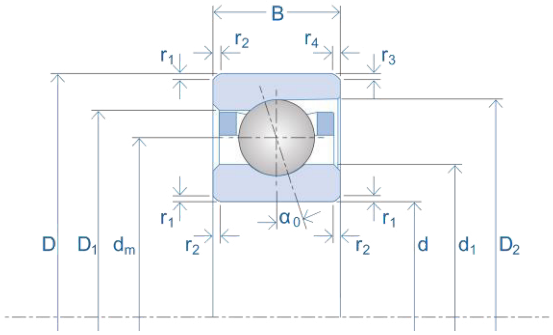
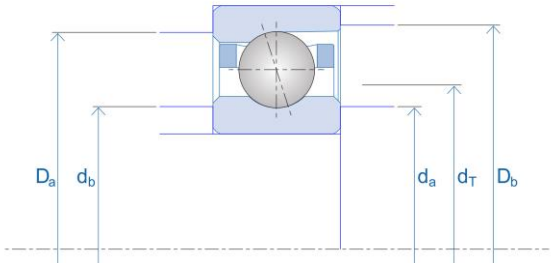
# Data Sheet
## High Precision Ball Bearings




| | |
|---|---|
| Part Number | **S 6005 C TA** |
| Bearing Size | 6005 |

| | |
|---|---|
| Bearing Series | S |
| Hybrid ($Si_3N_4$ Balls) | No |

### Bearing Dimensions

| | | |
|---|---|---|
| Bore Diameter | d [mm] | 25 |
| Outer Diameter | D [mm] | 47 |
| Bearing Width | B [mm] | 12 |
| Pitch Circle | $d_m$ [mm] | 36.0 |
| Ball Diameter | $D_w$ [mm] | 6.35 |
| OD Inner Ring | $d_1$ [mm] | 32.2 |
| ID Outer Ring | $D_1$ [mm] | 40.1 |
| ID Outer Ring (Open Side) | $D_2$ [mm] | 42.3 |
| Chamfer | $r_{1,2}$ [mm] | 0.6 |
| Chamfer (Open Side) | $r_{3,4}$ [mm] | 0.3 |

### Bearing Load Ratings

| | | |
|---|---|---|
| Dynamic Radial Load Rating | C [N] | 13,400 |
| Static Radial Load Rating Steel Balls | $C_0$ [N] | 9,200 |
| Static Radial Load Rating $Si_3N_4$ balls | $C_{0\,HY}$ [N] | 6,500 |

### Bearing RPM Ratings

| | | |
|---|---|---|
| Speed Value with Oil Lubrication | $n_{oil}$ [1/min] | 47,000 |
| Speed Value with Grease Lubrication | $n_{grease}$ [1/min] | 35,000 |

### Geometrical Data

| | | |
|---|---|---|
| Number of Balls | Z [Qty.] | 15 |
| Contact Angle | $\alpha_0$ [°] | 15 |
| Bearing Weight | m [kg] | 0.076 |

### Mating Part Dimensions

| | | |
|---|---|---|
| Abutment Diameter Inner Ring | $d_a$ min. [mm] | 30.0 |
| Abutment Diameter Outer Ring | $D_a$ max. [mm] | 42.0 |
| Chamfer Associated Component | $r_a$ max. [mm] | 0.6 |
| Chamfer Associated Component (Open Side) | $r_b$ max. [mm] | 0.3 |

### Bearing Preload Data

| | | |
|---|---|---|
| Light Pre-Load | Fv [N] | 70 |
| Light Axial Rigidity | $C_{ax}$ [N/µm] | 38 |
| Medium Pre-Load | $F_v$ [N] | 200 |
| Medium Axial Rigidity | $C_{ax}$ [N/µm] | 65 |
| Heavy Pre-Load | $F_v$ [N] | 400 |
| Heavy Axial Rigidity | $C_{ax}$ [N/µm] | 95 |
| Minimum Spring Pre-Load | $F_f$ [N] | 345 |

**Notes:**

1. Position of the oiling Nozzle ($d_T$) for bearings with TA cage/ TXM cage upon request
2. The stated load and speed values are given for a spring preloaded single bearing with oil/air or oil mist lubrication. If specific applications differ, please consult correction factors and/or GMN USA engineers.

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