



7220 ACD/HCP4A Bearing 2D drawings and 3D CAD models

100 mm x 180 mm x 34 mm SKF 7220
ACD/HCP4A angular contact ball bearings

Bearing No. 7220 ACD/HCP4A

Size	180x100x34 mm
Bore Diameter	180 mm
Outer Diameter	100 mm
Width	34 mm
d	100 mm
D	180 mm
B	34 mm
d ₁	124.7 mm
d ₂	124.7 mm
D ₁	155.3 mm
r _{1,2} - min.	2.1 mm
r _{3,4} - min.	1.1 mm
a	49.9 mm
d _a - min.	112 mm
d _b - min.	112 mm
D _a - max.	168 mm
D _b - max.	173 mm
r _a - max.	2 mm
r _b - max.	1 mm
d _n	131.4 mm
Basic dynamic load rating - C	148 kN
Basic static load rating - C ₀	129 kN
Fatigue load limit - P _u	4.6 kN
Limiting speed for grease	8000 r/min



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Lubrication	
Limiting speed for oil lubrication	13000 mm/min
Ball - D_w	25.4 mm
Ball - z	15
G_{ref}	40.899 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	950 N
Preload class B - G_B	1900 N
Preload class C - G_C	3800 N
Preload class D - G_D	7600 N
Calculation factor - f	1.09
Calculation factor - f_1	0.99
Calculation factor - f_{2A}	1
Calculation factor - f_{2B}	1.01
Calculation factor - f_{2C}	1.03
Calculation factor - f_{2D}	1.06
Calculation factor - f_{HC}	1.01
Preload class A	329 N/micron
Preload class B	430 N/micron
Preload class C	565 N/micron
Preload class D	760 N/micron



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d_1	124.7 mm
d_2	124.7 mm
D_1	155.3 mm
$r_{1,2}$ min.	2.1 mm
$r_{3,4}$ min.	1.1 mm
d_a min.	112 mm
d_b min.	112 mm
D_a max.	168 mm
D_b max.	173 mm
r_a max.	2 mm
r_b max.	1 mm
d_n	131.4 mm
Basic dynamic load rating C	148 kN
Basic static load rating C_0	129 kN
Fatigue load limit P_u	4.65 kN
Attainable speed for grease lubrication	8000 r/min
Attainable speed for oil-air lubrication	13000 r/min
Ball diameter D_w	25.4 mm
Number of balls z	15
Reference grease quantity G_{ref}	40.899 cm ³
Preload class A G_A	950 N
Static axial stiffness, preload class A	329 N/ μ m
Preload class B G_B	1900 N
Static axial stiffness, preload class B	430 N/ μ m
Preload class C G_C	3800 N
Static axial stiffness, preload class C	565 N/ μ m
Preload class D G_D	7600 N
Static axial stiffness, preload class D	760 N/ μ m



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class D	
Calculation factor f	1.09
Calculation factor f_1	0.99
Calculation factor f_{2A}	1
Calculation factor f_{2B}	1.01
Calculation factor f_{2C}	1.03
Calculation factor f_{2D}	1.06
Calculation factor f_{HC}	1.01
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	2.64 kg