





Part Number	HY SM 6003 C TA
Bearing Size	6003

Bearing Dimensions

Bore Diameter	d [mm]	17
Outer Diameter	D [mm]	35
Bearing Width	B [mm]	10
Pitch Circle	d _m [mm]	26.0
Ball Diameter	D _w [mm]	4.762
OD Inner Ring	d₁ [mm]	22.7
ID Outer Ring	D₁ [mm]	29.4
ID Outer Ring (Open Side)	D ₂ [mm]	30.7
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]	5,150
Static Radial Load Rating Steel Balls	C ₀ [N]	2,410
Static Radial Load Rating Si ₃ N ₄ balls	С _{0 НҮ} [N]	1,690

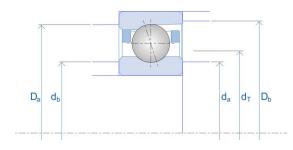
Bearing RPM Ratings

Speed Value with Oil Lubrication	n _{oil} [1/min]	96,250
Speed Value with Grease Lubrication	n _{grease} [1/min]	72,500

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]	0.037

Mating Part Dimensions

Abutment Diameter Inner Ring	da min. [mm]	20.0
Abutment Diameter Outer Ring	Da max. [mm]	31.5
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]	25
Light Axial Rigidity	C _{ax} [N/µm]	19
Medium Pre-Load	F _v [N]	80
Medium Axial Rigidity	C _{ax} [N/µm]	30
Heavy Pre-Load	F _v [N]	160
Heavy Axial Rigidity	C _{ax} [N/µm]	41
Minimum Spring Pre-Load	F _f [N]	155