

7000 CE/HCP4AH

Angular contact ball bearings,
super-precision

Product details

[Tolerances,](#)

P4A, P4B, P4, PA9A, P2, D design,

E design, B design,

[direct oil-air lubrication](#)

Principles of bearing

selection and application

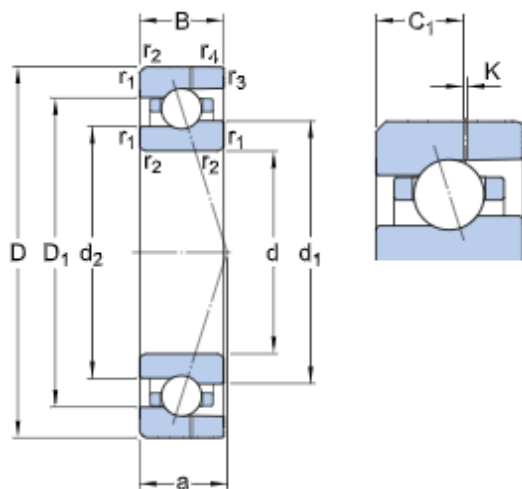
[Chamfer dimensions,](#)

[Seat tolerances for standard conditions,](#)

shafts, housings, shafts, housings,

[Initial grease fill](#)

Technical specification

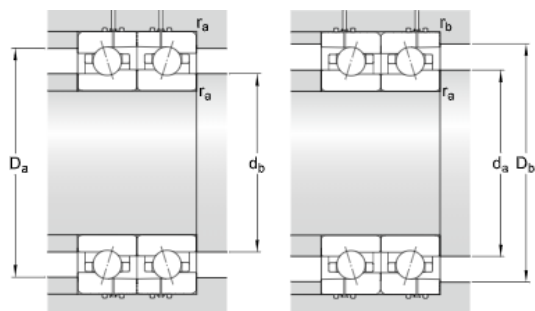


DIMENSIONS

d	10 mm
D	26 mm
B	8 mm
d ₁	15.6 mm
d ₂	14.5 mm
D ₁	20.45 mm
K	0.5 mm
C ₁	4.75 mm
r _{1,2}	min. 0.3 mm
r _{3,4}	min. 0.3 mm
a	6.5 mm

ABUTMENT DIMENSIONS

d _a	min. 12 mm
d _b	min. 12 mm



D_a	max. 24 mm
D_b	max. 23.6 mm
r_a	max. 0.3 mm
r_b	max. 0.3 mm
d_n	16.5 mm

CALCULATION DATA

Basic dynamic load rating	C	3.02 kN
Basic static load rating	C_0	1.18 kN
Fatigue load limit	P_u	0.036 kN
Attainable speed for grease lubrication		109000 r/min
Attainable speed for oil-air lubrication		165000 r/min
Contact angle	α	15 °
Ball diameter	D_w	3.969 mm
Number of balls	z	11
Reference grease quantity	G_{ref}	0.28 cm

PRELOAD AND STIFFNESS (BACK-TO-BACK, FACE-TO-FACE)

Preload class A	G_A	15 N
Static axial stiffness, preload class A		13 N/μm
Preload class B	G_B	48 N
Static axial stiffness, preload class B		21 N/μm
Preload class C	G_C	95 N
Static axial stiffness, preload class C		29 N/μm

CALCULATION FACTORS

Calculation factor	f	1.03
Calculation factor	f_1	1

Calculation factor	f_{2A}	1
Calculation factor	f_{2B}	1.03
Calculation factor	f_{2C}	1.05
Calculation factor	f_{HC}	1.01
Calculation factor	f_0	7.1

MASS

Mass bearing	0.017 kg
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More information

Product details Designs and variants Markings on bearings and bearing sets Bearing data Preload, clearance, and stiffness Loads Attainable speeds Mounting Designation system	Engineering information Principles of bearing selection and application General bearing knowledge Bearing selection process Bearing failure and how to prevent it	Tools SimPro Quick SimPro Spindle Engineering Calculator LubeSelect for SKF greases Heater selection tool
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