



PRODUCT DATASHEET

Datasheet creation date: 2025/06/02 10:23 (UTC)



7909C

Standard Series High Precision Angular Contact Ball Bearings



Parts Number

7909CTRV1VSUMP3

Boundary Dimensions

d	45	mm	Bore diameter
D	68	mm	Outside diameter
B	12	mm	Width
r(min.)	0.6	mm	Chamfer Dimension
r1(min.)	0.3	mm	Chamfer Dimension

Basic Load Ratings

Cr	16.8	kN	Basic Dynamic Load Rating
C0r	13.4	kN	Basic Static Load Rating

Speeds

Grease	20400	min-1	Limiting Speed
Oil (Oil-air)	31000	min-1	Limiting Speed

Dimensions

	C: 15°		Contact Angle
a	13.6	mm	Effective Load Center

Abutment and Fillet Dimensions

da(min.)	50	mm	Diameter of Shaft Abutment
Da(max.)	63	mm	Diameter of Housing Abutment
Db(max.)	65.5	mm	Diameter of Housing Abutment
ra(max.)	0.6	mm	Radius of Shaft or Housing Fillet
rb(max.)	0.3	mm	Radius of Shaft or Housing Fillet

Performance

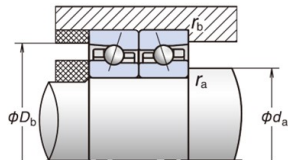
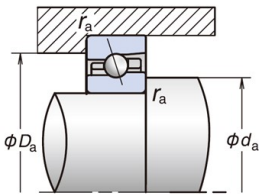
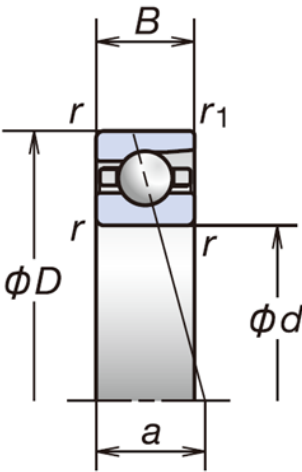
Pa	8.55	kN	Permissible Axial Load
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Calculation factors

f0	16.0		Factor
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Preload,Rigidity(DB and DF arrangement)

	Preload	Axial Rigidity	Measured axial clearance
EL	49N	37N/μm	0μm
L	104N	51N/μm	-5μm
M	192N	66N/μm	-11μm
H	391N	93N/μm	-21μm





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Table A		EL	L	M	H
	15°	6.5	6.0	5.0	4.5
	25°	2			
	30°	1.4			

Table B	DBD	DBB
Preload factor	1.36	2
Axial rigidity	1.48	2
Radial rigidity	1.54	2

Calculation of radial rigidity
Multiply axial rigidity by the appropriate factor in Table A.

Calculation of preload and axial rigidity for combined bearings

Multiply by the appropriate factor in Table B. For radial rigidity, multiply the value from Table A with the appropriate factor in Table B.

Additional information

0.77	g/brg	Recommended Grease Quantities
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Mass

0.129	kg	Mass(approx.)
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