

# Spindle ball bearing HY S 6024 E TA P4+

16.07.2024



## Components

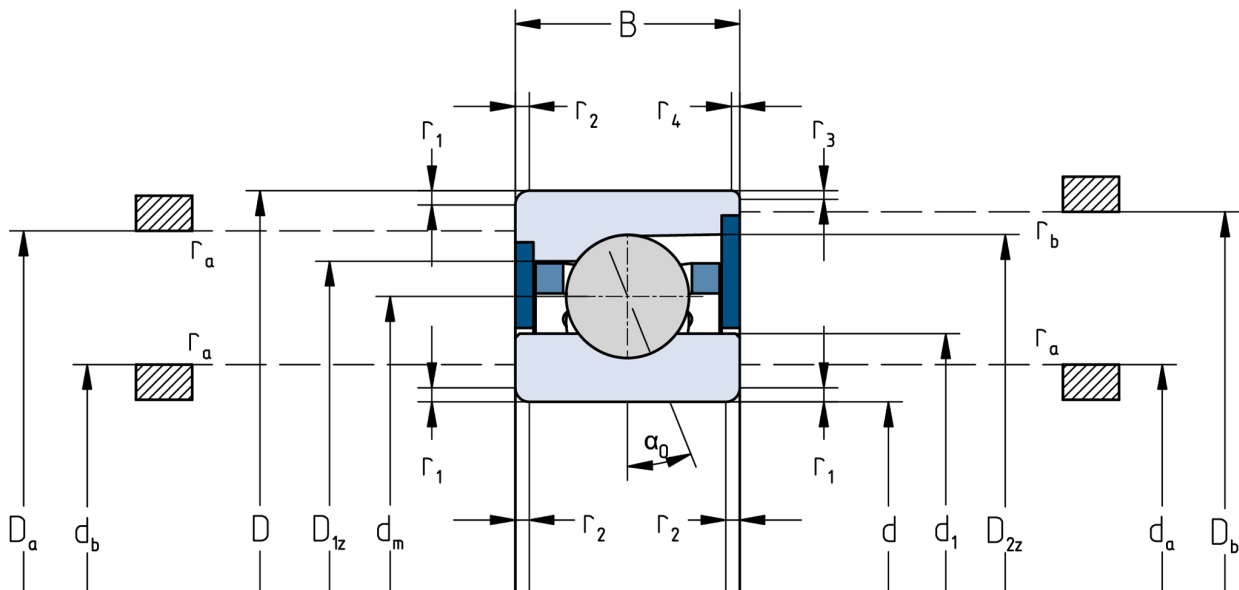
Bearing designation:	HY S 6024 E TA
Bearing design:	S
Series / size:	6024
Ball material:	Ceramic
Cage:	TA
Seal:	2RZ upon request
Precision:	P4+
Main dimensions [d x D x B]:	120 x 180 x 28 mm

## Load data

Static load capacity	$C_{0r}$ : 107000 N
Dynamic load capacity	$C_r$ : 98000 N
Fatigue load limit	$C_U$ : 3290 N
Speed limit	$n_{grease}$ : 9000 1/min
Speed limit	$n_{oil}$ : 12000 1/min
Light preload	L: 830 N
Axial rigidity	$C_{ax}$ : 367 N/ $\mu$ m
Medium preload	M: 2490 N
Axial rigidity	$C_{ax}$ : 555 N/ $\mu$ m
Heavy preload	S: 4990 N
Axial rigidity	$C_{ax}$ : 733 N/ $\mu$ m
Spring preload	Ff: 6240 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 120 mm	Oiling nozzle position	$d_f$ : 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: 25°



The given speed limits apply to individual bearings with spring preload. Correction factors must be considered for all properties which deviate from this.