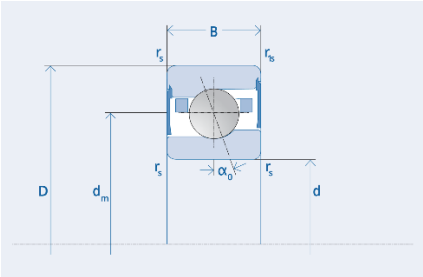
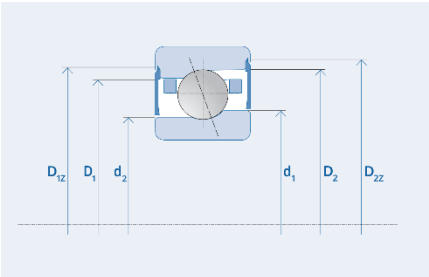
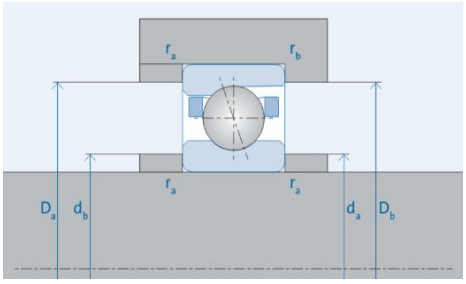
Data Sheet
High Precision Ball Bearings







Part Number	**KH 6020 C TA**
Bearing Size	6020

Bearing Series	KH
Ball Material	Silicon Nitride (Si3N4)
Ring Material	100 Cr 6 (SAE 52100)

Bearing Dimensions

Bore Diameter	d [mm]	100
Outer Diameter	D [mm]	150
Bearing Width	B [mm]	24
Pitch Circle Diameter	d_m [mm]	122.9
Ball Diameter	D_w [mm]	11.906
OD Inner Ring	d_1 [mm]	115.8
OD Inner Ring (Open Side)	d_2 [mm]	114.1
ID Outer Ring	D_1 [mm]	130.0
ID Outer Ring (Open Side)	D_2 [mm]	135.0
ID Outer Ring of Contact Surface	D_{1Z} [mm]	133.2
ID Outer Ring (Open Side) of Contact Surface	D_{2Z} [mm]	136.2
Chamfer	r_s [mm]	1.5
Chamfer (Open Side)	r_{1s} [mm]	0.6

Bearing Load Ratings

Dynamic Radial Load Rating	C_r [N]	39,000
Static Radial Load Rating	C_{0r} [N]	34,500
Fatigue Load Limit	C_{ur} [N]	1,600.0

Bearing RPM Ratings

Speed Value with Oil Lubrication	n_{oil} [1/min]	17,000
Speed Value with Grease Lubrication	n_{grease} [1/min]	13,000

Geometrical Data

Number of Balls	Z [Qty.]	27
Contact Angle	α_0 [°]	17
Bearing Weight	m [kg]	1.300

Mating Part Dimensions

Abutment Diameter Inner Ring	$d_{a,b}$ min. [mm]	107.8
Abutment Diameter Outer Ring	D_a max. [mm]	143.3
Abutment Diameter Outer Ring	D_b max. [mm]	144.3
Chamfer Associated Component	r_a max. [mm]	1.5
Chamfer Associated Component (Open Side)	r_b max. [mm]	0.6
Oil Nozzle Position	d_T [mm]	119.5

Bearing Preload Data

Light Preload	F_v L [N]	190
Light Axial Rigidity	C_{ax} L [N/µm]	91
Medium Preload	F_v M [N]	580
Medium Axial Rigidity	C_{ax} M [N/µm]	138
Heavy Preload	F_v S [N]	1170
Heavy Axial Rigidity	C_{ax} S [N/µm]	183
Minimum Spring Preload	F_f [N]	1990

Notes:

1. Position of the oiling Nozzle (d_T) for bearings with TXM cage design 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 Bearing USA engineers.

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