



**Bearing No. 7010 CD/P4A**

D	80 mm
d	50 mm
B	16 mm
a	16.8 mm
Bore	1.969 Inch   50 Millimeter
Noun	Bearing
Width	0.63 Inch   16 Millimeter
UNSPSC	31171531
Preload	None
series:	70
Category	Precision Ball Bearings
Ball - z	18
Inventory	0.0
Enclosure	Open
Size (mm)	80x50x16
Width (mm)	16
Flush Ground	No
Weight / LBS	0.578
Mass bearing	0.25 kg
maximum rpm:	28000 RPM
d <sub>n</sub>	61.2 mm
Inch - Metric	Metric
Product Group	B04270
d <sub>n</sub>	61.2 mm
Contact Angle	15 Degree
D <sub>1</sub>	70.8 mm
Raceway Style	1 Rib Outer Ring
Cage Material	Phenolic
d <sub>1</sub>	59.2 mm

d <sub>2</sub>	59.2 mm
D <sub>1</sub>	70.8 mm
d <sub>2</sub>	59.2 mm
d <sub>1</sub>	59.2 mm
closure type:	Open
Other Features	Single Row   Angular Contact   High Precision
contact angle:	15 °
Keyword String	Angular Contact Ball
fillet radius:	1 mm
bore diameter:	50 mm
overall width:	16 mm
Bearing number	7010 CD/P4A
Preload class A	58 N/micron
Precision Class	ABEC 7   ISO P4
Preload class C	111 N/micron
Preload class D	161 N/micron
Preload class B	79 N/micron
finish/coating:	Uncoated
G <sub>ref</sub>	3.6 cm <sup>3</sup>
Rolling Element	Ball Bearing
Material - Ball	Steel
Outside Diameter	3.15 Inch   80 Millimeter
Manufacturer URL	<a href="http://www.skf.com">http://www.skf.com</a>
Long Description	50MM Bore; 80MM Outside Diameter; 16MM Width; Open Enclosure; ABEC 7   ISO P4 Precision; Steel Ball Material; 1 (Single) Bearings; 15 Degree Contact Angle; Phenolic Cage Material; 1 Rib Outer Ring Rac
Weight / Kilogram	0.26

Manufacturer Name	SKF
Number of balls z	18
precision rating:	ABEC 7 (ISO Class 4)
outer ring width:	16 mm
bearing material:	Steel
outside diameter:	80 mm
$d_b$ min.	54.6 mm
$d_a$ min.	54.6 mm
Number of Bearings	1 (Single)
$D_a$ max.	75.4 mm
$D_b$ max.	78 mm
$r_a$ max.	1 mm
$r_b$ max.	0.3 mm
Bore Diameter (mm)	80
Outer Diameter (mm)	50
internal clearance:	C0
$D_b$ - max.	78 mm
$r_a$ - max.	1 mm
$r_b$ - max.	0.3 mm
$d_b$ - min.	54.6 mm
$D_a$ - max.	75.4 mm
$r_{3,4}$ min.	0.3 mm
$d_a$ - min.	54.6 mm
$r_{1,2}$ min.	1 mm
Minimum Buy Quantity	N/A
Ball - $D_w$	9.525 mm
Calculation factor f	1.11
$r_{1,2}$ - min.	1 mm
Harmonized Tariff Code	8482.10.50.28
Calculation factor - f	1.11
$r_{3,4}$ - min.	0.3 mm
ball screw application:	Not for Ball Screws

Manufacturer Item Number	7010 CD/P4A
Ball diameter $D_w$	9.525 mm
Basic dynamic load rating C	29.6 kN
radial static load capacity:	24 kN
Preload class D $G_D$	880 N
Preload class C $G_C$	440 N
radial dynamic load capacity:	29.6 kN
Basic dynamic load rating - C	29.6 kN
Preload class B $G_B$	220 N
Preload class A $G_A$	110 N
Preload class D - $G_D$	880 N
Preload class A - $G_A$	110 N
Preload class B - $G_B$	220 N
Preload class C - $G_C$	440 N
Calculation factor $f_1$	1
Calculation factor $f_0$	15.4
Fatigue load limit $P_u$	1.02 kN
Calculation factor - f	1
Calculation factor $f_{2A}$	1
Calculation factor $f_{2D}$	1.09
Calculation factor $f_{2B}$	1.02
Calculation factor $f_{2C}$	1.05
Calculation factor $f_{HC}$	1
Calculation factor - $f_0$	15.4
Limiting speed for oil lubrication	28000 mm/min
Fatigue load limit - $P_u$	1 kN
Calculation factor - $f_{2A}$	1

Calculation factor - $f_{HC}$	1
Calculation factor - $f_{2B}$	1.02
Calculation factor - $f_{2C}$	1.05
Calculation factor - $f_{2D}$	1.09
Limiting speed for grease lubrication	17000 r/min
Basic static load rating $C_0$	24 kN
Static axial stiffness, preload class C	111 N/ $\mu$ m
Static axial stiffness, preload class B	79 N/ $\mu$ m
Static axial stiffness, preload class D	161 N/ $\mu$ m
Static axial stiffness, preload class A	58 N/ $\mu$ m
Attainable speed for grease lubrication	17000 r/min
Basic static load rating - $C_0$	24 kN
Attainable speed for oil-air lubrication	28000 r/min
Reference grease quantity $G_{ref}$	3.6 cm <sup>3</sup>