



50 mm x 80 mm x 16 mm SKF 7010 ACE/P4AL
angular contact ball bearings

Bearing No. 7010 ACE/P4AL

7010 ACE/P4AL Bearing 2D drawings and 3D CAD models

Size	80x50x16 mm
Bore Diameter	80 mm
Outer Diameter	50 mm
Width	16 mm
d	50 mm
D	80 mm
B	16 mm
d ₁	60.25 mm
d ₂	57.9 mm
D ₁	69.75 mm
b	1.7 mm
C ₁	8.6 mm
C ₂	2.7 mm
C ₃	3 mm
r _{1,2} - min.	1 mm
r _{3,4} - min.	0.6 mm
a	23.3 mm
d _a - min.	54.6 mm
d _b - min.	54.6 mm
D _a - max.	75.4 mm
D _b - max.	75.8 mm
r _a - max.	1 mm
r _b - max.	0.6 mm
d _n	62.3 mm

Basic dynamic load rating - C	14.8 kN
Basic static load rating - C_0	10 kN
Fatigue load limit - P_u	0.425 kN
Limiting speed for grease lubrication	23000 r/min
Limiting speed for oil lubrication	34000 mm/min
Ball - D_w	7.938 mm
Ball - z	21
G_{ref}	4.1 cm ³
Calculation factor - e	0.68
Calculation factor - Y_2	0.87
Calculation factor - Y_0	0.38
Calculation factor - X_2	0.41
Calculation factor - Y_1	0.92
Calculation factor - Y_2	1.41
Calculation factor - Y_0	0.76
Calculation factor - X_2	0.67
Preload class A - G_A	130 N
Preload class B - G_B	400 N
Preload class C - G_C	800 N
Calculation factor - f	1.08
Calculation factor - f_1	0.99
Calculation factor - f_{2A}	1
Calculation factor - f_{2B}	1.03
Calculation factor - f_{2C}	1.06
Calculation factor - f_{HC}	1
Preload class A	104 N/micron
Preload class B	156 N/micron

Preload class C	204 N/micron
d_1	60.25 mm
d_2	57.9 mm
D_1	69.75 mm
C_1	8.6 mm
C_2	2.7 mm
C_3	3 mm
$r_{1,2}$ min.	1 mm
$r_{3,4}$ min.	0.6 mm
d_a min.	54.6 mm
d_b min.	54.6 mm
D_a max.	75.4 mm
D_b max.	75.8 mm
r_a max.	1 mm
r_b max.	0.6 mm
d_n	62.3 mm
Basic dynamic load rating C	14.8 kN
Basic static load rating C_0	10 kN
Fatigue load limit P_u	0.425 kN
Attainable speed for grease lubrication	23000 r/min
Attainable speed for oil-air lubrication	34000 r/min
Ball diameter D_w	7.938 mm
Number of balls z	21
Reference grease quantity G_{ref}	4.1 cm ³
Preload class A G_A	130 N
Static axial stiffness, preload class A	104 N/ μ m
Preload class B G_B	400 N
Static axial stiffness, preload class B	156 N/ μ m
Preload class C G_C	800 N

Static axial stiffness, preload class C	204 N/ μ m
Calculation factor f	1.08
Calculation factor f_1	0.99
Calculation factor f_{2A}	1
Calculation factor f_{2B}	1.03
Calculation factor f_{2C}	1.06
Calculation factor f_{HC}	1
Calculation factor e	0.68
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
Mass bearing	0.25 kg