

# Spindle ball bearing S 61806 C TA P4+

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## Components

Bearing designation:	S 61806 C TA
Bearing design:	S
Series / size:	61806
Ball material:	Steel 100Cr6
Cage:	TA
Precision:	P4+
Main dimensions [d x D x B]:	30 x 42 x 7 mm

## Load data

Static load capacity	$C_{0r}$ : 3300 N
Dynamic load capacity	$C_r$ : 3850 N
Fatigue load limit	$C_U$ : 170 N
Speed limit	$n_{grease}$ : 35250 1/min
Speed limit	$n_{oil}$ : 47000 1/min
Light preload	L: 20 N
Axial rigidity	$C_{ax}$ : 23 N/ $\mu$ m
Medium preload	M: 60 N
Axial rigidity	$C_{ax}$ : 37 N/ $\mu$ m
Heavy preload	S: 120 N
Axial rigidity	$C_{ax}$ : 52 N/ $\mu$ m
Spring preload	Ff: 190 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 30 mm	Oiling nozzle position	$d_T$ : 35.1 mm
Outer diameter	D: 42 mm	Pitch circle diameter	$d_m$ : 36.2 mm
Width of single bearing	B: 7 mm	Inner diameter of outer ring	$D_1$ : 38.3 mm
Ball diameter	$D_w$ : 3.175 mm	Undercut of associated component	$r_{a \max}$ : 0.3 mm
Number of balls	Z: 22	Undercut of associated component (open side)	$r_{b \max}$ : 0.3 mm
Chamfer (min)	$r_{1,2 \min}$ : 0.3 mm	Abutment diameter inner ring	$d_{a,b \min}$ : 31.7 mm
Chamfer (min), open side	$r_{3,4 \min}$ : 0.3 mm	Abutment diameter outer ring	$D_{a,b \max}$ : 40.5 mm
Outer diameter of inner ring	$d_1$ : 34.1 mm	Inner diameter of outer ring (open side)	$D_2$ : 39.4 mm
Outer diameter of inner ring (open side)	$d_2$ : -	Bearing weight	m: 0.024 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.