

Cylindrical bore

Tapered bore
taper 1:12

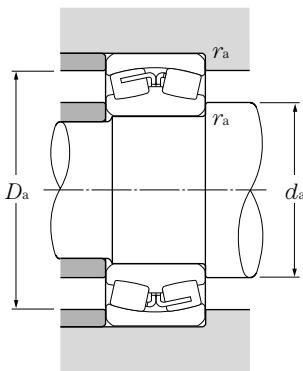
d 75 ~ 120mm

d	Boundary dimensions			dynamic C_r	Basic load ratings		Limiting speeds ^①		Bearing numbers	
	D	B	$r_{s\ min}$ ^③		static C_{or}	dynamic C_r	grease	oil	cylindrical bore	tapered ^② bore
75	130	31	1.5	166	223	16,900	2,300	3,600	22215B	22215BK
	160	37	2.1	239	287	24,300	1,800	2,700	21315	21315K
	160	55	2.1	330	410	33,500	2,100	3,200	22315B	22315BK
80	140	33	2	213	277	21,700	2,200	3,400	22216E	22216EK
	140	33	2	179	239	18,300	2,200	3,400	22216B	22216BK
	170	39	2.1	260	315	26,500	1,700	2,500	21316	21316K
	170	58	2.1	385	470	39,500	2,000	3,000	22316B	22316BK
85	150	36	2	251	320	25,600	2,100	3,200	22217E	22217EK
	150	36	2	206	272	21,000	2,100	3,200	22217B	22217BK
	180	41	3	289	355	29,500	1,600	2,400	21317	21317K
	180	60	3	415	510	42,500	1,900	2,900	22317B	22317BK
90	160	40	2	292	385	29,800	1,900	3,000	22218E	22218EK
	160	40	2	256	345	26,200	1,900	3,000	22218B	22218BK
	160	52.4	2	315	455	32,500	1,800	2,800	23218B	23218BK
	190	43	3	320	400	32,500	1,500	2,300	21318	21318K
	190	64	3	480	590	49,000	1,800	2,700	22318B	22318BK
95	170	43	2.1	294	390	30,000	1,800	2,800	22219B	22219BK
	200	45	3	335	420	34,000	1,400	2,100	21319	21319K
	200	67	3	500	615	51,000	1,600	2,500	22319B	22319BK
100	165	52	2	310	470	31,500	1,700	2,600	23120B	23120BK
	180	46	2.1	315	415	32,000	1,700	2,700	22220B	22220BK
	180	60.3	2.1	405	580	41,500	1,600	2,500	23220B	23220BK
	215	47	3	370	465	37,500	1,300	2,000	21320	21320K
	215	73	3	605	755	61,500	1,600	2,400	22320B	22320BK
110	170	45	2	282	455	28,800	1,800	2,800	23022B	23022BK
	180	56	2	370	580	37,500	1,500	2,400	23122B	23122BK
	180	69	2	450	755	46,000	1,500	2,400	24122B	24122BK30
	200	53	2.1	410	570	42,000	1,600	2,400	22222B	22222BK
	200	69.8	2.1	515	760	52,500	1,400	2,200	23222B	23222BK
	240	50	3	495	615	50,500	1,200	1,800	21322	21322K
	240	80	3	745	930	76,000	1,400	2,200	22322B	22322BK
120	180	46	2	296	495	30,000	1,700	2,600	23024B	23024BK

① This value was achieved with machined cages and molded resin cages; for pressed cages, 75% of this value is allowable.

② Bearings appended with "K" have a tapered bore ratio of 1:12; bearings appended with "K30" have a tapered bore ratio of 1:30.

③ Smallest allowable dimension for chamfer dimension r .



Equivalent bearing load

dynamic
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y_1	0.67	Y_2

static

$P_{or} = F_r + Y_0 F_a$

For values of e , Y_1 , Y_2 and Y_0 see the table below.

Abutment and fillet dimensions					Constant	Axial load factors				Mass (approx.)	
mm					e	Y_1	Y_2	Y_0	kg		
d_a	D_a	r_{as}	cylindrical bore	tapered bore							
min	max	min	max	max							
83.5		121.5	1.5	0.24	2.81	4.19	2.75	1.65	1.61		
87		148	2	0.24	2.84	4.23	2.78	3.81	3.76		
87		148	2	0.37	1.80	2.69	1.76	5.25	5.13		
90	94.5	125.5	130	2	0.22	3.01	4.48	2.94	1.99	1.94	
90		130	2	0.26	2.64	3.93	2.58	2.15	2.11		
92		158	2	0.23	2.95	4.39	2.88	4.53	4.47		
92		158	2	0.37	1.80	2.69	1.76	6.05	5.91		
95	100.5	135	140	2	0.23	2.96	4.41	2.90	2.49	2.43	
95		140	2	0.26	2.60	3.88	2.55	2.66	2.61		
99		166	2.5	0.25	2.69	4.00	2.63	5.35	5.28		
99		166	2.5	0.37	1.82	2.71	1.78	7.1	6.94		
100	107.5	144	150	2	0.24	2.86	4.25	2.79	3.24	3.16	
100		150	2	0.26	2.55	3.80	2.49	3.5	3.42		
100		150	2	0.33	2.04	3.03	1.99	4.45	4.32		
104		176	2.5	0.24	2.83	4.22	2.77	6.3	6.21		
104		176	2.5	0.37	1.80	2.69	1.76	8.35	8.16		
107		158	2	0.26	2.63	3.92	2.57	4.1	4.01		
109		186	2.5	0.23	3.00	4.46	2.93	7.1	7		
109		186	2.5	0.37	1.80	2.69	1.76	9.76	9.54		
110		155	2	0.32	2.12	3.15	2.07	4.3	4.16		
112		168	2	0.26	2.55	3.80	2.49	4.95	4.84		
112		168	2	0.34	1.98	2.94	1.93	6.47	6.28		
114		201	2.5	0.22	3.01	4.48	2.94	8.89	8.78		
114		201	2.5	0.37	1.80	2.69	1.76	12.4	12.1		
120		160	2	0.26	2.59	3.85	2.53	3.71	3.58		
120		170	2	0.31	2.17	3.24	2.13	5.4	5.22		
120		170	2	0.38	1.76	2.63	1.73	7.07	6.96		
122		188	2	0.27	2.51	3.74	2.46	7.2	7.04		
122		188	2	0.35	1.91	2.84	1.86	9.71	9.43		
124		226	2.5	0.21	3.20	4.77	3.13	11.2	11.1		
124		226	2.5	0.36	1.87	2.79	1.83	17.1	16.7		
130		170	2	0.25	2.69	4.01	2.63	4.05	3.9		

Note: Upon request, bearings with oil inlets and oil grooves on the outer ring can also be manufactured. In such cases, please add the suffix "D1" to the end of the bearing number. (Example: 23024BD1)