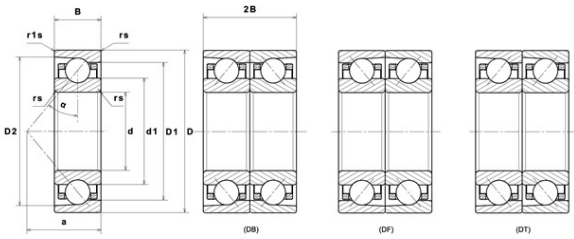
# PDF technical sheet
# 7006HVUJ74

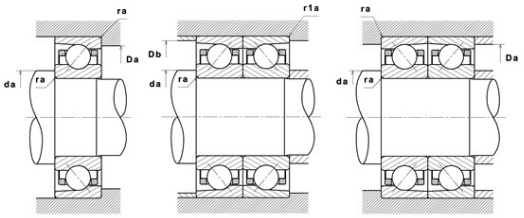
## High precision angular contact ball bearings

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

| Product definition | |
|---|---|
| d | 1.1811 " |
| D | 2.1654 " |
| B | 0.5118 " |
| d1 | 1.5000 " |
| D1 | 1.8484 " |
| D2 | 1.9850 " |
| a | 0.6299 " |
| Contact angle, a | 25 ° |
| rs min | 0.0394 " |
| r1s min | 0.0236 " |
| f0 | 15.112 |
| Precision class | P4 |
| Mass | 0.40 oz |
| Brand | SNR |




| Product performance | |
|---|---|
| Dynamic load, C | 15.60 kN |
| Static load, C0 | 11.20 kN |
| Fatigue limit load, Cu | 0.62 kN |
| Nlim (oil) | 38,000 RPM |
| Nlim (grease) | 25,000 RPM |
| Axial displacement K Factor | 0.71 |
| Preload level | 7 |
| Peload value | 130 kN |
| axial rigidity | 102 N/$\mu$m |
| radial rigidity | 218 N/$\mu$m |
| Min operating temperature, Tmin | −22 °C |
| Max operating temperature, Tmax | 248 °C |
| Characteristic cage frequency, FTF | 0.42 Hz |
| Characteristic rolling element frequency, BSF | 5.81 Hz |
| Characteristic outer ring frequency, BPF0 | 6.78 Hz |
| Characteristic inner ring frequency, BPFI | 9.22 Hz |



| Abutment dimensions | |
|---|---|
| da min | 1.3976 " |
| db min | 1.3976 " |
| Da max | 1.9488 " |
| Db max | 1.9488 " |
| r1a max | 0.0236 " |
| ra max | 0.0394 " |
| D6 | 1.5945 " |

## 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)<br>72 (NTN & SNR)<br>78 (NTN)<br>79 (NTN)<br>719 (SNR) | 15° | 0.38 | 1 | 0 | 0.44 | 1.47 | 1 | 1.65 | 0.72 | 2.39 |
| | | 0.4 | | | | 1.4 | | 1.57 | | 2.28 |
| | | 0.43 | | | | 1.3 | | 1.46 | | 2.11 |
| | | 0.46 | | | | 1.23 | | 1.38 | | 2 |
| | | 0.47 | | | | 1.19 | | 1.34 | | 1.93 |
| | | 0.5 | | | | 1.12 | | 1.26 | | 1.82 |
| | | 0.55 | | | | 1.02 | | 1.14 | | 1.66 |
| | | 0.56 | | | | | | 1.12 | | 1.63 |
| | | 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**

Po = Xo.Fr + Yo.Fa

| Series | | Single or DT bearing arrangement | | DB or DF arrangement | |
|---|---|---|---|---|---|
| | | $X_0$ | $Y_0$ | $X_0$ | $Y_0$ |
| 70 (NTN & SNR)<br>72 (NTN & SNR)<br>78 (NTN)<br>79 (NTN)<br>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 Po <Fr, then use Po = Fr