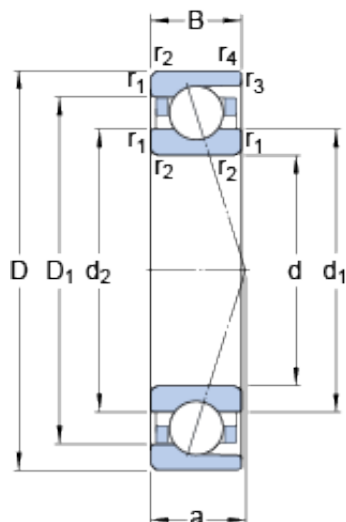




## Timken PRECISION AXLE Manufacturing C...



110 mm x 140 mm x 16 mm SKF 71822  
ACD/P4 angular contact ball bearings

Bearing No. 71822 ACD/P4

71822 ACD/P4 Bearing 2D drawings and 3D CAD models

Size	140x110x16 mm
Bore Diameter	140 mm
Outer Diameter	110 mm
Width	16 mm
d	110 mm
D	140 mm
B	16 mm
d <sub>1</sub>	119.8 mm
d <sub>2</sub>	119.8 mm
D <sub>1</sub>	130.6 mm
r <sub>1,2</sub> - min.	1 mm
r <sub>3,4</sub> - min.	0.3 mm
a	37.2 mm
d <sub>a</sub> - min.	114.6 mm
d <sub>b</sub> - min.	114.6 mm
D <sub>a</sub> - max.	135.4 mm
D <sub>b</sub> - max.	138 mm
r <sub>a</sub> - max.	1 mm
r <sub>b</sub> - max.	0.3 mm
d <sub>n</sub>	120.9 mm
Basic dynamic load rating - C	30.2 kN
Basic static load rating - C <sub>0</sub>	38 kN
Fatigue load limit - P <sub>u</sub>	1.5 kN
Limiting speed for grease	7500 r/min



## Timken PRECISION AXLE Manufacturing C...

Lubrication	
Limiting speed for oil lubrication	12000 mm/min
Ball - $D_w$	8.731 mm
Ball - $z$	32
$G_{ref}$	5.1 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 - $G_A$	260 N
Preload class B - $G_B$	800 N
Preload class C - $G_C$	1600 N
Calculation factor - $f$	1.34
Calculation factor - $f_1$	0.97
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2B}$	1.08
Calculation factor - $f_{2C}$	1.15
Calculation factor - $f_{HC}$	1
Preload class A	236 N/micron
Preload class B	377 N/micron
Preload class C	518 N/micron
$d_1$	119.8 mm
$d_2$	119.8 mm
$D_1$	130.6 mm
$r_{1,2}$ min.	1 mm



## Timken PRECISION AXLE Manufacturing C...

$r_{3,4}$ min.	0.3 mm
$d_a$ min.	114.6 mm
$d_b$ min.	114.6 mm
$D_a$ max.	135.4 mm
$D_b$ max.	138 mm
$r_a$ max.	1 mm
$r_b$ max.	0.3 mm
$d_n$	120.9 mm
Basic dynamic load rating C	30.2 kN
Basic static load rating $C_0$	38 kN
Fatigue load limit $P_u$	1.46 kN
Attainable speed for grease lubrication	7500 r/min
Attainable speed for oil-air lubrication	12000 r/min
Ball diameter $D_w$	8.731 mm
Number of balls z	32
Reference grease quantity $G_{ref}$	5.1 cm <sup>3</sup>
Preload class A $G_A$	260 N
Static axial stiffness, preload class A	236 N/ $\mu$ m
Preload class B $G_B$	800 N
Static axial stiffness, preload class B	377 N/ $\mu$ m
Preload class C $G_C$	1600 N
Static axial stiffness, preload class C	518 N/ $\mu$ m
Calculation factor f	1.34
Calculation factor $f_1$	0.97
Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.08
Calculation factor $f_{2C}$	1.15
Calculation factor $f_{HC}$	1



## Timken PRECISION AXLE Manufacturing C...

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	0.51 kg