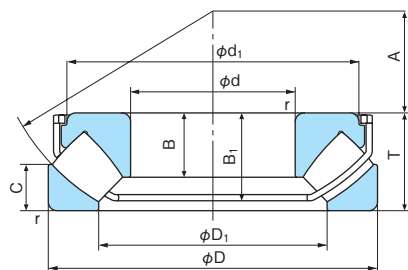
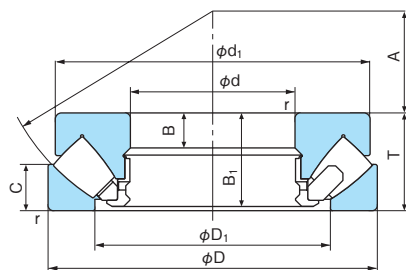


Spherical Roller Thrust Bearings

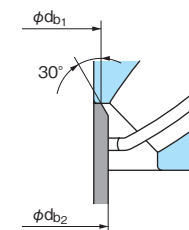
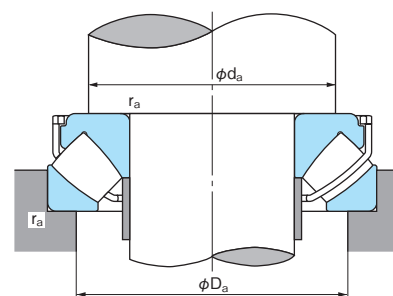
Bore Diameter: 60~130mm



Type EX



Type E



Dynamic equivalent axial load
 $P_a = F_a + 1.2F_r$
Static equivalent axial load
 $P_{0a} = F_a + 2.7F_r$
 where, F_a : Axial load
 F_r : Radial load
 However $\frac{F_r}{F_a} \leq 0.55$
 However $\frac{F_r}{F_a} \leq 0.55$ must be satisfied

1N=0.102kgf

| Boundary dimensions (mm) | | | | Bearing No. | Basic dynamic load rating C_a (N) | Basic static load rating C_{0a} (N) | Limiting speed (min ⁻¹) | | Reference Dimensions (mm) | | | | | | Abutment and fillet dimensions (mm) | | | Spacer dimensions (mm) | | Mass (kg) (Reference) | Bearing No. |
|--------------------------|-----|----|-----------|-------------|-------------------------------------|---------------------------------------|-------------------------------------|-----------------|---------------------------|-------|------|-------|------|----|-------------------------------------|-------------|-------------|------------------------|----------------|-----------------------|-------------|
| d | D | T | r (min) | | | | Grease lubrication | Oil lubrication | d_1 | D_1 | B | B_1 | C | A | d_a (min) | D_a (max) | r_a (max) | d_{b1} (max) | d_{b2} (max) | | |
| 60 | 130 | 42 | 1.5 | 29412E | 299000 | 890000 | — | 2800 | 123 | 89 | 15 | 39.5 | 20 | 38 | 91 | 108 | 1.5 | — | — | 2.75 | 29412E |
| | 130 | 42 | 1.5 | 29412EX | 350000 | 915000 | 1800 | 2800 | 113 | 87 | 27 | 37.1 | 20 | 38 | 91 | 108 | 1.5 | 66.0 | 66.0 | 2.50 | 29412EX |
| 65 | 140 | 45 | 2 | 29413E | 345000 | 1040000 | — | 2700 | 133 | 96 | 16 | 42.5 | 21 | 42 | 99 | 115 | 2.0 | — | — | 3.41 | 29413E |
| | 140 | 45 | 2 | 29413EX | 410000 | 1110000 | 1700 | 2700 | 123 | 93.5 | 29.5 | 40 | 21 | 42 | 99 | 115 | 2.0 | 72.0 | 72.0 | 3.20 | 29413EX |
| 70 | 150 | 48 | 2 | 29414E | 375000 | 1110000 | — | 2400 | 142 | 103 | 17 | 45.5 | 23 | 44 | 106 | 125 | 2.0 | — | — | 4.16 | 29414E |
| | 150 | 48 | 2 | 29414EX | 490000 | 1350000 | 1600 | 2400 | 128.3 | 98.4 | 32 | 42.7 | 23 | 44 | 106 | 125 | 2.0 | 75.5 | 77.5 | 3.82 | 29414EX |
| 75 | 160 | 51 | 2 | 29415E | 445000 | 1380000 | — | 2300 | 152 | 109 | 18 | 48 | 24 | 47 | 113 | 132 | 2.0 | — | — | 4.98 | 29415E |
| | 160 | 51 | 2 | 29415EX | 525000 | 1470000 | 1600 | 2300 | 140 | 105.6 | 34.5 | 45.6 | 24 | 47 | 113 | 132 | 2.0 | 82.5 | 82.5 | 4.70 | 29415EX |
| 80 | 170 | 54 | 2.1 | 29416E | 480000 | 1490000 | — | 2100 | 162 | 117 | 19 | 51 | 26 | 50 | 120 | 140 | 2.0 | — | — | 5.95 | 29416E |
| | 170 | 54 | 2.1 | 29416EX | 580000 | 1630000 | 1500 | 2100 | 149 | 113 | 36 | 48.2 | 26 | 50 | 120 | 140 | 2.0 | 88.0 | 88.0 | 5.60 | 29416EX |
| 85 | 150 | 39 | 1.5 | 29317E | 293000 | 990000 | — | 2700 | 143.5 | 114 | 13 | 37 | 19 | 50 | 115 | 135 | 1.5 | — | — | 2.87 | 29317E |
| | 150 | 39 | 1.5 | 29317EX | 365000 | 1060000 | 1600 | 2700 | 134 | 110.5 | 25 | 35 | 19 | 50 | 115 | 135 | 1.5 | 90.0 | 90.0 | 2.67 | 29317EX |
| | 180 | 58 | 2.1 | 29417E | 540000 | 1720000 | — | 2000 | 170 | 125 | 21 | 55 | 28 | 54 | 130 | 150 | 2.0 | — | — | 7.19 | 29417E |
| | 180 | 58 | 2.1 | 29417EX | 640000 | 1810000 | 1300 | 2000 | 158.2 | 120.5 | 37 | 50.6 | 28 | 54 | 130 | 150 | 2.0 | 94.0 | 94.0 | 6.69 | 29417EX |
| 90 | 155 | 39 | 1.5 | 29318E | 300000 | 1040000 | — | 2700 | 148.5 | 117 | 13 | 37 | 19 | 52 | 120 | 140 | 1.5 | — | — | 3.06 | 29318E |
| | 155 | 39 | 1.5 | 29318EX | 355000 | 1070000 | 1600 | 2700 | 135.2 | 116 | 23.8 | 35.1 | 19 | 52 | 120 | 140 | 1.5 | 95.0 | 95.0 | 2.75 | 29318EX |
| | 190 | 60 | 2.1 | 29418E | 620000 | 2020000 | — | 1900 | 180 | 132 | 22 | 57 | 29 | 56 | 135 | 157 | 2.0 | — | — | 8.28 | 29418E |
| | 190 | 60 | 2.1 | 29418EX | 710000 | 2080000 | 1300 | 1900 | 162 | 127 | 40.5 | 53 | 29 | 56 | 135 | 157 | 2.0 | 99.0 | 99.0 | 7.83 | 29418EX |
| 100 | 170 | 42 | 1.5 | 29320E | 355000 | 1260000 | — | 2500 | 163 | 129 | 14 | 40 | 20.8 | 58 | 130 | 150 | 1.5 | — | — | 3.91 | 29320E |
| | 170 | 42 | 1.5 | 29320EX | 435000 | 1400000 | 1500 | 2500 | 146.9 | 126 | 27 | 38.2 | 20.8 | 58 | 130 | 150 | 1.5 | 105.0 | 107.0 | 3.61 | 29320EX |
| | 210 | 67 | 3 | 29420E | 690000 | 2230000 | — | 1700 | 200 | 146 | 24 | 64 | 32 | 62 | 150 | 175 | 2.5 | — | — | 11.2 | 29420E |
| | 210 | 67 | 3 | 29420EX | 870000 | 2530000 | 1100 | 1700 | 181 | 139 | 44.5 | 59.6 | 32 | 62 | 150 | 175 | 2.5 | 108.0 | 110.0 | 10.6 | 29420EX |
| 110 | 190 | 48 | 2 | 29322E | 470000 | 1680000 | — | 2100 | 182 | 143 | 16 | 45.5 | 23 | 64 | 145 | 165 | 2.0 | — | — | 5.67 | 29322E |
| | 190 | 48 | 2 | 29322EX | 550000 | 1730000 | 1300 | 2100 | 165.1 | 140.6 | 30.9 | 44 | 23 | 64 | 145 | 165 | 2.0 | 116.0 | 117.0 | 5.22 | 29322EX |
| | 230 | 73 | 3 | 29422E | 845000 | 2820000 | — | 1500 | 220 | 162 | 26 | 69 | 35 | 69 | 165 | 190 | 2.5 | — | — | 14.7 | 29422E |
| | 230 | 73 | 3 | 29422EX | 1060000 | 3150000 | 950 | 1500 | 199.6 | 153.4 | 48 | 64.4 | 35 | 69 | 165 | 190 | 2.5 | 119.5 | 120.0 | 14.0 | 29422EX |
| 120 | 210 | 54 | 2.1 | 29324E | 565000 | 2030000 | — | 1900 | 200 | 159 | 18 | 51 | 26 | 70 | 160 | 180 | 2.0 | — | — | 7.90 | 29324E |
| | 210 | 54 | 2.1 | 29324EX | 670000 | 2160000 | 1100 | 1900 | 184.5 | 155 | 34.5 | 48.7 | 26 | 70 | 160 | 180 | 2.0 | 127.0 | 128.0 | 7.30 | 29324EX |
| | 250 | 78 | 4 | 29424E | 1030000 | 3450000 | — | 1400 | 236 | 174 | 29 | 74 | 37 | 74 | 180 | 205 | 3.0 | — | — | 18.5 | 29424E |
| | 250 | 78 | 4 | 29424EX | 1210000 | 3750000 | 900 | 1400 | 218 | 166.5 | 54 | 70.9 | 37 | 74 | 180 | 205 | 3.0 | 131.0 | 132.0 | 17.6 | 29424EX |
| 130 | 225 | 58 | 2.1 | 29326E | 665000 | 2420000 | — | 1800 | 215 | 171 | 19 | 55 | 28 | 76 | 170 | 195 | 2.0 | — | — | 9.45 | 29326E |
| | 225 | 58 | 2.1 | 29326EX | 770000 | 2440000 | 1000 | 1800 | 197.4 | 165.8 | 36.8 | 52.7 | 28 | 76 | 170 | 195 | 2.0 | 136.0 | 138.0 | 8.82 | 29326EX |
| | 270 | 85 | 4 | 29426E | 1140000 | 3850000 | — | 1200 | 255 | 189 | 31 | 81 | 41 | 81 | 195 | 225 | 3.0 | — | — | 23.5 | 29426E |
| | 270 | 85 | 4 | 29426EX | 1400000 | 4300000 | 850 | 1200 | 236.4 | 181 | 56 | 75 | 41 | 81 | 195 | 225 | 3.0 | 141.5 | 143.0 | 22.3 | 29426EX |

Note: For heavy load application, d_a should be large enough to support the shaft washer rib.