



Bearing No. 7004 ACE/P4AL

b	1.9 mm
d	20 mm
a	13.2 mm
B	12 mm
D	42 mm
Ball - z	12
Size (mm)	42x20x12
Width (mm)	12
Mass bearing	0.064 kg
d <sub>2</sub>	24.8 mm
D <sub>1</sub>	34.21 mm
d <sub>n</sub>	28.1 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>	28.1 mm
D <sub>1</sub>	34.21 mm
d <sub>2</sub>	24.8 mm
d <sub>1</sub>	26.6 mm
d <sub>1</sub>	26.6 mm
C <sub>3</sub>	1.9 mm
Bearing number	7004 ACE/P4AL
Preload class A	52 N/micron
Preload class B	78 N/micron
G <sub>ref</sub>	1.1 cm <sup>3</sup>
Preload class C	102 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.	39.6 mm
$D_a$ max.	40 mm
$d_a$ min.	22 mm
$d_b$ min.	22 mm
Outer Diameter (mm)	20
$r_b$ - max.	0.3 mm
$r_{3,4}$ min.	0.3 mm
$d_b$ - min.	22 mm
$D_a$ - max.	40 mm
$D_b$ - max.	39.6 mm
$r_{1,2}$ min.	0.6 mm
$d_a$ - min.	22 mm
$r_a$ - max.	0.6 mm
Ball - $D_w$	6.35 mm
Calculation factor f	1.04
Calculation factor e	0.68
$r_{3,4}$ - min.	0.3 mm
Calculation factor - f	1.04
$r_{1,2}$ - min.	0.6 mm
Calculation factor - e	0.68
Ball diameter $D_w$	6.35 mm
Basic dynamic load rating C	7.15 kN
Preload class C $G_C$	390 N
Basic dynamic load rating - C	7.2 kN
Preload class B $G_B$	193 N
Preload class A $G_A$	64 N
Preload class C - $G_C$	390 N

Preload class A - $G_A$	64 N
Preload class B - $G_B$	193 N
Calculation factor $f_1$	0.99
Fatigue load limit $P_u$	0.137 kN
Calculation factor $f_{HC}$	1
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 - $P_u$	0.137 kN
Calculation factor - $f_1$	0.99
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{HC}$	1
Calculation factor - $f_{2C}$	1.06
Calculation factor - $f_{2B}$	1.03
Limiting speed for grease lubrication	48000 r/min
Basic static load rating $C_0$	3.25 kN
Static axial stiffness, preload class A	52 N/ $\mu$ m
Static axial stiffness, preload class C	102 N/ $\mu$ m
Static axial stiffness, preload class B	78 N/ $\mu$ m
Attainable speed for grease lubrication	48000 r/min

Basic static load rating - $C_0$	3.2 kN
Attainable speed for oil-air lubrication	75000 r/min
Reference grease quantity $G_{ref}$	1.1 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