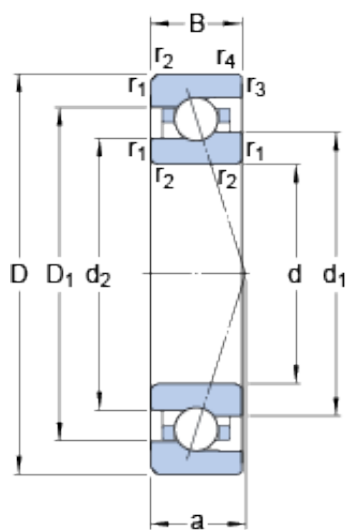




Bearing No. 7011 CE/HCP4A

|                |                                 |
|----------------|---------------------------------|
| D              | 90 mm                           |
| d              | 55 mm                           |
| B              | 18 mm                           |
| a              | 18.8 mm                         |
| Noun           | Bearing                         |
| Bore           | 2.165 Inch   55 Millimeter      |
| Width          | 0.709 Inch   18 Millimeter      |
| UNSPSC         | 31171531                        |
| Preload        | None                            |
| Category       | Precision Ball Bearings         |
| Ball - z       | 24                              |
| Inventory      | 0.0                             |
| Enclosure      | Open                            |
| Size (mm)      | 90x55x18                        |
| Width (mm)     | 18                              |
| Flush Ground   | No                              |
| Mass bearing   | 0.36 kg                         |
| d <sub>1</sub> | 67.73 mm                        |
| d <sub>2</sub> | 65.6 mm                         |
| d <sub>n</sub> | 69.6 mm                         |
| Inch - Metric  | Metric                          |
| D <sub>1</sub> | 77.25 mm                        |
| Cage Material  | Phenolic                        |
| Raceway Style  | 1 Rib Inner Ring and Outer Ring |
| d <sub>2</sub> | 65.6 mm                         |
| Contact Angle  | 15 Degree                       |
| d <sub>1</sub> | 67.73 mm                        |
|                |                                 |

|                    |                                                                                                                                                                                                          |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $D_1$              | 77.25 mm                                                                                                                                                                                                 |
| $d_n$              | 69.6 mm                                                                                                                                                                                                  |
| Product Group      | B04270                                                                                                                                                                                                   |
| Other Features     | Single Row   Angular Contact   High Speed E Design                                                                                                                                                       |
| Keyword String     | Ball Angular Contact                                                                                                                                                                                     |
| Bearing number     | 7011 CE/HCP4A                                                                                                                                                                                            |
| Preload class A    | 51 N/micron                                                                                                                                                                                              |
| Rolling Element    | Ball Bearing                                                                                                                                                                                             |
| Preload class B    | 80 N/micron                                                                                                                                                                                              |
| Preload class C    | 108 N/micron                                                                                                                                                                                             |
| $G_{ref}$          | 5 cm <sup>3</sup>                                                                                                                                                                                        |
| Material - Ball    | Ceramic                                                                                                                                                                                                  |
| Precision Class    | ABEC 7   ISO P4                                                                                                                                                                                          |
| Long Description   | 55MM Bore; 90MM Outside Diameter; 18MM Width; Open Enclosure; ABEC 7   ISO P4 Precision; Ceramic Ball Material; 1 (Single) Bearing; 15 Degree Contact Angle; Phenolic Cage Material; 1 Rib Inner Ring an |
| Manufacturer URL   | <a href="http://www.skf.com">http://www.skf.com</a>                                                                                                                                                      |
| Outside Diameter   | 3.543 Inch   90 Millimeter                                                                                                                                                                               |
| Number of balls z  | 24                                                                                                                                                                                                       |
| Manufacturer Name  | SKF                                                                                                                                                                                                      |
| Weight / Kilogram  | 0                                                                                                                                                                                                        |
| $d_a$ min.         | 61 mm                                                                                                                                                                                                    |
| Number of Bearings | 1 (Single)                                                                                                                                                                                               |
| $D_a$ max.         | 84 mm                                                                                                                                                                                                    |
| $D_b$ max.         | 85.8 mm                                                                                                                                                                                                  |
| $r_a$ max.         | 1 mm                                                                                                                                                                                                     |

|                               |               |
|-------------------------------|---------------|
| $r_b$ max.                    | 0.6 mm        |
| Bore Diameter (mm)            | 90            |
| $d_b$ min.                    | 61 mm         |
| Outer Diameter (mm)           | 55            |
| $D_b$ - max.                  | 85.8 mm       |
| $r_{3,4}$ min.                | 0.6 mm        |
| $r_{1,2}$ min.                | 1.1 mm        |
| $d_b$ - min.                  | 61 mm         |
| Calculation factor f          | 1.07          |
| $D_a$ - max.                  | 84 mm         |
| $d_a$ - min.                  | 61 mm         |
| $r_b$ - max.                  | 0.6 mm        |
| $r_a$ - max.                  | 1 mm          |
| Minimum Buy Quantity          | N/A           |
| Ball - $D_w$                  | 7.938 mm      |
| Harmonized Tariff Code        | 8482.10.50.28 |
| $r_{1,2}$ - min.              | 1.1 mm        |
| Calculation factor - f        | 1.07          |
| $r_{3,4}$ - min.              | 0.6 mm        |
| Basic dynamic load rating C   | 16.8 kN       |
| Ball diameter $D_w$           | 7.938 mm      |
| Preload class C $G_C$         | 540 N         |
| Preload class A $G_A$         | 90 N          |
| Preload class B $G_B$         | 270 N         |
| Basic dynamic load rating - C | 16.8 kN       |
| Preload class A - $G_A$       | 90 N          |
| Preload class B - $G_B$       | 270 N         |
| Preload class C - $G_C$       | 540 N         |
| Fatigue load limit $P_u$      | 0.52 kN       |
| Calculation factor $f_0$      | 8.4           |
|                               |               |

|                                          |                   |
|------------------------------------------|-------------------|
| Calculation factor $f_1$                 | 1                 |
| Calculation factor - $f$                 | 1                 |
| Calculation factor $f_{2B}$              | 1.03              |
| Calculation factor $f_{2A}$              | 1                 |
| Calculation factor $f_{2C}$              | 1.05              |
| Calculation factor $f_{HC}$              | 1.01              |
| Fatigue load limit - $P_u$               | 0.52 kN           |
| Calculation factor - $f_0$               | 8.4               |
| Limiting speed for oil lubrication       | 39000 mm/min      |
| Calculation factor - $f_{2A}$            | 1                 |
| Calculation factor - $f_{2B}$            | 1.03              |
| Calculation factor - $f_{HC}$            | 1.01              |
| Calculation factor - $f_{2C}$            | 1.05              |
| Limiting speed for grease lubrication    | 25000 r/min       |
| Basic static load rating $C_0$           | 12.2 kN           |
| Static axial stiffness, preload class B  | 80 N/ $\mu$ m     |
| Static axial stiffness, preload class A  | 51 N/ $\mu$ m     |
| Static axial stiffness, preload class C  | 108 N/ $\mu$ m    |
| Attainable speed for grease lubrication  | 25000 r/min       |
| Attainable speed for oil-air lubrication | 39000 r/min       |
| Basic static load rating - $C_0$         | 12.2 kN           |
| Reference grease quantity $G_{ref}$      | 5 cm <sup>3</sup> |