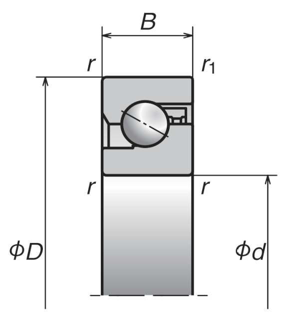
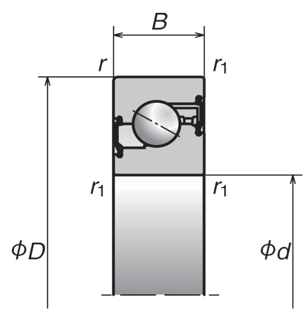
Ball screw support bearings UBC

For high stiffness application

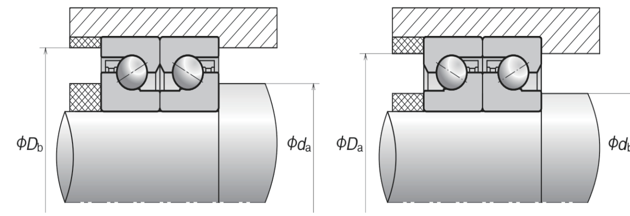
d: 15 ~ 60mm



Open type



Sealed type



Multi-row assembled bearings' calculation coefficient table for preload, axial stiffness, starting torque:

	TFT / TBT	QFC / QBC	QFT / QBT
Preload coefficient	1. 36	2. 00	1. 57
axial stiffness coefficient	1. 49	2. 00	1. 89
starting torque coefficient	1. 35	2. 00	1. 55

(Open type)

Part No.	Basic dimensions (mm) d	D	B	r (min.)	r_1 (min.)	Dimensions for assembly (mm) D_b (max.)	d_a (min.)	D_a (max.)	d_b (min.)	Recommended filled amount of lubrication grease (cc/row)	Contact angle (degree)	Limiting speed② (rpm) by grease	by oil	Ref. weight (kg)	Preload (DB,DF assembly) (N) H	Axial stiffness (DB,DF assembly) (N/μm) H	Ref. starting torque④ (DB,DF assembly) (N·m) H	Basic static loading ratings (Ca) (Based on number of rows carrying axial loads) 1row(kN)	2rows (kN)	3rows (kN)	Limiting axial load ratings③ (Based on number of rows carrying axial loads) 1row(kN)	2rows (kN)	3rows (kN)
15TAC47C	15	47	15	1	0.6	42	19.5	41	19.5	2.2	60	6900	9200	0.146	1450	630	0.09	23.0	37.5	49.5	26.6	53.0	79.5
17TAC47C	17	47	15	1	0.6	42	23	41	23	2.2	60	6900	9200	0.14	1450	630	0.09	23.0	37.5	49.5	26.6	53.0	79.5
20TAC47C	20	47	15	1	0.6	42	25	41	25	2.2	60	6900	9200	0.135	1450	630	0.09	23.0	37.5	49.5	26.6	53.0	79.5
25TAC62C	25	62	15	1	0.6	57	31	56	31	3.0	60	5200	6900	0.252	2280	850	0.15	29.9	48.5	64.5	40.5	81.5	122
30TAC62C	30	62	15	1	0.6	57	36	56	36	3.2	60	4900	6400	0.224	2400	890	0.16	30.5	50.0	66.0	43.0	86.0	129
35TAC72C	35	72	15	1	0.6	67	42	66	42	3.8	60	4100	5800	0.31	2750	1030	0.18	32.5	53.0	70.5	50.0	100	150
40TAC72C	40	72	15	1	0.6	67	47	66	47	3.9	60	4100	5500	0.275	2860	1080	0.19	33.5	54.0	72.0	52.0	104	157
40TAC90C	40	90	20	1	0.6	85	48	84	48	8.8	60	3500	4600	0.674	3450	1150	0.29	62.0	101	134	89.5	179	269
45TAC75C	45	75	15	1	0.6	68	54	67	54	4.2	60	3700	4900	0.27	3100	1170	0.2	34.5	56.0	74.5	57.0	114	170
45TAC100C	45	100	20	1	0.6	93	55	92	55	9.7	60	3000	4100	0.842	4440	1340	0.4	64.5	105	140	99.0	198	298
50TAC100C	50	100	20	1	0.6	92	60	91	60	10.2	60	3000	3900	0.778	4650	1410	0.42	66.0	107	142	104	208	310
55TAC100C	55	100	20	1	0.6	92	63	91	63	10.2	60	3000	3900	0.714	4650	1410	0.42	66.0	107	142	104	208	310
55TAC120C	55	120	20	1	0.6	112	63	111	63	12	60	2500	3500	1.23	5450	1660	0.49	70.5	115	153	123	246	370
60TAC120C	60	120	20	1	0.6	112	70	111	70	12	60	2500	3500	1.16	5450	1660	0.49	70.5	115	153	123	246	370

(Contact seal type)

Part No.①	Basic dimensions (mm) d	D	B	r (min.)	r_1 (min.)	Dimensions for assembly(mm) D_b (max.)	d_a (min.)	D_a (max.)	d_b (min.)	Contact angle (degree)	Limiting speed② (rpm) by grease	Ref. weight (kg)	Preload (DB,DF assembly) (N) H	Axial stiffness (DB,DF assembly) (N/μm) H	Ref. starting torque④ (DB,DF assembly) (N·m) H	Basic static loading ratings (Ca) (Based on number of rows carrying axial loads) 1row(kN)	2rows (kN)	3rows (kN)	Limiting axial load ratings③ (Based on number of rows carrying axial loads) 1row(kN)	2rows (kN)	3rows (kN)
*15TAC47CDDG	15	47	15	1	0.6	42	19.5	41	19.5	60	6900	0.146	1450	630	0.09	23.0	37.5	49.5	26.6	53.0	79.5
*17TAC47CDDG	17	47	15	1	0.6	42	23	41	23	60	6900	0.14	1450	630	0.09	23.0	37.5	49.5	26.6	53.0	79.5
*20TAC47CDDG	20	47	15	1	0.6	42	25	41	25	60	6900	0.135	1450	630	0.09	23.0	37.5	49.5	26.6	53.0	79.5
*25TAC62CDDG	25	62	15	1	0.6	57	31	56	31	60	5200	0.252	2280	850	0.15	29.9	48.5	64.5	40.5	81.5	122
30TAC62CDDG	30	62	15	1	0.6	57	36	56	36	60	4900	0.224	2400	850	0.16	30.5	50.0	66.0	43.0	86.0	129
35TAC72CDDG	35	72	15	1	0.6	67	42	66	42	60	4100	0.31	2750	1030	0.18	32.5	53.0	70.5	50.0	100	150
40TAC72CDDG	40	72	15	1	0.6	67	47	66	47	60	4100	0.275	2860	1080	0.19	33.5	54.0	72.0	52.0	104	157
40TAC90CDDG	40	90	20	1	0.6	85	48	84	48	60	3500	0.674	3450	1150	0.29	62.0	101	134	89.5	179	269
45TAC100CDDG	45	100	20	1	0.6	93	55	92	55	60	3000	0.842	4440	1340	0.40	64.5	105	140	99.0	198	298
50TAC100CDDG	50	100	20	1	0.6	92	60	91	60	60	3000	0.778	4650	1410	0.42	66.0	107	142	104	208	310
55TAC100CDDG	55	100	20	1	0.6	92	63	91	63	60	3000	0.714	4650	1410	0.42	66.0	107	142	104	208	310

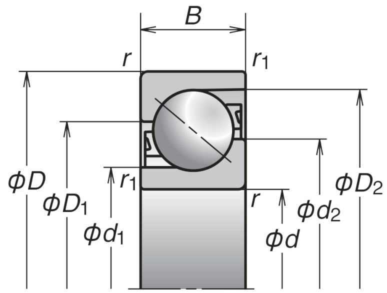
Note:

① Non-contact seals are available for part no. marked with *.
② The limiting speed is the value applicable to H preload. This value is not affected by the bearing arrangement.
③The allowable axial load is 0.7 times of the limiting load.
④The starting torques are under grease lubrication. For oil lubrication, they are 1.4 times the values in the above table. The impact of contact-seal is not considered.
⑤The assembly-related dimensions are recommended values for general machine tool applications. For heavy-duty applications, please contact us for info.

Ball screw support bearings UBC

For high-load driving application

d : 15 ~ 180mm



Multi-row assembled bearings' calculation coefficient table for preload, axial stiffness, starting torque:

Rows of carrying laods Items	2rows		3rows		4rows
	TFT	QFC	QFT	PFC	PFT
	TBT	QBC	QBT	PBC	PBT
Preload coefficient	1. 36	2. 00	1. 57	2. 42	1. 72
axial stiffness coefficient	1. 49	2. 00	1. 89	2. 51	2. 24
starting torque coefficient	1. 35	2. 00	1. 55	2. 41	1. 68

Part No.①	Basic dimensions (mm)					Dimensions for assembly (mm)				Recommended filled amount of lubrication grease (cc/row)	Contact angle (degree)	Limiting speed ② (rpm)		Ref. weight (kg)
	d	D	B	r (min.)	r1 (min.)	d1	d2	D1	D2			by grease	by oil	
15TAC02D	15	35	11	0.6	0.3	19.1	24.5	26	31.9	1	55	12000	14800	0.047
20TAC03D	20	52	15	1.1	0.6	27.2	35.3	37.5	46.1	2.7	55	8300	10300	0.155
25TAC02D	25	52	15	1	0.6	30.8	38.1	39.6	47.3	3	55	7700	9700	0.137
TAC35-3	35	90	23	1.5	1	50.4	64.2	67.1	81.7	14	55	4600	6000	0.712
40TAC03D	40	90	23	1.5	1	50.4	64.2	67.1	81.7	14	55	4600	5700	0.659
TAC40-3	40	110	27	2	1	62	79.1	82.4	100.6	25	55	3700	5000	1.28
45TAC03D	45	100	25	1.5	1	56.5	71.7	74.7	90.8	18	55	4100	5200	0.877
TAC45-3	45	110	27	2	1	62	79.1	82.4	100.6	25	55	3700	4800	1.21
50TAC03D	50	110	27	2	1	62	79.1	82.4	100.6	25	55	3700	4700	1.14
TAC50-3	50	130	31	2.1	1.1	73.9	93.8	98	119	40	55	3100	4200	2.00
55TAC03D	55	120	29	2	1	68	86.4	90.2	109.7	32	55	3400	4300	1.44
60TAC03D	60	130	31	2.1	1.1	73.9	93.8	98	119	40	55	3100	3900	1.80
TAC60-3	60	170	39	2.1	1.1	98.5	123.6	128.7	157.5	85	55	2400	3300	4.47
70TAC03D	70	150	35	2.1	1.1	86.3	108.6	113.4	137.8	59	55	2700	3400	2.67
75TAC03D	75	160	37	2.1	1.1	92.4	116.2	121	146.2	67	55	2500	3200	3.20
80TAC03D	80	170	39	2.1	1.1	98.5	123.6	128.7	157.5	85	55	2400	3000	3.80
TAC80-3	80	215	47	3	1.1	124	154.9	160.4	194.5	156	55	1900	2600	8.66
100TAC03D	100	215	47	3	1.1	124	154.9	160.4	194.5	156	55	1900	2400	7.54
TAC100-3	100	260	55	3	1.1	150.5	186.9	193.4	231.7	254	55	1500	2100	14.8
120TAC03D	120	260	55	3	1.1	150.5	186.9	193.4	231.7	254	55	1500	2000	13.3
*TAC120-3M	120	300	62	4	1.5	170.8	215.3	224.1	265.7	336	55	1300	1800	24.5
*140TAC03DM	140	300	62	4	1.5	170.8	215.3	224.1	265.7	336	55	1300	1700	22.5
*TAC140-3M	140	340	68	4	1.5	197.5	246.2	254.3	298.8	442	55	1200	1600	34.5
*160TAC03DM	160	340	68	4	1.5	197.5	246.2	254.3	298.8	442	55	1200	1500	32.0
*TAC160-3M	160	380	75	4	1.5	221.1	275.6	284.9	334.9	624	55	1000	1400	46.8
*180TAC03DM	180	380	75	4	1.5	221.1	275.6	284.9	334.9	624	55	1000	1400	43.7

Part No.①	Preload③ (DB,DF assembly) (N)	Axial stiffness③ (DB,DF assembly) (N/μm)	Ref. starting torque④ (DB,DF assembly) (N·m)	Basic static loading ratings (Ca) (Based on number of rows carrying axial loads)					Limiting axial load ratings⑤ (Based on number of rows carrying axial loads)				
	H	H	H	1row (kN)	2rows (kN)	3rows (kN)	4rows (kN)	5rows (kN)	1row (kN)	2rows (kN)	3rows (kN)	4rows (kN)	5rows (kN)
15TAC02D	400	290	0.017	21.0	34.0	45.0	55.5	64.5	18.6	37.5	56	74.5	93
20TAC03D	830	430	0.026	42.5	69.5	92.0	113	132	38.5	77	116	154	193
25TAC02D	690	430	0.036	37.0	60	79.5	97.5	114	36	72.5	109	145	181
TAC35-3	2500	780	0.26	113	184	244	299	350	118	235	355	470	590
40TAC03D	2500	780	0.26	113	184	244	299	350	118	235	355	470	590
TAC40-3	3900	970	0.50	166	270	360	440	515	181	360	540	720	905
45TAC03D	2800	830	0.31	133	216	287	350	410	142	283	425	565	710
TAC45-3	3900	970	0.50	166	270	360	440	515	181	360	540	720	905
50TAC03D	3900	970	0.50	166	270	360	440	515	181	360	540	720	905
TAC50-3	5200	1120	0.78	218	355	470	575	670	242	485	725	965	1210
55TAC03D	4280	1060	0.68	190	310	410	500	585	210	420	630	840	1050
60TAC03D	5200	1120	0.78	218	355	470	575	670	242	485	725	965	1210
TAC60-3	8050	1400	1.5	305	495	660	805	940	390	775	1170	1550	1940
70TAC03D	6400	1250	1.1	262	425	565	690	810	305	615	920	1230	1530
75TAC03D	7230	1330	1.3	283	460	610	750	875	345	690	1040	1380	1730
80TAC03D	8050	1400	1.5	305	495	660	805	940	390	775	1170	1550	1940
TAC80-3	12400	880	0.15	420	685	910	1110	1300	510	1020	1530	2040	2550
100TAC03D	12400	880	0.15	420	685	910	1110	1300	510	1020	1530	2040	2550
TAC100-3	16200	1050	0.21	520	850	1130	1380	1610	680	1360	2040	2720	3400
120TAC03D	16200	1050	0.21	520	850	1130	1380	1610	680	1360	2040	2720	3400
*TAC120-3M	17100	1130	0.24	640	1040	1380	1680	1970	794	1590	2380	3200	3950
*140TAC03DM	17100	1130	0.24	640	1040	1380	1680	1970	794	1590	2380	3200	3950
*TAC140-3M	18500	1240	0.27	725	1180	1570	1920	2240	1040	2080	3100	4150	5200
*160TAC03DM	18500	1240	0.27	725	1180	1570	1920	2240	1040	2080	3100	4150	5200
*TAC160-3M	19400	1310	0.30	815	1330	1760	2150	2520	1360	2720	4100	5450	6800
*180TAC03DM	19400	1310	0.30	815	1330	1760	2150	2520	1360	2720	4100	5450	6800

Note:
① The part no. marked with * are bearings with lifting threaded holes. For details, please contact us.
② The limiting speed is as per each bearing with standard preload. This value is not affected by the rows of bearing arrangement.
③ For part no. with d>=80mm (except part no. 80TAC03D), the value is when they are with EL preload.
④ The starting torques are under grease lubrication.
⑤ The allowable axial load is 0.7 times of the limiting axial load.