



7209 CD/HCP4A Bearing 2D drawings and 3D CAD models

45 mm x 85 mm x 19 mm SKF 7209 CD/HCP4A angular contact ball bearings

Bearing No. 7209 CD/HCP4A

Size	85x45x19 mm
Bore Diameter	85 mm
Outer Diameter	45 mm
Width	19 mm
d	45 mm
D	85 mm
B	19 mm
d ₁	57.3 mm
d ₂	57.3 mm
D ₁	72.7 mm
r _{1,2} - min.	1.1 mm
r _{3,4} - min.	0.6 mm
a	18.3 mm
d _a - min.	52 mm
d _b - min.	52 mm
D _a - max.	78 mm
D _b - max.	80.8 mm
r _a - max.	1 mm
r _b - max.	0.6 mm
d _n	60.6 mm
Basic dynamic load rating - C	42.3 kN
Basic static load rating - C ₀	31 kN
Fatigue load limit - P _u	1.3 kN
Limiting speed for grease	20000 r/min



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Lubrication	
Limiting speed for oil lubrication	32000 mm/min
Ball - D_w	12.7 mm
Ball - z	14
G_{ref}	5.922 cm ³
Calculation factor - f_0	14.2
Preload class A - G_A	160 N
Preload class B - G_B	320 N
Preload class C - G_C	640 N
Preload class D - G_D	1280 N
Calculation factor - f	1.07
Calculation factor - f	1
Calculation factor - f_{2A}	1
Calculation factor - f_{2B}	1.01
Calculation factor - f_{2C}	1.03
Calculation factor - f_{2D}	1.06
Calculation factor - f_{HC}	1.01
Preload class A	67 N/micron
Preload class B	92 N/micron
Preload class C	128 N/micron
Preload class D	185 N/micron
Category	Precision Ball Bearings
Inventory	0.0
Manufacturer Name	SKF
Minimum Buy Quantity	N/A
Weight / Kilogram	0.39
Product Group	B04270
Enclosure	Open
Precision Class	ABEC 7 ISO P4



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Material - Ball	Ceramic
Number of Bearings	1 (Single)
Contact Angle	15 Degree
Preload	None
Raceway Style	1 Rib Outer Ring
Cage Material	Phenolic
Rolling Element	Ball Bearing
Flush Ground	No
Inch - Metric	Metric
Other Features	Single Row Angular Contact Super Precision High Capacity Hybrid Corrosion Resistant Ball
Long Description	45MM Bore; 85MM Outside Diameter; 19MM Width; Open Enclosure; ABEC 7 ISO P4 Precision; Ceramic Ball Material; 1 (Single) Bearings; 15 Degree Contact Angle; Phenolic Cage Material; 1 Rib Outer Ring R
Category	Precision Ball Bearings
UNSPSC	31171531
Harmonized Tariff Code	8482.10.50.28
Noun	Bearing
Keyword String	Angular Contact Ball
Manufacturer URL	http://www.skf.com
Manufacturer Item Number	7209 CD/HCP4A
Weight / LBS	0.849
Bore	1.772 Inch 45 Millimeter
Width	0.748 Inch 19 Millimeter
Outside Diameter	3.346 Inch 85 Millimeter
d ₁	57.3 mm
d ₂	57.3 mm
D ₁	72.7 mm



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$r_{1,2}$ min.	1.1 mm
$r_{3,4}$ min.	0.6 mm
d_a min.	52 mm
d_b min.	52 mm
D_a max.	78 mm
D_b max.	80.8 mm
r_a max.	1 mm
r_b max.	0.6 mm
d_n	60.6 mm
Basic dynamic load rating C	42.3 kN
Basic static load rating C_0	31 kN
Fatigue load limit P_u	1.32 kN
Attainable speed for grease lubrication	20000 r/min
Attainable speed for oil-air lubrication	32000 r/min
Ball diameter D_w	12.7 mm
Number of balls z	14
Reference grease quantity G_{ref}	5.922 cm ³
Preload class A G_A	160 N
Static axial stiffness, preload class A	67 N/ μ m
Preload class B G_B	320 N
Static axial stiffness, preload class B	92 N/ μ m
Preload class C G_C	640 N
Static axial stiffness, preload class C	128 N/ μ m
Preload class D G_D	1280 N
Static axial stiffness, preload class D	185 N/ μ m
Calculation factor f	1.07
Calculation factor f_1	1



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Calculation factor f_{2A}	1
Calculation factor f_{2B}	1.01
Calculation factor f_{2C}	1.03
Calculation factor f_{2D}	1.06
Calculation factor f_{HC}	1.01
Calculation factor f_0	14.2
Mass bearing	0.34 kg