



SKF 7009 CEGA/P4A

Super-precision, high-speed E design, universally matchable single row angular contact ball bearing

These super-precision, high-speed, E design, 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 for high-speed operation and, compared to SKF B design high-speed bearings, have a slightly higher speed capability and can accommodate heavier loads. 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	75 mm
Width	16 mm
Shoulder diameter of inner ring (large side face)	55.7 mm
Shoulder diameter of inner ring (small side face)	53.6 mm
Shoulder diameter of outer ring (large side face)	64.25 mm
Chamfer dimension	1 mm
Chamfer dimension	0.6 mm
Distance from side face to pressure point	16.1 mm
Contact angle	15 °

Abutment dimensions	
Diameter of shaft abutment	49.6 mm
Diameter of shaft abutment	49.6 mm
Diameter of housing abutment	70.4 mm
Diameter of housing abutment	70.8 mm
Radius of fillet	1 mm
Radius of fillet	0.6 mm
Position of oil nozzle	57.6 mm

Calculation data	
Basic dynamic load rating	13 kN
Basic static load rating	8.5 kN
Fatigue load limit	0.36 kN
Attainable speed for grease lubrication	To be calculated: Single bearing (27000) x speed reduction factor (see table below)
Attainable speed for oil-air lubrication	To be calculated: Single bearing (41000) x speed reduction factor (see table below)
Contact angle	15 °
Ball diameter	7.144 mm
Number of rows	1
Number of balls (per bearing)	21
Reference grease quantity (per bearing)	3.4 cm ³
Preload class	A
Preload when unmounted	70 N
Axial stiffness	38 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	8.2
Additional factors for equivalent loads	Refer to Notes 1 and 2 below

Performance	
Basic dynamic load rating	13 kN
Basic static load rating	8.5 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-speed E
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	0.84 kg CO ₂ e

Logistics	
Product net weight	0.234 kg
eClass code	23-05-08-04
UNSPSC code	31171531

SKF drawings



