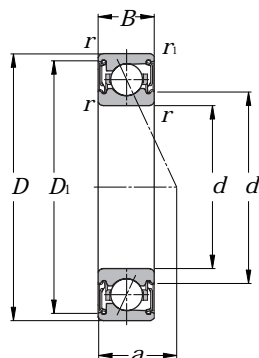


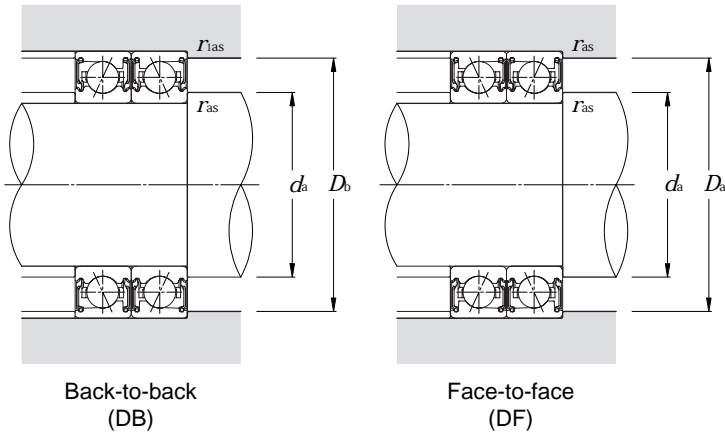
## Sealed standard angular contact ball bearings (steel ball type) 79CD type

Contact angle 15°  $d$  10 ~ 50mm



Bearing numbers	Boundary dimensions					Basic load ratings				Allowable axial load		Factor $f_0$	Limiting speed $\text{min}^{-1}$ grease lubrication
	mm					dynamic	static	dynamic	static	kN	kgf		
	$d$	$D$	$B$	$r_3 \text{ min}^{\text{①}}$	$r_1 \text{ min}^{\text{①}}$	$C_r$	$C_{or}$	$C_r$	$C_{or}$	(at standstill)			
7900CDLLB	10	22	6	0.3	0.15	3.00	1.52	305	155	1.91	194	14.1	75 700
7901CDLLB	12	24	6	0.3	0.15	3.35	1.86	340	189	2.34	239	14.7	67 300
7902CDLLB	15	28	7	0.3	0.15	5.05	2.86	515	292	3.60	370	14.5	56 300
7903CDLLB	17	30	7	0.3	0.15	5.25	3.15	535	320	4.00	405	14.8	51 500
7904CDLLB	20	37	9	0.3	0.15	7.30	4.55	745	465	5.75	590	14.9	42 500
7905CDLLB	25	42	9	0.3	0.15	8.15	5.75	835	585	7.30	745	15.5	36 100
7906CDLLB	30	47	9	0.3	0.15	8.60	6.60	880	675	8.40	860	15.9	31 400
7907CDLLB	35	55	10	0.6	0.3	11.8	9.50	1 200	970	12.1	1 230	15.9	26 900
7908CDLLB	40	62	12	0.6	0.3	17.6	13.8	1 790	1 400	17.5	1 780	15.5	23 700
7909CDLLB	45	68	12	0.6	0.3	18.6	15.6	1 890	1 590	19.8	2 020	15.8	21 400
7910CDLLB	50	72	12	0.6	0.3	15.9	14.7	1 620	1 490	18.6	1 900	16.4	20 000

① Minimum allowable value for corner radius dimension  $r$  or  $r_1$ .



### Dynamic equivalent radial load

$$P_r = X F_r + Y F_a$$

$\frac{i \cdot f_0 \cdot F_a}{C_{or}}$	e	Single row / Tandem				Back-to-back / Face-to-face			
		$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
		X	Y	X	Y	X	Y	X	Y
0.178	0.38				1.47			1.65	2.39
0.357	0.4				1.4			1.57	2.28
0.714	0.43				1.3			1.46	2.11
1.07	0.46				1.23			1.38	2
1.43	0.47	1	0	0.44	1.19	1		1.34	1.93
2.14	0.5				1.12			1.26	1.82
3.57	0.55				1.02			1.14	1.66
5.35	0.56				1			1.12	1.63
7.14	0.56				1			1.12	1.63

### Static equivalent radial load

$$P_{or} = X_0 F_r + Y_0 F_a$$

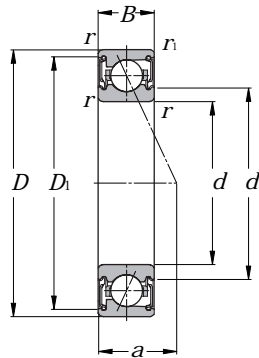
Single row / Tandem		Back-to-back / Face-to-face	
$X_0$	$Y_0$	$X_0$	$Y_0$
0.5	0.46	1	0.92

When  $P_{or} < F_r$  with single-row or tandem arrangement,  $P_{or} = F_r$ .

Load center mm a	Mass kg Single-row (approx.)	Reference dimensions		Abutment and fillet dimensions					Bearing numbers
		$d_i$	$D_i$	$d_a$ min	$D_a$ max	$D_b$ max	$r_{as}$ max	$r_{ias}$ max	
5.2	0.010	12.9	19.7	12.5	19.7	20.8	0.3	0.15	7900CDLLB
5.4	0.012	15.2	21.7	14.5	21.7	22.8	0.3	0.15	7901CDLLB
6.4	0.017	18.5	26.0	17.5	26.0	26.8	0.3	0.15	7902CDLLB
6.7	0.019	20.2	28.0	19.5	28.0	28.8	0.3	0.15	7903CDLLB
8.4	0.039	23.9	33.9	22.5	34.5	35.8	0.3	0.15	7904CDLLB
9.0	0.046	29.1	38.9	27.5	39.5	40.8	0.3	0.15	7905CDLLB
9.7	0.053	34.6	43.9	32.5	44.5	45.8	0.3	0.15	7906CDLLB
11.1	0.081	40.2	51.2	39.5	51.2	52.5	0.6	0.3	7907CDLLB
12.9	0.11	45.3	58.8	44.5	58.8	59.5	0.6	0.3	7908CDLLB
13.6	0.13	50.8	64.3	49.5	64.3	65.5	0.6	0.3	7909CDLLB
14.2	0.14	55.2	67.5	54.5	67.5	69.5	0.6	0.3	7910CDLLB

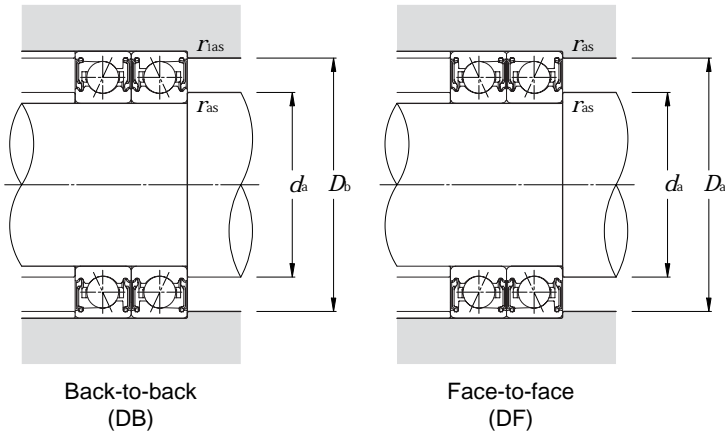
## Sealed standard angular contact ball bearings (steel ball type) 79AD type

Contact angle 25°  $d$  10 ~ 50mm



Bearing numbers	Boundary dimensions					Basic load ratings				Allowable axial load		Limiting speed min <sup>-1</sup> grease lubrication
	mm					dynamic	static	dynamic	static	kN	kgf	
	$d$	$D$	$B$	$r_3$ min <sup>①</sup>	$r_1$ min <sup>①</sup>	$C_r$	$C_{or}$	$C_r$	$C_{or}$	(at standstill)		
7900ADLLB	10	22	6	0.3	0.15	2.88	1.45	294	148	2.20	225	65 600
7901ADLLB	12	24	6	0.3	0.15	3.20	1.77	325	181	2.61	267	58 300
7902ADLLB	15	28	7	0.3	0.15	4.80	2.74	490	279	4.40	450	48 800
7903ADLLB	17	30	7	0.3	0.15	5.00	3.00	510	305	4.75	485	44 700
7904ADLLB	20	37	9	0.3	0.15	6.95	4.35	710	445	6.35	645	36 800
7905ADLLB	25	42	9	0.3	0.15	7.75	5.50	790	560	7.75	790	31 300
7906ADLLB	30	47	9	0.3	0.15	8.15	6.30	830	640	8.65	885	27 300
7907ADLLB	35	55	10	0.6	0.3	11.1	9.00	1 130	920	13.1	1 340	23 300
7908ADLLB	40	62	12	0.6	0.3	16.7	13.1	1 700	1 330	19.3	1 960	20 600
7909ADLLB	45	68	12	0.6	0.3	17.6	14.8	1 790	1 510	21.5	2 190	18 600
7910ADLLB	50	72	12	0.6	0.3	15.0	13.9	1 530	1 420	13.6	1 380	17 400

① Minimum allowable value for corner radius dimension  $r$  or  $r_1$ .



**Dynamic equivalent radial load**  $P_r = XF_r + YF_a$

e	Single row / Tandem				Back-to-back / Face-to-face			
	$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
	X	Y	X	Y	X	Y	X	Y
0.68	1	0	0.41	0.87	1	0.92	0.67	1.41

**Static equivalent radial load**  $P_{or} = X_0 F_r + Y_0 F_a$

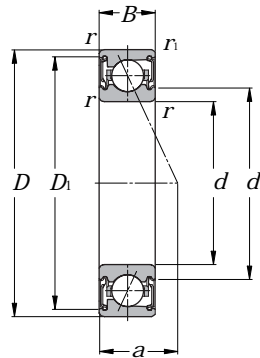
Single row / Tandem		Back-to-back / Face-to-face	
$X_0$	$Y_0$	$X_0$	$Y_0$
0.5	0.38	1	0.76

When  $P_{or} < F_r$  with single-row or tandem arrangement,  $P_{or} = F_r$ .

作用点 mm a	質量 kg 单列 (参考)	参考寸法		取付関係寸法					呼び番号
		d1	D1	mm					
				da 最小	Da 最大	Db 最大	r <sub>as</sub> 最大	r <sub>1as</sub> 最大	
6.8	0.010	12.9	19.7	12.5	19.7	20.8	0.3	0.15	<b>7900ADLLB</b>
7.2	0.012	15.2	21.7	14.5	21.7	22.8	0.3	0.15	<b>7901ADLLB</b>
8.6	0.017	18.5	26.0	17.5	26.0	26.8	0.3	0.15	<b>7902ADLLB</b>
9.0	0.019	20.2	28.0	19.5	28.0	28.8	0.3	0.15	<b>7903ADLLB</b>
11.2	0.039	23.9	33.9	22.5	34.5	35.8	0.3	0.15	<b>7904ADLLB</b>
12.4	0.046	29.1	38.9	27.5	39.5	40.8	0.3	0.15	<b>7905ADLLB</b>
13.5	0.053	34.6	43.9	32.5	44.5	45.8	0.3	0.15	<b>7906ADLLB</b>
15.6	0.081	40.2	51.2	39.5	51.2	52.5	0.6	0.3	<b>7907ADLLB</b>
18.0	0.11	45.3	58.8	44.5	58.8	59.5	0.6	0.3	<b>7908ADLLB</b>
19.3	0.13	50.8	64.3	49.5	64.3	65.5	0.6	0.3	<b>7909ADLLB</b>
20.2	0.14	55.2	67.5	54.5	67.5	69.5	0.6	0.3	<b>7910ADLLB</b>

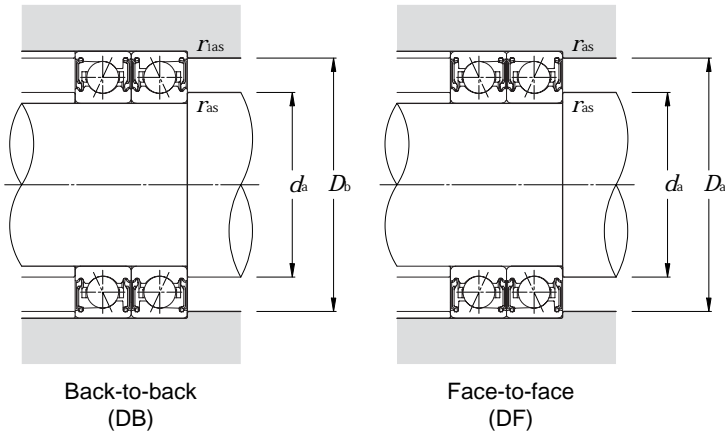
## Sealed standard angular contact ball bearings (steel ball type) 70CD type

Contact angle 15°  $d$  10 ~ 50mm



Bearing numbers	Boundary dimensions					Basic load ratings				Allowable axial load		Factor $f_0$	Limiting speed $\text{min}^{-1}$ grease lubrication
	mm					dynamic	static	dynamic	static	kN	kgf		
	$d$	$D$	$B$	$r_{\text{s min}}$ ①	$r_{\text{ls min}}$ ①	$C_r$	$C_{\text{or}}$	$C_r$	$C_{\text{or}}$	(at standstill)			
7000CDLLB	10	26	8	0.3	0.15	5.30	2.49	540	254	3.10	315	12.6	67 300
7001CDLLB	12	28	8	0.3	0.15	5.80	2.90	590	296	3.65	370	13.2	60 600
7002CDLLB	15	32	9	0.3	0.15	6.25	3.40	635	345	4.25	435	14.0	51 500
7003CDLLB	17	35	10	0.3	0.15	8.25	4.50	840	460	5.70	580	13.8	46 600
7004CDLLB	20	42	12	0.6	0.3	10.5	6.00	1 070	610	7.55	770	14.0	39 100
7005CDLLB	25	47	12	0.6	0.3	12.3	8.00	1 250	815	10.1	1 030	14.7	33 600
7006CDLLB	30	55	13	1	0.6	15.1	10.3	1 540	1 050	13.0	1 320	14.9	28 500
7007CDLLB	35	62	14	1	0.6	19.1	13.7	1 950	1 390	17.3	1 760	15.0	25 000
7008CDLLB	40	68	15	1	0.6	20.6	15.9	2 100	1 620	20.1	2 050	15.4	22 400
7009CDLLB	45	75	16	1	0.6	27.7	21.1	2 820	2 160	26.7	2 730	15.1	20 200
7010CDLLB	50	80	16	1	0.6	28.6	22.9	2 910	2 330	29.0	2 960	15.4	18 600

① Minimum allowable value for corner radius dimension  $r$  or  $r_1$ .



### Dynamic equivalent radial load

$$P_r = X F_r + Y F_a$$

$\frac{i \cdot f_0 \cdot F_a}{C_{or}}$	e	Single row / Tandem				Back-to-back / Face-to-face			
		$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
		X	Y	X	Y	X	Y	X	Y
0.178	0.38				1.47			1.65	2.39
0.357	0.4				1.4			1.57	2.28
0.714	0.43				1.3			1.46	2.11
1.07	0.46				1.23			1.38	2
1.43	0.47	1	0	0.44	1.19	1		1.34	1.93
2.14	0.5				1.12			1.26	1.82
3.57	0.55				1.02			1.14	1.66
5.35	0.56				1			1.12	1.63
7.14	0.56				1			1.12	1.63

### Static equivalent radial load

$$P_{or} = X_0 F_r + Y_0 F_a$$

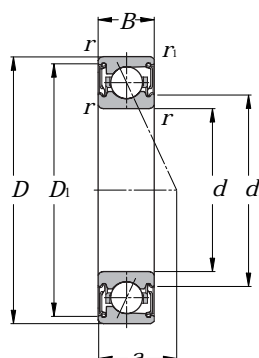
Single row / Tandem		Back-to-back / Face-to-face	
$X_0$	$Y_0$	$X_0$	$Y_0$
0.5	0.46	1	0.92

When  $P_{or} < F_r$  with single-row or tandem arrangement,  $P_{or} = F_r$ .

Load center mm a	Mass kg Single-row (approx.)	Reference dimensions		Abutment and fillet dimensions					Bearing numbers
		d <sub>t</sub>	D <sub>t</sub>	d <sub>a</sub> min	D <sub>a</sub> max	D <sub>b</sub> max	r <sub>as</sub> max	r <sub>1as</sub> max	
6.4	0.018	14.5	23.4	12.5	23.5	24.8	0.3	0.15	7000CDLLB
6.7	0.022	16.5	25.4	14.5	25.5	26.8	0.3	0.15	7001CDLLB
7.7	0.032	19.5	28.8	17.5	29.5	30.8	0.3	0.15	7002CDLLB
8.5	0.040	21.6	32.2	19.5	32.5	33.8	0.3	0.15	7003CDLLB
10.2	0.070	26.0	38.0	24.5	38.0	39.5	0.6	0.3	7004CDLLB
10.9	0.083	30.7	43.1	29.5	43.1	44.5	0.6	0.3	7005CDLLB
12.2	0.11	36.7	50.4	35.5	50.4	50.5	1	0.6	7006CDLLB
13.6	0.16	42.2	57.2	40.5	57.2	57.5	1	0.6	7007CDLLB
14.8	0.19	48.2	62.7	45.5	62.7	63.5	1	0.6	7008CDLLB
16.1	0.24	53.3	70.3	50.5	70.3	70.5	1	0.6	7009CDLLB
16.8	0.26	58.3	75.3	55.5	75.3	75.5	1	0.6	7010CDLLB

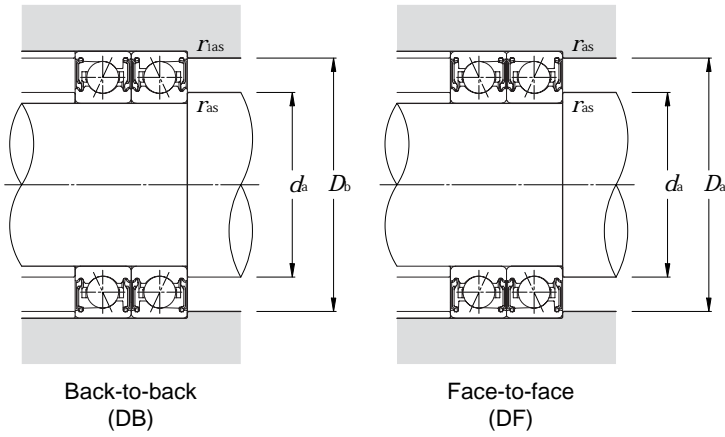
## Sealed standard angular contact ball bearings (steel ball type) 70AD type

Contact angle 25°  $d$  10 ~ 50mm



Bearing numbers	Boundary dimensions					Basic load ratings				Allowable axial load		Limiting speed min <sup>-1</sup> grease lubrication
	mm					dynamic kN		static kgf		kN	kgf	
	$d$	$D$	$B$	$r_{3 \text{ min}}$ ①	$r_{1s \text{ min}}$ ①	$C_r$	$C_{or}$	$C_r$	$C_{or}$	(at standstill)		
7000ADLLB	10	26	8	0.3	0.15	5.15	2.41	525	245	3.85	395	58 300
7001ADLLB	12	28	8	0.3	0.15	5.60	2.79	570	285	4.50	455	52 500
7002ADLLB	15	32	9	0.3	0.15	5.95	3.25	610	330	4.95	505	44 700
7003ADLLB	17	35	10	0.3	0.15	7.90	4.35	805	445	6.95	710	40 400
7004ADLLB	20	42	12	0.6	0.3	10.0	5.75	1 020	585	8.80	900	33 900
7005ADLLB	25	47	12	0.6	0.3	11.7	7.65	1 190	780	11.3	1 150	29 200
7006ADLLB	30	55	13	1	0.6	14.4	9.80	1 470	995	14.9	1 520	24 700
7007ADLLB	35	62	14	1	0.6	18.2	13.0	1 850	1 330	20.4	2 080	21 600
7008ADLLB	40	68	15	1	0.6	19.5	15.1	1 990	1 540	23.2	2 370	19 400
7009ADLLB	45	75	16	1	0.6	26.3	20.1	2 680	2 050	31.0	3 150	17 500
7010ADLLB	50	80	16	1	0.6	27.1	21.8	2 760	2 220	33.0	3 350	16 200

① Minimum allowable value for corner radius dimension  $r$  or  $r_1$ .



**Dynamic equivalent radial load**  $P_r = XF_r + YF_a$

e	Single row / Tandem				Back-to-back / Face-to-face			
	$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
	X	Y	X	Y	X	Y	X	Y
0.68	1	0	0.41	0.87	1	0.92	0.67	1.41

**Static equivalent radial load**  $P_{or} = X_0 F_r + Y_0 F_a$

Single row / Tandem		Back-to-back / Face-to-face	
$X_0$	$Y_0$	$X_0$	$Y_0$
0.5	0.38	1	0.76

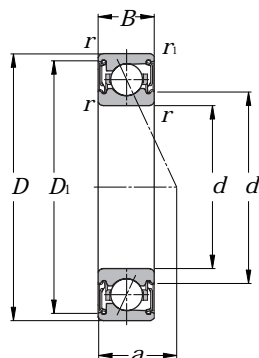
When  $P_{or} < F_r$  with single-row or tandem arrangement,  $P_{or} = F_r$ .

Load center mm a	Mass kg Single-row (approx.)	Reference dimensions		Abutment and fillet dimensions mm					Bearing numbers
		d <sub>t</sub>	D <sub>t</sub>	d <sub>a</sub> min	D <sub>a</sub> max	D <sub>b</sub> max	r <sub>as</sub> max	r <sub>1as</sub> max	
8.3	0.018	14.5	23.4	12.5	23.5	24.8	0.3	0.15	7000ADLLB
8.7	0.022	16.5	25.4	14.5	25.5	26.8	0.3	0.15	7001ADLLB
10.0	0.032	19.5	28.8	17.5	29.5	30.8	0.3	0.15	7002ADLLB
11.1	0.040	21.6	32.2	19.5	32.5	33.8	0.3	0.15	7003ADLLB
13.3	0.070	26.0	38.0	24.5	38.0	39.5	0.6	0.3	7004ADLLB
14.5	0.083	30.7	43.1	29.5	43.1	44.5	0.6	0.3	7005ADLLB
16.5	0.11	36.7	50.4	35.5	50.4	50.5	1	0.6	7006ADLLB
18.4	0.16	42.2	57.2	40.5	57.2	57.5	1	0.6	7007ADLLB
20.2	0.19	48.2	62.7	45.5	62.7	63.5	1	0.6	7008ADLLB
22.1	0.24	53.3	70.3	50.5	70.3	70.5	1	0.6	7009ADLLB
23.3	0.26	58.3	75.3	55.5	75.3	75.5	1	0.6	7010ADLLB



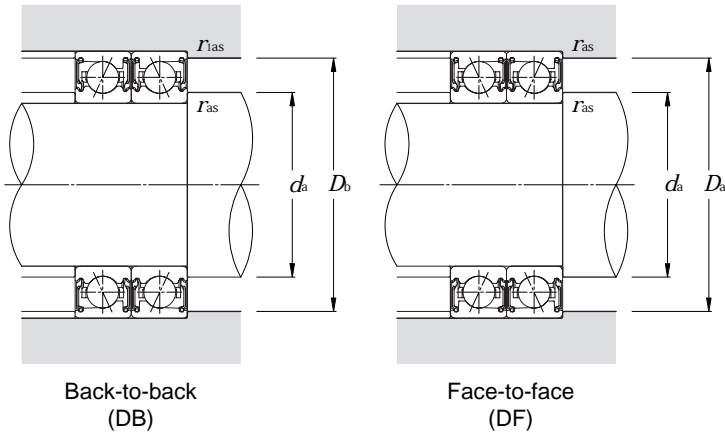
## Sealed standard angular contact ball bearings (ceramic ball type) 5S-79CD type

Contact angle 15°  $d$  10 ~ 50mm



Bearing numbers	Boundary dimensions					Basic load ratings				Allowable axial load		Factor $f_0$	Limiting speed $\text{min}^{-1}$ grease lubrication
	mm					dynamic	static	dynamic	static	kN	kgf		
	$d$	$D$	$B$	$r_{\text{s min}}$ ①	$r_{\text{1s min}}$ ①	$C_r$	$C_{\text{or}}$	$C_r$	$C_{\text{or}}$	(at standstill)			
5S-7900CDLLB	10	22	6	0.3	0.15	3.00	1.05	305	107	1.19	121	9.8	89 800
5S-7901CDLLB	12	24	6	0.3	0.15	3.35	1.29	340	131	1.46	149	10.2	79 800
5S-7902CDLLB	15	28	7	0.3	0.15	5.05	1.98	515	202	2.25	230	10.0	66 800
5S-7903CDLLB	17	30	7	0.3	0.15	5.25	2.19	535	223	2.49	254	10.3	61 100
5S-7904CDLLB	20	37	9	0.3	0.15	7.30	3.15	745	325	3.60	365	10.3	50 400
5S-7905CDLLB	25	42	9	0.3	0.15	8.15	4.00	835	405	4.55	465	10.7	42 900
5S-7906CDLLB	30	47	9	0.3	0.15	8.60	4.60	880	470	5.25	535	11.0	37 300
5S-7907CDLLB	35	55	10	0.6	0.3	11.8	6.60	1 200	670	7.55	770	11.0	31 900
5S-7908CDLLB	40	62	12	0.6	0.3	17.6	9.55	1 790	975	10.9	1 110	10.8	28 200
5S-7909CDLLB	45	68	12	0.6	0.3	18.6	10.8	1 890	1 100	12.4	1 260	11.0	24 100
5S-7910CDLLB	50	72	12	0.6	0.3	15.9	10.2	1 620	1 040	11.7	1 190	11.3	22 500

① Minimum allowable value for corner radius dimension  $r$  or  $r_1$ .



### Dynamic equivalent radial load

$$P_r = XF_r + YF_a$$

$\frac{i \cdot f_0 \cdot F_a}{C_{or}}$	e	Single row / Tandem				Back-to-back / Face-to-face			
		$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
		X	Y	X	Y	X	Y	X	Y
0.178	0.38				1.47			1.65	2.39
0.357	0.4				1.4			1.57	2.28
0.714	0.43				1.3			1.46	2.11
1.07	0.46				1.23			1.38	2
1.43	0.47	1	0	0.44	1.19	1		1.34	1.93
2.14	0.5				1.12			1.26	1.82
3.57	0.55				1.02			1.14	1.66
5.35	0.56				1			1.12	1.63
7.14	0.56				1			1.12	1.63

### Static equivalent radial load

$$P_{or} = X_0 F_r + Y_0 F_a$$

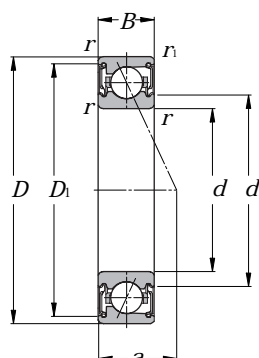
Single row / Tandem		Back-to-back / Face-to-face	
$X_0$	$Y_0$	$X_0$	$Y_0$
0.5	0.46	1	0.92

When  $P_{or} < F_r$  with single-row or tandem arrangement,  $P_{or} = F_r$ .

Load center mm a	Mass kg Single-row (approx.)	Reference dimensions		Abutment and fillet dimensions					Bearing numbers
		d <sub>t</sub>	D <sub>t</sub>	d <sub>a</sub> min	D <sub>a</sub> max	D <sub>b</sub> max	r <sub>as</sub> max	r <sub>1as</sub> max	
5.2	0.009	12.9	19.7	12.5	19.5	20.8	0.3	0.15	5S-7900CDLLB
5.4	0.011	15.2	21.7	14.5	21.5	22.8	0.3	0.15	5S-7901CDLLB
6.4	0.015	18.5	26.0	17.5	25.5	26.8	0.3	0.15	5S-7902CDLLB
6.7	0.017	20.2	28.0	19.5	27.5	28.8	0.3	0.15	5S-7903CDLLB
8.4	0.036	23.9	33.9	22.5	34.5	35.8	0.3	0.15	5S-7904CDLLB
9.0	0.042	29.1	38.9	27.5	39.5	40.8	0.3	0.15	5S-7905CDLLB
9.7	0.048	34.6	43.9	32.5	44.5	45.8	0.3	0.15	5S-7906CDLLB
11.1	0.073	40.2	51.2	39.5	50.5	52.5	0.6	0.3	5S-7907CDLLB
12.9	0.099	45.3	58.8	44.5	57.5	59.5	0.6	0.3	5S-7908CDLLB
13.6	0.12	50.8	64.3	49.5	63.5	65.5	0.6	0.3	5S-7909CDLLB
14.2	0.12	55.2	67.5	54.5	67.5	69.5	0.6	0.3	5S-7910CDLLB

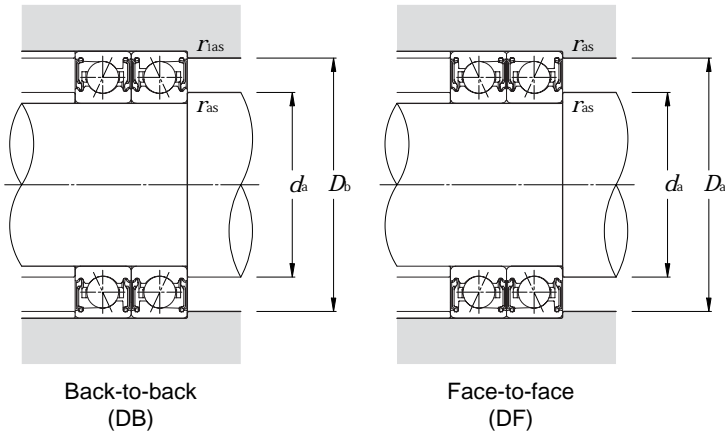
## Sealed standard angular contact ball bearings (ceramic ball type) 5S-79AD type

Contact angle 25°  $d$  10 ~ 50mm



Bearing numbers	Boundary dimensions					Basic load ratings				Allowable axial load		Limiting speed min <sup>-1</sup> grease lubrication
	mm					dynamic kN		static kgf		kN	kgf	
	$d$	$D$	$B$	$r_{\text{S min}}$ ①	$r_{\text{1S min}}$ ①	$C_r$	$C_{\text{or}}$	$C_r$	$C_{\text{or}}$	(at standstill)		
5S-7900ADLLB	10	22	6	0.3	0.15	2.88	1.01	294	103	1.52	155	79 700
5S-7901ADLLB	12	24	6	0.3	0.15	3.20	1.23	325	125	1.86	189	70 800
5S-7902ADLLB	15	28	7	0.3	0.15	4.80	1.90	490	193	2.86	292	59 300
5S-7903ADLLB	17	30	7	0.3	0.15	5.00	2.09	510	213	3.15	320	54 300
5S-7904ADLLB	20	37	9	0.3	0.15	6.95	3.00	710	310	4.55	465	44 700
5S-7905ADLLB	25	42	9	0.3	0.15	7.75	3.80	790	385	5.75	585	38 100
5S-7906ADLLB	30	47	9	0.3	0.15	8.15	4.35	830	445	6.60	670	33 100
5S-7907ADLLB	35	55	10	0.6	0.3	11.1	6.25	1 130	635	9.45	965	28 300
5S-7908ADLLB	40	62	12	0.6	0.3	16.7	9.05	1 700	925	13.7	1 400	25 000
5S-7909ADLLB	45	68	12	0.6	0.3	17.6	10.3	1 790	1 050	15.6	1 590	21 400
5S-7910ADLLB	50	72	12	0.6	0.3	15.0	9.60	1 530	980	14.6	1 490	20 000

① Minimum allowable value for corner radius dimension  $r$  or  $r_1$ .



**Dynamic equivalent radial load**  $P_r = XF_r + YF_a$

e	Single row / Tandem				Back-to-back / Face-to-face			
	$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
	X	Y	X	Y	X	Y	X	Y
0.68	1	0	0.41	0.87	1	0.92	0.67	1.41

**Static equivalent radial load**  $P_{or} = X_0 F_r + Y_0 F_a$

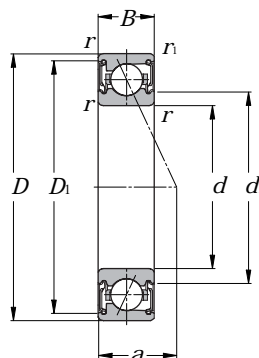
Single row / Tandem		Back-to-back / Face-to-face	
$X_0$	$Y_0$	$X_0$	$Y_0$
0.5	0.38	1	0.76

When  $P_{or} < F_r$  with single-row or tandem arrangement,  $P_{or} = F_r$ .

Load center mm <i>a</i>	Mass kg Single-row (approx.)	Reference dimensions		Abutment and fillet dimensions mm					Bearing numbers
		<i>d</i> <sub>1</sub>	<i>D</i> <sub>1</sub>	<i>d</i> <sub>a</sub> min	<i>D</i> <sub>a</sub> max	<i>D</i> <sub>b</sub> max	<i>r</i> <sub>as</sub> max	<i>r</i> <sub>1as</sub> max	
6.8	0.009	12.9	19.7	12.5	19.5	20.8	0.3	0.15	5S-7900ADLLB
7.2	0.011	15.2	21.7	14.5	21.5	22.8	0.3	0.15	5S-7901ADLLB
8.6	0.015	18.5	26.0	17.5	25.5	26.8	0.3	0.15	5S-7902ADLLB
9.0	0.017	20.2	28.0	19.5	27.5	28.8	0.3	0.15	5S-7903ADLLB
11.2	0.036	23.9	33.9	22.5	34.5	35.8	0.3	0.15	5S-7904ADLLB
12.4	0.042	29.1	38.9	27.5	39.5	40.8	0.3	0.15	5S-7905ADLLB
13.5	0.048	34.6	43.9	32.5	44.5	45.8	0.3	0.15	5S-7906ADLLB
15.6	0.073	40.2	51.2	39.5	50.5	52.5	0.6	0.3	5S-7907ADLLB
18.0	0.099	45.3	58.8	44.5	57.5	59.5	0.6	0.3	5S-7908ADLLB
19.3	0.12	50.8	64.3	49.5	63.5	65.5	0.6	0.3	5S-7909ADLLB
20.2	0.12	55.2	67.5	54.5	67.5	69.5	0.6	0.3	5S-7910ADLLB

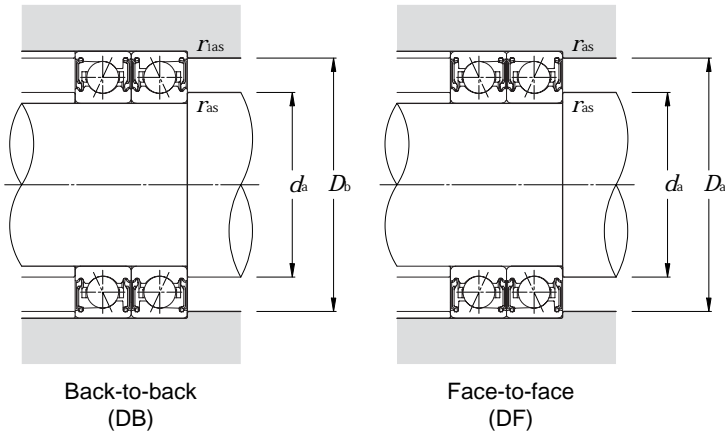
## Sealed standard angular contact ball bearings (ceramic ball type) 5S-70CD type

Contact angle 15°  $d$  10 ~ 50mm



Bearing numbers	Boundary dimensions					Basic load ratings				Allowable axial load		Factor $f_0$	Limiting speed $\text{min}^{-1}$ grease lubrication
	mm					dynamic	static	dynamic	static	kN	kgf		
	$d$	$D$	$B$	$r_{\text{s min}}^{\text{①}}$	$r_{\text{1s min}}^{\text{①}}$	$C_r$	$C_{\text{or}}$	$C_r$	$C_{\text{or}}$	(at standstill)			
5S-7000CDLLB	10	26	8	0.3	0.15	5.30	1.73	540	176	1.93	197	8.8	80 600
5S-7001CDLLB	12	28	8	0.3	0.15	5.80	2.01	590	205	2.26	231	9.2	72 600
5S-7002CDLLB	15	32	9	0.3	0.15	6.25	2.35	635	239	2.66	271	9.7	61 800
5S-7003CDLLB	17	35	10	0.3	0.15	8.25	3.15	840	320	3.55	360	9.6	55 800
5S-7004CDLLB	20	42	12	0.6	0.3	10.5	4.15	1 070	425	4.70	480	9.7	46 800
5S-7005CDLLB	25	47	12	0.6	0.3	12.3	5.55	1 250	565	6.30	640	10.2	40 300
5S-7006CDLLB	30	55	13	1	0.6	15.1	7.10	1 540	725	8.10	825	10.3	34 100
5S-7007CDLLB	35	62	14	1	0.6	19.1	9.45	1 950	965	10.8	1 100	10.4	29 900
5S-7008CDLLB	40	68	15	1	0.6	20.6	11.0	2 100	1 120	12.6	1 280	10.6	26 900
5S-7009CDLLB	45	75	16	1	0.6	27.7	14.6	2 820	1 490	16.7	1 700	10.4	23 300
5S-7010CDLLB	50	80	16	1	0.6	28.6	15.9	2 910	1 620	18.1	1 850	10.6	21 500

① Minimum allowable value for corner radius dimension  $r$  or  $r_1$ .



### Dynamic equivalent radial load

$$P_r = X F_r + Y F_a$$

$\frac{i \cdot f_0 \cdot F_a}{C_{or}}$	e	Single row / Tandem				Back-to-back / Face-to-face			
		$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
		X	Y	X	Y	X	Y	X	Y
0.178	0.38				1.47			1.65	2.39
0.357	0.4				1.4			1.57	2.28
0.714	0.43				1.3			1.46	2.11
1.07	0.46				1.23			1.38	2
1.43	0.47	1	0	0.44	1.19	1		1.34	1.93
2.14	0.5				1.12			1.26	1.82
3.57	0.55				1.02			1.14	1.66
5.35	0.56				1			1.12	1.63
7.14	0.56				1			1.12	1.63

### Static equivalent radial load

$$P_{or} = X_0 F_r + Y_0 F_a$$

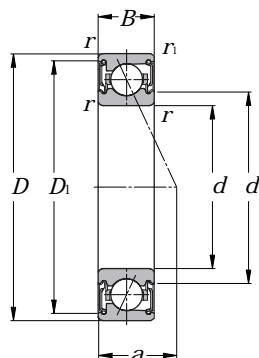
Single row / Tandem		Back-to-back / Face-to-face	
$X_0$	$Y_0$	$X_0$	$Y_0$
0.5	0.46	1	0.92

When  $P_{or} < F_r$  with single-row or tandem arrangement,  $P_{or} = F_r$ .

Load center mm a	Mass kg Single-row (approx.)	Reference dimensions		Abutment and fillet dimensions					Bearing numbers
		d1	D1	da min	Da max	Db max	ras max	r1as max	
6.4	0.014	14.5	23.4	12.5	23.5	24.8	0.3	0.15	5S-7000CDLLB
6.7	0.020	16.5	25.4	14.5	25.5	26.8	0.3	0.15	5S-7001CDLLB
7.7	0.029	19.5	28.8	17.5	29.5	30.8	0.3	0.15	5S-7002CDLLB
8.5	0.035	21.6	32.2	19.5	32.5	33.8	0.3	0.15	5S-7003CDLLB
10.2	0.064	26.0	38.0	24.5	37.5	39.5	0.6	0.3	5S-7004CDLLB
10.9	0.075	30.7	43.1	29.5	42.5	44.5	0.6	0.3	5S-7005CDLLB
12.2	0.096	36.7	50.4	35.5	49.5	50.5	1	0.6	5S-7006CDLLB
13.6	0.14	42.2	57.2	40.5	56.5	57.5	1	0.6	5S-7007CDLLB
14.8	0.17	48.2	62.7	45.5	62.5	63.5	1	0.6	5S-7008CDLLB
16.1	0.21	53.3	70.3	50.5	69.5	70.5	1	0.6	5S-7009CDLLB
16.8	0.23	58.3	75.3	55.5	74.5	75.5	1	0.6	5S-7010CDLLB

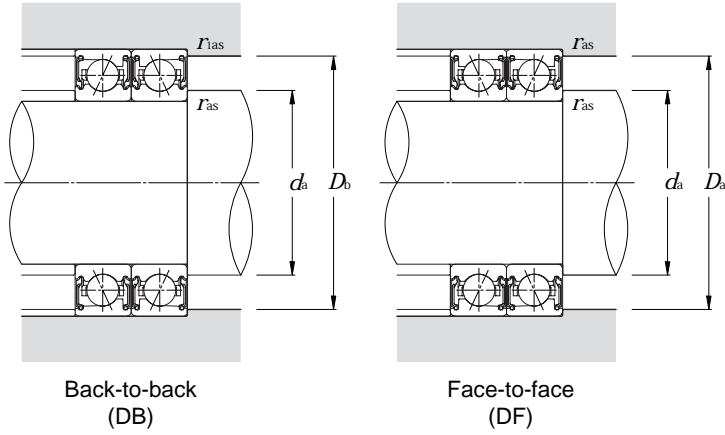
## Sealed standard angular contact ball bearings (ceramic ball type) 5S-70AD type

Contact angle 25°  $d$  10 ~ 50mm



Bearing numbers	Boundary dimensions					Basic load ratings				Allowable axial load		Limiting speed min <sup>-1</sup> grease lubrication
	mm					dynamic	static	dynamic	static	kN	kgf	
	$d$	$D$	$B$	$r_{s \min}$ ①	$r_{1s \min}$ ①	$C_r$	$C_{or}$	$C_r$	$C_{or}$	(at standstill)		
5S-7000ADLLB	10	26	8	0.3	0.15	5.15	1.67	525	170	2.51	256	70 600
5S-7001ADLLB	12	28	8	0.3	0.15	5.60	1.93	570	197	2.92	297	63 500
5S-7002ADLLB	15	32	9	0.3	0.15	5.95	2.25	610	229	3.40	345	54 000
5S-7003ADLLB	17	35	10	0.3	0.15	7.90	3.00	805	305	4.55	465	48 800
5S-7004ADLLB	20	42	12	0.6	0.3	10.0	4.00	1 020	405	6.00	615	41 000
5S-7005ADLLB	25	47	12	0.6	0.3	11.7	5.30	1 190	540	8.00	815	35 300
5S-7006ADLLB	30	55	13	1	0.6	14.4	6.80	1 470	690	10.2	1 040	29 900
5S-7007ADLLB	35	62	14	1	0.6	18.2	9.00	1 850	920	13.6	1 390	26 200
5S-7008ADLLB	40	68	15	1	0.6	19.5	10.5	1 990	1 070	15.8	1 620	23 500
5S-7009ADLLB	45	75	16	1	0.6	26.3	14.0	2 680	1 420	21.1	2 150	20 300
5S-7010ADLLB	50	80	16	1	0.6	27.1	15.1	2 760	1 540	22.8	2 330	18 800

① Minimum allowable value for corner radius dimension  $r$  or  $r_1$ .



**Dynamic equivalent radial load**  $P_r = X F_r + Y F_a$

e	Single row / Tandem				Back-to-back / Face-to-face			
	$F_a/F_r \leq e$		$F_a/F_r > e$		$F_a/F_r \leq e$		$F_a/F_r > e$	
	X	Y	X	Y	X	Y	X	Y
0.68	1	0	0.41	0.87	1	0.92	0.67	1.41

**Static equivalent radial load**  $P_{or} = X_0 F_r + Y_0 F_a$

Single row / Tandem		Back-to-back / Face-to-face	
$X_0$	$Y_0$	$X_0$	$Y_0$
0.5	0.38	1	0.76

When  $P_{or} < F_r$  with single-row or tandem arrangement,  $P_{or} = F_r$ .

Load center mm a	Mass kg Single-row (approx.)	Reference dimensions		Abutment and fillet dimensions mm					Bearing numbers
		d <sub>t</sub>	D <sub>t</sub>	d <sub>a</sub> min	D <sub>a</sub> max	D <sub>b</sub> max	r <sub>as</sub> max	r <sub>1as</sub> max	
8.3	0.014	14.5	23.4	12.5	23.5	24.8	0.3	0.15	5S-7000ADLLB
8.7	0.020	16.5	25.4	14.5	25.5	26.8	0.3	0.15	5S-7001ADLLB
10.0	0.029	19.5	28.8	17.5	29.5	30.8	0.3	0.15	5S-7002ADLLB
11.1	0.035	21.6	32.2	19.5	32.5	33.8	0.3	0.15	5S-7003ADLLB
13.3	0.064	26.0	38.0	24.5	37.5	39.5	0.6	0.3	5S-7004ADLLB
14.5	0.075	30.7	43.1	29.5	42.5	44.5	0.6	0.3	5S-7005ADLLB
16.5	0.096	36.7	50.4	35.5	49.5	50.5	1	0.6	5S-7006ADLLB
18.4	0.14	42.2	57.2	40.5	56.5	57.5	1	0.6	5S-7007ADLLB
20.2	0.17	48.2	62.7	45.5	62.5	63.5	1	0.6	5S-7008ADLLB
22.1	0.21	53.3	70.3	50.5	69.5	70.5	1	0.6	5S-7009ADLLB
23.3	0.23	58.3	75.3	55.5	74.5	75.5	1	0.6	5S-7010ADLLB