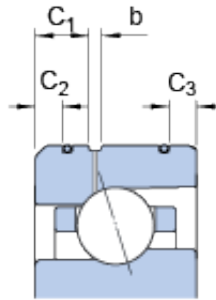
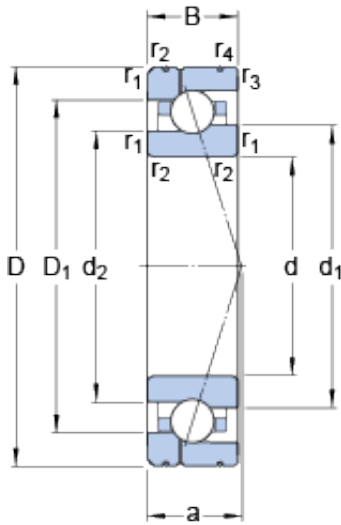




# DRIVESHAFT ANDERSON, INC.



50 mm x 80 mm x 16 mm SKF 7010  
ACE/HCP4AL1 angular contact ball bearings

Bearing No. 7010 ACE/HCP4AL1

7010 ACE/HCP4AL1 Bearing 2D drawings and 3D CAD models

Size	80x50x16 mm
Bore Diameter	80 mm
Outer Diameter	50 mm
Width	16 mm
d	50 mm
D	80 mm
B	16 mm
d <sub>1</sub>	60.25 mm
d <sub>2</sub>	57.9 mm
D <sub>1</sub>	69.75 mm
b	1.6 mm
C <sub>1</sub>	4.7 mm
C <sub>2</sub>	2.7 mm
C <sub>3</sub>	3 mm
r <sub>1,2</sub> - min.	1 mm
r <sub>3,4</sub> - min.	0.6 mm
a	23.3 mm
d <sub>a</sub> - min.	54.6 mm
d <sub>b</sub> - min.	54.6 mm
D <sub>a</sub> - max.	75.4 mm
D <sub>b</sub> - max.	75.8 mm
r <sub>a</sub> - max.	1 mm
r <sub>b</sub> - max.	0.6 mm
d <sub>n</sub>	62.3 mm



## DRIVESHAFT ANDERSON, INC.

Basic dynamic load rating - C	14.8 kN
Basic static load rating - $C_0$	10 kN
Fatigue load limit - $P_u$	0.425 kN
Limiting speed for grease lubrication	27000 r/min
Limiting speed for oil lubrication	41000 mm/min
Ball - $D_w$	7.938 mm
Ball - z	21
$G_{ref}$	4.1 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 - $G_A$	130 N
Preload class B - $G_B$	400 N
Preload class C - $G_C$	800 N
Calculation factor - f	1.08
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
Preload class A	115 N/micron
Preload class B	173 N/micron



## DRIVESHAFT ANDERSON, INC.

Preload class C	227 N/micron
$d_1$	60.25 mm
$d_2$	57.9 mm
$D_1$	69.75 mm
$C_1$	4.7 mm
$C_2$	2.7 mm
$C_3$	3 mm
$r_{1,2}$ min.	1 mm
$r_{3,4}$ min.	0.6 mm
$d_a$ min.	54.6 mm
$d_b$ min.	54.6 mm
$D_a$ max.	75.4 mm
$D_b$ max.	75.8 mm
$r_a$ max.	1 mm
$r_b$ max.	0.6 mm
$d_n$	62.3 mm
Basic dynamic load rating C	14.8 kN
Basic static load rating $C_0$	10 kN
Fatigue load limit $P_u$	0.425 kN
Attainable speed for grease lubrication	27000 r/min
Attainable speed for oil-air lubrication	41000 r/min
Ball diameter $D_w$	7.938 mm
Number of balls z	21
Reference grease quantity $G_{ref}$	4.1 cm <sup>3</sup>
Preload class A $G_A$	130 N
Static axial stiffness, preload class A	115 N/ $\mu$ m
Preload class B $G_B$	400 N
Static axial stiffness, preload class B	173 N/ $\mu$ m
Preload class C $G_C$	800 N



## DRIVESHAFT ANDERSON, INC.

Static axial stiffness, preload class C	227 N/ $\mu$ m
Calculation factor f	1.08
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	0.23 kg