



7212 ACD/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

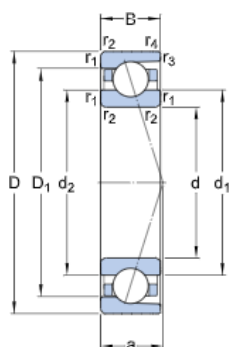
[Chamfer dimensions,](#)

[Seat tolerances for standard conditions,](#)

shafts, housings, shafts, housings,

[Initial grease fill](#)

Technical specification

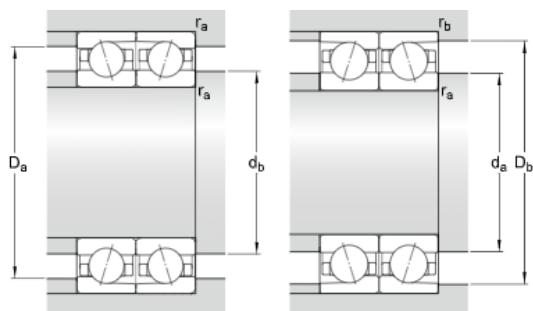


DIMENSIONS

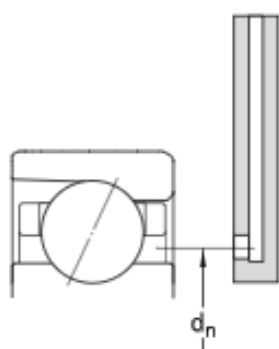
d	60 mm
D	110 mm
B	22 mm
d ₁	76.4 mm
d ₂	76.4 mm
D ₁	93.6 mm
r _{1,2}	min. 1.5 mm
r _{3,4}	min. 0.6 mm
a	30.9 mm

ABUTMENT DIMENSIONS

d _a	min. 69 mm
d _b	min. 69 mm
D _a	max. 101 mm
D _b	max. 105.8 mm



r_a	max. 1.5 mm
r_b	max. 0.6 mm
d_n	80.1 mm



CALCULATION DATA

Basic dynamic load rating	C	55.3 kN
Basic static load rating	C_0	45 kN
Fatigue load limit	P_u	1.37 kN
Attainable speed for grease lubrication		14000 r/min
Attainable speed for oil-air lubrication		22000 r/min
Contact angle	α	25 °
Ball diameter	D_w	14.288 mm
Number of balls	z	16
Reference grease quantity	G_{ref}	10.08 cm

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

Preload class A	G_A	350 N
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Static axial stiffness, preload class A		202 N/μm
Preload class B	G_B	700 N
Static axial stiffness, preload class B		264 N/μm
Preload class C	G_C	1400 N
Static axial stiffness, preload class C		349 N/μm
Preload class D	G_D	2800 N
Static axial stiffness, preload class D		470 N/μm

CALCULATION FACTORS

Calculation factor	f	1.07
Calculation factor	f_1	0.99
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	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	0.69 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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