

## PDF technical sheet

# 24124EAK30W33C3

### Double row spherical roller bearings

Spherical roller bearing, with central rib on inner ring, pressed steel cage, groove and lubrication holes on outer ring, tapered bore 1:30

| Product definition          |          |
|-----------------------------|----------|
| d                           | 4.7244 " |
| D                           | 7.8740 " |
| B                           | 3.1496 " |
| d2                          | 5.2441 " |
| D1                          | 6.7638 " |
| rs min                      | 0.0787 " |
| Number of lubrication holes | 3        |
| b                           | 0.3937 " |
| k                           | 0.1772 " |
| e                           | 0.39     |
| Y1                          | 1.74     |
| Y2                          | 2.59     |
| Y0                          | 1.7      |
| Radial clearance class      | C3       |
| Mass                        | 34.22 oz |
| Brand                       | SNR      |

| Product performance                           |           |
|-----------------------------------------------|-----------|
| Dynamic load, C                               | 749 kN    |
| Static load, C0                               | 948 kN    |
| Fatigue limit load, Cu                        | 60.20 kN  |
| Nref                                          | 2,000 RPM |
| Nlim                                          | 2,600 RPM |
| Min operating temperature, Tmin               | -40 °C    |
| Max operating temperature, Tmax               | 392 °C    |
| Characteristic cage frequency, FTF            | 0.43 Hz   |
| Characteristic rolling element frequency, BSF | 7.23 Hz   |
| Characteristic outer ring frequency, BPF0     | 8.68 Hz   |
| Characteristic inner ring frequency, BPF1     | 11.32 Hz  |

| Abutment dimensions |          |
|---------------------|----------|
| da min              | 5.1575 " |
| Da max              | 7.4409 " |
| ra max              | 0.0787 " |

## 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 .