

Spindle ball bearing HY SM 61920 C TA P4+

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Components

Bearing designation:	HY SM 61920 C TA
Bearing design:	SM
Series / size:	61920
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ upon request
Precision:	P4+
Main dimensions [d x D x B]:	100 x 140 x 20 mm

Load data

Static load capacity	C_{0r} : 30000 N
Dynamic load capacity	C_r : 37500 N
Fatigue load limit	C_U : 1032 N
Speed limit	n_{grease} : 15750 1/min
Speed limit	n_{oil} : 21000 1/min
Light preload	L: 190 N
Axial rigidity	C_{ax} : 118 N/ μ m
Medium preload	M: 570 N
Axial rigidity	C_{ax} : 176 N/ μ m
Heavy preload	S: 1150 N
Axial rigidity	C_{ax} : 231 N/ μ m
Spring preload	Ff: 1440 N (for n_{max})

Geometrical Data

Bore diameter	d: 100 mm	Oiling nozzle position	d_T : 116.5 mm
Outer diameter	D: 140 mm	Pitch circle diameter	d_m : 120 mm
Width of single bearing	B: 20 mm	Inner diameter of outer ring	D_1 : 127.2 mm
Ball diameter	D_w : 11.906 mm	Undercut of associated component	$r_{a \max}$: 0.6 mm
Number of balls	Z: 25	Undercut of associated component (open side)	$r_{b \max}$: 0.6 mm
Chamfer (min)	$r_{1,2 \min}$: 0.6 mm	Abutment diameter inner ring	$d_{a,b \min}$: 105.7 mm
Chamfer (min), open side	$r_{3,4 \min}$: 0.6 mm	Abutment diameter outer ring	$D_{a,b \max}$: 135.2 mm
Outer diameter of inner ring	d_1 : 112.8 mm	Inner diameter of outer ring (open side)	D_2 : 132.1 mm
Outer diameter of inner ring (open side)	d_2 : -	Bearing weight	m: 0.68 kg
		Contact angle	Alpha 0: 19°



The given speed limits apply to individual bearings with spring preload. Correction factors must be considered for all properties which deviate from this.