



Bearing No. 7018 CD/HCP4AL

a	27.5 mm
Size	140x90x24 mm
Bore Diameter	140 mm
Outer Diameter	90 mm
Width	24 mm
d	90 mm
D	140 mm
B	24 mm
d <sub>1</sub>	105.4 mm
d <sub>2</sub>	105.4 mm
D <sub>1</sub>	124.6 mm
b	2.2 mm
C <sub>1</sub>	13.4 mm
C <sub>2</sub>	5.2 mm
C <sub>3</sub>	4.3 mm
r <sub>1,2</sub> - min.	1.5 mm
r <sub>3,4</sub> - min.	1 mm
d <sub>a</sub> - min.	97 mm
d <sub>b</sub> - min.	97 mm
D <sub>a</sub> - max.	133 mm
D <sub>b</sub> - max.	136 mm
r <sub>a</sub> - max.	1.5 mm
r <sub>b</sub> - max.	1 mm
d <sub>n</sub>	108.7 mm
Basic dynamic load rating - C	79.3 kN
Basic static load rating - C <sub>0</sub>	76.5 kN
Fatigue load limit - P <sub>u</sub>	3 kN

Limiting speed for grease lubrication	11000 r/min
Limiting speed for oil lubrication	18000 mm/min
Ball - $D_w$	15.875 mm
Ball - $z$	20
$G_{ref}$	15 cm <sup>3</sup>
Calculation factor - $f_0$	15.6
Preload class A - $G_A$	300 N
Preload class B - $G_B$	600 N
Preload class C - $G_C$	1200 N
Preload class D - $G_D$	2400 N
Calculation factor - $f$	1.14
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	114 N/micron
Preload class B	156 N/micron
Preload class C	220 N/micron
Preload class D	319 N/micron
$d_1$	105.4 mm
$d_2$	105.4 mm
$D_1$	124.6 mm
$C_1$	13.4 mm
$C_2$	5.2 mm
$C_3$	4.3 mm
$r_{1,2}$ min.	1.5 mm

$r_{3,4}$ min.	1 mm
$d_a$ min.	97 mm
$d_b$ min.	97 mm
$D_a$ max.	133 mm
$D_b$ max.	136 mm
$r_a$ max.	1.5 mm
$r_b$ max.	1 mm
$d_n$	108.7 mm
Basic dynamic load rating C	79.3 kN
Basic static load rating $C_0$	76.5 kN
Fatigue load limit $P_u$	3 kN
Attainable speed for grease lubrication	11000 r/min
Attainable speed for oil-air lubrication	18000 r/min
Ball diameter $D_w$	15.875 mm
Number of balls z	20
Reference grease quantity $G_{ref}$	15 cm <sup>3</sup>
Preload class A $G_A$	300 N
Static axial stiffness, preload class A	114 N/ $\mu$ m
Preload class B $G_B$	600 N
Static axial stiffness, preload class B	156 N/ $\mu$ m
Preload class C $G_C$	1200 N
Static axial stiffness, preload class C	220 N/ $\mu$ m
Preload class D $G_D$	2400 N
Static axial stiffness, preload class D	319 N/ $\mu$ m
Calculation factor f	1.14
Calculation factor $f_1$	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
Calculation factor $f_0$	15.6
Mass bearing	1.01 kg