



SKF 7209 CDGA/P4A

Super-precision, high-capacity, universally matchable single row angular contact

These super-precision, high-capacity, single row angular contact ball bearings accommodate radial and axial loads acting simultaneously, where the axial load acts in one direction only. They are designed to accommodate heavy loads at relatively high speeds under low to moderate operating temperatures. Being universally matchable, they can be used together in arrangements to provide effective load sharing, within a predetermined preload range, without the use of shims or similar devices.

Technical specifications

General	
Universal matching bearing(s)	Yes, back-to-back (<>), face-to-face (><) or tandem (>>)

Dimensions	
Bore diameter	45 mm
Outside diameter	85 mm
Width	19 mm
Shoulder diameter of inner ring (large side face)	57.3 mm
Shoulder diameter of inner ring (small side face)	57.3 mm
Shoulder diameter of outer ring (large side face)	72.7 mm
Chamfer dimension	1.1 mm
Chamfer dimension	0.6 mm
Distance from side face to pressure point	18.3 mm
Contact angle	15 °

Abutment dimensions	
Diameter of shaft abutment	52 mm
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Diameter of housing abutment	78 mm
Diameter of housing abutment	80.8 mm
Radius of fillet	1 mm
Radius of fillet	0.6 mm
Position of oil nozzle	60.6 mm

Calculation data	
Basic dynamic load rating	42.3 kN
Basic static load rating	31 kN
Fatigue load limit	1.32 kN
Attainable speeds	Refer to catalogue data or contact SKF for the attainable speeds
Contact angle	15 °
Ball diameter	12.7 mm
Number of rows	1
Number of balls (per bearing)	14
Reference grease quantity (per bearing)	5.9 cm ³
Preload class	A
Preload when unmounted	160 N
Axial stiffness	61 N/μm
Correction factor dependent on bearing series and size	1.1
Correction factor dependent on contact angle	1
Correction factor, preload class A	1
Correction factor for hybrid bearings	1
Calculation factor for equivalent loads	14.2
Additional factors for equivalent loads	Refer to Notes 1 and 2 below

Performance	
Basic dynamic load rating	42.3 kN

Basic static load rating	31 kN
Note	Refer to catalogue data or contact SKF for the attainable speeds

Properties	
Contact type	Normal contact (two-point contact)
Number of rows	1
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	No
Matched condition (axial clearance/ preload)	Measuring load, class A
Tolerance class	P4A
Material, bearing	Bearing steel
Coating	Without
Sealing	Without
Lubricant	None
Indicative carbon footprint for new product	1.5 kg CO ₂ e

Logistics	
Product net weight	0.412 kg
eClass code	23-05-08-04
UNSPSC code	31171531

SKF drawings



