

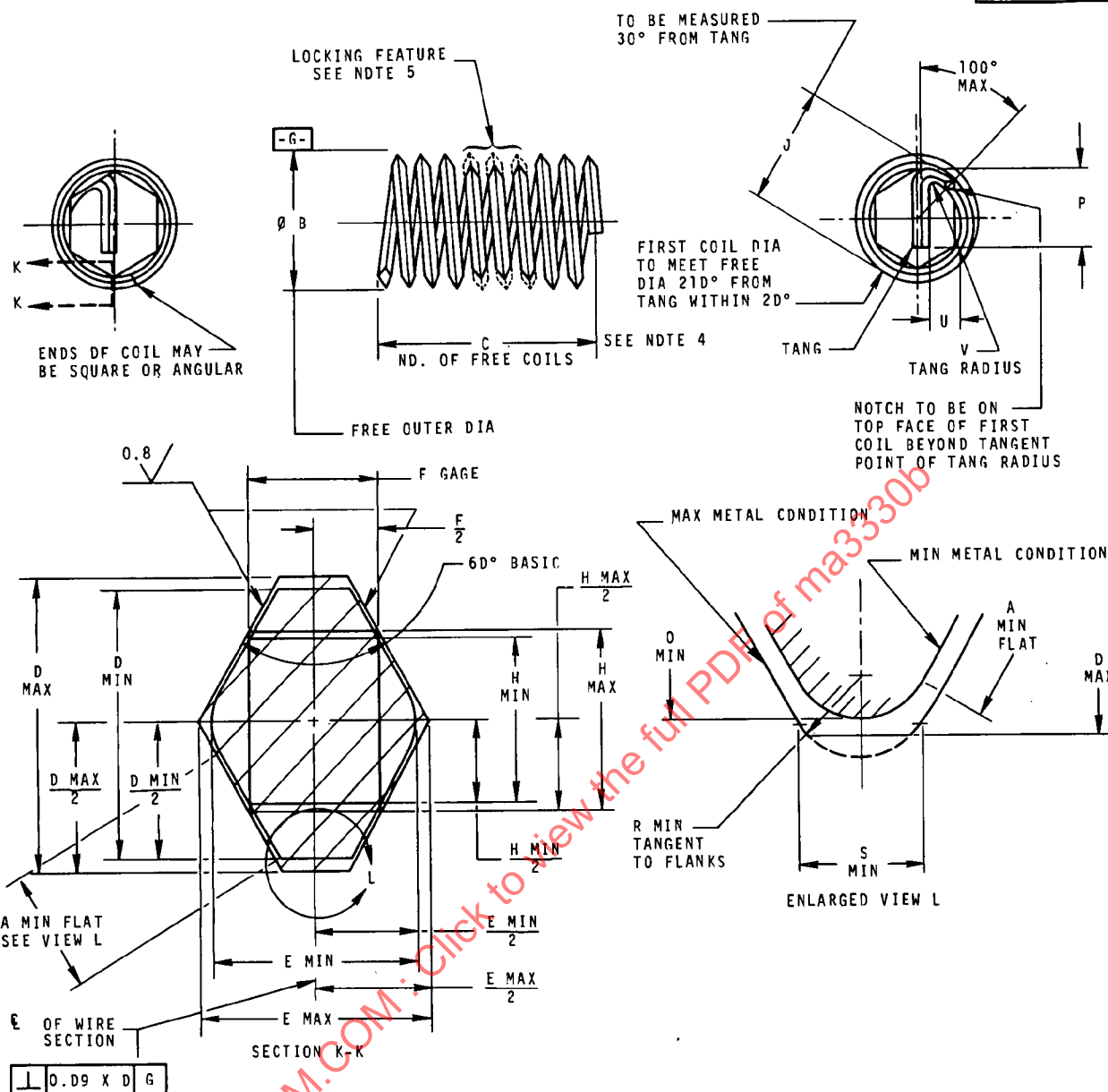
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MA3329

MA3330

MA333I

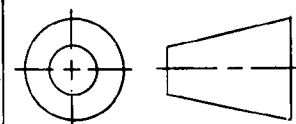


1. NOMINAL LENGTH IS REFERENCE AND EQUALS MINIMUM LENGTH OF FULL THREAD INTO WHICH MAXIMUM INSERT CAN BE ASSEMBLED. SEE TABLE.
2. ASSEMBLED LENGTH OF INSERT TO BE AS SPECIFIED ON AEROSPACE STANDARD MA 1567.
3. ASSEMBLED LENGTH OF INSERT TO BE MEASURED FROM NOTCH.
4. NUMBER OF FREE COILS TO BE COUNTED FROM NOTCH.
5. NUMBER OF LOCKING COILS, SPACING OF LOCKING COILS, NUMBER OF LOCKING DEFORMATIONS, SHAPE AND ORIENTATION OPTIONAL. LOCKING FEATURE FOR 1, 1.5 AND 2 DIAMETER LENGTH INSERTS SYMMETRICALLY POSITIONED ABOUT THE CENTER OF INSERT, AND FOR 2.5 AND 3 DIAMETER LENGTH INSERTS AT 1 DIAMETER FROM TANG END OF INSERT.
6. MATERIAL CRES, SEE PROCUREMENT SPECIFICATION.
7. SURFACE TEXTURE: SYMBOLS PER ANSI Y14.36-1978; REQUIREMENTS PER ANSI B46.1-1978.
8. WHEN DRY FILM LUBRICANT IS SPECIFIED, IT SHALL BE IN ACCORDANCE WITH MIL-L-8937.
9. WHEN CADMIUM PLATING IS SPECIFIED, IT SHALL BE IN ACCORDANCE WITH QQ-P-416, TYPE II, EXCEPT THICKNESS SHALL BE A MAXIMUM OF 0.003 mm.
10. DIMENSIONS AND TOLERANCING: ANSI Y14.5-1973. DIMENSIONS APPLY BEFORE COATING.
11. LINEAR DIMENSIONS IN MILLIMETRES (mm).
12. INSERTS CAN BE USED WITH M OR MJ EXTERNAL THREADS.
13. PROCUREMENT SPECIFICATION: MA1565.
14. DO NOT USE UNASSIGNED AEROSPACE STANDARD PART NUMBERS.

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REAFFIRMED

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THIRD ANGLE PROJECTION



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

SHEET 1 OF 5 METRIC

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400 COMMONWEALTH DRIVE WARRENDALE, PA 15096

AEROSPACE STANDARD

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

MA 3329

MA3330

MA333U

THREAD SIZE			AEROSPACE STANDARD PART NUMBER FOR UNCOATED INSERT										AEROSPACE STANDARD PART NUMBER FOR DRY FILM LUBRICATED INSERT									
DIA	PITCH		1 DIA	1.5 DIA	2 DIA	2.5 DIA	3 DIA	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	MA3330-139	MA3330-189	MA3330-239	MA3330-289	MA3330-339					

THREAD SIZE		AEROSPACE STANDARD PART NUMBER FOR CADMIUM PLATED INSERT										NOMINAL LENGTH SEE NOTE 1					A		B	
		1 DIA	1.5 DIA	2 DIA	2.5 DIA	3 DIA	1 DIA	1.5 DIA	2 DIA	2.5 DIA	3 DIA	1 DIA	1.5 DIA	2 DIA	2.5 DIA	3 DIA	MIN	MAX	MIN	MAX
2.2	0.45	MA3331-100	MA3331-150	MA3331-200	MA3331-250	MA3331-300	2.2	3.3	4.4	5.5	6.6	2.2	3.3	4.4	5.5	6.6	0.082	2.80	2.80	3.00
2.5	0.45	MA3331-101	MA3331-151	MA3331-201	MA3331-251	MA3331-301	2.5	3.8	5.0	6.3	7.5	2.5	3.8	5.0	6.3	7.5	0.082	3.20	3.20	3.70
3	0.5	MA3331-102	MA3331-152	MA3331-202	MA3331-252	MA3331-302	3.0	4.5	6.0	7.5	9.0	3.0	4.5	6.0	7.5	9.0	0.105	3.80	3.80	4.35
3.5	0.6	MA3331-103	MA3331-153	MA3331-203	MA3331-253	MA3331-303	3.5	5.3	7.0	8.8	10.5	3.5	5.3	7.0	8.8	10.5	0.160	4.40	4.40	4.95
4	0.7	MA3331-104	MA3331-154	MA3331-204	MA3331-254	MA3331-304	4.0	6.0	8.0	10.0	12.0	4.0	6.0	8.0	10.0	12.0	0.163	5.05	5.05	5.60
5	0.8	MA3331-105	MA3331-155	MA3331-205	MA3331-255	MA3331-305	5.0	7.5	10.0	12.5	15.0	5.0	7.5	10.0	12.5	15.0	0.209	6.25	6.25	6.80
6	1	MA3331-106	MA3331-156	MA3331-206	MA3331-256	MA3331-306	6.0	9.0	12.0	15.0	18.0	6.0	9.0	12.0	15.0	18.0	0.267	7.40	7.40	7.95
7	1	MA3331-107	MA3331-157	MA3331-207	MA3331-257	MA3331-307	7.0	10.5	14.0	17.5	21.0	7.0	10.5	14.0	17.5	21.0	0.267	8.65	8.65	9.20
8	1	MA3331-108	MA3331-158	MA3331-208	MA3331-258	MA3331-308	8.0	12.0	16.0	20.0	24.0	8.0	12.0	16.0	20.0	24.0	0.267	9.70	9.70	10.25
8	1.25	MA3331-109	MA3331-159	MA3331-209	MA3331-259	MA3331-309	8.0	12.0	16.0	20.0	24.0	8.0	12.0	16.0	20.0	24.0	0.415	9.80	9.80	10.35
10	1.25	MA3331-110	MA3331-160	MA3331-210	MA3331-260	MA3331-310	10.0	15.0	20.0	25.0	30.0	10.0	15.0	20.0	25.0	30.0	0.415	12.10	12.10	12.65
10	1.5	MA3331-111	MA3331-161	MA3331-211	MA3331-261	MA3331-311	10.0	15.0	20.0	25.0	30.0	10.0	15.0	20.0	25.0	30.0	0.511	11.95	11.95	12.50
12	1.25	MA3331-112	MA3331-162	MA3331-212	MA3331-262	MA3331-312	12.0	18.0	24.0	30.0	36.0	12.0	18.0	24.0	30.0	36.0	0.415	14.30	14.30	15.00
12	1.5	MA3331-113	MA3331-163	MA3331-213	MA3331-263	MA3331-313	12.0	18.0	24.0	30.0	36.0	12.0	18.0	24.0	30.0	36.0	0.511	14.25	14.25	14.95
12	1.75	MA3331-114	MA3331-164	MA3331-214	MA3331-264	MA3331-314	12.0	18.0	24.0	30.0	36.0	12.0	18.0	24.0	30.0	36.0	0.654	14.30	14.30	15.00
14	1.5	MA3331-115	MA3331-165	MA3331-215	MA3331-265	MA3331-315	14.0	21.0	28.0	35.0	42.0	14.0	21.0	28.0	35.0	42.0	0.511	16.55	16.55	17.25
14	2	MA3331-116	MA3331-166	MA3331-216	MA3331-266	MA3331-316	14.0	21.0	28.0	35.0	42.0	14.0	21.0	28.0	35.0	42.0	0.799	16.65	16.65	17.35
16	1.5	MA3331-117	MA3331-167	MA3331-217	MA3331-267	MA3331-317	16.0	24.0	32.0	40.0	48.0	16.0	24.0	32.0	40.0	48.0	0.511	18.90	18.90	19.60
16	2	MA3331-118	MA3331-168	MA3331-218	MA3331-268	MA3331-318	16.0	24.0	32.0	40.0	48.0	16.0	24.0	32.0	40.0	48.0	0.799	18.90	18.90	19.60
18	1.5	MA3331-119	MA3331-169	MA3331-219	MA3331-269	MA3331-319	18.0	27.0	36.0	45.0	54.0	18.0	27.0	36.0	45.0	54.0	0.511	21.05	21.05	21.75
18	2	MA3331-120	MA3331-170	MA3331-220	MA3331-270	MA3331-320	18.0	27.0	36.0	45.0	54.0	18.0	27.0	36.0	45.0	54.0	0.799	21.15	21.15	21.85
18	2.5	MA3331-121	MA3331-171	MA3331-221	MA3331-271	MA3331-321	18.0	27.0	36.0	45.0	54.0	18.0	27.0	36.0	45.0	54.0	1.017	21.30	21.30	22.00
20	1.5	MA3331-122	MA3331-172	MA3331-222	MA3331-272	MA3331-322	20.0	30.0	40.0	50.0	60.0	20.0	30.0	40.0	50.0	60.0	0.511	23.15	23.15	24.00
20	2	MA3331-123	MA3331-173	MA3331-223	MA3331-273	MA3331-323	20.0	30.0	40.0	50.0	60.0	20.0	30.0	40.0	50.0	60.0	0.799	23.20	23.20	24.05
20	2.5	MA3331-124	MA3331-174	MA3331-224	MA3331-274	MA3331-324	20.0	30.0	40.0	50.0	60.0	20.0	30.0	40.0	50.0	60.0	1.017	23.55	23.55	24.40
22	1.5	MA3331-125	MA3331-175	MA3331-225	MA3331-275	MA3331-325	22.0	33.0	44.0	55.0	66.0	22.0	33.0	44.0	55.0	66.0	0.511	25.55	25.55	26.45
22	2	MA3331-126	MA3331-176	MA3331-226	MA3331-276	MA3331-326	22.0	33.0	44.0	55.0	66.0	22.0	33.0	44.0	55.0	66.0	0.799	25.60	25.60	26.50
22	2.5	MA3331-127	MA3331-177	MA3331-227	MA3331-277	MA3331-327	22.0	33.0	44.0	55.0	66.0	22.0	33.0	44.0	55.0	66.0	1.017	25.90	25.90	26.90
24	2	MA3331-128	MA3331-178	MA3331-228	MA3331-278	MA3331-328	24.0	36.0	48.0	60.0	72.0	24.0	36.0	48.0	60.0	72.0	0.799	28.10	28.10	29.10
24	3	MA3331-129	MA3331-179	MA3331-229	MA3331-279	MA3331-329	24.0	36.0	48.0	60.0	72.0	24.0	36.0	48.0	60.0	72.0	1.234	28.00	28.00	29.00
27	2	MA3331-130	MA3331-180	MA3331-230	MA3331-280	MA3331-330	27.0	40.5	54.0	67.5	81.0	27.0	40.5	54.0	67.5	81.0	0.799	31.30	31.30	32.30
27	3	MA3331-131	MA3331-181	MA3331-231	MA3331-281	MA3331-331	27.0	40.5	54.0	67.5	81.0	27.0	40.5	54.0	67.5	81.0	1.234	31.40	31.40	32.40
30	2	MA3331-132	MA3331-182	MA3331-232	MA3331-282	MA3331-332	30.0	45.0	60.0	75.0	90.0	30.0	45.0	60.0	75.0	90.0	0.799	34.50	34.50	35.70
30	3	MA3331-133	MA3331-183	MA3331-233	MA3331-283	MA3331-333	30.0	45.0	60.0	75.0	90.0	30.0	45.0	60.0	75.0	90.0	1.234	34.90	34.90	36.10
33	2	MA3331-134	MA3331-184	MA3331-234	MA3331-284	MA3331-334	33.0	49.5	66.0	82.5	99.0	33.0	49.5	66.0	82.5	99.0	0.799	37.80	37.80	39.20
33	3	MA3331-135	MA3331-185	MA3331-235	MA3331-285	MA3331-335	33.0	49.5	66.0	82.5	99.0	33.0	49.5	66.0	82.5	99.0	1.234	38.10	38.10	39.50
36	2	MA3331-136	MA3331-186	MA3331-236	MA3331-286	MA3331-336	36.0	54.0	72.0	90.0	108.0	36.0	54.0	72.0	90.0	108.0	0.799	41.00	41.00	42.40
36	3	MA3331-137	MA3331-187	MA3331-237	MA3331-287	MA3331-337	36.0	54.0	72.0	90.0	108.0	36.0	54.0	72.0	90.0	108.0	1.234	41.30	41.30	42.70
39	2	MA3331-138	MA3331-188	MA3331-238	MA3331-288	MA3331-338	39.0	58.5	78.0	97.5	117.0	39.0	58.5	78.0	97.5	117.0	0.799	44.30	44.30	45.70
39	3	MA3331-139	MA3331-189	MA3331-239	MA3331-289	MA3331-339	39.0	58.5	78.0	97.5	117.0	39.0	58.5	78.0	97.5	117.0	1.234	44.40	44.40	45.80

SHEET 3 OF 5 METRIC

AEROSPACE STANDARD

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

MA3329

MA3330

MA3331

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
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	4.000	6.750	9.500	12.250	15.000	0.586	0.650	0.449	0.525	0.300	0.3795	0.3900	4.25	4.90
4	0.7	4.625	7.625	10.625	13.625	16.625	0.683	0.758	0.510	0.612	0.350	0.4445	0.4550	4.90	5.55
5	0.8	5.125	8.375	11.625	14.875	18.125	0.775	0.866	0.598	0.700	0.400	0.5085	0.5200	6.10	6.75
6	1	5.625	9.125	12.875	16.125	19.375	0.875	1.083	0.748	0.875	0.500	0.6370	0.6500	7.25	7.90
7	1	6.125	10.125	13.875	17.125	20.375	0.975	1.183	0.848	0.975	0.500	0.6370	0.6500	8.40	9.15
8	1.25	6.625	11.125	14.875	18.125	21.375	1.075	1.283	0.948	1.075	0.500	0.6370	0.6500	9.20	9.65
8	1.25	6.625	11.125	14.875	18.125	21.375	1.075	1.283	0.948	1.075	0.500	0.6370	0.6500	9.20	9.65
10	1.25	7.625	13.125	16.875	20.125	23.375	1.275	1.483	1.048	1.275	0.625	0.7990	0.8120	9.50	9.90
10	1.5	8.125	14.125	17.875	21.125	24.375	1.375	1.583	1.160	1.312	0.625	0.7990	0.8120	11.50	11.95
12	1.25	9.125	15.125	18.875	22.125	25.375	1.475	1.683	1.248	1.312	0.625	0.7990	0.8120	11.80	12.25
12	1.5	9.625	16.125	19.875	23.125	26.375	1.575	1.783	1.348	1.312	0.625	0.7990	0.8120	13.50	14.00
12	1.75	10.125	17.125	20.875	24.125	27.375	1.675	1.883	1.448	1.312	0.625	0.7990	0.8120	13.80	14.30
14	1.5	11.125	18.125	21.875	25.125	28.375	1.775	1.983	1.548	1.312	0.625	0.7990	0.8120	14.10	14.60
14	2	12.125	19.125	22.875	26.125	29.375	1.875	2.083	1.598	1.312	0.750	0.9615	0.9740	15.80	16.30
14	2	12.125	19.125	22.875	26.125	29.375	1.875	2.083	1.598	1.312	0.750	0.9615	0.9740	15.80	16.30
16	1.5	13.125	20.125	23.875	27.125	30.375	1.975	2.183	1.698	1.312	0.750	0.9615	0.9740	16.40	16.90
16	2	14.125	21.125	24.875	28.125	31.375	2.075	2.283	1.698	1.312	0.750	0.9615	0.9740	17.80	18.30
18	1.5	15.125	22.125	25.875	29.125	32.375	2.175	2.383	1.798	1.312	0.750	0.9615	0.9740	18.40	18.90
18	2	16.125	23.125	26.875	30.125	33.375	2.275	2.483	1.798	1.312	0.750	0.9615	0.9740	19.80	20.35
18	2.5	17.125	24.125	27.875	31.125	34.375	2.375	2.583	1.798	1.312	0.750	0.9615	0.9740	20.40	20.95
20	1.5	18.125	25.125	28.875	32.125	35.375	2.475	2.683	1.798	1.312	0.750	0.9615	0.9740	20.90	21.45
20	2	19.125	26.125	29.875	33.125	36.375	2.575	2.783	1.798	1.312	0.750	0.9615	0.9740	21.80	22.50
20	2.5	20.125	27.125	30.875	34.125	37.375	2.675	2.883	1.798	1.312	0.750	0.9615	0.9740	22.40	23.10
22	1.5	21.125	28.125	31.875	35.125	38.375	2.775	2.983	1.798	1.312	0.750	0.9615	0.9740	22.90	23.60
22	2	22.125	29.125	32.875	36.125	39.375	2.875	3.083	1.798	1.312	0.750	0.9615	0.9740	24.10	24.80
22	2.5	23.125	30.125	33.875	37.125	40.375	2.975	3.183	1.798	1.312	0.750	0.9615	0.9740	24.40	25.10
24	2	24.125	31.125	34.875	38.125	41.375	3.075	3.283	1.798	1.312	0.750	0.9615	0.9740	24.90	25.60
24	3	25.125	32.125	35.875	39.125	42.375	3.175	3.383	1.798	1.312	0.750	0.9615	0.9740	26.40	27.10
24	3	25.125	32.125	35.875	39.125	42.375	3.175	3.383	1.798	1.312	0.750	0.9615	0.9740	26.40	27.10
27	2	27.125	34.125	37.875	41.125	44.375	3.375	3.583	1.798	1.312	0.750	0.9615	0.9740	27.50	28.20
27	3	28.125	35.125	38.875	42.125	45.375	3.475	3.683	1.798	1.312	0.750	0.9615	0.9740	29.40	30.10
30	2	30.125	37.125	40.875	44.125	47.375	3.675	3.883	1.798	1.312	0.750	0.9615	0.9740	30.50	31.20
30	3	31.125	38.125	41.875	45.125	48.375	3.775	3.983	1.798	1.312	0.750	0.9615	0.9740	32.50	33.20
33	2	33.125	40.125	43.875	47.125	50.375	3.975	4.183	1.798	1.312	0.750	0.9615	0.9740	33.50	34.20
33	3	34.125	41.125	44.875	48.125	51.375	4.075	4.283	1.798	1.312	0.750	0.9615	0.9740	35.80	36.50
36	2	36.125	43.125	46.875	50.125	53.375	4.275	4.483	1.798	1.312	0.750	0.9615	0.9740	36.50	37.20
36	3	37.125	44.125	47.875	51.125	54.375	4.375	4.583	1.798	1.312	0.750	0.9615	0.9740	39.00	39.70
39	2	39.125	46.125	49.875	53.125	56.375	4.575	4.783	1.798	1.312	0.750	0.9615	0.9740	39.50	40.20
39	3	40.125	47.125	50.875	54.125	57.375	4.675	4.883	1.798	1.312	0.750	0.9615	0.9740	42.30	43.00

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