

7013 CB/P4AL

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

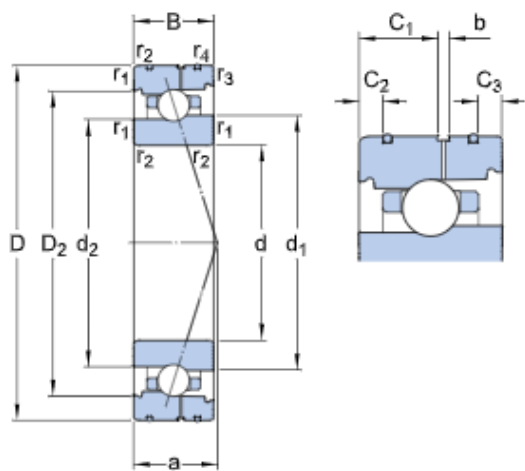
[Chamfer dimensions,](#)

[Seat tolerances for standard conditions,](#)

shafts, housings, shafts, housings,

[Initial grease fill](#)

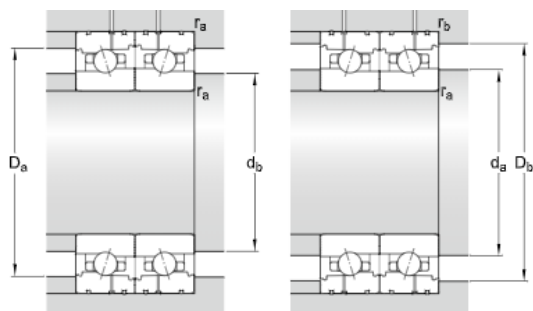
Technical specification



DIMENSIONS

d	65 mm
D	100 mm
B	18 mm
d ₁	78 mm
d ₂	76.36 mm
D ₂	89.69 mm
b	1.5 mm
C ₁	9.7 mm
C ₂	4.3 mm
C ₃	2.8 mm
r _{1,2}	min. 1.1 mm
r _{3,4}	min. 0.6 mm
a	20.1 mm

ABUTMENT DIMENSIONS



d_a	min. 71 mm
d_b	min. 71 mm
D_a	max. 94 mm
D_b	max. 96.8 mm
r_a	max. 1 mm
r_b	max. 0.6 mm
d_n	79 mm

CALCULATION DATA

Basic dynamic load rating	C	15.6 kN
Basic static load rating	C_0	12.9 kN
Fatigue load limit	P_u	0.55 kN
Attainable speed for grease lubrication		18000 r/min
Attainable speed for oil-air lubrication		28000 r/min
Contact angle	α	15 °
Ball diameter	D_w	7.144 mm
Number of balls	z	27
Reference grease quantity	G_{ref}	5.49 cm

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

Preload class A	G_A	49 N
Static axial stiffness, preload class A		41 N/ μ m
Preload class B	G_B	98 N
Static axial stiffness, preload class B		54 N/ μ m
Preload class C	G_C	295 N
Static axial stiffness, preload class C		85 N/ μ m

CALCULATION FACTORS

Calculation factor	f	1.07
Calculation factor	f_1	1

Calculation factor	f_{2A}	1
Calculation factor	f_{2B}	1.02
Calculation factor	f_{2C}	1.05
Calculation factor	f_{HC}	1
Calculation factor	f_0	9.7

MASS

Mass bearing	0.47 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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