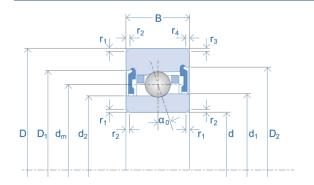


# Data Sheet High Precision Ball Bearings



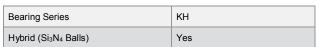
 $D_{b}$ 

d<sub>T</sub>



Part Number	HY KH 61905 C TA	
Bearing Size	61905	

# Bear



### **Bearing Dimensions**

Bore Diameter	d [mm]	25
Outer Diameter	D [mm]	42
Bearing Width	B [mm]	9
Pitch Circle	d <sub>m</sub> [mm]	33.5
Ball Diameter	D <sub>w</sub> [mm]	3.969
OD Inner Ring	d <sub>1</sub> [mm]	30.6
OD Inner Ring (Open Side)	d <sub>2</sub> [mm]	30.0
ID Outer Ring	D <sub>1</sub> [mm]	37.2
ID Outer Ring (Open Side)	D <sub>2</sub> [mm]	38.5
Chamfer	r <sub>1,2</sub> [mm]	0.3
Chamfer (Open Side)	r <sub>3,4</sub> [mm]	0.3

#### **Geometrical Data**

Da

d

Number of Balls	Z [Qty.]	19
Contact Angle	α <sub>0</sub> [°]	17
Bearing Weight	m [kg]	0.041

# Bearing Load Ratings

Dynamic Radial Load Rating	C [N]	4,250
Static Radial Load Rating Steel Balls	C <sub>0</sub> [N]	2,330
Static Radial Load Rating Si <sub>3</sub> N <sub>4</sub> balls	C <sub>0 HY</sub> [N]	1,640

## **Mating Part Dimensions**

Abutment Diameter Inner Ring	d <sub>a,b</sub> min. [mm]	28.0
Abutment Diameter Outer Ring	D <sub>a,b</sub> max. [mm]	38.5
Chamfer Associated Component	r <sub>a</sub> max. [mm]	0.3
Chamfer Associated Component (Open Side)	r <sub>b</sub> max. [mm]	0.15

# Bearing RPM Ratings

Speed Value with Oil Lubrication	n <sub>oil</sub> [1/min]	78,750
Speed Value with Grease Lubrication	n <sub>grease</sub> [1/min]	58,750

# **Bearing Preload Data**

Light Pre-Load	Fv [N]	22
Light Axial Rigidity	C <sub>ax</sub> [N/µm]	25
Medium Pre-Load	F <sub>v</sub> [N]	65
Medium Axial Rigidity	C <sub>ax</sub> [N/µm]	38
Heavy Pre-Load	F <sub>v</sub> [N]	130
Heavy Axial Rigidity	C <sub>ax</sub> [N/µm]	51
Minimum Spring Pre-Load	F <sub>f</sub> [N]	155

#### 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.