

S7203 CD/HCP4A

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,](#)

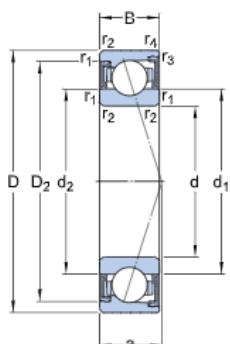
[Seat tolerances for standard](#)
[conditions,](#)

shafts, housings, shafts, housings,

[Initial grease fill](#)

Technical specification

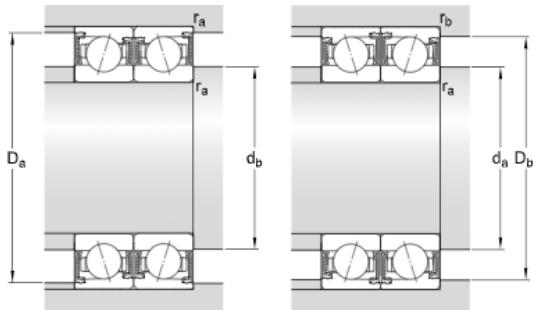
DIMENSIONS



d	17 mm
D	40 mm
B	12 mm
d ₁	24.1 mm
d ₂	24.1 mm
D ₂	34.4 mm
r _{1,2}	min. 0.6 mm
r _{3,4}	min. 0.3 mm
a	9.9 mm

ABUTMENT DIMENSIONS

d _a	min. 21.2 mm
d _a	max. 23.5 mm
d _b	min. 21.2 mm
d _b	max. 23.5 mm



D _a	max. 35.8 mm
D _b	max. 37.6 mm
r _a	max. 0.6 mm
r _b	max. 0.3 mm

CALCULATION DATA

Basic dynamic load rating	C	9.23 kN
Basic static load rating	C ₀	4.15 kN
Fatigue load limit	P _u	0.129 kN
Attainable speed for grease lubrication		53000 r/min
Contact angle	α	15 °
Ball diameter	D _w	7.144 mm
Number of balls	z	10

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

Preload class A	G _A	35 N
Static axial stiffness, preload class A		23 N/μm
Preload class B	G _B	70 N
Static axial stiffness, preload class B		31 N/μm
Preload class C	G _C	140 N
Static axial stiffness, preload class C		42 N/μm
Preload class D	G _D	280 N
Static axial stiffness, preload class D		59 N/μm

CALCULATION FACTORS

Calculation factor	f	1.03
Calculation factor	f ₁	1

Calculation factor	f_{2A}	1
Calculation factor	f_{2B}	1.01
Calculation factor	f_{2C}	1.03
Calculation factor	f_{2D}	1.06
Calculation factor	f_{HC}	1.01
Calculation factor	f_0	8.5

MASS

Mass bearing	0.056 kg
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More information

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

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