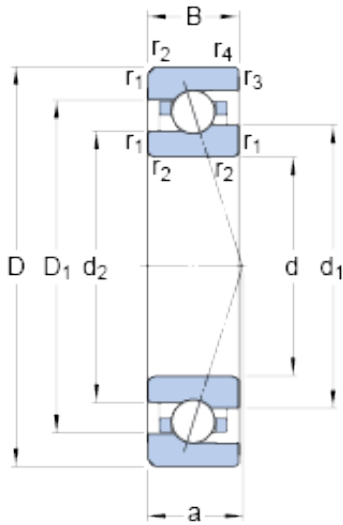




# NACHI BEARINGS TRAINING INDUSTRY



7019 ACE/HCP4A Bearing 2D drawings and 3D CAD models

95 mm x 145 mm x 24 mm SKF 7019  
ACE/HCP4A angular contact ball bearings

Bearing No. 7019 ACE/HCP4A

Size	145x95x24 mm
Bore Diameter	145 mm
Outer Diameter	95 mm
Width	24 mm
d	95 mm
D	145 mm
B	24 mm
d <sub>1</sub>	112.38 mm
d <sub>2</sub>	109.2 mm
D <sub>1</sub>	127.61 mm
r <sub>1,2</sub> - min.	1.5 mm
r <sub>3,4</sub> - min.	1 mm
a	40.2 mm
d <sub>a</sub> - min.	102 mm
d <sub>b</sub> - min.	102 mm
D <sub>a</sub> - max.	138 mm
D <sub>b</sub> - max.	139.4 mm
r <sub>a</sub> - max.	1.5 mm
r <sub>b</sub> - max.	1 mm
d <sub>n</sub>	115.4 mm
Basic dynamic load rating - C	41.6 kN
Basic static load rating - C <sub>0</sub>	36 kN
Fatigue load limit - P <sub>u</sub>	1.4 kN
Limiting speed for grease	13300 r/min



## NACHI BEARINGS TRAINING INDUSTRY

Lubrication	
Limiting speed for oil lubrication	20500 mm/min
Ball - $D_w$	12.7 mm
Ball - $z$	26
$G_{ref}$	17 cm <sup>3</sup>
Calculation factor - $e$	0.68
Calculation factor - $Y_2$	0.87
Calculation factor - $Y_0$	0.38
Calculation factor - $X_2$	0.41
Calculation factor - $Y_1$	0.92
Calculation factor - $Y_2$	1.41
Calculation factor - $Y_0$	0.76
Calculation factor - $X_2$	0.67
Preload class A - $G_A$	380 N
Preload class B - $G_B$	1130 N
Preload class C - $G_C$	2270 N
Calculation factor - $f$	1.11
Calculation factor - $f_1$	0.99
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2B}$	1.03
Calculation factor - $f_{2C}$	1.06
Calculation factor - $f_{HC}$	1.01
Preload class A	236 N/micron
Preload class B	354 N/micron
Preload class C	466 N/micron
$d_1$	112.38 mm
$d_2$	109.2 mm
$D_1$	127.61 mm
$r_{1,2}$ min.	1.5 mm



## NACHI BEARINGS TRAINING INDUSTRY

$r_{3,4}$ min.	1 mm
$d_a$ min.	102 mm
$d_b$ min.	102 mm
$D_a$ max.	138 mm
$D_b$ max.	139.4 mm
$r_a$ max.	1.5 mm
$r_b$ max.	1 mm
$d_n$	115.4 mm
Basic dynamic load rating C	41.6 kN
Basic static load rating $C_0$	36 kN
Fatigue load limit $P_u$	1.4 kN
Attainable speed for grease lubrication	13300 r/min
Attainable speed for oil-air lubrication	20500 r/min
Ball diameter $D_w$	12.7 mm
Number of balls z	26
Reference grease quantity $G_{ref}$	17 cm <sup>3</sup>
Preload class A $G_A$	380 N
Static axial stiffness, preload class A	236 N/ $\mu$ m
Preload class B $G_B$	1130 N
Static axial stiffness, preload class B	354 N/ $\mu$ m
Preload class C $G_C$	2270 N
Static axial stiffness, preload class C	466 N/ $\mu$ m
Calculation factor f	1.11
Calculation factor $f_1$	0.99
Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.03
Calculation factor $f_{2C}$	1.06
Calculation factor $f_{HC}$	1.01



## NACHI BEARINGS TRAINING INDUSTRY

Calculation factor e	0.68
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
Mass bearing	1.08 kg