

## PDF technical sheet 24038EMW33C4



### Double row spherical roller bearings

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

| Product definition          |           |
|-----------------------------|-----------|
| d                           | 7.4803 "  |
| D                           | 11.4173 " |
| B                           | 3.9370 "  |
| D1                          | 10.2402 " |
| rs min                      | 0.0827 "  |
| Number of lubrication holes | 3         |
| b                           | 0.4567 "  |
| k                           | 0.1969 "  |
| e                           | 0.31      |
| Y1                          | 2.15      |
| Y2                          | 3.2       |
| Y0                          | 2.1       |
| Radial clearance class      | C4        |
| Mass                        | 79.47 oz  |
| Brand                       | SNR       |



| Product performance                           |           |
|-----------------------------------------------|-----------|
| Dynamic load, C                               | 1,310 kN  |
| Static load, C0                               | 1,800 kN  |
| Fatigue limit load, Cu                        | 119 kN    |
| Nref                                          | 1,500 RPM |
| Nlim                                          | 2,100 RPM |
| Min operating temperature, Tmin               | -40 °C    |
| Max operating temperature, Tmax               | 392 °C    |
| Characteristic cage frequency, FTF            | 0.44 Hz   |
| Characteristic rolling element frequency, BSF | 8.14 Hz   |
| Characteristic outer ring frequency, BPF0     | 10.14 Hz  |
| Characteristic inner ring frequency, BPF1     | 12.86 Hz  |



### Abutment dimensions

|        |           |
|--------|-----------|
| da min | 7.8819 "  |
| Da max | 11.0157 " |
| 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 .