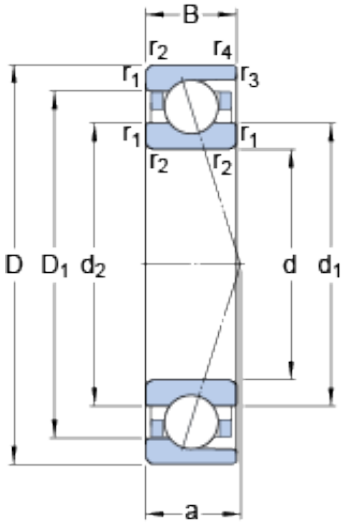




## Off-the-shelf SKF shaft Co., Ltd



7003 ACD/P4A Bearing 2D drawings and 3D CAD models

### 17 mm x 35 mm x 10 mm SKF 7003 ACD/P4A TAC series for ball screw support

Bearing No. 7003 ACD/P4A

Size	35x17x10 mm
Bore Diameter	35 mm
Outer Diameter	17 mm
Width	10 mm
d	17 mm
D	35 mm
B	10 mm
d <sub>1</sub>	22.6 mm
d <sub>2</sub>	22.6 mm
D <sub>1</sub>	29.3 mm
r <sub>1,2</sub> - min.	0.3 mm
r <sub>3,4</sub> - min.	0.2 mm
a	11.2 mm
d <sub>a</sub> - min.	19 mm
d <sub>b</sub> - min.	19 mm
D <sub>a</sub> - max.	33 mm
D <sub>b</sub> - max.	33.6 mm
r <sub>a</sub> - max.	0.3 mm
r <sub>b</sub> - max.	0.2 mm
d <sub>n</sub>	23.7 mm
Basic dynamic load rating - C	6.5 kN
Basic static load rating - C <sub>0</sub>	3.1 kN
Fatigue load limit - P <sub>u</sub>	0.132 kN
Limiting speed for grease	45000 r/min



## Off-the-shelf SKF shaft Co., Ltd

Lubrication	
Limiting speed for oil lubrication	70000 mm/min
Ball - $D_w$	5.556 mm
Ball - $z$	12
$G_{ref}$	0.54 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 - $G_A$	40 N
Preload class B - $G_B$	80 N
Preload class C - $G_C$	160 N
Preload class D - $G_D$	320 N
Calculation factor - $f$	1.04
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	48 N/micron
Preload class B	62 N/micron
Preload class C	81 N/micron
Preload class D	107 N/micron



## Off-the-shelf SKF shaft Co., Ltd

Category	Precision Ball Bearings
Inventory	0.0
Manufacturer Name	SKF
Minimum Buy Quantity	N/A
Weight / Kilogram	0.042
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 Precision
Long Description	17MM Bore; 35MM Outside Diameter; 10MM 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
Category	Precision Ball Bearings
UNSPSC	31171531
Harmonized Tariff Code	8482.10.50.28
Noun	Bearing
Keyword String	Angular Contact Ball
Manufacturer URL	<a href="http://www.skf.com">http://www.skf.com</a>
Manufacturer Item Number	7003 ACD/P4A



## Off-the-shelf SKF shaft Co., Ltd

Weight / LBS	0.093
Width	0.394 Inch   10 Millimeter
Bore	0.669 Inch   17 Millimeter
Outside Diameter	1.378 Inch   35 Millimeter
bore diameter:	17 mm
radial static load capacity:	3.1 kN
outside diameter:	35 mm
maximum rpm (grease):	45000 rpm
overall width:	10 mm
maximum rpm (oil):	70000 rpm
contact angle:	25 °
bearing material:	Steel
duplex type:	Duplex Universal
cage material:	Cotton Fabric Reinforced Phenolic
closure type:	Open
fillet radius:	0.3 mm
precision rating:	P4
series:	70
operating temperature range:	300 ° F
manufacturer product page:	<a href="#">Click here</a>
radial dynamic load capacity:	6.5 kN
manufacturer upc number:	7316570721355
$d_1$	22.6 mm
$d_2$	22.6 mm
$D_1$	29.3 mm
$r_{1,2}$ min.	0.3 mm
$r_{3,4}$ min.	0.2 mm
$d_a$ min.	19 mm
$d_b$ min.	19 mm
$D_a$ max.	33 mm



## Off-the-shelf SKF shaft Co., Ltd

$D_b$ max.	33.6 mm
$r_a$ max.	0.3 mm
$r_b$ max.	0.2 mm
$d_n$	23.7 mm
Basic dynamic load rating C	6.5 kN
Basic static load rating $C_0$	3.1 kN
Fatigue load limit $P_u$	0.132 kN
Attainable speed for grease lubrication	45000 r/min
Attainable speed for oil-air lubrication	70000 r/min
Ball diameter $D_w$	5.556 mm
Number of balls z	12
Reference grease quantity $G_{ref}$	0.54 cm <sup>3</sup>
Preload class A $G_A$	40 N
Static axial stiffness, preload class A	48 N/ $\mu$ m
Preload class B $G_B$	80 N
Static axial stiffness, preload class B	62 N/ $\mu$ m
Preload class C $G_C$	160 N
Static axial stiffness, preload class C	81 N/ $\mu$ m
Preload class D $G_D$	320 N
Static axial stiffness, preload class D	107 N/ $\mu$ m
Calculation factor f	1.04
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



## Off-the-shelf SKF shaft Co., Ltd

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	0.038 kg