



S7001 ACE/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

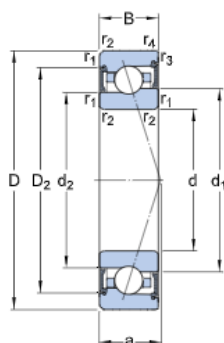
[Chamfer dimensions,](#)

[Seat tolerances for standard conditions,](#)

shafts, housings, shafts, housings,

[Initial grease fill](#)

Technical specification

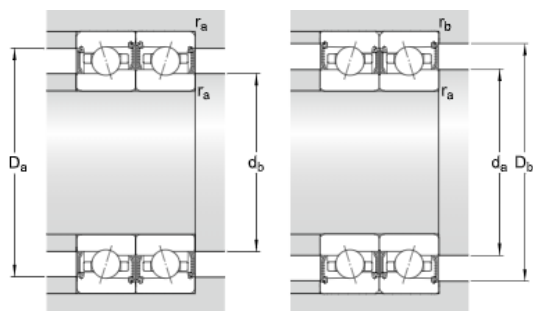


DIMENSIONS

d	12 mm
D	28 mm
B	8 mm
d ₁	17.5 mm
d ₂	16.5 mm
D ₂	24.35 mm
r _{1,2}	min. 0.3 mm
r _{3,4}	min. 0.15 mm
a	8.8 mm

ABUTMENT DIMENSIONS

d _a	min. 14 mm
d _a	max. 17.1 mm
d _b	min. 14 mm
d _b	max. 16.1 mm
D _a	max. 26 mm



D_b	max. 26.6 mm
r_a	max. 0.3 mm
r_b	max. 0.15 mm

CALCULATION DATA

Basic dynamic load rating	C	3.07 kN
Basic static load rating	C_0	1.27 kN
Fatigue load limit	P_u	0.054 kN
Attainable speed for grease lubrication		73 000 r/min
Contact angle	α	25 °
Ball diameter	D_w	3.969 mm
Number of balls	z	12

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

Preload class A	G_A	28 N
Static axial stiffness, preload class A		34 N/μm
Preload class B	G_B	85 N
Static axial stiffness, preload class B		50 N/μm
Preload class C	G_C	170 N
Static axial stiffness, preload class C		66 N/μm

CALCULATION FACTORS

Calculation factor	f	1.02
Calculation factor	f_1	0.99
Calculation factor	f_{2A}	1
Calculation factor	f_{2B}	1.03

Calculation factor	f_{2C}	1.06
Calculation factor	f_{HC}	1
Calculation factor	e	0.68
Calculation factor (single, tandem)	Y_2	0.87
Calculation factor (single, tandem)	Y_0	0.38
Calculation factor (single, tandem)	X_2	0.41
Calculation factor (back-to-back, face-to-face)	Y_1	0.92
Calculation factor (back-to-back, face-to-face)	Y_2	1.41
Calculation factor (back-to-back, face-to-face)	Y_0	0.76
Calculation factor (back-to-back, face-to-face)	X_2	0.67

MASS

Mass bearing	0.021 kg
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More information

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