

# Spindle ball bearing HY S 6018 E TA P4+

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## Components

Bearing designation:	HY S 6018 E TA
Bearing design:	S
Series / size:	6018
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ optional (with grease)
Precision:	P4+
Main dimensions [d x D x B]:	90 x 140 x 24 mm

## Load data

Static load capacity	$C_{0r}$ : 68000 N
Dynamic load capacity	$C_r$ : 70500 N
Fatigue load limit	$C_U$ : 2394 N
Speed limit	$n_{grease}$ : 12000 1/min
Speed limit	$n_{oil}$ : 16000 1/min
Light preload	L: 600 N
Axial rigidity	$C_{ax}$ : 287 N/ $\mu$ m
Medium preload	M: 1790 N
Axial rigidity	$C_{ax}$ : 434 N/ $\mu$ m
Heavy preload	S: 3570 N
Axial rigidity	$C_{ax}$ : 573 N/ $\mu$ m
Spring preload	Ff: 4540 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 90 mm	Oiling nozzle position	$d_f$ : 110.6 mm
Outer diameter	D: 140 mm	Pitch circle diameter	$d_m$ : 115 mm
Width of single bearing	B: 24 mm	Inner diameter of outer ring	$D_1$ : 124.2 mm
Ball diameter	$D_w$ : 15.081 mm	Undercut of associated component	$r_{a \max}$ : 1.5 mm
Number of balls	Z: 20	Undercut of associated component (open side)	$r_{b \max}$ : 0.6 mm
Chamfer (min)	$r_{1,2 \min}$ : 1.5 mm	Abutment diameter inner ring	$d_{a,b \min}$ : 98.9 mm
Chamfer (min), open side	$r_{3,4 \min}$ : 0.6 mm	Abutment diameter outer ring	$D_{a,b \max}$ : 132.6 mm
Outer diameter of inner ring	$d_1$ : 105.8 mm	Inner diameter of outer ring (open side)	$D_2$ : 130.3 mm
Outer diameter of inner ring (open side)	$d_2$ : -	Bearing weight	m: 0.98 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.