



# KOYO PRECISION AXLE CORP.



45 mm x 85 mm x 19 mm SKF S7209 ACD/P4A  
angular contact ball bearings

Bearing No. S7209 ACD/P4A

S7209 ACD/P4A Bearing 2D drawings and 3D CAD models

Size	85x45x19 mm
Bore Diameter	85 mm
Outer Diameter	45 mm
Width	19 mm
d	45 mm
D	85 mm
B	19 mm
d <sub>1</sub>	57.3 mm
d <sub>2</sub>	57.3 mm
D <sub>2</sub>	75.7 mm
r <sub>1,2</sub> - min.	1.1 mm
r <sub>3,4</sub> - min.	0.6 mm
a	24.8 mm
d <sub>a</sub> - min.	52 mm
d <sub>a</sub> - max.	56.5 mm
d <sub>b</sub> - min.	52 mm
d <sub>b</sub> - max.	56.5 mm
D <sub>a</sub> - max.	78 mm
D <sub>b</sub> - max.	80.8 mm
r <sub>a</sub> - max.	1 mm
r <sub>b</sub> - max.	0.6 mm
Basic dynamic load rating - C	41 kN
Basic static load rating - C <sub>0</sub>	30 kN
Fatigue load limit - P <sub>u</sub>	1.2 kN



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Limiting speed for grease lubrication	15000 r/min
Ball - $D_w$	12.7 mm
Ball - z	14
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 - $G_A$	260 N
Preload class B - $G_B$	520 N
Preload class C - $G_C$	1040 N
Preload class D - $G_D$	2080 N
Calculation factor - f	1.07
Calculation factor - $f_1$	0.99
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2B}$	1.01
Calculation factor - $f_{2C}$	1.02
Calculation factor - $f_{2D}$	1.05
Calculation factor - $f_{HC}$	1
Preload class A	146 N/micron
Preload class B	190 N/micron
Preload class C	252 N/micron
Preload class D	341 N/micron
Category	Precision Ball Bearings
Inventory	0.0
Manufacturer Name	SKF



## KOYO PRECISION AXLE CORP.

Minimum Buy Quantity	N/A
Weight / Kilogram	0.46
EAN	7316575955397
Product Group	B04270
Enclosure	2 Seals
Precision Class	ABEC 7   ISO P4
Material - Ball	Steel
Number of Bearings	1 (Single)
Contact Angle	25 Degree
Preload	None
Raceway Style	1 Rib Outer Ring
Cage Material	Phenolic
Rolling Element	Ball Bearing
Enclosure Type	Non Contact Seal
Flush Ground	No
Inch - Metric	Metric
Other Features	Single Row   Angular Contact   Super Precision
Long Description	45MM Bore; 85MM Outside Diameter; 19MM Width; 2 Seals; ISO P4; Single; Phenolic Cage
Category	Precision Ball Bearings
UNSPSC	31171531
Harmonized Tariff Code	8482.10.50.28
Noun	Bearing
Keyword String	Ball Angular Contact
Manufacturer URL	<a href="http://www.skf.com">http://www.skf.com</a>
Manufacturer Item Number	S7209 ACD/P4A
Weight / LBS	0.926
Width	0.748 Inch   19 Millimeter
Bore	1.772 Inch   45 Millimeter
Outside Diameter	3.346 Inch   85 Millimeter



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$d_1$	57.3 mm
$d_2$	57.3 mm
$D_2$	75.7 mm
$r_{1,2}$ min.	1.1 mm
$r_{3,4}$ min.	0.6 mm
$d_a$ min.	52 mm
$d_a$ max.	56.5 mm
$d_b$ min.	52 mm
$d_b$ max.	56.5 mm
$D_a$ max.	78 mm
$D_b$ max.	80.8 mm
$r_a$ max.	1 mm
$r_b$ max.	0.6 mm
Basic dynamic load rating C	41 kN
Basic static load rating $C_0$	30 kN
Fatigue load limit $P_u$	1.25 kN
Attainable speed for grease lubrication	15000 r/min
Ball diameter $D_w$	12.7 mm
Number of balls z	14
Preload class A $G_A$	260 N
Static axial stiffness, preload class A	146 N/ $\mu$ m
Preload class B $G_B$	520 N
Static axial stiffness, preload class B	190 N/ $\mu$ m
Preload class C $G_C$	1040 N
Static axial stiffness, preload class C	252 N/ $\mu$ m
Preload class D $G_D$	2080 N
Static axial stiffness, preload class D	341 N/ $\mu$ m
Calculation factor f	1.07
Calculation factor $f_1$	0.99



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Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.01
Calculation factor $f_{2C}$	1.02
Calculation factor $f_{2D}$	1.05
Calculation factor $f_{HC}$	1
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	0.42 kg