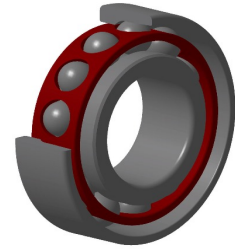


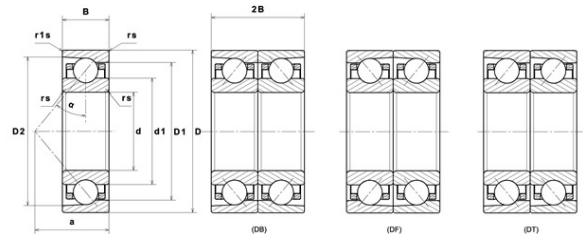
PDF technical sheet 71912HVUJ74



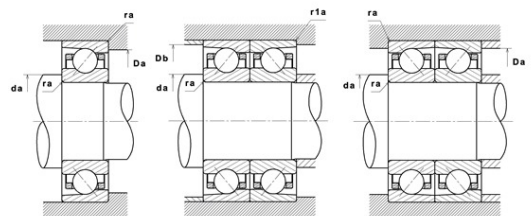
High precision angular contact ball bearings

High precision angular contact ball bearing, laminated resin cage centred on outer ring

| Product definition | |
|-------------------------|----------|
| d | 2.3622 " |
| D | 3.3465 " |
| B | 0.5118 " |
| d1 | 2.6811 " |
| D1 | 3.0276 " |
| D2 | 3.1571 " |
| a | 0.9055 " |
| Contact angle, α | 25 ° |
| rs min | 0.0394 " |
| r1s min | 0.0118 " |
| f0 | 16.653 |
| Precision class | P4 |
| Mass | 0.69 oz |
| Brand | SNR |



| Product performance | |
|---|----------------|
| Dynamic load, C | 18 kN |
| Static load, C0 | 17.70 kN |
| Fatigue limit load, Cu | 1 kN |
| Nlim (oil) | 22,000 RPM |
| Nlim (grease) | 14,500 RPM |
| Axial displacement K Factor | 0.55 |
| Preload level | 7 |
| Peload value | 150 kN |
| axial rigidity | 136 N/ μ m |
| radial rigidity | 292 N/ μ m |
| Min operating temperature, Tmin | -22 °C |
| Max operating temperature, Tmax | 248 °C |
| Characteristic cage frequency, FTF | 0.46 Hz |
| Characteristic rolling element frequency, BSF | 10.07 Hz |
| Characteristic outer ring frequency, BPF0 | 10.47 Hz |
| Characteristic inner ring frequency, BPF1 | 12.53 Hz |



Abutment dimensions

| | |
|---------|----------|
| da min | 2.5787 " |
| db min | 2.5787 " |
| Da max | 3.1299 " |
| Db max | 3.1299 " |
| r1a max | 0.0118 " |
| ra max | 0.0394 " |
| D6 | 2.7717 " |

Calculation factors

Equivalent dynamic radial load

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

| Series | e | Single or DT bearing arrangement | | | | DB or DF arrangement | | | | | |
|---|------|----------------------------------|------|-------------|------|----------------------|------|-------------|------|------|------|
| | | Fa / Fr ≤ e | | Fa / Fr > e | | Fa / Fr ≤ e | | Fa / Fr > e | | | |
| | | X | Y | X | Y | X | Y | X | Y | | |
| 70 (NTN & SNR) 72 (NTN & SNR) 78 (NTN) 79 (NTN) 719 (SNR) | 15° | 0.178 | 0.38 | 1 | 0 | 0.44 | 1.47 | 1 | 1.65 | 0.72 | 2.39 |
| | | 0.357 | 0.4 | | | | 1.4 | | 1.57 | | 2.28 |
| | | 0.714 | 0.43 | | | | 1.3 | | 1.46 | | 2.11 |
| | | 1.07 | 0.46 | | | | 1.23 | | 1.38 | | 2 |
| | | 1.43 | 0.47 | | | | 1.19 | | 1.34 | | 1.93 |
| | | 2.14 | 0.5 | | | | 1.12 | | 1.26 | | 1.82 |
| | | 3.57 | 0.55 | | | | 1.02 | | 1.14 | | 1.66 |
| | | 5.35 | 0.56 | | | | | | 1.12 | | 1.63 |
| | 7.14 | 0.56 | 1 | 1.12 | 1.63 | | | | | | |
| | 25° | 0.68 | | | 0.41 | 0.87 | | 0.92 | 0.67 | 1.41 | |
| 30° | 0.8 | | | 0.39 | 0.76 | | 0.78 | 0.63 | 1.24 | | |

Equivalent static radial load

$$P_o = X_o.Fr + Y_o.Fa$$

| Series | e | Single or DT bearing arrangement | | DB or DF arrangement | |
|---|-----|----------------------------------|----------------|----------------------|----------------|
| | | X _o | Y _o | X _o | Y _o |
| 70 (NTN & SNR) 72 (NTN & SNR) 78 (NTN) 79 (NTN) 719 (SNR) | 15° | 0.5 | 0.46 | 1 | 0.92 |
| | 25° | | 0.38 | | 0.76 |
| | 30° | | 0.33 | | 0.66 |

For single or DT bearing arrangement :

If $P_o < F_r$, then use $P_o = F_r$