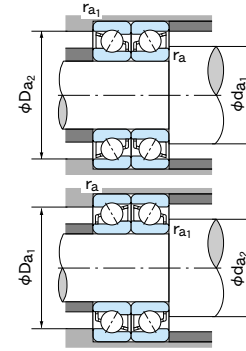
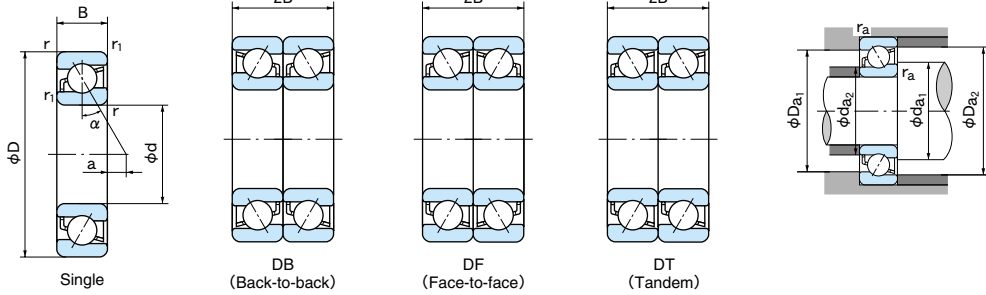


Angular Contact Ball Bearings Single Mounting / Duplex Mounting

Bore Diameter : 10~17mm



• Dynamic equivalent radial load
Pr = XFr + YFa

| Contact angle | iFa Cor | e | Single or DT | | | | DB or DF | | | | | | | |
|---------------|------------|------|--------------|------|--------|------|----------|------|--------|------|------|------|------|------|
| | | | Fa > e | | Fa ≤ e | | Fa > e | | Fa ≤ e | | | | | |
| | | | X | Y | X | Y | X | Y | X | Y | | | | |
| 15° | 0.015 | 0.38 | 1.47 | 1.65 | 0.72 | 2.39 | 0.029 | 0.40 | 0.44 | 1.40 | 1.57 | 0.72 | 2.28 | |
| | 0.058 | 0.43 | 1.30 | 1.46 | 1.23 | 2.11 | 0.087 | 0.46 | 0.44 | 1.30 | 1.38 | 1.23 | 2.00 | |
| | 0.12 | 0.47 | 0.44 | 1.19 | 1 | 1.34 | 0.72 | 1.93 | 0.17 | 0.50 | 1.12 | 1.26 | 1.82 | |
| | 0.29 | 0.55 | 0.44 | 1.02 | 1 | 1.14 | 1.66 | 0.44 | 0.56 | 0.44 | 1.00 | 1 | 1.12 | 1.63 |
| | 0.58 | 0.56 | 0.44 | 1.00 | 1 | 1.12 | 1.63 | 0.58 | 0.56 | 0.44 | 1.00 | 1 | 1.12 | 1.63 |
| 30° | 0.8 | 0.39 | 0.76 | 1 | 0.78 | 0.63 | 1.24 | 0.8 | 0.39 | 0.76 | 1 | 0.78 | 0.63 | 1.24 |
| | 1.14 | 0.35 | 0.57 | 1 | 0.55 | 0.57 | 0.93 | 1.14 | 0.35 | 0.57 | 1 | 0.55 | 0.57 | 0.93 |

• Static equivalent radial load
Por = XoFr + YoFa

| Contact angle | Single or DT | | DB or DF | |
|---------------|--------------|------|----------|------|
| | Xo | Yo | Xo | Yo |
| 15° | 0.5 | 0.46 | 1 | 0.92 |
| 30° | 0.5 | 0.33 | 1 | 0.66 |
| 40° | 0.5 | 0.26 | 1 | 0.52 |

• Single or DT mounting
When Por < Fr, use Pr = Fr

• i = 2 for DB or DF mounting
i = 1 for Single or DT mounting
• Single or DT mounting
When Fa/Fr ≤ e, use Pr = Fr

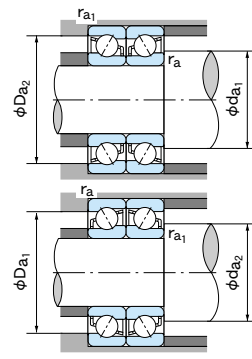
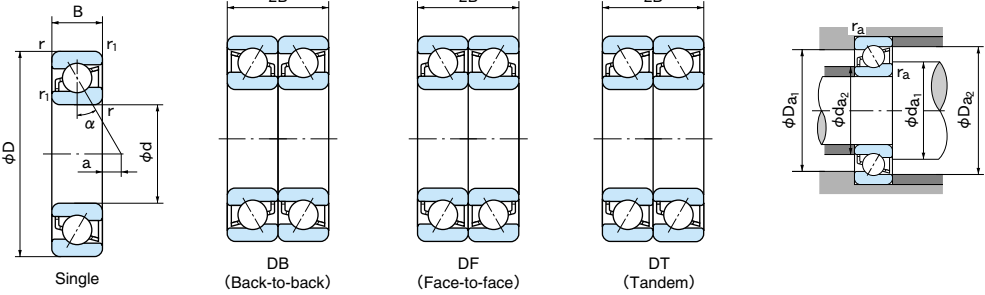
1N=0.102kgf

| d | Boundary dimensions (mm) | | | | | Load center (mm) | | | | Bearing No. | | | | Basic dynamic load rating Cr(N) | | Basic static load rating Cor(N) | | Limiting speed (rpm) | | | | Abutment and fillet dimensions (mm) | | | | | | Mass (kg) | | Bearing No. |
|----|--------------------------|----|---------|----------|-------|------------------|---------|---------|---------|-------------|--------|--------|--------|---------------------------------|-----------------|---------------------------------|--------|----------------------|------------|------------|------------|-------------------------------------|------------|--------|-------|--|--|-----------|--|-------------|
| | D | B | r (min) | r1 (min) | a (1) | Single | Duplex | | | Single | Duplex | Single | Duplex | Grease lubrication | Oil lubrication | Single | Duplex | d a1 (min) | d a2 (min) | D a1 (max) | D a2 (max) | r a (max) | r a1 (max) | Single | | | | | | |
| 10 | 26 | 8 | 0.3 | 0.15 | 1.2 | 7000 | 7000DB | 7000DF | 7000DT | 5000 | 8150 | 2340 | 4650 | 23000 | 19000 | 31000 | 26000 | 12 | 12 | 24 | 25 | 0.3 | 0.15 | 0.022 | 7000 | | | | | |
| | 26 | 8 | 0.3 | 0.15 | -1.9 | 7000C | 7000CDB | 7000CDF | 7000CDT | 5350 | 8700 | 2500 | 5000 | 44000 | 35000 | 61000 | 49000 | 12 | 12 | 24 | 25 | 0.3 | 0.15 | 0.022 | 7000C | | | | | |
| | 30 | 9 | 0.6 | 0.3 | 1.3 | 7200 | 7200DB | 7200DF | 7200DT | 5400 | 8800 | 2710 | 5400 | 22000 | 18000 | 30000 | 24000 | 15 | 12 | 25 | 27.4 | 0.6 | 0.3 | 0.034 | 7200 | | | | | |
| | 30 | 9 | 0.6 | 0.3 | 3.9 | 7200B | 7200BDB | 7200BDF | 7200BDT | 5150 | 8350 | 2570 | 5150 | 19000 | 16000 | 28000 | 22000 | 15 | 12 | 25 | 27.4 | 0.6 | 0.3 | 0.034 | 7200B | | | | | |
| | 30 | 9 | 0.6 | 0.3 | -2.2 | 7200C | 7200CDB | 7200CDF | 7200CDT | 6950 | 11300 | 3300 | 6650 | 40000 | 32000 | 55000 | 44000 | 15 | 15 | 25 | 27.4 | 0.6 | 0.3 | 0.034 | 7200C | | | | | |
| | 35 | 11 | 0.6 | 0.3 | 1.0 | 7300 | 7300DB | 7300DF | 7300DT | 9300 | 15100 | 4300 | 8600 | 20000 | 16000 | 26000 | 21000 | 15 | 12 | 30 | 32.4 | 0.6 | 0.3 | 0.055 | 7300 | | | | | |
| | 35 | 11 | 0.6 | 0.3 | 3.9 | 7300B | 7300BDB | 7300BDF | 7300BDT | 8950 | 14500 | 4150 | 8250 | 18000 | 14000 | 24000 | 19000 | 15 | 12 | 30 | 32.4 | 0.6 | 0.3 | 0.055 | 7300B | | | | | |
| | 35 | 11 | 0.6 | 0.3 | -2.8 | 7300C | 7300CDB | 7300CDF | 7300CDT | 9850 | 16000 | 4600 | 9250 | 36000 | 29000 | 49000 | 39000 | 15 | 15 | 30 | 32.4 | 0.6 | 0.3 | 0.055 | 7300C | | | | | |
| 12 | 28 | 8 | 0.3 | 0.15 | 1.7 | 7001 | 7001DB | 7001DF | 7001DT | 5050 | 8800 | 2710 | 5700 | 22000 | 18000 | 29000 | 23000 | 14 | 14 | 26 | 27 | 0.3 | 0.15 | 0.024 | 7001 | | | | | |
| | 28 | 8 | 0.3 | 0.15 | -1.7 | 7001C | 7001CDB | 7001CDF | 7001CDT | 5800 | 9450 | 2910 | 5800 | 40000 | 32000 | 55000 | 44000 | 14 | 14 | 26 | 27 | 0.3 | 0.15 | 0.024 | 7001C | | | | | |
| | 32 | 10 | 0.6 | 0.3 | 1.4 | 7201 | 7201DB | 7201DF | 7201DT | 7600 | 12400 | 3960 | 7950 | 20000 | 16000 | 27000 | 22000 | 17 | 14 | 27 | 29.4 | 0.6 | 0.3 | 0.040 | 7201 | | | | | |
| | 32 | 10 | 0.6 | 0.3 | 4.2 | 7201B | 7201BDB | 7201BDF | 7201BDT | 7200 | 11700 | 3800 | 7550 | 17000 | 15000 | 24000 | 20000 | 17 | 14 | 27 | 29.4 | 0.6 | 0.3 | 0.040 | 7201B | | | | | |
| | 32 | 10 | 0.6 | 0.3 | -2.5 | 7201C | 7201CDB | 7201CDF | 7201CDT | 7950 | 13000 | 3900 | 7750 | 36000 | 29000 | 50000 | 40000 | 17 | 17 | 27 | 29.4 | 0.6 | 0.3 | 0.040 | 7201C | | | | | |
| | 37 | 12 | 1 | 0.6 | 1.1 | 7301 | 7301DB | 7301DF | 7301DT | 11200 | 18200 | 5250 | 10500 | 18000 | 15000 | 24000 | 20000 | 18 | 15 | 31 | 33.4 | 1 | 0.6 | 0.063 | 7301 | | | | | |
| | 37 | 12 | 1 | 0.6 | 4.3 | 7301B | 7301BDB | 7301BDF | 7301BDT | 10800 | 17500 | 5050 | 10100 | 16000 | 13000 | 22000 | 18000 | 18 | 15 | 31 | 33.4 | 1 | 0.6 | 0.063 | 7301B | | | | | |
| | 37 | 12 | 1 | 0.6 | -3.1 | 7301C | 7301CDB | 7301CDF | 7301CDT | 10800 | 17500 | 4900 | 9800 | 33000 | 26000 | 45000 | 36000 | 18 | 18 | 31 | 33.4 | 1 | 0.6 | 0.063 | 7301C | | | | | |
| 15 | 32 | 9 | 0.3 | 0.15 | 2.3 | 7002 | 7002DB | 7002DF | 7002DT | 6150 | 9950 | 3400 | 6850 | 18000 | 15000 | 24000 | 20000 | 17 | 17 | 30 | 31 | 0.3 | 0.15 | 0.035 | 7002 | | | | | |
| | 32 | 9 | 0.3 | 0.15 | -1.8 | 7002C | 7002CDB | 7002CDF | 7002CDT | 6650 | 10800 | 3700 | 7450 | 34000 | 27000 | 47000 | 38000 | 17 | 17 | 30 | 31 | 0.3 | 0.15 | 0.035 | 7002C | | | | | |
| | 35 | 11 | 0.6 | 0.3 | 1.7 | 7202 | 7202DB | 7202DF | 7202DT | 9050 | 14700 | 4700 | 9400 | 17000 | 14000 | 23000 | 19000 | 20 | 17 | 30 | 32.4 | 0.6 | 0.3 | 0.048 | 7202 | | | | | |
| | 35 | 11 | 0.6 | 0.3 | 5.0 | 7202B | 7202BDB | 7202BDF | 7202BDT | 8600 | 14000 | 4500 | 8950 | 16000 | 12000 | 21000 | 17000 | 20 | 17 | 30 | 32.4 | 0.6 | 0.3 | 0.048 | 7202B | | | | | |
| | 35 | 11 | 0.6 | 0.3 | -2.6 | 7202C | 7202CDB | 7202CDF | 7202CDT | 8700 | 14200 | 4550 | 9150 | 32000 | 26000 | 44000 | 35000 | 20 | 20 | 30 | 32.4 | 0.6 | 0.3 | 0.048 | 7202C | | | | | |
| | 42 | 13 | 1 | 0.6 | 1.7 | 7302 | 7302DB | 7302DF | 7302DT | 13600 | 22000 | 7100 | 14200 | 16000 | 13000 | 21000 | 17000 | 21 | 18 | 36 | 38.4 | 1 | 0.6 | 0.085 | 7302 | | | | | |
| | 42 | 13 | 1 | 0.6 | 5.5 | 7302B | 7302BDB | 7302BDF | 7302BDT | 12800 | 21000 | 6750 | 13500 | 14000 | 11000 | 19000 | 16000 | 21 | 18 | 36 | 38.4 | 1 | 0.6 | 0.085 | 7302B | | | | | |
| | 42 | 13 | 1 | 0.6 | -3.1 | 7302C | 7302CDB | 7302CDF | 7302CDT | 13300 | 21700 | 6850 | 13700 | 28000 | 22000 | 39000 | 31000 | 21 | 21 | 36 | 38.4 | 1 | 0.6 | 0.085 | 7302C | | | | | |
| 17 | 35 | 10 | 0.3 | 0.15 | 2.5 | 7003 | 7003DB | 7003DF | 7003DT | 6400 | 10400 | 3800 | 7650 | 17000 | 13000 | 22000 | 18000 | 19 | 19 | 33 | 34 | 0.3 | 0.15 | 0.045 | 7003 | | | | | |
| | 35 | 10 | 0.3 | 0.15 | -2.0 | 7003C | 7003CDB | 7003CDF | 7003CDT | 7000 | 11400 | 4150 | 8300 | 31000 | 25000 | 42000 | 34000 | 19 | 19 | 33 | 34 | 0.3 | 0.15 | 0.045 | 7003C | | | | | |
| | 40 | 12 | 0.6 | 0.3 | 2.2 | 7203 | 7203DB | 7203DF | 7203DT | 11900 | 19400 | 6600 | 13200 | 16000 | 13000 | 21000 | 17000 | 22 | 19 | 35 | 37.4 | 0.6 | 0.3 | 0.070 | 7203 | | | | | |
| | 40 | 12 | 0.6 | 0.3 | 6.0 | 7203B | 7203BDB | 7203BDF | 7203BDT | 11300 | 18400 | 6300 | 12600 | 14000 | 11000 | 19000 | 15000 | 22 | 19 | 35 | 37.4 | 0.6 | 0.3 | 0.070 | 7203B | | | | | |
| | 40 | 12 | 0.6 | 0.3 | -2.7 | 7203C | 7203CDB | 7203CDF | 7203CDT | 10900 | 17800 | 5900 | 11800 | 28000 | 22000 | 39000 | 31000 | 22 | 22 | 35 | 37.4 | 0.6 | 0.3 | 0.070 | 7203C | | | | | |
| | 47 | 14 | 1 | 0.6 | 2.2 | 7303 | 7303DB | 7303DF | 7303DT | 15900 | 25900 | 8650 | 17300 | 14000 | 11000 | 19000 | 15000 | 23 | 21 | 41 | 43.4 | 1 | 0.6 | 0.120 | 7303 | | | | | |
| | 47 | 14 | 1 | 0.6 | 6.4 | 7303B | 7303BDB | 7303BDF | 7303BDT | 15200 | 24700 | 8250 | 16500 | 13000 | 10000 | 17000 | 14000 | 23 | 21 | 41 | 43.4 | 1 | 0.6 | 0.120 | 7303B | | | | | |
| | 47 | 14 | 1 | 0.6 | -3.2 | 7303C | 7303CDB | 7303CDF | 7303CDT | 15900 | 25800 | 8350 | 16700 | 25000 | 20000 | 34000 | 27000 | 23 | 23 | 41 | 43.4 | 1 | 0.6 | 0.120 | 7303C | | | | | |

Note : (1) "a" means the distance between back face and load center.

Angular Contact Ball Bearings Single Mounting / Duplex Mounting

Bore Diameter : 20~35mm



• Dynamic equivalent radial load
Pr = XFr + YFa

| Contact angle | iFa / Cor | e | Single or DT | | | | DB or DF | | | |
|---------------|-----------|------|--------------|------|-------------|------|-------------|------|-------------|------|
| | | | Fa / Fr > e | | Fa / Fr ≤ e | | Fa / Fr > e | | Fa / Fr ≤ e | |
| | | | X | Y | X | Y | X | Y | X | Y |
| 15° | 0.015 | 0.38 | 1.47 | 1.65 | 0.44 | 1.40 | 1 | 1.57 | 0.72 | 2.39 |
| | 0.029 | 0.40 | 1.30 | 1.46 | 0.44 | 1.30 | 1 | 1.46 | 0.72 | 2.11 |
| | 0.058 | 0.43 | 1.23 | 1.38 | 0.44 | 1.23 | 1 | 1.38 | 0.72 | 2.00 |
| | 0.087 | 0.46 | 1.12 | 1.26 | 0.44 | 1.19 | 1 | 1.34 | 0.72 | 1.93 |
| | 0.12 | 0.47 | 1.00 | 1.12 | 0.44 | 1.12 | 1 | 1.26 | 0.72 | 1.82 |
| 30° | 0.29 | 0.55 | 1.02 | 1.14 | 0.44 | 1.02 | 1 | 1.14 | 0.72 | 1.66 |
| | 0.44 | 0.56 | 1.00 | 1.12 | 0.44 | 1.00 | 1 | 1.12 | 0.72 | 1.63 |
| | 0.58 | 0.56 | 1.00 | 1.12 | 0.44 | 1.00 | 1 | 1.12 | 0.72 | 1.63 |
| 40° | - | 0.8 | 0.39 | 0.76 | 1 | 0.78 | 0.63 | 1.24 | - | - |
| | - | 1.14 | 0.35 | 0.57 | 1 | 0.55 | 0.57 | 0.93 | - | - |

• Static equivalent radial load
Por = XoFr + YoFa

| Contact angle | Single or DT | | DB or DF | |
|---------------|--------------|------|----------|------|
| | Xo | Yo | Xo | Yo |
| 15° | 0.5 | 0.46 | 1 | 0.92 |
| 30° | 0.5 | 0.33 | 1 | 0.66 |
| 40° | 0.5 | 0.26 | 1 | 0.52 |

• Single or DT mounting
When Por < Fr, use Pr = Fr

• i = 2 for DB or DF mounting
i = 1 for Single or DT mounting
• Single or DT mounting
When Fa / Fr ≤ e, use Pr = Fr

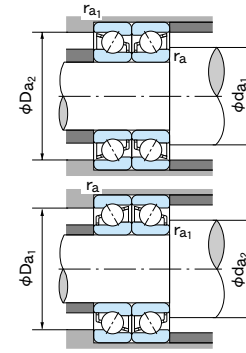
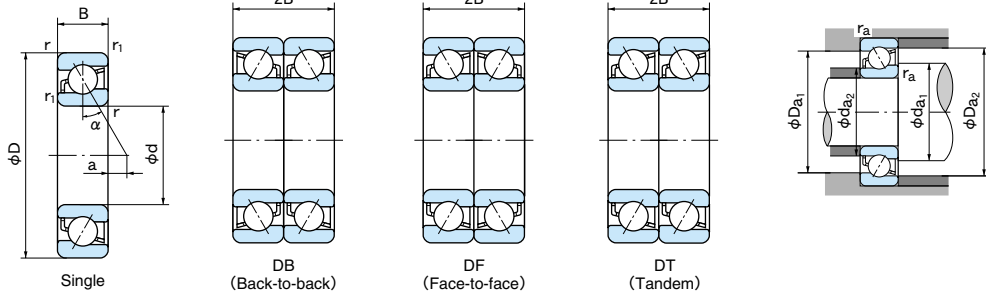
1N=0.102kgf

| d | Boundary dimensions (mm) | | | | | Load center (mm) | | | | Bearing No. | | | | Basic dynamic load rating Cr(N) | | Basic static load rating Cor(N) | | Limiting speed (rpm) | | | | Abutment and fillet dimensions (mm) | | | | | | Mass (kg) | | Bearing No. |
|----|--------------------------|-------|------------------|-------------------|------------------|------------------|---------|---------|---------|-------------|--------|--------|--------|---------------------------------|-----------------|---------------------------------|--------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------------|-----------------------|--------|-------|--|--|-----------|--|-------------|
| | D | B | r _{min} | r _{1min} | a ⁽¹⁾ | Single | | Duplex | | Single | Duplex | Single | Duplex | Grease lubrication | Oil lubrication | Single | Duplex | d _{a1} (min) | d _{a2} (min) | D _{a1} (max) | D _{a2} (max) | r _a (max) | r _{a1} (max) | Single | | | | | | |
| | (min) | (min) | (min) | (min) | (mm) | | | | | | | | | Single | Duplex | Single | Duplex | | | | | | | | | | | | | |
| 20 | 42 | 12 | 0.6 | 0.3 | 2.9 | 7004 | 7004DB | 7004DF | 7004DT | 10300 | 16700 | 6050 | 12100 | 15000 | 12000 | 20000 | 16000 | 24 | 24 | 38 | 40 | 0.6 | 0.3 | 0.079 | 7004 | | | | | |
| | 42 | 12 | 0.6 | 0.3 | -2.4 | 7004C | 7004CDB | 7004CDF | 7004CDT | 11200 | 18200 | 6600 | 13200 | 26000 | 21000 | 35000 | 28000 | 24 | 24 | 38 | 40 | 0.6 | 0.3 | 0.079 | 7004C | | | | | |
| | 47 | 14 | 1 | 0.6 | 2.7 | 7204 | 7204DB | 7204DF | 7204DT | 14500 | 23500 | 8300 | 16600 | 13000 | 10000 | 18000 | 14000 | 26 | 23 | 41 | 43.4 | 1 | 0.6 | 0.110 | 7204 | | | | | |
| | 47 | 14 | 1 | 0.6 | 7.1 | 7204B | 7204BDB | 7204BDF | 7204BDT | 13700 | 22300 | 7850 | 15700 | 11000 | 9500 | 16000 | 13000 | 26 | 23 | 41 | 43.4 | 1 | 0.6 | 0.110 | 7204B | | | | | |
| | 47 | 14 | 1 | 0.6 | -3.1 | 7204C | 7204CDB | 7204CDF | 7204CDT | 14700 | 23800 | 8150 | 16300 | 24000 | 19000 | 33000 | 26000 | 26 | 26 | 41 | 43.4 | 1 | 0.6 | 0.110 | 7204C | | | | | |
| | 52 | 15 | 1.1 | 0.6 | 2.9 | 7304 | 7304DB | 7304DF | 7304DT | 18700 | 30500 | 10400 | 20800 | 13000 | 10000 | 17000 | 13000 | 27 | 25 | 45 | 47 | 1 | 0.6 | 0.150 | 7304 | | | | | |
| 25 | 52 | 15 | 1.1 | 0.6 | 7.6 | 7304B | 7304BDB | 7304BDF | 7304BDT | 17800 | 28900 | 9900 | 19800 | 10000 | 9000 | 15000 | 12000 | 27 | 25 | 45 | 47 | 1 | 0.6 | 0.150 | 7304B | | | | | |
| | 52 | 15 | 1.1 | 0.6 | -3.2 | 7304C | 7304CDB | 7304CDF | 7304CDT | 18600 | 30000 | 10000 | 20000 | 22000 | 18000 | 31000 | 25000 | 27 | 27 | 45 | 47 | 1 | 0.6 | 0.150 | 7304C | | | | | |
| | 47 | 12 | 0.6 | 0.3 | 4.4 | 7005 | 7005DB | 7005DF | 7005DT | 11300 | 18400 | 7400 | 14800 | 13000 | 10000 | 17000 | 13000 | 29 | 29 | 43 | 45 | 0.6 | 0.3 | 0.091 | 7005 | | | | | |
| | 47 | 12 | 0.6 | 0.3 | -1.8 | 7005C | 7005CDB | 7005CDF | 7005CDT | 12900 | 21000 | 8650 | 17300 | 22000 | 18000 | 31000 | 25000 | 29 | 29 | 43 | 45 | 0.6 | 0.3 | 0.091 | 7005C | | | | | |
| | 52 | 15 | 1 | 0.6 | 3.6 | 7205 | 7205DB | 7205DF | 7205DT | 16200 | 26300 | 10200 | 20500 | 12000 | 9500 | 15000 | 12000 | 31 | 28 | 46 | 48.4 | 1 | 0.6 | 0.135 | 7205 | | | | | |
| | 52 | 15 | 1 | 0.6 | 8.9 | 7205B | 7205BDB | 7205BDF | 7205BDT | 15300 | 24800 | 9700 | 19400 | 9500 | 8000 | 14000 | 11000 | 31 | 28 | 46 | 48.4 | 1 | 0.6 | 0.135 | 7205B | | | | | |
| 30 | 52 | 15 | 1 | 0.6 | -3.1 | 7205C | 7205CDB | 7205CDF | 7205CDT | 16700 | 27100 | 10300 | 20700 | 21000 | 17000 | 29000 | 23000 | 31 | 31 | 46 | 48.4 | 1 | 0.6 | 0.135 | 7205C | | | | | |
| | 62 | 17 | 1.1 | 0.6 | 4.1 | 7305 | 7305DB | 7305DF | 7305DT | 26400 | 43000 | 15800 | 31500 | 10000 | 8500 | 14000 | 11000 | 32 | 30 | 55 | 57 | 1 | 0.6 | 0.245 | 7305 | | | | | |
| | 62 | 17 | 1.1 | 0.6 | 9.8 | 7305B | 7305BDB | 7305BDF | 7305BDT | 25100 | 40500 | 15100 | 30000 | 8500 | 7300 | 12000 | 10000 | 32 | 30 | 55 | 57 | 1 | 0.6 | 0.245 | 7305B | | | | | |
| | 62 | 17 | 1.1 | 0.6 | -3.4 | 7305C | 7305CDB | 7305CDF | 7305CDT | 26600 | 43000 | 15500 | 31000 | 18000 | 14000 | 25000 | 20000 | 32 | 32 | 55 | 57 | 1 | 0.6 | 0.245 | 7305C | | | | | |
| | 55 | 13 | 1 | 0.6 | 5.8 | 7006 | 7006DB | 7006DF | 7006DT | 14500 | 23600 | 10100 | 20300 | 12000 | 8500 | 14000 | 11000 | 35 | 35 | 50 | 52 | 1 | 0.6 | 0.135 | 7006 | | | | | |
| | 55 | 13 | 1 | 0.6 | -1.6 | 7006C | 7006CDB | 7006CDF | 7006CDT | 16000 | 25900 | 11100 | 24000 | 19000 | 15000 | 26000 | 21000 | 35 | 35 | 50 | 52 | 1 | 0.6 | 0.135 | 7006C | | | | | |
| 35 | 62 | 16 | 1 | 0.6 | 5.3 | 7206 | 7206DB | 7206DF | 7206DT | 22500 | 36500 | 14800 | 29600 | 10000 | 8000 | 13000 | 10000 | 36 | 33 | 56 | 58.4 | 1 | 0.6 | 0.210 | 7206 | | | | | |
| | 62 | 16 | 1 | 0.6 | 11.3 | 7206B | 7206BDB | 7206BDF | 7206BDT | 21200 | 34500 | 13900 | 27900 | 8500 | 7000 | 12000 | 9500 | 36 | 33 | 56 | 58.4 | 1 | 0.6 | 0.210 | 7206B | | | | | |
| | 62 | 16 | 1 | 0.6 | -2.7 | 7206C | 7206CDB | 7206CDF | 7206CDT | 23200 | 37500 | 14900 | 29700 | 18000 | 14000 | 24000 | 19000 | 36 | 36 | 56 | 58.4 | 1 | 0.6 | 0.210 | 7206C | | | | | |
| | 72 | 19 | 1.1 | 0.6 | 5.2 | 7306 | 7306DB | 7306DF | 7306DT | 33500 | 54500 | 22400 | 44500 | 9000 | 7000 | 12000 | 9500 | 37 | 35 | 65 | 67 | 1 | 0.6 | 0.360 | 7306 | | | | | |
| | 72 | 19 | 1.1 | 0.6 | 11.9 | 7306B | 7306BDB | 7306BDF | 7306BDT | 32000 | 52000 | 21000 | 42000 | 7500 | 6100 | 10000 | 8500 | 37 | 35 | 65 | 67 | 1 | 0.6 | 0.360 | 7306B | | | | | |
| | 72 | 19 | 1.1 | 0.6 | -3.6 | 7306C | 7306CDB | 7306CDF | 7306CDT | 32500 | 52500 | 20400 | 40500 | 16000 | 13000 | 22000 | 18000 | 37 | 37 | 65 | 67 | 1 | 0.6 | 0.360 | 7306C | | | | | |
| 35 | 62 | 14 | 1 | 0.6 | 7 | 7007 | 7007DB | 7007DF | 7007DT | 17500 | 28500 | 12600 | 25200 | 9500 | 7500 | 13000 | 10000 | 40 | 40 | 57 | 59 | 1 | 0.6 | 0.170 | 7007 | | | | | |
| | 62 | 14 | 1 | 0.6 | -1.4 | 7007C | 7007CDB | 7007CDF | 7007CDT | 19300 | 31000 | 13700 | 27500 | 16000 | 13000 | 23000 | 18000 | 40 | 40 | 57 | 59 | 1 | 0.6 | 0.170 | 7007C | | | | | |
| | 72 | 17 | 1.1 | 0.6 | 6.9 | 7207 | 7207DB | 7207DF | 7207DT | 29700 | 48000 | 20000 | 40000 | 8500 | 7000 | 11000 | 9500 | 42 | 40 | 65 | 67 | 1 | 0.6 | 0.295 | 7207 | | | | | |
| | 72 | 17 | 1.1 | 0.6 | 14.1 | 7207B | 7207BDB | 7207BDF | 7207BDT | 28000 | 45500 | 19000 | 38000 | 7500 | 6000 | 10000 | 8000 | 42 | 40 | 65 | 67 | 1 | 0.6 | 0.295 | 7207B | | | | | |
| | 72 | 17 | 1.1 | 0.6 | -2.8 | 7207C | 7207CDB | 7207CDF | 7207CDT | 30500 | 49500 | 20100 | 40000 | 15000 | 12000 | 21000 | 17000 | 42 | 42 | 65 | 67 | 1 | 0.6 | 0.295 | 7207C | | | | | |
| | 80 | 21 | 1.5 | 1 | 6.1 | 7307 | 7307DB | 7307DF | 7307DT | 40000 | 65000 | 26300 | 52500 | 8000 | 6300 | 10000 | 8500 | 44 | 40 | 71 | 74.6 | 1.5 | 1 | 0.475 | 7307 | | | | | |
| 80 | 21 | 1.5 | 1 | 13.7 | 7307B | 7307BDB | 7307BDF | 7307BDT | 37500 | 61500 | 24900 | 49500 | 7000 | 5500 | 9500 | 7500 | 44 | 40 | 71 | 74.6 | 1.5 | 1 | 0.475 | 7307B | | | | | | |
| 80 | 21 | 1.5 | 1 | -3.9 | 7307C | 7307CDB | 7307CDF | 7307CDT | 40500 | 66000 | 26000 | 52000 | 14000 | 11000 | 19000 | 15000 | 44 | 44 | 71 | 74.6 | 1.5 | 1 | 0.475 | 7307C | | | | | | |

Note : (1) "a" means the distance between back face and load center.

Angular Contact Ball Bearings Single Mounting / Duplex Mounting

Bore Diameter : 40~55mm



• Dynamic equivalent radial load
Pr = XFr + YFa

| Contact angle | iFa Cor | e | Single or DT | | | | DB or DF | | | | |
|---------------|------------|------|--------------|------|--------|------|----------|------|--------|---|--|
| | | | Fa > e | | Fa ≤ e | | Fa > e | | Fa ≤ e | | |
| | | | X | Y | X | Y | X | Y | X | Y | |
| 15° | 0.015 | 0.38 | | | 1.47 | 1.65 | | | 2.39 | | |
| | 0.029 | 0.40 | 0.44 | 1.40 | 1 | 1.57 | 0.72 | 2.28 | | | |
| | 0.058 | 0.43 | | 1.30 | | 1.46 | | 2.11 | | | |
| | 0.087 | 0.46 | | 1.23 | | 1.38 | | 2.00 | | | |
| | 0.12 | 0.47 | 0.44 | 1.19 | 1 | 1.34 | 0.72 | 1.93 | | | |
| 30° | 0.17 | 0.50 | | 1.12 | | 1.26 | | 1.82 | | | |
| | 0.29 | 0.55 | | 1.02 | | 1.14 | | 1.66 | | | |
| | 0.44 | 0.56 | 0.44 | 1.00 | 1 | 1.12 | 0.72 | 1.63 | | | |
| | 0.58 | 0.56 | | 1.00 | | 1.12 | | 1.63 | | | |
| | 0.8 | 0.8 | 0.39 | 0.76 | 1 | 0.78 | 0.63 | 1.24 | | | |
| 40° | - | 1.14 | 0.35 | 0.57 | 1 | 0.55 | 0.57 | 0.93 | | | |

• Static equivalent radial load
Por = XoFr + YoFa

| Contact angle | Single or DT | | DB or DF | |
|---------------|--------------|------|----------|------|
| | Xo | Yo | Xo | Yo |
| 15° | 0.5 | 0.46 | 1 | 0.92 |
| 30° | 0.5 | 0.33 | 1 | 0.66 |
| 40° | 0.5 | 0.26 | 1 | 0.52 |

• Single or DT mounting
When Por < Fr, use Pr = Fr

• i = 2 for DB or DF mounting
i = 1 for Single or DT mounting
• Single or DT mounting
When Fa/Fr ≤ e, use Pr = Fr

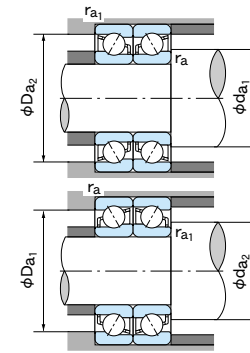
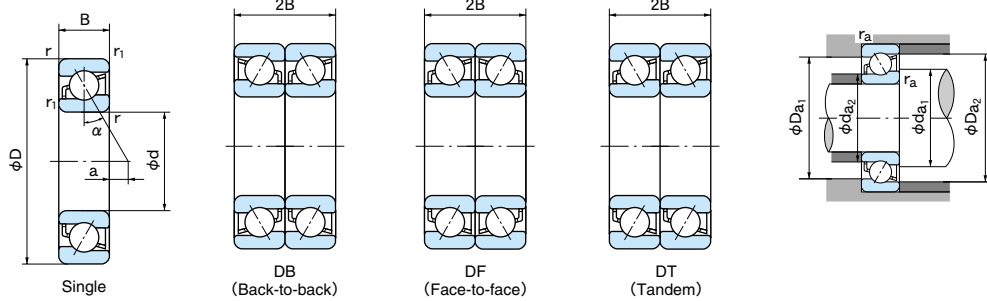
1N=0.102kgf

| Boundary dimensions (mm) | | | | | | Load center (mm) | | | | Bearing No. | | | | Basic dynamic load rating Cr(N) | | Basic static load rating Cor(N) | | Limiting speed (rpm) | | | | Abutment and fillet dimensions (mm) | | | | | | Mass (kg) | |
|--------------------------|-----|----|---------|----------|-------|------------------|---------|---------|---------|-------------|--------|--------|--------|---------------------------------|------------------------|---------------------------------|------------------------|----------------------|-----------|-----------|-----------|-------------------------------------|-----------|--------|-------|-------------|--------|-----------|--|
| d | D | B | r (min) | r1 (min) | a (1) | Single | | Duplex | | Single | Duplex | Single | Duplex | Grease lubrication Single | Oil lubrication Single | Grease lubrication Duplex | Oil lubrication Duplex | da1 (min) | da2 (min) | Da1 (max) | Da2 (max) | ra (max) | ra1 (max) | Single | | Bearing No. | | | |
| | | | | | | a (1) | | a (1) | | | | | | | | | | | | | | | | Single | | | Single | | |
| 40 | 68 | 15 | 1 | 0.6 | 8.2 | 7008 | 7008DB | 7008DF | 7008DT | 18800 | 30500 | 14500 | 29000 | 8500 | 6600 | 11000 | 9000 | 45 | 45 | 63 | 65 | 1 | 0.6 | 0.210 | 7008 | | | | |
| | 68 | 15 | 1 | 0.6 | -1.3 | 7008C | 7008CDB | 7008CDF | 7008CDT | 20700 | 33500 | 16000 | 32000 | 15000 | 12000 | 20000 | 16000 | 45 | 45 | 63 | 65 | 1 | 0.6 | 0.210 | 7008C | | | | |
| | 80 | 18 | 1.1 | 0.6 | 8.3 | 7208 | 7208DB | 7208DF | 7208DT | 35000 | 57500 | 25200 | 50500 | 7500 | 6000 | 10000 | 8000 | 47 | 45 | 73 | 75 | 1 | 0.6 | 0.380 | 7208 | | | | |
| | 80 | 18 | 1.1 | 0.6 | 16.2 | 7208B | 7208BDB | 7208BDF | 7208BDT | 33000 | 54000 | 23700 | 47500 | 6700 | 5300 | 9200 | 7200 | 47 | 45 | 73 | 75 | 1 | 0.6 | 0.380 | 7208B | | | | |
| | 80 | 18 | 1.1 | 0.6 | -2.1 | 7208C | 7208CDB | 7208CDF | 7208CDT | 36500 | 59500 | 25400 | 50500 | 13000 | 10000 | 18000 | 14000 | 47 | 47 | 73 | 75 | 1 | 0.6 | 0.380 | 7208C | | | | |
| | 90 | 23 | 1.5 | 1 | 7.3 | 7308 | 7308DB | 7308DF | 7308DT | 49000 | 79000 | 33000 | 66000 | 7000 | 5500 | 9200 | 7500 | 49 | 45 | 81 | 84.6 | 1.5 | 1 | 0.655 | 7308 | | | | |
| | 90 | 23 | 1.5 | 1 | 15.8 | 7308B | 7308BDB | 7308BDF | 7308BDT | 46000 | 75000 | 31000 | 62500 | 6300 | 5000 | 8500 | 6700 | 49 | 45 | 81 | 84.6 | 1.5 | 1 | 0.655 | 7308B | | | | |
| | 90 | 23 | 1.5 | 1 | -4.0 | 7308C | 7308CDB | 7308CDF | 7308CDT | 49500 | 80500 | 32500 | 65500 | 12000 | 9600 | 17000 | 13000 | 49 | 49 | 81 | 84.6 | 1.5 | 1 | 0.655 | 7308C | | | | |
| | 45 | 75 | 16 | 1 | 0.6 | 9.3 | 7009 | 7009DB | 7009DF | 7009DT | 22200 | 36000 | 17600 | 35000 | 7500 | 6000 | 10000 | 8000 | 50 | 50 | 70 | 72 | 1 | 0.6 | 0.265 | 7009 | | | |
| | | 75 | 16 | 1 | 0.6 | -1.1 | 7009C | 7009CDB | 7009CDF | 7009CDT | 24600 | 40000 | 19400 | 39000 | 13000 | 10000 | 18000 | 14000 | 50 | 50 | 70 | 72 | 1 | 0.6 | 0.265 | 7009C | | | |
| | | 85 | 19 | 1.1 | 0.6 | 9.3 | 7209 | 7209DB | 7209DF | 7209DT | 39500 | 64500 | 28800 | 57500 | 7000 | 5500 | 9200 | 7500 | 52 | 50 | 78 | 80 | 1 | 0.6 | 0.430 | 7209 | | | |
| | | 85 | 19 | 1.1 | 0.6 | 17.8 | 7209B | 7209BDB | 7209BDF | 7209BDT | 37000 | 60500 | 27100 | 54000 | 6300 | 5000 | 8500 | 6700 | 52 | 50 | 78 | 80 | 1 | 0.6 | 0.430 | 7209B | | | |
| 85 | | 19 | 1.1 | 0.6 | -2.0 | 7209C | 7209CDB | 7209CDF | 7209CDT | 41000 | 66500 | 29000 | 58000 | 12000 | 9600 | 17000 | 13000 | 52 | 52 | 78 | 80 | 1 | 0.6 | 0.430 | 7209C | | | | |
| 100 | | 25 | 1.5 | 1 | 8.4 | 7309 | 7309DB | 7309DF | 7309DT | 63500 | 103000 | 43500 | 87000 | 6300 | 5000 | 8500 | 6700 | 54 | 50 | 91 | 94.6 | 1.5 | 1 | 0.875 | 7309 | | | | |
| 50 | 100 | 25 | 1.5 | 1 | 18.0 | 7309B | 7309BDB | 7309BDF | 7309BDT | 60000 | 97500 | 41500 | 82500 | 5600 | 4500 | 7500 | 6000 | 54 | 50 | 91 | 94.6 | 1.5 | 1 | 0.875 | 7309B | | | | |
| | 100 | 25 | 1.5 | 1 | -4.1 | 7309C | 7309CDB | 7309CDF | 7309CDT | 63500 | 103000 | 43500 | 87000 | 11000 | 8800 | 15000 | 12000 | 54 | 54 | 91 | 94.6 | 1.5 | 1 | 0.875 | 7309C | | | | |
| | 80 | 16 | 1 | 0.6 | 10.8 | 7010 | 7010DB | 7010DF | 7010DT | 23600 | 38500 | 20000 | 40000 | 7000 | 5500 | 9200 | 7500 | 55 | 55 | 75 | 77 | 1 | 0.6 | 0.285 | 7010 | | | | |
| | 80 | 16 | 1 | 0.6 | -0.5 | 7010C | 7010CDB | 7010CDF | 7010CDT | 26200 | 42500 | 22000 | 44000 | 12000 | 9600 | 17000 | 13000 | 55 | 55 | 75 | 77 | 1 | 0.6 | 0.285 | 7010C | | | | |
| | 90 | 20 | 1.1 | 0.6 | 10.2 | 7210 | 7210DB | 7210DF | 7210DT | 41000 | 67000 | 31500 | 63000 | 6300 | 5300 | 8500 | 6700 | 57 | 55 | 83 | 85 | 1 | 0.6 | 0.485 | 7210 | | | | |
| | 90 | 20 | 1.1 | 0.6 | 19.4 | 7210B | 7210BDB | 7210BDF | 7210BDT | 38500 | 63000 | 29600 | 59000 | 5600 | 4500 | 7500 | 6000 | 57 | 55 | 83 | 85 | 1 | 0.6 | 0.485 | 7210B | | | | |
| | 90 | 20 | 1.1 | 0.6 | -1.9 | 7210C | 7210CDB | 7210CDF | 7210CDT | 43000 | 70000 | 32000 | 63500 | 11000 | 8800 | 16000 | 13000 | 57 | 57 | 83 | 85 | 1 | 0.6 | 0.485 | 7210C | | | | |
| | 110 | 27 | 2 | 1 | 9.6 | 7310 | 7310DB | 7310DF | 7310DT | 74000 | 121000 | 52000 | 104000 | 5600 | 4500 | 7500 | 6000 | 60 | 56 | 100 | 104 | 2 | 1 | 1.14 | 7310 | | | | |
| | 110 | 27 | 2 | 1 | 20.1 | 7310B | 7310BDB | 7310BDF | 7310BDT | 70500 | 114000 | 49500 | 98500 | 5000 | 4000 | 6700 | 5300 | 60 | 56 | 100 | 104 | 2 | 1 | 1.14 | 7310B | | | | |
| | 110 | 27 | 2 | 1 | -4.3 | 7310C | 7310CDB | 7310CDF | 7310CDT | 75500 | 122000 | 51000 | 102000 | 10000 | 8000 | 14000 | 11000 | 60 | 60 | 100 | 104 | 2 | 1 | 1.14 | 7310C | | | | |
| | 55 | 90 | 18 | 1.1 | 0.6 | 11.9 | 7011 | 7011DB | 7011DF | 7011DT | 31000 | 50500 | 26200 | 52500 | 6300 | 5000 | 8500 | 6700 | 61 | 61 | 84 | 86 | 1 | 0.6 | 0.420 | 7011 | | | |
| | | 90 | 18 | 1.1 | 0.6 | -0.6 | 7011C | 7011CDB | 7011CDF | 7011CDT | 34500 | 56000 | 28800 | 57500 | 11000 | 8800 | 15000 | 12000 | 61 | 61 | 84 | 86 | 1 | 0.6 | 0.420 | 7011C | | | |
| 100 | | 21 | 1.5 | 1 | 11.9 | 7211 | 7211DB | 7211DF | 7211DT | 51000 | 83000 | 39500 | 79000 | 6000 | 4500 | 7500 | 6300 | 64 | 60 | 91 | 94.6 | 1.5 | 1 | 0.635 | 7211 | | | | |
| 100 | | 21 | 1.5 | 1 | 22.1 | 7211B | 7211BDB | 7211BDF | 7211BDT | 48000 | 78000 | 37500 | 74500 | 5300 | 4000 | 7000 | 5500 | 64 | 60 | 91 | 94.6 | 1.5 | 1 | 0.635 | 7211B | | | | |
| 100 | | 21 | 1.5 | 1 | -1.6 | 7211C | 7211CDB | 7211CDF | 7211CDT | 53000 | 86500 | 40000 | 80000 | 10000 | 8000 | 14000 | 11000 | 64 | 64 | 91 | 94.6 | 1.5 | 1 | 0.635 | 7211C | | | | |
| 120 | | 29 | 2 | 1 | 10.8 | 7311 | 7311DB | 7311DF | 7311DT | 85500 | 139000 | 61500 | 123000 | 5000 | 4000 | 7000 | 5500 | 65 | 61 | 110 | 114 | 2 | 1 | 1.45 | 7311 | | | | |
| 120 | | 29 | 2 | 1 | 22.3 | 7311B | 7311BDB | 7311BDF | 7311BDT | 81000 | 132000 | 58000 | 116000 | 4500 | 3500 | 6200 | 5000 | 65 | 61 | 110 | 114 | 2 | 1 | 1.45 | 7311B | | | | |
| 120 | | 29 | 2 | 1 | -4.4 | 7311C | 7311CDB | 7311CDF | 7311CDT | 87000 | 142000 | 60000 | 121000 | 9100 | 7300 | 13000 | 10000 | 65 | 65 | 110 | 114 | 2 | 1 | 1.45 | 7311C | | | | |

Note : (1) "a" means the distance between back face and load center.

Angular Contact Ball Bearings Single Mounting / Duplex Mounting

Bore Diameter : 60~75mm



• Dynamic equivalent radial load
Pr = XFr + YFa

| Contact angle | iFa Cor | e | Single or DT | | | | DB or DF | | | | | | |
|---------------|------------|------|--------------|------|--------------|------|--------------|------|--------------|------|------|------|------|
| | | | Fa Fr > e | | Fa Fr ≤ e | | Fa Fr > e | | Fa Fr ≤ e | | | | |
| | | | X | Y | X | Y | X | Y | X | Y | | | |
| 15° | 0.015 | 0.38 | 0.44 | 1.47 | 1 | 1.65 | 0.72 | 2.39 | 0.58 | 0.46 | 1.23 | 1.38 | 2.00 |
| | 0.029 | 0.40 | 0.44 | 1.40 | 1 | 1.57 | 0.72 | 2.28 | 0.58 | 0.43 | 1.30 | 1.46 | 2.11 |
| | 0.058 | 0.46 | 0.44 | 1.19 | 1 | 1.34 | 0.72 | 1.93 | 0.58 | 0.46 | 1.23 | 1.38 | 2.00 |
| | 0.12 | 0.47 | 0.44 | 1.19 | 1 | 1.34 | 0.72 | 1.93 | 0.58 | 0.46 | 1.23 | 1.38 | 2.00 |
| | 0.17 | 0.50 | 0.44 | 1.12 | 1 | 1.26 | 0.72 | 1.82 | 0.58 | 0.46 | 1.00 | 1.12 | 1.63 |
| | 0.29 | 0.55 | 0.44 | 1.02 | 1 | 1.14 | 0.72 | 1.66 | 0.58 | 0.46 | 1.00 | 1.12 | 1.63 |
| 30° | 0.8 | 0.39 | 0.76 | 1 | 0.78 | 0.63 | 1.24 | 0.58 | 0.56 | 1.00 | 1.12 | 1.63 | 0.58 |
| | 1.14 | 0.35 | 0.57 | 1 | 0.55 | 0.57 | 0.93 | 0.58 | 0.56 | 1.00 | 1.12 | 1.63 | 0.58 |

• i = 2 for DB or DF mounting
i = 1 for Single or DT mounting
• Single or DT mounting
When Fa/Fr ≤ e, use Pr = Fr

• Static equivalent radial load
Por = XoFr + YoFa

| Contact angle | Single or DT | | DB or DF | |
|---------------|--------------|------|----------|------|
| | Xo | Yo | Xo | Yo |
| 15° | 0.5 | 0.46 | 1 | 0.92 |
| 30° | 0.5 | 0.33 | 1 | 0.66 |
| 40° | 0.5 | 0.26 | 1 | 0.52 |

• Single or DT mounting
When Por < Fr, use Pr = Fr

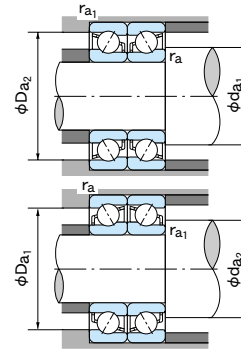
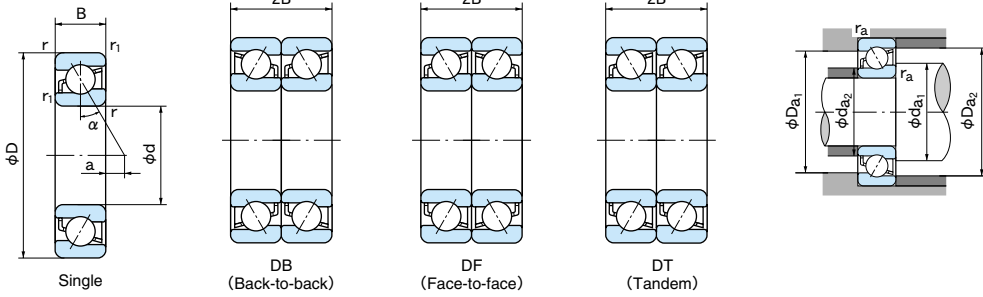
1N=0.102kgf

| d | Boundary dimensions (mm) | | | | Load center (mm) a ⁽¹⁾ | Bearing No. | | | | Basic dynamic load rating Cr(N) | | Basic static load rating Cor(N) | | Limiting speed (rpm) | | | | Abutment and fillet dimensions (mm) | | | | | Mass (kg) Single | Bearing No. | |
|-----|--------------------------|-----|---------|----------|-----------------------------------|-------------|---------|---------|---------|---------------------------------|--------|---------------------------------|--------|----------------------|-----------------|--------|-----------|-------------------------------------|-----------|-----------|----------|-----------|------------------|-------------|-------|
| | D | B | r (min) | r1 (min) | | Single | Duplex | | | Single | Duplex | Single | Duplex | Grease lubrication | Oil lubrication | | dA1 (min) | dA2 (min) | DA1 (max) | DA2 (max) | ra (max) | ra1 (max) | | | |
| | | | | | | | | | | | | | | Single | Duplex | Single | Duplex | | | | | | | | |
| 60 | 95 | 18 | 1.1 | 0.6 | 13.4 | 7012 | 7012DB | 7012DF | 7012DT | 32000 | 51500 | 28000 | 56000 | 6000 | 4500 | 7600 | 6200 | 66 | 66 | 89 | 91 | 1 | 0.6 | 0.450 | 7012 |
| | 95 | 18 | 1.1 | 0.6 | -0.1 | 7012C | 7012CDB | 7012CDF | 7012CDT | 35500 | 57500 | 30500 | 61500 | 10000 | 8000 | 14000 | 11000 | 66 | 66 | 89 | 91 | 1 | 0.6 | 0.450 | 7012C |
| | 110 | 22 | 1.5 | 1 | 13.5 | 7212 | 7212DB | 7212DF | 7212DT | 62000 | 100000 | 48500 | 97500 | 5300 | 4300 | 7100 | 5600 | 69 | 65 | 101 | 104.6 | 1.5 | 1 | 0.820 | 7212 |
| | 110 | 22 | 1.5 | 1 | 24.7 | 7212B | 7212BDB | 7212BDF | 7212BDT | 58000 | 94000 | 46000 | 92000 | 4800 | 3800 | 6300 | 5000 | 69 | 65 | 101 | 104.6 | 1.5 | 1 | 0.820 | 7212B |
| | 110 | 22 | 1.5 | 1 | -1.2 | 7212C | 7212CDB | 7212CDF | 7212CDT | 64500 | 105000 | 49500 | 98500 | 9400 | 7500 | 13000 | 10000 | 69 | 69 | 101 | 104.6 | 1.5 | 1 | 0.820 | 7212C |
| | 130 | 31 | 2.1 | 1.1 | 11.9 | 7312 | 7312DB | 7312DF | 7312DT | 98000 | 159000 | 71500 | 148000 | 4800 | 3800 | 6300 | 5000 | 72 | 67 | 118 | 123 | 2 | 1 | 1.81 | 7312 |
| 130 | 31 | 2.1 | 1.1 | 24.4 | 7312B | 7312BDB | 7312BDF | 7312BDT | 92500 | 151000 | 67500 | 135000 | 4300 | 3400 | 5500 | 4500 | 72 | 67 | 118 | 123 | 2 | 1 | 1.81 | 7312B | |
| 130 | 31 | 2.1 | 1.1 | -4.5 | 7312C | 7312CDB | 7312CDF | 7312CDT | 99500 | 162000 | 70000 | 140000 | 8400 | 6700 | 12000 | 9600 | 72 | 72 | 118 | 123 | 2 | 1 | 1.81 | 7312C | |
| 65 | 100 | 18 | 1.1 | 0.6 | 14.8 | 7013 | 7013DB | 7013DF | 7013DT | 33500 | 54500 | 31000 | 62500 | 5600 | 4300 | 7100 | 6000 | 71 | 71 | 94 | 96 | 1 | 0.6 | 0.470 | 7013 |
| | 100 | 18 | 1.1 | 0.6 | 0.5 | 7013C | 7013CDB | 7013CDF | 7013CDT | 37500 | 60500 | 34500 | 69000 | 9700 | 7800 | 13000 | 10000 | 71 | 71 | 94 | 96 | 1 | 0.6 | 0.470 | 7013C |
| | 120 | 23 | 1.5 | 1 | 15.2 | 7213 | 7213DB | 7213DF | 7213DT | 70000 | 114000 | 57800 | 116000 | 4900 | 3900 | 6500 | 5300 | 74 | 70 | 111 | 114.6 | 1.5 | 1 | 1.02 | 7213 |
| | 120 | 23 | 1.5 | 1 | 27.4 | 7213B | 7213BDB | 7213BDF | 7213BDT | 66000 | 107000 | 54500 | 109000 | 4300 | 3400 | 5600 | 4600 | 74 | 70 | 111 | 114.6 | 1.5 | 1 | 1.02 | 7213B |
| | 120 | 23 | 1.5 | 1 | -0.8 | 7213C | 7213CDB | 7213CDF | 7213CDT | 73500 | 120000 | 59000 | 118000 | 8600 | 6900 | 12000 | 9600 | 74 | 74 | 111 | 114.6 | 1.5 | 1 | 1.02 | 7213C |
| | 140 | 33 | 2.1 | 1.1 | 13.1 | 7313 | 7313DB | 7313DF | 7313DT | 111000 | 180000 | 82000 | 165000 | 4400 | 3600 | 5800 | 4700 | 77 | 72 | 128 | 133 | 2 | 1 | 2.22 | 7313 |
| 140 | 33 | 2.1 | 1.1 | 26.6 | 7313B | 7313BDB | 7313BDF | 7313BDT | 105000 | 170000 | 77500 | 155000 | 4000 | 3200 | 5300 | 4200 | 77 | 72 | 128 | 133 | 2 | 1 | 2.22 | 7313B | |
| 140 | 33 | 2.1 | 1.1 | -4.7 | 7313C | 7313CDB | 7313CDF | 7313CDT | 113000 | 183000 | 81000 | 162000 | 7800 | 6200 | 11000 | 8800 | 77 | 77 | 128 | 133 | 2 | 1 | 2.22 | 7313C | |
| 70 | 110 | 20 | 1.1 | 0.6 | 16.0 | 7014 | 7014DB | 7014DF | 7014DT | 42500 | 69000 | 39500 | 78500 | 5000 | 4000 | 6600 | 5300 | 76 | 76 | 104 | 106 | 1 | 0.6 | 0.660 | 7014 |
| | 110 | 20 | 1.1 | 0.6 | 0.4 | 7014C | 7014CDB | 7014CDF | 7014CDT | 47000 | 76500 | 43000 | 86500 | 8900 | 7100 | 12000 | 9600 | 76 | 76 | 104 | 106 | 1 | 0.6 | 0.660 | 7014C |
| | 125 | 24 | 1.5 | 1 | 16.1 | 7214 | 7214DB | 7214DF | 7214DT | 76500 | 124000 | 63500 | 127000 | 4500 | 3800 | 6300 | 5000 | 79 | 75 | 116 | 119.6 | 1.5 | 1 | 1.12 | 7214 |
| | 125 | 24 | 1.5 | 1 | 29.0 | 7214B | 7214BDB | 7214BDF | 7214BDT | 71500 | 116000 | 59500 | 120000 | 4300 | 3200 | 5600 | 4500 | 79 | 75 | 116 | 119.6 | 1.5 | 1 | 1.12 | 7214B |
| | 125 | 24 | 1.5 | 1 | -0.7 | 7214C | 7214CDB | 7214CDF | 7214CDT | 80000 | 130000 | 65000 | 130000 | 8200 | 6600 | 11000 | 8800 | 79 | 79 | 116 | 119.6 | 1.5 | 1 | 1.12 | 7214C |
| | 150 | 35 | 2.1 | 1.1 | 14.3 | 7314 | 7314DB | 7314DF | 7314DT | 125000 | 203000 | 94000 | 188000 | 4000 | 3200 | 5300 | 4300 | 82 | 77 | 138 | 143 | 2 | 1 | 2.70 | 7314 |
| 150 | 35 | 2.1 | 1.1 | 28.7 | 7314B | 7314BDB | 7314BDF | 7314BDT | 118000 | 191000 | 88500 | 177000 | 3600 | 2900 | 4800 | 3900 | 82 | 77 | 138 | 143 | 2 | 1 | 2.70 | 7314B | |
| 150 | 35 | 2.1 | 1.1 | -4.8 | 7314C | 7314CDB | 7314CDF | 7314CDT | 127000 | 206000 | 92500 | 185000 | 7300 | 5800 | 10000 | 8000 | 82 | 82 | 138 | 143 | 2 | 1 | 2.70 | 7314C | |
| 75 | 115 | 20 | 1.1 | 0.6 | 17.4 | 7015 | 7015DB | 7015DF | 7015DT | 43500 | 70500 | 41500 | 83000 | 4800 | 3800 | 6300 | 5000 | 81 | 81 | 109 | 111 | 1 | 0.6 | 0.695 | 7015 |
| | 115 | 20 | 1.1 | 0.6 | 1.0 | 7015C | 7015CDB | 7015CDF | 7015CDT | 48500 | 78500 | 46000 | 92000 | 8400 | 6700 | 12000 | 9600 | 81 | 81 | 109 | 111 | 1 | 0.6 | 0.695 | 7015C |
| | 130 | 25 | 1.5 | 1 | 17.1 | 7215 | 7215DB | 7215DF | 7215DT | 79000 | 129000 | 68500 | 137000 | 4300 | 3400 | 5800 | 4700 | 84 | 80 | 121 | 124.6 | 1.5 | 1 | 1.23 | 7215 |
| | 130 | 25 | 1.5 | 1 | 30.6 | 7215B | 7215BDB | 7215BDF | 7215BDT | 74000 | 120000 | 64000 | 128000 | 4000 | 3200 | 5300 | 4300 | 84 | 80 | 121 | 124.6 | 1.5 | 1 | 1.23 | 7215B |
| | 130 | 25 | 1.5 | 1 | -0.7 | 7215C | 7215CDB | 7215CDF | 7215CDT | 83500 | 135000 | 70000 | 141000 | 7800 | 6200 | 11000 | 8800 | 84 | 84 | 121 | 124.6 | 1.5 | 1 | 1.23 | 7215C |
| | 160 | 37 | 2.1 | 1.1 | 15.4 | 7315 | 7315DB | 7315DF | 7315DT | 136000 | 221000 | 106000 | 212000 | 3800 | 3000 | 5000 | 4000 | 87 | 82 | 148 | 153 | 2 | 1 | 3.15 | 7315 |
| 160 | 37 | 2.1 | 1.1 | 30.9 | 7315B | 7315BDB | 7315BDF | 7315BDT | 128000 | 208000 | 100000 | 200000 | 3400 | 2700 | 4500 | 3600 | 87 | 82 | 148 | 153 | 2 | 1 | 3.15 | 7315B | |
| 160 | 37 | 2.1 | 1.1 | -4.9 | 7315C | 7315CDB | 7315CDF | 7315CDT | 138000 | 225000 | 104000 | 209000 | 6800 | 5400 | 9400 | 7500 | 87 | 87 | 148 | 153 | 2 | 1 | 3.15 | 7315C | |

Note : (1) "a" means the distance between back face and load center.

Angular Contact Ball Bearings Single Mounting / Duplex Mounting

Bore Diameter : 80~95mm



• Dynamic equivalent radial load
Pr = XFr + YFa

| Contact angle | iFa / Cor | e | Single or DT | | | | DB or DF | | | |
|---------------|-----------|------|--------------|------|-------------|------|-------------|------|-------------|---|
| | | | Fa / Fr > e | | Fa / Fr ≤ e | | Fa / Fr > e | | Fa / Fr ≤ e | |
| | | | X | Y | X | Y | X | Y | X | Y |
| 15° | 0.015 | 0.38 | | | 1.47 | 1.65 | 0.72 | 2.39 | | |
| | 0.029 | 0.40 | 0.44 | 1.40 | 1.57 | 1.65 | 0.72 | 2.28 | | |
| | 0.058 | 0.43 | | 1.30 | 1.46 | 1.58 | 0.72 | 2.11 | | |
| | 0.087 | 0.46 | | 1.23 | 1.38 | 1.58 | 0.72 | 2.00 | | |
| | 0.12 | 0.47 | 0.44 | 1.19 | 1.34 | 1.58 | 0.72 | 1.93 | | |
| 30° | 0.17 | 0.50 | | | 1.12 | 1.26 | 1.12 | 1.82 | | |
| | 0.29 | 0.55 | | 1.02 | 1.14 | 1.14 | 1.66 | | | |
| | 0.44 | 0.56 | 0.44 | 1.00 | 1.12 | 1.12 | 0.72 | 1.63 | | |
| | 0.58 | 0.56 | | 1.00 | 1.12 | 1.12 | 1.63 | | | |
| | 0.8 | 0.58 | 0.39 | 0.76 | 1.00 | 0.78 | 0.63 | 1.24 | | |
| 40° | | 1.14 | 0.35 | 0.57 | 1.00 | 0.55 | 0.57 | 0.93 | | |

• Static equivalent radial load
Por = XoFr + YoFa

| Contact angle | Single or DT | | DB or DF | |
|---------------|--------------|------|----------|------|
| | Xo | Yo | Xo | Yo |
| 15° | 0.5 | 0.46 | 1 | 0.92 |
| 30° | 0.5 | 0.33 | 1 | 0.66 |
| 40° | 0.5 | 0.26 | 1 | 0.52 |

• Single or DT mounting
When Por < Fr, use Pr = Fr

• i = 2 for DB or DF mounting
i = 1 for Single or DT mounting
• Single or DT mounting
When Fa/Fr ≤ e, use Pr = Fr

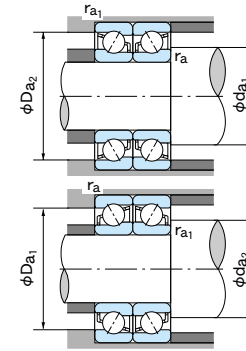
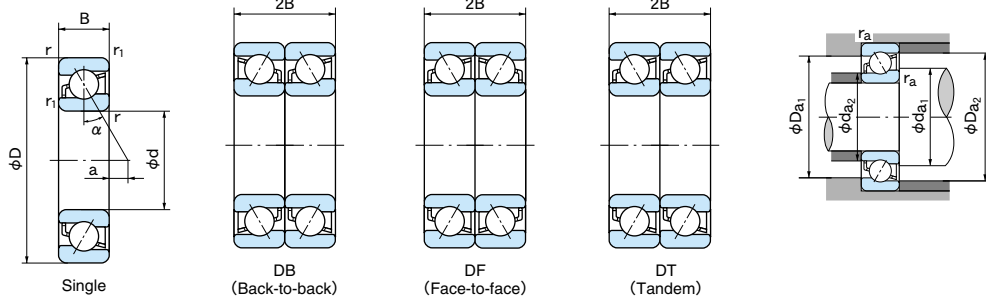
1N=0.102kgf

| d | Boundary dimensions (mm) | | | | | Load center (mm) a ⁽¹⁾ | Bearing No. | | | | Basic dynamic load rating Cr(N) | | Basic static load rating Cor(N) | | Limiting speed (rpm) | | | | Abutment and fillet dimensions (mm) | | | | | | Mass (kg) | Bearing No. |
|-----|--------------------------|-------|------------------|-------------------|----------------|-----------------------------------|-------------|---------|---------|---------|---------------------------------|--------|---------------------------------|--------|----------------------|-----------------|-----------------|-------|-------------------------------------|-------|----------------|-------|-----|-------|-----------|-------------|
| | D | B | r _{min} | r _{1min} | r ₁ | | Single | | Duplex | | Single | Duplex | Single | Duplex | Grease lubrication | Oil lubrication | D _{a1} | | D _{a2} | | r _a | | | | | |
| | (min) | (min) | (min) | (min) | (min) | | | | | | | | | | Single | Duplex | (min) | (min) | (max) | (max) | (max) | (max) | | | | |
| 80 | 125 | 22 | 1.1 | 0.6 | 18.6 | 7016 | 7016DB | 7016DF | 7016DT | 53500 | 86500 | 50500 | 101000 | 4400 | 3500 | 5800 | 4600 | 86 | 86 | 119 | 121 | 1 | 0.6 | 0.925 | 7016 | |
| | 125 | 22 | 1.1 | 0.6 | 0.8 | 7016C | 7016CDB | 7016CDF | 7016CDT | 59000 | 96000 | 55500 | 111000 | 7800 | 6200 | 11000 | 8800 | 86 | 86 | 119 | 121 | 1 | 0.6 | 0.925 | 7016C | |
| | 140 | 26 | 2 | 1 | 18.8 | 7216 | 7216DB | 7216DF | 7216DT | 89000 | 145000 | 76500 | 153000 | 4000 | 3200 | 5400 | 4300 | 90 | 86 | 130 | 134 | 2 | 1 | 1.50 | 7216 | |
| | 140 | 26 | 2 | 1 | 33.2 | 7216B | 7216BDB | 7216BDF | 7216BDT | 83500 | 135000 | 71500 | 143000 | 3600 | 2800 | 5000 | 4000 | 90 | 86 | 130 | 134 | 2 | 1 | 1.50 | 7216B | |
| | 140 | 26 | 2 | 1 | -0.3 | 7216C | 7216CDB | 7216CDF | 7216CDT | 93500 | 152000 | 78000 | 156000 | 7300 | 5800 | 10000 | 8000 | 90 | 90 | 130 | 134 | 2 | 1 | 1.50 | 7216C | |
| | 170 | 39 | 2.1 | 1.1 | 16.6 | 7316 | 7316DB | 7316DF | 7316DT | 147000 | 239000 | 119000 | 238000 | 3600 | 2800 | 4800 | 3800 | 92 | 87 | 158 | 163 | 2 | 1 | 4.18 | 7316 | |
| | 170 | 39 | 2.1 | 1.1 | 33.0 | 7316B | 7316BDB | 7316BDF | 7316BDT | 139000 | 226000 | 112000 | 225000 | 3200 | 2500 | 4200 | 3400 | 92 | 87 | 158 | 163 | 2 | 1 | 4.18 | 7316B | |
| | 170 | 39 | 2.1 | 1.1 | -5.1 | 7316C | 7316CDB | 7316CDF | 7316CDT | 150000 | 243000 | 117000 | 235000 | 6400 | 5100 | 8800 | 7000 | 92 | 92 | 158 | 163 | 2 | 1 | 4.18 | 7316C | |
| | 85 | 130 | 22 | 1.1 | 0.6 | 20 | 7017 | 7017DB | 7017DF | 7017DT | 54500 | 88500 | 53500 | 107000 | 4100 | 3300 | 5500 | 4400 | 91 | 91 | 124 | 126 | 1 | 0.6 | 0.960 | 7017 |
| | | 130 | 22 | 1.1 | 0.6 | 1.4 | 7017C | 7017CDB | 7017CDF | 7017CDT | 60500 | 98500 | 59000 | 118000 | 7400 | 5900 | 10000 | 8000 | 91 | 91 | 124 | 126 | 1 | 0.6 | 0.960 | 7017C |
| | | 150 | 28 | 2 | 1 | 19.9 | 7217 | 7217DB | 7217DF | 7217DT | 103000 | 167000 | 89500 | 179000 | 3800 | 3000 | 5000 | 4000 | 95 | 91 | 140 | 144 | 2 | 1 | 1.87 | 7217 |
| | | 150 | 28 | 2 | 1 | 35.4 | 7217B | 7217BDB | 7217BDF | 7217BDT | 96500 | 159000 | 83500 | 168000 | 3400 | 2600 | 4500 | 3800 | 95 | 91 | 140 | 144 | 2 | 1 | 1.87 | 7217B |
| 150 | | 28 | 2 | 1 | -0.4 | 7217C | 7217CDB | 7217CDF | 7217CDT | 100000 | 163000 | 85000 | 170000 | 6800 | 5400 | 9400 | 7500 | 95 | 95 | 140 | 144 | 2 | 1 | 1.87 | 7217C | |
| 180 | | 41 | 3 | 1.1 | 17.7 | 7317 | 7317DB | 7317DF | 7317DT | 159000 | 258000 | 133000 | 266000 | 3400 | 2600 | 4500 | 3600 | 99 | 92 | 166 | 173 | 2.5 | 1 | 4.90 | 7317 | |
| 180 | | 41 | 3 | 1.1 | 35.2 | 7317B | 7317BDB | 7317BDF | 7317BDT | 150000 | 244000 | 125000 | 251000 | 3000 | 2400 | 4000 | 3200 | 99 | 92 | 166 | 173 | 2.5 | 1 | 4.90 | 7317B | |
| 180 | | 41 | 3 | 1.1 | -5.2 | 7317C | 7317CDB | 7317CDF | 7317CDT | 162000 | 263000 | 131000 | 262000 | 6000 | 4800 | 8300 | 6600 | 99 | 99 | 166 | 173 | 2.5 | 1 | 4.90 | 7317C | |
| 90 | | 140 | 24 | 1.5 | 1 | 21.2 | 7018 | 7018DB | 7018DF | 7018DT | 65000 | 106000 | 63000 | 126000 | 3800 | 3200 | 5200 | 4200 | 97 | 97 | 133 | 135.6 | 1.5 | 1 | 1.26 | 7018 |
| | | 140 | 24 | 1.5 | 1 | 1.3 | 7018C | 7018CDB | 7018CDF | 7018CDT | 72000 | 117000 | 69500 | 139000 | 7000 | 5600 | 9600 | 7800 | 97 | 97 | 133 | 135.6 | 1.5 | 1 | 1.26 | 7018C |
| | | 160 | 30 | 2 | 1 | 21.1 | 7218 | 7218DB | 7218DF | 7218DT | 118000 | 191000 | 103000 | 206000 | 3500 | 2800 | 4700 | 3700 | 100 | 96 | 150 | 154 | 2 | 1 | 2.30 | 7218 |
| | | 160 | 30 | 2 | 1 | 37.5 | 7218B | 7218BDB | 7218BDF | 7218BDT | 110000 | 179000 | 97000 | 194000 | 3200 | 2500 | 4300 | 3400 | 100 | 96 | 150 | 154 | 2 | 1 | 2.30 | 7218B |
| | 160 | 30 | 2 | 1 | -0.6 | 7218C | 7218CDB | 7218CDF | 7218CDT | 124000 | 201000 | 105000 | 211000 | 6400 | 5100 | 8800 | 7000 | 100 | 100 | 150 | 154 | 2 | 1 | 2.30 | 7218C | |
| | 190 | 43 | 3 | 1.1 | 18.9 | 7318 | 7318DB | 7318DF | 7318DT | 171000 | 277000 | 147000 | 295000 | 3200 | 2600 | 4300 | 3400 | 104 | 97 | 176 | 183 | 2.5 | 1 | 5.76 | 7318 | |
| | 190 | 43 | 3 | 1.1 | 37.3 | 7318B | 7318BDB | 7318BDF | 7318BDT | 161000 | 262000 | 139000 | 278000 | 2800 | 2300 | 3800 | 3000 | 104 | 97 | 176 | 183 | 2.5 | 1 | 5.76 | 7318B | |
| | 190 | 43 | 3 | 1.1 | -5.3 | 7318C | 7318CDB | 7318CDF | 7318CDT | 174000 | 282000 | 146000 | 291000 | 5700 | 4600 | 7900 | 6300 | 104 | 104 | 176 | 183 | 2.5 | 1 | 5.76 | 7318C | |
| | 95 | 145 | 24 | 1.5 | 1 | 22.6 | 7019 | 7019DB | 7019DF | 7019DT | 67000 | 109000 | 66500 | 133000 | 3800 | 3100 | 5200 | 4200 | 102 | 102 | 138 | 140.6 | 1.5 | 1 | 1.36 | 7019 |
| | | 145 | 24 | 1.5 | 1 | 1.9 | 7019C | 7019CDB | 7019CDF | 7019CDT | 74000 | 120000 | 73500 | 147000 | 6700 | 5400 | 9200 | 7400 | 102 | 102 | 138 | 140.6 | 1.5 | 1 | 1.36 | 7019C |
| | | 170 | 32 | 2.1 | 1.1 | 22.2 | 7219 | 7219DB | 7219DF | 7219DT | 126000 | 205000 | 112000 | 225000 | 3400 | 2600 | 4500 | 3600 | 107 | 102 | 158 | 163 | 2 | 1 | 2.78 | 7219 |
| | | 170 | 32 | 2.1 | 1.1 | 39.7 | 7219B | 7219BDB | 7219BDF | 7219BDT | 120000 | 195000 | 105000 | 210000 | 3000 | 2400 | 4000 | 3200 | 107 | 102 | 158 | 163 | 2 | 1 | 2.78 | 7219B |
| 170 | | 32 | 2.1 | 1.1 | -0.7 | 7219C | 7219CDB | 7219CDF | 7219CDT | 133000 | 217000 | 115000 | 230000 | 6000 | 4800 | 8300 | 6600 | 107 | 107 | 158 | 163 | 2 | 1 | 2.78 | 7219C | |
| 200 | | 45 | 3 | 1.1 | 20.1 | 7319 | 7319DB | 7319DF | 7319DT | 183000 | 297000 | 163000 | 325000 | 3000 | 2400 | 4000 | 3200 | 109 | 102 | 186 | 193 | 2.5 | 1 | 6.68 | 7319 | |
| 200 | | 45 | 3 | 1.1 | 39.5 | 7319B | 7319BDB | 7319BDF | 7319BDT | 172000 | 280000 | 153000 | 305000 | 2500 | 2200 | 3600 | 3000 | 109 | 102 | 186 | 193 | 2.5 | 1 | 6.68 | 7319B | |
| 200 | | 45 | 3 | 1.1 | -5.5 | 7319C | 7319CDB | 7319CDF | 7319CDT | 186000 | 300000 | 161000 | 320000 | 5400 | 4300 | 7500 | 6000 | 109 | 109 | 186 | 193 | 2.5 | 1 | 6.68 | 7319C | |

Note : (1) "a" means the distance between back face and load center.

Angular Contact Ball Bearings Single Mounting / Duplex Mounting

Bore Diameter : 100~120mm



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

| Contact angle | iFa Cor | e | Single or DT | | | | DB or DF | | | |
|---------------|------------|------|--------------|------|-----------|------|-----------|------|-----------|------|
| | | | Fa/Fr > e | | Fa/Fr ≤ e | | Fa/Fr > e | | Fa/Fr ≤ e | |
| | | | X | Y | X | Y | X | Y | X | Y |
| 15° | 0.015 | 0.38 | 0.44 | 1.47 | 1 | 1.65 | 0.72 | 2.39 | 1 | 1.63 |
| | 0.029 | 0.40 | 1.30 | 1.46 | 1 | 1.57 | 2.28 | 1 | 1.61 | |
| | 0.058 | 0.43 | 1.23 | 1.38 | 1 | 1.50 | 2.11 | 1 | 1.58 | |
| | 0.087 | 0.46 | 1.17 | 1.34 | 1 | 1.43 | 2.00 | 1 | 1.55 | |
| | 0.12 | 0.47 | 1.12 | 1.26 | 1 | 1.38 | 1.82 | 1 | 1.52 | |
| 30° | 0.29 | 0.55 | 0.44 | 1.02 | 1 | 1.14 | 0.72 | 1.66 | 1 | 1.63 |
| | 0.44 | 0.56 | 1.00 | 1.12 | 1 | 1.12 | 1.63 | 1 | 1.63 | |
| | 0.58 | 0.56 | 1.00 | 1.12 | 1 | 1.12 | 1.63 | 1 | 1.63 | |
| | 0.8 | 0.56 | 0.39 | 0.76 | 1 | 0.78 | 0.63 | 1.24 | 1 | 1.63 |
| | 1.14 | 0.57 | 0.57 | 1 | 0.55 | 0.57 | 0.93 | 1 | 1.63 | |
| 40° | 1.14 | 0.57 | 0.57 | 1 | 0.55 | 0.57 | 0.93 | 1 | 1.63 | |

• Static equivalent radial load
 $Por = XoFr + YoFa$

| Contact angle | Single or DT | | DB or DF | |
|---------------|--------------|------|----------|------|
| | Xo | Yo | Xo | Yo |
| 15° | 0.5 | 0.46 | 1 | 0.92 |
| 30° | 0.5 | 0.33 | 1 | 0.66 |
| 40° | 0.5 | 0.26 | 1 | 0.52 |

• Single or DT mounting
When $Por < Fr$, use $Pr = Fr$

• $i = 2$ for DB or DF mounting
 $i = 1$ for Single or DT mounting
• Single or DT mounting
When $Fa/Fr \leq e$, use $Pr = Fr$

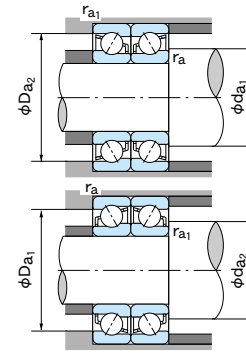
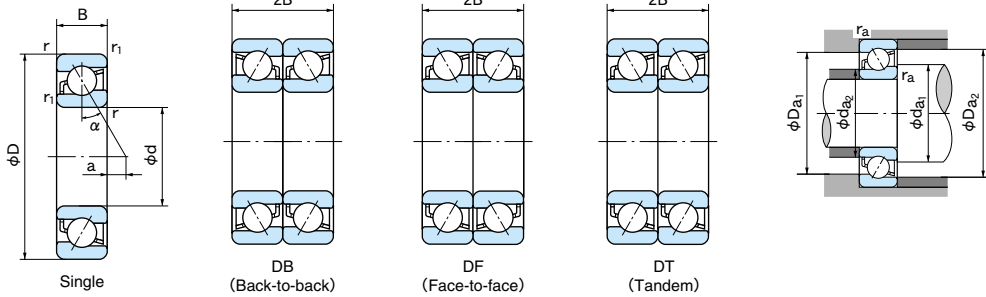
1N=0.102kgf

| Boundary dimensions (mm) | Load center (mm) | Bearing No. | Basic dynamic load rating Cr(N) | | Basic static load rating Cor(N) | | Limiting speed (rpm) | | | | Abutment and fillet dimensions (mm) | | | | | Mass (kg) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|------------------|-------------|---------------------------------|------|---------------------------------|--------------------|----------------------|------------------|--------|--------|-------------------------------------|--------|--------------------|-----------------|--------|-----------|--------|--------|--------|-------------|------|------|-----|-------|-----|-----|------|------|-------|---------|---------|---------|---------|---------|--------|--------|------|------|------|------|-----|-------|-----|-----|------|-------|-------|
| | | | d | D | B | r _(min) | r ₁ (min) | a ⁽¹⁾ | Single | Duplex | Single | Duplex | Grease lubrication | Oil lubrication | Single | Duplex | Single | Duplex | Single | Bearing No. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 24 | 7020 | 150 | 24 | 1.5 | 1 | 24.1 | 2.4 | 7020 | 7020DB | 7020DF | 7020DT | 68500 | 111000 | 70500 | 141000 | 3600 | 2800 | 4800 | 3800 | 107 | 107 | 143 | 145.6 | 1.5 | 1 | 1.37 | 7020 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7020C | 7020CDB | 7020CDF | 7020CDT | 76000 | 123000 | 6400 | 5100 | 8800 | 7000 | 107 | 107 | 143 | 145.6 | 1.5 | 1 | 1.37 | 7020C | |
| | 180 | 34 | 7220 | 2.1 | 1.1 | 23.4 | 2.4 | 23.4 | 2.4 | 7220 | 7220DB | 7220DF | 7220DT | 144000 | 234000 | 126000 | 251000 | 3200 | 2400 | 4200 | 3400 | 112 | 107 | 168 | 173 | 2 | 1 | 3.32 | 7220 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7220B | 7220BDB | 7220BDF | 7220BDT | 135000 | 219000 | 2800 | 2200 | 3700 | 3000 | 112 | 107 | 168 | 173 | 2 | 1 | 3.32 | 7220B |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7220C | 7220CDB | 7220CDF | 7220CDT | 150000 | 244000 | 5700 | 4600 | 7900 | 6300 | 112 | 112 | 168 | 173 | 2 | 1 | 3.32 | 7220C |
| | 215 | 47 | 7320 | 3 | 1.1 | 22.0 | 1.1 | 22.0 | 1.1 | 7320 | 7320DB | 7320DF | 7320DT | 207000 | 335000 | 190000 | 380000 | 2800 | 2200 | 3800 | 3000 | 114 | 107 | 201 | 208 | 2.5 | 1 | 8.18 | 7320 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7320B | 7320BDB | 7320BDF | 7320BDT | 196000 | 320000 | 2400 | 2000 | 3300 | 2800 | 114 | 107 | 201 | 208 | 2.5 | 1 | 8.18 | 7320B |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7320C | 7320CDB | 7320CDF | 7320CDT | 211000 | 340000 | 5100 | 4100 | 7000 | 5600 | 114 | 114 | 201 | 208 | 2.5 | 1 | 8.18 | 7320C |
| | 105 | 26 | 7021 | 160 | 26 | 2 | 1 | 25.2 | 2.3 | 7021 | 7021DB | 7021DF | 7021DT | 80000 | 130000 | 81500 | 163000 | 3300 | 2600 | 4400 | 3500 | 113 | 113 | 152 | 155 | 2 | 1 | 1.73 | 7021 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7021C | 7021CDB | 7021CDF | 7021CDT | 97000 | 158000 | 6000 | 4800 | 8300 | 6600 | 113 | 113 | 152 | 155 | 2 | 1 | 1.73 | 7021C |
| | | 190 | 36 | 7221 | 2.1 | 1.1 | 24.6 | 1.1 | 24.6 | 1.1 | 7221 | 7221DB | 7221DF | 7221DT | 157000 | 254000 | 141000 | 283000 | 3000 | 2400 | 4000 | 3200 | 117 | 112 | 178 | 183 | 2 | 1 | 3.93 | 7221 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7221B | 7221BDB | 7221BDF | 7221BDT | 147000 | 239000 | 2700 | 2100 | 3600 | 2900 | 117 | 112 | 178 | 183 | 2 | 1 | 3.93 |
| 7221C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7221CDB | 7221CDF | 7221CDT | 163000 | 265000 | 5400 | 4300 | 7500 | 6000 | 117 | 117 | 178 | 183 | 2 | 1 | 3.93 | 7221C |
| 225 | | 49 | 7321 | 3 | 1.1 | 23.1 | 1.1 | 23.1 | 1.1 | 7321 | 7321DB | 7321DF | 7321DT | 219000 | 355000 | 206000 | 410000 | 2700 | 2100 | 3600 | 2800 | 119 | 112 | 211 | 218 | 2.5 | 1 | 9.34 | 7321 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7321B | 7321BDB | 7321BDF | 7321BDT | 208000 | 335000 | 2400 | 1900 | 3200 | 2600 | 119 | 112 | 211 | 218 | 2.5 | 1 | 9.34 | 7321B |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7321C | 7321CDB | 7321CDF | 7321CDT | 224000 | 365000 | 4800 | 3800 | 6700 | 5400 | 119 | 119 | 211 | 218 | 2.5 | 1 | 9.34 | 7321C |
| 110 | | 28 | 7022 | 170 | 28 | 2 | 1 | 26.2 | 2.2 | 7022 | 7022DB | 7022DF | 7022DT | 92000 | 149000 | 92500 | 185000 | 3200 | 2500 | 4300 | 3300 | 118 | 118 | 162 | 165 | 2 | 1 | 2.14 | 7022 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7022C | 7022CDB | 7022CDF | 7022CDT | 107000 | 173000 | 5700 | 4600 | 7900 | 6300 | 118 | 118 | 162 | 165 | 2 | 1 | 2.14 | 7022C |
| | | 200 | 38 | 7222 | 2.1 | 1.1 | 25.7 | 1.1 | 25.7 | 1.1 | 7222 | 7222DB | 7222DF | 7222DT | 170000 | 276000 | 158000 | 315000 | 2800 | 2200 | 3800 | 3000 | 122 | 117 | 188 | 193 | 2 | 1 | 4.62 | 7222 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7222B | 7222BDB | 7222BDF | 7222BDT | 159000 | 259000 | 2600 | 2000 | 3400 | 2800 | 122 | 117 | 188 | 193 | 2 | 1 | 4.62 |
| | 7222C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7222CDB | 7222CDF | 7222CDT | 171000 | 277000 | 5200 | 4200 | 7100 | 5700 | 122 | 122 | 188 | 193 | 2 | 1 | 4.62 | 7222C |
| | 240 | 50 | 7322 | 3 | 1.1 | 25.5 | 1.1 | 25.5 | 1.1 | 7322 | 7322DB | 7322DF | 7322DT | 244000 | 395000 | 239000 | 480000 | 2600 | 2000 | 3400 | 2700 | 124 | 117 | 226 | 233 | 2.5 | 1 | 11.0 | 7322 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7322B | 7322BDB | 7322BDF | 7322BDT | 231000 | 375000 | 2200 | 1800 | 3000 | 2400 | 124 | 117 | 226 | 233 | 2.5 | 1 | 11.0 | 7322B |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7322C | 7322CDB | 7322CDF | 7322CDT | 237000 | 385000 | 4600 | 3700 | 6300 | 5000 | 124 | 124 | 226 | 233 | 2.5 | 1 | 11.0 | 7322C |
| | 120 | 28 | 7024 | 180 | 28 | 2 | 1 | 29.3 | 3.3 | 7024 | 7024DB | 7024DF | 7024DT | 96500 | 157000 | 103000 | 206000 | 2900 | 2300 | 3800 | 3000 | 128 | 128 | 172 | 175 | 2 | 1 | 2.27 | 7024 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7024C | 7024CDB | 7024CDF | 7024CDT | 109000 | 178000 | 5300 | 4200 | 7300 | 5800 | 128 | 128 | 172 | 175 | 2 | 1 | 2.27 | 7024C |
| | | 215 | 40 | 7224 | 2.1 | 1.1 | 28.4 | 1.1 | 28.4 | 1.1 | 7224 | 7224DB | 7224DF | 7224DT | 182000 | 295000 | 180000 | 360000 | 2600 | 2100 | 3400 | 2700 | 132 | 127 | 203 | 208 | 2 | 1 | 6.05 | 7224 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7224B | 7224BDB | 7224BDF | 7224BDT | 170000 | 277000 | 1900 | 1500 | 3100 | 2500 | 132 | 127 | 203 | 208 | 2 | 1 | 6.05 |
| 7224C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7224CDB | 7224CDF | 7224CDT | 185000 | 300000 | 4800 | 3800 | 6600 | 5300 | 132 | 132 | 203 | 208 | 2 | 1 | 6.05 | 7224C |
| 260 | | 55 | 7324 | 3 | 1.1 | 27.3 | 1.1 | 27.3 | 1.1 | 7324 | 7324DB | 7324DF | 7324DT | 260000 | 420000 | 169000 | 540000 | 2200 | 1800 | 3000 | 2400 | 134 | 127 | 246 | 253 | 2.5 | 1 | 14.2 | 7324 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7324B | 7324BDB | 7324BDF | 7324BDT | 245000 | 400000 | 2100 | 1700 | 2800 | 2200 | 134 | 127 | 246 | 253 | 2.5 | 1 | 14.2 | 7324B |

Note : (1) "a" means the distance between back face and load center.

Angular Contact Ball Bearings Single Mounting / Duplex Mounting

Bore Diameter : 130~160mm



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

| Contact angle | iFa Cor | e | Single or DT | | | | DB or DF | | | | | |
|---------------|------------|------|--------------|------|--------|------|----------|------|--------|---|--|--|
| | | | Fa > e | | Fa ≤ e | | Fa > e | | Fa ≤ e | | | |
| | | | X | Y | X | Y | X | Y | X | Y | | |
| 15° | 0.015 | 0.38 | | | 1.47 | 1.65 | 1.65 | 2.39 | | | | |
| | 0.029 | 0.40 | 0.44 | 1.40 | 1 | 1.57 | 0.72 | 2.28 | | | | |
| | 0.058 | 0.43 | | 1.30 | | 1.46 | | 2.11 | | | | |
| | 0.087 | 0.46 | 0.44 | 1.23 | 1 | 1.38 | | 2.00 | | | | |
| | 0.12 | 0.47 | | 1.19 | 1 | 1.34 | 0.72 | 1.93 | | | | |
| | 0.17 | 0.50 | | 1.12 | | 1.26 | | 1.82 | | | | |
| 30° | 0.29 | 0.55 | | 1.02 | | 1.14 | | 1.66 | | | | |
| | 0.44 | 0.56 | 0.44 | 1.00 | 1 | 1.12 | 0.72 | 1.63 | | | | |
| | 0.58 | 0.56 | | 1.00 | | 1.12 | | 1.63 | | | | |
| | — | — | 0.8 | 0.39 | 0.76 | 1 | 0.78 | 0.63 | 1.24 | | | |
| 40° | — | — | 1.14 | 0.35 | 0.57 | 1 | 0.55 | 0.57 | 0.93 | | | |

• Static equivalent radial load
 $Por = XoFr + YoFa$

| Contact angle | Single or DT | | DB or DF | |
|---------------|--------------|------|----------|------|
| | Xo | Yo | Xo | Yo |
| 15° | 0.5 | 0.46 | 1 | 0.92 |
| 30° | 0.5 | 0.33 | 1 | 0.66 |
| 40° | 0.5 | 0.26 | 1 | 0.52 |

• Single or DT mounting
 When $Por < Fr$, use $Pr = Fr$

• $i = 2$ for DB or DF mounting
 $i = 1$ for Single or DT mounting
 • Single or DT mounting
 When $Fa/Fr \leq e$, use $Pr = Fr$

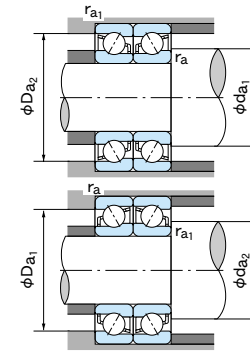
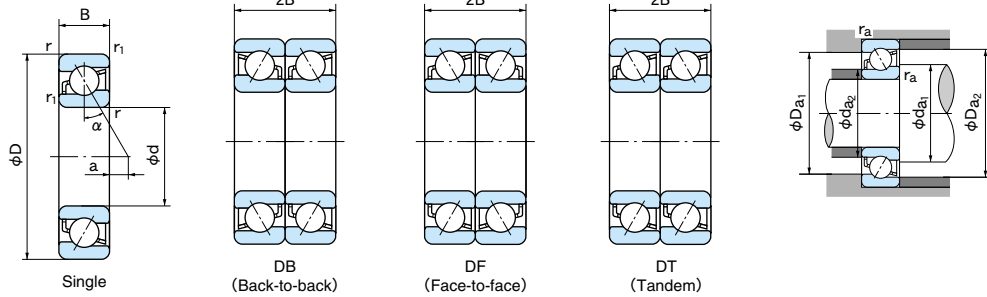
1N=0.102kgf

| Boundary dimensions (mm) | | | | | Load center (mm) | Bearing No. | | | | Basic dynamic load rating Cr(N) | | Basic static load rating Cor(N) | | Limiting speed (rpm) | | | | Abutment and fillet dimensions (mm) | | | | | | Mass (kg) | Bearing No. |
|--------------------------|-----|----|---------|----------|------------------|-------------|---------|---------|---------|---------------------------------|--------|---------------------------------|--------|---------------------------|--------|------------------------|--------|-------------------------------------|-----------|-----------|-----------|----------|-----------|-----------|-------------|
| d | D | B | r (min) | r1 (min) | a (1) | Single | Duplex | | | Single | Duplex | Single | Duplex | Grease lubrication Single | Duplex | Oil lubrication Single | Duplex | da1 (min) | da2 (min) | Da1 (max) | Da2 (max) | ra (max) | ra1 (max) | Single | |
| 130 | 200 | 33 | 2 | 1 | 31.1 | 7026 | 7026DB | 7026DF | 7026DT | 117000 | 190000 | 125000 | 250000 | 2600 | 2200 | 3600 | 2700 | 138 | 138 | 192 | 195 | 2 | 1 | 3.43 | 7026 |
| | 200 | 33 | 2 | 1 | 2.5 | 7026C | 7026CDB | 7026CDF | 7026CDT | 130000 | 211000 | 138000 | 276000 | 4800 | 3800 | 6700 | 5400 | 138 | 138 | 192 | 195 | 2 | 1 | 3.43 | 7026C |
| | 230 | 40 | 3 | 1.1 | 32 | 7226 | 7226DB | 7226DF | 7226DT | 196000 | 320000 | 198000 | 395000 | 2400 | 1900 | 3100 | 2500 | 144 | 137 | 216 | 223 | 2.5 | 1 | 6.88 | 7226 |
| | 230 | 40 | 3 | 1.1 | 55.5 | 7226B | 7226BDB | 7226BDF | 7226BDT | 184000 | 298000 | 185000 | 370000 | 2100 | 1700 | 2800 | 2300 | 144 | 137 | 216 | 223 | 2.5 | 1 | 6.88 | 7226B |
| | 230 | 40 | 3 | 1.1 | 0.9 | 7226C | 7226CDB | 7226CDF | 7226CDT | 214000 | 350000 | 216000 | 430000 | 4400 | 3500 | 6100 | 4900 | 144 | 144 | 216 | 223 | 2.5 | 1 | 6.88 | 7226C |
| | 280 | 58 | 4 | 1.5 | 30.2 | 7326 | 7326DB | 7326DF | 7326DT | 300000 | 490000 | 330000 | 660000 | 2200 | 1700 | 2900 | 2200 | 148 | 139 | 262 | 271 | 3 | 1.5 | 17.4 | 7326 |
| 280 | 58 | 4 | 1.5 | 57.0 | 7326B | 7326BDB | 7326BDF | 7326BDT | 284000 | 460000 | 310000 | 620000 | 1900 | 1500 | 2600 | 2000 | 148 | 139 | 262 | 271 | 3 | 1.5 | 17.4 | 7326B | |
| 140 | 210 | 33 | 2 | 1 | 34 | 7028 | 7028DB | 7028DF | 7028DT | 120000 | 194000 | 133000 | 265000 | 2400 | 1900 | 3300 | 2600 | 148 | 148 | 202 | 205 | 2 | 1 | 3.63 | 7028 |
| | 210 | 33 | 2 | 1 | 3.7 | 7028C | 7028CDB | 7028CDF | 7028CDT | 133000 | 216000 | 146000 | 292000 | 4600 | 3700 | 6300 | 5000 | 148 | 148 | 202 | 205 | 2 | 1 | 3.63 | 7028C |
| | 250 | 42 | 3 | 1.1 | 35.3 | 7228 | 7228DB | 7228DF | 7228DT | 211000 | 345000 | 228000 | 525000 | 2200 | 1800 | 3000 | 2400 | 154 | 147 | 236 | 243 | 2.5 | 1 | 8.78 | 7228 |
| | 250 | 42 | 3 | 1.1 | 60.8 | 7228B | 7228BDB | 7228BDF | 7228BDT | 197000 | 320000 | 214000 | 425000 | 2000 | 1600 | 2600 | 2200 | 154 | 147 | 236 | 243 | 2.5 | 1 | 8.78 | 7228B |
| | 250 | 42 | 3 | 1.1 | 1.3 | 7228C | 7228CDB | 7228CDF | 7228CDT | 223000 | 360000 | 235000 | 470000 | 4100 | 3300 | 5600 | 4500 | 154 | 154 | 236 | 243 | 2.5 | 1 | 8.78 | 7228C |
| | 300 | 62 | 4 | 1.5 | 32.5 | 7328 | 7328DB | 7328DF | 7328DT | 300000 | 490000 | 335000 | 670000 | 2000 | 1600 | 2600 | 2000 | 158 | 149 | 282 | 291 | 3 | 1.5 | 21.5 | 7328 |
| 300 | 62 | 4 | 1.5 | 61.3 | 7328B | 7328BDB | 7328BDF | 7328BDT | 284000 | 460000 | 315000 | 635000 | 1700 | 1400 | 2400 | 1900 | 158 | 149 | 282 | 291 | 3 | 1.5 | 21.5 | 7328B | |
| 150 | 225 | 35 | 2.1 | 1.1 | 36.6 | 7030 | 7030DB | 7030DF | 7030DT | 137000 | 222000 | 154000 | 305000 | 2300 | 1800 | 3000 | 2400 | 159 | 159 | 216 | 219 | 2 | 1 | 4.42 | 7030 |
| | 225 | 35 | 2.1 | 1.1 | 4.1 | 7030C | 7030CDB | 7030CDF | 7030CDT | 152000 | 247000 | 169000 | 340000 | 4300 | 3400 | 5900 | 4700 | 159 | 159 | 216 | 219 | 2 | 1 | 4.42 | 7030C |
| | 270 | 45 | 3 | 1.1 | 38.1 | 7230 | 7230DB | 7230DF | 7230DT | 249000 | 405000 | 280000 | 560000 | 2000 | 1600 | 2800 | 2200 | 164 | 157 | 256 | 263 | 2.5 | 1 | 11.0 | 7230 |
| | 270 | 45 | 3 | 1.1 | 65.6 | 7230B | 7230BDB | 7230BDF | 7230BDT | 223000 | 360000 | 246000 | 490000 | 1800 | 1500 | 2600 | 2000 | 164 | 157 | 256 | 263 | 2.5 | 1 | 11.0 | 7230B |
| | 270 | 45 | 3 | 1.1 | 1.5 | 7230C | 7230CDB | 7230CDF | 7230CDT | 261000 | 425000 | 287000 | 575000 | 3800 | 3000 | 5200 | 4200 | 164 | 164 | 256 | 263 | 2.5 | 1 | 11.0 | 7230C |
| | 320 | 65 | 4 | 1.5 | 35.3 | 7330 | 7330DB | 7330DF | 7330DT | 330000 | 535000 | 380000 | 765000 | 1700 | 1400 | 2400 | 1800 | 168 | 159 | 302 | 311 | 3 | 1.5 | 25.1 | 7330 |
| 320 | 65 | 4 | 1.5 | 66.1 | 7330B | 7330BDB | 7330BDF | 7330BDT | 310000 | 505000 | 360000 | 725000 | 1500 | 1300 | 2200 | 1600 | 168 | 159 | 302 | 311 | 3 | 1.5 | 25.1 | 7330B | |
| 160 | 240 | 38 | 2.1 | 1.1 | 38.7 | 7032 | 7032DB | 7032DF | 7032DT | 155000 | 252000 | 176000 | 350000 | 2100 | 1700 | 2800 | 2300 | 169 | 169 | 231 | 234 | 2 | 1 | 5.44 | 7032 |
| | 240 | 38 | 2.1 | 1.1 | 4.1 | 7032C | 7032CDB | 7032CDF | 7032CDT | 172000 | 280000 | 194000 | 390000 | 4000 | 3200 | 5500 | 4400 | 169 | 169 | 231 | 234 | 2 | 1 | 5.44 | 7032C |
| | 290 | 48 | 3 | 1.1 | 41.0 | 7232 | 7232DB | 7232DF | 7232DT | 263000 | 425000 | 305000 | 615000 | 1900 | 1500 | 2600 | 2000 | 174 | 167 | 276 | 283 | 2.5 | 1 | 13.7 | 7232 |
| | 290 | 48 | 3 | 1.1 | 70.4 | 7232B | 7232BDB | 7232BDF | 7232BDT | 246000 | 400000 | 287000 | 575000 | 1700 | 1400 | 2200 | 1800 | 174 | 167 | 276 | 283 | 2.5 | 1 | 13.7 | 7232B |
| | 290 | 48 | 3 | 1.1 | 2.4 | 7232C | 7232CDB | 7232CDF | 7232CDT | 288000 | 470000 | 335000 | 670000 | 3600 | 2900 | 4900 | 3900 | 174 | 167 | 276 | 283 | 2.5 | 1 | 13.7 | 7232C |
| | 340 | 68 | 4 | 1.5 | 38.2 | 7332 | 7332DB | 7332DF | 7332DT | 345000 | 565000 | 420000 | 845000 | 1700 | 1400 | 2200 | 1800 | 178 | 169 | 322 | 331 | 3 | 1.5 | 30.2 | 7332 |
| 340 | 68 | 4 | 1.5 | 70.9 | 7332B | 7332BDB | 7332BDF | 7332BDT | 325000 | 530000 | 395000 | 795000 | 1500 | 1200 | 2000 | 1600 | 178 | 169 | 322 | 331 | 3 | 1.5 | 30.2 | 7332B | |

Note : (1) "a" means the distance between back face and load center.

Angular Contact Ball Bearings Single Mounting / Duplex Mounting

Bore Diameter : 170~200mm



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

| Contact angle | iFa / Cor | e | Single or DT | | | | DB or DF | | | |
|---------------|-----------|------|--------------|------|-------------|------|-------------|------|-------------|---|
| | | | Fa / Fr > e | | Fa / Fr ≤ e | | Fa / Fr > e | | Fa / Fr ≤ e | |
| | | | X | Y | X | Y | X | Y | X | Y |
| 15° | 0.015 | 0.38 | 1.47 | 1.65 | 2.39 | | | | | |
| | 0.029 | 0.40 | 0.44 | 1.40 | 1.57 | 0.72 | 2.28 | | | |
| | 0.058 | 0.43 | 1.30 | 1.30 | 1.46 | 2.00 | | | | |
| | 0.087 | 0.46 | 1.23 | 1.38 | 1.38 | 1.93 | | | | |
| | 0.12 | 0.47 | 1.19 | 1.34 | 0.72 | 1.93 | | | | |
| | 0.17 | 0.50 | 1.12 | 1.26 | 1.26 | 1.82 | | | | |
| 30° | 0.29 | 0.55 | 1.02 | 1.14 | 1.66 | | | | | |
| | 0.44 | 0.56 | 0.44 | 1.00 | 1.12 | 0.72 | 1.63 | | | |
| | 0.58 | 0.56 | 1.00 | 1.12 | 1.12 | 1.63 | | | | |
| | 0.8 | 0.8 | 0.39 | 0.76 | 1 | 0.78 | 0.63 | 1.24 | | |
| | 1.14 | 1.14 | 0.35 | 0.57 | 1 | 0.55 | 0.57 | 0.93 | | |
| | 1.14 | 1.14 | 0.35 | 0.57 | 1 | 0.55 | 0.57 | 0.93 | | |

• Static equivalent radial load
 $Por = XoFr + YoFa$

| Contact angle | Single or DT | | DB or DF | |
|---------------|--------------|------|----------|------|
| | Xo | Yo | Xo | Yo |
| 15° | 0.5 | 0.46 | 1 | 0.92 |
| 30° | 0.5 | 0.33 | 1 | 0.66 |
| 40° | 0.5 | 0.26 | 1 | 0.52 |

• Single or DT mounting
 When $Por < Fr$, use $Pr = Fr$

• $i = 2$ for DB or DF mounting
 $i = 1$ for Single or DT mounting
 • Single or DT mounting
 When $Fa / Fr \leq e$, use $Pr = Fr$

1N=0.102kgf

| d | Boundary dimensions (mm) | | | | Load center (mm) a ⁽¹⁾ | Bearing No. | | | | Basic dynamic load rating Cr(N) | | Basic static load rating Cor(N) | | Limiting speed (rpm) | | | | Abutment and fillet dimensions (mm) | | | | | | Mass (kg) Bearing No. | |
|-----|--------------------------|-----|-----------|-----------|-----------------------------------|-------------|---------|---------|---------|---------------------------------|--------|---------------------------------|---------|----------------------|-----------------|--------|--------|-------------------------------------|--------|--------|--------|-----|------|-----------------------|-------|
| | D | B | r (min) | r1 (min) | | Single | | Duplex | | Single | Duplex | Single | Duplex | Grease lubrication | Oil lubrication | Single | Duplex | Single | Duplex | Single | Duplex | | | | |
| | Da1 | Da2 | Da1 (max) | Da2 (max) | | ra | ra1 | Single | Duplex | Single | Duplex | Single | Duplex | Single | Duplex | Single | Duplex | Single | Duplex | Single | Duplex | | | | |
| 170 | 260 | 42 | 2.1 | 1.1 | 41.1 | 7034 | 7034DB | 7034DF | 7034DT | 179000 | 291000 | 210000 | 420000 | 2000 | 1600 | 2600 | 2100 | 179 | 179 | 251 | 254 | 2 | 1 | 7.87 | 7034 |
| | 260 | 42 | 2.1 | 1.1 | 3.8 | 7034C | 7034CDB | 7034CDF | 7034CDT | 206000 | 335000 | 236000 | 470000 | 3700 | 3000 | 5100 | 4100 | 179 | 179 | 251 | 254 | 2 | 1 | 7.87 | 7034C |
| | 310 | 52 | 4 | 1.5 | 43.3 | 7234 | 7234DB | 7234DF | 7234DT | 272000 | 440000 | 330000 | 660000 | 1800 | 1400 | 2400 | 1900 | 188 | 179 | 292 | 301 | 3 | 1.5 | 17.4 | 7234 |
| | 310 | 52 | 4 | 1.5 | 74.7 | 7234B | 7234BDB | 7234BDF | 7234BDT | 254000 | 410000 | 310000 | 620000 | 1600 | 1300 | 2200 | 1700 | 188 | 179 | 292 | 301 | 3 | 1.5 | 17.4 | 7234B |
| | 310 | 52 | 4 | 1.5 | 2.2 | 7234C | 7234CDB | 7234CDF | 7234CDT | 299000 | 485000 | 360000 | 725000 | 3300 | 2600 | 4600 | 3700 | 188 | 179 | 292 | 301 | 3 | 1.5 | 17.4 | 7234C |
| | 360 | 72 | 4 | 1.5 | 40.5 | 7334 | 7334DB | 7334DF | 7334DT | 390000 | 630000 | 485000 | 970000 | 1600 | 1300 | 2200 | 1700 | 188 | 179 | 342 | 351 | 3 | 1.5 | 35.7 | 7334 |
| 360 | 72 | 4 | 1.5 | 75.2 | 7334B | 7334BDB | 7334BDF | 7334BDT | 365000 | 595000 | 460000 | 915000 | 1400 | 1100 | 2000 | 1600 | 188 | 179 | 342 | 351 | 3 | 1.5 | 35.7 | 7334B | |
| 180 | 280 | 46 | 2.1 | 1.1 | 43.4 | 7036 | 7036DB | 7036DF | 7036DT | 207000 | 335000 | 252000 | 505000 | 1900 | 1500 | 2500 | 2000 | 189 | 189 | 271 | 274 | 2 | 1 | 9.98 | 7036 |
| | 280 | 46 | 2.1 | 1.1 | 3.5 | 7036C | 7036CDB | 7036CDF | 7036CDT | 235000 | 385000 | 290000 | 580000 | 3500 | 2800 | 4800 | 3800 | 189 | 189 | 271 | 274 | 2 | 1 | 9.98 | 7036C |
| | 320 | 52 | 4 | 1.5 | 46.2 | 7236 | 7236DB | 7236DF | 7236DT | 281000 | 455000 | 350000 | 705000 | 1700 | 1300 | 2200 | 1800 | 198 | 189 | 302 | 311 | 3 | 1.5 | 19.9 | 7236 |
| | 320 | 52 | 4 | 1.5 | 48.9 | 7236B | 7236BDB | 7236BDF | 7236BDT | 262000 | 425000 | 330000 | 660000 | 1500 | 1200 | 2000 | 1700 | 198 | 189 | 302 | 311 | 3 | 1.5 | 19.9 | 7236B |
| | 320 | 52 | 4 | 1.5 | 3.3 | 7236C | 7236CDB | 7236CDF | 7236CDT | 310000 | 500000 | 385000 | 775000 | 3200 | 2600 | 4400 | 3500 | 198 | 189 | 302 | 311 | 3 | 1.5 | 19.9 | 7236C |
| | 380 | 75 | 4 | 1.5 | 43.3 | 7336 | 7336DB | 7336DF | 7336DT | 410000 | 665000 | 535000 | 1070000 | 1400 | 1200 | 2000 | 1600 | 198 | 189 | 362 | 371 | 3 | 1.5 | 41.3 | 7336 |
| 380 | 75 | 4 | 1.5 | 80.0 | 7336B | 7336BDB | 7336BDF | 7336BDT | 385000 | 625000 | 505000 | 1010000 | 1300 | 1100 | 1900 | 1500 | 198 | 189 | 362 | 371 | 3 | 1.5 | 41.3 | 7336B | |
| 190 | 290 | 46 | 2.1 | 1.1 | 46.3 | 7038 | 7038DB | 7038DF | 7038DT | 218000 | 355000 | 277000 | 555000 | 1800 | 1400 | 2300 | 1900 | 199 | 199 | 281 | 284 | 2 | 1 | 10.7 | 7038 |
| | 290 | 46 | 2.1 | 1.1 | 4.7 | 7038C | 7038CDB | 7038CDF | 7038CDT | 248000 | 405000 | 310000 | 615000 | 3300 | 2600 | 4600 | 3700 | 199 | 199 | 281 | 284 | 2 | 1 | 10.7 | 7038C |
| | 340 | 55 | 4 | 1.5 | 49.0 | 7238 | 7238DB | 7238DF | 7238DT | 315000 | 510000 | 410000 | 825000 | 1600 | 1300 | 2200 | 1700 | 208 | 199 | 322 | 331 | 3 | 1.5 | 21.5 | 7238 |
| | 340 | 55 | 4 | 1.5 | 83.7 | 7238B | 7238BDB | 7238BDF | 7238BDT | 294000 | 475000 | 385000 | 770000 | 1400 | 1100 | 2000 | 1600 | 208 | 199 | 322 | 331 | 3 | 1.5 | 21.5 | 7238B |
| | 400 | 78 | 5 | 2 | 46.1 | 7338 | 7338DB | 7338DF | 7338DT | 445000 | 725000 | 610000 | 1220000 | 1400 | 1100 | 1900 | 1500 | 212 | 200 | 378 | 390 | 4 | 2 | 47.6 | 7338 |
| | 400 | 78 | 5 | 2 | 84.8 | 7338B | 7338BDB | 7338BDF | 7338BDT | 420000 | 680000 | 575000 | 1150000 | 1300 | 1000 | 1800 | 1400 | 212 | 200 | 378 | 390 | 4 | 2 | 47.6 | 7338B |
| 200 | 310 | 51 | 2.1 | 1.1 | 48.1 | 7040 | 7040DB | 7040DF | 7040DT | 226000 | 365000 | 277000 | 565000 | 1700 | 1300 | 2200 | 1800 | 209 | 209 | 301 | 304 | 2 | 1 | 13.8 | 7040 |
| | 310 | 51 | 2.1 | 1.1 | 3.9 | 7040C | 7040CDB | 7040CDF | 7040CDT | 274000 | 445000 | 360000 | 715000 | 3100 | 2500 | 4300 | 3400 | 209 | 209 | 301 | 304 | 2 | 1 | 13.8 | 7040C |
| | 360 | 58 | 4 | 1.5 | 51.8 | 7240 | 7240DB | 7240DF | 7240DT | 335000 | 550000 | 450000 | 900000 | 1500 | 1200 | 2000 | 1600 | 218 | 209 | 342 | 351 | 3 | 1.5 | 25.5 | 7240 |
| | 360 | 58 | 4 | 1.5 | 88.5 | 7240B | 7240BDB | 7240BDF | 7240BDT | 315000 | 510000 | 420000 | 840000 | 1300 | 1000 | 1900 | 1500 | 218 | 209 | 342 | 351 | 3 | 1.5 | 25.5 | 7240B |
| | 420 | 80 | 5 | 2 | 49.5 | 7340 | 7340DB | 7340DF | 7340DT | 475000 | 770000 | 655000 | 1310000 | 1300 | 1100 | 1800 | 1400 | 222 | 210 | 398 | 410 | 4 | 2 | 53.7 | 7340 |
| | 420 | 80 | 5 | 2 | 90.1 | 7340B | 7340BDB | 7340BDF | 7340BDT | 445000 | 725000 | 620000 | 1240000 | 1200 | 1000 | 1700 | 1300 | 222 | 210 | 398 | 410 | 4 | 2 | 53.7 | 7340B |

Note : (1) "a" means the distance between back face and load center.