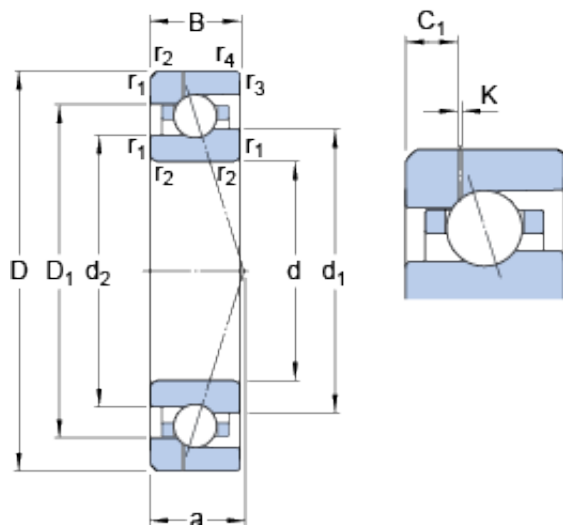




ISOSTATIC BEARING LIMITED

7005 ACE/HCP4AH1 SKF High Speed Angular Contact Ball Bearings

Bearing No. 7005 ACE/HCP4AH1



7005 ACE/HCP4AH1 Bearing 2D drawings and 3D CAD models

| | |
|---|-------------|
| Size | 47x25x12 mm |
| Bore Diameter | 47 mm |
| Outer Diameter | 25 mm |
| Width | 12 mm |
| d | 25 mm |
| D | 47 mm |
| B | 12 mm |
| d ₁ | 31.6 mm |
| d ₂ | 29.8 mm |
| D ₁ | 39.21 mm |
| K | 0.5 mm |
| C ₁ | 3.72 mm |
| r _{1,2} - min. | 0.6 mm |
| r _{3,4} - min. | 0.3 mm |
| a | 14.4 mm |
| d _a - min. | 28.2 mm |
| d _b - min. | 28.2 mm |
| D _a - max. | 43.8 mm |
| D _b - max. | 44.6 mm |
| r _a - max. | 0.6 mm |
| r _b - max. | 0.3 mm |
| d _n | 33.1 mm |
| Basic dynamic load rating - C | 7.9 kN |
| Basic static load rating - C ₀ | 3.9 kN |



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|---------------------------------------|---------------------|
| Fatigue load limit - P_u | 0.166 kN |
| Limiting speed for grease lubrication | 50000 r/min |
| Limiting speed for oil lubrication | 75000 mm/min |
| Ball - D_w | 6.35 mm |
| Ball - z | 14 |
| G_{ref} | 1.3 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 | 70 N |
| Preload class B - G_B | 210 N |
| Preload class C - G_C | 430 N |
| Calculation factor - f | 1.05 |
| 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} | 1.01 |
| Preload class A | 66 N/micron |
| Preload class B | 98 N/micron |
| Preload class C | 130 N/micron |
| d_1 | 31.6 mm |
| d_2 | 29.8 mm |



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| | |
|--|---------------------|
| D_1 | 39.21 mm |
| C_1 | 3.72 mm |
| $r_{1,2}$ min. | 0.6 mm |
| $r_{3,4}$ min. | 0.3 mm |
| d_a min. | 28.2 mm |
| d_b min. | 28.2 mm |
| D_a max. | 43.8 mm |
| D_b max. | 44.6 mm |
| r_a max. | 0.6 mm |
| r_b max. | 0.3 mm |
| d_n | 33.1 mm |
| Basic dynamic load rating C | 7.93 kN |
| Basic static load rating C_0 | 3.9 kN |
| Fatigue load limit P_u | 0.166 kN |
| Attainable speed for grease lubrication | 50000 r/min |
| Attainable speed for oil-air lubrication | 75000 r/min |
| Ball diameter D_w | 6.35 mm |
| Number of balls z | 14 |
| Reference grease quantity G_{ref} | 1.3 cm ³ |
| Preload class A G_A | 70 N |
| Static axial stiffness, preload class A | 66 N/ μ m |
| Preload class B G_B | 210 N |
| Static axial stiffness, preload class B | 98 N/ μ m |
| Preload class C G_C | 430 N |
| Static axial stiffness, preload class C | 130 N/ μ m |
| Calculation factor f | 1.05 |
| Calculation factor f_1 | 0.99 |
| Calculation factor f_{2A} | 1 |



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| | |
|---|----------|
| Calculation factor f_{2B} | 1.03 |
| Calculation factor f_{2C} | 1.06 |
| Calculation factor f_{HC} | 1.01 |
| 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 | 0.065 kg |