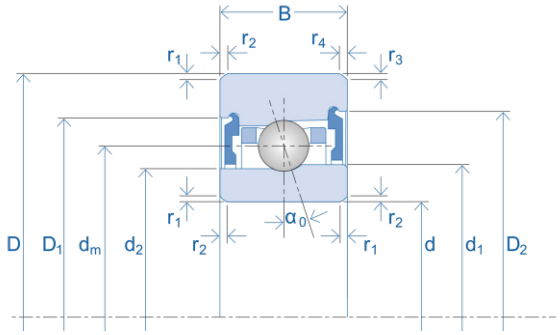
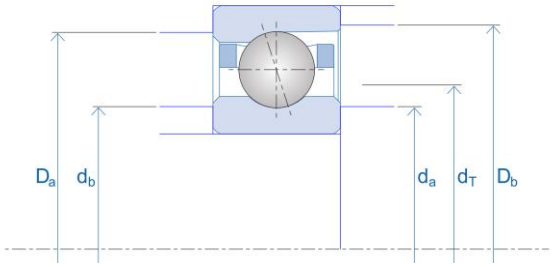
Data Sheet
High Precision Ball Bearings





Part Number	**HY KH 61909 E TA**
Bearing Size	61909

Bearing Series	KH
Hybrid (Si_3N_4 Balls)	Yes

Bearing Dimensions

Bore Diameter	d [mm]	45
Outer Diameter	D [mm]	68
Bearing Width	B [mm]	12
Pitch Circle	d_m [mm]	56.5
Ball Diameter	D_w [mm]	4.762
OD Inner Ring	d_1 [mm]	52.3
OD Inner Ring (Open Side)	d_2 [mm]	50.8
ID Outer Ring	D_1 [mm]	60.7
ID Outer Ring (Open Side)	D_2 [mm]	62.2
Chamfer	$r_{1,2}$ [mm]	0.6
Chamfer (Open Side)	$r_{3,4}$ [mm]	0.3

Bearing Load Ratings

Dynamic Radial Load Rating	C [N]	6,950
Static Radial Load Rating Steel Balls	C_0 [N]	4,900
Static Radial Load Rating Si_3N_4 balls	$C_{0\,HY}$ [N]	3,450

Bearing RPM Ratings

Speed Value with Oil Lubrication	n_{oil} [1/min]	42,500
Speed Value with Grease Lubrication	n_{grease} [1/min]	31,875

Geometrical Data

Number of Balls	Z [Qty.]	28
Contact Angle	α_0 [°]	25
Bearing Weight	m [kg]	0.128

Mating Part Dimensions

Abutment Diameter Inner Ring	$d_{a,b}$ min. [mm]	50.0
Abutment Diameter Outer Ring	$D_{a,b}$ max. [mm]	63.5
Chamfer Associated Component	r_a max. [mm]	0.6
Chamfer Associated Component (Open Side)	r_b max. [mm]	0.15

Bearing Preload Data

Light Pre-Load	Fv [N]	60
Light Axial Rigidity	C_{ax} [N/µm]	86
Medium Pre-Load	F_v [N]	170
Medium Axial Rigidity	C_{ax} [N/µm]	124
Heavy Pre-Load	F_v [N]	350
Heavy Axial Rigidity	C_{ax} [N/µm]	162
Minimum Spring Pre-Load	F_f [N]	335

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.

GMN Bearing USA
22935 Elkana Deane Lane
Katy, Texas 77449

(800) 323-5725
www.gmnbt.com