



**Bearing No. 7010 CD/HCP4AH**

K	0.5 mm
a	16.8 mm
d	50 mm
D	80 mm
B	16 mm
Ball - z	18
Size (mm)	80x50x16
Width (mm)	16
Mass bearing	0.22 kg
$d_n$	61.2 mm
$D_1$	70.8 mm
$d_1$	59.2 mm
$C_1$	9.6 mm
$D_1$	70.8 mm
$d_2$	59.2 mm
$C_1$	9.6 mm
$d_1$	59.2 mm
$d_n$	61.2 mm
$d_2$	59.2 mm
Bearing number	7010 CD/HCP4AH
Preload class A	64 N/micron
Preload class D	179 N/micron
Preload class B	88 N/micron
Preload class C	124 N/micron
$G_{ref}$	3.6 cm <sup>3</sup>
Number of balls z	18
$r_b$ max.	0.3 mm
$r_a$ max.	1 mm
$D_b$ max.	78 mm

$D_a$ max.	75.4 mm
$d_b$ min.	54.6 mm
$d_a$ min.	54.6 mm
Bore Diameter (mm)	80
Outer Diameter (mm)	50
$d_b$ - min.	54.6 mm
$r_b$ - max.	0.3 mm
$r_{1,2}$ min.	1 mm
$d_a$ - min.	54.6 mm
Calculation factor f	1.11
$r_a$ - max.	1 mm
$r_{3,4}$ min.	0.3 mm
$D_a$ - max.	75.4 mm
Ball - $D_w$	9.525 mm
$D_b$ - max.	78 mm
Calculation factor - f	1.11
$r_{3,4}$ - min.	0.3 mm
$r_{1,2}$ - min.	1 mm
Ball diameter $D_w$	9.525 mm
Basic dynamic load rating C	29.6 kN
Preload class D $G_D$	880 N
Preload class A $G_A$	110 N
Preload class C $G_C$	440 N
Preload class B $G_B$	220 N
Basic dynamic load rating - C	29.6 kN
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 $f_{2D}$	1.09
Calculation factor - $f$	1
Calculation factor $f_{2C}$	1.05
Calculation factor $f_{HC}$	1.02
Calculation factor $f_{2B}$	1.02
Calculation factor $f_{2A}$	1
Limiting speed for oil lubrication	32000 mm/min
Fatigue load limit - $P_u$	1 kN
Calculation factor - $f_0$	15.4
Calculation factor - $f_{2D}$	1.09
Calculation factor - $f_{HC}$	1.02
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2C}$	1.05
Calculation factor - $f_{2B}$	1.02
Limiting speed for grease lubrication	20000 r/min
Basic static load rating $C_0$	24 kN
Static axial stiffness, preload class B	88 N/ $\mu$ m
Static axial stiffness, preload class C	124 N/ $\mu$ m
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
Attainable speed for oil-air lubrication	32000 r/min

Basic static load rating - $C_0$	24 kN
Reference grease quantity $G_{ref}$	3.6 cm <sup>3</sup>