

Spindle ball bearing HY S 609 C TA P4+

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Components

Bearing designation:	HY S 609 C TA
Bearing design:	S
Series / size:	609
Ball material:	Ceramic
Cage:	TA
Precision:	P4+ (UP+ Upon request)
Main dimensions [d x D x B]:	9 x 24 x 7 mm

Load data

Static load capacity	C_{0r} : 1650 N
Dynamic load capacity	C_r : 3750 N
Fatigue load limit	C_U : 63 N
Speed limit	n_{grease} : 97500 1/min
Speed limit	n_{oil} : 130000 1/min
Light preload	L: 20 N
Axial rigidity	C_{ax} : 16 N/μm
Medium preload	M: 60 N
Axial rigidity	C_{ax} : 26 N/μm
Heavy preload	S: 120 N
Axial rigidity	C_{ax} : 37 N/μm
Spring preload	Ff: 70 N (for n_{max})

Geometrical Data

Bore diameter	d: 9 mm	Oiling nozzle position	d_T : 15.2 mm
Outer diameter	D: 24 mm	Pitch circle diameter	d_m : 16.7 mm
Width of single bearing	B: 7 mm	Inner diameter of outer ring	D_1 : 19.9 mm
Ball diameter	D_w : 3.969 mm	Undercut of associated component	$r_{a \max}$: 0.3 mm
Number of balls	Z: 10	Undercut of associated component (open side)	$r_{b \max}$: 0.3 mm
Chamfer (min)	$r_{1,2 \min}$: 0.3 mm	Abutment diameter inner ring	$d_{a,b \min}$: 11.2 mm
Chamfer (min), open side	$r_{3,4 \min}$: 0.3 mm	Abutment diameter outer ring	$D_{a,b \max}$: 22.5 mm
Outer diameter of inner ring	d_1 : 13.5 mm	Inner diameter of outer ring (open side)	D_2 : 20.7 mm
Outer diameter of inner ring (open side)	d_2 : -	Bearing weight	m: 0.012 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.