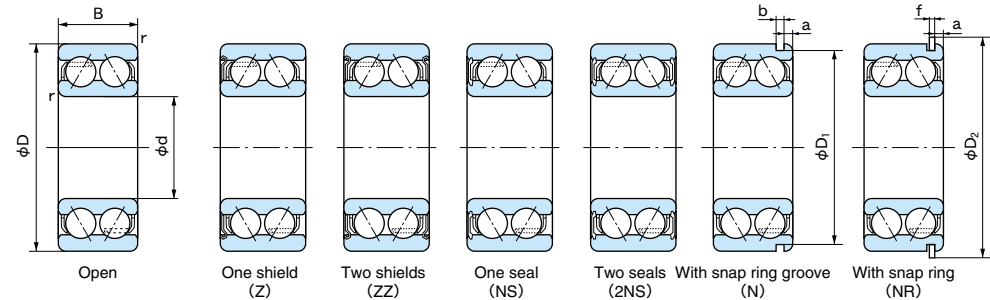
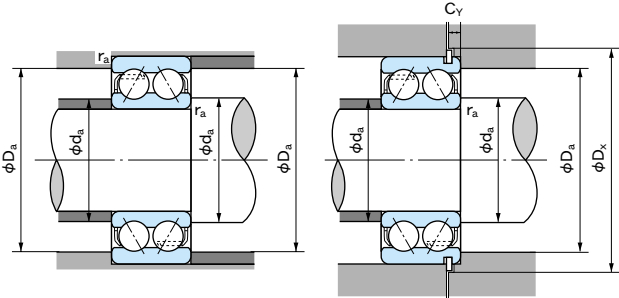


Double-row Angular Contact Ball Bearings

Bore Diameter : 10~50mm



1N=0.102kgf



• Dynamic equivalent radial load

$Pr = XFr + YFa$

| Contact angle e |      | $\frac{Fa}{Fr} \leq e$ |      | $\frac{Fa}{Fr} > e$ |      |
|-----------------|------|------------------------|------|---------------------|------|
|                 |      | X                      | Y    | X                   | Y    |
| 30°             | 0.80 | 1.0                    | 0.78 | 0.63                | 1.24 |
| 20°             | 0.57 | 1.0                    | 1.09 | 0.70                | 1.63 |

• Static equivalent radial load

Nominal contact angle 30°  
:  $Pr = Fr + 0.66Fa$

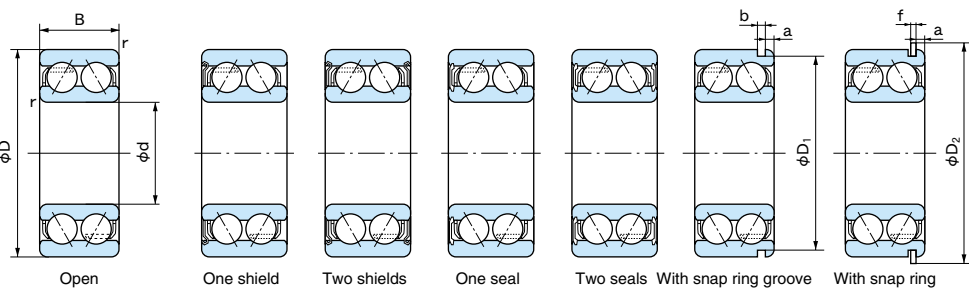
Nominal contact angle 20°  
:  $Pr = Fr + 0.84Fa$

| Boundary dimensions (mm) |     |      |         | Bearing No. |             |           |                       |                |        |         | Basic dynamic load rating Cr(N) | Basic static load rating Cor(N) | Limiting speed (rpm) |                 | Dimensions of snap ring groove and snap ring (mm) |         |         |                      |         | Abutment and fillet dimensions (mm) |                      |                      |                      |                      | Mass (kg) | Bearing No. |
|--------------------------|-----|------|---------|-------------|-------------|-----------|-----------------------|----------------|--------|---------|---------------------------------|---------------------------------|----------------------|-----------------|---------------------------------------------------|---------|---------|----------------------|---------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|-----------|-------------|
| d                        | D   | B    | r (min) | Open type   | Shield type | Seal type | With snap ring groove | With snap ring |        |         |                                 |                                 | Grease lubrication   | Oil lubrication | D <sub>1</sub> (max)                              | a (max) | b (min) | D <sub>2</sub> (max) | f (max) | d <sub>a</sub> (min)                | D <sub>a</sub> (max) | D <sub>X</sub> (min) | r <sub>a</sub> (max) | C <sub>Y</sub> (max) |           |             |
| 10                       | 30  | 14.3 | 0.6     | 5200        | 5200Z       | 5200ZZ    | 5200NS                | 5200-2NS       | 5200N  | 5200NR  | 7300                            | 4000                            | 18000                | 24000           | 28.17                                             | 2.06    | 1.35    | 34.7                 | 1.12    | 15                                  | 25                   | 35.5                 | 0.6                  | 2.9                  | 0.050     | 5200        |
|                          | 30  | 14.3 | 0.6     | 5200A       | 5200AZ      | 5200AZZ   | 5200ANS               | 5200A-2NS      | 5200AN | 5200ANR | 6950                            | 3800                            | 16000                | 22000           | 28.17                                             | 2.06    | 1.35    | 34.7                 | 1.12    | 15                                  | 25                   | 35.5                 | 0.6                  | 2.9                  | 0.050     | 5200A       |
| 12                       | 32  | 15.9 | 0.6     | 5201        | 5201Z       | 5201ZZ    | 5201NS                | 5201-2NS       | 5201N  | 5201NR  | 10700                           | 5950                            | 16000                | 22000           | 30.15                                             | 2.06    | 1.35    | 36.7                 | 1.12    | 17                                  | 27                   | 37.5                 | 0.6                  | 2.9                  | 0.060     | 5201        |
|                          | 32  | 15.9 | 0.6     | 5201A       | 5201AZ      | 5201AZZ   | 5201ANS               | 5201A-2NS      | 5201AN | 5201ANR | 10300                           | 5650                            | 15000                | 20000           | 30.15                                             | 2.06    | 1.35    | 36.7                 | 1.12    | 17                                  | 27                   | 37.5                 | 0.6                  | 2.9                  | 0.060     | 5201A       |
| 15                       | 35  | 15.9 | 0.6     | 5202        | 5202Z       | 5202ZZ    | 5202NS                | 5202-2NS       | 5202N  | 5202NR  | 11900                           | 7200                            | 14000                | 19000           | 33.17                                             | 2.06    | 1.35    | 39.7                 | 1.12    | 20                                  | 30                   | 40.5                 | 0.6                  | 2.9                  | 0.070     | 5202        |
|                          | 35  | 15.9 | 0.6     | 5202A       | 5202AZ      | 5202AZZ   | 5202ANS               | 5202A-2NS      | 5202AN | 5202ANR | 11400                           | 6850                            | 12000                | 17000           | 33.17                                             | 2.06    | 1.35    | 39.7                 | 1.12    | 20                                  | 30                   | 40.5                 | 0.6                  | 2.9                  | 0.070     | 5202A       |
| 17                       | 40  | 17.5 | 0.6     | 5203        | 5203Z       | 5203ZZ    | 5203NS                | 5203-2NS       | 5203N  | 5203NR  | 15000                           | 9250                            | 12000                | 17000           | 38.1                                              | 2.06    | 1.35    | 44.6                 | 1.12    | 22                                  | 35                   | 45.5                 | 0.6                  | 2.9                  | 0.090     | 5203        |
|                          | 40  | 17.5 | 0.6     | 5203A       | 5203AZ      | 5203AZZ   | 5203ANS               | 5203A-2NS      | 5203AN | 5203ANR | 14200                           | 8800                            | 11000                | 15000           | 38.1                                              | 2.06    | 1.35    | 44.6                 | 1.12    | 22                                  | 35                   | 45.5                 | 0.6                  | 2.9                  | 0.090     | 5203A       |
|                          | 47  | 22.2 | 1       | 5303        | —           | —         | —                     | —              | 5303N  | 5303NR  | 23100                           | 12700                           | 10000                | 14000           | 44.6                                              | 2.46    | 1.35    | 52.7                 | 1.12    | 23                                  | 41                   | 53.5                 | 1                    | 3.3                  | 0.140     | 5303        |
| 20                       | 47  | 20.6 | 1       | 5204        | 5204Z       | 5204ZZ    | 5204NS                | 5204-2NS       | 5204N  | 5204NR  | 20000                           | 12700                           | 10000                | 14000           | 44.6                                              | 2.46    | 1.35    | 52.7                 | 1.12    | 26                                  | 41                   | 53.5                 | 1                    | 3.3                  | 0.120     | 5204        |
|                          | 47  | 20.6 | 1       | 5204A       | 5204AZ      | 5204AZZ   | 5204ANS               | 5204A-2NS      | 5204AN | 5204ANR | 19000                           | 12100                           | 9500                 | 13000           | 44.6                                              | 2.46    | 1.35    | 52.7                 | 1.12    | 26                                  | 41                   | 53.5                 | 1                    | 3.3                  | 0.120     | 5204A       |
|                          | 52  | 22.2 | 1.1     | 5304        | —           | —         | —                     | —              | 5304N  | 5304NR  | 21700                           | 13300                           | 9000                 | 11000           | 49.73                                             | 2.46    | 1.35    | 57.9                 | 1.12    | 27                                  | 45                   | 58.5                 | 1                    | 3.3                  | 0.230     | 5304        |
| 25                       | 52  | 20.6 | 1       | 5205        | 5205Z       | 5205ZZ    | 5205NS                | 5205-2NS       | 5205N  | 5205NR  | 21800                           | 15100                           | 9500                 | 13000           | 49.73                                             | 2.46    | 1.35    | 57.9                 | 1.12    | 31                                  | 46                   | 58.5                 | 1                    | 3.3                  | 0.190     | 5205        |
|                          | 52  | 20.6 | 1       | 5205A       | 5205AZ      | 5205AZZ   | 5205ANS               | 5205A-2NS      | 5205AN | 5205ANR | 20600                           | 14300                           | 8000                 | 11000           | 49.73                                             | 2.46    | 1.35    | 57.9                 | 1.12    | 31                                  | 46                   | 58.8                 | 1                    | 3.3                  | 0.190     | 5205A       |
|                          | 62  | 25.4 | 1.1     | 5305        | —           | —         | —                     | —              | 5305N  | 5305NR  | 32000                           | 21600                           | 7300                 | 10000           | 59.61                                             | 3.28    | 1.9     | 67.7                 | 1.7     | 32                                  | 55                   | 68.5                 | 1                    | 4.7                  | 0.340     | 5305        |
| 30                       | 62  | 23.8 | 1       | 5206        | —           | —         | —                     | —              | 5206N  | 5206NR  | 30500                           | 21700                           | 8000                 | 11000           | 59.61                                             | 3.28    | 1.9     | 67.7                 | 1.7     | 36                                  | 56                   | 68.5                 | 1                    | 4.7                  | 0.290     | 5206        |
|                          | 62  | 23.8 | 1       | —           | 5206Z       | 5206ZZ    | 5206NS                | 5206-2NS       | —      | —       | 25900                           | 18700                           | 8000                 | —               | —                                                 | —       | —       | —                    | —       | 36                                  | 56                   | —                    | 1                    | —                    | 0.290     | 5206Z       |
|                          | 62  | 23.8 | 1       | 5206A       | —           | —         | —                     | —              | 5206AN | 5206ANR | 28600                           | 20500                           | 7000                 | 9500            | 59.61                                             | 3.28    | 1.9     | 67.7                 | 1.7     | 36                                  | 56                   | 68.5                 | 1                    | 4.7                  | 0.290     | 5206A       |
|                          | 62  | 23.8 | 1       | —           | 5206AZ      | 5206AZZ   | 5206ANS               | 5206A-2NS      | —      | —       | 24400                           | 17700                           | 7000                 | —               | —                                                 | —       | —       | —                    | —       | 36                                  | 56                   | —                    | 1                    | —                    | 0.290     | 5206AZ      |
|                          | 72  | 30.2 | 1.1     | 5306        | —           | —         | —                     | —              | 5306N  | 5306NR  | 41500                           | 29000                           | 7000                 | 9500            | 68.81                                             | 3.28    | 1.9     | 78.6                 | 1.7     | 37                                  | 65                   | 80                   | 1                    | 4.7                  | 0.510     | 5306        |
| 35                       | 72  | 27   | 1.1     | 5207        | —           | —         | —                     | —              | 5207N  | 5207NR  | 40000                           | 29500                           | 7000                 | 9500            | 68.81                                             | 3.28    | 1.9     | 78.6                 | 1.7     | 42                                  | 65                   | 80                   | 1                    | 4.7                  | 0.430     | 5207        |
|                          | 72  | 27   | 1.1     | —           | 5207Z       | 5207ZZ    | 5207NS                | 5207-2NS       | —      | —       | 35000                           | 25900                           | 7000                 | —               | —                                                 | —       | —       | —                    | —       | 42                                  | 65                   | —                    | 1                    | —                    | 0.430     | 5207Z       |
|                          | 72  | 27   | 1.1     | 5207A       | —           | —         | —                     | —              | 5207AN | 5207ANR | 38000                           | 27700                           | 6000                 | 8000            | 68.81                                             | 3.28    | 1.9     | 78.6                 | 1.7     | 42                                  | 65                   | 80                   | 1                    | 4.7                  | 0.430     | 5207A       |
|                          | 72  | 27   | 1.1     | —           | 5207AZ      | 5207AZZ   | 5207ANS               | 5207A-2NS      | —      | —       | 33000                           | 24500                           | 6000                 | —               | —                                                 | —       | —       | —                    | —       | 42                                  | 65                   | —                    | 1                    | —                    | 0.430     | 5207AZ      |
|                          | 80  | 34.9 | 1.5     | 5307        | —           | —         | —                     | —              | 5307N  | 5307NR  | 52000                           | 37000                           | 6300                 | 8500            | 76.81                                             | 3.28    | 1.9     | 86.6                 | 1.7     | 44                                  | 71                   | 88                   | 1.5                  | 4.7                  | 0.790     | 5307        |
| 40                       | 80  | 30.2 | 1.1     | 5208        | —           | —         | —                     | —              | 5208N  | 5208NR  | 45500                           | 34000                           | 6000                 | 8000            | 76.81                                             | 3.28    | 1.9     | 86.6                 | 1.7     | 47                                  | 73                   | 88                   | 1                    | 4.7                  | 0.570     | 5208        |
|                          | 80  | 30.2 | 1.1     | —           | 5208Z       | 5208ZZ    | 5208NS                | 5208-2NS       | —      | —       | 40000                           | 30500                           | 6000                 | —               | —                                                 | —       | —       | —                    | —       | 47                                  | 73                   | —                    | 1                    | —                    | 0.570     | 5208Z       |
|                          | 80  | 30.2 | 1.1     | 5208A       | —           | —         | —                     | —              | 5208AN | 5208ANR | 42500                           | 32500                           | 5300                 | 7200            | 76.81                                             | 3.28    | 1.9     | 86.6                 | 1.7     | 47                                  | 73                   | 88                   | 1                    | 4.7                  | 0.570     | 5208A       |
|                          | 80  | 30.2 | 1.1     | —           | 5208AZ      | 5208AZZ   | 5208ANS               | 5208A-2NS      | —      | —       | 37500                           | 28700                           | 5300                 | —               | —                                                 | —       | —       | —                    | —       | 47                                  | 73                   | —                    | 1                    | —                    | 0.570     | 5208AZ      |
|                          | 90  | 36.5 | 1.5     | 5308        | —           | —         | —                     | —              | 5308N  | 5308NR  | 63500                           | 46500                           | 5500                 | 7500            | 86.79                                             | 3.28    | 2.7     | 96.5                 | 2.46    | 49                                  | 81                   | 98                   | 1.5                  | 5.4                  | 1.05      | 5308        |
| 45                       | 85  | 30.2 | 1.1     | 5209        | —           | —         | —                     | —              | 5209N  | 5209NR  | 51000                           | 39000                           | 5500                 | 7500            | 81.81                                             | 3.28    | 1.9     | 91.6                 | 1.7     | 52                                  | 78                   | 93                   | 1                    | 4.7                  | 0.620     | 5209        |
|                          | 85  | 30.2 | 1.1     | —           | 5209Z       | 5209ZZ    | 5209NS                | 5209-2NS       | —      | —       | 42500                           | 34500                           | 5500                 | —               | —                                                 | —       | —       | —                    | —       | 52                                  | 78                   | —                    | 1                    | —                    | 0.620     | 5209Z       |
|                          | 85  | 30.2 | 1.1     | 5209A       | —           | —         | —                     | —              | 5209AN | 5209ANR | 48000                           | 37000                           | 5000                 | 6700            | 81.81                                             | 3.28    | 1.9     | 91.6                 | 1.7     | 52                                  | 78                   | 93                   | 1                    | 4.7                  | 0.620     | 5209A       |
|                          | 85  | 30.2 | 1.1     | —           | 5209AZ      | 5209AZZ   | 5209ANS               | 5209A-2NS      | —      | —       | 40000                           | 32500                           | 5000                 | —               | —                                                 | —       | —       | —                    | —       | 52                                  | 78                   | —                    | 1                    | —                    | 0.620     | 5209AZ      |
|                          | 100 | 39.7 | 1.5     | 5309        | —           | —         | —                     | —              | 5309N  | 5309NR  | 76500                           | 56500                           | 5000                 | 6700            | 96.8                                              | 3.28    | 2.7     | 106.5                | 2.46    | 54                                  | 91                   | 108                  | 1.5                  | 5.4                  | 1.42      | 5309        |
| 50                       | 90  | 30.2 | 1.1     | 5210        | —           | —         | —                     | —              | 5210N  | 5210NR  | 54500                           | 44500                           | 5000                 | 6700            | 86.79                                             | 3.28    | 2.7     | 96.5                 | 2.46    | 57                                  | 83                   | 98                   | 1                    | 5.4                  | 0.670     | 5210        |
|                          | 90  | 30.2 | 1.1     | —           | 5210Z       | 5210ZZ    | 5210NS                | 5210-2NS       | —      | —       | 45000                           | 39000                           | 5000                 | —               | —                                                 | —       | —       | —                    | —       | 57                                  | 83                   | —                    | 1                    | —                    | 0.670     | 5210Z       |
|                          | 90  | 30.2 | 1.1     | 5210A       | —           | —         | —                     | —              | 5210AN | 5210ANR | 51000                           | 42000                           | 4500                 | 6000            | 86.79                                             | 3.28    | 2.7     | 96.5                 | 2.46    | 57                                  | 83                   | 98                   | 1                    | 5.4                  | 0.670     | 5210A       |
|                          | 90  | 30.2 | 1.1     | —           | 5210AZ      | 5210AZZ   | 5210ANS               | 5210A-2NS      | —      | —       | 42000                           | 36500                           | 4500                 | —               | —                                                 | —       | —       | —                    | —       | 57                                  | 83                   | —                    | 1                    | —                    | 0.670     | 5210AZ      |
|                          | 110 | 44.4 | 2       | 5310        | —           | —         | —                     | —              | 5310N  | 5310NR  | 90000                           | 68000                           | 4500                 | 6000            | 106.81                                            | 3.28    | 2.7     | 116.6                | 2.46    | 60                                  | 100                  | 118                  | 2                    | 5.4                  | 1.93      | 5310        |

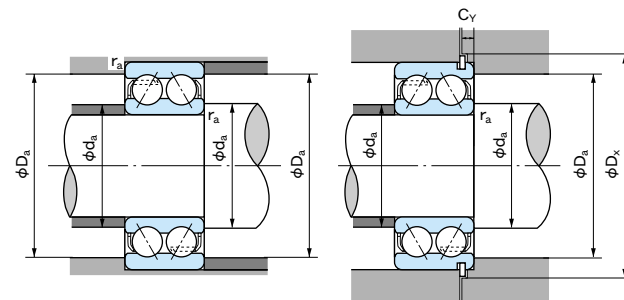
Note : Dimensions and tolerances of snap ring groove and snap ring are shown on pages 45 to 48.

## Double-row Angular Contact Ball Bearings

Bore Diameter : 55~100mm



1N=0.102kgf



• Dynamic equivalent radial load  
 $Pr = XFr + YFa$

| Contact angle e | $\frac{Fa}{Fr} \leq e$ |     | $\frac{Fa}{Fr} > e$ |      |
|-----------------|------------------------|-----|---------------------|------|
|                 | X                      | Y   | X                   | Y    |
| 30°             | 0.80                   | 1.0 | 0.78                | 1.24 |
| 20°             | 0.57                   | 1.0 | 1.09                | 0.70 |

• Static equivalent radial load  
 Nominal contact angle 30°  
 $Pr = Fr + 0.66Fa$   
 Nominal contact angle 20°  
 $Pr = Fr + 0.84Fa$

| Boundary dimensions (mm) |     |      |           | Bearing No. |             | Basic dynamic load rating Cr (N) | Basic static load rating Cor (N) | Limiting speed (rpm) |                    | Dimensions of snap ring groove and snap ring (mm) |                      |         |         |                      | Abutment and fillet dimensions (mm) |                      |                      |                      |                      | Mass (kg)            | Bearing No. |       |        |
|--------------------------|-----|------|-----------|-------------|-------------|----------------------------------|----------------------------------|----------------------|--------------------|---------------------------------------------------|----------------------|---------|---------|----------------------|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|-------|--------|
| d                        | D   | B    | $r_{min}$ | Open type   | Shield type | Seal type                        | With snap ring groove            | With snap ring       | Grease lubrication | Oil lubrication                                   | D <sub>1</sub> (max) | a (max) | b (min) | D <sub>2</sub> (max) | f (max)                             | d <sub>a</sub> (min) | D <sub>a</sub> (max) | D <sub>X</sub> (min) | r <sub>a</sub> (max) | C <sub>Y</sub> (max) |             |       |        |
| 55                       | 100 | 33.3 | 1.5       | 5211        | —           | —                                | —                                | 5211N                | 5211NR             | 4500                                              | 6300                 | 96.8    | 3.28    | 2.7                  | 106.5                               | 2.46                 | 64                   | 91                   | 108                  | 1.5                  | 5.4         | 0.960 | 5211   |
|                          | 100 | 33.3 | 1.5       | —           | 5211Z       | 5211ZZ                           | —                                | —                    | —                  | 4500                                              | —                    | —       | —       | —                    | —                                   | —                    | 64                   | 91                   | —                    | 1.5                  | —           | 0.960 | 5211Z  |
|                          | 100 | 33.3 | 1.5       | 5211A       | —           | —                                | —                                | 5211AN               | 5211ANR            | 4000                                              | 5500                 | 96.8    | 3.28    | 2.7                  | 106.5                               | 2.46                 | 64                   | 91                   | 108                  | 1.5                  | 5.4         | 0.960 | 5211A  |
|                          | 100 | 33.3 | 1.5       | —           | 5211AZ      | 5211AZZ                          | —                                | —                    | —                  | 4000                                              | —                    | —       | —       | —                    | —                                   | —                    | 64                   | 91                   | —                    | 1.5                  | —           | 0.960 | 5211AZ |
|                          | 120 | 49.2 | 2         | 5311        | —           | —                                | —                                | 5311N                | 5311NR             | 4000                                              | 5500                 | 115.21  | 4.06    | 3.1                  | 129.7                               | 2.82                 | 65                   | 110                  | 131.5                | 2                    | 6.5         | 2.30  | 5311   |
| 60                       | 110 | 36.5 | 1.5       | 5212        | —           | —                                | —                                | 5212N                | 5212NR             | 4300                                              | 5600                 | 106.81  | 3.28    | 2.7                  | 116.6                               | 2.46                 | 69                   | 101                  | 118                  | 1.5                  | 5.4         | 1.36  | 5212   |
|                          | 110 | 36.5 | 1.5       | —           | 5212Z       | 5212ZZ                           | —                                | —                    | —                  | 4300                                              | —                    | —       | —       | —                    | —                                   | —                    | 69                   | 101                  | —                    | 1.5                  | —           | 1.36  | 5212Z  |
|                          | 110 | 36.5 | 1.5       | 5212A       | —           | —                                | —                                | 5212AN               | 5212ANR            | 3800                                              | 5000                 | 106.81  | 3.28    | 2.7                  | 116.6                               | 2.46                 | 69                   | 101                  | 118                  | 1.5                  | 5.4         | 1.36  | 5212A  |
|                          | 110 | 36.5 | 1.5       | —           | 5212AZ      | 5212AZZ                          | —                                | —                    | —                  | 3800                                              | —                    | —       | —       | —                    | —                                   | —                    | 69                   | 101                  | —                    | 1.5                  | —           | 1.36  | 5212AZ |
|                          | 130 | 54   | 2.1       | 5312        | —           | —                                | —                                | 5312N                | 5312NR             | 3800                                              | 5000                 | 125.22  | 4.06    | 3.1                  | 139.7                               | 2.82                 | 72                   | 118                  | 141.5                | 2                    | 6.5         | 3.16  | 5312   |
| 65                       | 120 | 38.1 | 1.5       | 5213        | —           | —                                | —                                | 5213N                | 5213NR             | 3900                                              | 5300                 | 115.21  | 4.06    | 3.1                  | 129.7                               | 2.82                 | 74                   | 111                  | 131.5                | 1.5                  | 6.5         | 1.66  | 5213   |
|                          | 120 | 38.1 | 1.5       | —           | 5213Z       | 5213ZZ                           | —                                | —                    | —                  | 3900                                              | —                    | —       | —       | —                    | —                                   | —                    | 74                   | 111                  | —                    | 1.5                  | —           | 1.66  | 5213Z  |
|                          | 120 | 38.1 | 1.5       | 5213A       | —           | —                                | —                                | 5213AN               | 5213ANR            | 3400                                              | 4600                 | 115.21  | 4.06    | 3.1                  | 129.7                               | 2.82                 | 74                   | 111                  | 131.5                | 1.5                  | 6.5         | 1.66  | 5213A  |
|                          | 120 | 38.1 | 1.5       | —           | 5213AZ      | 5213AZZ                          | —                                | —                    | —                  | 3400                                              | —                    | —       | —       | —                    | —                                   | —                    | 74                   | 111                  | —                    | 1.5                  | —           | 1.66  | 5213AZ |
|                          | 140 | 58.7 | 2.1       | 5313        | —           | —                                | —                                | 5313N                | 5313NR             | 3600                                              | 4700                 | 135.23  | 4.9     | 3.1                  | 149.7                               | 2.82                 | 77                   | 128                  | 152                  | 2                    | 7.4         | 3.86  | 5313   |
| 70                       | 125 | 39.7 | 1.5       | 5214        | —           | —                                | —                                | 5214N                | 5214NR             | 3800                                              | 5000                 | 120.22  | 4.06    | 3.1                  | 134.7                               | 2.82                 | 79                   | 116                  | 136.5                | 1.5                  | 6.5         | 1.82  | 5214   |
|                          | 125 | 39.7 | 1.5       | —           | 5214Z       | 5214ZZ                           | —                                | —                    | —                  | 3800                                              | —                    | —       | —       | —                    | —                                   | —                    | 79                   | 116                  | —                    | 1.5                  | —           | 1.82  | 5214Z  |
|                          | 125 | 39.7 | 1.5       | 5214A       | —           | —                                | —                                | 5214AN               | 5214ANR            | 3200                                              | 4500                 | 120.22  | 4.06    | 3.1                  | 134.7                               | 2.82                 | 79                   | 116                  | 136.5                | 1.5                  | 6.5         | 1.82  | 5214A  |
|                          | 125 | 39.7 | 1.5       | —           | 5214AZ      | 5214AZZ                          | —                                | —                    | —                  | 3200                                              | —                    | —       | —       | —                    | —                                   | —                    | 79                   | 116                  | —                    | 1.5                  | —           | 1.82  | 5214AZ |
|                          | 150 | 63.5 | 2.1       | 5314        | —           | —                                | —                                | 5314N                | 5314NR             | 3200                                              | 4300                 | 145.24  | 4.9     | 3.1                  | 159.7                               | 2.82                 | 82                   | 138                  | 162                  | 2                    | 7.4         | 4.88  | 5314   |
| 75                       | 130 | 41.3 | 1.5       | 5215        | —           | —                                | —                                | 5215N                | 5215NR             | 3400                                              | 4700                 | 125.22  | 4.06    | 3.1                  | 139.7                               | 2.82                 | 84                   | 121                  | 141.5                | 1.5                  | 6.5         | 1.91  | 5215   |
|                          | 130 | 41.3 | 1.5       | —           | 5215Z       | 5215ZZ                           | —                                | —                    | —                  | 3400                                              | —                    | —       | —       | —                    | —                                   | —                    | 84                   | 121                  | —                    | 1.5                  | —           | 1.91  | 5215Z  |
|                          | 130 | 41.3 | 1.5       | 5215A       | —           | —                                | —                                | 5215AN               | 5215ANR            | 3200                                              | 4300                 | 125.22  | 4.06    | 3.1                  | 139.7                               | 2.82                 | 84                   | 121                  | 141.5                | 1.5                  | 6.5         | 1.91  | 5215A  |
|                          | 130 | 41.3 | 1.5       | —           | 5215AZ      | 5215AZZ                          | —                                | —                    | —                  | 3200                                              | —                    | —       | —       | —                    | —                                   | —                    | 84                   | 121                  | —                    | 1.5                  | —           | 1.91  | 5215AZ |
|                          | 160 | 68.3 | 2.1       | 5315        | —           | —                                | —                                | 5315N                | 5315NR             | 3000                                              | 4000                 | 155.22  | 4.9     | 3.1                  | 169.7                               | 2.82                 | 87                   | 148                  | 172                  | 2                    | 7.4         | 5.51  | 5315   |
| 80                       | 140 | 44.4 | 2         | 5216        | —           | —                                | —                                | 5216N                | 5216NR             | 3500                                              | 4600                 | 135.23  | 4.9     | 3.1                  | 149.7                               | 2.82                 | 90                   | 130                  | 152                  | 2                    | 7.4         | 2.48  | 5216   |
|                          | 140 | 44.4 | 2         | 5216A       | —           | —                                | —                                | 5216AN               | 5216ANR            | 2800                                              | 4000                 | 135.23  | 4.9     | 3.1                  | 149.7                               | 2.82                 | 90                   | 130                  | 152                  | 2                    | 7.4         | 2.48  | 5216A  |
|                          | 170 | 68.3 | 2.1       | 5316        | —           | —                                | —                                | 5316N                | 5316NR             | 2800                                              | 4000                 | 163.65  | 5.69    | 3.5                  | 182.9                               | 3.1                  | 92                   | 158                  | 185                  | 2                    | 8.4         | 6.81  | 5316   |
| 85                       | 150 | 49.2 | 2         | 5217        | —           | —                                | —                                | 5217N                | 5217NR             | 3000                                              | 4000                 | 145.24  | 4.9     | 3.1                  | 159.7                               | 2.82                 | 95                   | 140                  | 162                  | 2                    | 7.4         | 3.40  | 5217   |
|                          | 150 | 49.2 | 2         | 5217A       | —           | —                                | —                                | 5217AN               | 5217ANR            | 2600                                              | 3800                 | 145.24  | 4.9     | 3.1                  | 159.7                               | 2.82                 | 95                   | 140                  | 162                  | 2                    | 7.4         | 3.40  | 5217A  |
| 90                       | 160 | 52.4 | 2         | 5218        | —           | —                                | —                                | 5218N                | 5218NR             | 2700                                              | 3900                 | 155.22  | 4.9     | 3.1                  | 169.7                               | 2.82                 | 100                  | 150                  | 172                  | 2                    | 7.4         | 4.28  | 5218   |
|                          | 160 | 52.4 | 2         | 5218A       | —           | —                                | —                                | 5218AN               | 5218ANR            | 2500                                              | 3500                 | 155.22  | 4.9     | 3.1                  | 169.7                               | 2.82                 | 100                  | 150                  | 172                  | 2                    | 7.4         | 4.28  | 5218A  |
| 95                       | 170 | 55.6 | 2.1       | 5219        | —           | —                                | —                                | 5219N                | 5219NR             | 2600                                              | 3700                 | 163.65  | 5.69    | 3.5                  | 182.9                               | 3.1                  | 107                  | 158                  | 185                  | 2                    | 8.4         | 5.02  | 5219   |
|                          | 170 | 55.6 | 2.1       | 5219A       | —           | —                                | —                                | 5219AN               | 5219ANR            | 2400                                              | 3200                 | 163.65  | 5.69    | 3.5                  | 182.9                               | 3.1                  | 107                  | 158                  | 185                  | 2                    | 8.4         | 5.02  | 5219A  |
| 100                      | 180 | 60.3 | 2.1       | 5220        | —           | —                                | —                                | 5220N                | 5220NR             | 2400                                              | 3200                 | 173.66  | 5.69    | 3.5                  | 192.9                               | 3.1                  | 112                  | 168                  | 195                  | 2                    | 8.4         | 5.78  | 5220   |
|                          | 180 | 60.3 | 2.1       | 5220A       | —           | —                                | —                                | 5220AN               | 5220ANR            | 2200                                              | 3000                 | 173.66  | 5.69    | 3.5                  | 192.9                               | 3.1                  | 112                  | 168                  | 195                  | 2                    | 8.4         | 5.78  | 5220A  |

Note : Dimensions and tolerances of snap ring groove and snap ring are shown on pages 45 to 48.