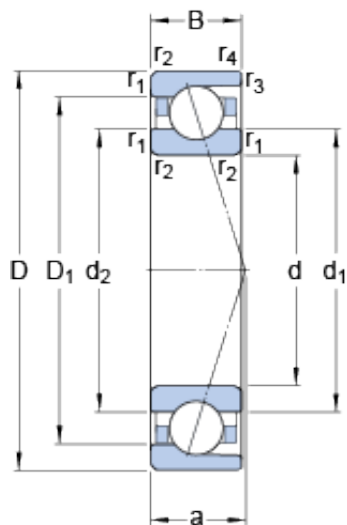




# ISOSTATIC BEARING LIMITED

## 7005 ACD/P4A SKF High Speed Angular Contact Ball Bearings

Bearing No. 7005 ACD/P4A



7005 ACD/P4A Bearing 2D drawings and 3D CAD models

Size	47x25x12 mm
Bore Diameter	47 mm
Outer Diameter	25 mm
Width	12 mm
d	25 mm
D	47 mm
B	12 mm
d <sub>1</sub>	32.1 mm
d <sub>2</sub>	32.1 mm
D <sub>1</sub>	39.9 mm
r <sub>1,2</sub> - min.	0.6 mm
r <sub>3,4</sub> - min.	0.3 mm
a	14.5 mm
d <sub>a</sub> - min.	28.2 mm
d <sub>b</sub> - min.	28.2 mm
D <sub>a</sub> - max.	43.8 mm
D <sub>b</sub> - max.	45 mm
r <sub>a</sub> - max.	0.6 mm
r <sub>b</sub> - max.	0.3 mm
d <sub>n</sub>	33.4 mm
Basic dynamic load rating - C	9.2 kN
Basic static load rating - C <sub>0</sub>	5 kN
Fatigue load limit - P <sub>u</sub>	0.212 kN
Limiting speed for grease	34000 r/min



## ISOSTATIC BEARING LIMITED

Lubrication	
Limiting speed for oil lubrication	50000 mm/min
Ball - $D_w$	6.35 mm
Ball - $z$	14
$G_{ref}$	1.02 cm <sup>3</sup>
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 - $G_A$	60 N
Preload class B - $G_B$	120 N
Preload class C - $G_C$	240 N
Preload class D - $G_D$	480 N
Calculation factor - $f$	1.05
Calculation factor - $f_1$	0.99
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2B}$	1.02
Calculation factor - $f_{2C}$	1.05
Calculation factor - $f_{2D}$	1.08
Calculation factor - $f_{HC}$	1
Preload class A	64 N/micron
Preload class B	83 N/micron
Preload class C	108 N/micron
Preload class D	143 N/micron



## ISOSTATIC BEARING LIMITED

Category	Precision Ball Bearings
Inventory	0.0
Manufacturer Name	SKF
Minimum Buy Quantity	N/A
Weight / Kilogram	0.078
Product Group	B04270
Enclosure	Open
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
Flush Ground	No
Inch - Metric	Metric
Other Features	Single Row   Angular Contact   High Capacity Basic Design
Long Description	25MM Bore; 47MM Outside Diameter; 12MM Width; Open Enclosure; ABEC 7   ISO P4 Precision; Steel Ball Material; 1 (Single) Bearing; 25 Degree Contact Angle; Phenolic Cage Material; 1 Rib Outer Ring Race
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>



## ISOSTATIC BEARING LIMITED

Width	0.472 Inch   12 Millimeter
Outside Diameter	1.85 Inch   47 Millimeter
Bore	0.984 Inch   25 Millimeter
$d_1$	32.1 mm
$d_2$	32.1 mm
$D_1$	39.9 mm
$r_{1,2}$ min.	0.6 mm
$r_{3,4}$ min.	0.3 mm
$d_a$ min.	28.2 mm
$d_b$ min.	28.2 mm
$D_a$ max.	43.8 mm
$D_b$ max.	45 mm
$r_a$ max.	0.6 mm
$r_b$ max.	0.3 mm
$d_n$	33.4 mm
Basic dynamic load rating C	9.23 kN
Basic static load rating $C_0$	5 kN
Fatigue load limit $P_u$	0.212 kN
Attainable speed for grease lubrication	34000 r/min
Attainable speed for oil-air lubrication	50000 r/min
Ball diameter $D_w$	6.35 mm
Number of balls z	14
Reference grease quantity $G_{ref}$	1.02 cm <sup>3</sup>
Preload class A $G_A$	60 N
Static axial stiffness, preload class A	64 N/ $\mu$ m
Preload class B $G_B$	120 N
Static axial stiffness, preload class B	83 N/ $\mu$ m
Preload class C $G_C$	240 N
Static axial stiffness, preload	108 N/ $\mu$ m



## ISOSTATIC BEARING LIMITED

class C	
Preload class D $G_D$	480 N
Static axial stiffness, preload class D	143 N/ $\mu$ m
Calculation factor f	1.05
Calculation factor $f_1$	0.99
Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.02
Calculation factor $f_{2C}$	1.05
Calculation factor $f_{2D}$	1.08
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	0.079 kg