FEDERAL SUPPLY CLASS

RATIONALE

MA3330C HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

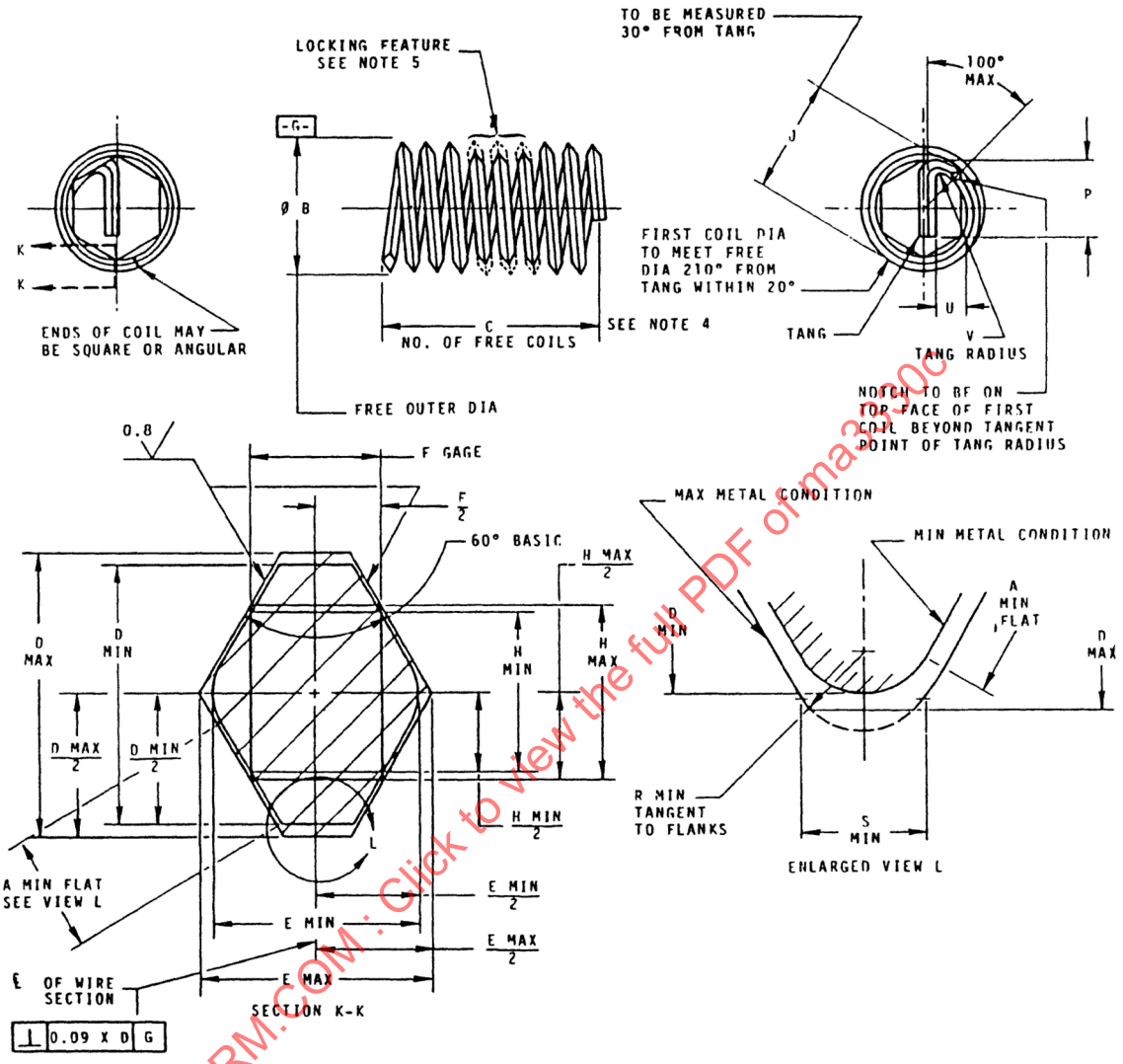
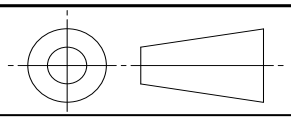


FIGURE 1

SAE values your input. To provide feedback on this Technical Report, please visit
http://www.sae.org/technical/standards/MA3330C

THIRD ANGLE PROJECTION



ISSUED 1981-09 REVISED 1995-12 REAFFIRMED 2012-12

CUSTODIAN: E-25

PROCUREMENT SPECIFICATION: NONE

SAE Aerospace
An SAE International Group

METRIC AEROSPACE STANDARD

INSERT, SCREW THREAD, HELICAL COIL, METRIC SERIES, SCREW LOCKING, CRES, DRY FILM LUBRICATED

SAE MA3330
SHEET 1 OF 5

REV. C

TABLE 1

THREAD SIZE DIA	THREAD SIZE PITCH	AEROSPACE STANDARD PART NUMBER 1 DIA	AEROSPACE STANDARD PART NUMBER 1.5 DIA	AEROSPACE STANDARD PART NUMBER 2 DIA	AEROSPACE STANDARD PART NUMBER 2.5 DIA	AEROSPACE STANDARD PART NUMBER 3 DIA	NOMINAL LENGTH SEE NOTE 1 1 DIA	NOMINAL LENGTH SEE NOTE 1 1.5 DIA	NOMINAL LENGTH SEE NOTE 1 2 DIA	NOMINAL LENGTH SEE NOTE 1 2.5 DIA	NOMINAL LENGTH SEE NOTE 1 3 DIA	A MIN	B MIN	B MAX
2	0.4	—	MA3330-190	MA3330-240	MA3330-290	MA3330-340	—	3.0	4.0	5.0	6.0	0.074	2.50	2.70
2.2	0.45	MA3330-100	MA3330-150	MA3330-200	MA3330-250	MA3330-300	2.2	3.3	4.4	5.5	6.6	0.082	2.80	3.00
2.5	0.45	MA3330-101	MA3330-151	MA3330-201	MA3330-251	MA3330-301	2.5	3.8	5.0	6.3	7.5	0.082	3.20	3.70
3	0.5	MA3330-102	MA3330-152	MA3330-202	MA3330-252	MA3330-302	3.0	4.5	6.0	7.5	9.0	0.105	3.80	4.35
3.5	0.6	MA3330-103	MA3330-153	MA3330-203	MA3330-253	MA3330-303	3.5	5.3	7.0	8.8	10.5	0.160	4.40	4.95
4	0.7	MA3330-104	MA3330-154	MA3330-204	MA3330-254	MA3330-304	4.0	6.0	8.0	10.0	12.0	0.163	5.05	5.60
5	0.8	MA3330-105	MA3330-155	MA3330-205	MA3330-255	MA3330-305	5.0	7.5	10.0	12.5	15.0	0.209	6.25	6.80
6	1	MA3330-106	MA3330-156	MA3330-206	MA3330-256	MA3330-306	6.0	9.0	12.0	15.0	18.0	0.267	7.40	7.95
7	1	MA3330-107	MA3330-157	MA3330-207	MA3330-257	MA3330-307	7.0	10.5	14.0	17.5	21.0	0.267	8.65	9.20
8	1	MA3330-108	MA3330-158	MA3330-208	MA3330-258	MA3330-308	8.0	12.0	16.0	20.0	24.0	0.267	9.70	10.25
8	1.25	MA3330-109	MA3330-159	MA3330-209	MA3330-259	MA3330-309	8.0	12.0	16.0	20.0	24.0	0.415	9.80	10.35
10	1	MA3330-141	MA3330-191	MA3330-241	MA3330-291	MA3330-341	10.0	15.0	20.0	25.0	30.0	0.267	11.95	12.50
10	1.25	MA3330-110	MA3330-160	MA3330-210	MA3330-260	MA3330-310	10.0	15.0	20.0	25.0	30.0	0.415	12.10	12.65
10	1.5	MA3330-111	MA3330-161	MA3330-211	MA3330-261	MA3330-311	10.0	15.0	20.0	25.0	30.0	0.511	11.95	12.50
12	1.25	MA3330-112	MA3330-162	MA3330-212	MA3330-262	MA3330-312	12.0	18.0	24.0	30.0	36.0	0.415	14.30	15.00
12	1.5	MA3330-113	MA3330-163	MA3330-213	MA3330-263	MA3330-313	12.0	18.0	24.0	30.0	36.0	0.511	14.25	14.95
12	1.75	MA3330-114	MA3330-164	MA3330-214	MA3330-264	MA3330-314	12.0	18.0	24.0	30.0	36.0	0.654	14.30	15.00
14	1.5	MA3330-115	MA3330-165	MA3330-215	MA3330-265	MA3330-315	14.0	21.0	28.0	35.0	42.0	0.511	16.55	17.25
14	2	MA3330-116	MA3330-166	MA3330-216	MA3330-266	MA3330-316	14.0	21.0	28.0	35.0	42.0	0.799	16.65	17.35
16	1.5	MA3330-117	MA3330-167	MA3330-217	MA3330-267	MA3330-317	16.0	24.0	32.0	40.0	48.0	0.511	18.90	19.60
16	2	MA3330-118	MA3330-168	MA3330-218	MA3330-268	MA3330-318	16.0	24.0	32.0	40.0	48.0	0.799	18.90	19.60
18	1.5	MA3330-119	MA3330-169	MA3330-219	MA3330-269	MA3330-319	18.0	27.0	36.0	45.0	54.0	0.511	21.05	21.75
18	2	MA3330-120	MA3330-170	MA3330-220	MA3330-270	MA3330-320	18.0	27.0	36.0	45.0	54.0	0.799	21.15	21.85
18	2.5	MA3330-121	MA3330-171	MA3330-221	MA3330-271	MA3330-321	18.0	27.0	36.0	45.0	54.0	1.017	21.30	22.00
20	1.5	MA3330-122	MA3330-172	MA3330-222	MA3330-272	MA3330-322	20.0	30.0	40.0	50.0	60.0	0.511	23.15	24.00
20	2	MA3330-123	MA3330-173	MA3330-223	MA3330-273	MA3330-323	20.0	30.0	40.0	50.0	60.0	0.799	23.20	24.05
20	2.5	MA3330-124	MA3330-174	MA3330-224	MA3330-274	MA3330-324	20.0	30.0	40.0	50.0	60.0	1.017	23.55	24.40
22	1.5	MA3330-125	MA3330-175	MA3330-225	MA3330-275	MA3330-325	22.0	33.0	44.0	55.0	66.0	0.511	25.55	26.45
22	2	MA3330-126	MA3330-176	MA3330-226	MA3330-276	MA3330-326	22.0	33.0	44.0	55.0	66.0	0.799	25.60	26.50
22	2.5	MA3330-127	MA3330-177	MA3330-227	MA3330-277	MA3330-327	22.0	33.0	44.0	55.0	66.0	1.017	25.90	26.90
24	2	MA3330-128	MA3330-178	MA3330-228	MA3330-278	MA3330-328	24.0	36.0	48.0	60.0	72.0	0.799	28.10	29.10
24	3	MA3330-129	MA3330-179	MA3330-229	MA3330-279	MA3330-329	24.0	36.0	48.0	60.0	72.0	1.234	28.00	29.00
27	2	MA3330-130	MA3330-180	MA3330-230	MA3330-280	MA3330-330	27.0	40.5	54.0	67.5	81.0	0.799	31.30	32.30
27	3	MA3330-131	MA3330-181	MA3330-231	MA3330-281	MA3330-331	27.0	40.5	54.0	67.5	81.0	1.234	31.40	32.40
30	2	MA3330-132	MA3330-182	MA3330-232	MA3330-282	MA3330-332	30.0	45.0	60.0	75.0	90.0	0.799	34.50	35.70
30	3	MA3330-133	MA3330-183	MA3330-233	MA3330-283	MA3330-333	30.0	45.0	60.0	75.0	90.0	1.234	34.90	36.10
33	2	MA3330-134	MA3330-184	MA3330-234	MA3330-284	MA3330-334	33.0	49.5	66.0	82.5	99.0	0.799	37.80	39.20
33	3	MA3330-135	MA3330-185	MA3330-235	MA3330-285	MA3330-335	33.0	49.5	66.0	82.5	99.0	1.234	38.10	39.50
36	2	MA3330-136	MA3330-186	MA3330-236	MA3330-286	MA3330-336	36.0	54.0	72.0	90.0	108.0	0.799	41.00	42.40
36	3	MA3330-137	MA3330-187	MA3330-237	MA3330-287	MA3330-337	36.0	54.0	72.0	90.0	108.0	1.234	41.30	42.70
39	2	MA3330-138	MA3330-188	MA3330-238	MA3330-288	MA3330-338	39.0	58.5	78.0	97.5	117.0	0.799	44.30	45.70
39	3	MA3330-139	MA3330-189	MA3330-239	MA3330-289	MA3330-339	39.0	58.5	78.0	97.5	117.0	1.234	44.40	45.80

TABLE 1 (CONTINUED)

THREAD SIZE DIA	THREAD SIZE PITCH	C ± .25 COIL 1 DIA	C ± .25 COIL 1.5 DIA	C ± .25 COIL 2 DIA	C ± .25 COIL 2.5 DIA	C ± .25 COIL 3 DIA	D MIN	D MAX	E MIN	E MAX	F GAGE	H MIN	H MAX	J MIN	J MAX
2	0.4	—	5.500	7.750	10.125	12.375	0.389	0.433	0.274	0.350	0.200	0.2495	0.2600	2.50	2.70
2.2	0.45	3.125	5.375	7.625	9.875	12.125	0.437	0.487	0.318	0.394	0.225	0.2820	0.2920	2.60	2.80
2.5	0.45	3.375	5.750	8.125	10.500	12.750	0.437	0.487	0.318	0.394	0.225	0.2820	0.2920	3.05	3.65
3	0.5	3.750	6.375	8.875	11.375	13.875	0.482	0.541	0.362	0.438	0.250	0.3145	0.3250	3.60	4.30
3.5	0.6	3.750	6.375	8.750	11.375	13.750	0.586	0.650	0.449	0.525	0.300	0.3795	0.3900	4.25	4.90
4	0.7	3.625	6.125	8.625	11.125	13.625	0.683	0.758	0.510	0.612	0.350	0.4445	0.4550	4.90	5.55
5	0.8	4.125	6.875	9.625	12.375	15.125	0.775	0.866	0.598	0.700	0.400	0.5085	0.5200	6.10	6.75
6	1	4.000	6.750	9.500	12.125	14.875	0.975	1.083	0.748	0.875	0.500	0.6370	0.6500	7.25	7.90
7	1	4.875	8.000	10.125	14.125	17.250	0.975	1.083	0.748	0.875	0.500	0.6370	0.6500	8.40	9.15
8	1	5.875	9.375	13.000	16.500	20.125	0.975	1.083	0.748	0.875	0.500	0.6370	0.6500	9.20	9.65
8	1.25	4.500	7.375	10.250	13.250	16.125	1.251	1.353	0.967	1.094	0.625	0.7990	0.8120	9.50	9.90
10	1	7.625	12.000	16.500	21.000	25.500	0.975	1.083	0.748	0.875	0.500	0.6370	0.6500	11.10	11.55
10	1.25	5.875	9.500	13.125	16.750	20.375	1.251	1.353	0.967	1.094	0.625	0.7990	0.8120	11.50	11.95
10	1.5	4.875	8.000	11.125	14.250	17.375	1.522	1.624	1.160	1.312	0.750	0.9615	0.9740	11.80	12.25
12	1.25	7.250	11.625	15.875	20.250	24.500	1.251	1.353	0.967	1.094	0.625	0.7990	0.8120	13.50	14.00
12	1.5	6.000	9.625	13.375	17.000	20.750	1.522	1.624	1.160	1.312	0.750	0.9615	0.9740	13.80	14.30
12	1.75	5.000	8.250	11.500	14.625	17.875	1.792	1.894	1.379	1.531	0.875	1.1240	1.1370	14.10	14.60
14	1.5	7.125	11.375	15.625	20.000	24.250	1.522	1.624	1.160	1.312	0.750	0.9615	0.9740	15.80	16.30
14	2	5.125	8.500	11.750	15.000	18.375	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	16.40	16.90
16	1.5	8.250	13.125	18.000	22.750	27.625	1.522	1.624	1.160	1.312	0.750	0.9615	0.9740	17.80	18.30
16	2	6.125	9.750	13.500	17.250	21.000	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	18.40	18.90
18	1.5	9.500	15.000	20.375	25.875	31.375	1.522	1.624	1.160	1.312	0.750	0.9615	0.9740	19.80	20.35
18	2	7.000	11.125	15.375	19.500	23.625	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	20.40	20.95
18	2.5	5.375	8.875	12.250	15.625	19.000	2.604	2.706	1.998	2.188	1.250	1.6110	1.6240	20.90	21.45
20	1.5	10.750	16.875	22.875	28.875	35.000	1.522	1.624	1.160	1.312	0.750	0.9615	0.9740	21.80	22.50
20	2	7.875	12.500	17.250	21.875	26.500	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	22.40	23.10
20	2.5	6.125	9.875	13.625	17.375	21.125	2.604	2.706	1.998	2.188	1.250	1.6110	1.6240	22.90	23.60
22	1.5	11.875	18.500	25.125	31.625	38.250	1.522	1.624	1.160	1.312	0.750	0.9615	0.9740	24.10	24.80
22	2	8.750	13.750	18.875	23.875	29.000	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	24.40	25.10
22	2.5	6.750	10.875	14.875	19.000	23.125	2.604	2.706	1.998	2.188	1.250	1.6110	1.6240	24.90	25.60
24	2	9.500	15.000	20.375	25.875	31.250	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	26.40	27.10
24	3	6.125	10.000	13.750	17.500	21.375	3.146	3.248	2.396	2.625	1.500	1.9360	1.9485	27.50	28.20
27	2	10.875	17.000	23.250	29.375	35.500	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	29.40	30.10
27	3	7.000	11.250	15.500	19.750	24.000	3.146	3.248	2.396	2.625	1.500	1.9360	1.9485	30.50	31.20
30	2	12.250	19.125	25.875	32.750	39.500	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	32.50	33.20
30	3	7.875	12.500	17.125	21.875	26.500	3.146	3.248	2.396	2.625	1.500	1.9360	1.9485	33.50	34.20
33	2	13.625	21.125	28.625	36.000	43.500	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	35.80	36.50
33	3	8.750	13.875	19.000	24.125	29.250	3.146	3.248	2.396	2.625	1.500	1.9360	1.9485	36.50	37.20
36	2	15.000	23.250	31.375	39.500	47.750	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	39.00	39.70
36	3	9.750	15.250	20.875	26.500	32.000	3.146	3.248	2.396	2.625	1.500	1.9360	1.9485	39.50	40.20
39	2	16.375	25.250	34.125	43.000	51.875	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	42.30	43.00
39	3	10.750	16.750	22.750	28.875	34.875	3.146	3.248	2.396	2.625	1.500	1.9360	1.9485	42.50	43.20

TABLE 1 (CONTINUED)

THREAD SIZE DIA	THREAD SIZE PITCH	P MIN	P MAX	R MIN	S MIN	U MAX	U MIN	V MAX	APPROXI-MATE MASS, KILO-GRAMS/100 1 DIA	APPROXI-MATE MASS, KILO-GRAMS/100 1.5 DIA	APPROXI-MATE MASS, KILO-GRAMS/100 2 DIA	APPROXI-MATE MASS, KILO-GRAMS/100 2.5 DIA	APPROXI-MATE MASS, KILO-GRAMS/100 3 DIA
2	0.4	1.30	1.90	0.072	0.125	0.66	0.37	0.22	—	0.003	0.005	0.007	0.008
2.2	0.45	1.40	2.00	0.081	0.141	0.91	0.62	0.25	0.002	0.004	0.006	0.008	0.009
2.5	0.45	1.60	2.25	0.081	0.141	1.22	0.81	0.30	0.003	0.006	0.008	0.010	0.012
3	0.5	1.95	2.80	0.090	0.156	1.33	0.86	0.30	0.006	0.009	0.012	0.016	0.019
3.5	0.6	2.20	3.00	0.108	0.188	1.47	0.92	0.30	0.009	0.014	0.020	0.026	0.031
4	0.7	2.50	3.55	0.126	0.219	1.67	1.02	0.45	0.014	0.022	0.031	0.039	0.048
5	0.8	3.15	4.55	0.144	0.250	2.09	1.41	0.60	0.025	0.040	0.055	0.070	0.085
6	1	3.70	4.65	0.180	0.312	2.55	1.65	0.60	0.044	0.072	0.099	0.126	0.153
7	1	4.30	5.50	0.180	0.312	3.10	2.09	0.75	0.062	0.099	0.136	0.173	0.210
8	1	4.75	6.50	0.180	0.312	3.88	2.27	0.75	0.083	0.132	0.180	0.228	0.277
8	1.25	4.75	6.50	0.226	0.391	3.60	2.02	0.75	0.100	0.160	0.221	0.281	0.342
10	1	5.50	8.00	0.180	0.312	4.90	2.95	0.75	0.136	0.212	0.288	0.362	0.439
10	1.25	5.50	8.00	0.226	0.391	4.77	2.86	0.75	0.162	0.257	0.352	0.446	0.541
10	1.5	5.50	8.00	0.271	0.469	4.54	2.56	0.75	0.188	0.302	0.416	0.530	0.643
12	1.25	6.70	9.75	0.226	0.391	5.84	3.77	1.00	0.240	0.376	0.512	0.649	0.785
12	1.5	6.70	9.75	0.271	0.469	5.58	3.50	1.20	0.281	0.444	0.608	0.772	0.935
12	1.75	6.70	9.75	0.316	0.547	5.36	3.23	1.40	0.318	0.509	0.700	0.890	1.081
14	1.5	7.20	11.25	0.271	0.469	6.76	4.34	1.15	0.391	0.614	0.836	1.059	1.282
14	2	7.20	11.25	0.361	0.625	6.26	3.79	1.40	0.497	0.794	1.091	1.388	1.685
16	1.5	8.30	12.75	0.271	0.469	7.78	5.32	1.45	0.519	0.810	1.101	1.392	1.682
16	2	8.30	12.75	0.361	0.625	7.30	4.76	2.70	0.665	1.053	1.441	1.828	2.216
18	1.5	9.30	14.00	0.271	0.469	8.83	6.26	1.75	0.665	1.033	1.401	1.769	2.137
18	2	9.30	14.00	0.361	0.625	8.30	5.74	2.70	0.856	1.347	1.838	2.328	2.819
18	2.5	9.30	14.00	0.451	0.781	7.79	5.20	2.85	1.031	1.645	2.258	2.872	3.486
20	1.5	10.40	14.50	0.271	0.469	9.77	7.19	2.85	0.830	1.284	1.739	2.193	2.647
20	2	10.40	14.50	0.361	0.625	9.40	6.65	2.85	1.072	1.678	2.284	2.890	3.495
20	2.5	10.40	14.50	0.451	0.781	8.89	6.11	2.85	1.297	2.054	2.812	3.569	4.326
22	1.5	11.40	16.00	0.271	0.469	11.10	8.01	2.85	1.013	1.563	2.113	2.662	3.212
22	2	11.40	16.00	0.361	0.625	10.45	7.61	2.85	1.313	2.046	2.779	3.512	4.245
22	2.5	11.40	16.00	0.451	0.781	9.94	7.07	2.85	1.593	2.510	3.426	4.342	5.259
24	2	12.50	16.50	0.361	0.625	11.46	8.60	2.85	1.576	2.448	3.321	4.193	5.065
24	3	12.50	16.50	0.541	0.938	10.45	7.51	2.85	2.239	3.548	4.857	6.166	7.474
27	2	14.00	17.50	0.361	0.625	13.14	9.93	2.85	2.017	3.121	4.225	5.329	6.433
27	3	14.00	17.50	0.541	0.938	12.13	8.85	2.85	2.884	4.540	6.196	7.853	9.509
30	2	15.00	19.00	0.361	0.625	14.81	11.26	2.85	2.143	3.876	5.238	6.601	7.964
30	3	15.00	19.00	0.541	0.938	13.65	10.32	2.85	3.611	5.656	7.700	9.745	11.782
33	2	17.00	21.00	0.361	0.625	16.35	12.74	2.85	3.063	4.712	6.361	8.010	9.659
33	3	17.00	21.00	0.541	0.938	15.19	11.78	2.85	4.420	6.894	9.367	11.841	14.315
36	2	18.50	22.50	0.361	0.625	17.77	14.29	2.85	3.671	5.633	7.595	9.557	11.519
36	3	18.50	22.50	0.541	0.938	16.73	13.23	2.85	5.316	8.260	11.204	14.147	17.091
39	2	20.00	24.00	0.361	0.625	19.28	15.77	2.85	4.331	6.634	8.936	11.239	13.542
39	3	20.00	24.00	0.541	0.938	18.28	14.68	2.85	6.290	9.745	13.200	16.654	20.109