

## PDF technical sheet ET33110



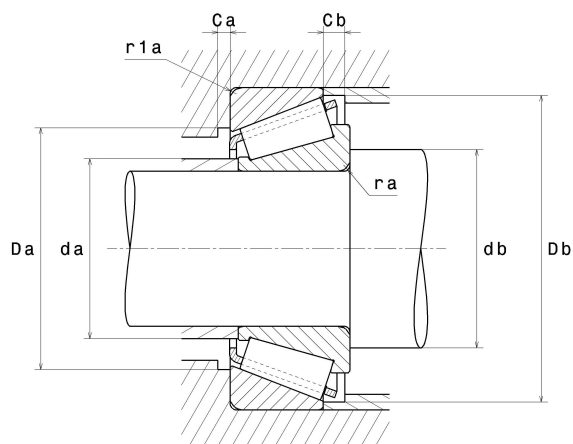
### Single row tapered roller bearings

Tapered roller bearing, pressed steel cage

| Product definition |          |
|--------------------|----------|
| d                  | 1.9685 " |
| D                  | 3.3465 " |
| B                  | 1.0236 " |
| C                  | 0.7874 " |
| T                  | 1.0236 " |
| d1                 | 2.6772 " |
| a                  | 0.8071 " |
| rs min             | 0.0591 " |
| r1s min            | 0.0591 " |
| e                  | 0.41     |
| Y2                 | 1.46     |
| Y0                 | 0.8      |
| Mass               | 2.05 oz  |
| ISO 355 reference  | T3CE050  |
| Brand              | NTN      |



| Product performance                           |           |
|-----------------------------------------------|-----------|
| Dynamic load, C                               | 86.50 kN  |
| Rating life coefficient, A2                   | 1.9       |
| Static load, C0                               | 121 kN    |
| Fatigue limit load, Cu                        | 14.80 kN  |
| Nlim (oil)                                    | 5,600 RPM |
| Nlim (grease)                                 | 4,200 RPM |
| Min operating temperature, Tmin               | -40 °C    |
| Max operating temperature, Tmax               | 248 °C    |
| Characteristic cage frequency, FTF            | 0.44 Hz   |
| Characteristic rolling element frequency, BSF | 7.80 Hz   |
| Characteristic outer ring frequency, BPF0     | 9.66 Hz   |
| Characteristic inner ring frequency, BPFI     | 12.34 Hz  |



### Abutment dimensions

|         |          |
|---------|----------|
| da max  | 2.2047 " |
| db min  | 2.3031 " |
| Da min  | 2.9134 " |
| Da max  | 3.0118 " |
| Db min  | 3.2283 " |
| Ca min  | 0.1575 " |
| Cb min  | 0.2362 " |
| ra max  | 0.0591 " |
| r1a max | 0.0591 " |

### 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  $P_0 \leq F_r$ , then use  $P_0 = F_r$

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