

Spindle ball bearing HY S 61806 E TA P4+

08.05.2024



Components

Bearing designation:	HY S 61806 E TA
Bearing design:	S
Series / size:	61806
Ball material:	Ceramic
Cage:	TA
Precision:	P4+
Main dimensions [d x D x B]:	30 x 42 x 7 mm

Load data

Static load capacity	C_{0r} : 2950 N
Dynamic load capacity	C_r : 3650 N
Fatigue load limit	C_U : 112 N
Speed limit	n_{grease} : 37500 1/min
Speed limit	n_{oil} : 50000 1/min
Light preload	L: 30 N
Axial rigidity	C_{ax} : 61 N/ μ m
Medium preload	M: 90 N
Axial rigidity	C_{ax} : 91 N/ μ m
Heavy preload	S: 180 N
Axial rigidity	C_{ax} : 120 N/ μ m
Spring preload	Ff: 210 N (for n_{max})

Geometrical Data

Bore diameter	d: 30 mm	Oiling nozzle position	d_T : 35.1 mm
Outer diameter	D: 42 mm	Pitch circle diameter	d_m : 36.2 mm
Width of single bearing	B: 7 mm	Inner diameter of outer ring	D_1 : 38.3 mm
Ball diameter	D_w : 3.175 mm	Undercut of associated component	$r_{a \max}$: 0.3 mm
Number of balls	Z: 22	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	$d_{a,b \min}$: 31.7 mm
Chamfer (min), open side	$r_{3,4 \min}$: 0.3 mm	Abutment diameter outer ring	$D_{a,b \max}$: 40.5 mm
Outer diameter of inner ring	d_1 : 34.1 mm	Inner diameter of outer ring (open side)	D_2 : 39.4 mm
Outer diameter of inner ring (open side)	d_2 : -	Bearing weight	m: 0.022 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.