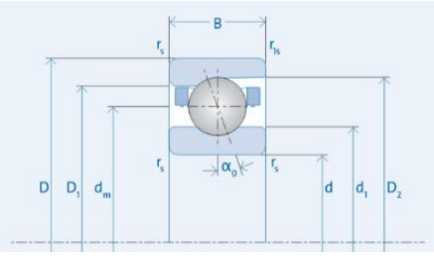
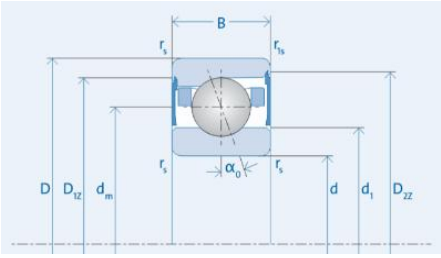
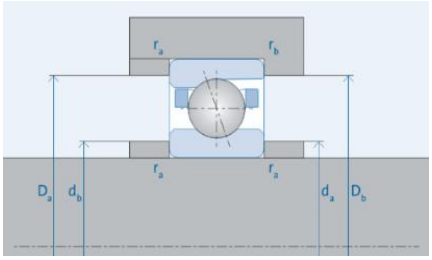
GMN BEARING USA

Data Sheet
High Precision Ball Bearings







Part Number	**S 6211 E TA**
Bearing Size	6211

Bearing Series	S
Ball Material	100 Cr 6 (SAE 52100)
Ring Material	100 Cr 6 (SAE 52100)

Bearing Dimensions

Bore Diameter	d [mm]	55
Outer Diameter	D [mm]	100
Bearing Width	B [mm]	21
Pitch Circle Diameter	d_m [mm]	77.5
Ball Diameter	D_w [mm]	14.288
OD Inner Ring	d_1 [mm]	69.0
ID Outer Ring	D_1 [mm]	85.8
ID Outer Ring (Open Side)	D_2 [mm]	92.0
ID Outer Ring of Contact Surface	D_{1Z} [mm]	
ID Outer Ring (Open Side) of Contact Surface	D_{2Z} [mm]	
Chamfer	r_s [mm]	1.5
Chamfer (Open Side)	r_{1s} [mm]	1.0

Geometrical Data

Number of Balls	Z [Qty.]	15
Contact Angle	α_0 [°]	25
Bearing Weight	m [kg]	0.620

Mating Part Dimensions

Abutment Diameter Inner Ring	$d_{a,b}$ min. [mm]	63.8
Abutment Diameter Outer Ring	D_a max. [mm]	93.0
Abutment Diameter Outer Ring	D_b max. [mm]	93.4
Chamfer Associated Component	r_a max. [mm]	1.5
Chamfer Associated Component (Open Side)	r_b max. [mm]	1.0
Oil Nozzle Position	d_T [mm]	73.8

Bearing Load Ratings

Dynamic Radial Load Rating	C_r [N]	55,500
Static Radial Load Rating	C_{0r} [N]	44,500
Fatigue Load Limit	C_{ur} [N]	2,310.0

Bearing Preload Data

Light Pre-Load	F_v L [N]	470
Light Axial Rigidity	C_{ax} L [N/µm]	196
Medium Pre-Load	F_v M [N]	1400
Medium Axial Rigidity	C_{ax} M [N/µm]	299
Heavy Pre-Load	F_v S [N]	2800
Heavy Axial Rigidity	C_{ax} S [N/µm]	400
Minimum Spring Pre-Load	F_f [N]	4380

Bearing RPM Ratings

Speed Value with Oil Lubrication	n_{oil} [1/min]	18,500
Speed Value with Grease Lubrication	n_{grease} [1/min]	14,000

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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