



NTA PRECISION AXLE CORP.



7024 CB/HCP4A Bearing 2D drawings and 3D CAD models

120 mm x 180 mm x 28 mm SKF 7024
CB/HCP4A angular contact ball bearings

Bearing No. 7024 CB/HCP4A

Size	180x120x28 mm
Bore Diameter	180 mm
Outer Diameter	120 mm
Width	28 mm
d	120 mm
D	180 mm
B	28 mm
d ₁	143.2 mm
d ₂	140.8 mm
D ₂	161.9 mm
r _{1,2} - min.	2 mm
r _{3,4} - min.	1 mm
a	34.2 mm
d _a - min.	129 mm
d _b - min.	129 mm
D _a - max.	171 mm
D _b - max.	175.4 mm
r _a - max.	2 mm
r _b - max.	1 mm
d _n	144.7 mm
Basic dynamic load rating - C	37.7 kN
Basic static load rating - C ₀	39 kN
Fatigue load limit - P _u	1.3 kN
Limiting speed for grease	11000 r/min



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Lubrication	
Limiting speed for oil lubrication	17000 mm/min
Ball - D_w	11.112 mm
Ball - z	33
G_{ref}	23.69 cm ³
Calculation factor - f_0	9.8
Preload class A - G_A	130 N
Preload class B - G_B	260 N
Preload class C - G_C	780 N
Calculation factor - f	1.08
Calculation factor - f	1
Calculation factor - f_{2A}	1
Calculation factor - f_{2B}	1.02
Calculation factor - f_{2C}	1.05
Calculation factor - f_{HC}	1.01
Preload class A	84 N/micron
Preload class B	110 N/micron
Preload class C	173 N/micron
d_1	143.2 mm
d_2	140.8 mm
D_2	161.9 mm
$r_{1,2}$ min.	2 mm
$r_{3,4}$ min.	1 mm
d_a min.	129 mm
d_b min.	129 mm
D_a max.	171 mm
D_b max.	175.4 mm
r_a max.	2 mm
r_b max.	1 mm
d_n	144.7 mm



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Basic dynamic load rating C	50.7 kN
Basic static load rating C_0	63 kN
Fatigue load limit P_u	1.34 kN
Attainable speed for grease lubrication	11000 r/min
Attainable speed for oil-air lubrication	17000 r/min
Ball diameter D_w	11.112 mm
Number of balls z	33
Reference grease quantity G_{ref}	23.69 cm ³
Preload class A G_A	130 N
Static axial stiffness, preload class A	84 N/ μ m
Preload class B G_B	260 N
Static axial stiffness, preload class B	110 N/ μ m
Preload class C G_C	780 N
Static axial stiffness, preload class C	173 N/ μ m
Calculation factor f	1.08
Calculation factor f_1	1
Calculation factor f_{2A}	1
Calculation factor f_{2B}	1.02
Calculation factor f_{2C}	1.05
Calculation factor f_{HC}	1.01
Calculation factor f_0	9.8
Mass bearing	2.24 kg