

Spindle ball bearing HY KH 6009 E TA P4+

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Components

Bearing designation:	HY KH 6009 E TA
Bearing design:	KH
Series / size:	6009
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ optional (with grease)
Precision:	P4+
Main dimensions [d x D x B]:	45 x 75 x 16 mm

Load data

Static load capacity	C_{0r} : 6450 N
Dynamic load capacity	C_r : 10300 N
Fatigue load limit	C_U : 243 N
Speed limit	n_{grease} : 30000 1/min
Speed limit	n_{oil} : 40000 1/min
Light preload	L: 90 N
Axial rigidity	C_{ax} : 102 N/μm
Medium preload	M: 260 N
Axial rigidity	C_{ax} : 149 N/μm
Heavy preload	S: 520 N
Axial rigidity	C_{ax} : 192 N/μm
Spring preload	Ff: 460 N (for n_{max})

Geometrical Data

Bore diameter	d: 45 mm	Oiling nozzle position	d_T : 56.9 mm
Outer diameter	D: 75 mm	Pitch circle diameter	d_m : 58.8 mm
Width of single bearing	B: 16 mm	Inner diameter of outer ring	D_1 : 63 mm
Ball diameter	D_w : 6.35 mm	Undercut of associated component	$r_{a \max}$: 1 mm
Number of balls	Z: 22	Undercut of associated component (open side)	$r_{b \max}$: 0.6 mm
Chamfer (min)	$r_{1,2 \min}$: 1 mm	Abutment diameter inner ring	$d_{a,b \min}$: 49.5 mm
Chamfer (min), open side	$r_{3,4 \min}$: 0.6 mm	Abutment diameter outer ring	$D_{a,b \max}$: 71.1 mm
Outer diameter of inner ring	d_1 : 54.7 mm	Inner diameter of outer ring (open side)	D_2 : 65.3 mm
Outer diameter of inner ring (open side)	d_2 : 53 mm	Bearing weight	m: 0.235 kg
		Contact angle	Alpha 0: 25°



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