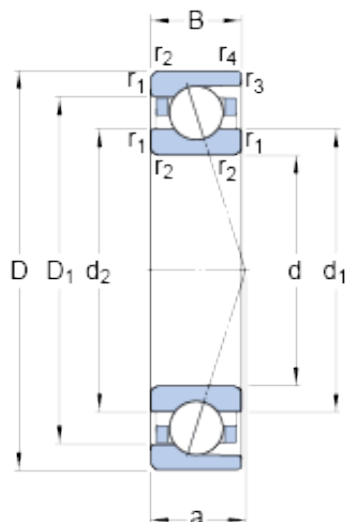




# NACHI BEARINGS TRAINING INDUSTRY



## 65 mm x 90 mm x 13 mm SKF 71913 ACD/HCP4A angular contact ball bearings

Bearing No. 71913 ACD/HCP4A

71913 ACD/HCP4A Bearing 2D drawings and 3D CAD models

|   |             |
|---|-------------|
| Size                                      | 90x65x13 mm |
| Bore Diameter                             | 90 mm       |
| Outer Diameter                            | 65 mm       |
| Width                                     | 13 mm       |
| d   | 65 mm       |
| D   | 90 mm       |
| B   | 13 mm       |
| d <sub>1</sub>                            | 72.7 mm     |
| d <sub>2</sub>                            | 72.7 mm     |
| D <sub>1</sub>                            | 82.3 mm     |
| r <sub>1,2</sub> - min.                   | 1 mm        |
| r <sub>3,4</sub> - min.                   | 0.3 mm      |
| a   | 24.7 mm     |
| d <sub>a</sub> - min.                     | 69.6 mm     |
| d <sub>b</sub> - min.                     | 69.6 mm     |
| D <sub>a</sub> - max.                     | 85.4 mm     |
| D <sub>b</sub> - max.                     | 88 mm       |
| r <sub>a</sub> - max.                     | 1 mm        |
| r <sub>b</sub> - max.                     | 0.3 mm      |
| d <sub>n</sub>                            | 74.7 mm     |
| Basic dynamic load rating - C             | 19.5 kN     |
| Basic static load rating - C <sub>0</sub> | 16 kN       |
| Fatigue load limit - P <sub>u</sub>       | 0.68 kN     |
| Limiting speed for grease                 | 15000 r/min |



## NACHI BEARINGS TRAINING INDUSTRY

|                                    |                      |
|------------------------------------|----------------------|
| Lubrication                        |                      |
| Limiting speed for oil lubrication | 24000 mm/min         |
| Ball - $D_w$                       | 7.938 mm             |
| Ball - $z$                         | 26                   |
| $G_{ref}$                          | 2.85 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 - $G_A$            | 120 N                |
| Preload class B - $G_B$            | 240 N                |
| Preload class C - $G_C$            | 480 N                |
| Preload class D - $G_D$            | 960 N                |
| Calculation factor - $f$           | 1.2                  |
| Calculation factor - $f_1$         | 0.98                 |
| Calculation factor - $f_{2A}$      | 1                    |
| Calculation factor - $f_{2B}$      | 1.07                 |
| Calculation factor - $f_{2C}$      | 1.12                 |
| Calculation factor - $f_{2D}$      | 1.17                 |
| Calculation factor - $f_{HC}$      | 1.04                 |
| Preload class A                    | 151 N/micron         |
| Preload class B                    | 196 N/micron         |
| Preload class C                    | 257 N/micron         |
| Preload class D                    | 345 N/micron         |
|                                    |                      |



## NACHI BEARINGS TRAINING INDUSTRY

|                        |  |
|------------------------|--|
| Category               | Precision Ball Bearings  |
| Inventory              | 0.0  |
| Manufacturer Name      | SKF  |
| Minimum Buy Quantity   | N/A  |
| Weight / Kilogram      | 0  |
| Product Group          | B04270   |
| Enclosure              | Open   |
| Precision Class        | ABEC 7   ISO P4  |
| Material - Ball        | Ceramic  |
| Number of Bearings     | 1 (Single)   |
| Contact Angle          | 25 Degree  |
| Preload                | None   |
| Raceway Style          | 1 Rib Outer Ring   |
| Cage Material          | Phenolic   |
| Rolling Element        | Ball Bearing   |
| Flush Ground           | No   |
| Inch - Metric          | Metric   |
| Other Features         | Single Row   Angular Contact   High Capacity Basic Design  |
| Long Description       | 65MM Bore; 90MM Outside Diameter; 13MM Width; Open Enclosure; ABEC 7   ISO P4 Precision; Ceramic Ball Material; 1 (Single) Bearing; 25 Degree Contact Angle; Phenolic Cage Material; 1 Rib Outer Ring Ra |
| Category               | Precision Ball Bearings  |
| UNSPSC                 | 31171531   |
| Harmonized Tariff Code | 8482.10.50.28  |
| Noun                   | Bearing  |
| Keyword String         | Ball Angular Contact   |
| Manufacturer URL       | <a href="http://www.skf.com">http://www.skf.com</a>  |
|                        |  |



## NACHI BEARINGS TRAINING INDUSTRY

|  |                            |
|--|----------------------------|
| Width                                    | 0.512 Inch   13 Millimeter |
| Bore                                     | 2.559 Inch   65 Millimeter |
| Outside Diameter                         | 3.543 Inch   90 Millimeter |
| $d_1$                                    | 72.7 mm                    |
| $d_2$                                    | 72.7 mm                    |
| $D_1$                                    | 82.3 mm                    |
| $r_{1,2}$ min.                           | 1 mm                       |
| $r_{3,4}$ min.                           | 0.3 mm                     |
| $d_a$ min.                               | 69.6 mm                    |
| $d_b$ min.                               | 69.6 mm                    |
| $D_a$ max.                               | 85.4 mm                    |
| $D_b$ max.                               | 88 mm                      |
| $r_a$ max.                               | 1 mm                       |
| $r_b$ max.                               | 0.3 mm                     |
| $d_n$                                    | 74.7 mm                    |
| Basic dynamic load rating C              | 19.5 kN                    |
| Basic static load rating $C_0$           | 16 kN                      |
| Fatigue load limit $P_u$                 | 0.68 kN                    |
| Attainable speed for grease lubrication  | 15000 r/min                |
| Attainable speed for oil-air lubrication | 24000 r/min                |
| Ball diameter $D_w$                      | 7.938 mm                   |
| Number of balls z                        | 26                         |
| Reference grease quantity $G_{ref}$      | 2.85 cm <sup>3</sup>       |
| Preload class A $G_A$                    | 120 N                      |
| Static axial stiffness, preload class A  | 151 N/ $\mu$ m             |
| Preload class B $G_B$                    | 240 N                      |
| Static axial stiffness, preload class B  | 196 N/ $\mu$ m             |
| Preload class C $G_C$                    | 480 N                      |
| Static axial stiffness, preload          | 257 N/ $\mu$ m             |



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|   |                |
|---|----------------|
| class C   |                |
| Preload class D $G_D$                                 | 960 N          |
| Static axial stiffness, preload class D               | 345 N/ $\mu$ m |
| Calculation factor f                                  | 1.2            |
| Calculation factor $f_1$                              | 0.98           |
| Calculation factor $f_{2A}$                           | 1              |
| Calculation factor $f_{2B}$                           | 1.07           |
| Calculation factor $f_{2C}$                           | 1.12           |
| Calculation factor $f_{2D}$                           | 1.17           |
| Calculation factor $f_{HC}$                           | 1.04           |
| 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  | 0.17 kg        |