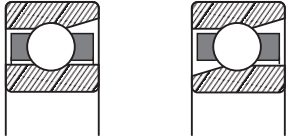




## Type Code: 7



7

0

7

2

## SIZE DESIGNATIONS

0=70xx  
2=72xx  
3=73xx  
4=74xx

## Designs, Types and Features

/C: nominal contact angle  $\alpha=15^\circ$   
/AC: nominal contact angle  $\alpha=25^\circ$   
/A: nominal contact angle  $\alpha=30^\circ$   
/B: nominal contact angle  $\alpha=40^\circ$   
/M: brass solid retainer  
/TN: Glass-fiber reinforced nylon cage

## BORE DIAMETER DESIGNATION

5 X -- = mm  
5 X 08 = 40 mm  
5 X 12 = 60 mm

12

C

DB

P5

08

BM

DF

## Mounting

/DB: mount in sets, back to back  
/DF: mount in sets, face to face  
/DT: mount in sets, tandem

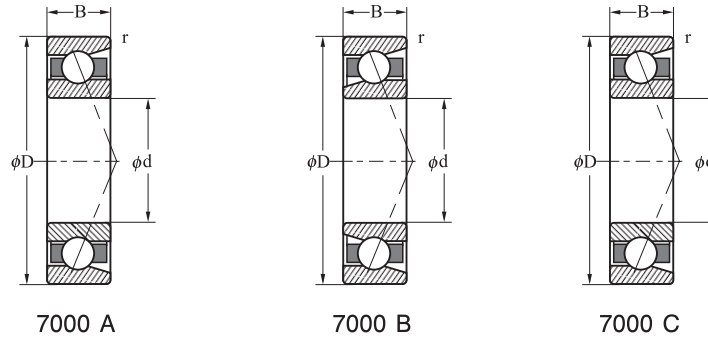
## Clearance:

/C2: Less than nominal clearance  
/C0: Nominal clearance, omitted in designation  
/C3: Larger clearance, than C0  
/C4: Larger clearance, than C3  
/C5: Larger clearance, than C4  
/C9: Non-Standard

## Tolerance class:

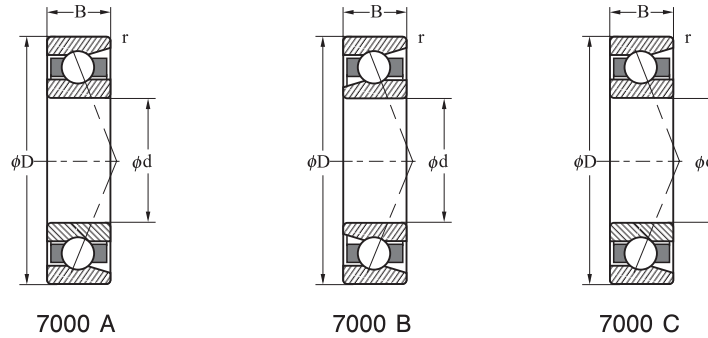
/P0: Equals grade ABEC 1, omissible  
/P6: Equals grade ABEC 3  
/P5: Equals grade ABEC 5  
/P4: Equals grade ABEC 7  
/P2: Equals tolerance class ABEC 9

# ANGULAR CONTACT BALL BEARINGS



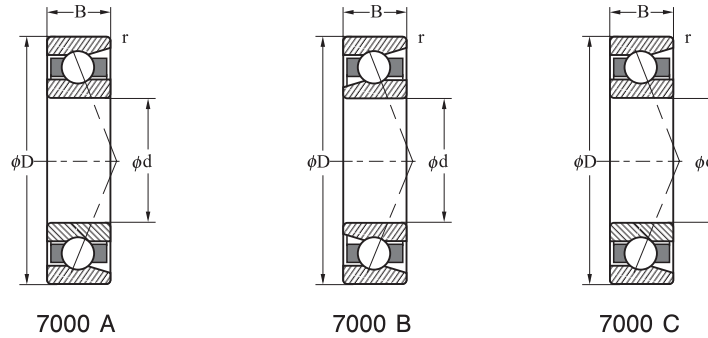
Principal dimensions mm (in)				Weight kg (lb)	Bearing Number	Basic Load Rating kN (lbf)		Limiting Speed (rpm)		
d	D	B	r <sub>min</sub>			Dynamic C <sub>r</sub>	Static Cor	Grease	Oil	
17 0.6692	35 1.3779	10 0.3937	0.15 0.005	0.040 0.088	7003C	6.93 1560	3.94 890	29000	39000	
	35 1.3779	10 0.3937	0.15 0.005	0.031 0.068	7003A	6.44 1450	3.70 830	20000	27000	
	40 1.5748	12 0.4724	0.30 0.011	0.067 0.147	7203C	10.08 2270	5.52 1240	28000	36000	
	40 1.5748	12 0.4724	0.30 0.011	0.060 0.132	7203A	10.80 2430	6.34 1430	18000	25000	
	40 1.5748	12 0.4724	0.30 0.011	0.062 0.136	7203B	9.90 2230	5.86 1320	16000	21000	
	47 1.8503	14 0.5511	1.00 0.039	0.109 0.24	7303C	15.70 3530	8.25 1860	26000	35000	
	47 1.8503	14 0.5511	0.60 0.023	0.111 0.244	7303A	14.31 3220	8.30 1870	17000	23000	
	47 1.8503	14 0.5511	0.60 0.023	0.113 0.249	7303B	13.32 3000	7.68 1730	14000	19000	
	20 0.7874	42 1.6535	12 0.4724	0.30 0.011	0.071 0.156	7004C	9.45 2130	5.81 1310	26000	34000
		42 1.6535	12 0.4724	0.30 0.011	0.063 0.138	7004A	8.73 1960	5.38 1210	18000	24000
47 1.8503		14 0.5511	0.60 0.023	0.113 0.249	7204C	13.14 2960	7.82 1760	24000	32000	
47 1.8503		14 0.5511	0.60 0.023	0.100 0.22	7204A	13.05 2940	8.06 1810	16000	22000	
47 1.8503		14 0.5511	0.60 0.023	0.104 0.229	7204B	11.97 2690	7.39 1660	14000	19000	
52 2.0472		15 0.5905	1.10 0.043	0.140 0.308	7304C	18.50 4160	9.95 2240	23000	31000	
52 2.0472		15 0.5905	0.60 0.023	0.140 0.308	7304A	16.83 3790	9.98 2250	15000	20000	
52 2.0472		15 0.5905	0.60 0.023	0.144 0.317	7304B	15.57 3500	9.26 2080	12000	17000	
25 0.9842		47 1.8503	12 0.4724	0.30 0.011	0.083 0.183	7005C	10.53 2370	7.15 1610	22000	29000
		47 1.8503	12 0.4724	0.30 0.011	0.074 0.163	7005A	9.63 2170	6.58 1480	15000	20000
	52 2.0472	15 0.5905	0.60 0.023	0.139 0.306	7205C	14.94 3360	9.79 2200	20000	27000	
	52 2.0472	15 0.5905	0.60 0.023	0.126 0.277	7205A	14.58 3280	9.89 2230	13000	18000	
	52 2.0472	15 0.5905	0.60 0.023	0.129 0.284	7205B	13.32 3000	9.02 2030	11000	15000	
	62 2.4409	17 0.6693	1.10 0.043	0.222 0.489	7305C	26.40 5940	15.30 3440	19000	26000	
	62 2.4409	17 0.6693	0.60 0.023	0.230 0.507	7305A	23.76 5350	15.17 3410	12000	16000	
	62 2.4409	17 0.6693	0.60 0.023	0.236 0.52	7305B	21.96 4940	14.02 3160	10000	14000	
	30 1.1811	55 2.1653	13 0.5118	0.60 0.023	0.130 0.286	7006C	13.59 3060	9.89 2230	19000	25000
		55 2.1653	13 0.5118	0.60 0.023	0.111 0.244	7006A	12.51 2820	9.07 2040	12000	17000
62 2.4409		16 0.6299	0.60 0.023	0.218 0.48	7206C	20.70 4660	14.11 3180	17000	23000	
62 2.4409		16 0.6299	0.60 0.023	0.191 0.421	7206A	20.25 4560	14.21 3200	11000	15000	
62 2.4409		16 0.6299	0.60 0.023	0.197 0.434	7206B	18.45 4150	12.96 2920	10000	13000	
72 2.8346		19 0.7480	1.10 0.043	0.330 0.727	7306C	32.50 7310	20.30 4570	16000	22000	
72 2.8346		19 0.7480	0.60 0.023	0.341 0.751	7306A	30.15 6780	21.41 4820	10000	14000	
72 2.8346		19 0.7480	0.60 0.023	0.349 0.769	7306B	27.90 6280	19.68 4430	9100	12000	
35 1.3779		62 2.4409	14 0.5511	0.60 0.023	0.169 0.372	7007C	17.19 3870	13.15 2960	16000	22000
		62 2.4409	14 0.5511	0.60 0.023	0.148 0.326	7007A	15.75 3540	12.10 2720	11000	15000
	72 2.8346	17 0.6693	0.60 0.023	0.316 0.696	7207C	27.45 6180	19.10 4300	15000	20000	
	72 2.8346	17 0.6693	0.60 0.023	0.284 0.626	7207A	26.73 6010	19.30 4340	10000	13000	
	72 2.8346	17 0.6693	0.60 0.023	0.289 0.637	7207B	24.39 5490	17.66 3970	8800	11000	
	80 3.1496	21 0.8268	1.00 0.039	0.440 0.97	7307C	40.50 9110	25.80 5810	14000	19000	
	80 3.1496	21 0.8268	1.00 0.039	0.459 1.012	7307A	36.00 8100	25.25 5680	9300	12000	
	80 3.1496	21 0.8268	1.00 0.039	0.469 1.034	7307B	32.85 7390	23.23 5230	8000	10000	

# ANGULAR CONTACT BALL BEARINGS



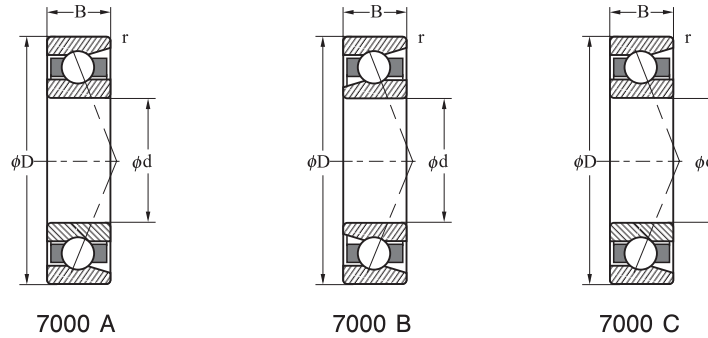
Principal dimensions mm (in)				Weight kg (lb)	Bearing Number	Basic Load Rating kN (lbf)		Limiting Speed (rpm)			
d	D	B	r <sub>min</sub>			Dynamic C <sub>r</sub>	Static Cor	Grease	Oil		
<b>40</b> 1.5748	68	15	0.60	0.209	<b>7008C</b>	18.54	15.26	14000	20000		
	2.6771	0.5905	0.023	0.46		4170	3430				
	68	15	0.60	0.186		<b>7008A</b>	16.92	14.02	10000	13000	
	2.6771	0.5905	0.023	0.41		3810	3150				
	80	18	0.60	0.413		<b>7208C</b>	32.85	24.19	13000	18000	
	3.1496	0.7086	0.023	0.910		7390	5440				
	80	18	0.60	0.370		<b>7208A</b>	31.95	24.10	9100	12000	
	3.1496	0.7086	0.023	0.815		7190	5420				
	80	18	0.60	0.378		<b>7208B</b>	28.80	22.08	7900	10000	
	3.1496	0.7086	0.023	0.833		6480	4970				
<b>45</b> 1.7716	90	23	1.50	0.606	<b>7308C</b>	49.50	32.50	13000	17000		
	3.5433	0.9055	0.059	1.336		11140	7310				
	90	23	1.00	0.628		<b>7308A</b>	44.10	31.68	8200	11000	
	3.5433	0.9055	0.039	1.384		9920	7130				
	90	23	1.00	0.643		<b>7308B</b>	40.50	29.28	7000	9400	
	3.5433	0.9055	0.039	1.417		9110	6590				
<b>50</b> 1.9685	75	16	0.60	0.268	<b>7009C</b>	21.96	18.53	13000	18000		
	2.9527	0.6299	0.023	0.590		4940	4170				
	85	19	0.60	0.405		<b>7209A</b>	35.55	27.55	8300	11000	
	3.3464	0.748	0.023	0.893		8000	6200				
	85	19	0.60	0.415		<b>7209B</b>	32.40	25.15	7000	9400	
	3.3464	0.748	0.023	0.915		7290	5660				
	100	25	1.50	0.830		<b>7309C</b>	64.00	43.00	11000	15000	
	3.9370	0.9842	0.059	1.830		14400	9680				
	100	25	1.00	0.840		<b>7309A</b>	57.15	41.76	7400	9500	
	3.9370	0.9842	0.039	1.852		12860	9400				
<b>55</b> 2.1653	100	25	1.00	0.861	<b>7309B</b>	52.65	38.40	6300	8500		
	3.9370	0.9842	0.039	1.898		11850	8640				
	80	16	0.60	0.285		<b>7010C</b>	23.40	20.74	12000	16000	
	3.1496	0.6299	0.023	0.628			5270	4670			
	80	16	0.60	0.255			<b>7010A</b>	21.33	19.30	8200	10000
	3.1496	0.6299	0.023	0.562			4800	4340			
	90	20	0.60	0.519			<b>7210C</b>	38.70	30.24	11000	14000
	3.5433	0.7874	0.023	1.144			8710	6800			
	90	20	0.60	0.457			<b>7210A</b>	37.35	30.24	7500	9500
	3.5433	0.7874	0.023	1.007			8400	6800			
90	20	0.60	0.468	<b>7210B</b>	33.75		27.46	6400	8600		
3.5433	0.7874	0.023	1.031	7600	6180						
<b>60</b> 2.3622	110	27	2.00	1.050	<b>7310C</b>	75.00	51.50	10000	14000		
	4.3307	1.0629	0.078	2.315		16880	11590				
	110	27	1.0	1.091		<b>7310A</b>	66.60	49.92	6700	8900	
	4.3307	1.0629	0.039	2.405		14990	11230				
	110	27	1.0	1.110		<b>7310B</b>	61.20	46.08	5700	7700	
	4.3307	1.0629	0.039	2.447		13770	10370				
	90	18	0.60	0.421		<b>7011C</b>	30.60	27.46	11000	14000	
	3.5433	0.7086	0.023	0.928			6890	6180			
	90	18	0.60	0.388			<b>7011A</b>	27.90	25.25	7500	10000
	3.5433	0.7086	0.023	0.855			6280	5680			
100	21	1.0	0.679	<b>7211C</b>	47.70		38.40	10000	13000		
3.9370	0.8267	0.039	1.497	10730	8640						
100	21	1.0	0.604	<b>7211A</b>	45.90		37.92	6700	9000		
3.9370	0.8267	0.039	1.331	10330	8530						
100	21	1.0	0.617	<b>7211B</b>	41.85		34.56	5800	7800		
3.9370	0.8267	0.039	1.36	9420	7780						
<b>65</b> 2.5590	120	29	2.0	1.340	<b>7311C</b>	87.00	60.50	9400	13000		
	4.7244	1.1417	0.078	2.954		19580	13610				
	120	29	1.0	1.400		<b>7311A</b>	77.40	59.04	6100	8200	
	4.7244	1.1417	0.039	3.087		17420	13280				
	120	29	1.0	1.441		<b>7311B</b>	71.10	54.24	5200	6900	
	4.7244	1.1417	0.039	3.177		16000	12200				
	95	18	0.6	0.449		<b>7012C</b>	31.50	29.28	10000	13000	
	3.7401	0.7086	0.023	0.990			7090	6590			
	95	18	0.6	0.406			<b>7012A</b>	28.80	26.98	6800	9100
	3.7401	0.7086	0.023	0.895			6480	6070			
110	22	1.0	0.878	<b>7212C</b>	57.60		47.52	9200	12000		
4.3307	0.8661	0.039	1.935	12960	10690						
110	22	1.0	0.787	<b>7212A</b>	55.35		47.04	6300	8400		
4.3307	0.8661	0.039	1.735	12450	10580						
110	22	1.0	0.804	<b>7212B</b>	50.40		42.72	5400	7200		
4.3307	0.8661	0.039	1.772	11340	9610						
<b>65</b> 2.5590	130	31	2.1	1.680	<b>7312C</b>	99.00	70.50	8700	12000		
	5.1181	1.2204	0.082	3.704		22280	15860				
	130	31	1.1	1.729		<b>7312A</b>	88.20	68.64	5600	7500	
	5.1181	1.2204	0.043	3.812		19850	15440				
	130	31	1.1	1.769		<b>7312B</b>	81.00	63.36	4800	6500	
	5.1181	1.2204	0.043	3.900		18230	14260				

# ANGULAR CONTACT BALL BEARINGS



Principal dimensions mm (in)				Weight kg (lb)	Bearing Number	Basic Load Rating kN (lbf)		Limiting Speed (rpm)		
d	D	B	r <sub>min</sub>			Dynamic C <sub>r</sub>	Static C <sub>or</sub>	Grease	Oil	
<b>65</b> 2.559	100 3.9370	18 0.7086	0.6 0.023	0.445 0.981	<b>7013A</b>	30.15 6780	30.24 6800	6400	8600	
	120 4.7244	23 0.9055	1.0 0.039	1.130 2.491	<b>7213C</b>	63.00 14180	52.80 11880	8600	11000	
	120 4.7244	23 0.9055	1.0 0.039	1.020 2.249	<b>7213A</b>	63.45 14280	55.68 12530	5800	7700	
	140 5.5118	23 0.9055	1.0 0.039	1.040 2.293	<b>7213B</b>	57.15 12860	50.40 11340	4900	6700	
	140 5.5118	33 1.2992	2.1 0.082	2.060 4.542	<b>7313C</b>	112.00 25200	80.50 18110	8100	11000	
	140 5.5118	33 1.2992	1.1 0.043	2.110 4.652	<b>7313A</b>	99.90 22480	78.72 17710	5200	6900	
	90 3.5433	33 1.2992	1.1 0.043	2.160 4.762	<b>7313B</b>	91.80 20660	72.48 16310	4500	6000	
	<b>70</b> 2.7559	110 4.3307	20 0.7874	0.6 0.023	0.688 1.517	<b>7014C</b>	42.30 9520	41.28 9290	8700	11000
110 4.3307		20 0.7874	0.6 0.023	0.615 1.356	<b>7014A</b>	38.25 8610	37.92 8550	5900	7900	
125 4.9212		24 0.9448	1.0 0.039	1.230 2.712	<b>7214C</b>	68.40 15390	57.60 12960	7900	10000	
125 4.9212		24 0.9448	1.0 0.039	1.100 2.425	<b>7214A</b>	68.85 15490	60.96 13720	5400	7200	
125 4.9212		24 0.9448	1.0 0.039	1.130 2.491	<b>7214B</b>	62.10 13970	55.68 12530	4700	6200	
150 5.9055		35 1.3779	2.1 0.082	2.500 5.512	<b>7314C</b>	126.00 28350	92.00 20700	7500	10000	
150 5.9055		35 1.3779	1.1 0.043	2.590 5.710	<b>7314A</b>	112.50 25310	89.76 20200	4800	6500	
150 5.9055		35 1.3779	1.1 0.043	2.640 5.821	<b>7314B</b>	102.60 23090	82.56 18580	4200	5500	
<b>75</b> 2.9527		115 4.5275	20 0.7874	0.6 0.023	0.739 1.629	<b>7015C</b>	43.20 9720	43.68 9830	8200	10000
		115 4.5275	20 0.7874	0.6 0.023	0.652 1.437	<b>7015A</b>	39.15 8810	39.84 8960	5500	7400
	130 5.1181	25 0.9842	1.0 0.039	1.351 2.978	<b>7215C</b>	71.55 16100	62.88 14150	7400	9500	
	130 5.1181	25 0.9842	1.0 0.039	1.181 2.604	<b>7215A</b>	71.10 16000	65.76 14800	5000	6700	
	130 5.1181	25 0.9842	1.0 0.039	1.211 2.670	<b>7215B</b>	64.35 14480	59.52 13390	4300	5700	
	160 6.2992	37 1.4566	2.1 0.082	3.090 6.813	<b>7315C</b>	137.00 30830	104.00 23400	7000	9300	
	160 6.2992	37 1.4566	1.1 0.043	3.121 6.881	<b>7315A</b>	122.40 27540	101.76 22900	4600	6000	
	160 6.2992	37 1.4566	1.1 0.043	3.181 7.014	<b>7315B</b>	112.50 25310	93.60 21060	3900	5100	
	<b>80</b> 3.1496	125 4.9212	22 0.8661	0.6 0.023	0.958 2.112	<b>7016C</b>	52.92 11910	53.28 11990	7600	10000
		125 4.9212	22 0.8661	0.6 0.023	0.872 1.922	<b>7016A</b>	48.15 10830	48.48 10910	5200	6900
140 5.5118		26 1.0236	1.0 0.039	1.622 3.576	<b>7216C</b>	83.70 18830	74.40 16740	6900	9200	
140 5.5118		26 1.0236	1.0 0.039	1.452 3.201	<b>7216A</b>	80.10 18020	72.96 16420	4800	6300	
140 5.5118		26 1.0236	1.0 0.039	1.482 3.267	<b>7216B</b>	72.45 16300	66.72 15010	4100	5400	
170 6.6929		39 1.5354	2.1 0.082	3.550 7.827	<b>7316C</b>	149.00 33530	117.00 26330	6500	8700	
170 6.6929		39 1.5354	1.1 0.043	3.702 8.162	<b>7316A</b>	132.30 29770	114.24 25700	4300	5600	
170 6.6929		39 1.5354	1.1 0.043	3.782 8.339	<b>7316B</b>	121.50 27340	104.64 23540	3600	4800	
<b>85</b> 3.3464		130 5.1181	22 0.8661	0.6 0.023	1.005 2.216	<b>7017C</b>	54.00 12150	56.16 12640	7200	9500
		130 5.1181	22 0.8661	0.6 0.023	0.909 2.004	<b>7017A</b>	49.05 11040	51.36 11560	4800	6600
	150 5.9055	28 1.1023	1.0 0.039	2.036 4.489	<b>7217C</b>	93.60 21060	86.88 19550	6600	8600	
	150 5.9055	28 1.1023	1.0 0.039	1.825 4.024	<b>7217A</b>	89.55 20150	84.96 19120	4500	5900	
	150 5.9055	28 1.1023	1.0 0.039	1.865 4.112	<b>7217B</b>	81.00 18230	77.28 17390	3800	5000	
	180 7.0866	41 1.6141	3.0 0.082	4.180 9.216	<b>7317C</b>	161.00 36230	130.00 29250	6200	8200	
<b>90</b> 3.5433	180 7.0866	41 1.6141	1.1 0.043	4.326 9.538	<b>7317A</b>	143.10 32200	127.68 28730	4000	5300	
	180 7.0866	41 1.6141	1.1 0.043	4.415 9.735	<b>7317B</b>	131.40 29570	117.12 26350	3400	4600	
	140 5.5118	24 0.9448	1.0 0.039	1.332 2.937	<b>7018C</b>	64.35 14480	66.24 14900	6700	9000	

# ANGULAR CONTACT BALL BEARINGS



Principal dimensions mm (in)				Weight kg (lb)	Bearing Number	Basic Load Rating kN (lbf)		Limiting Speed (rpm)		
d	D	B	r <sub>min</sub>			Dynamic C <sub>r</sub>	Static Cor	Grease	Oil	
<b>90</b> 3.5433	140 5.5118	24 0.9448	1.0 0.039	1.183 2.608	<b>7018A</b>	58.50 13160	60.96 13720	4700	6200	
	160 6.2992	30 1.1811	1.0 0.039	2.501 5.514	<b>7218C</b>	110.70 24910	100.80 22680	6200	8200	
	160 6.2992	30 1.1811	1.0 0.039	2.243 4.945	<b>7218A</b>	106.20 23900	98.88 22250	4200	5600	
	160 6.2992	30 1.1811	1.0 0.039	2.285 5.038	<b>7218B</b>	96.30 21670	90.24 20300	3600	4800	
	190 7.4803	43 1.6929	3.0 0.118	4.880 10.760	<b>7318C</b>	183.00 41180	158.00 35550	5800	7800	
	190 7.4803	43 1.6929	1.1 0.043	5.054 11.144	<b>7318A</b>	153.90 34630	141.12 31750	3800	5000	
	190 7.4803	43 1.6929	1.1 0.043	5.164 11.386	<b>7318B</b>	140.40 31590	129.60 29160	3200	4300	
	<b>95</b> 3.7401	145 5.7086	24 0.9448	1.0 0.039	1.411 3.111	<b>7019C</b>	66.15 14890	70.08 15770	6500	8600
		145 5.7086	24 0.9448	1.0 0.039	1.422 3.155	<b>7019A</b>	60.30 13570	64.32 14470	4400	5800
		170 6.6929	32 1.2598	1.1 0.043	3.041 6.705	<b>7219C</b>	125.10 28150	115.20 25920	5800	7700
170 6.6929		32 1.2598	1.1 0.043	2.673 5.893	<b>7219A</b>	119.70 26930	113.28 25490	3900	5200	
170 6.6929		32 1.2598	1.1 0.043	2.733 6.026	<b>7219B</b>	108.90 24500	102.72 23110	3300	4500	
200 7.8740		45 1.7716	3.0 0.118	5.650 12.458	<b>7319C</b>	196.00 44100	174.00 39150	5500	7300	
200 7.8740		45 1.7716	1.1 0.043	5.822 12.837	<b>7319A</b>	164.70 37060	155.52 34990	3500	4800	
200 7.8740		45 1.7716	1.1 0.043	5.974 13.172	<b>7319B</b>	150.30 33820	143.04 32180	3000	4000	
<b>100</b> 3.9370		150 5.9055	24 0.9448	1.0 0.039	1.455 3.208	<b>7020C</b>	67.95 15290	73.92 16630	6100	8200
		150 5.9055	24 0.9448	1.0 0.039	1.473 3.247	<b>7020A</b>	61.65 13870	67.68 15230	4200	5500
	180 7.0866	34 1.3385	1.1 0.043	3.643 8.032	<b>7220C</b>	130.50 29360	121.92 2743200	5500	7300	
	180 7.0866	34 1.3385	1.1 0.043	3.211 7.080	<b>7220A</b>	129.60 29160	120.96 27220	3700	4900	
	180 7.0866	34 1.3385	1.1 0.043	3.272 7.214	<b>7220B</b>	117.00 26330	109.44 24620	3200	4300	
	215 8.4645	47 1.8503	3.0 0.118	6.900 15.214	<b>7320C</b>	222.00 49950	207.00 46580	5200	6900	
	215 8.4645	47 1.8503	1.1 0.043	7.284 16.061	<b>7320A</b>	186.30 41920	185.28 41690	3300	4500	
	215 8.4645	47 1.8503	1.1 0.043	7.423 16.367	<b>7320B</b>	171.00 38480	170.88 38450	2900	3800	