

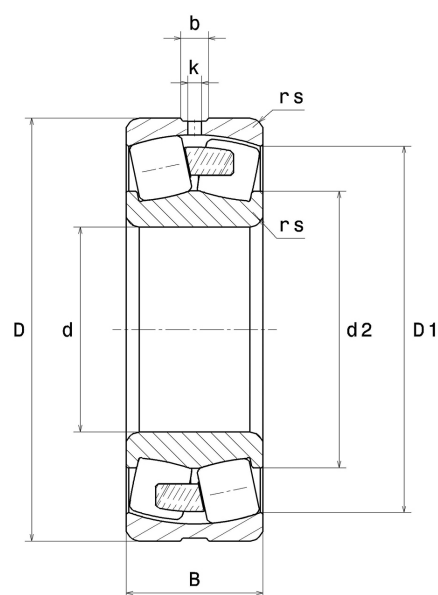
PDF technical sheet 2221EMW33



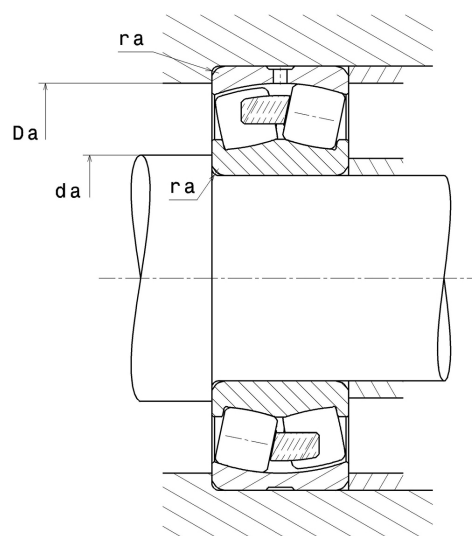
Double row spherical roller bearings

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

| Product definition | |
|-----------------------------|----------|
| d | 2.1654 " |
| D | 3.9370 " |
| B | 0.9843 " |
| D1 | 3.5315 " |
| rs min | 0.0591 " |
| Number of lubrication holes | 3 |
| b | 0.2520 " |
| k | 0.1181 " |
| e | 0.23 |
| Y1 | 2.95 |
| Y2 | 4.39 |
| Y0 | 2.89 |
| Radial clearance class | CN |
| Mass | 2.96 oz |
| Brand | SNR |



| Product performance | |
|---|-----------|
| Dynamic load, C | 148 kN |
| Static load, C0 | 140 kN |
| Fatigue limit load, Cu | 16.90 kN |
| Nref | 6,100 RPM |
| Nlim | 8,200 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 | 6.29 Hz |
| Characteristic outer ring frequency, BPF0 | 7.20 Hz |
| Characteristic inner ring frequency, BPF1 | 9.81 Hz |



Abutment dimensions

| | |
|--------|----------|
| da min | 2.5197 " |
| Da max | 3.5827 " |
| ra max | 0.0591 " |

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

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