



SKF 6311 NR

Deep groove ball bearing with snap ring

Single row deep groove ball bearings with a snap ring groove 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 many other bearing types. The snap ring, fitted in an annular groove in the outer ring, facilitates axial location of the bearings within their housings.

Technical specifications

Dimensions	
Bore diameter	55 mm
Deviation limits of mid-range bore diameter	-0.012..0 mm
Outside diameter	120 mm
Deviation limits of mid-range outside diameter	-0.013..0 mm
Width	29 mm
Deviation limits of ring width	-0.1..0 mm
Shoulder diameter	75.34 mm
Recess diameter	103.7 mm
Diameter of snap ring groove	115.21 mm
Outside diameter of snap ring	129.7 mm
Width of snap ring groove	3.1 mm
Distance from outer ring side face to snap ring groove	4.06 mm
Width of snap ring	2.82 mm
Bottom radius of snap ring groove	0.6 mm
Chamfer dimension	2 mm
ISO tolerance class for dimensions	P6 and tighter width tolerance

Abutment dimensions	
Diameter of shaft abutment	66 mm
Diameter of housing abutment	109 mm
Diameter of snap ring recess in the housing	131 mm
Width of snap ring recess in the housing	3.5 mm
Distance from outer ring side face to snap ring back face	6.88 mm
Radius of shaft or housing fillet	2 mm

Calculation data	
SKF performance class	SKF Explorer
Basic dynamic load rating	74.1 kN
Basic static load rating	45 kN
Fatigue load limit	1.9 kN
Reference speed	12000 r/min
Limiting speed	8000 r/min
Minimum load factor	0.03
Calculation factor	13

Tolerances of run-out	
Range of section height at inner ring of assembled bearing	20 μ m
Range of section height at outer ring of assembled bearing	35 μ m
ISO tolerance class for geometrical tolerances	Normal

Included products	
Snap ring	SP 120

Performance	
Basic dynamic load rating	74.1 kN
Basic static load rating	45 kN
Reference speed	12000 r/min

Limiting speed	8000 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	Without
Lubricant	None
Relubrication feature	Without
Indicative carbon footprint for new product	5 kg CO ₂ e

Logistics	
Product net weight	1.38 kg
eClass code	23-05-08-01
UNSPSC code	31171504

SKF drawings

