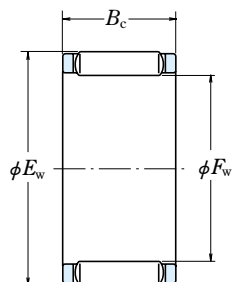


FWF • FWJ

Inscribed Circle Diameter 5 – 22 mm



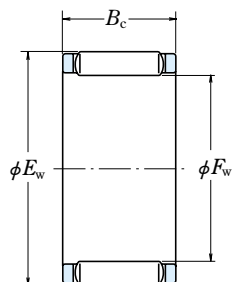
| Boundary Dimensions (mm) | | | Basic Load Ratings | | | | Limiting Speeds | |
|--------------------------|----------------|---|--------------------|-----------------|----------------|-----------------|----------------------|--------|
| F _W | E _W | B _C ^{-0.2} _{-0.55} | (N) | | {kgf} | | (min ⁻¹) | |
| | | | C _r | C _{0r} | C _r | C _{0r} | Grease | Oil |
| 5 | 8 | 8 | 2 330 | 1 860 | 237 | 189 | 60 000 | 95 000 |
| 6 | 9 | 8 | 2 200 | 1 780 | 224 | 182 | 48 000 | 75 000 |
| | 9 | 10 | 3 350 | 3 050 | 340 | 310 | 48 000 | 75 000 |
| 7 | 10 | 8 | 2 840 | 2 560 | 290 | 261 | 40 000 | 67 000 |
| | 10 | 10 | 3 650 | 3 550 | 375 | 360 | 40 000 | 67 000 |
| 8 | 11 | 10 | 3 950 | 4 000 | 400 | 410 | 34 000 | 56 000 |
| | 11 | 13 | 4 750 | 5 150 | 485 | 525 | 34 000 | 56 000 |
| 9 | 12 | 10 | 3 750 | 3 850 | 380 | 395 | 30 000 | 50 000 |
| | 12 | 13 | 5 100 | 5 750 | 520 | 585 | 30 000 | 50 000 |
| 10 | 13 | 10 | 3 950 | 4 300 | 405 | 435 | 28 000 | 45 000 |
| | 13 | 13 | 5 400 | 6 350 | 550 | 650 | 28 000 | 45 000 |
| | 14 | 13 | 6 500 | 6 750 | 660 | 690 | 28 000 | 45 000 |
| 12 | 15 | 10 | 4 350 | 5 100 | 445 | 520 | 22 000 | 36 000 |
| | 15 | 13 | 5 950 | 7 600 | 605 | 775 | 22 000 | 36 000 |
| | 16 | 13 | 7 350 | 8 350 | 750 | 850 | 22 000 | 38 000 |
| 14 | 18 | 10 | 6 750 | 7 750 | 690 | 790 | 19 000 | 32 000 |
| | 18 | 13 | 8 050 | 9 750 | 820 | 995 | 19 000 | 32 000 |
| | 20 | 17 | 13 400 | 14 600 | 1 370 | 1 490 | 20 000 | 32 000 |
| 15 | 19 | 10 | 7 050 | 8 400 | 720 | 855 | 18 000 | 28 000 |
| | 19 | 13 | 8 400 | 10 500 | 860 | 1 070 | 18 000 | 28 000 |
| | 21 | 17 | 13 400 | 14 800 | 1 370 | 1 510 | 19 000 | 30 000 |
| 16 | 20 | 10 | 7 350 | 9 000 | 750 | 920 | 17 000 | 26 000 |
| | 20 | 13 | 8 800 | 11 300 | 895 | 1 150 | 17 000 | 26 000 |
| | 22 | 17 | 14 700 | 16 900 | 1 500 | 1 720 | 17 000 | 28 000 |
| 17 | 21 | 10 | 7 650 | 9 650 | 780 | 985 | 16 000 | 26 000 |
| | 21 | 13 | 10 200 | 14 000 | 1 040 | 1 420 | 16 000 | 26 000 |
| | 23 | 17 | 15 100 | 17 800 | 1 540 | 1 810 | 16 000 | 26 000 |
| 18 | 22 | 10 | 7 900 | 10 300 | 805 | 1 050 | 15 000 | 24 000 |
| | 22 | 13 | 9 450 | 12 900 | 965 | 1 310 | 15 000 | 24 000 |
| | 24 | 17 | 17 400 | 21 600 | 1 770 | 2 210 | 15 000 | 24 000 |
| 20 | 24 | 10 | 8 000 | 10 700 | 815 | 1 090 | 13 000 | 20 000 |
| | 24 | 13 | 9 700 | 13 700 | 990 | 1 400 | 13 000 | 20 000 |
| | 26 | 17 | 18 000 | 23 200 | 1 830 | 2 370 | 14 000 | 22 000 |
| 22 | 26 | 10 | 8 600 | 12 200 | 880 | 1 240 | 12 000 | 19 000 |
| | 26 | 13 | 10 300 | 15 300 | 1 050 | 1 560 | 12 000 | 19 000 |
| | 28 | 17 | 17 300 | 22 700 | 1 760 | 2 310 | 12 000 | 20 000 |

Note (*) These bearings have polyamide cages. The maximum permissible operating temperature for these bearings is 100 °C for continued operation and 120 °C for short periods.

| Bearing Numbers | Mass (g) |
|-----------------|----------|
| | approx. |
| * FBNP-588 | 1.0 |
| * FBNP-698 | 1.2 |
| * FBNP-6910 | 1.5 |
| * FBNP-7108 | 1.3 |
| * FBNP-71010 | 1.6 |
| * FBNP-81110 | 1.8 |
| * FBNP-81113 | 2.6 |
| * FBNP-91210 | 2.0 |
| * FBNP-91213 | 2.6 |
| FBN-101310 | 2.2 |
| FBN-101313 | 2.9 |
| FWF-101413 | 4.0 |
| FBN-121510 | 2.6 |
| FBN-121513 | 3.4 |
| FWF-121613 | 4.6 |
| FWF-141810 | 4.1 |
| FWF-141813 | 5.3 |
| FWF-142017 | 11 |
| FWF-151910 | 4.3 |
| FWF-151913 | 5.6 |
| FWF-152117 | 12 |
| FWF-162010 | 4.6 |
| FWF-162013 | 6.0 |
| FWF-162217 | 12 |
| FWF-172110 | 4.8 |
| FWJ-172113 | 6.3 |
| FWF-172317 | 14 |
| FWF-182210 | 5.1 |
| FWF-182213 | 6.6 |
| FWJ-182417 | 14 |
| FWF-202410 | 5.6 |
| FWF-202413 | 7.3 |
| FWJ-202617 | 15 |
| FWF-222610 | 6.1 |
| FWF-222613 | 7.9 |
| FWF-222817 | 16 |

FWF · FWJ

Inscribed Circle Diameter 25 – 100 mm

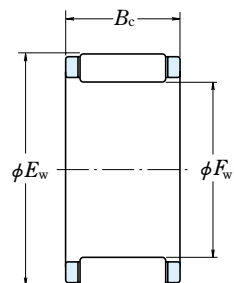


| Boundary Dimensions (mm) | | | Basic Load Ratings | | | | Limiting Speeds | |
|-----------------------------|-------|-------------------------------|--------------------|----------|-------|----------|----------------------|--------|
| F_w | E_w | $B_c^{-0.2}$ $E_w^{-0.55}$ | (N) | | {kgf} | | (min ⁻¹) | |
| | | | C_r | C_{0r} | C_r | C_{0r} | Grease | Oil |
| 25 | 29 | 10 | 9 350 | 14 100 | 950 | 1 440 | 10 000 | 17 000 |
| | 29 | 13 | 11 300 | 18 000 | 1 150 | 1 830 | 10 000 | 17 000 |
| | 31 | 17 | 19 200 | 26 800 | 1 950 | 2 740 | 10 000 | 17 000 |
| 28 | 33 | 13 | 13 700 | 20 400 | 1 400 | 2 080 | 9 500 | 15 000 |
| | 33 | 17 | 17 600 | 28 300 | 1 800 | 2 890 | 9 500 | 15 000 |
| | 34 | 17 | 19 900 | 29 100 | 2 020 | 2 970 | 9 500 | 15 000 |
| 30 | 35 | 13 | 14 000 | 21 600 | 1 430 | 2 200 | 8 500 | 14 000 |
| | 35 | 17 | 18 700 | 31 500 | 1 910 | 3 200 | 8 500 | 14 000 |
| | 37 | 20 | 26 000 | 38 000 | 2 650 | 3 850 | 9 000 | 14 000 |
| 32 | 37 | 13 | 15 100 | 24 400 | 1 540 | 2 480 | 8 000 | 13 000 |
| | 37 | 17 | 18 500 | 31 500 | 1 880 | 3 200 | 8 000 | 13 000 |
| | 39 | 20 | 27 300 | 41 000 | 2 780 | 4 200 | 8 500 | 13 000 |
| 35 | 40 | 13 | 14 900 | 24 600 | 1 520 | 2 500 | 7 500 | 12 000 |
| | 40 | 17 | 20 500 | 37 000 | 2 090 | 3 750 | 7 500 | 12 000 |
| | 42 | 20 | 30 000 | 47 500 | 3 050 | 4 850 | 7 500 | 12 000 |
| 40 | 45 | 17 | 21 000 | 40 000 | 2 150 | 4 050 | 6 300 | 10 000 |
| | 45 | 27 | 32 000 | 68 000 | 3 250 | 6 900 | 6 300 | 10 000 |
| | 48 | 25 | 40 500 | 66 500 | 4 150 | 6 800 | 6 700 | 10 000 |
| 45 | 50 | 17 | 21 600 | 43 000 | 2 200 | 4 350 | 5 600 | 9 000 |
| | 50 | 27 | 34 000 | 77 500 | 3 500 | 7 900 | 5 600 | 9 000 |
| | 53 | 25 | 44 000 | 77 000 | 4 500 | 7 850 | 5 600 | 9 500 |
| 50 | 55 | 20 | 26 900 | 59 000 | 2 750 | 6 050 | 5 000 | 8 000 |
| | 55 | 27 | 35 000 | 83 000 | 3 600 | 8 450 | 5 000 | 8 000 |
| | 58 | 25 | 48 500 | 90 500 | 4 950 | 9 200 | 5 300 | 8 500 |
| 55 | 61 | 20 | 31 000 | 64 000 | 3 150 | 6 500 | 4 500 | 7 500 |
| | 61 | 30 | 47 000 | 109 000 | 4 750 | 11 100 | 4 500 | 7 500 |
| | 63 | 25 | 50 000 | 97 500 | 5 100 | 9 950 | 4 800 | 7 500 |
| 60 | 66 | 20 | 33 000 | 71 500 | 3 350 | 7 300 | 4 300 | 6 700 |
| | 66 | 30 | 50 000 | 122 000 | 5 100 | 12 400 | 4 300 | 6 700 |
| | 68 | 25 | 52 000 | 105 000 | 5 300 | 10 700 | 4 300 | 6 700 |
| 65 | 73 | 30 | 61 000 | 132 000 | 6 200 | 13 400 | 4 000 | 6 300 |
| | 70 | 30 | 63 000 | 140 000 | 6 400 | 14 300 | 3 600 | 6 000 |
| | 75 | 30 | 65 000 | 151 000 | 6 650 | 15 400 | 3 400 | 5 600 |
| 80 | 88 | 30 | 69 000 | 166 000 | 7 050 | 17 000 | 3 200 | 5 000 |
| | 85 | 30 | 71 000 | 176 000 | 7 250 | 17 900 | 3 000 | 4 800 |
| | 90 | 30 | 70 000 | 177 000 | 7 150 | 18 000 | 2 800 | 4 500 |
| 95 | 103 | 30 | 69 500 | 177 000 | 7 100 | 18 100 | 2 600 | 4 300 |
| | 100 | 108 | 75 500 | 201 000 | 7 700 | 20 500 | 2 400 | 4 000 |

| Bearing Numbers | Mass (g) |
|---------------------|-------------|
| | approx. |
| FWF-252910 | 6.9 |
| FWF-252913 | 8.9 |
| FWF-253117 | 18 |
| FWF-283313 | 13 |
| FWF-283317 | 16 |
| FWF-283417 | 20 |
| FWF-303513 | 14 |
| FWF-303517A | 18 |
| FWF-303720 | 30 |
| FWF-323713 | 14 |
| FWJ-323717 | 19 |
| FWF-323920 | 32 |
| FWF-354013 | 16 |
| FWF-354017 | 20 |
| FWJ-354220 | 34 |
| FWF-404517A | 23 |
| FWF-404527 | 36 |
| FWF-404825 | 56 |
| FWF-455017 | 26 |
| FWF-455027 | 41 |
| FWF-455325 | 62 |
| FWF-505520 | 37 |
| FWF-505527 | 50 |
| FWF-505825 | 77 |
| FWF-556120 | 53 |
| FWF-556130 | 81 |
| FWF-556325 | 85 |
| FWF-606620 | 57 |
| FWF-606630 | 87 |
| FWF-606825 | 91 |
| FWF-657330 | 120 |
| FWF-707830 | 125 |
| FWF-758330 | 135 |
| FWF-808830 | 145 |
| FWF-859330 | 150 |
| FWF-909830 | 160 |
| FWF-9510330 | 175 |
| FWF-10010830 | 185 |

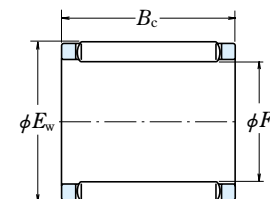
CAGE & NEEDLE ROLLER ASSEMBLIES

Cage & Needle Roller Assemblies for Large Ends of Connecting Rods
Inscribed Circle Diameter 12 – 30 mm



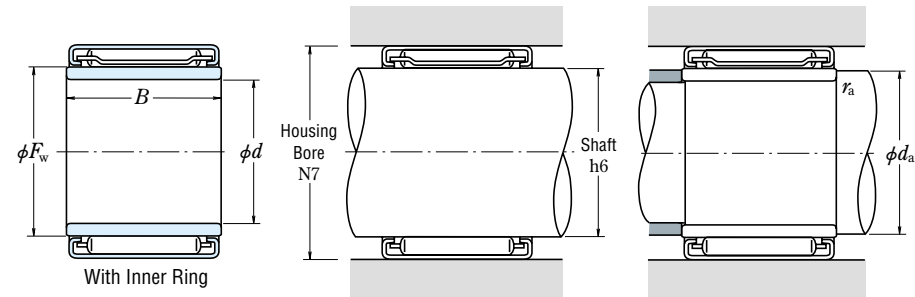
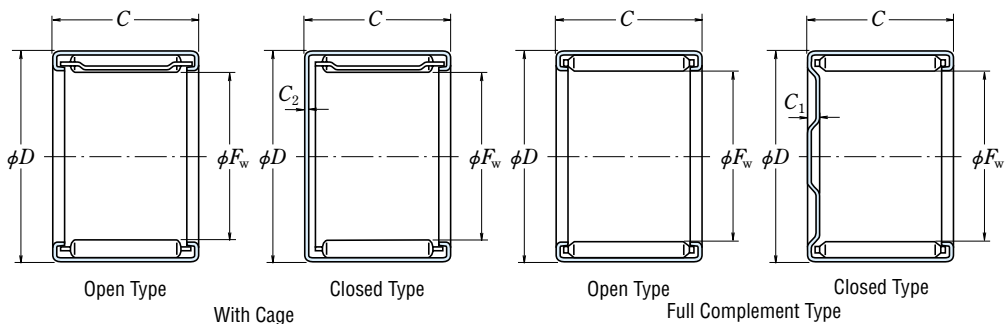
| Boundary Dimensions (mm) | | | Basic Load Ratings (N) (kgf) | | | | Bearing Numbers | Mass (g) approx. |
|--------------------------|-------|--------------|------------------------------|----------|-------|----------|----------------------|------------------|
| F_W | E_W | $B_C^{-0.2}$ | C_r | C_{0r} | C_r | C_{0r} | | |
| 12 | 16 | 10 | 6 100 | 6 500 | 620 | 665 | FWF-121610-E | 4.0 |
| 14 | 19 | 10 | 7 800 | 8 050 | 795 | 820 | FWF-141910-E | 6.2 |
| | 20 | 12 | 8 900 | 8 600 | 910 | 880 | FWF-142012-E | 8.3 |
| 15 | 19 | 9 | 5 650 | 6 250 | 575 | 640 | FWF-15199-E | 4.1 |
| | 20 | 10 | 7 300 | 7 600 | 745 | 775 | FWF-152010-E | 6.0 |
| | 21 | 10 | 7 950 | 7 500 | 810 | 765 | FWF-152110-E | 8.5 |
| 16 | 21 | 11 | 8 650 | 9 600 | 880 | 980 | FWF-162111-E | 7.5 |
| | 22 | 12 | 9 500 | 9 600 | 965 | 980 | FWF-162212-E | 9.5 |
| 18 | 23 | 14 | 11 800 | 14 800 | 1 200 | 1 510 | FWF-182314-E | 10 |
| | 24 | 12 | 10 000 | 10 600 | 1 020 | 1 080 | FWF-182412-E | 11 |
| 20 | 26 | 12 | 12 200 | 14 100 | 1 250 | 1 440 | FWF-202612-E | 13 |
| | 26 | 17 | 16 800 | 21 200 | 1 710 | 2 160 | FWF-202617-E | 17 |
| | 28 | 18 | 18 100 | 19 400 | 1 840 | 1 970 | FWF-202818-E | 25 |
| 22 | 28 | 14 | 13 900 | 17 100 | 1 420 | 1 740 | FWF-222814-E | 14 |
| | 29 | 15 | 16 300 | 19 000 | 1 660 | 1 930 | FWF-222915-E | 19 |
| | 32 | 16 | 19 700 | 19 400 | 2 010 | 1 970 | FWF-223216-E | 31 |
| 23 | 31 | 16 | 17 600 | 19 400 | 1 800 | 1 980 | FWF-233116-E | 23 |
| 24 | 30 | 15 | 15 600 | 20 300 | 1 590 | 2 070 | FWF-243015-E | 17 |
| | 30 | 17 | 17 900 | 24 300 | 1 830 | 2 480 | FWF-243017-E | 19 |
| | 31 | 20 | 21 600 | 27 800 | 2 200 | 2 840 | FWF-243120-E | 30 |
| 25 | 32 | 16 | 17 700 | 21 900 | 1 810 | 2 230 | FWF-253216-E | 24 |
| 28 | 35 | 16 | 18 400 | 23 700 | 1 880 | 2 410 | FWF-283516-E | 25 |
| 29.75 | 36.75 | 16.5 | 19 600 | 26 000 | 1 990 | 2 650 | FWF-293616Z-E | 28 |
| 30 | 37 | 16 | 21 900 | 30 500 | 2 230 | 3 100 | FWF-303716-E | 29 |
| | 38 | 18 | 25 500 | 34 000 | 2 600 | 3 450 | FWF-303818-E | 35 |

Cage & Needle Roller Assemblies for Small Ends of Connecting Rods
Inscribed Circle Diameter 9 – 19 mm



| Boundary Dimensions (mm) | | | Basic Load Ratings (N) (kgf) | | | | Bearing Numbers | Mass (g) approx. |
|--------------------------|-------|--------------|------------------------------|----------|-------|----------|----------------------|------------------|
| F_W | E_W | $B_C^{-0.2}$ | C_r | C_{0r} | C_r | C_{0r} | | |
| 9 | 12 | 11.5 | 4 300 | 4 650 | 440 | 475 | FBN-91211Z-E | 3.5 |
| 10 | 14 | 12.7 | 5 900 | 5 950 | 605 | 610 | FBN-101412Z-E | 5.0 |
| 12 | 15 | 14.3 | 6 400 | 8 400 | 655 | 855 | FBN-121514Z-E | 4.8 |
| | 16 | 13 | 7 250 | 8 200 | 740 | 835 | FBN-121613-E | 6.4 |
| | 16 | 15.5 | 8 500 | 10 000 | 865 | 1 020 | FBN-121615Z-E | 7.0 |
| | 16 | 16 | 8 500 | 10 000 | 865 | 1 020 | FBN-121616-E | 7.5 |
| 14 | 18 | 12 | 6 950 | 8 050 | 710 | 820 | FBN-141812-E | 6.5 |
| | 18 | 16.5 | 9 250 | 11 600 | 945 | 1 180 | FBN-141816Z-E | 8.5 |
| | 18 | 18 | 10 700 | 14 000 | 1 090 | 1 430 | FBN-141818-E | 11.5 |
| | 18 | 20 | 9 550 | 12 000 | 975 | 1 230 | FBN-141820-E1 | 13 |
| 15 | 19 | 18 | 11 300 | 15 300 | 1 150 | 1 560 | FBN-151918-E | 11 |
| | 21 | 18 | 12 900 | 13 900 | 1 310 | 1 420 | FBN-152118-E | 13 |
| 16 | 20 | 22 | 13 700 | 20 000 | 1 400 | 2 040 | FBN-162022-E | 14 |
| | 20 | 23.5 | 14 900 | 22 300 | 1 520 | 2 280 | FBN-162023Z-E | 15 |
| | 21 | 20 | 14 200 | 18 100 | 1 450 | 1 840 | FBN-162120-E | 16 |
| 17 | 21 | 23 | 14 800 | 22 500 | 1 510 | 2 290 | FBN-172123-E | 16 |
| 18 | 22 | 17 | 11 500 | 16 500 | 1 170 | 1 680 | FBN-182217-E | 12 |
| | 22 | 22 | 14 200 | 21 600 | 1 440 | 2 200 | FBN-182222-E | 15 |
| | 22 | 23.6 | 15 400 | 24 100 | 1 570 | 2 460 | FBN-182223Z-E | 16 |
| 19 | 23 | 23.7 | 16 000 | 25 800 | 1 630 | 2 630 | FBN-192323Z-E | 17 |

FJ • MFJ (With Cage)
F • MF (Full Complement Type)
 Inscribed Circle Diameter 4 – 16 mm



| Boundary Dimensions (mm) | | | | Basic Dynamic Load Ratings (N) {kgf} | | Limiting Loads (N) {kgf} | | Limiting Speeds (min ⁻¹) | | Bearing | |
|--------------------------|-----|-------------|-----------------|--------------------------------------|-----------|--------------------------|-------|--------------------------------------|--------|----------|-----------|
| F_w | D | $C^{-0.25}$ | C_1, C_2 max. | C_r | P_{max} | Grease | Oil | With Cage | | | |
| | | | | | | | | Open | Closed | | |
| 4 | 8 | 8 | 0.8 | 1 720 | 175 | 675 | 69 | 45 000 | 75 000 | * FJP-48 | — |
| 5 | 9 | 9 | 0.8 | 1 860 | 190 | 745 | 76 | 43 000 | 71 000 | FJ-59 | MFJ-59 |
| 6 | 10 | 9 | 0.8 | 2 320 | 237 | 985 | 101 | 36 000 | 56 000 | FJ-69 | MFJ-69 |
| 7 | 11 | 9 | 0.8 | 2 550 | 260 | 1 110 | 113 | 30 000 | 48 000 | FJ-79 | MFJ-79 |
| 8 | 12 | 10 | 0.8 | 2 840 | 289 | 1 270 | 130 | 26 000 | 43 000 | FJ-810 | MFJ-810 |
| | 14 | 10 | 1.0 | 4 300 | 435 | 1 770 | 180 | 28 000 | 45 000 | FJH-810 | MFJH-810 |
| | 14 | 10 | 1.9 | 5 550 | 565 | 2 980 | 305 | 6 300 | 10 000 | — | — |
| 9 | 13 | 10 | 0.8 | 3 300 | 335 | 1 600 | 163 | 22 000 | 36 000 | FJ-910 | MFJ-910 |
| | 15 | 10 | 1.0 | 4 550 | 465 | 1 910 | 194 | 24 000 | 40 000 | FJH-910 | MFJH-910 |
| | 15 | 10 | 1.8 | 6 100 | 625 | 3 350 | 340 | 6 000 | 10 000 | — | — |
| 10 | 14 | 10 | 0.8 | 3 500 | 360 | 1 760 | 179 | 20 000 | 32 000 | FJ-1010 | MFJ-1010 |
| | 16 | 10 | 1.0 | 4 900 | 500 | 2 100 | 214 | 22 000 | 34 000 | FJH-1010 | MFJH-1010 |
| | 16 | 10 | 1.9 | 6 650 | 680 | 3 700 | 375 | 5 600 | 9 000 | — | — |
| 12 | 16 | 10 | 0.8 | 4 150 | 420 | 2 210 | 225 | 17 000 | 26 000 | FJ-1210 | MFJ-1210 |
| | 18 | 12 | 1.0 | 6 450 | 655 | 3 050 | 310 | 17 000 | 28 000 | FJH-1212 | MFJH-1212 |
| | 18 | 12 | 1.9 | 9 000 | 920 | 5 700 | 580 | 4 500 | 7 500 | — | — |
| 13 | 19 | 12 | 1.0 | 6 950 | 710 | 3 400 | 345 | 16 000 | 26 000 | FJ-1312 | MFJ-1312 |
| | 19 | 12 | 1.9 | 9 550 | 975 | 6 100 | 625 | 4 300 | 7 100 | — | — |
| 14 | 20 | 12 | 1.0 | 6 500 | 665 | 3 250 | 335 | 15 000 | 24 000 | FJ-1412 | MFJ-1412 |
| | 20 | 12 | 2.2 | 9 450 | 965 | 6 350 | 645 | 3 800 | 6 000 | — | — |
| | 20 | 16 | 1.0 | 9 500 | 970 | 5 300 | 540 | 15 000 | 24 000 | FJ-1416 | MFJ-1416 |
| | 20 | 16 | 2.2 | 13 300 | 1 360 | 9 850 | 1 000 | 3 800 | 6 000 | — | — |
| 15 | 21 | 12 | 1.0 | 7 650 | 780 | 3 900 | 400 | 14 000 | 22 000 | FJ-1512 | MFJ-1512 |
| | 21 | 12 | 1.8 | 10 300 | 1 050 | 6 900 | 705 | 3 800 | 6 000 | — | — |
| | 21 | 14 | 1.8 | 12 400 | 1 270 | 8 800 | 895 | 3 800 | 6 000 | — | — |
| | 21 | 16 | 1.0 | 11 000 | 1 120 | 6 200 | 635 | 14 000 | 22 000 | FJ-1516 | MFJ-1516 |
| | 21 | 16 | 1.8 | 14 500 | 1 480 | 10 700 | 1 090 | 3 800 | 6 000 | — | — |
| 16 | 22 | 12 | 1.0 | 7 100 | 725 | 3 750 | 380 | 12 000 | 20 000 | FJ-1612 | MFJ-1612 |
| | 22 | 12 | 2.2 | 10 200 | 1 040 | 7 100 | 725 | 3 400 | 5 300 | — | — |
| | 22 | 16 | 1.0 | 10 400 | 1 060 | 6 050 | 620 | 12 000 | 20 000 | FJ-1616 | MFJ-1616 |
| | 22 | 16 | 2.2 | 14 400 | 1 460 | 11 100 | 1 130 | 3 400 | 5 300 | — | — |

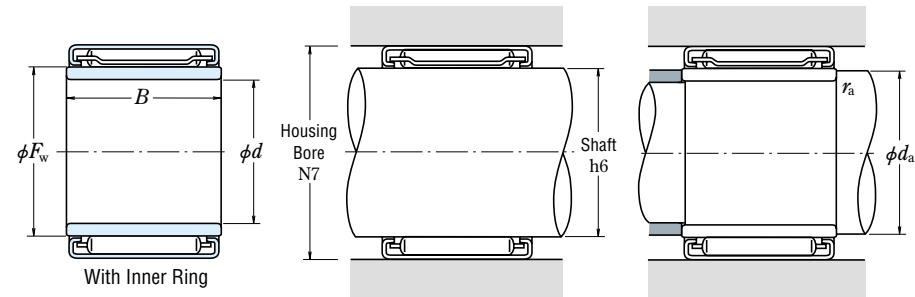
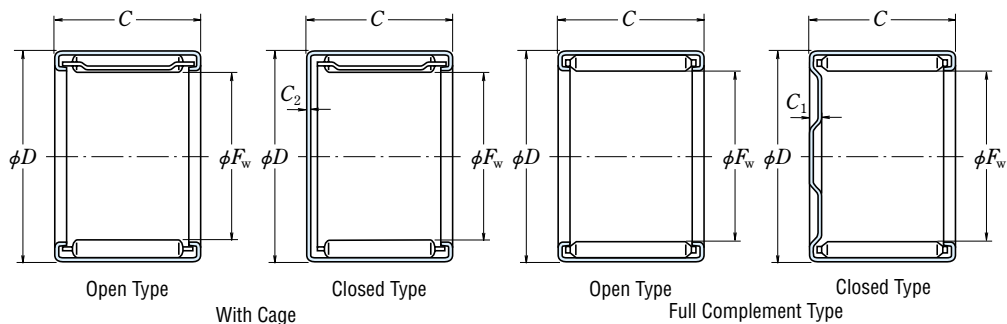
Note (*) These bearing have polyamide cages. The maximum permissible operating temperature for these bearings is 100°C for continued operation and 120°C for short periods.

| Numbers | | In case of inner ring is used | | | | Mass Without Inner Ring (g) | | |
|----------------------|-------------------------------|-------------------------------|-----|-------------------------------------|--------------|-----------------------------|--------|-----|
| Full Complement Type | Bearing Numbers of Inner Ring | Boundary Dimensions (mm) | | Abutment and Fillet Dimensions (mm) | | approx. | | |
| Open | Closed | d | B | d_a (min.) | r_a (max.) | Open | Closed | |
| — | — | — | — | — | — | 1.3 | — | |
| — | — | — | — | — | — | 1.7 | 1.9 | |
| — | — | — | — | — | — | 2.2 | 2.4 | |
| — | — | — | — | — | — | 2.3 | 2.7 | |
| — | — | — | — | — | — | 2.7 | 3.2 | |
| FH-810 | MFH-810 | — | — | — | — | 5.2 | 5.5 | |
| — | — | — | — | — | — | 6.0 | 6.3 | |
| — | — | — | — | — | — | 3.2 | 3.6 | |
| — | — | — | — | — | — | 5.7 | 6.1 | |
| FH-910 | MFH-910 | — | — | — | — | 6.4 | 6.8 | |
| — | — | — | — | — | — | — | — | |
| — | — | FIR-71010 | 7 | 10.5 | 9 | 0.3 | 3.6 | 4.1 |
| — | — | FIR-71010 | 7 | 10.5 | 9 | 0.3 | 6.1 | 6.6 |
| FH-1010 | MFH-1010 | FIR-71010 | 7 | 10.5 | 9 | 0.3 | 6.9 | 7.3 |
| — | — | — | — | — | — | — | — | |
| — | — | FIR-81210 | 8 | 10.5 | 10 | 0.3 | 4.1 | 4.5 |
| — | — | FIR-81212 | 8 | 12.5 | 10 | 0.3 | 7.7 | 8.2 |
| FH-1212 | MFH-1212 | FIR-81212 | 8 | 12.5 | 10 | 0.3 | 10 | 11 |
| — | — | — | — | — | — | — | — | |
| F-1312 | MF-1312 | FIR-101312 | 10 | 12.5 | 12 | 0.3 | 8.6 | 9.5 |
| — | — | FIR-101312 | 10 | 12.5 | 12 | 0.3 | 11 | 12 |
| — | — | — | — | — | — | — | — | |
| F-1412 | MF-1412 | FIR-101412 | 10 | 12.5 | 12 | 0.3 | 10 | 11 |
| — | — | FIR-101412 | 10 | 12.5 | 12 | 0.3 | 12 | 14 |
| F-1416 | MF-1416 | FIR-101416 | 10 | 16.5 | 12 | 0.3 | 13 | 14 |
| — | — | FIR-101416 | 10 | 16.5 | 12 | 0.3 | 18 | 19 |
| — | — | — | — | — | — | — | — | |
| — | — | FIR-121512 | 12 | 12.5 | 14 | 0.3 | 10 | 11 |
| F-1512 | MF-1512 | FIR-121512 | 12 | 12.5 | 14 | 0.3 | 12 | 14 |
| F-1514 | MF-1514 | — | — | — | — | 15 | 16 | |
| — | — | — | — | — | — | — | — | |
| — | — | FIR-121516 | 12 | 16.5 | 14 | 0.3 | 13 | 14 |
| F-1516 | MF-1516 | FIR-121516 | 12 | 16.5 | 14 | 0.3 | 17 | 18 |
| — | — | — | — | — | — | — | — | |
| — | — | FIR-121612 | 12 | 12.5 | 14 | 0.3 | 11 | 12 |
| F-1612 | MF-1612 | FIR-121612 | 12 | 12.5 | 14 | 0.3 | 14 | 15 |
| — | — | FIR-121616 | 12 | 16.5 | 14 | 0.3 | 14 | 15 |
| F-1616 | MF-1616 | FIR-121616 | 12 | 16.5 | 14 | 0.3 | 18 | 20 |

FJ • MFJ (With Cage)

F • MF (Full Complement Type)

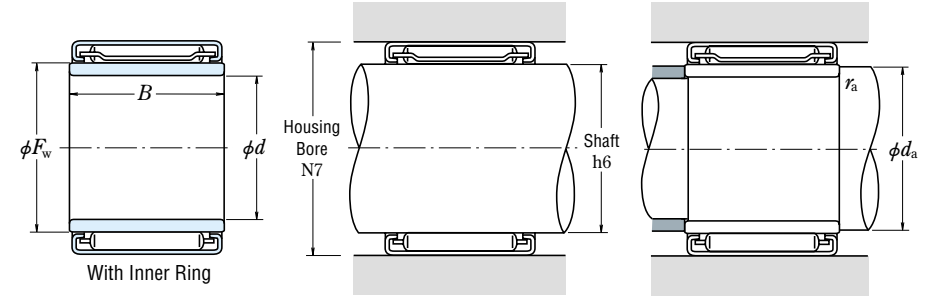
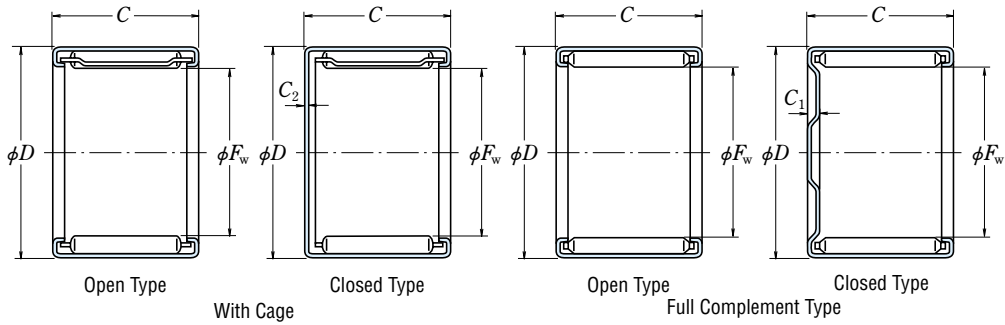
Inscribed Circle Diameter 17 – 28 mm



| Bearing | Boundary Dimensions (mm) | | | | Basic Dynamic Load Ratings (N) {kgf} | | Limiting Loads (N) {kgf} | | Limiting Speeds (min ⁻¹) | | With Cage | |
|----------------|--------------------------|----|--------------------|------------------------------------|--------------------------------------|------------------|--------------------------|-------|--------------------------------------|--------|----------------|-----------------|
| | F _W | D | C ^{-0.25} | C _{1, C₂ max.} | C _r | P _{max} | Grease | Oil | Open | | Closed | |
| | | | | | | | | | Open | Closed | Open | Closed |
| 17 | 23 | 12 | 1.0 | 1.0 | 8 450 | 860 | 4 450 | 455 | 12 000 | 19 000 | FJ-1712 | MFJ-1712 |
| | 23 | 12 | 1.8 | 1.8 | 11 300 | 1 150 | 7 750 | 790 | 3 400 | 5 600 | — | — |
| | 23 | 16 | 1.0 | 1.0 | 12 100 | 1 230 | 7 100 | 720 | 12 000 | 19 000 | FJ-1716 | MFJ-1716 |
| | 23 | 16 | 1.8 | 1.8 | 15 800 | 1 610 | 12 000 | 1 220 | 3 400 | 5 600 | — | — |
| 18 | 24 | 12 | 1.0 | 1.0 | 7 650 | 780 | 4 200 | 430 | 11 000 | 18 000 | FJ-1812 | MFJ-1812 |
| | 24 | 12 | 2.2 | 2.2 | 10 900 | 1 110 | 7 900 | 805 | 3 000 | 5 000 | — | — |
| | 24 | 16 | 1.0 | 1.0 | 11 200 | 1 140 | 6 800 | 695 | 11 000 | 18 000 | FJ-1816 | MFJ-1816 |
| | 24 | 16 | 2.2 | 2.2 | 15 300 | 1 560 | 12 300 | 1 250 | 3 000 | 5 000 | — | — |
| 20 | 26 | 12 | 1.0 | 1.0 | 8 150 | 835 | 4 650 | 475 | 10 000 | 16 000 | FJ-2012 | MFJ-2012 |
| | 26 | 12 | 2.2 | 2.2 | 11 500 | 1 170 | 8 700 | 885 | 2 800 | 4 500 | — | — |
| | 26 | 16 | 1.0 | 1.0 | 11 900 | 1 210 | 7 550 | 770 | 10 000 | 16 000 | FJ-2016 | MFJ-2016 |
| | 26 | 16 | 2.2 | 2.2 | 16 200 | 1 650 | 13 500 | 1 380 | 2 800 | 4 500 | — | — |
| 22 | 28 | 12 | 1.0 | 1.0 | 8 650 | 880 | 5 150 | 525 | 9 000 | 14 000 | FJ-2212 | MFJ-2212 |
| | 28 | 12 | 2.2 | 2.2 | 12 100 | 1 230 | 9 500 | 970 | 2 400 | 4 000 | — | — |
| | 28 | 16 | 1.0 | 1.0 | 12 600 | 1 290 | 8 350 | 850 | 9 000 | 14 000 | FJ-2216 | MFJ-2216 |
| | 28 | 16 | 2.2 | 2.2 | 17 100 | 1 740 | 14 800 | 1 510 | 2 400 | 4 000 | — | — |
| 25 | 32 | 16 | 1.0 | 1.0 | 15 200 | 1 550 | 9 350 | 955 | 8 000 | 13 000 | FJ-2516 | MFJ-2516 |
| | 32 | 16 | 2.5 | 2.5 | 20 200 | 2 060 | 16 200 | 1 650 | 2 800 | 4 500 | — | — |
| | 32 | 20 | 1.0 | 1.0 | 19 800 | 2 020 | 13 100 | 1 340 | 8 000 | 13 000 | FJ-2520 | MFJ-2520 |
| | 32 | 20 | 2.5 | 2.5 | 25 900 | 2 640 | 22 200 | 2 260 | 2 800 | 4 500 | — | — |
| 28 | 35 | 16 | 1.0 | 1.0 | 15 600 | 1 590 | 9 950 | 1 020 | 7 100 | 11 000 | FJ-2816 | MFJ-2816 |
| | 35 | 16 | 2.5 | 2.5 | 21 300 | 2 170 | 17 900 | 1 820 | 2 400 | 4 000 | — | — |
| | 35 | 20 | 1.0 | 1.0 | 20 500 | 2 090 | 14 200 | 1 450 | 7 100 | 11 000 | FJ-2820 | MFJ-2820 |
| | 35 | 20 | 2.5 | 2.5 | 27 300 | 2 780 | 24 600 | 2 510 | 2 400 | 4 000 | — | — |
| FJ-2826 | 35 | 26 | 1.0 | 1.0 | 26 900 | 2 750 | 20 200 | 2 060 | 7 100 | 11 000 | FJ-2826 | MFJ-2826 |
| | 35 | 26 | 2.5 | 2.5 | 35 500 | 3 650 | 34 500 | 3 550 | 2 400 | 4 000 | — | — |

| Numbers | In case of inner ring is used | | | | Mass Without Inner Ring (g) | | | | |
|---------------|-------------------------------|-------------------|-------------------------------|--------------------------|-----------------------------|-------------------------------------|-----------------------|---------|--------|
| | Full Complement Type | | Bearing Numbers of Inner Ring | Boundary Dimensions (mm) | | Abutment and Fillet Dimensions (mm) | | approx. | |
| | Open | Closed | | d | B | d _a (min.) | r _a (max.) | Open | Closed |
| — | — | — | — | — | — | — | — | 10 | 11 |
| F-1712 | MF-1712 | — | — | — | — | — | — | 14 | 15 |
| — | — | — | — | — | — | — | — | 14 | 16 |
| F-1716 | MF-1716 | — | — | — | — | — | — | 18 | 20 |
| — | — | FIR-151812 | 15 | 12.5 | 17 | 0.3 | 12 | 14 | |
| F-1812 | MF-1812 | FIR-151812 | 15 | 12.5 | 17 | 0.3 | 14 | 16 | |
| — | — | FIR-151816 | 15 | 16.5 | 17 | 0.3 | 16 | 18 | |
| F-1816 | MF-1816 | FIR-151816 | 15 | 16.5 | 17 | 0.3 | 19 | 22 | |
| — | — | FIR-172012 | 17 | 12.5 | 19 | 0.3 | 13 | 15 | |
| F-2012 | MF-2012 | FIR-172012 | 17 | 12.5 | 19 | 0.3 | 17 | 19 | |
| — | — | FIR-172016 | 17 | 16.5 | 19 | 0.3 | 17 | 19 | |
| F-2016 | MF-2016 | FIR-172016 | 17 | 16.5 | 19 | 0.3 | 22 | 25 | |
| — | — | FIR-172020 | 17 | 20.5 | 19 | 0.3 | 22 | 24 | |
| F-2020 | MF-2020 | FIR-172020 | 17 | 20.5 | 19 | 0.3 | 28 | 30 | |
| — | — | FIR-172212 | 17 | 12.5 | 19 | 0.3 | 14 | 17 | |
| F-2212 | MF-2212 | FIR-172212 | 17 | 12.5 | 19 | 0.3 | 18 | 21 | |
| — | — | FIR-172216 | 17 | 16.5 | 19 | 0.3 | 19 | 22 | |
| F-2216 | MF-2216 | FIR-172216 | 17 | 16.5 | 19 | 0.3 | 24 | 27 | |
| — | — | FIR-172220 | 17 | 20.5 | 19 | 0.3 | 23 | 26 | |
| F-2220 | MF-2220 | FIR-172220 | 17 | 20.5 | 19 | 0.3 | 30 | 33 | |
| — | — | FIR-202516 | 20 | 16.5 | 22 | 0.3 | 24 | 27 | |
| F-2516 | MF-2516 | FIR-202516 | 20 | 16.5 | 22 | 0.3 | 31 | 35 | |
| — | — | FIR-202520 | 20 | 20.5 | 22 | 0.3 | 31 | 34 | |
| F-2520 | MF-2520 | FIR-202520 | 20 | 20.5 | 22 | 0.3 | 40 | 43 | |
| — | — | FIR-202526 | 20 | 26.5 | 22 | 0.3 | 40 | 43 | |
| F-2526 | MF-2526 | FIR-202526 | 20 | 26.5 | 22 | 0.3 | 52 | 55 | |
| — | — | FIR-222816 | 22 | 16.5 | 24 | 0.3 | 27 | 31 | |
| F-2816 | MF-2816 | FIR-222816 | 22 | 16.5 | 24 | 0.3 | 35 | 40 | |
| — | — | FIR-222820 | 22 | 20.5 | 24 | 0.3 | 34 | 38 | |
| F-2820 | MF-2820 | FIR-222820 | 22 | 20.5 | 24 | 0.3 | 44 | 48 | |
| — | — | FIR-222826 | 22 | 26.5 | 24 | 0.3 | 45 | 49 | |
| F-2826 | MF-2826 | FIR-222826 | 22 | 26.5 | 24 | 0.3 | 57 | 62 | |

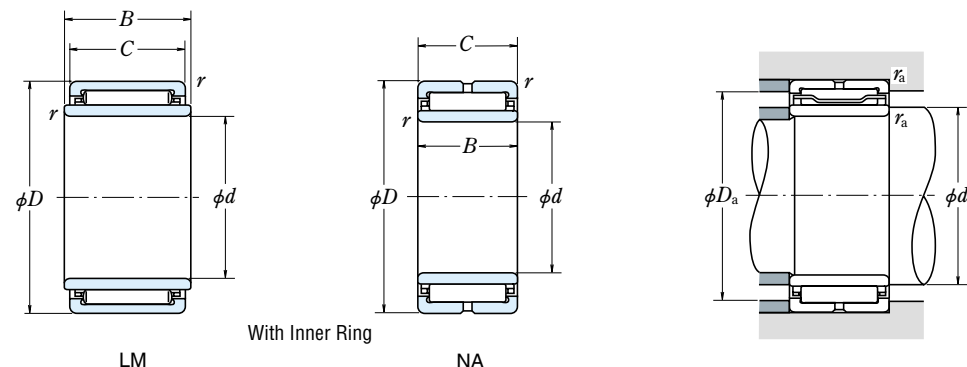
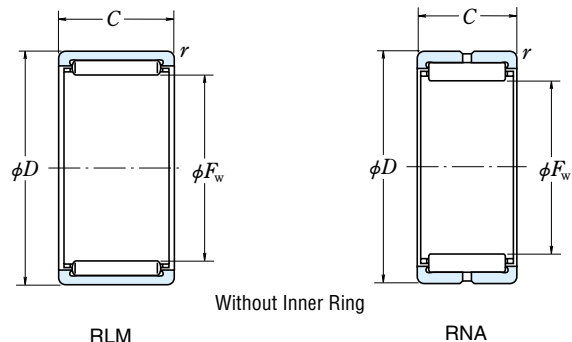
FJ • MFJ (With Cage)
F • MF (Full Complement Type)
 Inscribed Circle Diameter 30 – 55 mm



| Boundary Dimensions (mm) | Basic Dynamic Load Ratings (N) {kgf} | | Limiting Loads (N) {kgf} | | Limiting Speeds (min ⁻¹) | | Bearing | | | | |
|--------------------------|--------------------------------------|----------------|--------------------------|--------------------|--------------------------------------|--------|---------|-----------|--------|-----------------|-----------------|
| | F _W | C _r | D | C ^{-0.25} | C ₁ , C ₂ max. | Grease | Oil | With Cage | | | |
| | | | | | | | | Open | Closed | | |
| 30 | 37 | 16 | 1.0 | 15 600 | 1 590 | 10 100 | 1 030 | 6 700 | 10 000 | FJ-3016L | MFJ-3016 |
| | 37 | 16 | 2.5 | 22 100 | 2 250 | 18 900 | 1 930 | 2 400 | 3 800 | — | — |
| | 37 | 20 | 1.0 | 19 400 | 1 970 | 13 300 | 1 360 | 6 700 | 10 000 | FJ-3020 | MFJ-3020 |
| 35 | 37 | 20 | 2.5 | 28 400 | 2 900 | 26 200 | 2 670 | 2 400 | 3 800 | — | — |
| | 37 | 26 | 1.0 | 26 000 | 2 660 | 19 500 | 1 990 | 6 700 | 10 000 | FJ-3026 | MFJ-3026 |
| | 37 | 26 | 2.5 | 37 000 | 3 800 | 37 000 | 3 750 | 2 400 | 3 800 | — | — |
| 40 | 42 | 16 | 1.0 | 18 100 | 1 850 | 12 800 | 1 300 | 5 600 | 9 000 | FJ-3516 | MFJ-3516 |
| | 42 | 16 | 2.5 | 24 000 | 2 450 | 22 000 | 2 240 | 2 000 | 3 400 | — | — |
| | 42 | 20 | 1.0 | 23 600 | 2 410 | 17 900 | 1 830 | 5 600 | 9 000 | FJ-3520 | MFJ-3520 |
| 45 | 42 | 20 | 2.5 | 31 000 | 3 150 | 30 000 | 3 100 | 2 000 | 3 400 | — | — |
| | 42 | 26 | 1.0 | 31 500 | 3 200 | 25 800 | 2 630 | 5 600 | 9 000 | FJ-3526 | MFJ-3526 |
| | 42 | 26 | 2.5 | 40 000 | 4 100 | 42 500 | 4 350 | 2 000 | 3 400 | — | — |
| 50 | 47 | 16 | 1.0 | 18 600 | 1 890 | 13 600 | 1 390 | 4 800 | 7 500 | FJ-4016 | MFJ-4016 |
| | 47 | 16 | 2.5 | 25 700 | 2 620 | 24 900 | 2 540 | 1 800 | 3 000 | — | — |
| | 47 | 20 | 1.0 | 23 500 | 2 400 | 18 500 | 1 890 | 4 800 | 7 500 | FJ-4020 | MFJ-4020 |
| 55 | 47 | 20 | 2.5 | 32 500 | 3 350 | 34 000 | 3 450 | 1 800 | 3 000 | — | — |
| | 47 | 26 | 1.0 | 31 500 | 3 200 | 26 900 | 2 740 | 4 800 | 7 500 | FJ-4026 | MFJ-4026 |
| | — | — | — | — | — | — | — | — | — | — | — |
| 30 | 52 | 16 | 1.0 | 19 900 | 2 030 | 15 400 | 1 570 | 4 300 | 6 700 | FJ-4516 | MFJ-4516 |
| | 52 | 16 | 2.5 | 27 300 | 2 790 | 27 800 | 2 840 | 1 600 | 2 600 | — | — |
| | 52 | 20 | 1.0 | 25 500 | 2 600 | 21 200 | 2 160 | 4 300 | 6 700 | FJ-4520 | MFJ-4520 |
| 40 | 52 | 20 | 2.5 | 35 000 | 3 550 | 38 500 | 3 900 | 1 600 | 2 600 | — | — |
| | 58 | 20 | 1.1 | 28 900 | 2 940 | 23 100 | 2 350 | 3 800 | 6 300 | FJ-5020L | MFJ-5020 |
| | 58 | 20 | 2.8 | 39 500 | 4 050 | 41 500 | 4 250 | 1 700 | 2 800 | — | — |
| 50 | 58 | 24 | 1.1 | 36 000 | 3 700 | 30 500 | 3 150 | 3 800 | 6 300 | FJ-5024 | MFJ-5024 |
| | 58 | 24 | 2.8 | 48 000 | 4 900 | 53 000 | 5 400 | 1 700 | 2 800 | — | — |
| | — | — | — | — | — | — | — | — | — | — | — |
| 30 | 63 | 20 | 1.1 | 30 000 | 3 100 | 25 100 | 2 560 | 3 400 | 5 600 | FJ-5520 | MFJ-5520 |
| | 63 | 20 | 2.8 | 41 500 | 4 250 | 45 500 | 4 650 | 1 600 | 2 400 | — | — |
| | 63 | 24 | 1.1 | 37 500 | 3 850 | 33 500 | 3 400 | 3 400 | 5 600 | FJ-5524 | MFJ-5524 |
| 50 | 63 | 24 | 2.8 | 50 500 | 5 150 | 58 000 | 5 950 | 1 600 | 2 400 | — | — |

| Numbers | In case of inner ring is used | | | | Mass Without Inner Ring (g) | | | |
|---------------|-------------------------------|-------------------|-------------------------------|--------------------------|-----------------------------|---------|--------|----|
| | Full Complement Type | | Bearing Numbers of Inner Ring | Boundary Dimensions (mm) | | approx. | | |
| | Open | Closed | | d | B | Open | Closed | |
| — | — | — | — | — | — | 26 | 31 | |
| F-3016 | MF-3016 | — | — | — | — | 35 | 40 | |
| — | — | FIR-253020 | 25 | 20.5 | 27 | 0.3 | 35 | 39 |
| F-3020 | MF-3020 | FIR-253020 | 25 | 20.5 | 27 | 0.3 | 46 | 51 |
| F-3026 | MF-3026 | FIR-253026 | 25 | 26.5 | 27 | 0.3 | 46 | 50 |
| — | — | FIR-253026 | 25 | 26.5 | 27 | 0.3 | 61 | 66 |
| — | — | — | — | — | — | 32 | 38 | |
| F-3516 | MF-3516 | — | — | — | — | 53 | 60 | |
| — | — | FIR-303520 | 30 | 20.5 | 34 | 0.6 | 41 | 45 |
| F-3520 | MF-3520 | FIR-303520 | 30 | 20.5 | 34 | 0.6 | 42 | 49 |
| — | — | FIR-303526 | 30 | 26.5 | 34 | 0.6 | 54 | 58 |
| F-3526 | MF-3526 | FIR-303526 | 30 | 26.5 | 34 | 0.6 | 70 | 76 |
| — | — | — | — | — | — | 34 | 43 | |
| F-4016 | MF-4016 | — | — | — | — | 48 | 56 | |
| — | — | FIR-354020 | 35 | 20.5 | 39 | 0.6 | 46 | 51 |
| F-4020 | MF-4020 | FIR-354020 | 35 | 20.5 | 39 | 0.6 | 60 | 69 |
| — | — | FIR-354026 | 35 | 26.5 | 39 | 0.6 | 60 | 65 |
| — | — | — | — | — | — | 39 | 50 | |
| F-4516 | MF-4516 | — | — | — | — | 53 | 64 | |
| — | — | FIR-404520 | 40 | 20.5 | 44 | 0.6 | 53 | 59 |
| F-4520 | MF-4520 | FIR-404520 | 40 | 20.5 | 44 | 0.6 | 67 | 78 |
| — | — | FIR-455020 | 45 | 20.5 | 49 | 0.6 | 56 | 71 |
| F-5020 | MF-5020 | — | — | — | — | 81 | 95 | |
| — | — | — | — | — | — | 69 | 84 | |
| F-5024 | MF-5024 | — | — | — | — | 98 | 110 | |
| — | — | — | — | — | — | 60 | 79 | |
| F-5520 | MF-5520 | — | — | — | — | 88 | 105 | |
| — | — | — | — | — | — | 72 | 90 | |
| F-5524 | MF-5524 | — | — | — | — | 105 | 125 | |

RLM • LM
RNA • NA
Inscribed Circle Diameter 9 – 22 mm

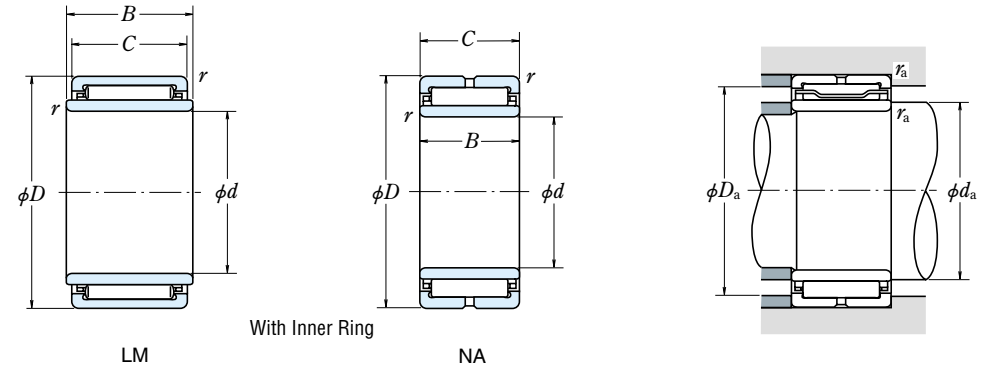
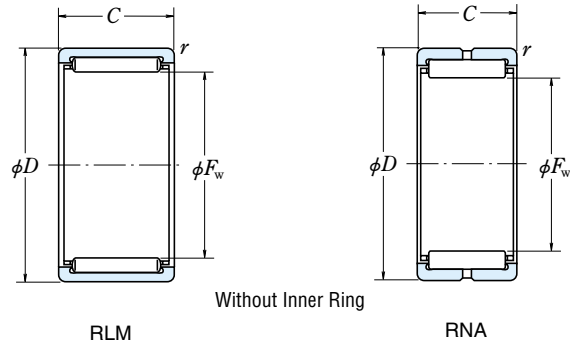


| Boundary Dimensions (mm) | Basic Load Ratings | | | | Limiting Speeds | | Bearing | | | |
|--------------------------|--------------------|-----|--------|----------|-----------------|-------|----------|----------------------|-------------------|--|
| | F_W | D | C | r min. | (N) | (kgf) | | (min ⁻¹) | | |
| | | | | C_r | C_{0r} | C_r | C_{0r} | Grease | Oil | Without Inner Ring |
| 9 | 16 | 12 | 0.3 | 6 150 | 5 400 | 625 | 550 | 24 000 | 40 000 | RLM 912 RLM 916 |
| | 16 | 16 | 0.3 | 7 900 | 7 450 | 805 | 760 | 24 000 | 40 000 | |
| 10 | 17 | 10 | 0.3 | 5 350 | 4 650 | 545 | 470 | 22 000 | 36 000 | RLM 101710 RLM 101715 |
| | 17 | 15 | 0.3 | 8 050 | 7 800 | 820 | 795 | 22 000 | 36 000 | |
| 12 | 17 | 12 | 0.3 | 6 150 | 7 650 | 625 | 780 | 18 000 | 30 000 | RLM 1212 RLM 121912 |
| | 19 | 12 | 0.3 | 7 300 | 7 150 | 745 | 730 | 18 000 | 30 000 | |
| 14 | 22 | 13 | 0.3 | 9 150 | 9 950 | 930 | 1 010 | 20 000 | 32 000 | — |
| | 22 | 16 | 0.3 | 12 100 | 12 700 | 1 230 | 1 300 | 15 000 | 24 000 | |
| | 22 | 20 | 0.3 | 15 500 | 17 500 | 1 580 | 1 790 | 15 000 | 24 000 | |
| 15 | 20 | 15 | 0.3 | 8 100 | 11 700 | 825 | 1 190 | 14 000 | 24 000 | RLM 1515 RLM 1520 RLM 152215 |
| | 20 | 20 | 0.3 | 11 100 | 17 400 | 1 130 | 1 770 | 14 000 | 24 000 | |
| | 22 | 15 | 0.3 | 9 900 | 11 100 | 1 010 | 1 140 | 14 000 | 24 000 | |
| 16 | 24 | 13 | 0.3 | 10 100 | 11 700 | 1 030 | 1 190 | 17 000 | 28 000 | — |
| | 24 | 16 | 0.3 | 12 900 | 14 200 | 1 310 | 1 450 | 13 000 | 22 000 | |
| | 24 | 20 | 0.3 | 16 500 | 19 500 | 1 680 | 1 990 | 13 000 | 22 000 | |
| | 24 | 22 | 0.3 | 17 900 | 24 500 | 1 830 | 2 500 | 17 000 | 28 000 | |
| 17 | 22 | 10 | 0.3 | 5 850 | 7 950 | 595 | 810 | 13 000 | 20 000 | RLM 1710 RLM 172425 |
| | 24 | 25 | 0.5 | 18 200 | 25 300 | 1 850 | 2 580 | 13 000 | 20 000 | |
| 18 | 25 | 15 | 0.5 | 11 500 | 14 300 | 1 170 | 1 450 | 12 000 | 20 000 | RLM 1815 RLM 1820 |
| | 25 | 20 | 0.5 | 15 800 | 21 500 | 1 610 | 2 190 | 12 000 | 20 000 | |
| 20 | 27 | 10 | 0.5 | 7 950 | 9 150 | 810 | 930 | 11 000 | 18 000 | RLM 2010 RLM 2015 RLM 2020 RLM 2025 |
| | 27 | 15 | 0.5 | 11 900 | 15 400 | 1 220 | 1 570 | 11 000 | 18 000 | |
| | 27 | 20 | 0.5 | 16 400 | 23 200 | 1 670 | 2 370 | 11 000 | 18 000 | |
| | 27 | 25 | 0.5 | 19 800 | 29 500 | 2 010 | 3 000 | 11 000 | 18 000 | |
| | 28 | 13 | 0.3 | 10 800 | 13 600 | 1 100 | 1 390 | 13 000 | 22 000 | |
| | 28 | 18 | 0.3 | 15 700 | 21 900 | 1 600 | 2 240 | 13 000 | 22 000 | |
| 22 | 28 | 23 | 0.3 | 19 300 | 28 600 | 1 960 | 2 920 | 13 000 | 22 000 | RLM 2220 RLM 2225 |
| | 29 | 20 | 0.5 | 17 700 | 26 400 | 1 810 | 2 690 | 10 000 | 16 000 | |
| | 29 | 25 | 0.5 | 21 300 | 33 500 | 2 170 | 3 400 | 10 000 | 16 000 | |
| | 30 | 13 | 0.3 | 11 600 | 15 400 | 1 190 | 1 570 | 12 000 | 20 000 | |
| | 30 | 18 | 0.3 | 16 800 | 24 800 | 1 720 | 2 530 | 12 000 | 20 000 | |
| | 30 | 20 | 0.5 | 20 000 | 27 200 | 2 030 | 2 780 | 10 000 | 16 000 | |
| 30 | 23 | 0.3 | 20 700 | 32 500 | 2 110 | 3 300 | 12 000 | 20 000 | RLM 223020 | |

| Numbers | Boundary Dimensions (mm) | Abutment and Fillet Dimensions (mm) | | | Mass (kg) | | | |
|-----------------|--------------------------|-------------------------------------|------|------------|------------|------------|--------------------|-----------------|
| | | d | B | d_a min. | D_a max. | r_a max. | Without Inner Ring | With Inner Ring |
| — | LM 91612-1 | 6 | 12 | 8 | 14 | 0.3 | 0.009 | 0.013 |
| — | — | — | — | — | 14 | 0.3 | 0.011 | — |
| — | — | — | — | — | 15 | 0.3 | 0.008 | — |
| — | — | — | — | — | 15 | 0.3 | 0.012 | — |
| — | LM 1212 | 8 | 12.2 | 10 | 15 | 0.3 | 0.007 | 0.013 |
| — | LM 121912 | 8 | 12.2 | 10 | 17 | 0.3 | 0.011 | 0.017 |
| RNA 4900 | NA 4900 | 10 | 13 | 12 | 20 | 0.3 | 0.016 | 0.024 |
| — | LM 1416 | 10 | 16.2 | 12 | 20 | 0.3 | 0.019 | 0.028 |
| — | LM 1420 | 10 | 20.2 | 12 | 20 | 0.3 | 0.024 | 0.036 |
| — | LM 1515 | 10 | 15.2 | 12 | 18 | 0.3 | 0.011 | 0.022 |
| — | LM 1520 | 10 | 20.2 | 12 | 18 | 0.3 | 0.015 | 0.03 |
| — | LM 152215 | 10 | 15.2 | 12 | 20 | 0.3 | 0.016 | 0.027 |
| RNA 4901 | NA 4901 | 12 | 13 | 14 | 22 | 0.3 | 0.018 | 0.027 |
| — | LM 1616 | 12 | 16.2 | 14 | 22 | 0.3 | 0.021 | 0.032 |
| — | LM 1620 | 12 | 20.2 | 14 | 22 | 0.3 | 0.027 | 0.041 |
| RNA 6901 | NA 6901 | 12 | 22 | 14 | 22 | 0.3 | 0.03 | 0.045 |
| — | LM 1710 | 12 | 10.2 | 14 | 20 | 0.3 | 0.008 | 0.017 |
| — | LM 172425 | 12 | 25.2 | 16 | 20 | 0.5 | 0.03 | 0.052 |
| — | LM 1815 | 15 | 15.2 | 19 | 21 | 0.5 | 0.019 | 0.028 |
| — | LM 1820 | 15 | 20.2 | 19 | 21 | 0.5 | 0.025 | 0.037 |
| — | LM 2010 | 15 | 10.2 | 19 | 23 | 0.5 | 0.014 | 0.025 |
| — | LM 2015 | 15 | 15.2 | 19 | 23 | 0.5 | 0.021 | 0.037 |
| — | LM 2020 | 15 | 20.2 | 19 | 23 | 0.5 | 0.028 | 0.049 |
| — | LM 2025 | 15 | 25.2 | 19 | 23 | 0.5 | 0.035 | 0.061 |
| RNA 4902 | NA 4902 | 15 | 13 | 17 | 26 | 0.3 | 0.021 | 0.035 |
| RNA 5902 | NA 5902 | 15 | 18 | 17 | 26 | 0.3 | 0.032 | 0.051 |
| RNA 6902 | NA 6902 | 15 | 23 | 17 | 26 | 0.3 | 0.039 | 0.064 |
| — | LM 2220 | 17 | 20.2 | 21 | 25 | 0.5 | 0.03 | 0.054 |
| — | LM 2225 | 17 | 25.2 | 21 | 25 | 0.5 | 0.038 | 0.068 |
| RNA 4903 | NA 4903 | 17 | 13 | 19 | 28 | 0.3 | 0.023 | 0.038 |
| RNA 5903 | NA 5903 | 17 | 18 | 19 | 28 | 0.3 | 0.034 | 0.055 |
| — | LM 223020 | 17 | 20.2 | 21 | 26 | 0.5 | 0.035 | 0.06 |
| RNA 6903 | NA 6903 | 17 | 23 | 19 | 28 | 0.3 | 0.041 | 0.068 |

Remarks If a full complement roller bearing is required, please contact NSK.

RLM • LM
RNA • NA
Inscribed Circle Diameter 25 – 35 mm

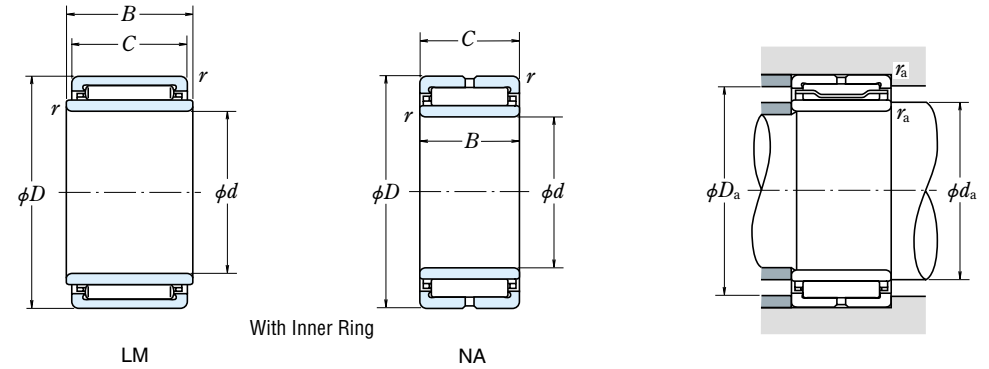
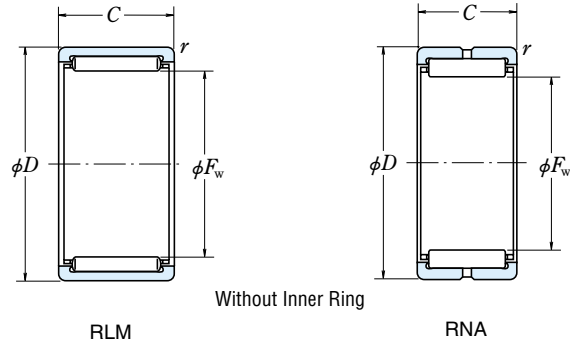


| F _W | Boundary Dimensions (mm) | | | Basic Load Ratings (N) | | | | Limiting Speeds (min ⁻¹) | | Bearing |
|----------------|--------------------------|----|--------|------------------------|-----------------|----------------------|-----------------------|--------------------------------------|--------|--|
| | D | C | r min. | C _r | C _{0r} | C _r (kgf) | C _{0r} (kgf) | Grease | Oil | |
| 25 | 32 | 12 | 0.5 | 10 300 | 13 700 | 1 050 | 1 400 | 8 500 | 14 000 | RLM 2512 RLM 2520 RLM 2525 |
| | 32 | 20 | 0.5 | 18 800 | 29 700 | 1 920 | 3 050 | 8 500 | 14 000 | |
| | 32 | 25 | 0.5 | 22 700 | 37 500 | 2 310 | 3 850 | 8 500 | 14 000 | |
| 28 | 37 | 17 | 0.3 | 19 700 | 22 900 | 2 010 | 2 340 | 11 000 | 18 000 | — — — |
| | 37 | 23 | 0.3 | 27 800 | 35 500 | 2 830 | 3 650 | 11 000 | 18 000 | |
| | 37 | 30 | 0.3 | 36 500 | 50 500 | 3 700 | 5 150 | 11 000 | 18 000 | |
| 30 | 35 | 20 | 0.5 | 19 900 | 33 000 | 2 030 | 3 350 | 7 500 | 12 000 | RLM 2820 RLM 2825 RLM 283730 |
| | 35 | 25 | 0.5 | 23 900 | 42 000 | 2 440 | 4 250 | 7 500 | 12 000 | |
| | 37 | 30 | 0.5 | 34 000 | 52 500 | 3 450 | 5 350 | 7 500 | 12 000 | |
| 32 | 39 | 17 | 0.3 | 22 400 | 30 500 | 2 290 | 3 150 | 9 500 | 15 000 | — — — |
| | 39 | 23 | 0.3 | 28 300 | 41 500 | 2 890 | 4 200 | 9 500 | 15 000 | |
| | 39 | 30 | 0.3 | 37 000 | 58 500 | 3 800 | 6 000 | 9 500 | 15 000 | |
| 33 | 37 | 25 | 0.5 | 24 500 | 44 000 | 2 490 | 4 500 | 7 100 | 12 000 | RLM 3025 RLM 304020 RLM 304030 |
| | 40 | 20 | 0.5 | 25 000 | 36 000 | 2 550 | 3 650 | 7 100 | 12 000 | |
| | 40 | 30 | 0.5 | 35 000 | 56 000 | 3 600 | 5 700 | 7 100 | 12 000 | |
| 34 | 42 | 17 | 0.3 | 21 400 | 26 800 | 2 180 | 2 740 | 9 000 | 14 000 | — — — |
| | 42 | 23 | 0.3 | 30 000 | 41 500 | 3 100 | 4 250 | 9 000 | 14 000 | |
| | 42 | 30 | 0.3 | 39 500 | 59 000 | 4 050 | 6 050 | 9 000 | 14 000 | |
| 35 | 42 | 20 | 0.5 | 25 800 | 38 000 | 2 630 | 3 900 | 6 700 | 11 000 | RLM 3220 RLM 3230 |
| | 42 | 30 | 0.5 | 36 500 | 59 000 | 3 700 | 6 050 | 6 700 | 11 000 | |
| | 45 | 17 | 0.3 | 22 200 | 28 700 | 2 270 | 2 930 | 8 500 | 13 000 | |
| 36 | 45 | 23 | 0.3 | 31 500 | 44 500 | 3 200 | 4 550 | 8 500 | 13 000 | — — — |
| | 45 | 30 | 0.3 | 41 000 | 63 500 | 4 200 | 6 450 | 8 500 | 13 000 | |
| | 47 | 17 | 0.3 | 23 900 | 32 500 | 2 430 | 3 300 | 7 500 | 12 000 | |
| 37 | 42 | 20 | 0.5 | 22 300 | 41 000 | 2 270 | 4 200 | 6 300 | 10 000 | RLM 3520 RLM 3530 |
| | 42 | 30 | 0.5 | 31 000 | 63 500 | 3 200 | 6 450 | 6 300 | 10 000 | |
| | 45 | 20 | 0.5 | 27 500 | 42 500 | 2 800 | 4 350 | 6 300 | 10 000 | |
| 38 | 45 | 25 | 0.5 | 33 000 | 54 500 | 3 400 | 5 550 | 6 300 | 10 000 | RLM 354520 RLM 354525 RLM 354530 |
| | 45 | 30 | 0.5 | 38 500 | 66 000 | 3 950 | 6 750 | 6 300 | 10 000 | |
| | 47 | 23 | 0.3 | 33 500 | 50 500 | 3 450 | 5 150 | 7 500 | 12 000 | |
| 39 | 47 | 30 | 0.3 | 44 000 | 71 500 | 4 500 | 7 300 | 7 500 | 12 000 | — — — |

| Numbers | | Boundary Dimensions (mm) | | Abutment and Fillet Dimensions (mm) | | | Mass (kg) | |
|--------------------|-----------------|--------------------------|------|-------------------------------------|---------------------|---------------------|--------------------|-----------------|
| Without Inner Ring | With Inner Ring | d | B | d _a min. | D _a max. | r _a max. | approx. | |
| | | | | | | | Without Inner Ring | With Inner Ring |
| — | LM 2512 | 20 | 12.2 | 24 | 28 | 0.5 | 0.02 | 0.036 |
| — | LM 2520 | 20 | 20.2 | 24 | 28 | 0.5 | 0.034 | 0.061 |
| — | LM 2525 | 20 | 25.2 | 24 | 28 | 0.5 | 0.042 | 0.076 |
| RNA 4904 | NA 4904 | 20 | 17 | 22 | 35 | 0.3 | 0.055 | 0.077 |
| RNA 5904 | NA 5904 | 20 | 23 | 22 | 35 | 0.3 | 0.089 | 0.12 |
| RNA 6904 | NA 6904 | 20 | 30 | 22 | 35 | 0.3 | 0.098 | 0.14 |
| — | LM 2820 | 22 | 20.2 | 26 | 31 | 0.5 | 0.038 | 0.062 |
| — | LM 2825 | 22 | 25.2 | 26 | 31 | 0.5 | 0.047 | 0.092 |
| — | LM 283730 | 22 | 30.2 | 26 | 33 | 0.5 | 0.075 | 0.13 |
| RNA 49/22 | NA 49/22 | 22 | 17 | 24 | 37 | 0.3 | 0.056 | 0.086 |
| RNA 59/22 | NA 59/22 | 22 | 23 | 24 | 37 | 0.3 | 0.091 | 0.135 |
| RNA 69/22 | NA 69/22 | 22 | 30 | 24 | 37 | 0.3 | 0.096 | 0.15 |
| — | LM 3025 | 25 | 25.2 | 29 | 33 | 0.5 | 0.05 | 0.092 |
| — | LM 304020 | 25 | 20.2 | 29 | 36 | 0.5 | 0.06 | 0.093 |
| — | LM 304030 | 25 | 30.2 | 29 | 36 | 0.5 | 0.09 | 0.14 |
| RNA 4905 | NA 4905 | 25 | 17 | 27 | 40 | 0.3 | 0.063 | 0.091 |
| RNA 5905 | NA 5905 | 25 | 23 | 27 | 40 | 0.3 | 0.10 | 0.14 |
| RNA 6905 | NA 6905 | 25 | 30 | 27 | 40 | 0.3 | 0.11 | 0.16 |
| — | LM 3220 | 28 | 20.2 | 32 | 38 | 0.5 | 0.064 | 0.09 |
| — | LM 3230 | 28 | 30.2 | 32 | 38 | 0.5 | 0.096 | 0.14 |
| RNA 49/28 | NA 49/28 | 28 | 17 | 30 | 43 | 0.3 | 0.076 | 0.099 |
| RNA 59/28 | NA 59/28 | 28 | 23 | 30 | 43 | 0.3 | 0.11 | 0.145 |
| RNA 69/28 | NA 69/28 | 28 | 30 | 30 | 43 | 0.3 | 0.13 | 0.175 |
| — | LM 3520 | 30 | 20.2 | 34 | 38 | 0.5 | 0.046 | 0.085 |
| — | LM 3530 | 30 | 30.2 | 34 | 38 | 0.5 | 0.07 | 0.13 |
| — | LM 354520 | 30 | 20.2 | 34 | 41 | 0.5 | 0.069 | 0.11 |
| — | LM 354525 | 30 | 25.2 | 34 | 41 | 0.5 | 0.086 | 0.135 |
| — | LM 354530 | 30 | 30.2 | 34 | 41 | 0.5 | 0.10 | 0.16 |
| RNA 4906 | NA 4906 | 30 | 17 | 32 | 45 | 0.3 | 0.072 | 0.105 |
| RNA 5906 | NA 5906 | 30 | 23 | 32 | 45 | 0.3 | 0.11 | 0.15 |
| RNA 6906 | NA 6906 | 30 | 30 | 32 | 45 | 0.3 | 0.13 | 0.19 |

Remarks If a full complement roller bearing is required, please contact NSK.

RLM • LM
RNA • NA
Inscribed Circle Diameter 37 – 58 mm

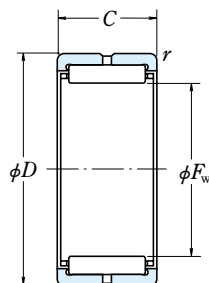


| F_w | Boundary Dimensions (mm) | | | Basic Load Ratings | | | | Limiting Speeds | | Bearing |
|-------|--------------------------|-----|----------|--------------------|--------------|-------------|----------------|-----------------|--------|--------------------------|
| | D | C | r min. | C_r (N) | C_{0r} (N) | C_r (kgf) | C_{0r} (kgf) | Grease | Oil | |
| 37 | 47 | 20 | 0.6 | 28 200 | 45 000 | 2 880 | 4 550 | 6 000 | 9 500 | RLM 3720 RLM 3730 |
| | 47 | 30 | 0.6 | 39 500 | 69 500 | 4 050 | 7 100 | 6 000 | 9 500 | |
| 38 | 48 | 20 | 0.6 | 29 000 | 47 000 | 2 960 | 4 800 | 5 600 | 9 000 | RLM 3820 RLM 3830 |
| | 48 | 30 | 0.6 | 41 000 | 73 000 | 4 150 | 7 450 | 5 600 | 9 000 | |
| 40 | 50 | 20 | 0.6 | 29 700 | 49 000 | 3 050 | 5 000 | 5 300 | 9 000 | RLM 4020 RLM 4030 |
| | 50 | 30 | 0.6 | 42 000 | 76 500 | 4 250 | 7 800 | 5 300 | 9 000 | |
| 42 | 52 | 20 | 0.6 | 29 900 | 45 000 | 3 050 | 4 600 | 6 700 | 10 000 | — |
| | 52 | 27 | 0.6 | 40 500 | 66 000 | 4 100 | 6 750 | 6 700 | 10 000 | — |
| | 52 | 36 | 0.6 | 56 000 | 101 000 | 5 700 | 10 300 | 6 700 | 10 000 | — |
| 45 | 55 | 20 | 0.6 | 30 500 | 47 500 | 3 100 | 4 800 | 6 300 | 10 000 | — |
| | 55 | 27 | 0.6 | 41 500 | 69 500 | 4 200 | 7 100 | 6 300 | 10 000 | — |
| | 55 | 36 | 0.6 | 57 500 | 106 000 | 5 850 | 10 900 | 6 300 | 10 000 | — |
| 48 | 62 | 22 | 0.6 | 31 000 | 53 500 | 3 150 | 5 500 | 4 800 | 8 000 | RLM 4520 RLM 4530 |
| | 62 | 30 | 0.6 | 43 500 | 83 500 | 4 450 | 8 500 | 4 800 | 8 000 | |
| 50 | 62 | 22 | 0.6 | 39 000 | 61 500 | 3 950 | 6 300 | 5 600 | 9 000 | — |
| | 62 | 30 | 0.6 | 54 500 | 95 000 | 5 550 | 9 700 | 5 600 | 9 000 | — |
| | 62 | 40 | 0.6 | 72 000 | 137 000 | 7 350 | 13 900 | 5 600 | 9 000 | — |
| 52 | 62 | 20 | 0.6 | 35 500 | 60 500 | 3 600 | 6 150 | 4 300 | 7 100 | RLM 506220 RLM 506225 |
| | 62 | 25 | 0.6 | 43 000 | 77 500 | 4 400 | 7 900 | 4 300 | 7 100 | |
| 55 | 68 | 22 | 0.6 | 41 000 | 67 500 | 4 150 | 6 900 | 5 000 | 8 000 | — |
| | 68 | 30 | 0.6 | 57 000 | 104 000 | 5 800 | 10 600 | 5 000 | 8 000 | — |
| | 68 | 40 | 0.6 | 76 000 | 149 000 | 7 750 | 15 200 | 5 000 | 8 000 | — |
| 58 | 65 | 30 | 0.6 | 49 000 | 104 000 | 5 000 | 10 600 | 4 000 | 6 300 | RLM 5530 RLM 556720 |
| | 67 | 20 | 0.6 | 38 000 | 68 000 | 3 850 | 6 900 | 4 000 | 6 300 | |
| 58 | 72 | 22 | 0.6 | 42 500 | 73 500 | 4 350 | 7 500 | 4 500 | 7 100 | — |
| | 72 | 30 | 0.6 | 59 500 | 113 000 | 6 050 | 11 500 | 4 500 | 7 100 | — |
| | 72 | 40 | 0.6 | 79 000 | 163 000 | 8 050 | 16 600 | 4 500 | 7 100 | — |

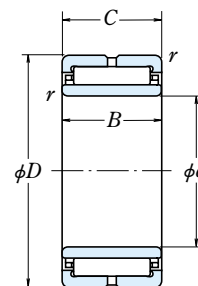
| Numbers | | Boundary Dimensions (mm) | | Abutment and Fillet Dimensions (mm) | | | Mass (kg) | |
|--------------------|-----------------|--------------------------|------|-------------------------------------|------------|------------|--------------------|-----------------|
| Without Inner Ring | With Inner Ring | d | B | d_a min. | D_a max. | r_a max. | approx. | |
| | | | | | | | Without Inner Ring | With Inner Ring |
| — | LM 3720 | 32 | 20.3 | 36 | 43 | 0.6 | 0.072 | 0.115 |
| — | LM 3730 | 32 | 30.3 | 36 | 43 | 0.6 | 0.11 | 0.17 |
| — | LM 3820 | 32 | 20.3 | 36 | 44 | 0.6 | 0.074 | 0.125 |
| — | LM 3830 | 32 | 30.3 | 36 | 44 | 0.6 | 0.11 | 0.195 |
| — | LM 4020 | 35 | 20.3 | 39 | 46 | 0.6 | 0.078 | 0.125 |
| — | LM 4030 | 35 | 30.3 | 39 | 46 | 0.6 | 0.12 | 0.19 |
| RNA 49/32 | NA 49/32 | 32 | 20 | 36 | 48 | 0.6 | 0.092 | 0.16 |
| RNA 59/32 | NA 59/32 | 32 | 27 | 36 | 48 | 0.6 | 0.15 | 0.24 |
| RNA 69/32 | NA 69/32 | 32 | 36 | 36 | 48 | 0.6 | 0.17 | 0.29 |
| RNA 4907 | NA 4907 | 35 | 20 | 39 | 51 | 0.6 | 0.11 | 0.17 |
| RNA 5907 | NA 5907 | 35 | 27 | 39 | 51 | 0.6 | 0.175 | 0.25 |
| RNA 6907 | NA 6907 | 35 | 36 | 39 | 51 | 0.6 | 0.20 | 0.315 |
| — | LM 4520 | 40 | 20.3 | 44 | 51 | 0.6 | 0.086 | 0.14 |
| — | LM 4530 | 40 | 30.3 | 44 | 51 | 0.6 | 0.13 | 0.21 |
| RNA 4908 | NA 4908 | 40 | 22 | 44 | 58 | 0.6 | 0.15 | 0.24 |
| RNA 5908 | NA 5908 | 40 | 30 | 44 | 58 | 0.6 | 0.23 | 0.355 |
| RNA 6908 | NA 6908 | 40 | 40 | 44 | 58 | 0.6 | 0.265 | 0.435 |
| — | LM 506220 | 42 | 20.3 | 46 | 58 | 0.6 | 0.12 | 0.21 |
| — | LM 506225 | 42 | 25.3 | 46 | 58 | 0.6 | 0.155 | 0.265 |
| RNA 4909 | NA 4909 | 45 | 22 | 49 | 64 | 0.6 | 0.19 | 0.28 |
| RNA 5909 | NA 5909 | 45 | 30 | 49 | 64 | 0.6 | 0.27 | 0.39 |
| RNA 6909 | NA 6909 | 45 | 40 | 49 | 64 | 0.6 | 0.335 | 0.495 |
| — | LM 5530 | 45 | 30.3 | 49 | 61 | 0.6 | 0.16 | 0.34 |
| — | LM 556720 | 45 | 20.3 | 49 | 63 | 0.6 | 0.13 | 0.25 |
| RNA 4910 | NA 4910 | 50 | 22 | 54 | 68 | 0.6 | 0.18 | 0.295 |
| RNA 5910 | NA 5910 | 50 | 30 | 54 | 68 | 0.6 | 0.25 | 0.405 |
| RNA 6910 | NA 6910 | 50 | 40 | 54 | 68 | 0.6 | 0.32 | 0.53 |

Remarks If a full complement roller bearing is required, please contact NSK.

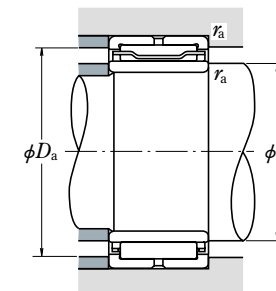
RNA · NA
Inscribed Circle Diameter 63 – 120 mm



Without Inner Ring
RNA



With Inner Ring
NA

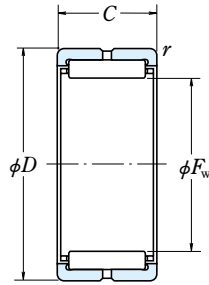


| Boundary Dimensions (mm) | Basic Load Ratings | | | | Limiting Speeds | | Bearing | | | |
|--------------------------|--------------------|-----|-----|----------|-----------------|--------|----------|----------------------|-------|--------------------|
| | F_W | D | C | r min. | (N) | (kgf) | | (min ⁻¹) | | |
| | | | | C_r | C_{0r} | C_r | C_{0r} | Grease | Oil | Without Inner Ring |
| 63 | 80 | 25 | 1 | 53 500 | 87 500 | 5 450 | 8 950 | 4 000 | 6 700 | RNA 4911 |
| | 80 | 34 | 1 | 73 500 | 133 000 | 7 500 | 13 600 | 4 000 | 6 700 | RNA 5911 |
| | 80 | 45 | 1 | 93 500 | 181 000 | 9 550 | 18 500 | 4 000 | 6 700 | RNA 6911 |
| 68 | 85 | 25 | 1 | 56 000 | 95 500 | 5 700 | 9 750 | 3 800 | 6 300 | RNA 4912 |
| | 85 | 34 | 1 | 77 500 | 145 000 | 7 900 | 14 800 | 3 800 | 6 300 | RNA 5912 |
| | 85 | 45 | 1 | 98 000 | 197 000 | 10 000 | 20 100 | 3 800 | 6 300 | RNA 6912 |
| 72 | 90 | 25 | 1 | 58 500 | 103 000 | 5 950 | 10 500 | 3 600 | 5 600 | RNA 4913 |
| | 90 | 34 | 1 | 81 000 | 157 000 | 8 250 | 16 000 | 3 600 | 5 600 | RNA 5913 |
| | 90 | 45 | 1 | 103 000 | 213 000 | 10 500 | 21 800 | 3 600 | 5 600 | RNA 6913 |
| 80 | 100 | 30 | 1 | 80 500 | 143 000 | 8 200 | 14 600 | 3 200 | 5 300 | RNA 4914 |
| | 100 | 40 | 1 | 107 000 | 206 000 | 10 900 | 21 000 | 3 200 | 5 300 | RNA 5914 |
| | 100 | 54 | 1 | 143 000 | 298 000 | 14 500 | 30 500 | 3 200 | 5 300 | RNA 6914 |
| 85 | 105 | 30 | 1 | 84 000 | 155 000 | 8 600 | 15 800 | 3 000 | 5 000 | RNA 4915 |
| | 105 | 40 | 1 | 112 000 | 222 000 | 11 400 | 22 700 | 3 000 | 5 000 | RNA 5915 |
| | 105 | 54 | 1 | 149 000 | 325 000 | 15 200 | 33 000 | 3 000 | 5 000 | RNA 6915 |
| 90 | 110 | 30 | 1 | 87 500 | 166 000 | 8 950 | 17 000 | 2 800 | 4 500 | RNA 4916 |
| | 110 | 40 | 1 | 116 000 | 239 000 | 11 900 | 24 400 | 2 800 | 4 500 | RNA 5916 |
| | 110 | 54 | 1 | 157 000 | 350 000 | 16 000 | 36 000 | 2 800 | 4 500 | RNA 6916 |
| 100 | 120 | 35 | 1.1 | 104 000 | 214 000 | 10 600 | 21 800 | 2 600 | 4 000 | RNA 4917 |
| | 120 | 46 | 1.1 | 138 000 | 310 000 | 14 100 | 31 500 | 2 600 | 4 000 | RNA 5917 |
| | 120 | 63 | 1.1 | 174 000 | 415 000 | 17 800 | 42 500 | 2 600 | 4 000 | RNA 6917 |
| 105 | 125 | 35 | 1.1 | 108 000 | 228 000 | 11 000 | 23 300 | 2 400 | 4 000 | RNA 4918 |
| | 125 | 46 | 1.1 | 143 000 | 330 000 | 14 600 | 33 500 | 2 400 | 4 000 | RNA 5918 |
| | 125 | 63 | 1.1 | 181 000 | 445 000 | 18 400 | 45 000 | 2 400 | 4 000 | RNA 6918 |
| 110 | 130 | 35 | 1.1 | 111 000 | 242 000 | 11 400 | 24 700 | 2 200 | 3 800 | RNA 4919 |
| | 130 | 46 | 1.1 | 148 000 | 350 000 | 15 100 | 35 500 | 2 200 | 3 800 | RNA 5919 |
| | 130 | 63 | 1.1 | 187 000 | 470 000 | 19 100 | 48 000 | 2 200 | 3 800 | RNA 6919 |
| 115 | 140 | 40 | 1.1 | 144 000 | 295 000 | 14 700 | 30 000 | 2 200 | 3 600 | RNA 4920 |
| | 140 | 54 | 1.1 | 193 000 | 430 000 | 19 700 | 43 500 | 2 200 | 3 600 | RNA 5920 |
| | 140 | 30 | 1 | 99 500 | 214 000 | 10 100 | 21 900 | 2 000 | 3 400 | RNA 4822 |

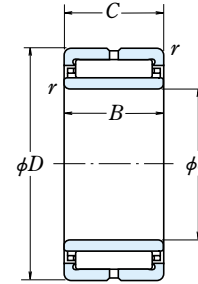
Remarks If a full complement roller bearing is required, please contact NSK.

| Numbers | Boundary Dimensions (mm) | | Abutment and Fillet Dimensions (mm) | | | Mass (kg) | |
|----------------|--------------------------|-----|-------------------------------------|------------|------------|------------|------------------------------------|
| | With Inner Ring | d | B | d_a min. | D_a max. | r_a max. | approx. |
| | | | | | | | Without Inner Ring With Inner Ring |
| NA 4911 | | 55 | 25 | 60 | 75 | 1 | 0.26 0.40 |
| | NA 5911 | 55 | 34 | 60 | 75 | 1 | 0.37 0.56 |
| | NA 6911 | 55 | 45 | 60 | 75 | 1 | 0.475 0.73 |
| NA 4912 | | 60 | 25 | 65 | 80 | 1 | 0.28 0.435 |
| | NA 5912 | 60 | 34 | 65 | 80 | 1 | 0.415 0.625 |
| | NA 6912 | 60 | 45 | 65 | 80 | 1 | 0.485 0.76 |
| NA 4913 | | 65 | 25 | 70 | 85 | 1 | 0.32 0.465 |
| | NA 5913 | 65 | 34 | 70 | 85 | 1 | 0.48 0.675 |
| | NA 6913 | 65 | 45 | 70 | 85 | 1 | 0.53 0.79 |
| NA 4914 | | 70 | 30 | 75 | 95 | 1 | 0.47 0.74 |
| | NA 5914 | 70 | 40 | 75 | 95 | 1 | 0.69 1.05 |
| | NA 6914 | 70 | 54 | 75 | 95 | 1 | 0.89 1.4 |
| NA 4915 | | 75 | 30 | 80 | 100 | 1 | 0.5 0.79 |
| | NA 5915 | 75 | 40 | 80 | 100 | 1 | 0.735 1.1 |
| | NA 6915 | 75 | 54 | 80 | 100 | 1 | 0.96 1.5 |
| NA 4916 | | 80 | 30 | 85 | 105 | 1 | 0.53 0.835 |
| | NA 5916 | 80 | 40 | 85 | 105 | 1 | 0.75 1.15 |
| | NA 6916 | 80 | 54 | 85 | 105 | 1 | 0.99 1.55 |
| NA 4917 | | 85 | 35 | 91.5 | 113.5 | 1 | 0.68 1.25 |
| | NA 5917 | 85 | 46 | 91.5 | 113.5 | 1 | 0.99 1.75 |
| | NA 6917 | 85 | 63 | 91.5 | 113.5 | 1 | 1.2 2.25 |
| NA 4918 | | 90 | 35 | 96.5 | 118.5 | 1 | 0.72 1.35 |
| | NA 5918 | 90 | 46 | 96.5 | 118.5 | 1 | 1.05 1.85 |
| | NA 6918 | 90 | 63 | 96.5 | 118.5 | 1 | 1.35 2.45 |
| NA 4919 | | 95 | 35 | 101.5 | 123.5 | 1 | 0.74 1.4 |
| | NA 5919 | 95 | 46 | 101.5 | 123.5 | 1 | 1.15 2.0 |
| | NA 6919 | 95 | 63 | 101.5 | 123.5 | 1 | 1.5 2.65 |
| NA 4920 | | 100 | 40 | 106.5 | 133.5 | 1 | 1.15 1.95 |
| | NA 5920 | 100 | 54 | 106.5 | 133.5 | 1 | 1.8 2.85 |
| | NA 4822 | 110 | 30 | 115 | 135 | 1 | 0.67 1.1 |

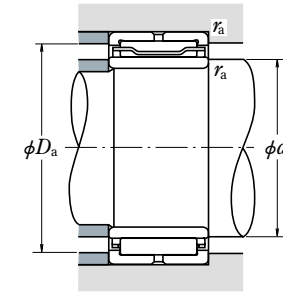
RNA · NA
Inscribed Circle Diameter 125 – 390 mm



Without Inner Ring
RNA



With Inner Ring
NA



| Boundary Dimensions (mm) | | | | Basic Load Ratings (N) (kgf) | | | | Limiting Speeds (min ⁻¹) | | Bearing |
|--|-----|----|--------|------------------------------|-----------------|----------------|-----------------|--------------------------------------|-------|--|
| F _W | D | C | r min. | C _r | C _{0r} | C _r | C _{0r} | Grease | Oil | |
| 125 | 150 | 40 | 1.1 | 149 000 | 315 000 | 15 200 | 32 500 | 2 000 | 3 200 | RNA 4922 RNA 5922 |
| | 150 | 54 | 1.1 | 200 000 | 460 000 | 20 300 | 47 000 | 2 000 | 3 200 | |
| 130 | 150 | 30 | 1 | 105 000 | 238 000 | 10 700 | 24 300 | 1 900 | 3 200 | RNA 4824 |
| 135 | 165 | 45 | 1.1 | 192 000 | 395 000 | 19 600 | 40 500 | 1 900 | 3 000 | RNA 4924 RNA 5924 |
| | 165 | 60 | 1.1 | 253 000 | 565 000 | 25 800 | 58 000 | 1 900 | 3 000 | |
| 145 | 165 | 35 | 1.1 | 127 000 | 315 000 | 12 900 | 32 000 | 1 700 | 2 800 | RNA 4826 |
| 150 | 180 | 50 | 1.5 | 228 000 | 515 000 | 23 200 | 52 500 | 1 700 | 2 800 | RNA 4926 RNA 5926 |
| | 180 | 67 | 1.5 | 299 000 | 725 000 | 30 500 | 74 000 | 1 700 | 2 800 | |
| 155 | 175 | 35 | 1.1 | 133 000 | 340 000 | 13 600 | 35 000 | 1 600 | 2 600 | RNA 4828 |
| 160 | 190 | 50 | 1.5 | 235 000 | 545 000 | 24 000 | 55 500 | 1 600 | 2 600 | RNA 4928 RNA 5928 |
| | 190 | 67 | 1.5 | 310 000 | 775 000 | 31 500 | 79 000 | 1 600 | 2 600 | |
| 165 | 190 | 40 | 1.1 | 180 000 | 440 000 | 18 300 | 45 000 | 1 500 | 2 400 | RNA 4830 |
| 175 185 195 | 200 | 40 | 1.1 | 184 000 | 465 000 | 18 700 | 47 000 | 1 400 | 2 200 | RNA 4832 RNA 4834 RNA 4836 |
| | 215 | 45 | 1.1 | 224 000 | 540 000 | 22 900 | 55 000 | 1 400 | 2 200 | |
| | 225 | 45 | 1.1 | 230 000 | 570 000 | 23 500 | 58 000 | 1 300 | 2 000 | |
| 210 220 240 | 240 | 50 | 1.5 | 268 000 | 705 000 | 27 300 | 72 000 | 1 200 | 1 900 | RNA 4838 RNA 4840 RNA 4844 |
| | 250 | 50 | 1.5 | 274 000 | 740 000 | 27 900 | 75 500 | 1 100 | 1 800 | |
| | 270 | 50 | 1.5 | 286 000 | 805 000 | 29 100 | 82 000 | 1 000 | 1 700 | |
| 265 285 305 | 300 | 60 | 2 | 375 000 | 1 070 000 | 38 500 | 109 000 | 950 | 1 500 | RNA 4848 RNA 4852 RNA 4856 |
| | 320 | 60 | 2 | 395 000 | 1 160 000 | 40 000 | 118 000 | 900 | 1 400 | |
| | 350 | 69 | 2 | 510 000 | 1 390 000 | 52 000 | 142 000 | 800 | 1 300 | |
| 330 350 370 390 | 380 | 80 | 2.1 | 660 000 | 1 810 000 | 67 500 | 185 000 | 750 | 1 200 | RNA 4860 RNA 4864 RNA 4868 RNA 4872 |
| | 400 | 80 | 2.1 | 675 000 | 1 900 000 | 69 000 | 194 000 | 710 | 1 100 | |
| | 420 | 80 | 2.1 | 690 000 | 1 990 000 | 70 500 | 203 000 | 670 | 1 100 | |
| | 440 | 80 | 2.1 | 705 000 | 2 080 000 | 72 000 | 212 000 | 630 | 1 000 | |

Remarks If a full complement roller bearing is required, please contact NSK.

| Numbers | Boundary Dimensions (mm) | | Abutment and Fillet Dimensions (mm) | | | Mass (kg) | |
|--|--------------------------|--------|-------------------------------------|---------------------|---------------------|--------------------|-----------------|
| | With Inner Ring | d B | d _a min. | D _a max. | r _a max. | Without Inner Ring | With Inner Ring |
| NA 4922 NA 5922 | | 110 40 | 116.5 | 143.5 | 1 | 1.25 | 2.1 |
| | | 110 54 | 116.5 | 143.5 | 1 | 1.95 | 3.05 |
| NA 4824 | | 120 30 | 125 | 145 | 1 | 0.71 | 1.15 |
| NA 4924 NA 5924 | | 120 45 | 126.5 | 158.5 | 1 | 1.9 | 2.9 |
| | | 120 60 | 126.5 | 158.5 | 1 | 2.7 | 4.05 |
| NA 4826 | | 130 35 | 136.5 | 158.5 | 1 | 0.92 | 1.8 |
| NA 4926 NA 5926 | | 130 50 | 138 | 172 | 1.5 | 2.3 | 4.0 |
| | | 130 67 | 138 | 172 | 1.5 | 3.3 | 5.55 |
| NA 4828 | | 140 35 | 146.5 | 168.5 | 1 | 0.98 | 1.9 |
| NA 4928 NA 5928 | | 140 50 | 148 | 182 | 1.5 | 2.45 | 4.25 |
| | | 140 67 | 148 | 182 | 1.5 | 3.55 | 6.0 |
| NA 4830 | | 150 40 | 156.5 | 183.5 | 1 | 1.6 | 2.75 |
| NA 4832 NA 4834 NA 4836 | | 160 40 | 166.5 | 193.5 | 1 | 1.75 | 2.95 |
| | | 170 45 | 176.5 | 208.5 | 1 | 2.55 | 4.0 |
| | | 180 45 | 186.5 | 218.5 | 1 | 2.65 | 4.2 |
| NA 4838 NA 4840 NA 4844 | | 190 50 | 198 | 232 | 1.5 | 3.2 | 5.6 |
| | | 200 50 | 208 | 242 | 1.5 | 3.35 | 5.9 |
| | | 220 50 | 228 | 262 | 1.5 | 3.65 | 6.45 |
| NA 4848 NA 4852 NA 4856 | | 240 60 | 249 | 291 | 2 | 5.45 | 10 |
| | | 260 60 | 269 | 311 | 2 | 5.9 | 11 |
| | | 280 69 | 289 | 341 | 2 | 9.5 | 15.5 |
| NA 4860 NA 4864 NA 4868 NA 4872 | | 300 80 | 311 | 369 | 2 | 13 | 22 |
| | | 320 80 | 331 | 389 | 2 | 13.5 | 23.5 |
| | | 340 80 | 351 | 409 | 2 | 14 | 24.5 |
| | | 360 80 | 371 | 429 | 2 | 15 | 26 |

FNTA (Thrust Cage & Needle Roller Assemblies)

Thrust raceway washers

FTRA (s=1.0)

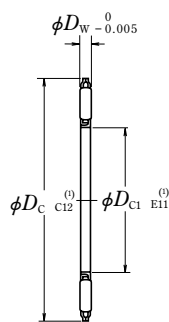
FTRB (s=1.5)

FTRC (s=2.0)

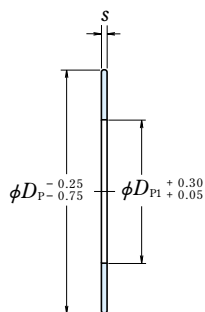
FTRD (s=2.5)

FTRE (s=3.0)

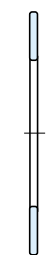
Bore Diameter 10 – 100 mm



FNTA



FTRA



FTRB



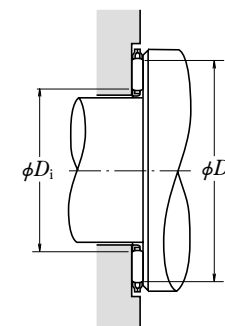
FTRC



FTRD



FTRE



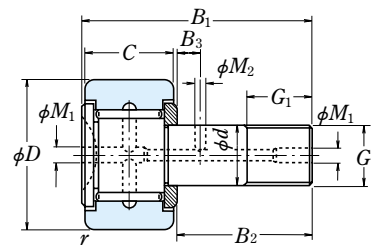
| Boundary Dimensions (mm) | | | | Basic Load Ratings | | | | Limiting Speeds (min ⁻¹) | Bearing Numbers | s=1.0 ^{±0.05} |
|-----------------------------------|---------------------------------|----------------|----------------|--------------------|----------------|-----------------|--------|--------------------------------------|-----------------|------------------------|
| D _{C1} , D _{p1} | D _C , D _p | D _W | C _a | C _{0a} | C _a | C _{0a} | Oil | | | |
| 10 | 24 | 2 | 7 750 | 23 000 | 790 | 2 350 | 17 000 | FNTA-1024 | *FTRA-1024 | |
| 12 | 26 | 2 | 8 350 | 26 300 | 855 | 2 680 | 16 000 | FNTA-1226 | FTRA-1226 | |
| 15 | 28 | 2 | 7 950 | 25 800 | 810 | 2 630 | 15 000 | FNTA-1528 | FTRA-1528 | |
| 16 | 29 | 2 | 8 200 | 27 100 | 835 | 2 770 | 14 000 | FNTA-1629 | FTRA-1629 | |
| 17 | 30 | 2 | 8 400 | 28 400 | 855 | 2 900 | 14 000 | FNTA-1730 | FTRA-1730 | |
| 18 | 31 | 2 | 8 600 | 29 700 | 875 | 3 050 | 13 000 | FNTA-1831 | FTRA-1831 | |
| 20 | 35 | 2 | 11 900 | 47 000 | 1 220 | 4 800 | 12 000 | FNTA-2035 | FTRA-2035 | |
| 25 | 42 | 2 | 14 800 | 66 000 | 1 510 | 6 750 | 9 500 | FNTA-2542 | FTRA-2542 | |
| 30 | 47 | 2 | 16 500 | 79 000 | 1 680 | 8 100 | 8 500 | FNTA-3047 | FTRA-3047 | |
| 35 | 52 | 2 | 17 300 | 88 000 | 1 770 | 8 950 | 8 000 | FNTA-3552 | FTRA-3552 | |
| 40 | 60 | 3 | 26 900 | 122 000 | 2 740 | 12 400 | 6 700 | FNTA-4060 | FTRA-4060 | |
| 45 | 65 | 3 | 28 700 | 137 000 | 2 930 | 14 000 | 6 300 | FNTA-4565 | FTRA-4565 | |
| 50 | 70 | 3 | 30 500 | 152 000 | 3 100 | 15 500 | 5 600 | FNTA-5070 | FTRA-5070 | |
| 55 | 78 | 3 | 37 000 | 201 000 | 3 750 | 20 500 | 5 300 | FNTA-5578 | FTRA-5578 | |
| 60 | 85 | 3 | 43 000 | 252 000 | 4 400 | 25 700 | 4 800 | FNTA-6085 | FTRA-6085 | |
| 65 | 90 | 3 | 45 500 | 274 000 | 4 600 | 28 000 | 4 500 | FNTA-6590 | FTRA-6590 | |
| 70 | 95 | 4 | 59 000 | 320 000 | 6 000 | 33 000 | 4 300 | FNTA-7095 | FTRA-7095 | |
| 75 | 100 | 4 | 60 000 | 335 000 | 6 150 | 34 500 | 4 000 | FNTA-75100 | FTRA-75100 | |
| 80 | 105 | 4 | 63 000 | 365 000 | 6 450 | 37 500 | 3 800 | FNTA-80105 | FTRA-80105 | |
| 85 | 110 | 4 | 64 500 | 380 000 | 6 550 | 39 000 | 3 600 | FNTA-85110 | FTRA-85110 | |
| 90 | 120 | 4 | 80 000 | 515 000 | 8 150 | 52 500 | 3 400 | FNTA-90120 | FTRA-90120 | |
| 100 | 135 | 4 | 98 500 | 695 000 | 10 000 | 71 000 | 3 000 | FNTA-100135 | FTRA-100135 | |

| Bearing Numbers of Matching Bearing Rings | | | | Roller Contact Surfaces (mm) | | Mass (g) | |
|---|--------------------------|--------------------------|--------------------------|--------------------------------------|-----------------------------------|----------|-----|
| s=1.5 ⁰ -0.08 | s=2.0 ⁰ -0.08 | s=2.5 ⁰ -0.08 | s=3.0 ⁰ -0.08 | Outside Diameter D _e min. | Bore Diameter D _i max. | approx. | |
| | | | | FNTA | FTRA | | |
| FTRB-1024 | FTRC-1024 | — | — | 22.0 | 11.5 | 2.3 | 2.9 |
| FTRB-1226 | FTRC-1226 | — | — | 24.0 | 13.5 | 3.4 | 3.3 |
| FTRB-1528 | FTRC-1528 | FTRD-1528 | FTRE-1528 | 26.0 | 16.5 | 3.5 | 3.5 |
| FTRB-1629 | FTRC-1629 | FTRD-1629 | FTRE-1629 | 27.0 | 17.5 | 3.7 | 3.6 |
| FTRB-1730 | FTRC-1730 | FTRD-1730 | FTRE-1730 | 28.0 | 18.5 | 3.8 | 3.8 |
| FTRB-1831 | FTRC-1831 | FTRD-1831 | FTRE-1831 | 29.0 | 19.5 | 4 | 3.9 |
| FTRB-2035 | FTRC-2035 | FTRD-2035 | FTRE-2035 | 33.0 | 21.5 | 5.4 | 5.1 |
| FTRB-2542 | FTRC-2542 | FTRD-2542 | FTRE-2542 | 40.0 | 26.5 | 7.7 | 7 |
| FTRB-3047 | FTRC-3047 | FTRD-3047 | FTRE-3047 | 45.0 | 31.5 | 8.9 | 7.9 |
| FTRB-3552 | FTRC-3552 | FTRD-3552 | FTRE-3552 | 50.5 | 36.5 | 9.7 | 9.1 |
| FTRB-4060 | FTRC-4060 | FTRD-4060 | FTRE-4060 | 57.0 | 42.0 | 18 | 12 |
| FTRB-4565 | FTRC-4565 | FTRD-4565 | FTRE-4565 | 62.0 | 47.0 | 20 | 13 |
| FTRB-5070 | FTRC-5070 | FTRD-5070 | FTRE-5070 | 67.0 | 51.5 | 22 | 15 |
| FTRB-5578 | FTRC-5578 | FTRD-5578 | FTRE-5578 | 75.0 | 57.0 | 29 | 19 |
| FTRB-6085 | FTRC-6085 | FTRD-6085 | FTRE-6085 | 82.0 | 61.5 | 35 | 22 |
| FTRB-6590 | FTRC-6590 | FTRD-6590 | FTRE-6590 | 87.5 | 66.5 | 38 | 24 |
| FTRB-7095 | FTRC-7095 | FTRD-7095 | FTRE-7095 | 92.5 | 71.5 | 52 | 25 |
| FTRB-75100 | FTRC-75100 | FTRD-75100 | FTRE-75100 | 97.5 | 76.5 | 54 | 27 |
| FTRB-80105 | FTRC-80105 | FTRD-80105 | FTRE-80105 | 102.5 | 81.5 | 58 | 28 |
| FTRB-85110 | FTRC-85110 | FTRD-85110 | FTRE-85110 | 107.5 | 86.5 | 63 | 30 |
| FTRB-90120 | FTRC-90120 | FTRD-90120 | FTRE-90120 | 117.5 | 91.5 | 80 | 38 |
| FTRB-100135 | FTRC-100135 | FTRD-100135 | FTRE-100135 | 132.5 | 101.5 | 105 | 50 |

Note (1) For tolerance classes C12 and E11, please refer to ISO 286-1 and 286-2 (ISO system of limits and fits), respectively.

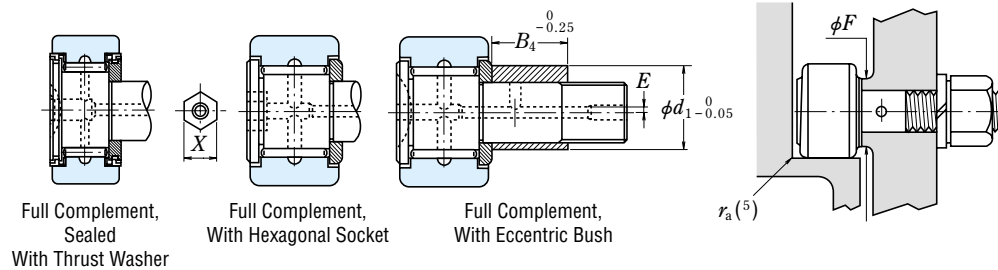
(*) The tolerance of this bearing bore diameter is +0.025 to +0.175mm and outside diameter tolerance is -0.040 to -0.370mm

- FCR** (Full Complement)
- FCRS** (Full Complement, Sealed With Thrust Washer)
- FCJ** (With Cage)
- FCJS** (Sealed, with Cage and Thrust Washer)
- Outside Diameter 16 – 90 mm



Full Complement

FCR



Full Complement, Sealed With Thrust Washer

FCRS

Full Complement, With Hexagonal Socket

FCRB

Full Complement, With Eccentric Bush

FCRE

| Boundary Dimensions (mm) | | | Screw G | Dimensions (mm) | | | | | | | Bearing Numbers | |
|--------------------------|----|----|----------|-----------------|----------------|----------------|----------------|----------------|------------------|--------|-----------------|----------------|
| D | C | d | | G ₁ | B ₁ | B ₂ | B ₃ | M ₂ | M ₁ | r min. | FCR FCJ | FCRS FCJS |
| 16 | 11 | 6 | M 6×1 | 8 | 28 | 16 | — | — | 4 ⁽¹⁾ | 0.3 | FCR-16 | FCRS-16 |
| | 11 | 6 | M 6×1 | 8 | 28 | 16 | — | — | 4 ⁽¹⁾ | 0.3 | FCJ-16 | FCJS-16 |
| 19 | 11 | 8 | M 8×1.25 | 10 | 32 | 20 | — | — | 4 ⁽¹⁾ | 0.3 | FCR-19 | FCRS-19 |
| | 11 | 8 | M 8×1.25 | 10 | 32 | 20 | — | — | 4 ⁽¹⁾ | 0.3 | FCJ-19 | FCJS-19 |
| 22 | 12 | 10 | M10×1.25 | 12 | 36 | 23 | — | — | 4 ⁽¹⁾ | 0.3 | FCR-22 | FCRS-22 |
| | 12 | 10 | M10×1.25 | 12 | 36 | 23 | — | — | 4 ⁽¹⁾ | 0.3 | FCJ-22 | FCJS-22 |
| 26 | 12 | 10 | M10×1.25 | 12 | 36 | 23 | — | — | 4 ⁽¹⁾ | 0.3 | FCR-26 | FCRS-26 |
| | 12 | 10 | M10×1.25 | 12 | 36 | 23 | — | — | 4 ⁽¹⁾ | 0.3 | FCJ-26 | FCJS-26 |
| 30 | 14 | 12 | M12×1.5 | 13 | 40 | 25 | 6 | 3 | 6 | 0.6 | FCR-30 | FCRS-30 |
| | 14 | 12 | M12×1.5 | 13 | 40 | 25 | 6 | 3 | 6 | 0.6 | FCJ-30 | FCJS-30 |
| 32 | 14 | 12 | M12×1.5 | 13 | 40 | 25 | 6 | 3 | 6 | 0.6 | FCR-32 | FCRS-32 |
| | 14 | 12 | M12×1.5 | 13 | 40 | 25 | 6 | 3 | 6 | 0.6 | FCJ-32 | FCJS-32 |
| 35 | 18 | 16 | M16×1.5 | 17 | 52 | 32.5 | 8 | 3 | 6 | 0.6 | FCR-35 | FCRS-35 |
| | 18 | 16 | M16×1.5 | 17 | 52 | 32.5 | 8 | 3 | 6 | 0.6 | FCJ-35 | FCJS-35 |
| 40 | 20 | 18 | M18×1.5 | 19 | 58 | 36.5 | 8 | 3 | 6 | 1 | FCR-40 | FCRS-40 |
| | 20 | 18 | M18×1.5 | 19 | 58 | 36.5 | 8 | 3 | 6 | 1 | FCJ-40 | FCJS-40 |
| 47 | 24 | 20 | M20×1.5 | 21 | 66 | 40.5 | 9 | 4 | 8 | 1 | FCR-47 | FCRS-47 |
| | 24 | 20 | M20×1.5 | 21 | 66 | 40.5 | 9 | 4 | 8 | 1 | FCJ-47 | FCJS-47 |
| 52 | 24 | 20 | M20×1.5 | 21 | 66 | 40.5 | 9 | 4 | 8 | 1 | FCR-52 | FCRS-52 |
| | 24 | 20 | M20×1.5 | 21 | 66 | 40.5 | 9 | 4 | 8 | 1 | FCJ-52 | FCJS-52 |
| 62 | 29 | 24 | M24×1.5 | 25 | 80 | 49.5 | 11 | 4 | 8 | 1 | FCR-62 | FCRS-62 |
| | 29 | 24 | M24×1.5 | 25 | 80 | 49.5 | 11 | 4 | 8 | 1 | FCJ-62 | FCJS-62 |
| 72 | 29 | 24 | M24×1.5 | 25 | 80 | 49.5 | 11 | 4 | 8 | 1 | FCR-72 | FCRS-72 |
| | 29 | 24 | M24×1.5 | 25 | 80 | 49.5 | 11 | 4 | 8 | 1 | FCJ-72 | FCJS-72 |
| 80 | 35 | 30 | M30×1.5 | 32 | 100 | 63 | 15 | 4 | 8 | 1 | FCR-80 | FCRS-80 |
| | 35 | 30 | M30×1.5 | 32 | 100 | 63 | 15 | 4 | 8 | 1 | FCJ-80 | FCJS-80 |
| 85 | 35 | 30 | M30×1.5 | 32 | 100 | 63 | 15 | 4 | 8 | 1 | FCR-85 | FCRS-85 |
| | 35 | 30 | M30×1.5 | 32 | 100 | 63 | 15 | 4 | 8 | 1 | FCJ-85 | FCJS-85 |
| 90 | 35 | 30 | M30×1.5 | 32 | 100 | 63 | 15 | 4 | 8 | 1 | FCR-90 | FCRS-90 |
| | 35 | 30 | M30×1.5 | 32 | 100 | 63 | 15 | 4 | 8 | 1 | FCJ-90 | FCJS-90 |

Notes ⁽¹⁾ Only the head of the stud has on oil hole.

⁽²⁾ Applicable to FCRB only.

Remarks Standard grease is packed in sealed cam followers, but not in cam followers without seals.

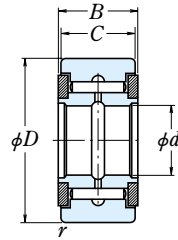
| Basic Dynamic Load Ratings (N) | | Limiting Loads (N) | | Limiting Track Loads (N) | | Mass (kg) | Dimensions of Hexagonal Socket ⁽²⁾ (width across flats) (mm) X | Eccentric Bush Dimensions ⁽²⁾ (mm) | | | Shoulder Dimensions (mm) F (min.) | Tightening Torque ⁽⁴⁾ (N·cm) (kgf·cm) | |
|--------------------------------|-------|--------------------|-------|--------------------------|-------|-----------|---|---|----------------|----------------|-----------------------------------|--|--------|
| C _r | (kgf) | P _{max} | (kgf) | (N) | (kgf) | | | approx. | B ₄ | d ₁ | | E | (max.) |
| 5 800 | 590 | 2 360 | 240 | 3 350 | 340 | 0.020 | 4 | 8 | 9 | 0.5 | 11 | 226 | 23 |
| | | | | | | | | | | | | 2 830 | 288 |
| 6 600 | 670 | 4 200 | 425 | 4 150 | 425 | 0.031 | 4 | 10 | 11 | 0.5 | 13 | 550 | 56 |
| | | | | | | | | | | | | 3 450 | 355 |
| 8 550 | 875 | 6 550 | 665 | 5 300 | 540 | 0.047 | 5 | 11 | 13 | 0.5 | 15 | 1 060 | 108 |
| | | | | | | | | | | | | 4 350 | 445 |
| 8 550 | 875 | 6 550 | 665 | 6 000 | 610 | 0.060 | 5 | 11 | 13 | 0.5 | 15 | 1 060 | 108 |
| | | | | | | | | | | | | 4 350 | 445 |
| 12 500 | 1 280 | 9 250 | 945 | 7 800 | 795 | 0.088 | 6 | 12 | 17 | 1 | 20 | 1 450 | 148 |
| | | | | | | | | | | | | 7 200 | 735 |
| 12 500 | 1 280 | 9 250 | 945 | 8 050 | 820 | 0.099 | 6 | 12 | 17 | 1 | 20 | 1 450 | 148 |
| | | | | | | | | | | | | 7 200 | 735 |
| 18 600 | 1 900 | 17 000 | 1 740 | 11 800 | 1 200 | 0.17 | 10 | 15.5 | 22 | 1 | 24 | 4 000 | 410 |
| | | | | | | | | | | | | 9 700 | 990 |
| 20 500 | 2 090 | 21 700 | 2 220 | 14 300 | 1 460 | 0.25 | 10 | 17.5 | 24 | 1 | 26 | 5 950 | 605 |
| | | | | | | | | | | | | 10 300 | 1 050 |
| 28 200 | 2 880 | 26 400 | 2 690 | 20 800 | 2 120 | 0.39 | 12 | 19.5 | 27 | 1 | 31 | 8 450 | 860 |
| | | | | | | | | | | | | 19 200 | 1 950 |
| 28 200 | 2 880 | 26 400 | 2 690 | 22 900 | 2 340 | 0.47 | 12 | 19.5 | 27 | 1 | 31 | 8 450 | 860 |
| | | | | | | | | | | | | 19 200 | 1 950 |
| 40 000 | 4 100 | 38 500 | 3 950 | 34 000 | 3 450 | 0.80 | 14 | 24.5 | 34 | 1 | 45 | 15 200 | 1 550 |
| | | | | | | | | | | | | 24 900 | 2 540 |
| 40 000 | 4 100 | 38 500 | 3 950 | 38 000 | 3 860 | 1.05 | 14 | 24.5 | 34 | 1 | 45 | 15 200 | 1 550 |
| | | | | | | | | | | | | 24 900 | 2 540 |
| 60 500 | 6 200 | 61 000 | 6 200 | 52 000 | 5 300 | 1.55 | 17 | 31 | 40 | 1.5 | 52 | 30 500 | 3 120 |
| | | | | | | | | | | | | 39 000 | 4 000 |
| 60 500 | 6 200 | 61 000 | 6 200 | 55 500 | 5 650 | 1.75 | 17 | 31 | 40 | 1.5 | 52 | 30 500 | 3 120 |
| | | | | | | | | | | | | 39 000 | 4 000 |
| 60 500 | 6 200 | 61 000 | 6 200 | 59 000 | 6 000 | 1.95 | 17 | 31 | 40 | 1.5 | 52 | 30 500 | 3 120 |
| | | | | | | | | | | | | 39 000 | 4 000 |

Notes ⁽³⁾ Applicable to FCRE only.

⁽⁴⁾ These values are for when the screw is oiled ; they should be approximately doubled when the screw is dry.

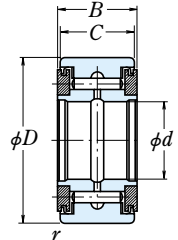
⁽⁵⁾ Should not be greater than r (min.).

- FYCR (Full Complement)
- FYCRS (Full Complement, Sealed with Thrust Washer)
- FYCJ (With Cage)
- FYCJS (Sealed, with Cage and Thrust Washer)
- Bore Diameter 5 – 50 mm



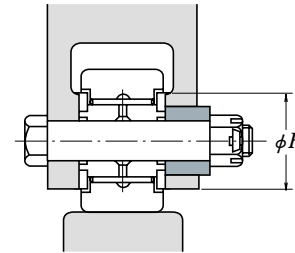
Full Complement

FYCR



Full Complement, Sealed with Thrust Washer

FYCRS



| d | Boundary Dimensions (mm) | | | | Basic Load Ratings (N) | | | | Limiting Track Loads (N) | |
|----|--------------------------|----|------------|--------|------------------------|----------|-------|----------|--------------------------|-------|
| | D | C | $B^{0.38}$ | r min. | C_r | C_{0r} | C_r | C_{0r} | (N) | (kgf) |
| 5 | 16 | 11 | 12 | 0.3 | 5 800 | 8 000 | 590 | 815 | 3 350 | 340 |
| | 16 | 11 | 12 | 0.3 | 2 830 | 2 620 | 288 | 267 | 3 350 | 340 |
| 6 | 19 | 11 | 12 | 0.3 | 6 550 | 9 900 | 665 | 1 010 | 4 150 | 425 |
| | 19 | 11 | 12 | 0.3 | 3 450 | 3 600 | 355 | 365 | 4 150 | 425 |
| 8 | 24 | 14 | 15 | 0.3 | 10 100 | 15 000 | 1 030 | 1 530 | 6 500 | 665 |
| | 24 | 14 | 15 | 0.3 | 5 700 | 6 000 | 580 | 610 | 6 500 | 665 |
| 10 | 30 | 14 | 15 | 0.6 | 11 700 | 18 500 | 1 190 | 1 890 | 7 800 | 795 |
| | 30 | 14 | 15 | 0.6 | 6 950 | 8 200 | 705 | 835 | 7 800 | 795 |
| 12 | 32 | 14 | 15 | 0.6 | 12 600 | 21 000 | 1 280 | 2 140 | 8 050 | 820 |
| | 32 | 14 | 15 | 0.6 | 7 650 | 9 650 | 780 | 985 | 8 050 | 820 |
| 15 | 35 | 18 | 19 | 0.6 | 18 700 | 29 300 | 1 910 | 2 990 | 11 800 | 1 200 |
| | 35 | 18 | 19 | 0.6 | 12 200 | 14 100 | 1 250 | 1 440 | 11 800 | 1 200 |
| 17 | 40 | 20 | 21 | 0.6 | 21 100 | 35 000 | 2 160 | 3 600 | 14 300 | 1 460 |
| | 40 | 20 | 21 | 0.6 | 13 700 | 16 700 | 1 390 | 1 700 | 14 300 | 1 460 |
| 20 | 47 | 24 | 25 | 1 | 28 900 | 50 000 | 2 940 | 5 100 | 20 800 | 2 120 |
| | 47 | 24 | 25 | 1 | 18 200 | 22 600 | 1 850 | 2 310 | 20 800 | 2 120 |
| 25 | 52 | 24 | 25 | 1 | 32 500 | 60 000 | 3 300 | 6 100 | 22 900 | 2 340 |
| | 52 | 24 | 25 | 1 | 22 200 | 31 000 | 2 270 | 3 150 | 22 900 | 2 340 |
| 30 | 62 | 28 | 29 | 1 | 47 500 | 96 000 | 4 800 | 9 800 | 33 000 | 3 350 |
| | 62 | 28 | 29 | 1 | 31 500 | 47 000 | 3 200 | 4 800 | 33 000 | 3 350 |
| 35 | 72 | 28 | 29 | 1 | 49 500 | 106 000 | 5 050 | 10 800 | 36 500 | 3 700 |
| | 72 | 28 | 29 | 1 | 33 000 | 52 500 | 3 400 | 5 350 | 36 500 | 3 700 |
| 40 | 80 | 30 | 32 | 1 | 54 500 | 126 000 | 5 600 | 12 800 | 43 500 | 4 450 |
| | 80 | 30 | 32 | 1 | 38 500 | 67 500 | 3 950 | 6 900 | 43 500 | 4 450 |
| 45 | 85 | 30 | 32 | 1 | 57 500 | 139 000 | 5 850 | 14 100 | 46 500 | 4 750 |
| | 85 | 30 | 32 | 1 | 40 000 | 73 000 | 4 100 | 7 450 | 46 500 | 4 750 |
| 50 | 90 | 30 | 32 | 1 | 60 500 | 152 000 | 6 150 | 15 500 | 49 500 | 5 050 |
| | 90 | 30 | 32 | 1 | 41 500 | 78 000 | 4 200 | 7 950 | 49 500 | 5 050 |

Remarks Standard grease is packed in sealed cam followers, but not in cam followers without seals.

| Bearing Numbers | | Mass (kg) | Shoulder Dimensions (mm) |
|-----------------|-----------------|-----------|--------------------------|
| FYCR FYCJ | FYCRS FYCJS | approx. | F min. |
| FYCR-5 | FYCRS-5 | 0.016 | 10 |
| FYCJ-5 | FYCJS-5 | 0.014 | 10 |
| FYCR-6 | FYCRS-6 | 0.022 | 12 |
| FYCJ-6 | FYCJS-6 | 0.020 | 12 |
| FYCR-8 | FYCRS-8 | 0.044 | 14 |
| FYCJ-8 | FYCJS-8 | 0.042 | 14 |
| FYCR-10 | FYCRS-10 | 0.069 | 17 |
| FYCJ-10 | FYCJS-10 | 0.067 | 17 |
| FYCR-12 | FYCRS-12 | 0.076 | 19 |
| FYCJ-12 | FYCJS-12 | 0.074 | 19 |
| FYCR-15 | FYCRS-15 | 0.105 | 23 |
| FYCJ-15 | FYCJS-15 | 0.097 | 23 |
| FYCR-17 | FYCRS-17 | 0.145 | 25 |
| FYCJ-17 | FYCJS-17 | 0.14 | 25 |
| FYCR-20 | FYCRS-20 | 0.255 | 29 |
| FYCJ-20 | FYCJS-20 | 0.245 | 29 |
| FYCR-25 | FYCRS-25 | 0.285 | 34 |
| FYCJ-25 | FYCJS-25 | 0.275 | 34 |
| FYCR-30 | FYCRS-30 | 0.48 | 51 |
| FYCJ-30 | FYCJS-30 | 0.47 | 51 |
| FYCR-35 | FYCRS-35 | 0.64 | 58 |
| FYCJ-35 | FYCJS-35 | 0.635 | 58 |
| FYCR-40 | FYCRS-40 | 0.88 | 66 |
| FYCJ-40 | FYCJS-40 | 0.865 | 66 |
| FYCR-45 | FYCRS-45 | 0.93 | 72 |
| FYCJ-45 | FYCJS-45 | 0.91 | 72 |
| FYCR-50 | FYCRS-50 | 0.995 | 76 |
| FYCJ-50 | FYCJS-50 | 0.965 | 76 |