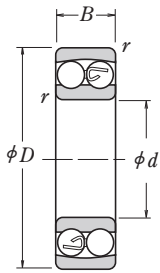
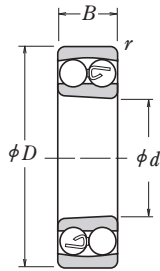


SELF-ALIGNING BALL BEARINGS

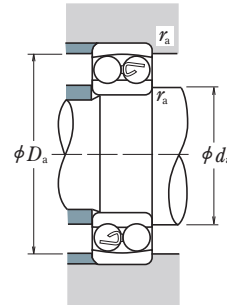
Bore Diameter 5 – 30 mm



Cylindrical Bore



Tapered Bore


Dynamic Equivalent Load

$$P = XF_r + YF_a$$

$F_a/F_r \leq e$		$F_a/F_r > e$	
X	Y	X	Y
1	Y_3	0.65	Y_2

Static Equivalent Load

$$P_0 = F_r + Y_0 F_a$$

The values of e , Y_2 , Y_3 , and Y_0 are listed in the table below.

Boundary Dimensions (mm)				Basic Load Ratings (N)		Limiting Speeds (min ⁻¹)		Bearing	Designations	Abutment and Fillet Dimensions (mm)			Constant	Axial Load Factors			Mass (kg)
d	D	B	$r_{\min.}$	C_r	C_{0r}	Grease	Oil	Cylindrical Bore	Tapered Bore ⁽¹⁾	d_a min.	D_a max.	r_a max.	e	Y_2	Y_3	Y_0	approx.
5	19	6	0.3	2 790	475	30 000	36 000	135	—	7	17	0.3	0.34	2.9	1.9	1.9	0.009
6	19	6	0.3	2 790	475	30 000	36 000	126	—	8	17	0.3	0.34	2.9	1.9	1.9	0.008
7	22	7	0.3	3 000	600	26 000	32 000	127	—	9	20	0.3	0.31	3.1	2.0	2.1	0.013
8	22	7	0.3	3 000	600	26 000	32 000	108	—	10	20	0.3	0.31	3.1	2.0	2.1	0.016
9	26	8	0.6	4 550	895	26 000	30 000	129	—	13	22	0.6	0.32	3.1	2.0	2.1	0.021
10	30	9	0.6	6 150	1 190	22 000	28 000	1200	—	14	26	0.6	0.32	3.1	2.0	2.1	0.034
	30	14	0.6	8 200	1 590	24 000	28 000	2200	—	14	26	0.6	0.64	1.5	0.98	1.0	0.046
	35	11	0.6	8 100	1 620	20 000	24 000	1300	—	14	31	0.6	0.35	2.8	1.8	1.9	0.059
	35	17	0.6	10 100	2 010	18 000	22 000	2300	—	14	31	0.6	0.71	1.4	0.89	0.93	0.080
12	32	10	0.6	6 250	1 270	22 000	26 000	1201	—	16	28	0.6	0.36	2.7	1.8	1.8	0.041
	32	14	0.6	8 500	1 730	22 000	26 000	2201	—	16	28	0.6	0.58	1.7	1.1	1.1	0.051
	37	12	1	10 600	2 160	18 000	22 000	1301	—	17	32	1	0.33	2.9	1.9	2.0	0.068
	37	17	1	13 300	2 730	17 000	22 000	2301	—	17	32	1	0.60	1.6	1.1	1.1	0.089
15	35	11	0.6	8 350	1 750	18 000	22 000	1202	—	19	31	0.6	0.32	3.1	2.0	2.1	0.050
	35	14	0.6	8 550	1 850	18 000	22 000	2202	—	19	31	0.6	0.50	1.9	1.3	1.3	0.058
	42	13	1	10 700	2 290	16 000	20 000	1302	—	20	37	1	0.33	2.9	1.9	2.0	0.101
	42	17	1	13 500	2 910	14 000	18 000	2302	—	20	37	1	0.51	1.9	1.2	1.3	0.116
17	40	12	0.6	8 800	2 010	16 000	20 000	1203	—	21	36	0.6	0.31	3.1	2.0	2.1	0.074
	40	16	0.6	10 900	2 420	16 000	20 000	2203	—	21	36	0.6	0.50	1.9	1.3	1.3	0.089
	47	14	1	14 000	3 200	14 000	17 000	1303	—	22	42	1	0.32	3.1	2.0	2.1	0.13
	47	19	1	16 200	3 550	13 000	16 000	2303	—	22	42	1	0.51	1.9	1.2	1.3	0.16
20	47	14	1	11 000	2 610	14 000	17 000	1204	1204 K	25	42	1	0.29	3.4	2.2	2.3	0.12
	47	18	1	14 100	3 300	14 000	17 000	2204	2204 K	25	42	1	0.47	2.1	1.3	1.4	0.142
	52	15	1.1	13 800	3 350	12 000	15 000	1304	1304 K	26.5	45.5	1	0.29	3.4	2.2	2.3	0.164
	52	21	1.1	20 300	4 700	11 000	14 000	2304	2304 K	26.5	45.5	1	0.50	1.9	1.2	1.3	0.210
25	52	15	1	13 400	3 300	12 000	14 000	1205	1205 K	30	47	1	0.28	3.5	2.3	2.4	0.14
	52	18	1	13 600	3 450	12 000	14 000	2205	2205 K	30	47	1	0.41	2.4	1.5	1.6	0.16
	62	17	1.1	20 000	5 000	10 000	13 000	1305	1305 K	31.5	55.5	1	0.28	3.5	2.3	2.4	0.261
	62	24	1.1	27 300	6 600	9 500	12 000	2305	2305 K	31.5	55.5	1	0.47	2.1	1.4	1.4	0.340
30	62	16	1	17 300	4 650	10 000	12 000	1206	1206 K	35	57	1	0.25	3.9	2.5	2.6	0.22
	62	20	1	16 800	4 550	10 000	12 000	2206	2206 K	35	57	1	0.38	2.5	1.6	1.7	0.262
	72	19	1.1	23 600	6 300	8 500	11 000	1306	1306 K	36.5	65.5	1	0.26	3.7	2.4	2.5	0.391
	72	27	1.1	35 000	8 750	8 000	10 000	2306	2306 K	36.5	65.5	1	0.44	2.2	1.4	1.5	0.51

Note ⁽¹⁾ Suffix K represents bearings with tapered bores (1 : 12).

Remark For dimensions related to adapters, refer to Page C348.