

Spindle ball bearing HY S 6205 C TA P4+

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Components

Bearing designation:	HY S 6205 C TA
Bearing design:	S
Series / size:	6205
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ upon request
Precision:	P4+ (UP+ Upon request)
Main dimensions [d x D x B]:	25 x 52 x 15 mm

Load data

Static load capacity	C_{0r} : 12200 N
Dynamic load capacity	C_r : 19000 N
Fatigue load limit	C_U : 460 N
Speed limit	n_{grease} : 40500 1/min
Speed limit	n_{oil} : 54000 1/min
Light preload	L: 100 N
Axial rigidity	C_{ax} : 50 N/ μ m
Medium preload	M: 300 N
Axial rigidity	C_{ax} : 83 N/ μ m
Heavy preload	S: 600 N
Axial rigidity	C_{ax} : 119 N/ μ m
Spring preload	Ff: 500 N (for n_{max})

Geometrical Data

Bore diameter	d: 25 mm	Oiling nozzle position	d_f : 36.8 mm
Outer diameter	D: 52 mm	Pitch circle diameter	d_m : 39.1 mm
Width of single bearing	B: 15 mm	Inner diameter of outer ring	D_1 : 44.1 mm
Ball diameter	D_w : 7.938 mm	Undercut of associated component	$r_{a max}$: 1 mm
Number of balls	Z: 13	Undercut of associated component (open side)	$r_{b max}$: 0.6 mm
Chamfer (min)	$r_{1,2 min}$: 1 mm	Abutment diameter inner ring	$d_{a,b min}$: 30.2 mm
Chamfer (min), open side	$r_{3,4 min}$: 0.6 mm	Abutment diameter outer ring	$D_{a,b max}$: 47.9 mm
Outer diameter of inner ring	d_1 : 34 mm	Inner diameter of outer ring (open side)	D_2 : 47.2 mm
Outer diameter of inner ring (open side)	d_2 : -	Bearing weight	m: 0.11 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.