

# Spindle ball bearing HY S 61920 E TXM P4+

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## Components

Bearing designation:	HY S 61920 E TXM
Bearing design:	S
Series / size:	61920
Ball material:	Ceramic
Cage:	TXM
Precision:	P4+
Main dimensions [d x D x B]:	100 x 140 x 20 mm

## Load data

Static load capacity	$C_{0r}$ : 52500 N
Dynamic load capacity	$C_r$ : 48500 N
Fatigue load limit	$C_U$ : 1805 N
Speed limit	$n_{grease}$ : 11250 1/min
Speed limit	$n_{oil}$ : 15000 1/min
Light preload	L: 410 N
Axial rigidity	$C_{ax}$ : 264 N/ $\mu$ m
Medium preload	M: 1230 N
Axial rigidity	$C_{ax}$ : 397 N/ $\mu$ m
Heavy preload	S: 2470 N
Axial rigidity	$C_{ax}$ : 523 N/ $\mu$ m
Spring preload	Ff: 3420 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 100 mm	Oiling nozzle position	$d_T$ : 116.5 mm
Outer diameter	D: 140 mm	Pitch circle diameter	$d_m$ : 120 mm
Width of single bearing	B: 20 mm	Inner diameter of outer ring	$D_1$ : 127.2 mm
Ball diameter	$D_w$ : 11.906 mm	Undercut of associated component	$r_{a max}$ : 0.6 mm
Number of balls	Z: 25	Undercut of associated component (open side)	$r_{b max}$ : 0.6 mm
Chamfer (min)	$r_{1,2 min}$ : 0.6 mm	Abutment diameter inner ring	$d_{a,b min}$ : 105.7 mm
Chamfer (min), open side	$r_{3,4 min}$ : 0.6 mm	Abutment diameter outer ring	$D_{a,b max}$ : 135.2 mm
Outer diameter of inner ring	$d_1$ : 112.8 mm	Inner diameter of outer ring (open side)	$D_2$ : 132.1 mm
Outer diameter of inner ring (open side)	$d_2$ : -	Bearing weight	m: 0.68 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.