



## TBD Bearing Machinery Co., Ltd



45 mm x 58 mm x 7 mm 45 mm x 58 mm x 7 mm SKF 71809 ACD/P4 angular contact ball bearings

Bearing No. 71809 ACD/P4

71809 ACD/P4 Bearing 2D drawings and 3D CAD models

Size	58x45x7 mm
Bore Diameter	58 mm
Outer Diameter	45 mm
Width	7 mm
d	45 mm
D	58 mm
B	7 mm
d <sub>1</sub>	49.6 mm
d <sub>2</sub>	49.6 mm
D <sub>1</sub>	53.6 mm
r <sub>1,2</sub> - min.	0.3 mm
r <sub>3,4</sub> - min.	0.15 mm
a	15.5 mm
d <sub>a</sub> - min.	47 mm
d <sub>b</sub> - min.	47 mm
D <sub>a</sub> - max.	56 mm
D <sub>b</sub> - max.	57.2 mm
r <sub>a</sub> - max.	0.3 mm
r <sub>b</sub> - max.	0.15 mm
d <sub>n</sub>	50 mm
Basic dynamic load rating - C	4.6 kN
Basic static load rating - C <sub>0</sub>	5 kN
Fatigue load limit - P <sub>u</sub>	0.212 kN



## TBD Bearing Machinery Co., Ltd

Limiting speed for grease lubrication	20000 r/min
Limiting speed for oil lubrication	30000 mm/min
Ball - $D_w$	3.175 mm
Ball - z	31
$G_{ref}$	0.36 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 - $G_A$	41 N
Preload class B - $G_B$	125 N
Preload class C - $G_C$	250 N
Calculation factor - f	1.24
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	87 N/micron
Preload class B	139 N/micron
Preload class C	189 N/micron
$d_1$	49.6 mm
$d_2$	49.6 mm
$D_1$	53.6 mm



## TBD Bearing Machinery Co., Ltd

$r_{1,2}$ min.	0.3 mm
$r_{3,4}$ min.	0.15 mm
$d_a$ min.	47 mm
$d_b$ min.	47 mm
$D_a$ max.	56 mm
$D_b$ max.	57.2 mm
$r_a$ max.	0.3 mm
$r_b$ max.	0.15 mm
$d_n$	50 mm
Basic dynamic load rating C	4.62 kN
Basic static load rating $C_0$	5 kN
Fatigue load limit $P_u$	0.212 kN
Attainable speed for grease lubrication	20000 r/min
Attainable speed for oil-air lubrication	30000 r/min
Ball diameter $D_w$	3.175 mm
Number of balls z	31
Reference grease quantity $G_{ref}$	0.36 cm <sup>3</sup>
Preload class A $G_A$	41 N
Static axial stiffness, preload class A	87 N/ $\mu$ m
Preload class B $G_B$	125 N
Static axial stiffness, preload class B	139 N/ $\mu$ m
Preload class C $G_C$	250 N
Static axial stiffness, preload class C	189 N/ $\mu$ m
Calculation factor f	1.24
Calculation factor $f_1$	0.97
Calculation factor $f_{2A}$	1
Calculation factor $f_{2B}$	1.08
Calculation factor $f_{2C}$	1.15



## TBD Bearing Machinery Co., Ltd

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	0.039 kg