



## 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

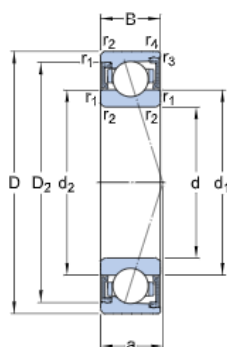
[Chamfer dimensions,](#)

[Seat tolerances for standard conditions,](#)

shafts, housings, shafts, housings,

[Initial grease fill](#)

## Technical specification

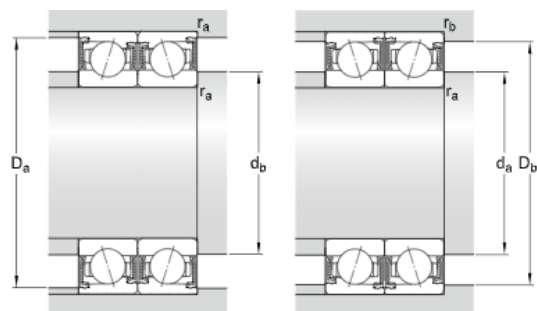


### DIMENSIONS

d	17 mm
D	40 mm
B	12 mm
d <sub>1</sub>	24.1 mm
d <sub>2</sub>	24.1 mm
D <sub>2</sub>	34.4 mm
r <sub>1,2</sub>	min. 0.6 mm
r <sub>3,4</sub>	min. 0.3 mm
a	9.9 mm

### ABUTMENT DIMENSIONS

d <sub>a</sub>	min. 21.2 mm
d <sub>a</sub>	max. 23.5 mm
d <sub>b</sub>	min. 21.2 mm
d <sub>b</sub>	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	$\alpha$	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/ $\mu$ m
Preload class B	$G_B$	70 N
Static axial stiffness, preload class B		31 N/ $\mu$ m
Preload class C	$G_C$	140 N
Static axial stiffness, preload class C		42 N/ $\mu$ m
Preload class D	$G_D$	280 N
Static axial stiffness, preload class D		59 N/ $\mu$ m

## 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

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