



## Bearing Manufacturing of America



140 mm x 210 mm x 33 mm 140 mm x 210 mm  
x 33 mm SKF 7028 CD/HCP4AH1 angular  
contact ball bearings

Bearing No. 7028 CD/HCP4AH1

7028 CD/HCP4AH1 Bearing 2D drawings and 3D CAD  
models

Size	210x140x33 mm
Bore Diameter	210 mm
Outer Diameter	140 mm
Width	33 mm
d	140 mm
D	210 mm
B	33 mm
d <sub>1</sub>	161.6 mm
d <sub>2</sub>	161.6 mm
D <sub>1</sub>	188.4 mm
K	0.5 mm
C <sub>1</sub>	8.9 mm
r <sub>1,2</sub> - min.	2 mm
r <sub>3,4</sub> - min.	1 mm
a	40.1 mm
d <sub>a</sub> - min.	149 mm
d <sub>b</sub> - min.	149 mm
D <sub>a</sub> - max.	201 mm
D <sub>b</sub> - max.	205 mm
r <sub>a</sub> - max.	2 mm
r <sub>b</sub> - max.	1 mm
d <sub>n</sub>	166.3 mm
Basic dynamic load rating - C	153 kN



## Bearing Manufacturing of America

Basic static load rating - $C_0$	166 kN
Fatigue load limit - $P_u$	5.3 kN
Limiting speed for grease lubrication	7500 r/min
Limiting speed for oil lubrication	12000 mm/min
Ball - $D_w$	22.225 mm
Ball - $z$	22
$G_{ref}$	45 cm <sup>3</sup>
Calculation factor - $f_0$	15.8
Preload class A - $G_A$	570 N
Preload class B - $G_B$	1140 N
Preload class C - $G_C$	2280 N
Preload class D - $G_D$	4560 N
Calculation factor - $f$	1.16
Calculation factor - $f$	1
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2B}$	1.02
Calculation factor - $f_{2C}$	1.05
Calculation factor - $f_{2D}$	1.09
Calculation factor - $f_{HC}$	1.02
Preload class A	168 N/micron
Preload class B	228 N/micron
Preload class C	320 N/micron
Preload class D	464 N/micron
$d_1$	161.6 mm
$d_2$	161.6 mm
$D_1$	188.4 mm
$C_1$	8.9 mm
$r_{1,2}$ min.	2 mm



## Bearing Manufacturing of America

$r_{3,4}$ min.	1 mm
$d_a$ min.	149 mm
$d_b$ min.	149 mm
$D_a$ max.	201 mm
$D_b$ max.	205 mm
$r_a$ max.	2 mm
$r_b$ max.	1 mm
$d_n$	166.3 mm
Basic dynamic load rating C	153 kN
Basic static load rating $C_0$	166 kN
Fatigue load limit $P_u$	5.3 kN
Attainable speed for grease lubrication	7500 r/min
Attainable speed for oil-air lubrication	12000 r/min
Ball diameter $D_w$	22.225 mm
Number of balls z	22
Reference grease quantity $G_{ref}$	45 cm <sup>3</sup>
Preload class A $G_A$	570 N
Static axial stiffness, preload class A	168 N/ $\mu$ m
Preload class B $G_B$	1140 N
Static axial stiffness, preload class B	228 N/ $\mu$ m
Preload class C $G_C$	2280 N
Static axial stiffness, preload class C	320 N/ $\mu$ m
Preload class D $G_D$	4560 N
Static axial stiffness, preload class D	464 N/ $\mu$ m
Calculation factor f	1.16
Calculation factor $f_1$	1
Calculation factor $f_{2A}$	1



## Bearing Manufacturing of America

Calculation factor $f_{2B}$	1.02
Calculation factor $f_{2C}$	1.05
Calculation factor $f_{2D}$	1.09
Calculation factor $f_{HC}$	1.02
Calculation factor $f_0$	15.8
Mass bearing	2.83 kg