



Bearing No. 7009 CE/HCP4AL1

b	1.4 mm
d	45 mm
a	16.1 mm
B	16 mm
D	75 mm
Ball - z	21
Size (mm)	75x45x16
Width (mm)	16
Mass bearing	0.22 kg
d <sub>2</sub>	53.6 mm
D <sub>1</sub>	64.25 mm
d <sub>n</sub>	57.6 mm
C <sub>1</sub>	5 mm
C <sub>2</sub>	3 mm
C <sub>3</sub>	3 mm
C <sub>2</sub>	3 mm
C <sub>1</sub>	5 mm
d <sub>n</sub>	57.6 mm
D <sub>1</sub>	64.25 mm
d <sub>2</sub>	53.6 mm
d <sub>1</sub>	55.7 mm
d <sub>1</sub>	55.7 mm
C <sub>3</sub>	3 mm
Bearing number	7009 CE/HCP4AL1
Preload class B	65 N/micron
G <sub>ref</sub>	3.4 cm <sup>3</sup>
Preload class C	88 N/micron
Preload class A	42 N/micron
Number of balls z	21

$d_a$ min.	49.6 mm
$d_b$ min.	49.6 mm
$D_a$ max.	70.4 mm
$D_b$ max.	70.8 mm
$r_a$ max.	1 mm
$r_b$ max.	0.6 mm
Bore Diameter (mm)	75
Outer Diameter (mm)	45
$r_{1,2}$ min.	1 mm
$d_a$ - min.	49.6 mm
$d_b$ - min.	49.6 mm
$D_a$ - max.	70.4 mm
Calculation factor f	1.06
$r_b$ - max.	0.6 mm
$r_{3,4}$ min.	0.6 mm
$r_a$ - max.	1 mm
$D_b$ - max.	70.8 mm
Ball - $D_w$	7.144 mm
$r_{3,4}$ - min.	0.6 mm
$r_{1,2}$ - min.	1 mm
Calculation factor - f	1.06
Ball diameter $D_w$	7.144 mm
Basic dynamic load rating C	13 kN
Preload class B $G_B$	210 N
Preload class C $G_C$	410 N
Preload class A $G_A$	70 N
Basic dynamic load rating - C	13 kN
Preload class A - $G_A$	70 N
Preload class B - $G_B$	210 N
Preload class C - $G_C$	410 N

Calculation factor $f_1$	1
Calculation factor $f_0$	8.2
Fatigue load limit $P_u$	0.36 kN
Calculation factor $f_{2C}$	1.05
Calculation factor $f_{2B}$	1.03
Calculation factor - $f$	1
Calculation factor $f_{2A}$	1
Calculation factor $f_{HC}$	1.01
Calculation factor - $f_0$	8.2
Limiting speed for oil lubrication	50000 mm/min
Fatigue load limit - $P_u$	0.36 kN
Calculation factor - $f_{HC}$	1.01
Calculation factor - $f_{2B}$	1.03
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2C}$	1.05
Limiting speed for grease lubrication	32000 r/min
Basic static load rating $C_0$	8.5 kN
Static axial stiffness, preload class A	42 N/ $\mu$ m
Static axial stiffness, preload class B	65 N/ $\mu$ m
Static axial stiffness, preload class C	88 N/ $\mu$ m
Attainable speed for grease lubrication	32000 r/min
Basic static load rating - $C_0$	8.5 kN
Attainable speed for oil-air lubrication	50000 r/min
Reference grease quantity $G_{ref}$	3.4 cm <sup>3</sup>

