

**FAG****2309-M**

Self-aligning ball bearing

Self-aligning ball bearing 23..-M, solid brass cage

Technical information



Your current product variant

Bore type	Z	Cylindrical
Sealing	Without	Not sealed
Cage	M	Solid brass cage, ball guided
Tolerance class	PN	Normal (ISO 492:2023)
Radial internal clearance	CN (Group N)	Normal internal clearance
Lubricant	Without	Bearing not greased

Main Dimensions & Performance Data

d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	36 mm	Width
C_r	55,000 N	Basic dynamic load rating, radial
C_{0r}	16,600 N	Basic static load rating, radial
C_{ur}	1,060 N	Fatigue load limit, radial
n_G	10,500 1/min	Limiting speed
n_{gr}	8,000 1/min	Reference speed
m	1.38 kg	Weight

Mounting dimensions

$d_{a \min}$	54 mm	Minimum diameter shaft shoulder
$D_{a \max}$	91 mm	Maximum diameter of housing shoulder
$r_{a \max}$	1.5 mm	Maximum fillet radius



Dimensions

r_{\min}	1.5 mm	Minimum chamfer dimension
D_1	83.64 mm	Shoulder diameter outer ring
d_1	60.05 mm	Shoulder diameter inner ring
C_1	0.1 mm	Overhang rolling element

Temperature range

T_{\min}	-30 °C	Operating temperature min.
T_{\max}	150 °C	Operating temperature max.

Calculation factors

e	0.43	Limiting value of F_a/F_r for the applicability of diff. Values of factors X and Y
Y_1	1.47	Dynamic axial load factor
Y_2	2.28	Dynamic axial load factor
Y_0	1.54	Static axial load factor

Characteristics

	Radial load
	Axial load in one direction
	Axial load in two directions
	Grease Lubrication
	Oil Lubrication
	Not sealed
	Static angular error and misalignment
	Dynamic angular error and misalignment