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SAE MA3280

FEDERAL SUPPLY CLASS

RATIONALE

MA3280B HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

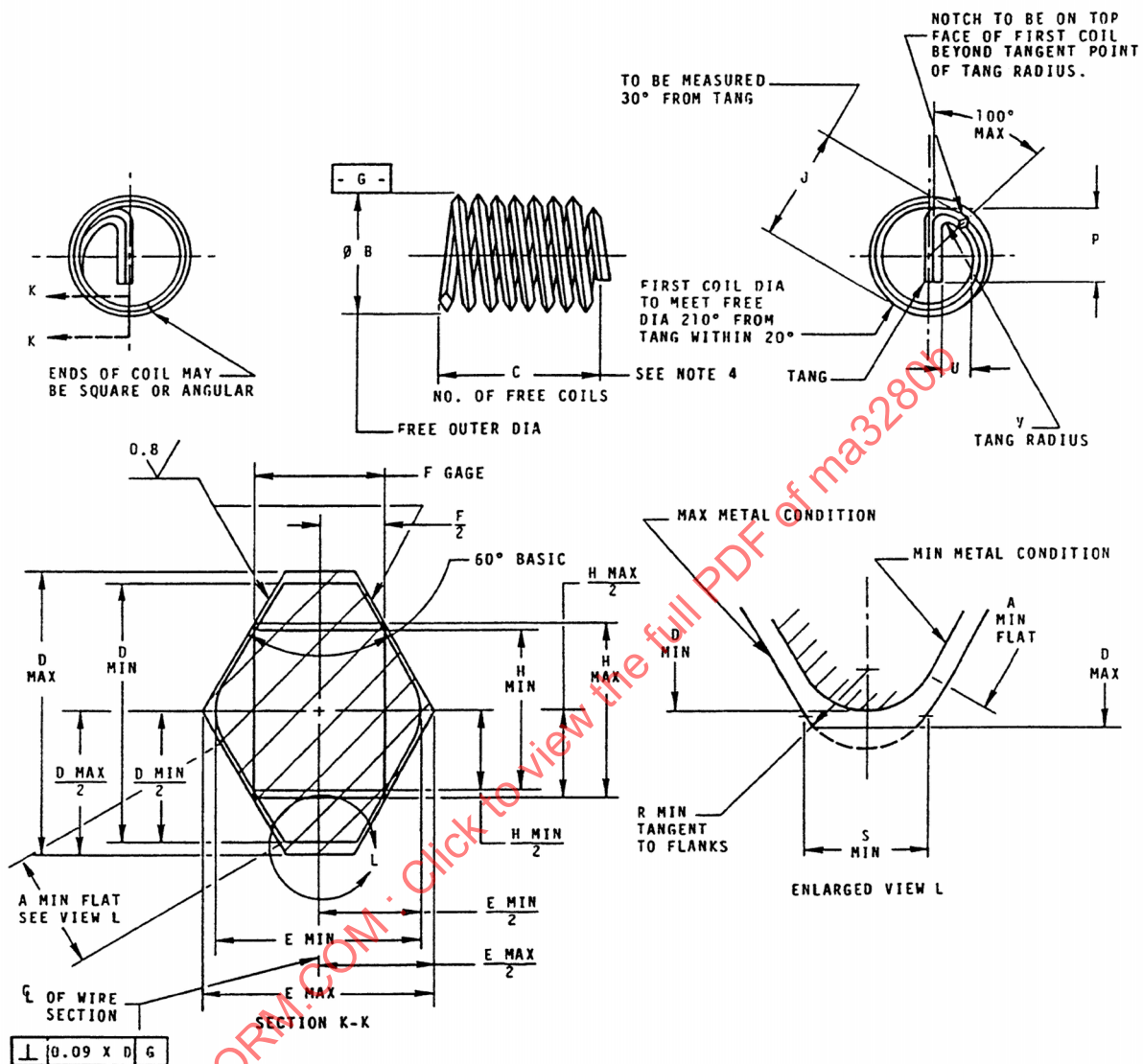
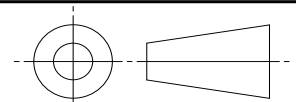


FIGURE 1

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/MA3280B>

THIRD ANGLE PROJECTION



CUSTODIAN: E-25

PROCUREMENT SPECIFICATION: NONE

SAE Aerospace
An SAE International Group

METRIC AEROSPACE STANDARD

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

SAE MA3280
SHEET 1 OF 5

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

TABLE 1

THREAD SIZE	THREAD SIZE DIA	THREAD PITCH	AEROSPACE STANDARD PART			AEROSPACE STANDARD PART			AEROSPACE STANDARD PART			AEROSPACE STANDARD PART			AEROSPACE STANDARD PART			NOMINAL LENGTH SEE NOTE 1			NOMINAL LENGTH SEE NOTE 1			NOMINAL LENGTH SEE NOTE 1			NOMINAL LENGTH SEE NOTE 1		
			NUMBER	1 DIA	1.5 DIA	NUMBER	2 DIA	2.5 DIA	NUMBER	3 DIA	NOTE 1	1 DIA	1.5 DIA	NOTE 1	2 DIA	NOTE 1	2.5 DIA	NOTE 1	2 DIA	NOTE 1	2.5 DIA	A	B	B	MIN	MAX	MIN	MAX	MIN
2	0.4		MA3280-140	MA3280-190	MA3280-240	MA3280-290	MA3280-340			2.0	3.0	4.0	5.0	6.0	0.074	2.50	2.70												
2.2	0.45		MA3280-100	MA3280-150	MA3280-200	MA3280-250	MA3280-300			2.2	3.3	4.4	5.5	6.6	0.082	2.80	3.00												
2.5	0.45		MA3280-101	MA3280-151	MA3280-201	MA3280-251	MA3280-301			2.5	3.8	5.0	6.3	7.5	0.082	3.20	3.70												
3	0.5		MA3280-102	MA3280-152	MA3280-202	MA3280-252	MA3280-302			3.0	4.5	6.0	7.5	9.0	0.105	3.80	4.35												
3.5	0.6		MA3280-103	MA3280-153	MA3280-203	MA3280-253	MA3280-303			3.5	5.3	7.0	8.8	10.5	0.160	4.40	4.95												
4	0.7		MA3280-104	MA3280-154	MA3280-204	MA3280-254	MA3280-304			4.0	6.0	8.0	10.0	12.0	0.163	5.05	5.60												
5	0.8		MA3280-105	MA3280-155	MA3280-205	MA3280-255	MA3280-305			5.0	7.5	10.0	12.5	15.0	0.209	6.25	6.80												
6	1		MA3280-106	MA3280-156	MA3280-206	MA3280-256	MA3280-306			6.0	9.0	12.0	15.0	18.0	0.267	7.40	7.95												
7	1		MA3280-107	MA3280-157	MA3280-207	MA3280-257	MA3280-307			7.0	10.5	14.0	17.5	21.0	0.267	8.65	9.20												
8	1		MA3280-108	MA3280-158	MA3280-208	MA3280-258	MA3280-308			8.0	12.0	16.0	20.0	24.0	0.267	9.70	10.35												
8	1.25		MA3280-109	MA3280-159	MA3280-209	MA3280-259	MA3280-309			8.0	12.0	16.0	20.0	24.0	0.415	9.80	10.35												
10	1		MA3280-141	MA3280-191	MA3280-241	MA3280-291	MA3280-341			10.0	15.0	20.0	25.0	30.0	0.267	11.95	12.50												
10	1.25		MA3280-110	MA3280-160	MA3280-210	MA3280-260	MA3280-310			10.0	15.0	20.0	25.0	30.0	0.415	12.10	12.65												
10	1.5		MA3280-111	MA3280-161	MA3280-211	MA3280-261	MA3280-311			10.0	15.0	20.0	25.0	30.0	0.511	11.95	12.50												
12	1.25		MA3280-112	MA3280-162	MA3280-212	MA3280-262	MA3280-312			12.0	18.0	24.0	30.0	36.0	0.415	14.30	15.00												
12	1.5		MA3280-113	MA3280-163	MA3280-213	MA3280-263	MA3280-313			12.0	18.0	24.0	30.0	36.0	0.511	14.25	14.95												
12	1.75		MA3280-114	MA3280-164	MA3280-214	MA3280-264	MA3280-314			12.0	18.0	24.0	30.0	36.0	0.654	14.30	15.00												
14	1.5		MA3280-115	MA3280-165	MA3280-215	MA3280-265	MA3280-315			14.0	21.0	28.0	35.0	42.0	0.511	16.55	17.25												
14	2		MA3280-116	MA3280-166	MA3280-216	MA3280-266	MA3280-316			14.0	21.0	28.0	35.0	42.0	0.799	16.55	17.35												
16	1.5		MA3280-117	MA3280-167	MA3280-217	MA3280-267	MA3280-317			16.0	24.0	32.0	40.0	48.0	0.511	18.90	19.60												
16	2		MA3280-118	MA3280-168	MA3280-218	MA3280-268	MA3280-318			16.0	24.0	32.0	40.0	48.0	0.799	18.90	19.60												
18	1.5		MA3280-119	MA3280-169	MA3280-219	MA3280-269	MA3280-319			18.0	27.0	36.0	45.0	54.0	0.511	21.05	21.75												
18	2		MA3280-120	MA3280-170	MA3280-220	MA3280-270	MA3280-320			18.0	27.0	36.0	45.0	54.0	0.799	21.15	21.85												
18	2.5		MA3280-121	MA3280-171	MA3280-221	MA3280-271	MA3280-321			18.0	27.0	36.0	45.0	54.0	1.017	21.30	22.00												
20	1.5		MA3280-122	MA3280-172	MA3280-222	MA3280-272	MA3280-322			20.0	30.0	40.0	50.0	60.0	0.511	23.15	24.00												
20	2		MA3280-123	MA3280-173	MA3280-223	MA3280-273	MA3280-323			20.0	30.0	40.0	50.0	60.0	0.799	23.20	24.05												
20	2.5		MA3280-124	MA3280-174	MA3280-224	MA3280-274	MA3280-324			20.0	30.0	40.0	50.0	60.0	1.017	23.55	24.40												
22	1.5		MA3280-125	MA3280-175	MA3280-225	MA3280-275	MA3280-325			22.0	33.0	44.0	55.0	66.0	0.511	25.55	26.45												
22	2		MA3280-126	MA3280-176	MA3280-226	MA3280-276	MA3280-326			22.0	33.0	44.0	55.0	66.0	0.799	25.60	26.50												
22	2.5		MA3280-127	MA3280-177	MA3280-227	MA3280-277	MA3280-327			22.0	33.0	44.0	55.0	66.0	1.017	25.90	26.90												
24	2		MA3280-128	MA3280-178	MA3280-228	MA3280-278	MA3280-328			24.0	36.0	48.0	60.0	72.0	0.799	28.10	29.10												
24	3		MA3280-129	MA3280-179	MA3280-229	MA3280-279	MA3280-329			24.0	36.0	48.0	60.0	72.0	1.234	28.00	29.00												
27	2		MA3280-130	MA3280-180	MA3280-230	MA3280-280	MA3280-330			27.0	40.5	54.0	67.5	81.0	0.799	31.30	32.30												
27	3		MA3280-131	MA3280-181	MA3280-231	MA3280-281	MA3280-331			27.0	40.5	54.0	67.5	81.0	1.234	31.40	32.40												
30	2		MA3280-132	MA3280-182	MA3280-232	MA3280-282	MA3280-332			30.0	45.0	60.0	75.0	90.0	0.799	34.50	35.70												
30	3		MA3280-133	MA3280-183	MA3280-233	MA3280-283	MA3280-333			30.0	45.0	60.0	75.0	90.0	1.234	34.90	36.10												
33	2		MA3280-134	MA3280-184	MA3280-234	MA3280-284	MA3280-334			33.0	49.5	66.0	82.5	99.0	0.799	37.80	39.20												
33	3		MA3280-135	MA3280-185	MA3280-235	MA3280-285	MA3280-335			33.0	49.5	66.0	82.5	99.0	1.234	38.10	39.50												
36	2		MA3280-136	MA3280-186	MA3280-236	MA3280-286	MA3280-336			36.0	54.0	72.0	90.0	108.0	0.799	41.00	42.40												
36	3		MA3280-137	MA3280-187	MA3280-237	MA3280-287	MA3280-337			36.0	54.0	72.0	90.0	108.0	1.234	41.30	42.70												
39	2		MA3280-138	MA3280-188	MA3280-238	MA3280-288	MA3280-338			39.0	58.5	78.0	97.5	117.0	0.799	44.40	45.80												
39	3		MA3280-139	MA3280-189	MA3280-239	MA3280-289	MA3280-339			39.0	58.5	78.0	97.5	117.0	1.234	44.30	45.70												

TABLE 1 (CONTINUED)

THREAD SIZE	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	3.250	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	11.125	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	20.375	24.125	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	APPROX- MATE MASS, KILO- GRAMS/100 1 DIA	APPROX- MATE MASS, KILO- GRAMS/100 1.5 DIA	APPROX- MATE MASS, KILO- GRAMS/100 2 DIA	APPROX- MATE MASS, KILO- GRAMS/100 2.5 DIA	APPROX- MATE MASS, KILO- GRAMS/100 3 DIA
2	0.4	1.30	1.90	0.072	0.125	0.66	0.37	0.22	0.002	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	0.004	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	4.85	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	0.784	1.091	1.368	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	2.513	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	8.280	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