



# BEARING PRECISION AXLE CORP.



71910 ACD/HCP4A Bearing 2D drawings and 3D CAD models

## 71910 ACD/HCP4A SKF High Speed Angular Contact Ball Bearings

Bearing No. 71910 ACD/HCP4A

Size	72x50x12 mm
Bore Diameter	72 mm
Outer Diameter	50 mm
Width	12 mm
d	50 mm
D	72 mm
B	12 mm
d <sub>1</sub>	57.1 mm
d <sub>2</sub>	57.1 mm
D <sub>1</sub>	64.9 mm
r <sub>1,2</sub> - min.	0.6 mm
r <sub>3,4</sub> - min.	0.3 mm
a	20.3 mm
d <sub>a</sub> - min.	53.2 mm
d <sub>b</sub> - min.	53.2 mm
D <sub>a</sub> - max.	68.8 mm
D <sub>b</sub> - max.	70.6 mm
r <sub>a</sub> - max.	0.6 mm
r <sub>b</sub> - max.	0.3 mm
d <sub>n</sub>	58.7 mm
Basic dynamic load rating - C	12.7 kN
Basic static load rating - C <sub>0</sub>	9.8 kN
Fatigue load limit - P <sub>u</sub>	0.415 kN
Limiting speed for grease	19000 r/min



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Lubrication	
Limiting speed for oil lubrication	30000 mm/min
Ball - $D_w$	6.35 mm
Ball - $z$	25
$G_{ref}$	1.74 cm <sup>3</sup>
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 - $G_A$	80 N
Preload class B - $G_B$	160 N
Preload class C - $G_C$	320 N
Preload class D - $G_D$	640 N
Calculation factor - $f$	1.13
Calculation factor - $f_1$	0.98
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2B}$	1.07
Calculation factor - $f_{2C}$	1.12
Calculation factor - $f_{2D}$	1.17
Calculation factor - $f_{HC}$	1.04
Preload class A	117 N/micron
Preload class B	152 N/micron
Preload class C	200 N/micron
Preload class D	266 N/micron



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$d_1$	57.1 mm
$d_2$	57.1 mm
$D_1$	64.9 mm
$r_{1,2}$ min.	0.6 mm
$r_{3,4}$ min.	0.3 mm
$d_a$ min.	53.2 mm
$d_b$ min.	53.2 mm
$D_a$ max.	68.8 mm
$D_b$ max.	70.6 mm
$r_a$ max.	0.6 mm
$r_b$ max.	0.3 mm
$d_n$	58.7 mm
Basic dynamic load rating C	12.7 kN
Basic static load rating $C_0$	9.8 kN
Fatigue load limit $P_u$	0.415 kN
Attainable speed for grease lubrication	19000 r/min
Attainable speed for oil-air lubrication	30000 r/min
Ball diameter $D_w$	6.35 mm
Number of balls z	25
Reference grease quantity $G_{ref}$	1.74 cm <sup>3</sup>
Preload class A $G_A$	80 N
Static axial stiffness, preload class A	117 N/ $\mu$ m
Preload class B $G_B$	160 N
Static axial stiffness, preload class B	152 N/ $\mu$ m
Preload class C $G_C$	320 N
Static axial stiffness, preload class C	200 N/ $\mu$ m
Preload class D $G_D$	640 N
Static axial stiffness, preload class D	266 N/ $\mu$ m



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class D	
Calculation factor f	1.13
Calculation factor $f_1$	0.98
Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.07
Calculation factor $f_{2C}$	1.12
Calculation factor $f_{2D}$	1.17
Calculation factor $f_{HC}$	1.04
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	0.12 kg