

PDF technical sheet

22310.EK.F800

Double row spherical roller bearings

Spherical roller bearing for vibratory applications, one-piece machined cage, groove and lubrication holes on outer ring, tapered bore 1:12, special C4 class clearance

| Product definition | |
|-----------------------------|------------|
| d | 1.9685 " |
| D | 4.3307 " |
| B | 1.5748 " |
| d2 | 2.5118 " |
| D1 | 3.6929 " |
| rs min | 0.0787 " |
| Number of lubrication holes | 3 |
| b | 0.2874 " |
| k | 0.1378 " |
| Associated sleeve reference | H2310 |
| e | 0.36 |
| Y1 | 1.87 |
| Y2 | 2.79 |
| Y0 | 1.83 |
| Radial clearance class | C4 Special |
| Mass | 6.43 oz |
| Brand | SNR |

| Product performance | |
|---|-----------|
| Dynamic load, C | 250 kN |
| Static load, C0 | 232 kN |
| Fatigue limit load, Cu | 20.40 kN |
| Nref | 4,900 RPM |
| Nlim | 6,100 RPM |
| Min operating temperature, Tmin | -40 °C |
| Max operating temperature, Tmax | 392 °C |
| Characteristic cage frequency, FTF | 0.40 Hz |
| Characteristic rolling element frequency, BSF | 4.90 Hz |
| Characteristic outer ring frequency, BPF0 | 5.66 Hz |
| Characteristic inner ring frequency, BPF1 | 8.34 Hz |

Abutment dimensions

| | |
|--------|----------|
| da min | 2.4016 " |
| db min | 2.2047 " |
| Ce min | 0.1969 " |
| Da max | 3.8976 " |
| ra max | 0.0787 " |

Calculation factors

Equivalent dynamic radial load

$$P = X.Fr + Y.Fa$$

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

Equivalent static radial load

$$P_0 = X_0.Fr + Y_0.Fa$$

| X ₀ | Y ₀ |
|----------------|----------------|
| 1 | Y0 |

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