





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

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] | 3.969 |
| OD Inner Ring | d₁ [mm] | 21.0 |
| ID Outer Ring | D1 [mm] | 26.6 |
| ID Outer Ring (Open Side) | D ₂ [mm] | 27.7 |
| Chamfer | r _{1,2} [mm] | 0.3 |
| Chamfer (Open Side) | r _{3,4} [mm] | 0.3 |

Bearing Load Ratings

| Dynamic Radial Load Rating | C [N] | 3,750 |
|--|-----------------------|-------|
| Static Radial Load Rating Steel Balls | C ₀ [N] | 1,750 |
| Static Radial Load Rating Si ₃ N ₄ balls | С _{0 НҮ} [N] | 1,230 |

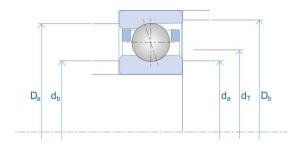
Bearing RPM Ratings

| Speed Value with Oil Lubrication | n _{oil} [1/min] | 105,000 |
|-------------------------------------|-----------------------------|---------|
| Speed Value with Grease Lubrication | n _{grease} [1/min] | 78,750 |

Notes:

1. Position of the oiling Nozzle $(d_{\rm T})$ 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.



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

Geometrical Data

| Number of Balls | Z [Qty.] | 14 |
|-----------------|--------------------|-------|
| Contact Angle | α ₀ [°] | 15 |
| Bearing Weight | m [kg] | 0.017 |

Mating Part Dimensions

| Abutment Diameter Inner Ring | d₂ min. [mm] | 19.5 |
|--|--------------------------|------|
| Abutment Diameter Outer Ring | Da max. [mm] | 27.5 |
| Chamfer Associated Component | r _a max. [mm] | 0.3 |
| Chamfer Associated Component (Open Side) | r₀ max. [mm] | 0.1 |

Bearing Preload Data

| Light Pre-Load | Fv [N] | 19 |
|-------------------------|------------------------|-----|
| Light Axial Rigidity | C _{ax} [N/µm] | 16 |
| Medium Pre-Load | F _v [N] | 55 |
| Medium Axial Rigidity | C _{ax} [N/µm] | 25 |
| Heavy Pre-Load | F _v [N] | 110 |
| Heavy Axial Rigidity | C _{ax} [N/µm] | 34 |
| Minimum Spring Pre-Load | F _f [N] | 115 |