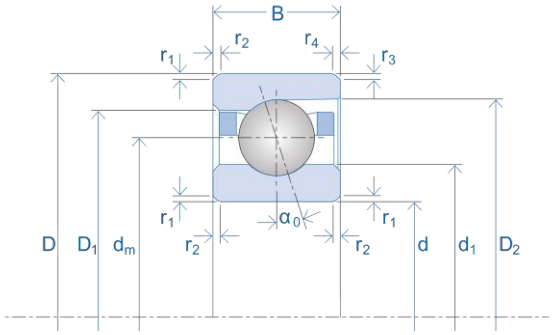
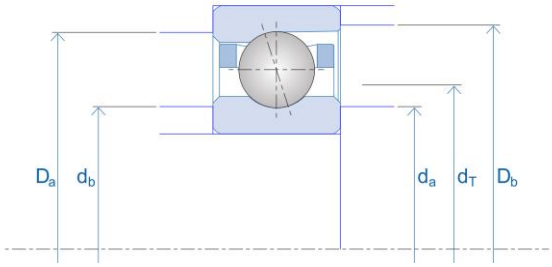
Data Sheet
High Precision Ball Bearings





Part Number	**HY S 61900 C TA**
Bearing Size	61900

Bearing Series	S
Hybrid (Si_3N_4 Balls)	Yes

Bearing Dimensions

Bore Diameter	d [mm]	10
Outer Diameter	D [mm]	22
Bearing Width	B [mm]	6
Pitch Circle	d_m [mm]	16.0
Ball Diameter	D_w [mm]	3.175
OD Inner Ring	d_1 [mm]	13.6
ID Outer Ring	D_1 [mm]	17.8
ID Outer Ring (Open Side)	D_2 [mm]	18.8
Chamfer	$r_{1,2}$ [mm]	0.3
Chamfer (Open Side)	$r_{3,4}$ [mm]	0.3

Geometrical Data

Number of Balls	Z [Qty.]	11
Contact Angle	α_0 [°]	15
Bearing Weight	m [kg]	0.010

Bearing Load Ratings

Dynamic Radial Load Rating	C [N]	2,800
Static Radial Load Rating Steel Balls	C_0 [N]	1,360
Static Radial Load Rating Si_3N_4 balls	$C_{0\,HY}$ [N]	960

Mating Part Dimensions

Abutment Diameter Inner Ring	d_a min. [mm]	12.5
Abutment Diameter Outer Ring	D_a max. [mm]	19.5
Chamfer Associated Component	r_a max. [mm]	0.3
Chamfer Associated Component (Open Side)	r_b max. [mm]	0.1

Bearing RPM Ratings

Speed Value with Oil Lubrication	n_{oil} [1/min]	137,500
Speed Value with Grease Lubrication	n_{grease} [1/min]	102,500

Bearing Preload Data

Light Pre-Load	Fv [N]	12
Light Axial Rigidity	C_{ax} [N/µm]	13
Medium Pre-Load	F_v [N]	40
Medium Axial Rigidity	C_{ax} [N/µm]	21
Heavy Pre-Load	F_v [N]	75
Heavy Axial Rigidity	C_{ax} [N/µm]	29
Minimum Spring Pre-Load	F_f [N]	75

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.

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