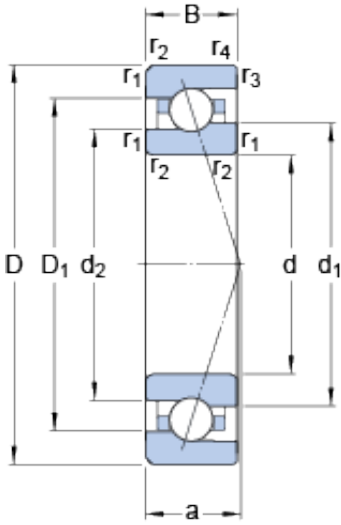




BEARING PRECISION AXLE CORP.



7010 ACE/P4A Bearing 2D drawings and 3D CAD models

7010 ACE/P4A SKF High Speed Angular Contact Ball Bearings

Bearing No. 7010 ACE/P4A

| | |
|---|-------------|
| Size | 80x50x16 mm |
| Bore Diameter | 80 mm |
| Outer Diameter | 50 mm |
| Width | 16 mm |
| d | 50 mm |
| D | 80 mm |
| B | 16 mm |
| d ₁ | 60.25 mm |
| d ₂ | 57.9 mm |
| D ₁ | 69.75 mm |
| r _{1,2} - min. | 1 mm |
| r _{3,4} - min. | 0.6 mm |
| a | 23.3 mm |
| d _a - min. | 54.6 mm |
| d _b - min. | 54.6 mm |
| D _a - max. | 75.4 mm |
| D _b - max. | 75.8 mm |
| r _a - max. | 1 mm |
| r _b - max. | 0.6 mm |
| d _n | 62.3 mm |
| Basic dynamic load rating - C | 14.8 kN |
| Basic static load rating - C ₀ | 10 kN |
| Fatigue load limit - P _u | 0.425 kN |
| Limiting speed for grease | 23000 r/min |



BEARING PRECISION AXLE CORP.

| | |
|------------------------------------|---------------------|
| Lubrication | |
| Limiting speed for oil lubrication | 34000 mm/min |
| Ball - D_w | 7.938 mm |
| Ball - z | 21 |
| G_{ref} | 4.1 cm ³ |
| 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 | 130 N |
| Preload class B - G_B | 400 N |
| Preload class C - G_C | 800 N |
| Calculation factor - f | 1.08 |
| Calculation factor - f_1 | 0.99 |
| Calculation factor - f_{2A} | 1 |
| Calculation factor - f_{2B} | 1.03 |
| Calculation factor - f_{2C} | 1.06 |
| Calculation factor - f_{HC} | 1 |
| Preload class A | 104 N/micron |
| Preload class B | 156 N/micron |
| Preload class C | 204 N/micron |
| d_1 | 60.25 mm |
| d_2 | 57.9 mm |
| D_1 | 69.75 mm |
| $r_{1,2}$ min. | 1 mm |



BEARING PRECISION AXLE CORP.

| | |
|--|---------------------|
| $r_{3,4}$ min. | 0.6 mm |
| d_a min. | 54.6 mm |
| d_b min. | 54.6 mm |
| D_a max. | 75.4 mm |
| D_b max. | 75.8 mm |
| r_a max. | 1 mm |
| r_b max. | 0.6 mm |
| d_n | 62.3 mm |
| Basic dynamic load rating C | 14.8 kN |
| Basic static load rating C_0 | 10 kN |
| Fatigue load limit P_u | 0.425 kN |
| Attainable speed for grease lubrication | 23000 r/min |
| Attainable speed for oil-air lubrication | 34000 r/min |
| Ball diameter D_w | 7.938 mm |
| Number of balls z | 21 |
| Reference grease quantity G_{ref} | 4.1 cm ³ |
| Preload class A G_A | 130 N |
| Static axial stiffness, preload class A | 104 N/ μ m |
| Preload class B G_B | 400 N |
| Static axial stiffness, preload class B | 156 N/ μ m |
| Preload class C G_C | 800 N |
| Static axial stiffness, preload class C | 204 N/ μ m |
| Calculation factor f | 1.08 |
| Calculation factor f_1 | 0.99 |
| Calculation factor f_{2A} | 1 |
| Calculation factor f_{2B} | 1.03 |
| Calculation factor f_{2C} | 1.06 |
| Calculation factor f_{HC} | 1 |



BEARING PRECISION AXLE CORP.

| | |
|---|---------|
| 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 | 0.25 kg |