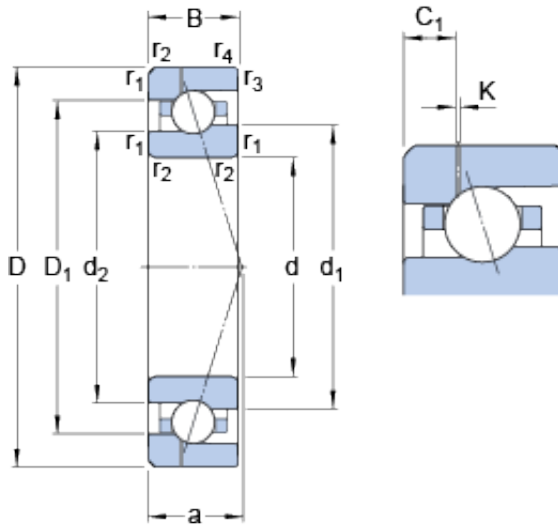




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20 mm x 42 mm x 12 mm skf 7004
ACE/HCP4AH1 Super-precision Angular contact
ball bearings

Bearing No. 7004 ACE/HCP4AH1

7004 ACE/HCP4AH1 Bearing 2D drawings and 3D
CAD models

Size	42x20x12 mm
Bore Diameter	42 mm
Outer Diameter	20 mm
Width	12 mm
d	20 mm
D	42 mm
B	12 mm
d ₁	26.6 mm
d ₂	24.8 mm
D ₁	34.21 mm
K	0.5 mm
C ₁	3.67 mm
r _{1,2} - min.	0.6 mm
r _{3,4} - min.	0.3 mm
a	13.2 mm
d _a - min.	22 mm
d _b - min.	22 mm
D _a - max.	40 mm
D _b - max.	39.6 mm
r _a - max.	0.6 mm
r _b - max.	0.3 mm
d _n	28.1 mm
Basic dynamic load rating - C	7.2 kN



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Basic static load rating - C_0	3.2 kN
Fatigue load limit - P_u	0.137 kN
Limiting speed for grease lubrication	58000 r/min
Limiting speed for oil lubrication	88000 mm/min
Ball - D_w	6.35 mm
Ball - z	12
G_{ref}	1.1 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	64 N
Preload class B - G_B	193 N
Preload class C - G_C	390 N
Calculation factor - f	1.04
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	58 N/micron
Preload class B	86 N/micron
Preload class C	113 N/micron
d_1	26.6 mm



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d_2	24.8 mm
D_1	34.21 mm
C_1	3.67 mm
$r_{1,2}$ min.	0.6 mm
$r_{3,4}$ min.	0.3 mm
d_a min.	22 mm
d_b min.	22 mm
D_a max.	40 mm
D_b max.	39.6 mm
r_a max.	0.6 mm
r_b max.	0.3 mm
d_n	28.1 mm
Basic dynamic load rating C	7.15 kN
Basic static load rating C_0	3.25 kN
Fatigue load limit P_u	0.137 kN
Attainable speed for grease lubrication	58000 r/min
Attainable speed for oil-air lubrication	88000 r/min
Ball diameter D_w	6.35 mm
Number of balls z	12
Reference grease quantity G_{ref}	1.1 cm ³
Preload class A G_A	64 N
Static axial stiffness, preload class A	58 N/ μ m
Preload class B G_B	193 N
Static axial stiffness, preload class B	86 N/ μ m
Preload class C G_C	390 N
Static axial stiffness, preload class C	113 N/ μ m
Calculation factor f	1.04
Calculation factor f_1	0.99



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Calculation factor f_{2A}	1
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	0.056 kg