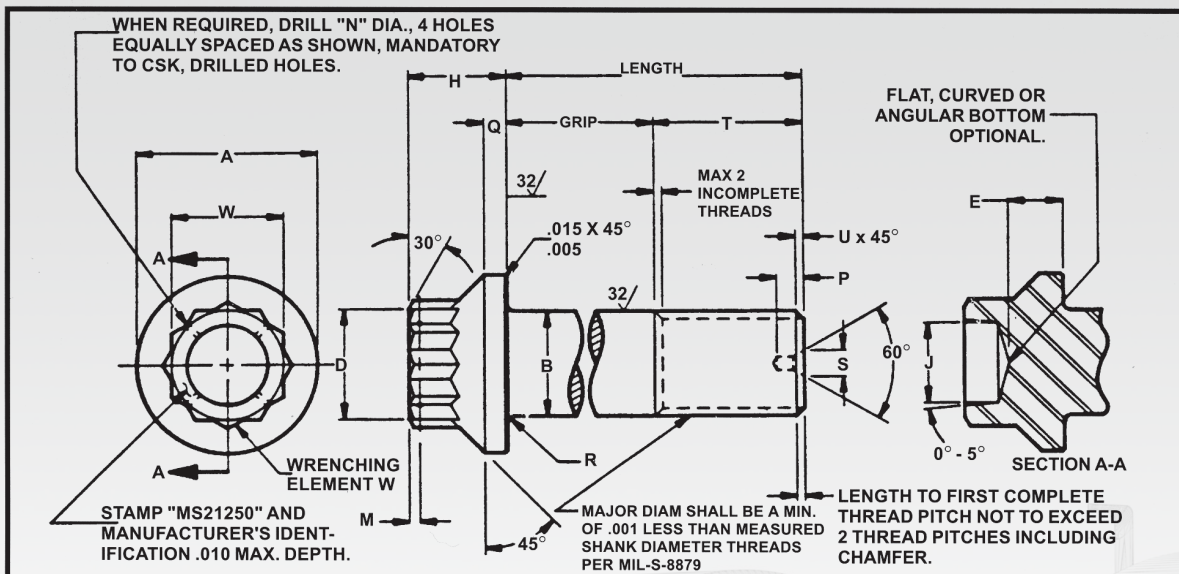


Aerospace Bolts

MS21250 Series



Dash No.	Thread MIL-S-8879	A Diam	B Diam	Nom Size W	D Diam	E Min	H	J +.010 -0.30	M	N Diam ±.005	P Max	Q	R	S Max	T Min	U ±.016
O2	.1640-32 UNJC-3A	.300 .290	.1635 .1625	0.2188	.219 .204	0.076	0.25	0.10				0.05			0.385	
O3	.1900-32 UNJF-3A	.350 .340	.1895 .1885	0.25	.250 .235	0.092	0.265	0.125	.062	.037		0.055	.041 .031		0.42	.031
O4	.2500-28 UNJF-3A	.438 .428	.2495 .2485	0.3125	.312 .297	0.135	0.30	0.18				0.069			0.492	
O5	.3125-24 UNJF-3A	.531 .521	.3120 .3110	0.375	.375 .360	0.162	0.348	0.215				0.082			0.579	
O6	.3750-24 UNJF-3A	.649 .639	.3745 .3735	0.4375	.437 .422	0.197	0.388	0.26	.070			0.091			0.625	.047
O7	.4375-20 UNJF-3A	.750 .740	.4370 .4360	0.50	.500 .485	0.228	0.435	0.32				0.099	.057 .047		0.721	
O8	.5000-20 UNJF-3A	.828 .818	.4995 .4985	0.5625	.562 .547	0.254	0.504	0.38		.055		0.123			0.768	
O9	.5625-18 UNJF-3A	.938 .928	.5615 .5605	0.625	.625 .610	0.287	0.557	0.44	.094			0.133			0.852	
10	.6250-18 UNJF-3A	1.050 1.040	.6240 .6230	0.6875	.687 .672	0.327	0.618	0.50				0.15			0.899	.062
12	.7500-16 UNJF-3A	1.230 1.220	.7490 .7480	0.8125	.812 .797	0.38	0.711	0.57			.200	0.178	.073 .063	.187	1.036	
14	.8750-14 UNJF-3A	1.438 1.428	.8740 .8730	0.9375	.937 .922	0.438	0.808	0.65	.125		.260	0.198			1.244	.078
16	1.000-12 UNJF-3A	1.625 1.615	.9990 .9980	1.0625	1.062 1.047	0.493	0.923	0.74				0.222		.250	1.479	

PROCUREMENT SPECIFICATION	TITLE	CLASSIFICATION
MIL-B-8831	BOLT, STEEL, EXTERNAL WRENCHING 180,000 PSI FTU, 450°F, 12 POINT	STANDARD PART MS 21250

GRIP		MS 21250, LENGTH: $\pm .015$ DIAMETER DASH NUMBERS											
DASH NO.	GRIP $\pm .010$	2	3	4	5	6	7	8	9	10	12	14	16
4	0.25	0.655	0.69	0.762	0.849	0.895	0.991	1.038					
6	0.375	0.78	0.815	0.887	0.974	1.02	1.116	1.163	1.247	1.294	1.431		
8	0.50	0.905	0.94	1.012	1.099	1.145	1.241	1.288	1.372	1.419	1.556	1.764	1.999
10	0.625	1.03	1.065	1.137	1.224	1.27	1.366	1.413	1.497	1.544	1.681	1.889	2.124
12	0.75	1.155	1.19	1.262	1.349	1.395	1.491	1.538	1.622	1.669	1.806	2.014	2.249
14	0.875	1.28	1.315	1.387	1.474	1.52	1.616	1.663	1.747	1.794	1.931	2.139	2.374
16	1.00	1.405	1.44	1.512	1.599	1.645	1.741	1.788	1.872	1.919	2.056	2.264	2.499
18	1.125	1.53	1.565	1.637	1.724	1.77	1.866	1.913	1.997	2.044	2.181	2.389	2.624
20	1.25	1.655	1.69	1.762	1.849	1.895	1.991	2.038	2.122	2.169	2.306	2.514	2.749
22	1.375	1.78	1.815	1.887	1.974	2.02	2.116	2.163	2.247	2.294	2.431	2.639	2.874
24	1.50	1.905	1.94	2.012	2.099	2.145	2.241	2.288	2.372	2.419	2.556	2.764	2.999
26	1.625	2.03	2.065	2.137	2.224	2.27	2.366	2.413	2.497	2.544	2.681	2.889	3.124
28	1.75	2.155	2.19	2.262	2.349	2.395	2.491	2.538	2.622	2.669	2.806	3.014	3.249
30	1.875	2.28	2.315	2.387	2.474	2.52	2.616	2.663	2.747	2.794	2.931	3.139	3.374
32	2.00	2.405	2.44	2.512	2.599	2.645	2.741	2.788	2.872	2.919	3.056	3.264	3.499
34	2.125	2.53	2.565	2.637	2.724	2.77	2.866	2.913	2.997	3.044	3.181	3.389	3.624
35	2.188					2.833							
36	2.25	2.655	2.69	2.762	2.849	2.895	2.991	3.038	3.122	3.169	3.306	3.514	3.749
38	2.375	2.78	2.815	2.887	2.974	3.02	3.116	3.163	3.247	3.294	3.431	3.639	3.874
39	2.438							3.225					
40	2.50	2.905	2.94	3.012	3.099	3.145	3.241	3.288	3.372	3.419	3.556	3.764	3.999
42	2.625	3.03	3.065	3.137	3.224	3.27	3.366	3.413	3.497	3.544	3.681	3.889	4.124
44	2.75	3.155	3.19	3.262	3.349	3.395	3.491	3.538	3.622	3.669	3.806	4.014	4.249
46	2.875	3.28	3.315	3.387	3.474	3.52	3.616	3.663	3.747	3.794	3.931	4.139	4.374
48	3.00	3.405	3.44	3.512	3.599	3.645	3.741	3.788	3.872	3.919	4.056	4.264	4.499
50	3.125	3.53	3.565	3.637	3.724	3.77	3.866	3.913	3.997	4.044	4.181	4.389	4.624
52	3.25	3.655	3.69	3.762	3.849	3.895	3.991	4.038	4.122	4.169	4.306	4.514	4.749
54	3.375	3.78	3.815	3.887	3.974	4.02	4.116	4.163	4.247	4.294	4.431	4.639	4.874
56	3.50	3.905	3.94	4.012	4.099	4.145	4.241	4.288	4.372	4.419	4.556	4.764	4.999
58	3.625	4.03	4.065	4.137	4.224	4.27	4.366	4.413	4.497	4.544	4.681	4.889	5.124
60	3.75	4.155	4.19	4.262	4.349	4.395	4.491	4.538	4.622	4.669	4.806	5.014	5.249
62	3.875	4.28	4.315	4.387	4.474	4.52	4.616	4.663	4.747	4.794	4.931	5.139	5.374
64	4.00	4.405	4.44	4.512	4.599	4.645	4.741	4.788	4.872	4.919	5.056	5.264	5.499
66	4.125	4.53	4.565	4.637	4.724	4.77	4.866	4.913	4.997	5.044	5.181	5.389	5.624
68	4.25	4.655	4.69	4.762	4.849	4.895	4.991	5.038	5.122	5.169	5.306	5.514	5.749
70	4.375	4.78	4.815	4.887	4.974	5.02	5.116	5.163	5.247	5.294	5.431	5.639	5.874
72	4.50	4.905	4.94	5.012	5.099	5.145	5.241	5.288	5.372	5.419	5.556	5.764	5.999
74	4.625	5.03	5.065	5.137	5.224	5.27	5.366	5.413	5.497	5.544	5.681	5.889	6.124
76	4.75	5.155	5.19	5.262	5.349	5.395	5.491	5.538	5.622	5.669	5.806	6.014	6.249
78	4.875	5.28	5.315	5.387	5.474	5.52	5.616	5.663	5.747	5.794	5.931	6.139	6.374
80	5.00	5.405	5.44	5.512	5.599	5.645	5.741	5.788	5.872	5.919	6.056	6.264	6.499
82	5.125	5.53	5.565	5.637	5.724	5.77	5.866	5.913	5.997	6.044	6.181	6.389	6.624
84	5.25	5.655	5.69	5.762	5.849	5.895	5.991	6.038	6.122	6.169	6.306	6.514	6.749
86	5.375	5.78	5.815	5.887	5.974	6.02	6.116	6.163	6.247	6.294	6.431	6.639	6.874
88	5.50	5.905	5.94	6.012	6.099	6.145	6.241	6.288	6.372	6.419	6.556	6.764	6.999
90	5.625	6.03	6.065	6.137	6.224	6.27	6.366	6.413	6.497	6.544	6.681	6.889	7.124
92	5.75	6.155	6.19	6.262	6.349	6.395	6.491	6.538	6.622	6.669	6.806	7.014	7.249
94	5.875	6.28	6.315	6.387	6.474	6.52	6.616	6.663	6.747	6.794	6.931	7.139	7.374
96	6.00	6.405	6.44	6.512	6.599	6.645	6.741	6.788	6.872	6.919	7.056	7.264	7.499

GRIP LENGTH OF BOLTS SHALL BE MEASURED FROM UNDERSIDE OF HEAD TO THE END OF FULL CYLINDRICAL PORTION OF THE SHANK.

DASH NO. INDICATES PREFERRED LENGTHS IN 0.125" INCREMENTS. INTERMEDIATE OR LONGER LENGTHS IN 0.062" INCREMENTS MAY BE OBTAINED BY SPECIFYING SIGNIFICANT DASH NUMBERS. LENGTH AND GRIP OF A BOLT WITH AN ODD DASH NUMBER WILL BE 0.062" GREATER THAN SHOWN FOR THE BOLT WITH THE PRECEDING EVEN SECOND DASH NUMBER.