

# Spindle ball bearing HY S 6011 C TA P4+

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## Components

Bearing designation:	HY S 6011 C TA
Bearing design:	S
Series / size:	6011
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ upon request
Precision:	P4+ (UP+ Upon request)
Main dimensions [d x D x B]:	55 x 90 x 18 mm

## Load data

Static load capacity	$C_{0r}$ : 28500 N
Dynamic load capacity	$C_r$ : 32500 N
Fatigue load limit	$C_U$ : 1066 N
Speed limit	$n_{grease}$ : 22125 1/min
Speed limit	$n_{oil}$ : 29500 1/min
Light preload	L: 160 N
Axial rigidity	$C_{ax}$ : 76 N/ $\mu$ m
Medium preload	M: 490 N
Axial rigidity	$C_{ax}$ : 125 N/ $\mu$ m
Heavy preload	S: 980 N
Axial rigidity	$C_{ax}$ : 176 N/ $\mu$ m
Spring preload	Ff: 1160 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 55 mm	Oiling nozzle position	$d_f$ : 69.8 mm
Outer diameter	D: 90 mm	Pitch circle diameter	$d_m$ : 72.5 mm
Width of single bearing	B: 18 mm	Inner diameter of outer ring	$D_1$ : 78.2 mm
Ball diameter	$D_w$ : 9.525 mm	Undercut of associated component	$r_{a \max}$ : 1 mm
Number of balls	Z: 20	Undercut of associated component (open side)	$r_{b \max}$ : 1 mm
Chamfer (min)	$r_{1,2 \min}$ : 1.1 mm	Abutment diameter inner ring	$d_{a,b \min}$ : 61.4 mm
Chamfer (min), open side	$r_{3,4 \min}$ : 1 mm	Abutment diameter outer ring	$D_{a,b \max}$ : 84.6 mm
Outer diameter of inner ring	$d_1$ : 66.8 mm	Inner diameter of outer ring (open side)	$D_2$ : 82.2 mm
Outer diameter of inner ring (open side)	$d_2$ : -	Bearing weight	m: 0.345 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.