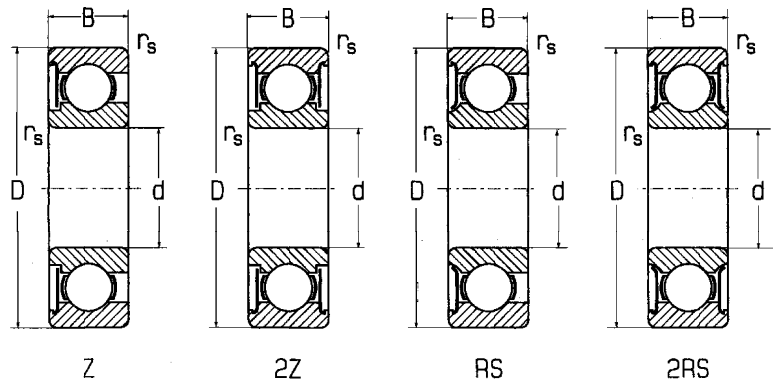


# Single Row Deep Groove Ball Bearings with Seals or Shields

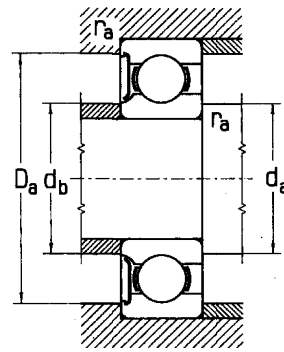
Sizes 3 mm – 15 mm



B

Dimensions				Basic Load Rating		Bearing Designation			
d	D	B	r <sub>s</sub> min	Dynamic C <sub>r</sub>	Static C <sub>0r</sub>	Z,ZR	2Z,2ZR	RS,RSR	2RS,2RSR
mm				kN lbf					
<b>3</b>	10	4	0.15	0.49	0.228	<b>623ZR</b>	<b>623-2ZR</b>	–	–
				110	51				
<b>4</b>	13	5	0.2	0.9	0.414	<b>624ZR</b>	<b>624-2ZR</b>	–	–
				203	92				
<b>5</b>	16	5	0.3	1.43	0.681	<b>634ZR</b>	<b>634-2ZR</b>	–	–
				322	153				
<b>6</b>	19	6	0.3	1.43	0.681	<b>625ZR</b>	<b>625-2ZR</b>	<b>625RSR</b>	<b>625-2RSR</b>
				322	153				
<b>7</b>	16	6	0.3	2.12	1.04	<b>635ZR</b>	<b>635-2ZR</b>	<b>635RSR</b>	<b>635-2RSR</b>
				473	233				
<b>8</b>	19	6	0.3	2.12	1.04	<b>626ZR</b>	<b>626-2ZR</b>	<b>626RSR</b>	<b>626-2RSR</b>
				473	233				
<b>9</b>	22	7	0.3	2.2	1.08	<b>607ZR</b>	<b>607-2ZR</b>	<b>607RSR</b>	<b>607-2RSR</b>
				492	242				
<b>10</b>	22	7	0.3	2.5	1.36	<b>627ZR</b>	<b>627-2ZR</b>	<b>627RSR</b>	<b>627-2RSR</b>
				562	304				
<b>11</b>	22	7	0.3	2.5	1.36	<b>608ZR</b>	<b>608-2ZR</b>	<b>608RSR</b>	<b>608-2RSR</b>
				562	304				
<b>12</b>	24	7	0.3	2.8	1.65	<b>609ZR</b>	<b>609-2ZR</b>	<b>609RSR</b>	<b>609-2RSR</b>
				631	369				
<b>13</b>	26	8	0.3	3.55	1.96	<b>629ZR</b>	<b>629-2ZR</b>	<b>629RSR</b>	<b>629-2RSR</b>
				794	438				
<b>14</b>	26	8	0.3	3.91	1.96	<b>6000ZR</b>	<b>6000-2ZR</b>	<b>6000RSR</b>	<b>6000-2RSR</b>
				874	438				
				5.11	2.51				
<b>15</b>	30	9	0.6	5.11	2.51	<b>6200ZR</b>	<b>6200-2ZR</b>	<b>6200RSR</b>	<b>6200-2RSR</b>
				1,140	562				
<b>16</b>	35	11	0.6	6.81	3.41	<b>6300ZR</b>	<b>6300-2ZR</b>	<b>6300RS</b>	<b>6300-2RS</b>
				1,530	764				
				8.58	4.22				
<b>17</b>	28	8	0.3	4.5	2.37	<b>6001ZR</b>	<b>6001-2ZR</b>	<b>6001RSR</b>	<b>6001-2RSR</b>
				1,000	531				
				6.1	3.1				
<b>18</b>	32	10	0.6	1,360	694	<b>6201ZR</b>	<b>6201-2ZR</b>	<b>6201RSR</b>	<b>6201-2RSR</b>
				8.58	4.22				
<b>19</b>	37	12	1	1,920	944	<b>6301ZR</b>	<b>6301-2ZR</b>	<b>6301RS</b>	<b>6301-2RS</b>
				8.58	4.22				
				10.4	5.41				
<b>20</b>	32	9	0.3	5.21	2.82	<b>6002ZR</b>	<b>6002-2ZR</b>	<b>6002RS</b>	<b>6002-2RS</b>
				1,110	631				
				7.1	3.76				
<b>21</b>	35	11	0.6	1,580	841	<b>6202Z</b>	<b>6202-2Z</b>	<b>6202RS</b>	<b>6202-2RS</b>
				10.4	5.41				
<b>22</b>	42	13	1	2,330	1,210	<b>6302Z</b>	<b>6302-2ZR</b>	<b>6302RS</b>	<b>6302-2RS</b>
				10.4	5.41				

Bearing designations printed in bold face type are currently in our manufacturing schedule. Those shown in normal face type are made to order.

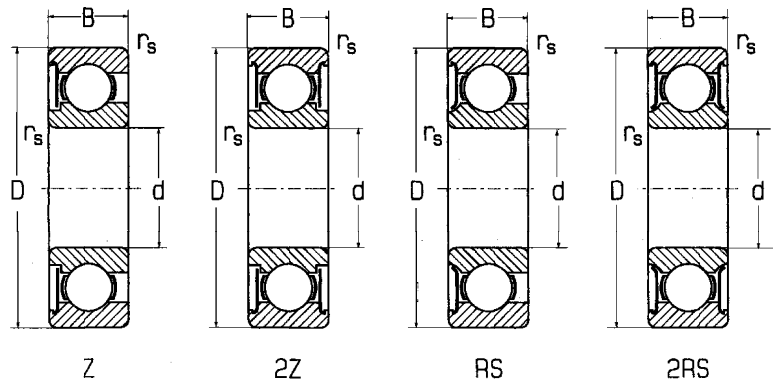


B

Limiting Speed for Lubricating by			Abutment and Fillet Dimensions					Weight
Grease Z,2Z	- RS,2RS	Oil Z	d	d <sub>a</sub> min	d <sub>b</sub> max	D <sub>a</sub> max	r <sub>a</sub> max	~
min <sup>-1</sup>			mm					kg lbs
40,000	-	50,000	<b>3</b>	4.2	4.8	8.5	0.1	0.002 0.004
38,000	-	45,000	<b>4</b>	5.5	5.8	11.2	0.2	0.004 0.008
35,000	-	42,000		6.2	6.5	13.4	0.3	0.005 0.011
35,000	24,000	42,000	<b>5</b>	7	7	14	0.3	0.006 0.013
35,000	24,000	42,000		7.2	7.5	15.8	0.3	0.009 0.019
35,000	24,000	42,000	<b>6</b>	8.2	8.3	17	0.3	0.010 0.022
35,000	24,000	42,000	<b>7</b>	9	9	17	0.3	0.010 0.022
35,000	24,000	42,000		9.2	9.8	19.5	0.3	0.012 0.026
35,000	24,000	42,000	<b>8</b>	10	10	20	0.3	0.015 0.033
35,000	24,000	42,000	<b>9</b>	11	12	22	0.3	0.018 0.039
35,000	24,000	42,000		12	12.5	22.5	0.3	0.020 0.044
28,000	19,000	33,000	<b>10</b>	12	12.5	24	0.3	0.020 0.044
25,000	17,000	30,000		14	14.4	26	0.6	0.032 0.070
22,000	15,000	27,000		14	15	31	0.6	0.053 0.116
25,000	17,000	30,000	<b>12</b>	14	14.5	26	0.3	0.022 0.048
22,000	15,000	27,000		16	16.5	28	0.6	0.037 0.081
20,000	13,000	24,000		17	17	32	1	0.060 0.132
21,000	14,000	25,000	<b>15</b>	17	18	30	0.3	0.031 0.068
20,000	13,000	24,000		19	19.5	31	0.6	0.045 0.099
18,000	12,000	21,000		20	20.5	36	1	0.082 0.180

# Single Row Deep Groove Ball Bearings with Seals or Shields

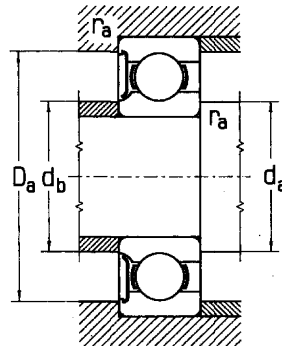
Sizes 17 mm – 45 mm



B

Dimensions				Basic Load Rating		Bearing Designation			
d	D	B	r <sub>s</sub> min	Dynamic C <sub>r</sub>	Static C <sub>0r</sub>	Z,ZR	2Z,2ZR	RS,RSR	2RS,2RSR
mm				kN lbf					
<b>17</b>	35	10	0.3	5.73 1,280	3.22 722	6003ZR	6003-2ZR	6003RS	6003-2RS
	40	12	0.6	9.26 2,070	4.82 1,080	6203Z	6203-2Z	6203RS	6203-2RS
	47	14	1	13.1 2,930	6.56 1,470	6303ZR	6303-2ZR	6303RS	6303-2RS
<b>20</b>	42	12	0.6	9.44 2,110	5.01 1,120	6004ZR	6004-2ZR	6004RS	6004-2RS
	47	14	1	12.8 2,870	6.56 1,470	6204Z	6204-2Z	6204RS	6204-2RS
	52	15	1.1	16 3,620	7.94 1,780	6304Z	6304-2Z	6304RS	6304-2RS
<b>25</b>	47	12	0.6	10 2,240	5.84 1,310	6005ZR	6005-2ZR	6005RS	6005-2RS
	52	15	1	14.1 3,160	7.94 1,780	6205Z	6205-2Z	6205RS	6205-2RS
	62	17	1.1	20.7 4,640	11.2 2,510	6305Z	6305-2Z	6305RS	6305-2RS
<b>30</b>	55	13	1	13.3 2,990	8.25 1,850	6006Z	6006-2Z	6006RS	6006-2RS
	62	16	1	19.6 4,380	11.2 2,510	6206Z	6206-2Z	6206RS	6206-2RS
	72	19	1.1	30 6,810	15.8 3,550	6306ZR	6306-2ZR	6306RSR	6306-2RSR
<b>35</b>	62	14	1	16 3,620	10.2 2,280	6007Z	6007-2Z	6007RS	6007-2RS
	72	17	1.1	25.6 5,730	15.3 3,410	6207Z	6207-2Z	6207RS	6207-2RS
	80	21	1.5	33.5 7,500	19.2 4,300	6307Z	6307-2Z	6307RS	6307-2RS
<b>40</b>	68	15	1	16.8 3,760	11.4 2,560	6008Z	6008-2Z	6008RS	6008-2RS
	80	18	1.1	32.9 7,360	20 4,470	6208Z	6208-2Z	6208RS	6208-2RS
	90	23	1.5	40.6 9,090	23.7 5,310	6308Z	6308-2Z	6308RS	6308-2RS
<b>45</b>	75	16	1	21.1 4,730	15.3 3,410	6009Z	6009-2Z	6009RS	6009-2RS
	85	19	1.1	32.9 7,360	20.3 4,550	6209Z	6209-2Z	6209RS	6209-2RS
	100	25	1.5	53.1 11,900	31.6 7,080	6309Z	6309-2Z	6309RS	6309-2RS

Bearing designations printed in bold face type are currently in our manufacturing schedule. Those shown in normal face type are made to order.

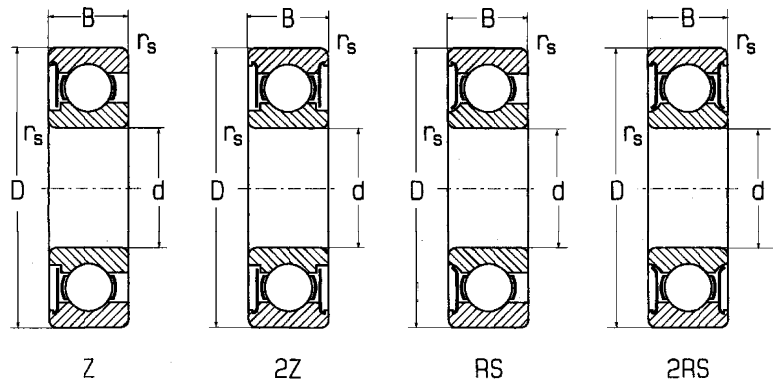


B

Limiting Speed for Lubricating by			Abutment and Fillet Dimensions					Weight
Grease Z,2Z	- RS,2RS	Oil Z	d	$d_a$ min	$d_b$ max	$D_a$ max	$r_a$ max	~
min <sup>-1</sup>			mm					kg lbs
20,000	13,000	24,000	<b>17</b>	19	20	33	0.3	0.040 0.088
18,000	12,000	21,000		21	21.4	36	0.6	0.065 0.143
16,000	10,600	19,000		23	23	41	1	0.116 0.255
17,000	11,000	20,000	<b>20</b>	24	24.5	38	0.3	0.070 0.154
15,000	10,000	18,000		25	25.5	42	0.6	0.107 0.235
14,000	9,400	17,000		26	26.5	45	1	0.144 0.317
14,000	9,400	17,000	<b>25</b>	28	29	43	0.6	0.081 0.178
12,600	8,400	15,000		30	30.5	47	1	0.128 0.281
11,000	7,500	13,000		31	33	55	1	0.232 0.511
12,000	7,900	14,000	<b>30</b>	34	35	50	1	0.119 0.262
11,000	7,500	13,000		35	36.7	57	1	0.201 0.442
10,000	6,700	12,000		36	38.9	65	1	0.350 0.770
10,600	7,100	12,600	<b>35</b>	39.5	39.5	57	1	0.159 0.350
9,400	6,300	11,000		42	42	65	1	0.290 0.638
8,400	5,600	10,000		42	44	71	1.5	0.460 1.01
9,400	6,300	11,000	<b>40</b>	44	46	63	1	0.195 0.429
8,400	5,600	10,000		47	48	73	1	0.367 0.808
7,900	5,300	9,400		47	50.6	81	1.5	0.635 1.39
8,400	5,600	10,000	<b>45</b>	49	51.5	70	1	0.249 0.548
7,900	5,300	9,400		52	52.5	78	1	0.410 0.903
7,100	4,700	8,400		52	56	91	1.5	0.833 1.83

# Single Row Deep Groove Ball Bearings with Seals or Shields

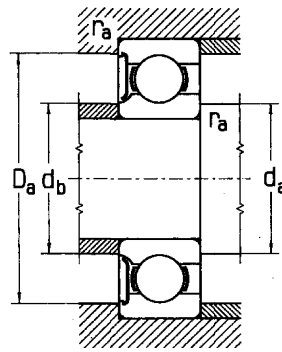
Sizes 50 mm – 80 mm



B

Dimensions				Basic Load Rating		Bearing Designation			
d	D	B	r <sub>s</sub> min	Dynamic C <sub>r</sub>	Static C <sub>0r</sub>	Z,ZR	2Z,2ZR	RS,RSR	2RS,2RSR
mm				kN lbf					
<b>50</b>	80	16	1	22 4,920	16.5 3,690	6010Z	6010-2Z	6010RS	6010-2RS
	90	20	1.1	34.8 7,790	23.3 5,210	6210Z	6210-2Z	6210RS	6210-2RS
	110	27	2	61.9 13,900	37.6 8,410	6310Z	6310-2Z	6310RS	6310-2RS
<b>55</b>	90	18	1.1	28.2 6,310	21.1 4,730	6011Z	6011-2Z	6011RS	6011-2RS
	100	21	1.5	43 9,620	29.3 6,560	6211Z	6211-2Z	6211RS	6211-2RS
	120	29	2	71 15,800	44.7 10,000	6311Z	6311-2Z	6311RS	6311-2RS
<b>60</b>	95	18	1.1	29.3 6,560	23.3 5,210	6012Z	6012-2Z	6012RS	6012-2RS
	110	22	1.5	52.1 11,100	36.3 8,100	6212Z	6212-2Z	6212RS	6212-2RS
	130	31	2.1	81.5 18,500	52.1 11,100	6312Z	6312-2Z	6312RS	6312-2RS
<b>65</b>	100	18	1.1	30.5 6,810	25.1 5,620	6013Z	6013-2Z	6013RS	6013-2RS
	120	23	1.5	57.3 12,800	39.8 8,910	6213Z	6213-2Z	6213RS	6213-2RS
	140	33	2.1	92.6 20,700	59.6 13,300	6313Z	6313-2Z	6313RS	6313-2RS
<b>70</b>	110	20	1.1	38.3 8,580	31 6,940	6014Z	6014-2Z	6014RS	6014-2RS
	125	24	1.5	62 13,900	43.8 9,810	6214Z	6214-2Z	6214RS	6214-2RS
	150	35	2.1	104 23,300	68.1 15,300	6314Z	6314-2Z	6314RS	6314-2RS
<b>75</b>	115	20	1.1	39.8 8,910	33.5 7,500	6015Z	6015-2Z	6015RS	6015-2RS
	130	25	1.5	66.8 15,000	49.2 11,000	6215Z	6215-2Z	6215RS	6215-2RS
	160	37	2.1	114 25,600	76.4 17,100	6315Z	6315-2Z	6315RS	6315-2RS
<b>80</b>	125	22	1.1	47.5 10,600	39.8 8,910	6016Z	6016-2Z	6016RS	6016-2RS
	140	26	2	72.2 16,200	53.1 11,900	6216Z	6216-2Z	6216RS	6216-2RS
	170	39	2.1	123 27,600	85.8 19,200	6316Z	6316-2Z	6316RS	6316-2RS

Bearing designations printed in bold face type are currently in our manufacturing schedule. Those shown in normal face type are made to order.

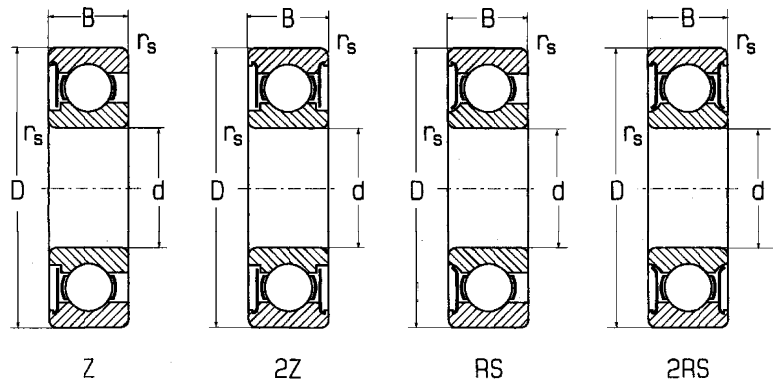


B

Limiting Speed for Lubricating by			Abutment and Fillet Dimensions					Weight
Grease Z,2Z	- RS,2RS	Oil Z	d	d <sub>a</sub> min	d <sub>b</sub> max	D <sub>a</sub> max	r <sub>a</sub> max	~
min <sup>-1</sup>			mm					kg lbs
7,900	5,300	9,400	<b>50</b>	54	56.5	75	1	0.264 0.581
7,100	4,700	8,400		57	58	83	1	0.464 1.02
6,300	4,200	7,500		60	61.8	100	2	1.08 2.37
7,100	4,700	8,400	<b>55</b>	60	62.5	84	1	0.390 0.859
6,700	4,500	7,900		62	65	91	1.5	0.611 1.34
5,600	3,800	6,700		65	67	110	2	1.38 3.03
6,700	4,500	7,900	<b>60</b>	65	68	88	1	0.420 0.925
6,000	4,000	7,100		67	70.2	101	1.5	0.787 1.733
5,300	3,500	6,300		72	75	118	2	1.72 3.78
6,300	4,200	7,500	<b>65</b>	70	73	93	1	0.440 0.969
5,300	3,500	6,300		72	77	111	1.5	0.995 2.19
5,000	3,300	6,000		76	78	128	2	2.10 4.62
5,600	3,800	6,700	<b>70</b>	75	78	103	1	0.618 1.36
5,300	3,500	6,300		77	82	116	1.5	1.09 2.40
4,700	3,200	5,600		81	85	138	2	2.53 5.57
5,300	3,500	6,300	<b>75</b>	80	83	108	1	0.640 1.40
5,000	3,300	6,000		82	85	121	1.5	1.19 2.62
4,200	2,800	5,000		86	93	148	2	3.03 6.67
5,000	3,300	6,000	<b>80</b>	85	90	118	1	0.860 1.89
4,700	3,200	5,600		90	92	130	2	1.41 3.10
4,000	2,700	4,700		91	99	158	2	3.62 7.97

# Single Row Deep Groove Ball Bearings with Seals or Shields

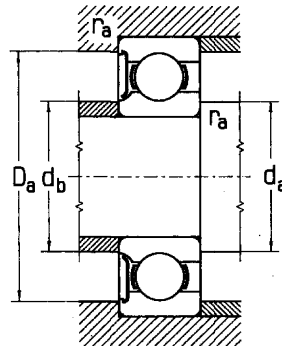
Sizes 85 mm – 130 mm



B

Dimensions				Basic Load Rating		Bearing Designation			
d	D	B	r <sub>s</sub> min	Dynamic C <sub>r</sub>	Static C <sub>0r</sub>	Z,ZR	2Z,2ZR	RS,RSR	2RS,2RSR
mm				KN lbf					
<b>85</b>	130	22	1.1	49.2 11,000	43 9,620	<b>6017Z</b>	<b>6017-2Z</b>	<b>6017RS</b>	<b>6017-2RS</b>
	150	28	2	83 18,800	64.3 14,400	<b>6217Z</b>	<b>6217-2Z</b>	<b>6217RS</b>	<b>6217-2RS</b>
	180	41	3	133 29,900	96.2 21,500	<b>6317Z</b>	<b>6317-2Z</b>	<b>6317RS</b>	<b>6317-2RS</b>
<b>90</b>	140	24	1.5	58.4 13,100	49.2 11,000	<b>6018Z</b>	<b>6018-2Z</b>	<b>6018RS</b>	<b>6018-2RS</b>
	160	30	2	96.2 21,500	70.8 15,800	<b>6218Z</b>	<b>6218-2Z</b>	<b>6218RS</b>	<b>6218-2RS</b>
<b>95</b>	145	24	1.5	60.7 13,600	54.1 12,100	<b>6019Z</b>	<b>6019-2Z</b>	<b>6019RS</b>	<b>6019-2RS</b>
<b>100</b>	150	24	1.5	60 13,600	54.1 12,100	<b>6020Z</b>	<b>6020-2Z</b>	<b>6020RS</b>	<b>6020-2RS</b>
<b>105</b>	160	26	2	72.2 16,200	65.6 14,700	<b>6021Z</b>	<b>6021-2Z</b>	<b>6021RS</b>	<b>6021-2RS</b>
<b>110</b>	170	28	2	82.5 18,500	72.2 16,200	<b>6022Z</b>	<b>6022-2Z</b>	<b>6022RS</b>	<b>6022-2RS</b>
<b>120</b>	180	28	2	85 19,200	79.4 17,800	<b>6024Z</b>	<b>6024-2Z</b>	<b>6024RS</b>	<b>6024-2RS</b>
<b>130</b>	200	33	2	106 23,700	100 22,400	<b>6026Z</b>	<b>6026-2Z</b>	<b>6026RS</b>	<b>6026-2RS</b>

Bearing designations printed in bold face type are currently in our manufacturing schedule. Those shown in normal face type are made to order.



B

Limiting Speed for Lubricating by			Abutment and Fillet Dimensions					Weight
Grease Z,2Z	- RS,2RS	Oil Z	d	d <sub>a</sub> min	d <sub>b</sub> max	D <sub>a</sub> max	r <sub>a</sub> max	~
min <sup>-1</sup>			mm					kg lbs
4,700	3,200	5,600	<b>85</b>	90	95	123	1	0.890 1.96
4,200	2,800	5,000		95	99	140	2	1.79 3.94
3,800	2,500	4,500		98	103	166	2.5	4.26 9.38
4,500	3,000	5,300	<b>90</b>	97	100	132	1.5	1.16 2.55
4,000	2,700	4,700		100	105	150	2	2.16 4.75
4,200	2,800	5,000	<b>95</b>	102	105	137	1.5	1.22 2.68
4,200	2,800	5,000	<b>100</b>	106	110	142	1.5	1.27 2.79
4,000	2,700	4,700	<b>105</b>	113	116	151	2	1.59 3.50
3,800	2,500	4,500	<b>110</b>	118	122	161	2	1.95 4.29
3,300	2,200	4,000	<b>120</b>	128	132	171	2	2.10 4.62
3,200	2,100	3,800	<b>130</b>	138	146	191	2	3.26 7.18