

## PDF technical sheet

### 23930EMD1



## Double row spherical roller bearings

Spherical roller bearing, one-piece machined cage, groove and lubrication holes on outer ring

| Product definition          |          |
|-----------------------------|----------|
| d                           | 5.9055 " |
| D                           | 8.2677 " |
| B                           | 1.7717 " |
| d2                          | 6.5748 " |
| D1                          | 7.6772 " |
| rs min                      | 0.0787 " |
| Number of lubrication holes | 3        |
| b                           | 0.3740 " |
| k                           | 0.1575 " |
| e                           | 0.18     |
| Y1                          | 3.71     |
| Y2                          | 5.52     |
| Y0                          | 3.63     |
| Radial clearance class      | CN       |
| Brand                       | NTN      |



| Product performance                           |           |
|-----------------------------------------------|-----------|
| Dynamic load, C                               | 419 kN    |
| Static load, C0                               | 635 kN    |
| Fatigue limit load, Cu                        | 58.40 kN  |
| Nref                                          | 2,300 RPM |
| Nlim                                          | 3,100 RPM |
| Min operating temperature, Tmin               | -40 °C    |
| Max operating temperature, Tmax               | 392 °C    |
| Characteristic cage frequency, FTF            | 0.46 Hz   |
| Characteristic rolling element frequency, BSF | 12.83 Hz  |
| Characteristic outer ring frequency, BPF0     | 15.23 Hz  |
| Characteristic inner ring frequency, BPF1     | 17.77 Hz  |



### Abutment dimensions

|        |          |
|--------|----------|
| da min | 6.2520 " |
| Da max | 7.9213 " |
| ra max | 0.0787 " |

### Calculation factors

#### Equivalent dynamic radial load

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

| Fa / Fr ≤ e |    | Fa / Fr > 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 <sub>0</sub> | Y <sub>0</sub> |
|----------------|----------------|
| 1              | Y0             |

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