Spindle ball bearing HY S 61803 E TA P4+

24.11.2026



Components

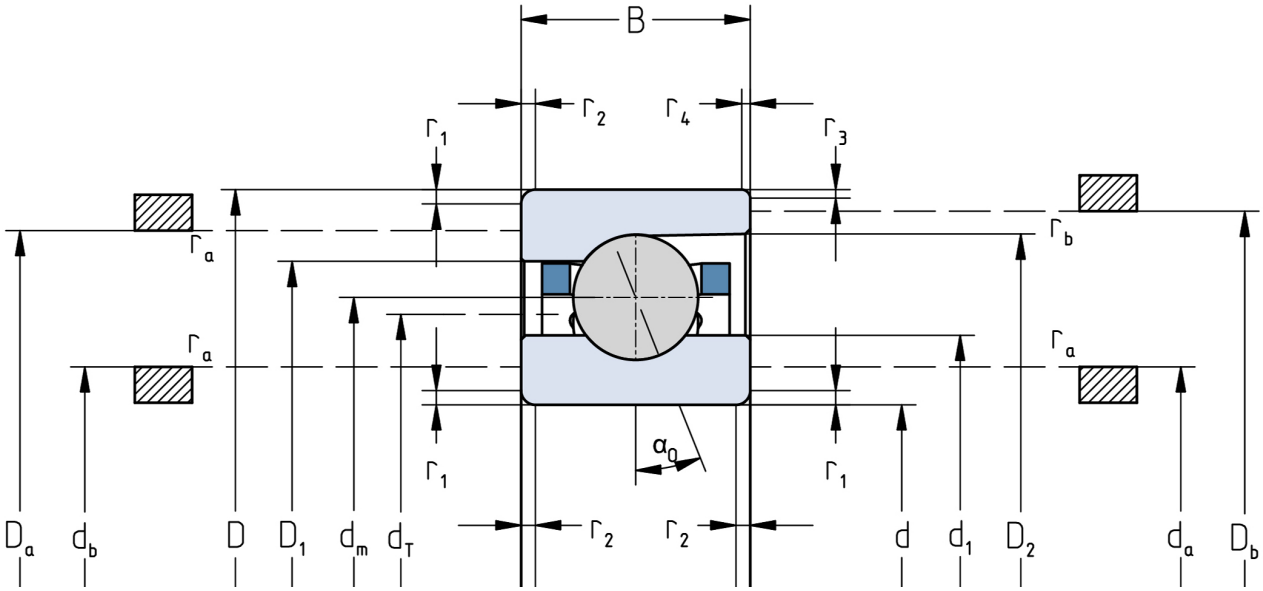
Bearing designation:	HY S 61803 E TA
Bearing design:	S
Series / size:	61803
Ball material:	Ceramic
Cage:	TA
Precision:	P4+
Main dimensions [d x D x B]:	17 x 26 x 5 mm

Load data

Static load capacity	C_{0r}:	1190 N
Dynamic load capacity	C_r:	1890 N
Fatigue load limit	C_U:	45 N
Speed limit	n_{grease}:	63000 1/min
Speed limit	n_{oil}:	84000 1/min
Light preload	L:	16 N
Axial rigidity	C_{ax}:	38 N/µm
Medium preload	M:	50 N
Axial rigidity	C_{ax}:	58 N/µm
Heavy preload	S:	100 N
Axial rigidity	C_{ax}:	76 N/µm
Spring preload	Ff:	85 N (for n_{max})

Geometrical Data

Bore diameter	d:	17 mm
Outer diameter	D:	26 mm
Width of single bearing	B:	5 mm
Ball diameter	D_w:	2.381 mm
Number of balls	Z:	19
Chamfer (min)	$r_{1,2\ min}$:	0.3 mm
Chamfer (min), open side	$r_{3,4\ min}$:	0.2 mm
Outer diameter of inner ring	d_1:	19.8 mm
Outer diameter of inner ring (open side)	d_2:	-
Oiling nozzle position	d_T:	20.6 mm
Pitch circle diameter	d_m:	21.5 mm
Inner diameter of outer ring	D_1:	23.2 mm
Undercut of associated component	$r_{a\ max}$:	0.3 mm
Undercut of associated component (open side)	$r_{b\ max}$:	0.2 mm
Abutment diameter inner ring	$d_{a,b\ min}$:	18.6 mm
Abutment diameter outer ring	$D_{a,b\ max}$:	24.6 mm
Inner diameter of outer ring (open side)	D_2:	23.9 mm
Bearing weight	m:	0.007 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.