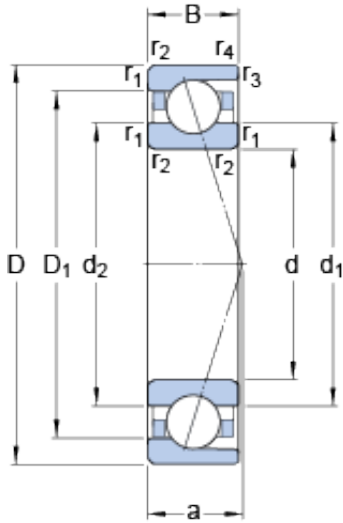




# NTN BEARING-SUDAMERICANA, S.A.



7021 ACD/HCP4A Bearing 2D drawings and 3D CAD models

105 mm x 160 mm x 26 mm SKF 7021  
ACD/HCP4A angular contact ball bearings

Bearing No. 7021 ACD/HCP4A

|   |               |
|---|---------------|
| Size                                      | 160x105x26 mm |
| Bore Diameter                             | 160 mm        |
| Outer Diameter                            | 105 mm        |
| Width                                     | 26 mm         |
| d   | 105 mm        |
| D   | 160 mm        |
| B   | 26 mm         |
| d <sub>1</sub>                            | 121.9 mm      |
| d <sub>2</sub>                            | 121.9 mm      |
| D <sub>1</sub>                            | 143.1 mm      |
| r <sub>1,2</sub> - min.                   | 2 mm          |
| r <sub>3,4</sub> - min.                   | 1 mm          |
| a   | 44 mm         |
| d <sub>a</sub> - min.                     | 114 mm        |
| d <sub>b</sub> - min.                     | 114 mm        |
| D <sub>a</sub> - max.                     | 151 mm        |
| D <sub>b</sub> - max.                     | 155 mm        |
| r <sub>a</sub> - max.                     | 2 mm          |
| r <sub>b</sub> - max.                     | 1 mm          |
| d <sub>n</sub>                            | 125.6 mm      |
| Basic dynamic load rating - C             | 90.4 kN       |
| Basic static load rating - C <sub>0</sub> | 93 kN         |
| Fatigue load limit - P <sub>u</sub>       | 3.4 kN        |
| Limiting speed for grease                 | 9000 r/min    |



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|                                    |              |
|------------------------------------|--------------|
| Lubrication                        |              |
| Limiting speed for oil lubrication | 14000 mm/min |
| Ball - $D_w$                       | 17.462 mm    |
| Ball - $z$                         | 21           |
| $G_{ref}$                          | 20.4 cm3     |
| 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 - $G_A$            | 560 N        |
| Preload class B - $G_B$            | 1120 N       |
| Preload class C - $G_C$            | 2240 N       |
| Preload class D - $G_D$            | 4480 N       |
| Calculation factor - $f$           | 1.15         |
| Calculation factor - $f_1$         | 0.99         |
| Calculation factor - $f_{2A}$      | 1            |
| Calculation factor - $f_{2B}$      | 1.02         |
| Calculation factor - $f_{2C}$      | 1.05         |
| Calculation factor - $f_{2D}$      | 1.08         |
| Calculation factor - $f_{HC}$      | 1.02         |
| Preload class A                    | 309 N/micron |
| Preload class B                    | 405 N/micron |
| Preload class C                    | 537 N/micron |
| Preload class D                    | 727 N/micron |
|                                    |              |



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|  |                      |
|--|----------------------|
| $d_1$                                    | 121.9 mm             |
| $d_2$                                    | 121.9 mm             |
| $D_1$                                    | 143.1 mm             |
| $r_{1,2}$ min.                           | 2 mm                 |
| $r_{3,4}$ min.                           | 1 mm                 |
| $d_a$ min.                               | 114 mm               |
| $d_b$ min.                               | 114 mm               |
| $D_a$ max.                               | 151 mm               |
| $D_b$ max.                               | 155 mm               |
| $r_a$ max.                               | 2 mm                 |
| $r_b$ max.                               | 1 mm                 |
| $d_n$                                    | 125.6 mm             |
| Basic dynamic load rating C              | 90.4 kN              |
| Basic static load rating $C_0$           | 93 kN                |
| Fatigue load limit $P_u$                 | 3.4 kN               |
| Attainable speed for grease lubrication  | 9000 r/min           |
| Attainable speed for oil-air lubrication | 14000 r/min          |
| Ball diameter $D_w$                      | 17.462 mm            |
| Number of balls z                        | 21                   |
| Reference grease quantity $G_{ref}$      | 20.4 cm <sup>3</sup> |
| Preload class A $G_A$                    | 560 N                |
| Static axial stiffness, preload class A  | 309 N/ $\mu$ m       |
| Preload class B $G_B$                    | 1120 N               |
| Static axial stiffness, preload class B  | 405 N/ $\mu$ m       |
| Preload class C $G_C$                    | 2240 N               |
| Static axial stiffness, preload class C  | 537 N/ $\mu$ m       |
| Preload class D $G_D$                    | 4480 N               |
| Static axial stiffness, preload class D  | 727 N/ $\mu$ m       |



## NTN BEARING-SUDAMERICANA, S.A.

|   |         |
|---|---------|
| class D   |         |
| Calculation factor f                                  | 1.15    |
| Calculation factor $f_1$                              | 0.99    |
| Calculation factor $f_{2A}$                           | 1       |
| Calculation factor $f_{2B}$                           | 1.02    |
| Calculation factor $f_{2C}$                           | 1.05    |
| Calculation factor $f_{2D}$                           | 1.08    |
| Calculation factor $f_{HC}$                           | 1.02    |
| 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  | 1.32 kg |