



Bearing No. 7010 ACD/P4A

a	23.2 mm
d	50 mm
D	80 mm
B	16 mm
Bore	1.969 Inch   50 Millimeter
Noun	Bearing
Width	0.63 Inch   16 Millimeter
UNSPSC	31171531
Preload	None
Ball - z	18
Category	Precision Ball Bearings
Size (mm)	80x50x16
Enclosure	Open
Inventory	0.0
Width (mm)	16
Weight / LBS	0.578
Flush Ground	No
Mass bearing	0.25 kg
d <sub>1</sub>	59.2 mm
d <sub>2</sub>	59.2 mm
D <sub>1</sub>	70.8 mm
Inch - Metric	Metric
Cage Material	Phenolic
d <sub>n</sub>	61.2 mm
Contact Angle	25 Degree
Product Group	B04270
Raceway Style	1 Rib Outer Ring
d <sub>1</sub>	59.2 mm
d <sub>n</sub>	61.2 mm

D <sub>1</sub>	70.8 mm
d <sub>2</sub>	59.2 mm
Bearing number	7010 ACD/P4A
Other Features	Single Row   Angular Contact   High Precision
Keyword String	Angular Contact Ball
Material - Ball	Steel
Precision Class	ABEC 7   ISO P4
G <sub>ref</sub>	3.6 cm <sup>3</sup>
Preload class D	331 N/micron
Preload class C	244 N/micron
Preload class B	184 N/micron
Preload class A	141 N/micron
Rolling Element	Ball Bearing
Outside Diameter	3.15 Inch   80 Millimeter
Long Description	50MM Bore; 80MM Outside Diameter; 16MM Width; Open Enclosure; ABEC 7   ISO P4 Precision; Steel Ball Material; 1 (Single) Bearings; 25 Degree Contact Angle; Phenolic Cage Material; 1 Rib Outer Ring Rac
Manufacturer URL	<a href="http://www.skf.com">http://www.skf.com</a>
Weight / Kilogram	0.26
Manufacturer Name	SKF
Number of balls z	18
r <sub>b</sub> max.	0.3 mm
Bore Diameter (mm)	80
D <sub>a</sub> max.	75.4 mm
D <sub>b</sub> max.	78 mm
d <sub>a</sub> min.	54.6 mm
r <sub>a</sub> max.	1 mm

Number of Bearings	1 (Single)
$d_b$ min.	54.6 mm
Outer Diameter (mm)	50
$d_a$ - min.	54.6 mm
$r_{1,2}$ min.	1 mm
$d_b$ - min.	54.6 mm
Calculation factor f	1.11
$r_{3,4}$ min.	0.3 mm
Calculation factor e	0.68
$D_a$ - max.	75.4 mm
Ball - $D_w$	9.525 mm
$D_b$ - max.	78 mm
Minimum Buy Quantity	N/A
$r_b$ - max.	0.3 mm
$r_a$ - max.	1 mm
Calculation factor - e	0.68
Calculation factor - f	1.11
$r_{1,2}$ - min.	1 mm
$r_{3,4}$ - min.	0.3 mm
Harmonized Tariff Code	8482.10.50.28
Manufacturer Item Number	7010 ACD/P4A
Ball diameter $D_w$	9.525 mm
Basic dynamic load rating C	28.1 kN
Preload class A $G_A$	180 N
Preload class D $G_D$	1440 N
Preload class C $G_C$	720 N
Basic dynamic load rating - C	28.1 kN
Preload class B $G_B$	360 N
Preload class C - $G_C$	720 N
Preload class A - $G_A$	180 N

Preload class D - $G_D$	1440 N
Preload class B - $G_B$	360 N
Calculation factor $f_1$	0.99
Fatigue load limit $P_u$	0.98 kN
Calculation factor $f_{2C}$	1.05
Calculation factor $f_{HC}$	1
Calculation factor $f_{2B}$	1.02
Calculation factor $f_{2D}$	1.08
Calculation factor $f_{2A}$	1
Calculation factor - $Y_0$	0.76
Calculation factor - $Y_2$	1.41
Limiting speed for oil lubrication	24000 mm/min
Fatigue load limit - $P_u$	0.98 kN
Calculation factor - $X_2$	0.67
Calculation factor - $Y_1$	0.92
Calculation factor - $f_1$	0.99
Calculation factor - $f_{2D}$	1.08
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2B}$	1.02
Calculation factor - $f_{2C}$	1.05
Calculation factor - $f_{HC}$	1
Limiting speed for grease lubrication	15000 r/min
Basic static load rating $C_0$	23.2 kN
Attainable speed for grease lubrication	15000 r/min
Static axial stiffness, preload class D	331 N/ $\mu$ m
Static axial stiffness, preload class C	244 N/ $\mu$ m

Static axial stiffness, preload class B	184 N/ $\mu$ m
Static axial stiffness, preload class A	141 N/ $\mu$ m
Attainable speed for oil-air lubrication	24000 r/min
Basic static load rating - $C_0$	23.2 kN
Reference grease quantity $G_{ref}$	3.6 cm <sup>3</sup>
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