

# Spindle ball bearing HY KH 6011 C TA P4+

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## Components

Bearing designation:	HY KH 6011 C TA
Bearing design:	KH
Series / size:	6011
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ optional (with grease)
Precision:	P4+
Main dimensions [d x D x B]:	55 x 90 x 18 mm

## Load data

Static load capacity	$C_{0r}$ : 11000 N
Dynamic load capacity	$C_r$ : 16700 N
Fatigue load limit	$C_U$ : 415 N
Speed limit	$n_{grease}$ : 27750 1/min
Speed limit	$n_{oil}$ : 37000 1/min
Light preload	L: 80 N
Axial rigidity	$C_{ax}$ : 60 N/ $\mu$ m
Medium preload	M: 250 N
Axial rigidity	$C_{ax}$ : 92 N/ $\mu$ m
Heavy preload	S: 500 N
Axial rigidity	$C_{ax}$ : 122 N/ $\mu$ m
Spring preload	Ff: 520 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 55 mm	Oiling nozzle position	$d_7$ : 69.3 mm
Outer diameter	D: 90 mm	Pitch circle diameter	$d_m$ : 71.5 mm
Width of single bearing	B: 18 mm	Inner diameter of outer ring	$D_1$ : 76.5 mm
Ball diameter	$D_w$ : 7.938 mm	Undercut of associated component	$r_{a max}$ : 1 mm
Number of balls	Z: 23	Undercut of associated component (open side)	$r_{b max}$ : 1 mm
Chamfer (min)	$r_{1,2 min}$ : 1.1 mm	Abutment diameter inner ring	$d_{a,b min}$ : 60.8 mm
Chamfer (min), open side	$r_{3,4 min}$ : 1 mm	Abutment diameter outer ring	$D_{a,b max}$ : 85 mm
Outer diameter of inner ring	$d_1$ : 66.8 mm	Inner diameter of outer ring (open side)	$D_2$ : 79.6 mm
Outer diameter of inner ring (open side)	$d_2$ : 65.6 mm	Bearing weight	m: 0.37 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.