



UGE BEARING INDUSTRIAL CO., LTD.



45 mm x 75 mm x 16 mm SKF 7009 CD/HCP4A Optimum Design Precision Bearings

Bearing No. 7009 CD/HCP4A

7009 CD/HCP4A Bearing 2D drawings and 3D CAD models

Size	75x45x16 mm
Bore Diameter	75 mm
Outer Diameter	45 mm
Width	16 mm
d	45 mm
D	75 mm
B	16 mm
d ₁	54.2 mm
d ₂	54.2 mm
D ₁	65.8 mm
r _{1,2} - min.	1 mm
r _{3,4} - min.	0.3 mm
a	16.1 mm
d _a - min.	49.6 mm
d _b - min.	49.6 mm
D _a - max.	70.4 mm
D _b - max.	73 mm
r _a - max.	1 mm
r _b - max.	0.3 mm
d _n	56.2 mm
Basic dynamic load rating - C	28.6 kN
Basic static load rating - C ₀	22.4 kN
Fatigue load limit - P _u	0.95 kN
Limiting speed for grease	22000 r/min



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Lubrication	
Limiting speed for oil lubrication	34000 mm/min
Ball - D_w	9.525 mm
Ball - z	17
G_{ref}	3.3 cm ³
Calculation factor - f_0	15.1
Preload class A - G_A	110 N
Preload class B - G_B	220 N
Preload class C - G_C	440 N
Preload class D - G_D	880 N
Calculation factor - f	1.09
Calculation factor - f	1
Calculation factor - f_{2A}	1
Calculation factor - f_{2B}	1.02
Calculation factor - f_{2C}	1.05
Calculation factor - f_{2D}	1.09
Calculation factor - f_{HC}	1.02
Preload class A	62 N/micron
Preload class B	85 N/micron
Preload class C	119 N/micron
Preload class D	172 N/micron
d_1	54.2 mm
d_2	54.2 mm
D_1	65.8 mm
$r_{1,2}$ min.	1 mm
$r_{3,4}$ min.	0.3 mm
d_a min.	49.6 mm
d_b min.	49.6 mm
D_a max.	70.4 mm



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D_b max.	73 mm
r_a max.	1 mm
r_b max.	0.3 mm
d_n	56.2 mm
Basic dynamic load rating C	28.6 kN
Basic static load rating C_0	22.4 kN
Fatigue load limit P_u	0.95 kN
Attainable speed for grease lubrication	22000 r/min
Attainable speed for oil-air lubrication	34000 r/min
Ball diameter D_w	9.525 mm
Number of balls z	17
Reference grease quantity G_{ref}	3.3 cm ³
Preload class A G_A	110 N
Static axial stiffness, preload class A	62 N/ μ m
Preload class B G_B	220 N
Static axial stiffness, preload class B	85 N/ μ m
Preload class C G_C	440 N
Static axial stiffness, preload class C	119 N/ μ m
Preload class D G_D	880 N
Static axial stiffness, preload class D	172 N/ μ m
Calculation factor f	1.09
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_{2D}	1.09
Calculation factor f_{HC}	1.02



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Calculation factor f_0	15.1
Mass bearing	0.2 kg