



SKF 6309-ZNR

Deep groove ball bearing with snap ring and integral sealing

Single row deep groove ball bearing, with snap ring groove and seals or shields on one or both sides, are particularly versatile, have low friction and are optimized for low noise and low vibration, which enables high rotational speeds. They accommodate radial and axial loads in both directions, are easy to mount, and require less maintenance than other bearing types. The snap ring, fitted in an annular groove in the outer ring, facilitates axial location of the bearings within their housings. The integral sealing can significantly prolong bearing service life because it keeps lubricant in the bearings and contaminants out.

Technical specifications

Dimensions	
Bore diameter	45 mm
Deviation limits of mid-range bore diameter	-0.01..0 mm
Outside diameter	100 mm
Deviation limits of mid-range outside diameter	-0.013..0 mm
Width	25 mm
Deviation limits of ring width	-0.06..0 mm
Shoulder diameter	62.18 mm
Recess diameter	86.7 mm
Diameter of snap ring groove	96.8 mm
Outside diameter of snap ring	106.5 mm
Width of snap ring groove	2.7 mm
Distance from outer ring side face to snap ring groove	3.28 mm
Width of snap ring	2.46 mm
Bottom radius of snap ring groove	0.6 mm
Chamfer dimension	1.5 mm
ISO tolerance class for dimensions	P6 and tighter width tolerance

Abutment dimensions	
Diameter of shaft abutment	54 mm
Diameter of shaft abutment	62.1 mm
Diameter of housing abutment	91 mm
Diameter of snap ring recess in the housing	108 mm
Width of snap ring recess in the housing	3 mm
Distance from outer ring side face to snap ring back face	5.74 mm
Radius of shaft or housing fillet	1.5 mm

Calculation data	
SKF performance class	SKF Explorer
Basic dynamic load rating	55.3 kN
Basic static load rating	31.5 kN
Fatigue load limit	1.34 kN
Reference speed	15000 r/min
Limiting speed	9500 r/min
Minimum load factor	0.03
Calculation factor	13

Tolerances of run-out	
Range of section height at inner ring of assembled bearing	10 µm
Range of section height at outer ring of assembled bearing	18 µm
ISO tolerance class for geometrical tolerances	P6

Included products	
Snap ring	SP 100

Performance	
Basic dynamic load rating	55.3 kN
Basic static load rating	31.5 kN

Reference speed	15000 r/min
Limiting speed	9500 r/min
SKF performance class	SKF Explorer

Properties	
Filling slots	Without
Number of rows	1
Locating feature, bearing outer ring	Snap ring (fitted)
Bore type	Cylindrical
Cage	Sheet metal
Matched arrangement	No
Radial internal clearance	CN
Material, bearing	Bearing steel
Coating	Without
Sealing	Shield on one side
Sealing type	Non-contact
Lubricant	None
Relubrication feature	Without
Indicative carbon footprint for new product	3.1 kg CO ₂ e

Logistics	
Product net weight	0.851 kg
eClass code	23-05-08-01
UNSPSC code	31171504

SKF drawings

