

## PDF technical sheet

### 23240EMW33



## Double row spherical roller bearings

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

| Product definition          |           |
|-----------------------------|-----------|
| d                           | 7.8740 "  |
| D                           | 14.1732 " |
| B                           | 5.0394 "  |
| D1                          | 12.3937 " |
| rs min                      | 0.1575 "  |
| Number of lubrication holes | 3         |
| b                           | 0.7402 "  |
| k                           | 0.3543 "  |
| e                           | 0.34      |
| Y1                          | 1.98      |
| Y2                          | 2.94      |
| Y0                          | 1.93      |
| Radial clearance class      | CN        |
| Mass                        | 196.83 oz |
| Brand                       | SNR       |



| Product performance                           |           |
|-----------------------------------------------|-----------|
| Dynamic load, C                               | 2,250 kN  |
| Static load, C0                               | 2,840 kN  |
| Fatigue limit load, Cu                        | 173 kN    |
| Nref                                          | 1,100 RPM |
| Nlim                                          | 1,700 RPM |
| Min operating temperature, Tmin               | -40 °C    |
| Max operating temperature, Tmax               | 392 °C    |
| Characteristic cage frequency, FTF            | 0.42 Hz   |
| Characteristic rolling element frequency, BSF | 6.21 Hz   |
| Characteristic outer ring frequency, BPF0     | 7.62 Hz   |
| Characteristic inner ring frequency, BPF1     | 10.38 Hz  |



### Abutment dimensions

|        |           |
|--------|-----------|
| da min | 8.5433 "  |
| Da max | 13.5039 " |
| ra max | 0.1181 "  |

### 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 .