



## 7201 CD/P4A

### 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

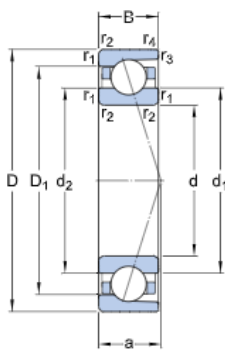
[Chamfer dimensions,](#)

[Seat tolerances for standard conditions,](#)

shafts, housings, shafts, housings,

[Initial grease fill](#)

## Technical specification

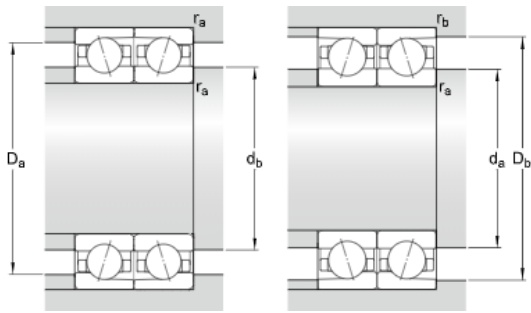


### DIMENSIONS

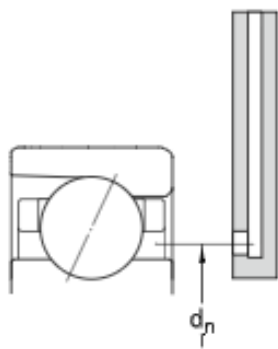
d	12 mm
D	32 mm
B	10 mm
d <sub>1</sub>	18.6 mm
d <sub>2</sub>	18.6 mm
D <sub>1</sub>	25.4 mm
r <sub>1,2</sub>	min. 0.6 mm
r <sub>3,4</sub>	min. 0.3 mm
a	8 mm

### ABUTMENT DIMENSIONS

d <sub>a</sub>	min. 16.2 mm
d <sub>b</sub>	min. 16.2 mm
D <sub>a</sub>	max. 27.8 mm
D <sub>b</sub>	max. 29.6 mm
r <sub>a</sub>	max. 0.6 mm



$r_b$	max. 0.3 mm
$d_n$	20 mm



CALCULATION DATA

Basic dynamic load rating	C	5.85 kN
Basic static load rating	$C_0$	2.55 kN
Fatigue load limit	$P_u$	0.108 kN
Attainable speed for grease lubrication		53 000 r/min
Attainable speed for oil-air lubrication		80 000 r/min
Contact angle	$\alpha$	15 °
Ball diameter	$D_w$	5.556 mm
Number of balls	z	10
Reference grease quantity	$G_{ref}$	0.507 cm

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

Preload class A	$G_A$	22 N
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Static axial stiffness, preload class A		16 N/μm
Preload class B	$G_B$	44 N
Static axial stiffness, preload class B		22 N/μm
Preload class C	$G_C$	88 N
Static axial stiffness, preload class C		30 N/μm
Preload class D	$G_D$	176 N
Static axial stiffness, preload class D		42 N/μm

#### CALCULATION FACTORS

Calculation factor	$f$	1.02
Calculation factor	$f_1$	1
Calculation factor	$f_{2A}$	1
Calculation factor	$f_{2B}$	1.01
Calculation factor	$f_{2C}$	1.03
Calculation factor	$f_{2D}$	1.05
Calculation factor	$f_{HC}$	1
Calculation factor	$f_0$	8.5

#### MASS

Mass bearing	0.037 kg
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## More information

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

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