



Part Number	HY S 6011 E TA
Bearing Size	6011

Bearing Series	S
Hybrid (Si ₃ N ₄ Balls)	Yes

Bearing Dimensions

Bore Diameter	d [mm]	55
Outer Diameter	D [mm]	90
Bearing Width	B [mm]	18
Pitch Circle	d _m [mm]	72.5
Ball Diameter	D _w [mm]	9.525
OD Inner Ring	d ₁ [mm]	66.8
ID Outer Ring	D ₁ [mm]	78.2
ID Outer Ring (Open Side)	D ₂ [mm]	81.9
Chamfer	r _{1,2} [mm]	1.1
Chamfer (Open Side)	r _{3,4} [mm]	1.0

Geometrical Data

Number of Balls	Z [Qty.]	20
Contact Angle	α ₀ [°]	25
Bearing Weight	m [kg]	0.374

Mating Part Dimensions

Abutment Diameter Inner Ring	d _a min. [mm]	62.0
Abutment Diameter Outer Ring	D _a max. [mm]	83.0
Chamfer Associated Component	r _a max. [mm]	1.1
Chamfer Associated Component (Open Side)	r _b max. [mm]	0.6

Bearing Load Ratings

Dynamic Radial Load Rating	C [N]	30,500
Static Radial Load Rating Steel Balls	C ₀ [N]	28,000
Static Radial Load Rating Si ₃ N ₄ balls	C _{0HY} [N]	19,400

Bearing Preload Data

Light Pre-Load	F _v [N]	260
Light Axial Rigidity	C _{ax} [N/μm]	167
Medium Pre-Load	F _v [N]	770
Medium Axial Rigidity	C _{ax} [N/μm]	253
Heavy Pre-Load	F _v [N]	1,540
Heavy Axial Rigidity	C _{ax} [N/μm]	337
Minimum Spring Pre-Load	F _r [N]	1,110

Bearing RPM Ratings

Speed Value with Oil Lubrication	n _{oil} [1/min]	25,000
Speed Value with Grease Lubrication	n _{grease} [1/min]	18,750

Notes:

1. Position of the oiling Nozzle (d_r) 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.