



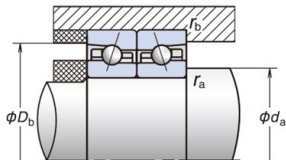
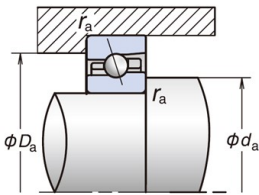
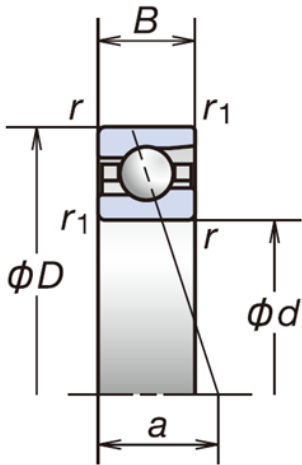
PRODUCT DATASHEET

Datasheet creation date: 2025/06/02 10:08 (UTC)



70BER19H

ROBUST Series Ultra High-Speed Angular Contact Ball Bearings



Parts Number

70BER19HTSUELP3

Boundary Dimensions

	BER: 25°		Bearing Type
d	70	mm	Bore diameter
D	100	mm	Outside diameter
B	16	mm	Width
BN	3.1	mm	
SN	9.3	mm	
SB	1.4	mm	
r(min.)	1	mm	Chamfer Dimension
r1(min.)	0.6	mm	Chamfer Dimension

Basic Load Ratings

Cr	25.7	kN	Basic Dynamic Load Rating
C0r	16.6	kN	Basic Static Load Rating

Speeds

Grease	18900	min-1	Limiting Speed
Oil (Oil-air)	29500	min-1	Limiting Speed

Dimensions

	25°		Contact Angle
a	27.8	mm	Effective Load Center

Abutment and Fillet Dimensions

da(min.)	76	mm	Diameter of Shaft Abutment
Da(max.)	94	mm	Diameter of Housing Abutment
Db(max.)	95	mm	Diameter of Housing Abutment
ra(max.)	1	mm	Radius of Shaft or Housing Fillet
rb(max.)	0.5	mm	Radius of Shaft or Housing Fillet

Performance

Pa	20.7	kN	Permissible Axial Load
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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	49N	94N/μm	0μm
L	329N	180N/μm	-8μm
M	693N	235N/μm	-15μm

Additional information

2.0	g/brg	Recommended Grease Quantities
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Mass

0.292	kg	Mass(approx.)
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