

## PDF technical sheet

# 23088BL1K

### Double row spherical roller bearings

Spherical roller bearing, with central rib on inner ring, 2-part machined cage centred on inner ring, groove and lubrication holes on outer ring, tapered bore 1:12

| Product definition          |           |
|-----------------------------|-----------|
| d                           | 17.3228 " |
| D                           | 25.5906 " |
| B                           | 6.1811 "  |
| d2                          | 20.0000 " |
| D1                          | 23.0157 " |
| rs min                      | 0.2362 "  |
| Number of lubrication holes | 8         |
| b                           | 0.7874 "  |
| k                           | 0.4724 "  |
| Associated sleeve reference | H3088     |
| e                           | 0.24      |
| Y1                          | 2.85      |
| Y2                          | 4.24      |
| Y0                          | 2.78      |
| Radial clearance class      | CN        |
| Brand                       | NTN       |

| Product performance                           |          |
|-----------------------------------------------|----------|
| Dynamic load, C                               | 3,300 kN |
| Static load, C0                               | 6,850 kN |
| Fatigue limit load, Cu                        | 838 kN   |
| Nref                                          | 610 RPM  |
| Nlim                                          | 800 RPM  |
| Min operating temperature, Tmin               | -40 °C   |
| Max operating temperature, Tmax               | 248 °C   |
| Characteristic cage frequency, FTF            | 0.45 Hz  |
| Characteristic rolling element frequency, BSF | 10.62 Hz |
| Characteristic outer ring frequency, BPF0     | 13.16 Hz |
| Characteristic inner ring frequency, BPFI     | 15.84 Hz |

### Abutment dimensions

|        |           |
|--------|-----------|
| da min | 18.2283 " |
| db min | 18.0315 " |
| Ce min | 0.6693 "  |
| Da max | 24.6850 " |
| ra max | 0.1969 "  |

### 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                  | Y1 | 0.67            | Y2 |

#### Equivalent static radial load

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

| $X_0$ | $Y_0$ |
|-------|-------|
| 1     | Y0    |

The values for e, Y1, Y2 and Y0 are shown in the above table .