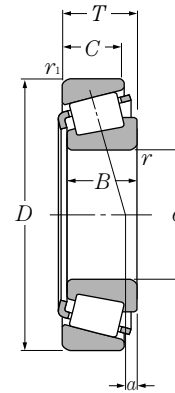


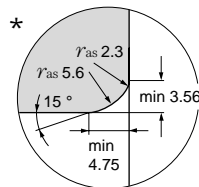
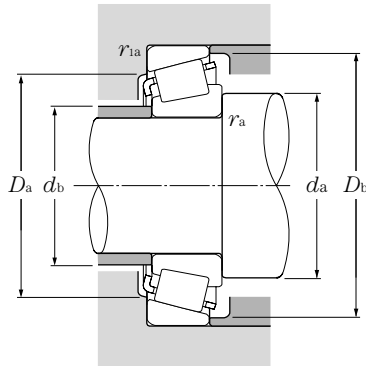
Inch system sizes  
J system series



**d 34.925 ~ 38.100mm**

| d      | Boundary dimensions |        |        |        | Basic load ratings |                   |                   |                   | Limiting speeds |       |
|--------|---------------------|--------|--------|--------|--------------------|-------------------|-------------------|-------------------|-----------------|-------|
|        | D                   | T      | B      | C      | dynamic<br>static  | dynamic<br>static | dynamic<br>static | dynamic<br>static | grease          | oil   |
|        | mm                  |        |        |        | kN                 |                   | kgf               |                   | rpm             |       |
| 34.925 | 76.200              | 23.812 | 25.654 | 19.050 | 73.0               | 90.5              | 7,450             | 9,200             | 5,100           | 6,800 |
|        | 76.200              | 29.370 | 28.575 | 23.020 | 78.0               | 105               | 7,950             | 10,700            | 5,100           | 6,800 |
|        | 76.200              | 29.370 | 28.575 | 23.812 | 80.5               | 97.0              | 8,200             | 9,900             | 5,100           | 6,800 |
|        | 76.200              | 29.370 | 28.575 | 23.812 | 80.5               | 97.0              | 8,200             | 9,900             | 5,100           | 6,800 |
|        | 79.375              | 29.370 | 29.771 | 23.812 | 93.0               | 114               | 9,450             | 11,600            | 4,900           | 6,600 |
|        | 80.167              | 29.370 | 30.391 | 23.812 | 95.0               | 112               | 9,700             | 11,400            | 4,800           | 6,400 |
|        | 85.725              | 30.162 | 30.162 | 23.812 | 105                | 132               | 10,700            | 13,400            | 4,500           | 6,000 |
| 34.976 | 69.012              | 19.845 | 19.583 | 15.875 | 48.5               | 58.0              | 4,900             | 5,900             | 5,600           | 7,400 |
| 34.988 | 59.974              | 15.875 | 16.764 | 11.938 | 35.5               | 47.5              | 3,600             | 4,850             | 6,100           | 8,100 |
|        | 61.973              | 16.700 | 17.000 | 13.600 | 37.0               | 48.0              | 3,800             | 4,900             | 5,900           | 7,900 |
|        | 61.973              | 18.000 | 17.000 | 15.000 | 37.0               | 48.0              | 3,800             | 4,900             | 5,900           | 7,900 |
| 35.000 | 70.000              | 24.000 | 23.500 | 19.000 | 62.0               | 78.0              | 6,350             | 7,950             | 5,500           | 7,300 |
|        | 79.375              | 23.812 | 25.400 | 19.050 | 76.5               | 97.5              | 7,800             | 9,950             | 4,800           | 6,400 |
|        | 80.000              | 21.000 | 22.403 | 17.826 | 68.0               | 75.0              | 6,950             | 7,650             | 4,700           | 6,300 |
| 35.717 | 72.233              | 25.400 | 25.400 | 19.842 | 65.0               | 84.5              | 6,600             | 8,600             | 5,400           | 7,200 |
|        | 72.626              | 25.400 | 25.400 | 19.842 | 65.0               | 84.5              | 6,600             | 8,600             | 5,400           | 7,200 |
| 36.487 | 73.025              | 23.812 | 24.608 | 19.050 | 71.0               | 85.0              | 7,200             | 8,700             | 5,300           | 7,100 |
|        | 76.200              | 23.812 | 25.654 | 19.050 | 73.0               | 90.5              | 7,450             | 9,200             | 5,100           | 6,800 |
| 36.512 | 76.200              | 29.370 | 28.575 | 23.020 | 78.0               | 105               | 7,950             | 10,700            | 5,100           | 6,800 |
|        | 76.200              | 29.370 | 28.575 | 23.020 | 78.0               | 105               | 7,950             | 10,700            | 5,100           | 6,800 |
|        | 76.200              | 29.370 | 28.575 | 23.812 | 80.5               | 97.0              | 8,200             | 9,900             | 5,100           | 6,800 |
|        | 79.375              | 29.370 | 28.829 | 22.664 | 86.5               | 104               | 8,800             | 10,600            | 5,000           | 6,600 |
|        | 79.375              | 29.370 | 29.771 | 23.812 | 93.0               | 114               | 9,450             | 11,600            | 4,900           | 6,600 |
|        | 88.500              | 25.400 | 23.698 | 17.462 | 70.5               | 78.0              | 7,200             | 7,950             | 4,000           | 5,300 |
| 38.000 | 63.000              | 17.000 | 17.000 | 13.500 | 38.5               | 52.5              | 3,950             | 5,350             | 5,700           | 7,600 |
| 38.100 | 63.500              | 12.700 | 11.908 | 9.525  | 25.9               | 33.5              | 2,640             | 3,400             | 5,500           | 7,300 |
|        | 65.088              | 18.034 | 18.288 | 13.970 | 43.5               | 57.0              | 4,400             | 5,800             | 5,500           | 7,400 |
|        | 69.012              | 19.050 | 19.050 | 15.083 | 47.5               | 59.5              | 4,850             | 6,050             | 5,300           | 7,100 |
|        | 69.012              | 19.050 | 19.050 | 15.083 | 47.5               | 59.5              | 4,850             | 6,050             | 5,300           | 7,100 |
|        | 71.438              | 15.875 | 16.520 | 11.908 | 43.5               | 51.0              | 4,400             | 5,200             | 5,400           | 7,200 |
|        | 72.000              | 19.000 | 20.638 | 14.237 | 48.0               | 58.5              | 4,900             | 5,950             | 5,300           | 7,000 |

Note: 1. With regard to the chamfer dimensions on the back face of the inner and outer rings, installation dimensions  $r_{is}$  and  $r_{os}$  are larger than the maximum value.  
2. For the inner bore diameter of bearings with bearing numbers marked "+" (inner ring) or "++" (outer ring), this value applies only to high precision class types, Class 4 and 2.



### Equivalent bearing load

**dynamic**  
 $P_r = XF_r + YF_a$

| $\frac{F_a}{F_r}$ | $e$ | $\frac{F_a}{F_r} > e$ |       |
|-------------------|-----|-----------------------|-------|
| X                 | Y   | X                     | Y     |
| 1                 | 0   | 0.4                   | $Y_2$ |

### static

$P_{or} = 0.5F_r + Y_0F_a$

When  $P_{or} < F_r$  use  $P_{or} = F_r$

For values of  $e$ ,  $Y_2$  and  $Y_0$  see the table below.

| Bearing numbers         | Abutment and fillet dimensions |       |       |       |              |               | Load center mm | Constant | Axial load factors |      | Mass kg   |
|-------------------------|--------------------------------|-------|-------|-------|--------------|---------------|----------------|----------|--------------------|------|-----------|
|                         | mm                             |       |       |       |              |               |                |          | $a$                | $e$  |           |
|                         | $d_a$                          | $d_b$ | $D_a$ | $D_b$ | $r_{as}$ max | $r_{1as}$ max |                |          |                    |      | (approx.) |
| 4T-2793/2729            | 42                             | 41    | 68    | 70    | 0.8          | 0.8           | 7.8            | 0.30     | 1.98               | 1.09 | 0.541     |
| 4T-HM89446/HM89410      | 53                             | 44.5  | 62    | 73    | 3.5          | 3.3           | 5.8            | 0.55     | 1.10               | 0.60 | 0.646     |
| 4T-31593/31520          | 50                             | 43.5  | 64    | 72    | 3.5          | 3.3           | 7.8            | 0.40     | 1.49               | 0.82 | 0.625     |
| 4T-31594/31520          | 46                             | 43.5  | 64    | 72    | 1.5          | 3.3           | 7.8            | 0.40     | 1.49               | 0.82 | 0.627     |
| 4T-3478/3420            | 50                             | 43.5  | 67    | 74    | 3.5          | 3.3           | 8.7            | 0.37     | 1.64               | 0.90 | 0.725     |
| 4T-3379/3320            | 48                             | 41.5  | 70    | 75    | 3.5          | 3.3           | 11.2           | 0.27     | 2.20               | 1.21 | 0.732     |
| 4T-3872/3820            | 53                             | 46    | 73    | 81    | 3.5          | 3.3           | 8.1            | 0.40     | 1.49               | 0.82 | 0.897     |
| 4T-14139/14276          | 41.5                           | 40    | 60    | 63    | 1.3          | 1.3           | 4.1            | 0.38     | 1.57               | 0.86 | 0.333     |
| 4T-L68149†/L68111††     | 45.5                           | 39    | 53    | 56    | *            | 1.3           | 2.5            | 0.42     | 1.44               | 0.79 | 0.179     |
| 4T-LM78349A†/LM78310A†† | 42                             | 39.5  | 54    | 59    | 1.5          | 1.5           | 2.4            | 0.44     | 1.35               | 0.74 | 0.209     |
| 4T-LM78349†/LM78310C††  | 46                             | 40    | 56    | 59    | *            | 1.5           | 2.4            | 0.44     | 1.35               | 0.74 | 0.218     |
| #4T-JS3549A/JS3510      | 47                             | 42    | 60    | 67    | 2            | 1.5           | 3.6            | 0.55     | 1.10               | 0.60 | 0.42      |
| 4T-26883/26822          | 42.5                           | 42    | 71    | 74    | 0.8          | 0.8           | 7.4            | 0.32     | 1.88               | 1.04 | 0.61      |
| 4T-339/332              | 42.5                           | 41.5  | 73    | 75    | 0.8          | 1.3           | 6.6            | 0.27     | 2.20               | 1.21 | 0.534     |
| 4T-HM88648/HM88610      | 52                             | 43    | 60    | 69    | 3.5          | 2.3           | 4.6            | 0.55     | 1.10               | 0.60 | 0.478     |
| 4T-HM88648/HM88611AS    | 52                             | 43    | 59    | 69    | 3.5          | 3.3           | 3.0            | 0.55     | 1.10               | 0.60 | 0.482     |
| 4T-25880/25821          | 44                             | 42    | 65    | 68    | 1.5          | 0.8           | 8.1            | 0.29     | 2.07               | 1.14 | 0.457     |
| 4T-2780/2720            | 44.5                           | 42.5  | 66    | 70    | 1.5          | 3.3           | 7.8            | 0.30     | 1.98               | 1.09 | 0.518     |
| 4T-HM89448/HM89410      | 48.5                           | 44.5  | 62    | 73    | 0.8          | 3.3           | 5.8            | 0.55     | 1.10               | 0.60 | 0.629     |
| 4T-HM89449/HM89411      | 54                             | 44.5  | 65    | 73    | 3.5          | 0.8           | 5.8            | 0.55     | 1.10               | 0.60 | 0.631     |
| 4T-31597/31520          | 51                             | 44.5  | 64    | 72    | 3.5          | 3.3           | 7.8            | 0.40     | 1.49               | 0.82 | 0.605     |
| 4T-HM89249/HM89210      | 55                             | 44    | 66    | 75    | 3.5          | 3.3           | 5.8            | 0.55     | 1.10               | 0.60 | 0.686     |
| 4T-3479/3420            | 45.5                           | 44.5  | 67    | 74    | 0.8          | 3.3           | 8.7            | 0.37     | 1.64               | 0.90 | 0.707     |
| 4T-44143/44348          | 54                             | 50    | 75    | 84    | 2.3          | 1.5           | -2.9           | 0.78     | 0.77               | 0.42 | 0.729     |
| #4T-JL69349/JL69310     | 49                             | 42.5  | 56    | 60    | *            | 1.3           | 2.3            | 0.42     | 1.44               | 0.79 | 0.198     |
| 4T-13889/13830          | 45                             | 42.5  | 59    | 60    | 1.5          | 0.8           | 0.8            | 0.35     | 1.73               | 0.95 | 0.147     |
| 4T-LM29748/LM29710      | 49                             | 42.5  | 59    | 62    | *            | 1.3           | 4.3            | 0.33     | 1.80               | 0.99 | 0.233     |
| 4T-13685/13621          | 49.5                           | 43    | 61    | 65    | 3.5          | 2.3           | 3.0            | 0.40     | 1.49               | 0.82 | 0.293     |
| 4T-13687/13621          | 46.5                           | 43    | 61    | 65    | 2            | 2.3           | 3.0            | 0.40     | 1.49               | 0.82 | 0.296     |
| 4T-19150/19281          | 45                             | 43    | 63    | 66    | 1.5          | 1             | 1.4            | 0.44     | 1.35               | 0.74 | 0.273     |
| 4T-16150/16282          | 49.5                           | 43    | 63    | 67    | 3.5          | 1.5           | 4.2            | 0.40     | 1.49               | 0.82 | 0.331     |

Note: 3. Bearing numbers marked "# " designate **J-series** bearings. The tolerances of these bearings is listed in **Table 6.6** on **page A-40**.

4. Chamfer dimensions of bearings marked "\*" are shown in drawings.