

# Spindle ball bearing S 6204 E TA P4+

16.07.2024



## Components

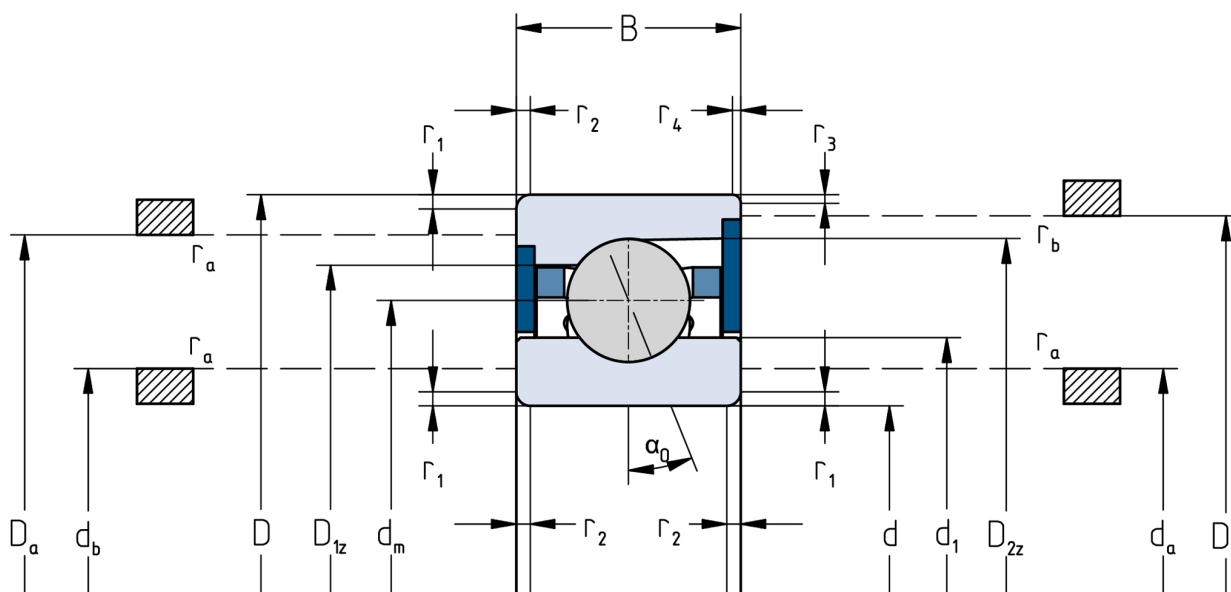
Bearing designation:	S 6204 E TA
Bearing design:	S
Series / size:	6204
Ball material:	Steel 100Cr6
Cage:	TA
Seal:	2RZ upon request
Precision:	P4+ (UP+ Upon request)
Main dimensions [d x D x B]:	20 x 47 x 14 mm

## Load data

Static load capacity	$C_{0r}$ : 9800 N
Dynamic load capacity	$C_r$ : 16200 N
Fatigue load limit	$C_U$ : 511 N
Speed limit	$n_{grease}$ : 32250 1/min
Speed limit	$n_{oil}$ : 43000 1/min
Light preload	L: 140 N
Axial rigidity	$C_{ax}$ : 91 N/ $\mu$ m
Medium preload	M: 410 N
Axial rigidity	$C_{ax}$ : 139 N/ $\mu$ m
Heavy preload	S: 820 N
Axial rigidity	$C_{ax}$ : 187 N/ $\mu$ m
Spring preload	Ff: 970 N (for $n_{max}$ )

## Geometrical Data

Bore diameter	d: 20 mm	Oiling nozzle position	$d_f$ : 31.4 mm
Outer diameter	D: 47 mm	Pitch circle diameter	$d_m$ : 33.5 mm
Width of single bearing	B: 14 mm	Inner diameter of outer ring	$D_1$ : 38.6 mm
Ball diameter	$D_w$ : 7.938 mm	Undercut of associated component	$r_{a \max}$ : 1 mm
Number of balls	Z: 11	Undercut of associated component (open side)	$r_{b \max}$ : 0.6 mm
Chamfer (min)	$r_{1,2 \min}$ : 1 mm	Abutment diameter inner ring	$d_{a,b \min}$ : 25.1 mm
Chamfer (min), open side	$r_{3,4 \min}$ : 0.6 mm	Abutment diameter outer ring	$D_{a,b \max}$ : 43.1 mm
Outer diameter of inner ring	$d_1$ : 28.5 mm	Inner diameter of outer ring (open side)	$D_2$ : 41.6 mm
Outer diameter of inner ring (open side)	$d_2$ : -	Bearing weight	m: 0.105 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.