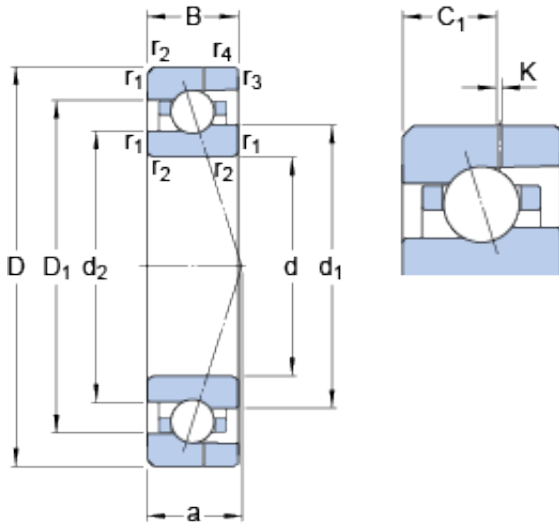




# NTN BEARING-SUDAMERICANA, S.A.



## 9 mm x 24 mm x 7 mm SKF 709 ACE/HCP4AH angular contact ball bearings

Bearing No. 709 ACE/HCP4AH

709 ACE/HCP4AH Bearing 2D drawings and 3D CAD models

Size	24x9x7 mm
Bore Diameter	24 mm
Outer Diameter	9 mm
Width	7 mm
d	9 mm
D	24 mm
B	7 mm
d <sub>1</sub>	13.6 mm
d <sub>2</sub>	13 mm
D <sub>1</sub>	19.4 mm
K	0.5 mm
C <sub>1</sub>	4.25 mm
r <sub>1,2</sub> - min.	0.3 mm
r <sub>3,4</sub> - min.	0.15 mm
a	7.4 mm
d <sub>a</sub> - min.	11 mm
d <sub>b</sub> - min.	11 mm
D <sub>a</sub> - max.	22 mm
D <sub>b</sub> - max.	22.6 mm
r <sub>a</sub> - max.	0.3 mm
r <sub>b</sub> - max.	0.15 mm
d <sub>n</sub>	14.8 mm
Basic dynamic load rating - C	2.5 kN
Basic static load rating - C <sub>0</sub>	0.9 kN



## NTN BEARING-SUDAMERICANA, S.A.

Fatigue load limit - $P_u$	0.038 kN
Limiting speed for grease lubrication	106000 r/min
Limiting speed for oil lubrication	165000 mm/min
Ball - $D_w$	3.969 mm
Ball - $z$	9
$G_{ref}$	0.19 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 - $G_A$	23 N
Preload class B - $G_B$	65 N
Preload class C - $G_C$	130 N
Calculation factor - $f$	1.02
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	29 N/micron
Preload class B	42 N/micron
Preload class C	55 N/micron
$d_1$	13.6 mm
$d_2$	13 mm



## NTN BEARING-SUDAMERICANA, S.A.

$D_1$	19.4 mm
$C_1$	4.25 mm
$r_{1,2}$ min.	0.3 mm
$r_{3,4}$ min.	0.15 mm
$d_a$ min.	11 mm
$d_b$ min.	11 mm
$D_a$ max.	22 mm
$D_b$ max.	22.6 mm
$r_a$ max.	0.3 mm
$r_b$ max.	0.15 mm
$d_n$	14.8 mm
Basic dynamic load rating C	2.51 kN
Basic static load rating $C_0$	0.9 kN
Fatigue load limit $P_u$	0.038 kN
Attainable speed for grease lubrication	106000 r/min
Attainable speed for oil-air lubrication	165000 r/min
Ball diameter $D_w$	3.969 mm
Number of balls z	9
Reference grease quantity $G_{ref}$	0.19 cm <sup>3</sup>
Preload class A $G_A$	23 N
Static axial stiffness, preload class A	29 N/ $\mu$ m
Preload class B $G_B$	65 N
Static axial stiffness, preload class B	42 N/ $\mu$ m
Preload class C $G_C$	130 N
Static axial stiffness, preload class C	55 N/ $\mu$ m
Calculation factor f	1.02
Calculation factor $f_1$	0.99
Calculation factor $f_{2A}$	1



## NTN BEARING-SUDAMERICANA, S.A.

Calculation factor $f_{2B}$	1.03
Calculation factor $f_{2C}$	1.06
Calculation factor $f_{HC}$	1.01
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	0.013 kg