

# Spindle ball bearing HY SM 6010 C TXM P4+

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## Components

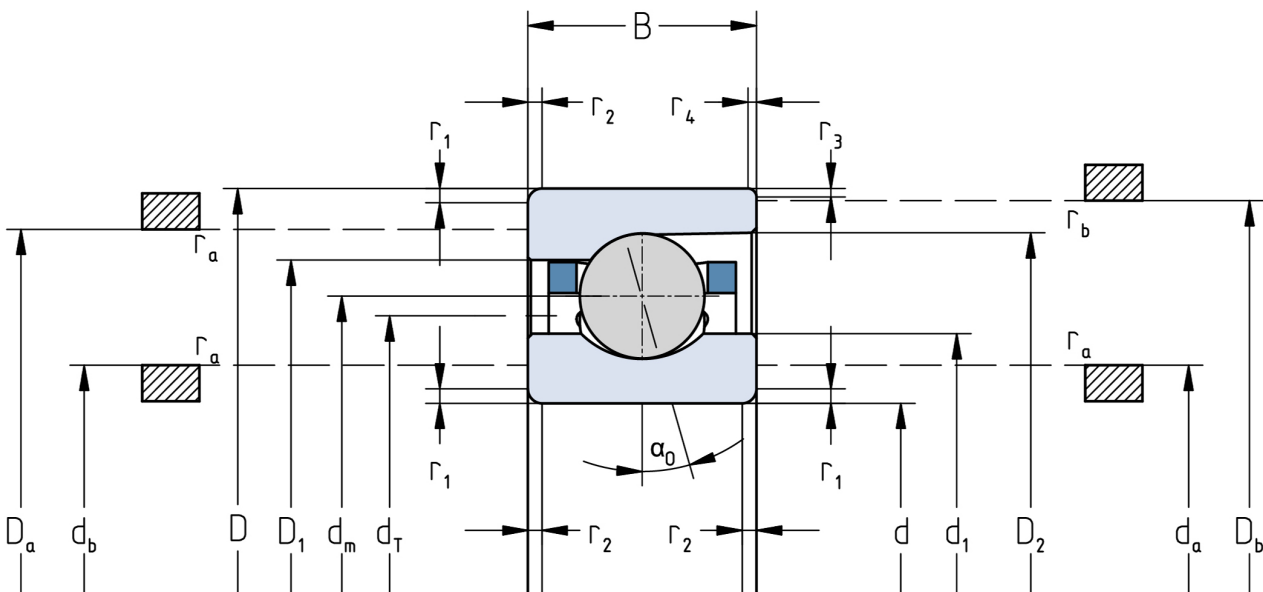
Bearing designation:	HY SM 6010 C TXM
Bearing design:	SM
Series / size:	6010
Ball material:	Ceramic
Cage:	TXM
Precision:	P4+ (UP+ Upon request)
Main dimensions [d x D x B]:	50 x 80 x 16 mm

## Load data

Static load capacity	$C_{0r}$ : 11900 N
Dynamic load capacity	$C_r$ : 19000 N
Fatigue load limit	$C_U$ : 449 N
Speed limit	$n_{grease}$ : 28500 1/min
Speed limit	$n_{oil}$ : 38000 1/min
Light preload	L: 100 N
Axial rigidity	$C_{ax}$ : 52 N/ $\mu$ m
Medium preload	M: 290 N
Axial rigidity	$C_{ax}$ : 79 N/ $\mu$ m
Heavy preload	S: 580 N
Axial rigidity	$C_{ax}$ : 107 N/ $\mu$ m
Spring preload	Ff: 490 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 50 mm	Oiling nozzle position	$d_T$ : 62.5 mm
Outer diameter	D: 80 mm	Pitch circle diameter	$d_m$ : 65 mm
Width of single bearing	B: 16 mm	Inner diameter of outer ring	$D_1$ : 70 mm
Ball diameter	$D_w$ : 8.731 mm	Undercut of associated component	$r_{a max}$ : 1 mm
Number of balls	Z: 19	Undercut of associated component (open side)	$r_{b max}$ : 0.6 mm
Chamfer (min)	$r_{1,2 min}$ : 1 mm	Abutment diameter inner ring	$d_{a,b min}$ : 55.4 mm
Chamfer (min), open side	$r_{3,4 min}$ : 0.6 mm	Abutment diameter outer ring	$D_{a,b max}$ : 75.5 mm
Outer diameter of inner ring	$d_1$ : 59.7 mm	Inner diameter of outer ring (open side)	$D_2$ : 73.9 mm
Outer diameter of inner ring (open side)	$d_2$ : -	Bearing weight	m: 0.225 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.