

## PDF technical sheet

# 24040EMK30W33C3

### Double row spherical roller bearings

Spherical roller bearing, one-piece machined cage, groove and lubrication holes on outer ring, tapered bore 1:30

| Product definition          |           |
|-----------------------------|-----------|
| d                           | 7.8740 "  |
| D                           | 12.2047 " |
| B                           | 4.2913 "  |
| D1                          | 11.1535 " |
| rs min                      | 0.0827 "  |
| Number of lubrication holes | 3         |
| b                           | 0.5000 "  |
| k                           | 0.2362 "  |
| e                           | 0.33      |
| Y1                          | 2.06      |
| Y2                          | 3.07      |
| Y0                          | 2.01      |
| Radial clearance class      | C3        |
| Mass                        | 110.76 oz |
| Brand                       | SNR       |

| Product performance                           |           |
|-----------------------------------------------|-----------|
| Dynamic load, C                               | 1,520 kN  |
| Static load, C0                               | 2,120 kN  |
| Fatigue limit load, Cu                        | 135 kN    |
| Nref                                          | 1,400 RPM |
| Nlim                                          | 2,000 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 | 8.12 Hz   |
| Characteristic outer ring frequency, BPF0     | 10.14 Hz  |
| Characteristic inner ring frequency, BPF1     | 12.86 Hz  |

| Abutment dimensions |           |
|---------------------|-----------|
| da min              | 8.2756 "  |
| Da max              | 11.8031 " |
| ra max              | 0.0787 "  |

### Calculation factors

#### Equivalent dynamic radial load

$$P = X \cdot Fr + Y \cdot Fa$$

| Fa / Fr ≤ e |    | Fa / Fr > e |    |
|-------------|----|-------------|----|
| X           | Y  | X           | Y  |
| 1           | Y1 | 0.67        | Y2 |

#### Equivalent static radial load

$$Po = Xo \cdot Fr + Yo \cdot Fa$$

| Xo | Yo |
|----|----|
| 1  | Y0 |

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