



Bearing No. 7005 ACE/HCP4AL

b	2.1 mm
d	25 mm
a	14.4 mm
B	12 mm
D	47 mm
Ball - z	14
Size (mm)	47x25x12
Width (mm)	12
Mass bearing	0.065 kg
d <sub>2</sub>	29.8 mm
D <sub>1</sub>	39.21 mm
d <sub>n</sub>	33.1 mm
C <sub>1</sub>	5.9 mm
C <sub>2</sub>	1.8 mm
C <sub>3</sub>	1.9 mm
C <sub>2</sub>	1.8 mm
C <sub>1</sub>	5.9 mm
d <sub>n</sub>	33.1 mm
D <sub>1</sub>	39.21 mm
d <sub>2</sub>	29.8 mm
d <sub>1</sub>	31.6 mm
d <sub>1</sub>	31.6 mm
C <sub>3</sub>	1.9 mm
Bearing number	7005 ACE/HCP4AL
Preload class A	66 N/micron
Preload class B	98 N/micron
G <sub>ref</sub>	1.3 cm <sup>3</sup>
Preload class C	130 N/micron
Number of balls z	14

Bore Diameter (mm)	47
$r_b$ max.	0.3 mm
$r_a$ max.	0.6 mm
$D_b$ max.	44.6 mm
$D_a$ max.	43.8 mm
$d_a$ min.	28.2 mm
$d_b$ min.	28.2 mm
Outer Diameter (mm)	25
$r_b$ - max.	0.3 mm
$r_{3,4}$ min.	0.3 mm
$d_b$ - min.	28.2 mm
$D_a$ - max.	43.8 mm
$D_b$ - max.	44.6 mm
$r_{1,2}$ min.	0.6 mm
$d_a$ - min.	28.2 mm
$r_a$ - max.	0.6 mm
Ball - $D_w$	6.35 mm
Calculation factor f	1.05
Calculation factor e	0.68
$r_{3,4}$ - min.	0.3 mm
Calculation factor - f	1.05
$r_{1,2}$ - min.	0.6 mm
Calculation factor - e	0.68
Ball diameter $D_w$	6.35 mm
Basic dynamic load rating C	7.93 kN
Preload class C $G_C$	430 N
Basic dynamic load rating - C	7.9 kN
Preload class B $G_B$	210 N
Preload class A $G_A$	70 N
Preload class C - $G_C$	430 N

Preload class A - $G_A$	70 N
Preload class B - $G_B$	210 N
Calculation factor $f_1$	0.99
Fatigue load limit $P_u$	0.166 kN
Calculation factor $f_{HC}$	1.01
Calculation factor $f_{2C}$	1.06
Calculation factor $f_{2B}$	1.03
Calculation factor $f_{2A}$	1
Calculation factor - $Y_2$	1.41
Calculation factor - $Y_0$	0.76
Calculation factor - $X_2$	0.67
Limiting speed for oil lubrication	75000 mm/min
Calculation factor - $Y_1$	0.92
Fatigue load limit - $P_u$	0.166 kN
Calculation factor - $f_1$	0.99
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{HC}$	1.01
Calculation factor - $f_{2C}$	1.06
Calculation factor - $f_{2B}$	1.03
Limiting speed for grease lubrication	50000 r/min
Basic static load rating $C_0$	3.9 kN
Static axial stiffness, preload class A	66 N/ $\mu$ m
Static axial stiffness, preload class C	130 N/ $\mu$ m
Static axial stiffness, preload class B	98 N/ $\mu$ m
Attainable speed for grease lubrication	50000 r/min

Basic static load rating - $C_0$	3.9 kN
Attainable speed for oil-air lubrication	75000 r/min
Reference grease quantity $G_{ref}$	1.3 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