



NTN Bearing Manufacturing



7205 ACD/HCP4A Bearing 2D drawings and 3D CAD models

25 mm x 52 mm x 15 mm SKF 7205
ACD/HCP4A angular contact ball bearings

Bearing No. 7205 ACD/HCP4A

Size	52x25x15 mm
Bore Diameter	52 mm
Outer Diameter	25 mm
Width	15 mm
d	25 mm
D	52 mm
B	15 mm
d ₁	34.1 mm
d ₂	34.1 mm
D ₁	43.7 mm
r _{1,2} - min.	1 mm
r _{3,4} - min.	0.3 mm
a	16.7 mm
d _a - min.	30.6 mm
d _b - min.	30.6 mm
D _a - max.	46.4 mm
D _b - max.	49.6 mm
r _a - max.	1 mm
r _b - max.	0.3 mm
d _n	36.1 mm
Basic dynamic load rating - C	13 kN
Basic static load rating - C ₀	7 kN
Fatigue load limit - P _u	0.29 kN
Limiting speed for grease	32000 r/min



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Lubrication	
Limiting speed for oil lubrication	48000 mm/min
Ball - D_w	7.938 mm
Ball - z	13
G_{ref}	1.872 cm ³
Calculation factor - e	0.68
Calculation factor - Y_2	0.87
Calculation factor - Y_0	0.38
Calculation factor - X_2	0.41
Calculation factor - Y_1	0.92
Calculation factor - Y_2	1.41
Calculation factor - Y_0	0.76
Calculation factor - X_2	0.67
Preload class A - G_A	80 N
Preload class B - G_B	160 N
Preload class C - G_C	320 N
Preload class D - G_D	640 N
Calculation factor - f	1.03
Calculation factor - f_1	0.99
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	79 N/micron
Preload class B	102 N/micron
Preload class C	133 N/micron
Preload class D	175 N/micron



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Category	Precision Ball Bearings
Inventory	0.0
Manufacturer Name	SKF
Minimum Buy Quantity	N/A
Weight / Kilogram	0
Product Group	B04270
Enclosure	Open
Precision Class	ABEC 7 ISO P4
Material - Ball	Ceramic
Number of Bearings	1 (Single)
Contact Angle	25 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 High Capacity Basic Design
Long Description	25MM Bore; 52MM Outside Diameter; 15MM Width; Open Enclosure; ABEC 7 ISO P4 Precision; Ceramic Ball Material; 1 (Single) Bearing; 25 Degree Contact Angle; Phenolic Cage Material; 1 Rib Outer Ring Ra
Category	Precision Ball Bearings
UNSPSC	31171531
Harmonized Tariff Code	8482.10.50.28
Noun	Bearing
Keyword String	Ball Angular Contact
Manufacturer URL	http://www.skf.com



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Outside Diameter	2.047 Inch 52 Millimeter
Width	0.591 Inch 15 Millimeter
Bore	0.984 Inch 25 Millimeter
d_1	34.1 mm
d_2	34.1 mm
D_1	43.7 mm
$r_{1,2}$ min.	1 mm
$r_{3,4}$ min.	0.3 mm
d_a min.	30.6 mm
d_b min.	30.6 mm
D_a max.	46.4 mm
D_b max.	49.6 mm
r_a max.	1 mm
r_b max.	0.3 mm
d_n	36.1 mm
Basic dynamic load rating C	13 kN
Basic static load rating C_0	6.95 kN
Fatigue load limit P_u	0.29 kN
Attainable speed for grease lubrication	32000 r/min
Attainable speed for oil-air lubrication	48000 r/min
Ball diameter D_w	7.938 mm
Number of balls z	13
Reference grease quantity G_{ref}	1.872 cm ³
Preload class A G_A	80 N
Static axial stiffness, preload class A	79 N/ μ m
Preload class B G_B	160 N
Static axial stiffness, preload class B	102 N/ μ m
Preload class C G_C	320 N
Static axial stiffness, preload	133 N/ μ m



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class C	
Preload class D G_D	640 N
Static axial stiffness, preload class D	175 N/ μ m
Calculation factor f	1.03
Calculation factor f_1	0.99
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 e	0.68
Calculation factor (single, tandem) Y_2	0.87
Calculation factor (single, tandem) Y_0	0.38
Calculation factor (single, tandem) X_2	0.41
Calculation factor (back-to-back, face-to-face) Y_1	0.92
Calculation factor (back-to-back, face-to-face) Y_2	1.41
Calculation factor (back-to-back, face-to-face) Y_0	0.76
Calculation factor (back-to-back, face-to-face) X_2	0.67
Mass bearing	0.11 kg