | 25.4000 | 46.458 | 100.926 | 2340 | 3510 |
| 1 5/8 | 41.2750 | 2 | 50.8000 | 1 1/4 | 31.7500 | 57.672 | 133.767 | 2340 | 3510 |
| 1 3/4 | 44.4500 | 2 1/8 | 53.9750 | 3/4 | 19.0500 | 35.364 | 73.292 | 2160 | 3330 |
| 1 3/4 | 44.4500 | 2 1/8 | 53.9750 | 1 | 25.4000 | 48.060 | 108.536 | 2160 | 3330 |
| 1 3/4 | 44.4500 | 2 1/8 | 53.9750 | 1 1/4 | 31.7500 | 59.675 | 144.180 | 2160 | 3330 |
| 1 3/4 | 44.4500 | 2 1/8 | 53.9750 | 1 1/2 | 38.1000 | 70.889 | 179.424 | 2160 | 3330 |
| 1 7/8 | 47.6250 | 2 1/4 | 57.1500 | 1/2 | 12.7000 | 22.628 | 41.652 | 2070 | 3150 |
| 1 7/8 | 47.6250 | 2 1/4 | 57.1500 | 3/4 | 19.0500 | 37.367 | 79.700 | 2070 | 3150 |
| 1 7/8 | 47.6250 | 2 1/4 | 57.1500 | 1 | 25.4000 | 50.463 | 116.946 | 2070 | 3150 |
| 2 | 50.8000 | 2 3/8 | 60.3250 | 1/2 | 12.7000 | 22.869 | 43.254 | 1890 | 2970 |
| 2 | 50.8000 | 2 3/8 | 60.3250 | 1 | 25.4000 | 51.665 | 124.155 | 1890 | 2970 |
| 2 | 50.8000 | 2 3/8 | 60.3250 | 1 1/4 | 31.7500 | 64.481 | 164.606 | 1890 | 2970 |
| 2 | 50.8000 | 2 3/8 | 60.3250 | 1 1/2 | 38.1000 | 76.496 | 205.056 | 1890 | 2970 |
| 2 | 50.8000 | 2 3/8 | 60.3250 | 1 3/4 | 44.4500 | 87.710 | 245.507 | 1890 | 2970 |
| 2 1/16 | 52.3875 | 2 17/32 | 64.2925 | 3/4 | 19.0500 | 41.652 | 78.098 | 2340 | 3690 |
| 2 1/16 | 52.3875 | 2 17/32 | 64.2925 | 3/4 | 19.0500 | 57.672 | 119.750 | 2340 | 3690 |
| 2 1/16 | 52.3875 | 2 17/32 | 64.2925 | 1 1/2 | 38.1000 | 87.309 | 203.054 | 2340 | 3690 |
| 2 1/8 | 53.9750 | 2 1/2 | 63.5000 | 1/2 | 12.7000 | 23.509 | 46.058 | 1800 | 2790 |
| 2 1/8 | 53.9750 | 2 1/2 | 63.5000 | 1 | 25.4000 | 53.267 | 132.165 | 1800 | 2790 |
| 2 1/8 | 53.9750 | 2 1/2 | 63.5000 | 1 1/4 | 31.7500 | 66.083 | 175.019 | 1800 | 2790 |
| 2 1/8 | 53.9750 | 2 1/2 | 63.5000 | 1 1/2 | 38.1000 | 78.498 | 217.872 | 1800 | 2790 |
| 2 1/4 | 57.1500 | 2 5/8 | 66.6750 | 3/4 | 19.0500 | 42.854 | 94.919 | 1800 | 2700 |
| 2 1/4 | 57.1500 | 2 5/8 | 66.6750 | 1 1/4 | 31.7500 | 69.687 | 185.832 | 1800 | 2700 |
| 2 1/4 | 57.1500 | 2 5/8 | 66.6750 | 1 1/2 | 38.1000 | 82.904 | 231.089 | 1800 | 2700 |



Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

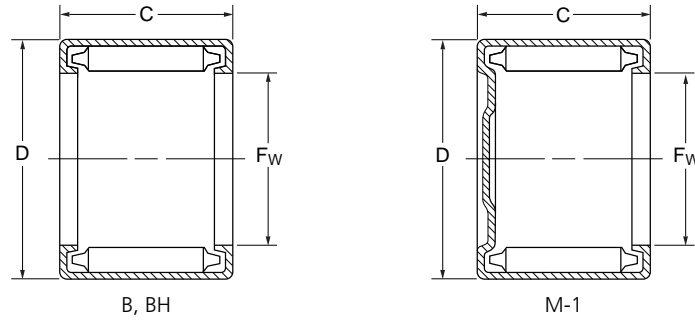
| Mass Approx. | | Interchange | |
|--------------|-------------|-------------|-------------|
| Open Ends | Closed Ends | Open Ends | Closed Ends |
| g | g | | |
| 47.67 | 54.03 | B 248 | M 2481 |
| 59.93 | 68.10 | B 2410 | M 24101 |
| 71.73 | 81.27 | B 2412 | M 24121 |
| 83.54 | 94.89 | B 2414 | M 24141 |
| 95.79 | 108.51 | B 2416 | M 24161 |
| 119.40 | 135.29 | B 2420 | M 24201 |
| 51.30 | - | B 268 | - |
| 64.01 | 72.64 | B 2610 | M 26101 |
| 102.60 | - | B 2616 | - |
| 128.03 | 145.28 | B 2620 | M 26201 |
| 82.17 | 93.07 | B 2812 | M 28121 |
| 109.87 | 124.40 | B 2816 | M 28161 |
| 137.11 | - | B 2820 | - |
| 164.80 | 186.59 | B 2824 | M 26241 |
| 58.57 | 66.28 | B 308 | M 3081 |
| 87.62 | - | B 3012 | - |
| 117.13 | 132.57 | B 3016 | M 30161 |
| 61.74 | 69.92 | B 328 | M 3281 |
| 123.94 | 140.29 | B 3216 | M 32161 |
| 154.81 | 175.24 | B 3220 | M 32201 |
| 186.14 | 211.11 | B 3224 | M 32241 |
| 217.01 | 245.61 | B 3228 | M 32281 |
| 122.13 | - | BH 3312 | - |
| 162.53 | 184.32 | BH 3316 | MH 33161 |
| 243.80 | 276.49 | BH 3324 | MH 33241 |
| 65.38 | - | B 348 | - |
| 138.02 | 156.63 | B 3416 | M 34161 |
| 163.89 | - | B 3420 | - |
| 196.58 | 222.91 | B 3424 | M 34241 |
| 103.51 | 117.13 | B 3612 | M 36121 |
| 172.52 | - | B 3620 | - |
| 207.02 | 234.72 | B 3624 | M 36241 |



10.04

10.04

Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

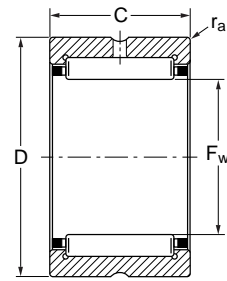


| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | |
|------------------|----------|-------|----------|-------|---------|--------------------|----------------------|----------------|------|
| F _w | | D | | C | | Dynamic | Static | Grease | Oil |
| inch | mm | inch | mm | inch | mm | C kN | C ₀ kN | | |
| 2 5/8 | 66.6750 | 3 | 76.2000 | 1 | 25.4000 | 60.075 | 163.805 | 1530 | 2250 |
| 2 3/4 | 69.8500 | 3 1/8 | 79.3750 | 5/8 | 15.8750 | 36.886 | 88.110 | 1440 | 2250 |
| 2 3/4 | 69.8500 | 3 1/8 | 79.3750 | 1 | 25.4000 | 62.078 | 171.414 | 1440 | 2250 |
| 2 3/4 | 69.8500 | 3 1/8 | 79.3750 | 1 1/4 | 31.7500 | 76.896 | 227.084 | 1440 | 2250 |
| 3 1/2 | 88.9000 | 4 | 101.6000 | 3/4 | 19.0500 | 58.473 | 134.969 | 1620 | 2430 |
| 5 1/2 | 139.7000 | 6 | 152.4000 | 3/4 | 19.0500 | 69.287 | 208.260 | 900 | 1440 |

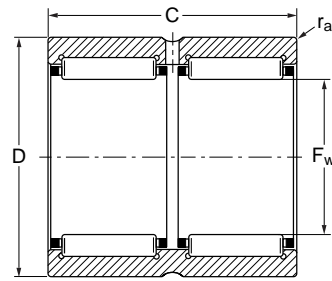


Drawn Cup Needle Roller Bearings,
Full Complement - Inch Sizes

| Mass Approx. | | Interchange | |
|----------------|------------------|-------------|-------------|
| Open Ends g | Closed Ends g | Open Ends | Closed Ends |
| 159.35 | 180.69 | B 4216 | M 42161 |
| 103.97 | - | B 4410 | - |
| 166.16 | - | B 4416 | - |
| 207.93 | 235.63 | B 4420 | M 44201 |
| 212.47 | - | B 5612 | - |
| 325.52 | - | B 8812 | - |



NK, NKS
RNA 48
RNA 49, RNA 69 ($F_w \geq 35$ mm)



RNA 69 ($F_w \geq 40$ mm)

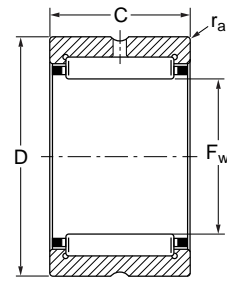
| Basic Dimensions | | | | Basic Load Ratings | | Limiting Speed | Mass | |
|------------------|---------|---------|--------------|--------------------|-----------------------|----------------|-------|----------|
| F_w mm | D mm | C mm | r_a max | Dynamic C kN | Static C_0 kN | r/min | g | NK |
| 20 | 28 | 23 | 0.30 | 17.30 | 25.50 | 18000 | 39.7 | - |
| 20 | 32 | 20 | 0.30 | 23.00 | 25.00 | 17100 | 48.7 | - |
| 21 | 29 | 16 | 0.30 | 13.50 | 18.70 | 18000 | 28.1 | NK 21/16 |
| 21 | 29 | 20 | 0.30 | 17.10 | 25.50 | 18000 | 35.2 | NK 21/20 |
| 22 | 30 | 16 | 0.30 | 14.00 | 19.90 | 17100 | 30.0 | NK 22/16 |
| 22 | 30 | 20 | 0.30 | 17.70 | 27.00 | 17100 | 37.0 | NK 22/20 |
| 22 | 30 | 13 | 0.30 | 11.00 | 14.60 | 18900 | 22.2 | - |
| 22 | 30 | 23 | 0.30 | 18.60 | 29.00 | 17100 | 42.4 | - |
| 22 | 35 | 20 | 0.60 | 24.50 | 28.00 | 15300 | 61.5 | - |
| 24 | 32 | 16 | 0.30 | 15.00 | 22.30 | 16200 | 31.9 | NK 24/16 |
| 24 | 32 | 20 | 0.30 | 19.00 | 30.50 | 16200 | 40.0 | NK 24/20 |
| 24 | 37 | 20 | 0.60 | 26.00 | 31.00 | 14400 | 65.5 | - |
| 25 | 33 | 16 | 0.30 | 14.90 | 22.40 | 15300 | 32.6 | NK 25/16 |
| 25 | 33 | 20 | 0.30 | 18.80 | 30.50 | 15300 | 42.0 | NK 25/20 |
| 25 | 37 | 17 | 0.30 | 21.00 | 25.50 | 15300 | 52.3 | - |
| 25 | 37 | 30 | 0.30 | 36.00 | 51.00 | 14400 | 100.0 | - |
| 25 | 38 | 20 | 0.60 | 27.50 | 33.50 | 14400 | 68.1 | - |
| 26 | 34 | 16 | 0.30 | 15.30 | 23.60 | 14400 | 34.0 | NK 26/16 |
| 26 | 34 | 20 | 0.30 | 19.40 | 32.00 | 14400 | 42.0 | NK 26/20 |
| 28 | 37 | 20 | 0.30 | 22.00 | 34.00 | 13500 | 52.2 | NK 28/20 |
| 28 | 37 | 30 | 0.30 | 33.00 | 57.00 | 13500 | 82.0 | NK 28/30 |
| 28 | 39 | 17 | 0.30 | 22.80 | 29.50 | 14400 | 50.2 | - |
| 28 | 39 | 30 | 0.30 | 37.50 | 55.00 | 13500 | 98.0 | - |
| 28 | 42 | 20 | 0.60 | 28.50 | 36.50 | 12600 | 83.6 | - |
| 29 | 38 | 20 | 0.30 | 21.90 | 34.00 | 13500 | 53.7 | NK 29/20 |
| 29 | 38 | 30 | 0.30 | 32.50 | 57.00 | 13500 | 84.3 | NK 29/30 |
| 30 | 40 | 20 | 0.30 | 22.60 | 36.00 | 12600 | 65.0 | NK 30/20 |
| 30 | 40 | 30 | 0.30 | 33.50 | 60.00 | 12600 | 97.9 | NK 30/30 |
| 30 | 42 | 17 | 0.30 | 23.60 | 31.50 | 13500 | 61.0 | - |
| 30 | 42 | 30 | 0.30 | 39.00 | 59.00 | 12600 | 112.0 | - |
| 30 | 45 | 22 | 0.60 | 32.00 | 40.00 | 11700 | 104.0 | - |
| 32 | 42 | 20 | 0.30 | 23.10 | 37.50 | 11700 | 68.0 | NK 32/20 |

| Designation | | | |
|-------------|--------|-----------|-----------|
| NKS | RNA 48 | RNA 49 | RNA 69 |
| - | - | - | RNA 6902 |
| NKS 20 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 4903 | - |
| - | - | - | RNA 6903 |
| NKS 22 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| NKS 24 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 4904 | - |
| - | - | - | RNA 6904 |
| NKS 25 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 49/22 | - |
| - | - | - | RNA 69/22 |
| NKS 28 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 4905 | - |
| - | - | - | RNA 6905 |
| NKS 30 | - | - | - |
| - | - | - | - |

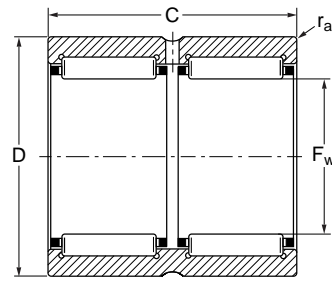


10.05

10.05



NK, NKS
RNA 48
RNA 49, RNA 69 ($F_w \geq 35$ mm)



RNA 69 ($F_w \geq 40$ mm)

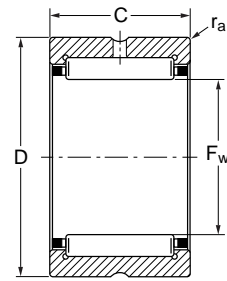
| Basic Dimensions | | | | Basic Load Ratings | | Limiting Speed | Mass | |
|------------------|---------|---------|--------------|--------------------|-----------------------|----------------|-------|----------|
| F_w mm | D mm | C mm | r_a max | Dynamic C kN | Static C_0 kN | r/min | g | NK |
| 32 | 42 | 30 | 0.30 | 34.50 | 63.00 | 11700 | 102.0 | NK 32/30 |
| 32 | 45 | 17 | 0.30 | 24.40 | 33.50 | 11700 | 73.2 | - |
| 32 | 45 | 30 | 0.30 | 40.50 | 63.00 | 11700 | 135.0 | - |
| 32 | 47 | 22 | 0.60 | 33.50 | 43.50 | 10800 | 110.0 | - |
| 35 | 45 | 20 | 0.30 | 24.30 | 41.50 | 10800 | 73.8 | NK 35/20 |
| 35 | 45 | 30 | 0.30 | 36.50 | 69.00 | 10800 | 112.0 | NK 35/30 |
| 35 | 47 | 17 | 0.30 | 25.00 | 35.50 | 11700 | 69.4 | - |
| 35 | 47 | 30 | 0.30 | 43.50 | 71.00 | 10800 | 126.0 | - |
| 35 | 50 | 22 | 0.60 | 35.00 | 47.00 | 10800 | 118.0 | - |
| 37 | 47 | 20 | 0.30 | 24.90 | 43.50 | 10800 | 77.0 | NK 37/20 |
| 37 | 47 | 30 | 0.30 | 37.00 | 73.00 | 10800 | 113.0 | NK 37/30 |
| 37 | 52 | 22 | 0.60 | 36.50 | 50.00 | 9900 | 123.0 | - |
| 38 | 48 | 20 | 0.30 | 25.50 | 45.00 | 9900 | 79.4 | NK 38/20 |
| 38 | 48 | 30 | 0.30 | 38.00 | 76.00 | 9900 | 116.0 | NK 38/30 |
| 40 | 50 | 20 | 0.30 | 26.00 | 47.00 | 9900 | 82.7 | NK 40/20 |
| 40 | 50 | 30 | 0.30 | 39.00 | 79.00 | 9900 | 125.0 | NK 40/30 |
| 40 | 52 | 20 | 0.60 | 30.50 | 47.50 | 10800 | 89.1 | - |
| 40 | 52 | 36 | 0.60 | 47.00 | 82.00 | 9900 | 162.0 | - |
| 40 | 55 | 22 | 0.60 | 38.00 | 54.00 | 9000 | 129.0 | - |
| 42 | 52 | 20 | 0.30 | 26.50 | 49.00 | 9000 | 85.8 | NK 42/20 |
| 42 | 52 | 30 | 0.30 | 39.50 | 82.00 | 9000 | 130.0 | NK 42/30 |
| 42 | 55 | 20 | 0.60 | 31.50 | 50.00 | 9900 | 107.0 | - |
| 42 | 55 | 36 | 0.60 | 48.00 | 86.00 | 9000 | 193.0 | - |
| 43 | 53 | 20 | 0.30 | 27.00 | 51.00 | 9000 | 86.0 | NK 43/20 |
| 43 | 53 | 30 | 0.30 | 40.50 | 85.00 | 9000 | 133.0 | NK 43/30 |
| 43 | 58 | 22 | 0.60 | 39.00 | 57.00 | 8550 | 139.0 | - |
| 45 | 55 | 20 | 0.30 | 27.50 | 53.00 | 9000 | 91.5 | NK 45/20 |
| 45 | 55 | 30 | 0.30 | 41.00 | 88.00 | 9000 | 139.0 | NK 45/30 |
| 45 | 60 | 22 | 0.60 | 40.50 | 60.00 | 8550 | 145.0 | - |
| 47 | 57 | 20 | 0.30 | 28.50 | 56.00 | 8550 | 94.5 | NK 47/20 |
| 47 | 57 | 30 | 0.30 | 43.00 | 94.00 | 8550 | 142.0 | NK 47/30 |
| 48 | 62 | 22 | 0.60 | 43.00 | 67.00 | 8550 | 140.0 | - |

| Designation | | | |
|-------------|--------|-----------|-----------|
| NKS | RNA 48 | RNA 49 | RNA 69 |
| - | - | - | - |
| - | - | RNA 49/28 | - |
| - | - | - | RNA 69/28 |
| NKS 32 | - | - | - |
| - | - | - | - |
| - | - | RNA 49/06 | - |
| - | - | - | RNA 69/06 |
| NKS 35 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| NKS 37 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 49/32 | - |
| - | - | - | RNA 69/32 |
| NKS 40 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 49/07 | - |
| - | - | - | RNA 69/07 |
| - | - | - | - |
| - | - | - | - |
| NKS 43 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| NKS 45 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 49/08 | - |

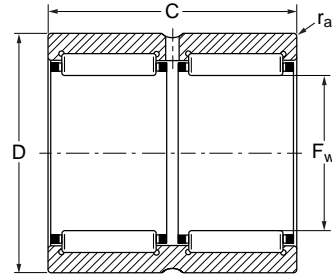


10.05

10.05



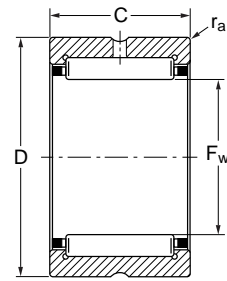
NK, NKS
RNA 48
RNA 49, RNA 69 ($F_w \geq 35$ mm)



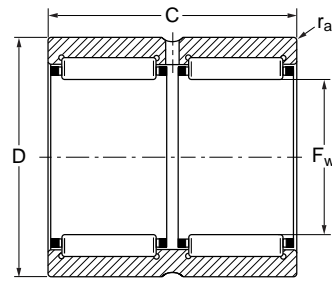
RNA 69 ($F_w \geq 40$ mm)

| Basic Dimensions | | | | Basic Load Ratings | | Limiting Speed | Mass | |
|------------------|---------|---------|--------------|--------------------|-----------------------|----------------|-------|----------|
| F_w mm | D mm | C mm | r_a max | Dynamic C kN | Static C_0 kN | r/min | g | NK |
| 48 | 62 | 40 | 0.60 | 66.00 | 116.00 | 8100 | 256.0 | - |
| 50 | 62 | 25 | 0.60 | 38.00 | 74.00 | 8100 | 158.0 | NK 50/25 |
| 50 | 62 | 35 | 0.60 | 50.00 | 106.00 | 8100 | 221.0 | NK 50/35 |
| 50 | 65 | 22 | 1.00 | 42.50 | 67.00 | 7650 | 157.0 | - |
| 52 | 68 | 22 | 0.60 | 45.00 | 73.00 | 7650 | 182.0 | - |
| 52 | 68 | 40 | 0.60 | 69.00 | 127.00 | 7200 | 338.0 | - |
| 55 | 68 | 25 | 0.60 | 40.00 | 82.00 | 7200 | 180.0 | NK 55/25 |
| 55 | 68 | 35 | 0.60 | 53.00 | 118.00 | 7200 | 250.0 | NK 55/35 |
| 55 | 72 | 22 | 1.00 | 45.00 | 74.00 | 6750 | 221.0 | - |
| 58 | 72 | 22 | 0.60 | 47.00 | 80.00 | 7200 | 163.0 | - |
| 58 | 72 | 40 | 0.60 | 73.00 | 139.00 | 6750 | 310.0 | - |
| 60 | 72 | 25 | 0.60 | 42.00 | 90.00 | 6750 | 185.0 | NK 60/25 |
| 60 | 72 | 35 | 0.60 | 56.00 | 130.00 | 6750 | 258.0 | NK 60/35 |
| 60 | 80 | 28 | 1.10 | 63.00 | 98.00 | 6300 | 335.0 | - |
| 63 | 80 | 25 | 1.00 | 58.00 | 100.00 | 6750 | 255.0 | - |
| 63 | 80 | 45 | 1.00 | 90.00 | 176.00 | 6300 | 470.0 | - |
| 65 | 78 | 25 | 0.60 | 44.00 | 98.00 | 6300 | 221.0 | NK 65/25 |
| 65 | 78 | 35 | 0.60 | 59.00 | 142.00 | 6300 | 310.0 | NK 65/35 |
| 65 | 85 | 28 | 1.10 | 67.00 | 108.00 | 5850 | 356.0 | - |
| 68 | 82 | 25 | 0.60 | 43.50 | 89.00 | 5850 | 241.0 | NK 68/25 |
| 68 | 82 | 35 | 0.60 | 62.00 | 139.00 | 5850 | 338.0 | NK 68/35 |
| 68 | 85 | 25 | 1.00 | 60.00 | 108.00 | 6300 | 275.0 | - |
| 68 | 85 | 45 | 1.00 | 94.00 | 191.00 | 5850 | 488.0 | - |
| 70 | 85 | 25 | 0.60 | 44.50 | 92.00 | 5850 | 260.0 | NK 70/25 |
| 70 | 85 | 35 | 0.60 | 63.00 | 144.00 | 5850 | 370.0 | NK 70/35 |
| 70 | 90 | 28 | 1.10 | 68.00 | 113.00 | 5400 | 380.0 | - |
| 72 | 90 | 25 | 1.00 | 61.00 | 112.00 | 5850 | 312.0 | - |
| 72 | 90 | 45 | 1.00 | 95.00 | 198.00 | 5400 | 580.0 | - |
| 73 | 90 | 25 | 1.00 | 53.00 | 100.00 | 5400 | 302.0 | NK 73/25 |
| 73 | 90 | 35 | 1.00 | 75.00 | 156.00 | 5400 | 428.0 | NK 73/35 |
| 75 | 92 | 25 | 1.00 | 54.00 | 104.00 | 5400 | 315.0 | NK 75/25 |
| 75 | 92 | 35 | 1.00 | 77.00 | 162.00 | 5400 | 445.0 | NK 75/35 |

| Designation | | | |
|-------------|--------|----------|----------|
| NKS | RNA 48 | RNA 49 | RNA 69 |
| - | - | - | RNA 6908 |
| - | - | - | - |
| - | - | - | - |
| NKS 50 | - | - | - |
| - | - | RNA 4909 | - |
| - | - | - | RNA 6909 |
| - | - | - | - |
| - | - | - | - |
| NKS 55 | - | - | - |
| - | - | RNA 4910 | - |
| - | - | - | RNA 6910 |
| - | - | - | - |
| - | - | - | - |
| NKS 60 | - | - | - |
| - | - | RNA 4911 | - |
| - | - | - | RNA 6911 |
| - | - | - | - |
| - | - | - | - |
| NKS 65 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 4912 | - |
| - | - | - | RNA 6912 |
| - | - | - | - |
| - | - | - | - |
| NKS 70 | - | - | - |
| - | - | RNA 4913 | - |
| - | - | - | RNA 6913 |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |



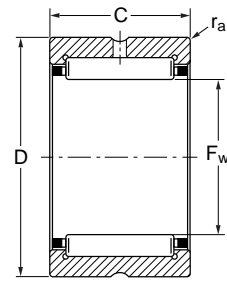
NK, NKS
RNA 48
RNA 49, RNA 69 ($F_w \geq 35$ mm)



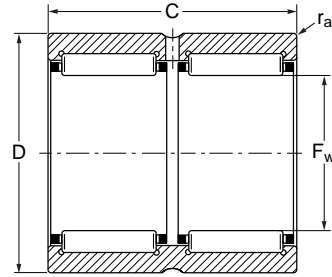
RNA 69 ($F_w \geq 40$ mm)

| Basic Dimensions | | | | Basic Load Ratings | | Limiting Speed | Mass | |
|------------------|---------|---------|--------------|--------------------|-----------------------|----------------|--------|-----------|
| F_w mm | D mm | C mm | r_a max | Dynamic C kN | Static C_0 kN | r/min | g | NK |
| 75 | 95 | 28 | 1.10 | 71.00 | 123.00 | 5400 | 402.0 | - |
| 80 | 95 | 25 | 1.00 | 56.00 | 119.00 | 4950 | 301.0 | NK 80/25 |
| 80 | 95 | 35 | 1.00 | 78.00 | 184.00 | 4950 | 425.0 | NK 80/35 |
| 80 | 100 | 30 | 1.00 | 84.00 | 156.00 | 5400 | 460.0 | - |
| 80 | 100 | 54 | 1.00 | 128.00 | 265.00 | 4950 | 857.0 | - |
| 85 | 105 | 25 | 1.00 | 69.00 | 123.00 | 4500 | 425.0 | NK 85/25 |
| 85 | 105 | 35 | 1.00 | 98.00 | 193.00 | 4500 | 600.0 | NK 85/35 |
| 85 | 105 | 30 | 1.00 | 86.00 | 162.00 | 4950 | 489.0 | - |
| 85 | 105 | 54 | 1.00 | 130.00 | 275.00 | 4500 | 935.0 | - |
| 90 | 110 | 25 | 1.00 | 72.00 | 132.00 | 4410 | 450.0 | NK 90/25 |
| 90 | 110 | 35 | 1.00 | 103.00 | 208.00 | 4410 | 630.0 | NK 90/35 |
| 90 | 110 | 30 | 1.00 | 89.00 | 174.00 | 4500 | 516.0 | - |
| 90 | 110 | 54 | 1.00 | 135.00 | 300.00 | 4410 | 987.0 | - |
| 95 | 115 | 26 | 1.00 | 73.00 | 137.00 | 4230 | 490.0 | NK 95/26 |
| 95 | 115 | 36 | 1.00 | 107.00 | 223.00 | 4230 | 680.0 | NK 95/36 |
| 100 | 120 | 26 | 1.00 | 76.00 | 146.00 | 4050 | 515.0 | NK 100/26 |
| 100 | 120 | 36 | 1.00 | 111.00 | 237.00 | 4050 | 715.0 | NK 100/36 |
| 100 | 120 | 35 | 1.10 | 111.00 | 237.00 | 4320 | 657.0 | - |
| 100 | 120 | 63 | 1.10 | 166.00 | 400.00 | 4050 | 1200.0 | - |
| 105 | 125 | 26 | 1.00 | 78.00 | 155.00 | 3870 | 540.0 | NK 105/26 |
| 105 | 125 | 36 | 1.00 | 114.00 | 250.00 | 3870 | 713.0 | NK 105/36 |
| 105 | 125 | 35 | 1.10 | 114.00 | 250.00 | 4140 | 745.0 | - |
| 105 | 125 | 63 | 1.10 | 172.00 | 425.00 | 3870 | 1330.0 | - |
| 110 | 130 | 30 | 1.10 | 98.00 | 210.00 | 3690 | 650.0 | NK 110/30 |
| 110 | 130 | 40 | 1.10 | 127.00 | 290.00 | 3690 | 830.0 | NK 110/40 |
| 110 | 130 | 35 | 1.10 | 116.00 | 260.00 | 3960 | 719.0 | - |
| 110 | 130 | 63 | 1.10 | 174.00 | 440.00 | 3690 | 1460.0 | - |
| 115 | 140 | 40 | 1.10 | 128.00 | 270.00 | 3690 | 1150.0 | - |
| 120 | 140 | 30 | 1.00 | 94.00 | 216.00 | 3420 | 670.0 | - |
| 125 | 150 | 40 | 1.10 | 132.00 | 290.00 | 3420 | 1240.0 | - |
| 130 | 150 | 30 | 1.00 | 99.00 | 239.00 | 3150 | 730.0 | - |
| 135 | 165 | 45 | 1.10 | 181.00 | 390.00 | 3060 | 1860.0 | - |

| Designation | | | |
|-------------|----------|----------|----------|
| NKS | RNA 48 | RNA 49 | RNA 69 |
| NKS 75 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 4914 | - |
| - | - | - | RNA 6914 |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 4915 | - |
| - | - | - | RNA 6915 |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 4916 | - |
| - | - | - | RNA 6916 |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 4917 | - |
| - | - | - | RNA 6917 |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 4918 | - |
| - | - | - | RNA 6918 |
| - | - | - | - |
| - | - | - | - |
| - | - | RNA 4919 | - |
| - | - | - | RNA 6919 |
| - | - | RNA 4920 | - |
| - | RNA 4822 | - | - |
| - | - | RNA 4922 | - |
| - | RNA 4824 | - | - |
| - | - | RNA 4924 | - |



NK, NKS
RNA 48
RNA 49, RNA 69 ($F_w \geq 35$ mm)

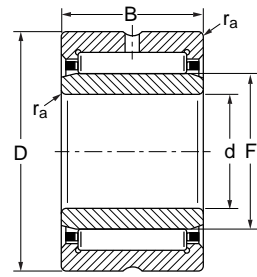


RNA 69 ($F_w \geq 40$ mm)

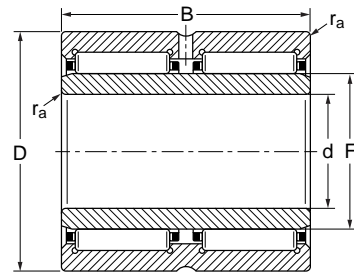
| Basic Dimensions | | | | Basic Load Ratings | | Limiting Speed | Mass | NK |
|------------------|---------|---------|--------------|--------------------|-----------------------|----------------|---------|----|
| F_w mm | D mm | C mm | r_a max | Dynamic C kN | Static C_0 kN | r/min | g | |
| 145 | 165 | 35 | 1.10 | 118.00 | 310.00 | 2880 | 990.0 | - |
| 150 | 180 | 50 | 1.50 | 203.00 | 470.00 | 2880 | 2210.0 | - |
| 155 | 175 | 35 | 1.10 | 120.00 | 325.00 | 2700 | 1050.0 | - |
| 160 | 190 | 50 | 1.50 | 209.00 | 500.00 | 2700 | 2350.0 | - |
| 165 | 190 | 40 | 1.10 | 152.00 | 400.00 | 2520 | 1600.0 | - |
| 175 | 200 | 40 | 1.10 | 160.00 | 435.00 | 2340 | 1700.0 | - |
| 185 | 215 | 45 | 1.10 | 185.00 | 510.00 | 2250 | 2540.0 | - |
| 195 | 225 | 45 | 1.10 | 194.00 | 550.00 | 2070 | 2680.0 | - |
| 210 | 240 | 50 | 1.50 | 227.00 | 690.00 | 1980 | 3210.0 | - |
| 220 | 250 | 50 | 1.50 | 230.00 | 720.00 | 1890 | 3350.0 | - |
| 240 | 270 | 50 | 1.50 | 243.00 | 790.00 | 1710 | 3620.0 | - |
| 265 | 300 | 60 | 2.00 | 355.00 | 1080.00 | 1530 | 5400.0 | - |
| 285 | 320 | 60 | 2.00 | 370.00 | 1160.00 | 1440 | 5800.0 | - |
| 305 | 350 | 69 | 2.00 | 450.00 | 1300.00 | 1350 | 9300.0 | - |
| 330 | 380 | 80 | 2.10 | 620.00 | 1770.00 | 1260 | 12700.0 | - |
| 350 | 400 | 80 | 2.10 | 630.00 | 1850.00 | 1170 | 13400.0 | - |
| 370 | 420 | 80 | 2.10 | 640.00 | 1940.00 | 1080 | 14000.0 | - |
| 390 | 440 | 80 | 2.10 | 660.00 | 2020.00 | 1080 | 14800.0 | - |
| 415 | 480 | 100 | 2.10 | 1000.00 | 2900.00 | 990 | 26000.0 | - |

| Designation | | | |
|-------------|----------|----------|--------|
| NKS | RNA 48 | RNA 49 | RNA 69 |
| - | RNA 4826 | - | - |
| - | - | RNA 4926 | - |
| - | RNA 4828 | - | - |
| - | - | RNA 4928 | - |
| - | RNA 4830 | - | - |
| - | RNA 4832 | - | - |
| - | RNA 4834 | - | - |
| - | RNA 4836 | - | - |
| - | RNA 4838 | - | - |
| - | RNA 4840 | - | - |
| - | RNA 4844 | - | - |
| - | RNA 4848 | - | - |
| - | RNA 4852 | - | - |
| - | RNA 4856 | - | - |
| - | RNA 4860 | - | - |
| - | RNA 4864 | - | - |
| - | RNA 4868 | - | - |
| - | RNA 4872 | - | - |
| - | RNA 4876 | - | - |





NKI ($d \leq 30$ mm)
NKIS
NA 49, NA 69 ($d \leq 30$ mm)
NA 48

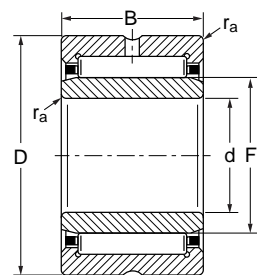


NA 69 ($d \geq 32$ mm)

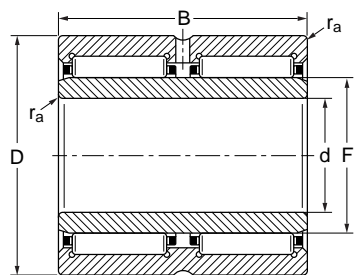
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | Mass | |
|------------------|----|----|----|----------------|--------------------|----------------|----------------|------|-----------|
| d | F | D | B | r _a | Dynamic | Static | | | NKI |
| mm | mm | mm | mm | max | C | C ₀ | r/min | g | |
| 5 | 8 | 15 | 12 | 0.30 | 3.95 | 4.10 | 28800 | 11.5 | NKI 5/12 |
| 5 | 8 | 15 | 16 | 0.30 | 5.10 | 5.80 | 28800 | 15.3 | NKI 5/16 |
| 6 | 9 | 16 | 12 | 0.30 | 4.50 | 5.00 | 27000 | 13.5 | NKI 6/12 |
| 6 | 9 | 16 | 16 | 0.30 | 5.90 | 7.10 | 27000 | 17.4 | NKI 6/16 |
| 7 | 10 | 17 | 12 | 0.30 | 4.75 | 5.50 | 26100 | 13.7 | NKI 7/12 |
| 7 | 10 | 17 | 16 | 0.30 | 6.20 | 7.80 | 26100 | 18.2 | NKI 7/16 |
| 9 | 12 | 19 | 12 | 0.30 | 6.40 | 7.10 | 24300 | 16.6 | NKI 9/12 |
| 9 | 12 | 19 | 16 | 0.30 | 9.00 | 11.00 | 24300 | 21.9 | NKI 9/16 |
| 10 | 14 | 22 | 16 | 0.30 | 10.10 | 11.50 | 22500 | 29.4 | NKI 10/16 |
| 10 | 14 | 22 | 20 | 0.30 | 12.80 | 15.60 | 22500 | 37.1 | NKI 10/20 |
| 10 | 14 | 22 | 13 | 0.30 | 8.50 | 9.20 | 22500 | 23 | - |
| 12 | 16 | 24 | 16 | 0.30 | 11.30 | 13.90 | 21600 | 33.3 | NKI 12/16 |
| 12 | 16 | 24 | 20 | 0.30 | 14.40 | 18.80 | 21600 | 41.9 | NKI 12/20 |
| 12 | 16 | 24 | 13 | 0.30 | 9.40 | 10.90 | 21600 | 26 | - |
| 12 | 16 | 24 | 22 | 0.30 | 16.00 | 21.60 | 21600 | 46 | - |
| 15 | 19 | 27 | 16 | 0.30 | 13.00 | 17.40 | 19800 | 38.8 | NKI 15/16 |
| 15 | 19 | 27 | 20 | 0.30 | 16.50 | 23.60 | 19800 | 48.7 | NKI 15/20 |
| 15 | 20 | 28 | 13 | 0.30 | 10.60 | 13.60 | 19800 | 34 | - |
| 15 | 20 | 28 | 23 | 0.30 | 17.30 | 25.50 | 19800 | 63.6 | - |
| 15 | 22 | 35 | 20 | 0.60 | 24.50 | 28.00 | 18000 | 92 | - |
| 17 | 21 | 29 | 16 | 0.30 | 13.50 | 18.70 | 18900 | 42.4 | NKI 17/16 |
| 17 | 21 | 29 | 20 | 0.30 | 17.10 | 25.50 | 18900 | 53.4 | NKI 17/20 |
| 17 | 22 | 30 | 13 | 0.30 | 11.00 | 14.60 | 18900 | 37 | - |
| 17 | 22 | 30 | 23 | 0.30 | 18.60 | 29.00 | 18900 | 72 | - |
| 17 | 24 | 37 | 20 | 0.60 | 26.00 | 31.00 | 16200 | 98 | - |
| 20 | 24 | 32 | 16 | 0.30 | 15.00 | 22.30 | 17100 | 49 | NKI 20/16 |
| 20 | 24 | 32 | 20 | 0.30 | 19.00 | 30.50 | 17100 | 61 | NKI 20/20 |
| 20 | 25 | 37 | 17 | 0.30 | 21.00 | 25.50 | 15300 | 75.2 | - |
| 20 | 25 | 37 | 30 | 0.30 | 36.00 | 51.00 | 15300 | 141 | - |
| 20 | 28 | 42 | 20 | 0.60 | 28.50 | 36.50 | 14400 | 129 | - |
| 22 | 26 | 34 | 16 | 0.30 | 15.30 | 23.60 | 16200 | 52 | NKI 22/16 |
| 22 | 26 | 34 | 20 | 0.30 | 19.40 | 32.00 | 16200 | 65.4 | NKI 22/20 |

| Designation | | | |
|-------------|-------|---------|---------|
| NKIS | NA 48 | NA 49 | NA 69 |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4900 | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4901 | - |
| - | - | - | - |
| - | - | - | NA 6901 |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4902 | - |
| - | - | - | - |
| - | - | - | NA 6902 |
| NKIS 15 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4903 | - |
| - | - | - | - |
| - | - | - | NA 6903 |
| NKIS 17 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4904 | - |
| - | - | - | - |
| - | - | - | NA 6904 |
| NKIS 20 | - | - | - |
| - | - | - | - |
| - | - | - | - |





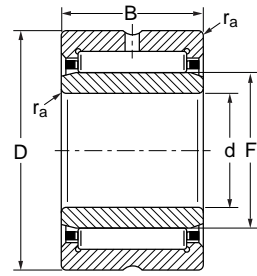
NKI ($d \leq 30$ mm)
NKIS
NA 49, NA 69 ($d \leq 30$ mm)
NA 48



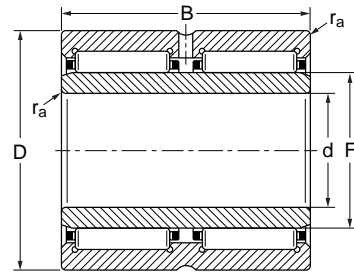
NA 69 ($d \geq 32$ mm)

| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | Mass | |
|------------------|----|----|----|------|--------------------|----------------|----------------|------|-----------|
| d | F | D | B | ra | Dynamic | Static | | | NKI |
| mm | mm | mm | mm | max | C | C ₀ | r/min | g | |
| 22 | 28 | 39 | 17 | 0.30 | 22.80 | 29.50 | 14400 | 80 | - |
| 22 | 28 | 39 | 30 | 0.30 | 37.50 | 55.00 | 14400 | 150 | - |
| 25 | 29 | 38 | 20 | 0.30 | 21.90 | 34.00 | 14400 | 79.4 | NKI 25/20 |
| 25 | 29 | 38 | 30 | 0.30 | 32.50 | 57.00 | 14400 | 124 | NKI 25/30 |
| 25 | 30 | 42 | 17 | 0.30 | 23.60 | 31.50 | 13500 | 88 | - |
| 25 | 30 | 42 | 30 | 0.30 | 39.00 | 59.00 | 13500 | 161 | - |
| 25 | 32 | 47 | 22 | 0.60 | 33.50 | 43.50 | 12600 | 162 | - |
| 28 | 32 | 42 | 20 | 0.30 | 23.10 | 37.50 | 12600 | 96.5 | NKI 28/20 |
| 28 | 32 | 42 | 30 | 0.30 | 34.50 | 63.00 | 12600 | 146 | NKI 28/30 |
| 28 | 32 | 45 | 17 | 0.30 | 24.40 | 33.50 | 11700 | 97.7 | - |
| 28 | 32 | 45 | 30 | 0.30 | 40.50 | 63.00 | 11700 | 182 | - |
| 30 | 35 | 45 | 20 | 0.30 | 24.30 | 41.50 | 11700 | 112 | NKI 30/20 |
| 30 | 35 | 45 | 30 | 0.30 | 36.50 | 69.00 | 11700 | 170 | NKI 30/30 |
| 30 | 35 | 47 | 17 | 0.30 | 25.00 | 35.50 | 11700 | 101 | - |
| 30 | 35 | 47 | 30 | 0.30 | 43.50 | 71.00 | 11700 | 192 | - |
| 30 | 37 | 52 | 22 | 0.60 | 36.50 | 50.00 | 10800 | 184 | - |
| 32 | 37 | 47 | 20 | 0.30 | 24.90 | 43.50 | 10800 | 118 | NKI 32/20 |
| 32 | 37 | 47 | 30 | 0.30 | 37.00 | 73.00 | 10800 | 180 | NKI 32/30 |
| 32 | 40 | 52 | 20 | 0.60 | 30.50 | 47.50 | 10800 | 158 | - |
| 32 | 40 | 52 | 36 | 0.60 | 47.00 | 82.00 | 10800 | 288 | - |
| 35 | 40 | 50 | 20 | 0.30 | 26.00 | 47.00 | 10800 | 127 | NKI 35/20 |
| 35 | 40 | 50 | 30 | 0.30 | 39.00 | 79.00 | 10800 | 193 | NKI 35/30 |
| 35 | 42 | 55 | 20 | 0.60 | 31.50 | 50.00 | 9900 | 170 | - |
| 35 | 42 | 55 | 36 | 0.60 | 48.00 | 86.00 | 9900 | 310 | - |
| 35 | 43 | 58 | 22 | 0.60 | 39.00 | 57.00 | 9900 | 220 | - |
| 38 | 43 | 53 | 20 | 0.30 | 27.00 | 51.00 | 9900 | 136 | NKI 38/20 |
| 38 | 43 | 53 | 30 | 0.30 | 40.50 | 85.00 | 9900 | 207 | NKI 38/30 |
| 40 | 45 | 55 | 20 | 0.30 | 27.50 | 53.00 | 9000 | 142 | NKI 40/20 |
| 40 | 45 | 55 | 30 | 0.30 | 41.00 | 88.00 | 9000 | 216 | NKI 40/30 |
| 40 | 48 | 62 | 22 | 0.60 | 43.00 | 67.00 | 8550 | 230 | - |
| 40 | 48 | 62 | 40 | 0.60 | 66.00 | 116.00 | 8550 | 430 | - |
| 40 | 50 | 65 | 22 | 1.00 | 42.50 | 67.00 | 8550 | 281 | - |

| Designation | | | |
|-------------|-------|----------|----------|
| NKIS | NA 48 | NA 49 | NA 69 |
| - | - | NA 49/22 | - |
| - | - | - | NA 69/22 |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4905 | - |
| - | - | - | NA 6905 |
| NKIS 25 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 49/28 | - |
| - | - | - | NA 69/28 |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4906 | - |
| - | - | - | NA 6906 |
| NKIS 30 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 49/32 | - |
| - | - | - | NA 69/32 |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4907 | - |
| - | - | - | NA 6907 |
| NKIS 35 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4908 | - |
| - | - | - | NA 6908 |
| NKIS 40 | - | - | - |



NKI ($d \leq 30$ mm)
NKIS
NA 49, NA 69 ($d \leq 30$ mm)
NA 48

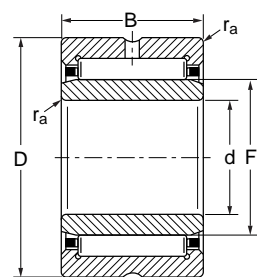


NA 69 ($d \geq 32$ mm)

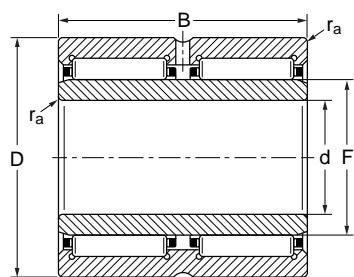
| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | Mass | |
|------------------|----|-----|----|----------------|--------------------|----------------|----------------|------|-----------|
| d | F | D | B | r _a | Dynamic | Static | | | NKI |
| mm | mm | mm | mm | max | C | C ₀ | r/min | g | |
| 42 | 47 | 57 | 20 | 0.30 | 28.50 | 56.00 | 9000 | 148 | NKI 42/20 |
| 42 | 47 | 57 | 30 | 0.30 | 43.00 | 94.00 | 9000 | 222 | NKI 42/30 |
| 45 | 50 | 62 | 25 | 0.60 | 38.00 | 74.00 | 8100 | 229 | NKI 45/25 |
| 45 | 50 | 62 | 35 | 0.60 | 50.00 | 105.00 | 8100 | 322 | NKI 45/35 |
| 45 | 52 | 68 | 22 | 0.60 | 45.00 | 73.00 | 7650 | 271 | - |
| 45 | 52 | 68 | 40 | 0.60 | 69.00 | 127.00 | 7650 | 495 | - |
| 45 | 55 | 72 | 22 | 1.00 | 45.00 | 74.00 | 7650 | 336 | - |
| 50 | 55 | 68 | 25 | 0.60 | 40.00 | 82.00 | 7650 | 270 | NKI 50/25 |
| 50 | 55 | 68 | 35 | 0.60 | 53.00 | 118.00 | 7650 | 379 | NKI 50/35 |
| 50 | 58 | 72 | 22 | 0.60 | 47.00 | 80.00 | 7200 | 274 | - |
| 50 | 58 | 72 | 40 | 0.60 | 73.00 | 139.00 | 7200 | 515 | - |
| 50 | 60 | 80 | 28 | 1.10 | 63.00 | 98.00 | 6750 | 518 | - |
| 55 | 60 | 72 | 25 | 0.60 | 42.00 | 90.00 | 6750 | 272 | NKI 55/25 |
| 55 | 60 | 72 | 35 | 0.60 | 56.00 | 130.00 | 6750 | 379 | NKI 55/35 |
| 55 | 63 | 80 | 25 | 1.00 | 58.00 | 100.00 | 6750 | 393 | - |
| 55 | 63 | 80 | 45 | 1.00 | 90.00 | 176.00 | 6750 | 780 | - |
| 55 | 65 | 85 | 28 | 1.10 | 67.00 | 108.00 | 6300 | 558 | - |
| 60 | 68 | 82 | 25 | 0.60 | 43.50 | 89.00 | 6300 | 394 | NKI 60/25 |
| 60 | 68 | 82 | 35 | 0.60 | 62.00 | 139.00 | 6300 | 553 | NKI 60/35 |
| 60 | 68 | 85 | 25 | 1.00 | 60.00 | 108.00 | 6300 | 426 | - |
| 60 | 68 | 85 | 45 | 1.00 | 94.00 | 191.00 | 6300 | 808 | - |
| 60 | 70 | 90 | 28 | 1.10 | 68.00 | 113.00 | 5850 | 560 | - |
| 65 | 73 | 90 | 25 | 1.00 | 53.00 | 100.00 | 5850 | 467 | NKI 65/25 |
| 65 | 73 | 90 | 35 | 1.00 | 75.00 | 156.00 | 5850 | 659 | NKI 65/35 |
| 65 | 72 | 90 | 25 | 1.00 | 61.00 | 112.00 | 5850 | 456 | - |
| 65 | 72 | 90 | 45 | 1.00 | 95.00 | 198.00 | 5850 | 833 | - |
| 65 | 75 | 95 | 28 | 1.10 | 71.00 | 123.00 | 5400 | 641 | - |
| 70 | 80 | 95 | 25 | 1.00 | 56.00 | 119.00 | 5400 | 521 | NKI 70/25 |
| 70 | 80 | 95 | 35 | 1.00 | 78.00 | 184.00 | 5400 | 737 | NKI 70/35 |
| 70 | 80 | 100 | 30 | 1.00 | 84.00 | 156.00 | 5400 | 728 | - |
| 70 | 80 | 100 | 54 | 1.00 | 128.00 | 265.00 | 5400 | 1340 | - |
| 75 | 85 | 105 | 25 | 1.00 | 69.00 | 123.00 | 4950 | 641 | NKI 75/25 |

| Designation | | | |
|-------------|-------|---------|---------|
| NKIS | NA 48 | NA 49 | NA 69 |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4909 | - |
| - | - | - | NA 6909 |
| NKIS 45 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4910 | - |
| - | - | - | NA 6910 |
| NKIS 50 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4911 | - |
| - | - | - | NA 6911 |
| NKIS 55 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4912 | - |
| - | - | - | NA 6912 |
| NKIS 60 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4913 | - |
| - | - | - | NA 6913 |
| NKIS 65 | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4914 | - |
| - | - | - | NA 6914 |
| - | - | - | - |





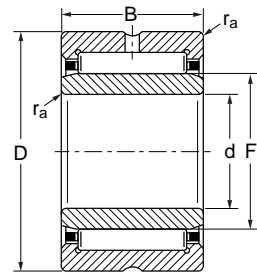
NKI ($d \leq 30$ mm)
NKIS
NA 49, NA 69 ($d \leq 30$ mm)
NA 48



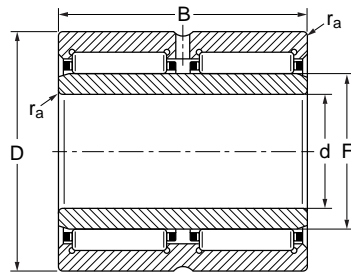
NA 69 ($d \geq 32$ mm)

| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | Mass | |
|------------------|-----|-----|----|----------------|--------------------|----------------|----------------|------|------------|
| d | F | D | B | r _a | Dynamic | Static | | | NKI |
| mm | mm | mm | mm | max | C | C ₀ | r/min | g | |
| 75 | 85 | 105 | 35 | 1.00 | 98.00 | 193.00 | 4950 | 908 | NKI 75/35 |
| 75 | 85 | 105 | 30 | 1.00 | 86.00 | 162.00 | 4950 | 775 | - |
| 75 | 85 | 105 | 54 | 1.00 | 130.00 | 275.00 | 4950 | 1450 | - |
| 80 | 90 | 110 | 25 | 1.00 | 72.00 | 132.00 | 4500 | 677 | NKI 80/25 |
| 80 | 90 | 110 | 35 | 1.00 | 103.00 | 208.00 | 4500 | 959 | NKI 80/35 |
| 80 | 90 | 110 | 30 | 1.00 | 89.00 | 174.00 | 4500 | 878 | - |
| 80 | 90 | 110 | 54 | 1.00 | 135.00 | 300.00 | 4500 | 1522 | - |
| 85 | 95 | 115 | 26 | 1.00 | 73.00 | 137.00 | 4410 | 743 | NKI 85/26 |
| 85 | 95 | 115 | 36 | 1.00 | 107.00 | 223.00 | 4410 | 1040 | NKI 85/36 |
| 85 | 100 | 120 | 35 | 1.10 | 111.00 | 237.00 | 4320 | 1250 | - |
| 85 | 100 | 120 | 63 | 1.10 | 166.00 | 400.00 | 4320 | 2200 | - |
| 90 | 100 | 120 | 26 | 1.00 | 76.00 | 146.00 | 4230 | 778 | NKI 90/26 |
| 90 | 100 | 120 | 36 | 1.00 | 111.00 | 237.00 | 4230 | 1090 | NKI 90/36 |
| 90 | 105 | 125 | 35 | 1.10 | 114.00 | 250.00 | 4140 | 1312 | - |
| 90 | 105 | 125 | 63 | 1.10 | 172.00 | 425.00 | 4140 | 2310 | - |
| 95 | 105 | 125 | 26 | 1.00 | 78.00 | 155.00 | 4050 | 816 | NKI 95/26 |
| 95 | 105 | 125 | 36 | 1.00 | 114.00 | 250.00 | 4050 | 1145 | NKI 95/36 |
| 95 | 110 | 130 | 35 | 1.10 | 116.00 | 260.00 | 3960 | 1371 | - |
| 95 | 110 | 130 | 63 | 1.10 | 174.00 | 440.00 | 3960 | 2500 | - |
| 100 | 110 | 130 | 30 | 1.10 | 98.00 | 210.00 | 3870 | 990 | NKI 100/30 |
| 100 | 110 | 130 | 40 | 1.10 | 127.00 | 290.00 | 3870 | 1330 | NKI 100/40 |
| 100 | 115 | 140 | 40 | 1.10 | 128.00 | 270.00 | 3690 | 1900 | - |
| 110 | 125 | 150 | 40 | 1.10 | 132.00 | 290.00 | 3420 | 2070 | - |
| 110 | 120 | 140 | 30 | 1.00 | 94.00 | 216.00 | 3510 | 1080 | - |
| 120 | 135 | 165 | 45 | 1.10 | 181.00 | 390.00 | 3060 | 2860 | - |
| 120 | 130 | 150 | 30 | 1.00 | 68.00 | 113.00 | 3240 | 1170 | - |
| 130 | 145 | 165 | 35 | 1.10 | 118.00 | 310.00 | 2970 | 1810 | - |
| 130 | 150 | 180 | 50 | 1.50 | 203.00 | 470.00 | 2880 | 3900 | - |
| 140 | 155 | 175 | 35 | 1.10 | 120.00 | 325.00 | 2790 | 1920 | - |
| 140 | 160 | 190 | 50 | 1.50 | 209.00 | 500.00 | 2700 | 4150 | - |
| 150 | 165 | 190 | 40 | 1.10 | 152.00 | 400.00 | 2610 | 2720 | - |
| 160 | 175 | 200 | 40 | 1.10 | 160.00 | 435.00 | 2430 | 2890 | - |

| Designation | | | |
|-------------|---------|---------|---------|
| NKIS | NA 48 | NA 49 | NA 69 |
| - | - | - | - |
| - | - | NA 4915 | - |
| - | - | - | NA 6915 |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4916 | - |
| - | - | - | NA 6916 |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4917 | - |
| - | - | - | NA 6917 |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4918 | - |
| - | - | - | NA 6918 |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4919 | - |
| - | - | - | NA 6919 |
| - | - | - | - |
| - | - | - | - |
| - | - | NA 4920 | - |
| - | - | NA 4922 | - |
| - | NA 4822 | - | - |
| - | - | NA 4924 | - |
| - | NA 4824 | - | - |
| - | NA 4826 | - | - |
| - | - | NA 4926 | - |
| - | NA 4828 | - | - |
| - | - | NA 4928 | - |
| - | NA 4830 | - | - |
| - | NA 4832 | - | - |



NKI ($d \leq 30$ mm)
NKIS
NA 49, NA 69 ($d \leq 30$ mm)
NA 48

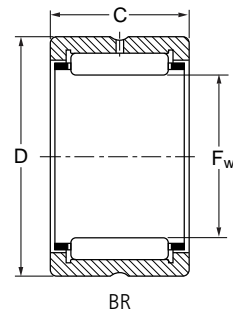


NA 69 ($d \geq 32$ mm)

| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | Mass | |
|------------------|-----|-----|-----|------|--------------------|----------------|----------------|-------|-----|
| d | F | D | B | ra | Dynamic | Static | | | NKI |
| mm | mm | mm | mm | max | C | C ₀ | r/min | g | |
| 170 | 185 | 215 | 45 | 1.10 | 185.00 | 510.00 | 2250 | 3960 | - |
| 180 | 195 | 225 | 45 | 1.10 | 194.00 | 550.00 | 2160 | 4200 | - |
| 190 | 210 | 240 | 50 | 1.50 | 227.00 | 690.00 | 2070 | 5610 | - |
| 200 | 220 | 250 | 50 | 1.50 | 230.00 | 720.00 | 1980 | 5840 | - |
| 220 | 240 | 270 | 50 | 1.50 | 243.00 | 790.00 | 1800 | 6380 | - |
| 240 | 265 | 300 | 60 | 2.00 | 355.00 | 1080.00 | 1620 | 10000 | - |
| 260 | 285 | 320 | 60 | 2.00 | 370.00 | 1160.00 | 1530 | 10600 | - |
| 280 | 305 | 350 | 69 | 2.00 | 450.00 | 1300.00 | 1440 | 15300 | - |
| 300 | 330 | 380 | 80 | 2.10 | 620.00 | 1770.00 | 1260 | 21800 | - |
| 320 | 350 | 400 | 80 | 2.10 | 630.00 | 1850.00 | 1260 | 23000 | - |
| 340 | 370 | 420 | 80 | 2.10 | 640.00 | 1940.00 | 1170 | 24200 | - |
| 360 | 390 | 440 | 80 | 2.10 | 660.00 | 2020.00 | 1080 | 25600 | - |
| 380 | 415 | 480 | 100 | 2.10 | 1000.00 | 2900.00 | 990 | 42600 | - |

| Designation | | | |
|-------------|---------|-------|-------|
| NKIS | NA 48 | NA 49 | NA 69 |
| - | NA 4834 | - | - |
| - | NA 4836 | - | - |
| - | NA 4838 | - | - |
| - | NA 4840 | - | - |
| - | NA 4844 | - | - |
| - | NA 4848 | - | - |
| - | NA 4852 | - | - |
| - | NA 4856 | - | - |
| - | NA 4860 | - | - |
| - | NA 4864 | - | - |
| - | NA 4868 | - | - |
| - | NA 4872 | - | - |
| - | NA 4876 | - | - |





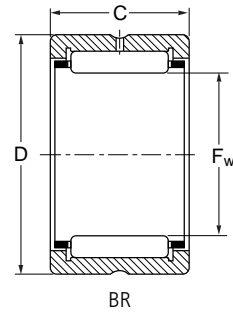
| Basic Dimensions | | | | | | Basic Load Ratings | | Mass | Designation |
|------------------|--------|--------|--------|-------|--------|--------------------|---------|-------|-------------------|
| F _w | | D | | C | | Dynamic | Static | g | Sealed Type BR |
| inch | mm | inch | mm | inch | mm | kN | kN | | |
| 5/8 | 15.875 | 1 1/8 | 28.575 | 3/4 | 19.050 | 17.023 | 17.728 | 49.0 | BR 101812 |
| 3/4 | 19.050 | 1 1/4 | 31.750 | 3/4 | 19.050 | 19.580 | 21.962 | 56.0 | BR 122012 |
| 3/4 | 19.050 | 1 1/4 | 31.750 | 1 | 25.400 | 24.784 | 29.812 | 75.0 | BR 122016 |
| 7/8 | 22.225 | 1 3/8 | 34.925 | 3/4 | 19.050 | 20.639 | 24.431 | 63.0 | BR 142212 |
| 7/8 | 22.225 | 1 3/8 | 34.925 | 1 | 25.400 | 26.195 | 33.163 | 84.5 | BR 142216 |
| 1 | 25.400 | 1 1/2 | 38.100 | 3/4 | 19.050 | 22.756 | 28.665 | 69.0 | BR 162412 |
| 1 | 25.400 | 1 1/2 | 38.100 | 1 | 25.400 | 28.930 | 38.984 | 92.5 | BR 162416 |
| 1 1/8 | 28.575 | 1 5/8 | 41.275 | 1 | 25.400 | 31.399 | 44.894 | 102.0 | BR 182616 |
| 1 1/8 | 28.575 | 1 5/8 | 41.275 | 1 1/4 | 31.750 | 38.896 | 59.006 | 128.0 | BR 182620 |
| 1 1/4 | 31.750 | 1 3/4 | 44.450 | 1 | 25.400 | 32.369 | 48.069 | 110.0 | BR 202816 |
| 1 1/4 | 31.750 | 1 3/4 | 44.450 | 1 1/4 | 31.750 | 40.131 | 63.328 | 138.0 | BR 202820 |
| 1 3/8 | 34.925 | 1 7/8 | 47.625 | 1 | 25.400 | 34.663 | 53.978 | 119.0 | BR 223016 |
| 1 3/8 | 34.925 | 1 7/8 | 47.625 | 1 1/4 | 31.750 | 42.953 | 71.089 | 149.0 | BR 223020 |
| 1 1/2 | 38.100 | 2 1/16 | 52.388 | 1 | 25.400 | 39.337 | 60.152 | 149.0 | BR 243316 |
| 1 1/2 | 38.100 | 2 1/16 | 52.388 | 1 1/4 | 31.750 | 48.775 | 79.204 | 187.0 | BR 243320 |
| 1 5/8 | 41.275 | 2 3/16 | 55.562 | 1 | 25.400 | 40.307 | 63.769 | 158.0 | BR 263516 |
| 1 5/8 | 41.275 | 2 3/16 | 55.562 | 1 1/4 | 31.750 | 50.009 | 84.055 | 199.0 | BR 263520 |
| 1 3/4 | 44.450 | 2 5/16 | 58.738 | 1 | 25.400 | 42.777 | 70.384 | 170.0 | BR 283716 |
| 1 3/4 | 44.450 | 2 5/16 | 58.738 | 1 1/4 | 31.750 | 53.008 | 92.610 | 215.0 | BR 283720 |
| 1 3/4 | 44.450 | 2 3/8 | 60.325 | 1 1/4 | 31.750 | 53.008 | 92.610 | 250.0 | BR 283820 |
| 1 7/8 | 47.625 | 2 7/16 | 61.912 | 1 1/4 | 31.750 | 54.067 | 97.020 | 225.0 | BR 303920 |
| 2 | 50.800 | 2 9/16 | 65.088 | 1 | 25.400 | 45.864 | 80.350 | 190.0 | BR 324116 |
| 2 | 50.800 | 2 9/16 | 65.088 | 1 1/4 | 31.750 | 56.801 | 105.840 | 240.0 | BR 324120 |

| Designation | | |
|-------------|---------|----------|
| HJ | MR | NCS |
| HJ-101812 | MR-10-N | NCS 1012 |
| HJ-122012 | MR-12-N | NCS 1212 |
| HJ-122016 | MR-12 | NCS 1216 |
| HJ-142212 | MR-14-N | NCS 1412 |
| HJ-142216 | MR-14 | NCS 1416 |
| HJ-162412 | MR-16-N | NCS 1612 |
| HJ-162416 | MR-16 | NCS 1616 |
| HJ-182616 | MR-18-N | NCS 1816 |
| HJ-182620 | MR-18 | NCS 1820 |
| HJ-202816 | MR-20-N | NCS 2016 |
| HJ-202820 | MR-20 | NCS 2020 |
| HJ-223016 | MR-22-N | NCS 2216 |
| HJ-223020 | MR-22 | NCS 2220 |
| HJ-243316 | MR-24-N | NCS 2416 |
| HJ-243320 | MR-24 | NCS 2420 |
| HJ-263516 | MR-26-N | NCS 2616 |
| HJ-263520 | MR-26 | NCS 2620 |
| HJ-283716 | MR-28-N | NCS 2816 |
| HJ-283720 | MR-28-N | NCS 2820 |
| - | - | - |
| HJ-303920 | MR-30 | NCS 3020 |
| HJ-324116 | MR-32-N | NCS 3216 |
| HJ-324120 | MR-32 | NCS 3220 |



10.07

10.07

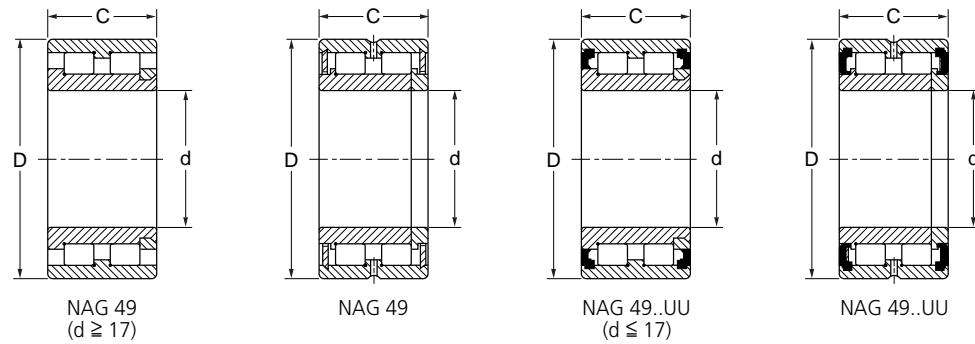


| Basic Dimensions | | | | | | Basic Load Ratings | | Mass | Designation |
|------------------|---------|-------|---------|-------|--------|--------------------|---------|--------|-------------------|
| F _w | | D | | C | | Dynamic | Static | g | Sealed Type BR |
| inch | mm | inch | mm | inch | mm | kN | kN | | |
| 2 1/4 | 57.150 | 3 | 76.200 | 1 1/2 | 38.100 | 81.144 | 142.002 | 435.0 | BR 364824 |
| 2 1/4 | 57.150 | 3 | 76.200 | 1 3/4 | 44.450 | 94.374 | 171.990 | 510.0 | BR 364828 |
| 2 1/2 | 63.500 | 3 1/4 | 82.550 | 1 1/2 | 38.100 | 85.025 | 156.114 | 475.0 | BR 405224 |
| 2 1/2 | 63.500 | 3 1/4 | 82.550 | 1 3/4 | 44.450 | 98.784 | 188.748 | 555.0 | BR 405228 |
| 2 3/4 | 69.850 | 3 1/2 | 88.900 | 1 1/2 | 38.100 | 89.082 | 170.226 | 510.0 | BR 445624 |
| 2 3/4 | 69.850 | 3 1/2 | 88.900 | 1 3/4 | 44.450 | 103.194 | 205.506 | 600.0 | BR 445628 |
| 3 | 76.200 | 3 3/4 | 95.250 | 1 1/2 | 38.100 | 94.374 | 190.512 | 555.0 | BR 486024 |
| 3 | 76.200 | 3 3/4 | 95.250 | 1 3/4 | 44.450 | 109.368 | 230.202 | 650.0 | BR 486028 |
| 3 1/4 | 82.550 | 4 1/4 | 107.950 | 1 3/4 | 44.450 | 127.008 | 232.848 | 990.0 | BR 526828 |
| 3 1/4 | 82.550 | 4 1/4 | 107.950 | 2 | 50.800 | 138.474 | 260.190 | 1140.0 | BR 526832 |
| 3 1/2 | 88.900 | 4 1/2 | 114.300 | 2 | 50.800 | 145.530 | 283.122 | 1220.0 | BR 567232 |
| 3 3/4 | 95.250 | 4 3/4 | 120.650 | 2 | 50.800 | 151.704 | 307.818 | 1290.0 | BR 607632 |
| 4 | 101.600 | 5 | 127.000 | 2 | 50.800 | 158.760 | 330.750 | 1370.0 | BR 648032 |

| Designation | | |
|-------------|---------|----------|
| HJ | MR | NCS |
| HJ-364824 | MR-36-N | NCS 3624 |
| HJ-364828 | MR-36 | - |
| HJ-405224 | MR-40-N | NCS 4024 |
| HJ-405228 | MR-40 | - |
| HJ-445624 | MR-44-N | NCS 4424 |
| HJ-445628 | MR-44 | - |
| HJ-486024 | MR-48-N | NCS 4824 |
| HJ-486028 | MR-48 | - |
| HJ-526828 | MR-52 | NCS 5228 |
| HJ-526832 | - | NCS 5232 |
| HJ-567232 | MR-56 | NCS 5632 |
| HJ-607632 | MR-60 | - |
| HJ-648032 | MR-64 | - |



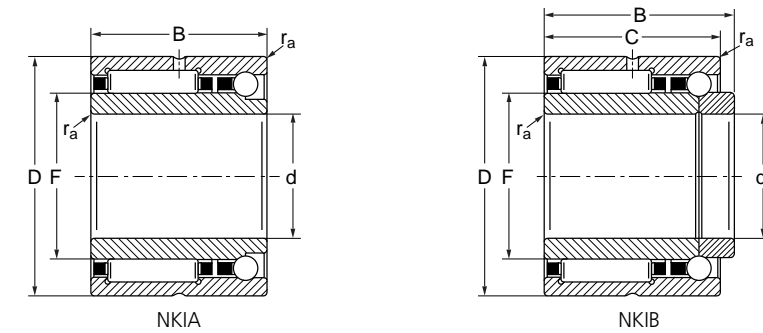
Needle Roller Bearings, with Inner Ring, Full Complement



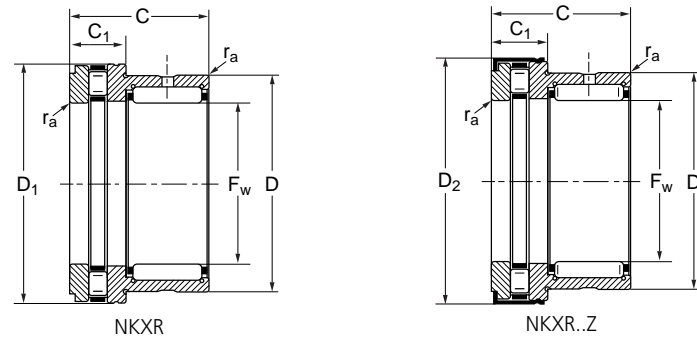
| Basic Dimensions | | | Basic Load Ratings | | Designation | Mass | Designation | Mass |
|------------------|-----|----|--------------------|----------------------|-------------|--------|-------------|--------|
| d | D | B | Dynamic | Static | Open Type | Open | Sealed Type | Sealed |
| mm | mm | mm | C kN | C ₀ kN | NAG 49 | g | NAG 49..U | g |
| 10 | 22 | 13 | 10.672 | 12.701 | NAG 4900 | 25.5 | NAG 4900 UU | 25.5 |
| 12 | 24 | 13 | 11.466 | 14.200 | NAG 4901 | 28.5 | NAG 4901 UU | 28.5 |
| 15 | 28 | 13 | 13.054 | 17.905 | NAG 4902 | 38.0 | NAG 4902 UU | 38.0 |
| 17 | 30 | 13 | 13.671 | 19.404 | NAG 4903 | 41.0 | NAG 4903 UU | 41.0 |
| 20 | 37 | 17 | 17.816 | 23.020 | NAG 4904 | 76.5 | NAG 4904 UU | 76.5 |
| 25 | 42 | 17 | 19.933 | 28.312 | NAG 4905 | 89.5 | NAG 4905 UU | 89.5 |
| 30 | 47 | 17 | 21.521 | 32.546 | NAG 4906 | 103.0 | NAG 4906 UU | 103.0 |
| 35 | 55 | 20 | 32.281 | 52.479 | NAG 4907 | 172.0 | NAG 4907 UU | 172.0 |
| 40 | 62 | 22 | 38.896 | 59.447 | NAG 4908 | 225.0 | NAG 4908 UU | 225.0 |
| 45 | 68 | 22 | 40.925 | 65.621 | NAG 4909 | 265.0 | NAG 4909 UU | 265.0 |
| 50 | 72 | 22 | 43.042 | 71.795 | NAG 4910 | 270.0 | NAG 4910 UU | 270.0 |
| 55 | 80 | 25 | 53.978 | 92.610 | NAG 4911 | 395.0 | NAG 4911 UU | 395.0 |
| 60 | 85 | 25 | 56.272 | 100.548 | NAG 4912 | 425.0 | NAG 4912 UU | 425.0 |
| 65 | 90 | 25 | 58.653 | 108.486 | NAG 4913 | 455.0 | NAG 4913 UU | 455.0 |
| 70 | 100 | 30 | 83.173 | 156.114 | NAG 4914 | 725.0 | NAG 4914 UU | 725.0 |
| 75 | 105 | 30 | 85.642 | 164.052 | NAG 4915 | 775.0 | NAG 4915 UU | 775.0 |
| 80 | 110 | 30 | 89.082 | 176.400 | NAG 4916 | 815.0 | NAG 4916 UU | 815.0 |
| 85 | 120 | 35 | 116.424 | 219.618 | NAG 4917 | 1190.0 | NAG 4917 UU | 1190.0 |
| 90 | 125 | 35 | 119.952 | 231.084 | NAG 4918 | 1250.0 | NAG 4918 UU | 1250.0 |
| 95 | 130 | 35 | 122.598 | 243.432 | NAG 4919 | 1300.0 | NAG 4919 UU | 1300.0 |
| 100 | 140 | 40 | 157.878 | 315.756 | NAG 4920 | 1850.0 | NAG 4920 UU | 1850.0 |
| 110 | 150 | 40 | 164.052 | 339.570 | NAG 4922 | 2010.0 | NAG 4922 UU | 2010.0 |
| 120 | 165 | 45 | 207.270 | 440.118 | NAG 4924 | 2780.0 | NAG 4924 UU | 2780.0 |
| 130 | 180 | 50 | 238.140 | 505.386 | NAG 4926 | 3750.0 | NAG 4926 UU | 3750.0 |
| 140 | 190 | 50 | 247.842 | 542.430 | NAG 4928 | 3990.0 | NAG 4928 UU | 3990.0 |



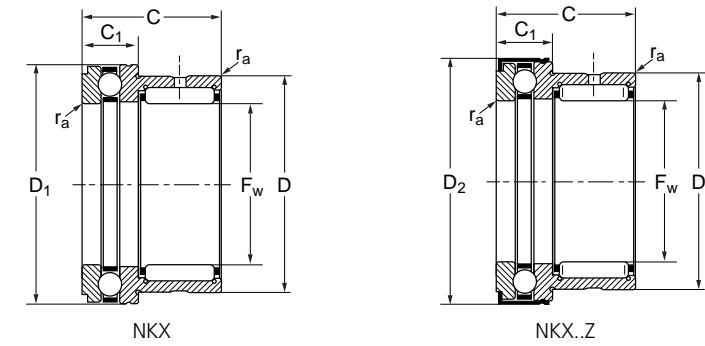
Combined Needle Roller Bearings



| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | Designation | Mass |
|------------------|----|-----|------|----|----------------|--------------------|----------------------|----------------|-------------|------|
| d | F | D | B | C | r _a | Dynamic | Static | | | |
| mm | mm | mm | mm | mm | max | C kN | C ₀ kN | r/min | | g |
| 12 | 16 | 24 | 16 | - | 0.3 | 6.8 | 7.5 | 21600 | NKIA 5901 | 40 |
| 12 | 16 | 24 | 17.5 | 16 | 0.3 | 6.8 | 7.5 | 21600 | NKIB 5901 | 43 |
| 15 | 20 | 28 | 18 | - | 0.3 | 9.5 | 12.2 | 19800 | NKIA 5902 | 50 |
| 15 | 20 | 28 | 20 | 18 | 0.3 | 9.5 | 12.2 | 19800 | NKIB 5902 | 52 |
| 17 | 22 | 30 | 18 | - | 0.3 | 9.9 | 13.1 | 18900 | NKIA 5903 | 56 |
| 17 | 22 | 30 | 20 | 18 | 0.3 | 9.9 | 13.1 | 18900 | NKIB 5903 | 58 |
| 20 | 25 | 37 | 23 | - | 0.3 | 18.9 | 23.0 | 15300 | NKIA 5904 | 103 |
| 20 | 25 | 37 | 25 | 23 | 0.3 | 18.9 | 23.0 | 15300 | NKIB 5904 | 107 |
| 22 | 28 | 39 | 23 | - | 0.3 | 20.5 | 26.6 | 14400 | NKIA 59/22 | 118 |
| 22 | 28 | 39 | 25 | 23 | 0.3 | 20.5 | 26.6 | 14400 | NKIB 59/22 | 122 |
| 25 | 30 | 42 | 23 | - | 0.3 | 21.2 | 28.4 | 13500 | NKIA 5905 | 130 |
| 25 | 30 | 42 | 25 | 23 | 0.3 | 21.2 | 28.4 | 13500 | NKIB 5905 | 134 |
| 30 | 35 | 47 | 23 | - | 0.3 | 22.5 | 32.0 | 11700 | NKIA 5906 | 147 |
| 30 | 35 | 47 | 25 | 23 | 0.3 | 22.5 | 32.0 | 11700 | NKIB 5906 | 151 |
| 35 | 42 | 55 | 27 | - | 0.6 | 28.4 | 45.0 | 9900 | NKIA 5907 | 243 |
| 35 | 42 | 55 | 30 | 27 | 0.6 | 28.4 | 45.0 | 9900 | NKIB 5907 | 247 |
| 40 | 48 | 62 | 30 | - | 0.6 | 38.7 | 60.3 | 8550 | NKIA 5908 | 315 |
| 40 | 48 | 62 | 34 | 30 | 0.6 | 38.7 | 60.3 | 8550 | NKIB 5908 | 320 |
| 45 | 52 | 68 | 30 | - | 0.6 | 40.5 | 65.7 | 7650 | NKIA 5909 | 375 |
| 45 | 52 | 68 | 34 | 30 | 0.6 | 40.5 | 65.7 | 7650 | NKIB 5909 | 380 |
| 50 | 58 | 72 | 30 | - | 0.6 | 42.3 | 72.0 | 7200 | NKIA 5910 | 380 |
| 50 | 58 | 72 | 34 | 30 | 0.6 | 42.3 | 72.0 | 7200 | NKIB 5910 | 385 |
| 55 | 63 | 80 | 34 | - | 1.0 | 52.2 | 90.0 | 6750 | NKIA 5911 | 550 |
| 55 | 63 | 80 | 38 | 34 | 1.0 | 52.2 | 90.0 | 6750 | NKIB 5911 | 555 |
| 60 | 68 | 85 | 34 | - | 1.0 | 54.0 | 97.2 | 6300 | NKIA 5912 | 590 |
| 60 | 68 | 85 | 38 | 34 | 1.0 | 54.0 | 97.2 | 6300 | NKIB 5912 | 595 |
| 65 | 72 | 90 | 34 | - | 1.0 | 54.9 | 100.8 | 5850 | NKIA 5913 | 635 |
| 65 | 72 | 90 | 38 | 34 | 1.0 | 54.9 | 100.8 | 5850 | NKIB 5913 | 640 |
| 70 | 80 | 100 | 40 | - | 1.0 | 75.6 | 140.4 | 5400 | NKIA 5914 | 980 |
| 70 | 80 | 100 | 45 | 40 | 1.0 | 75.6 | 140.4 | 5400 | NKIB 5914 | 985 |



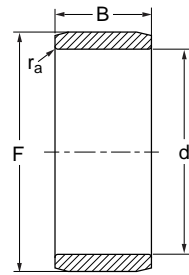
| Basic Dimensions | | | | | | | | Basic Load Ratings | | Limiting Speed | Designation | Mass | Basic Load Ratings | | Limiting Speed |
|------------------|----|----------------|----------------|----|----------------|----------------|-------|--------------------|-------|----------------|-------------|-------|--------------------|-------|----------------|
| F _w | D | D ₁ | D ₂ | C | C ₁ | r _a | C | C ₀ | r/min | C | | | C ₀ | nG | |
| mm | mm | mm | mm | mm | mm | max | kN | kN | | kN | kN | r/min | | | |
| 15 | 24 | 28.1 | 29.2 | 23 | 9 | 0.3 | 9.63 | 11.43 | 11700 | NKXR 15 | 42 | 10.7 | 12.7 | 13000 | |
| 17 | 26 | 30.1 | 31.2 | 25 | 9 | 0.3 | 10.71 | 13.5 | 10800 | NKXR 17 | 50 | 11.9 | 15 | 12000 | |
| 20 | 30 | 35.1 | 36.2 | 30 | 10 | 0.3 | 14.76 | 21.42 | 9000 | NKXR 20 | 80 | 16.4 | 23.8 | 10000 | |
| 25 | 37 | 42.1 | 43.2 | 30 | 11 | 0.6 | 16.92 | 27.45 | 7650 | NKXR 25 | 120 | 18.8 | 30.5 | 8500 | |
| 30 | 42 | 47.1 | 48.2 | 30 | 11 | 0.6 | 20.34 | 32.4 | 6750 | NKXR 30 | 135 | 22.6 | 36 | 7500 | |
| 35 | 47 | 52.1 | 53.2 | 30 | 12 | 0.6 | 21.87 | 37.35 | 5850 | NKXR 35 | 157 | 24.3 | 41.5 | 6500 | |
| 40 | 52 | 60.1 | 61.2 | 32 | 13 | 0.6 | 23.4 | 42.3 | 5400 | NKXR 40 | 204 | 26 | 47 | 6000 | |
| 45 | 58 | 65.2 | 66.5 | 32 | 14 | 0.6 | 24.75 | 47.7 | 4500 | NKXR 45 | 244 | 27.5 | 53 | 5000 | |
| 50 | 62 | 70.2 | 71.5 | 35 | 14 | 0.6 | 34.2 | 66.6 | 4320 | NKXR 50 | 268 | 38 | 74 | 4800 | |



| Basic Dimensions | | | | | | | | Basic Load Ratings | | Limiting Speed | Designation | Mass | Basic Load Ratings | | Limiting Speed |
|------------------|----|----------------|----------------|----|----------------|----------------|-------|--------------------|-------|----------------|-------------|-------|--------------------|-------|----------------|
| F _w | D | D ₁ | D ₂ | C | C ₁ | r _a | C | C ₀ | r/min | C | | | C ₀ | nG | |
| mm | mm | mm | mm | mm | mm | max | kN | kN | | kN | kN | r/min | | | |
| 12 | 21 | 26.1 | 27.2 | 23 | 9 | 0.3 | 8.1 | 9.9 | 9900 | NKX 12 | 38 | 9 | 11 | 11000 | |
| 15 | 24 | 28.1 | 29.2 | 23 | 9 | 0.3 | 9.63 | 11.43 | 8550 | NKX 15 | 44 | 10.7 | 12.7 | 9500 | |
| 17 | 26 | 30.1 | 31.2 | 25 | 9 | 0.3 | 10.71 | 13.5 | 7650 | NKX 17 | 53 | 11.9 | 15 | 8500 | |
| 20 | 30 | 35.1 | 36.2 | 30 | 10 | 0.3 | 14.76 | 21.42 | 6750 | NKX 20 | 83 | 16.4 | 23.8 | 7500 | |
| 25 | 37 | 42.1 | 43.2 | 30 | 11 | 0.6 | 16.92 | 27.45 | 5400 | NKX 25 | 125 | 18.8 | 30.5 | 6000 | |
| 30 | 42 | 47.1 | 48.2 | 30 | 11 | 0.6 | 20.34 | 32.4 | 4500 | NKX 30 | 141 | 22.6 | 36 | 5000 | |
| 35 | 47 | 52.1 | 53.2 | 30 | 12 | 0.6 | 21.87 | 37.35 | 4140 | NKX 35 | 163 | 24.3 | 41.5 | 4600 | |
| 40 | 52 | 60.1 | 61.2 | 32 | 13 | 0.6 | 23.4 | 42.3 | 3600 | NKX 40 | 200 | 26 | 47 | 4000 | |
| 45 | 58 | 65.2 | 66.5 | 32 | 14 | 0.6 | 24.75 | 47.7 | 3240 | NKX 45 | 252 | 27.5 | 53 | 3600 | |
| 50 | 62 | 70.2 | 71.5 | 35 | 14 | 0.6 | 34.2 | 66.6 | 2970 | NKX 50 | 280 | 38 | 74 | 3300 | |
| 60 | 72 | 85.2 | 86.5 | 40 | 17 | 1 | 37.8 | 81 | 2520 | NKX 60 | 360 | 42 | 90 | 2800 | |
| 70 | 85 | 95.2 | 96.5 | 40 | 18 | 1 | 40.05 | 82.8 | 2160 | NKX 70 | 500 | 44.5 | 92 | 2400 | |

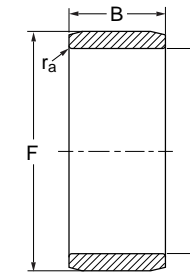
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Inner Ring - IR

| Basic Dimensions | | | | Mass | Designation |
|------------------|----|------|----------------|------|-------------------|
| d | F | B | r _a | | |
| mm | mm | mm | max | g | |
| 5 | 8 | 12 | 0.3 | 2.8 | IR 5 x 8 x 12 |
| 5 | 8 | 16 | 0.3 | 3.7 | IR 5 x 8 x 16 |
| 6 | 9 | 12 | 0.3 | 3.0 | IR 6 x 9 x 12 |
| 6 | 9 | 16 | 0.3 | 4.3 | IR 6 x 9 x 16 |
| 6 | 10 | 10 | 0.3 | 3.7 | IR 6 x 10 x 10 |
| 6 | 10 | 12 | 0.3 | 4.6 | IR 6 x 10 x 12 |
| 7 | 10 | 10.5 | 0.3 | 3.1 | IR 7 x 10 x 10.5 |
| 7 | 10 | 12 | 0.3 | 3.6 | IR 7 x 10 x 12 |
| 7 | 10 | 16 | 0.3 | 4.9 | IR 7 x 10 x 16 |
| 8 | 12 | 10 | 0.3 | 4.8 | IR 8 x 12 x 10 |
| 8 | 12 | 10.5 | 0.3 | 5.0 | IR 8 x 12 x 10.5 |
| 8 | 12 | 12 | 0.3 | 5.6 | IR 8 x 12 x 12 |
| 8 | 12 | 12.5 | 0.3 | 5.9 | IR 8 x 12 x 12.5 |
| 9 | 12 | 12 | 0.3 | 4.4 | IR 9 x 12 x 12 |
| 9 | 12 | 16 | 0.3 | 6.0 | IR 9 x 12 x 16 |
| 10 | 13 | 12.5 | 0.3 | 5.2 | IR 10 x 13 x 12.5 |
| 10 | 14 | 12 | 0.3 | 7.3 | IR 10 x 14 x 12 |
| 10 | 14 | 13 | 0.3 | 7.4 | IR 10 x 14 x 13 |
| 10 | 14 | 14 | 0.3 | 8.1 | IR 10 x 14 x 14 |
| 10 | 14 | 16 | 0.3 | 9.2 | IR 10 x 14 x 16 |
| 10 | 14 | 20 | 0.3 | 11.5 | IR 10 x 14 x 20 |
| 12 | 15 | 12 | 0.3 | 5.7 | IR 12 x 15 x 12 |
| 12 | 15 | 12.5 | 0.3 | 6.1 | IR 12 x 15 x 12.5 |
| 12 | 15 | 16 | 0.3 | 7.6 | IR 12 x 15 x 16 |
| 12 | 15 | 16.5 | 0.3 | 8.1 | IR 12 x 15 x 16.5 |
| 12 | 15 | 22.5 | 0.3 | 10.9 | IR 12 x 15 x 22.5 |
| 12 | 16 | 12 | 0.3 | 7.9 | IR 12 x 16 x 12 |
| 12 | 16 | 13 | 0.3 | 8.5 | IR 12 x 16 x 13 |
| 12 | 16 | 14 | 0.3 | 9.4 | IR 12 x 16 x 14 |
| 12 | 16 | 16 | 0.3 | 10.7 | IR 12 x 16 x 16 |
| 12 | 16 | 20 | 0.3 | 13.5 | IR 12 x 16 x 20 |
| 12 | 16 | 22 | 0.3 | 14.9 | IR 12 x 16 x 22 |

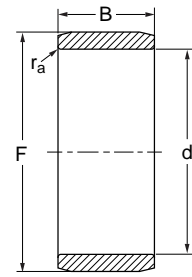


Inner Ring - IR

| Basic Dimensions | | | | Mass | Designation |
|------------------|----|------|----------------|------|-------------------|
| d | F | B | r _a | | |
| mm | mm | mm | max | g | |
| 14 | 17 | 17 | 0.3 | 9.5 | IR 14 x 17 x 17 |
| 15 | 18 | 16 | 0.3 | 9.4 | IR 15 x 18 x 16 |
| 15 | 18 | 16.5 | 0.3 | 9.8 | IR 15 x 18 x 16.5 |
| 15 | 19 | 16 | 0.3 | 12.9 | IR 15 x 19 x 16 |
| 15 | 19 | 20 | 0.3 | 16.3 | IR 15 x 19 x 20 |
| 15 | 20 | 12 | 0.3 | 12.2 | IR 15 x 20 x 12 |
| 15 | 20 | 13 | 0.3 | 13.5 | IR 15 x 20 x 13 |
| 15 | 20 | 14 | 0.3 | 14.6 | IR 15 x 20 x 14 |
| 15 | 20 | 23 | 0.3 | 24.4 | IR 15 x 20 x 23 |
| 17 | 20 | 16 | 0.3 | 10.6 | IR 17 x 20 x 16 |
| 17 | 20 | 16.5 | 0.3 | 11.1 | IR 17 x 20 x 16.5 |
| 17 | 20 | 20 | 0.3 | 13.5 | IR 17 x 20 x 20 |
| 17 | 20 | 20.5 | 0.3 | 13.8 | IR 17 x 20 x 20.5 |
| 17 | 20 | 30.5 | 0.3 | 20.6 | IR 17 x 20 x 30.5 |
| 17 | 21 | 16 | 0.3 | 15.0 | IR 17 x 21 x 16 |
| 17 | 21 | 20 | 0.3 | 18.0 | IR 17 x 21 x 20 |
| 17 | 22 | 13 | 0.3 | 14.9 | IR 17 x 22 x 13 |
| 17 | 22 | 14 | 0.3 | 16.4 | IR 17 x 22 x 14 |
| 17 | 22 | 16 | 0.3 | 18.4 | IR 17 x 22 x 16 |
| 17 | 22 | 23 | 0.3 | 27.1 | IR 17 x 22 x 23 |
| 17 | 24 | 20 | 0.6 | 33.8 | IR 17 x 24 x 20 |
| 20 | 24 | 16 | 0.3 | 15.0 | IR 20 x 24 x 16 |
| 20 | 24 | 20 | 0.3 | 21.3 | IR 20 x 24 x 20 |
| 20 | 25 | 16 | 0.3 | 24.0 | IR 20 x 25 x 16 |
| 20 | 25 | 17 | 0.3 | 25.0 | IR 20 x 25 x 17 |
| 20 | 25 | 18 | 0.3 | 24.2 | IR 20 x 25 x 18 |
| 20 | 25 | 20 | 0.3 | 27.5 | IR 20 x 25 x 20 |
| 20 | 25 | 20.5 | 0.3 | 27.4 | IR 20 x 25 x 20.5 |
| 20 | 25 | 26.5 | 0.3 | 38.0 | IR 20 x 25 x 26.5 |
| 20 | 25 | 30 | 0.3 | 40.4 | IR 20 x 25 x 30 |
| 20 | 25 | 38.5 | 0.3 | 52.5 | IR 20 x 25 x 38.5 |
| 20 | 28 | 20 | 0.6 | 45.2 | IR 20 x 28 x 20 |

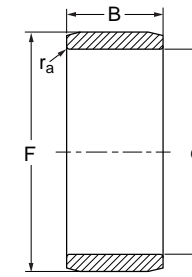
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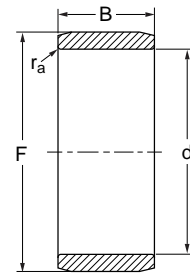
Inner Ring - IR

| Basic Dimensions | | | | Mass | Designation |
|------------------|----|------|----------------|------|-------------------|
| d | F | B | r _a | | |
| mm | mm | mm | max | g | |
| 22 | 26 | 16 | 0.3 | 18.2 | IR 22 x 26 x 16 |
| 22 | 26 | 20 | 0.3 | 23.0 | IR 22 x 26 x 20 |
| 22 | 28 | 17 | 0.3 | 29.5 | IR 22 x 28 x 17 |
| 22 | 28 | 20 | 0.3 | 35.0 | IR 22 x 28 x 20 |
| 22 | 28 | 20.5 | 0.3 | 36.0 | IR 22 x 28 x 20.5 |
| 22 | 28 | 30 | 0.3 | 54.4 | IR 22 x 28 x 30 |
| 25 | 29 | 20 | 0.3 | 25.9 | IR 25 x 29 x 20 |
| 25 | 29 | 30 | 0.3 | 39.3 | IR 25 x 29 x 30 |
| 25 | 30 | 16 | 0.3 | 25.7 | IR 25 x 30 x 16 |
| 25 | 30 | 17 | 0.3 | 27.4 | IR 25 x 30 x 17 |
| 25 | 30 | 18 | 0.3 | 29.8 | IR 25 x 30 x 18 |
| 25 | 30 | 20 | 0.3 | 32.8 | IR 25 x 30 x 20 |
| 25 | 30 | 20.5 | 0.3 | 33.4 | IR 25 x 30 x 20.5 |
| 25 | 30 | 26.5 | 0.3 | 46.0 | IR 25 x 30 x 26.5 |
| 25 | 30 | 30 | 0.3 | 53.0 | IR 25 x 30 x 30 |
| 25 | 30 | 32 | 0.3 | 56.0 | IR 25 x 30 x 32 |
| 25 | 30 | 38.5 | 0.3 | 64.5 | IR 25 x 30 x 38.5 |
| 25 | 32 | 22 | 0.6 | 52.5 | IR 25 x 32 x 22 |
| 28 | 32 | 17 | 0.3 | 24.5 | IR 28 x 32 x 17 |
| 28 | 32 | 20 | 0.3 | 28.5 | IR 28 x 32 x 20 |
| 28 | 32 | 30 | 0.3 | 43.5 | IR 28 x 32 x 30 |
| 30 | 35 | 13 | 0.3 | 25.0 | IR 30 x 35 x 13 |
| 30 | 35 | 16 | 0.3 | 34.0 | IR 30 x 35 x 16 |
| 30 | 35 | 17 | 0.3 | 36.0 | IR 30 x 35 x 17 |
| 30 | 35 | 18 | 0.3 | 35.1 | IR 30 x 35 x 18 |
| 30 | 35 | 20 | 0.3 | 39.0 | IR 30 x 35 x 20 |
| 30 | 35 | 20.5 | 0.3 | 39.7 | IR 30 x 35 x 20.5 |
| 30 | 35 | 26 | 0.3 | 50.4 | IR 30 x 35 x 26 |
| 30 | 35 | 30 | 0.3 | 58.5 | IR 30 x 35 x 30 |
| 30 | 37 | 18 | 0.6 | 50.0 | IR 30 x 37 x 18 |
| 30 | 37 | 22 | 0.6 | 61.6 | IR 30 x 37 x 22 |
| 30 | 38 | 20 | 0.6 | 77.0 | IR 30 x 38 x 20 |



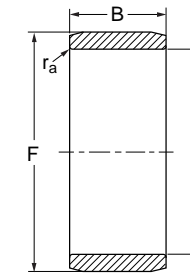
Inner Ring - IR

| Basic Dimensions | | | | Mass | Designation |
|------------------|----|------|----------------|-------|-------------------|
| d | F | B | r _a | | |
| mm | mm | mm | max | g | |
| 32 | 37 | 20 | 0.3 | 42.0 | IR 32 x 37 x 20 |
| 32 | 37 | 30 | 0.3 | 62.0 | IR 32 x 37 x 30 |
| 32 | 40 | 20 | 0.6 | 68.0 | IR 32 x 40 x 20 |
| 32 | 40 | 36 | 0.6 | 124.0 | IR 32 x 40 x 36 |
| 33 | 37 | 13 | 0.3 | 21.9 | IR 33 x 37 x 13 |
| 35 | 40 | 17 | 0.3 | 37.8 | IR 35 x 40 x 17 |
| 35 | 40 | 20 | 0.3 | 44.2 | IR 35 x 40 x 20 |
| 35 | 40 | 20.5 | 0.3 | 46.1 | IR 35 x 40 x 20.5 |
| 35 | 40 | 30 | 0.3 | 67.1 | IR 35 x 40 x 30 |
| 35 | 42 | 20 | 0.6 | 63.9 | IR 35 x 42 x 20 |
| 35 | 42 | 21 | 0.6 | 68.0 | IR 35 x 42 x 21 |
| 35 | 42 | 23 | 0.6 | 74.7 | IR 35 x 42 x 23 |
| 35 | 42 | 36 | 0.6 | 117.0 | IR 35 x 42 x 36 |
| 35 | 43 | 22 | 0.6 | 82.0 | IR 35 x 43 x 22 |
| 38 | 43 | 20 | 0.3 | 48.1 | IR 38 x 43 x 20 |
| 38 | 43 | 30 | 0.3 | 73.6 | IR 38 x 43 x 30 |
| 40 | 45 | 17 | 0.3 | 42.5 | IR 40 x 45 x 17 |
| 40 | 45 | 20 | 0.3 | 50.8 | IR 40 x 45 x 20 |
| 40 | 45 | 20.5 | 0.3 | 51.8 | IR 40 x 45 x 20.5 |
| 40 | 45 | 30 | 0.3 | 84.0 | IR 40 x 45 x 30 |
| 40 | 48 | 22 | 0.6 | 91.6 | IR 40 x 48 x 22 |
| 40 | 48 | 23 | 0.6 | 97.5 | IR 40 x 48 x 23 |
| 40 | 48 | 40 | 0.6 | 170.0 | IR 40 x 48 x 40 |
| 40 | 50 | 20 | 1.0 | 106.0 | IR 40 x 50 x 20 |
| 40 | 50 | 22 | 1.0 | 118.0 | IR 40 x 50 x 22 |
| 42 | 47 | 20 | 0.3 | 52.8 | IR 42 x 47 x 20 |
| 42 | 47 | 30 | 0.3 | 81.0 | IR 42 x 47 x 30 |
| 45 | 50 | 25 | 0.3 | 70.8 | IR 45 x 50 x 25 |
| 45 | 50 | 25.5 | 0.3 | 75.1 | IR 45 x 50 x 25.5 |
| 45 | 50 | 35 | 0.6 | 101.0 | IR 45 x 50 x 35 |
| 45 | 52 | 22 | 0.6 | 89.0 | IR 45 x 52 x 22 |
| 45 | 52 | 23 | 0.6 | 93.9 | IR 45 x 52 x 23 |



Inner Ring - IR

| Basic Dimensions | | | | Mass | Designation |
|------------------|----|----|----------------|-------|-----------------|
| d | F | B | r _a | | |
| mm | mm | mm | max | g | |
| 45 | 52 | 40 | 0.6 | 164.0 | IR 45 x 52 x 40 |
| 45 | 55 | 20 | 1.0 | 117.0 | IR 45 x 55 x 20 |
| 45 | 55 | 22 | 1.0 | 129.0 | IR 45 x 55 x 22 |
| 50 | 55 | 20 | 0.6 | 62.5 | IR 50 x 55 x 20 |
| 50 | 55 | 25 | 0.6 | 78.0 | IR 50 x 55 x 25 |
| 50 | 55 | 35 | 0.6 | 112.0 | IR 50 x 55 x 35 |
| 50 | 58 | 22 | 0.6 | 115.0 | IR 50 x 58 x 22 |
| 50 | 58 | 23 | 0.6 | 119.0 | IR 50 x 58 x 23 |
| 50 | 58 | 40 | 0.6 | 208.0 | IR 50 x 58 x 40 |
| 50 | 60 | 20 | 1.0 | 128.0 | IR 50 x 60 x 20 |
| 50 | 60 | 25 | 1.0 | 162.0 | IR 50 x 60 x 25 |
| 50 | 60 | 28 | 1.1 | 181.0 | IR 50 x 60 x 28 |
| 55 | 60 | 25 | 0.6 | 85.5 | IR 55 x 60 x 25 |
| 55 | 60 | 35 | 0.6 | 121.0 | IR 55 x 60 x 35 |
| 55 | 63 | 25 | 1.0 | 141.0 | IR 55 x 63 x 25 |
| 55 | 63 | 45 | 1.0 | 256.0 | IR 55 x 63 x 45 |
| 55 | 65 | 28 | 1.1 | 198.0 | IR 55 x 65 x 28 |
| 60 | 68 | 25 | 1.0 | 152.0 | IR 60 x 68 x 25 |
| 60 | 68 | 35 | 0.6 | 213.0 | IR 60 x 68 x 35 |
| 60 | 68 | 45 | 1.0 | 276.0 | IR 60 x 68 x 45 |
| 60 | 70 | 25 | 1.0 | 195.0 | IR 60 x 70 x 25 |
| 60 | 70 | 28 | 1.1 | 215.0 | IR 60 x 70 x 28 |
| 65 | 72 | 25 | 1.0 | 141.0 | IR 65 x 72 x 25 |
| 65 | 72 | 45 | 1.0 | 259.0 | IR 65 x 72 x 45 |
| 65 | 73 | 25 | 1.0 | 164.0 | IR 65 x 73 x 25 |
| 65 | 73 | 35 | 1.0 | 231.0 | IR 65 x 73 x 35 |
| 65 | 75 | 28 | 1.1 | 229.0 | IR 65 x 75 x 28 |
| 70 | 80 | 25 | 1.0 | 221.0 | IR 70 x 80 x 25 |
| 70 | 80 | 30 | 1.0 | 267.0 | IR 70 x 80 x 30 |
| 70 | 80 | 35 | 1.0 | 312.0 | IR 70 x 80 x 35 |
| 70 | 80 | 54 | 1.0 | 488.0 | IR 70 x 80 x 54 |
| 75 | 85 | 25 | 1.0 | 238.0 | IR 75 x 85 x 25 |

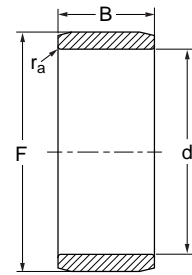


Inner Ring - IR

| Basic Dimensions | | | | Mass | Designation |
|------------------|-----|----|----------------|--------|-------------------|
| d | F | B | r _a | | |
| mm | mm | mm | max | g | |
| 75 | 85 | 30 | 1.0 | 287.0 | IR 75 x 85 x 30 |
| 75 | 85 | 35 | 1.0 | 336.0 | IR 75 x 85 x 35 |
| 75 | 85 | 54 | 1.0 | 520.0 | IR 75 x 85 x 54 |
| 80 | 90 | 25 | 1.0 | 253.0 | IR 80 x 90 x 25 |
| 80 | 90 | 30 | 1.0 | 304.0 | IR 80 x 90 x 30 |
| 80 | 90 | 35 | 1.0 | 355.0 | IR 80 x 90 x 35 |
| 80 | 90 | 54 | 1.0 | 556.0 | IR 80 x 90 x 54 |
| 85 | 95 | 26 | 1.0 | 277.0 | IR 85 x 95 x 26 |
| 85 | 95 | 36 | 1.0 | 388.0 | IR 85 x 95 x 36 |
| 85 | 100 | 35 | 1.1 | 582.0 | IR 85 x 100 x 35 |
| 85 | 100 | 63 | 1.1 | 1054.0 | IR 85 x 100 x 63 |
| 90 | 100 | 26 | 1.0 | 294.0 | IR 90 x 100 x 26 |
| 90 | 100 | 30 | 1.0 | 340.0 | IR 90 x 100 x 30 |
| 90 | 100 | 36 | 1.0 | 406.0 | IR 90 x 100 x 36 |
| 90 | 105 | 35 | 1.1 | 610.0 | IR 90 x 105 x 35 |
| 90 | 105 | 63 | 1.1 | 1110.0 | IR 90 x 105 x 63 |
| 95 | 105 | 26 | 1.0 | 313.0 | IR 95 x 105 x 26 |
| 95 | 105 | 36 | 1.0 | 431.0 | IR 95 x 105 x 36 |
| 95 | 110 | 35 | 1.1 | 657.0 | IR 95 x 110 x 35 |
| 95 | 110 | 63 | 1.1 | 1170.0 | IR 95 x 110 x 63 |
| 100 | 110 | 30 | 1.1 | 350.0 | IR 100 x 110 x 30 |
| 100 | 110 | 40 | 1.1 | 505.0 | IR 100 x 110 x 40 |
| 100 | 115 | 40 | 1.1 | 797.0 | IR 100 x 115 x 40 |
| 110 | 120 | 30 | 1.0 | 409.0 | IR 110 x 120 x 30 |
| 110 | 125 | 40 | 1.1 | 840.0 | IR 110 x 125 x 40 |
| 120 | 130 | 30 | 1.0 | 442.0 | IR 120 x 130 x 30 |
| 120 | 135 | 45 | 1.1 | 1044.0 | IR 120 x 135 x 45 |
| 130 | 145 | 35 | 1.1 | 855.0 | IR 130 x 145 x 35 |
| 130 | 150 | 50 | 1.5 | 1690.0 | IR 130 x 150 x 50 |
| 140 | 155 | 35 | 1.1 | 917.0 | IR 140 x 155 x 35 |
| 140 | 160 | 50 | 1.5 | 1800.0 | IR 140 x 160 x 50 |
| 150 | 165 | 40 | 1.1 | 1122 | IR 150 x 165 x 40 |

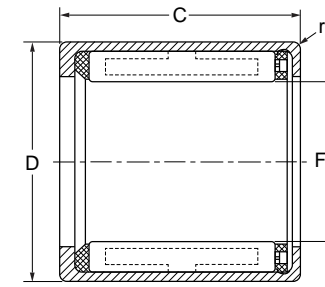
10.10

10.10



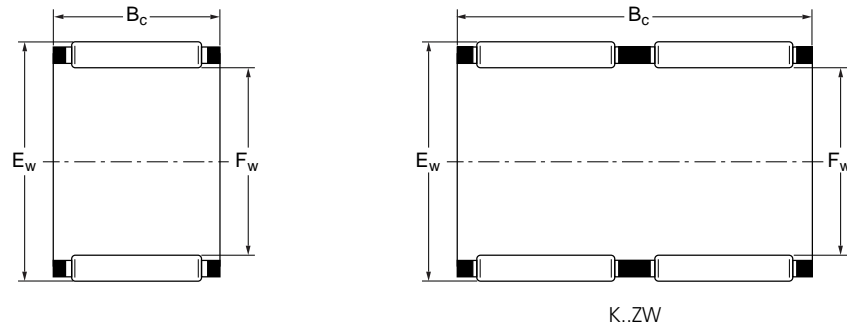
Inner Ring - IR

| Basic Dimensions | | | | Mass | Designation |
|------------------|---------|---------|-----------------------|-------|--------------------|
| d mm | F mm | B mm | r _a max | g | |
| 160 | 175 | 40 | 1.1 | 1200 | IR 160 x 175 x 40 |
| 170 | 185 | 45 | 1.1 | 1441 | IR 170 x 185 x 45 |
| 180 | 195 | 45 | 1.1 | 1510 | IR 180 x 195 x 45 |
| 190 | 210 | 50 | 1.5 | 2410 | IR 190 x 210 x 50 |
| 200 | 220 | 50 | 1.5 | 2518 | IR 200 x 220 x 50 |
| 220 | 240 | 50 | 1.5 | 2753 | IR 220 x 240 x 50 |
| 240 | 265 | 60 | 2.0 | 4600 | IR 240 x 265 x 60 |
| 260 | 285 | 60 | 2.0 | 4980 | IR 260 x 285 x 60 |
| 280 | 305 | 69 | 2.0 | 6100 | IR 280 x 305 x 69 |
| 300 | 330 | 80 | 2.1 | 9200 | IR 300 x 330 x 80 |
| 320 | 350 | 80 | 2.1 | 9800 | IR 320 x 350 x 80 |
| 340 | 370 | 80 | 2.1 | 10200 | IR 340 x 370 x 80 |
| 360 | 390 | 80 | 2.1 | 10900 | IR 360 x 390 x 80 |
| 380 | 415 | 100 | 2.1 | 16700 | IR 380 x 415 x 100 |

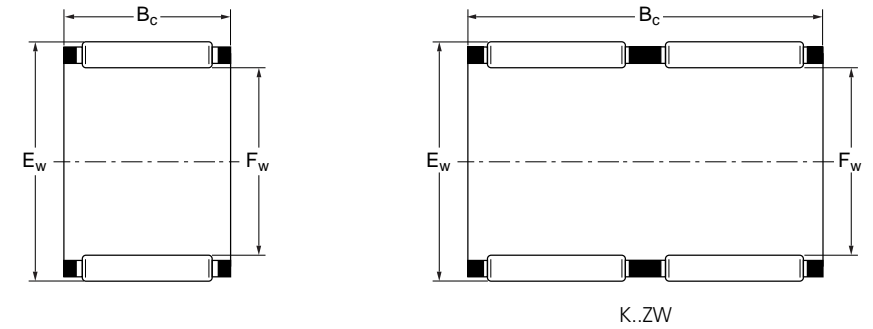


HF, HF.KF

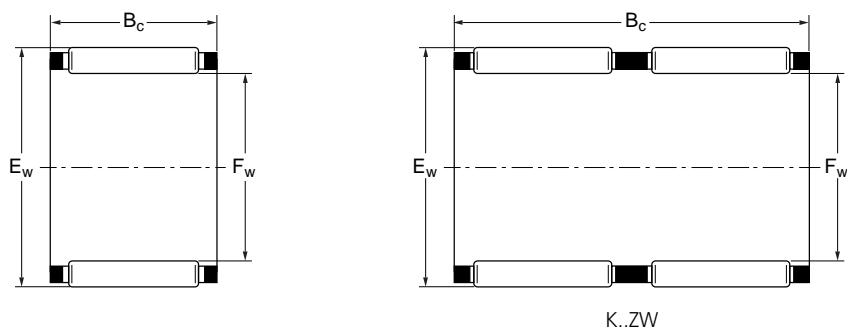
| Basic Dimensions | | | Chamfer Dimension | Limiting Speed | Mass | Designation | |
|----------------------|---------|---------|-----------------------|----------------|------|-----------------|---------------|
| F _w mm | D mm | C mm | r _a max | r/min | g | Plastic Springs | Steel Springs |
| 4 | 8 | 6 | 0.3 | 32300 | 1.0 | HF 0406 KF | - |
| 4 | 8 | 6 | 0.3 | 32300 | 1.0 | HF 0406 KFR | - |
| 6 | 10 | 12 | 0.3 | 21850 | 3.0 | HF 0612 KF | HF 0612 |
| 6 | 10 | 12 | 0.3 | 21850 | 3.0 | HF 0612 KFR | HF 0612 R |
| 8 | 12 | 12 | 0.3 | 16150 | 3.5 | HF 0812 KF | HF 0812 |
| 8 | 12 | 12 | 0.3 | 16150 | 3.5 | HF 0812 KFR | HF 0812 R |
| 10 | 14 | 12 | 0.3 | 13300 | 4.0 | HF 1012 KF | HF 1012 |
| 12 | 18 | 16 | 0.3 | 10450 | 11.0 | - | HF 1216 |
| 14 | 20 | 16 | 0.3 | 9025 | 13.0 | - | HF 1416 |
| 16 | 22 | 16 | 0.3 | 8075 | 14.0 | - | HF 1616 |
| 18 | 24 | 16 | 0.3 | 7125 | 16.0 | - | HF 1816 |
| 20 | 26 | 16 | 0.3 | 6650 | 17.0 | - | HF 2016 |
| 25 | 32 | 20 | 0.3 | 5225 | 30.0 | - | HF 2520 |
| 30 | 37 | 20 | 0.3 | 4275 | 36.0 | - | HF 3020 |
| 35 | 42 | 20 | 0.3 | 3705 | 40.0 | - | HF 3520 |



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Mass | Designation |
|----------------------|----------------------|----------------------|--------------------|--------------|----------------|------|-----------------|
| F _w mm | E _w mm | B _c mm | Dynamic kN | Static kN | r/min | g | |
| 3 | 5 | 7 | 1.39 | 1.16 | 45000 | 0.3 | KT 3 x 5 x 7 |
| 3 | 5 | 9 | 1.54 | 1.33 | 45000 | 0.4 | KT 3 x 5 x 9 |
| 3 | 6 | 7 | 1.29 | 0.87 | 42300 | 0.4 | KT 3 x 6 x 7 |
| 4 | 7 | 7 | 1.57 | 1.14 | 38700 | 0.5 | KT 4 x 7 x 7 |
| 4 | 7 | 10 | 2.10 | 1.66 | 38700 | 0.7 | KT 4 x 7 x 10 |
| 5 | 8 | 8 | 2.12 | 1.73 | 35100 | 0.7 | KT 5 x 8 x 8 |
| 5 | 8 | 10 | 2.70 | 2.39 | 35100 | 0.9 | KT 5 x 8 x 10 |
| 6 | 9 | 8 | 2.34 | 2.05 | 33300 | 0.8 | KT 6 x 9 x 8 |
| 6 | 9 | 10 | 3.02 | 2.84 | 33300 | 1.1 | KT 6 x 9 x 10 |
| 6 | 10 | 13 | 3.42 | 2.79 | 31500 | 1.9 | KT 6 x 10 x 13 |
| 7 | 9 | 7 | 1.56 | 1.59 | 31500 | 0.8 | KT 7 x 9 x 7 |
| 7 | 10 | 8 | 2.57 | 2.39 | 30600 | 0.9 | KT 7 x 10 x 8 |
| 7 | 10 | 10 | 3.29 | 3.24 | 30600 | 1.0 | KT 7 x 10 x 10 |
| 8 | 11 | 8 | 2.79 | 2.70 | 28800 | 1.0 | KT 8 x 11 x 8 |
| 8 | 11 | 10 | 3.56 | 3.69 | 28800 | 1.2 | KT 8 x 11 x 10 |
| 8 | 11 | 13 | 4.59 | 5.22 | 28800 | 1.7 | KT 8 x 11 x 13 |
| 8 | 12 | 10 | 4.50 | 4.23 | 28800 | 2.0 | KT 8 x 12 x 10 |
| 9 | 12 | 10 | 4.05 | 4.50 | 27900 | 1.5 | KT 9 x 12 x 10 |
| 9 | 12 | 13 | 5.31 | 6.39 | 27900 | 2.1 | KT 9 x 12 x 13 |
| 10 | 13 | 10 | 4.28 | 4.95 | 26100 | 1.6 | KT 10 x 13 x 10 |
| 10 | 13 | 13 | 5.58 | 7.02 | 26100 | 2.3 | KT 10 x 13 x 13 |
| 10 | 13 | 16 | 6.39 | 8.37 | 26100 | 2.9 | KT 10 x 13 x 16 |
| 10 | 14 | 10 | 5.22 | 5.40 | 26100 | 2.5 | KT 10 x 14 x 10 |
| 10 | 14 | 13 | 6.75 | 7.56 | 26100 | 4.6 | KT 10 x 14 x 13 |
| 10 | 16 | 12 | 7.29 | 6.48 | 25200 | 5.5 | KT 10 x 16 x 12 |
| 12 | 15 | 10 | 4.41 | 5.49 | 24300 | 2.9 | KT 12 x 15 x 10 |
| 12 | 15 | 13 | 5.76 | 7.65 | 24300 | 2.3 | KT 12 x 15 x 13 |
| 12 | 16 | 13 | 7.20 | 8.46 | 24300 | 5.5 | KT 12 x 16 x 13 |
| 12 | 17 | 13 | 8.64 | 9.36 | 23400 | 4.9 | KT 12 x 17 x 13 |
| 12 | 18 | 12 | 9.00 | 8.91 | 23400 | 6.0 | KT 12 x 18 x 12 |
| 14 | 18 | 10 | 6.39 | 7.65 | 22500 | 4.0 | KT 14 x 18 x 10 |
| 14 | 18 | 13 | 7.38 | 9.09 | 22500 | 6.5 | KT 14 x 18 x 13 |

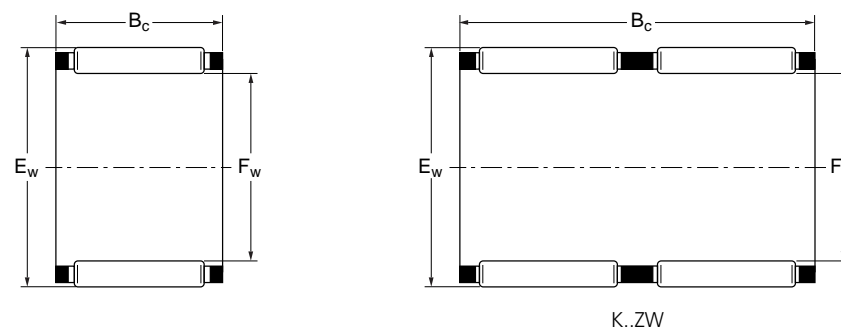


| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Mass | Designation |
|----------------------|----------------------|----------------------|--------------------|--------------|----------------|------|-----------------|
| F _w mm | E _w mm | B _c mm | Dynamic kN | Static kN | r/min | g | |
| 14 | 18 | 15 | 8.55 | 11.07 | 22500 | 5.0 | KT 14 x 18 x 15 |
| 14 | 18 | 17 | 9.72 | 12.96 | 22500 | 8.0 | KT 14 x 18 x 17 |
| 14 | 20 | 12 | 9.27 | 9.54 | 21600 | 8.5 | KT 14 x 20 x 12 |
| 15 | 18 | 17 | 7.20 | 10.89 | 22500 | 4.6 | KT 15 x 18 x 17 |
| 15 | 19 | 10 | 6.75 | 8.28 | 21600 | 5.0 | KT 15 x 19 x 10 |
| 15 | 19 | 13 | 7.65 | 9.81 | 21600 | 7.0 | KT 15 x 19 x 13 |
| 15 | 19 | 17 | 10.17 | 14.04 | 21600 | 9.5 | KT 15 x 19 x 17 |
| 15 | 20 | 13 | 8.91 | 10.35 | 21600 | 7.0 | KT 15 x 20 x 13 |
| 15 | 21 | 15 | 12.87 | 14.76 | 21600 | 11.0 | KT 15 x 21 x 15 |
| 15 | 21 | 21 | 17.46 | 21.87 | 21600 | 17.0 | KT 15 x 21 x 21 |
| 16 | 20 | 10 | 7.02 | 8.91 | 21600 | 5.5 | KT 16 x 20 x 10 |
| 16 | 20 | 13 | 8.01 | 10.62 | 21600 | 7.5 | KT 16 x 20 x 13 |
| 16 | 20 | 17 | 10.53 | 15.12 | 21600 | 10.0 | KT 16 x 20 x 17 |
| 16 | 22 | 12 | 10.35 | 11.25 | 20700 | 10.0 | KT 16 x 22 x 12 |
| 16 | 22 | 16 | 13.32 | 15.75 | 20700 | 12.0 | KT 16 x 22 x 16 |
| 16 | 22 | 20 | 16.47 | 20.52 | 20700 | 17.0 | KT 16 x 22 x 20 |
| 16 | 24 | 20 | 19.26 | 21.15 | 19800 | 22.0 | KT 16 x 24 x 20 |
| 17 | 21 | 10 | 7.29 | 9.54 | 20700 | 5.5 | KT 17 x 21 x 10 |
| 17 | 21 | 13 | 9.36 | 13.14 | 20700 | 6.5 | KT 17 x 21 x 13 |
| 17 | 21 | 17 | 10.98 | 16.11 | 20700 | 9.5 | KT 17 x 21 x 17 |
| 18 | 22 | 10 | 7.56 | 10.17 | 19800 | 6.0 | KT 18 x 22 x 10 |
| 18 | 22 | 13 | 8.28 | 11.43 | 19800 | 8.0 | KT 18 x 22 x 13 |
| 18 | 22 | 17 | 10.89 | 16.20 | 19800 | 11.0 | KT 18 x 22 x 17 |
| 18 | 24 | 12 | 11.52 | 13.41 | 19800 | 12.0 | KT 18 x 24 x 12 |
| 18 | 24 | 13 | 11.79 | 13.77 | 19800 | 13.0 | KT 18 x 24 x 13 |
| 18 | 24 | 20 | 18.18 | 24.30 | 19800 | 18.0 | KT 18 x 24 x 20 |
| 18 | 25 | 22 | 20.79 | 26.10 | 19800 | 23.0 | KT 18 x 25 x 22 |
| 19 | 23 | 13 | 8.55 | 12.15 | 19800 | 8.0 | KT 19 x 23 x 13 |
| 19 | 23 | 17 | 11.25 | 17.28 | 19800 | 11.0 | KT 19 x 23 x 17 |
| 20 | 24 | 10 | 8.01 | 11.34 | 18900 | 6.5 | KT 20 x 24 x 10 |
| 20 | 24 | 13 | 8.82 | 12.87 | 18900 | 9.0 | KT 20 x 24 x 13 |
| 20 | 24 | 17 | 11.61 | 18.36 | 18900 | 12.0 | KT 20 x 24 x 17 |



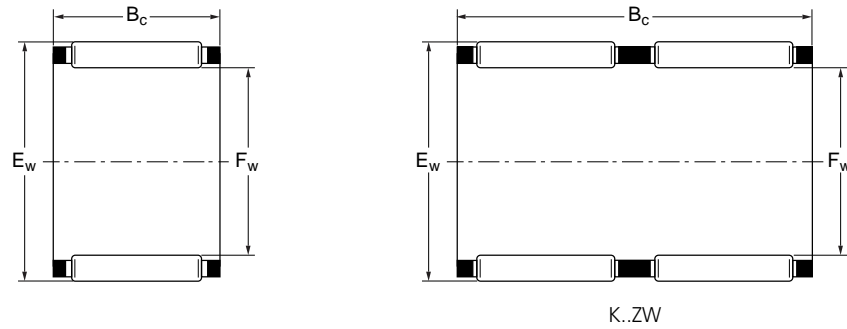
K..ZW

| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Mass | Designation |
|----------------------|----------------------|----------------------|--------------------|--------------|----------------|------|--------------------|
| F _w mm | E _w mm | B _c mm | Dynamic kN | Static kN | r/min | g | |
| 20 | 26 | 12 | 11.16 | 14.58 | 18900 | 11.0 | KT 20 x 26 x 12 |
| 20 | 26 | 13 | 12.96 | 16.11 | 18900 | 12.0 | KT 20 x 26 x 13 |
| 20 | 26 | 17 | 17.28 | 23.40 | 18900 | 16.0 | KT 20 x 26 x 17 |
| 20 | 26 | 20 | 18.99 | 26.10 | 18900 | 19.0 | KT 20 x 26 x 20 |
| 20 | 28 | 16 | 17.82 | 20.16 | 18000 | 20.0 | KT 20 x 28 x 16 |
| 20 | 28 | 20 | 21.51 | 25.65 | 18000 | 27.0 | KT 20 x 28 x 20 |
| 20 | 28 | 25 | 27.45 | 35.10 | 18000 | 32.0 | KT 20 x 28 x 25 |
| 20 | 30 | 30 | 31.95 | 37.35 | 18000 | 49.0 | KT 20 x 30 x 30 |
| 21 | 25 | 13 | 9.09 | 13.59 | 18900 | 9.0 | KT 21 x 25 x 13 |
| 22 | 26 | 10 | 8.19 | 12.06 | 18000 | 7.5 | KT 22 x 26 x 10 |
| 22 | 26 | 13 | 9.36 | 14.31 | 18000 | 9.5 | KT 22 x 26 x 13 |
| 22 | 26 | 17 | 12.33 | 20.43 | 18000 | 12.0 | KT 22 x 26 x 17 |
| 22 | 28 | 17 | 17.46 | 24.30 | 18000 | 18.0 | KT 22 x 28 x 17 |
| 22 | 29 | 16 | 18.00 | 22.95 | 17100 | 16.0 | KT 22 x 29 x 16 |
| 22 | 30 | 15 | 18.09 | 21.06 | 17100 | 18.0 | KT 22 x 30 x 15 |
| 22 | 32 | 24 | 30.60 | 36.00 | 16200 | 43.0 | KT 22 x 32 x 24 |
| 23 | 35 | 16 | 22.05 | 21.51 | 15300 | 29.0 | KT 23 x 35 x 16 |
| 24 | 28 | 10 | 8.64 | 13.32 | 17100 | 8.5 | KT 24 x 28 x 10 |
| 24 | 28 | 13 | 9.90 | 15.84 | 17100 | 10.0 | KT 24 x 28 x 13 |
| 24 | 28 | 17 | 13.05 | 22.50 | 17100 | 13.0 | KT 24 x 28 x 17 |
| 24 | 30 | 17 | 17.55 | 24.75 | 16200 | 19.0 | KT 24 x 30 x 17 |
| 24 | 30 | 31 | 24.75 | 39.15 | 16200 | 32.0 | KT 24 x 30 x 31 ZW |
| 25 | 29 | 10 | 8.91 | 13.86 | 16200 | 8.5 | KT 25 x 29 x 10 |
| 25 | 29 | 13 | 10.17 | 16.56 | 16200 | 11.0 | KT 25 x 29 x 13 |
| 25 | 29 | 17 | 13.41 | 23.40 | 16200 | 14.0 | KT 25 x 29 x 17 |
| 25 | 30 | 17 | 16.83 | 27.00 | 16200 | 16.0 | KT 25 x 30 x 17 |
| 25 | 30 | 20 | 19.53 | 32.85 | 16200 | 18.0 | KT 25 x 30 x 20 |
| 25 | 30 | 26 | 19.26 | 31.95 | 16200 | 19.0 | KT 25 x 30 x 26 ZW |
| 25 | 31 | 17 | 17.64 | 25.65 | 16200 | 19.0 | KT 25 x 31 x 17 |
| 25 | 31 | 21 | 22.23 | 34.20 | 16200 | 20.0 | KT 25 x 31 x 21 |
| 25 | 32 | 16 | 18.72 | 24.75 | 15300 | 21.0 | KT 25 x 32 x 16 |
| 25 | 33 | 20 | 25.65 | 34.20 | 15300 | 33.0 | KT 25 x 33 x 20 |



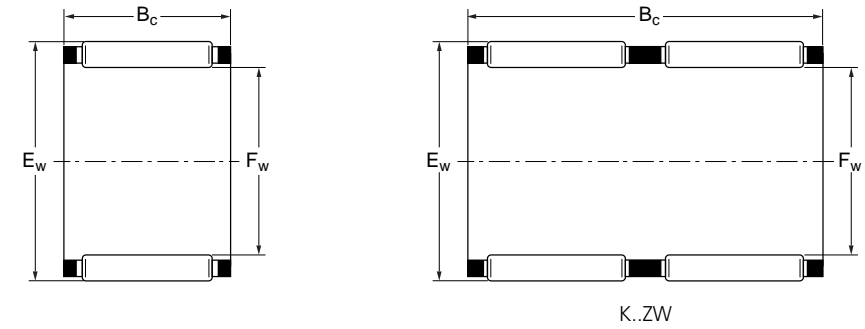
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| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Mass | Designation |
|----------------------|----------------------|----------------------|--------------------|--------------|----------------|-------|--------------------|
| F _w mm | E _w mm | B _c mm | Dynamic kN | Static kN | r/min | g | |
| 25 | 33 | 24 | 30.60 | 42.30 | 15300 | 39.0 | KT 25 x 33 x 24 |
| 25 | 35 | 30 | 42.30 | 55.80 | 14400 | 65.0 | KT 25 x 35 x 30 |
| 26 | 30 | 13 | 10.44 | 17.28 | 16200 | 11.0 | KT 26 x 30 x 13 |
| 26 | 30 | 17 | 13.68 | 24.75 | 16200 | 15.0 | KT 26 x 30 x 17 |
| 26 | 30 | 22 | 14.13 | 25.65 | 16200 | 12.0 | KT 26 x 30 x 22 ZW |
| 28 | 33 | 13 | 13.77 | 21.78 | 14400 | 13.0 | KT 28 x 33 x 13 |
| 28 | 33 | 17 | 17.73 | 30.15 | 14400 | 17.0 | KT 28 x 33 x 17 |
| 28 | 34 | 17 | 19.62 | 30.15 | 14400 | 24.0 | KT 28 x 34 x 17 |
| 28 | 35 | 16 | 19.35 | 26.55 | 14400 | 24.0 | KT 28 x 35 x 16 |
| 28 | 35 | 18 | 21.60 | 30.60 | 14400 | 27.0 | KT 28 x 35 x 18 |
| 28 | 40 | 25 | 40.95 | 49.50 | 12600 | 70.0 | KT 28 x 40 x 25 |
| 30 | 34 | 13 | 11.07 | 19.53 | 13500 | 14.0 | KT 30 x 34 x 13 |
| 30 | 35 | 13 | 14.04 | 22.95 | 13500 | 14.0 | KT 30 x 35 x 13 |
| 30 | 35 | 17 | 17.64 | 30.60 | 13500 | 19.0 | KT 30 x 35 x 17 |
| 30 | 35 | 27 | 27.45 | 53.10 | 13500 | 30.0 | KT 30 x 35 x 27 |
| 30 | 37 | 16 | 20.79 | 30.15 | 13500 | 27.0 | KT 30 x 37 x 16 |
| 30 | 37 | 18 | 23.40 | 34.65 | 13500 | 30.0 | KT 30 x 37 x 18 |
| 30 | 40 | 18 | 28.80 | 36.00 | 12600 | 48.0 | KT 30 x 40 x 18 |
| 30 | 40 | 30 | 44.10 | 62.10 | 13500 | 73.0 | KT 30 x 40 x 30 |
| 32 | 37 | 13 | 13.95 | 22.95 | 12600 | 18.0 | KT 32 x 37 x 13 |
| 32 | 37 | 17 | 17.91 | 31.95 | 12600 | 19.0 | KT 32 x 37 x 17 |
| 32 | 37 | 27 | 27.00 | 54.00 | 12600 | 30.0 | KT 32 x 37 x 27 |
| 32 | 38 | 20 | 23.85 | 40.50 | 12600 | 30.0 | KT 32 x 38 x 20 |
| 32 | 39 | 16 | 21.42 | 31.95 | 12600 | 37.0 | KT 32 x 39 x 16 |
| 32 | 39 | 18 | 23.85 | 36.90 | 12600 | 31.0 | KT 32 x 39 x 18 |
| 32 | 40 | 25 | 33.75 | 52.20 | 12600 | 49.0 | KT 32 x 40 x 25 |
| 32 | 40 | 42 | 45.00 | 75.60 | 12600 | 77.0 | KT 32 x 40 x 42 ZW |
| 32 | 46 | 32 | 59.40 | 75.60 | 11700 | 119.0 | KT 32 x 46 x 32 |
| 35 | 40 | 13 | 14.58 | 25.20 | 11700 | 19.0 | KT 35 x 40 x 13 |
| 35 | 40 | 17 | 18.72 | 34.65 | 11700 | 21.0 | KT 35 x 40 x 17 |
| 35 | 40 | 25 | 26.55 | 54.00 | 11700 | 31.0 | KT 35 x 40 x 25 |
| 35 | 40 | 27 | 43.65 | 5.58 | 11700 | 39.0 | KT 35 x 40 x 27 |



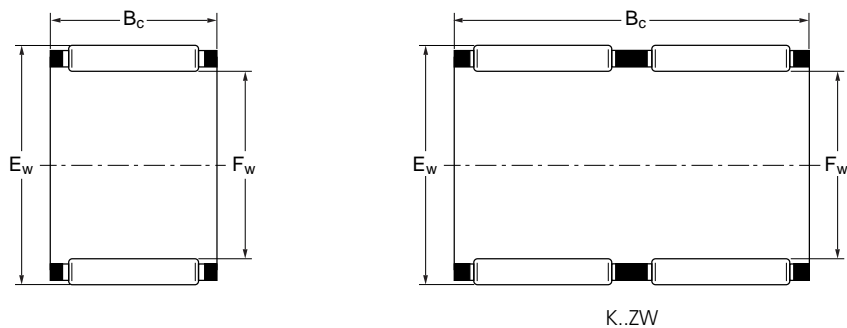
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| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Mass | Designation |
|----------------------|----------------------|----------------------|--------------------|--------------|----------------|-------|--------------------|
| F _w mm | E _w mm | B _c mm | Dynamic kN | Static kN | r/min | g | |
| 35 | 42 | 16 | 21.96 | 33.75 | 11700 | 34.0 | KT 35 x 42 x 16 |
| 35 | 42 | 18 | 24.75 | 38.70 | 11700 | 34.0 | KT 35 x 42 x 18 |
| 35 | 42 | 20 | 27.00 | 44.10 | 11700 | 37.0 | KT 35 x 42 x 20 |
| 35 | 42 | 30 | 35.10 | 61.20 | 11700 | 67.0 | KT 35 x 42 x 30 |
| 35 | 45 | 20 | 33.30 | 45.00 | 10800 | 56.0 | KT 35 x 45 x 20 |
| 35 | 45 | 30 | 47.70 | 71.10 | 10800 | 80.0 | KT 35 x 45 x 30 |
| 37 | 42 | 17 | 20.16 | 38.70 | 10800 | 22.0 | KT 37 x 42 x 17 |
| 38 | 43 | 17 | 18.45 | 34.65 | 10800 | 29.0 | KT 38 x 43 x 17 |
| 38 | 43 | 27 | 28.35 | 61.20 | 10800 | 43.0 | KT 38 x 43 x 27 |
| 38 | 46 | 20 | 31.95 | 51.30 | 10800 | 47.0 | KT 38 x 46 x 20 |
| 38 | 46 | 32 | 49.50 | 89.10 | 10800 | 76.0 | KT 38 x 46 x 32 |
| 39 | 44 | 26 | 24.75 | 50.40 | 10800 | 45.0 | KT 39 x 44 x 26 ZW |
| 40 | 45 | 13 | 15.84 | 29.25 | 10800 | 22.0 | KT 40 x 45 x 13 |
| 40 | 45 | 17 | 19.26 | 37.35 | 10800 | 31.0 | KT 40 x 45 x 17 |
| 40 | 45 | 27 | 29.70 | 65.70 | 10800 | 46.0 | KT 40 x 45 x 27 |
| 40 | 47 | 18 | 26.55 | 45.00 | 9900 | 39.0 | KT 40 x 47 x 18 |
| 40 | 47 | 20 | 29.25 | 51.30 | 9900 | 42.0 | KT 40 x 47 x 20 |
| 40 | 48 | 20 | 32.40 | 53.10 | 9900 | 49.0 | KT 40 x 48 x 20 |
| 42 | 47 | 13 | 16.02 | 30.15 | 9900 | 18.0 | KT 42 x 47 x 13 |
| 42 | 47 | 17 | 19.53 | 38.70 | 9900 | 32.0 | KT 42 x 47 x 17 |
| 42 | 47 | 30 | 30.15 | 68.40 | 9900 | 54.0 | KT 42 x 47 x 30 ZW |
| 42 | 50 | 20 | 31.50 | 51.30 | 9900 | 53.0 | KT 42 x 50 x 20 |
| 43 | 48 | 17 | 19.44 | 38.70 | 9900 | 30.0 | KT 43 x 48 x 17 |
| 43 | 48 | 27 | 30.15 | 67.50 | 9900 | 50.0 | KT 43 x 48 x 27 |
| 45 | 50 | 17 | 20.25 | 41.40 | 9000 | 34.0 | KT 45 x 50 x 17 |
| 45 | 50 | 27 | 31.05 | 72.00 | 9000 | 51.0 | KT 45 x 50 x 27 |
| 45 | 52 | 18 | 28.35 | 51.30 | 9000 | 42.0 | KT 45 x 52 x 18 |
| 45 | 53 | 20 | 35.10 | 60.30 | 9000 | 55.0 | KT 45 x 53 x 20 |
| 45 | 53 | 21 | 34.65 | 60.30 | 9000 | 60.0 | KT 45 x 53 x 21 |
| 45 | 53 | 28 | 46.80 | 88.20 | 9000 | 81.0 | KT 45 x 53 x 28 |
| 45 | 59 | 18 | 39.60 | 48.60 | 8550 | 72.0 | KT 45 x 59 x 18 |
| 45 | 59 | 32 | 65.70 | 92.70 | 8550 | 148.0 | KT 45 x 59 x 32 |

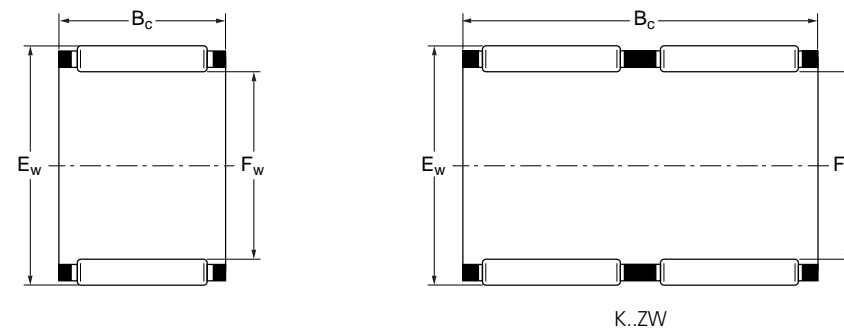


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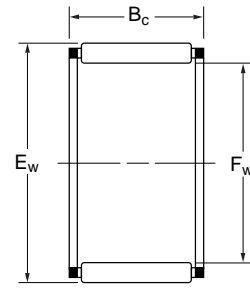
| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Mass | Designation |
|----------------------|----------------------|----------------------|--------------------|--------------|----------------|-------|--------------------|
| F _w mm | E _w mm | B _c mm | Dynamic kN | Static kN | r/min | g | |
| 47 | 52 | 17 | 20.97 | 44.10 | 9000 | 35.0 | KT 47 x 52 x 17 |
| 47 | 52 | 27 | 31.50 | 74.70 | 9000 | 51.0 | KT 47 x 52 x 27 |
| 50 | 55 | 13.5 | 16.38 | 32.85 | 8550 | 30.0 | KT 50 x 55 x 13.5 |
| 50 | 55 | 17 | 19.89 | 42.30 | 8550 | 35.0 | KT 50 x 55 x 17 |
| 50 | 55 | 20 | 23.85 | 54.00 | 8550 | 43.0 | KT 50 x 55 x 20 |
| 50 | 55 | 30 | 35.10 | 87.30 | 8550 | 65.0 | KT 50 x 55 x 30 |
| 50 | 57 | 18 | 30.15 | 56.70 | 8100 | 47.0 | KT 50 x 57 x 18 |
| 50 | 58 | 20 | 31.95 | 55.80 | 8100 | 75.0 | KT 50 x 58 x 20 |
| 50 | 58 | 25 | 39.60 | 72.90 | 8100 | 90.0 | KT 50 x 58 x 25 |
| 52 | 57 | 12 | 16.20 | 32.85 | 8100 | 24.0 | KT 52 x 57 x 12 |
| 55 | 60 | 20 | 25.65 | 59.40 | 7650 | 40.0 | KT 55 x 60 x 20 |
| 55 | 60 | 27 | 34.20 | 87.30 | 7650 | 60.0 | KT 55 x 60 x 27 |
| 55 | 60 | 30 | 36.90 | 97.20 | 7650 | 71.0 | KT 55 x 60 x 30 |
| 55 | 62 | 18 | 31.95 | 63.00 | 7650 | 52.0 | KT 55 x 62 x 18 |
| 55 | 63 | 20 | 36.00 | 66.60 | 7650 | 67.0 | KT 55 x 63 x 20 |
| 55 | 63 | 25 | 45.90 | 90.90 | 7650 | 80.0 | KT 55 x 63 x 25 |
| 55 | 63 | 32 | 55.80 | 117.00 | 7650 | 102.0 | KT 55 x 63 x 32 |
| 58 | 65 | 18 | 31.50 | 63.00 | 7200 | 52.0 | KT 58 x 65 x 18 |
| 58 | 65 | 36 | 44.10 | 96.30 | 7200 | 127.0 | KT 58 x 65 x 36 ZW |
| 60 | 65 | 20 | 26.55 | 64.80 | 7200 | 52.0 | KT 60 x 65 x 20 |
| 60 | 65 | 30 | 38.25 | 104.40 | 7200 | 77.0 | KT 60 x 65 x 30 |
| 60 | 66 | 33 | 41.40 | 100.80 | 7200 | 104.0 | KT 60 x 66 x 33 ZW |
| 60 | 66 | 40 | 52.20 | 135.90 | 7200 | 116.0 | KT 60 x 66 x 40 ZW |
| 60 | 68 | 20 | 39.15 | 76.50 | 6750 | 71.0 | KT 60 x 68 x 20 |
| 60 | 68 | 23 | 44.55 | 90.90 | 6750 | 94.0 | KT 60 x 68 x 23 |
| 60 | 68 | 25 | 47.70 | 99.90 | 6750 | 89.0 | KT 60 x 68 x 25 |
| 60 | 68 | 30 | 40.05 | 79.20 | 6750 | 129.0 | KT 60 x 68 x 30 ZW |
| 60 | 75 | 42 | 106.20 | 179.10 | 6750 | 240.0 | KT 60 x 75 x 42 |
| 62 | 70 | 40 | 59.40 | 131.40 | 6750 | 174.0 | KT 62 x 70 x 40 ZW |
| 64 | 70 | 16 | 25.20 | 54.00 | 6750 | 53.0 | KT 64 x 70 x 16 |
| 65 | 70 | 20 | 27.45 | 69.30 | 6750 | 56.0 | KT 65 x 70 x 20 |
| 65 | 70 | 30 | 39.60 | 111.60 | 6750 | 83.0 | KT 65 x 70 x 30 |



| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Mass | Designation |
|----------------------|----------------------|----------------------|--------------------|--------------|----------------|-------|---------------------|
| F _w mm | E _w mm | B _c mm | Dynamic kN | Static kN | r/min | g | |
| 65 | 73 | 23 | 41.40 | 84.60 | 6300 | 108.0 | KT 65 x 73 x 23 |
| 65 | 73 | 30 | 51.30 | 110.70 | 6300 | 141.0 | KT 65 x 73 x 30 |
| 68 | 74 | 20 | 31.95 | 75.60 | 6300 | 71.0 | KT 68 x 74 x 20 |
| 68 | 74 | 30 | 41.85 | 106.20 | 6300 | 100.0 | KT 68 x 74 x 30 |
| 68 | 74 | 35 | 43.65 | 112.50 | 6300 | 120.0 | KT 68 x 74 x 35 ZW |
| 70 | 76 | 20 | 32.40 | 77.40 | 5850 | 71.0 | KT 70 x 76 x 20 |
| 70 | 76 | 30 | 46.80 | 125.10 | 5850 | 110.0 | KT 70 x 76 x 30 |
| 70 | 78 | 30 | 54.00 | 121.50 | 5850 | 148.0 | KT 70 x 78 x 30 |
| 72 | 80 | 20 | 37.35 | 76.50 | 5850 | 98.0 | KT 72 x 80 x 20 |
| 73 | 79 | 20 | 33.30 | 81.00 | 5850 | 75.0 | KT 73 x 79 x 20 |
| 75 | 81 | 20 | 33.75 | 84.60 | 5850 | 79.0 | KT 75 x 81 x 20 |
| 75 | 81 | 30 | 46.80 | 128.70 | 5850 | 114.0 | KT 75 x 81 x 30 |
| 75 | 83 | 23 | 45.00 | 98.10 | 5400 | 124.0 | KT 75 x 83 x 23 |
| 75 | 83 | 30 | 55.80 | 128.70 | 5400 | 147.0 | KT 75 x 83 x 30 |
| 75 | 83 | 35 | 56.70 | 132.30 | 5400 | 182.0 | KT 75 x 83 x 35 ZW |
| 75 | 83 | 40 | 65.70 | 159.30 | 5400 | 211.0 | KT 75 x 83 x 40 |
| 80 | 86 | 20 | 34.65 | 88.20 | 5400 | 60.0 | KT 80 x 86 x 20 |
| 80 | 88 | 30 | 63.90 | 158.40 | 5400 | 138.0 | KT 80 x 88 x 30 |
| 80 | 88 | 40 | 68.40 | 172.80 | 5400 | 227.0 | KT 80 x 88 x 40 ZW |
| 80 | 88 | 46 | 79.20 | 207.90 | 5400 | 260.0 | KT 80 x 88 x 46 ZW |
| 85 | 92 | 20 | 40.05 | 97.20 | 4950 | 102.0 | KT 85 x 92 x 20 |
| 90 | 97 | 20 | 40.50 | 101.70 | 4500 | 109.0 | KT 90 x 97 x 20 |
| 90 | 98 | 27 | 54.90 | 135.00 | 4500 | 150.0 | KT 90 x 98 x 27 |
| 90 | 98 | 30 | 61.20 | 154.80 | 4500 | 172.0 | KT 90 x 98 x 30 |
| 95 | 103 | 30 | 62.10 | 162.00 | 4410 | 165.0 | KT 95 x 103 x 30 |
| 95 | 103 | 40 | 74.70 | 205.20 | 4410 | 266.0 | KT 95 x 103 x 40 ZW |
| 100 | 107 | 21 | 43.20 | 114.30 | 4230 | 120.0 | KT 100 x 107 x 21 |
| 100 | 108 | 27 | 51.30 | 128.70 | 4230 | 185.0 | KT 100 x 108 x 27 |
| 100 | 108 | 30 | 63.90 | 169.20 | 4230 | 180.0 | KT 100 x 108 x 30 |
| 105 | 112 | 21 | 42.75 | 114.30 | 4050 | 129.0 | KT 105 x 112 x 21 |
| 110 | 117 | 24 | 50.40 | 142.20 | 3870 | 172.0 | KT 110 x 117 x 24 |
| 110 | 118 | 30 | 70.20 | 197.10 | 3870 | 217.0 | KT 110 x 118 x 30 |

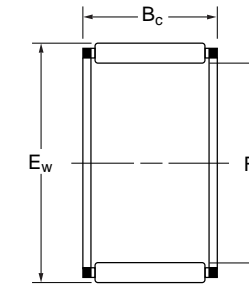


| Basic Dimensions | | | Basic Load Ratings | | Limiting Speed | Mass | Designation |
|----------------------|----------------------|----------------------|--------------------|--------------|----------------|--------|-------------------|
| F _w mm | E _w mm | B _c mm | Dynamic kN | Static kN | r/min | g | |
| 115 | 123 | 27 | 56.70 | 153.00 | 3690 | 200.0 | KT 115 x 123 x 27 |
| 120 | 127 | 24 | 53.10 | 156.60 | 3600 | 165.0 | KT 120 x 127 x 24 |
| 125 | 133 | 35 | 77.40 | 234.00 | 3420 | 275.0 | KT 125 x 133 x 35 |
| 130 | 137 | 24 | 54.90 | 167.40 | 3330 | 170.0 | KT 130 x 137 x 24 |
| 135 | 143 | 35 | 81.90 | 261.00 | 3150 | 300.0 | KT 135 x 143 x 35 |
| 145 | 153 | 26 | 66.60 | 202.50 | 2970 | 262.0 | KT 145 x 153 x 26 |
| 150 | 160 | 46 | 132.30 | 423.00 | 2880 | 570.0 | KT 150 x 160 x 46 |
| 155 | 163 | 26 | 67.50 | 212.40 | 2790 | 265.0 | KT 155 x 163 x 26 |
| 160 | 170 | 46 | 136.80 | 459.00 | 2700 | 550.0 | KT 160 x 170 x 46 |
| 165 | 173 | 26 | 72.90 | 238.50 | 2610 | 320.0 | KT 165 x 173 x 26 |
| 175 | 183 | 32 | 89.10 | 315.00 | 2430 | 400.0 | KT 175 x 183 x 32 |
| 185 | 195 | 37 | 115.20 | 382.50 | 2340 | 607.0 | KT 185 x 195 x 37 |
| 195 | 205 | 37 | 119.70 | 405.00 | 2250 | 620.0 | KT 195 x 205 x 37 |
| 210 | 220 | 42 | 138.60 | 504.00 | 2070 | 740.0 | KT 210 x 220 x 42 |
| 220 | 230 | 42 | 142.20 | 531.00 | 1980 | 790.0 | KT 220 x 230 x 42 |
| 240 | 250 | 42 | 147.60 | 567.00 | 1800 | 850.0 | KT 240 x 250 x 42 |
| 265 | 280 | 50 | 229.50 | 774.00 | 1620 | 1810.0 | KT 265 x 280 x 50 |



WJ and WJC

| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | Mass Approx. | Assembly Designation |
|------------------|---------|--------|---------|----------------|---------|--------------------|-------|----------------|--------------|----------------------|
| d | D | B | C | C ₀ | Oil | g | r/min | g | | |
| | | | | | | | | | | inch |
| 5/8 | 15.8750 | 7/8 | 22.2250 | 5/8 | 15.8750 | 3510 | 3990 | 29000 | 13.17 | WJ 101410 |
| 5/8 | 15.8750 | 7/8 | 22.2250 | 7/8 | 22.2250 | 4780 | 5940 | 29000 | 18.16 | WJ 101414 |
| 3/4 | 19.0500 | 1 | 25.4000 | 1 | 25.4000 | 6020 | 8370 | 24000 | 24.97 | WJ 121616 |
| 13/16 | 20.6375 | 1 1/16 | 26.9875 | 7/8 | 22.2250 | 5650 | 7880 | 22000 | 20.88 | WJ 131714 |
| 7/8 | 22.2250 | 1 1/8 | 28.5750 | 1 | 25.4000 | 6570 | 9770 | 20000 | 28.15 | WJ 141816 |
| 1 | 25.4000 | 1 5/16 | 33.3375 | 3/4 | 19.0500 | 6320 | 8340 | 18000 | 34.96 | WJ 162112 |
| 1 | 25.4000 | 1 5/16 | 33.3375 | 1 | 25.4000 | 8270 | 11800 | 18000 | 43.13 | WJ 162116 |
| 1 | 25.4000 | 1 5/16 | 33.3375 | 1 1/4 | 31.7500 | 10000 | 15100 | 18000 | 55.84 | WJ 162120 |
| 1 1/8 | 28.5750 | 1 1/2 | 38.1000 | 1 | 25.4000 | 9520 | 13000 | 16000 | 40.86 | WJ 182416 |
| 1 1/8 | 28.5750 | 1 1/2 | 38.1000 | 1 1/4 | 31.7500 | 11700 | 16800 | 16000 | 71.73 | WJ 182420 |
| 1 1/4 | 31.7500 | 1 5/8 | 41.2750 | 3/4 | 19.0500 | 7520 | 9830 | 14000 | 50.85 | WJ 202612 |
| 1 1/4 | 31.7500 | 1 5/8 | 41.2750 | 1 | 25.4000 | 9910 | 14000 | 14000 | 60.84 | WJ 202616 |
| 1 1/4 | 31.7500 | 1 5/8 | 41.2750 | 1 1/4 | 31.7500 | 12100 | 18200 | 14000 | 73.09 | WJ 202620 |
| 1 1/4 | 31.7500 | 1 5/8 | 41.2750 | 1 1/2 | 38.1000 | 14300 | 22400 | 14000 | 105.78 | WJ 202624 |
| 1 3/8 | 34.9250 | 1 3/4 | 44.4500 | 1 | 25.4000 | 10300 | 15100 | 13000 | 66.74 | WJ 222816 |
| 1 3/8 | 34.9250 | 1 3/4 | 44.4500 | 1 1/4 | 31.7500 | 12600 | 19600 | 13000 | 83.08 | WJ 222820 |
| 1 1/2 | 38.1000 | 1 7/8 | 47.6250 | 1 | 25.4000 | 10600 | 16100 | 12000 | 78.09 | WJ 243016 |
| 1 1/2 | 38.1000 | 1 7/8 | 47.6250 | 1 1/4 | 31.7500 | 13000 | 20900 | 12000 | 89.89 | WJ 243020 |
| 1 1/2 | 38.1000 | 1 7/8 | 47.6250 | 1 1/2 | 38.1000 | 15300 | 25800 | 12000 | 119.86 | WJ 243024 |
| 1 1/2 | 38.1000 | 1 7/8 | 47.6250 | 1 3/4 | 44.4500 | 17400 | 30500 | 12000 | 133.93 | WJ 243028 |
| 1 3/4 | 44.4500 | 2 1/8 | 53.9750 | 3/4 | 19.0500 | 8870 | 13400 | 9900 | 61.74 | WJ 283412 |
| 1 3/4 | 44.4500 | 2 1/8 | 53.9750 | 1 | 25.4000 | 11700 | 19100 | 9900 | 83.99 | WJ 283416 |
| 1 3/4 | 44.4500 | 2 1/8 | 53.9750 | 1 1/2 | 38.1000 | 16800 | 30600 | 9900 | 143.01 | WJ 283424 |
| 2 | 50.8000 | 2 3/8 | 60.3250 | 3/4 | 19.0500 | 9610 | 15500 | 8600 | 84.90 | WJ 323812 |
| 2 | 50.8000 | 2 3/8 | 60.3250 | 1 | 25.4000 | 12700 | 22100 | 8600 | 104.87 | WJ 323816 |
| 2 | 50.8000 | 2 3/8 | 60.3250 | 1 1/4 | 31.7500 | 15500 | 28700 | 8600 | 124.85 | WJ 323820 |
| 2 | 50.8000 | 2 3/8 | 60.3250 | 1 1/2 | 38.1000 | 18200 | 35300 | 8600 | 143.01 | WJ 323824 |
| 2 1/16 | 52.3875 | 2 7/16 | 61.9125 | 1 | 25.4000 | 13000 | 23100 | 8300 | 98.97 | WJ 333916 |
| 2 1/8 | 53.9750 | 2 1/2 | 63.5000 | 1 | 25.4000 | 11800 | 20700 | 8000 | 99.88 | WJ 344016 |
| 2 1/8 | 53.9750 | 2 1/2 | 63.5000 | 1 1/2 | 38.1000 | 17600 | 34500 | 8000 | 165.71 | WJ 344024 |
| 2 3/16 | 55.5625 | 2 9/16 | 65.0875 | 3/4 | 19.0500 | 10000 | 16900 | 7800 | 84.90 | WJ 354112 |
| 2 3/16 | 55.5625 | 2 9/16 | 65.0875 | 1 | 25.4000 | 13000 | 24100 | 7800 | 103.06 | WJ 354116 |



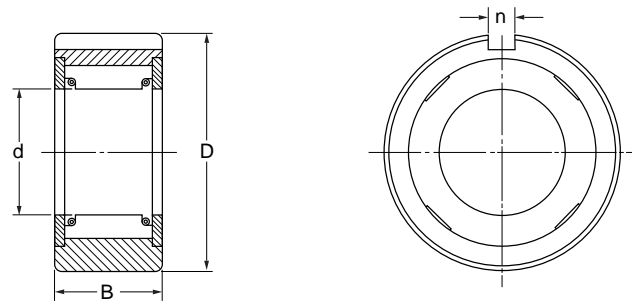
WJ and WJC

| Basic Dimensions | | | | | | Basic Load Ratings | | Limiting Speed | Mass Approx. | Assembly Designation |
|------------------|----------|-------|----------|----------------|---------|--------------------|-------|----------------|--------------|----------------------|
| d | D | B | C | C ₀ | Oil | g | r/min | g | | |
| | | | | | | | | | | inch |
| 2 1/4 | 57.1500 | 2 5/8 | 66.6750 | 1 | 25.4000 | 12100 | 21600 | 7500 | 105.78 | WJ 364216 |
| 2 1/4 | 57.1500 | 2 5/8 | 66.6750 | 1 1/4 | 31.7500 | 15200 | 28900 | 7500 | 132.11 | WJ 364220 |
| 2 3/8 | 60.3250 | 2 3/4 | 69.8500 | 1 1/2 | 38.1000 | 18300 | 37600 | 7100 | 185.69 | WJ 384424 |
| 2 1/2 | 63.5000 | 2 7/8 | 73.0250 | 1 | 25.4000 | 12500 | 23400 | 6700 | 136.65 | WJ 404616 |
| 2 1/2 | 63.5000 | 2 7/8 | 73.0250 | 1 1/4 | 31.7500 | 15700 | 31400 | 6700 | 160.26 | WJ 404620 |
| 2 1/2 | 63.5000 | 2 7/8 | 73.0250 | 1 1/2 | 38.1000 | 18700 | 39100 | 6700 | 179.78 | WJ 404624 |
| 2 3/4 | 69.8500 | 3 1/8 | 79.3750 | 1 | 25.4000 | 13000 | 25300 | 6100 | 125.76 | WJ 445016 |
| 3 | 76.2000 | 3 3/8 | 85.7250 | 1 | 25.4000 | 13400 | 27100 | 5600 | 159.81 | WJ 485416 |
| 3 | 76.2000 | 3 3/8 | 85.7250 | 1 1/2 | 38.1000 | 19200 | 43100 | 5600 | 212.93 | WJ 485424 |
| 3 1/4 | 82.5500 | 3 5/8 | 92.0750 | 1 | 25.4000 | 13800 | 28900 | 5100 | 146.64 | WJ 525816 |
| 3 1/4 | 82.5500 | 3 5/8 | 92.0750 | 1 1/2 | 38.1000 | 19800 | 46000 | 5100 | 220.64 | WJ 525824 |
| 3 1/2 | 88.9000 | 3 7/8 | 98.4250 | 1 | 25.4000 | 14200 | 30700 | 4700 | 173.88 | WJ 566216 |
| 3 1/2 | 88.9000 | 4 | 101.6000 | 1 | 25.4000 | 17900 | 33800 | 4800 | 214.74 | WJ 566416 |
| 3 1/2 | 88.9000 | 4 | 101.6000 | 1 1/2 | 38.1000 | 25600 | 53400 | 4800 | 359.57 | WJ 566424 |
| 4 | 101.6000 | 4 1/2 | 114.3000 | 1 | 25.4000 | 18800 | 37450 | 4200 | 239.71 | WJ 647216 |
| 4 | 101.6000 | 4 1/2 | 114.3000 | 1 1/2 | 38.1000 | 26800 | 59200 | 4200 | 369.56 | WJ 647224 |
| 5 | 127.0000 | 6 | 152.4000 | 1 1/2 | 38.1000 | 47600 | 82100 | 3400 | 1018.78 | WJ 809624 |

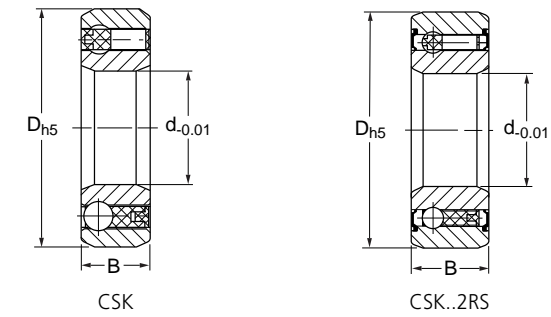


One Way Clutch

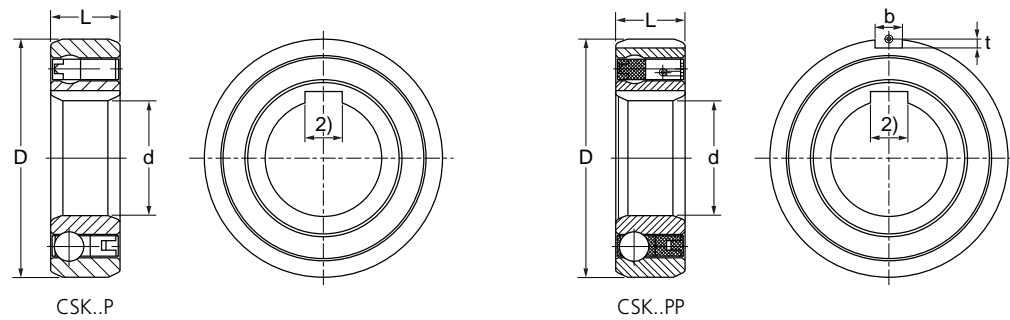
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| 11.01 Cam clutches | 355 |
| 11.02 Sprag freewheels without keyway | 356 |
| 11.03 Sprag freewheels with keyway | 357 |



| Basic Dimensions | | | | Limiting Speed | Mass | Designation | Bearings Series |
|------------------|-------------|--------|----------|----------------|-------|-------------|-----------------|
| B | D | d | n | | | | |
| mm | mm | mm | mm | r/min | kg | | |
| 25 | 40 - 0.014 | 16.510 | 4 X 2.5 | 2400 | 0.230 | B 203 | 6203 |
| 25 | 40 - 0.039 | 16.510 | 4 X 2.5 | 2400 | 0.230 | B 203 | 6203 |
| 25 | 47 - 0.014 | 18.796 | 5 X 3 | 2400 | 0.340 | B 204 | 6204 |
| 25 | 47 - 0.039 | 18.796 | 5 X 3 | 2400 | 0.340 | B 204 | 6204 |
| 25 | 52 - 0.017 | 23.622 | 5 X 3 | 1800 | 0.450 | B 205 | 6205 |
| 25 | 52 - 0.042 | 23.622 | 5 X 3 | 1800 | 0.450 | B 205 | 6205 |
| 28 | 62 - 0.017 | 32.766 | 7 X 4 | 1800 | 0.680 | B 206 | 6206 |
| 28 | 62 - 0.042 | 32.766 | 7 X 4 | 1800 | 0.680 | B 206 | 6206 |
| 28 | 72 - 0.017 | 42.088 | 7 X 4 | 1800 | 0.800 | B 207 | 6207 |
| 28 | 72 - 0.042 | 42.088 | 7 X 4 | 1800 | 0.800 | B 207 | 6207 |
| 32 | 80 - 0.017 | 46.761 | 10 X 4.5 | 1800 | 0.910 | B 208 | 6207 |
| 32 | 80 - 0.042 | 46.761 | 10 X 4.5 | 1800 | 0.910 | B 208 | 6207 |
| 32 | 85 - 0.020 | 46.761 | 10 X 4.5 | 1800 | 0.950 | B 209 | 6209 |
| 32 | 85 - 0.045 | 46.761 | 10 X 4.5 | 1800 | 0.950 | B 209 | 6209 |
| 32 | 90 - 0.020 | 56.109 | 10 X 4.5 | 1200 | 1.000 | B 210 | 6210 |
| 32 | 90 - 0.045 | 56.109 | 10 X 4.5 | 1200 | 1.000 | B 210 | 6210 |
| 32 | 100 - 0.020 | 56.109 | 10 X 4.5 | 1200 | 1.400 | B 211 | 6211 |
| 32 | 100 - 0.045 | 56.109 | 10 X 4.5 | 1200 | 1.400 | B 211 | 6211 |
| 42 | 110 - 0.020 | 70.029 | 10 X 4.5 | 1200 | 1.800 | B 212 | 6212 |
| 42 | 110 - 0.045 | 70.029 | 10 X 4.5 | 1200 | 1.800 | B 212 | 6212 |
| 42 | 120 - 0.020 | 70.029 | 10 X 4.5 | 1200 | 2.300 | B 213 | 6213 |
| 42 | 120 - 0.045 | 70.029 | 10 X 4.5 | 1200 | 2.300 | B 213 | 6213 |
| 42 | 125 - 0.024 | 79.356 | 12 X 4.5 | 1000 | 2.400 | B 214 | 6214 |
| 42 | 125 - 0.060 | 79.356 | 12 X 4.5 | 1000 | 2.400 | B 214 | 6214 |



| Basic Dimensions | | | | | Basic Load Ratings | | Limiting Speed | Mass | Designation | Bearing Series |
|------------------|----|----|----|------|--------------------|----------------|----------------|------|-------------|----------------|
| d | D | L | b | t | Dynamic | Static | | | | |
| mm | mm | mm | mm | mm | C | C ₀ | r/min | kg | | |
| 15 | 35 | 11 | - | - | 7.40 | 3.42 | 8400 | 0.06 | CSK 15 P | 6202 |
| 15 | 35 | 11 | 2 | 0.60 | 7.40 | 3.42 | 8400 | 0.06 | CSK 15 PP | 6202 |
| 17 | 40 | 12 | - | - | 7.90 | 3.80 | 7350 | 0.07 | CSK 17 P | 6203 |
| 17 | 40 | 12 | 2 | 1.00 | 7.90 | 3.80 | 7350 | 0.07 | CSK 17 PP | 6203 |
| 20 | 47 | 14 | - | - | 9.40 | 4.46 | 6000 | 0.11 | CSK 20 P | 6204 |
| 20 | 47 | 14 | 3 | 1.50 | 9.40 | 4.46 | 6000 | 0.11 | CSK 20 PP | 6204 |
| 25 | 52 | 15 | - | - | 10.70 | 5.46 | 5200 | 0.14 | CSK 25 P | 6205 |
| 25 | 52 | 15 | 6 | 2.00 | 10.70 | 5.46 | 5200 | 0.14 | CSK 25 PP | 6205 |
| 30 | 62 | 16 | - | - | 11.70 | 6.45 | 4200 | 0.21 | CSK 30 P | 6206 |
| 30 | 62 | 16 | 6 | 2.00 | 11.70 | 6.45 | 4200 | 0.21 | CSK 30 PP | 6206 |
| 35 | 72 | 17 | - | - | 12.60 | 7.28 | 3600 | 0.30 | CSK 35 P | 6207 |
| 35 | 72 | 17 | 8 | 2.50 | 12.60 | 7.28 | 3600 | 0.30 | CSK 35 PP | 6207 |

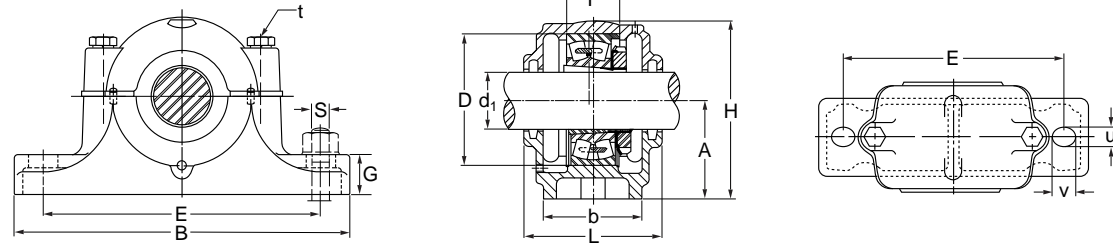


| Basic Dimensions | | | Basis Load Ratings | | Limiting Speed | Mass | Designation |
|------------------|---------|---------|--------------------|----------------------|----------------|-------|-------------|
| d mm | D mm | B mm | C kN | C ₀ kN | r/min | kg | |
| 12 | 32 | 10 | 6.100 | 2.770 | 10,000 | 0.040 | CSK 12 |
| 12 | 32 | 14 | 6.100 | 2.770 | 10,000 | 0.050 | CSK 12 2RS |
| 15 | 35 | 11 | 7.400 | 3.420 | 8,400 | 0.060 | CSK 15 |
| 15 | 35 | 16 | 7.400 | 3.420 | 8,400 | 0.070 | CSK 15 2RS |
| 17 | 40 | 12 | 7.900 | 3.800 | 7,350 | 0.070 | CSK 17 |
| 17 | 40 | 17 | 7.900 | 3.800 | 7,350 | 0.090 | CSK 17 2RS |
| 20 | 47 | 14 | 9.400 | 4.460 | 6,000 | 0.110 | CSK 20 |
| 20 | 47 | 19 | 9.400 | 4.460 | 6,000 | 0.145 | CSK 20 2RS |
| 25 | 52 | 15 | 10.700 | 5.460 | 5,200 | 0.140 | CSK 25 |
| 25 | 52 | 20 | 10.700 | 5.460 | 5,200 | 0.175 | CSK 25 2RS |
| 30 | 62 | 15 | 11.700 | 6.450 | 4,200 | 0.210 | CSK 30 |
| 30 | 62 | 21 | 11.700 | 6.450 | 4,200 | 0.270 | CSK 30 2RS |
| 35 | 72 | 17 | 12.600 | 7.280 | 3,600 | 0.300 | CSK 35 |
| 35 | 72 | 22 | 12.600 | 7.280 | 3,600 | 0.400 | CSK 35 2RS |



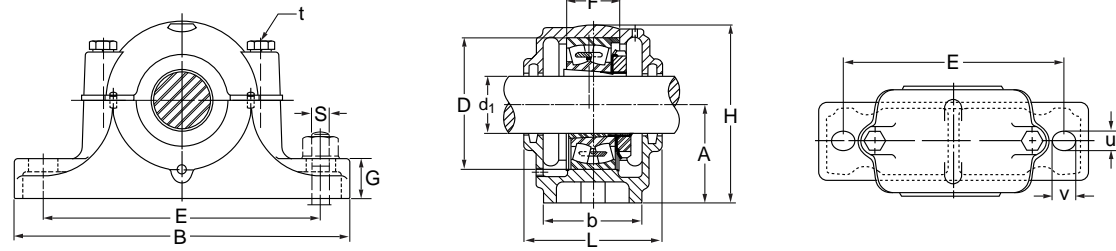
Plummer Blocks

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| 12.01 SN 500 series | 359 |
| 12.02 SN 600 series | 363 |
| 12.03 SNK 500 - 600 series | 367 |
| 12.04 SAF 200 series | 371 |
| 12.05 SAF 300 series | 373 |
| 12.06 SAF 500 series | 375 |
| 12.07 SAF 600 series | 377 |
| 12.08 SD 3000 series | 379 |
| 12.09 SD 3100 series | 381 |



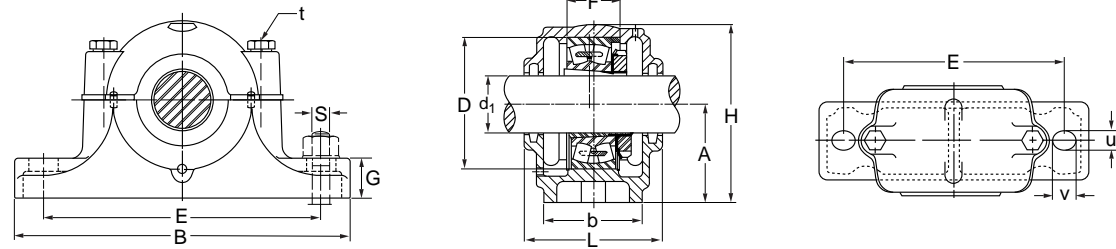
| Housing No | Basic Dimensions | | | | | | | | | | | |
|------------|---------------------------|-------|---------|-----|-----|----|----------|----------|-----|-----|-----|-----|
| | Shaft Dia. d ₁ | | D H8 | B | b | G | F H13 | A h13 | L | H | E | t |
| | Metric | Inch | | | | | | | | | | |
| SN 505 | 20 | 3/4 | 52 | 165 | 46 | 22 | 25 | 40 | 67 | 75 | 130 | M8 |
| SN 506 | 25 | 1 | 62 | 185 | 52 | 22 | 30 | 50 | 77 | 90 | 150 | M8 |
| SN 507 | 30 | 1 1/8 | 72 | 185 | 52 | 22 | 33 | 50 | 82 | 95 | 150 | M10 |
| SN 508 | 35 | 1 1/4 | 80 | 205 | 60 | 25 | 33 | 60 | 85 | 110 | 170 | M10 |
| SN 509 | 40 | 1 1/2 | 85 | 205 | 60 | 25 | 31 | 60 | 85 | 112 | 170 | M10 |
| SN 510 | 45 | 1 3/4 | 90 | 205 | 60 | 25 | 33 | 60 | 90 | 115 | 170 | M10 |
| SN 511 | 50 | 2 | 100 | 255 | 70 | 28 | 33 | 70 | 95 | 130 | 210 | M12 |
| SN 512 | 55 | 2 1/8 | 110 | 255 | 70 | 30 | 38 | 70 | 105 | 135 | 210 | M12 |
| SN 513 | 60 | 2 1/4 | 120 | 275 | 80 | 30 | 43 | 80 | 110 | 150 | 230 | M12 |
| SN 515 | 65 | 2 1/2 | 130 | 280 | 80 | 30 | 41 | 80 | 115 | 155 | 230 | M12 |
| SN 516 | 70 | 2 3/4 | 140 | 315 | 90 | 32 | 43 | 95 | 120 | 175 | 260 | M16 |
| SN 517 | 75 | 3 | 150 | 320 | 90 | 32 | 46 | 95 | 125 | 185 | 260 | M16 |
| SN 518 | 80 | 3 1/4 | 160 | 345 | 100 | 35 | 62.4 | 100 | 145 | 195 | 290 | M16 |
| SN 519 | 85 | - | 170 | 345 | 100 | 35 | 53 | 112 | 140 | 210 | 290 | M16 |
| SN 520 | 90 | 3 1/2 | 180 | 380 | 110 | 40 | 70.3 | 112 | 160 | 218 | 320 | M20 |

| u | v | S | Mass kg | Bearing No | | Adapter Sleeve | | Locating Ring | |
|----|----|-----|------------|--------------------|------------------|----------------|-----------------|--------------------------|--------|
| | | | | Self-Aligning Ball | Spherical Roller | Metric | Inch | Number | Qty |
| | | | | | | | | | |
| 15 | 20 | M12 | 1.5 | 1205K 2205K | - 22205K | H205 H305 | HE205 HE305 | 52 X 5 52 X 7 | 2 1 |
| 15 | 20 | M12 | 1.74 | 1206K 2206K | - 22206K | H206 H306 | HE206 HE306 | 62 X 7 62 X 10 | 2 1 |
| 15 | 20 | M12 | 1.9 | 1207K 2207K | - 22207K | H207 H307 | HE207 HE307 | 72 X 8 72 X 10 | 2 1 |
| 15 | 20 | M12 | 2.63 | 1208K 2208K | - 22208K | H208 H308 | HE208 HE308 | 80 X 7.5 80 X 10 | 2 1 |
| 15 | 20 | M12 | 2.64 | 1209K 2209K | - 22209K | H209 H309 | HE209 HE309 | 85 X 6 85 X 8 | 2 1 |
| 15 | 20 | M12 | 2.8 | 1210K 2210K | - 22210K | H210 H310 | HE210 HE310 | 90 X 6.5 90 X 10 | 2 1 |
| 18 | 23 | M16 | 4.32 | 1211K 2211K | - 22211K | H211 H311 | HE211 HE311 | 100 X 6 100 X 8 | 2 1 |
| 18 | 23 | M16 | 4.99 | 1212K 2212K | - 22212K | H212 H312 | HE212 HE312 | 110 X 8 110 X 10 | 2 1 |
| 18 | 23 | M16 | 5.64 | 1213K 2213K | - 22213K | H213 H313 | HE213 HE313 | 120 X 10 120 X 12 | 2 1 |
| 18 | 23 | M16 | 6.19 | 1213K 1213K | - - | H213 H313 | HE213 HE313 | 120 X 10 120 X 12 | 2 1 |
| 22 | 27 | M20 | 8.17 | 1216K 2216K | - 22216K | H216 H316 | HE216 HE316 | 140 X 8.5 140 X 10 | 2 1 |
| 22 | 27 | M20 | 9.37 | 1217K 2217K | - 22217K | H217 H317 | HE217 HE317 | 150 X 9 150 X 10 | 2 1 |
| 22 | 27 | M20 | 11.5 | 1218K 2218K | - 22218K | H218 H318 | HE218 HE318 | 160 X 16.2 160 X 11.2 | 2 2 |
| 22 | 27 | M20 | 11.5 | - 23218K | - 22218K | H2318 H318 | HE2318 HE318 | 160 X 10 | 1 |
| 22 | 28 | M20 | 13.5 | 1219K - | - 22219K | H219 H319 | HE219 HE319 | 170 X 10.5 170 X 10 | 2 1 |
| 26 | 32 | M24 | 16.3 | 2220K - | 22220K 23220K | H320 H2320 | HE320 HE2320 | 180 X 12.1 180 X 10 | 2 1 |



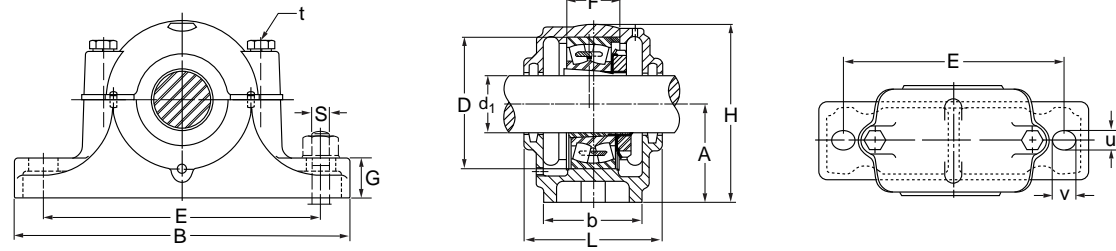
| Housing No | Basic Dimensions | | | | | | | | | | | |
|------------|---------------------------|-------|---------|-----|-----|----|----------|----------|-----|-----|-----|-----|
| | Shaft Dia. d ₁ | | D H8 | B | b | G | F H13 | A h13 | L | H | E | t |
| | Metric | Inch | | | | | | | | | | |
| SN 522 | 100 | 4 | 200 | 410 | 120 | 45 | 80 | 125 | 175 | 240 | 350 | M20 |
| SN 524 | 110 | 4.1/4 | 215 | 410 | 120 | 45 | 86 | 140 | 185 | 270 | 350 | M20 |
| SN 526 | 115 | 4.1/2 | 230 | 445 | 130 | 50 | 90 | 150 | 190 | 290 | 380 | M24 |
| SN 528 | 125 | 5 | 250 | 500 | 150 | 50 | 98 | 150 | 205 | 305 | 420 | M24 |
| SN 530 | 135 | 5.1/4 | 270 | 530 | 160 | 60 | 106 | 160 | 220 | 325 | 450 | M24 |
| SN 532 | 140 | 5.1/2 | 290 | 550 | 160 | 60 | 114 | 170 | 235 | 345 | 470 | M24 |

| u | v | S | Mass kg | Bearing No | | Adapter Sleeve | | Locating Ring | |
|----|----|-----|------------|--------------------|------------------|----------------|--------|---------------|-----|
| | | | | Self-Aligning Ball | Spherical Roller | Metric | Inch | Number | Qty |
| | | | | | | | | | |
| 26 | 32 | M24 | 25.1 | 2222K | 22222K | H322 | HE322 | 200 X 13.5 | 2 |
| | | | | - | 23222K | H2322 | HE2322 | 200 X 10 | 1 |
| 26 | 34 | M24 | 27.2 | - | 22224K | H3124 | HE3124 | 215 X 14 | 2 |
| | | | | - | 23224K | H2324 | HE2324 | 215 X 10 | 1 |
| 28 | 35 | M24 | 35.2 | - | 22226K | H3126 | HE3126 | 230 X 13 | 2 |
| | | | | - | 23226K | H2326 | HE2326 | 230 X 10 | 1 |
| 34 | 44 | M30 | 43.7 | - | 22228K | H3128 | HE3128 | 250 X 15 | 2 |
| | | | | - | 23228K | H2328 | HE2328 | 250 X 10 | 1 |
| 34 | 42 | M30 | 45.3 | - | 22230K | H3130 | HE3130 | 270 X 16.5 | 2 |
| | | | | - | 23230K | H2330 | HE2330 | 270 X 10 | 1 |
| 32 | 44 | M30 | 50.75 | - | 22232K | H3132 | HE3132 | 290 X 17 | 2 |
| | | | | - | 23232K | H2332 | HE2332 | 290 X 10 | 1 |



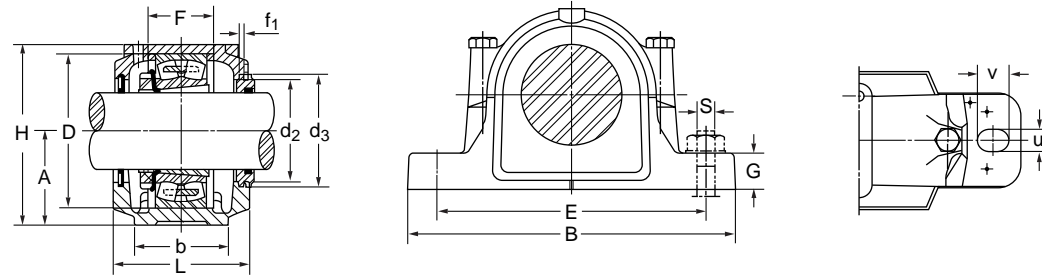
| Housing No | Basic Dimensions | | | | | | | | | | | |
|------------|---------------------------|-------|---------|-----|-----|----|----------|----------|-----|-----|-----|-----|
| | Shaft Dia. d ₁ | | D H8 | B | b | G | F H13 | A h13 | L | H | E | t |
| | Metric | Inch | | | | | | | | | | |
| SN 605 | 20 | 3/4 | 62 | 185 | 52 | 22 | 34 | 50 | 80 | 90 | 150 | M8 |
| SN 606 | 25 | 1 | 72 | 185 | 52 | 22 | 37 | 50 | 82 | 95 | 150 | M10 |
| SN 607 | 30 | 1 1/8 | 80 | 205 | 60 | 25 | 41 | 60 | 90 | 110 | 170 | M10 |
| SN 608 | 35 | 1 1/4 | 90 | 205 | 60 | 25 | 43 | 60 | 95 | 115 | 170 | M10 |
| SN 609 | 40 | 1 1/2 | 100 | 255 | 70 | 28 | 46 | 70 | 105 | 130 | 210 | M12 |
| SN 610 | 45 | 1 3/4 | 110 | 255 | 70 | 30 | 50 | 70 | 115 | 135 | 210 | M12 |
| SN 611 | 50 | 2 | 120 | 275 | 80 | 30 | 53 | 80 | 120 | 150 | 230 | M12 |
| SN 612 | 55 | 2 1/8 | 130 | 280 | 80 | 30 | 56 | 80 | 125 | 155 | 230 | M12 |
| SN 613 | 60 | 2 1/4 | 140 | 315 | 90 | 32 | 58 | 95 | 130 | 175 | 260 | M16 |
| SN 615 | 65 | 2 1/2 | 160 | 345 | 100 | 35 | 65 | 100 | 140 | 195 | 290 | M16 |
| SN 616 | 70 | 2 3/4 | 170 | 345 | 100 | 35 | 68 | 112 | 145 | 212 | 290 | M16 |
| SN 617 | 75 | 3 | 180 | 380 | 110 | 40 | 70 | 112 | 155 | 218 | 320 | M20 |
| SN 618 | 80 | 3 1/8 | 190 | 400 | 110 | 33 | 74 | 112 | 160 | 230 | 335 | M20 |
| SN 619 | 85 | - | 200 | 420 | 120 | 36 | 77 | 125 | 170 | 245 | 350 | M20 |
| SN 620 | 90 | 3 1/2 | 215 | 420 | 120 | 38 | 83 | 140 | 175 | 280 | 350 | M20 |
| SN 622 | 100 | 4 | 240 | 460 | 130 | 40 | 90 | 150 | 190 | 300 | 390 | M20 |

| u | v | S | Mass kg | Bearing No | | Adapter Sleeve | | Locating Ring | |
|----|----|-----|------------|--------------------|------------------|----------------|-----------------|------------------------|--------|
| | | | | Self-Aligning Ball | Spherical Roller | Metric | Inch | Number | Qty |
| | | | | | | | | | |
| 16 | 20 | M12 | 2.11 | 1305K 2305K | - | H305 H2305 | HE305 HE2305 | 62 X 8.5 62 X 10 | 2 1 |
| 16 | 20 | M12 | 2.09 | 1306K 2306K | - | H306 H2306 | HE306 HE2306 | 72 X 9 72 X 10 | 2 1 |
| 16 | 20 | M12 | 3.4 | 1307K 2307K | - | H307 H2307 | HE307 HE2307 | 80 X 10 80 X 10 | 2 1 |
| 15 | 24 | M12 | 3.6 | 1308K 2308K | 21308K 22308K | H308 H2308 | HE308 HE2308 | 90 X 10 90 X 10 | 2 1 |
| 19 | 25 | M16 | 5.3 | 1309K 2309K | 21309K 22309K | H309 H2309 | HE309 HE2309 | 100 X 10.5 100 X 10 | 2 1 |
| 18 | 23 | M16 | 5.5 | 1310K 2310K | 21310K 22310K | H310 H2310 | HE310 HE2310 | 110 X 10 110 X 10 | 2 1 |
| 20 | 28 | M16 | 6.9 | 1311K 2311K | 21311K 22311K | H311 H2311 | HE311 HE2311 | 120 X 12 120 X 10 | 2 1 |
| 20 | 28 | M16 | 8.8 | 1312K 2312K | 21312K 22312K | H312 H2312 | HE312 HE2312 | 130 X 12.5 130 X 10 | 2 1 |
| 22 | 30 | M20 | 9.8 | 1313K 2313K | 21313K 22313K | H313 H2313 | HE313 HE2313 | 140 X 12.5 140 X 10 | 2 1 |
| 23 | 28 | M20 | 13 | 1315K 2315K | 21315K 22315K | H315 H2315 | HE315 HE2315 | 160 X 14 160 X 10 | 2 1 |
| 23 | 30 | M20 | 15.5 | 1316K 2316K | 21316K 22316K | H316 H2316 | HE316 HE2316 | 170 X 14.5 170 X 10 | 2 1 |
| 26 | 35 | M24 | 16.3 | 1317K 2317K | 21317K 22317K | H317 H2317 | HE317 HE2317 | 180 X 14.5 180 X 10 | 2 1 |
| 27 | 38 | M24 | 20 | 1318K 2318K | - 22318K | H318 H2318 | HE318 HE2318 | 190 X 15.5 190 X 10 | 2 1 |
| 28 | 36 | M24 | 28 | 1319K 2319K | - 22319K | H319 H2319 | HE319 HE2319 | 200 X 16 200 X 10 | 2 1 |
| 27 | 33 | M24 | 30.5 | 1320K 2320K | - 22320K | H320 H2320 | HE320 HE2320 | 215 X 18 215 X 10 | 2 1 |
| 28 | 32 | M24 | 42 | 1322K 2322K | - 22322K | H322 H2322 | HE322 HE2322 | 240 X 20 240 X 10 | 2 1 |

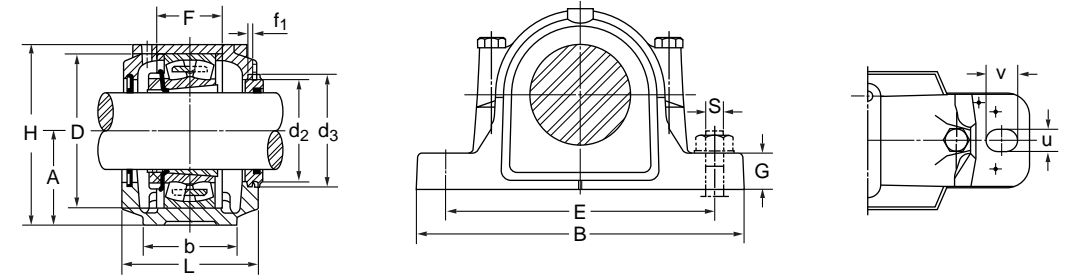


| Housing No | Basic Dimensions | | | | | | | | | | | |
|------------|---------------------------|-------|---------|-----|-----|----|----------|----------|-----|-----|-----|-----|
| | Shaft Dia. d ₁ | | D H8 | B | b | G | F H13 | A h13 | L | H | E | t |
| | Metric | Inch | | | | | | | | | | |
| SN 624 | 110 | 4 1/4 | 260 | 540 | 160 | 50 | 96 | 160 | 205 | 325 | 450 | M24 |
| SN 626 | 115 | 4 1/2 | 280 | 560 | 160 | 50 | 103 | 170 | 215 | 350 | 470 | M24 |
| SN 628 | 125 | 5 | 300 | 630 | 170 | 55 | 112 | 180 | 235 | 375 | 520 | M30 |
| SN 630 | 135 | 5 1/4 | 320 | 680 | 180 | 55 | 118 | 190 | 245 | 395 | 560 | M30 |
| SN 632 | 140 | 5 1/2 | 340 | 710 | 190 | 60 | 124 | 200 | 255 | 415 | 580 | M30 |

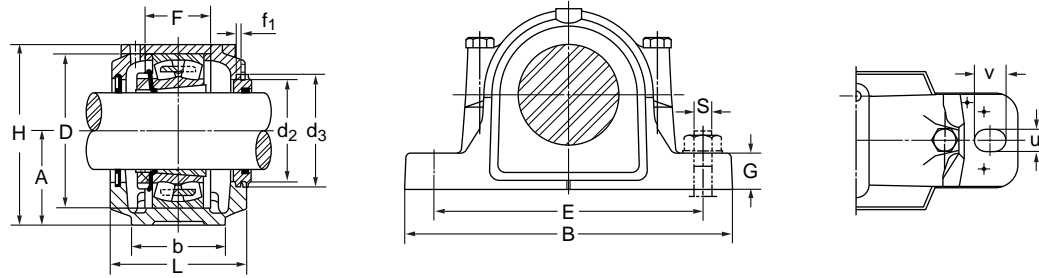
| u | v | S | Mass kg | Bearing No | | Adapter Sleeve | | Locating Ring | |
|----|----|-----|------------|--------------------|------------------|----------------|--------|---------------|--------|
| | | | | Self-Aligning Ball | Spherical Roller | Metric | Inch | Number | Qty |
| | | | | 34 | 42 | M30 | 59 | - | 22324K |
| 34 | 42 | M30 | 61.5 | - | 22326K | H2326 | HE2326 | 280 X 10 | 1 |
| 34 | 46 | M30 | 88 | - | 22328K | H2328 | HE2328 | 300 X 10 | 1 |
| 38 | 44 | M30 | 89 | - | 22330K | H2330 | HE2330 | 320 X 10 | 1 |
| 40 | 52 | M36 | 127 | - | 22332K | H2332 | HE2332 | 340 X 10 | 1 |



| Shaft Dia. mm | Housing No | Bearing No | | Accessories | Sealing Arrangement | Locating Ring | |
|------------------|-------------|--------------------|------------------|----------------|---------------------|---------------|-----|
| | | Self-Aligning Ball | Spherical Roller | Adapter Sleeve | TSNA-G | Number | Qty |
| 20 | SNK 505 | 1205K | - | H205 | - | 52 X 10 | 1 |
| 20 | SNK 505 | 2205K | - | H305 | - | 52 X 7 | 1 |
| 20 | SNK 506-605 | 1305K | - | H305 | - | 62 X 7.5 | 2 |
| 20 | SNK 506-605 | 2305K | - | H2305 | - | 62 X 8 | 1 |
| 25 | SNK 506-605 | 1206K | - | H206 | - | 62 X 8 | 2 |
| 25 | SNK 506-605 | 2206K | - | H306 | - | 62 X 6 | 2 |
| 25 | SNK 507-606 | 1306K | - | H306 | - | 72 X 7.5 | 2 |
| 25 | SNK 507-606 | 2306K | - | H2306 | - | 72 X 7 | 1 |
| 30 | SNK 507-606 | 1207K | - | H207 | TSN 507 G | 72 X 8.5 | 2 |
| 30 | SNK 507-606 | 2207K | 22207K | H307 | TSN 507 G | 72 X 5.5 | 2 |
| 30 | SNK 508-607 | 1307K | - | H307 | TSN 607 G | 80 X 9 | 2 |
| 30 | SNK 508-607 | 2307K | - | H2307 | TSN 607 G | 80 X 8 | 1 |
| 35 | SNK 508-607 | 1208K | - | H208 | TSN 508 G | 80 X 10.5 | 2 |
| 35 | SNK 508-607 | 2208K | 22208K | H308 | TSN 508 G | 80 X 8 | 2 |
| 35 | SNK 510-608 | 1308K | 21308K | H308 | TSN 608 G | 90 X 9 | 2 |
| 35 | SNK 510-608 | 2308K | 22308K | H2308 | TSN 608 G | 90 X 8 | 1 |
| 40 | SNK 509 | 1209K | - | H209 | TSN 509 G | 85 X 5.5 | 2 |
| 40 | SNK 509 | 2209K | 22209K | H309 | TSN 509 G | 85 X 7 | 1 |
| 40 | SNK 511-609 | 1309K | 21309K | H309 | TSN 609 G | 100 X 9.5 | 2 |
| 40 | SNK 511-609 | 2309K | 22309K | H2309 | TSN 609 G | 100 X 8 | 1 |
| 45 | SNK 510-608 | 1210K | - | H210 | TSN 510 G | 90 X 10.5 | 2 |
| 45 | SNK 510-608 | 2210K | 22210K | H310 | TSN 510 G | 90 X 9 | 2 |
| 45 | SNK 512-610 | 1310K | 21310K | H310 | TSN 610 G | 110 X 10.5 | 2 |
| 45 | SNK 512-610 | 2310K | 22310K | H2310 | TSN 610 G | 110 X 8 | 1 |
| 50 | SNK 511-609 | 1211K | - | H211 | TSN 511 G | 100 X 11.5 | 2 |
| 50 | SNK 511-609 | 2211K | 22211K | H311 | TSN 511 G | 100 X 9.5 | 2 |
| 50 | SNK 513-611 | 1311K | 21311K | H311 | TSN 611 G | 120 X 11 | 2 |
| 50 | SNK 513-611 | 2311K | 22311K | H2311 | TSN 611 G | 120 X 8 | 1 |
| 55 | SNK 512-610 | 1212K | - | H212 | TSN 512 G | 110 X 13 | 2 |
| 55 | SNK 512-610 | 2212K | 22212K | H312 | TSN 512 G | 110 X 10 | 2 |
| 55 | SNK 515-612 | 1312K | 21312K | H312 | TSN 612 G | 130 X 12.5 | 2 |
| 55 | SNK 515-613 | 2312K | 22312K | H2312 | TSN 612 G | 130 X 10 | 1 |

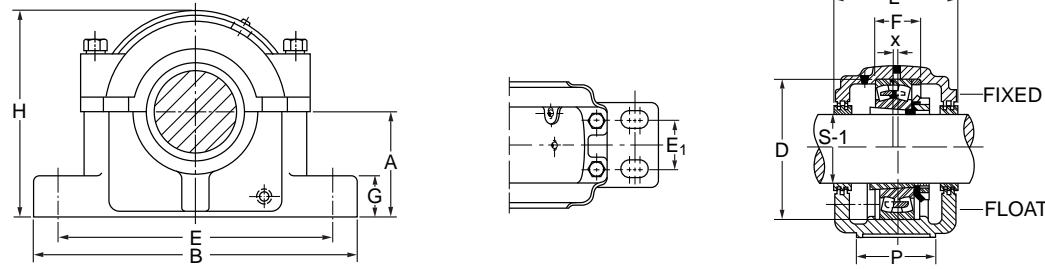


| Shaft Dia. mm | Housing No | Bearing No | | Accessories | Sealing Arrangement | Locating Ring | |
|------------------|-------------|--------------------|------------------|----------------|---------------------|---------------|-----|
| | | Self-Aligning Ball | Spherical Roller | Adapter Sleeve | TSNA-G | Number | Qty |
| 60 | SNK 513-611 | 1213K | - | H213 | TSN 513 G | 120 X 14 | 2 |
| 60 | SNK 513-611 | 2213K | 22213K | H313 | TSN 513 G | 120 X 10 | 2 |
| 60 | SNK 516-613 | 1313K | 21313K | H313 | TSN 613 G | 140 X 12.5 | 2 |
| 60 | SNK 516-613 | 2313K | 22313K | H2313 | TSN 613 G | 140 X 10 | 1 |
| 65 | SNK 515-612 | 1215K | - | H215 | TSN 515 G | 130 X 15.5 | 2 |
| 65 | SNK 515-612 | 2215K | 22215K | H315 | TSN 515 G | 130 X 12.5 | 2 |
| 65 | SNK 518-615 | 1315K | 21315K | H315 | TSN 615 G | 160 X 14 | 2 |
| 65 | SNK 518-615 | 2315K | 22315K | H2315 | TSN 615 G | 160 X 10 | 1 |
| 70 | SNK 516-613 | 1216K | - | H216 | TSN 516 G | 140 X 16 | 2 |
| 70 | SNK 516-613 | 2216K | 22216K | H316 | TSN 516 G | 140 X 12.5 | 2 |
| 70 | SNK 519-616 | 1316K | 21316K | H316 | TSN 616 G | 170 X 14.5 | 2 |
| 70 | SNK 519-616 | 2316K | 22316K | H2316 | TSN 616 G | 170 X 10 | 1 |
| 75 | SNK 517 | 1217K | - | H217 | TSN 517 G | 150 X 16.5 | 2 |
| 75 | SNK 517 | 2217K | 22217K | H317 | TSN 517 G | 150 X 12.5 | 2 |
| 75 | SNK 520-617 | 1317K | 21317K | H317 | TSN 617 G | 180 X 14.5 | 2 |
| 75 | SNK 520-617 | 2317K | 22317K | H2317 | TSN 617 G | 180 X 10 | 1 |
| 80 | SNK 518-615 | 1218K | - | H218 | TSN 518 G | 160 X 17.5 | 2 |
| 80 | SNK 518-615 | 2218K | 22218K | H318 | TSN 518 G | 160 X 12.5 | 2 |
| 80 | SNK 518-615 | - | 23218K | H2318 | TSN 518 G | 160 X 12.5 | 1 |
| 85 | SNK 519-616 | 1219K | - | H219 | TSN 519 G | 170 X 18 | 2 |
| 85 | SNK 519-616 | 2219K | 22219K | H319 | TSN 519 G | 170 X 12.5 | 2 |
| 85 | SNK 522-619 | - | 22319K | H2319 | TSN 619 G | 200 X 13 | 1 |
| 90 | SNK 520-617 | 1220K | - | H220 | TSN 520 G | 180 X 18 | 2 |
| 90 | SNK 520-617 | 2220K | 22220K | H320 | TSN 520 G | 180 X 12 | 2 |
| 90 | SNK 520-617 | - | 23220K | H2320 | TSN 520 G | 180 X 9.7 | 1 |
| 90 | SNK 524-620 | - | 22320K | H2320 | TSN 620 G | 215 X 13 | 1 |
| 100 | SNK 522-619 | 1222K | - | H222 | TSN 522 G | 200 X 21 | 2 |
| 100 | SNK 522-619 | 2222K | 22222K | H322 | TSN 522 G | 200 X 13.5 | 2 |
| 100 | SNK 522-619 | - | 22322K | H2322 | TSN 522 G | 200 X 10 | 1 |
| 110 | SNK 524-620 | - | 22224K | H3124 | TSN 524 G | 215 X 14 | 2 |
| 110 | SNK 524-620 | - | 22324K | H2324 | TSN 524 G | 215 X 10 | 1 |
| 115 | SNK 526 | - | 22226K | H3126 | TSN 526 G | 230 X 13 | 2 |



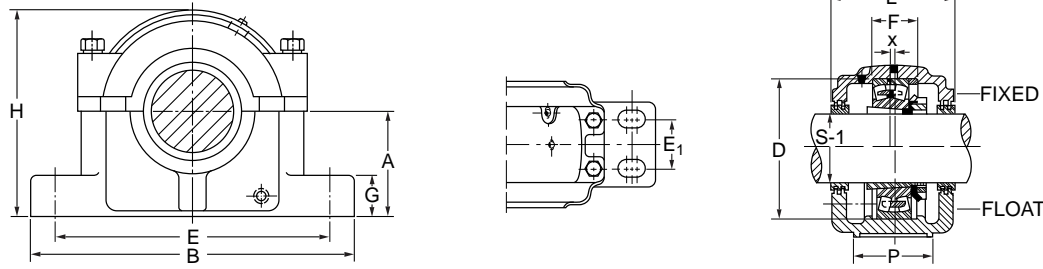
| Shaft Dia. | Housing No | Bearing No | | Accessories | Sealing Arrangement | Locating Ring | |
|------------|------------|--------------------|------------------|-------------|---------------------|---------------|-----|
| | | Self-Aligning Ball | Spherical Roller | | | Number | Qty |
| mm | | | | | | | |
| 115 | SNK 526 | - | 23226K | H2326 | TSN 526 G | 230 X 10 | 1 |
| 125 | SNK 528 | - | 22228K | H3128 | TSN 528 G | 250 X 15 | 2 |
| 125 | SNK 528 | - | 23228K | H2328 | TSN 528 G | 250 X 10 | 1 |
| 135 | SNK 530 | - | 22230K | H3130 | TSN 530 G | 270 X 16.5 | 2 |
| 135 | SNK 530 | - | 23230K | H2330 | TSN 530 G | 270 X 10 | 1 |
| 140 | SNK 532 | - | 22232K | H3132 | TSN 532 G | 290 X 17 | 2 |
| 140 | SNK 532 | - | 23232K | H2332 | TSN 532 G | 290 X 10 | 1 |

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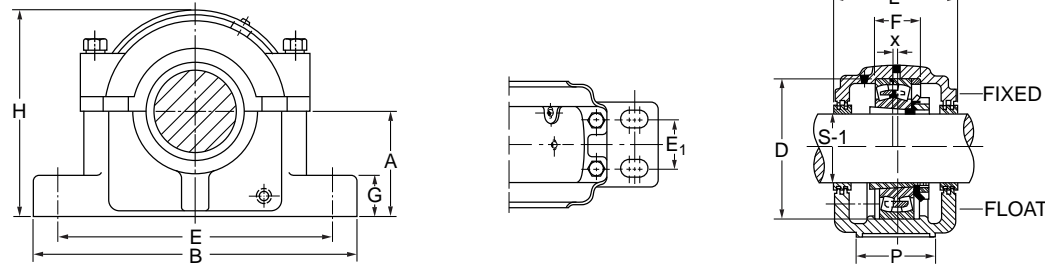
| Housing No | Basic Dimensions | | | | | | | | | | | | |
|------------|------------------|--------|-------|--------|----------|----------|-------|----------|--------|-------------------|---------|-----|-----|
| | A | B | p | G | E | | E1 | H | L | Bolts (No, Req'd) | | D | F |
| | in. | in. | in. | in. | Max. in. | Max. in. | in. | in. | in. | in. | in. | mm | mm |
| SAF 216 | 3.1/2 | 13 | 3.1/2 | 1.1/4 | 11 | 9.5/8 | 2.1/8 | 6.15/16 | 5.3/8 | (2) 3/4 | (4) 5/8 | 140 | 43 |
| SAF 217 | 3.3/4 | 13 | 3.1/2 | 1.1/4 | 11 | 9.7/8 | 2.1/8 | 7.3/8 | 5.3/8 | (2) 3/4 | (4) 5/8 | 150 | 46 |
| SAF 218 | 4 | 13.3/4 | 3.7/8 | 1.5/16 | 11.5/8 | 10.3/8 | 2.1/8 | 7.3/4 | 5.3/4 | (2) 3/4 | (4) 5/8 | 160 | 50 |
| SAF 220 | 4.1/2 | 15.1/4 | 4.3/8 | 1.3/4 | 13.1/8 | 11.5/8 | 2.3/8 | 8.3/4 | 6 | (2) 7/8 | (4) 3/4 | 180 | 56 |
| SAF 222 | 4.15/16 | 16.1/2 | 4.3/4 | 2 | 14.1/2 | 12.5/8 | 2.3/4 | 9.5/8 | 6.1/2 | (4) 3/4 | | 200 | 63 |
| SAF 224 | 5.1/4 | 16.1/2 | 4.3/4 | 2.1/8 | 14.1/2 | 13.1/4 | 2.3/4 | 10.1/4 | 7.3/8 | (4) 3/4 | | 215 | 68 |
| SAF 226 | 6 | 18.3/8 | 5.1/8 | 2.3/8 | 16 | 14.5/8 | 3.1/4 | 11.1/2 | 8 | (4) 7/8 | | 230 | 74 |
| SAF 228 | 6 | 20.1/8 | 5.7/8 | 2.3/8 | 17.1/8 | 16 | 3.3/8 | 11.3/4 | 7.5/8 | (4) 1 | | 250 | 78 |
| SAF 230 | 6.5/16 | 21.1/4 | 6.1/4 | 2.1/2 | 18.1/4 | 17 | 3.3/4 | 12.1/2 | 8.3/8 | (4) 1 | | 270 | 83 |
| SAF 232 | 6.11/16 | 22 | 6.1/4 | 2.5/8 | 19.1/4 | 17.3/8 | 3.3/4 | 13.5/16 | 8.3/4 | (4) 1 | | 290 | 90 |
| SAF 234 | 7.1/16 | 24.3/4 | 6.3/4 | 2.3/4 | 21.5/8 | 19.3/8 | 4.1/4 | 14.3/16 | 9.5/8 | (4) 1 | | 310 | 96 |
| SAF 236 | 7.1/2 | 26.3/4 | 7.1/8 | 3 | 23.5/8 | 20.7/8 | 4.5/8 | 14.7/8 | 10 | (4) 1 | | 320 | 96 |
| SAF 238 | 7.7/8 | 28 | 7.1/2 | 3.1/8 | 24.3/8 | 21.5/8 | 4.1/2 | 15.11/16 | 10.3/4 | (4) 1 1/4 | | 340 | 102 |
| SAF 240 | 8.1/4 | 29.1/2 | 8 | 3.3/8 | 25 | 22.1/2 | 5 | 16.1/2 | 11.1/4 | (4) 1 1/4 | | 360 | 108 |

| Shaft Dia. | | Mass | Complete Set | Pillow Block | Bearing | Accessories | | | | | |
|------------|---------|-------|---------------------|---------------------|---------|-------------|---------|---------|---------|------------|---------------------|
| S-2 | S-3 | | | | | Unit Number | Housing | Number | Locknut | Lockwasher | Labyrinth Seal Ring |
| in. | in. | kg | S-2 Shaft (1 Req'd) | S-3 Shaft (1 Req'd) | | | | | | | |
| 3.5/8 | 3 | 10.2 | SAF 22216 | SAF 216 | 22216 | KM 16 | MB 16 | LER 82 | LER 54 | SR-16-13 | 9 |
| 3.15/16 | 3.3/16 | 12.8 | SAF 22217 | SAF 217 | 22217 | KM 17 | MB 17 | LER 89 | LER 63 | SR-17-14 | 9 |
| 4.1/8 | 3.3/8 | 15.4 | SAF 22218 | SAF 218 | 22218 | KM 18 | MB 18 | LER 112 | LER 191 | SR-18-15 | 11 |
| 4.1/2 | 3.13/16 | 22.6 | SAF 22220 | SAF 220 | 22220 | KM 20 | MB 20 | LER 118 | LER 106 | SR-20-17 | 12 |
| 4.7/8 | 4.3/16 | 28.9 | SAF 22222 | SAF 222 | 22222 | KM 22 | MB 22 | LER 121 | LER 113 | SR-22-19 | 14 |
| 5.5/16 | 4.9/16 | 30.5 | SAF 22224 | SAF 224 | 22224 | KM 24 | MB 24 | LER 127 | LER 119 | SR-24-20 | 15 |
| 5.7/8 | 4.15/16 | 46.0 | SAF 22226 | SAF 226 | 22226 | KM 26 | MB 26 | LER 136 | LER 122 | SR-26-0 | 27 |
| 6.1/4 | 5.5/16 | 50.5 | SAF 22228 | SAF 228 | 22228 | KM 28 | MB 28 | LER 144 | LER 127 | SR-28-0 | 16 |
| 6.5/8 | 5.3/4 | 65.5 | SAF 22230 | SAF 230 | 22230 | KM 30 | MB 30 | LER 151 | LER 134 | SR-30-0 | 17 |
| 7 | 6.1/16 | 75.8 | SAF 22232 | SAF 232 | 22232 | KM 32 | MB 32 | LER 156 | LER 142 | SR-32-0 | 18 |
| 7.7/16 | 6.7/16 | 80.0 | SAF 22234 | SAF 234 | 22234 | KM 34 | MB 34 | LER 161 | LER 148 | SR-34-0 | 19 |
| 7.13/16 | 6.7/8 | 94.7 | SAF 22236 | SAF 236 | 22236 | KM 36 | MB 36 | LER 165 | LER 154 | SR-36-30 | 20 |
| 8.3/8 | 7.1/4 | 127.1 | SAF 22238 | SAF 238 | 22238 | KM 38 | MB 38 | LER 171 | LER 160 | SR-38-32 | 21 |
| 8.3/4 | 7.5/8 | 152.8 | SAF 22240 | SAF 240 | 22240 | KM 40 | MB 40 | LER 175 | LER 164 | SR-40-34 | 22 |



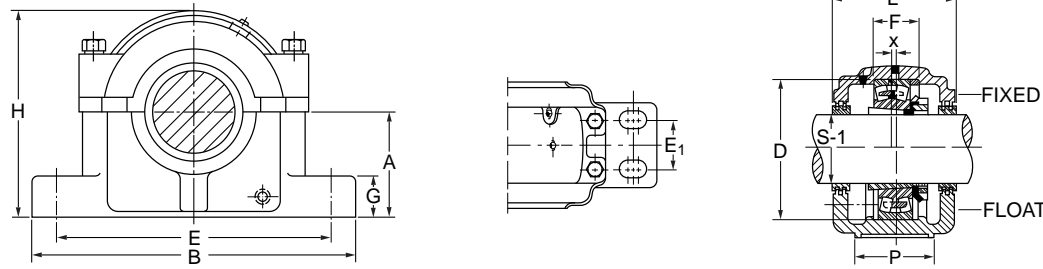
| Housing No | Basic Dimensions | | | | | | | | | | | | |
|------------|------------------|--------|-------|--------|----------|----------|-------|----------|--------|-------------------|-----------|-----|------|
| | A | B | p | G | E | | E1 | H | L | Bolts (No, Req'd) | | D | F |
| | in. | in. | in. | in. | Max. in. | Max. in. | in. | in. | in. | in. | in. | mm | mm |
| SAF 308 | 2.1/2 | 8.1/4 | 2.3/8 | 1 | 7 | 6.1/2 | | 4.13/16 | 4 | (2) 1/2 | | 90 | 42.8 |
| SAF 309 | 2.3/4 | 9.5/8 | 2.3/4 | 1 | 7.7/8 | 7.3/8 | | 5.5/16 | 4.1/4 | (2) 5/8 | | 100 | 46 |
| SAF 310 | 3 | 10.5/8 | 2.3/4 | 1.1/8 | 9 | 7.3/4 | | 5.13/16 | 4.5/8 | (2) 5/8 | | 110 | 51 |
| SAF 311 | 3.1/4 | 11 | 3.1/8 | 1.3/16 | 9.1/2 | 8.1/8 | 2 | 6.3/16 | 5 | (2) 5/8 | (4) 1/2 | 120 | 53 |
| SAF 313 | 3.1/2 | 13 | 3.1/2 | 1.1/4 | 11 | 9.5/8 | 2.1/8 | 6.15/16 | 5.3/8 | (2) 3/4 | (4) 5/8 | 140 | 58 |
| SAF 315 | 4 | 13.3/4 | 3.7/8 | 1.5/16 | 11.5/8 | 10.3/8 | 2.1/8 | 7.13/16 | 6.1/4 | (2) 3/4 | (4) 5/8 | 160 | 65 |
| SAF 316 | 4.1/4 | 14.1/4 | 3.7/8 | 1.5/16 | 12.5/8 | 10.5/8 | 2.1/8 | 8.1/4 | 6.1/2 | (2) 3/4 | (4) 5/8 | 170 | 68 |
| SAF 317 | 4.1/2 | 15.1/4 | 4.3/8 | 1.3/4 | 13.1/8 | 11.5/8 | 2.3/8 | 8.3/4 | 6.3/4 | (2) 7/8 | (4) 3/4 | 180 | 70 |
| SAF 318 | 4.3/4 | 15.1/2 | 4.3/8 | 2 | 13.1/2 | 12 | 2.1/4 | 9.3/16 | 6.7/8 | | (4) 3/4 | 190 | 74 |
| SAF 320 | 5.1/4 | 16.1/2 | 4.3/4 | 2.1/8 | 14.1/2 | 13.1/4 | 2.3/4 | 10.1/4 | 7.3/8 | | (4) 3/4 | 215 | 83 |
| SAF 322 | 6 | 18.3/8 | 5.1/8 | 2.3/8 | 16 | 14.5/8 | 3.1/4 | 11.1/2 | 8 | | (4) 7/8 | 240 | 90 |
| SAF 324 | 6.5/16 | 21.1/4 | 6.1/4 | 2.1/2 | 18.1/4 | 17 | 3.3/4 | 12.1/2 | 8.3/8 | | (4) 1 | 260 | 96 |
| SAF 326 | 6.11/16 | 22 | 6.1/4 | 2.5/8 | 19.1/4 | 17.3/8 | 3.3/4 | 13.5/16 | 8.3/4 | | (4) 1 | 280 | 103 |
| SAF 328 | 7.1/16 | 24.3/4 | 6.3/4 | 2.3/4 | 21.5/8 | 19.3/8 | 4.1/4 | 14.3/16 | 9.5/8 | | (4) 1 | 300 | 112 |
| SAF 330 | 7.1/2 | 26.3/4 | 7.1/8 | 3 | 23.5/8 | 20.7/8 | 4.5/8 | 14.7/8 | 9.3/4 | | (4) 1 | 320 | 118 |
| SAF 332 | 7.7/8 | 28 | 7.1/2 | 3.1/8 | 24.3/8 | 21.5/8 | 4.1/2 | 15.11/16 | 10.3/4 | | (4) 1.1 4 | 340 | 124 |

| Shaft Dia. | | Mass | Complete Set | Pillow Block | Bearing | Accessories | | | | | |
|------------|---------|-------|--------------|--------------|---------|-------------|---------|---------|---------|------------|---------------------|
| S-2 | S-3 | | | | | Unit Number | Housing | Number | Locknut | Lockwasher | Labyrinth Seal Ring |
| in. | in. | kg | in. | in. | in. | | | | | | in. |
| 1.15/16 | 1.7/16 | 5.0 | SAF 22308 | SAF 308 | 222308 | KM 08 | MB 08 | LER 24 | LER 17 | SR-10- 8 | 3 |
| 2.1/8 | 1.11/16 | 6.4 | SAF 22309 | SAF 309 | 22309 | KM 09 | MB 09 | LER 28 | LER 20 | SR-11- 9 | 4 |
| 2.3/8 | 1.7/8 | 7.9 | SAF 22310 | SAF 310 | 22310 | KM 10 | MB 10 | LER 35 | LER 23 | SR- 0-10 | 4 |
| 2.9/16 | 2.1/16 | 9.0 | SAF 22311 | SAF 311 | 22311 | KM 11 | MB 11 | LER 40 | LER 27 | SR-13-11 | 6 |
| 3.1/16 | 2.7/16 | 12.8 | SAF 22313 | SAF 313 | 22313 | KM 13 | MB 13 | LER 55 | LER 37 | SR-16-13 | 7 |
| 3.7/16 | 2.13/16 | 17.7 | SAF 22315 | SAF 315 | 22315 | KM 15 | MB 15 | LER 79 | LER 46 | SR-18-15 | 8 |
| 3.5/8 | 3 | 22.2 | SAF 22316 | SAF 316 | 22316 | KM 16 | MB 16 | LER 84 | LER 60 | SR-19-16 | 10 |
| 3.15/16 | 3.3/16 | 24.0 | SAF 22317 | SAF 317 | 22317 | KM 17 | MB 17 | LER 109 | LER 188 | SR-20-17 | 11 |
| 4.1/8 | 3.3/8 | 26.3 | SAF 22318 | SAF 318 | 22318 | KM 18 | MB 18 | LER 112 | LER 191 | SR-21-18 | 11 |
| 4.1/2 | 3.13/16 | 36.3 | SAF 22320 | SAF 320 | 22320 | KM 20 | MB 20 | LER 118 | LER 106 | SR-24-20 | 12 |
| 4.7/8 | 4.3/16 | 43.1 | SAF 22322 | SAF 322 | 22322 | KM 22 | MB 22 | LER 121 | LER 113 | SR- 0-22 | 14 |
| 5.5/16 | 4.9/16 | 63.4 | SAF 22324 | SAF 324 | 22324 | KM 24 | MB 24 | LER 127 | LER 119 | SR- 0-24 | 15 |
| 5.7/8 | 4.15/16 | 78.7 | SAF 22326 | SAF 326 | 22326 | KM 26 | MB 26 | LER 136 | LER 122 | SR- 0-26 | 27 |
| 6.1/4 | 5.5/16 | 92.8 | SAF 22328 | SAF 328 | 22328 | KM 28 | MB 28 | LER 144 | LER 127 | SR- 0-28 | 16 |
| 6.5/8 | 5.3/4 | 111.2 | SAF 22330 | SAF 330 | 22330 | KM 30 | MB 30 | LER 151 | LER 134 | SR-36-30 | 17 |
| 7 | 6.1/16 | 129.3 | SAF 22332 | SAF 332 | 22332 | KM 32 | MB 32 | LER 156 | LER 142 | SR-38-32 | 18 |



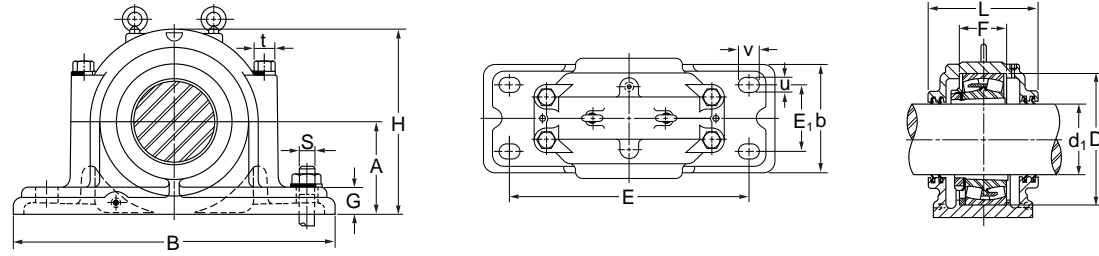
| Housing No | Basic Dimensions | | | | | | | | | | | |
|------------|------------------|--------|-------|--------|----------|----------|-------|----------|--------|-------|-------------------|-------------|
| | A | B | p | G | E | | E1 | H | X | L | Bolts (No, Req'd) | |
| | in. | in. | in. | in. | Max. in. | Max. in. | in. | in. | in. | in. | in. | in. |
| SAF 509 | 2.1/4 | 8.1/4 | 2.3/8 | 13/16 | 7 | 6.1/4 | | 4.3/8 | 3.5/8 | 0.114 | (2) | 1/2 |
| SAF 510 | 2.1/2 | 8.1/4 | 2.3/8 | 15/16 | 7 | 6.1/2 | | 4.3/4 | 3.5/8 | 0.133 | (2) | 1/2 |
| SAF 511 | 2.3/4 | 9.5/8 | 2.3/4 | 15/16 | 7.7/8 | 7.3/8 | | 5.1/4 | 3.7/8 | 0.114 | (2) | 5/8 |
| SAF 513 | 3 | 11 | 3.1/8 | 1 | 9.1/2 | 8.1/8 | 2 | 5.15/16 | 4.1/2 | 0.157 | (2) | 5/8 (4) 1/2 |
| SAF 515 | 3.1/4 | 11.1/4 | 3.1/8 | 1.1/8 | 9.5/8 | 8.5/8 | 1.7/8 | 6.3/8 | 4.3/4 | 0.118 | (2) | 5/8 (4) 1/2 |
| SAF 516 | 3.1/2 | 13 | 3.1/2 | 1.3/16 | 11 | 9.5/8 | 2.1/8 | 6.7/8 | 4.7/8 | 0.187 | (2) | 3/4 (4) 5/8 |
| SAF 517 | 3.3/4 | 13 | 3.1/2 | 1.1/4 | 11 | 9.7/8 | 2.1/8 | 7.5/16 | 5 | 0.187 | (2) | 3/4 (4) 5/8 |
| SAF 518 | 4 | 13.3/4 | 3.7/8 | 1.5/16 | 11.5/8 | 10.3/8 | 2.1/8 | 7.3/4 | 5.3/4 | 0.187 | (2) | 3/4 (4) 5/8 |
| SAF 520 | 4.1/2 | 15.1/4 | 4.3/8 | 1.3/4 | 13.1/8 | 11.5/8 | 2.3/8 | 8.3/4 | 6.1/8 | 0.187 | (2) | 7/8 (4) 3/4 |
| SAF 522 | 4.15/16 | 16.1/2 | 4.3/4 | 2 | 14.1/2 | 12.5/8 | 2.3/4 | 9.5/8 | 6.1/2 | 0.187 | (4) | 3/4 |
| SAF 524 | 5.1/4 | 16.1/2 | 4.3/4 | 2.1/8 | 14.1/2 | 13.1/4 | 2.3/4 | 10.1/4 | 7.3/8 | 0.187 | (4) | 3/4 |
| SAF 526 | 6 | 18.3/8 | 5.1/8 | 2.3/8 | 16 | 14.5/8 | 3.1/4 | 11.1/2 | 8 | 0.187 | (4) | 7/8 |
| SAF 528 | 6 | 20.1/8 | 5.7/8 | 2.3/8 | 17.1/8 | 16 | 3.3/8 | 11.3/4 | 7.5/8 | 0.187 | (4) | 1 |
| SAF 530 | 6.5/16 | 21.1/4 | 6.1/4 | 2.1/2 | 18.1/4 | 17 | 3.3/4 | 12.1/2 | 8.3/8 | 0.187 | (4) | 1 |
| SAF 532 | 6.11/16 | 22 | 6.1/4 | 2.5/8 | 19.1/4 | 17.3/8 | 3.3/4 | 13.5/16 | 8.3/4 | 0.187 | (4) | 1 |
| SAF 534 | 7.1/16 | 24.3.4 | 6.3/4 | 2.3/4 | 21.5/8 | 19.3/8 | 4.1/4 | 14.3/16 | 9.5/8 | 0.187 | (4) | 1 |
| SAF 536 | 7.1/2 | 26.3/4 | 7.1/8 | 3 | 23.5/8 | 20.7/8 | 4.5/8 | 14.7/16 | 10 | 0.187 | (4) | 1 |
| SAF 538 | 7.7/8 | 28 | 7.1/2 | 3.1/8 | 24.3/8 | 21.5/8 | 4.1/2 | 15.11/16 | 10.3/4 | 0.187 | (4) | 1.1/4 |
| SAF 540 | 8.1/4 | 29.1/2 | 8 | 3.3/8 | 25 | 22.1/2 | 5 | 16.1/2 | 11.1/4 | 0.187 | (4) | 1.1/4 |
| SAF 544 | 9.1/2 | 32.3/4 | 8.3/4 | 3.3/4 | 27.7/8 | 24.3/4 | 5.1/4 | 18.5/8 | 12 | 0.187 | (4) | 1.1/2 |

| D | F | Shaft Dia. | Mass | Complete Block | Pillow Block | Bearing | Accessories | | | | | |
|-----|-----|------------|-------|----------------|--------------|---------|-------------|--------------------------------|-------------------------------|----------------------------|----------------|----|
| | | S-1 | | Block Number | Housing Only | | Number | Adapter Locknut and Lockwasher | Labyrinth Seal Ring (2 Req'd) | Stabilizing Ring (1 Req'd) | End Plug (EPR) | |
| mm | mm | in. | kg | | | | | | | | | |
| 85 | 29 | 1.7/16 | 4.2 | SAF 22509 | SAF 509 | 22209K | SNW 9 | LER 17 | SR-9-9 | | | 3 |
| 90 | 30 | 1.11/16 | 4.6 | SAF 22510 | SAF 510 | 22210K | SNW 10 | LER 20 | SR-10-0 | | | 4 |
| 100 | 31 | 1.15/16 | 5.6 | SAF 22511 | SAF 511 | 22211K | SNW 11 | LER 24 | SR-11-0 | | | 5 |
| 120 | 39 | 2.3/16 | 8.2 | SAF 22513 | SAF 513 | 22213K | SNW 13 | LER 29 | SR-13-0 | | | 6 |
| 130 | 37 | 2.7/16 | 8.2 | SAF 22515 | SAF 515 | 22215K | SNW 15 | LER 37 | SR-15-0 | | | 7 |
| 140 | 43 | 2.11/16 | 12.0 | SAF 22516 | SAF 516 | 22216K | SNW 16 | LER 44 | SR-16-13 | | | 8 |
| 150 | 46 | 2.15/16 | 13.3 | SAF 22517 | SAF 517 | 22217K | SNW 17 | LER 53 | SR-17-14 | | | 9 |
| 160 | 50 | 3.3/16 | 16.3 | SAF 22518 | SAF 518 | 22218K | SNW 18 | LER 188 | SR-18-15 | | | 11 |
| 180 | 56 | 3.7/16 | 22.4 | SAF 22520 | SAF 520 | 22220K | SNW 20 | LER 102 | SR-20-17 | | | 12 |
| 200 | 63 | 3.15/16 | 26.8 | SAF 22522 | SAF 522 | 22222K | SNW 22 | LER 109 | SR-22-19 | | | 13 |
| 215 | 68 | 4.3/16 | 31.8 | SAF 22524 | SAF 524 | 22224K | SNW 24 | LER 113 | SR-24-20 | | | 14 |
| 230 | 74 | 4.7/16 | 42.3 | SAF 22526 | SAF 526 | 22226K | SNW 26 | LER 117 | SR-26-0 | | | 15 |
| 250 | 78 | 4.15/16 | 49.2 | SAF 22528 | SAF 528 | 22228K | SNW 28 | LER 122 | SR-28-0 | | | 27 |
| 270 | 83 | 5.3/16 | 61.6 | SAF 22530 | SAF 530 | 22230K | SNW 30 | LER 125 | SR-30-0 | | | 16 |
| 290 | 90 | 5.7/16 | 70.4 | SAF 22532 | SAF 532 | 22232K | SNW 32 | LER 130 | SR-32-0 | | | 16 |
| 310 | 96 | 5.15/16 | 82.4 | SAF 22534 | SAF 534 | 22234K | SNW 34 | LER 140 | SR-34-0 | | | 18 |
| 320 | 96 | 6.7/16 | 96.9 | SAF 22536 | SAF 536 | 22236K | SNW 36 | LER 148 | SR-36-30 | | | 19 |
| 340 | 102 | 6.15/16 | 127.2 | SAF 22538 | SAF 538 | 22238K | SNW 38 | LER 155 | SR-38-32 | | | 20 |
| 360 | 108 | 7.3/16 | 147.3 | SAF 22540 | SAF 540 | 22240K | SNW 40 | LER 159 | SR-40-34 | | | 21 |
| 400 | 111 | 7.15/16 | 174.7 | SAF 22544 | SAF 544 | 22244K | SNW 44 | LER 167 | SR-44-38 | | | 23 |



| Housing No | Basic Dimensions | | | | | | | | | | |
|------------|------------------|--------|-------|--------|----------|----------|-------|----------|---------|-------------------|-----------|
| | A | B | p | G | E | | E1 | H | L | Bolts (No, Req'd) | |
| | in. | in. | in. | in. | Max. in. | Max. in. | in. | in. | in. | in. | in. |
| SAF 609 | 2.3/4 | 9.5/8 | 2.3/4 | 1 | 7.7/8 | 7.3/8 | | 5.5/16 | 4.1/4 | (2) 5/8 | |
| SAF 610 | 3 | 10.5/8 | 2.3/4 | 1.1/8 | 9 | 7.3/4 | | 5.13/16 | 4.5/8 | (2) 5/8 | |
| SAF 611 | 3.1/4 | 11 | 3.1/3 | 1.3/16 | 9.1/2 | 8.1/8 | 2 | 6.3/16 | 4.7/8 | (2) 5/8 | (4) 1/2 |
| SAF 613 | 3.1/2 | 13 | 3.1/2 | 1.1/4 | 11 | 9.5/8 | 2.1/8 | 6.15/16 | 5.3/8 | (2) 3/4 | (4) 5/8 |
| SAF 615 | 4 | 13.3/4 | 3.7/8 | 1.5/16 | 11.5/8 | 10.3/8 | 2.1/8 | 7.3/4 | 6.1/4 | (2) 3/4 | (4) 5/8 |
| SAF 616 | 4.1/4 | 14.1/4 | 3.7/8 | 1.5/16 | 12.5/8 | 10.5/8 | 2.1/8 | 8.1/4 | 6.1/2 | (2) 3/4 | (4) 5/8 |
| SAF 617 | 4.1/2 | 15.1/4 | 4.3/8 | 1.3/4 | 13.1/8 | 11.5/8 | 2.3/8 | 8.3/4 | 6.3/4 | (2) 7/8 | (4) 3/4 |
| SAF 618 | 4.3/4 | 15.1/2 | 4.3/8 | 2 | 13.1/2 | 12 | 2.1/4 | 9.3/16 | 6.7/8 | | (4) 3/4 |
| SAF 620 | 5.1/4 | 16.1/2 | 4.3/4 | 2.1/8 | 14.1/2 | 13.1/4 | 2.3/4 | 10.1/4 | 7.3/8 | | (4) 3/4 |
| SAF 622 | 6 | 18.3/8 | 5.1/8 | 2.3/8 | 16 | 14.5/8 | 3 | 11.1/2 | 8 | | (4) 7/8 |
| SAF 624 | 6.5/16 | 21.1/4 | 6.1/4 | 2.1/2 | 18.1/4 | 17 | 3.3/4 | 12.1/2 | 8.3/8 | | (4) 1 |
| SAF 626 | 6.11/16 | 22 | 6.1/4 | 2.5/8 | 19.1/4 | 17.3/8 | 3.3/4 | 13.5/16 | 8.3/4 | | (4) 1 |
| SAF 628 | 7.1/16 | 24.3/4 | 6.3/4 | 2.3/4 | 21.5/8 | 19.3/8 | 4.1/4 | 14.3/16 | 9.5/8 | | (4) 1 |
| SAF 630 | 7.1/2 | 26.3/4 | 7.1/8 | 3 | 23.5/8 | 20.7/8 | 4.5/8 | 14.7/8 | 9.3/4 | | (4) 1 |
| SAF 632 | 7.7/8 | 28 | 7.1/2 | 3.1/8 | 24.5/8 | 21.5/8 | 4.1/2 | 15.11/16 | 10.3/4 | | (4) 1.1/4 |
| SAF 634 | 8.1/4 | 29.1/2 | 8 | 3.3/8 | 25 | 22.1/2 | 5 | 16.1/2 | 11.1/4 | | (4) 1.1/4 |
| SAF 636 | 8.7/8 | 31.1/4 | 8.1/4 | 3.1/2 | 26.5/8 | 24 | 5.1/4 | 17.3/4 | 11.3/8 | | (4) 1.1/4 |
| SAF 638 | 9.1/2 | 32.3/4 | 8.3/4 | 3.3/4 | 27.7/8 | 24.3/4 | 5.1/4 | 18.5/8 | 12 | | (4) 1.1/2 |
| SAF 640 | 9.7/8 | 34.1/4 | 9 | 4 | 29.1/2 | 26.1/4 | 5.1/2 | 20 | 12.1/16 | | (4) 1.1/2 |

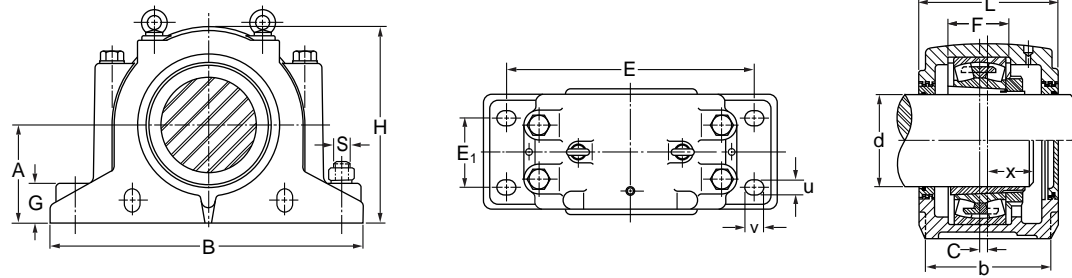
| D | F | Shaft Dia. S-1 | Mass | Complete Block | Pillow Block | Bearing | Accessories | | | |
|-----|-----|----------------|-------|----------------|--------------|---------|--------------------------------|-------------------------------|----------------------------|----------------|
| | | | | | | | Adapter Locknut and Lockwasher | Labyrinth Seal Ring (2 Req'd) | Stabilizing Ring (1 Req'd) | End Plug (EPR) |
| mm | mm | in. | kg | Block Number | Housing Only | Number | | | | |
| 100 | 46 | 1.7/16 | 5.4 | SAF 22609 | SAF 609 | 22309K | SNW 109 | LER 17 | SR-11-9 | 3 |
| 110 | 51 | 1.11/16 | 7.5 | SAF 22610 | SAF 610 | 22310K | SNW 110 | LER 20 | SR-0-10 | 4 |
| 120 | 53 | 1.15/16 | 9.0 | SAF 22611 | SAF 611 | 22311K | SNW 111 | LER 24 | SR-13-11 | 5 |
| 140 | 58 | 2.3/16 | 12.8 | SAF 22613 | SAF 613 | 22313K | SNW 113 | LER 32 | SR-16-13 | 6 |
| 160 | 65 | 2.7/16 | 16.5 | SAF 22615 | SAF 615 | 22315K | SNW 115 | LER 37 | SR-18-15 | 7 |
| 170 | 68 | 2.11/16 | 21.3 | SAF 22616 | SAF 616 | 22316K | SNW 116 | LER 44 | SR-19-16 | 8 |
| 180 | 70 | 2.15/16 | 25.6 | SAF 22617 | SAF 617 | 22317K | SNW 117 | LER 184 | SR-20-17 | 10 |
| 190 | 74 | 3.3/16 | 28.0 | SAF 22618 | SAF 618 | 22318K | SNW 118 | LER 188 | SR-21-18 | 11 |
| 215 | 83 | 3.7/16 | 34.4 | SAF 22620 | SAF 620 | 22320K | SNW 120 | LER 102 | SR-24-20 | 12 |
| 240 | 90 | 3.15/16 | 47.9 | SAF 22622 | SAF 622 | 22322K | SNW 122 | LER 109 | SR-0-22 | 13 |
| 260 | 96 | 4.3/16 | 65.1 | SAF 22624 | SAF 624 | 22324K | SNW 124 | LER 113 | SR-0-24 | 14 |
| 280 | 103 | 4.7/16 | 73.5 | SAF 22626 | SAF 626 | 22326K | SNW 126 | LER 117 | SR-0-26 | 15 |
| 300 | 112 | 4.15/16 | 86.1 | SAF 22628 | SAF 628 | 22328K | SNW 128 | LER 122 | SR-0-28 | 27 |
| 320 | 118 | 5.3/16 | 115.8 | SAF 22630 | SAF 630 | 22330K | SNW 130 | LER 125 | SR-36-30 | 16 |
| 340 | 124 | 5.7/16 | 120.0 | SAF 22632 | SAF 632 | 22332K | SNW 132 | LER 130 | SR-38-32 | 16 |
| 360 | 130 | 5.15/16 | 136.8 | SAF 22634 | SAF 634 | 22334K | SNW 134 | LER 140 | SR-40-34 | 18 |
| 380 | 136 | 6.7/16 | 167.3 | SAF 22636 | SAF 636 | 22336K | SNW 136 | LER 148 | SR-0-36 | 19 |
| 400 | 142 | 6.15/16 | 196.9 | SAF 22638 | SAF 638 | 22338K | SNW 138 | LER 155 | SR-44-38 | 20 |
| 420 | 148 | 7.3/16 | 218.7 | SAF 22640 | SAF 640 | 22340K | SNW 140 | LER 159 | SR-0-40 | 21 |



| Housing No | Basic Dimensions | | | | | | | | | | | | |
|------------|------------------|------|-------|------|-----|-----|-----|-------|-----|-----|-----|----|----|
| | d1 | D H8 | A h13 | B | E | B | G | F H13 | H | L | E1 | u | v |
| SD 3034 | 150 | 260 | 160 | 540 | 450 | 200 | 50 | 77 | 320 | 230 | 110 | 35 | 52 |
| SD 3036 | 160 | 280 | 170 | 560 | 470 | 220 | 50 | 84 | 340 | 250 | 120 | 35 | 52 |
| SD 3038 | 170 | 290 | 170 | 560 | 470 | 220 | 50 | 85 | 345 | 250 | 120 | 35 | 52 |
| SD 3040 | 180 | 310 | 180 | 620 | 510 | 230 | 60 | 92 | 360 | 270 | 140 | 35 | 55 |
| SD 3044 | 200 | 340 | 200 | 700 | 570 | 260 | 65 | 100 | 400 | 290 | 160 | 35 | 55 |
| SD 3048 | 220 | 360 | 210 | 740 | 610 | 270 | 65 | 102 | 420 | 300 | 170 | 35 | 55 |
| SD 3052 | 240 | 400 | 240 | 820 | 680 | 300 | 70 | 114 | 475 | 330 | 190 | 42 | 62 |
| SD 3056 | 260 | 420 | 250 | 860 | 710 | 320 | 85 | 116 | 500 | 350 | 200 | 42 | 62 |
| SD 3060 | 280 | 460 | 280 | 920 | 770 | 330 | 85 | 128 | 550 | 360 | 210 | 42 | 62 |
| SD 3064 | 300 | 480 | 280 | 940 | 790 | 340 | 85 | 131 | 560 | 370 | 210 | 42 | 62 |
| SD 3068 | 320 | 520 | 310 | 1020 | 860 | 370 | 100 | 143 | 615 | 400 | 230 | 50 | 70 |
| SD 3072 | 340 | 540 | 325 | 1060 | 890 | 390 | 100 | 144 | 640 | 410 | 250 | 50 | 70 |
| SD 3076 | 360 | 560 | 340 | 1080 | 900 | 390 | 100 | 145 | 665 | 410 | 260 | 50 | 70 |

| t | Bolt S | Mass kg | Bearing Number | Adapter Sleeve | Accessories | | ZF Seal |
|-----|--------|------------|-------------------|----------------|---------------|-----|---------|
| | | | | | Locating Ring | | |
| | | | | | Number | Qty | |
| M24 | M30 | 71 | 23034K | H3034 | SR260 X 10 | 1 | ZF34 |
| M24 | M30 | 77 | 23036K | H3036 | SR280 X 10 | 1 | ZF36 |
| M24 | M30 | 78 | 23038K | H3038 | SR290 X 10 | 1 | ZF38 |
| M24 | M30 | 85 | 23040K | H3040 | SR310 X 10 | 1 | ZF40 |
| M30 | M30 | 118 | 23044K | H3044 | SR340 X 10 | 1 | ZF44 |
| M30 | M30 | 136 | 23048K | H3048 | SR360 X 10 | 1 | ZF48 |
| M30 | M36 | 190 | 23052K | H3052 | SR400 X 10 | 1 | ZF52 |
| M36 | M36 | 242.2 | 23056K | H3056 | SR420 X 10 | 1 | ZF56 |
| M36 | M36 | 295 | 23060K | H3060 | SR460 X 10 | 1 | ZF60 |
| M36 | M36 | 291 | 23064K | H3064 | SR480 X 10 | 1 | ZF64 |
| M36 | M42 | 386 | 23068K | H3068 | SR520 X 10 | 1 | ZF68 |
| M36 | M42 | 434 | 23072K | H3072 | SR540 X 10 | 1 | ZF72 |
| M36 | M42 | 453 | 23076K | H3076 | SR560 X 10 | 1 | ZF76 |

TM



| Housing No | Shaft Dia | | Basic Dimensions | | | | | | | | | | |
|------------|-----------|------|------------------|------|-----|------|-----|-----|-----|-----|-----|-----|----|
| | d | | A | B | F | E | b | G | H | L | E1 | X | U |
| | Metric | Inch | | | | | | | | | | | |
| SD 3134 | 150 | 6 | 170 | 510 | 108 | 430 | 180 | 70 | 335 | 230 | 100 | 65 | 28 |
| SD 3136 | 160 | 6.5 | 180 | 530 | 116 | 450 | 190 | 75 | 355 | 240 | 110 | 68 | 30 |
| SD 3138 | 170 | 6.75 | 190 | 560 | 124 | 480 | 210 | 80 | 375 | 260 | 120 | 80 | 35 |
| SD 3140 | 180 | 7 | 210 | 610 | 132 | 510 | 230 | 85 | 410 | 280 | 130 | 82 | 35 |
| SD 3144 | 200 | | 220 | 640 | 140 | 540 | 240 | 90 | 435 | 290 | 140 | 90 | 36 |
| SD 3148 | 220 | | 240 | 700 | 148 | 600 | 260 | 95 | 475 | 310 | 150 | 100 | 38 |
| SD 3152 | 240 | | 260 | 770 | 164 | 650 | 280 | 100 | 515 | 320 | 160 | 105 | 45 |
| SD 3156 | 260 | | 280 | 790 | 166 | 670 | 280 | 105 | 550 | 330 | 160 | 105 | 45 |
| SD 3160 | 280 | | 300 | 830 | 180 | 710 | 310 | 110 | 590 | 350 | 190 | 110 | 44 |
| SD 3164 | 300 | | 320 | 880 | 196 | 750 | 330 | 115 | 630 | 370 | 200 | 120 | 45 |
| SD 3168 | 320 | | 340 | 965 | 210 | 840 | 380 | 120 | 670 | 390 | 240 | 135 | 52 |
| SD 3172 | 340 | | 360 | 1040 | 212 | 890 | 390 | 130 | 720 | 400 | 255 | 145 | 60 |
| SD 3176 | 360 | | 380 | 1120 | 214 | 980 | 400 | 135 | 750 | 405 | 255 | 145 | 68 |
| SD 3180 | 380 | | 400 | 1245 | 220 | 1050 | 420 | 140 | 790 | 425 | 270 | 150 | 75 |

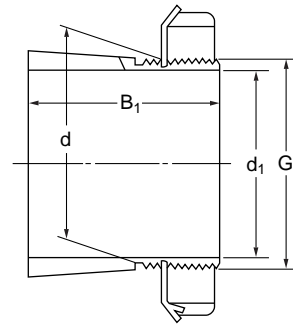
| V | Bolt S | Mass kg | Bearing Number | Accessories | | | |
|----|-----------|------------|-------------------|----------------|--------|---------------|-----|
| | | | | Adapter Sleeve | | Locating Ring | |
| | | | | Metric | Inch | Number | Qty |
| 35 | M24 | 66 | 23134K | H3134 | HE3134 | 280 X 10 | 2 |
| 38 | M24 | 75 | 23136K | H3136 | HE3136 | 300 X 10 | 2 |
| 48 | M24 | 87 | 23138K | H3138 | HE3138 | 320 X 10 | 2 |
| 42 | M30 | 113 | 23140K | H3140 | HE3140 | 340 X 10 | 2 |
| 46 | M30 | 129 | 23144K | H3144 | | 370 X 10 | 2 |
| 46 | M30 | 163 | 23148K | H3148 | | 400 X 10 | 2 |
| 60 | M36 | 199 | 23152K | H3152 | | 400 X 10 | 2 |
| 60 | M36 | 226 | 23156K | H3156 | | 460 X 10 | 2 |
| 64 | M36 | 283 | 23160K | H3160 | | 500 X 10 | 2 |
| 72 | M36 | 346 | 23164K | H3164 | | 540 X 10 | 2 |
| 70 | M45 | 514 | 23168K | H3168 | | 580 X 10 | 2 |
| 77 | M50 | 594 | 23172K | H3172 | | 600 X 10 | 2 |
| 88 | M55 | 702 | 23176K | H3176 | | 620 X 10 | 2 |
| 96 | M60 | 740 | 23180K | H3180 | | 650 X 10 | 2 |

TM

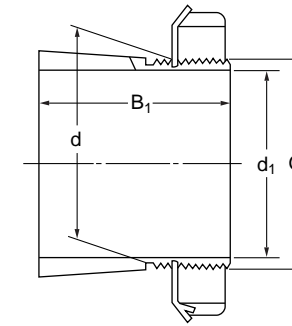


Accessories

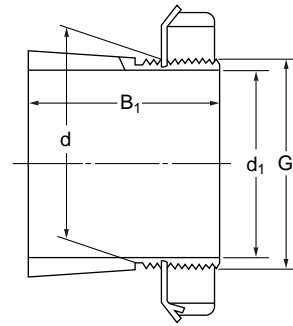
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|------------------------------------|------|
| 13.01 Adapter sleeves | 385 |
| 13.02 Adapter sleeves - Inch sizes | 388 |
| 13.03 Withdrawal sleeves | 393 |
| 13.04 Lock nuts | 396 |
| 13.05 Washers | 398 |
| 13.06 Steel balls | 400 |
| 13.07 Cylindrical rollers | 402 |
| 13.08 Needle rollers | 405 |



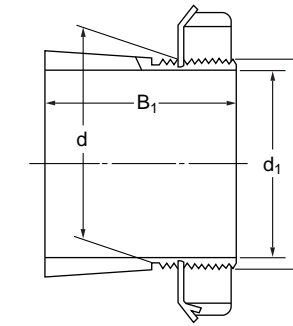
| Basic Dimensions | | | | Mass kg | Designation | | |
|------------------|-----------|-------------|----------|------------|---|----------|--------|
| d_1 mm | d mm | B_1 mm | G mm | | Adapter Sleeve with Lock Nut and Washer | Lock Nut | Washer |
| 17 | 20 | 24 | M 20X1 | 0.036 | H 204 | KM 4 | MB 4 |
| 17 | 20 | 28 | M 20X1 | 0.040 | H 304 | KM 4 | MB 4 |
| 20 | 25 | 26 | M 25X1.5 | 0.064 | H 205 | KM 5 | MB 5 |
| 20 | 25 | 29 | M 25X1.5 | 0.071 | H 305 | KM 5 | MB 5 |
| 20 | 25 | 35 | M 25X1.5 | 0.085 | H 2305 | KM 5 | MB 5 |
| 25 | 30 | 27 | M 30X1.5 | 0.086 | H 206 | KM 6 | MB 6 |
| 25 | 30 | 31 | M 30X1.5 | 0.095 | H 306 | KM 6 | MB 6 |
| 25 | 30 | 38 | M 30X1.5 | 0.110 | H 2306 | KM 6 | MB 6 |
| 30 | 35 | 29 | M 35X1.5 | 0.120 | H 207 | KM 7 | MB 7 |
| 30 | 35 | 35 | M 35X1.5 | 0.140 | H 307 | KM 7 | MB 7 |
| 30 | 35 | 43 | M 35X1.5 | 0.160 | H 2307 | KM 7 | MB 7 |
| 35 | 40 | 31 | M 40X1.5 | 0.160 | H 208 | KM 8 | MB 8 |
| 35 | 40 | 36 | M 40X1.5 | 0.170 | H 308 | KM 8 | MB 8 |
| 35 | 40 | 46 | M 40X1.5 | 0.220 | H 2308 | KM 8 | MB 8 |
| 40 | 45 | 33 | M 45X1.5 | 0.210 | H 209 | KM 9 | MB 9 |
| 40 | 45 | 39 | M 45X1.5 | 0.230 | H 309 | KM 9 | MB 9 |
| 40 | 45 | 50 | M 45X1.5 | 0.270 | H 2309 | KM 9 | MB 9 |
| 45 | 50 | 35 | M 50X1.5 | 0.240 | H 210 | KM 10 | MB 10 |
| 45 | 50 | 42 | M 50X1.5 | 0.270 | H 310 | KM 10 | MB 10 |
| 45 | 50 | 55 | M 50X1.5 | 0.340 | H 2310 | KM 10 | MB 10 |
| 50 | 55 | 37 | M 55X2 | 0.280 | H 211 | KM 11 | MB 11 |
| 50 | 55 | 45 | M 55X2 | 0.320 | H 311 | KM 11 | MB 11 |
| 50 | 55 | 59 | M 55X2 | 0.390 | H 2311 | KM 11 | MB 11 |
| 55 | 60 | 38 | M 60X2 | 0.310 | H 212 | KM 12 | MB 12 |
| 55 | 60 | 47 | M 60X2 | 0.360 | H 312 | KM 12 | MB 12 |
| 55 | 60 | 62 | M 60X2 | 0.450 | H 2312 | KM 12 | MB 12 |
| 60 | 65 | 40 | M 65X2 | 0.360 | H 213 | KM 13 | MB 13 |
| 60 | 65 | 50 | M 65X2 | 0.420 | H 313 | KM 13 | MB 13 |
| 60 | 65 | 65 | M 65X2 | 0.520 | H 2313 | KM 13 | MB 13 |
| 60 | 70 | 52 | M 70X2 | 0.670 | H 314 | KM 14 | MB 14 |
| 60 | 70 | 68 | M 70X2 | 0.880 | H 2314 | KM 14 | MB 14 |
| 65 | 75 | 43 | M 75X2 | 0.660 | H 215 | KM 15 | MB 15 |



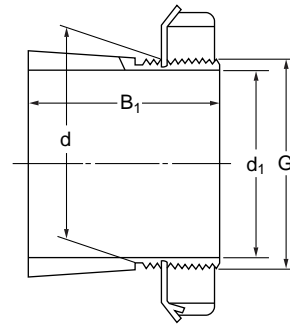
| Basic Dimensions | | | | Mass kg | Designation | | |
|------------------|-----------|-------------|---------|------------|---|----------|--------|
| d_1 mm | d mm | B_1 mm | G mm | | Adapter Sleeve with Lock Nut and Washer | Lock Nut | Washer |
| 65 | 75 | 55 | M 75X2 | 0.780 | H 315 | KM 15 | MB 15 |
| 65 | 75 | 73 | M 75X2 | 1.100 | H 2315 | KM 15 | MB 15 |
| 70 | 80 | 46 | M 80X2 | 0.810 | H 216 | KM 16 | MB 16 |
| 70 | 80 | 59 | M 80X2 | 0.950 | H 316 | KM 16 | MB 16 |
| 70 | 80 | 78 | M 80X2 | 1.200 | H 2316 | KM 16 | MB 16 |
| 75 | 85 | 50 | M 85X2 | 0.940 | H 217 | KM 17 | MB 17 |
| 75 | 85 | 63 | M 85X2 | 1.100 | H 317 | KM 17 | MB 17 |
| 75 | 85 | 82 | M 85X2 | 1.350 | H 2317 | KM 17 | MB 17 |
| 80 | 90 | 52 | M 90X2 | 1.100 | H 218 | KM 18 | MB 18 |
| 80 | 90 | 65 | M 90X2 | 1.300 | H 318 | KM 18 | MB 18 |
| 80 | 90 | 86 | M 90X2 | 1.600 | H 2318 | KM 18 | MB 18 |
| 85 | 95 | 55 | M 95X2 | 1.250 | H 219 | KM 19 | MB 19 |
| 85 | 95 | 68 | M 95X2 | 1.400 | H 319 | KM 19 | MB 19 |
| 85 | 95 | 90 | M 95X2 | 1.800 | H 2319 | KM 19 | MB 19 |
| 90 | 100 | 58 | M 100X2 | 1.400 | H 220 | KM 20 | MB 20 |
| 90 | 100 | 71 | M 100X2 | 1.600 | H 320 | KM 20 | MB 20 |
| 90 | 100 | 76 | M 100X2 | 1.800 | H 3120 | KM 20 | MB 20 |
| 90 | 100 | 97 | M 100X2 | 2.000 | H 2320 | KM 20 | MB 20 |
| 100 | 110 | 63 | M 110X2 | 1.800 | H 222 | KM 22 | MB 22 |
| 100 | 110 | 77 | M 110X2 | 2.040 | H 322 | KM 22 | MB 22 |
| 100 | 110 | 81 | M 110X2 | 2.100 | H 3122 | KM 22 | MB 22 |
| 100 | 110 | 105 | M 110X2 | 2.750 | H 2322 | KM 22 | MB 22 |
| 110 | 120 | 88 | M 120X2 | 2.500 | H 3124 | KM 24 | MB 24 |
| 110 | 120 | 112 | M 120X2 | 3.000 | H 2324 | KM 24 | MB 24 |
| 115 | 130 | 92 | M 130X2 | 3.450 | H 3126 | KM 26 | MB 26 |
| 115 | 130 | 121 | M 130X2 | 4.450 | H 2326 | KM 26 | MB 26 |
| 125 | 140 | 97 | M 140X2 | 4.100 | H 3128 | KM 28 | MB 28 |
| 125 | 140 | 131 | M 140X2 | 5.400 | H 2328 | KM 28 | MB 28 |
| 135 | 150 | 111 | M 150X2 | 5.250 | H 3130 | KM 30 | MB 30 |
| 135 | 150 | 139 | M 150X2 | 6.400 | H 2330 | KM 30 | MB 30 |
| 140 | 160 | 119 | M 160X3 | 7.250 | H 3132 | KM 32 | MB 32 |
| 140 | 160 | 147 | M 160X3 | 8.800 | H 2332 | KM 32 | MB 32 |



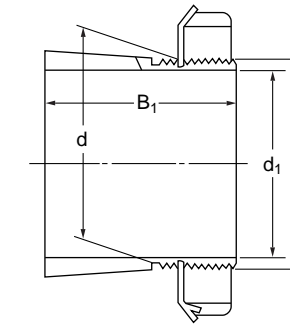
| Basic Dimensions | | | | Mass kg | Designation | | |
|----------------------|---------|----------------------|---------|------------|---|----------|--------|
| d ₁ mm | d mm | B ₁ mm | G mm | | Adapter Sleeve with Lock Nut and Washer | Lock Nut | Washer |
| 150 | 170 | 122 | M 170X3 | 8.100 | H 3134 | KM 34 | MB 34 |
| 150 | 170 | 154 | M 170X3 | 9.900 | H 2334 | KM 34 | MB 34 |
| 160 | 180 | 131 | M 180X3 | 9.150 | H 3136 | KM 36 | MB 36 |
| 160 | 180 | 161 | M 180X3 | 11.000 | H 2336 | KM 36 | MB 36 |
| 170 | 190 | 141 | M 190X3 | 10.500 | H 3138 | KM 38 | MB 38 |
| 170 | 190 | 169 | M 190X3 | 12.000 | H 2338 | KM 38 | MB 38 |
| 180 | 200 | 150 | M 200X3 | 12.000 | H 3140 | KM 40 | MB 40 |
| 180 | 200 | 176 | M 200X3 | 13.500 | H 2340 | KM 40 | MB 40 |



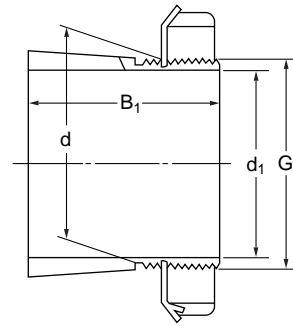
| Basic Dimensions | | | | | Mass kg | Designation | | |
|------------------------|--------|---------|----------------------|----------|------------|--|----------|--------|
| d ₁ inch | mm | d mm | B ₁ mm | G mm | | Adapter Sleeve with Nut and Locking Device | Lock Nut | Washer |
| 3/4 | 19.050 | 25 | 26 | M 25X1.5 | 0.070 | HE 205 | KM 5 | MB 5 |
| 3/4 | 19.050 | 25 | 29 | M 25X1.5 | 0.080 | HE 305 | KM 5 | MB 5 |
| 3/4 | 19.050 | 25 | 35 | M 25X1.5 | 0.090 | HE 2305 | KM 5 | MB 5 |
| 7/8 | 22.225 | 30 | 27 | M 30X1.5 | 0.110 | HS 206 | KM 6 | MB 6 |
| 7/8 | 22.225 | 30 | 31 | M 30X1.5 | 0.120 | HS 306 | KM 6 | MB 6 |
| 15/16 | 23.813 | 30 | 27 | M 30X1.5 | 0.100 | HA 206 | KM 6 | MB 6 |
| 15/16 | 23.813 | 30 | 31 | M 30X1.5 | 0.120 | HA 306 | KM 6 | MB 6 |
| 15/16 | 23.813 | 30 | 38 | M 30X1.5 | 0.130 | HA 2306 | KM 6 | MB 6 |
| 1 | 25.400 | 30 | 27 | M 30X1.5 | 0.080 | HE 206 | KM 6 | MB 6 |
| 1 | 25.400 | 30 | 31 | M 30X1.5 | 0.100 | HE 306 | KM 6 | MB 6 |
| 1 | 25.400 | 30 | 38 | M 35X1.5 | 0.110 | HE 2306 | KM 6 | MB 6 |
| 1.1/8 | 28.575 | 35 | 29 | M 35X1.5 | 0.140 | HS 207 | KM 7 | MB 7 |
| 1.1/8 | 28.575 | 35 | 35 | M 35X1.5 | 0.160 | HS 307 | KM 7 | MB 7 |
| 1.3/16 | 30.163 | 35 | 29 | M 35X1.5 | 0.120 | HA 207 | KM 7 | MB 7 |
| 1.3/16 | 30.163 | 35 | 35 | M 35X1.5 | 0.140 | HA 307 | KM 7 | MB 7 |
| 1.3/16 | 30.163 | 35 | 43 | M 35X1.5 | 0.160 | HA 2307 | KM 7 | MB 7 |
| 1.1/4 | 31.750 | 40 | 31 | M 40X1.5 | 0.190 | HE 208 | KM 8 | MB 8 |
| 1.1/4 | 31.750 | 40 | 36 | M 40X1.5 | 0.220 | HE 308 | KM 8 | MB 8 |
| 1.1/4 | 31.750 | 40 | 46 | M 40X1.5 | 0.280 | HE 2308 | KM 8 | MB 8 |
| 1.3/8 | 34.925 | 40 | 31 | M 40X1.5 | 0.160 | HS 208 | KM 8 | MB 8 |
| 1.3/8 | 34.925 | 40 | 36 | M 40X1.5 | 0.170 | HS 308 | KM 8 | MB 8 |
| 1.7/16 | 36.512 | 45 | 33 | M 45X1.5 | 0.260 | HA 209 | KM 9 | MB 9 |
| 1.7/16 | 36.512 | 45 | 39 | M 45X1.5 | 0.290 | HA 309 | KM 9 | MB 9 |
| 1.7/16 | 36.512 | 45 | 50 | M 45X1.5 | 0.350 | HA 2309 | KM 9 | MB 9 |
| 1.1/2 | 38.100 | 45 | 33 | M 45X1.5 | 0.200 | HE 209 | KM 9 | MB 9 |
| 1.1/2 | 38.100 | 45 | 39 | M 45X1.5 | 0.240 | HE 309 | KM 9 | MB 9 |
| 1.1/2 | 38.100 | 45 | 50 | M 45X1.5 | 0.310 | HE 2309 | KM 9 | MB 9 |
| 1.5/8 | 41.275 | 50 | 35 | M 50X1.5 | 0.310 | HS 210 | KM 10 | MB 10 |
| 1.5/8 | 41.275 | 50 | 42 | M 50X1.5 | 0.360 | HS 310 | KM 10 | MB 10 |
| 1.5/8 | 41.275 | 50 | 55 | M 50X1.5 | 0.400 | HS 2310 | KM 10 | MB 10 |
| 1.11/16 | 42.863 | 50 | 35 | M 50X1.5 | 0.280 | HA 210 | KM 10 | MB 10 |
| 1.11/16 | 42.863 | 50 | 42 | M 50X1.5 | 0.320 | HA 310 | KM 10 | MB 10 |



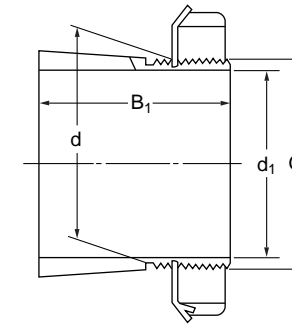
| Basic Dimensions | | | | | Mass kg | Designation | | |
|------------------------|---------|----------------------|---------|--|------------|-------------|--------|-------|
| d ₁ inch | d mm | B ₁ mm | G mm | Adapter Sleeve with Nut and Locking Device | | Lock Nut | Washer | |
| 1.11/16 | 42.863 | 50 | 55 | M 50X1.5 | 0.400 | HA 2310 | KM 10 | MB 10 |
| 1.3/4 | 44.450 | 50 | 35 | M 50X1.5 | 0.260 | HE 210 | KM 10 | MB 10 |
| 1.3/4 | 44.450 | 50 | 42 | M 50X1.5 | 0.290 | HE 310 | KM 10 | MB 10 |
| 1.3/4 | 44.450 | 50 | 55 | M 50X1.5 | 0.360 | HE 2310 | KM 10 | MB 10 |
| 1.7/8 | 47.625 | 55 | 37 | M 55X2 | 0.330 | HS 211 | KM 11 | MB 11 |
| 1.7/8 | 47.625 | 55 | 45 | M 55X2 | 0.380 | HS 311 | KM 11 | MB 11 |
| 1.15/16 | 49.213 | 55 | 37 | M 55X2 | 0.300 | HA 211 | KM 11 | MB 11 |
| 1.15/16 | 49.213 | 55 | 45 | M 55X2 | 0.340 | HA 311 | KM 11 | MB 11 |
| 1.15/16 | 49.213 | 55 | 59 | M 55X2 | 0.420 | HA 2311 | KM 11 | MB 11 |
| 2 | 50.800 | 55 | 37 | W 55X1/19 | 0.260 | HE 211 B | HM 11 | MB 11 |
| 2 | 50.800 | 55 | 45 | W 55X1/19 | 0.290 | HE 311 B | HM 11 | MB 11 |
| 2 | 50.800 | 55 | 59 | W 55X1/19 | 0.360 | HE 2311 B | HM 11 | MB 11 |
| 2.1/8 | 53.975 | 60 | 38 | M 60X2 | 0.350 | HS 212 | KM 12 | MB 12 |
| 2.1/8 | 53.975 | 60 | 47 | M 60X2 | 0.400 | HS 312 | KM 12 | MB 12 |
| 2.1/8 | 53.975 | 60 | 62 | M 60X2 | 0.490 | HS 2312 | KM 12 | MB 12 |
| 2.3/16 | 55.563 | 65 | 40 | M 65X2 | 0.490 | HA 213 | KM 13 | MB 13 |
| 2.3/16 | 55.563 | 65 | 50 | M 65X2 | 0.580 | HA 313 | KM 13 | MB 13 |
| 2.3/16 | 55.563 | 65 | 65 | M 65X2 | 0.750 | HA 2313 | KM 13 | MB 13 |
| 2.1/4 | 57.150 | 65 | 40 | M 65X2 | 0.440 | HE 213 | KM 13 | MB 13 |
| 2.1/4 | 57.150 | 65 | 50 | M 65X2 | 0.520 | HE 313 | KM 13 | MB 13 |
| 2.1/4 | 57.150 | 65 | 65 | M 65X2 | 0.650 | HE 2313 | KM 13 | MB 13 |
| 2.3/8 | 60.325 | 65 | 40 | M 65X2 | 0.440 | HS 213 | KM 13 | MB 13 |
| 2.3/8 | 60.325 | 65 | 50 | M 65X2 | 0.710 | HS 2313 | KM 13 | MB 13 |
| 2.3/8 | 60.325 | 65 | 65 | M 65X2 | 0.800 | HS 2313 | KM 13 | MB 13 |
| 2.7/16 | 61.913 | 75 | 43 | M 75X2 | 0.750 | HA 215 | KM 15 | MB 15 |
| 2.7/16 | 61.913 | 75 | 55 | M 75X2 | 0.910 | HA 315 | KM 15 | MB 15 |
| 2.7/16 | 61.913 | 75 | 73 | M 75X2 | 1.150 | HA 2315 | KM 15 | MB 15 |
| 2.1/2 | 63.500 | 75 | 43 | M 75X2 | 0.700 | HE 215 | KM 15 | MB 15 |
| 2.1/2 | 63.500 | 75 | 55 | M 75X2 | 0.850 | HE 315 | KM 15 | MB 15 |
| 2.1/2 | 63.500 | 75 | 73 | M 75X2 | 1.090 | HE 2315 | KM 15 | MB 15 |
| 2.5/8 | 66.675 | 75 | 43 | M 75X2 | 0.700 | HS 215 | KM 15 | MB 15 |
| 2.5/8 | 66.675 | 75 | 55 | M 75X2 | 0.710 | HS 315 | KM 15 | MB 15 |



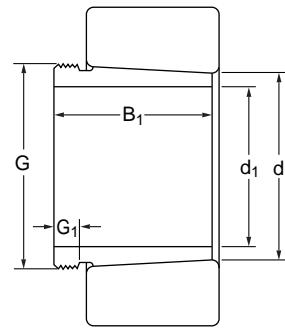
| Basic Dimensions | | | | | Mass kg | Designation | | |
|------------------------|---------|----------------------|---------|--|------------|-------------|--------|-------|
| d ₁ inch | d mm | B ₁ mm | G mm | Adapter Sleeve with Nut and Locking Device | | Lock Nut | Washer | |
| 2.5/8 | 66.675 | 75 | 73 | M 75X2 | 0.900 | HS 2315 | KM 15 | MB 15 |
| 2.11/16 | 68.263 | 80 | 46 | M 80X2 | 0.870 | HA 216 | KM 16 | MB 16 |
| 2.11/16 | 68.263 | 80 | 59 | M 80X2 | 1.050 | HA 316 | KM 16 | MB 16 |
| 2.11/16 | 68.263 | 80 | 78 | M 80X2 | 1.300 | HA 2316 | KM 16 | MB 16 |
| 2.3/4 | 69.850 | 80 | 46 | M 80X2 | 0.810 | HE 216 | KM 16 | MB 16 |
| 2.3/4 | 69.850 | 80 | 59 | M 80X2 | 0.970 | HE 313 | KM 16 | MB 16 |
| 2.3/4 | 69.850 | 80 | 78 | M 80X2 | 1.200 | HE 2316 | KM 16 | MB 16 |
| 2.15/16 | 74.613 | 85 | 50 | M 85X2 | 0.940 | HA 217 | KM 17 | MB 17 |
| 2.15/16 | 74.613 | 85 | 63 | M 85X2 | 1.100 | HA 317 | KM 17 | MB 17 |
| 2.15/16 | 74.613 | 85 | 82 | M 85X2 | 1.400 | HA 2317 | KM 17 | MB 17 |
| 3 | 76.200 | 85 | 50 | M 85X2 | 0.870 | HE 217 | KM 17 | MB 17 |
| 3 | 76.200 | 85 | 63 | M 85X2 | 1.000 | HE 317 | KM 17 | MB 17 |
| 3 | 76.200 | 85 | 82 | M 85X2 | 1.300 | HE 2317 | KM 17 | MB 17 |
| 3.3/16 | 80.963 | 90 | 52 | M 90X2 | 1.050 | HA 218 | KM 18 | MB 18 |
| 3.3/16 | 80.963 | 90 | 65 | M 90X2 | 1.250 | HA 318 | KM 18 | MB 18 |
| 3.3/16 | 80.963 | 90 | 86 | M 90X2 | 1.500 | HA 2318 | KM 18 | MB 18 |
| 3.1/4 | 82.550 | 90 | 52 | M 90X2 | 0.970 | HE 218 | KM 18 | MB 18 |
| 3.1/4 | 82.550 | 90 | 65 | M 90X2 | 1.100 | HE 318 | KM 18 | MB 18 |
| 3.1/4 | 82.550 | 90 | 86 | M 90X2 | 1.400 | HE 2318 | KM 18 | MB 18 |
| 3.1/4 | 82.550 | 95 | 55 | M 95X2 | 1.350 | HE 219 | KM 19 | MB 19 |
| 3.1/4 | 82.550 | 95 | 68 | M 95X2 | 1.600 | HE 319 | KM 19 | MB 19 |
| 3.1/4 | 82.550 | 95 | 90 | M 95X2 | 2.000 | HE 2319 | KM 19 | MB 19 |
| 3.7/16 | 87.313 | 100 | 58 | M 100X2 | 1.550 | HA 220 | KM 20 | MB 20 |
| 3.7/16 | 87.313 | 100 | 71 | M 100X2 | 1.800 | HA 320 | KM 20 | MB 20 |
| 3.7/16 | 87.313 | 100 | 97 | M 100X2 | 2.350 | HA 2320 | KM 20 | MB 20 |
| 3.1/2 | 88.900 | 100 | 58 | M 100X2 | 1.450 | HE 220 | KM 20 | MB 20 |
| 3.1/2 | 88.900 | 100 | 71 | M 100X2 | 1.750 | HE 320 | KM 20 | MB 20 |
| 3.1/2 | 88.900 | 100 | 76 | M 100X2 | 1.800 | HE 3120 | KM 20 | MB 20 |
| 3.1/2 | 88.900 | 100 | 97 | M 100X2 | 2.200 | HE 2320 | KM 20 | MB 20 |
| 4 | 101.600 | 110 | 63 | M 110X2 | 1.650 | HE 222 | KM 22 | MB 22 |
| 4 | 101.600 | 110 | 77 | M 110X2 | 1.900 | HE 322 | KM 22 | MB 22 |
| 4 | 101.600 | 110 | 81 | M 110X2 | 2.250 | HE 3122 | KM 22 | MB 22 |



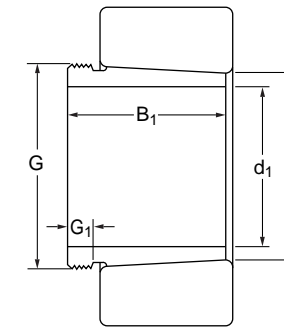
| Basic Dimensions | | | | | Mass kg | Designation | | |
|------------------------|---------|----------------------|---------|--|------------|-------------|--------|-------|
| d ₁ inch | d mm | B ₁ mm | G mm | Adapter Sleeve with Nut and Locking Device | | Lock Nut | Washer | |
| 4 | 101.600 | 110 | 105 | M 110X2 | 2.400 | HE 2322 | KM 22 | MB 22 |
| 4.3/16 | 106.363 | 120 | 88 | M 120X2 | 2.900 | HA 3124 | KM 24 | MB 24 |
| 4.3/16 | 106.363 | 120 | 112 | M 120X2 | 3.600 | HA 2324 | KM 24 | MB 24 |
| 4.1/4 | 107.950 | 120 | 88 | M 120X2 | 2.800 | HE 3124 | KM 24 | MB 24 |
| 4.1/4 | 107.950 | 120 | 112 | M 120X2 | 3.350 | HE 2324 | KM 24 | MB 24 |
| 4.7/16 | 112.713 | 130 | 92 | M 130X2 | 3.750 | HA 3126 | KM 26 | MB 26 |
| 4.7/16 | 112.713 | 130 | 121 | M 130X2 | 4.740 | HA 2326 | KM 26 | MB 26 |
| 4.1/2 | 114.300 | 130 | 92 | M 130X2 | 3.600 | HE 3126 | KM 26 | MB 26 |
| 4.1/2 | 114.300 | 130 | 121 | M 130X2 | 4.550 | HE 2326 | KM 26 | MB 26 |
| 4.15/16 | 125.413 | 140 | 97 | M 140X2 | 4.100 | HA 3128 | KM 28 | MB 28 |
| 4.15/16 | 125.413 | 140 | 131 | M 140X2 | 5.300 | HA 2328 | KM 28 | MB 28 |
| 5 | 127.000 | 140 | 97 | M 140X2 | 3.800 | HE 3128 | KM 28 | MB 28 |
| 5 | 127.000 | 140 | 131 | M 140X2 | 5.000 | HE 2328 | KM 28 | MB 28 |
| 5.3/16 | 131.763 | 150 | 111 | M 150X2 | 5.800 | HA 3130 | KM 30 | MB 30 |
| 5.3/16 | 131.763 | 150 | 139 | M 150X2 | 7.100 | HA 2330 | KM 30 | MB 30 |
| 5.1/4 | 133.350 | 150 | 111 | M 150X2 | 5.500 | HE 3130 | KM 30 | MB 30 |
| 5.1/4 | 133.350 | 150 | 139 | M 150X2 | 6.800 | HE 2330 | KM 30 | MB 30 |
| 5.7/16 | 138.113 | 160 | 119 | M 160X3 | 7.550 | HA 3132 | KM 32 | MB 32 |
| 5.7/16 | 138.113 | 160 | 147 | M 160X3 | 9.400 | HA 2332 | KM 32 | MB 32 |
| 5.1/2 | 139.700 | 160 | 119 | M 160X3 | 7.300 | HE 3132 | KM 32 | MB 32 |
| 5.1/2 | 139.700 | 160 | 147 | M 160X3 | 8.800 | HE 2332 | KM 32 | MB 32 |
| 5.15/16 | 150.813 | 170 | 122 | M 170X3 | 7.800 | HA 3134 | KM 34 | MB 34 |
| 5.15/16 | 150.813 | 170 | 154 | M 170X3 | 9.600 | HA 2334 | KM 34 | MB 34 |
| 6 | 152.400 | 170 | 122 | M 170X3 | 7.550 | HE 3134 | KM 34 | MB 34 |
| 6 | 152.400 | 170 | 154 | M 170X3 | 9.200 | HE 2334 | KM 34 | MB 34 |
| 6.7/16 | 163.513 | 180 | 131 | M 180X3 | 8.150 | HA 3136 | KM 36 | MB 36 |
| 6.7/16 | 163.513 | 180 | 161 | M 180X3 | 9.900 | HA 2336 | KM 36 | MB 36 |
| 6.1/2 | 165.100 | 180 | 131 | M 180X3 | 7.800 | HE 3136 | KM 36 | MB 36 |
| 6.1/2 | 165.100 | 180 | 161 | M 180X3 | 9.350 | HE 2336 | KM 36 | MB 36 |
| 6.3/4 | 171.450 | 190 | 141 | M 190X3 | 10.200 | HE 3138 | KM 38 | MB 38 |
| 6.3/4 | 171.450 | 190 | 169 | M 190X3 | 11.700 | HE 2338 | KM 38 | MB 38 |
| 6.15/16 | 176.213 | 190 | 141 | M 190X3 | 8.500 | HA 3138 | KM 38 | MB 38 |



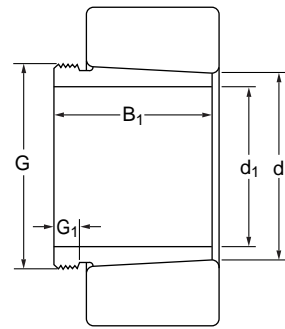
| Basic Dimensions | | | | | Mass kg | Designation | | |
|------------------------|---------|----------------------|---------|--|------------|-------------|--------|-------|
| d ₁ inch | d mm | B ₁ mm | G mm | Adapter Sleeve with Nut and Locking Device | | Lock Nut | Washer | |
| 6.15/16 | 176.213 | 190 | 169 | M 190X3 | 10.000 | HA 2338 | KM 38 | MB 38 |
| 7 | 177.800 | 200 | 150 | M 200X3 | 12.300 | HE 3140 | KM 40 | MB 40 |
| 7 | 177.800 | 200 | 176 | M 200X3 | 14.200 | HE 2340 | KM 40 | MB 40 |
| 7.3/16 | 182.563 | 200 | 150 | M 200X3 | 11.200 | HA 3140 | KM 40 | MB 40 |
| 7.3/16 | 182.563 | 200 | 176 | M 200X3 | 12.600 | HA 2340 | KM 40 | MB 40 |



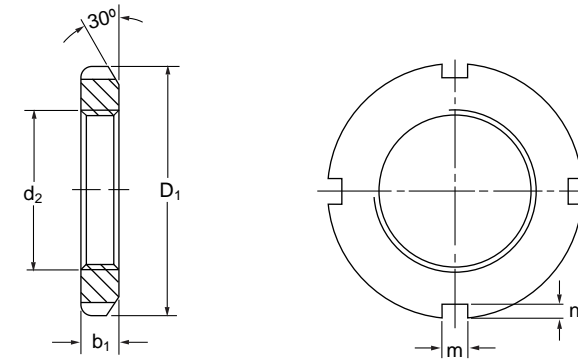
| Basic Dimensions | | | | | Mass kg | Designation | |
|------------------|-----------|-------------|-----------|-------------|------------|-------------------|---------------------------------|
| d_1 mm | d mm | B_1 mm | G mm | G_1 mm | | Withdrawal Sleeve | Appropriate Nut for Dismounting |
| 35 | 40 | 29 | M 45x1.5 | 6 | 0.090 | AH 308 | KM 9 |
| 35 | 40 | 40 | M 45x1.5 | 7 | 0.130 | AH 2308 | KM 9 |
| 40 | 45 | 31 | M 50X1.5 | 6 | 0.120 | AH 309 | KM10 |
| 40 | 45 | 44 | M 50X1.5 | 7 | 0.160 | AH 2309 | KM10 |
| 45 | 50 | 35 | M 55X2 | 7 | 0.130 | AHX 310 | KM 11 |
| 45 | 50 | 50 | M 55X2 | 9 | 0.190 | AHX 2310 | KM 11 |
| 50 | 55 | 37 | M 60X2 | 7 | 0.160 | AHX 311 | KM 12 |
| 50 | 55 | 54 | M 60X2 | 10 | 0.260 | AHX 2311 | KM 12 |
| 55 | 60 | 40 | M 65X2 | 8 | 0.190 | AHX 312 | KM 13 |
| 55 | 60 | 58 | M 65X2 | 11 | 0.300 | AHX 2312 | KM 13 |
| 60 | 65 | 42 | M 70X2 | 8 | 0.220 | AH 313 | KM 14 |
| 60 | 65 | 61 | M 70X2 | 12 | 0.360 | AH 2313 | KM 14 |
| 65 | 70 | 43 | M 75X2 | 8 | 0.240 | AH 314 | KM 15 |
| 65 | 70 | 64 | M 75X2 | 12 | 0.420 | AHX 2314 | KM 15 |
| 70 | 75 | 45 | M 80X2 | 8 | 0.290 | AH 315 | KM 16 |
| 70 | 75 | 68 | M 80X2 | 12 | 0.480 | AHX 2315 | KM 16 |
| 75 | 80 | 48 | M 90X2 | 8 | 0.370 | AH 316 | KM 18 |
| 75 | 80 | 71 | M 90X2 | 12 | 0.570 | AHX 2316 | KM 18 |
| 80 | 85 | 52 | M 95X2 | 9 | 0.430 | AHX 317 | KM 19 |
| 80 | 85 | 74 | M 95X2 | 13 | 0.650 | AHX 2317 | KM 19 |
| 85 | 90 | 53 | M 100X2 | 9 | 0.460 | AHX 318 | KM 20 |
| 85 | 90 | 63 | M 100X2 | 10 | 0.570 | AHX 3218 | KM 20 |
| 85 | 90 | 79 | M 100X2 | 14 | 0.760 | AHX 2318 | KM 20 |
| 90 | 95 | 57 | M 105X2 | 10 | 0.540 | AHX 319 | KM 21 |
| 90 | 95 | 85 | M 105X2 | 16 | 0.900 | AHX 2319 | KM 21 |
| 95 | 100 | 59 | M 110X2 | 10 | 0.580 | AHX 320 | KM 22 |
| 95 | 100 | 64 | M 110X2 | 11 | 0.660 | AHX 3120 | KM 22 |
| 95 | 100 | 73 | M 110X2 | 11 | 0.760 | AHX 3220 | KM 22 |
| 95 | 100 | 90 | M 110X2 | 16 | 1.000 | AHX 2320 | KM 22 |
| 105 | 110 | 63 | M 120X2 | 12 | 0.770 | AHX 322 | KM 24 |
| 105 | 110 | 68 | M 120X2 | 11 | 0.760 | AHX 3122 | KM 24 |
| 105 | 110 | 82 | M 120X2 | 11 | 1.000 | AHX 3222 | KM 24 |



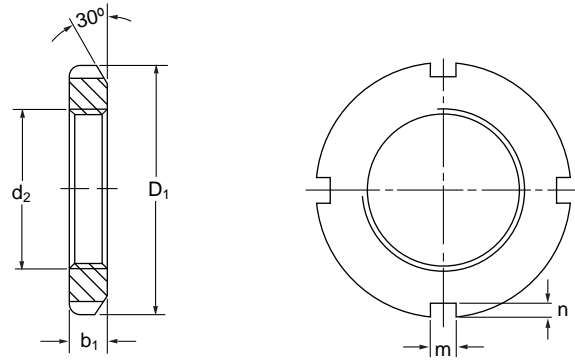
| Basic Dimensions | | | | | Mass kg | Designation | |
|------------------|-----------|-------------|-----------|-------------|------------|-------------------|---------------------------------|
| d_1 mm | d mm | B_1 mm | G mm | G_1 mm | | Withdrawal Sleeve | Appropriate Nut for Dismounting |
| 105 | 110 | 98 | M 120X2 | 16 | 1.300 | AHX 2322 | KM 24 |
| 105 | 110 | 82 | M 115X2 | 13 | 0.710 | AH 24122 | KM 23 |
| 115 | 120 | 60 | M 130X2 | 13 | 0.73 | AHX 3024 | KM 26 |
| 115 | 120 | 75 | M 130X2 | 12 | 0.940 | AHX 3124 | KM 26 |
| 115 | 120 | 90 | M 130X2 | 13 | 1.300 | AHX 3224 | KM 26 |
| 115 | 120 | 105 | M 130X2 | 17 | 1.550 | AHX 2324 | KM 26 |
| 115 | 120 | 73 | M 125X2 | 13 | 0.700 | AH 24024 | KM 25 |
| 115 | 120 | 93 | M 130X2 | 13 | 1.000 | AH 24124 | KM 26 |
| 125 | 130 | 67 | M 140X2 | 14 | 0.91 | AHX 3026 | KM 28 |
| 125 | 130 | 78 | M 140X2 | 12 | 1.100 | AHX 3126 | KM 28 |
| 125 | 130 | 98 | M 140X2 | 15 | 1.500 | AHX 3226 | KM 28 |
| 125 | 130 | 115 | M 140X2 | 19 | 1.850 | AHX 2326 | KM 28 |
| 125 | 130 | 83 | M 135X2 | 14 | 0.900 | AH 24026 | KM 27 |
| 125 | 130 | 94 | M 140X2 | 14 | 1.150 | AH 24126 | KM 28 |
| 135 | 140 | 68 | M 150X2 | 14 | 1.000 | AHX 3028 | KM 30 |
| 135 | 140 | 83 | M 150X2 | 14 | 1.300 | AHX 3128 | KM 30 |
| 135 | 140 | 104 | M 150X2 | 15 | 1.750 | AHX 3228 | KM 30 |
| 135 | 140 | 125 | M 150X2 | 20 | 2.250 | AHX 2328 | KM 30 |
| 135 | 140 | 83 | M 145X2 | 14 | 0.950 | AH 24028 | KM 29 |
| 135 | 140 | 99 | M 150X2 | 14 | 1.300 | AH 24128 | KM 30 |
| 145 | 150 | 72 | M 160X3 | 15 | 1.150 | AHX 3030 | KM 32 |
| 145 | 150 | 96 | M 160X3 | 15 | 1.700 | AHX 3130 | KM 32 |
| 145 | 150 | 114 | M 160X3 | 17 | 2.100 | AHX 3230 | KM 32 |
| 145 | 150 | 135 | M 160X3 | 24 | 2.750 | AHX 2330 | KM 32 |
| 145 | 150 | 90 | M 155X3 | 15 | 1.050 | AH 24030 | KM 31 |
| 145 | 150 | 115 | M 160X3 | 15 | 1.550 | AH 24130 | KM 32 |
| 150 | 160 | 77 | M 170X3 | 16 | 2.000 | AH 3032 | KM 34 |
| 150 | 160 | 103 | M 170X3 | 16 | 3.000 | AH 3132 | KM 34 |
| 150 | 160 | 124 | M 170X3 | 20 | 3.700 | AH 3232 | KM 34 |
| 150 | 160 | 140 | M 170X3 | 24 | 4.350 | AH 2332 | KM 34 |
| 150 | 160 | 95 | M 170X3 | 15 | 2.300 | AH 24032 | KM 34 |
| 150 | 160 | 124 | M 170X3 | 15 | 3.000 | AH 24132 | KM 34 |



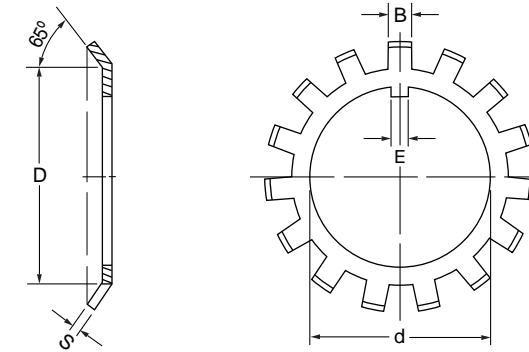
| Basic Dimensions | | | | | Mass kg | Designation | |
|----------------------|---------|----------------------|---------|----------------------|------------|-------------------|---------------------------------|
| d ₁ mm | d mm | B ₁ mm | G mm | G ₁ mm | | Withdrawal Sleeve | Appropriate Nut for Dismounting |
| 160 | 170 | 85 | M 180X3 | 17 | 2.450 | AH 3034 | KM 36 |
| 160 | 170 | 104 | M 180X3 | 16 | 3.200 | AH 3134 | KM 36 |
| 160 | 170 | 134 | M 180X3 | 24 | 4.350 | AH 3234 | KM 36 |
| 160 | 170 | 146 | M 180X3 | 24 | 4.850 | AH 2334 | KM 36 |
| 160 | 170 | 106 | M 180X3 | 16 | 2.700 | AH 24034 | KM 36 |
| 160 | 170 | 125 | M 180X3 | 16 | 3.250 | AH 24134 | KM 36 |
| 170 | 180 | 92 | M 190X3 | 17 | 2.800 | AH 3036 | KM 38 |
| 170 | 180 | 105 | M 190X3 | 17 | 3.400 | AH 2236 | KM 38 |
| 170 | 180 | 116 | M 190X3 | 19 | 3.900 | AH 3136 | KM 38 |
| 170 | 180 | 140 | M 190X3 | 24 | 4.850 | AH 3236 | KM 38 |
| 170 | 180 | 154 | M 190X3 | 26 | 5.500 | AH 2336 | KM 38 |
| 170 | 180 | 116 | M 190X3 | 16 | 3.200 | AH 24036 | KM 38 |
| 170 | 180 | 134 | M 190X3 | 16 | 3.750 | AH 24136 | KM 38 |
| 180 | 190 | 96 | M 200X3 | 18 | 3.300 | AH 3038 | KM 40 |
| 180 | 190 | 112 | M 200X3 | 18 | 3.900 | AH 2238 | KM 40 |
| 180 | 190 | 125 | M 200X3 | 20 | 4.500 | AH 3138 | KM 40 |
| 180 | 190 | 145 | M 200X3 | 25 | 5.400 | AH 3238 | KM 40 |
| 180 | 190 | 160 | M 200X3 | 26 | 6.100 | AH 2338 | KM 40 |
| 180 | 190 | 118 | M 200X3 | 18 | 3.550 | AH 24038 | KM 40 |
| 180 | 190 | 146 | M 200X3 | 18 | 4.450 | AH 24138 | KM 40 |



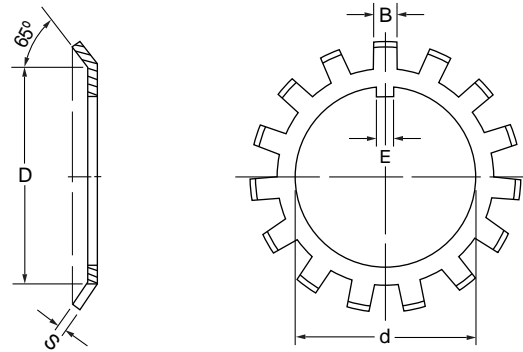
| Basic Dimensions | | | | | Mass kg | Designation | Reference Number |
|----------------------|----------------------|----------------------|---------|---------|------------|-------------|------------------|
| d ₂ mm | D ₁ mm | b ₁ mm | m mm | n mm | | | |
| M10 X 0.75 | 18 | 4 | 3 | 2 | 0.004 | KM 0 | AN 00 |
| M12 X 1 | 22 | 4 | 3 | 2 | 0.007 | KM 1 | AN 01 |
| M15 X 1 | 25 | 5 | 4 | 2 | 0.010 | KM 2 | AN 02 |
| M17 X 1 | 28 | 5 | 4 | 2 | 0.013 | KM 3 | AN 03 |
| M20 X 1 | 32 | 6 | 4 | 2 | 0.019 | KM 4 | AN 04 |
| M25 X 1.5 | 38 | 7 | 5 | 2 | 0.025 | KM 5 | AN 05 |
| M30 X 1.5 | 45 | 7 | 5 | 2 | 0.043 | KM 6 | AN 06 |
| M35 X 1.5 | 52 | 8 | 5 | 2 | 0.053 | KM 7 | AN 07 |
| M40 X 1.5 | 58 | 9 | 6 | 2.5 | 0.085 | KM 8 | AN 08 |
| M45 X 1.5 | 65 | 10 | 6 | 2.5 | 0.119 | KM 9 | AN 09 |
| M50 X 1.5 | 70 | 11 | 6 | 2.5 | 0.148 | KM 10 | AN 10 |
| M55 X 2 | 75 | 11 | 7 | 3 | 0.158 | KM 11 | AN 11 |
| M60 X 2 | 80 | 11 | 7 | 3 | 0.174 | KM 12 | AN 12 |
| M65 X 2 | 85 | 12 | 7 | 3 | 0.203 | KM 13 | AN 13 |
| M70 X 2 | 92 | 12 | 8 | 3.5 | 0.242 | KM 14 | AN 14 |
| M75 X 2 | 98 | 13 | 8 | 3.5 | 0.287 | KM 15 | AN 15 |
| M80 X 2 | 105 | 15 | 8 | 3.5 | 0.397 | KM 16 | AN 16 |
| M85 X 2 | 110 | 16 | 8 | 3.5 | 0.451 | KM 17 | AN 17 |
| M90 X 2 | 120 | 16 | 10 | 4 | 0.556 | KM 18 | AN 18 |
| M95 X 2 | 125 | 17 | 10 | 4 | 0.658 | KM 19 | AN 19 |
| M100 X 2 | 130 | 18 | 10 | 4 | 0.698 | KM 20 | AN 20 |
| M105 X 2 | 140 | 18 | 12 | 5 | 0.845 | KM 21 | AN 21 |
| M110 X 2 | 145 | 19 | 12 | 5 | 0.965 | KM 22 | AN 22 |
| M115 X 2 | 150 | 19 | 12 | 5 | 1.010 | KM 23 | AN 23 |
| M120 X 2 | 155 | 20 | 12 | 5 | 1.080 | KM 24 | AN 24 |
| M125 X 2 | 160 | 21 | 12 | 5 | 1.190 | KM 25 | AN 25 |
| M130 X 2 | 165 | 21 | 12 | 5 | 1.250 | KM 26 | AN 26 |
| M135 X 2 | 175 | 22 | 14 | 6 | 1.550 | KM 27 | AN 27 |
| M140 X 2 | 180 | 22 | 14 | 6 | 1.560 | KM 28 | AN 28 |
| M145 X 2 | 190 | 24 | 14 | 6 | 1.800 | KM 29 | AN 29 |
| M150 X 2 | 195 | 24 | 14 | 6 | 2.030 | KM 30 | AN 30 |
| M155 X 3 | 200 | 25 | 16 | 7 | 2.300 | KM 31 | AN 31 |



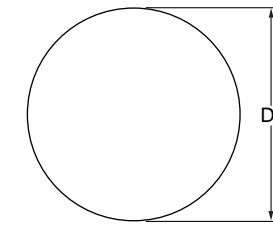
| Basic Dimensions | | | | | Mass | Designation | Reference Number |
|----------------------|----------------------|----------------------|---------|---------|-------|-------------|------------------|
| d ₂ mm | D ₁ mm | b ₁ mm | m mm | n mm | kg | | |
| M160 X 3 | 210 | 25 | 16 | 7 | 2.590 | KM 32 | AN 32 |
| M165 X 3 | 210 | 26 | 16 | 7 | 2.700 | KM 33 | AN 33 |
| M170 X 3 | 220 | 26 | 16 | 7 | 2.800 | KM 34 | AN 34 |
| M180 X 3 | 230 | 27 | 18 | 8 | 3.070 | KM 36 | AN 36 |
| M190 X 3 | 240 | 28 | 18 | 8 | 3.390 | KM 38 | AN 38 |
| M200 X 3 | 250 | 29 | 18 | 8 | 3.690 | KM 40 | AN 40 |



| Basic Dimensions | | | | | Mass | Designation | Reference Number |
|------------------|---------|---------|---------|---------|----------|-------------|------------------|
| d mm | D mm | S mm | E mm | B mm | (100/kg) | - | - |
| 10 | 13.5 | 1 | 3 | 3 | 0.131 | MB 0 | AW 00 |
| 12 | 17 | 1 | 3 | 3 | 0.192 | MB 1 | AW 01 |
| 15 | 21 | 1 | 4 | 4 | 0.253 | MB 2 | AW 02 |
| 17 | 24 | 1 | 4 | 4 | 0.313 | MB 3 | AW 03 |
| 20 | 26 | 1 | 4 | 4 | 0.350 | MB 4 | AW 04 |
| 25 | 32 | 1.25 | 5 | 5 | 0.640 | MB 5 | AW 05 |
| 30 | 38 | 1.25 | 5 | 5 | 0.780 | MB 6 | AW 06 |
| 35 | 44 | 1.25 | 6 | 5 | 1.040 | MB 7 | AW 07 |
| 40 | 50 | 1.25 | 6 | 6 | 1.230 | MB 8 | AW 08 |
| 45 | 56 | 1.25 | 6 | 6 | 1.520 | MB 9 | AW 09 |
| 50 | 61 | 1.25 | 6 | 6 | 1.600 | MB 10 | AW 10 |
| 55 | 67 | 1.25 | 8 | 7 | 1.960 | MB 11 | AW 11 |
| 60 | 73 | 1.5 | 8 | 7 | 2.530 | MB 12 | AW 12 |
| 65 | 79 | 1.5 | 8 | 7 | 2.900 | MB 13 | AW 13 |
| 70 | 85 | 1.5 | 8 | 8 | 3.340 | MB 14 | AW 14 |
| 75 | 90 | 1.5 | 8 | 8 | 3.560 | MB 15 | AW 15 |
| 80 | 95 | 1.75 | 10 | 8 | 4.640 | MB 16 | AW 16 |
| 85 | 102 | 1.75 | 10 | 8 | 5.240 | MB 17 | AW 17 |
| 90 | 108 | 1.75 | 10 | 10 | 6.230 | MB 18 | AW 18 |
| 95 | 113 | 1.75 | 10 | 10 | 6.700 | MB 19 | AW 19 |
| 100 | 120 | 1.75 | 12 | 10 | 7.650 | MB 20 | AW 20 |
| 105 | 126 | 1.75 | 12 | 12 | 8.260 | MB 21 | AW 21 |
| 110 | 133 | 1.75 | 12 | 12 | 9.400 | MB 22 | AW 22 |
| 115 | 137 | 2 | 12 | 12 | 10.800 | MB 23 | AW 23 |
| 120 | 138 | 2 | 14 | 12 | 10.500 | MB 24 | AW 24 |
| 125 | 148 | 2 | 14 | 12 | 11.800 | MB 25 | AW 25 |
| 130 | 149 | 2 | 14 | 12 | 11.300 | MB 26 | AW 26 |
| 135 | 160 | 2 | 14 | 12 | 14.400 | MB 27 | AW 27 |
| 140 | 160 | 2 | 16 | 14 | 14.200 | MB 28 | AW 28 |
| 145 | 172 | 2 | 16 | 14 | 16.800 | MB 29 | AW 29 |
| 150 | 171 | 2 | 16 | 14 | 15.500 | MB 30 | AW 30 |
| 155 | 181 | 2.5 | 16 | 16 | 20.900 | MB 31 | AW 31 |

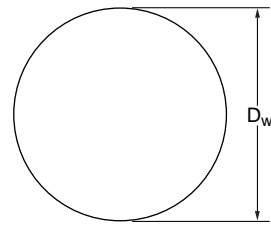


| Basic Dimensions | | | | | Mass | Designation | Reference Number |
|------------------|-----|-----|----|----|----------|-------------|------------------|
| d | D | S | E | B | (100/kg) | | |
| mm | mm | mm | mm | mm | | | |
| 160 | 182 | 2.5 | 18 | 16 | 22.200 | MB 32 | AW 32 |
| 165 | 193 | 2.5 | 18 | 16 | 24.100 | MB 33 | AW 33 |
| 170 | 193 | 2.5 | 18 | 16 | 24.700 | MB 34 | AW 34 |
| 180 | 203 | 2.5 | 20 | 18 | 26.800 | MB 36 | AW 36 |
| 190 | 214 | 2.5 | 20 | 18 | 27.800 | MB 38 | AW 38 |
| 200 | 226 | 2.5 | 20 | 18 | 29.300 | MB 40 | AW 40 |
| 220 | 250 | 3 | 24 | 20 | 40.000 | MB 44 | AW 44 |
| 240 | 270 | 3 | 24 | 20 | 40.000 | MB 48 | AW 48 |
| 260 | 300 | 3 | 28 | 24 | 60.000 | MB 52 | AW 52 |
| 280 | 320 | 3 | 28 | 24 | 62.000 | MB 56 | AW 56 |



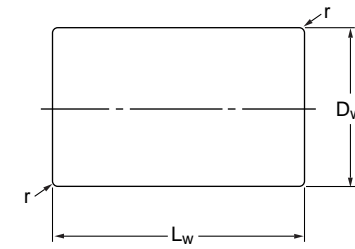
| Basic Dimensions | | Mass | Designations |
|------------------|--------|--------|--------------|
| D _w | Per 10 | | |
| | mm | inch | |
| 0.4 | - | 0.0003 | RB 0.4 |
| 0.5 | - | 0.0005 | RB 0.5 |
| 1 | - | 0.0040 | RB 1 |
| 1.5 | - | 0.0140 | RB 1.5 |
| 1.588 | 0.0625 | 0.0160 | RB 1.588 |
| 2 | - | 0.0330 | RB 2 |
| 2.381 | 0.0938 | 0.0550 | RB 2.381 |
| 2.5 | - | 0.0640 | RB 2.5 |
| 3 | - | 0.111 | R 3 |
| 3.175 | 0.1250 | 0.132 | RB 3.175 |
| 3.5 | - | 0.177 | RB 3.5 |
| 3.969 | 0.1563 | 0.257 | RB 3.969 |
| 4 | - | 0.263 | RB 4 |
| 4.5 | - | 0.374 | RB 4.5 |
| 4.762 | 0.1875 | 0.446 | RB 4.762 |
| 5 | - | 0.514 | RB 5 |
| 5.556 | 0.2188 | 0.702 | RB 5.556 |
| 6 | - | 0.882 | RB 6 |
| 6.350 | 0.2500 | 1.03 | RB 6.35 |
| 6.5 | - | 1.13 | RB 6.5 |
| 7 | - | 1.41 | RB 7 |
| 7.144 | 0.2813 | 1.50 | RB 7.144 |
| 7.5 | - | 1.74 | RB 7.5 |
| 7.938 | 0.3125 | 2.06 | RB 7.938 |
| 8 | - | 2.10 | RB 8 |
| 8.5 | - | 2.52 | RB 8.5 |
| 8.731 | 0.3438 | 2.66 | RB 8.731 |
| 9 | - | 3.00 | RB 9 |
| 10.5 | - | 0.476 | RB 10.5 |
| 11 | - | 0.547 | RB 11 |
| 11.112 | 0.4375 | 0.564 | RB 11.112 |
| 11.5 | - | 0.625 | RB 11.5 |

| Basic Dimensions | | Mass | Designations |
|------------------|----------|-------|--------------|
| D _w | Per Ball | | |
| | mm | inch | |
| 11.906 | 0.4688 | 0.693 | RB 11.906 |
| 12 | - | 0.71 | RB 12 |
| 12.5 | - | 0.803 | RB 12.5 |
| 12.700 | 0.5000 | 0.842 | RB 12.7 |
| 13 | - | 0.903 | RB 13 |
| 13.494 | 0.5313 | 1.01 | RB 13.494 |
| 14 | - | 1.13 | RB 14 |
| 14.288 | 0.5625 | 1.2 | RB 14.288 |
| 15 | - | 1.39 | RB 15 |
| 15.081 | 0.5938 | 1.41 | RB 15.081 |
| 15.875 | 0.6250 | 1.65 | RB 15.875 |
| 16 | - | 1.68 | RB 16 |
| 16.5 | - | 1.85 | RB 16.5 |
| 16.669 | 0.6563 | 1.91 | RB 16.669 |
| 17 | - | 2.02 | RB 17 |
| 17.462 | 0.6875 | 2.19 | RB 17.462 |
| 18 | - | 2.4 | RB 18 |
| 18.256 | 0.7188 | 2.5 | RB 18.256 |
| 19 | - | 2.82 | RB 19 |
| 19.050 | 0.7500 | 2.84 | RB 19.05 |
| 19.844 | 0.7813 | 3.24 | RB 19.844 |
| 20 | - | 3.29 | RB 20 |
| 20.5 | - | 3.54 | RB 20.5 |
| 20.638 | 0.8125 | 3.62 | RB 20.638 |
| 21 | - | 3.81 | RB 21 |
| 22 | - | 4.38 | RB 22 |
| 22.225 | 0.875 | 0.452 | RB 22.225 |
| 22.5 | - | 0.468 | RB 22.5 |
| 23.0 | - | 0.500 | RB 23 |
| 23.812 | 0.938 | 0.555 | RB 23.812 |
| 24 | - | 0.568 | RB 24 |
| 25 | - | 0.642 | RB 25 |

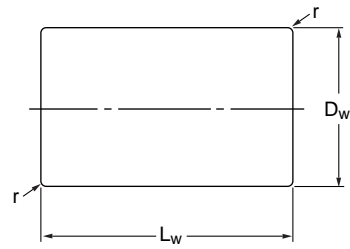


| Basic Dimensions | | Mass | Designations |
|------------------|--------|--------|--------------|
| D_w | | Per 10 | |
| mm | inch | kg | |
| 25.400 | 1 | 0.674 | RB 25.4 |
| 26 | - | 0.723 | RB 26 |
| 26.988 | 1.0625 | 0.808 | RB 26.988 |
| 28 | - | 0.902 | RB 28 |
| 28.575 | 1.1250 | 0.955 | RB 28.575 |
| 30 | - | 1.110 | RB 30 |
| 30.162 | 1.1875 | 1.130 | RB 30.162 |
| 31.750 | 1.2500 | 1.320 | RB 31.75 |
| 32 | - | 1.350 | RB 32 |
| 33 | - | 1.480 | RB 33 |
| 33.338 | 1.3125 | 1.520 | RB 33.338 |
| 34 | - | 1.620 | RB 34 |
| 34.925 | 1.3750 | 1.750 | RB 34.925 |
| 35 | - | 1.77 | RB 35 |
| 36 | - | 1.92 | RB 36 |
| 36.512 | 1.4375 | 2.00 | RB 36.512 |
| 38 | - | 2.25 | RB 38 |
| 38.100 | 1.5000 | 2.27 | RB 38.1 |
| 39.688 | 1.5625 | 2.57 | RB 39.688 |
| 40 | - | 2.63 | RB 40 |
| 41.275 | 1.6250 | 2.90 | RB 41.275 |
| 42.862 | 1.6875 | 3.24 | RB 42.862 |
| 44.450 | 1.7500 | 3.61 | RB 44.45 |
| 45 | - | 3.74 | RB 45 |
| 46.038 | 1.8125 | 0.403 | RB 46.038 |
| 47.625 | 1.875 | 0.446 | RB 47.625 |
| 49.212 | 1.9375 | 0.49 | RB 49.212 |
| 50 | - | 0.514 | RB 50 |
| 50.8 | 2 | 0.539 | RB 50.8 |
| 53.975 | 2.125 | 0.646 | RB 53.975 |
| 55 | - | 0.679 | RB 55 |
| 57.150 | 2.250 | 0.767 | RB 57.15 |

| Basic Dimensions | | Mass | Designations |
|------------------|--------|----------|--------------|
| D_w | | Per Ball | |
| mm | inch | kg | |
| 60 | - | 0.882 | RB 60 |
| 60.325 | 2.3750 | 0.902 | RB 60.325 |
| 63.500 | 2.50 | 1.03 | RB 63.5 |
| 65 | - | 1.13 | RB 65 |
| 66.675 | 2.625 | 1.22 | RB 66.675 |
| 69.850 | 2.750 | 1.4 | RB 69.85 |
| 70 | - | 1.41 | RB 70 |
| 73.025 | 2.875 | 1.6 | RB 73.025 |
| 75 | - | 1.74 | RB 75 |
| 76.200 | 3.000 | 1.82 | RB 76.2 |
| 80 | - | 2.1 | RB 80 |
| 82.550 | 3.250 | 2.31 | RB 82.55 |
| 85 | - | 2.52 | RB 85 |
| 88.900 | 3.500 | 2.89 | RB 88.9 |
| 90 | - | 3 | RB 90 |
| 95 | - | 3.52 | RB 95 |
| 95.250 | 3.750 | 3.55 | RB 95.25 |
| 100 | - | 4.11 | RB 100 |
| 110 | - | 5.47 | RB 110 |
| 120 | - | 7.1 | RB 120 |
| 127 | 5 | 8.42 | RB 127 |
| 150 | - | 13.9 | RB 150 |
| 200 | - | 32.9 | RB 200 |
| 250 | - | 64.2 | RB 250 |



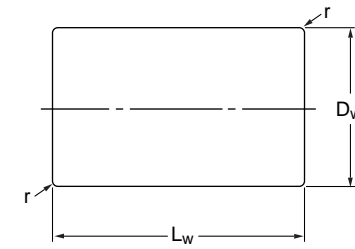
| Basic Dimensions | | | | Mass | Designations |
|------------------|-------|--------|--------|---------|--------------|
| D_w | L_w | r | r | Per 100 | |
| mm | mm | min mm | max mm | kg | |
| 3 | 5 | 0.2 | 0.4 | 0.027 | RC 3X5 |
| 3.5 | 5 | 0.2 | 0.4 | 0.037 | RC 3.5X5 |
| 3.5 | 8 | 0.2 | 0.4 | 0.060 | RC 3.5X8 |
| 4 | 4 | 0.2 | 0.4 | 0.038 | RC 4X4 |
| 4 | 6 | 0.2 | 0.4 | 0.058 | RC 4X6 |
| 4 | 8 | 0.2 | 0.4 | 0.078 | RC 4X8 |
| 4.5 | 6 | 0.2 | 0.6 | 0.073 | RC 4.5X6 |
| 5 | 5 | 0.2 | 0.6 | 0.075 | RC 5X5 |
| 5 | 6 | 0.2 | 0.6 | 0.091 | RC 5X6 |
| 5 | 7 | 0.2 | 0.6 | 0.106 | RC 5X7 |
| 5 | 8 | 0.2 | 0.6 | 0.121 | RC 5X8 |
| 5 | 10 | 0.2 | 0.6 | 0.152 | RC 5X10 |
| 5.5 | 5.5 | 0.2 | 0.6 | 0.100 | RC 5.5X5.5 |
| 5.5 | 8 | 0.2 | 0.6 | 0.146 | RC 5.5X8 |
| 6 | 6 | 0.2 | 0.6 | 0.130 | RC 6X6 |
| 6 | 8 | 0.2 | 0.6 | 0.178 | RC 6X8 |
| 6 | 12 | 0.2 | 0.6 | 0.261 | RC 6X12 |
| 6.5 | 6.5 | 0.2 | 0.6 | 0.166 | RC 6.5X6.5 |
| 6.5 | 9 | 0.2 | 0.6 | 0.230 | RC 6.5X9 |
| 7 | 7 | 0.2 | 0.6 | 0.206 | RC 7X7 |
| 7 | 10 | 0.2 | 0.6 | 0.296 | RC 7X10 |
| 7 | 14 | 0.2 | 0.6 | 0.417 | RC 7X14 |
| 7.5 | 7.5 | 0.2 | 0.6 | 0.254 | RC 7.5X7.5 |
| 7.5 | 11 | 0.2 | 0.6 | 0.374 | RC 7.5X11 |
| 8 | 8 | 0.2 | 0.6 | 0.308 | RC 8X8 |
| 8 | 12 | 0.2 | 0.6 | 0.465 | RC 8X12 |
| 9 | 9 | 0.3 | 0.7 | 0.440 | RC 9X9 |
| 9 | 14 | 0.3 | 0.7 | 0.680 | RC 9X14 |
| 10 | 10 | 0.3 | 0.7 | 0.600 | RC 10X10 |
| 10 | 14 | 0.3 | 0.7 | 0.850 | RC 10X14 |
| 11 | 11 | 0.3 | 0.7 | 0.810 | RC 11X11 |
| 11 | 15 | 0.3 | 0.7 | 1.100 | RC 11X15 |



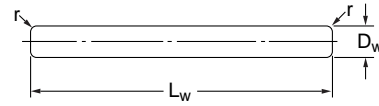
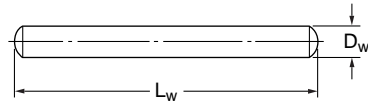
| Basic Dimensions | | | | Mass | Designations |
|----------------------|----------------------|----------------|----------------|---------------|--------------|
| D _w mm | L _w mm | r min mm | r max mm | Per 100 kg | |
| 12 | 12 | 0.3 | 0.7 | 1.040 | RC 12X12 |
| 12 | 18 | 0.3 | 0.7 | 1.570 | RC 12X18 |
| 13 | 13 | 0.4 | 0.8 | 1.33 | RC 13X13 |
| 13 | 20 | 0.4 | 0.8 | 2.040 | RC 13X20 |
| 14 | 14 | 0.4 | 0.8 | 1.660 | RC 14X14 |
| 14 | 20 | 0.4 | 0.8 | 2.380 | RC 14X20 |
| 15 | 15 | 0.4 | 0.8 | 2.040 | RC 15X15 |
| 15 | 22 | 0.4 | 0.8 | 3.000 | RC 15X22 |
| 16 | 16 | 0.4 | 0.8 | 2.480 | RC 16X16 |
| 16 | 24 | 0.4 | 0.8 | 3.730 | RC 16X24 |
| 17 | 17 | 0.4 | 1.0 | 2.970 | RC 17X17 |
| 17 | 24 | 0.4 | 1.0 | 4.200 | RC 17X24 |
| 18 | 18 | 0.4 | 1.0 | 3.570 | RC 18X18 |
| 18 | 26 | 0.4 | 1.0 | 5.100 | RC 18X26 |
| 19 | 19 | 0.4 | 1.0 | 4.160 | RC 19X19 |
| 19 | 28 | 0.4 | 1.0 | 6.100 | RC 19X28 |
| 20 | 20 | 0.4 | 1.0 | 4.850 | RC 20X20 |
| 20 | 30 | 0.4 | 1.0 | 7.300 | RC 20X30 |
| 21 | 21 | 0.5 | 1.1 | 5.600 | RC 21X21 |
| 21 | 30 | 0.5 | 1.1 | 8.000 | RC 21X30 |
| 22 | 22 | 0.5 | 1.1 | 6.400 | RC 22X22 |
| 22 | 34 | 0.5 | 1.1 | 10.000 | RC 22X34 |
| 23 | 23 | 0.5 | 1.1 | 7.400 | RC 23X23 |
| 23 | 34 | 0.5 | 1.1 | 11.200 | RC 23X34 |
| 24 | 24 | 0.5 | 1.1 | 8.400 | RC 24X24 |
| 24 | 36 | 0.5 | 1.1 | 12.600 | RC 24X36 |
| 25 | 25 | 0.5 | 1.1 | 9.500 | RC 25X25 |
| 25 | 36 | 0.5 | 1.1 | 13.700 | RC 25X36 |
| 26 | 26 | 0.5 | 1.1 | 10.700 | RC 26X26 |
| 26 | 40 | 0.5 | 1.1 | 16.400 | RC 26X40 |
| 28 | 28 | 0.6 | 1.4 | 13.300 | RC 28X28 |
| 28 | 44 | 0.6 | 1.4 | 21.000 | RC 28X44 |

TM

TM



| Basic Dimensions | | | | Mass | Designations |
|----------------------|----------------------|----------------|----------------|---------------|--------------|
| D _w mm | L _w mm | r min mm | r max mm | Per 100 kg | |
| 30 | 30 | 0.6 | 1.4 | 16.300 | RC 30X30 |
| 30 | 48 | 0.6 | 1.4 | 26.200 | RC 30X48 |
| 32 | 32 | 0.6 | 1.4 | 19.900 | RC 32X32 |
| 32 | 52 | 0.6 | 1.4 | 32.400 | RC 32X52 |
| 34 | 34 | 0.6 | 1.4 | 23.900 | RC 34X34 |
| 34 | 55 | 0.6 | 1.4 | 38.700 | RC 34X55 |
| 36 | 36 | 0.7 | 1.7 | 28.300 | RC 36X36 |
| 36 | 58 | 0.7 | 1.7 | 45.700 | RC 36X58 |
| 38 | 38 | 0.7 | 1.7 | 33.300 | RC 38X38 |
| 38 | 62 | 0.7 | 1.7 | 55.000 | RC 38X62 |
| 40 | 40 | 0.7 | 1.7 | 38.900 | RC 40X40 |
| 40 | 65 | 0.7 | 1.7 | 63.000 | RC 40X65 |



| Basic Dimensions | | | | Mass Per 100 kg | Designations | |
|----------------------|----------------------|----------------|----------------|-----------------------|-------------------------------------|----------------------------------|
| D _w mm | L _w mm | r min mm | r max mm | | Needle Rollers with Sphered Ends | Needle Rollers with Flat Ends |
| 1.5 | 5.8 | 0.1 | 0.4 | 0.008 | RN 1.5X5.8 B | RN 1.5X5.8 BF |
| 1.5 | 7.8 | 0.1 | 0.4 | 0.011 | RN 1.5X7.8 B | RN 1.5X7.8 BF |
| 1.5 | 9.8 | 0.1 | 0.4 | 0.013 | RN 1.5X9.8 B | RN 1.5X9.8 BF |
| 1.5 | 11.8 | 0.1 | 0.4 | 0.016 | RN 1.5X11.8 B | RN 1.5X11.8 BF |
| 1.5 | 13.8 | 0.1 | 0.4 | 0.018 | RN 1.5X13.8 B | RN 1.5X13.8 BF |
| 2 | 7.8 | 0.1 | 0.4 | 0.019 | RN 2X7.8 B | RN 2X7.8 BF |
| 2 | 9.8 | 0.1 | 0.4 | 0.024 | RN 2X9.8 B | RN 2X9.8 BF |
| 2 | 11.8 | 0.1 | 0.4 | 0.029 | RN 2X11.8 B | RN 2X11.8 BF |
| 2 | 13.8 | 0.1 | 0.4 | 0.034 | RN 2X13.8 B | RN 2X13.8 BF |
| 2 | 15.8 | 0.1 | 0.4 | 0.039 | RN 2X15.8 B | RN 2X15.8 BF |
| 2 | 17.8 | 0.1 | 0.4 | 0.044 | RN 2X17.8 B | RN 2X17.8 BF |
| 2 | 19.8 | 0.1 | 0.4 | 0.049 | RN 2X19.8 B | RN 2X19.8 BF |
| 2 | 21.8 | 0.1 | 0.4 | 0.054 | RN 2X21.8 B | RN 2X21.8 BF |
| 2.5 | 7.8 | 0.1 | 0.4 | 0.030 | RN 2.5X7.8 B | RN 2.5X7.8 BF |
| 2.5 | 9.8 | 0.1 | 0.4 | 0.038 | RN 2.5X9.8 B | RN 2.5X9.8 BF |
| 2.5 | 11.8 | 0.1 | 0.4 | 0.045 | RN 2.5X11.8 B | RN 2.5X11.8 BF |
| 2.5 | 13.8 | 0.1 | 0.4 | 0.053 | RN 2.5X13.8 B | RN 2.5X13.8 BF |
| 2.5 | 15.8 | 0.1 | 0.4 | 0.061 | RN 2.5X15.8 B | RN 2.5X15.8 BF |
| 2.5 | 17.8 | 0.1 | 0.4 | 0.069 | RN 2.5X17.8 B | RN 2.5X17.8 BF |
| 2.5 | 19.8 | 0.1 | 0.4 | 0.076 | RN 2.5X19.8 B | RN 2.5X19.8 BF |
| 2.5 | 21.8 | 0.1 | 0.4 | 0.084 | RN 2.5X21.8 B | RN 2.5X21.8 BF |
| 2.5 | 23.8 | 0.1 | 0.4 | 0.092 | RN 2.5X23.8 B | RN 2.5X23.8 BF |
| 3 | 9.8 | 0.1 | 0.4 | 0.054 | RN 3X9.8 B | RN 3X9.8 BF |
| 3 | 11.8 | 0.1 | 0.4 | 0.065 | RN 3X11.8 B | RN 3X11.8 BF |
| 3 | 13.8 | 0.1 | 0.4 | 0.076 | RN 3X13.8 B | RN 3X13.8 BF |
| 3 | 15.8 | 0.1 | 0.4 | 0.087 | RN 3X15.8 B | RN 3X15.8 BF |
| 3 | 17.8 | 0.1 | 0.4 | 0.099 | RN 3X17.8 B | RN 3X17.8 BF |
| 3 | 19.8 | 0.1 | 0.4 | 0.110 | RN 3X19.8 B | RN 3X19.8 BF |
| 3 | 23.8 | 0.1 | 0.4 | 0.132 | RN 3X23.8 B | RN 3X23.8 BF |
| 3 | 27.8 | 0.1 | 0.4 | 0.154 | RN 3X27.8 B | RN 3X27.8 BF |
| 3.5 | 29.8 | 0.1 | 0.6 | 0.225 | RN 3.5X29.8 B | RN 3.5X29.8 BF |
| 3.5 | 34.8 | 0.1 | 0.6 | 0.265 | RN 3.5X34.8 B | RN 3.5X34.8 BF |
| 4 | 39.8 | 0.1 | 0.6 | 0.390 | RN 4X39.8 B | RN 4X39.8 BF |
| 5 | 49.8 | 0.1 | 0.6 | 0.750 | RN 5X49.8 B | RN 5X49.8 BF |



Special Bearings



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