

Spindle ball bearing SM 61911 C TA P4+

08.05.2024



Components

Bearing designation:	SM 61911 C TA
Bearing design:	SM
Series / size:	61911
Ball material:	Steel 100Cr6
Cage:	TA
Seal:	2RZ optional (with grease)
Precision:	P4+
Main dimensions [d x D x B]:	55 x 80 x 13 mm

Load data

Static load capacity	C_{0r} : 9500 N
Dynamic load capacity	C_r : 13600 N
Fatigue load limit	C_U : 491 N
Speed limit	n_{grease} : 22125 1/min
Speed limit	n_{oil} : 29500 1/min
Light preload	L: 70 N
Axial rigidity	C_{ax} : 48 N/ μ m
Medium preload	M: 210 N
Axial rigidity	C_{ax} : 74 N/ μ m
Heavy preload	S: 420 N
Axial rigidity	C_{ax} : 99 N/ μ m
Spring preload	Ff: 610 N (for n_{max})

Geometrical Data

Bore diameter	d: 55 mm	Oiling nozzle position	d_T : 65.4 mm
Outer diameter	D: 80 mm	Pitch circle diameter	d_m : 67.5 mm
Width of single bearing	B: 13 mm	Inner diameter of outer ring	D_1 : 71.9 mm
Ball diameter	D_w : 7.144 mm	Undercut of associated component	$r_{a \max}$: 1 mm
Number of balls	Z: 21	Undercut of associated component (open side)	$r_{b \max}$: 0.3 mm
Chamfer (min)	$r_{1,2 \min}$: 1 mm	Abutment diameter inner ring	$d_{a,b \min}$: 59.9 mm
Chamfer (min), open side	$r_{3,4 \min}$: 0.3 mm	Abutment diameter outer ring	$D_{a,b \max}$: 75.5 mm
Outer diameter of inner ring	d_1 : 63.1 mm	Inner diameter of outer ring (open side)	D_2 : 74.7 mm
Outer diameter of inner ring (open side)	d_2 : -	Bearing weight	m: 0.175 kg
		Contact angle	Alpha 0: 17°



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