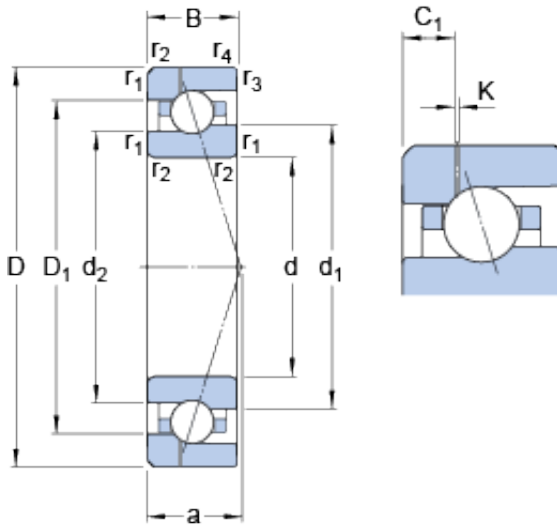




# Huaxin Bearing Co., Ltd



## 45 mm x 75 mm x 16 mm SKF 7009 ACE/HCP4AH1 angular contact ball bearings

Bearing No. 7009 ACE/HCP4AH1

7009 ACE/HCP4AH1 Bearing 2D drawings and 3D CAD models

|   |             |
|---|-------------|
| Size                                      | 75x45x16 mm |
| Bore Diameter                             | 75 mm       |
| Outer Diameter                            | 45 mm       |
| Width                                     | 16 mm       |
| d   | 45 mm       |
| D   | 75 mm       |
| B   | 16 mm       |
| d <sub>1</sub>                            | 55.7 mm     |
| d <sub>2</sub>                            | 53.6 mm     |
| D <sub>1</sub>                            | 64.25 mm    |
| K   | 0.5 mm      |
| C <sub>1</sub>                            | 5.53 mm     |
| r <sub>1,2</sub> - min.                   | 1 mm        |
| r <sub>3,4</sub> - min.                   | 0.6 mm      |
| a   | 22.2 mm     |
| d <sub>a</sub> - min.                     | 49.6 mm     |
| d <sub>b</sub> - min.                     | 49.6 mm     |
| D <sub>a</sub> - max.                     | 70.4 mm     |
| D <sub>b</sub> - max.                     | 70.8 mm     |
| r <sub>a</sub> - max.                     | 1 mm        |
| r <sub>b</sub> - max.                     | 0.6 mm      |
| d <sub>n</sub>                            | 57.6 mm     |
| Basic dynamic load rating - C             | 12.1 kN     |
| Basic static load rating - C <sub>0</sub> | 8.2 kN      |



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|                                       |                     |
|---------------------------------------|---------------------|
| Fatigue load limit - $P_u$            | 0.345 kN            |
| Limiting speed for grease lubrication | 29000 r/min         |
| Limiting speed for oil lubrication    | 45000 mm/min        |
| Ball - $D_w$                          | 7.144 mm            |
| Ball - $z$                            | 21                  |
| $G_{ref}$                             | 3.4 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 - $G_A$               | 110 N               |
| Preload class B - $G_B$               | 330 N               |
| Preload class C - $G_C$               | 660 N               |
| Calculation factor - $f$              | 1.06                |
| 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                       | 104 N/micron        |
| Preload class B                       | 156 N/micron        |
| Preload class C                       | 204 N/micron        |
| $d_1$                                 | 55.7 mm             |
| $d_2$                                 | 53.6 mm             |



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|  |                     |
|--|---------------------|
| $D_1$                                    | 64.25 mm            |
| $C_1$                                    | 5.53 mm             |
| $r_{1,2}$ min.                           | 1 mm                |
| $r_{3,4}$ min.                           | 0.6 mm              |
| $d_a$ 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              |
| $d_n$                                    | 57.6 mm             |
| Basic dynamic load rating C              | 12.1 kN             |
| Basic static load rating $C_0$           | 8.15 kN             |
| Fatigue load limit $P_u$                 | 0.345 kN            |
| Attainable speed for grease lubrication  | 29000 r/min         |
| Attainable speed for oil-air lubrication | 45000 r/min         |
| Ball diameter $D_w$                      | 7.144 mm            |
| Number of balls z                        | 21                  |
| Reference grease quantity $G_{ref}$      | 3.4 cm <sup>3</sup> |
| Preload class A $G_A$                    | 110 N               |
| Static axial stiffness, preload class A  | 104 N/ $\mu$ m      |
| Preload class B $G_B$                    | 330 N               |
| Static axial stiffness, preload class B  | 156 N/ $\mu$ m      |
| Preload class C $G_C$                    | 660 N               |
| Static axial stiffness, preload class C  | 204 N/ $\mu$ m      |
| Calculation factor f                     | 1.06                |
| Calculation factor $f_1$                 | 0.99                |
| Calculation factor $f_{2A}$              | 1                   |



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|   |         |
|---|---------|
| 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  | 0.22 kg |