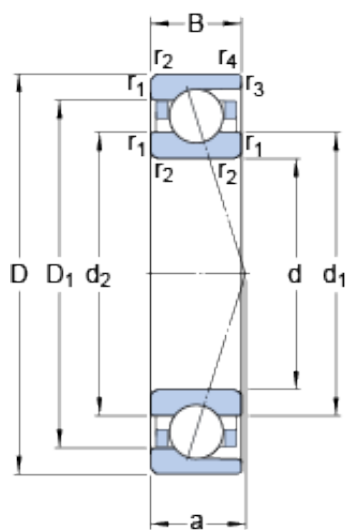




Bearing No. 7003 CD/HCP4A

|                |                            |
|----------------|----------------------------|
| D              | 35 mm                      |
| d              | 17 mm                      |
| B              | 10 mm                      |
| a              | 8.5 mm                     |
| Noun           | Bearing                    |
| Bore           | 0.669 Inch   17 Millimeter |
| Width          | 0.394 Inch   10 Millimeter |
| UNSPSC         | 31171531                   |
| Preload        | None                       |
| Category       | Precision Ball Bearings    |
| Ball - z       | 12                         |
| Inventory      | 0.0                        |
| Enclosure      | Open                       |
| Size (mm)      | 35x17x10                   |
| Width (mm)     | 10                         |
| Flush Ground   | No                         |
| Mass bearing   | 0.033 kg                   |
| d <sub>1</sub> | 22.6 mm                    |
| d <sub>2</sub> | 22.6 mm                    |
| d <sub>n</sub> | 23.7 mm                    |
| Inch - Metric  | Metric                     |
| D <sub>1</sub> | 29.3 mm                    |
| Cage Material  | Phenolic                   |
| Raceway Style  | 1 Rib Outer Ring           |
| d <sub>2</sub> | 22.6 mm                    |
| Contact Angle  | 15 Degree                  |
| d <sub>1</sub> | 22.6 mm                    |
| D <sub>1</sub> | 29.3 mm                    |

|                    |                                                                                                                                                                                                          |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $d_n$              | 23.7 mm                                                                                                                                                                                                  |
| Product Group      | B04270                                                                                                                                                                                                   |
| Other Features     | Single Row   Angular Contact   High Capacity Basic Design                                                                                                                                                |
| Keyword String     | Ball Angular Contact                                                                                                                                                                                     |
| Bearing number     | 7003 CD/HCP4A                                                                                                                                                                                            |
| $G_{ref}$          | 0.54 cm <sup>3</sup>                                                                                                                                                                                     |
| Rolling Element    | Ball Bearing                                                                                                                                                                                             |
| Material - Ball    | Ceramic                                                                                                                                                                                                  |
| Preload class A    | 22 N/micron                                                                                                                                                                                              |
| Preload class B    | 29 N/micron                                                                                                                                                                                              |
| Preload class C    | 39 N/micron                                                                                                                                                                                              |
| Preload class D    | 55 N/micron                                                                                                                                                                                              |
| Precision Class    | ABEC 7   ISO P4                                                                                                                                                                                          |
| Long Description   | 17MM Bore; 35MM Outside Diameter; 10MM Width; Open Enclosure; ABEC 7   ISO P4 Precision; Ceramic Ball Material; 1 (Single) Bearing; 15 Degree Contact Angle; Phenolic Cage Material; 1 Rib Outer Ring Ra |
| Manufacturer URL   | <a href="http://www.skf.com">http://www.skf.com</a>                                                                                                                                                      |
| Outside Diameter   | 1.378 Inch   35 Millimeter                                                                                                                                                                               |
| Number of balls z  | 12                                                                                                                                                                                                       |
| Weight / Kilogram  | 0                                                                                                                                                                                                        |
| Manufacturer Name  | SKF                                                                                                                                                                                                      |
| Number of Bearings | 1 (Single)                                                                                                                                                                                               |
| $d_a$ min.         | 19 mm                                                                                                                                                                                                    |
| $d_b$ min.         | 19 mm                                                                                                                                                                                                    |
| $D_a$ max.         | 33 mm                                                                                                                                                                                                    |
| $D_b$ max.         | 33.6 mm                                                                                                                                                                                                  |

|                               |               |
|-------------------------------|---------------|
| $r_a$ max.                    | 0.3 mm        |
| $r_b$ max.                    | 0.2 mm        |
| Bore Diameter (mm)            | 35            |
| Outer Diameter (mm)           | 17            |
| $r_{3,4}$ min.                | 0.2 mm        |
| $r_{1,2}$ min.                | 0.3 mm        |
| $d_b$ - min.                  | 19 mm         |
| Calculation factor f          | 1.04          |
| $D_a$ - max.                  | 33 mm         |
| $D_b$ - max.                  | 33.6 mm       |
| $r_a$ - max.                  | 0.3 mm        |
| $d_a$ - min.                  | 19 mm         |
| Ball - $D_w$                  | 5.556 mm      |
| $r_b$ - max.                  | 0.2 mm        |
| Minimum Buy Quantity          | N/A           |
| Calculation factor - f        | 1.04          |
| $r_{3,4}$ - min.              | 0.2 mm        |
| $r_{1,2}$ - min.              | 0.3 mm        |
| Harmonized Tariff Code        | 8482.10.50.28 |
| Basic dynamic load rating C   | 6.76 kN       |
| Ball diameter $D_w$           | 5.556 mm      |
| Basic dynamic load rating - C | 6.8 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          |
| 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          |

|                                         |               |
|-----------------------------------------|---------------|
| Calculation factor $f_0$                | 9.1           |
| Calculation factor $f_1$                | 1             |
| Fatigue load limit $P_u$                | 0.137 kN      |
| Calculation factor - $f$                | 1             |
| Calculation factor $f_{HC}$             | 1.02          |
| Calculation factor $f_{2D}$             | 1.09          |
| Calculation factor $f_{2C}$             | 1.05          |
| Calculation factor $f_{2B}$             | 1.02          |
| Calculation factor $f_{2A}$             | 1             |
| Calculation factor - $f_0$              | 9.1           |
| Limiting speed for oil lubrication      | 95000 mm/min  |
| Fatigue load limit - $P_u$              | 0.137 kN      |
| Calculation factor - $f_{2D}$           | 1.09          |
| Calculation factor - $f_{2A}$           | 1             |
| Calculation factor - $f_{HC}$           | 1.02          |
| Calculation factor - $f_{2B}$           | 1.02          |
| Calculation factor - $f_{2C}$           | 1.05          |
| Limiting speed for grease lubrication   | 60000 r/min   |
| Basic static load rating $C_0$          | 3.25 kN       |
| Static axial stiffness, preload class D | 55 N/ $\mu$ m |
| Static axial stiffness, preload class B | 29 N/ $\mu$ m |
| Static axial stiffness, preload class A | 22 N/ $\mu$ m |
| Attainable speed for grease lubrication | 60000 r/min   |
| Static axial stiffness, preload class C | 39 N/ $\mu$ m |
| Basic static load rating -              | 3.2 kN        |

|                                          |                      |
|------------------------------------------|----------------------|
| $C_0$                                    |                      |
| Attainable speed for oil-air lubrication | 95000 r/min          |
| Reference grease quantity $G_{ref}$      | 0.54 cm <sup>3</sup> |