



Bearing No. 7004 ACD/P4A

B	12 mm
a	13.3 mm
d	20 mm
D	42 mm
Bore	0.787 Inch   20 Millimeter
Noun	Bearing
Width	0.472 Inch   12 Millimeter
UNSPSC	31171531
series:	70
Preload	None
Category	Precision Ball Bearings
Ball - z	12
Size (mm)	42x20x12
Enclosure	Open
Inventory	0.0
Width (mm)	12
Flush Ground	No
Weight / LBS	0.157
Mass bearing	0.068 kg
maximum rpm:	50000 RPM
d <sub>n</sub>	28.4 mm
Inch - Metric	Metric
Product Group	B04270
d <sub>n</sub>	28.4 mm
Contact Angle	25 Degree
D <sub>1</sub>	34.8 mm
Raceway Style	1 Rib Outer Ring
Cage Material	Phenolic
d	27.1 mm

1	
d <sub>2</sub>	27.1 mm
D <sub>1</sub>	34.8 mm
d <sub>2</sub>	27.1 mm
d <sub>1</sub>	27.1 mm
closure type:	Open
Other Features	Single Row   Angular Contact   High Precision
contact angle:	25 °
Keyword String	Angular Contact Ball
fillet radius:	0.6 mm
bore diameter:	20 mm
overall width:	12 mm
Bearing number	7004 ACD/P4A
Rolling Element	Ball Bearing
Precision Class	ABEC 7   ISO P4
Preload class A	54 N/micron
Preload class B	69 N/micron
Preload class C	90 N/micron
Preload class D	120 N/micron
finish/coating:	Uncoated
G <sub>ref</sub>	0.9 cm <sup>3</sup>
Material - Ball	Steel
Outside Diameter	1.654 Inch   42 Millimeter
Manufacturer URL	<a href="http://www.skf.com">http://www.skf.com</a>
Long Description	20MM Bore; 42MM Outside Diameter; 12MM Width; Open Enclosure; ABEC 7   ISO P4 Precision; Steel Ball Material; 1 (Single) Bearings; 25 Degree Contact Angle; Phenolic Cage Material; 1 Rib

	Outer Ring Rac
outer ring width:	12 mm
outside diameter:	42 mm
bearing material:	Steel
precision rating:	ABEC 7 (ISO Class 4)
Manufacturer Name	SKF
Number of balls z	12
Weight / Kilogram	0.072
$r_a$ max.	0.6 mm
$D_b$ max.	40 mm
$D_a$ max.	38.8 mm
$d_b$ min.	23.2 mm
$d_a$ min.	23.2 mm
Bore Diameter (mm)	42
Number of Bearings	1 (Single)
$r_b$ max.	0.3 mm
internal clearance:	C0
Outer Diameter (mm)	20
Calculation factor f	1.03
$r_b$ - max.	0.3 mm
Calculation factor e	0.68
$D_a$ - max.	38.8 mm
$r_a$ - max.	0.6 mm
$d_b$ - min.	23.2 mm
$d_a$ - min.	23.2 mm
Minimum Buy Quantity	N/A
Ball - $D_w$	6.35 mm
$r_{1,2}$ min.	0.6 mm
$r_{3,4}$ min.	0.3 mm
$D_b$ - max.	40 mm
row type & fill slot:	Single-Row Non-Fill Slot
$r_{1,2}$ - min.	0.6 mm

$r_{3,4}$ - min.	0.3 mm
Harmonized Tariff Code	8482.10.50.28
Calculation factor - f	1.03
Calculation factor - e	0.68
Manufacturer Item Number	7004 ACD/P4A
Basic dynamic load rating C	8.32 kN
Ball diameter $D_w$	6.35 mm
radial static load capacity:	4.15 kN
Preload class C $G_C$	200 N
Preload class B $G_B$	100 N
Preload class A $G_A$	50 N
radial dynamic load capacity:	8.32 kN
Preload class D $G_D$	400 N
Basic dynamic load rating - C	8.3 kN
Preload class C - $G_C$	200 N
Preload class A - $G_A$	50 N
Preload class B - $G_B$	100 N
Preload class D - $G_D$	400 N
Fatigue load limit $P_u$	0.173 kN
Calculation factor $f_1$	0.99
Calculation factor $f_{HC}$	1
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 - $X_2$	0.67
Calculation factor - $f_1$	0.99
Fatigue load limit - $P_u$	0.173 kN

Limiting speed for oil lubrication	60000 mm/min
Calculation factor - $Y_2$	1.41
Calculation factor - $Y_1$	0.92
Calculation factor - $Y_0$	0.76
Calculation factor - $f_{2D}$	1.08
Calculation factor - $f_{HC}$	1
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2B}$	1.02
Calculation factor - $f_{2C}$	1.05
Limiting speed for grease lubrication	38000 r/min
Basic static load rating $C_0$	4.15 kN
Static axial stiffness, preload class B	69 N/ $\mu$ m
Static axial stiffness, preload class C	90 N/ $\mu$ m
Attainable speed for grease lubrication	38000 r/min
Static axial stiffness, preload class A	54 N/ $\mu$ m
Static axial stiffness, preload class D	120 N/ $\mu$ m
Attainable speed for oil-air lubrication	60000 r/min
Basic static load rating - $C_0$	4.2 kN
Reference grease quantity $G_{ref}$	0.9 cm <sup>3</sup>
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