

Spindle ball bearing SM 61907 C TXM P4+

16.07.2024



Components

Bearing designation:	SM 61907 C TXM
Bearing design:	SM
Series / size:	61907
Ball material:	Steel 100Cr6
Cage:	TXM
Precision:	P4+
Main dimensions [d x D x B]:	35 x 55 x 10 mm

Load data

Static load capacity	C_{0r} : 4800 N
Dynamic load capacity	C_r : 8000 N
Fatigue load limit	C_U : 249 N
Speed limit	n_{grease} : 33000 1/min
Speed limit	n_{oil} : 44000 1/min
Light preload	L: 40 N
Axial rigidity	C_{ax} : 33 N/ μ m
Medium preload	M: 120 N
Axial rigidity	C_{ax} : 51 N/ μ m
Heavy preload	S: 240 N
Axial rigidity	C_{ax} : 68 N/ μ m
Spring preload	Ff: 310 N (for n_{max})

Geometrical Data

Bore diameter	d: 35 mm	Oiling nozzle position	d_T : 43.3 mm
Outer diameter	D: 55 mm	Pitch circle diameter	d_m : 45 mm
Width of single bearing	B: 10 mm	Inner diameter of outer ring	D_1 : 48.6 mm
Ball diameter	D_w : 5.556 mm	Undercut of associated component	$r_{a max}$: 0.6 mm
Number of balls	Z: 18	Undercut of associated component (open side)	$r_{b max}$: 0.3 mm
Chamfer (min)	$r_{1,2 min}$: 0.6 mm	Abutment diameter inner ring	$d_{a,b min}$: 38.2 mm
Chamfer (min), open side	$r_{3,4 min}$: 0.3 mm	Abutment diameter outer ring	$D_{a,b max}$: 52.3 mm
Outer diameter of inner ring	d_1 : 41.4 mm	Inner diameter of outer ring (open side)	D_2 : 50.6 mm
Outer diameter of inner ring (open side)	d_2 : -	Bearing weight	m: 0.072 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.