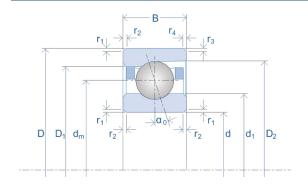


# **Data Sheet High Precision Ball Bearings**





Part Number	HY S 6018 C TA
Bearing Size	6018

## **Bearing Dimensions**

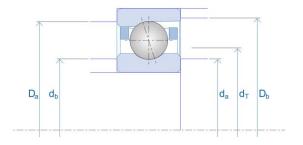
Bore Diameter	d [mm]	90
Outer Diameter	D [mm]	140
Bearing Width	B [mm]	24
Pitch Circle	d <sub>m</sub> [mm]	115.0
Ball Diameter	D <sub>w</sub> [mm]	15.081
OD Inner Ring	d <sub>1</sub> [mm]	105.8
ID Outer Ring	D <sub>1</sub> [mm]	124.2
ID Outer Ring (Open Side)	D <sub>2</sub> [mm]	130.1
Chamfer	r <sub>1,2</sub> [mm]	1.5
Chamfer (Open Side)	r <sub>3,4</sub> [mm]	0.6

# **Bearing Load Ratings**

Dynamic Radial Load Rating	C [N]	74,500
Static Radial Load Rating Steel Balls	C <sub>0</sub> [N]	74,000
Static Radial Load Rating Si <sub>3</sub> N <sub>4</sub> balls	C <sub>0 HY</sub> [N]	52,000

### **Bearing RPM Ratings**

Speed Value with Oil Lubrication	n <sub>oil</sub> [1/min]	18,750
Speed Value with Grease Lubrication	n <sub>grease</sub> [1/min]	13,750



Bearing Series	S
Hybrid (Si₃N₄ Balls)	Yes

#### **Geometrical Data**

Number of Balls	Z [Qty.]	20
Contact Angle	α <sub>0</sub> [°]	15
Bearing Weight	m [kg]	1.150

#### **Mating Part Dimensions**

Abutment Diameter Inner Ring	d <sub>a</sub> min. [mm]	100.0
Abutment Diameter Outer Ring	D <sub>a</sub> max. [mm]	131.0
Chamfer Associated Component	r <sub>a</sub> max. [mm]	1.5
Chamfer Associated Component (Open Side)	r₀ max. [mm]	0.6

# **Bearing Preload Data**

Light Pre-Load	Fv [N]	380
Light Axial Rigidity	C <sub>ax</sub> [N/µm]	110
Medium Pre-Load	F <sub>v</sub> [N]	1,130
Medium Axial Rigidity	C <sub>ax</sub> [N/µm]	179
Heavy Pre-Load	F <sub>v</sub> [N]	2,270
Heavy Axial Rigidity	C <sub>ax</sub> [N/µm]	255
Minimum Spring Pre-Load	F <sub>f</sub> [N]	1,900

#### 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.