

2301



Self-aligning ball bearings have two rows of balls, a common sphered raceway in the outer ring and two deep uninterrupted raceway grooves in the inner ring. They are insensitive to angular misalignment of the shaft relative to the housing, which can be caused, for example, by shaft deflection.

- Accommodate static and dynamic misalignment
- Excellent high-speed performance
- Excellent light load performance
- Low friction

Bore type

Cylindrical



Dimensions

d	12 mm	Bore diameter
D	37 mm	Outside diameter
B	17 mm	Width
d ₁	≈ 18.9 mm	Shoulder diameter inner ring
D ₁	≈ 29.1 mm	Shoulder diameter outer ring
r _{1,2}	min. 1 mm	Chamfer dimension



Abutment dimensions

d _a	min. 17.6 mm	Abutment diameter shaft
D _a	max. 31.4 mm	Abutment diameter housing
r _a	max. 1 mm	Fillet radius

Calculation data

Basic dynamic load rating	C	11.7 kN
Basic static load rating	C ₀	2.7 kN
Fatigue load limit	P _u	0.14 kN
Reference speed		38 000 r/min
Limiting speed		28 000 r/min
Permissible angular misalignment	α	3 °
Calculation factor	k _r	0.05
Limiting value	e	0.6
Calculation factor	Y ₀	1.1
Calculation factor	Y ₁	1.05
Calculation factor	Y ₂	1.6

Tolerances and clearances

GENERAL BEARING SPECIFICATIONS

- Tolerances: Normal, JS7
- Radial internal clearance: table

BEARING INTERFACES

- Seat tolerances for standard conditions
- Tolerances and resultant fits