



# NTN PRECISION AXLE CORP.



## 55 mm x 90 mm x 18 mm SKF 7011 ACD/P4AH1 angular contact ball bearings

Bearing No. 7011 ACD/P4AH1

7011 ACD/P4AH1 Bearing 2D drawings and 3D CAD models

Size	55x90x18 mm
Bore Diameter	55 mm
Outer Diameter	90 mm
Width	18 mm
d	55 mm
D	90 mm
B	18 mm
d <sub>1</sub>	65.8 mm
d <sub>2</sub>	65.8 mm
D <sub>1</sub>	79.2 mm
K	0.5 mm
C <sub>1</sub>	4.88 mm
r <sub>1,2</sub> - min.	1.1 mm
r <sub>3,4</sub> - min.	0.6 mm
a	26 mm
d <sub>a</sub> - min.	61 mm
d <sub>b</sub> - min.	61 mm
D <sub>a</sub> - max.	84 mm
D <sub>b</sub> - max.	86.8 mm
r <sub>a</sub> - max.	1 mm
r <sub>b</sub> - max.	0.6 mm
d <sub>n</sub>	68.1 mm
Basic dynamic load rating - C	37.1 kN
Basic static load rating - C <sub>0</sub>	31 kN



## NTN PRECISION AXLE CORP.

Fatigue load limit - $P_u$	1.3 kN
Limiting speed for grease lubrication	14000 r/min
Limiting speed for oil lubrication	22000 mm/min
Ball - $D_w$	11.112 mm
Ball - $z$	18
$G_{ref}$	5.1 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 - $G_A$	230 N
Preload class B - $G_B$	460 N
Preload class C - $G_C$	920 N
Preload class D - $G_D$	1840 N
Calculation factor - $f$	1.1
Calculation factor - $f_1$	0.99
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2B}$	1.02
Calculation factor - $f_{2C}$	1.05
Calculation factor - $f_{2D}$	1.08
Calculation factor - $f_{HC}$	1
Preload class A	159 N/micron
Preload class B	207 N/micron
Preload class C	275 N/micron



## NTN PRECISION AXLE CORP.

Preload class D	372 N/micron
$d_1$	65.8 mm
$d_2$	65.8 mm
$D_1$	79.2 mm
$C_1$	4.88 mm
$r_{1,2}$ min.	1.1 mm
$r_{3,4}$ min.	0.6 mm
$d_a$ min.	61 mm
$d_b$ min.	61 mm
$D_a$ max.	84 mm
$D_b$ max.	86.8 mm
$r_a$ max.	1 mm
$r_b$ max.	0.6 mm
$d_n$	68.1 mm
Basic dynamic load rating C	37.1 kN
Basic static load rating $C_0$	31 kN
Fatigue load limit $P_u$	1.32 kN
Attainable speed for grease lubrication	14000 r/min
Attainable speed for oil-air lubrication	22000 r/min
Ball diameter $D_w$	11.112 mm
Number of balls z	18
Reference grease quantity $G_{ref}$	5.1 cm <sup>3</sup>
Preload class A $G_A$	230 N
Static axial stiffness, preload class A	159 N/ $\mu$ m
Preload class B $G_B$	460 N
Static axial stiffness, preload class B	207 N/ $\mu$ m
Preload class C $G_C$	920 N
Static axial stiffness, preload class C	275 N/ $\mu$ m



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Preload class D $G_D$	1840 N
Static axial stiffness, preload class D	372 N/ $\mu$ m
Calculation factor f	1.1
Calculation factor $f_1$	0.99
Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.02
Calculation factor $f_{2C}$	1.05
Calculation factor $f_{2D}$	1.08
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	0.38 kg