



Angular contact ball bearings, super-precision

Principles of bearing

selection and application

Chamfer dimensions,

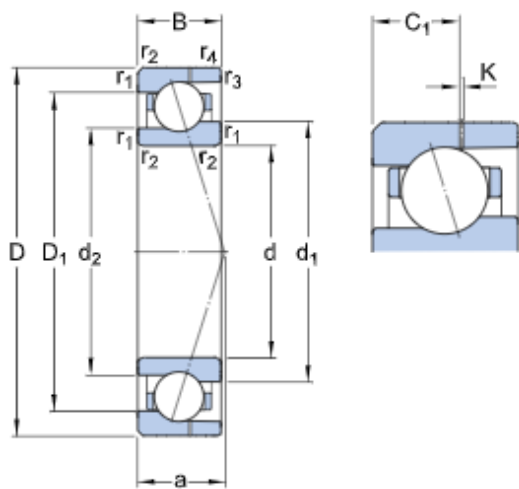
Seat tolerances for standard

conditions,

shafts, housings, shafts, housings,

Initial grease fill

Technical specification

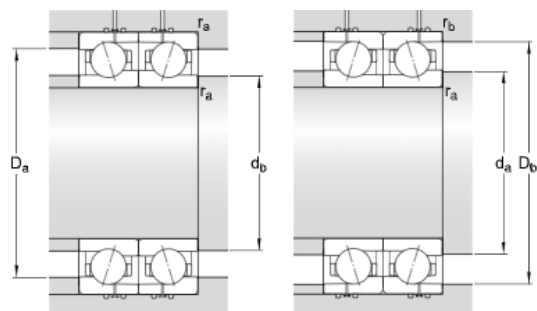


DIMENSIONS

d	30 mm
D	47 mm
B	9 mm
d ₁	35.8 mm
d ₂	34.4 mm
D ₁	41.39 mm
K	0.5 mm
C ₁	5.45 mm
r _{1,2}	min. 0.3 mm
r _{3,4}	min. 0.15 mm
a	10.1 mm

ABUTMENT DIMENSIONS

d_a	min. 32 mm
d_b	min. 32 mm



D_a	max. 45 mm
D_b	max. 46.2 mm
r_a	max. 0.3 mm
r_b	max. 0.15 mm
d_n	36.8 mm

CALCULATION DATA

Basic dynamic load rating	C	5.59 kN
Basic static load rating	C_0	3.25 kN
Fatigue load limit	P_u	0.14 kN
Attainable speed for grease lubrication		49000 r/min
Attainable speed for oil-air lubrication		75000 r/min
Contact angle	α	15 °
Ball diameter	D_w	4.762 mm
Number of balls	z	18
Reference grease quantity	G_{ref}	0.6 cm

PRELOAD AND STIFFNESS (BACK-TO-BACK, FACE-TO-FACE)

Preload class A	G_A	30 N
Static axial stiffness, preload class A		25 N/μm
Preload class B	G_B	90 N
Static axial stiffness, preload class B		39 N/μm
Preload class C	G_C	180 N
Static axial stiffness, preload class C		54 N/μm

CALCULATION FACTORS

Calculation factor	f	1.08
Calculation factor	f_1	1

Calculation factor	f_{2A}	1
Calculation factor	f_{2B}	1.05
Calculation factor	f_{2C}	1.09
Calculation factor	f_{HC}	1.01
Calculation factor	f_0	8.3

MASS

Mass bearing	0.045 kg
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More information

Product details Designs and variants Markings on bearings and bearing sets Bearing data Preload, clearance, and stiffness Loads Attainable speeds Mounting Designation system	Engineering information Principles of bearing selection and application General bearing knowledge Bearing selection process Bearing failure and how to prevent it	Tools SimPro Quick SimPro Spindle Engineering Calculator LubeSelect for SKF greases Heater selection tool
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