

INCH-POUND

MS19068B

13 February 2020

SUPERSEDING

MS19068A

03 June 1977

DETAILED SPECIFICATION SHEET

NUTS , PLAIN, ROUND, RETAINING, BALL AND
ROLLER BEARING, REGULAR SERIES

Inactive for new design.

This specification is approve for all Departments and Agencies of the Department of Defense.

The requirement for acquiring the product describe herein shall consist of this specification sheet and procurement specification MIL-N-21337.

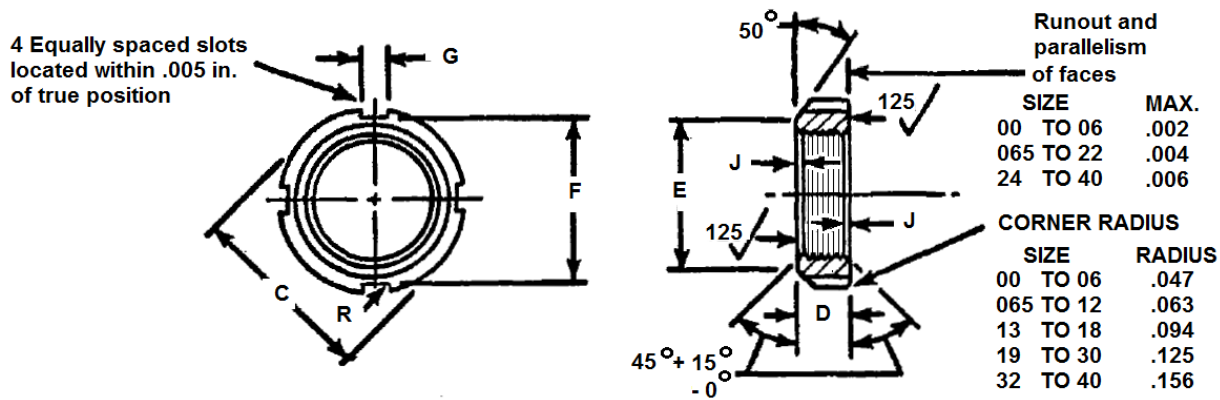


FIGURE 1. NUT

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TABLE I. Dash Numbers and Dimensions

Dash No.	D Thickness		C OD +.005 -.015	E Face Dim		J Cham	Slot dimensions				Thread data					
							F +.010 -.020	G		R Max	No. per inch	Minor dia		Pitch dia		Min major dia
	Min	Max	Min	Max	Min	Max		Min	Max							
00	0.209	0.229	0.750	0.605	0.625	.031	0.625	.120	.130	.010	32	0.3572	0.3606	0.3707	0.3733	0.391
01	0.303	0.323	0.875	0.699	0.719	.031	0.750	.120	.130	.010	32	0.4352	0.4386	0.4487	0.4513	0.469
02	0.303	0.323	1.000	0.793	0.813	.031	0.812	.120	.130	.010	32	0.5522	0.5556	0.5657	0.5687	0.586
03	0.334	0.354	1.125	0.918	0.938	.031	0.937	.120	.130	.010	32	0.6302	0.6336	0.6437	0.6467	0.664
04	0.365	0.385	1.375	1.105	1.125	.031	1.187	.178	.198	.015	32	0.7472	0.7506	0.7607	0.7641	0.781
05	0.396	0.416	1.562	1.261	1.281	.031	1.375	.178	.198	.015	32	0.9352	0.9386	0.9487	0.9521	0.969
06	0.396	0.416	1.750	1.480	1.500	.047	1.562	.178	.198	.015	18	1.1129	1.1189	1.1369	1.1409	1.173
065	0.428	0.448	2.062	1.793	1.813	.047	1.875	.178	.198	.015	18	1.2524	1.2584	1.2764	1.2804	1.3125
07	0.428	0.448	2.062	1.793	1.813	.047	1.875	.178	.198	.015	18	1.3159	1.3219	1.3399	1.3439	1.376
08	0.428	0.448	2.250	1.980	2.000	.047	2.062	.240	.260	.020	18	1.5029	1.5089	1.5269	1.5314	1.563
09	0.428	0.448	2.531	2.261	2.281	.047	2.343	.240	.260	.020	18	1.7069	1.7129	1.7309	1.7354	1.767
10	0.490	0.510	2.687	2.418	2.438	.047	2.500	.240	.260	.020	18	1.9069	1.9129	1.9309	1.9354	1.967
11	0.490	0.510	2.968	2.636	2.656	.047	2.718	.240	.260	.020	18	2.0969	2.1029	2.1209	2.1260	2.157
12	0.521	0.541	3.156	2.824	2.844	.047	2.906	.240	.260	.020	18	2.2999	2.3059	2.3239	2.3290	2.360
13	0.553	0.573	3.375	3.043	3.063	.047	3.125	.240	.260	.020	18	2.4879	2.4939	2.5119	2.5170	2.548
14	0.553	0.573	3.625	3.283	3.313	.047	3.375	.240	.260	.020	18	2.6909	2.6969	2.7149	2.7200	2.751
15	0.548	.0604	3.875	3.533	3.563	.078	3.625	.360	.385	.025	12	2.8428	2.8518	2.8789	2.8843	2.933
16	0.584	0.604	4.156	3.814	3.844	.078	3.906	.360	.385	.025	12	3.0468	3.0558	3.0829	3.0888	3.137
17	0.615	0.635	4.406	4.001	4.031	.078	4.093	.360	.385	.025	12	3.2498	3.2588	3.2859	3.2918	3.340
18	0.678	0.698	4.656	4.251	4.281	.078	4.343	.360	.385	.025	12	3.4368	3.4458	3.4729	3.4803	3.527
19	0.709	0.729	4.937	4.533	4.563	.078	4.625	.360	.385	.025	12	3.6398	3.6488	3.6759	3.6833	3.730
20	0.735	0.760	5.187	4.783	4.813	.078	4.875	.360	.385	.025	12	3.8278	3.8368	3.8639	3.8713	3.918
21	0.735	0.760	5.437	4.970	5.000	.078	5.062	.485	.510	.030	12	4.0318	4.0408	4.0679	4.0762	4.122
22	0.766	0.791	5.718	5.251	5.281	.078	5.343	.485	.510	.030	12	4.2348	4.2438	4.2709	4.2792	4.325
24	0.798	0.823	6.125	5.658	5.688	.078	5.750	.485	.510	.030	12	4.6258	4.6348	4.6619	4.6702	4.716
26	0.860	0.885	6.750	6.158	6.188	.078	6.250	.610	.635	.030	12	5.0158	5.0248	5.0519	5.0602	5.106
28	0.923	0.948	7.093	6.501	6.531	.078	6.593	.610	.635	.030	12	5.4068	5.4158	5.4429	5.4512	5.497
30	0.954	0.979	7.687	7.033	7.063	.078	7.125	.610	.635	.030	12	5.7978	5.8068	5.8339	5.8422	5.888
32	1.016	1.041	8.062	7.398	7.438	.094	7.500	.610	.635	.030	8	6.1487	6.1622	6.2028	6.2119	6.284
34	1.048	1.073	8.656	7.991	8.031	.094	8.093	.610	.635	.030	8	6.5237	6.5372	6.5778	6.5869	6.659
36	1.079	1.104	9.062	8.335	8.375	.094	8.437	.735	.760	.030	8	6.9307	6.9442	6.9848	6.9939	7.066
38	1.110	1.135	9.468	8.741	8.781	.094	8.843	.735	.760	.030	8	7.3367	7.3502	7.3908	7.3999	7.472
40	1.173	1.198	9.843	9.116	9.156	.094	9.218	.735	.760	.030	8	7.7117	7.7252	7.7658	7.7772	7.847

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NOTES:

1. MATERIALS:
 - (a) Carbon steel, SAE nos. C1015 to C1035, C1112 to C1118 or C1212 to C1215 in accordance with SAE AIR4127.
 - (b) Corrosion resisting steel, number 302, 303 Or 304 in accordance with SAE AIR4127.
2. HARDNESS:
 - (a) Carbon steel nuts shall have a hardness of Rockwell R_b 66 to 92.
 - (b) Corrosion resisting steel shall have a maximum hardness of Rockwell R_b 90.
3. PROTECTIVE COATING:
 - (a) Carbon steel nuts are available either zinc plated or unplated. Zinc plated nuts shall be plated in accordance with ASTM B633, Type II, Class Fe/Zn 5.
 - (b) Corrosion resisting steel nuts shall be passivated in accordance with ASTM A967 / A967M or SAE-AMS-QQ-P-35.
4. THREADS: Threads shall be American National Form, Class UNC-3B, in accordance with FED-STD-H28 .
5. SURFACE ROUGHNESS: Surface roughness shall be in accordance with ASME B46.1.
6. MAGNETIC PARTICLE INSPECTION: Inspection shall be in accordance with the procurement specification.
7. LIQUID PENETRANT INSPECTION: Inspection for corrosion resisting steel parts shall be in accordance with ASTM E1417 / E1417M.
8. DIMENSIONS: All dimensions are in inches. Tolerances; decimals $\pm .010$, angles $\pm 2^\circ$ unless otherwise specified.
9. PART NUMBER: The MS part number is the MS number, plus the size and the material number. The material numbers are:
 - 1 – carbon steel
 - 2 – zinc plated carbon steel
 - 3 – corrosion resisting steel

Examples: MS19068-002

└─ material number
└─ size number

MS19068-0652

└─ material number
└─ size number

10. WASHER: See MS19070 for applicable key washers. Applicable washers should have size numbers corresponding to nut size numbers: e.g., nut size 00 should be used with washer size number 00.

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11. For design feature purpose, this specification takes precedence over procurement documents referenced herein.
12. Referenced documents shall be of the issue in effect on the date of invitations for bids, or request for proposal, except that referenced adopted industry documents shall give the date of the issue adopted.
13. Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
Army – AT
Navy – OS
DLA - IS

Preparing activity:
DLA - IS

(Project 5310-2019-006)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.