



7010 CD/P4ADGAMatched set of two super-precision, high-capacity, D design, single row angular contact ball bearings

Matched set of two super-precision, high-capacity, D design, single row angular contact ball bearings

These matched sets of two super-precision, high-capacity, D design, single row angular contact ball bearings are available in a variety of arrangements. They are designed for high-load capacity and relatively high speed operation and, compared to the equivalent SKF B and E design high-speed bearings, are best suited for heavier loads.

- Very high running accuracy
- Very high load carrying capacity

Overview

Dimensions

Bore diameter	50 mm
Outside diameter	80 mm
Width	32 mm
Contact angle	15 °

Performance

Basic dynamic load rating	48.8 kN
Basic static load rating	48 kN
Note	Contact SKF for the attainable speeds

Properties

Contact type	Normal contact (two-point contact)
Number of rows	2
Ring type	One-piece inner and outer rings
Design	High-capacity D
Universal matching bearing	Yes, back-to-back (<>), face-to-face (><) or tandem (>>)
Matched arrangement	Universal matching
Number of bearings in matched set	2
Matched condition (axial)	Extra light preload

clearance/
preload)

Tolerance class	P4A
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None

Technical Specification

Universal matching bearing(s)

Yes, back-to-back (<>), face-to-face (><) or tandem (>>)

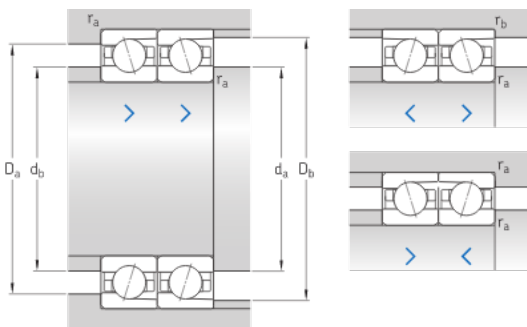


Dimensions

d	50 mm	Bore diameter
D	80 mm	Outside diameter
B	32 mm	Width
d ₁	59.2 mm	Shoulder diameter of inner ring (large side face)
d ₂	59.2 mm	Shoulder diameter of inner ring (small side face)
D ₁	70.8 mm	Shoulder diameter of outer ring (large side face)
r _{1,2}	min. 1 mm	Chamfer dimension
r _{3,4}	min. 0.3 mm	Chamfer dimension

Abutment dimensions

d _a	min. 54.6 mm	Diameter of shaft abutment
d _b	min. 54.6 mm	Diameter of shaft abutment
D _a	max. 75.4 mm	Diameter of housing abutment
D _b	max. 78 mm	Diameter of housing abutment
r _a	max. 1 mm	Radius of fillet
r _b	max. 0.3 mm	Radius of fillet
d _n	61.2 mm	Position of oil nozzle





Calculation data

Basic dynamic load rating	C	48 800 N
Basic static load rating	C_0	48 000 N
Fatigue load limit	P_u	2 040 N
Attainable speeds	Contact SKF for the attainable speeds	
Contact angle	α	15 °
Ball diameter	D_w	9.525 mm
Number of rows	i	2
Number of balls (per bearing)	z	18
Reference grease quantity (per bearing)	G_{ref}	3.6 cm ³

Preload and stiffness (back-to-back, face-to-face)

Preload class		A
Preload	G	110 N
Axial stiffness		58 N/ μ m

Correction factors for preload calculation

Correction factor dependent on bearing series and size	f	1.11
Correction factor dependent on contact angle	f_1	1
Correction factor, preload class A	f_{2A}	1
Correction factor for hybrid bearings	f_{HC}	1

Factors for equivalent bearing load calculation

Calculation factor for equivalent loads	f_0	15.4
Additional factors for equivalent loads		Refer to Notes 1 and 2 below

Mass

Mass		0.51 kg
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