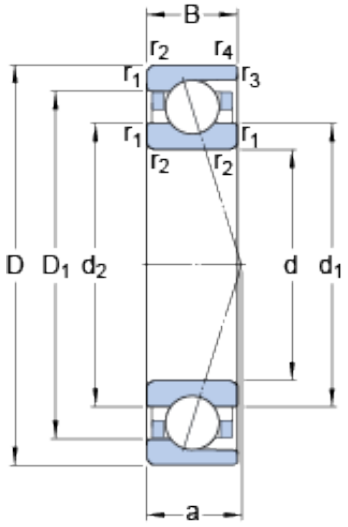
Loyal | 7010 ACD/HCP4A



Bearing No. 7010 ACD/HCP4A

D	80 mm
d	50 mm
B	16 mm
a	23.2 mm
Ball - z	18
Size (mm)	80x50x16
Width (mm)	16
Mass bearing	0.22 kg
d_n	61.2 mm
d_n	61.2 mm
D_1	70.8 mm
d_1	59.2 mm
d_2	59.2 mm
D_1	70.8 mm
d_2	59.2 mm
d_1	59.2 mm
Bearing number	7010 ACD/HCP4A
Preload class B	204 N/micron
Preload class A	156 N/micron
Preload class D	367 N/micron
Preload class C	271 N/micron
G_{ref}	3.6 cm3
Number of balls z	18
Bore Diameter (mm)	80
r_b max.	0.3 mm
r_a max.	1 mm
D_b max.	78 mm
D_a max.	75.4 mm
d_a min.	54.6 mm

d_b min.	54.6 mm
Outer Diameter (mm)	50
D_b - max.	78 mm
d_b - min.	54.6 mm
Ball - D_w	9.525 mm
$r_{1,2}$ min.	1 mm
$r_{3,4}$ min.	0.3 mm
d_a - min.	54.6 mm
r_a - max.	1 mm
D_a - max.	75.4 mm
r_b - max.	0.3 mm
Calculation factor f	1.11
Calculation factor e	0.68
$r_{1,2}$ - min.	1 mm
$r_{3,4}$ - min.	0.3 mm
Calculation factor - e	0.68
Calculation factor - f	1.11
Ball diameter D_w	9.525 mm
Basic dynamic load rating C	28.1 kN
Preload class C G_C	720 N
Preload class B G_B	360 N
Preload class A G_A	180 N
Preload class D G_D	1440 N
Basic dynamic load rating - C	28.1 kN
Preload class B - G_B	360 N
Preload class D - G_D	1440 N
Preload class C - G_C	720 N
Preload class A - G_A	180 N
Fatigue load limit P_u	0.98 kN
Calculation factor f_1	0.99

Calculation factor f_{2A}	1
Calculation factor f_{2C}	1.05
Calculation factor f_{2B}	1.02
Calculation factor f_{2D}	1.08
Calculation factor f_{HC}	1.02
Calculation factor - X_2	0.67
Calculation factor - f_1	0.99
Calculation factor - Y_1	0.92
Limiting speed for oil lubrication	28000 mm/min
Calculation factor - Y_0	0.76
Fatigue load limit - P_u	0.98 kN
Calculation factor - Y_2	1.41
Calculation factor - f_{HC}	1.02
Calculation factor - f_{2A}	1
Calculation factor - f_{2C}	1.05
Calculation factor - f_{2B}	1.02
Calculation factor - f_{2D}	1.08
Limiting speed for grease lubrication	18000 r/min
Basic static load rating C_0	23.2 kN
Static axial stiffness, preload class B	204 N/µm
Attainable speed for grease lubrication	18000 r/min
Static axial stiffness, preload class D	367 N/µm
Static axial stiffness, preload class C	271 N/µm
Static axial stiffness, preload class A	156 N/µm
Basic static load rating -	23.2 kN

C_0	
Attainable speed for oil-air lubrication	28000 r/min
Reference grease quantity G_{ref}	3.6 cm³
Calculation factor (single, tandem) Y_2	0.87
Calculation factor (single, tandem) Y_0	0.38
Calculation factor (single, tandem) X_2	0.41
Calculation factor (back-to-back, face-to-face) Y_1	0.92
Calculation factor (back-to-back, face-to-face) Y_2	1.41
Calculation factor (back-to-back, face-to-face) Y_0	0.76
Calculation factor (back-to-back, face-to-face) X_2	0.67