

Spindle ball bearing KH 61909 E TA P4+

08.05.2024



Components

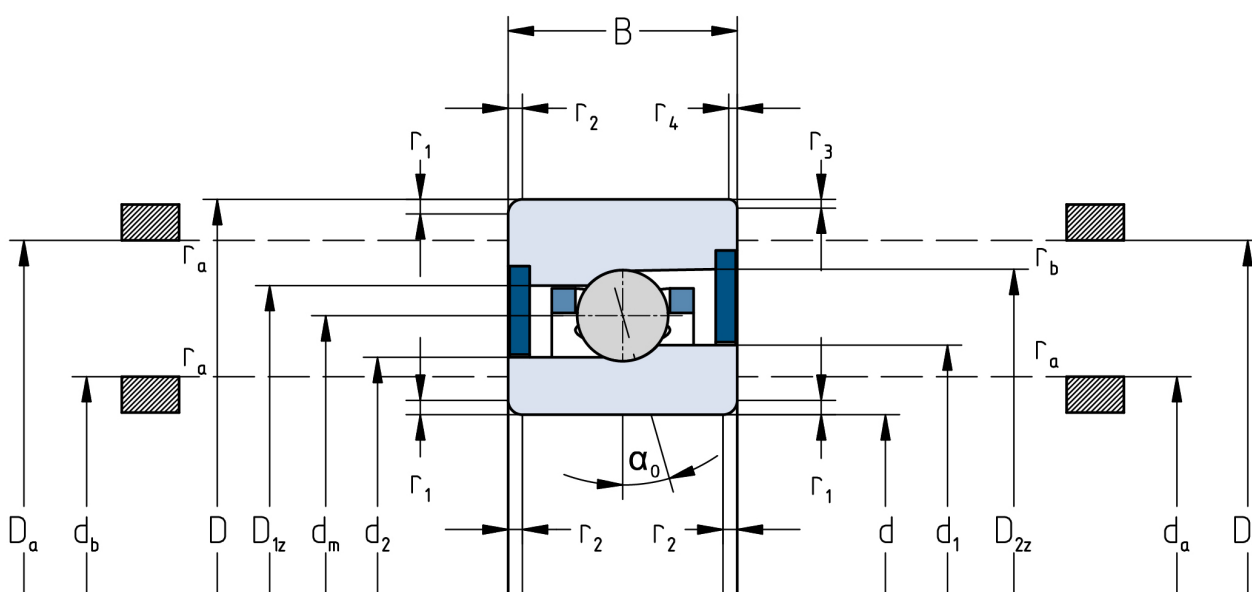
Bearing designation:	KH 61909 E TA
Bearing design:	KH
Series / size:	61909
Ball material:	Steel 100Cr6
Cage:	TA
Seal:	2RZ optional (with grease)
Precision:	P4+
Main dimensions [d x D x B]:	45 x 68 x 12 mm

Load data

Static load capacity	C_{0r} : 4950 N
Dynamic load capacity	C_r : 6950 N
Fatigue load limit	C_U : 256 N
Speed limit	n_{grease} : 25500 1/min
Speed limit	n_{oil} : 34000 1/min
Light preload	L: 60 N
Axial rigidity	C_{ax} : 86 N/ μ m
Medium preload	M: 170 N
Axial rigidity	C_{ax} : 124 N/ μ m
Heavy preload	S: 350 N
Axial rigidity	C_{ax} : 162 N/ μ m
Spring preload	Ff: 480 N (for n_{max})

Geometrical Data

Bore diameter	d: 45 mm	Oiling nozzle position	d_T : 53.8 mm
Outer diameter	D: 68 mm	Pitch circle diameter	d_m : 55.2 mm
Width of single bearing	B: 12 mm	Inner diameter of outer ring	D_1 : 58.6 mm
Ball diameter	D_w : 4.762 mm	Undercut of associated component	$r_{a \max}$: 0.6 mm
Number of balls	Z: 28	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	$d_{a,b \min}$: 48.4 mm
Chamfer (min), open side	$r_{3,4 \min}$: 0.3 mm	Abutment diameter outer ring	$D_{a,b \max}$: 65 mm
Outer diameter of inner ring	d_1 : 52.3 mm	Inner diameter of outer ring (open side)	D_2 : 60.1 mm
Outer diameter of inner ring (open side)	d_2 : 50.8 mm	Bearing weight	m: 0.135 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.