



FAG

31309-XL

Tapered roller bearing

Tapered roller bearings 313, main dimensions
acc. to DIN 720, separable

X-life

Technical information

Your current product variant

Tolerance class	PN	Normal (ISO 492:2023)
Heat treatment	Standard	
Cage	Standard	Sheet steel cage, window cage, roller-guided
Internal design	Standard	
Quality level	XL	X-life
Number of rows	1	Single-row design

Main Dimensions & Performance Data

d	45 mm	Bore diameter
D	100 mm	Outside diameter
B	25 mm	Width, inner ring
C	18 mm	Width, outer ring
T	27.25 mm	Width, total
C_r	119,000 N	Basic dynamic load rating, radial
C_{0r}	108,000 N	Basic static load rating, radial
C_{ur}	16,300 N	Fatigue load limit, radial
n_G	8,600 1/min	Limiting speed
n_{gr}	4,650 1/min	Thermal speed rating
m	0.96 kg	Weight





Mounting dimensions

$d_{a \max}$	56 mm	Maximum diameter of shaft shoulder
$d_{b \min}$	54 mm	Minimum diameter of shaft shoulder
$D_{a \min}$	79 mm	Minimum diameter of housing shoulder
$D_{a \max}$	91 mm	Maximum diameter of housing shoulder
$D_{b \min}$	95 mm	Minimum diameter of housing shoulder
$C_{a \min}$	4 mm	Minimum axial space
$C_{b \min}$	9 mm	Minimum axial space
$r_{a \max}$	2 mm	Maximum fillet radius of shaft
$r_{b \max}$	1.5 mm	Maximum fillet radius of housing

Dimensions

$r_{1, 2 \min}$	2 mm	Minimum chamfer dimension of inner ring back face
$r_{3, 4 \min}$	1.5 mm	Minimum chamfer dimension of outer ring back face
a	32 mm	Distance between the apexes of the pressure cones
d_1	74.7 mm	Guidance rib diameter of inner ring

Temperature range

T_{\min}	-30 °C	Operating temperature min.
T_{\max}	120 °C	Operating temperature max.

Calculation factors

e	0.83	Limiting value of F_a/F_r for the applicability of diff. Values of factors X and Y
Y	0.73	Dynamic axial load factor
Y_0	0.4	Static axial load factor

Additional information

T7FB045

Comparative designation to ISO 10317 and ISO 355



Characteristics

-  Radial load
-  Axial load in one direction
-  Grease Lubrication
-  Oil Lubrication
-  Not sealed