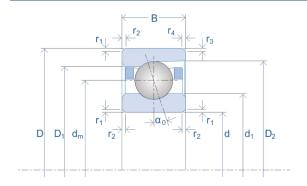


## Data Sheet High Precision Ball Bearings





Part Number	SM 61905 C TA
Bearing Size	61905

# $D_a$ $d_b$ $d_a$ $d_T$ $D_b$ Bearing Series SM

No

### Geometrical Data

Hybrid (Si<sub>3</sub>N<sub>4</sub> Balls)

Number of Balls	Z [Qty.]	17
Contact Angle	α <sub>0</sub> [°]	15
Bearing Weight	m [kg]	0.041

#### **Mating Part Dimensions**

Abutment Diameter Inner Ring	d <sub>a</sub> min. [mm]	28.0
Abutment Diameter Outer Ring	D <sub>a</sub> max. [mm]	38.5
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]	30
Light Axial Rigidity	C <sub>ax</sub> [N/µm]	23
Medium Pre-Load	F <sub>v</sub> [N]	90
Medium Axial Rigidity	C <sub>ax</sub> [N/µm]	36
Heavy Pre-Load	F <sub>v</sub> [N]	180
Heavy Axial Rigidity	C <sub>ax</sub> [N/µm]	49
Minimum Spring Pre-Load	F <sub>f</sub> [N]	175

#### **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]	4.762
OD Inner Ring	d₁ [mm]	30.6
ID Outer Ring	D <sub>1</sub> [mm]	37.4
ID Outer Ring (Open Side)	D <sub>2</sub> [mm]	38.7
Chamfer	r <sub>1,2</sub> [mm]	0.3
Chamfer (Open Side)	r <sub>3,4</sub> [mm]	0.3

#### **Bearing Load Ratings**

Dynamic Radial Load Rating	C [N]	5,800
Static Radial Load Rating Steel Balls	C <sub>0</sub> [N]	3,150
Static Radial Load Rating Si <sub>3</sub> N <sub>4</sub> balls	C <sub>0 HY</sub> [N]	2,200

#### **Bearing RPM Ratings**

Speed Value with Oil Lubrication	n <sub>oil</sub> [1/min]	59,000
Speed Value with Grease Lubrication	n <sub>grease</sub> [1/min]	44,000

#### Notes:

- 1. Position of the oiling Nozzle ( $\mbox{d}_{\mbox{\scriptsize T}})$  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.