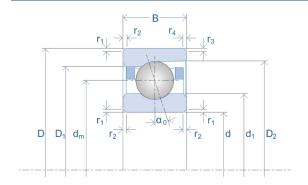


Data Sheet High Precision Ball Bearings



 D_b

 d_{T}



Part Number	HY S 61913 E TA
Bearing Size	61913

Bearing Series S Hybrid (Si₃N₄ Balls) Yes

Bearing Dimensions

Bore Diameter	d [mm]	65
Outer Diameter	D [mm]	90
Bearing Width	B [mm]	13
Pitch Circle	d _m [mm]	77.5
Ball Diameter	D _w [mm]	7.144
OD Inner Ring	d ₁ [mm]	73.1
ID Outer Ring	D ₁ [mm]	81.9
ID Outer Ring (Open Side)	D ₂ [mm]	84.5
Chamfer	r _{1,2} [mm]	1.0
Chamfer (Open Side)	r _{3,4} [mm]	0.3

Bearing Load Ratings

Dynamic Radial Load Rating	C [N]	18,300
Static Radial Load Rating Steel Balls	C ₀ [N]	18,900
Static Radial Load Rating Si ₃ N ₄ balls	C _{0 HY} [N]	13,300

Bearing RPM Ratings

Speed Value with Oil Lubrication	n _{oil} [1/min]	23,125
Speed Value with Grease Lubrication	n _{grease} [1/min]	17,500

Geometrical Data

Da

d

Number of Balls	Z [Qty.]	24
Contact Angle	α ₀ [°]	25
Bearing Weight	m [kg]	0.207

Mating Part Dimensions

Abutment Diameter Inner Ring	d _a min. [mm]	70.0
Abutment Diameter Outer Ring	D _a max. [mm]	85.0
Chamfer Associated Component	r _a max. [mm]	0.6
Chamfer Associated Component (Open Side)	r₀ max. [mm]	0.3

Bearing Preload Data

Light Pre-Load	Fv [N]	160
Light Axial Rigidity	C _{ax} [N/µm]	144
Medium Pre-Load	F _v [N]	470
Medium Axial Rigidity	C _{ax} [N/µm]	215
Heavy Pre-Load	F _v [N]	940
Heavy Axial Rigidity	C _{ax} [N/µm]	286
Minimum Spring Pre-Load	F _f [N]	665

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.