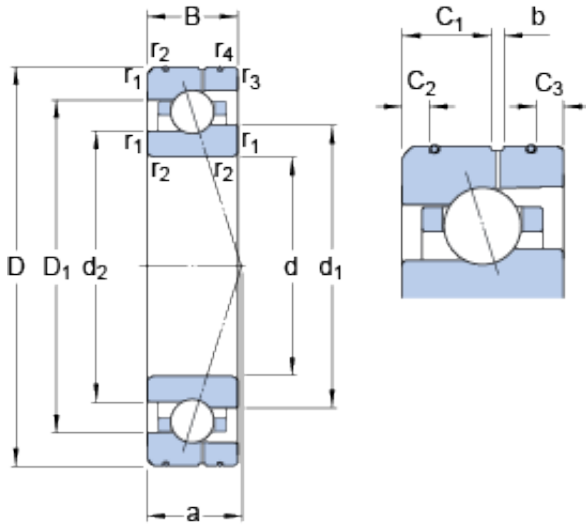




# BEARING PRECISION AXLE CORP.



## 7011 ACE/HCP4AL SKF High Speed Angular Contact Ball Bearings

Bearing No. 7011 ACE/HCP4AL

7011 ACE/HCP4AL Bearing 2D drawings and 3D CAD models

Size	90x55x18 mm
Bore Diameter	90 mm
Outer Diameter	55 mm
Width	18 mm
d	55 mm
D	90 mm
B	18 mm
d <sub>1</sub>	67.73 mm
d <sub>2</sub>	65.6 mm
D <sub>1</sub>	77.25 mm
b	2.4 mm
C <sub>1</sub>	9 mm
C <sub>2</sub>	3.4 mm
C <sub>3</sub>	3.4 mm
r <sub>1,2</sub> - min.	1.1 mm
r <sub>3,4</sub> - min.	0.6 mm
a	26.1 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.	85.8 mm
r <sub>a</sub> - max.	1 mm
r <sub>b</sub> - max.	0.6 mm
d <sub>n</sub>	69.6 mm



## BEARING PRECISION AXLE CORP.

Basic dynamic load rating - C	15.9 kN
Basic static load rating - C <sub>0</sub>	11.6 kN
Fatigue load limit - P <sub>u</sub>	0.49 kN
Limiting speed for grease lubrication	23000 r/min
Limiting speed for oil lubrication	35000 mm/min
Ball - D <sub>w</sub>	7.938 mm
Ball - z	24
G <sub>ref</sub>	5 cm <sup>3</sup>
Calculation factor - e	0.68
Calculation factor - Y <sub>2</sub>	0.87
Calculation factor - Y <sub>0</sub>	0.38
Calculation factor - X <sub>2</sub>	0.41
Calculation factor - Y <sub>1</sub>	0.92
Calculation factor - Y <sub>2</sub>	1.41
Calculation factor - Y <sub>0</sub>	0.76
Calculation factor - X <sub>2</sub>	0.67
Preload class A - G <sub>A</sub>	140 N
Preload class B - G <sub>B</sub>	430 N
Preload class C - G <sub>C</sub>	860 N
Calculation factor - f	1.07
Calculation factor - f <sub>1</sub>	0.99
Calculation factor - f <sub>2A</sub>	1
Calculation factor - f <sub>2B</sub>	1.03
Calculation factor - f <sub>2C</sub>	1.06
Calculation factor - f <sub>HC</sub>	1.01
Preload class A	128 N/micron
Preload class B	193 N/micron



## BEARING PRECISION AXLE CORP.

Preload class C	251 N/micron
$d_1$	67.73 mm
$d_2$	65.6 mm
$D_1$	77.25 mm
$C_1$	9 mm
$C_2$	3.4 mm
$C_3$	3.4 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.	85.8 mm
$r_a$ max.	1 mm
$r_b$ max.	0.6 mm
$d_n$	69.6 mm
Basic dynamic load rating C	15.9 kN
Basic static load rating $C_0$	11.6 kN
Fatigue load limit $P_u$	0.49 kN
Attainable speed for grease lubrication	23000 r/min
Attainable speed for oil-air lubrication	35000 r/min
Ball diameter $D_w$	7.938 mm
Number of balls z	24
Reference grease quantity $G_{ref}$	5 cm <sup>3</sup>
Preload class A $G_A$	140 N
Static axial stiffness, preload class A	128 N/ $\mu$ m
Preload class B $G_B$	430 N
Static axial stiffness, preload class B	193 N/ $\mu$ m
Preload class C $G_C$	860 N



## BEARING PRECISION AXLE CORP.

Static axial stiffness, preload class C	251 N/ $\mu$ m
Calculation factor f	1.07
Calculation factor $f_1$	0.99
Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.03
Calculation factor $f_{2C}$	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	0.36 kg