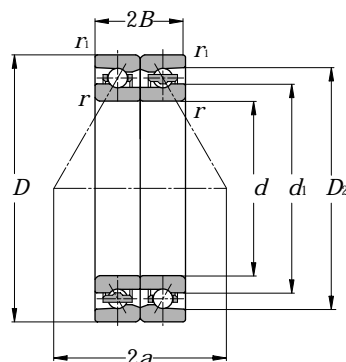


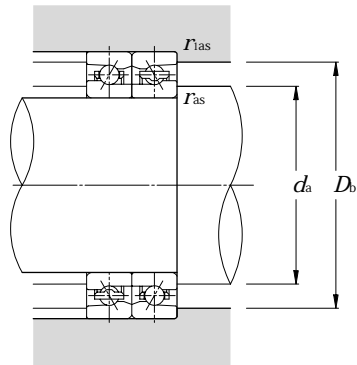
Angular contact ball bearings for axial loads (steel ball type) HTA9A type

Contact angle 30° d 100 ~ 320mm



| Bearing numbers | Boundary dimensions | | | | | | Basic load ratings | | | | Allowable axial load | | Limiting speed | |
|-----------------|---------------------|-----|------|-----------------|-----------------|--|--------------------|----------|--------|----------|----------------------|--------|--------------------|-----------------|
| | mm | | | | | | kN | | kgf | | kN | | min ⁻¹ | |
| | d | D | $2B$ | $r_{1s \min}$ ① | $r_{1s \min}$ ① | | C_a | C_{oa} | C_a | C_{oa} | (at standstill) | | grease lubrication | oil lubrication |
| HTA920ADB | 100 | 140 | 36 | 1.1 | 0.6 | | 40.0 | 109 | 4 050 | 11 100 | 44.5 | 4 550 | 5 200 | 8 300 |
| HTA921ADB | 105 | 145 | 36 | 1.1 | 0.6 | | 41.0 | 115 | 4 150 | 11 700 | 47.5 | 4 850 | 5 000 | 8 000 |
| HTA922ADB | 110 | 150 | 36 | 1.1 | 0.6 | | 41.0 | 118 | 4 200 | 12 000 | 48.5 | 4 950 | 4 800 | 7 700 |
| HTA924ADB | 120 | 165 | 40.5 | 1.1 | 0.6 | | 48.0 | 140 | 4 900 | 14 300 | 58.0 | 5 900 | 4 400 | 7 000 |
| HTA926ADB | 130 | 180 | 45 | 1.5 | 1 | | 57.5 | 173 | 5 850 | 17 600 | 71.5 | 7 300 | 4 000 | 6 500 |
| HTA928ADB | 140 | 190 | 45 | 1.5 | 1 | | 57.5 | 177 | 5 850 | 18 000 | 73.5 | 7 500 | 3 800 | 6 100 |
| HTA930ADB | 150 | 210 | 54 | 2 | 1 | | 80.5 | 243 | 8 200 | 24 800 | 100 | 10 200 | 3 400 | 5 600 |
| HTA932ADB | 160 | 220 | 54 | 2 | 1 | | 82.0 | 255 | 8 350 | 26 100 | 106 | 10 800 | 3 300 | 5 300 |
| HTA934ADB | 170 | 230 | 54 | 2 | 1 | | 84.0 | 268 | 8 550 | 27 300 | 111 | 11 400 | 3 100 | 5 000 |
| HTA936ADB | 180 | 250 | 63 | 2 | 1 | | 127 | 400 | 12 900 | 41 000 | 171 | 17 500 | 2 900 | 4 700 |
| HTA938ADB | 190 | 260 | 63 | 2 | 1 | | 129 | 420 | 13 100 | 43 000 | 180 | 18 400 | 2 800 | 4 400 |
| HTA940ADB | 200 | 280 | 72 | 2.1 | 1.1 | | 152 | 500 | 15 500 | 51 000 | 212 | 21 600 | 2 600 | 4 200 |
| HTA944ADB | 220 | 300 | 72 | 2.1 | 1.1 | | 156 | 535 | 15 900 | 54 500 | 228 | 23 300 | 2 400 | 3 800 |
| HTA948ADB | 240 | 320 | 72 | 2.1 | 1.1 | | 160 | 570 | 16 300 | 58 000 | 245 | 25 000 | 2 200 | 3 600 |
| HTA952ADB | 260 | 360 | 90 | 2.1 | 1.1 | | 210 | 745 | 21 400 | 76 000 | 315 | 32 500 | 2 000 | 3 200 |
| HTA956ADB | 280 | 380 | 90 | 2.1 | 1.1 | | 216 | 795 | 22 000 | 81 000 | 340 | 34 500 | 1 900 | 3 000 |
| HTA960ADB | 300 | 420 | 108 | 3 | 1.1 | | 276 | 1 020 | 28 100 | 104 000 | 430 | 44 000 | 1 700 | 2 800 |
| HTA964ADB | 320 | 440 | 108 | 3 | 1.1 | | 280 | 1 060 | 28 500 | 108 000 | 450 | 46 000 | 1 600 | 2 600 |

① Minimum allowable value for corner radius dimension r or r_1 .



Dynamic equivalent radial load

$$P_a = F_a$$

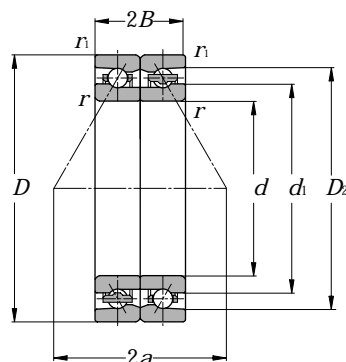
Static equivalent radial load

$$P_{0a} = F_a$$

| Load center mm $2a$ | Space capacity cm ³ Single-row (approx.) | Mass kg Single-row (approx.) | Reference dimensions | | Abutment and fillet dimensions mm | | | | Bearing numbers |
|---------------------------|--|---------------------------------------|----------------------|-------|--------------------------------------|--------------|-----------------|------------------|-----------------|
| | | | d_1 | D_2 | d_a min | D_b max | r_{as} max | r_{1as} max | |
| 87.4 | 48 | 1.60 | 115.6 | 128.9 | 110 | 134 | 1 | 0.6 | HTA920ADB |
| 90.3 | 50 | 1.66 | 120.6 | 133.9 | 115 | 139 | 1 | 0.6 | HTA921ADB |
| 93.2 | 52 | 1.72 | 125.6 | 138.9 | 120 | 144 | 1 | 0.6 | HTA922ADB |
| 102.7 | 72 | 2.40 | 137.7 | 152.2 | 130 | 159 | 1 | 0.6 | HTA924ADB |
| 112.2 | 99 | 3.26 | 149.8 | 165.5 | 142 | 172.5 | 1.5 | 1 | HTA926ADB |
| 118.0 | 104 | 3.46 | 159.8 | 175.5 | 152 | 182.5 | 1.5 | 1 | HTA928ADB |
| 131.2 | 166 | 5.40 | 173.6 | 193.0 | 164 | 202.5 | 2 | 1 | HTA930ADB |
| 136.9 | 175 | 5.70 | 183.6 | 203.0 | 174 | 212.5 | 2 | 1 | HTA932ADB |
| 142.7 | 184 | 6.00 | 193.6 | 213.0 | 184 | 222.5 | 2 | 1 | HTA934ADB |
| 155.9 | 290 | 9.38 | 207.1 | 231.2 | 194 | 242.5 | 2 | 1 | HTA936ADB |
| 161.7 | 304 | 9.82 | 217.1 | 241.2 | 204 | 252.5 | 2 | 1 | HTA938ADB |
| 174.9 | 420 | 13.7 | 231.3 | 257.9 | 217 | 270 | 2 | 1 | HTA940ADB |
| 186.4 | 456 | 14.8 | 251.3 | 277.9 | 237 | 290 | 2 | 1 | HTA944ADB |
| 198.0 | 490 | 16.0 | 271.3 | 297.8 | 257 | 310 | 2 | 1 | HTA948ADB |
| 224.4 | 844 | 27.8 | 299.7 | 331.2 | 277 | 350 | 2 | 1 | HTA952ADB |
| 235.9 | 898 | 28.0 | 319.7 | 351.2 | 297 | 370 | 2 | 1 | HTA956ADB |
| 262.3 | 1 370 | 46.6 | 348.1 | 384.5 | 320 | 410 | 2.5 | 1 | HTA960ADB |
| 273.8 | 1 490 | 49.0 | 368.1 | 404.5 | 340 | 430 | 2.5 | 1 | HTA964ADB |

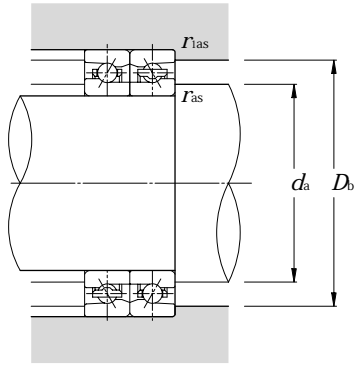
Angular contact ball bearings for axial loads (steel ball type) HTA9 type

Contact angle 40° d 100 ~ 320mm



| Bearing numbers | Boundary dimensions | | | | | Basic load ratings | | | | Allowable axial load | | Limiting speed | |
|-----------------|---------------------|-----|------|-----------------|-----------------|--------------------|----------|--------|----------|----------------------|--------|--------------------|-----------------|
| | mm | | | | | kN | | kgf | | kN | | min ⁻¹ | |
| | d | D | $2B$ | $r_{1s \min}$ ① | $r_{1s \min}$ ① | C_a | C_{0a} | C_a | C_{0a} | (at standstill) | | grease lubrication | oil lubrication |
| HTA920DB | 100 | 140 | 36 | 1.1 | 0.6 | 47.0 | 121 | 4 800 | 12 300 | 20.2 | 2 060 | 4 700 | 7 300 |
| HTA921DB | 105 | 145 | 36 | 1.1 | 0.6 | 48.5 | 128 | 4 950 | 13 000 | 21.4 | 2 180 | 4 500 | 7 000 |
| HTA922DB | 110 | 150 | 36 | 1.1 | 0.6 | 49.0 | 131 | 5 000 | 13 400 | 22.0 | 2 250 | 4 300 | 6 800 |
| HTA924DB | 120 | 165 | 40.5 | 1.1 | 0.6 | 57.0 | 156 | 5 800 | 15 900 | 26.2 | 2 670 | 3 900 | 6 200 |
| HTA926DB | 130 | 180 | 45 | 1.5 | 1 | 68.0 | 193 | 6 950 | 19 600 | 32.5 | 3 300 | 3 600 | 5 700 |
| HTA928DB | 140 | 190 | 45 | 1.5 | 1 | 68.0 | 197 | 6 950 | 20 100 | 33.5 | 3 400 | 3 400 | 5 300 |
| HTA930DB | 150 | 210 | 54 | 2 | 1 | 95.5 | 270 | 9 750 | 27 600 | 45.5 | 4 600 | 3 100 | 4 900 |
| HTA932DB | 160 | 220 | 54 | 2 | 1 | 97.5 | 284 | 9 950 | 29 000 | 48.0 | 4 900 | 2 900 | 4 600 |
| HTA934DB | 170 | 230 | 54 | 2 | 1 | 99.5 | 298 | 10 100 | 30 500 | 50.5 | 5 150 | 2 800 | 4 400 |
| HTA936DB | 180 | 250 | 63 | 2 | 1 | 150 | 445 | 15 300 | 45 500 | 79.0 | 8 050 | 2 600 | 4 100 |
| HTA938DB | 190 | 260 | 63 | 2 | 1 | 153 | 470 | 15 600 | 48 000 | 83.0 | 8 500 | 2 500 | 3 900 |
| HTA940DB | 200 | 280 | 72 | 2.1 | 1.1 | 180 | 555 | 18 400 | 56 500 | 97.5 | 9 950 | 2 300 | 3 700 |
| HTA944DB | 220 | 300 | 72 | 2.1 | 1.1 | 185 | 595 | 18 900 | 60 500 | 105 | 10 700 | 2 200 | 3 400 |
| HTA948DB | 240 | 320 | 72 | 2.1 | 1.1 | 190 | 635 | 19 400 | 64 500 | 113 | 11 500 | 2 000 | 3 100 |
| HTA952DB | 260 | 360 | 90 | 2.1 | 1.1 | 250 | 830 | 25 400 | 84 500 | 146 | 14 900 | 1 800 | 2 800 |
| HTA956DB | 280 | 380 | 90 | 2.1 | 1.1 | 257 | 885 | 26 200 | 90 500 | 156 | 15 900 | 1 700 | 2 700 |
| HTA960DB | 300 | 420 | 108 | 3 | 1.1 | 325 | 1 130 | 33 500 | 115 000 | 198 | 20 200 | 1 600 | 2 400 |
| HTA964DB | 320 | 440 | 108 | 3 | 1.1 | 330 | 1 180 | 34 000 | 120 000 | 207 | 2 110 | 1 500 | 2 300 |

① Minimum allowable value for corner radius dimension r or r_1 .



Dynamic equivalent radial load

$$P_a = F_a$$

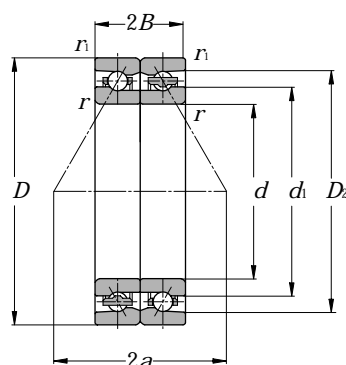
Static equivalent radial load

$$P_{0a} = F_a$$

| Load center mm $2a$ | Space capacity cm ³ Single-row (approx.) | Mass kg Single-row (approx.) | Reference dimensions | | Abutment and fillet dimensions mm | | | | Bearing numbers |
|---------------------------|--|---------------------------------------|----------------------|-------|--------------------------------------|--------------|-----------------|------------------|-----------------|
| | | | d_1 | D_2 | d_a min | D_b max | r_{as} max | r_{1as} max | |
| 118.9 | 48 | 1.60 | 115.6 | 128.8 | 110 | 134 | 1 | 0.6 | HTA920DB |
| 123.1 | 50 | 1.66 | 120.6 | 133.8 | 115 | 139 | 1 | 0.6 | HTA921DB |
| 127.3 | 52 | 1.72 | 125.6 | 138.8 | 120 | 144 | 1 | 0.6 | HTA922DB |
| 140.1 | 72 | 2.40 | 137.7 | 152.1 | 130 | 159 | 1 | 0.6 | HTA924DB |
| 152.8 | 97 | 3.26 | 149.8 | 165.5 | 142 | 172.5 | 1.5 | 1 | HTA926DB |
| 161.2 | 104 | 3.46 | 159.8 | 175.5 | 152 | 182.5 | 1.5 | 1 | HTA928DB |
| 178.4 | 166 | 5.40 | 173.6 | 192.9 | 164 | 202.5 | 2 | 1 | HTA930DB |
| 186.8 | 175 | 5.70 | 183.6 | 202.9 | 174 | 212.5 | 2 | 1 | HTA932DB |
| 195.2 | 184 | 6.00 | 193.6 | 212.9 | 184 | 222.5 | 2 | 1 | HTA934DB |
| 212.3 | 290 | 9.38 | 207.1 | 231.1 | 194 | 242.5 | 2 | 1 | HTA936DB |
| 220.7 | 304 | 9.82 | 217.1 | 241.1 | 204 | 252.5 | 2 | 1 | HTA938DB |
| 237.9 | 420 | 13.7 | 231.3 | 257.8 | 217 | 270 | 2 | 1 | HTA940DB |
| 254.6 | 456 | 14.8 | 251.3 | 277.8 | 237 | 290 | 2 | 1 | HTA944DB |
| 271.4 | 490 | 16.0 | 271.3 | 297.7 | 257 | 310 | 2 | 1 | HTA948DB |
| 305.7 | 844 | 27.8 | 299.7 | 331.1 | 277 | 350 | 2 | 1 | HTA952DB |
| 322.5 | 898 | 28.0 | 319.7 | 351.1 | 297 | 370 | 2 | 1 | HTA956DB |
| 356.7 | 1 370 | 46.6 | 348.1 | 384.5 | 320 | 410 | 2.5 | 1 | HTA960DB |
| 373.5 | 1 490 | 49.0 | 368.1 | 404.4 | 340 | 430 | 2.5 | 1 | HTA964DB |

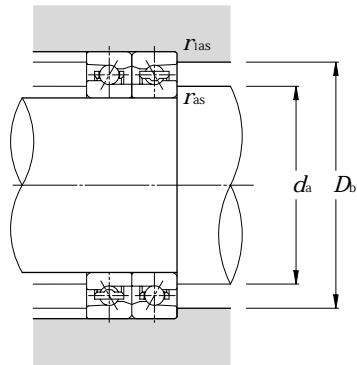
Angular contact ball bearings for axial loads (steel ball type) HTA0A type

Contact angle 30° d 50 ~ 320mm



| Bearing numbers | Boundary dimensions | | | | | | Basic load ratings | | | | Allowable axial load | | Limiting speed | |
|-----------------|---------------------|-----|-------|----------------------------|----------------------------|-------|--------------------|--------|----------|-----------------------|-----------------------|-------|--------------------|--|
| | mm | | | | | | kN | | kgf | | kN (at standstill) | kgf | min ⁻¹ | |
| | d | D | $2B$ | $r_{1s \min}$ ^① | $r_{1s \min}$ ^① | C_a | C_{0a} | C_a | C_{0a} | grease lubrication | | | oil lubrication | |
| HTA010ADB | 50 | 80 | 28.5 | 1 | 0.6 | 24.7 | 48.5 | 2 520 | 4 950 | 19.4 | 1 980 | 9 500 | 15 400 | |
| HTA011ADB | 55 | 90 | 33 | 1.1 | 0.6 | 26.8 | 57.5 | 2 730 | 5 850 | 22.7 | 2 310 | 8 600 | 13 800 | |
| HTA012ADB | 60 | 95 | 33 | 1.1 | 0.6 | 28.1 | 63.0 | 2 860 | 6 400 | 24.9 | 2 540 | 8 000 | 12 900 | |
| HTA013ADB | 65 | 100 | 33 | 1.1 | 0.6 | 28.5 | 65.0 | 2 900 | 6 650 | 26.0 | 2 650 | 7 500 | 12 100 | |
| HTA014ADB | 70 | 110 | 36 | 1.1 | 0.6 | 35.0 | 82.0 | 3 550 | 8 350 | 32.5 | 3 350 | 6 900 | 11 100 | |
| HTA015ADB | 75 | 115 | 36 | 1.1 | 0.6 | 37.0 | 91.5 | 3 800 | 9 300 | 36.5 | 3 750 | 6 500 | 10 500 | |
| HTA016ADB | 80 | 125 | 40.5 | 1.1 | 0.6 | 42.5 | 105 | 4 350 | 10 700 | 42.0 | 4 300 | 6 100 | 9 800 | |
| HTA017ADB | 85 | 130 | 40.5 | 1.1 | 0.6 | 43.0 | 108 | 4 400 | 11 100 | 43.5 | 4 450 | 5 800 | 9 300 | |
| HTA018ADB | 90 | 140 | 45 | 1.5 | 1 | 49.5 | 127 | 5 050 | 13 000 | 51.0 | 5 200 | 5 400 | 8 700 | |
| HTA019ADB | 95 | 145 | 45 | 1.5 | 1 | 50.5 | 131 | 5 150 | 13 400 | 35.0 | 5 400 | 5 200 | 8 300 | |
| HTA020ADB | 100 | 150 | 45 | 1.5 | 1 | 52.5 | 140 | 5 350 | 14 300 | 57.0 | 5 800 | 5 000 | 8 000 | |
| HTA021ADB | 105 | 160 | 49.5 | 2 | 1 | 60.0 | 163 | 6 100 | 16 600 | 66.0 | 6 700 | 4 700 | 7 500 | |
| HTA022ADB | 110 | 170 | 54 | 2 | 1 | 74.0 | 200 | 7 550 | 20 400 | 80.5 | 8 200 | 4 400 | 7 100 | |
| HTA024ADB | 120 | 180 | 54 | 2 | 1 | 75.0 | 206 | 7 650 | 21 000 | 83.5 | 8 500 | 4 100 | 6 700 | |
| HTA026ADB | 130 | 200 | 63 | 2 | 1 | 108 | 293 | 11 000 | 29 900 | 121 | 12 400 | 3 800 | 6 100 | |
| HTA028ADB | 140 | 210 | 63 | 2 | 1 | 111 | 315 | 11 300 | 32 000 | 130 | 13 300 | 3 500 | 5 700 | |
| HTA030ADB | 150 | 225 | 67.5 | 2.1 | 1.1 | 114 | 330 | 11 600 | 34 000 | 140 | 14 200 | 3 300 | 5 300 | |
| HTA032ADB | 160 | 240 | 72 | 2.1 | 1.1 | 134 | 390 | 13 700 | 40 000 | 163 | 16 600 | 3 100 | 5 000 | |
| HTA034ADB | 170 | 260 | 81 | 2.1 | 1.1 | 153 | 450 | 15 600 | 46 000 | 187 | 19 000 | 2 900 | 4 700 | |
| HTA036ADB | 180 | 280 | 90 | 2.1 | 1.1 | 177 | 530 | 18 100 | 54 000 | 218 | 22 300 | 2 700 | 4 300 | |
| HTA038ADB | 190 | 290 | 90 | 2.1 | 1.1 | 179 | 545 | 18 300 | 55 500 | 226 | 23 100 | 2 600 | 4 200 | |
| HTA040ADB | 200 | 310 | 99 | 2.1 | 1.1 | 201 | 610 | 20 500 | 62 000 | 253 | 25 800 | 2 400 | 3 900 | |
| HTA044ADB | 220 | 340 | 108 | 3 | 1.1 | 252 | 775 | 25 700 | 79 000 | 320 | 32 500 | 2 200 | 3 600 | |
| HTA048ADB | 240 | 360 | 108 | 3 | 1.1 | 261 | 825 | 26 600 | 84 000 | 340 | 35 000 | 2 100 | 3 300 | |
| HTA052ADB | 260 | 400 | 123 | 4 | 1.5 | 310 | 1 040 | 31 500 | 106 000 | 430 | 44 000 | 1 900 | 3 000 | |
| HTA056ADB | 280 | 420 | 123 | 4 | 1.5 | 315 | 1 110 | 32 500 | 113 000 | 460 | 47 000 | 1 800 | 2 900 | |
| HTA060ADB | 300 | 460 | 142.5 | 4 | 1.5 | 360 | 1 330 | 37 000 | 135 000 | 550 | 56 000 | 1 600 | 2 600 | |
| HTA064ADB | 320 | 480 | 142.5 | 4 | 1.5 | 365 | 1 360 | 37 000 | 139 000 | 565 | 57 500 | 1 600 | 2 500 | |

① Minimum allowable value for corner radius dimension r or r_1 .



Dynamic equivalent radial load

$$P_a = F_a$$

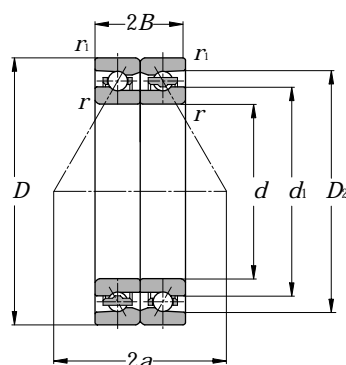
Static equivalent radial load

$$P_{0a} = F_a$$

| Load center mm <i>2a</i> | Space capacity cm ³ Single-row (approx.) | Mass kg Single-row (approx.) | Reference dimensions | | Abutment and fillet dimensions mm | | | | Bearing numbers |
|--------------------------------|---|------------------------------------|-----------------------|-----------------------|--------------------------------------|------------------------------|-------------------------------|--------------------------------|-----------------|
| | | | <i>d</i> ₁ | <i>D</i> ₂ | <i>d</i> _a min | <i>D</i> _b max | <i>r</i> _{as} max | <i>r</i> _{1as} max | |
| 51.9 | 17 | 0.480 | 61.0 | 73.1 | 57.5 | 74 | 1 | 0.6 | HTA010ADB |
| 58.5 | 24 | 0.750 | 68.5 | 80.6 | 65 | 84 | 1 | 0.6 | HTA011ADB |
| 61.4 | 26 | 0.810 | 73.5 | 85.6 | 70 | 89 | 1 | 0.6 | HTA012ADB |
| 64.3 | 28 | 0.860 | 78.5 | 90.6 | 75 | 94 | 1 | 0.6 | HTA013ADB |
| 70.1 | 36 | 1.19 | 85.6 | 98.9 | 80 | 104 | 1 | 0.6 | HTA014ADB |
| 73.0 | 38 | 1.26 | 90.6 | 103.9 | 85 | 109 | 1 | 0.6 | HTA015ADB |
| 79.6 | 52 | 1.73 | 97.7 | 112.3 | 90 | 119 | 1 | 0.6 | HTA016ADB |
| 82.5 | 55 | 1.82 | 102.7 | 117.3 | 95 | 124 | 1 | 0.6 | HTA017ADB |
| 89.1 | 73 | 2.40 | 109.8 | 125.6 | 102 | 132.5 | 1.5 | 1 | HTA018ADB |
| 92.0 | 76 | 2.52 | 114.8 | 130.6 | 107 | 137.5 | 1.5 | 1 | HTA019ADB |
| 94.9 | 79 | 2.62 | 119.8 | 135.6 | 112 | 142.5 | 1.5 | 1 | HTA020ADB |
| 101.5 | 101 | 3.38 | 126.9 | 143.9 | 119 | 152.5 | 2 | 1 | HTA021ADB |
| 108.1 | 129 | 4.22 | 133.6 | 153.1 | 124 | 162.5 | 2 | 1 | HTA022ADB |
| 113.8 | 139 | 4.50 | 143.6 | 163.0 | 134 | 172.5 | 2 | 1 | HTA024ADB |
| 127.1 | 214 | 6.66 | 157.1 | 181.3 | 144 | 192.5 | 2 | 1 | HTA026ADB |
| 132.8 | 226 | 7.08 | 167.1 | 191.3 | 154 | 202.5 | 2 | 1 | HTA028ADB |
| 142.3 | 276 | 8.82 | 179.6 | 203.8 | 167 | 215 | 2 | 1 | HTA030ADB |
| 151.8 | 338 | 10.6 | 191.3 | 217.9 | 177 | 230 | 2 | 1 | HTA032ADB |
| 165.0 | 462 | 14.5 | 205.5 | 234.6 | 187 | 250 | 2 | 1 | HTA034ADB |
| 178.2 | 636 | 20.6 | 219.7 | 251.3 | 197 | 270 | 2 | 1 | HTA036ADB |
| 184.0 | 668 | 21.4 | 229.7 | 261.3 | 207 | 280 | 2 | 1 | HTA038ADB |
| 197.1 | 856 | 27.4 | 243.9 | 278.0 | 317 | 300 | 2 | 1 | HTA040ADB |
| 216.1 | 1 150 | 35.8 | 267.3 | 306.2 | 240 | 330 | 2.5 | 1 | HTA044ADB |
| 227.6 | 1 230 | 38.2 | 287.3 | 326.2 | 260 | 350 | 2.5 | 1 | HTA048ADB |
| 252.6 | 1 760 | 56.2 | 315.7 | 359.5 | 283 | 388 | 3 | 1.5 | HTA052ADB |
| 264.1 | 1 860 | 59.6 | 335.7 | 379.5 | 303 | 408 | 3 | 1.5 | HTA056ADB |
| 291.2 | 2 680 | 85.6 | 364.1 | 412.9 | 323 | 448 | 3 | 1.5 | HTA060ADB |
| 302.8 | 2 840 | 90.0 | 384.1 | 432.9 | 343 | 468 | 3 | 1.5 | HTA064ADB |

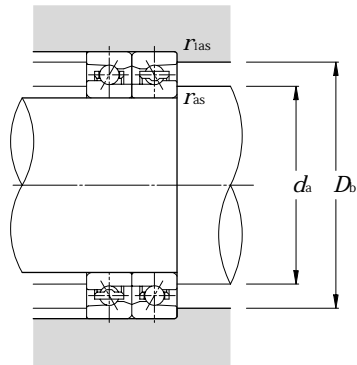
Angular contact ball bearings for axial loads (steel ball type) HTA0 type

Contact angle 40° d 50 ~ 320mm



| Bearing numbers | Boundary dimensions | | | | | | Basic load ratings | | | | Allowable axial load | | Limiting speed | |
|-----------------|---------------------|-----|-------|-----------------|-----------------|-------|--------------------|--------|----------|-----------------------|-----------------------|-------|--------------------|--|
| | mm | | | | | | kN | | kgf | | kN (at standstill) | kgf | min ⁻¹ | |
| | d | D | $2B$ | $r_{1s \min}$ ① | $r_{1s \min}$ ① | C_a | C_{0a} | C_a | C_{0a} | grease lubrication | | | oil lubrication | |
| HTA010DB | 50 | 80 | 28.5 | 1 | 0.6 | 29.6 | 55.5 | 3 000 | 5 650 | 8.8 | 895 | 8 600 | 13 500 | |
| HTA011DB | 55 | 90 | 33 | 1.1 | 0.6 | 32.0 | 64.0 | 3 250 | 6 500 | 10.3 | 1 050 | 7 700 | 12 100 | |
| HTA012DB | 60 | 95 | 33 | 1.1 | 0.6 | 33.5 | 69.5 | 3 400 | 7 100 | 11.3 | 1 150 | 7 200 | 11 400 | |
| HTA013DB | 65 | 100 | 33 | 1.1 | 0.6 | 34.0 | 72.0 | 3 450 | 7 350 | 11.8 | 1 200 | 6 800 | 10 700 | |
| HTA014DB | 70 | 110 | 36 | 1.1 | 0.6 | 41.5 | 91.0 | 4 250 | 9 300 | 14.8 | 1 510 | 6 200 | 9 800 | |
| HTA015DB | 75 | 115 | 36 | 1.1 | 0.6 | 44.0 | 101 | 4 500 | 10 300 | 16.6 | 1 690 | 5 900 | 9 300 | |
| HTA016DB | 80 | 125 | 40.5 | 1.1 | 0.6 | 50.5 | 117 | 5 150 | 11 900 | 19.1 | 1 940 | 5 500 | 8 600 | |
| HTA017DB | 85 | 130 | 40.5 | 1.1 | 0.6 | 51.0 | 120 | 5 200 | 12 300 | 19.8 | 2 020 | 5 200 | 8 200 | |
| HTA018DB | 90 | 140 | 45 | 1.5 | 1 | 59.5 | 141 | 6 050 | 14 400 | 23.2 | 2 370 | 4 900 | 7 700 | |
| HTA019DB | 95 | 145 | 45 | 1.5 | 1 | 60.0 | 146 | 6 100 | 14 900 | 24.0 | 2 450 | 4 700 | 7 300 | |
| HTA020DB | 100 | 150 | 45 | 1.5 | 1 | 62.0 | 156 | 6 350 | 15 900 | 25.7 | 2 620 | 4 500 | 7 000 | |
| HTA021DB | 105 | 160 | 49.5 | 2 | 1 | 71.0 | 181 | 7 250 | 18 400 | 29.8 | 3 050 | 4 200 | 6 600 | |
| HTA022DB | 110 | 170 | 54 | 2 | 1 | 88.5 | 222 | 9 000 | 22 700 | 36.5 | 3 700 | 4 000 | 6 300 | |
| HTA024DB | 120 | 180 | 54 | 2 | 1 | 89.0 | 228 | 9 050 | 23 300 | 37.5 | 3 850 | 3 700 | 5 900 | |
| HTA026DB | 130 | 200 | 63 | 2 | 1 | 128 | 325 | 13 000 | 33 000 | 56.0 | 5 700 | 3 400 | 5 300 | |
| HTA028DB | 140 | 210 | 63 | 2 | 1 | 132 | 345 | 13 500 | 35 500 | 60.0 | 6 150 | 3 200 | 5 000 | |
| HTA030DB | 150 | 225 | 67.5 | 2.1 | 1.1 | 136 | 370 | 13 800 | 37 500 | 64.5 | 6 550 | 3 000 | 4 700 | |
| HTA032DB | 160 | 240 | 72 | 2.1 | 1.1 | 159 | 435 | 16 200 | 44 000 | 75.0 | 7 650 | 2 800 | 4 400 | |
| HTA034DB | 170 | 260 | 81 | 2.1 | 1.1 | 182 | 500 | 18 600 | 51 000 | 86.0 | 8 750 | 2 600 | 4 100 | |
| HTA036DB | 180 | 280 | 90 | 2.1 | 1.1 | 211 | 585 | 21 500 | 60 000 | 100 | 10 200 | 2 400 | 3 800 | |
| HTA038DB | 190 | 290 | 90 | 2.1 | 1.1 | 214 | 605 | 21 800 | 61 500 | 104 | 10 600 | 2 300 | 3 700 | |
| HTA040DB | 200 | 310 | 99 | 2.1 | 1.1 | 240 | 680 | 24 400 | 69 000 | 116 | 11 800 | 2 200 | 3 500 | |
| HTA044DB | 220 | 340 | 108 | 3 | 1.1 | 300 | 860 | 30 500 | 87 500 | 146 | 14 900 | 2 000 | 3 100 | |
| HTA048DB | 240 | 360 | 108 | 3 | 1.1 | 310 | 915 | 31 500 | 93 000 | 156 | 15 900 | 1 900 | 2 900 | |
| HTA052DB | 260 | 400 | 123 | 4 | 1.5 | 365 | 1 160 | 37 500 | 118 000 | 197 | 20 100 | 1 700 | 2 700 | |
| HTA056DB | 280 | 420 | 123 | 4 | 1.5 | 375 | 1 230 | 38 500 | 125 000 | 210 | 21 400 | 1 600 | 2 500 | |
| HTA060DB | 300 | 460 | 142.5 | 4 | 1.5 | 430 | 1 470 | 44 000 | 150 000 | 250 | 25 500 | 1 500 | 2 300 | |
| HTA064DB | 320 | 480 | 142.5 | 4 | 1.5 | 435 | 1 520 | 44 000 | 155 000 | 259 | 26 400 | 1 400 | 2 200 | |

① Minimum allowable value for corner radius dimension r or r_1 .



Dynamic equivalent radial load

$$P_a = F_a$$

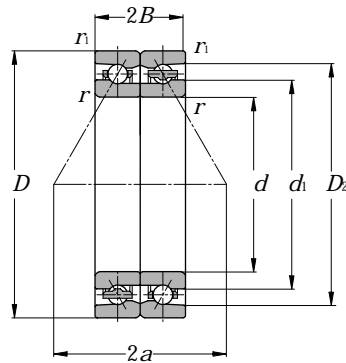
Static equivalent radial load

$$P_{0a} = F_a$$

| Load center mm $2a$ | Space capacity cm ³ Single-row (approx.) | Mass kg Single-row (approx.) | Reference dimensions | | Abutment and fillet dimensions mm | | | | Bearing numbers |
|---------------------------|--|---------------------------------------|----------------------|-------|--------------------------------------|--------------|-----------------|------------------|-----------------|
| | | | d_1 | D_2 | d_a min | D_b max | r_{as} max | r_{1as} max | |
| 69.0 | 17 | 0.48 | 61.0 | 73.0 | 57.5 | 74 | 1 | 0.6 | HTA010DB |
| 77.6 | 24 | 0.75 | 68.5 | 80.6 | 65 | 84 | 1 | 0.6 | HTA011DB |
| 81.8 | 26 | 0.81 | 73.5 | 85.6 | 70 | 89 | 1 | 0.6 | HTA012DB |
| 85.9 | 28 | 0.86 | 78.5 | 90.6 | 75 | 94 | 1 | 0.6 | HTA013DB |
| 93.8 | 36 | 1.19 | 85.6 | 98.9 | 80 | 104 | 1 | 0.6 | HTA014DB |
| 98.0 | 38 | 1.26 | 90.6 | 103.9 | 85 | 109 | 1 | 0.6 | HTA015DB |
| 106.5 | 52 | 1.73 | 97.7 | 112.2 | 90 | 119 | 1 | 0.6 | HTA016DB |
| 110.7 | 55 | 1.82 | 102.7 | 117.2 | 95 | 124 | 1 | 0.6 | HTA017DB |
| 119.3 | 73 | 2.40 | 109.8 | 125.5 | 102 | 132.5 | 1.5 | 1 | HTA018DB |
| 123.5 | 76 | 2.52 | 114.8 | 130.5 | 107 | 137.5 | 1.5 | 1 | HTA019DB |
| 127.7 | 79 | 2.62 | 119.8 | 135.5 | 112 | 142.5 | 1.5 | 1 | HTA020DB |
| 136.2 | 101 | 3.38 | 126.9 | 143.9 | 119 | 152.5 | 2 | 1 | HTA021DB |
| 144.8 | 129 | 4.22 | 133.6 | 153.0 | 124 | 162.5 | 2 | 1 | HTA022DB |
| 153.2 | 139 | 4.50 | 143.6 | 163.0 | 134 | 172.5 | 2 | 1 | HTA024DB |
| 170.4 | 214 | 6.66 | 157.1 | 181.2 | 144 | 192.5 | 2 | 1 | HTA026DB |
| 178.8 | 226 | 7.08 | 167.1 | 191.2 | 154 | 202.5 | 2 | 1 | HTA028DB |
| 191.5 | 276 | 8.82 | 179.6 | 203.8 | 167 | 215 | 2 | 1 | HTA030DB |
| 204.3 | 338 | 10.6 | 191.3 | 217.9 | 177 | 230 | 2 | 1 | HTA032DB |
| 221.4 | 462 | 14.5 | 205.5 | 234.5 | 187 | 250 | 2 | 1 | HTA034DB |
| 238.6 | 636 | 20.6 | 219.7 | 251.2 | 197 | 270 | 2 | 1 | HTA036DB |
| 246.9 | 668 | 21.4 | 229.7 | 261.2 | 207 | 280 | 2 | 1 | HTA038DB |
| 264.1 | 856 | 27.4 | 243.9 | 277.9 | 217 | 300 | 2 | 1 | HTA040DB |
| 289.6 | 1 150 | 35.8 | 267.3 | 306.1 | 240 | 330 | 2.5 | 1 | HTA044DB |
| 306.4 | 1 230 | 38.2 | 287.3 | 326.1 | 260 | 350 | 2.5 | 1 | HTA048DB |
| 339.2 | 1 760 | 56.2 | 315.7 | 359.4 | 283 | 388 | 3 | 1.5 | HTA052DB |
| 356.0 | 1 860 | 59.6 | 335.7 | 379.4 | 303 | 408 | 3 | 1.5 | HTA056DB |
| 391.0 | 2 680 | 85.6 | 364.1 | 412.8 | 323 | 448 | 3 | 1.5 | HTA060DB |
| 407.7 | 2 840 | 90.0 | 384.1 | 432.7 | 343 | 468 | 3 | 1.5 | HTA064DB |

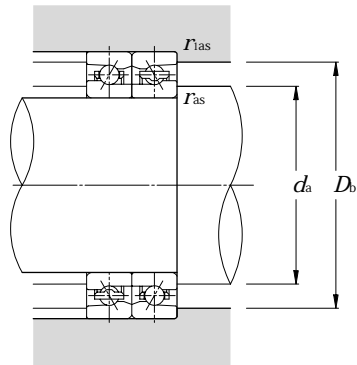
Angular contact ball bearings for axial loads (ceramic ball type) 5S-HTA0A type

Contact angle 30° d 50 ~ 130mm



| Bearing numbers | Boundary dimensions | | | | | | Basic load ratings | | | | Allowable axial load | | Limiting speed | |
|-----------------|---------------------|-----|------|--------------------------|--------------------------|-------|--------------------|--------|-------------|--------------------|-----------------------|--------|-------------------|--|
| | mm | | | | | | dynamic kN | | dynamic kgf | | kN (at standstill) | kgf | min ⁻¹ | |
| | d | D | $2B$ | $r_{1s \min}^{\text{①}}$ | $r_{1s \min}^{\text{①}}$ | C_a | C_{oa} | C_a | C_{oa} | grease lubrication | | | oil lubrication | |
| 5S-HTA010ADB | 50 | 80 | 28.5 | 1 | 0.6 | 24.7 | 33.5 | 2 520 | 3 400 | 21.2 | 2 160 | 11 500 | 18 300 | |
| 5S-HTA011ADB | 55 | 90 | 33 | 1.1 | 0.6 | 26.8 | 40.0 | 2 730 | 4 050 | 24.4 | 2 490 | 10 300 | 16 400 | |
| 5S-HTA012ADB | 60 | 95 | 33 | 1.1 | 0.6 | 28.1 | 43.5 | 2 860 | 4 450 | 26.5 | 2 710 | 9 700 | 15 400 | |
| 5S-HTA013ADB | 65 | 100 | 33 | 1.1 | 0.6 | 28.5 | 45.0 | 2 900 | 4 600 | 27.5 | 2 800 | 9 100 | 14 400 | |
| 5S-HTA014ADB | 70 | 110 | 36 | 1.1 | 0.6 | 35.0 | 57.0 | 3 550 | 5 800 | 34.5 | 3 550 | 8 300 | 13 200 | |
| 5S-HTA015ADB | 75 | 115 | 36 | 1.1 | 0.6 | 37.0 | 63.5 | 3 800 | 6 450 | 38.5 | 3 950 | 7 900 | 12 500 | |
| 5S-HTA016ADB | 80 | 125 | 40.5 | 1.1 | 0.6 | 42.5 | 73.0 | 4 350 | 7 400 | 44.5 | 4 550 | 7 300 | 11 600 | |
| 5S-HTA017ADB | 85 | 130 | 40.5 | 1.1 | 0.6 | 43.0 | 75.0 | 4 400 | 7 650 | 46.0 | 4 650 | 7 000 | 11 100 | |
| 5S-HTA018ADB | 90 | 140 | 45 | 1.5 | 1 | 49.5 | 88.5 | 5 050 | 9 000 | 54.0 | 5 500 | 6 500 | 10 400 | |
| 5S-HTA019ADB | 95 | 145 | 45 | 1.5 | 1 | 50.5 | 91.0 | 5 150 | 9 300 | 55.5 | 5 650 | 6 300 | 9 900 | |
| 5S-HTA020ADB | 100 | 150 | 45 | 1.5 | 1 | 52.5 | 97.0 | 5 350 | 9 900 | 59.0 | 6 050 | 6 000 | 9 500 | |
| 5S-HTA021ADB | 105 | 160 | 49.5 | 2 | 1 | 60.0 | 113 | 6 100 | 11 500 | 68.5 | 7 000 | 5 700 | 9 000 | |
| 5S-HTA022ADB | 110 | 170 | 54 | 2 | 1 | 74.0 | 139 | 7 550 | 14 100 | 84.5 | 8 600 | 5400 | 8 500 | |
| 5S-HTA024ADB | 120 | 180 | 54 | 2 | 1 | 75.0 | 143 | 7 650 | 14 500 | 87.0 | 8 850 | 5 000 | 7 900 | |
| 5S-HTA026ADB | 130 | 200 | 63 | 2 | 1 | 108 | 203 | 11 000 | 20 700 | 124 | 12 600 | 4 500 | 7 200 | |

① Minimum allowable value for corner radius dimension r or r_1 .



Dynamic equivalent radial load

$$P_a = F_a$$

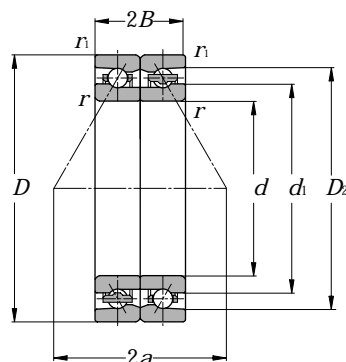
Static equivalent radial load

$$P_{0a} = F_a$$

| Load center mm $2a$ | Space capacity cm ³ Single-row (approx.) | Mass kg Single-row (approx.) | Reference dimensions | | Abutment and fillet dimensions mm | | | | Bearing numbers |
|---------------------------|--|---------------------------------------|----------------------|-------|--------------------------------------|--------------|-----------------|------------------|-----------------|
| | | | d_1 | D_2 | d_a min | D_b max | r_{as} max | r_{1as} max | |
| 51.9 | 17 | 0.43 | 61.0 | 73.1 | 57.5 | 74 | 1 | 0.6 | 5S-HTA010ADB |
| 58.5 | 24 | 0.70 | 68.5 | 80.6 | 65 | 84 | 1 | 0.6 | 5S-HTA011ADB |
| 61.4 | 26 | 0.75 | 73.5 | 85.6 | 70 | 89 | 1 | 0.6 | 5S-HTA012ADB |
| 64.3 | 28 | 0.80 | 78.5 | 90.6 | 75 | 94 | 1 | 0.6 | 5S-HTA013ADB |
| 70.1 | 36 | 1.11 | 85.6 | 98.9 | 80 | 104 | 1 | 0.6 | 5S-HTA014ADB |
| 73.0 | 38 | 1.17 | 90.6 | 103.9 | 85 | 109 | 1 | 0.6 | 5S-HTA015ADB |
| 79.6 | 52 | 1.62 | 97.7 | 112.3 | 90 | 119 | 1 | 0.6 | 5S-HTA016ADB |
| 82.5 | 55 | 1.71 | 102.7 | 117.3 | 95 | 124 | 1 | 0.6 | 5S-HTA017ADB |
| 89.1 | 73 | 2.26 | 109.8 | 125.6 | 102 | 132.5 | 1.5 | 1 | 5S-HTA018ADB |
| 92.0 | 76 | 2.38 | 114.8 | 130.6 | 107 | 137.5 | 1.5 | 1 | 5S-HTA019ADB |
| 94.9 | 79 | 2.46 | 119.8 | 135.6 | 112 | 142.5 | 1.5 | 1 | 5S-HTA020ADB |
| 101.5 | 101 | 3.18 | 126.9 | 143.9 | 119 | 152.5 | 2 | 1 | 5S-HTA021ADB |
| 108.1 | 129 | 3.94 | 133.6 | 153.1 | 124 | 162.5 | 2 | 1 | 5S-HTA022ADB |
| 113.8 | 139 | 4.21 | 143.6 | 163.0 | 134 | 172.5 | 2 | 1 | 5S-HTA024ADB |
| 127.1 | 214 | 6.16 | 157.1 | 181.3 | 144 | 192.5 | 2 | 1 | 5S-HTA026ADB |

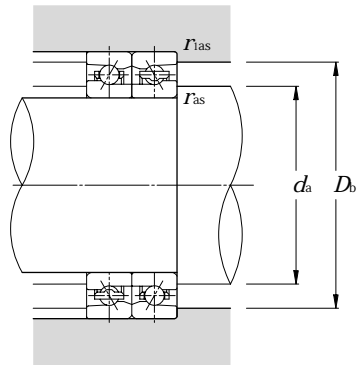
Angular contact ball bearings for axial loads (ceramic ball type) 5S-HTA0 type

Contact angle 40° d 50 ~ 130mm°



| Bearing numbers | Boundary dimensions | | | | | Basic load ratings | | | | Allowable axial load | | Limiting speed | |
|-----------------|---------------------|-----|------|---------------------------------|---------------------------------|--------------------|----------|-------------|----------|-----------------------|-------|--------------------|-----------------|
| | mm | | | | | dynamic kN | | dynamic kgf | | kN (at standstill) | kgf | min ⁻¹ | |
| | d | D | $2B$ | $r_{1s \text{ min}}^{\text{①}}$ | $r_{1s \text{ min}}^{\text{①}}$ | C_a | C_{oa} | C_a | C_{oa} | | | grease lubrication | oil lubrication |
| 5S-HTA010DB | 50 | 80 | 28.5 | 1 | 0.6 | 29.6 | 38.5 | 3 000 | 3 900 | 10.5 | 1 070 | 10 600 | 16 300 |
| 5S-HTA011DB | 55 | 90 | 33 | 1.1 | 0.6 | 32.0 | 44.5 | 3 250 | 4 500 | 12.3 | 1 250 | 9 500 | 14 600 |
| 5S-HTA012DB | 60 | 95 | 33 | 1.1 | 0.6 | 33.5 | 48.0 | 3 400 | 4 900 | 13.5 | 1 370 | 8 900 | 13 700 |
| 5S-HTA013DB | 65 | 100 | 33 | 1.1 | 0.6 | 34.0 | 50.0 | 3 450 | 5 100 | 14.1 | 1 430 | 8 400 | 12 800 |
| 5S-HTA014DB | 70 | 110 | 36 | 1.1 | 0.6 | 41.5 | 63.0 | 4 250 | 6 450 | 17.7 | 1 810 | 7 700 | 11 800 |
| 5S-HTA015DB | 75 | 115 | 36 | 1.1 | 0.6 | 44.0 | 70.5 | 4 500 | 7 150 | 19.9 | 2 030 | 7 300 | 11 200 |
| 5S-HTA016DB | 80 | 125 | 40.5 | 1.1 | 0.6 | 50.5 | 81.0 | 5 150 | 8 250 | 22.8 | 2 320 | 6 700 | 10 300 |
| 5S-HTA017DB | 85 | 130 | 40.5 | 1.1 | 0.6 | 51.0 | 83.5 | 5 200 | 8 500 | 23.7 | 2 410 | 6 400 | 9 900 |
| 5S-HTA018DB | 90 | 140 | 45 | 1.5 | 1 | 59.5 | 98.0 | 6 050 | 10 000 | 27.8 | 2 830 | 6 000 | 9 200 |
| 5S-HTA019DB | 95 | 145 | 45 | 1.5 | 1 | 60.0 | 101 | 6 100 | 10 300 | 28.8 | 2 930 | 5 800 | 8 800 |
| 5S-HTA020DB | 100 | 150 | 45 | 1.5 | 1 | 62.0 | 108 | 6 350 | 11 000 | 31.0 | 3 150 | 5 500 | 8 500 |
| 5S-HTA021DB | 105 | 160 | 49.5 | 2 | 1 | 71.0 | 125 | 7 250 | 12 800 | 35.5 | 3 650 | 5 200 | 8 000 |
| 5S-HTA022DB | 110 | 170 | 54 | 2 | 1 | 88.5 | 154 | 9 000 | 15 700 | 43.5 | 4 450 | 4 900 | 7 600 |
| 5S-HTA024DB | 120 | 180 | 54 | 2 | 1 | 89.0 | 158 | 9 050 | 16 100 | 45.0 | 4 600 | 4 600 | 7 100 |
| 5S-HTA026DB | 130 | 200 | 63 | 2 | 1 | 128 | 225 | 13 000 | 23 000 | 67.0 | 6 850 | 4 200 | 6 400 |

① Minimum allowable value for corner radius dimension r or r_1 .



Dynamic equivalent radial load

$$P_a = F_a$$

Static equivalent radial load

$$P_{0a} = F_a$$

| Load center mm $2a$ | Space capacity cm ³ Single-row (approx.) | Mass kg Single-row (approx.) | Reference dimensions | | Abutment and fillet dimensions mm | | | | Bearing numbers |
|---------------------------|--|---------------------------------------|----------------------|-------|--------------------------------------|--------------|-----------------|------------------|-----------------|
| | | | d_1 | D_2 | d_a min | D_b max | r_{as} max | r_{1as} max | |
| 69.0 | 17 | 0.43 | 61.0 | 73.0 | 57.5 | 74 | 1 | 0.6 | 5S-HTA010DB |
| 77.6 | 24 | 0.70 | 68.5 | 80.6 | 65 | 84 | 1 | 0.6 | 5S-HTA011DB |
| 81.8 | 26 | 0.75 | 73.5 | 85.6 | 70 | 89 | 1 | 0.6 | 5S-HTA012DB |
| 85.9 | 28 | 0.80 | 78.5 | 90.6 | 75 | 94 | 1 | 0.6 | 5S-HTA013DB |
| 93.8 | 36 | 1.11 | 85.6 | 98.9 | 80 | 104 | 1 | 0.6 | 5S-HTA014DB |
| 98.0 | 38 | 1.17 | 90.6 | 103.9 | 85 | 109 | 1 | 0.6 | 5S-HTA015DB |
| 106.5 | 52 | 1.62 | 97.7 | 112.2 | 90 | 119 | 1 | 0.6 | 5S-HTA016DB |
| 110.7 | 55 | 1.71 | 102.7 | 117.2 | 95 | 124 | 1 | 0.6 | 5S-HTA017DB |
| 119.3 | 73 | 2.26 | 109.8 | 125.5 | 102 | 132.5 | 1.5 | 1 | 5S-HTA018DB |
| 123.5 | 76 | 2.38 | 114.8 | 130.5 | 107 | 137.5 | 1.5 | 1 | 5S-HTA019DB |
| 127.7 | 79 | 2.46 | 119.8 | 135.5 | 112 | 142.5 | 1.5 | 1 | 5S-HTA020DB |
| 136.2 | 101 | 3.18 | 126.9 | 143.9 | 119 | 152.5 | 2 | 1 | 5S-HTA021DB |
| 144.8 | 129 | 3.94 | 133.6 | 153.0 | 124 | 162.5 | 2 | 1 | 5S-HTA022DB |
| 153.2 | 139 | 4.21 | 143.6 | 163.0 | 134 | 172.5 | 2 | 1 | 5S-HTA024DB |
| 170.4 | 214 | 6.16 | 157.1 | 181.2 | 144 | 192.5 | 2 | 1 | 5S-HTA026DB |