



Bearing No. 7004 ACD/HCP4AH

K	0.5 mm
a	13.3 mm
d	20 mm
D	42 mm
B	12 mm
Ball - z	12
Size (mm)	42x20x12
Width (mm)	12
Mass bearing	0.06 kg
$d_n$	28.4 mm
$D_1$	34.8 mm
$d_1$	27.1 mm
$C_1$	7.15 mm
$D_1$	34.8 mm
$d_2$	27.1 mm
$C_1$	7.15 mm
$d_1$	27.1 mm
$d_n$	28.4 mm
$d_2$	27.1 mm
Bearing number	7004 ACD/HCP4AH
Preload class B	77 N/micron
Preload class A	60 N/micron
Preload class D	133 N/micron
$G_{ref}$	0.9 cm <sup>3</sup>
Preload class C	100 N/micron
Number of balls z	12
Bore Diameter (mm)	42
$r_b$ max.	0.3 mm
$r_a$ max.	0.6 mm

$D_b$ max.	40 mm
$D_a$ max.	38.8 mm
$d_a$ min.	23.2 mm
$d_b$ min.	23.2 mm
Outer Diameter (mm)	20
$r_a$ - max.	0.6 mm
$D_a$ - max.	38.8 mm
$d_b$ - min.	23.2 mm
$d_a$ - min.	23.2 mm
$r_{1,2}$ min.	0.6 mm
$r_{3,4}$ min.	0.3 mm
Ball - $D_w$	6.35 mm
$r_b$ - max.	0.3 mm
$D_b$ - max.	40 mm
Calculation factor f	1.03
Calculation factor e	0.68
Calculation factor - f	1.03
$r_{1,2}$ - min.	0.6 mm
$r_{3,4}$ - min.	0.3 mm
Calculation factor - e	0.68
Ball diameter $D_w$	6.35 mm
Basic dynamic load rating C	8.32 kN
Preload class A $G_A$	50 N
Preload class B $G_B$	100 N
Preload class C $G_C$	200 N
Basic dynamic load rating - C	8.3 kN
Preload class D $G_D$	400 N
Preload class B - $G_B$	100 N
Preload class A - $G_A$	50 N
Preload class D - $G_D$	400 N

Preload class C - $G_C$	200 N
Fatigue load limit $P_u$	0.173 kN
Calculation factor $f_1$	0.99
Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.02
Calculation factor $f_{2C}$	1.05
Calculation factor $f_{2D}$	1.08
Calculation factor $f_{HC}$	1.02
Calculation factor - $Y_1$	0.92
Calculation factor - $Y_2$	1.41
Calculation factor - $Y_0$	0.76
Calculation factor - $X_2$	0.67
Calculation factor - $f_1$	0.99
Limiting speed for oil lubrication	70000 mm/min
Fatigue load limit - $P_u$	0.173 kN
Calculation factor - $f_{2D}$	1.08
Calculation factor - $f_{HC}$	1.02
Calculation factor - $f_{2C}$	1.05
Calculation factor - $f_{2B}$	1.02
Calculation factor - $f_{2A}$	1
Limiting speed for grease lubrication	45000 r/min
Basic static load rating $C_0$	4.15 kN
Static axial stiffness, preload class A	60 N/ $\mu$ m
Static axial stiffness, preload class D	133 N/ $\mu$ m
Static axial stiffness, preload class C	100 N/ $\mu$ m
Static axial stiffness,	77 N/ $\mu$ m

preload class B	
Attainable speed for grease lubrication	45000 r/min
Basic static load rating - $C_0$	4.2 kN
Attainable speed for oil-air lubrication	70000 r/min
Reference grease quantity $G_{ref}$	0.9 cm <sup>3</sup>
Calculation factor (single, tandem) $Y_2$	0.87
Calculation factor (single, tandem) $Y_0$	0.38
Calculation factor (single, tandem) $X_2$	0.41
Calculation factor (back-to-back, face-to-face) $Y_1$	0.92
Calculation factor (back-to-back, face-to-face) $Y_2$	1.41
Calculation factor (back-to-back, face-to-face) $Y_0$	0.76
Calculation factor (back-to-back, face-to-face) $X_2$	0.67