



Part Number	SM 6010 C TA
Bearing Size	6010

Bearing Series	SM
Hybrid (Si ₃ N ₄ Balls)	No

Bearing Dimensions

Bore Diameter	d [mm]	50
Outer Diameter	D [mm]	80
Bearing Width	B [mm]	16
Pitch Circle	d _m [mm]	65.0
Ball Diameter	D _w [mm]	8.731
OD Inner Ring	d ₁ [mm]	59.7
ID Outer Ring	D ₁ [mm]	70.0
ID Outer Ring (Open Side)	D ₂ [mm]	73.6
Chamfer	r _{1,2} [mm]	1.0
Chamfer (Open Side)	r _{3,4} [mm]	0.6

Geometrical Data

Number of Balls	Z [Qty.]	19
Contact Angle	α ₀ [°]	15
Bearing Weight	m [kg]	0.256

Mating Part Dimensions

Abutment Diameter Inner Ring	d _a min. [mm]	56.0
Abutment Diameter Outer Ring	D _a max. [mm]	74.0
Chamfer Associated Component	r _a max. [mm]	1.0
Chamfer Associated Component (Open Side)	r _b max. [mm]	0.3

Bearing Load Ratings

Dynamic Radial Load Rating	C [N]	19,000
Static Radial Load Rating Steel Balls	C ₀ [N]	12,300
Static Radial Load Rating Si ₃ N ₄ balls	C _{0HY} [N]	8,600

Bearing Preload Data

Light Pre-Load	F _v [N]	100
Light Axial Rigidity	C _{ax} [N/μm]	47
Medium Pre-Load	F _v [N]	290
Medium Axial Rigidity	C _{ax} [N/μm]	72
Heavy Pre-Load	F _v [N]	580
Heavy Axial Rigidity	C _{ax} [N/μm]	99
Minimum Spring Pre-Load	F _r [N]	570

Bearing RPM Ratings

Speed Value with Oil Lubrication	n _{oil} [1/min]	31,000
Speed Value with Grease Lubrication	n _{grease} [1/min]	23,000

Notes:

1. Position of the oiling Nozzle (dT) 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.