

Spindle ball bearing HY S 6005 E TA P4+

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Components

Bearing designation:	HY S 6005 E TA
Bearing design:	S
Series / size:	6005
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ optional (with grease)
Precision:	P4+ (UP+ Upon request)
Main dimensions [d x D x B]:	25 x 47 x 12 mm

Load data

Static load capacity	C_{0r} : 8500 N
Dynamic load capacity	C_r : 12700 N
Fatigue load limit	C_U : 322 N
Speed limit	n_{grease} : 37500 1/min
Speed limit	n_{oil} : 50000 1/min
Light preload	L: 110 N
Axial rigidity	C_{ax} : 101 N/ μ m
Medium preload	M: 320 N
Axial rigidity	C_{ax} : 152 N/ μ m
Heavy preload	S: 640 N
Axial rigidity	C_{ax} : 203 N/ μ m
Spring preload	Ff: 610 N (for n_{max})

Geometrical Data

Bore diameter	d: 25 mm	Oiling nozzle position	d_f : 34.3 mm
Outer diameter	D: 47 mm	Pitch circle diameter	d_m : 36 mm
Width of single bearing	B: 12 mm	Inner diameter of outer ring	D_1 : 40.1 mm
Ball diameter	D_w : 6.35 mm	Undercut of associated component	$r_{a \max}$: 0.6 mm
Number of balls	Z: 15	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	$d_{a,b \min}$: 28.8 mm
Chamfer (min), open side	$r_{3,4 \min}$: 0.3 mm	Abutment diameter outer ring	$D_{a,b \max}$: 44.1 mm
Outer diameter of inner ring	d_1 : 32.2 mm	Inner diameter of outer ring (open side)	D_2 : 42.5 mm
Outer diameter of inner ring (open side)	d_2 : -	Bearing weight	m: 0.068 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.