



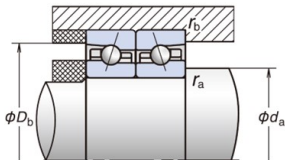
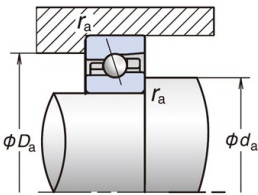
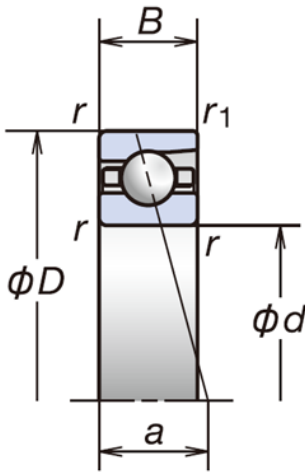
PRODUCT DATASHEET

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100BNR10H

ROBUST Series Ultra High-Speed Angular Contact Ball Bearings



Parts Number

100BNR10HTSUELP3

Boundary Dimensions

	BNR: 18°		Bearing Type
d	100	mm	Bore diameter
D	150	mm	Outside diameter
B	24	mm	Width
BN	5.5	mm	
SN	15	mm	
SB	2.2	mm	
r(min.)	1.5	mm	Chamfer Dimension
r1(min.)	1	mm	Chamfer Dimension

Basic Load Ratings

Cr	45.5	kN	Basic Dynamic Load Rating
C0r	34.5	kN	Basic Static Load Rating

Speeds

Grease	14400	min-1	Limiting Speed
Oil (Oil-air)	22400	min-1	Limiting Speed

Dimensions

	18°		Contact Angle
a	32.3	mm	Effective Load Center

Abutment and Fillet Dimensions

da(min.)	109	mm	Diameter of Shaft Abutment
Da(max.)	141	mm	Diameter of Housing Abutment
Db(max.)	144	mm	Diameter of Housing Abutment
ra(max.)	1.5	mm	Radius of Shaft or Housing Fillet
rb(max.)	0.8	mm	Radius of Shaft or Housing Fillet

Performance

Pa	34.0	kN	Permissible Axial Load
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Calculation factors

f0	10.9		Factor
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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.

Preload,Rigidity(DB and DF arrangement)

	Preload	Axial Rigidity	Measured axial clearance
EL	98N	88N/μm	0μm
L	389N	142N/μm	-10μm
M	999N	205N/μm	-24μm

Additional information

5.7	g/brg	Recommended Grease Quantities
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Mass

1.25	kg	Mass(approx.)
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