



**Bearing No. 7010 CD/HCP4A**

a	16.8 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	0.46297
Flush Ground	No
Mass bearing	0.22 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
Raceway Style	1 Rib Outer Ring
d <sub>n</sub>	61.2 mm
Product Group	B04270
Contact Angle	15 Degree
d <sub>n</sub>	61.2 mm
d <sub>1</sub>	59.2 mm

d <sub>2</sub>	59.2 mm
D <sub>1</sub>	70.8 mm
Bearing number	7010 CD/HCP4A
Keyword String	Ball Angular Contact
Other Features	Single Row   Angular Contact   High Capacity Basic Design
Preload class B	88 N/micron
Preload class A	64 N/micron
Precision Class	ABEC 7   ISO P4
Material - Ball	Ceramic
Preload class C	124 N/micron
Rolling Element	Ball Bearing
Preload class D	179 N/micron
G <sub>ref</sub>	3.6 cm <sup>3</sup>
Outside Diameter	3.15 Inch   80 Millimeter
Long Description	50MM Bore; 80MM Outside Diameter; 16MM Width; Open Enclosure; ABEC 7   ISO P4 Precision; Ceramic Ball Material; 1 (Single) Bearing; 15 Degree Contact Angle; Phenolic Cage Material; 1 Rib Outer Ring Ra
Manufacturer URL	<a href="http://www.skf.com">http://www.skf.com</a>
Manufacturer Name	SKF
Weight / Kilogram	0
Number of balls z	18
r <sub>a</sub> max.	1 mm
d <sub>a</sub> min.	54.6 mm
Bore Diameter (mm)	80
r <sub>b</sub> max.	0.3 mm
Number of Bearings	1 (Single)

$D_b$ max.	78 mm
$D_a$ max.	75.4 mm
$d_b$ min.	54.6 mm
Outer Diameter (mm)	50
$r_{1,2}$ min.	1 mm
Ball - $D_w$	9.525 mm
$d_b$ - min.	54.6 mm
Calculation factor f	1.11
$d_a$ - min.	54.6 mm
$r_{3,4}$ min.	0.3 mm
$r_a$ - max.	1 mm
$D_a$ - max.	75.4 mm
$r_b$ - max.	0.3 mm
Minimum Buy Quantity	N/A
$D_b$ - max.	78 mm
Harmonized Tariff Code	8482.10.50.28
Calculation factor - f	1.11
$r_{3,4}$ - min.	0.3 mm
$r_{1,2}$ - min.	1 mm
Basic dynamic load rating C	29.6 kN
Ball diameter $D_w$	9.525 mm
Preload class D $G_D$	880 N
Basic dynamic load rating - C	29.6 kN
Preload class C $G_C$	440 N
Preload class B $G_B$	220 N
Preload class A $G_A$	110 N
Preload class A - $G_A$	110 N
Preload class B - $G_B$	220 N
Preload class C - $G_C$	440 N
Preload class D - $G_D$	880 N

Fatigue load limit $P_u$	1.02 kN
Calculation factor $f_1$	1
Calculation factor $f_0$	15.4
Calculation factor - $f$	1
Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.02
Calculation factor $f_{2C}$	1.05
Calculation factor $f_{HC}$	1.02
Calculation factor $f_{2D}$	1.09
Limiting speed for oil lubrication	32000 mm/min
Fatigue load limit - $P_u$	1 kN
Calculation factor - $f_0$	15.4
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{HC}$	1.02
Calculation factor - $f_{2B}$	1.02
Calculation factor - $f_{2C}$	1.05
Calculation factor - $f_{2D}$	1.09
Limiting speed for grease lubrication	20000 r/min
Basic static load rating $C_0$	24 kN
Static axial stiffness, preload class A	64 N/ $\mu$ m
Static axial stiffness, preload class D	179 N/ $\mu$ m
Attainable speed for grease lubrication	20000 r/min
Static axial stiffness, preload class C	124 N/ $\mu$ m
Static axial stiffness, preload class B	88 N/ $\mu$ m
Basic static load rating -	24 kN

$C_0$	
Attainable speed for oil-air lubrication	32000 r/min
Reference grease quantity $G_{ref}$	3.6 cm <sup>3</sup>