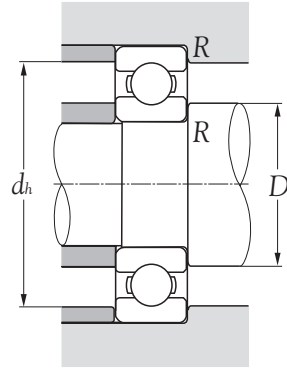
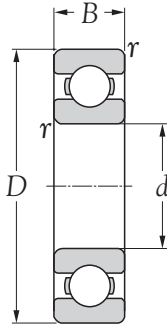




DIMENSION TABLES

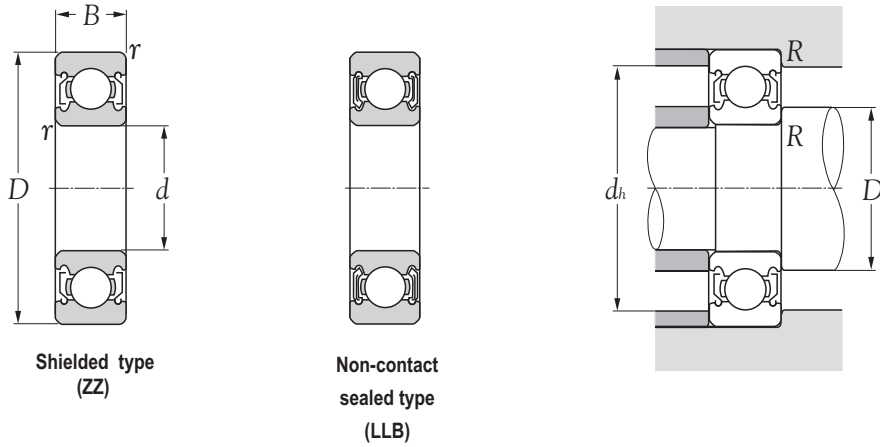
**BALL BEARING
SERIES 60**



| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | Abutment and fillet dimensions mm | | | Mass kg (approx.) |
|---------------------------|----------|----------|--|---|-----------------------|------------------------|-------|-----------------|---|------------------------------------|------------------------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r</i> _{s min¹⁾} | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | <i>D_s</i> <i>min</i> | <i>d_h</i> <i>max</i> | <i>R</i> <i>max</i> | |
| 10 | 26 | 8 | 0.3 | 4550 | 1960 | 29000 | 34000 | 6000 | 12.5 | 23.5 | 0.3 | 0.019 |
| 12 | 28 | 8 | 0.3 | 5100 | 2390 | 26000 | 30000 | 6001 | 14.5 | 25.5 | 0.3 | 0.021 |
| 15 | 32 | 9 | 0.3 | 5600 | 2840 | 22000 | 26000 | 6002 | 17.5 | 29.5 | 0.3 | 0.030 |
| 17 | 35 | 10 | 0.3 | 6800 | 3350 | 20000 | 24000 | 6003 | 19.5 | 32.5 | 0.3 | 0.039 |
| 20 | 42 | 12 | 0.6 | 9400 | 5050 | 18000 | 21000 | 6004 | 25.0 | 37.0 | 0.6 | 0.069 |
| 25 | 47 | 12 | 0.6 | 10100 | 5850 | 15000 | 18000 | 6005 | 30.0 | 42.0 | 0.6 | 0.080 |
| 30 | 55 | 13 | 1.0 | 13200 | 8300 | 13000 | 15000 | 6006 | 36.0 | 49.0 | 1.0 | 0.116 |
| 35 | 62 | 14 | 1.0 | 16000 | 10300 | 12000 | 14000 | 6007 | 41.0 | 56.0 | 1.0 | 0.155 |
| 40 | 68 | 15 | 1.0 | 16800 | 11500 | 10000 | 12000 | 6008 | 46.0 | 62.0 | 1.0 | 0.190 |
| 45 | 75 | 16 | 1.0 | 21000 | 15100 | 9200 | 11000 | 6009 | 51.0 | 69.0 | 1.0 | 0.237 |
| 50 | 80 | 16 | 1.0 | 21800 | 16600 | 8400 | 9800 | 6010 | 56.0 | 74.0 | 1.0 | 0.261 |
| 55 | 90 | 18 | 1.1 | 28300 | 21200 | 7700 | 9000 | 6011 | 62.0 | 83.0 | 1.0 | 0.388 |
| 60 | 95 | 18 | 1.1 | 29500 | 23200 | 7000 | 8300 | 6012 | 67.0 | 88.0 | 1.0 | 0.414 |
| 65 | 100 | 18 | 1.1 | 30500 | 25200 | 6500 | 7700 | 6013 | 72.0 | 93.0 | 1.0 | 0.421 |
| 70 | 110 | 20 | 1.1 | 38000 | 31000 | 6100 | 7100 | 6014 | 77.0 | 103.0 | 1.0 | 0.604 |
| 75 | 115 | 20 | 1.1 | 39500 | 33500 | 5700 | 6700 | 6015 | 82.0 | 108.0 | 1.0 | 0.649 |
| 80 | 125 | 22 | 1.1 | 47500 | 40000 | 5300 | 6200 | 6016 | 87.0 | 118.0 | 1.0 | 0.854 |
| 85 | 130 | 22 | 1.1 | 49500 | 43000 | 5000 | 5900 | 6017 | 92.0 | 123.0 | 1.0 | 0.890 |
| 90 | 140 | 24 | 1.5 | 58000 | 49500 | 4700 | 5600 | 6018 | 98.5 | 131.5 | 1.5 | 1.020 |
| 95 | 145 | 24 | 1.5 | 60500 | 54000 | 4500 | 5300 | 6019 | 103.5 | 136.5 | 1.5 | 1.080 |
| 100 | 150 | 24 | 1.5 | 60000 | 54000 | 4200 | 5000 | 6020 | 108.5 | 141.5 | 1.5 | 1.150 |

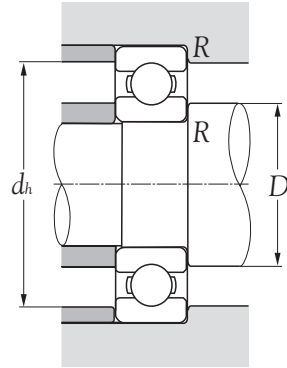
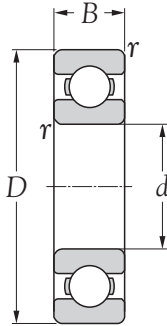
BALL BEARING

SERIES 60..LLB, 60..ZZ



| Boundary dimensions | | | | Basic load ratings | | Limiting speeds | | Bearing numbers | | Abutment and fillet dimensions | | | | Mass |
|---------------------|----------|----------|---------------------------------------|----------------------|-----------------------|-----------------|-------|-----------------|---------------|--------------------------------|----------------------|------------|------------|-----------|
| mm | | | | dynamic | static | rpm | | | | mm | | | | kg |
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | | <i>D_s</i> | <i>d_h</i> | <i>R</i> | | (approx.) |
| | | | | | | | | | | <i>min</i> | <i>max</i> | <i>max</i> | <i>max</i> | |
| 10 | 26 | 8 | 0.3 | 4550 | 1960 | 29000 | 21000 | 6000LLB | 6000ZZ | 12.5 | 13.5 | 23.5 | 0.3 | 0.019 |
| 12 | 28 | 8 | 0.3 | 5100 | 2390 | 26000 | 18000 | 6001LLB | 6001ZZ | 14.5 | 16.0 | 25.5 | 0.3 | 0.021 |
| 15 | 32 | 9 | 0.3 | 5600 | 2840 | 22000 | 15000 | 6002LLB | 6002ZZ | 17.5 | 19.0 | 29.5 | 0.3 | 0.030 |
| 17 | 35 | 10 | 0.3 | 6800 | 3350 | 20000 | 14000 | 6003LLB | 6003ZZ | 19.5 | 21.0 | 32.5 | 0.3 | 0.039 |
| 20 | 42 | 12 | 0.6 | 9400 | 5050 | 18000 | 11000 | 6004LLB | 6004ZZ | 25.0 | 26.0 | 37.0 | 0.6 | 0.069 |
| 25 | 47 | 12 | 0.6 | 10100 | 5850 | 15000 | 9400 | 6005LLB | 6005ZZ | 30.0 | 30.5 | 42.0 | 0.6 | 0.080 |
| 30 | 55 | 13 | 1.0 | 13200 | 8300 | 13000 | 7700 | 6006LLB | 6006ZZ | 36.0 | 37.0 | 49.0 | 1.0 | 0.116 |
| 35 | 62 | 14 | 1.0 | 16000 | 10300 | 12000 | 6800 | 6007LLB | 6007ZZ | 41.0 | 42.0 | 56.0 | 1.0 | 0.155 |
| 40 | 68 | 15 | 1.0 | 16800 | 11500 | 10000 | 6100 | 6008LLB | 6008ZZ | 46.0 | 47.0 | 62.0 | 1.0 | 0.190 |
| 45 | 75 | 16 | 1.0 | 21000 | 15100 | 9200 | 5400 | 6009LLB | 6009ZZ | 51.0 | 52.5 | 69.0 | 1.0 | 0.237 |
| 50 | 80 | 16 | 1.0 | 21800 | 16600 | 8400 | 5000 | 6010LLB | 6010ZZ | 56.0 | 57.5 | 74.0 | 1.0 | 0.261 |
| 55 | 90 | 18 | 1.1 | 28300 | 21200 | 7700 | 4500 | 6011LLB | 6011ZZ | 62.0 | 64.0 | 83.0 | 1.0 | 0.388 |
| 60 | 95 | 18 | 1.1 | 29500 | 23200 | 7000 | 4100 | 6012LLB | 6012ZZ | 67.0 | 69.0 | 88.0 | 1.0 | 0.414 |
| 65 | 100 | 18 | 1.1 | 30500 | 25200 | 6500 | 3900 | 6013LLB | 6013ZZ | 72.0 | 73.0 | 93.0 | 1.0 | 0.421 |
| 70 | 110 | 20 | 1.1 | 38000 | 31000 | 6100 | 3600 | 6014LLB | 6014ZZ | 77.0 | 80.5 | 103.0 | 1.0 | 0.604 |
| 75 | 115 | 20 | 1.1 | 39500 | 33500 | 5700 | 3300 | 6015LLB | 6015ZZ | 82.0 | 85.5 | 108.0 | 1.0 | 0.649 |
| 80 | 125 | 22 | 1.1 | 47500 | 40000 | 5300 | 3100 | 6016LLB | 6016ZZ | 87.0 | 91.5 | 118.0 | 1.0 | 0.854 |
| 85 | 130 | 22 | 1.1 | 49500 | 43000 | 5000 | 2900 | 6017LLB | 6017ZZ | 92.0 | 97.0 | 123.0 | 1.0 | 0.890 |
| 90 | 140 | 24 | 1.5 | 58000 | 49500 | 4700 | 2800 | 6018LLB | 6018ZZ | 98.5 | 102.0 | 131.5 | 1.5 | 1.020 |
| 95 | 145 | 24 | 1.5 | 60500 | 54000 | 4500 | 2600 | 6019LLB | 6019ZZ | 103.5 | 109.0 | 136.5 | 1.5 | 1.080 |
| 100 | 150 | 24 | 1.5 | 60000 | 54000 | 4200 | 2600 | 6020LLB | 6020ZZ | 108.5 | 110.0 | 141.5 | 1.5 | 1.150 |

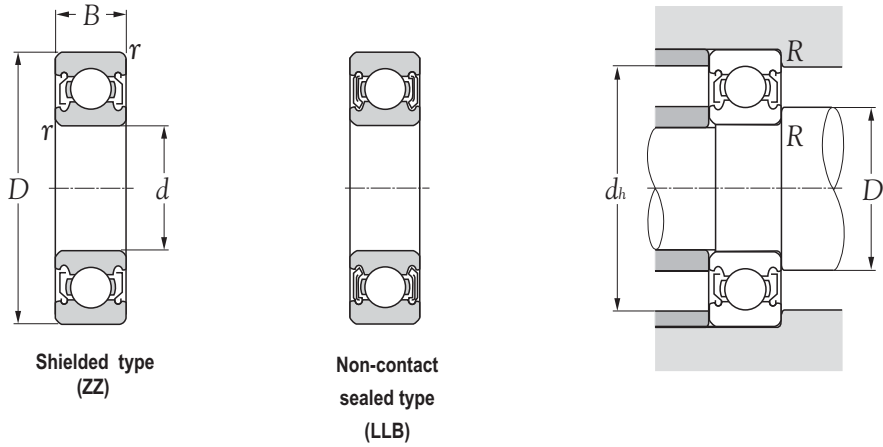
BALL BEARING
SERIES 62



| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | Abutment and fillet dimensions mm | | | Mass kg (approx.) |
|---------------------------|----------|----------|---------------------------------------|---|-----------------------|------------------------|-------|-----------------|---|--------------------------|------------------------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | <i>D_{s min}</i> | <i>d_{h max}</i> | <i>R_{max}</i> | |
| 10 | 30 | 9 | 0.6 | 5100 | 2390 | 25000 | 30000 | 6200 | 15.0 | 25.0 | 0.6 | 0.032 |
| 12 | 32 | 10 | 0.6 | 6100 | 2750 | 22000 | 26000 | 6201 | 17.0 | 27.0 | 0.6 | 0.037 |
| 15 | 35 | 11 | 0.6 | 7750 | 3600 | 19000 | 23000 | 6202 | 20.0 | 30.0 | 0.6 | 0.045 |
| 17 | 40 | 12 | 0.6 | 9600 | 4600 | 18000 | 21000 | 6203 | 22.0 | 35.0 | 0.6 | 0.066 |
| 20 | 47 | 14 | 1.0 | 12800 | 6650 | 16000 | 18000 | 6204 | 26.0 | 41.0 | 1.0 | 0.106 |
| 25 | 52 | 15 | 1.0 | 14000 | 7850 | 13000 | 15000 | 6205 | 31.0 | 46.0 | 1.0 | 0.128 |
| 30 | 62 | 16 | 1.0 | 19500 | 11300 | 11000 | 13000 | 6206 | 36.0 | 56.0 | 1.0 | 0.199 |
| 35 | 72 | 17 | 1.1 | 25700 | 15300 | 9800 | 11000 | 6207 | 42.0 | 65.0 | 1.0 | 0.288 |
| 40 | 80 | 18 | 1.1 | 29100 | 17800 | 8700 | 10000 | 6208 | 47.0 | 73.0 | 1.0 | 0.366 |
| 45 | 85 | 19 | 1.1 | 32500 | 20400 | 7800 | 9200 | 6209 | 52.0 | 78.0 | 1.0 | 0.398 |
| 50 | 90 | 20 | 1.1 | 35000 | 23200 | 7100 | 8300 | 6210 | 57.0 | 83.0 | 1.0 | 0.454 |
| 55 | 100 | 21 | 1.5 | 43500 | 29200 | 6400 | 7600 | 6211 | 63.5 | 91.5 | 1.5 | 0.601 |
| 60 | 110 | 22 | 1.5 | 52500 | 36000 | 6000 | 7000 | 6212 | 68.5 | 101.5 | 1.5 | 0.783 |
| 65 | 120 | 23 | 1.5 | 57500 | 40000 | 5500 | 6500 | 6213 | 73.5 | 111.5 | 1.5 | 0.990 |
| 70 | 125 | 24 | 1.5 | 62000 | 44000 | 5100 | 6000 | 6214 | 78.5 | 116.5 | 1.5 | 1.070 |
| 75 | 130 | 25 | 1.5 | 66000 | 49500 | 4800 | 5600 | 6215 | 83.5 | 121.5 | 1.5 | 1.180 |
| 80 | 140 | 26 | 2.0 | 72500 | 53000 | 4500 | 5300 | 6216 | 90.0 | 130.0 | 2.0 | 1.400 |
| 85 | 150 | 28 | 2.0 | 83500 | 64000 | 4200 | 5000 | 6217 | 95.0 | 140.0 | 2.0 | 1.790 |
| 90 | 160 | 30 | 2.0 | 96000 | 71500 | 4000 | 4700 | 6218 | 100.0 | 150.0 | 2.0 | 2.150 |
| 95 | 170 | 32 | 2.1 | 109000 | 82000 | 3700 | 4400 | 6219 | 107.0 | 158.0 | 2.0 | 2.620 |
| 100 | 180 | 34 | 2.1 | 122000 | 93000 | 3500 | 4200 | 6220 | 112.0 | 168.0 | 2.0 | 3.140 |

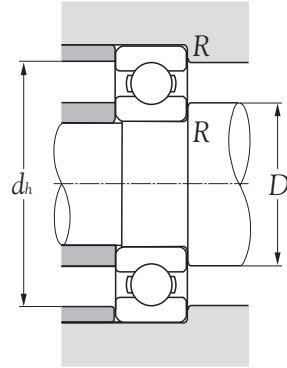
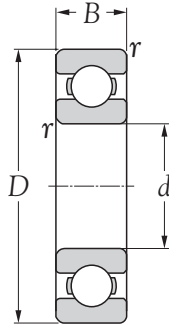
BALL BEARING

SERIES 62..LLB, 62..ZZ



| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | | Abutment and fillet dimensions mm | | | | Mass kg |
|---------------------------|----------|----------|---------------------------------------|---|-----------------------|------------------------|-------|-----------------|---------------|---|------------------------------------|------------------------------------|------------------------|------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | | <i>D_s</i> <i>min</i> | <i>D_s</i> <i>max</i> | <i>d_h</i> <i>max</i> | <i>R</i> <i>max</i> | (approx.) |
| 10 | 30 | 9 | 0.6 | 5100 | 2390 | 25000 | 18000 | 6200LLB | 6200ZZ | 15.0 | 16.0 | 25.0 | 0.6 | 0.032 |
| 12 | 32 | 10 | 0.6 | 6100 | 2750 | 22000 | 16000 | 6201LLB | 6201ZZ | 17.0 | 17.5 | 27.0 | 0.6 | 0.037 |
| 15 | 35 | 11 | 0.6 | 7750 | 3600 | 19000 | 15000 | 6202LLB | 6202ZZ | 20.0 | 20.5 | 30.0 | 0.6 | 0.045 |
| 17 | 40 | 12 | 0.6 | 9600 | 4600 | 18000 | 12000 | 6203LLB | 6203ZZ | 22.0 | 23.0 | 35.0 | 0.6 | 0.066 |
| 20 | 47 | 14 | 1.0 | 12800 | 6650 | 16000 | 10000 | 6204LLB | 6204ZZ | 26.0 | 28.0 | 41.0 | 1.0 | 0.106 |
| 25 | 52 | 15 | 1.0 | 14000 | 7850 | 13000 | 8900 | 6205LLB | 6205ZZ | 31.0 | 32.0 | 46.0 | 1.0 | 0.128 |
| 30 | 62 | 16 | 1.0 | 19500 | 11300 | 11000 | 7300 | 6206LLB | 6206ZZ | 36.0 | 39.0 | 56.0 | 1.0 | 0.199 |
| 35 | 72 | 17 | 1.1 | 25700 | 15300 | 9800 | 6300 | 6207LLB | 6207ZZ | 42.0 | 45.0 | 65.0 | 1.0 | 0.288 |
| 40 | 80 | 18 | 1.1 | 29100 | 17800 | 8700 | 5600 | 6208LLB | 6208ZZ | 47.0 | 51.0 | 73.0 | 1.0 | 0.366 |
| 45 | 85 | 19 | 1.1 | 32500 | 20400 | 7800 | 5200 | 6209LLB | 6209ZZ | 52.0 | 55.5 | 78.0 | 1.0 | 0.398 |
| 50 | 90 | 20 | 1.1 | 35000 | 23200 | 7100 | 4700 | 6210LLB | 6210ZZ | 57.0 | 60.0 | 83.0 | 1.0 | 0.454 |
| 55 | 100 | 21 | 1.5 | 43500 | 29200 | 6400 | 4300 | 6211LLB | 6211ZZ | 63.5 | 67.0 | 91.5 | 1.5 | 0.601 |
| 60 | 110 | 22 | 1.5 | 52500 | 36000 | 6000 | 3800 | 6212LLB | 6212ZZ | 68.5 | 75.0 | 101.5 | 1.5 | 0.783 |
| 65 | 120 | 23 | 1.5 | 57500 | 40000 | 5500 | 3600 | 6213LLB | 6213ZZ | 73.5 | 80.5 | 111.5 | 1.5 | 0.990 |
| 70 | 125 | 24 | 1.5 | 62000 | 44000 | 5100 | 3400 | 6214LLB | 6214ZZ | 78.5 | 85.0 | 116.5 | 1.5 | 1.070 |
| 75 | 130 | 25 | 1.5 | 66000 | 49500 | 4800 | 3200 | 6215LLB | 6215ZZ | 83.5 | 90.5 | 121.5 | 1.5 | 1.180 |
| 80 | 140 | 26 | 2.0 | 72500 | 53000 | 4500 | 3000 | 6216LLB | 6216ZZ | 90.0 | 95.5 | 130.0 | 2.0 | 1.400 |
| 85 | 150 | 28 | 2.0 | 83500 | 64000 | 4200 | 2800 | 6217LLB | 6217ZZ | 95.0 | 103.0 | 140.0 | 2.0 | 1.790 |
| 90 | 160 | 30 | 2.0 | 96000 | 71500 | 4000 | 2600 | 6218LLB | 6218ZZ | 100.0 | 109.0 | 150.0 | 2.0 | 2.150 |
| 95 | 170 | 32 | 2.1 | 109000 | 82000 | 3700 | 2500 | 6219LLB | 6219ZZ | 107.0 | 116.0 | 158.0 | 2.0 | 2.620 |
| 100 | 180 | 34 | 2.1 | 122000 | 93000 | 3500 | 2300 | 6220LLB | 6220ZZ | 112.0 | 122.0 | 168.0 | 2.0 | 3.140 |

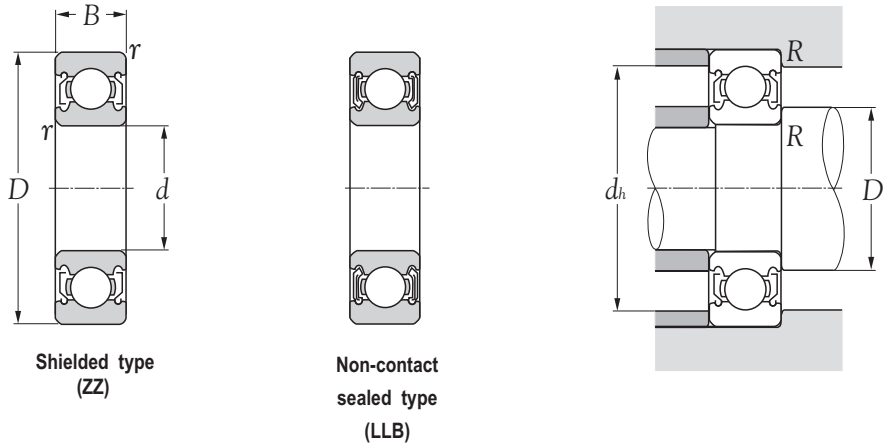
BALL BEARING
SERIES 63



| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | Abutment and fillet dimensions mm | | | Mass kg (approx.) |
|---------------------------|----------|----------|---------------------------------------|--|-----------------------|------------------------|-------|-----------------|---|--------------------------|------------------------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | <i>D_{s min}</i> | <i>d_{h max}</i> | <i>R_{max}</i> | |
| 10 | 35 | 11 | 0.6 | 8200 | 3500 | 23000 | 27000 | 6300 | 15.0 | 30.0 | 0.6 | 0.053 |
| 12 | 37 | 12 | 1.0 | 9700 | 4200 | 20000 | 24000 | 6301 | 18.0 | 31.0 | 1.0 | 0.060 |
| 15 | 42 | 13 | 1.0 | 11400 | 5450 | 17000 | 21000 | 6302 | 21.0 | 36.0 | 1.0 | 0.082 |
| 17 | 47 | 14 | 1.0 | 13500 | 6550 | 16000 | 19000 | 6303 | 23.0 | 41.0 | 1.0 | 0.115 |
| 20 | 52 | 15 | 1.1 | 15900 | 7900 | 14000 | 17000 | 6304 | 27.0 | 45.0 | 1.0 | 0.144 |
| 25 | 62 | 17 | 1.1 | 21200 | 10900 | 12000 | 14000 | 6305 | 32.0 | 55.0 | 1.0 | 0.232 |
| 30 | 72 | 19 | 1.1 | 26700 | 15000 | 10000 | 12000 | 6306 | 37.0 | 65.0 | 1.0 | 0.360 |
| 35 | 80 | 21 | 1.5 | 33500 | 19100 | 8800 | 10000 | 6307 | 43.5 | 71.5 | 1.5 | 0.457 |
| 40 | 90 | 23 | 1.5 | 40500 | 24000 | 7800 | 9200 | 6308 | 48.5 | 81.5 | 1.5 | 0.630 |
| 45 | 100 | 25 | 1.5 | 53000 | 32000 | 7000 | 8200 | 6309 | 53.5 | 91.5 | 1.5 | 0.814 |
| 50 | 110 | 27 | 2.0 | 62000 | 38500 | 6400 | 7500 | 6310 | 60.0 | 100.0 | 2.0 | 1.070 |
| 55 | 120 | 29 | 2.0 | 71500 | 45000 | 5800 | 6800 | 6311 | 65.0 | 110.0 | 2.0 | 1.370 |
| 60 | 130 | 31 | 2.1 | 82000 | 52000 | 5400 | 6300 | 6312 | 72.0 | 118.0 | 2.0 | 1.730 |
| 65 | 140 | 33 | 2.1 | 92500 | 60000 | 4900 | 5800 | 6313 | 77.0 | 128.0 | 2.0 | 2.080 |
| 70 | 150 | 35 | 2.1 | 104000 | 68000 | 4600 | 5400 | 6314 | 82.0 | 138.0 | 2.0 | 2.520 |
| 75 | 160 | 37 | 2.1 | 113000 | 77000 | 4300 | 5000 | 6315 | 87.0 | 148.0 | 2.0 | 3.020 |
| 80 | 170 | 39 | 2.1 | 123000 | 86500 | 4000 | 4700 | 6316 | 92.0 | 158.0 | 2.0 | 3.590 |
| 85 | 180 | 41 | 3.0 | 133000 | 97000 | 3800 | 4500 | 6317 | 99.0 | 166.0 | 2.5 | 4.230 |
| 90 | 190 | 43 | 3.0 | 143000 | 107000 | 3600 | 4200 | 6318 | 104.0 | 176.0 | 2.5 | 4.910 |
| 95 | 200 | 45 | 3.0 | 153000 | 119000 | 3300 | 3900 | 6319 | 109.0 | 186.0 | 2.5 | 5.670 |
| 100 | 215 | 47 | 3.0 | 173000 | 141000 | 3200 | 3700 | 6320 | 114.0 | 201.0 | 2.5 | 7.000 |

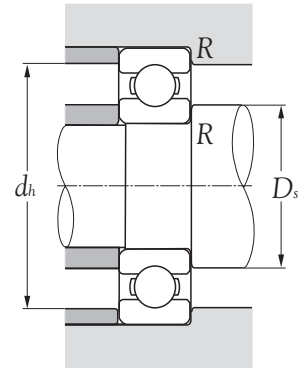
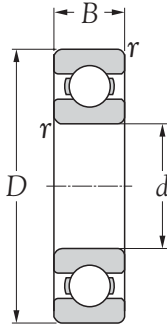
BALL BEARING

SERIES 63..LLB, 63..ZZ



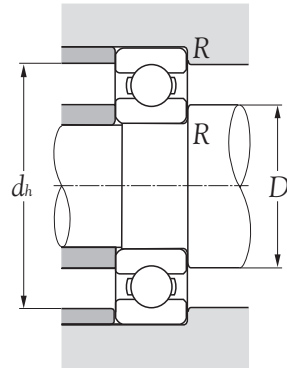
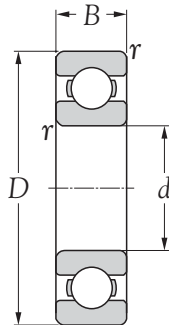
| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | | Abutment and fillet dimensions mm | | | | Mass kg |
|---------------------------|----------|----------|---------------------------------------|---|-----------------------|------------------------|-------|-----------------|---------------|---|------------------------------------|------------------------------------|------------------------|------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | | <i>D_s</i> <i>min</i> | <i>D_s</i> <i>max</i> | <i>d_h</i> <i>max</i> | <i>R</i> <i>max</i> | (approx.) |
| 10 | 35 | 11 | 0.6 | 8200 | 3500 | 23000 | 16000 | 6300LLB | 6300ZZ | 15.0 | 17.0 | 30.0 | 0.6 | 0.053 |
| 12 | 37 | 12 | 1.0 | 9700 | 4200 | 20000 | 15000 | 6301LLB | 6301ZZ | 18.0 | 18.5 | 31.0 | 1.0 | 0.060 |
| 15 | 42 | 13 | 1.0 | 11400 | 5450 | 17000 | 12000 | 6302LLB | 6302ZZ | 21.0 | 23.0 | 36.0 | 1.0 | 0.082 |
| 17 | 47 | 14 | 1.0 | 13500 | 6550 | 16000 | 11000 | 6303LLB | 6303ZZ | 23.0 | 25.0 | 41.0 | 1.0 | 0.115 |
| 20 | 52 | 15 | 1.1 | 15900 | 7900 | 14000 | 10000 | 6304LLB | 6304ZZ | 27.0 | 28.5 | 45.0 | 1.0 | 0.144 |
| 25 | 62 | 17 | 1.1 | 21200 | 10900 | 12000 | 8100 | 6305LLB | 6305ZZ | 32.0 | 35.0 | 55.0 | 1.0 | 0.232 |
| 30 | 72 | 19 | 1.1 | 26700 | 15000 | 10000 | 6600 | 6306LLB | 6306ZZ | 37.0 | 43.0 | 65.0 | 1.0 | 0.360 |
| 35 | 80 | 21 | 1.5 | 33500 | 19100 | 8800 | 6000 | 6307LLB | 6307ZZ | 43.5 | 47.0 | 71.5 | 1.5 | 0.457 |
| 40 | 90 | 23 | 1.5 | 40500 | 24000 | 7800 | 5300 | 6308LLB | 6308ZZ | 48.5 | 54.0 | 81.5 | 1.5 | 0.630 |
| 45 | 100 | 25 | 1.5 | 53000 | 32000 | 7000 | 4700 | 6309LLB | 6309ZZ | 53.5 | 61.5 | 91.5 | 1.5 | 0.814 |
| 50 | 110 | 27 | 2.0 | 62000 | 38500 | 6400 | 4200 | 6310LLB | 6310ZZ | 60.0 | 68.5 | 100.0 | 2.0 | 1.070 |
| 55 | 120 | 29 | 2.0 | 71500 | 45000 | 5800 | 3900 | 6311LLB | 6311ZZ | 65.0 | 74.0 | 110.0 | 2.0 | 1.370 |
| 60 | 130 | 31 | 2.1 | 82000 | 52000 | 5400 | 3600 | 6312LLB | 6312ZZ | 72.0 | 80.5 | 118.0 | 2.0 | 1.730 |
| 65 | 140 | 33 | 2.1 | 92500 | 60000 | 4900 | 3300 | 6313LLB | 6313ZZ | 77.0 | 86.0 | 128.0 | 2.0 | 2.080 |
| 70 | 150 | 35 | 2.1 | 104000 | 68000 | 4600 | 3100 | 6314LLB | 6314ZZ | 82.0 | 92.5 | 138.0 | 2.0 | 2.520 |
| 75 | 160 | 37 | 2.1 | 113000 | 77000 | 4300 | 2900 | 6315LLB | 6315ZZ | 87.0 | 99.0 | 148.0 | 2.0 | 3.020 |
| 80 | 170 | 39 | 2.1 | 123000 | 86500 | 4000 | 2700 | 6316LLB | 6316ZZ | 92.0 | 105.0 | 158.0 | 2.0 | 3.590 |
| 85 | 180 | 41 | 3.0 | 133000 | 97000 | 3800 | 2600 | 6317LLB | 6317ZZ | 99.0 | 112.0 | 166.0 | 2.5 | 4.230 |
| 90 | 190 | 43 | 3.0 | 143000 | 107000 | 3600 | 2400 | 6318LLB | 6318ZZ | 104.0 | 118.0 | 176.0 | 2.5 | 4.910 |
| 95 | 200 | 45 | 3.0 | 153000 | 119000 | 3300 | 2300 | - | 6319ZZ | 109.0 | 125.0 | 186.0 | 2.5 | 5.670 |
| 100 | 215 | 47 | 3.0 | 173000 | 141000 | 3200 | 2200 | - | 6320ZZ | 114.0 | 133.0 | 201.0 | 2.5 | 7.000 |

**BALL BEARING
SERIES 160**



| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | Abutment and fillet dimensions mm | | | Mass kg (approx.) |
|---------------------------|----------|----------|---------------------------------------|---|-----------------------|------------------------|-------|-----------------|---|--------------------------|------------------------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | <i>D_{s min}</i> | <i>d_{h max}</i> | <i>R_{max}</i> | |
| 12 | 28 | 7 | 0.3 | 5100 | 2390 | 26000 | 30000 | 16001 | 14.5 | 25.5 | 0.3 | 0.019 |
| 15 | 32 | 8 | 0.3 | 5600 | 2840 | 22000 | 26000 | 16002 | 17.5 | 29.5 | 0.3 | 0.025 |
| 17 | 35 | 8 | 0.3 | 6800 | 3350 | 20000 | 24000 | 16003 | 19.5 | 32.5 | 0.3 | 0.032 |
| 20 | 42 | 8 | 0.3 | 7900 | 4500 | 18000 | 21000 | 16004 | 22.5 | 39.5 | 0.3 | 0.051 |
| 25 | 47 | 8 | 0.3 | 8350 | 5100 | 15000 | 18000 | 16005 | 27.5 | 44.5 | 0.3 | 0.060 |
| 30 | 55 | 9 | 0.3 | 11200 | 7350 | 13000 | 15000 | 16006 | 32.5 | 52.5 | 0.3 | 0.091 |
| 35 | 62 | 9 | 0.3 | 11700 | 8200 | 12000 | 14000 | 16007 | 37.5 | 59.5 | 0.3 | 0.110 |
| 40 | 68 | 9 | 0.3 | 12600 | 9650 | 10000 | 12000 | 16008 | 42.5 | 65.5 | 0.3 | 0.125 |
| 45 | 75 | 10 | 0.6 | 12900 | 10500 | 9200 | 11000 | 16009 | 50.0 | 70.0 | 0.6 | 0.171 |
| 50 | 80 | 10 | 0.6 | 13200 | 11300 | 8400 | 9800 | 16010 | 55.0 | 75.0 | 0.6 | 0.180 |
| 55 | 90 | 11 | 0.6 | 18600 | 15300 | 7700 | 9000 | 16011 | 60.0 | 85.0 | 0.6 | 0.258 |
| 60 | 95 | 11 | 0.6 | 20000 | 17500 | 7000 | 8300 | 16012 | 65.0 | 90.0 | 0.6 | 0.283 |
| 65 | 100 | 11 | 0.6 | 20500 | 18700 | 6500 | 7700 | 16013 | 70.0 | 95.0 | 0.6 | 0.307 |
| 70 | 110 | 13 | 0.6 | 24400 | 22600 | 6100 | 7100 | 16014 | 75.0 | 105.0 | 0.6 | 0.441 |
| 75 | 115 | 13 | 0.6 | 25000 | 24000 | 5700 | 6700 | 16015 | 80.0 | 110.0 | 0.6 | 0.464 |
| 80 | 125 | 14 | 0.6 | 25400 | 25100 | 5300 | 6200 | 16016 | 85.0 | 120.0 | 0.6 | 0.597 |
| 85 | 130 | 14 | 0.6 | 25900 | 26200 | 5000 | 5900 | 16017 | 90.0 | 125.0 | 0.6 | 0.626 |
| 90 | 140 | 16 | 1.0 | 33500 | 33500 | 4700 | 5600 | 16018 | 96.0 | 134.0 | 1.0 | 0.848 |
| 95 | 145 | 16 | 1.0 | 34500 | 35000 | 4500 | 5300 | 16019 | 101.0 | 139.0 | 1.0 | 0.885 |
| 100 | 150 | 16 | 1.0 | 35000 | 36500 | 4200 | 5000 | 16020 | 106.0 | 144.0 | 1.0 | 0.910 |
| 105 | 160 | 18 | 1.0 | 52000 | 50500 | 4000 | 4700 | 16021 | 111.0 | 154.0 | 1.0 | 1.200 |
| 110 | 170 | 19 | 1.0 | 57500 | 56500 | 3800 | 4500 | 16022 | 116.0 | 164.0 | 1.0 | 1.460 |
| 120 | 180 | 19 | 1.0 | 63000 | 63500 | 3500 | 4100 | 16024 | 126.0 | 174.0 | 1.0 | 1.560 |

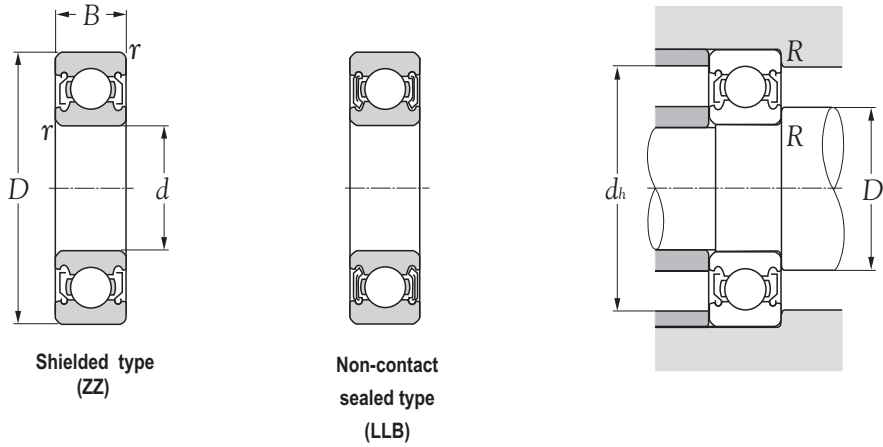
BALL BEARING
SERIES 68



| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | Abutment and fillet dimensions mm | | | Mass kg (approx.) |
|---------------------------|----------|----------|---------------------------------------|--|-----------------------|------------------------|-------|-----------------|---|--------------------------|------------------------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | <i>D_{s min}</i> | <i>d_{h max}</i> | <i>R_{max}</i> | |
| 10 | 19 | 5 | 0.3 | 1830 | 925 | 32000 | 38000 | 6800 | 12 | 17 | 0.3 | 0.005 |
| 12 | 21 | 5 | 0.3 | 1920 | 1040 | 29000 | 35000 | 6801 | 14 | 19 | 0.3 | 0.006 |
| 15 | 24 | 5 | 0.3 | 2080 | 1260 | 26000 | 31000 | 6802 | 17 | 22 | 0.3 | 0.007 |
| 17 | 26 | 5 | 0.3 | 2810 | 1720 | 24000 | 28000 | 6803 | 19 | 24 | 0.3 | 0.008 |
| 20 | 32 | 7 | 0.3 | 4000 | 2470 | 21000 | 25000 | 6804 | 22 | 30 | 0.3 | 0.019 |
| 25 | 37 | 7 | 0.3 | 4300 | 2950 | 18000 | 21000 | 6805 | 27 | 35 | 0.3 | 0.022 |
| 30 | 42 | 7 | 0.3 | 4700 | 3650 | 15000 | 18000 | 6806 | 32 | 40 | 0.3 | 0.026 |
| 35 | 47 | 7 | 0.3 | 4900 | 4050 | 13000 | 16000 | 6807 | 37 | 45 | 0.3 | 0.029 |
| 40 | 52 | 7 | 0.3 | 5100 | 4400 | 12000 | 14000 | 6808 | 42 | 50 | 0.3 | 0.033 |
| 45 | 58 | 7 | 0.3 | 6400 | 5650 | 11000 | 12000 | 6809 | 47 | 56 | 0.3 | 0.040 |
| 50 | 65 | 7 | 0.3 | 6600 | 6100 | 9600 | 11000 | 6810 | 52 | 63 | 0.3 | 0.052 |
| 55 | 72 | 9 | 0.3 | 8800 | 8100 | 8700 | 10000 | 6811 | 57 | 70 | 0.3 | 0.083 |
| 60 | 78 | 10 | 0.3 | 11500 | 10600 | 8000 | 9400 | 6812 | 62 | 76 | 0.3 | 0.106 |
| 65 | 85 | 10 | 0.6 | 11600 | 11000 | 7400 | 8700 | 6813 | 69 | 81 | 0.6 | 0.128 |
| 70 | 90 | 10 | 0.6 | 12100 | 11900 | 6900 | 8100 | 6814 | 74 | 86 | 0.6 | 0.137 |
| 75 | 95 | 10 | 0.6 | 12500 | 12900 | 6400 | 7600 | 6815 | 79 | 91 | 0.6 | 0.145 |
| 80 | 100 | 10 | 0.6 | 12700 | 13300 | 6000 | 7100 | 6816 | 84 | 96 | 0.6 | 0.154 |

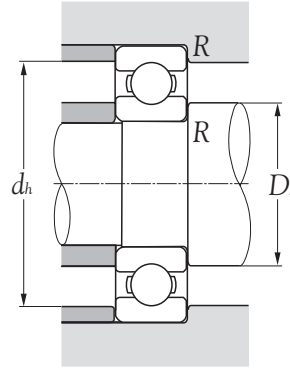
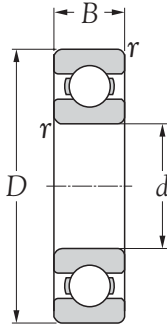
BALL BEARING

SERIES 68..LLB, 68..ZZ



| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | | Abutment and fillet dimensions mm | | | | Mass kg |
|---------------------------|----------|----------|---------------------------------------|---|-----------------------|------------------------|-------|-----------------|---------------|---|------------------------------------|------------------------------------|------------------------|------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | | <i>D_s</i> <i>min</i> | <i>D_s</i> <i>max</i> | <i>d_h</i> <i>max</i> | <i>R</i> <i>max</i> | (approx.) |
| 10 | 19 | 5 | 0.3 | 1830 | 925 | 32000 | 24000 | 6800LLB | 6800ZZ | 12 | 12.5 | 17 | 0.3 | 0.005 |
| 12 | 21 | 5 | 0.3 | 1920 | 1040 | 29000 | 20000 | 6801LLB | 6801ZZ | 14 | 14.5 | 19 | 0.3 | 0.006 |
| 15 | 24 | 5 | 0.3 | 2080 | 1260 | 26000 | 17000 | 6802LLB | 6802ZZ | 17 | 17.5 | 22 | 0.3 | 0.007 |
| 17 | 26 | 5 | 0.3 | 2810 | 1720 | 24000 | 15000 | 6803LLB | 6803ZZ | 19 | 19.5 | 24 | 0.3 | 0.008 |
| 20 | 32 | 7 | 0.3 | 4000 | 2470 | 21000 | 13000 | 6804LLB | 6804ZZ | 22 | 23.0 | 30 | 0.3 | 0.019 |
| 25 | 37 | 7 | 0.3 | 4300 | 2950 | 18000 | 10000 | 6805LLB | 6805ZZ | 27 | 28.0 | 35 | 0.3 | 0.022 |
| 30 | 42 | 7 | 0.3 | 4700 | 3650 | 15000 | 8800 | 6806LLB | 6806ZZ | 32 | 33.0 | 40 | 0.3 | 0.026 |
| 35 | 47 | 7 | 0.3 | 4900 | 4050 | 13000 | 7600 | 6807LLB | 6807ZZ | 37 | 38.0 | 45 | 0.3 | 0.029 |
| 40 | 52 | 7 | 0.3 | 5100 | 4400 | 12000 | 6700 | 6808LLB | 6808ZZ | 42 | 43.0 | 50 | 0.3 | 0.033 |
| 45 | 58 | 7 | 0.3 | 6400 | 5650 | 11000 | 5900 | 6809LLB | 6809ZZ | 47 | 48.0 | 56 | 0.3 | 0.040 |
| 50 | 65 | 7 | 0.3 | 6600 | 6100 | 9600 | 5300 | 6810LLB | 6810ZZ | 52 | 54.0 | 63 | 0.3 | 0.052 |
| 55 | 72 | 9 | 0.3 | 8800 | 8100 | 8700 | 4800 | 6811LLB | 6811ZZ | 57 | 59.0 | 70 | 0.3 | 0.083 |
| 60 | 78 | 10 | 0.3 | 11500 | 10600 | 8000 | 4400 | 6812LLB | 6812ZZ | 62 | 64.5 | 76 | 0.3 | 0.106 |
| 65 | 85 | 10 | 0.6 | 11600 | 11000 | 7400 | 4100 | 6813LLB | 6813ZZ | 69 | 70.0 | 81 | 0.6 | 0.128 |
| 70 | 90 | 10 | 0.6 | 12100 | 11900 | 6900 | 3800 | 6814LLB | 6814ZZ | 74 | 75.5 | 86 | 0.6 | 0.137 |
| 75 | 95 | 10 | 0.6 | 12500 | 12900 | 6400 | 3600 | 6815LLB | 6815ZZ | 79 | 80.0 | 91 | 0.6 | 0.145 |
| 80 | 100 | 10 | 0.6 | 12700 | 13300 | 6000 | 3400 | 6816LLB | 6816ZZ | 84 | 85.0 | 96 | 0.6 | 0.154 |

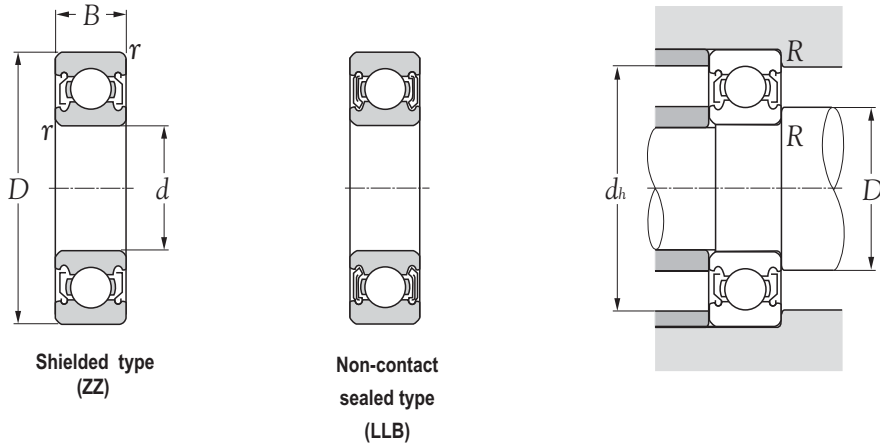
BALL BEARING
SERIES 69



| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | Abutment and fillet dimensions mm | | | Mass kg (approx.) |
|---------------------------|----------|----------|---------------------------------------|---|-----------------------|------------------------|-------|-----------------|---|--------------------------|------------------------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | <i>D_{s min}</i> | <i>d_{h max}</i> | <i>R_{max}</i> | |
| 10 | 22 | 6 | 0.3 | 2700 | 1270 | 30000 | 36000 | 6900 | 12 | 20 | 0.3 | 0.009 |
| 12 | 24 | 6 | 0.3 | 2890 | 1460 | 27000 | 32000 | 6901 | 14 | 22 | 0.3 | 0.011 |
| 15 | 28 | 7 | 0.3 | 4100 | 2060 | 24000 | 28000 | 6902 | 17 | 26 | 0.3 | 0.016 |
| 17 | 30 | 7 | 0.3 | 4650 | 2580 | 22000 | 26000 | 6903 | 19 | 28 | 0.3 | 0.018 |
| 20 | 37 | 9 | 0.3 | 6400 | 3700 | 19000 | 23000 | 6904 | 22 | 35 | 0.3 | 0.036 |
| 25 | 42 | 9 | 0.3 | 7050 | 4550 | 16000 | 19000 | 6905 | 27 | 40 | 0.3 | 0.042 |
| 30 | 47 | 9 | 0.3 | 7250 | 5000 | 14000 | 17000 | 6906 | 32 | 45 | 0.3 | 0.048 |
| 35 | 55 | 10 | 0.6 | 11200 | 7450 | 12000 | 15000 | 6907 | 39 | 51 | 0.6 | 0.074 |
| 40 | 62 | 12 | 0.6 | 14600 | 10200 | 11000 | 13000 | 6908 | 44 | 58 | 0.6 | 0.110 |
| 45 | 68 | 12 | 0.6 | 15100 | 11200 | 9800 | 12000 | 6909 | 49 | 64 | 0.6 | 0.128 |
| 50 | 72 | 12 | 0.6 | 15600 | 12200 | 8900 | 11000 | 6910 | 54 | 68 | 0.6 | 0.132 |
| 55 | 80 | 13 | 1.0 | 16000 | 13300 | 8200 | 9600 | 6911 | 60 | 75 | 1.0 | 0.180 |
| 60 | 85 | 13 | 1.0 | 16400 | 14300 | 7600 | 8900 | 6912 | 65 | 80 | 1.0 | 0.193 |
| 65 | 90 | 13 | 1.0 | 17400 | 16100 | 7000 | 8200 | 6913 | 70 | 85 | 1.0 | 0.206 |
| 70 | 100 | 16 | 1.0 | 23700 | 21200 | 6500 | 7700 | 6914 | 75 | 95 | 1.0 | 0.334 |
| 75 | 105 | 16 | 1.0 | 24400 | 22600 | 6100 | 7200 | 6915 | 80 | 100 | 1.0 | 0.353 |
| 80 | 110 | 16 | 1.0 | 24900 | 24000 | 5700 | 6700 | 6916 | 85 | 105 | 1.0 | 0.373 |

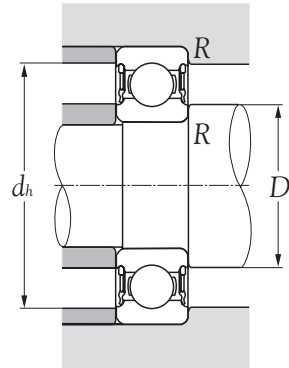
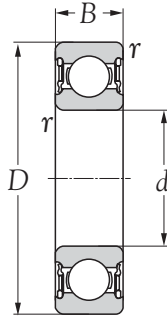
BALL BEARING

SERIES 69..LLB, 69..ZZ



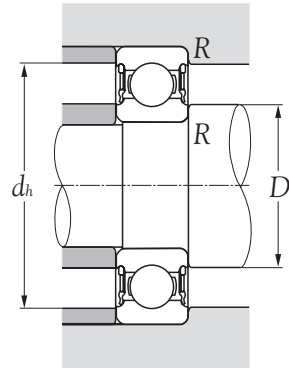
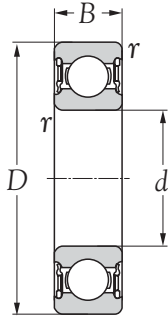
| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | | Abutment and fillet dimensions mm | | | | Mass kg |
|---------------------------|----------|----------|---------------------------------------|---|-----------------------|------------------------|-------|-----------------|---------------|---|------------------------------------|------------------------------------|------------------------|------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | | <i>D_s</i> <i>min</i> | <i>D_s</i> <i>max</i> | <i>d_h</i> <i>max</i> | <i>R</i> <i>max</i> | (approx.) |
| 10 | 22 | 6 | 0.3 | 2700 | 1270 | 30000 | 21000 | 6900LLB | 6900ZZ | 12 | 13.0 | 20 | 0.3 | 0.009 |
| 12 | 24 | 6 | 0.3 | 2890 | 1460 | 27000 | 19000 | 6901LLB | 6901ZZ | 14 | 15.0 | 22 | 0.3 | 0.011 |
| 15 | 28 | 7 | 0.3 | 4100 | 2060 | 24000 | 16000 | 6902LLB | 6902ZZ | 17 | 18.0 | 26 | 0.3 | 0.016 |
| 17 | 30 | 7 | 0.3 | 4650 | 2580 | 22000 | 14000 | 6903LLB | 6903ZZ | 19 | 20.0 | 28 | 0.3 | 0.018 |
| 20 | 37 | 9 | 0.3 | 6400 | 3700 | 19000 | 12000 | 6904LLB | 6904ZZ | 22 | 24.0 | 35 | 0.3 | 0.036 |
| 25 | 42 | 9 | 0.3 | 7050 | 4550 | 16000 | 9800 | 6905LLB | 6905ZZ | 27 | 29.0 | 40 | 0.3 | 0.042 |
| 30 | 47 | 9 | 0.3 | 7250 | 5000 | 14000 | 8400 | 6906LLB | 6906ZZ | 32 | 34.0 | 45 | 0.3 | 0.048 |
| 35 | 55 | 10 | 0.6 | 11200 | 7450 | 12000 | 7100 | 6907LLB | 6907ZZ | 39 | 40.0 | 51 | 0.6 | 0.074 |
| 40 | 62 | 12 | 0.6 | 14600 | 10200 | 11000 | 6300 | 6908LLB | 6908ZZ | 44 | 45.0 | 58 | 0.6 | 0.110 |
| 45 | 68 | 12 | 0.6 | 15100 | 11200 | 9800 | 5600 | 6909LLB | 6909ZZ | 49 | 51.0 | 64 | 0.6 | 0.128 |
| 50 | 72 | 12 | 0.6 | 15600 | 12200 | 8900 | 5100 | 6910LLB | 6910ZZ | 54 | 55.5 | 68 | 0.6 | 0.132 |
| 55 | 80 | 13 | 1.0 | 16000 | 13300 | 8200 | 4600 | 6911LLB | 6911ZZ | 60 | 61.5 | 75 | 1.0 | 0.180 |
| 60 | 85 | 13 | 1.0 | 16400 | 14300 | 7600 | 4300 | 6912LLB | 6912ZZ | 65 | 66.5 | 80 | 1.0 | 0.193 |
| 65 | 90 | 13 | 1.0 | 17400 | 16100 | 7000 | 4000 | 6913LLB | 6913ZZ | 70 | 71.5 | 85 | 1.0 | 0.206 |
| 70 | 100 | 16 | 1.0 | 23700 | 21200 | 6500 | 3700 | 6914LLB | 6914ZZ | 75 | 77.5 | 95 | 1.0 | 0.334 |
| 75 | 105 | 16 | 1.0 | 24400 | 22600 | 6100 | 3500 | 6915LLB | 6915ZZ | 80 | 82.5 | 100 | 1.0 | 0.353 |
| 80 | 110 | 16 | 1.0 | 24900 | 24000 | 5700 | 3200 | 6916LLB | 6916ZZ | 85 | 88.0 | 105 | 1.0 | 0.373 |

BALL BEARING
SERIES 622..2RS



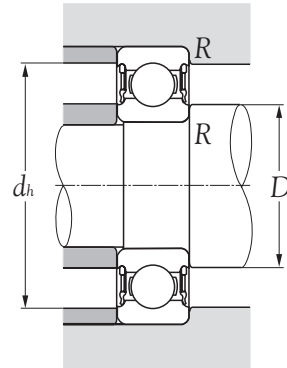
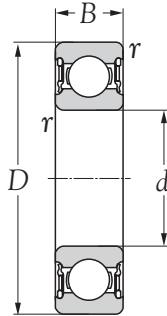
| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Speed rating rpm | Bearing numbers | Abutment and fillet dimensions mm | | | | Mass kg (approx.) |
|---------------------------|----------|----------|---------------------------------------|---|-----------------------|---------------------|------------------|---|--------------------------|--------------------------|------------------------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_o</i> | <i>C_{or}</i> | | | <i>D_{s min}</i> | <i>D_{s max}</i> | <i>d_{h max}</i> | <i>R_{max}</i> | |
| 10 | 30 | 14 | 0.6 | 5070 | 2360 | 17000 | 62200 2RS | 14.0 | 14.5 | 26.0 | 0.6 | 0.040 |
| 12 | 32 | 14 | 0.6 | 6890 | 3100 | 15000 | 62201 2RS | 16.0 | 16.0 | 28.0 | 0.6 | 0.045 |
| 15 | 35 | 14 | 0.6 | 7800 | 3750 | 13000 | 62202 2RS | 19.0 | 19.0 | 31.0 | 0.6 | 0.054 |
| 17 | 40 | 16 | 0.6 | 9560 | 4750 | 12000 | 62203 2RS | 21.0 | 21.0 | 36.0 | 0.6 | 0.083 |
| 20 | 47 | 18 | 1.0 | 12700 | 6550 | 10000 | 62204 2RS | 25.0 | 25.5 | 42.0 | 1.0 | 0.130 |
| 25 | 52 | 18 | 1.0 | 14000 | 7800 | 8500 | 62205 2RS | 30.0 | 31.0 | 47.0 | 1.0 | 0.150 |
| 30 | 62 | 20 | 1.0 | 19500 | 11200 | 7500 | 62206 2RS | 35.0 | 37.0 | 57.0 | 1.0 | 0.240 |
| 35 | 72 | 23 | 1.1 | 25500 | 15300 | 6300 | 62207 2RS | 41.5 | 43.5 | 65.5 | 1.0 | 0.370 |
| 40 | 80 | 23 | 1.1 | 30700 | 19000 | 5600 | 62208 2RS | 46.5 | 49.5 | 73.5 | 1.0 | 0.440 |
| 45 | 85 | 23 | 1.1 | 33200 | 21600 | 5000 | 62209 2RS | 51.5 | 54.0 | 78.5 | 1.0 | 0.480 |
| 50 | 90 | 23 | 1.1 | 35100 | 23200 | 4800 | 62210 2RS | 56.5 | 58.0 | 83.5 | 1.0 | 0.520 |

BALL BEARING
SERIES 623..2RS



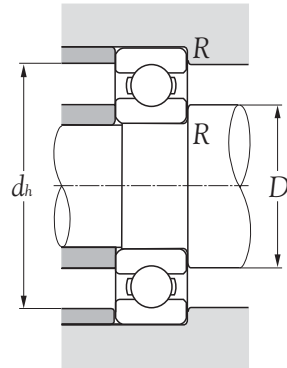
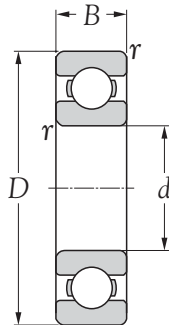
| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Speed rating rpm | Bearing numbers | Abutment and fillet dimensions mm | | | | Mass kg (approx.) |
|---------------------------|----------|----------|---|---|------------------------|---------------------|------------------|---|-------------------------------------|-------------------------------------|------------------------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r</i> _{s min} ¹⁾ | <i>C</i> _o | <i>C</i> _{or} | | | <i>D</i> _s <i>min</i> | <i>D</i> _s <i>max</i> | <i>d</i> _h <i>max</i> | <i>R</i> <i>max</i> | |
| 10 | 35 | 17 | 0.6 | 8060 | 3400 | 15000 | 62300 2RS | 14.0 | 15.0 | 31.0 | 0.6 | 0.06 |
| 12 | 37 | 17 | 1.0 | 9750 | 4150 | 14000 | 62301 2RS | 17.0 | 17.0 | 32.0 | 1.0 | 0.07 |
| 15 | 42 | 17 | 1.0 | 11400 | 5400 | 12000 | 62302 2RS | 20.0 | 20.5 | 37.0 | 1.0 | 0.11 |
| 17 | 47 | 19 | 1.0 | 13500 | 6550 | 11000 | 62303 2RS | 22.0 | 23.5 | 42.0 | 1.0 | 0.15 |
| 20 | 52 | 21 | 1.1 | 15900 | 7800 | 9500 | 62304 2RS | 26.5 | 27.0 | 45.5 | 1.0 | 0.20 |
| 25 | 62 | 24 | 1.1 | 22500 | 11600 | 7500 | 62305 2RS | 31.5 | 33.5 | 55.5 | 1.0 | 0.32 |
| 30 | 72 | 27 | 1.1 | 28100 | 16000 | 6300 | 62306 2RS | 36.5 | 41.5 | 65.5 | 1.0 | 0.48 |
| 35 | 80 | 31 | 1.5 | 33200 | 19000 | 6000 | 62307 2RS | 43.0 | 44.0 | 72.0 | 1.5 | 0.66 |
| 40 | 90 | 33 | 1.5 | 41000 | 24000 | 5000 | 62308 2RS | 48.0 | 50.5 | 82.0 | 1.5 | 0.89 |
| 45 | 100 | 36 | 1.5 | 52700 | 31500 | 4500 | 62309 2RS | 53.0 | 56.5 | 92.0 | 1.5 | 1.15 |
| 50 | 110 | 40 | 2.0 | 61800 | 38000 | 4300 | 62310 2RS | 59.0 | 63.0 | 101.0 | 2.0 | 1.55 |

BALL BEARING
SERIES 630..2RS



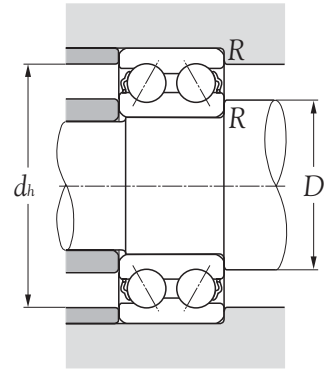
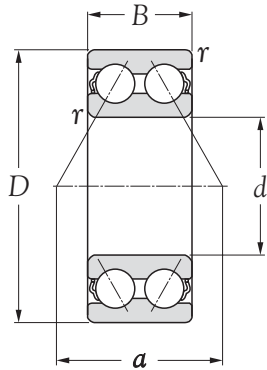
| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Speed rating rpm | Bearing numbers | Abutment and fillet dimensions mm | | | | Mass kg (approx.) |
|---------------------------|----------|----------|---|---|------------------------|---------------------|------------------|--------------------------------------|---------------------------|---------------------------|-------------------------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r</i> _{s min} ¹⁾ | <i>C</i> _o | <i>C</i> _{or} | | | <i>D</i> _{s min} | <i>D</i> _{s max} | <i>d</i> _{h max} | <i>R</i> _{max} | |
| 10 | 26 | 12 | 0.3 | 4620 | 1960 | 19000 | 63000 2RS | 12 | 12.5 | 24 | 0.3 | 0.025 |
| 12 | 28 | 12 | 0.3 | 5070 | 2360 | 17000 | 63001 2RS | 14 | 14.5 | 26 | 0.3 | 0.029 |
| 15 | 32 | 13 | 0.3 | 5590 | 2850 | 14000 | 63002 2RS | 17 | 18.0 | 30 | 0.3 | 0.039 |
| 17 | 35 | 14 | 0.3 | 6050 | 3250 | 13000 | 63003 2RS | 19 | 20.0 | 33 | 0.3 | 0.052 |
| 20 | 42 | 16 | 0.6 | 9360 | 5000 | 11000 | 63004 2RS | 24 | 24.5 | 38 | 0.6 | 0.086 |
| 25 | 47 | 16 | 0.6 | 11200 | 6550 | 9500 | 63005 2RS | 29 | 29.0 | 43 | 0.6 | 0.100 |
| 30 | 55 | 19 | 1.0 | 13300 | 8300 | 8000 | 63006 2RS | 35 | 35.5 | 50 | 1.0 | 0.160 |
| 35 | 62 | 20 | 1.0 | 15900 | 10200 | 7000 | 63007 2RS | 40 | 40.5 | 57 | 1.0 | 0.210 |
| 40 | 68 | 21 | 1.0 | 16800 | 11600 | 6300 | 63008 2RS | 45 | 46.0 | 63 | 1.0 | 0.260 |
| 45 | 75 | 23 | 1.0 | 20800 | 14600 | 5600 | 63009 2RS | 50 | 51.0 | 70 | 1.0 | 0.340 |
| 50 | 80 | 23 | 1.0 | 21600 | 16000 | 5000 | 63010 2RS | 55 | 56.0 | 75 | 1.0 | 0.370 |

BALL BEARING
SERIES 64



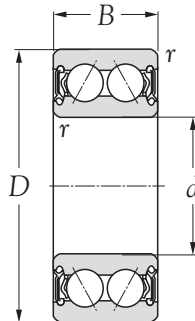
| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | Abutment and fillet dimensions mm | | | Mass kg (approx.) |
|---------------------------|----------|----------|---------------------------------------|---|-----------------------|------------------------|-------|-----------------|---|--------------------------|------------------------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}¹⁾</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | <i>D_{s min}</i> | <i>d_{h max}</i> | <i>R_{max}</i> | |
| 17 | 62 | 17 | 1.1 | 22700 | 10800 | 14000 | 16000 | 6403 | 24.0 | 55.0 | 1.0 | 0.270 |
| 20 | 72 | 19 | 1.1 | 28500 | 13900 | 12000 | 14000 | 6404 | 27.0 | 65.0 | 1.0 | 0.400 |
| 25 | 80 | 21 | 1.5 | 34500 | 17500 | 10000 | 12000 | 6405 | 33.5 | 71.5 | 1.5 | 0.530 |
| 30 | 90 | 23 | 1.5 | 43500 | 23900 | 8800 | 10000 | 6406 | 38.5 | 81.5 | 1.5 | 0.735 |
| 35 | 100 | 25 | 1.5 | 55000 | 31000 | 7800 | 9100 | 6407 | 43.5 | 91.5 | 1.5 | 0.952 |
| 40 | 110 | 27 | 2.0 | 63500 | 36500 | 7000 | 8200 | 6408 | 50.0 | 100.0 | 2.0 | 1.230 |
| 45 | 120 | 29 | 2.0 | 77000 | 45000 | 6300 | 7400 | 6409 | 55.0 | 110.0 | 2.0 | 1.530 |
| 50 | 130 | 31 | 2.1 | 83000 | 49500 | 5700 | 6700 | 6410 | 62.0 | 118.0 | 2.0 | 1.880 |
| 55 | 140 | 33 | 2.1 | 89000 | 54000 | 5200 | 6100 | 6411 | 67.0 | 128.0 | 2.0 | 2.290 |
| 60 | 150 | 35 | 2.1 | 102000 | 64500 | 4800 | 5700 | 6412 | 72.0 | 138.0 | 2.0 | 2.770 |

BALL BEARING
SERIES 52



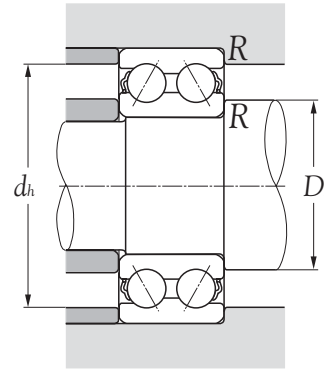
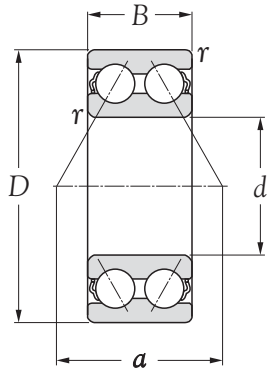
| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | Abutment and fillet dimensions mm | | | | Mass kg (approx.) |
|---------------------------|----------|----------|---|---|-----------------------|------------------------|-------|-----------------|---|------------------------------------|------------------------|----------|-------------------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r</i> _{s min} ¹⁾ | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | <i>D_s</i> <i>min</i> | <i>d_h</i> <i>max</i> | <i>R</i> <i>max</i> | <i>a</i> | |
| 10 | 30 | 14.3 | 0.6 | 6950 | 3800 | 14000 | 19000 | 5200 | 15 | 25 | 0.6 | 17.5 | 0.049 |
| 12 | 32 | 15.9 | 0.6 | 9150 | 5050 | 13000 | 17000 | 5201 | 17 | 27 | 0.6 | 19.0 | 0.057 |
| 15 | 35 | 15.9 | 0.6 | 10000 | 6050 | 11000 | 15000 | 5202 | 20 | 30 | 0.6 | 21.0 | 0.064 |
| 17 | 40 | 17.5 | 0.6 | 12800 | 7900 | 9900 | 13000 | 5203 | 22 | 35 | 0.6 | 24.0 | 0.096 |
| 20 | 47 | 20.6 | 1.0 | 19000 | 12100 | 8800 | 12000 | 5204 | 26 | 41 | 1.0 | 28.0 | 0.153 |
| 25 | 52 | 20.6 | 1.0 | 20600 | 14300 | 7300 | 9800 | 5205 | 31 | 46 | 1.0 | 31.5 | 0.175 |
| 30 | 62 | 23.8 | 1.0 | 28600 | 20400 | 6300 | 8400 | 5206 | 36 | 56 | 1.0 | 36.5 | 0.286 |
| 35 | 72 | 27.0 | 1.1 | 38000 | 27800 | 5500 | 7400 | 5207 | 42 | 65 | 1.0 | 42.5 | 0.436 |
| 40 | 80 | 30.2 | 1.1 | 42500 | 32500 | 4900 | 6600 | 5208 | 47 | 73 | 1.0 | 47.5 | 0.590 |
| 45 | 85 | 30.2 | 1.1 | 48000 | 37000 | 4400 | 5900 | 5209 | 52 | 78 | 1.0 | 50.5 | 0.640 |
| 50 | 90 | 30.2 | 1.1 | 51000 | 42000 | 4000 | 5300 | 5210 | 57 | 83 | 1.0 | 54.0 | 0.689 |

BALL BEARING
SERIES 52..2RS



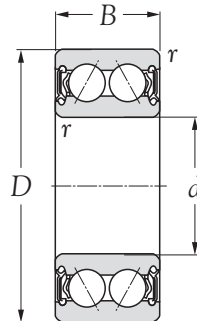
| Boundary dimensions | | | | Basic load ratings | | Limiting speeds | | Bearing numbers | Mass kg (approx.) |
|---------------------|----------|----------|--------------------------------|----------------------|-----------------------|-----------------|-------|-----------------|-------------------------|
| mm | | | | dynamic | static | rpm | | | |
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r</i> s min ⁻¹) | <i>C_r</i> | <i>C_{0r}</i> | grease | oil | | |
| 10 | 30 | 14.3 | 0.6 | 7150 | 3900 | 16000 | 22000 | 5200 2RS | 0.045 |
| 12 | 32 | 15.9 | 0.6 | 10600 | 5850 | 15000 | 20000 | 5201 2RS | 0.050 |
| 15 | 35 | 15.9 | 0.6 | 11700 | 6950 | 12000 | 17000 | 5202 2RS | 0.068 |
| 17 | 40 | 17.5 | 0.6 | 14800 | 9000 | 10000 | 15000 | 5203 2RS | 0.090 |
| 20 | 47 | 20.6 | 1.0 | 19500 | 12200 | 9000 | 13000 | 5204 2RS | 0.140 |
| 25 | 52 | 20.6 | 1.0 | 21200 | 14600 | 8000 | 11000 | 5205 2RS | 0.160 |
| 30 | 62 | 23.8 | 1.0 | 29600 | 21200 | 7000 | 9500 | 5206 2RS | 0.260 |
| 35 | 72 | 27.0 | 1.1 | 37700 | 27500 | 6000 | 8000 | 5207 2RS | 0.400 |
| 40 | 80 | 30.2 | 1.1 | 44900 | 34000 | 5600 | 7500 | 5208 2RS | 0.530 |
| 45 | 85 | 30.2 | 1.1 | 48800 | 39000 | 5000 | 6700 | 5209 2RS | 0.570 |

BALL BEARING
SERIES 53



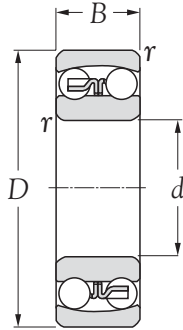
| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | Abutment and fillet dimensions mm | | | | Mass kg (approx.) |
|---------------------------|-----|------|------------------------|---|----------|------------------------|-------|-----------------|---|-----------------------------|---------------------------|------|-------------------------|
| d | D | B | $r_s \text{ min}^{1)}$ | C_r | C_{or} | grease | oil | | D_s <small>min</small> | d_h <small>max</small> | R <small>max</small> | a | |
| 15 | 42 | 19.0 | 1.0 | 17200 | 10100 | 9900 | 13000 | 5302 | 21.0 | 36.0 | 1.0 | 26.0 | 0.132 |
| 17 | 47 | 22.2 | 1.0 | 20400 | 12100 | 9000 | 12000 | 5303 | 23.0 | 41.0 | 1.0 | 28.5 | 0.181 |
| 20 | 52 | 22.2 | 1.1 | 20600 | 12700 | 8000 | 11000 | 5304 | 27.0 | 45.0 | 1.0 | 30.5 | 0.217 |
| 25 | 62 | 25.4 | 1.1 | 30500 | 20500 | 6700 | 8900 | 5305 | 32.0 | 55.0 | 1.0 | 36.5 | 0.362 |
| 30 | 72 | 30.2 | 1.1 | 39500 | 27500 | 5700 | 7600 | 5306 | 37.0 | 65.0 | 1.0 | 43.0 | 0.553 |
| 35 | 80 | 34.9 | 1.5 | 49500 | 35000 | 5000 | 6600 | 5307 | 43.5 | 71.5 | 1.5 | 48.5 | 0.766 |
| 40 | 90 | 36.5 | 1.5 | 60500 | 44000 | 4400 | 5900 | 5308 | 48.5 | 81.5 | 1.5 | 53.5 | 1.010 |
| 45 | 100 | 39.7 | 1.5 | 72500 | 54000 | 4000 | 5300 | 5309 | 53.5 | 91.5 | 1.5 | 60.0 | 1.340 |
| 50 | 110 | 44.4 | 2.0 | 85500 | 64500 | 3600 | 4800 | 5310 | 60.0 | 100.0 | 2.0 | 65.5 | 1.810 |

BALL BEARING
SERIES 53..2RS

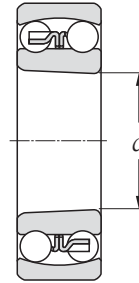


| Boundary dimensions | | | | Basic load ratings | | Limiting speeds | | Bearing numbers | Mass kg (approx.) |
|---------------------|----------|----------|--|----------------------|-----------------------|-----------------|-------|-----------------|-------------------------|
| mm | | | | dynamic | static | rpm | | | |
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r</i> <small>min¹⁾</small> | <i>C_r</i> | <i>C_{0r}</i> | grease | oil | | |
| 15 | 42 | 19.0 | 1.0 | 17200 | 10100 | 9900 | 13000 | 5302 2RS | 0.132 |
| 17 | 47 | 22.2 | 1.0 | 20400 | 12100 | 9000 | 12000 | 5303 2RS | 0.181 |
| 20 | 52 | 22.2 | 1.1 | 22500 | 14600 | 8500 | 12000 | 5304 2RS | 0.200 |
| 25 | 62 | 25.4 | 1.1 | 30700 | 20400 | 7500 | 10000 | 5305 2RS | 0.320 |
| 30 | 72 | 30.2 | 1.1 | 41600 | 29000 | 6300 | 8500 | 5306 2RS | 0.480 |
| 45 | 100 | 39.7 | 1.5 | 72800 | 53000 | 4500 | 6000 | 5309 2RS | 1.150 |

BALL BEARING
SERIES 12, 12..K



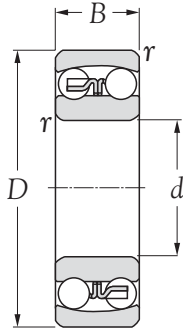
Cylindrical bore



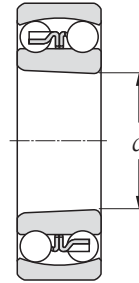
Tapered bore
taper 1:12

| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | | Mass kg | |
|---------------------------|----------|----------|---------------------------------------|---|-----------------------|------------------------|-------|-----------------|--------------|------------------|--------------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}^{b)}</i> | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | | cylindrical bore | tapered bore |
| | | | | | | | | | | | (approx.) |
| 10 | 30 | 9 | 0.6 | 5500 | 1190 | 21000 | 24000 | 1200 | - | 0.033 | - |
| 12 | 32 | 10 | 0.6 | 5600 | 1270 | 18000 | 22000 | 1201 | - | 0.040 | - |
| 15 | 35 | 11 | 0.6 | 7450 | 1750 | 16000 | 19000 | 1202 | - | 0.049 | - |
| 17 | 40 | 12 | 0.6 | 7900 | 2010 | 14000 | 17000 | 1203 | - | 0.072 | - |
| 20 | 47 | 14 | 1.0 | 9900 | 2610 | 13000 | 15000 | 1204 | 1204K | 0.116 | 0.114 |
| 25 | 52 | 15 | 1.0 | 12100 | 3300 | 11000 | 13000 | 1205 | 1205K | 0.138 | 0.135 |
| 30 | 62 | 16 | 1.0 | 15600 | 4650 | 9200 | 11000 | 1206 | 1206K | 0.217 | 0.213 |
| 35 | 72 | 17 | 1.1 | 15800 | 5100 | 8000 | 9400 | 1207 | 1207K | 0.317 | 0.312 |
| 40 | 80 | 18 | 1.1 | 19300 | 6550 | 7100 | 8400 | 1208 | 1208K | 0.414 | 0.407 |
| 45 | 85 | 19 | 1.1 | 21900 | 7350 | 6400 | 7500 | 1209 | 1209K | 0.457 | 0.448 |
| 50 | 90 | 20 | 1.1 | 22700 | 8100 | 5800 | 6800 | 1210 | 1210K | 0.515 | 0.504 |
| 55 | 100 | 21 | 1.5 | 26800 | 10000 | 5300 | 6200 | 1211 | 1211K | 0.692 | 0.679 |
| 60 | 110 | 22 | 1.5 | 30000 | 11500 | 4900 | 5800 | 1212 | 1212K | 0.879 | 0.864 |
| 65 | 120 | 23 | 1.5 | 31000 | 12500 | 4500 | 5300 | 1213 | 1213K | 1.130 | 1.110 |
| 70 | 125 | 24 | 1.5 | 34500 | 13800 | 4200 | 4900 | 1214 | - | 1.240 | - |
| 75 | 130 | 25 | 1.5 | 39000 | 15700 | 3900 | 4600 | 1215 | 1215K | 1.330 | 1.310 |
| 80 | 140 | 26 | 2.0 | 40000 | 17000 | 3700 | 4300 | 1216 | 1216K | 1.650 | 1.620 |

BALL BEARING
SERIES 13, 13..K



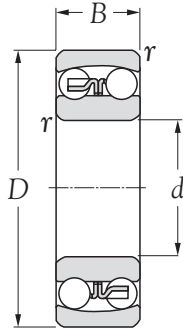
Cylindrical bore



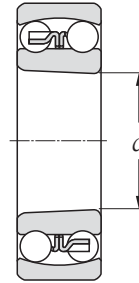
Tapered bore
taper 1:12

| Boundary dimensions mm | | | | Basic load ratings dynamic static N | | Limiting speeds rpm | | Bearing numbers | | Mass kg cylindrical tapered bore bore (approx.) | |
|---------------------------|----------|----------|--|---|-----------------------|------------------------|-------|-----------------|--------------|---|-------|
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r_{s min}</i> ¹⁾ | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | | | |
| 10 | 35 | 11 | 0.6 | 7250 | 1620 | 18000 | 21000 | 1300 | - | 0.058 | - |
| 12 | 37 | 12 | 1.0 | 9450 | 2160 | 16000 | 18000 | 1301 | - | 0.066 | - |
| 15 | 42 | 13 | 1.0 | 9550 | 2300 | 13000 | 16000 | 1302 | - | 0.092 | - |
| 17 | 47 | 14 | 1.0 | 12500 | 3200 | 12000 | 14000 | 1303 | - | 0.128 | - |
| 20 | 52 | 15 | 1.1 | 12400 | 3350 | 11000 | 13000 | 1304 | 1304K | 0.160 | 0.158 |
| 25 | 62 | 17 | 1.1 | 18000 | 5000 | 9100 | 11000 | 1305 | 1305K | 0.255 | 0.251 |
| 30 | 72 | 19 | 1.1 | 21300 | 6300 | 7700 | 9100 | 1306 | 1306K | 0.383 | 0.377 |
| 35 | 80 | 21 | 1.5 | 25100 | 7850 | 6800 | 8000 | 1307 | 1307K | 0.500 | 0.492 |
| 40 | 90 | 23 | 1.5 | 29600 | 9700 | 6000 | 7000 | 1308 | 1308K | 0.709 | 0.698 |
| 45 | 100 | 25 | 1.5 | 38000 | 12700 | 5400 | 6300 | 1309 | 1309K | 0.953 | 0.938 |
| 50 | 110 | 27 | 2.0 | 43500 | 14100 | 4900 | 5800 | 1310 | 1310K | 1.200 | 1.180 |
| 55 | 120 | 29 | 2.0 | 51500 | 17900 | 4500 | 5200 | 1311 | 1311K | 1.580 | 1.560 |
| 60 | 130 | 31 | 2.1 | 57000 | 20800 | 4100 | 4800 | 1312 | 1312K | 1.960 | 1.930 |

BALL BEARING
SERIES 22, 22..K



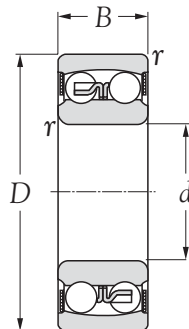
Cylindrical bore



Tapered bore
taper 1:12

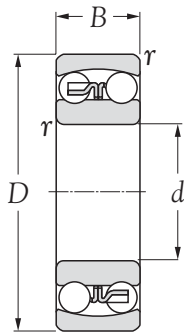
| Boundary dimensions | | | | Basic load ratings | | Limiting speeds | | Bearing numbers | | Mass | |
|---------------------|----------|----------|-------------------------------------|----------------------|-----------------------|-----------------|-------|-----------------|--------------|------------------|--------------|
| mm | | | | dynamic | static | rpm | | | | cylindrical bore | tapered bore |
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r</i> <i>s min</i> ¹⁾ | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | | (approx.) | |
| 10 | 30 | 14 | 0.6 | 7300 | 1590 | 19000 | 23000 | 2200 | - | 0.047 | - |
| 12 | 32 | 14 | 0.6 | 7600 | 1730 | 17000 | 20000 | 2201 | - | 0.051 | - |
| 15 | 35 | 14 | 0.6 | 7700 | 1850 | 15000 | 18000 | 2202 | - | 0.060 | - |
| 17 | 40 | 16 | 0.6 | 9800 | 2410 | 13000 | 16000 | 2203 | - | 0.088 | - |
| 20 | 47 | 18 | 1.0 | 12600 | 3300 | 12000 | 14000 | 2204 | 2204K | 0.140 | 0.137 |
| 25 | 52 | 18 | 1.0 | 12300 | 3450 | 10000 | 12000 | 2205 | 2205K | 0.157 | 0.153 |
| 30 | 62 | 20 | 1.0 | 15200 | 4500 | 8600 | 10000 | 2206 | 2206K | 0.256 | 0.250 |
| 35 | 72 | 23 | 1.1 | 21500 | 6600 | 7500 | 8800 | 2207 | 2207K | 0.392 | 0.382 |
| 40 | 80 | 23 | 1.1 | 22300 | 7350 | 6700 | 7900 | 2208 | 2208K | 0.493 | 0.482 |
| 45 | 85 | 23 | 1.1 | 23200 | 8150 | 6000 | 7100 | 2209 | 2209K | 0.540 | 0.528 |
| 50 | 90 | 23 | 1.1 | 23200 | 8450 | 5500 | 6400 | 2210 | 2210K | 0.583 | 0.569 |
| 55 | 100 | 25 | 1.5 | 26500 | 9900 | 5000 | 5800 | 2211 | 2211K | 0.787 | 0.769 |
| 60 | 110 | 28 | 1.5 | 34000 | 12600 | 4600 | 5400 | 2212 | 2212K | 1.080 | 1.060 |

BALL BEARING
SERIES 22..2RS

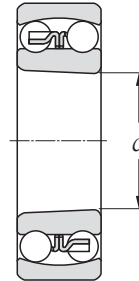


| Boundary dimensions | | | | Basic load ratings | | Speed rating | Bearing numbers | Mass |
|---------------------|----------|----------|-------------------------------------|----------------------|-----------------------|--------------|-----------------|-----------|
| mm | | | | dynamic | static | rpm | | kg |
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r</i> <i>rs min^{b)}</i> | <i>C_r</i> | <i>C_{0r}</i> | grease | | (approx.) |
| 10 | 30 | 14 | 0.6 | 5530 | 1180 | 17000 | 2200 2RS | 0.048 |
| 12 | 32 | 14 | 0.6 | 6240 | 1430 | 16000 | 2201 2RS | 0.053 |
| 15 | 35 | 14 | 0.6 | 7410 | 1760 | 14000 | 2202 2RS | 0.058 |
| 17 | 40 | 16 | 0.6 | 8840 | 2200 | 12000 | 2203 2RS | 0.089 |
| 20 | 47 | 18 | 1.0 | 12700 | 3400 | 10000 | 2204 2RS | 0.140 |
| 25 | 52 | 18 | 1.0 | 14300 | 4000 | 9000 | 2205 2RS | 0.160 |
| 30 | 62 | 20 | 1.0 | 15600 | 4650 | 7500 | 2206 2RS | 0.260 |
| 35 | 72 | 23 | 1.1 | 19000 | 6000 | 6300 | 2207 2RS | 0.410 |
| 40 | 80 | 23 | 1.1 | 19900 | 6950 | 5600 | 2208 2RS | 0.500 |
| 45 | 85 | 23 | 1.1 | 22900 | 7800 | 5300 | 2209 2RS | 0.530 |
| 50 | 90 | 23 | 1.1 | 22900 | 8150 | 4800 | 2210 2RS | 0.570 |
| 55 | 100 | 25 | 1.5 | 27600 | 10600 | 4300 | 2211 2RS | 0.790 |
| 60 | 110 | 28 | 1.5 | 31200 | 12200 | 3800 | 2212 2RS | 1.050 |

BALL BEARING
SERIES 23, 23..K



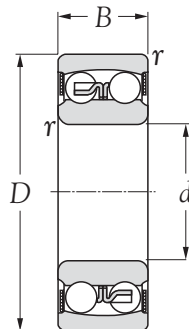
Cylindrical bore



Tapered bore
taper 1:12

| Boundary dimensions | | | | Basic load ratings | | Limiting speeds | | Bearing numbers | | Mass | |
|---------------------|----------|----------|-------------------------------------|----------------------|-----------------------|-----------------|-------|-----------------|--------------|------------------|--------------|
| mm | | | | dynamic | static | rpm | | | | cylindrical bore | tapered bore |
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r</i> <i>s min</i> ¹⁾ | <i>C_r</i> | <i>C_{or}</i> | grease | oil | | | (approx.) | |
| 10 | 35 | 17 | 0.6 | 10100 | 2150 | 17000 | 20000 | 2300 | - | 0.083 | - |
| 12 | 37 | 17 | 1.0 | 11800 | 2710 | 15000 | 17000 | 2301 | - | 0.091 | - |
| 15 | 42 | 17 | 1.0 | 12000 | 2900 | 13000 | 15000 | 2302 | - | 0.114 | - |
| 17 | 47 | 19 | 1.0 | 14400 | 3550 | 11000 | 14000 | 2303 | - | 0.156 | - |
| 20 | 52 | 21 | 1.1 | 18100 | 4700 | 10000 | 12000 | 2304 | 2304K | 0.206 | 0.201 |
| 25 | 62 | 24 | 1.1 | 24400 | 6600 | 8500 | 10000 | 2305 | 2305K | 0.334 | 0.326 |
| 30 | 72 | 27 | 1.1 | 31500 | 8750 | 7200 | 8500 | 2306 | 2306K | 0.496 | 0.485 |
| 35 | 80 | 31 | 1.5 | 39500 | 11300 | 6300 | 7400 | 2307 | 2307K | 0.671 | 0.653 |
| 40 | 90 | 33 | 1.5 | 45000 | 13500 | 5600 | 6600 | 2308 | 2308K | 0.918 | 0.895 |
| 45 | 100 | 36 | 1.5 | 54000 | 16700 | 5000 | 5900 | 2309 | 2309K | 1.230 | 1.200 |
| 50 | 110 | 40 | 2.0 | 64500 | 20200 | 4600 | 5400 | 2310 | 2310K | 1.630 | 1.590 |
| 55 | 120 | 43 | 2.0 | 75500 | 24000 | 4200 | 4900 | 2311 | 2311K | 2.100 | 2.050 |
| 60 | 130 | 46 | 2.1 | 87000 | 28200 | 3800 | 4500 | 2312 | 2312K | 2.590 | 2.520 |

BALL BEARING
SERIES 23..2RS



| Boundary dimensions | | | | Basic load ratings | | Speed rating | Bearing numbers | Mass |
|---------------------|----------|----------|------------------------------|----------------------|-----------------------|--------------|-----------------|-----------|
| mm | | | | dynamic | static | rpm | | kg |
| <i>d</i> | <i>D</i> | <i>B</i> | <i>r</i> s min ⁻¹ | <i>C_r</i> | <i>C_{0r}</i> | grease | | (approx.) |
| 15 | 42 | 17 | 1.0 | 10800 | 2600 | 12000 | 2302 2RS | 0.11 |
| 17 | 47 | 19 | 1.0 | 12700 | 3400 | 11000 | 2303 2RS | 0.16 |
| 20 | 52 | 21 | 1.1 | 14300 | 4000 | 9500 | 2304 2RS | 0.21 |
| 25 | 62 | 24 | 1.1 | 19000 | 5400 | 7500 | 2305 2RS | 0.34 |
| 30 | 72 | 27 | 1.1 | 22500 | 6800 | 6700 | 2306 2RS | 0.51 |
| 35 | 80 | 31 | 1.5 | 26500 | 8500 | 5600 | 2307 2RS | 0.70 |
| 40 | 90 | 33 | 1.5 | 33800 | 11200 | 5000 | 2308 2RS | 0.96 |
| 45 | 100 | 36 | 1.5 | 39000 | 13400 | 4500 | 2309 2RS | 1.30 |
| 50 | 110 | 40 | 2.0 | 43600 | 14000 | 4000 | 2310 2RS | 1.65 |