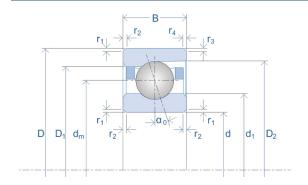


## Data Sheet High Precision Ball Bearings



 $D_b$ 

 $d_{\mathsf{T}}$ 



Part Number	S 61803 C TA
Bearing Size	61803

# Bearing Series S Hybrid (Si<sub>3</sub>N<sub>4</sub> Balls) No

#### **Bearing Dimensions**

Bore Diameter	d [mm]	17
Outer Diameter	D [mm]	26
Bearing Width	B [mm]	5
Pitch Circle	d <sub>m</sub> [mm]	21.5
Ball Diameter	D <sub>w</sub> [mm]	2.381
OD Inner Ring	d <sub>1</sub> [mm]	19.8
ID Outer Ring	D <sub>1</sub> [mm]	23.2
ID Outer Ring (Open Side)	D <sub>2</sub> [mm]	23.8
Chamfer	r <sub>1,2</sub> [mm]	0.3
Chamfer (Open Side)	r <sub>3,4</sub> [mm]	0.2

### **Bearing Load Ratings**

Dynamic Radial Load Rating	C [N]	2,000
Static Radial Load Rating Steel Balls	C <sub>0</sub> [N]	1,310
Static Radial Load Rating Si <sub>3</sub> N <sub>4</sub> balls	C <sub>0 HY</sub> [N]	920

#### **Bearing RPM Ratings**

Speed Value with Oil Lubrication	n <sub>oil</sub> [1/min]	79,000
Speed Value with Grease Lubrication	n <sub>grease</sub> [1/min]	59,000

#### **Geometrical Data**

Da

d

Number of Balls	Z [Qty.]	19
Contact Angle	α <sub>0</sub> [°]	15
Bearing Weight	m [kg]	0.008

#### **Mating Part Dimensions**

Abutment Diameter Inner Ring	d <sub>a</sub> min. [mm]	19.0
Abutment Diameter Outer Ring	D <sub>a</sub> max. [mm]	24.0
Chamfer Associated Component	r <sub>a</sub> max. [mm]	0.3
Chamfer Associated Component (Open Side)	r₀ max. [mm]	0.15

### **Bearing Preload Data**

Light Pre-Load	Fv [N]	10
Light Axial Rigidity	C <sub>ax</sub> [N/µm]	14
Medium Pre-Load	F <sub>v</sub> [N]	30
Medium Axial Rigidity	C <sub>ax</sub> [N/µm]	22
Heavy Pre-Load	F <sub>v</sub> [N]	60
Heavy Axial Rigidity	C <sub>ax</sub> [N/µm]	31
Minimum Spring Pre-Load	F <sub>f</sub> [N]	55

#### 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.