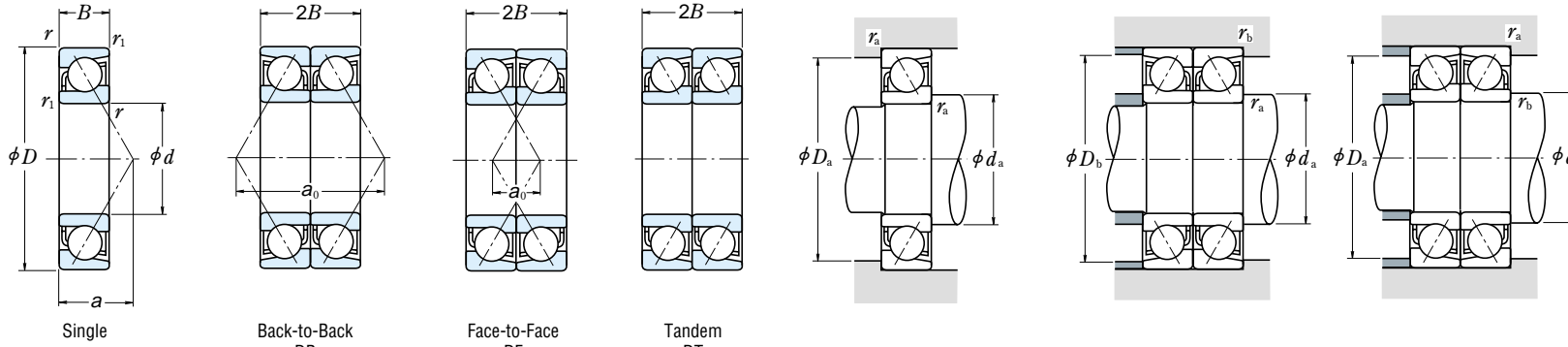


SINGLE/MATCHED MOUNTINGS

Bore Diameter 10 – 17 mm



Boundary Dimensions (mm)					Basic Load Ratings (Single) (N)				Factor $f_0$	Limiting Speeds <sup>(1)</sup> (min <sup>-1</sup> )		Eff. Load Centers (mm) $a$	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.
$d$	$D$	$B$	$r$ min.	$r_1$ min.	$C_r$	$C_{0r}$	$C_r$	$C_{0r}$		Grease	Oil		$d_a$ min.	$D_a$ max.	$r_a$ max.	
10	22	6	0.3	0.15	2 880	1 450	294	148	—	40 000	56 000	6.7	12.5	19.5	0.3	0.009
	22	6	0.3	0.15	3 000	1 520	305	155	14.1	48 000	63 000	5.1	12.5	19.5	0.3	0.009
	26	8	0.3	0.15	5 350	2 600	550	266	—	32 000	43 000	9.2	12.5	23.5	0.3	0.019
	26	8	0.3	0.15	5 300	2 490	540	254	12.6	45 000	63 000	6.4	12.5	23.5	0.3	0.021
	30	9	0.6	0.3	5 400	2 710	555	276	—	28 000	38 000	10.3	15	25	0.6	0.032
	30	9	0.6	0.3	5 000	2 500	510	255	—	20 000	28 000	12.9	15	25	0.6	0.032
	30	9	0.6	0.3	5 400	2 610	550	266	13.2	40 000	56 000	7.2	15	25	0.6	0.036
	35	11	0.6	0.3	9 300	4 300	950	440	—	20 000	26 000	12.0	15	30	0.6	0.053
	35	11	0.6	0.3	8 750	4 050	890	410	—	18 000	24 000	14.9	15	30	0.6	0.054
12	24	6	0.3	0.15	3 200	1 770	325	181	—	38 000	53 000	7.2	14.5	21.5	0.3	0.011
	24	6	0.3	0.15	3 350	1 860	340	189	14.7	45 000	63 000	5.4	14.5	21.5	0.3	0.011
	28	8	0.3	0.15	5 800	2 980	590	305	—	28 000	38 000	9.8	14.5	25.5	0.3	0.021
	28	8	0.3	0.15	5 800	2 900	590	296	13.2	40 000	56 000	6.7	14.5	25.5	0.3	0.024
	32	10	0.6	0.3	8 000	4 050	815	410	—	26 000	34 000	11.4	17	27	0.6	0.037
	32	10	0.6	0.3	7 450	3 750	760	380	—	18 000	26 000	14.2	17	27	0.6	0.038
	32	10	0.6	0.3	7 900	3 850	805	395	12.5	36 000	50 000	7.9	17	27	0.6	0.041
	37	12	1	0.6	9 450	4 500	965	460	—	18 000	24 000	13.1	18	31	1	0.060
	37	12	1	0.6	8 850	4 200	900	425	—	16 000	22 000	16.3	18	31	1	0.062
15	28	7	0.3	0.15	4 550	2 530	465	258	—	32 000	43 000	8.5	17.5	25.5	0.3	0.015
	28	7	0.3	0.15	4 750	2 640	485	270	14.5	38 000	53 000	6.4	17.5	25.5	0.3	0.015
	32	9	0.3	0.15	6 100	3 450	625	350	—	24 000	32 000	11.3	17.5	29.5	0.3	0.030
	32	9	0.3	0.15	6 250	3 400	635	345	14.1	34 000	48 000	7.6	17.5	29.5	0.3	0.034
	35	11	0.6	0.3	8 650	4 650	880	475	—	22 000	30 000	12.7	20	30	0.6	0.045
	35	11	0.6	0.3	7 950	4 300	810	440	—	16 000	22 000	16.0	20	30	0.6	0.046
	35	11	0.6	0.3	8 650	4 550	885	460	13.2	32 000	45 000	8.8	20	30	0.6	0.052
	42	13	1	0.6	13 400	7 100	1 370	720	—	16 000	22 000	14.7	21	36	1	0.084
	42	13	1	0.6	12 500	6 600	1 270	670	—	14 000	19 000	18.5	21	36	1	0.086
17	30	7	0.3	0.15	4 750	2 800	485	286	—	30 000	40 000	9.0	19.5	27.5	0.3	0.017
	30	7	0.3	0.15	5 000	2 940	510	299	14.8	34 000	48 000	6.6	19.5	27.5	0.3	0.017
	35	10	0.3	0.15	6 400	3 800	655	390	—	22 000	30 000	12.5	19.5	32.5	0.3	0.040
	35	10	0.3	0.15	6 600	3 800	675	390	14.5	32 000	43 000	8.5	19.5	32.5	0.3	0.044
	40	12	0.6	0.3	10 800	6 000	1 100	610	—	20 000	28 000	14.2	22	35	0.6	0.067
	40	12	0.6	0.3	9 950	5 500	1 010	565	—	14 000	19 000	18.0	22	35	0.6	0.068
	40	12	0.6	0.3	10 900	5 850	1 110	595	13.3	28 000	38 000	9.8	22	35	0.6	0.075
	47	14	1	0.6	15 900	8 650	1 630	880	—	14 000	19 000	16.2	23	41	1	0.116
	47	14	1	0.6	14 800	8 000	1 510	820	—	13 000	17 000	20.4	23	41	1	0.118

Notes <sup>(1)</sup> For applications operating near the limiting speed, refer to Page B49.  
<sup>(2)</sup> The suffixes A, A5, B, and C represent contact angles of 30°, 25°, 40°, and 15° respectively.

Dynamic Equivalent Load  $P = X F_r + Y F_a$

Contact Angle	$i f_0 F_a^*$ $C_{0r}$	$e$	Single, DT				DB or DF			
			$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
			X	Y	X	Y	X	Y	X	Y
15°	0.178	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39
	0.357	0.40	1	0	0.44	1.40	1	1.57	0.72	2.28
	0.714	0.43	1	0	0.44	1.30	1	1.46	0.72	2.11
	1.07	0.46	1	0	0.44	1.23	1	1.38	0.72	2.00
	1.43	0.47	1	0	0.44	1.19	1	1.34	0.72	1.93
	2.14	0.50	1	0	0.44	1.12	1	1.26	0.72	1.82
	3.57	0.55	1	0	0.44	1.02	1	1.14	0.72	1.66
	5.35	0.56	1	0	0.44	1.00	1	1.12	0.72	1.63
	25°	—	0.68	1	0	0.41	0.87	1	0.92	0.67
30°	—	0.80	1	0	0.39	0.76	1	0.78	0.63	1.24
40°	—	1.14	1	0	0.35	0.57	1	0.55	0.57	0.93

\*For  $i$ , use 2 for DB, DF and 1 for DT

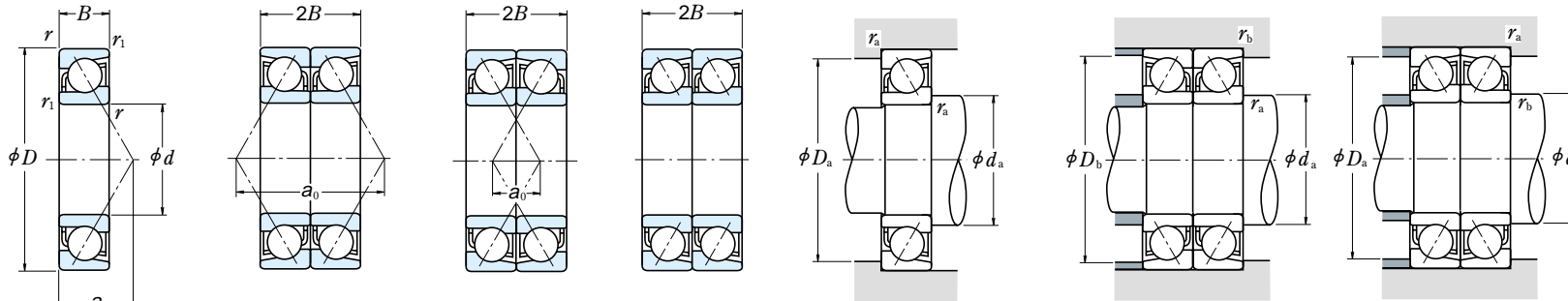
Static Equivalent Load  $P_0 = X_0 F_r + Y_0 F_a$

Contact Angle	Single, DT		DB or DF		Single or DT mounting When $F_r > 0.5 F_r + Y_0 F_a$ use $P_0 = F_r$
	$X_0$	$Y_0$	$X_0$	$Y_0$	
15°	0.5	0.46	1	0.92	—
25°	0.5	0.38	1	0.76	—
30°	0.5	0.33	1	0.66	—
40°	0.5	0.26	1	0.52	—

Bearing Numbers <sup>(2)</sup>	Basic Load Ratings (Matched) (N)				Limiting Speeds <sup>(1)</sup> (Matched) (min <sup>-1</sup> )		Load Center Spacings (mm)		Abutment and Fillet Dimensions (mm)				
	Single	Duplex	$C_r$	$C_{0r}$	Grease	Oil	DB $a_0$	DF	$d_b$ <sup>(3)</sup> min.	$D_b$ max.	$r_b$ <sup>(3)</sup> max.		
<b>7900 A5 DB DF DT</b>	—	—	4 700	2 900	32 000	43 000	13.5	1.5	—	20.8	0.15		
<b>7900 C DB DF DT</b>	—	—	4 900	3 050	38 000	53 000	10.3	1.7	—	20.8	0.15		
<b>7000 A DB DF DT</b>	—	—	8 750	5 200	890	530	24 000	34 000	18.4	2.4	11.2	24.8	0.15
<b>7000 C DB DF DT</b>	—	—	8 650	5 000	880	510	36 000	50 000	12.8	3.2	—	24.8	0.15
<b>7200 A DB DF DT</b>	—	—	8 800	5 400	900	555	22 000	30 000	20.5	2.5	12.5	27.5	0.3
<b>7200 B DB DF DT</b>	—	—	8 100	5 000	825	510	16 000	22 000	25.8	7.8	12.5	27.5	0.3
<b>7200 C DB DF DT</b>	—	—	8 800	5 200	895	530	32 000	45 000	14.4	3.6	—	27.5	0.3
<b>7300 A DB DF DT</b>	—	—	15 100	8 600	1 540	880	16 000	22 000	24.0	2.0	12.5	32.5	0.3
<b>7300 B DB DF DT</b>	—	—	14 200	8 100	1 450	825	14 000	20 000	29.9	7.9	12.5	32.5	0.3
<b>7901 A5 DB DF DT</b>	—	—	5 200	3 550	530	360	30 000	43 000	14.4	2.4	—	22.8	0.15
<b>7901 C DB DF DT</b>	—	—	5 450	3 700	555	380	36 000	50 000	10.8	1.2	—	22.8	0.15
<b>7001 A DB DF DT</b>	—	—	9 400	5 950	955	610	22 000	30 000	19.5	3.5	13.2	26.8	0.15
<b>7001 C DB DF DT</b>	—	—	9 400	5 800	960	590	32 000	45 000	13.4	2.6	—	26.8	0.15
<b>7201 A DB DF DT</b>	—	—	13 000	8 050	1 330	820	20 000	28 000	22.7	2.7	14.5	29.5	0.3
<b>7201 B DB DF DT</b>	—	—	12 100	7 500	1 230	765	15 000	20 000	28.5	8.5	14.5	29.5	0.3
<b>7201 C DB DF DT</b>	—	—	12 800	7 700	1 310	785	30 000	40 000	15.9	4.1	—	29.5	0.3
<b>7301 A DB DF DT</b>	—	—	15 400	9 000	1 570	915	15 000	20 000	26.1	2.1	17	32	0.6
<b>7301 B DB DF DT</b>	—	—	14 400	8 400	1 460	855	13 000	18 000	32.6	8.6	17	32	0.6
<b>7902 A5 DB DF DT</b>	—	—	7 400	5 050	755	515	26 000	34 000	17.0	3.0	—	26.8	0.15
<b>7902 C DB DF DT</b>	—	—	7 750	5 300	790	540	30 000	43 000	12.8	1.2	—	26.8	0.15
<b>7002 A DB DF DT</b>	—	—	9 950	6 850	1 010	700	19 000	26 000	22.6	4.6	16.2	30.8	0.15
<b>7002 C DB DF DT</b>	—	—	10 100	6 750	1 030	690	28 000	38 000	15.3	2.7	—	30.8	0.15
<b>7202 A DB DF DT</b>	—	—	14 000	9 300	1 430	950	18 000	24 000	25.4	3.4	17.5	32.5	0.3
<b>7202 B DB DF DT</b>	—	—	12 900	8 600	1 310	875	13 000	18 000	32.0	10.0	17.5	32.5	0.3
<b>7202 C DB DF DT</b>	—	—	14 100	9 050	1 440	925	26 000	36 000	17.7	4.3	—	32.5	0.3
<b>7302 A DB DF DT</b>	—	—	21 800	14 200	2 220	1 440	13 000	17 000	29.5	3.5	20	37	0.6
<b>7302 B DB DF DT</b>	—	—	20 200	13 200	2 060	1 340	11 000	15 000	36.9	10.9	20	37	0.6
<b>7903 A5 DB DF DT</b>	—	—	7 750	5 600	790	570	24 000	32 000	18.0	4.0	—	28.8	0.15
<b>7903 C DB DF DT</b>	—	—	8 150	5 850	830	600	28 000	38 000	13.3	0.7	—	28.8	0.15
<b>7003 A DB DF DT</b>	—	—	10 400	7 650	1 060	780	17 000	24 000	25.0	5.0	18.2	33.8	0.15
<b>7003 C DB DF DT</b>	—	—	10 700	7 600	1 100	775	26 000	34 000	17.0	3.0	—	33.8	0.15
<b>7203 A DB DF DT</b>	—	—	17 600	12 000									

SINGLE/MATCHED MOUNTINGS

Bore Diameter 20 – 35 mm



Dynamic Equivalent Load  $P = X F_r + Y F_a$

Contact Angle	$i f_0 F_a^*$ $C_{0r}$	$e$	Single, DT				DB or DF			
			$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
			X	Y	X	Y	X	Y	X	Y
15°	0.178	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39
	0.357	0.40	1	0	0.44	1.40	1	1.57	0.72	2.28
	0.714	0.43	1	0	0.44	1.30	1	1.46	0.72	2.11
	1.07	0.46	1	0	0.44	1.23	1	1.38	0.72	2.00
	1.43	0.47	1	0	0.44	1.19	1	1.34	0.72	1.93
	2.14	0.50	1	0	0.44	1.12	1	1.26	0.72	1.82
	3.57	0.55	1	0	0.44	1.02	1	1.14	0.72	1.66
	5.35	0.56	1	0	0.44	1.00	1	1.12	0.72	1.63
25°	—	0.68	1	0	0.41	0.87	1	0.92	0.67	1.41
30°	—	0.80	1	0	0.39	0.76	1	0.78	0.63	1.24
40°	—	1.14	1	0	0.35	0.57	1	0.55	0.57	0.93

\*For  $i$ , use 2 for DB, DF and 1 for DT

Static Equivalent Load  $P_0 = X_0 F_r + Y_0 F_a$

Contact Angle	Single, DT		DB or DF		Single or DT mounting When $F_r > 0.5 F_r + Y_0 F_a$ use $P_0 = F_r$
	$X_0$	$Y_0$	$X_0$	$Y_0$	
15°	0.5	0.46	1	0.92	
25°	0.5	0.38	1	0.76	
30°	0.5	0.33	1	0.66	
40°	0.5	0.26	1	0.52	

	Boundary Dimensions (mm)				Basic Load Ratings (Single) (N)				Factor $f_0$	Limiting Speeds (1) (min <sup>-1</sup> )		Eff. Load Centers (mm) $a$	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.
	$d$	$D$	$B$	$r_{1 \min.}$	$C_r$	$C_{0r}$	$C_r$	$C_{0r}$		Grease	Oil		$d_a \min.$	$D_a \max.$	$r_a \max.$	
	20	37	9	0.3	0.15	6 600	4 050	675		410	—		24 000	32 000	11.1	

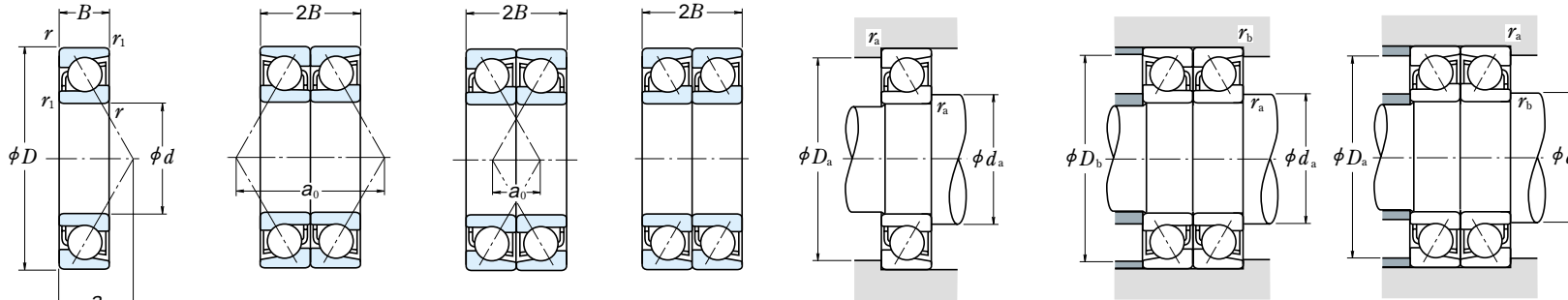
Bearing Numbers (°)	Basic Load Ratings (Matched) (N)				Limiting Speeds (1) (Matched) (min <sup>-1</sup> )		Load Center Spacings (mm)		Abutment and Fillet Dimensions (mm)				
	Single	Duplex	$C_r$	$C_{0r}$	Grease	Oil	DB	DF	$d_b$ (3) min.	$D_b \max.$	$r_b$ (3) max.		
	7904 A5 DB DF DT			10 700	8 100	1 090	825	19 000	26 000	22.3	4.3	—	35.8

Notes (1) For applications operating near the limiting speed, refer to Page B49.  
 (2) The suffixes A, A5, B, and C represent contact angles of 30°, 25°, 40°, and 15° respectively.

Note (3) For bearings marked — in the column for  $d_b$ ,  $D_b$  and  $r_b$  for shafts are  $d_a$  (min) and  $r_a$  (max) respectively.

SINGLE/MATCHED MOUNTINGS

Bore Diameter 40 – 55 mm



Single Back-to-Back DB Face-to-Face DF Tandem DT

	Boundary Dimensions (mm)					Basic Load Ratings (Single) (N)				Factor $f_0$	Limiting Speeds (1) (min <sup>-1</sup> )		Eff. Load Centers (mm) $a$	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.
	$d$	$D$	$B$	$r$ min.	$r_1$ min.	$C_r$	$C_{0r}$	$C_r$	$C_{0r}$		Grease	Oil		$d_a$ min.	$D_a$ max.	$r_a$ max.	
40	62	12	0.6	0.3	0.3	14 300	11 200	1 460	1 140	—	14 000	18 000	17.9	45	57	0.6	0.11
	62	12	0.6	0.3	0.3	15 100	11 700	1 540	1 200	15.7	16 000	22 000	12.8	45	57	0.6	0.109
	68	15	1	0.6	0.6	19 500	15 400	1 990	1 570	—	10 000	14 000	23.1	46	62	1	0.19
	68	15	1	0.6	0.6	20 600	15 900	2 100	1 620	15.4	15 000	20 000	14.7	46	62	1	0.213
	80	18	1.1	0.6	0.6	35 500	25 100	3 600	2 560	—	9 500	13 000	26.3	47	73	1	0.375
	80	18	1.1	0.6	0.6	32 000	23 000	3 250	2 340	—	6 700	9 000	34.2	47	73	1	0.383
	80	18	1.1	0.6	0.6	36 500	25 200	3 700	2 570	14.1	14 000	19 000	17.0	47	73	1	0.418
	90	23	1.5	1	1	49 000	33 000	5 000	3 350	—	7 100	9 000	30.3	49	81	1.5	0.633
	90	23	1.5	1	1	45 000	30 500	4 550	3 100	—	6 300	8 500	38.8	49	81	1.5	0.648
	45	68	12	0.6	0.3	0.3	15 100	12 700	1 540	1 290	—	12 000	17 000	19.2	50	63	0.6
68		12	0.6	0.3	0.3	16 000	13 400	1 630	1 360	16.0	14 000	20 000	13.6	50	63	0.6	0.129
75		16	1	0.6	0.6	23 100	18 700	2 360	1 910	—	9 500	13 000	25.3	51	69	1	0.25
75		16	1	0.6	0.6	24 400	19 300	2 490	1 960	15.4	14 000	19 000	16.0	51	69	1	0.274
85		19	1.1	0.6	0.6	39 500	28 700	4 050	2 930	—	8 500	12 000	28.3	52	78	1	0.411
85		19	1.1	0.6	0.6	36 000	26 200	3 650	2 680	—	6 300	8 500	36.8	52	78	1	0.421
85		19	1.1	0.6	0.6	41 000	28 800	4 150	2 940	14.2	12 000	17 000	18.2	52	78	1	0.468
100		25	1.5	1	1	63 500	43 500	6 450	4 450	—	6 300	8 500	33.4	54	91	1.5	0.848
100		25	1.5	1	1	58 500	40 000	5 950	4 100	—	5 600	7 500	42.9	54	91	1.5	0.869
50		72	12	0.6	0.3	0.3	15 900	14 200	1 630	1 450	—	11 000	15 000	20.2	55	67	0.6
	72	12	0.6	0.3	0.3	16 900	15 000	1 720	1 530	16.2	13 000	18 000	14.2	55	67	0.6	0.13
	80	16	1	0.6	0.6	24 500	21 100	2 500	2 150	—	8 500	12 000	26.8	56	74	1	0.263
	80	16	1	0.6	0.6	26 000	21 900	2 650	2 230	15.7	12 000	17 000	16.7	56	74	1	0.293
	90	20	1.1	0.6	0.6	41 500	31 500	4 200	3 200	—	8 000	11 000	30.2	57	83	1	0.466
	90	20	1.1	0.6	0.6	37 500	28 600	3 800	2 920	—	5 600	8 000	39.4	57	83	1	0.477
	90	20	1.1	0.6	0.6	43 000	31 500	4 350	3 250	14.5	12 000	16 000	19.4	57	83	1	0.528
	110	27	2	1	1	74 000	52 000	7 550	5 300	—	5 600	7 500	36.6	60	100	2	1.1
	110	27	2	1	1	68 000	48 000	6 950	4 900	—	5 000	6 700	47.1	60	100	2	1.12
	55	80	13	1	0.6	0.6	18 100	16 800	1 840	1 710	—	10 000	14 000	22.2	61	74	1
80		13	1	0.6	0.6	19 100	17 700	1 950	1 810	16.3	12 000	16 000	15.5	61	74	1	0.182
90		18	1.1	0.6	0.6	32 500	27 700	3 300	2 830	—	7 500	11 000	29.9	62	83	1	0.391
90		18	1.1	0.6	0.6	34 000	28 600	3 500	2 920	15.5	11 000	15 000	18.7	62	83	1	0.43
100		21	1.5	1	1	51 000	39 500	5 200	4 050	—	7 100	10 000	32.9	64	91	1.5	0.613
100		21	1.5	1	1	46 500	36 000	4 700	3 700	—	5 300	7 100	43.0	64	91	1.5	0.627
100		21	1.5	1	1	53 000	40 000	5 400	4 100	14.5	10 000	14 000	20.9	64	91	1.5	0.688
120		29	2	1	1	86 000	61 500	8 750	6 250	—	5 000	6 700	39.8	65	110	2	1.41
120		29	2	1	1	79 000	56 500	8 050	5 750	—	4 500	6 300	51.2	65	110	2	1.45

Notes (1) For applications operating near the limiting speed, refer to Page B49.  
(2) The suffixes A, A5, B, and C represent contact angles of 30°, 25°, 40°, and 15° respectively.

Dynamic Equivalent Load  $P = XF_r + YF_a$

Contact Angle	$i_0 F_a^*$ $C_{0r}$	$e$	Single, DT				DB or DF			
			$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
			X	Y	X	Y	X	Y	X	Y
15°	0.178	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39
	0.357	0.40	1	0	0.44	1.40	1	1.57	0.72	2.28
	0.714	0.43	1	0	0.44	1.30	1	1.46	0.72	2.11
	1.07	0.46	1	0	0.44	1.23	1	1.38	0.72	2.00
	1.43	0.47	1	0	0.44	1.19	1	1.34	0.72	1.93
	2.14	0.50	1	0	0.44	1.12	1	1.26	0.72	1.82
	3.57	0.55	1	0	0.44	1.02	1	1.14	0.72	1.66
	5.35	0.56	1	0	0.44	1.00	1	1.12	0.72	1.63
25°	—	0.68	1	0	0.41	0.87	1	0.92	0.67	1.41
30°	—	0.80	1	0	0.39	0.76	1	0.78	0.63	1.24
40°	—	1.14	1	0	0.35	0.57	1	0.55	0.57	0.93

\*For  $i$ , use 2 for DB, DF and 1 for DT

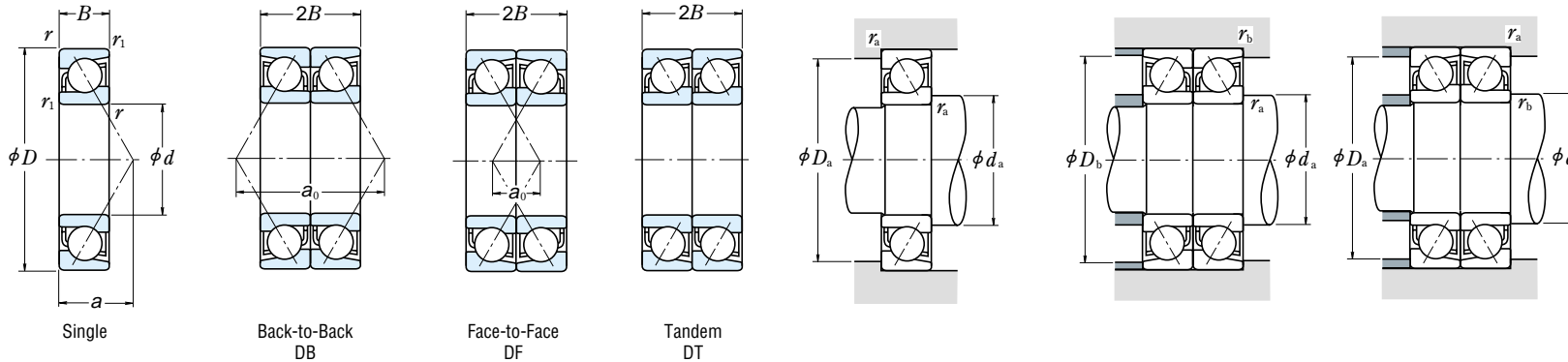
Static Equivalent Load  $P_0 = X_0 F_r + Y_0 F_a$

Contact Angle	Single, DT		DB or DF		Single or DT mounting When $F_r > 0.5 F_r + Y_0 F_a$ use $P_0 = F_r$
	$X_0$	$Y_0$	$X_0$	$Y_0$	
15°	0.5	0.46	1	0.92	
25°	0.5	0.38	1	0.76	
30°	0.5	0.33	1	0.66	
40°	0.5	0.26	1	0.52	

Bearing Numbers (°)	Basic Load Ratings (Matched) (N)	Limiting Speeds (1) (Matched) (min <sup>-1</sup> )	Load Center Spacings (mm)	Abutment and Fillet Dimensions (mm)							
					Single	Duplex	$C_r$	$C_{0r}$	Grease	Oil	DB
7908 A5 DB DF DT	23 300	22 300	2 370	2 270	11 000	15 000	35.8	11.8	—	59.5	0.3
7908 C DB DF DT	24 600	23 500	2 510	2 390	13 000	18 000	25.7	1.7	—	59.5	0.3
7008 A DB DF DT	31 500	31 000	3 250	3 150	8 500	11 000	46.2	16.2	45	63	0.6
7008 C DB DF DT	33 500	32 000	3 400	3 250	12 000	17 000	29.5	0.5	—	63	0.6
7208 A DB DF DT	57 500	50 500	5 850	5 150	7 500	10 000	52.6	16.6	45	75	0.6
7208 B DB DF DT	52 000	46 000	5 300	4 700	5 300	7 500	68.3	32.3	45	75	0.6
7208 C DB DF DT	59 000	50 500	6 000	5 150	11 000	15 000	34.1	1.9	—	75	0.6
7308 A DB DF DT	79 500	66 000	8 100	6 700	5 600	7 500	60.5	14.5	46	84	1
7308 B DB DF DT	73 000	60 500	7 400	6 200	5 000	6 700	77.5	31.5	46	84	1
7909 A5 DB DF DT	24 600	25 400	2 510	2 590	9 500	13 000	38.4	14.4	—	65.5	0.3
7909 C DB DF DT	26 000	26 800	2 660	2 730	12 000	16 000	27.1	3.1	—	65.5	0.3
7009 A DB DF DT	37 500	37 500	3 850	3 800	7 500	10 000	50.6	18.6	50	70	0.6
7009 C DB DF DT	39 500	38 500	4 050	3 950	11 000	15 000	32.1	0.1	—	70	0.6
7209 A DB DF DT	64 500	57 500	6 550	5 850	7 100	9 500	56.5	18.5	50	80	0.6
7209 B DB DF DT	58 500	52 500	5 950	5 350	5 000	6 700	73.5	35.5	50	80	0.6
7209 C DB DF DT	66 500	57 500	6 750	5 850	10 000	14 000	36.4	1.6	—	80	0.6
7309 A DB DF DT	103 000	87 000	10 500	8 900	5 000	6 700	66.9	16.9	51	94	1
7309 B DB DF DT	95 000	80 500	9 650	8 200	4 500	6 000	85.8	35.8	51	94	1
7910 A5 DB DF DT	25 900	28 400	2 640	2 900	9 000	12 000	40.5	16.5	—	69.5	0.3
7910 C DB DF DT	27 400	30 000	2 800	3 050	11 000	15 000	28.3	4.3	—	69.5	0.3
7010 A DB DF DT	40 000	42 000	4 050	4 300	7 100	9 500	53.5	21.5	55	75	0.6
7010 C DB DF DT	42 000	44 000	4 300	4 450	10 000	14 000	33.4	1.4	—	75	0.6
7210 A DB DF DT	67 000	63 000	6 850	6 400	6 300	9 000	60.4	20.4	55	85	0.6
7210 B DB DF DT	60 500	57 000	6 200	5 850	4 500	6 300	78.7	38.7	55	85	0.6
7210 C DB DF DT	69 500	63 500	7 100	6 450	9 500	13 000	38.7	1.3	—	85	0.6
7310 A DB DF DT	121 000	104 000	12 300	10 600	4 500	6 000	73.2	19.2	56	104	1
7310 B DB DF DT	111 000	96 000	11 300	9 800	4 000	5 600	94.1	40.1	56	104	1
7911 A5 DB DF DT	29 300	33 500	2 990	3 400	8 000	11 000	44.5	18.5	—	75	0.6
7911 C DB DF DT	31 000	35 500	3 150	3 600	9 500	13 000	31.1	5.1	—		

SINGLE/MATCHED MOUNTINGS

Bore Diameter 60 – 75 mm



Dynamic Equivalent Load  $P = X F_r + Y F_a$

Contact Angle	$i f_0 F_a^*$ $C_{0r}$	$e$	Single, DT				DB or DF			
			$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
			X	Y	X	Y	X	Y	X	Y
15°	0.178	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39
	0.357	0.40	1	0	0.44	1.40	1	1.57	0.72	2.28
	0.714	0.43	1	0	0.44	1.30	1	1.46	0.72	2.11
	1.07	0.46	1	0	0.44	1.23	1	1.38	0.72	2.00
	1.43	0.47	1	0	0.44	1.19	1	1.34	0.72	1.93
	2.14	0.50	1	0	0.44	1.12	1	1.26	0.72	1.82
	3.57	0.55	1	0	0.44	1.02	1	1.14	0.72	1.66
	5.35	0.56	1	0	0.44	1.00	1	1.12	0.72	1.63
25°	—	0.68	1	0	0.41	0.87	1	0.92	0.67	1.41
30°	—	0.80	1	0	0.39	0.76	1	0.78	0.63	1.24
40°	—	1.14	1	0	0.35	0.57	1	0.55	0.57	0.93

\*For  $i$ , use 2 for DB, DF and 1 for DT

Static Equivalent Load  $P_0 = X_0 F_r + Y_0 F_a$

Contact Angle	Single, DT		DB or DF		Single or DT mounting When $F_r > 0.5 F_r + Y_0 F_a$ use $P_0 = F_r$
	$X_0$	$Y_0$	$X_0$	$Y_0$	
15°	0.5	0.46	1	0.92	
25°	0.5	0.38	1	0.76	
30°	0.5	0.33	1	0.66	
40°	0.5	0.26	1	0.52	

	Boundary Dimensions (mm)				Basic Load Ratings (Single) (N)				Factor $f_0$	Limiting Speeds (1) (min <sup>-1</sup> )		Eff. Load Centers (mm) $a$	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.
	$d$	$D$	$B$	$r_{1 \text{ min.}}$	$C_r$	$C_{0r}$	$C_r$	$C_{0r}$		Grease	Oil		$d_a$ min.	$D_a$ max.	$r_a$ max.	
	<b>60</b>	85	13	1	0.6	18 300	17 700	1 870		1 810	—		9 500	13 000	23.4	

Bearing Numbers (°)	Basic Load Ratings (Matched) (N)				Limiting Speeds (1) (Matched) (min <sup>-1</sup> )		Load Center Spacings (mm) $a_0$		Abutment and Fillet Dimensions (mm)		
	Single	Duplex	$C_r$	$C_{0r}$	Grease	Oil	DB	DF	$d_b$ (3) min.	$D_b$ max.	$r_b$ (3) max.
	<b>7912 A5 DB DF DT</b>			29 800	35 500	7 500	10 000	46.8	20.8	—	80

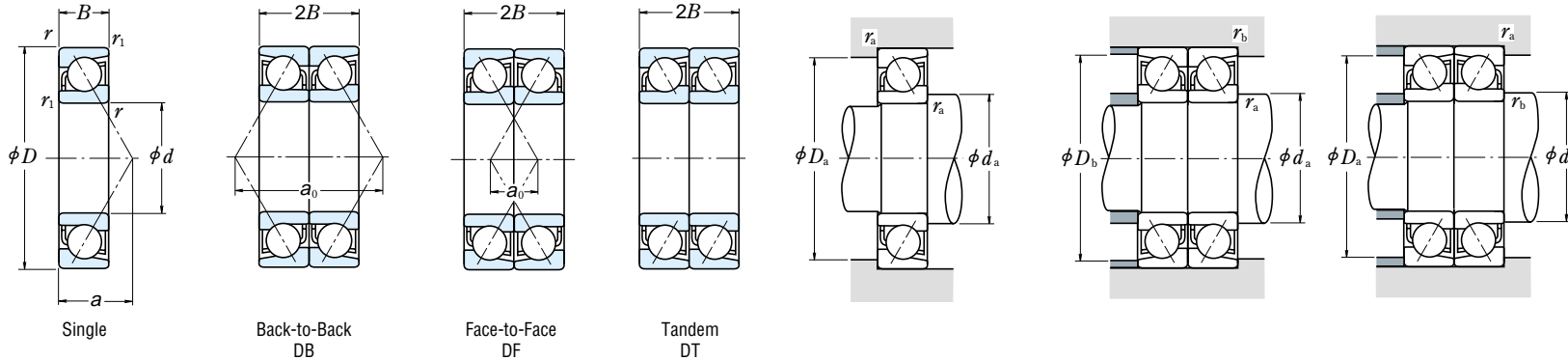
Notes (1) For applications operating near the limiting speed, refer to Page B49.  
(2) The suffixes A, A5, B, and C represent contact angles of 30°, 25°, 40°, and 15° respectively.

Note (3) For bearings marked — in the column for  $d_b$ ,  $D_b$  and  $r_b$  for shafts are  $d_a$  (min.) and  $r_a$  (max.) respectively.



SINGLE/MATCHED MOUNTINGS

Bore Diameter 80 – 95 mm



**Dynamic Equivalent Load**  $P = X F_r + Y F_a$

Contact Angle	$i_0 F_a^*$ $C_{0r}$	$e$	Single, DT				DB or DF			
			$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
			X	Y	X	Y	X	Y	X	Y
15°	0.178	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39
	0.357	0.40	1	0	0.44	1.40	1	1.57	0.72	2.28
	0.714	0.43	1	0	0.44	1.30	1	1.46	0.72	2.11
	1.07	0.46	1	0	0.44	1.23	1	1.38	0.72	2.00
	1.43	0.47	1	0	0.44	1.19	1	1.34	0.72	1.93
	2.14	0.50	1	0	0.44	1.12	1	1.26	0.72	1.82
	3.57	0.55	1	0	0.44	1.02	1	1.14	0.72	1.66
	5.35	0.56	1	0	0.44	1.00	1	1.12	0.72	1.63
	25°	—	0.68	1	0	0.41	0.87	1	0.92	0.67
30°	—	0.80	1	0	0.39	0.76	1	0.78	0.63	1.24
40°	—	1.14	1	0	0.35	0.57	1	0.55	0.57	0.93

\*For  $i$ , use 2 for DB, DF and 1 for DT

**Static Equivalent Load**  $P_0 = X_0 F_r + Y_0 F_a$

Contact Angle	Single, DT		DB or DF		Single or DT mounting When $F_r > 0.5 F_r + Y_0 F_a$ use $P_0 = F_r$
	$X_0$	$Y_0$	$X_0$	$Y_0$	
15°	0.5	0.46	1	0.92	
25°	0.5	0.38	1	0.76	
30°	0.5	0.33	1	0.66	
40°	0.5	0.26	1	0.52	

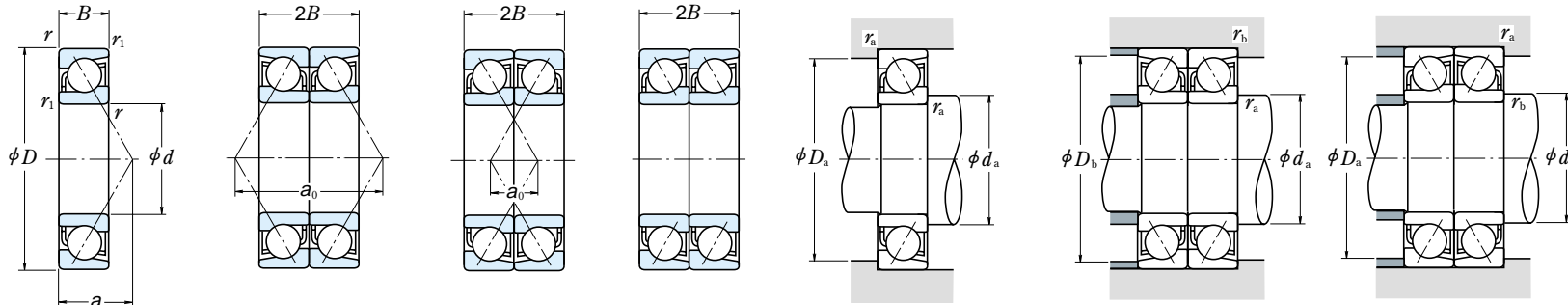
	Boundary Dimensions (mm)				Basic Load Ratings (Single) (N)				Factor $f_0$	Limiting Speeds <sup>(1)</sup> ( $\text{min}^{-1}$ )		Eff. Load Centers (mm) $a$	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.
	$d$	$D$	$B$	$r_{1 \text{ min.}}$ / $r_{1 \text{ max.}}$	$C_r$	$C_{0r}$	$C_r$	$C_{0r}$		Grease	Oil		$d_a \text{ min.}$	$D_a \text{ max.}$	$r_a \text{ max.}$	
80	110	16	1	0.6	27 300	29 000	2 790	2 960	—	7 100	10 000	30.2	86	104	1	0.38
	110	16	1	0.6	29 000	30 500	2 960	3 150	16.7	8 500	12 000	20.7	86	104	1	0.376
	125	22	1.1	0.6	55 000	53 000	5 650	5 400	—	5 600	7 500	40.6	87	118	1	0.88
	125	22	1.1	0.6	58 500	55 500	6 000	5 650	15.7	8 000	11 000	24.7	87	118	1	0.966
	140	26	2	1	89 000	76 000	9 100	7 750	—	5 000	7 100	44.8	90	130	2	1.46
	140	26	2	1	80 500	69 500	8 200	7 050	—	3 600	5 000	59.1	90	130	2	1.49
	140	26	2	1	93 000	77 500	9 450	7 900	14.7	7 500	10 000	27.7	90	130	2	1.63
	170	39	2.1	1.1	147 000	119 000	15 000	12 100	—	3 600	4 800	55.6	92	158	2	3.71
	170	39	2.1	1.1	135 000	109 000	13 800	11 100	—	3 200	4 300	71.9	92	158	2	3.79
	85	120	18	1.1	0.6	36 500	38 500	3 750	3 900	—	6 700	9 000	32.9	92	113	1
120		18	1.1	0.6	39 000	40 500	3 950	4 150	16.5	8 000	11 000	22.7	92	113	1	0.534
130		22	1.1	0.6	56 500	56 000	5 750	5 700	—	5 300	7 100	42.0	92	123	1	0.913
130		22	1.1	0.6	60 000	58 500	6 150	6 000	15.9	7 500	10 000	25.4	92	123	1	1.01
150		28	2	1	103 000	89 000	10 500	9 100	—	4 800	6 700	47.9	95	140	2	1.83
150		28	2	1	93 000	81 000	9 500	8 250	—	3 400	4 800	63.3	95	140	2	1.87
150		28	2	1	107 000	90 500	10 900	9 250	14.7	6 700	9 500	29.7	95	140	2	2.04
180		41	3	1.1	159 000	133 000	16 200	13 500	—	3 400	4 500	58.9	99	166	2.5	4.33
180		41	3	1.1	146 000	122 000	14 800	12 400	—	3 000	4 000	76.1	99	166	2.5	4.42
90		125	18	1.1	0.6	39 500	43 500	4 000	4 450	—	6 300	8 500	34.1	97	118	1
	125	18	1.1	0.6	41 500	46 000	4 250	4 700	16.6	7 500	10 000	23.4	97	118	1	0.563
	140	24	1.5	1	67 500	66 500	6 850	6 750	—	4 800	6 700	45.2	99	131	1.5	1.19
	140	24	1.5	1	71 500	69 000	7 300	7 050	15.7	7 100	9 500	27.4	99	131	1.5	1.34
	160	30	2	1	118 000	103 000	12 000	10 500	—	4 500	6 000	51.1	100	150	2	2.25
	160	30	2	1	107 000	94 000	10 900	9 550	—	3 200	4 300	67.4	100	150	2	2.29
	160	30	2	1	123 000	105 000	12 500	10 700	14.6	6 300	9 000	31.7	100	150	2	2.51
	190	43	3	1.1	171 000	147 000	17 400	15 000	—	3 200	4 300	61.9	104	176	2.5	5.06
	190	43	3	1.1	156 000	135 000	15 900	13 800	—	2 800	3 800	80.2	104	176	2.5	5.17
	95	130	18	1.1	0.6	40 000	45 500	4 050	4 650	—	6 000	8 500	35.2	102	123	1
130		18	1.1	0.6	42 500	48 000	4 300	4 900	16.7	7 100	10 000	24.1	102	123	1	0.591
145		24	1.5	1	67 000	67 000	6 800	6 800	—	4 500	6 300	46.6	104	136	1.5	1.43
145		24	1.5	1	73 500	73 000	7 500	7 450	15.9	6 700	9 000	28.1	104	136	1.5	1.42
170		32	2.1	1.1	128 000	111 000	13 000	11 300	—	4 300	5 600	54.2	107	158	2	2.68
170		32	2.1	1.1	116 000	101 000	11 800	10 300	—	3 000	4 000	71.6	107	158	2	2.74
170		32	2.1	1.1	133 000	112 000	13 500	11 400	14.6	6 000	8 500	33.7	107	158	2	3.05
200		45	3	1.1	183 000	162 000	18 600	16 600	—	3 000	4 000	65.1	109	186	2.5	5.83
200		45	3	1.1	167 000	149 000	17 100	15 200	—	2 600	3 600	84.3	109	186	2.5	5.98

**Notes** <sup>(1)</sup> For applications operating near the limiting speed, refer to Page B49.  
<sup>(2)</sup> The suffixes A, A5, B, and C represent contact angles of 30°, 25°, 40°, and 15° respectively.

Bearing Numbers (°)	Basic Load Ratings (Matched) (N)				Limiting Speeds <sup>(1)</sup> (Matched) ( $\text{min}^{-1}$ )		Load Center Spacings (mm) $a_0$		Abutment and Fillet Dimensions (mm)		
	Single	Duplex	$C_r$	$C_{0r}$	Grease	Oil	DB	DF	$d_b \text{ min.}$	$D_b \text{ max.}$	$r_b \text{ max.}$
<b>7916 A5 DB DF DT</b>			44 500	58 000	5 600	8 000	60.3	28.3	—	105	0.6
<b>7916 C DB DF DT</b>			47 000	61 500	6 700	9 500	41.5	9.5	—	105	0.6
<b>7016 A DB DF DT</b>			89 500	106 000	4 300	6 000	81.2	37.2	85	120	0.6
<b>7016 C DB DF DT</b>			95 500	111 000	6 300	9 000	49.4	5.4	—	120	0.6
<b>7216 A DB DF DT</b>			145 000	152 000	4 000	5 600	89.5	37.5	86	134	1
<b>7216 B DB DF DT</b>			131 000	139 000	2 800	4 000	118.3	66.3	86	134	1
<b>7216 C DB DF DT</b>			151 000	155 000	6 000	8 000	55.5	3.5	—	134	1
<b>7316 A DB DF DT</b>			239 000	238 000	2 800	3 800	111.2	33.2	87	163	1
<b>7316 B DB DF DT</b>			219 000	218 000	2 600	3 400	143.9	65.9	87	163	1
<b>7917 A5 DB DF DT</b>			59 500	77 000	5 300	7 500	65.8	29.8	—	115	0.6
<b>7917 C DB DF DT</b>			63 000	81 500	6 300	9 000	45.5	9.5	—	115	0.6
<b>7017 A DB DF DT</b>			91 500	112 000	4 300	5 600	84.1	40.1	90	125	0.6
<b>7017 C DB DF DT</b>			98 000	117 000	6 000	8 500	50.8	6.8	—	125	0.6
<b>7217 A DB DF DT</b>			167 000	178 000	3 800	5 300	95.8	39.8	91	144	1
<b>7217 B DB DF DT</b>			151 000	162 000	2 800	3 800	126.6	70.6	91	144	1
<b>7217 C DB DF DT</b>			174 000	181 000	5 600	7 500	59.5	3.5	—	144	1
<b>7317 A DB DF DT</b>			258 000	265 000	2 600	3 600	117.5	35.5	92	173	1
<b>7317 B DB DF DT</b>			236 000	244 000	2 400	3 200	152.2	70.2	92	173	1
<b>7918 A5 DB DF DT</b>			64 000	87 000	5 000	7 100	68.1	32.1	—	120	0.6
<b>7918 C DB DF DT</b>			67 500	92 000	6 000	8 500	46.8	10.8	—	120	0.6
<b>7018 A DB DF DT</b>			109 000	133 000	3 800	5 300	90.4	42.4	96	134	1
<b>7018 C DB DF DT</b>			116 000	138 000	5 600	8 000	54.8	6.8	—	134	1
<b>7218 A DB DF DT</b>			191 000	206 000	3 600	5 000	102.2	42.2	96	154	1
<b>7218 B DB DF DT</b>			173 000	188 000	2 600	3 400	134.9	74.9	96	154	1
<b>7218 C DB DF DT</b>			199 000	209 000	5 300	7 100	63.5	3.5	—	154	1
<b>7318 A DB DF DT</b>			277 000	294 000	2 600	3 400	123.8	37.8	97	183	1
<b>7318 B DB DF DT</b>			254 000	270 000	2 200	3 000	160.5	74.5	97	183	1
<b>7919 A5 DB DF DT</b>			64 500	9							

SINGLE/MATCHED MOUNTINGS

Bore Diameter 100 – 120 mm



Boundary Dimensions (mm)	Basic Load Ratings (Single) (N)				Factor	Limiting Speeds (1)		Eff. Load Centers (mm) a	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.					
	d	D	B	r <sub>1</sub> min.		C <sub>r</sub>	C <sub>0r</sub>		C <sub>r</sub>	C <sub>0r</sub>	f <sub>0</sub>		Grease	Oil	d <sub>a</sub> min.	D <sub>a</sub> max.	r <sub>a</sub> max.
100	140	20	1.1	0.6	47 500	51 500	4 850	5 250	—	5 600	8 000	38.0	107	133	1	0.804	
	140	20	1.1	0.6	50 000	54 000	5 100	5 550	16.5	6 700	9 000	26.1	107	133	1	0.794	
	150	24	1.5	1	68 500	70 500	6 950	7 200	—	4 500	6 000	48.1	109	141	1.5	1.48	
	150	24	1.5	1	75 500	77 000	7 700	7 900	16.0	6 300	9 000	28.7	109	141	1.5	1.46	
	180	34	2.1	1.1	144 000	126 000	14 700	12 800	—	4 000	5 300	57.4	112	168	2	3.22	
	180	34	2.1	1.1	130 000	114 000	13 300	11 700	—	2 800	3 800	75.7	112	168	2	3.28	
	180	34	2.1	1.1	149 000	127 000	15 200	12 900	14.5	5 600	8 000	35.7	112	168	2	3.65	
	215	47	3	1.1	207 000	193 000	21 100	19 700	—	2 800	3 800	69.0	114	201	2.5	7.29	
	215	47	3	1.1	190 000	178 000	19 400	18 100	—	2 400	3 400	89.6	114	201	2.5	7.43	
	105	145	20	1.1	0.6	48 000	54 000	4 900	5 500	—	5 600	7 500	39.2	112	138	1	0.82
		145	20	1.1	0.6	51 000	57 000	5 200	5 800	16.6	6 300	9 000	26.7	112	138	1	0.826
		160	26	2	1	80 000	81 500	8 150	8 350	—	4 300	5 600	51.2	115	150	2	1.84
160		26	2	1	88 000	89 500	9 000	9 100	15.9	6 000	8 500	30.7	115	150	2	1.82	
190		36	2.1	1.1	157 000	142 000	16 000	14 400	—	3 800	5 000	60.6	117	178	2	3.84	
190		36	2.1	1.1	142 000	129 000	14 500	13 100	—	2 600	3 600	79.9	117	178	2	3.92	
190		36	2.1	1.1	162 000	143 000	16 600	14 600	14.5	5 300	7 500	37.7	117	178	2	4.33	
225		49	3	1.1	208 000	193 000	21 200	19 700	—	2 600	3 600	72.1	119	211	2.5	9.34	
225		49	3	1.1	191 000	177 000	19 400	18 100	—	2 400	3 200	93.7	119	211	2.5	9.43	
110		150	20	1.1	0.6	49 000	56 000	5 000	5 750	—	5 300	7 100	40.3	117	143	1	0.877
		150	20	1.1	0.6	52 000	59 500	5 300	6 050	16.7	6 300	8 500	27.4	117	143	1	0.867
		170	28	2	1	96 500	95 500	9 850	9 700	—	4 000	5 300	54.4	120	160	2	2.28
	170	28	2	1	106 000	104 000	10 800	10 600	15.6	5 600	8 000	32.7	120	160	2	2.26	
	200	38	2.1	1.1	170 000	158 000	17 300	16 100	—	3 600	4 800	63.7	122	188	2	4.49	
	200	38	2.1	1.1	154 000	144 000	15 700	14 700	—	2 600	3 400	84.0	122	188	2	4.58	
	200	38	2.1	1.1	176 000	160 000	17 900	16 300	14.5	5 000	7 100	39.8	122	188	2	5.1	
	240	50	3	1.1	220 000	215 000	22 500	21 900	—	2 600	3 400	75.5	124	226	2.5	11.1	
	240	50	3	1.1	201 000	197 000	20 500	20 100	—	2 200	3 000	98.4	124	226	2.5	11.2	
	120	165	22	1.1	0.6	67 500	77 000	6 900	7 850	—	4 800	6 300	44.2	127	158	1	1.15
		165	22	1.1	0.6	72 000	81 000	7 300	8 300	16.5	5 600	7 500	30.1	127	158	1	1.15
		180	28	2	1	102 000	107 000	10 400	10 900	—	3 600	5 000	57.3	130	170	2	2.45
215		40	2.1	1.1	183 000	177 000	18 600	18 100	—	3 200	4 500	68.3	132	203	2	6.22	
215		40	2.1	1.1	165 000	162 000	16 900	16 500	—	2 400	3 200	90.3	132	203	2	6.26	
260		55	3	1.1	246 000	252 000	25 100	25 700	—	2 200	3 000	82.3	134	246	2.5	14.5	
260		55	3	1.1	225 000	231 000	23 000	23 600	—	2 000	2 800	107.2	134	246	2.5	14.4	

Notes (1) For applications operating near the limiting speed, refer to Page B49.  
 (2) The suffixes A, A5, B, and C represent contact angles of 30°, 25°, 40°, and 15° respectively.

Dynamic Equivalent Load  $P = X F_r + Y F_a$

Contact Angle	$i_0 F_a^*$ $C_{or}$	e	Single, DT				DB or DF				
			$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$		
			X	Y	X	Y	X	Y	X	Y	
15°	0.178	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39	
	0.357	0.40	1	0	0.44	1.40	1	1.57	0.72	2.28	
	0.714	0.43	1	0	0.44	1.30	1	1.46	0.72	2.11	
	1.07	0.46	1	0	0.44	1.23	1	1.38	0.72	2.00	
	1.43	0.47	1	0	0.44	1.19	1	1.34	0.72	1.93	
	2.14	0.50	1	0	0.44	1.12	1	1.26	0.72	1.82	
	3.57	0.55	1	0	0.44	1.02	1	1.14	0.72	1.66	
	5.35	0.56	1	0	0.44	1.00	1	1.12	0.72	1.63	
	25°	—	0.68	1	0	0.41	0.87	1	0.92	0.67	1.41
	30°	—	0.80	1	0	0.39	0.76	1	0.78	0.63	1.24
40°	—	1.14	1	0	0.35	0.57	1	0.55	0.57	0.93	

\*For i, use 2 for DB, DF and 1 for DT

Static Equivalent Load  $P_0 = X_0 F_r + Y_0 F_a$

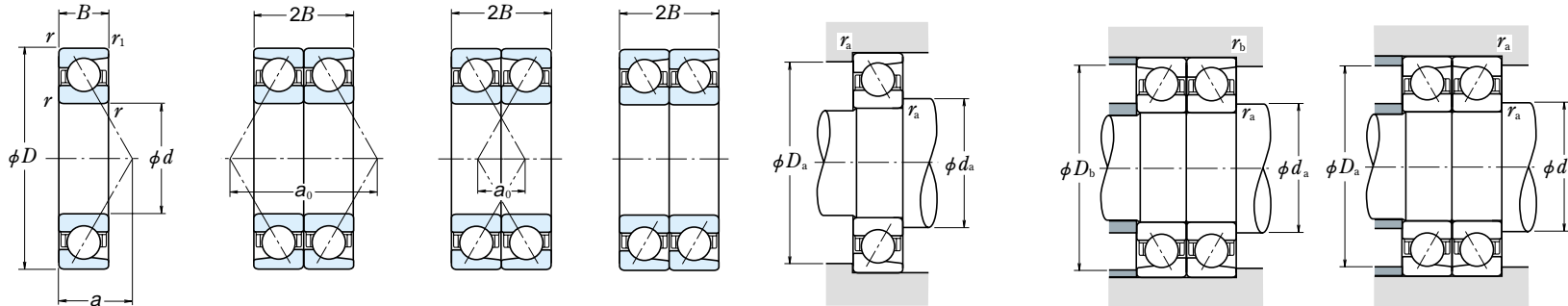
Contact Angle	Single, DT		DB or DF	
	X <sub>0</sub>	Y <sub>0</sub>	X <sub>0</sub>	Y <sub>0</sub>
15°	0.5	0.46	1	0.92
25°	0.5	0.38	1	0.76
30°	0.5	0.33	1	0.66
40°	0.5	0.26	1	0.52

Single or DT mounting  
 When  $F_r > 0.5 F_r + Y_0 F_a$   
 use  $P_0 = F_r$

Bearing Numbers (°)	Basic Load Ratings (Matched) (N)				Limiting Speeds (1) (Matched) (min <sup>-1</sup> )		Load Center Spacings (mm)		Abutment and Fillet Dimensions (mm)				
	Single	Duplex	C <sub>r</sub>	C <sub>0r</sub>	C <sub>r</sub>	C <sub>0r</sub>	DB	DF	d <sub>b</sub> (3)	D <sub>b</sub>	r <sub>b</sub> (3)		
									min.	max.	max.		
7920 A5 DB DF DT			77 000	103 000	7 850	10 500	4 500	6 300	76.0	36.0	—	135	0.6
	7920 C DB DF DT		81 500	108 000	8 300	11 100	5 300	7 500	52.2	12.2	—	135	0.6
	7020 A DB DF DT		111 000	141 000	11 300	14 400	3 600	5 000	96.2	48.2	—	144	1
7020 C DB DF DT			122 000	154 000	12 500	15 800	5 300	7 100	57.5	9.5	—	144	1
	7220 A DB DF DT		233 000	251 000	23 800	25 600	3 200	4 300	114.8	46.8	107	173	1
	7220 B DB DF DT		212 000	229 000	21 600	23 300	2 200	3 000	151.5	83.5	107	173	1
7220 C DB DF DT			242 000	254 000	24 700	25 900	4 500	6 300	71.5	3.5	—	173	1
	7320 A DB DF DT		335 000	385 000	34 500	39 500	2 200	3 000	137.9	43.9	107	208	1
	7320 B DB DF DT		310 000	355 000	31 500	36 000	2 000	2 800	179.2	85.2	107	208	1
7921 A5 DB DF DT			78 500	108 000	8 000	11 000	4 300	6 000	78.3	38.3	—	140	0.6
	7921 C DB DF DT		83 000	114 000	8 450	11 600	5 300	7 100	53.5	13.5	—	140	0.6
	7021 A DB DF DT		130 000	163 000	13 300	16 700	3 400	4 500	102.5	50.5	—	154	1
7021 C DB DF DT			143 000	179 000	14 600	18 200	4 800	6 700	61.5	9.5	—	154	1
	7221 A DB DF DT		254 000	283 000	25 900	28 900	3 000	4 000	121.2	49.2	112	183	1
	7221 B DB DF DT		231 000	258 000	23 500	26 300	2 200	3 000	159.8	87.8	112	183	1
7221 C DB DF DT			264 000	286 000	26 900	29 100	4 300	6 000	75.5	3.5	—	183	1
	7321 A DB DF DT		335 000	385 000	34 500	39 500	2 200	2 800	144.3	46.3	—	218	1
	7321 B DB DF DT		310 000	355 000	31 500	36 000	1 900	2 600	187.4	89.4	—	218	1
7922 A5 DB DF DT			79 500	112 000	8 100	11 500	4 300	5 600	80.6	40.6	—	145	0.6
	7922 C DB DF DT		84 500	119 000	8 600	12 100	5 000	6 700	54.8	14.8	—	145	0.6
	7022 A DB DF DT		157 000	191 000	16 000	19 400	3 200	4 300	108.8	52.8	—	164	1
7022 C DB DF DT			172 000	208 000	17 600	21 200	4 500	6 300	65.5	9.5	—	164	1
	7222 A DB DF DT		276 000	315 000	28 100	32 500	2 800	4 000	127.5	51.5	117	193	1
	7222 B DB DF DT		250 000	289 000	25 500	29 400	2 000	2 800	168.1	92.1	117	193	1
7222 C DB DF DT			286 000	320 000	29 200	32 500	4 000	5 600	79.5	3.5	—	193	1
	7322 A DB DF DT		360 000	430 000									

SINGLE/MATCHED MOUNTINGS

Bore Diameter 130 – 170 mm



	Boundary Dimensions (mm)				Basic Load Ratings (Single) (N)				Factor $f_0$	Limiting Speeds (1) (min <sup>-1</sup> )		Eff. Load Centers (mm) $a$	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.
	$d$	$D$	$B$	$r_{r1}$	$C_r$	$C_{0r}$	$C_r$	$C_{0r}$		Grease	Oil		$d_a$	$D_a$	$r_a$	
			min.	min.									min.	max.	max.	
<b>130</b>	180	24	1.5	1	74 000	86 000	7 550	8 750	—	4 300	6 000	48.1	139	171	1.5	1.54
	180	24	1.5	1	78 500	91 000	8 000	9 250	16.5	5 000	7 100	32.8	139	171	1.5	1.5
	200	33	2	1	117 000	125 000	12 000	12 800	—	3 400	4 500	64.1	140	190	2	3.68
	230	40	3	1.1	189 000	193 000	19 300	19 600	—	2 400	3 200	72.0	144	216	2.5	7.06
	230	40	3	1.1	171 000	175 000	17 400	17 800	—	2 200	3 000	95.5	144	216	2.5	7.1
<b>140</b>	280	58	4	1.5	273 000	293 000	27 900	29 800	—	2 200	2 800	88.2	148	262	3	17.5
	280	58	4	1.5	250 000	268 000	25 500	27 400	—	1 900	2 600	115.0	148	262	3	17.6
	190	24	1.5	1	75 000	90 000	7 650	9 200	—	4 000	5 600	50.5	149	181	1.5	1.63
	190	24	1.5	1	79 500	95 500	8 100	9 700	16.7	4 800	6 700	34.1	149	181	1.5	1.63
	210	33	2	1	120 000	133 000	12 200	13 500	—	3 200	4 300	67.0	150	200	2	3.9
<b>150</b>	250	42	3	1.1	218 000	234 000	22 300	23 900	—	2 200	3 000	77.3	154	236	2.5	8.92
	250	42	3	1.1	197 000	213 000	20 100	21 700	—	2 000	2 800	102.8	154	236	2.5	8.94
	300	62	4	1.5	300 000	335 000	30 500	34 500	—	2 000	2 600	94.5	158	282	3	21.4
	300	62	4	1.5	275 000	310 000	28 100	31 500	—	1 700	2 400	123.3	158	282	3	21.6
	210	28	2	1	96 500	115 000	9 850	11 800	—	3 800	5 000	56.0	160	200	2	2.97
<b>160</b>	240	38	2	1	102 000	122 000	10 400	12 400	16.6	4 300	6 000	38.1	160	200	2	2.96
	225	35	2.1	1.1	137 000	154 000	14 000	15 700	—	2 400	3 000	71.6	162	213	2	4.75
	270	45	3	1.1	248 000	280 000	25 300	28 500	—	2 000	2 800	83.1	164	256	2.5	11.2
	270	45	3	1.1	225 000	254 000	22 900	25 900	—	1 800	2 600	110.6	164	256	2.5	11.2
	320	65	4	1.5	315 000	370 000	32 500	38 000	—	1 800	2 400	100.3	168	302	3	26
<b>170</b>	320	65	4	1.5	289 000	340 000	29 400	34 500	—	1 600	2 200	131.1	168	302	3	25.9
	220	28	2	1	106 000	133 000	10 800	13 500	16.7	3 800	5 000	39.4	170	210	2	3.1
	240	38	2.1	1.1	155 000	176 000	15 800	18 000	—	2 200	2 800	76.7	172	228	2	5.77
	290	48	3	1.1	263 000	305 000	26 800	31 500	—	1 900	2 600	89.0	174	276	2.5	14.1
	290	48	3	1.1	238 000	279 000	24 200	28 400	—	1 700	2 400	118.4	174	276	2.5	14.2
<b>170</b>	340	68	4	1.5	345 000	420 000	35 500	43 000	—	1 700	2 200	106.2	178	322	3	30.7
	340	68	4	1.5	315 000	385 000	32 000	39 500	—	1 500	2 000	138.9	178	322	3	30.8
	260	42	2.1	1.1	113 000	148 000	11 500	15 100	16.8	3 600	4 800	40.8	180	220	2	3.36
	310	52	4	1.5	186 000	214 000	19 000	21 900	—	2 000	2 600	83.1	182	248	2	7.9
	310	52	4	1.5	295 000	360 000	30 000	36 500	—	1 800	2 400	95.3	188	292	3	17.3
<b>170</b>	310	52	4	1.5	266 000	325 000	27 200	33 000	—	1 600	2 200	126.7	188	292	3	17.6
	360	72	4	1.5	390 000	485 000	39 500	49 500	—	1 600	2 200	112.5	188	342	3	35.8
	360	72	4	1.5	355 000	445 000	36 000	45 500	—	1 400	2 000	147.2	188	342	3	35.6

Notes (1) For applications operating near the limiting speed, refer to Page B49.  
 (2) The suffixes A, A5, B, and C represent contact angles of 30°, 25°, 40°, and 15° respectively.

Dynamic Equivalent Load  $P = X F_r + Y F_a$

Contact Angle	$i f_0 F_a^*$ $C_{0r}$	$e$	Single, DT				DB or DF				
			$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$		
			X	Y	X	Y	X	Y	X	Y	
15°	0.178	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39	
	0.357	0.40	1	0	0.44	1.40	1	1.57	0.72	2.28	
	0.714	0.43	1	0	0.44	1.30	1	1.46	0.72	2.11	
	1.07	0.46	1	0	0.44	1.23	1	1.38	0.72	2.00	
	1.43	0.47	1	0	0.44	1.19	1	1.34	0.72	1.93	
	2.14	0.50	1	0	0.44	1.12	1	1.26	0.72	1.82	
	3.57	0.55	1	0	0.44	1.02	1	1.14	0.72	1.66	
	5.35	0.56	1	0	0.44	1.00	1	1.12	0.72	1.63	
	25°	—	0.68	1	0	0.41	0.87	1	0.92	0.67	1.41
	30°	—	0.80	1	0	0.39	0.76	1	0.78	0.63	1.24
40°	—	1.14	1	0	0.35	0.57	1	0.55	0.57	0.93	

\*For  $i$ , use 2 for DB, DF and 1 for DT

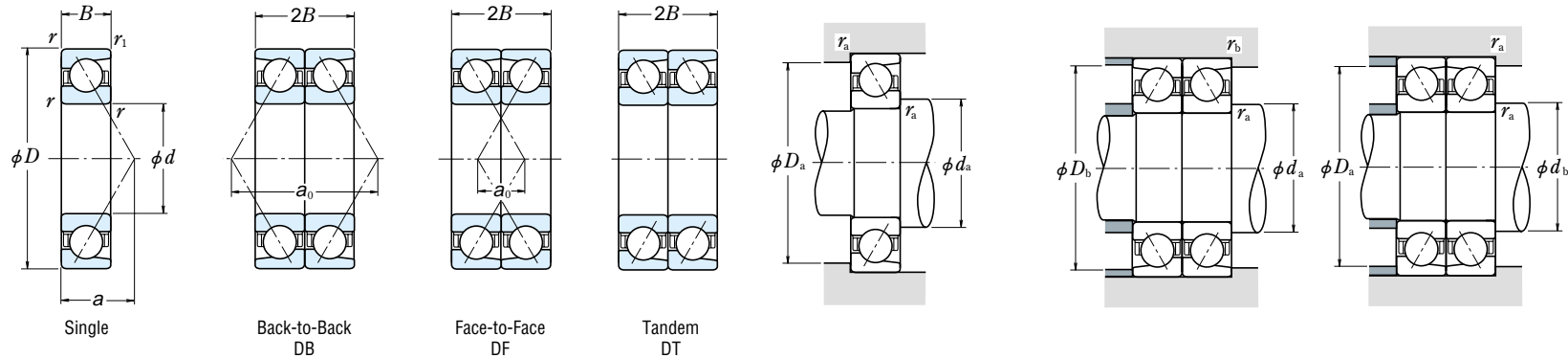
Static Equivalent Load  $P_0 = X_0 F_r + Y_0 F_a$

Contact Angle	Single, DT		DB or DF		Single or DT mounting When $F_r > 0.5 F_r + Y_0 F_a$ use $P_0 = F_r$
	$X_0$	$Y_0$	$X_0$	$Y_0$	
15°	0.5	0.46	1	0.92	
25°	0.5	0.38	1	0.76	
30°	0.5	0.33	1	0.66	
40°	0.5	0.26	1	0.52	

Bearing Numbers (°)	Basic Load Ratings (Matched) (N)	Basic Load Ratings (Matched) (kgf)	Limiting Speeds (1) (Matched) (min <sup>-1</sup> )		Load Center Spacings (mm)		Abutment and Fillet Dimensions (mm)				
			Grease	Oil	DB $a_0$	DF	$d_b$ (3) min.	$D_b$ max.	$r_b$ (3) max.		
<b>7926 A5 DB DF DT</b>	120 000	172 000	12 300	17 500	3 400	4 800	96.3	48.3	—	174	1
<b>7926 C DB DF DT</b>	128 000	182 000	13 000	18 500	4 000	5 600	65.5	17.5	—	174	1
<b>7026 A DB DF DT</b>	191 000	251 000	19 400	25 600	2 600	3 600	128.3	62.3	—	194	1
<b>7226 A DB DF DT</b>	310 000	385 000	31 500	39 500	1 900	2 600	143.9	63.9	—	223	1
<b>7226 B DB DF DT</b>	278 000	350 000	28 300	35 500	1 700	2 400	191.0	111.0	—	223	1
<b>7326 A DB DF DT</b>	445 000	585 000	45 500	59 500	1 700	2 200	176.3	60.3	—	271	1.5
<b>7326 B DB DF DT</b>	405 000	535 000	41 500	54 500	1 500	2 000	230.0	114.0	—	271	1.5
<b>7928 A5 DB DF DT</b>	122 000	180 000	12 400	18 400	3 200	4 500	100.9	52.9	—	184	1
<b>7928 C DB DF DT</b>	129 000	191 000	13 200	19 400	3 800	5 300	68.2	20.2	—	184	1
<b>7028 A DB DF DT</b>	194 000	265 000	19 800	27 000	2 600	3 400	134.0	68.0	—	204	1
<b>7228 A DB DF DT</b>	355 000	470 000	36 000	48 000	1 800	2 400	154.6	70.6	—	243	1
<b>7228 B DB DF DT</b>	320 000	425 000	32 500	43 500	1 600	2 200	205.6	121.6	—	243	1
<b>7328 A DB DF DT</b>	490 000	670 000	50 000	68 500	1 600	2 000	189.0	65.0	—	291	1.5
<b>7328 B DB DF DT</b>	445 000	615 000	45 500	63 000	1 400	1 900	246.6	122.6	—	291	1.5
<b>7930 A5 DB DF DT</b>	157 000	231 000	16 000	23 500	3 000	4 000	112.0	56.0	—	204	1
<b>7930 C DB DF DT</b>	166 000	244 000	16 900	24 900	3 600	4 800	76.2	20.2	—	204	1
<b>7030 A DB DF DT</b>	222 000	305 000	22 700	31 500	1 900	2 400	143.3	73.3	—	218	1
<b>7230 A DB DF DT</b>	405 000	560 000	41 000	57 000	1 600	2 200	166.3	76.3	—	263	1
<b>7230 B DB DF DT</b>	365 000	510 000	37 000	52 000	1 500	2 000	221.2	131.2	—	263	1
<b>7330 A DB DF DT</b>	515 000	745 000	52 500	75 500	1 500	1 900	200.7	70.7	—	311	1.5
<b>7330 B DB DF DT</b>	470 000	680 000	48 000	69 500	1 300	1 800	262.2	132.2	—	311	1.5
<b>7932 A DB DF DT</b>	173 000	265 000	17 600	27 000	3 000	4 000	78.9	22.9	—	214	1
<b>7032 A DB DF DT</b>	252 000	355 000	25 700	36 000	1 700	2 400	153.5	77.5	—	233	1
<b>7232 A DB DF DT</b>	425 000	615 000	43 500	62 500	1 500	2 000	177.9	81.9	—	283	1
<b>7232 B DB DF DT</b>	385 000	555 000	39 500	57 000	1 400	1 900	236.8	140.8	—	283	1
<b>7332 A DB DF DT</b>	565 000	845 000	57 500	86							

SINGLE/MATCHED MOUNTINGS

Bore Diameter 180 – 200 mm



	Boundary Dimensions (mm)				Basic Load Ratings (Single) (N)				Factor $f_0$	Limiting Speeds <sup>(1)</sup> ( $\text{min}^{-1}$ )		Eff. Load Centers (mm) $a$	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.
	$d$	$D$	$B$	$r_{1 \text{ min.}}$	$C_r$	$C_{0r}$	$C_r$	$C_{0r}$		Grease	Oil		$d_a \text{ min.}$	$D_a \text{ max.}$	$r_a \text{ max.}$	
<b>180</b>	250	332	2	1	145 000	184 000	14 800	18 800	16.6	3 200	4 500	45.3	190	240	2	4.9
	280	462	2.1	1.1	207 000	252 000	21 100	25 700	—	1 900	2 400	89.4	192	268	2	10.5
	320	524	4	1.5	305 000	385 000	31 000	39 000	—	1 700	2 200	98.2	198	302	3	18.1
	320	524	4	1.5	276 000	350 000	28 100	35 500	—	1 500	2 000	130.9	198	302	3	18.4
	380	754	4	1.5	410 000	535 000	41 500	54 500	—	1 500	2 000	118.3	198	362	3	42.1
<b>190</b>	260	332	2	1	147 000	192 000	15 000	19 600	16.7	3 000	4 300	46.6	200	250	2	4.98
	290	462	2.1	1.1	224 000	280 000	22 800	28 600	—	1 800	2 400	92.3	202	278	2	11.3
	340	554	4	1.5	315 000	410 000	32 000	42 000	—	1 600	2 200	104.0	208	322	3	22.4
	340	554	4	1.5	284 000	375 000	28 900	38 000	—	1 400	2 000	138.7	208	322	3	22.5
	400	785	5	2	450 000	600 000	46 000	61 000	—	1 400	1 900	124.2	212	378	4	47.5
<b>200</b>	360	584	5	2	410 000	550 000	42 000	56 000	—	1 300	1 700	162.8	212	378	4	47.2
	280	382	2.1	1.1	189 000	244 000	19 300	24 900	16.5	2 800	4 000	51.2	212	268	2	6.85
	310	512	2.1	1.1	240 000	310 000	24 500	31 500	—	1 700	2 200	99.1	212	298	2	13.7
	360	584	4	1.5	335 000	450 000	34 500	46 000	—	1 500	2 000	109.8	218	342	3	26.5
	360	584	4	1.5	305 000	410 000	31 000	41 500	—	1 300	1 800	146.5	218	342	3	26.6

**Notes** <sup>(1)</sup> For applications operating near the limiting speed, refer to Page B49.  
<sup>(2)</sup> The suffixes A, A5, B, and C represent contact angles of 30°, 25°, 40°, and 15° respectively.

Dynamic Equivalent Load  $P = X F_r + Y F_a$

Contact Angle	$i f_0 F_a^*$ $C_{0r}$	$e$	Single, DT				DB or DF				
			$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$		
			X	Y	X	Y	X	Y	X	Y	
15°	0.178	0.38	1	0	0.44	1.47	1	1.65	0.72	2.39	
	0.357	0.40	1	0	0.44	1.40	1	1.57	0.72	2.28	
	0.714	0.43	1	0	0.44	1.30	1	1.46	0.72	2.11	
	1.07	0.46	1	0	0.44	1.23	1	1.38	0.72	2.00	
	1.43	0.47	1	0	0.44	1.19	1	1.34	0.72	1.93	
	2.14	0.50	1	0	0.44	1.12	1	1.26	0.72	1.82	
	3.57	0.55	1	0	0.44	1.02	1	1.14	0.72	1.66	
	5.35	0.56	1	0	0.44	1.00	1	1.12	0.72	1.63	
	25°	—	0.68	1	0	0.41	0.87	1	0.92	0.67	1.41
	40°	—	0.80	1	0	0.39	0.76	1	0.78	0.63	1.24

\*For  $i$ , use 2 for DB, DF and 1 for DT

Static Equivalent Load  $P_0 = X_0 F_r + Y_0 F_a$

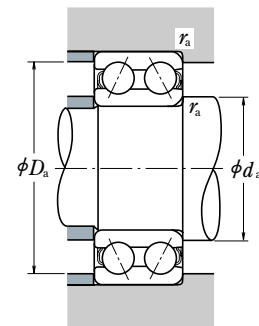
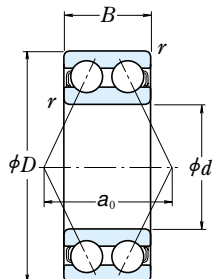
Contact Angle	Single, DT		DB or DF		Single or DT mounting When $F_r > 0.5 F_r + Y_0 F_a$ use $P_0 = F_r$
	$X_0$	$Y_0$	$X_0$	$Y_0$	
15°	0.5	0.46	1	0.92	
25°	0.5	0.38	1	0.76	
30°	0.5	0.33	1	0.66	
40°	0.5	0.26	1	0.52	

Bearing Numbers <sup>(2)</sup>	Basic Load Ratings (Matched) (N)				Limiting Speeds <sup>(1)</sup> (Matched) ( $\text{min}^{-1}$ )		Load Center Spacings (mm)		Abutment and Fillet Dimensions (mm)		
	Single	Duplex	$C_r$	$C_{0r}$	Grease	Oil	DB	DF	$d_b$ <sup>(3)</sup> min.	$D_b$ max.	$r_b$ <sup>(3)</sup> max.
<b>7936 C DB DF DT</b>			236 000	370 000	2 600	3 600	90.6	24.6	—	244	1
<b>7036 A DB DF DT</b>			335 000	505 000	1 500	2 000	178.8	86.8	—	273	1
<b>7236 A DB DF DT</b>			495 000	770 000	1 400	1 800	196.3	92.3	—	311	1.5
<b>7236 B DB DF DT</b>			450 000	700 000	1 200	1 700	261.8	157.8	—	311	1.5
<b>7336 A DB DF DT</b>			665 000	1 070 000	1 200	1 600	236.6	86.6	—	371	1.5
<b>7336 B DB DF DT</b>			605 000	975 000	1 100	1 500	309.9	159.9	—	371	1.5
<b>7938 C DB DF DT</b>			239 000	385 000	2 400	3 400	93.3	27.3	—	254	1
<b>7038 A DB DF DT</b>			365 000	560 000	1 400	1 900	184.6	92.6	—	283	1
<b>7238 A DB DF DT</b>			510 000	825 000	1 300	1 700	208.0	98.0	—	331	1.5
<b>7238 B DB DF DT</b>			460 000	750 000	1 100	1 600	277.3	167.3	—	331	1.5
<b>7338 A DB DF DT</b>			730 000	1 200 000	1 100	1 500	248.3	92.3	—	390	2
<b>7338 B DB DF DT</b>			670 000	1 100 000	1 000	1 400	325.5	169.5	—	390	2
<b>7940 C DB DF DT</b>			305 000	490 000	2 200	3 200	102.3	26.3	—	273	1
<b>7040 A DB DF DT</b>			390 000	620 000	1 300	1 800	198.2	96.2	—	303	1
<b>7240 A DB DF DT</b>			550 000	900 000	1 200	1 600	219.6	103.6	—	351	1.5
<b>7240 B DB DF DT</b>			495 000	815 000	1 100	1 500	292.9	176.9	—	351	1.5
<b>7340 A DB DF DT</b>			770 000	1 320 000	1 100	1 400	259.0	99.0	—	410	2
<b>7340 B DB DF DT</b>			700 000	1 200 000	950	1 300	340.1	180.1	—	410	2

**Note** <sup>(3)</sup> For bearings marked — in the column for  $d_b$ ,  $D_b$  and  $r_b$  for shafts are  $d_a$  (min.) and  $r_a$  (max.) respectively.



Bore Diameter 10 – 85 mm



Dynamic Equivalent Load

$$P = XF_r + YF_a$$

$F_a/F_r \leq e$		$F_a/F_r > e$		$e$
X	Y	X	Y	
1	0.92	0.67	1.41	0.68

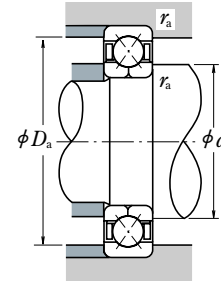
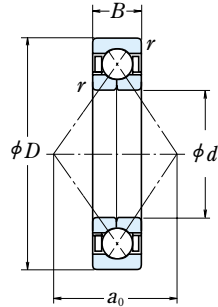
Static Equivalent Load

$$P_0 = F_r + 0.76 F_a$$

Boundary Dimensions (mm)				Basic Load Ratings				Limiting Speeds		Bearing Numbers
$d$	$D$	$B$	$r$ min.	$C_r$ (N)	$C_{0r}$ (kgf)	$C_r$ (kgf)	$C_{0r}$ (kgf)	Grease ( $\text{min}^{-1}$ )	Oil ( $\text{min}^{-1}$ )	
10	30	14.3	0.6	7 150	3 900	730	400	17 000	22 000	5200
12	32	15.9	0.6	10 500	5 800	1 070	590	15 000	20 000	5201
15	35	15.9	0.6	11 700	7 050	1 190	715	13 000	17 000	5202
	42	19	1	17 600	10 200	1 800	1 040	11 000	15 000	5302
17	40	17.5	0.6	14 600	9 050	1 490	920	11 000	15 000	5203
	47	22.2	1	21 000	12 600	2 140	1 280	10 000	13 000	5303
20	47	20.6	1	19 600	12 400	2 000	1 270	10 000	13 000	5204
	52	22.2	1.1	24 600	15 000	2 510	1 530	9 000	12 000	5304
25	52	20.6	1	21 300	14 700	2 170	1 500	8 500	11 000	5205
	62	25.4	1.1	32 500	20 700	3 350	2 110	7 500	10 000	5305
30	62	23.8	1	29 600	21 100	3 000	2 150	7 100	9 500	5206
	72	30.2	1.1	40 500	28 100	4 150	2 870	6 300	8 500	5306
35	72	27	1.1	39 000	28 700	4 000	2 920	6 300	8 000	5207
	80	34.9	1.5	51 000	36 000	5 200	3 700	5 600	7 500	5307
40	80	30.2	1.1	44 000	33 500	4 500	3 400	5 600	7 100	5208
	90	36.5	1.5	56 500	41 000	5 800	4 200	5 300	6 700	5308
45	85	30.2	1.1	49 500	38 000	5 050	3 900	5 000	6 700	5209
	100	39.7	1.5	68 500	51 000	7 000	5 200	4 500	6 000	5309
50	90	30.2	1.1	53 000	43 500	5 400	4 400	4 800	6 000	5210
	110	44.4	2	81 500	61 500	8 300	6 250	4 300	5 600	5310
55	100	33.3	1.5	56 000	49 000	5 700	5 000	4 300	5 600	5211
	120	49.2	2	95 000	73 000	9 700	7 450	3 800	5 000	5311
60	110	36.5	1.5	69 000	62 000	7 050	6 300	3 800	5 000	5212
	130	54	2.1	125 000	98 500	12 800	10 000	3 400	4 500	5312
65	120	38.1	1.5	76 500	69 000	7 800	7 050	3 600	4 500	5213
	140	58.7	2.1	142 000	113 000	14 500	11 500	3 200	4 300	5313
70	125	39.7	1.5	94 000	82 000	9 600	8 400	3 400	4 500	5214
	150	63.5	2.1	159 000	128 000	16 200	13 100	3 000	3 800	5314
75	130	41.3	1.5	93 500	83 000	9 550	8 500	3 200	4 300	5215
80	140	44.4	2	99 000	93 000	10 100	9 500	3 000	3 800	5216
85	150	49.2	2	116 000	110 000	11 800	11 200	2 800	3 600	5217

Load Center Spacings (mm)	Abutment and Fillet Dimensions (mm)			Mass (kg)
	$a_0$	$d_a$ min.	$D_a$ max.	
14.5	15	25	0.6	0.050
16.7	17	27	0.6	0.060
18.3	20	30	0.6	0.070
22.0	21	36	1	0.11
20.8	22	35	0.6	0.090
25.0	23	41	1	0.14
24.3	26	41	1	0.12
26.7	27	45	1	0.23
26.8	31	46	1	0.19
31.8	32	55	1	0.34
31.6	36	56	1	0.29
36.5	37	65	1	0.51
36.6	42	65	1	0.43
41.6	44	71	1.5	0.79
41.5	47	73	1	0.57
45.5	49	81	1.5	1.05
43.4	52	78	1	0.62
50.6	54	91	1.5	1.4
45.9	57	83	1	0.67
55.6	60	100	2	1.95
50.1	64	91	1.5	0.96
60.6	65	110	2	2.3
56.5	69	101	1.5	1.35
69.2	72	118	2	3.15
59.7	74	111	1.5	1.65
72.8	77	128	2	3.85
63.8	79	116	1.5	1.8
78.3	82	138	2	4.9
66.1	84	121	1.5	1.9
69.6	90	130	2	2.5
75.3	95	140	2	3.4

Bore Diameter 30 – 95 mm



Dynamic Equivalent Load  
 $P_a = F_a$

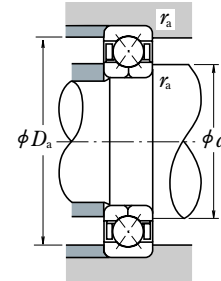
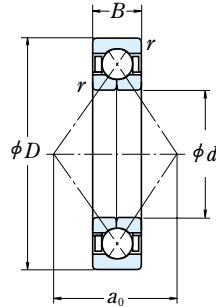
Static Equivalent Load  
 $P_{0a} = F_a$

Boundary Dimensions (mm)				Basic Load Ratings				Limiting Speeds	
<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i> <sub>min.</sub>	(N)		{kgf}		(min <sup>-1</sup> )	
				<i>C<sub>a</sub></i>	<i>C<sub>0a</sub></i>	<i>C<sub>a</sub></i>	<i>C<sub>0a</sub></i>	Grease	Oil
30	62	16	1	31 000	45 000	3 150	4 600	8 500	12 000
	72	19	1.1	46 000	63 000	4 700	6 450	8 000	11 000
35	72	17	1.1	41 000	61 500	4 200	6 250	7 500	10 000
	80	21	1.5	55 000	80 000	5 600	8 150	7 100	9 500
40	80	18	1.1	49 000	77 500	5 000	7 900	6 700	9 000
	90	23	1.5	67 000	100 000	6 850	10 200	6 300	8 500
45	85	19	1.1	55 000	88 500	5 600	9 000	6 300	8 500
	100	25	1.5	87 500	133 000	8 900	13 500	5 600	7 500
50	90	20	1.1	57 000	97 000	5 850	9 900	5 600	8 000
	110	27	2	102 000	159 000	10 400	16 200	5 000	6 700
55	100	21	1.5	71 000	122 000	7 200	12 500	5 300	7 100
	120	29	2	118 000	187 000	12 000	19 100	4 500	6 300
60	110	22	1.5	85 500	150 000	8 750	15 300	4 800	6 300
	130	31	2.1	135 000	217 000	13 800	22 200	4 300	5 600
65	120	23	1.5	97 500	179 000	9 950	18 300	4 300	6 000
	140	33	2.1	153 000	250 000	15 600	25 500	3 800	5 300
70	125	24	1.5	106 000	197 000	10 800	20 100	4 000	5 600
	150	35	2.1	172 000	285 000	17 500	29 100	3 600	5 000
75	130	25	1.5	110 000	212 000	11 200	21 700	3 800	5 300
	160	37	2.1	187 000	320 000	19 100	33 000	3 400	4 800
80	125	22	1.1	77 000	167 000	7 850	17 000	3 800	5 300
	140	26	2	124 000	236 000	12 600	24 100	3 600	5 000
	170	39	2.1	202 000	360 000	20 600	37 000	3 200	4 300
85	130	22	1.1	79 000	176 000	8 050	18 000	3 800	5 000
	150	28	2	143 000	276 000	14 600	28 200	3 400	4 800
	180	41	3	218 000	405 000	22 300	41 000	3 000	4 000
90	140	24	1.5	94 000	208 000	9 600	21 200	3 400	4 800
	160	30	2	164 000	320 000	16 700	32 500	3 200	4 300
	190	43	3	235 000	450 000	23 900	45 500	2 800	3 800
95	145	24	1.5	96 500	220 000	9 800	22 500	3 400	4 500
	170	32	2.1	177 000	340 000	18 000	35 000	3 000	4 000
	200	45	3	251 000	495 000	25 600	50 500	2 600	3 600

Bearing Numbers	Load Center Spacings (mm) <i>a</i> <sub>0</sub>	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.
		<i>d</i> <sub>a</sub> min.	<i>D</i> <sub>a</sub> max.	<i>r</i> <sub>a</sub> max.	
<b>QJ 206</b>	32.2	36	56	1	0.24
<b>QJ 306</b>	35.7	37	65	1	0.42
<b>QJ 207</b>	37.5	42	65	1	0.35
<b>QJ 307</b>	40.3	44	71	1.5	0.57
<b>QJ 208</b>	42.0	47	73	1	0.45
<b>QJ 308</b>	45.5	49	81	1.5	0.78
<b>QJ 209</b>	45.5	52	78	1	0.52
<b>QJ 309</b>	50.8	54	91	1.5	1.05
<b>QJ 210</b>	49.0	57	83	1	0.59
<b>QJ 310</b>	56.0	60	100	2	1.35
<b>QJ 211</b>	54.3	64	91	1.5	0.77
<b>QJ 311</b>	61.3	65	110	2	1.75
<b>QJ 212</b>	59.5	69	101	1.5	0.98
<b>QJ 312</b>	66.5	72	118	2	2.15
<b>QJ 213</b>	64.8	74	111	1.5	1.2
<b>QJ 313</b>	71.8	77	128	2	2.7
<b>QJ 214</b>	68.3	79	116	1.5	1.3
<b>QJ 314</b>	77.0	82	138	2	3.18
<b>QJ 215</b>	71.8	84	121	1.5	1.5
<b>QJ 315</b>	82.3	87	148	2	3.9
<b>QJ 1016</b>	71.8	87	118	1	1.05
<b>QJ 216</b>	77.0	90	130	2	1.85
<b>QJ 316</b>	87.5	92	158	2	4.6
<b>QJ 1017</b>	75.3	92	123	1	1.1
<b>QJ 217</b>	82.3	95	140	2	2.2
<b>QJ 317</b>	92.8	99	166	2.5	5.34
<b>QJ 1018</b>	80.5	99	131	1.5	1.45
<b>QJ 218</b>	87.5	100	150	2	2.75
<b>QJ 318</b>	98.0	104	176	2.5	6.4
<b>QJ 1019</b>	84.0	104	136	1.5	1.5
<b>QJ 219</b>	92.8	107	158	2	3.35
<b>QJ 319</b>	103.3	109	186	2.5	7.4

Remarks When using four-point contact ball bearings, please contact NSK.

Bore Diameter 100 – 200 mm



Dynamic Equivalent Load  
 $P_a = F_a$

Static Equivalent Load  
 $P_{0a} = F_a$

Boundary Dimensions (mm)				Basic Load Ratings				Limiting Speeds	
<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i> <sub>min.</sub>	(N)		{kgf}		(min <sup>-1</sup> )	
				<i>C<sub>a</sub></i>	<i>C<sub>0a</sub></i>	<i>C<sub>a</sub></i>	<i>C<sub>0a</sub></i>	Grease	Oil
<b>100</b>	150	24	1.5	98 500	232 000	10 000	23 700	3 200	4 300
	180	34	2.1	199 000	390 000	20 300	39 500	2 800	3 800
	215	47	3	300 000	640 000	31 000	65 500	2 400	3 400
<b>105</b>	160	26	2	115 000	269 000	11 800	27 400	3 000	4 000
	190	36	2.1	217 000	435 000	22 100	44 500	2 600	3 600
	225	49	3	305 000	640 000	31 000	65 500	2 400	3 200
<b>110</b>	170	28	2	139 000	315 000	14 200	32 000	2 800	3 800
	200	38	2.1	235 000	490 000	24 000	50 000	2 600	3 400
	240	50	3	320 000	710 000	32 500	72 500	2 200	3 000
<b>120</b>	180	28	2	147 000	350 000	15 000	36 000	2 600	3 600
	215	40	2.1	265 000	585 000	27 000	60 000	2 400	3 200
	260	55	3	360 000	835 000	36 500	85 500	2 000	2 800
<b>130</b>	200	33	2	169 000	415 000	17 300	42 000	2 400	3 200
	230	40	3	274 000	635 000	28 000	65 000	2 200	3 000
	280	58	4	400 000	970 000	40 500	99 000	1 900	2 600
<b>140</b>	210	33	2	172 000	435 000	17 600	44 500	2 200	3 000
	250	42	3	315 000	775 000	32 000	79 000	2 000	2 800
	300	62	4	440 000	1 110 000	44 500	114 000	1 700	2 400
<b>150</b>	225	35	2.1	197 000	505 000	20 100	51 500	2 000	2 800
	270	45	3	360 000	925 000	36 500	94 500	1 800	2 600
	320	65	4	460 000	1 230 000	47 000	125 000	1 600	2 200
<b>160</b>	240	38	2.1	224 000	580 000	22 800	59 000	1 900	2 600
	290	48	3	380 000	1 010 000	39 000	103 000	1 700	2 400
	340	68	4	505 000	1 400 000	51 500	143 000	1 500	2 000
<b>170</b>	260	42	2.1	268 000	705 000	27 300	72 000	1 800	2 400
	310	52	4	425 000	1 180 000	43 500	121 000	1 600	2 200
	360	72	4	565 000	1 610 000	57 500	164 000	1 400	2 000
<b>180</b>	280	46	2.1	299 000	830 000	30 500	84 500	1 700	2 200
	320	52	4	440 000	1 270 000	45 000	130 000	1 500	2 000
	380	75	4	595 000	1 770 000	60 500	180 000	1 300	1 800
<b>190</b>	290	46	2.1	325 000	925 000	33 000	94 000	1 600	2 200
	340	55	4	455 000	1 360 000	46 500	139 000	1 400	2 000
	400	78	5	655 000	1 980 000	67 000	202 000	1 300	1 700
<b>200</b>	310	51	2.1	345 000	1 020 000	35 500	104 000	1 500	2 000
	360	58	4	490 000	1 480 000	49 500	151 000	1 300	1 800
	420	80	5	690 000	2 180 000	70 500	222 000	1 200	1 600

Bearing Numbers	Load Center Spacings (mm) <i>a</i> <sub>0</sub>	Abutment and Fillet Dimensions (mm)			Mass (kg) approx.
		<i>d</i> <sub>a</sub> min.	<i>D</i> <sub>a</sub> max.	<i>r</i> <sub>a</sub> max.	
<b>QJ 1020</b>	87.5	109	141	1.5	1.6
<b>QJ 220</b>	98.0	112	168	2	4.0
<b>QJ 320</b>	110.3	114	201	2.5	9.3
<b>QJ 1021</b>	92.8	115	150	2	2.0
<b>QJ 221</b>	103.3	117	178	2	4.7
<b>QJ 321</b>	115.5	119	211	2.5	10.5
<b>QJ 1022</b>	98.0	120	160	2	2.5
<b>QJ 222</b>	108.5	122	188	2	5.6
<b>QJ 322</b>	122.5	124	226	2.5	12.5
<b>QJ 1024</b>	105.0	130	170	2	2.65
<b>QJ 224</b>	117.3	132	203	2	6.9
<b>QJ 324</b>	133.0	134	246	2.5	15.4
<b>QJ 1026</b>	115.5	140	190	2	4.0
<b>QJ 226</b>	126.0	144	216	2.5	7.7
<b>QJ 326</b>	143.5	148	262	3	19
<b>QJ 1028</b>	122.5	150	200	2	4.3
<b>QJ 228</b>	136.5	154	236	2.5	9.8
<b>QJ 328</b>	154.0	158	282	3	24
<b>QJ 1030</b>	131.3	162	213	2	5.2
<b>QJ 230</b>	147.0	164	256	2.5	12
<b>QJ 330</b>	164.5	168	302	3	29
<b>QJ 1032</b>	140.0	172	228	2	6.4
<b>QJ 232</b>	157.5	174	276	2.5	15
<b>QJ 332</b>	175.1	178	322	3	31
<b>QJ 1034</b>	150.5	182	248	2	8.6
<b>QJ 234</b>	168.0	188	292	3	19.5
<b>QJ 334</b>	185.6	188	342	3	41
<b>QJ 1036</b>	161.0	192	268	2	11
<b>QJ 236</b>	175.1	198	302	3	20.5
<b>QJ 336</b>	196.1	198	362	3	48
<b>QJ 1038</b>	168.0	202	278	2	11.5
<b>QJ 238</b>	185.6	208	322	3	23
<b>QJ 338</b>	206.6	212	378	4	54.5
<b>QJ 1040</b>	178.6	212	298	2	15
<b>QJ 240</b>	196.1	218	342	3	27
<b>QJ 340</b>	217.1	222	398	4	61.5

Remarks When using four-point contact ball bearings, please contact NSK.