

# Spindle ball bearing HY SM 61911 C TA P4+

16.07.2024



## Components

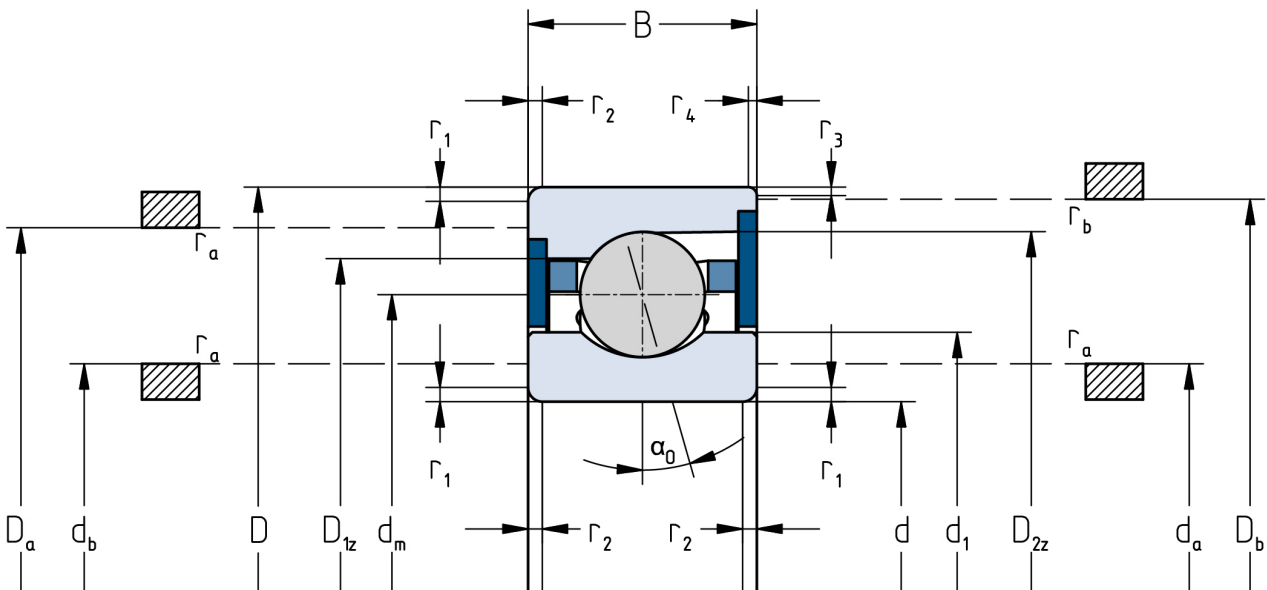
Bearing designation:	HY SM 61911 C TA
Bearing design:	SM
Series / size:	61911
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ optional (with grease)
Precision:	P4+
Main dimensions [d x D x B]:	55 x 80 x 13 mm

## Load data

Static load capacity	$C_{0r}$ : 9100 N
Dynamic load capacity	$C_r$ : 13600 N
Fatigue load limit	$C_U$ : 343 N
Speed limit	$n_{grease}$ : 27750 1/min
Speed limit	$n_{oil}$ : 37000 1/min
Light preload	L: 70 N
Axial rigidity	$C_{ax}$ : 54 N/ $\mu$ m
Medium preload	M: 210 N
Axial rigidity	$C_{ax}$ : 81 N/ $\mu$ m
Heavy preload	S: 420 N
Axial rigidity	$C_{ax}$ : 108 N/ $\mu$ m
Spring preload	Ff: 430 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 55 mm	Oiling nozzle position	$d_f$ : 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: 0.155 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.