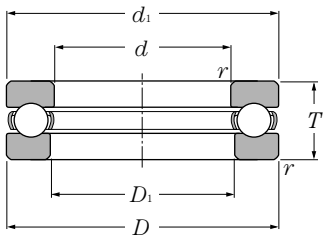
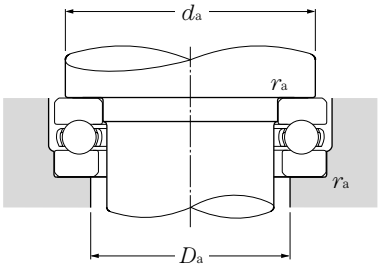




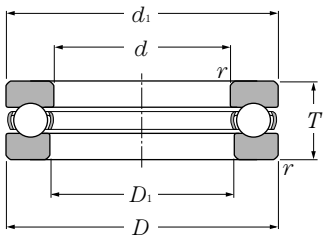
Equivalent bearing load
dynamic
$P_a = F_a$

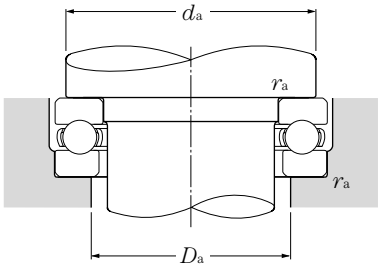
static
$P_{oa} = F_a$

d 10～50mm

Boundary dimensions mm				Basic load ratings dynamic kN		static kN		Limiting speeds rpm		Bearing numbers	Dimensions mm		Abutment and fillet dimensions mm			Mass kg
d	D	T	$r_{s\,min}$ ❶	C_a	C_{oa}	C_a	C_{oa}	grease	oil		$d_{1s\,max}$ ❷	$D_{1s\,min}$ ❸	d_a min	D_a max	r_{as} max	(approx.)
10	24	9	0.3	10.0	14.0	1,020	1,420	6,700	9,500	**51100**	24	11	18	16	0.3	0.021
	26	11	0.6	12.7	17.1	1,290	1,740	5,800	8,300	**51200**	26	12	20	16	0.6	0.03
12	26	9	0.3	10.3	15.4	1,050	1,570	6,400	9,200	**51101**	26	13	20	18	0.3	0.023
	28	11	0.6	13.2	19.0	1,340	1,940	5,600	8,000	**51201**	28	14	22	18	0.6	0.034
15	28	9	0.3	10.5	16.8	1,070	1,710	6,200	8,800	**51102**	28	16	23	20	0.3	0.024
	32	12	0.6	16.6	24.8	1,690	2,530	5,000	7,100	**51202**	32	17	25	22	0.6	0.046
17	30	9	0.3	10.8	18.2	1,100	1,850	6,000	8,500	**51103**	30	18	25	22	0.3	0.026
	35	12	0.6	17.2	27.3	1,750	2,780	4,800	6,800	**51203**	35	19	28	24	0.6	0.054
20	35	10	0.3	14.2	24.7	1,450	2,520	5,200	7,500	**51104**	35	21	29	26	0.3	0.04
	40	14	0.6	22.3	37.5	2,270	3,850	4,100	5,900	**51204**	40	22	32	28	0.6	0.081
25	42	11	0.6	19.6	37.0	1,990	3,800	4,600	6,500	**51105**	42	26	35	32	0.6	0.06
	47	15	0.6	27.8	50.5	2,830	5,150	3,700	5,300	**51205**	47	27	38	34	0.6	0.111
	52	18	1	35.5	61.5	3,650	6,250	3,200	4,600	**51305**	52	27	41	36	1	0.176
	60	24	1	55.5	89.5	5,650	9,100	2,600	3,700	**51405**	60	27	46	39	1	0.33
30	47	11	0.6	20.4	42.0	2,080	4,300	4,300	6,200	**51106**	47	32	40	37	0.6	0.069
	52	16	0.6	29.3	58.0	2,990	5,950	3,400	4,900	**51206**	52	32	43	39	0.6	0.139
	60	21	1	43.0	78.5	4,350	8,000	2,800	3,900	**51306**	60	32	48	42	1	0.269
	70	28	1	72.5	126	7,400	12,800	2,200	3,200	**51406**	70	32	54	46	1	0.516
35	52	12	0.6	20.4	44.5	2,080	4,550	3,900	5,600	**51107**	52	37	45	42	0.6	0.085
	62	18	1	39.0	78.0	4,000	7,950	2,900	4,200	**51207**	62	37	51	46	1	0.215
	68	24	1	55.5	105	5,650	10,700	2,400	3,500	**51307**	68	37	55	48	1	0.383
	80	32	1.1	87.0	155	8,850	15,800	1,900	2,800	**51407**	80	37	62	53	1	0.759
40	60	13	0.6	26.9	63.0	2,740	6,400	3,500	5,000	**51108**	60	42	52	48	0.6	0.125
	68	19	1	47.0	98.5	4,800	10,000	2,700	3,900	**51208**	68	42	57	51	1	0.276
	78	26	1	69.0	135	7,050	13,700	2,200	3,100	**51308**	78	42	63	55	1	0.548
	90	36	1.1	112	205	11,500	20,900	1,700	2,500	**51408**	90	42	70	60	1	1.08
45	65	14	0.6	27.9	69.0	2,840	7,050	3,200	4,600	**51109**	65	47	57	53	0.6	0.148
	73	20	1	48.0	105	4,850	10,700	2,600	3,700	**51209**	73	47	62	56	1	0.317
	85	28	1	80.0	163	8,150	16,700	2,000	2,900	**51309**	85	47	69	61	1	0.684
	100	39	1.1	130	242	13,200	24,700	1,600	2,200	**51409**	100	47	78	67	1	1.43
50	70	14	0.6	28.8	75.5	2,930	7,700	3,100	4,500	**51110**	70	52	62	58	0.6	0.161
	78	22	1	48.5	111	4,950	11,400	2,400	3,400	**51210**	78	52	67	61	1	0.378

❶ Smallest allowable dimension for chamfer dimension r. ❷ Maximum allowable dimension for shaft washer outer dimension d_a.
❸ Maximum allowable dimension for housing washer inner dimension D_a.





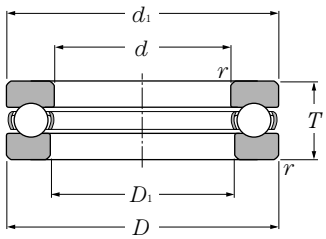
Equivalent bearing load
dynamic
$P_a = F_a$

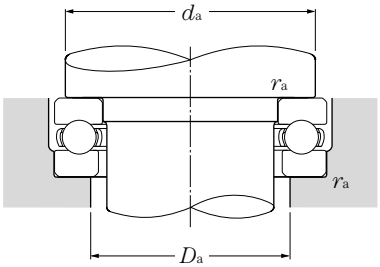
static
$P_{oa} = F_a$

d 50～90mm

Boundary dimensions mm				Basic load ratings dynamic kN		static kgf		Limiting speeds rpm		Bearing numbers	Dimensions mm		Abutment and fillet dimensions mm			Mass kg
d	D	T	$r_{s\,min}$ ❶	C_a	C_{oa}	C_a	C_{oa}	grease	oil		$d_{1s\,max}$ ❷	$D_{1s\,min}$ ❸	d_a min	D_a max	r_{as} max	(approx.)
50	95	31	1.1	96.5	202	9,850	20,600	1,800	2,600	**51310**	95	52	77	68	1	0.951
	110	43	1.5	148	283	15,100	28,800	1,400	2,000	**51410A**	110	52	86	74	1.5	1.9
55	78	16	0.6	35.0	93.0	3,550	9,500	2,800	4,000	**51111**	78	57	69	64	0.6	0.226
	90	25	1	69.5	159	7,100	16,200	2,100	3,000	**51211**	90	57	76	69	1	0.608
	105	35	1.1	119	246	12,200	25,100	1,600	2,300	**51311**	105	57	85	75	1	1.29
	120	48	1.5	178	360	18,200	36,500	1,300	1,800	**51411**	120	57	94	81	1.5	2.52
60	85	17	1	41.5	113	4,200	11,500	2,600	3,700	**51112**	85	62	75	70	1	0.296
	95	26	1	73.5	179	7,500	18,200	2,000	2,800	**51212**	95	62	81	74	1	0.676
	110	35	1.1	123	267	12,600	27,200	1,600	2,300	**51312**	110	62	90	80	1	1.37
	130	51	1.5	214	435	21,800	44,500	1,200	1,700	**51412**	130	62	102	88	1.5	3.12
65	90	18	1	41.5	117	4,250	12,000	2,400	3,500	**51113**	90	67	80	75	1	0.338
	100	27	1	75.0	189	7,650	19,200	1,900	2,700	**51213**	100	67	86	79	1	0.767
	115	36	1.1	128	287	13,000	29,300	1,500	2,200	**51313**	115	67	95	85	1	1.51
	140	56	2	232	495	23,600	50,500	1,100	1,600	**51413**	140	68	110	95	2	3.96
70	95	18	1	43.0	127	4,400	12,900	2,400	3,400	**51114**	95	72	85	80	1	0.356
	105	27	1	76.0	199	7,750	20,200	1,800	2,600	**51214**	105	72	91	84	1	0.793
	125	40	1.1	148	340	15,100	34,500	1,400	2,000	**51314**	125	72	103	92	1	2.01
	150	60	2	250	555	25,500	56,500	1,000	1,500	**51414**	150	73	118	102	2	4.86
75	100	19	1	44.5	136	4,550	13,900	2,200	3,200	**51115**	100	77	90	85	1	0.399
	110	27	1	77.5	209	7,900	21,300	1,800	2,600	**51215**	110	77	96	89	1	0.874
	135	44	1.5	171	395	17,400	40,500	1,300	1,800	**51315**	135	77	111	99	1.5	2.61
	160	65	2	269	615	27,400	63,000	940	1,400	**51415**	160	78	125	110	2	5.97
80	105	19	1	44.5	141	4,550	14,400	2,200	3,100	**51116**	105	82	95	90	1	0.422
	115	28	1	78.5	218	8,000	22,300	1,700	2,400	**51216**	115	82	101	94	1	0.916
	140	44	1.5	176	425	18,000	43,000	1,200	1,800	**51316**	140	82	116	104	1.5	2.72
	170	68	2.1	270	620	27,500	63,500	890	1,300	**51416**	170	83	133	117	2	7.77
85	110	19	1	46.0	150	4,700	15,300	2,100	3,000	**51117**	110	87	100	95	1	0.444
	125	31	1	95.5	264	9,700	26,900	1,600	2,200	**51217**	125	88	109	101	1	1.25
	150	49	1.5	201	490	20,500	50,000	1,100	1,600	**51317**	150	88	124	111	1.5	3.52
	180	72	2.1	288	685	29,400	70,000	840	1,200	∗**51417**	177	88	141	124	2	9.17
90	120	22	1	59.5	190	6,100	19,400	1,900	2,700	**51118**	120	92	108	102	1	0.687
	135	35	1.1	117	325	11,900	33,000	1,400	2,000	**51218**	135	93	117	108	1	1.7
	155	50	1.5	198	490	20,200	50,000	1,100	1,600	**51318**	155	93	129	116	1.5	3.74
	190	77	2.1	305	750	31,500	76,500	790	1,100	∗**51418**	187	93	149	131	2	11

❶ Smallest allowable dimension for chamfer dimension r. ❷ Maximum allowable dimension for shaft washer outer dimension d_1. ❸ Maximum allowable dimension for housing washer inner dimension D_1. Note: Bearing numbers marked "∗" signify bearings where the bearing shaft washer outer diameter is smaller than the housing shaft washer outer diameter. Therefore when using these bearings, it is possible to use the housing bore as is, without providing a ground undercut on the outer diameter section of the bearing shaft washer as shown in the drawing.





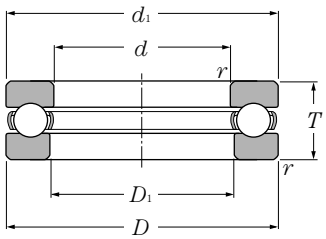
Equivalent bearing load
dynamic
$P_a = F_a$

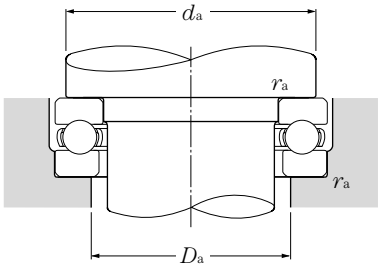
static
$P_{oa} = F_a$

d 10～200mm

Boundary dimensions mm				Basic load ratings dynamic kN		Basic load ratings static kgf		Limiting speeds rpm		Bearing numbers	Dimensions mm		Abutment and fillet dimensions mm			Mass kg
d	D	T	$r_{s\,min}$ ❶	C_a	C_{oa}	C_a	C_{oa}	grease	oil		$d_{1s\,max}$ ❷	$D_{1s\,min}$ ❸	d_a min	D_a max	r_{as} max	(approx.)
100	135	25	1	85.0	268	8,700	27,300	1,700	2,400	**51120**	135	102	121	114	1	0.987
	150	38	1.1	147	410	14,900	42,000	1,300	1,800	**51220**	150	103	130	120	1	2.29
	170	55	1.5	237	595	24,100	60,500	990	1,400	**51320**	170	103	142	128	1.5	4.88
	210	85	3	370	970	37,500	99,000	710	1,000	∗**51420**	205	103	165	145	2.5	14.7
110	145	25	1	87.0	288	8,900	29,400	1,600	2,300	**51122**	145	112	131	124	1	1.07
	160	38	1.1	153	450	15,600	46,000	1,200	1,800	**51222**	160	113	140	130	1	2.46
	190	63	2	267	705	27,300	72,000	870	1,200	∗**51322**	187	113	158	142	2	7.67
120	155	25	1	89.0	310	9,100	31,500	1,500	2,200	**51124**	155	122	141	134	1	1.11
	170	39	1.1	154	470	15,700	48,000	1,200	1,700	**51224**	170	123	150	140	1	2.71
	210	70	2.1	296	805	30,000	82,500	780	1,100	∗**51324**	205	123	173	157	2	10.8
130	170	30	1	104	350	10,600	36,000	1,300	1,900	**51126**	170	132	154	146	1	1.73
	190	45	1.5	191	565	19,400	57,500	1,000	1,500	∗**51226**	187	133	166	154	1.5	4.22
	225	75	2.1	330	960	33,500	97,500	720	1,000	∗**51326**	220	134	186	169	2	12.7
140	180	31	1	107	375	10,900	38,500	1,300	1,800	∗**51128**	178	142	164	156	1	1.9
	200	46	1.5	193	595	19,700	60,500	980	1,400	∗**51228**	197	143	176	164	1.5	4.77
	240	80	2.1	350	1,050	35,500	107,000	670	960	∗**51328**	235	144	199	181	2	15.3
150	190	31	1	109	400	11,100	41,000	1,200	1,800	∗**51130**	188	152	174	166	1	2
	215	50	1.5	220	685	22,400	70,000	900	1,300	∗**51230**	212	153	189	176	1.5	5.87
	250	80	2.1	360	1,130	37,000	115,000	660	940	∗**51330**	245	154	209	191	2	16.1
160	200	31	1	112	425	11,400	43,500	1,200	1,700	∗**51132**	198	162	184	176	1	2.1
	225	51	1.5	223	720	22,800	73,000	870	1,200	∗**51232**	222	163	199	186	1.5	6.32
	270	87	3	450	1,470	45,500	150,000	600	860	∗**51332**	265	164	225	205	2.5	20.7
170	215	34	1.1	134	510	13,700	52,000	1,100	1,600	∗**51134**	213	172	197	188	1	2.77
	240	55	1.5	261	835	26,600	85,000	810	1,200	∗**51234**	237	173	212	198	1.5	7.81
	280	87	3	465	1,570	47,000	160,000	590	840	∗**51334**	275	174	235	215	2.5	21.6
180	225	34	1.1	135	525	13,700	54,000	1,100	1,500	∗**51136**	222	183	207	198	1	2.92
	250	56	1.5	266	875	27,100	89,000	780	1,100	∗**51236**	247	183	222	208	1.5	8.34
	300	95	3	490	1,700	50,000	174,000	540	780	∗**51336**	295	184	251	229	2.5	27.5
190	240	37	1.1	170	655	17,400	67,000	980	1,400	∗**51138**	237	193	220	210	1	3.75
	270	62	2	310	1,060	31,500	108,000	710	1,000	∗**51238**	267	194	238	222	2	11.3
	320	105	4	545	1,950	55,500	199,000	500	710	∗**51338**	315	195	266	244	3	35
200	250	37	1.1	172	675	17,500	69,000	960	1,400	∗**51140**	247	203	230	220	1	3.92

❶ Smallest allowable dimension for chamfer dimension r. ❷ Maximum allowable dimension for shaft washer outer dimension d_a. ❸ Maximum allowable dimension for housing washer inner dimension D_a. Note: Bearing numbers marked "∗" signify bearings where the bearing shaft washer outer diameter is smaller than the housing shaft washer outer diameter. Therefore when using these bearings, it is possible to use the housing bore as is, without providing a ground undercut on the outer diameter section of the bearing shaft washer as shown in the drawing.





Equivalent bearing load
dynamic
$P_a = F_a$

static
$P_{oa} = F_a$

d 200～530mm

Boundary dimensions mm				Basic load ratings dynamic kN		Basic load ratings static kgf		Limiting speeds rpm		Bearing numbers	Dimensions mm		Abutment and fillet dimensions mm			Mass kg
d	D	T	$r_{s\,min}$ ❶	C_a	C_{oa}	C_a	C_{oa}	grease	oil		$d_{1s\,max}$ ❷	$D_{1s\,min}$ ❸	d_a min	D_a max	r_{as} max	(approx.)
200	280	62	2	315	1,110	32,000	113,000	700	990	∗51240	277	204	248	232	2	11.8
	340	110	4	595	2,220	61,000	227,000	470	670	∗51340	335	205	282	258	3	41.8
220	270	37	1.1	177	740	18,100	75,500	920	1,300	∗51144	267	223	250	240	1	4.27
	300	63	2	325	1,210	33,000	123,000	660	950	∗51244	297	224	268	252	2	13
240	300	45	1.5	228	935	23,200	95,000	780	1,100	∗51148	297	243	276	264	1.5	6.87
	340	78	2.1	415	1,650	42,500	168,000	550	790	∗51248	335	244	299	281	2	22.4
260	320	45	1.5	232	990	23,600	101,000	750	1,100	∗51152	317	263	296	284	1.5	7.38
	360	79	2.1	440	1,810	45,000	184,000	530	760	∗51252	355	264	319	301	2	24.2
280	350	53	1.5	305	1,270	31,000	130,000	650	940	∗51156	347	283	322	308	1.5	11.8
	380	80	2.1	460	1,970	47,000	201,000	510	730	∗51256	375	284	339	321	2	26.1
300	380	62	2	355	1,560	36,000	159,000	580	820	∗51160	376	304	348	332	2	17.2
	420	95	3	590	2,680	60,000	273,000	440	630	∗51260	415	304	371	349	2.5	40.6
320	400	63	2	365	1,660	37,000	169,000	550	790	∗51164	396	324	368	352	2	18.4
340	420	64	2	375	1,760	38,000	179,000	530	760	∗51168	416	344	388	372	2	19.7
360	440	65	2	380	1,860	39,000	190,000	510	730	∗51172	436	364	408	392	2	21.1
380	460	65	2	380	1,910	39,000	195,000	500	710	∗51176	456	384	428	412	2	22.3
400	480	65	2	390	2,010	40,000	205,000	480	690	∗51180	476	404	448	432	2	23.3
420	500	65	2	395	2,110	40,500	215,000	470	670	∗51184	495	424	468	452	2	24.4
440	540	80	2.1	515	2,850	52,500	291,000	400	580	∗51188	535	444	499	481	2	40
460	560	80	2.1	525	3,000	53,500	305,000	390	560	∗51192	555	464	519	501	2	41.6
480	580	80	2.1	525	3,100	54,000	315,000	380	550	∗51196	575	484	539	521	2	43.3
500	600	80	2.1	575	3,400	58,500	345,000	370	540	511/500	595	504	559	541	2	45
530	640	85	3	645	4,000	66,000	405,000	350	500	511/530	635	534	595	575	2.5	55.8

❶ Smallest allowable dimension for chamfer dimension r. ❷ Maximum allowable dimension for shaft washer outer dimension d_1. ❸ Maximum allowable dimension for housing washer inner dimension D_1. Note: Bearing numbers marked "∗" signify bearings where the bearing shaft washer outer diameter is smaller than the housing shaft washer outer diameter. Therefore when using these bearings, it is possible to use the housing bore as is, without providing a ground undercut on the outer diameter section of the bearing shaft washer as shown in the drawing.