

Bore Diameter 10 – 22 mm

## Dynamic Equivalent Load

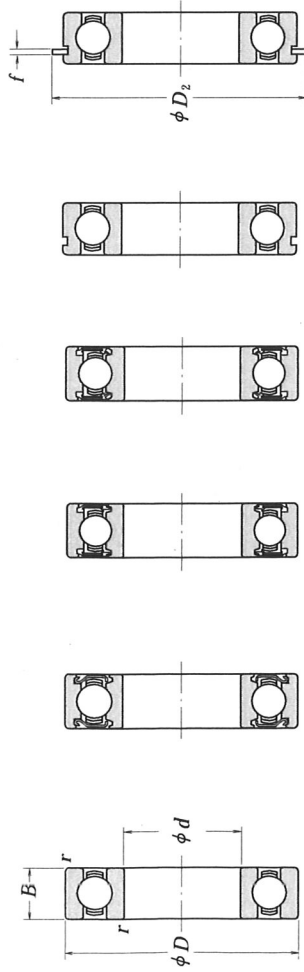
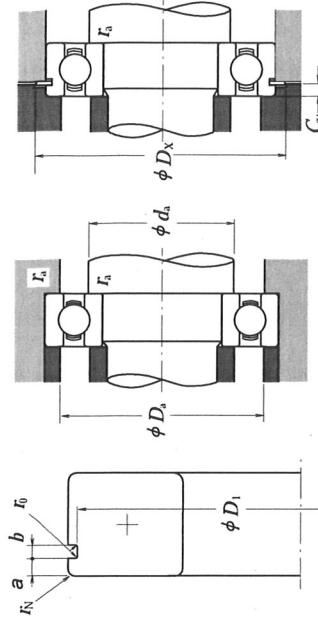
$$P = XF_r + YF_a$$

| $\frac{f_0 F_a}{C_{0r}}$ | $e$  | $\frac{F_a}{F_r} \leq e$ |   | $\frac{F_a}{F_r} > e$ |      |
|--------------------------|------|--------------------------|---|-----------------------|------|
|                          |      | X                        | Y | X                     | Y    |
| 0.172                    | 0.19 | 1                        | 0 | 0.56                  | 2.30 |
| 0.345                    | 0.22 | 1                        | 0 | 0.56                  | 1.99 |
| 0.689                    | 0.26 | 1                        | 0 | 0.56                  | 1.71 |
| 1.03                     | 0.28 | 1                        | 0 | 0.56                  | 1.55 |
| 1.38                     | 0.30 | 1                        | 0 | 0.56                  | 1.45 |
| 2.07                     | 0.34 | 1                        | 0 | 0.56                  | 1.31 |
| 3.45                     | 0.38 | 1                        | 0 | 0.56                  | 1.15 |
| 5.17                     | 0.42 | 1                        | 0 | 0.56                  | 1.04 |
| 6.89                     | 0.44 | 1                        | 0 | 0.56                  | 1.00 |

## Static Equivalent Load

$$F_r > 0.8, P_0 = 0.6F_r + 0.5F_a$$

$$F_r \leq 0.8, P_0 = F_r$$



| Boundary Dimensions (mm) | Basic Load Ratings (N) |    |     |        | Factor | Limiting Speeds (min <sup>-1</sup> ) |                 |                | Bearing Numbers                    |                                 |                                 |
|--------------------------|------------------------|----|-----|--------|--------|--------------------------------------|-----------------|----------------|------------------------------------|---------------------------------|---------------------------------|
|                          | d                      | D  | B   | r min. |        | C <sub>r</sub>                       | C <sub>0r</sub> | C <sub>r</sub> | Open <sup>(1)</sup><br>Grease<br>Z | Open <sup>(1)</sup><br>Oil<br>Z | Open <sup>(1)</sup><br>Oil<br>Z |
| 10                       | 19                     | 5  | 0.3 | 1 720  | 14.8   | 175                                  | 86              | 34 000         | 24 000                             | 40 000                          | 6800                            |
|                          | 22                     | 6  | 0.3 | 2 700  | 14.0   | 275                                  | 129             | 32 000         | 22 000                             | 38 000                          | 6900                            |
|                          | 26                     | 8  | 0.3 | 4 550  | 12.4   | 465                                  | 201             | 30 000         | 22 000                             | 36 000                          | 6000                            |
|                          | 30                     | 9  | 0.6 | 5 100  | 13.2   | 520                                  | 244             | 24 000         | 18 000                             | 30 000                          | 6200                            |
|                          | 35                     | 11 | 0.6 | 8 100  | 11.2   | 825                                  | 350             | 22 000         | 17 000                             | 26 000                          | 6300                            |
|                          | 21                     | 5  | 0.3 | 1 920  | 15.3   | 195                                  | 106             | 32 000         | 20 000                             | 38 000                          | 6801                            |
| 12                       | 24                     | 6  | 0.3 | 2 890  | 14.5   | 295                                  | 149             | 30 000         | 20 000                             | 36 000                          | 6901                            |
|                          | 28                     | 7  | 0.3 | 5 100  | 13.0   | 520                                  | 241             | 28 000         | —                                  | 32 000                          | 16001                           |
|                          | 28                     | 8  | 0.3 | 5 100  | 13.0   | 520                                  | 241             | 28 000         | 18 000                             | 32 000                          | 6001                            |
|                          | 32                     | 10 | 0.6 | 6 800  | 12.3   | 695                                  | 310             | 22 000         | 17 000                             | 28 000                          | 6201                            |
|                          | 37                     | 12 | 1   | 9 700  | 11.1   | 990                                  | 425             | 20 000         | 16 000                             | 24 000                          | 6301                            |
|                          | 24                     | 5  | 0.3 | 2 070  | 15.8   | 212                                  | 128             | 28 000         | 17 000                             | 34 000                          | 6802                            |
| 15                       | 28                     | 7  | 0.3 | 4 350  | 14.3   | 440                                  | 230             | 26 000         | 17 000                             | 30 000                          | 6902                            |
|                          | 32                     | 8  | 0.3 | 5 600  | 13.9   | 570                                  | 289             | 24 000         | —                                  | 28 000                          | 16002                           |
|                          | 32                     | 9  | 0.3 | 5 600  | 13.9   | 570                                  | 289             | 24 000         | 15 000                             | 28 000                          | 6002                            |
|                          | 35                     | 11 | 0.6 | 7 650  | 13.2   | 780                                  | 380             | 20 000         | 14 000                             | 24 000                          | 6202                            |
|                          | 42                     | 13 | 1   | 11 400 | 12.3   | 1 170                                | 555             | 17 000         | 13 000                             | 20 000                          | 6302                            |
|                          | 26                     | 5  | 0.3 | 2 630  | 15.7   | 268                                  | 160             | 26 000         | 15 000                             | 30 000                          | 6803                            |
| 17                       | 30                     | 7  | 0.3 | 4 600  | 14.7   | 470                                  | 260             | 24 000         | 15 000                             | 28 000                          | 6903                            |
|                          | 35                     | 8  | 0.3 | 6 000  | 14.4   | 610                                  | 330             | 22 000         | —                                  | 26 000                          | 16003                           |
|                          | 35                     | 10 | 0.3 | 6 000  | 14.4   | 610                                  | 330             | 22 000         | 13 000                             | 26 000                          | 6003                            |
|                          | 40                     | 12 | 0.6 | 9 550  | 13.2   | 975                                  | 490             | 17 000         | 12 000                             | 20 000                          | 6203                            |
|                          | 47                     | 14 | 1   | 13 600 | 12.4   | 1 390                                | 675             | 15 000         | 11 000                             | 18 000                          | 6303                            |
|                          | 32                     | 7  | 0.3 | 4 000  | 15.5   | 410                                  | 252             | 22 000         | 13 000                             | 26 000                          | 6804                            |
| 20                       | 37                     | 9  | 0.3 | 6 400  | 14.7   | 650                                  | 375             | 19 000         | 12 000                             | 22 000                          | 6904                            |
|                          | 42                     | 8  | 0.3 | 7 900  | 14.5   | 810                                  | 455             | 18 000         | —                                  | 20 000                          | 16004                           |
|                          | 42                     | 12 | 0.6 | 9 400  | 13.8   | 955                                  | 510             | 18 000         | 11 000                             | 20 000                          | 6004                            |
|                          | 47                     | 14 | 1   | 12 800 | 13.1   | 1 300                                | 670             | 15 000         | 10 000                             | 18 000                          | 6204                            |
|                          | 52                     | 15 | 1.1 | 15 900 | 12.4   | 1 620                                | 805             | 14 000         | 10 000                             | 17 000                          | 6304                            |
|                          | 44                     | 12 | 0.6 | 9 400  | 14.0   | 960                                  | 515             | 17 000         | 11 000                             | 20 000                          | 60/22                           |
| 22                       | 50                     | 14 | 1   | 12 900 | 13.5   | 1 320                                | 695             | 14 000         | 9 500                              | 16 000                          | 62/22                           |
|                          | 56                     | 16 | 1.1 | 18 400 | 12.4   | 1 870                                | 940             | 13 000         | 9 500                              | 16 000                          | 63/22                           |

Notes (1) For tolerances for the snap ring grooves and snap ring dimensions, refer to Pages A50 to A53.

(2) When heavy axial loads are applied, increase  $d_a$  and decrease  $d_s$  from the above values.

(3) Ring types N and NR applicable only to open-type bearings. Please consult NSK about the snap ring groove dimensions of sealed or shielded bearings.

## Remarks

1. Diameter Series 7 (extra thin section bearings) are also available, please contact NSK.

2. When using bearings with rotating outer rings, contact NSK if they are sealed, shielded, or have snap rings.