



Off-the-shelf SKF shaft Co., Ltd



7204 CD/HCP4A Bearing 2D drawings and 3D CAD models

20 mm x 47 mm x 14 mm SKF 7204 CD/HCP4A Work Head Spindle bearing

Bearing No. 7204 CD/HCP4A

Size	47x20x14 mm
Bore Diameter	47 mm
Outer Diameter	20 mm
Width	14 mm
d	20 mm
D	47 mm
B	14 mm
d ₁	29.1 mm
d ₂	29.1 mm
D ₁	38.7 mm
r _{1,2} - min.	1 mm
r _{3,4} - min.	0.3 mm
a	11.6 mm
d _a - min.	25.6 mm
d _b - min.	25.6 mm
D _a - max.	41.4 mm
D _b - max.	44.6 mm
r _a - max.	1 mm
r _b - max.	0.3 mm
d _n	31.1 mm
Basic dynamic load rating - C	11.9 kN
Basic static load rating - C ₀	5.8 kN
Fatigue load limit - P _u	0.245 kN
Limiting speed for grease	43000 r/min



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Lubrication	
Limiting speed for oil lubrication	60000 mm/min
Ball - D_w	7.938 mm
Ball - z	11
G_{ref}	1.539 cm ³
Calculation factor - f_0	8.7
Preload class A - G_A	45 N
Preload class B - G_B	90 N
Preload class C - G_C	180 N
Preload class D - G_D	360 N
Calculation factor - f	1.03
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	28 N/micron
Preload class B	37 N/micron
Preload class C	50 N/micron
Preload class D	70 N/micron
Category	Precision Ball Bearings
Inventory	0.0
Manufacturer Name	SKF
Minimum Buy Quantity	N/A
Weight / Kilogram	0.094
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	20MM Bore; 47MM Outside Diameter; 14MM 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	7204 CD/HCP4A
Weight / LBS	0.208
Bore	0.787 Inch 20 Millimeter
Outside Diameter	1.85 Inch 47 Millimeter
Width	0.551 Inch 14 Millimeter
d ₁	29.1 mm
d ₂	29.1 mm
D ₁	38.7 mm



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$r_{1,2}$ min.	1 mm
$r_{3,4}$ min.	0.3 mm
d_a min.	25.6 mm
d_b min.	25.6 mm
D_a max.	41.4 mm
D_b max.	44.6 mm
r_a max.	1 mm
r_b max.	0.3 mm
d_n	31.1 mm
Basic dynamic load rating C	11.9 kN
Basic static load rating C_0	5.85 kN
Fatigue load limit P_u	0.245 kN
Attainable speed for grease lubrication	43000 r/min
Attainable speed for oil-air lubrication	60000 r/min
Ball diameter D_w	7.938 mm
Number of balls z	11
Reference grease quantity G_{ref}	1.539 cm ³
Preload class A G_A	45 N
Static axial stiffness, preload class A	28 N/ μ m
Preload class B G_B	90 N
Static axial stiffness, preload class B	37 N/ μ m
Preload class C G_C	180 N
Static axial stiffness, preload class C	50 N/ μ m
Preload class D G_D	360 N
Static axial stiffness, preload class D	70 N/ μ m
Calculation factor f	1.03
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	8.7
Mass bearing	0.09 kg