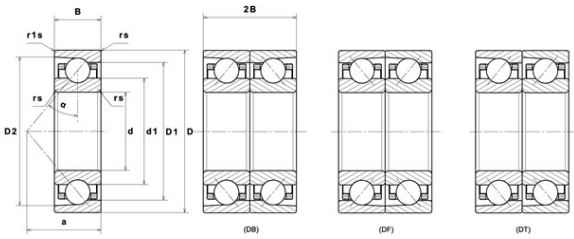
# PDF technical sheet
# 7024HVUJ74

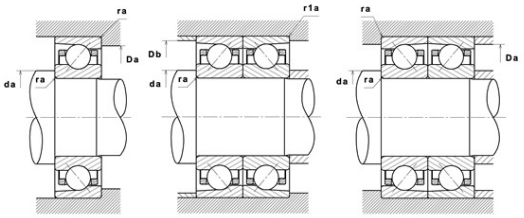
## High precision angular contact ball bearings

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

| Product definition | |
|---|---|
| d | 120 mm |
| D | 180 mm |
| B | 28 mm |
| d1 | 139.40 mm |
| D1 | 160.60 mm |
| D2 | 168.91 mm |
| a | 49 mm |
| Contact angle, a | 25 ° |
| rs min | 2 mm |
| r1s min | 1 mm |
| f0 | 16.268 |
| Precision class | P4 |
| Mass | 2.15 kg |
| Brand | SNR |




| Product performance | |
|---|---|
| Dynamic load, C | 94.80 kN |
| Static load, C0 | 103 kN |
| Fatigue limit load, Cu | 4.75 kN |
| Nlim (oil) | 10,500 Tr/min |
| Nlim (grease) | 7,000 Tr/min |
| Axial displacement K Factor | 0.4 |
| Preload level | 7 |
| Peload value | 830 kN |
| axial rigidity | 332 N/$\mu$m |
| radial rigidity | 714 N/$\mu$m |
| Min operating temperature, Tmin | −30 °C |
| Max operating temperature, Tmax | 120 °C |
| Characteristic cage frequency, FTF | 0.45 Hz |
| Characteristic rolling element frequency, BSF | 8.49 Hz |
| Characteristic outer ring frequency, BPF0 | 10.29 Hz |
| Characteristic inner ring frequency, BPFI | 12.71 Hz |




NTN-SNR ROULEMENTS – www.ntn-snr.com
1 rue des Usines – 74010 Annecy Cedex – France – Tel. +33 (0)4 50 65 30 00
S.A. au capital de 123 599 542 € - RCS ANNECY B 325 821 072 – Id. Fiscale : FR 48 325 821 072 – SIRET 325 821 072 00015 –
Code APE 2815 Z – Code NACE 28.15

| Abutment dimensions | |
|---|---|
| da min | 130 mm |
| db min | 130 mm |
| Da max | 170 mm |
| Db max | 170 mm |
| r1a max | 1 mm |
| ra max | 2 mm |
| D6 | 145 mm |

## 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° | 0.178 | 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**

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