

# Spindle ball bearing SM 61905 C TA P4+

16.07.2024



## Components

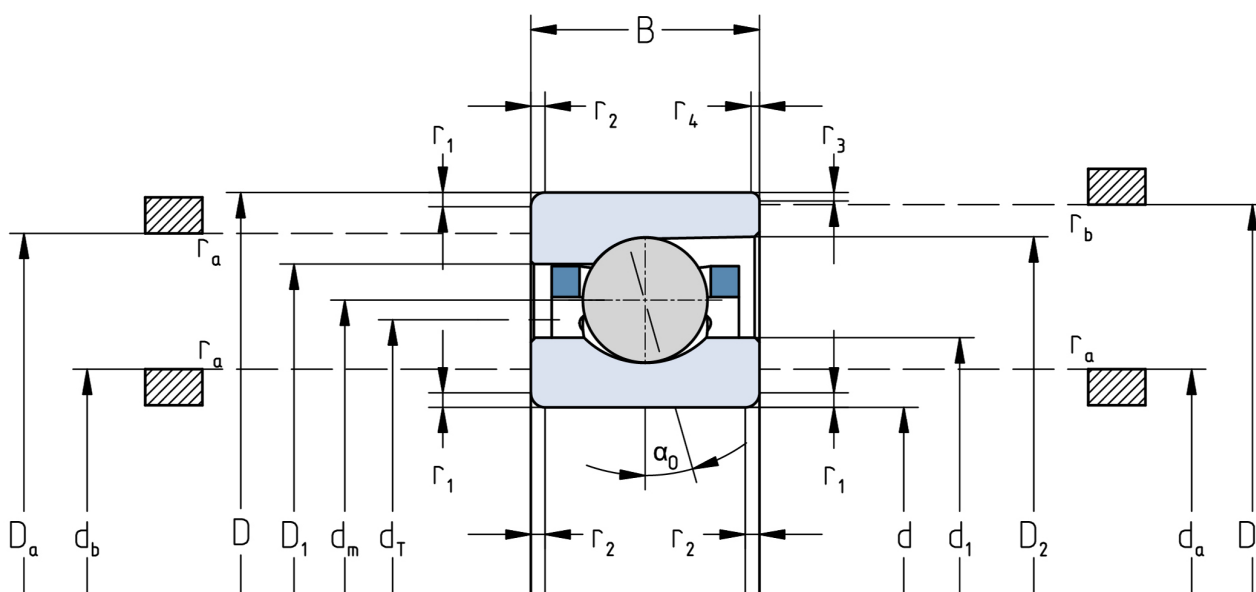
Bearing designation:	SM 61905 C TA
Bearing design:	SM
Series / size:	61905
Ball material:	Steel 100Cr6
Cage:	TA
Precision:	P4+
Main dimensions [d x D x B]:	25 x 42 x 9 mm

## Load data

Static load capacity	$C_{0r}$ : 3200 N
Dynamic load capacity	$C_r$ : 5800 N
Fatigue load limit	$C_U$ : 164 N
Speed limit	$n_{grease}$ : 44250 1/min
Speed limit	$n_{oil}$ : 59000 1/min
Light preload	L: 30 N
Axial rigidity	$C_{ax}$ : 23 N/ $\mu$ m
Medium preload	M: 90 N
Axial rigidity	$C_{ax}$ : 35 N/ $\mu$ m
Heavy preload	S: 180 N
Axial rigidity	$C_{ax}$ : 48 N/ $\mu$ m
Spring preload	Ff: 180 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 25 mm	Oiling nozzle position	$d_T$ : 32.4 mm
Outer diameter	D: 42 mm	Pitch circle diameter	$d_m$ : 34 mm
Width of single bearing	B: 9 mm	Inner diameter of outer ring	$D_1$ : 37.4 mm
Ball diameter	$D_w$ : 4.762 mm	Undercut of associated component	$r_{a \max}$ : 0.3 mm
Number of balls	Z: 17	Undercut of associated component (open side)	$r_{b \max}$ : 0.3 mm
Chamfer (min)	$r_{1,2 \min}$ : 0.3 mm	Abutment diameter inner ring	$d_{a,b \min}$ : 27.4 mm
Chamfer (min), open side	$r_{3,4 \min}$ : 0.3 mm	Abutment diameter outer ring	$D_{a,b \max}$ : 40.1 mm
Outer diameter of inner ring	$d_1$ : 30.6 mm	Inner diameter of outer ring (open side)	$D_2$ : 38.8 mm
Outer diameter of inner ring (open side)	$d_2$ : -	Bearing weight	m: 0.04 kg
		Contact angle	Alpha 0: 15°



The given speed limits apply to individual bearings with spring preload. Correction factors must be considered for all properties which deviate from this.