

Spindle ball bearing SM 6016 C TA P4+

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Components

Bearing designation:	SM 6016 C TA
Bearing design:	SM
Series / size:	6016
Ball material:	Steel 100Cr6
Cage:	TA
Seal:	2RZ upon request
Precision:	P4+
Main dimensions [d x D x B]:	80 x 125 x 22 mm

Load data

Static load capacity	C_{0r} : 31000 N
Dynamic load capacity	C_r : 43000 N
Fatigue load limit	C_U : 1594 N
Speed limit	n_{grease} : 14625 1/min
Speed limit	n_{oil} : 19500 1/min
Light preload	L: 220 N
Axial rigidity	C_{ax} : 86 N/ μ m
Medium preload	M: 650 N
Axial rigidity	C_{ax} : 130 N/ μ m
Heavy preload	S: 1300 N
Axial rigidity	C_{ax} : 174 N/ μ m
Spring preload	Ff: 1980 N (for n_{max})

Geometrical Data

Bore diameter	d: 80 mm	Oiling nozzle position	d_T : 98.6 mm
Outer diameter	D: 125 mm	Pitch circle diameter	d_m : 102.5 mm
Width of single bearing	B: 22 mm	Inner diameter of outer ring	D_1 : 110.7 mm
Ball diameter	D_w : 13.494 mm	Undercut of associated component	$r_{a \max}$: 1 mm
Number of balls	Z: 20	Undercut of associated component (open side)	$r_{b \max}$: 0.6 mm
Chamfer (min)	$r_{1,2 \min}$: 1.1 mm	Abutment diameter inner ring	$d_{a,b \min}$: 87.7 mm
Chamfer (min), open side	$r_{3,4 \min}$: 0.6 mm	Abutment diameter outer ring	$D_{a,b \max}$: 118.7 mm
Outer diameter of inner ring	d_1 : 94.3 mm	Inner diameter of outer ring (open side)	D_2 : 116.2 mm
Outer diameter of inner ring (open side)	d_2 : -	Bearing weight	m: 0.84 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.