



Bearing No. 7000 ACD/HCP4A

|                |                                      |
|----------------|--------------------------------------|
| a              | 8.3 mm                               |
| d              | 10 mm                                |
| D              | 26 mm                                |
| B              | 8 mm                                 |
| Noun           | Bearing                              |
| Bore           | 0.394 Inch   10<br>Millimeter        |
| UNSPSC         | 31171531                             |
| Flanges        | No                                   |
| Preload        | None                                 |
| Ball - z       | 9                                    |
| Category       | Miniature Precision Ball<br>Bearings |
| Size (mm)      | 26x10x8                              |
| Enclosure      | Open                                 |
| Inventory      | 0.0                                  |
| Width (mm)     | 8                                    |
| Flush Ground   | No                                   |
| Weight / LBS   | 0.046                                |
| Mass bearing   | 0.017 kg                             |
| d <sub>1</sub> | 15.1 mm                              |
| Product Group  | B04270                               |
| d <sub>n</sub> | 16 mm                                |
| d <sub>n</sub> | 16 mm                                |
| D <sub>1</sub> | 20.9 mm                              |
| d <sub>2</sub> | 15.1 mm                              |
| d <sub>1</sub> | 15.1 mm                              |
| d <sub>2</sub> | 15.1 mm                              |
| Inch - Metric  | Metric                               |
| D <sub>1</sub> | 20.9 mm                              |
|                |                                      |

|                   |                                                                                                                                                                                                    |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cage Material     | Phenolic                                                                                                                                                                                           |
| Contact Angle     | 25 Degree                                                                                                                                                                                          |
| Raceway Style     | 1 Rib Outer Ring                                                                                                                                                                                   |
| Race Material     | Steel                                                                                                                                                                                              |
| Keyword String    | Angular Contact Ball                                                                                                                                                                               |
| Other Features    | Single Row   Angular Contact   High Precision   Hybrid   Corrosion Resistant Ball                                                                                                                  |
| Bearing number    | 7000 ACD/HCP4A                                                                                                                                                                                     |
| G <sub>ref</sub>  | 0.24 cm3                                                                                                                                                                                           |
| Rolling Element   | Ball Bearing                                                                                                                                                                                       |
| Material - Ball   | Ceramic                                                                                                                                                                                            |
| Precision Class   | ABEC 7   ISO P4                                                                                                                                                                                    |
| Preload class A   | 36 N/micron                                                                                                                                                                                        |
| Preload class B   | 46 N/micron                                                                                                                                                                                        |
| Preload class C   | 60 N/micron                                                                                                                                                                                        |
| Preload class D   | 79 N/micron                                                                                                                                                                                        |
| Outside Diameter  | 1.024 Inch   26 Millimeter                                                                                                                                                                         |
| Long Description  | 10MM Bore; 26MM Outside Diameter; 8MM Inner Race Width; 8MM Outer Race Width; Open Enclosure; ABEC 7   ISO P4 Precision; No Flange; Ceramic Ball Material; Steel Race Material; 1 (Single) Bearing |
| Manufacturer URL  | <a href="http://www.skf.com">http://www.skf.com</a>                                                                                                                                                |
| Outer Race Width  | 0.315 Inch   8 Millimeter                                                                                                                                                                          |
| Inner Race Width  | 0.315 Inch   8 Millimeter                                                                                                                                                                          |
| Weight / Kilogram | 0.021                                                                                                                                                                                              |
| Manufacturer Name | SKF                                                                                                                                                                                                |
| Number of balls z | 9                                                                                                                                                                                                  |

|                             |                       |
|-----------------------------|-----------------------|
| $r_b$ max.                  | 0.2 mm                |
| $d_b$ min.                  | 12 mm                 |
| $D_a$ max.                  | 24 mm                 |
| $D_b$ max.                  | 24.6 mm               |
| $r_a$ max.                  | 0.3 mm                |
| Bore Diameter (mm)          | 26                    |
| $d_a$ min.                  | 12 mm                 |
| Number of Bearings          | 1 (Single)            |
| Outer Diameter (mm)         | 10                    |
| Calculation factor f        | 1.03                  |
| Calculation factor e        | 0.68                  |
| $r_{3,4}$ min.              | 0.2 mm                |
| Ball - $D_w$                | 4.762 mm              |
| $r_b$ - max.                | 0.2 mm                |
| $r_{1,2}$ min.              | 0.3 mm                |
| $D_b$ - max.                | 24.6 mm               |
| $r_a$ - max.                | 0.3 mm                |
| $d_b$ - min.                | 12 mm                 |
| $D_a$ - max.                | 24 mm                 |
| Minimum Buy Quantity        | N/A                   |
| $d_a$ - min.                | 12 mm                 |
| Calculation factor - e      | 0.68                  |
| Harmonized Tariff Code      | 8482.10.50.28         |
| Calculation factor - f      | 1.03                  |
| $r_{1,2}$ - min.            | 0.3 mm                |
| $r_{3,4}$ - min.            | 0.2 mm                |
| Flange Outside Diameter     | 0 Inch   0 Millimeter |
| Manufacturer Item Number    | 7000 ACD/HCP4A        |
| Ball diameter $D_w$         | 4.762 mm              |
| Basic dynamic load rating C | 3.97 kN               |

|                                    |               |
|------------------------------------|---------------|
| Preload class D $G_D$              | 200 N         |
| Preload class C $G_C$              | 100 N         |
| Preload class B $G_B$              | 50 N          |
| Preload class A $G_A$              | 25 N          |
| Basic dynamic load rating - C      | 4 kN          |
| Preload class D - $G_D$            | 200 N         |
| Preload class B - $G_B$            | 50 N          |
| Preload class C - $G_C$            | 100 N         |
| Preload class A - $G_A$            | 25 N          |
| Calculation factor $f_1$           | 0.99          |
| Fatigue load limit $P_u$           | 0.067 kN      |
| Calculation factor $f_{HC}$        | 1.02          |
| Calculation factor $f_{2B}$        | 1.02          |
| Calculation factor $f_{2D}$        | 1.08          |
| Calculation factor $f_{2A}$        | 1             |
| Calculation factor $f_{2C}$        | 1.05          |
| Calculation factor - $Y_0$         | 0.76          |
| Fatigue load limit - $P_u$         | 0.067 kN      |
| Calculation factor - $Y_1$         | 0.92          |
| Calculation factor - $Y_2$         | 1.41          |
| Calculation factor - $X_2$         | 0.67          |
| Calculation factor - $f_1$         | 0.99          |
| Limiting speed for oil lubrication | 120000 mm/min |
| Calculation factor - $f_{2D}$      | 1.08          |
| Calculation factor - $f_{HC}$      | 1.02          |
| Calculation factor - $f_{2B}$      | 1.02          |
| Calculation factor - $f_{2A}$      | 1             |
| Calculation factor - $f_{2C}$      | 1.05          |
|                                    |               |

|                                                       |                      |
|-------------------------------------------------------|----------------------|
| Limiting speed for grease lubrication                 | 80000 r/min          |
| Basic static load rating $C_0$                        | 1.6 kN               |
| Static axial stiffness, preload class C               | 60 N/ $\mu$ m        |
| Static axial stiffness, preload class D               | 79 N/ $\mu$ m        |
| Static axial stiffness, preload class B               | 46 N/ $\mu$ m        |
| Static axial stiffness, preload class A               | 36 N/ $\mu$ m        |
| Attainable speed for grease lubrication               | 80000 r/min          |
| Attainable speed for oil-air lubrication              | 120000 r/min         |
| Basic static load rating - $C_0$                      | 1.6 kN               |
| Reference grease quantity $G_{ref}$                   | 0.24 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                 |