



## Technical data

### 4T-HM88542/HM88510

Single row tapered roller bearings

Tapered roller bearing, pressed steel cage

## Visual(s)



## Product definition

|              |          |
|--------------|----------|
| <b>d</b>     | 31.75 mm |
| <b>D</b>     | 73.02 mm |
| <b>B</b>     | 27.78 mm |
| <b>C</b>     | 23.02 mm |
| <b>T</b>     | 29.37 mm |
| <b>d1</b>    | 56.5 mm  |
| <b>a</b>     | 23.37 mm |
| <b>e</b>     | 0.55     |
| <b>Y2</b>    | 1.1      |
| <b>Y0</b>    | 0.6      |
| <b>Mass</b>  | 0.62 kg  |
| <b>Brand</b> | NTN      |

## Product performance

|                                                      |              |
|------------------------------------------------------|--------------|
| <b>Dynamic load, C</b>                               | 72 kN        |
| <b>Rating life coefficient, A2</b>                   | 1.4          |
| <b>Static load, C0</b>                               | 97 kN        |
| <b>Fatigue limit load, Cu</b>                        | 11.8 kN      |
| <b>Nlim (oil)</b>                                    | 7,100 Tr/min |
| <b>Nlim (grease)</b>                                 | 5,400 Tr/min |
| <b>Min operating temperature, Tmin</b>               | -40 °C       |
| <b>Max operating temperature, Tmax</b>               | 120 °C       |
| <b>Characteristic cage frequency, FTF</b>            | 0.43 Hz      |
| <b>Characteristic rolling element frequency, BSF</b> | 6.92 Hz      |
| <b>Characteristic outer ring frequency, BPF0</b>     | 7.8 Hz       |
| <b>Characteristic inner ring frequency, BPFI</b>     | 10.2 Hz      |

## Abutment dimensions

|                |        |
|----------------|--------|
| <b>ra max</b>  | 1.3 mm |
| <b>r1a max</b> | 3.3 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  $P_0 \leq F_r$ , then use  $P_0 = F_r$

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