



Bearing No. 7008 ACE/HCP4AL1

|                   |                     |
|-------------------|---------------------|
| b                 | 1.4 mm              |
| d                 | 40 mm               |
| a                 | 20.3 mm             |
| B                 | 15 mm               |
| D                 | 68 mm               |
| Ball - z          | 19                  |
| Size (mm)         | 68x40x15            |
| Width (mm)        | 15                  |
| Mass bearing      | 0.17 kg             |
| d <sub>2</sub>    | 47.6 mm             |
| D <sub>1</sub>    | 58.25 mm            |
| d <sub>n</sub>    | 51.6 mm             |
| C <sub>1</sub>    | 4.5 mm              |
| C <sub>2</sub>    | 2.5 mm              |
| C <sub>3</sub>    | 3 mm                |
| C <sub>2</sub>    | 2.5 mm              |
| C <sub>1</sub>    | 4.5 mm              |
| d <sub>n</sub>    | 51.6 mm             |
| D <sub>1</sub>    | 58.25 mm            |
| d <sub>2</sub>    | 47.6 mm             |
| d <sub>1</sub>    | 49.7 mm             |
| d <sub>1</sub>    | 49.7 mm             |
| C <sub>3</sub>    | 3 mm                |
| Bearing number    | 7008 ACE/HCP4AL1    |
| Preload class A   | 96 N/micron         |
| Preload class B   | 143 N/micron        |
| G <sub>ref</sub>  | 2.8 cm <sup>3</sup> |
| Preload class C   | 187 N/micron        |
| Number of balls z | 19                  |

|                               |          |
|-------------------------------|----------|
| Bore Diameter (mm)            | 68       |
| $r_b$ max.                    | 0.6 mm   |
| $r_a$ max.                    | 1 mm     |
| $D_b$ max.                    | 63.8 mm  |
| $D_a$ max.                    | 63.4 mm  |
| $d_a$ min.                    | 44.6 mm  |
| $d_b$ min.                    | 44.6 mm  |
| Outer Diameter (mm)           | 40       |
| $r_b$ - max.                  | 0.6 mm   |
| $r_{3,4}$ min.                | 0.6 mm   |
| $d_b$ - min.                  | 44.6 mm  |
| $D_a$ - max.                  | 63.4 mm  |
| $D_b$ - max.                  | 63.8 mm  |
| $r_{1,2}$ min.                | 1 mm     |
| $d_a$ - min.                  | 44.6 mm  |
| $r_a$ - max.                  | 1 mm     |
| Ball - $D_w$                  | 7.144 mm |
| Calculation factor f          | 1.06     |
| Calculation factor e          | 0.68     |
| $r_{3,4}$ - min.              | 0.6 mm   |
| Calculation factor - f        | 1.06     |
| $r_{1,2}$ - min.              | 1 mm     |
| Calculation factor - e        | 0.68     |
| Ball diameter $D_w$           | 7.144 mm |
| Basic dynamic load rating C   | 11.7 kN  |
| Preload class C $G_C$         | 630 N    |
| Basic dynamic load rating - C | 11.7 kN  |
| Preload class B $G_B$         | 310 N    |
| Preload class A $G_A$         | 105 N    |
| Preload class C - $G_C$       | 630 N    |
|                               |          |

|   |                |
|---|----------------|
| Preload class A - $G_A$                 | 105 N          |
| Preload class B - $G_B$                 | 310 N          |
| Calculation factor $f_1$                | 0.99           |
| Fatigue load limit $P_u$                | 0.305 kN       |
| Calculation factor $f_{HC}$             | 1.01           |
| Calculation factor $f_{2C}$             | 1.06           |
| Calculation factor $f_{2B}$             | 1.03           |
| Calculation factor $f_{2A}$             | 1              |
| Calculation factor - $Y_2$              | 1.41           |
| Calculation factor - $Y_0$              | 0.76           |
| Calculation factor - $X_2$              | 0.67           |
| Limiting speed for oil lubrication      | 50000 mm/min   |
| Calculation factor - $Y_1$              | 0.92           |
| Fatigue load limit - $P_u$              | 0.305 kN       |
| Calculation factor - $f_1$              | 0.99           |
| Calculation factor - $f_{2A}$           | 1              |
| Calculation factor - $f_{HC}$           | 1.01           |
| Calculation factor - $f_{2C}$           | 1.06           |
| Calculation factor - $f_{2B}$           | 1.03           |
| Limiting speed for grease lubrication   | 32000 r/min    |
| Basic static load rating $C_0$          | 7.2 kN         |
| Static axial stiffness, preload class A | 96 N/ $\mu$ m  |
| Static axial stiffness, preload class C | 187 N/ $\mu$ m |
| Static axial stiffness, preload class B | 143 N/ $\mu$ m |
| Attainable speed for grease lubrication | 32000 r/min    |
|   |                |

|   |                     |
|---|---------------------|
| Basic static load rating - $C_0$                      | 7.2 kN              |
| Attainable speed for oil-air lubrication              | 50000 r/min         |
| Reference grease quantity $G_{ref}$                   | 2.8 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                |