



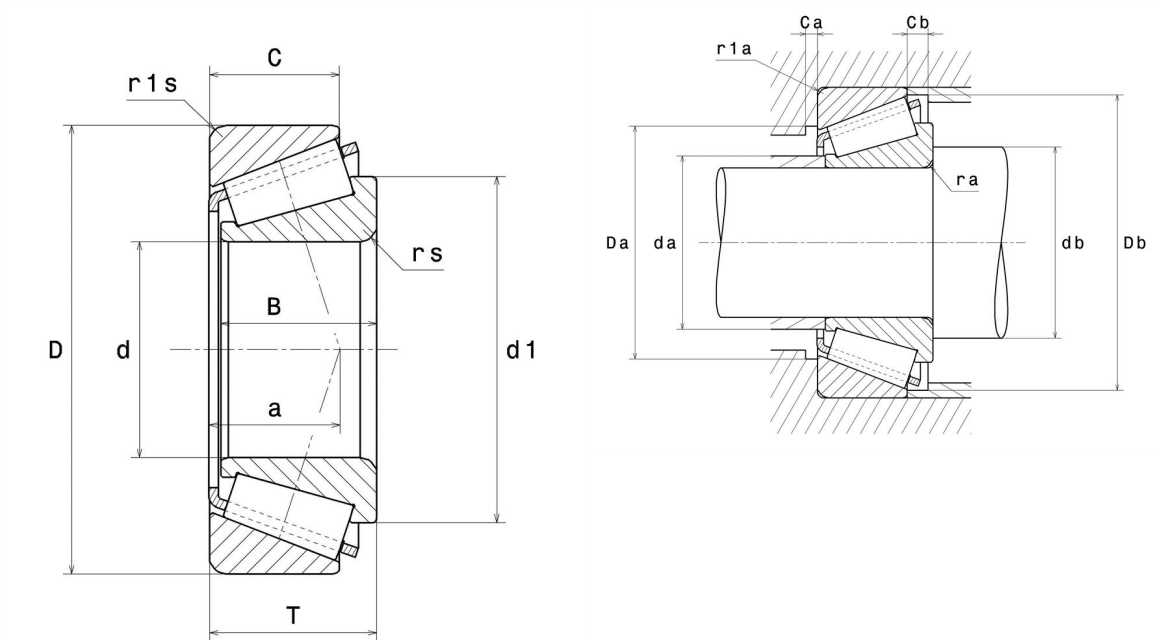
## Technical datasheet

### 4T-T4CB100

Single row tapered roller bearings

Tapered roller bearing, pressed steel cage

#### Visual(s)



#### Product definition

|                          |          |
|--------------------------|----------|
| <b>d</b>                 | 100 mm   |
| <b>D</b>                 | 145 mm   |
| <b>B</b>                 | 22.5 mm  |
| <b>C</b>                 | 17.5 mm  |
| <b>T</b>                 | 24 mm    |
| <b>d1</b>                | 121.5 mm |
| <b>a</b>                 | 30 mm    |
| <b>rs min</b>            | 3 mm     |
| <b>r1s min</b>           | 3 mm     |
| <b>e</b>                 | 0.47     |
| <b>Y2</b>                | 1.27     |
| <b>Y0</b>                | 0.7      |
| <b>Mass</b>              | 1.15 kg  |
| <b>ISO 355 reference</b> | T4CB100  |
| <b>Brand</b>             | NTN      |

## Product performance

|                                                      |           |
|------------------------------------------------------|-----------|
| <b>Dynamic load, C</b>                               | 107 kN    |
| <b>Rating life coefficient, A2</b>                   | 1.4       |
| <b>Static load, C0</b>                               | 153 kN    |
| <b>Fatigue limit load, Cu</b>                        | 17.6 kN   |
| <b>Nlim (oil)</b>                                    | 2,400 rpm |
| <b>Nlim (grease)</b>                                 | 1,800 rpm |
| <b>Min operating temperature, Tmin</b>               | -40 °C    |
| <b>Max operating temperature, Tmax</b>               | 120 °C    |
| <b>Characteristic cage frequency, FTF</b>            | 0.45 Hz   |
| <b>Characteristic rolling element frequency, BSF</b> | 10.2 Hz   |
| <b>Characteristic outer ring frequency, BPF0</b>     | 11.34 Hz  |
| <b>Characteristic inner ring frequency, BPFI</b>     | 13.66 Hz  |

## Abutment dimensions

|                |        |
|----------------|--------|
| <b>da max</b>  | 109 mm |
| <b>db min</b>  | 114 mm |
| <b>Da min</b>  | 130 mm |
| <b>Da max</b>  | 131 mm |
| <b>Db min</b>  | 140 mm |
| <b>Ca min</b>  | 4 mm   |
| <b>Cb min</b>  | 6.5 mm |
| <b>ra max</b>  | 2.5 mm |
| <b>r1a max</b> | 2.5 mm |

## Calculation factors

### Equivalent dynamic radial load

$$P = X.F_r + Y.F_a$$

| $F_a / F_r \leq e$ |   | $F_a / F_r > e$ |    |
|--------------------|---|-----------------|----|
| X                  | Y | X               | Y  |
| 1                  | 0 | 0.4             | Y2 |

### Equivalent static radial load

$$P_0 = X_0.F_r + Y_0.F_a$$

| $X_0$ | $Y_0$ |
|-------|-------|
| 0.5   | Y0    |

If  $P_0 < F_r$ , then use  $P_0 = F_r$

The values for e, Y2 and Y0 are shown in the above table