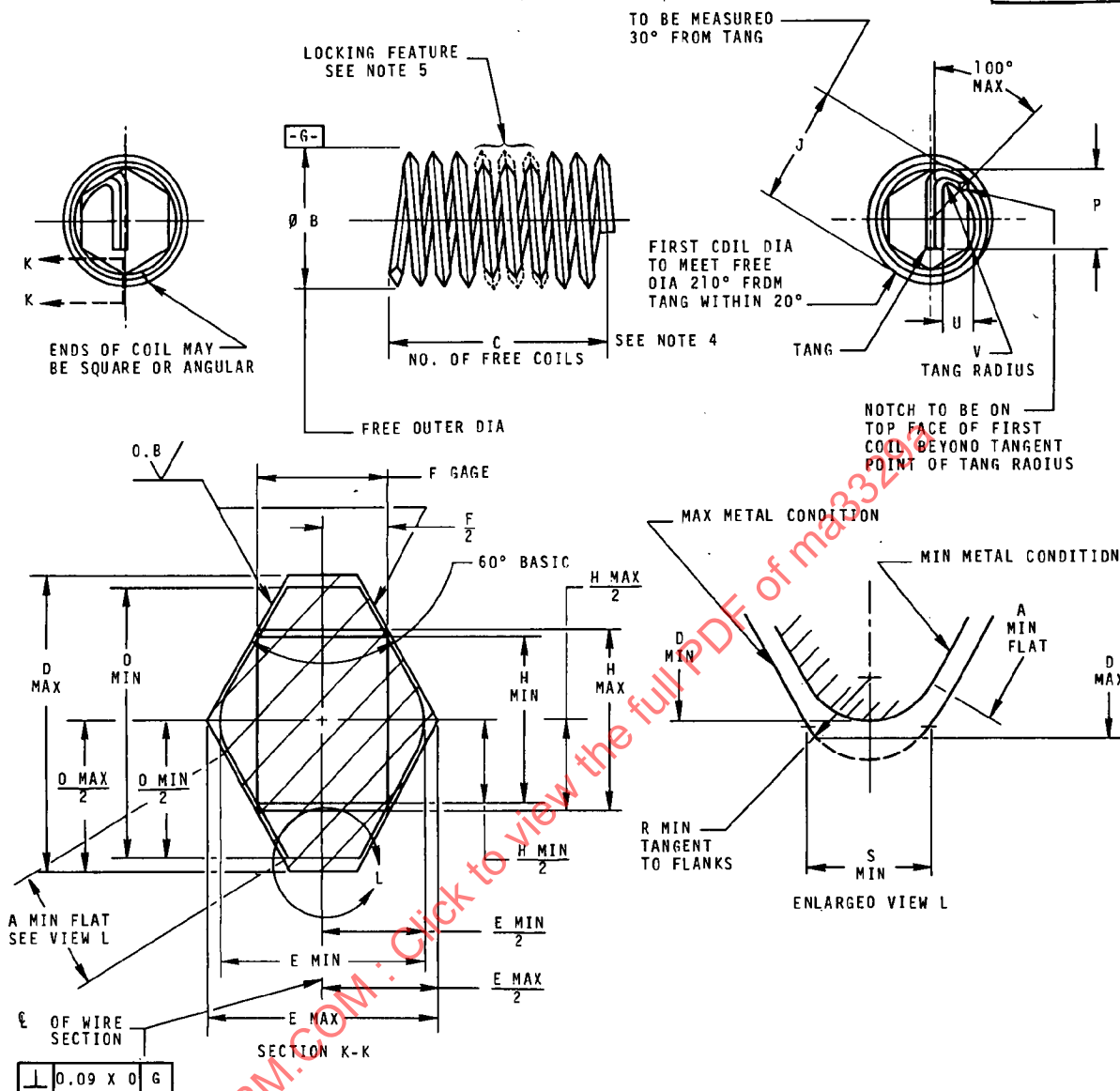


MA3329

MA3330

MA3331

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PREPARED BY SAE COMMITTEE E-25, GENERAL STANDARDS FOR AEROSPACE PROPULSION SYSTEMS

SHEET 1 OF 5 METRIC

SAE The Engineering
Resource For
Advancing Mobility®

AEROSPACE STANDARD

INSERT, SCREW THREAD, HELICAL COIL, METRIC SERIES,
SCREW LOCKING, CRES

MA3329

MA3330

MA3331

MA3329
MA3330
MA3331

FED SUP. CLASS
5340

A. THREAD SIZE			AEROSPACE STANDARD PART NUMBER FOR UNCOATED INSERT						AEROSPACE STANDARD PART NUMBER FOR DRY FILM LUBRICATED INSERT					
			1 DIA	1.5 DIA	2 DIA	2.5 DIA	3 DIA		1 DIA	1.5 DIA	2 DIA	2.5 DIA	3 DIA	
2.2	0.45		MA3329-100	MA3329-150	MA3329-200	MA3329-250	MA3329-300		MA3330-100	MA3330-150	MA3330-200	MA3330-250	MA3330-300	
2.5	0.45		MA3329-101	MA3329-151	MA3329-201	MA3329-251	MA3329-301		MA3330-101	MA3330-151	MA3330-201	MA3330-251	MA3330-301	
3	0.5		MA3329-102	MA3329-152	MA3329-202	MA3329-252	MA3329-302		MA3330-102	MA3330-152	MA3330-202	MA3330-252	MA3330-302	
3.5	0.6		MA3329-103	MA3329-153	MA3329-203	MA3329-253	MA3329-303		MA3330-103	MA3330-153	MA3330-203	MA3330-253	MA3330-303	
4	0.7		MA3329-104	MA3329-154	MA3329-204	MA3329-254	MA3329-304		MA3330-104	MA3330-154	MA3330-204	MA3330-254	MA3330-304	
5	0.8		MA3329-105	MA3329-155	MA3329-205	MA3329-255	MA3329-305		MA3330-105	MA3330-155	MA3330-205	MA3330-255	MA3330-305	
6	1		MA3329-106	MA3329-156	MA3329-206	MA3329-256	MA3329-306		MA3330-106	MA3330-156	MA3330-206	MA3330-256	MA3330-306	
7	1		MA3329-107	MA3329-157	MA3329-207	MA3329-257	MA3329-307		MA3330-107	MA3330-157	MA3330-207	MA3330-257	MA3330-307	
8	1		MA3329-108	MA3329-158	MA3329-208	MA3329-258	MA3329-308		MA3330-108	MA3330-158	MA3330-208	MA3330-258	MA3330-308	
8	1.25		MA3329-109	MA3329-159	MA3329-209	MA3329-259	MA3329-309		MA3330-109	MA3330-159	MA3330-209	MA3330-259	MA3330-309	
10	1.25		MA3329-110	MA3329-160	MA3329-210	MA3329-260	MA3329-310		MA3330-110	MA3330-160	MA3330-210	MA3330-260	MA3330-310	
10	1.5		MA3329-111	MA3329-161	MA3329-211	MA3329-261	MA3329-311		MA3330-111	MA3330-161	MA3330-211	MA3330-261	MA3330-311	
12	1.25		MA3329-112	MA3329-162	MA3329-212	MA3329-262	MA3329-312		MA3330-112	MA3330-162	MA3330-212	MA3330-262	MA3330-312	
12	1.5		MA3329-113	MA3329-163	MA3329-213	MA3329-263	MA3329-313		MA3330-113	MA3330-163	MA3330-213	MA3330-263	MA3330-313	
12	1.75		MA3329-114	MA3329-164	MA3329-214	MA3329-264	MA3329-314		MA3330-114	MA3330-164	MA3330-214	MA3330-264	MA3330-314	
14	1.5		MA3329-115	MA3329-165	MA3329-215	MA3329-265	MA3329-315		MA3330-115	MA3330-165	MA3330-215	MA3330-265	MA3330-315	
14	2		MA3329-116	MA3329-166	MA3329-216	MA3329-266	MA3329-316		MA3330-116	MA3330-166	MA3330-216	MA3330-266	MA3330-316	
16	1.5		MA3329-117	MA3329-167	MA3329-217	MA3329-267	MA3329-317		MA3330-117	MA3330-167	MA3330-217	MA3330-267	MA3330-317	
16	2		MA3329-118	MA3329-168	MA3329-218	MA3329-268	MA3329-318		MA3330-118	MA3330-168	MA3330-218	MA3330-268	MA3330-318	
18	1.5		MA3329-119	MA3329-169	MA3329-219	MA3329-269	MA3329-319		MA3330-119	MA3330-169	MA3330-219	MA3330-269	MA3330-319	
18	2		MA3329-120	MA3329-170	MA3329-220	MA3329-270	MA3329-320		MA3330-120	MA3330-170	MA3330-220	MA3330-270	MA3330-320	
18	2.5		MA3329-121	MA3329-171	MA3329-221	MA3329-271	MA3329-321		MA3330-121	MA3330-171	MA3330-221	MA3330-271	MA3330-321	
20	1.5		MA3329-122	MA3329-172	MA3329-222	MA3329-272	MA3329-322		MA3330-122	MA3330-172	MA3330-222	MA3330-272	MA3330-322	
20	2		MA3329-123	MA3329-173	MA3329-223	MA3329-273	MA3329-323		MA3330-123	MA3330-173	MA3330-223	MA3330-273	MA3330-323	
20	2.5		MA3329-124	MA3329-174	MA3329-224	MA3329-274	MA3329-324		MA3330-124	MA3330-174	MA3330-224	MA3330-274	MA3330-324	
22	1.5		MA3329-125	MA3329-175	MA3329-225	MA3329-275	MA3329-325		MA3330-125	MA3330-175	MA3330-225	MA3330-275	MA3330-325	
22	2		MA3329-126	MA3329-176	MA3329-226	MA3329-276	MA3329-326		MA3330-126	MA3330-176	MA3330-226	MA3330-276	MA3330-326	
22	2.5		MA3329-127	MA3329-177	MA3329-227	MA3329-277	MA3329-327		MA3330-127	MA3330-177	MA3330-227	MA3330-277	MA3330-327	
24	2		MA3329-128	MA3329-178	MA3329-228	MA3329-278	MA3329-328		MA3330-128	MA3330-178	MA3330-228	MA3330-278	MA3330-328	
24	3		MA3329-129	MA3329-179	MA3329-229	MA3329-279	MA3329-329		MA3330-129	MA3330-179	MA3330-229	MA3330-279	MA3330-329	
27	2		MA3329-130	MA3329-180	MA3329-230	MA3329-280	MA3329-330		MA3330-130	MA3330-180	MA3330-230	MA3330-280	MA3330-330	
27	3		MA3329-131	MA3329-181	MA3329-231	MA3329-281	MA3329-331		MA3330-131	MA3330-181	MA3330-231	MA3330-281	MA3330-331	
30	2		MA3329-132	MA3329-182	MA3329-232	MA3329-282	MA3329-332		MA3330-132	MA3330-182	MA3330-232	MA3330-282	MA3330-332	
30	3		MA3329-133	MA3329-183	MA3329-233	MA3329-283	MA3329-333		MA3330-133	MA3330-183	MA3330-233	MA3330-283	MA3330-333	
33	2		MA3329-134	MA3329-184	MA3329-234	MA3329-284	MA3329-334		MA3330-134	MA3330-184	MA3330-234	MA3330-284	MA3330-334	
33	3		MA3329-135	MA3329-185	MA3329-235	MA3329-285	MA3329-335		MA3330-135	MA3330-185	MA3330-235	MA3330-285	MA3330-335	
36	2		MA3329-136	MA3329-186	MA3329-236	MA3329-286	MA3329-336		MA3330-136	MA3330-186	MA3330-236	MA3330-286	MA3330-336	
36	3		MA3329-137	MA3329-187	MA3329-237	MA3329-287	MA3329-337		MA3330-137	MA3330-187	MA3330-237	MA3330-287	MA3330-337	
39	2		MA3329-138	MA3329-188	MA3329-238	MA3329-288	MA3329-338		MA3330-138	MA3330-188	MA3330-238	MA3330-288	MA3330-338	
39	3		MA3329-139	MA3329-189	MA3329-239	MA3329-289	MA3329-339		MA3330-139	MA3330-189	MA3330-239	MA3330-289	MA3330-339	

SHEET 2 OF 5 METRIC

AEROSPACE STANDARD
INSERT, SCREW THREAD, HELICAL COIL, METRIC SERIES,
SCREW LOCKING, CRES

MA3329

MA3330

MA3331

Issued 9-1-81 Revised 3-1-85

THREAD SIZE	AEROSPACE STANDARD PART NUMBER FOR CADMIUM PLATED INSERT			NOMINAL LENGTH SEE NOTE 1					A		B	
	DIA	PITCH	1 DIA	1.5 DIA	2 DIA	2.5 DIA	3 DIA	3 DIA	MIN	MAX	MIN	MAX
2.2	MA3331-100	0.45	MA3331-100	MA3331-151	MA3331-200	MA3331-250	MA3331-300	MA3331-301	0.082	0.082	2.80	3.00
2.5	MA3331-101	0.45	MA3331-101	MA3331-152	MA3331-201	MA3331-251	MA3331-301	MA3331-302	0.082	0.082	3.20	3.70
3	MA3331-102	0.5	MA3331-102	MA3331-153	MA3331-202	MA3331-252	MA3331-302	MA3331-303	0.105	0.105	3.80	4.35
3.5	MA3331-103	0.6	MA3331-103	MA3331-154	MA3331-203	MA3331-253	MA3331-303	MA3331-304	0.160	0.160	4.40	4.95
4	MA3331-104	0.7	MA3331-104	MA3331-155	MA3331-204	MA3331-254	MA3331-304	MA3331-305	0.163	0.163	5.05	5.60
5	MA3331-105	0.8	MA3331-105	MA3331-156	MA3331-205	MA3331-255	MA3331-305	MA3331-306	0.209	0.209	6.25	6.80
6	MA3331-106	1	MA3331-106	MA3331-157	MA3331-206	MA3331-256	MA3331-306	MA3331-307	0.267	0.267	7.40	7.95
7	MA3331-107	1	MA3331-107	MA3331-158	MA3331-207	MA3331-257	MA3331-307	MA3331-308	0.267	0.267	8.65	9.20
8	MA3331-108	1	MA3331-108	MA3331-159	MA3331-208	MA3331-258	MA3331-308	MA3331-309	0.415	0.415	9.70	10.25
8	MA3331-109	1.25	MA3331-109	MA3331-160	MA3331-209	MA3331-259	MA3331-309	MA3331-310	0.415	0.415	9.80	10.35
10	MA3331-110	1.25	MA3331-110	MA3331-161	MA3331-210	MA3331-260	MA3331-310	MA3331-311	0.511	0.511	12.10	12.65
10	MA3331-111	1.5	MA3331-111	MA3331-162	MA3331-211	MA3331-261	MA3331-311	MA3331-312	0.511	0.511	11.95	12.50
12	MA3331-112	1.25	MA3331-112	MA3331-163	MA3331-212	MA3331-262	MA3331-312	MA3331-313	0.415	0.415	14.30	15.00
12	MA3331-113	1.5	MA3331-113	MA3331-164	MA3331-213	MA3331-263	MA3331-313	MA3331-314	0.511	0.511	14.25	14.95
12	MA3331-114	1.75	MA3331-114	MA3331-165	MA3331-214	MA3331-264	MA3331-314	MA3331-315	0.654	0.654	14.30	15.00
14	MA3331-115	1.5	MA3331-115	MA3331-166	MA3331-215	MA3331-265	MA3331-315	MA3331-316	0.511	0.511	16.55	17.25
14	MA3331-116	2	MA3331-116	MA3331-167	MA3331-216	MA3331-266	MA3331-316	MA3331-317	0.799	0.799	16.65	17.35
16	MA3331-117	1.5	MA3331-117	MA3331-168	MA3331-217	MA3331-267	MA3331-317	MA3331-318	0.511	0.511	18.90	19.60
16	MA3331-118	2	MA3331-118	MA3331-169	MA3331-218	MA3331-268	MA3331-318	MA3331-319	0.799	0.799	18.90	19.60
18	MA3331-119	1.5	MA3331-119	MA3331-170	MA3331-219	MA3331-269	MA3331-319	MA3331-320	0.511	0.511	21.05	21.75
18	MA3331-120	2	MA3331-120	MA3331-171	MA3331-220	MA3331-270	MA3331-320	MA3331-321	0.799	0.799	21.15	21.85
18	MA3331-121	2.5	MA3331-121	MA3331-172	MA3331-221	MA3331-271	MA3331-321	MA3331-322	1.017	1.017	21.30	22.00
20	MA3331-122	1.5	MA3331-122	MA3331-173	MA3331-222	MA3331-272	MA3331-322	MA3331-323	0.511	0.511	23.15	24.00
20	MA3331-123	2	MA3331-123	MA3331-174	MA3331-223	MA3331-273	MA3331-323	MA3331-324	0.799	0.799	23.20	24.05
20	MA3331-124	2.5	MA3331-124	MA3331-175	MA3331-224	MA3331-274	MA3331-324	MA3331-325	1.017	1.017	23.55	24.40
22	MA3331-125	1.5	MA3331-125	MA3331-176	MA3331-225	MA3331-275	MA3331-325	MA3331-326	0.511	0.511	25.55	26.45
22	MA3331-126	2	MA3331-126	MA3331-177	MA3331-226	MA3331-276	MA3331-326	MA3331-327	0.799	0.799	25.60	26.50
22	MA3331-127	2.5	MA3331-127	MA3331-178	MA3331-227	MA3331-277	MA3331-327	MA3331-328	1.017	1.017	25.90	26.90
24	MA3331-128	2	MA3331-128	MA3331-179	MA3331-228	MA3331-278	MA3331-328	MA3331-329	0.799	0.799	28.10	29.10
24	MA3331-129	3	MA3331-129	MA3331-180	MA3331-229	MA3331-279	MA3331-329	MA3331-330	1.234	1.234	28.00	29.00
27	MA3331-130	2	MA3331-130	MA3331-181	MA3331-230	MA3331-280	MA3331-330	MA3331-331	0.799	0.799	31.30	32.40
27	MA3331-131	2	MA3331-131	MA3331-182	MA3331-231	MA3331-281	MA3331-331	MA3331-332	1.234	1.234	31.40	32.40
30	MA3331-132	2	MA3331-132	MA3331-183	MA3331-232	MA3331-282	MA3331-332	MA3331-333	0.799	0.799	34.50	35.70
30	MA3331-133	3	MA3331-133	MA3331-184	MA3331-233	MA3331-283	MA3331-333	MA3331-334	1.234	1.234	34.90	36.10
33	MA3331-134	2	MA3331-134	MA3331-185	MA3331-234	MA3331-284	MA3331-334	MA3331-335	0.799	0.799	37.80	39.20
33	MA3331-135	3	MA3331-135	MA3331-186	MA3331-235	MA3331-285	MA3331-335	MA3331-336	1.234	1.234	38.10	39.50
36	MA3331-136	2	MA3331-136	MA3331-187	MA3331-236	MA3331-286	MA3331-336	MA3331-337	0.799	0.799	41.00	42.40
36	MA3331-137	3	MA3331-137	MA3331-188	MA3331-237	MA3331-287	MA3331-337	MA3331-338	1.234	1.234	41.30	42.70
39	MA3331-138	2	MA3331-138	MA3331-189	MA3331-238	MA3331-288	MA3331-338	MA3331-339	0.799	0.799	44.30	45.70
39	MA3331-139	3	MA3331-139	MA3331-190	MA3331-239	MA3331-289	MA3331-339	MA3331-340	1.234	1.234	44.40	45.80

C ± .25 COIL											FED SUP. CLASS 5340						
THREAD SIZE		D					E		F		H		J		P		
DIA	PITCH	1 DIA	1.5 DIA	2 DIA	2.5 DIA	3 DIA	MIN	MAX	MIN	MAX	GAGE	MIN	MAX	MIN	MAX	MIN	MAX
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	1.40	2.00
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	1.60	2.25
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	1.95	2.80
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	2.20	3.00
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	2.50	3.55
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	3.15	4.55
6	1	4.000	6.750	9.500	12.250	14.875	0.975	1.083	0.748	0.875	0.500	0.6370	0.6500	7.25	7.90	3.70	4.85
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	4.30	5.50
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	4.75	6.50
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	4.75	6.50
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	5.50	8.00
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	5.50	8.00
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	6.70	9.75
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	6.70	9.75
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	6.70	9.75
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	7.20	11.25
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	7.20	11.25
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	8.30	12.75
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	8.30	12.75
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	9.30	14.00
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	9.30	14.00
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	9.30	14.00
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	10.40	14.50
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	10.40	14.50
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	10.40	14.50
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	11.40	16.00
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	11.40	16.00
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	11.40	16.00
24	2	9.500	15.000	20.375	25.875	31.375	2.063	2.165	1.598	1.750	1.000	1.2865	1.2990	26.40	27.10	12.50	16.50
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	12.50	16.50
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	14.00	17.50
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	14.00	17.50
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	15.00	19.00
30	3	7.875	12.500	17.250	21.875	26.500	3.146	3.248	2.396	2.625	1.500	1.9360	1.9485	33.50	34.20	15.00	19.00
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	17.00	21.00
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	17.00	21.00
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	18.50	22.50
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	18.50	22.50
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	20.00	24.00
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	20.00	24.00

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AEROSPACE STANDARD

INSERT, SCREW THREAD, HELICAL COIL, METRIC SERIES,
SCREW LOCKING, CRES

SHEET 4 OF 5 METRIC

MA3329

MA3330

MA3331