



| | |
|--------------|-------------------------|
| Part Number | HY KH 61903 C TA |
| Bearing Size | 61903 |

| | |
|---|-----|
| Bearing Series | KH |
| Hybrid (Si ₃ N ₄ Balls) | Yes |

Bearing Dimensions

| | | |
|---------------------------|-----------------------|-------|
| Bore Diameter | d [mm] | 17 |
| Outer Diameter | D [mm] | 30 |
| Bearing Width | B [mm] | 7 |
| Pitch Circle | d _m [mm] | 23.5 |
| Ball Diameter | D _w [mm] | 2.778 |
| OD Inner Ring | d ₁ [mm] | 21.0 |
| OD Inner Ring (Open Side) | d ₂ [mm] | 20.6 |
| ID Outer Ring | D ₁ [mm] | 26.2 |
| ID Outer Ring (Open Side) | D ₂ [mm] | 26.8 |
| Chamfer | r _{1,2} [mm] | 0.3 |
| Chamfer (Open Side) | r _{3,4} [mm] | 0.3 |

Geometrical Data

| | | |
|-----------------|--------------------|-------|
| Number of Balls | Z [Qty.] | 18 |
| Contact Angle | α ₀ [°] | 17 |
| Bearing Weight | m [kg] | 0.017 |

Mating Part Dimensions

| | | |
|--|----------------------------|------|
| Abutment Diameter Inner Ring | d _{a,b} min. [mm] | 19.5 |
| Abutment Diameter Outer Ring | D _{a,b} max. [mm] | 27.5 |
| Chamfer Associated Component | r _a max. [mm] | 0.3 |
| Chamfer Associated Component (Open Side) | r _b max. [mm] | 0.1 |

Bearing Load Ratings

| | | |
|--|-----------------------|-------|
| Dynamic Radial Load Rating | C [N] | 2,150 |
| Static Radial Load Rating Steel Balls | C ₀ [N] | 1,070 |
| Static Radial Load Rating Si ₃ N ₄ balls | C _{0 HY} [N] | 760 |

Bearing Preload Data

| | | |
|-------------------------|------------------------|----|
| Light Pre-Load | F _v [N] | 11 |
| Light Axial Rigidity | C _{ax} [N/μm] | 17 |
| Medium Pre-Load | F _v [N] | 35 |
| Medium Axial Rigidity | C _{ax} [N/μm] | 27 |
| Heavy Pre-Load | F _v [N] | 65 |
| Heavy Axial Rigidity | C _{ax} [N/μm] | 34 |
| Minimum Spring Pre-Load | F _f [N] | 80 |

Bearing RPM Ratings

| | | |
|-------------------------------------|-----------------------------|---------|
| Speed Value with Oil Lubrication | n _{oil} [1/min] | 112,500 |
| Speed Value with Grease Lubrication | n _{grease} [1/min] | 83,750 |

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.