

Spindle ball bearing SM 6009 C TA P4+

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Components

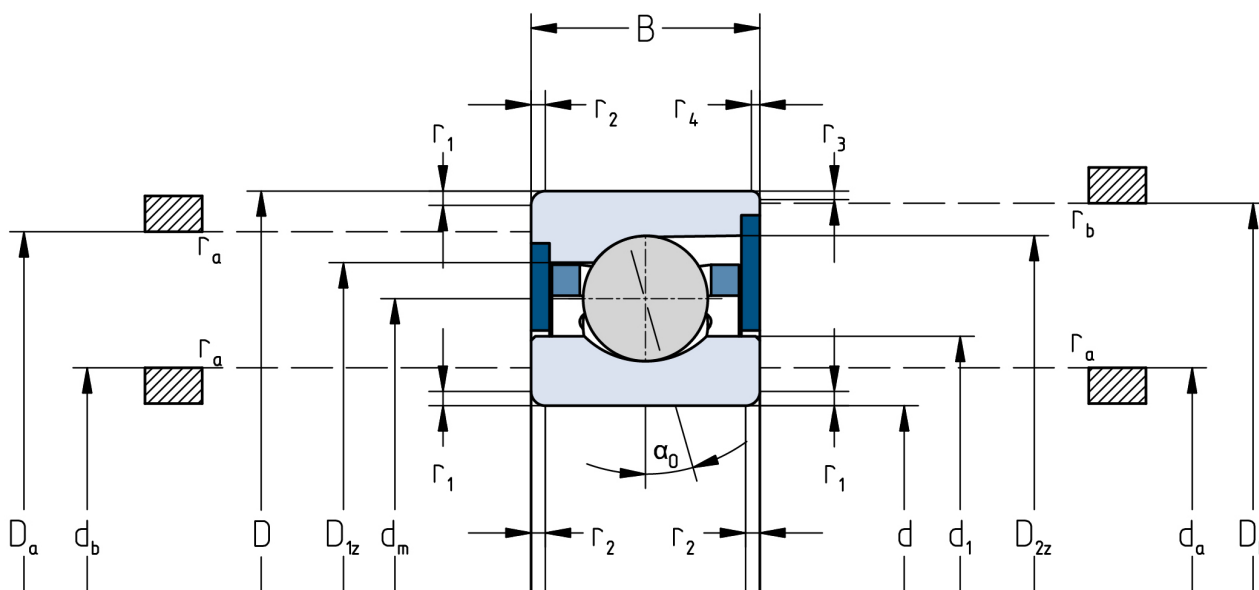
Bearing designation:	SM 6009 C TA
Bearing design:	SM
Series / size:	6009
Ball material:	Steel 100Cr6
Cage:	TA
Seal:	2RZ optional (with grease)
Precision:	P4+ (UP+ Upon request)
Main dimensions [d x D x B]:	45 x 75 x 16 mm

Load data

Static load capacity	C_{Or} : 11500 N
Dynamic load capacity	C_r : 18500 N
Fatigue load limit	C_U : 596 N
Speed limit	n_{grease} : 24750 1/min
Speed limit	n_{oil} : 33000 1/min
Light preload	L : 90 N
Axial rigidity	C_{ax} : 43 N/ μ m
Medium preload	M : 275 N
Axial rigidity	C_{ax} : 68 N/ μ m
Heavy preload	S : 550 N
Axial rigidity	C_{ax} : 93 N/ μ m
Spring preload	F_f : 650 N (for n_{max})

Geometrical Data

Bore diameter	d:	45 mm	Oiling nozzle position	d _r :	57.6 mm
Outer diameter	D:	75 mm	Pitch circle diameter	d _m :	60 mm
Width of single bearing	B:	16 mm	Inner diameter of outer ring	D ₁ :	65 mm
Ball diameter	D _w :	8.731 mm	Undercut of associated component	r _{a max} :	1 mm
Number of balls	Z:	18	Undercut of associated component (open side)	r _{b max} :	0.6 mm
Chamfer (min)	r _{1,2 min} :	1 mm	Abutment diameter inner ring	d _{a,b min} :	50.4 mm
Chamfer (min), open side	r _{3,4 min} :	0.6 mm	Abutment diameter outer ring	D _{a,b max} :	70.5 mm
Outer diameter of inner ring	d ₁ :	54.7 mm	Inner diameter of outer ring (open side)	D ₂ :	68.9 mm
Outer diameter of inner ring (open side)	d ₂ :	-	Bearing weight	m:	0.24 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.