

Spindle ball bearing HY S 6024 C TA P4+

08.05.2024



Components

Bearing designation:	HY S 6024 C TA
Bearing design:	S
Series / size:	6024
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ upon request
Precision:	P4+
Main dimensions [d x D x B]:	120 x 180 x 28 mm

Load data

Static load capacity	C_{0r} : 112000 N
Dynamic load capacity	C_r : 104000 N
Fatigue load limit	C_U : 3469 N
Speed limit	n_{grease} : 10500 1/min
Speed limit	n_{oil} : 14000 1/min
Light preload	L: 530 N
Axial rigidity	C_{ax} : 153 N/ μ m
Medium preload	M: 1580 N
Axial rigidity	C_{ax} : 246 N/ μ m
Heavy preload	S: 3170 N
Axial rigidity	C_{ax} : 345 N/ μ m
Spring preload	Ff: 3780 N (for n_{max})

Geometrical Data

Bore diameter	d: 120 mm	Oiling nozzle position	d_T : 144.9 mm
Outer diameter	D: 180 mm	Pitch circle diameter	d_m : 150 mm
Width of single bearing	B: 28 mm	Inner diameter of outer ring	D_1 : 160.6 mm
Ball diameter	D_w : 17.462 mm	Undercut of associated component	$r_{a \max}$: 2 mm
Number of balls	Z: 23	Undercut of associated component (open side)	$r_{b \max}$: 1 mm
Chamfer (min)	$r_{1,2 \min}$: 2 mm	Abutment diameter inner ring	$d_{a,b \min}$: 131.4 mm
Chamfer (min), open side	$r_{3,4 \min}$: 1 mm	Abutment diameter outer ring	$D_{a,b \max}$: 170.1 mm
Outer diameter of inner ring	d_1 : 139.4 mm	Inner diameter of outer ring (open side)	D_2 : 167.7 mm
Outer diameter of inner ring (open side)	d_2 : -	Bearing weight	m: 1.85 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.