

Spindle ball bearing SM 6021 C TA P4+

08.05.2024



Components

Bearing designation:	SM 6021 C TA
Bearing design:	SM
Series / size:	6021
Ball material:	Steel 100Cr6
Cage:	TA
Seal:	2RZ upon request
Precision:	P4+
Main dimensions [d x D x B]:	105 x 160 x 26 mm

Load data

Static load capacity	C_{0r} : 48500 N
Dynamic load capacity	C_r : 60500 N
Fatigue load limit	C_U : 2192 N
Speed limit	n_{grease} : 11250 1/min
Speed limit	n_{oil} : 15000 1/min
Light preload	L: 310 N
Axial rigidity	C_{ax} : 109 N/μm
Medium preload	M: 930 N
Axial rigidity	C_{ax} : 165 N/μm
Heavy preload	S: 1850 N
Axial rigidity	C_{ax} : 220 N/μm
Spring preload	Ff: 2720 N (for n_{max})

Geometrical Data

Bore diameter	d: 105 mm	Oiling nozzle position	d_T : 127.9 mm
Outer diameter	D: 160 mm	Pitch circle diameter	d_m : 132.5 mm
Width of single bearing	B: 26 mm	Inner diameter of outer ring	D_1 : 142.2 mm
Ball diameter	D_w : 15.875 mm	Undercut of associated component	$r_{a \max}$: 2 mm
Number of balls	Z: 22	Undercut of associated component (open side)	$r_{b \max}$: 1 mm
Chamfer (min)	$r_{1,2 \min}$: 2 mm	Abutment diameter inner ring	$d_{a,b \min}$: 115.8 mm
Chamfer (min), open side	$r_{3,4 \min}$: 1 mm	Abutment diameter outer ring	$D_{a,b \max}$: 150.6 mm
Outer diameter of inner ring	d_1 : 122.8 mm	Inner diameter of outer ring (open side)	D_2 : 148.6 mm
Outer diameter of inner ring (open side)	d_2 : -	Bearing weight	m: 1.6 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.