

# Spindle ball bearing HY SM 6014 C TXM P4+

16.07.2024



## Components

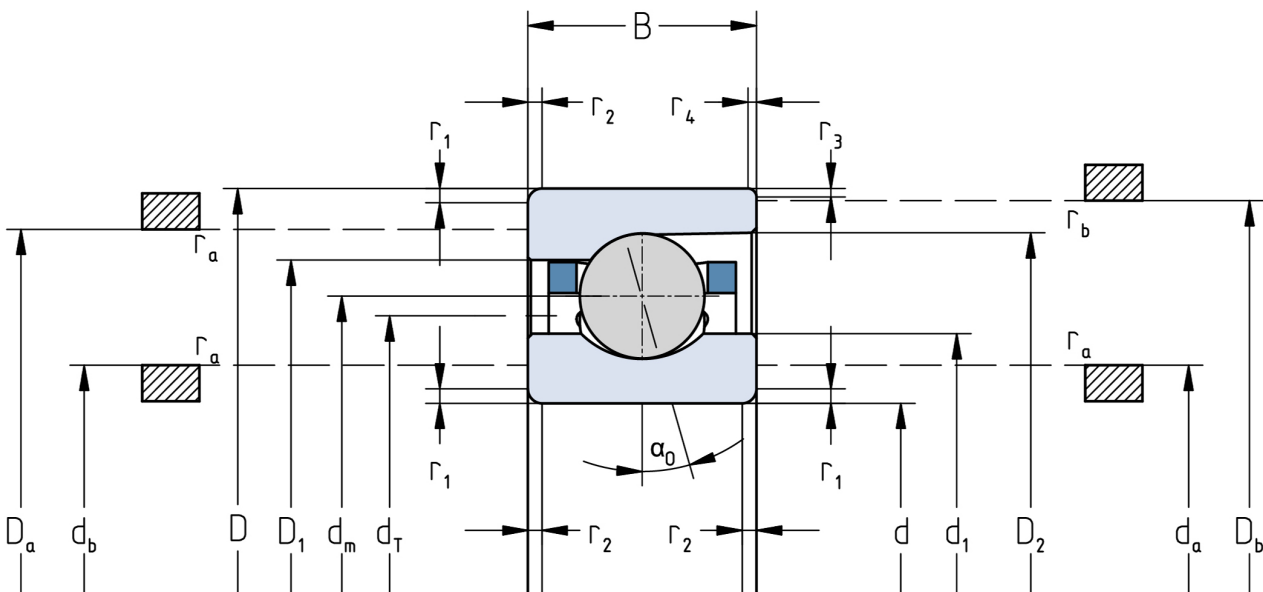
Bearing designation:	HY SM 6014 C TXM
Bearing design:	SM
Series / size:	6014
Ball material:	Ceramic
Cage:	TXM
Precision:	P4+ (UP+ Upon request)
Main dimensions [d x D x B]:	70 x 110 x 20 mm

## Load data

Static load capacity	$C_{0r}$ : 24400 N
Dynamic load capacity	$C_r$ : 35500 N
Fatigue load limit	$C_U$ : 926 N
Speed limit	$n_{grease}$ : 21000 1/min
Speed limit	$n_{oil}$ : 28000 1/min
Light preload	L: 180 N
Axial rigidity	$C_{ax}$ : 73 N/ $\mu$ m
Medium preload	M: 500 N
Axial rigidity	$C_{ax}$ : 109 N/ $\mu$ m
Heavy preload	S: 1000 N
Axial rigidity	$C_{ax}$ : 146 N/ $\mu$ m
Spring preload	Ff: 1010 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 70 mm	Oiling nozzle position	$d_T$ : 86.6 mm
Outer diameter	D: 110 mm	Pitch circle diameter	$d_m$ : 90 mm
Width of single bearing	B: 20 mm	Inner diameter of outer ring	$D_1$ : 97.4 mm
Ball diameter	$D_w$ : 11.906 mm	Undercut of associated component	$r_{a max}$ : 1 mm
Number of balls	Z: 21	Undercut of associated component (open side)	$r_{b max}$ : 1 mm
Chamfer (min)	$r_{1,2 min}$ : 1.1 mm	Abutment diameter inner ring	$d_{a,b min}$ : 77.3 mm
Chamfer (min), open side	$r_{3,4 min}$ : 1 mm	Abutment diameter outer ring	$D_{a,b max}$ : 103.9 mm
Outer diameter of inner ring	$d_1$ : 82.6 mm	Inner diameter of outer ring (open side)	$D_2$ : 102 mm
Outer diameter of inner ring (open side)	$d_2$ : -	Bearing weight	m: 0.51 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.