



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



### 70 mm x 90 mm x 10 mm SKF 71814 CD/HCP4 TAB High Durability Ball Screw Support Bearing

Bearing No. 71814 CD/HCP4

71814 CD/HCP4 Bearing 2D drawings and 3D CAD models

Size	90x70x10 mm
Bore Diameter	90 mm
Outer Diameter	70 mm
Width	10 mm
d	70 mm
D	90 mm
B	10 mm
d <sub>1</sub>	76.7 mm
d <sub>2</sub>	76.7 mm
D <sub>1</sub>	83.5 mm
r <sub>1,2</sub> - min.	0.6 mm
r <sub>3,4</sub> - min.	0.3 mm
a	15.7 mm
d <sub>a</sub> - min.	73.2 mm
d <sub>b</sub> - min.	73.2 mm
D <sub>a</sub> - max.	86.8 mm
D <sub>b</sub> - max.	88 mm
r <sub>a</sub> - max.	0.6 mm
r <sub>b</sub> - max.	0.3 mm
d <sub>n</sub>	77.4 mm
Basic dynamic load rating - C	13.8 kN
Basic static load rating - C <sub>0</sub>	16 kN
Fatigue load limit - P <sub>u</sub>	0.67 kN
Limiting speed for grease	17000 r/min



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Lubrication	
Limiting speed for oil lubrication	26000 mm/min
Ball - $D_w$	5.556 mm
Ball - $z$	31
$G_{ref}$	1.4 cm <sup>3</sup>
Calculation factor - $f_0$	17.2
Preload class A - $G_A$	73 N
Preload class B - $G_B$	220 N
Preload class C - $G_C$	440 N
Calculation factor - $f$	1.32
Calculation factor - $f$	1
Calculation factor - $f_{2A}$	1
Calculation factor - $f_{2B}$	1.1
Calculation factor - $f_{2C}$	1.18
Calculation factor - $f_{HC}$	1.02
Preload class A	72 N/micron
Preload class B	125 N/micron
Preload class C	184 N/micron
$d_1$	76.7 mm
$d_2$	76.7 mm
$D_1$	83.5 mm
$r_{1,2}$ min.	0.6 mm
$r_{3,4}$ min.	0.3 mm
$d_a$ min.	73.2 mm
$d_b$ min.	73.2 mm
$D_a$ max.	86.8 mm
$D_b$ max.	88 mm
$r_a$ max.	0.6 mm
$r_b$ max.	0.3 mm
$d_n$	77.4 mm



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Basic dynamic load rating C	13.8 kN
Basic static load rating $C_0$	16 kN
Fatigue load limit $P_u$	0.67 kN
Attainable speed for grease lubrication	17000 r/min
Attainable speed for oil-air lubrication	26000 r/min
Ball diameter $D_w$	5.556 mm
Number of balls z	31
Reference grease quantity $G_{ref}$	1.4 cm <sup>3</sup>
Preload class A $G_A$	73 N
Static axial stiffness, preload class A	72 N/ $\mu$ m
Preload class B $G_B$	220 N
Static axial stiffness, preload class B	125 N/ $\mu$ m
Preload class C $G_C$	440 N
Static axial stiffness, preload class C	184 N/ $\mu$ m
Calculation factor f	1.32
Calculation factor $f_1$	1
Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.1
Calculation factor $f_{2C}$	1.18
Calculation factor $f_{HC}$	1.02
Calculation factor $f_0$	17.2
Mass bearing	0.12 kg