



A 246, A 247,
A 248, A 249 : June 1974

UDC 629.7.02 : 621.882.3.082.3

British Standard : Aerospace Series
Specification for

Slotted hexagonal thick nuts (of Class 3B UNJ thread)

Index form of title: Nut, thick, slotted, hexagonal, Class 3B UNJ thread.

This British Standard, having been approved by the Aerospace Industry Standards Committee, was published under the authority of the Executive Board on 24 June, 1974.

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The following BSI references relate to the work on this standard:
Committee reference ACE/12. Draft for approval 73/35603

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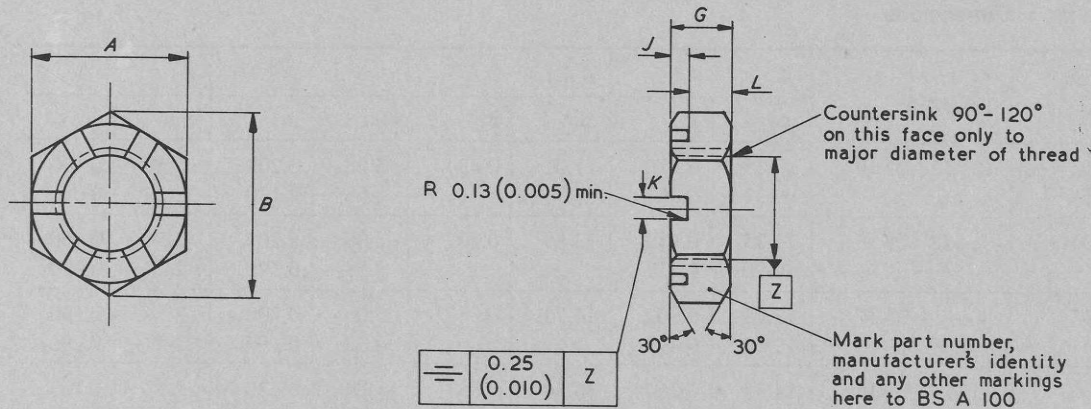


Fig. 1. Details of nut

NOTES

1. **Material.** Heat treatment, finish and part number, refer to Table 2.
2. **Dimensions.** Except for threads, dimensions are in millimetres; inch equivalents are shown in Table 1. When plated parts are called for, all dimensions shall be met after plating.
3. **Procurement.** BS A 100 for manufacture and inspection of nuts.
4. **Threads.** All threads shall have unified screw threads of 'UNJ' basic profile – Class 3B fit and shall conform to the requirements of BS 4084*.
5. **Call-up for nuts.** Example of complete part number is shown on Page 4.
6. **Limits.** ± 0.25 (± 0.010), angles $\pm 5^\circ$, unless otherwise specified.
7. **Corrosion resistant.** Steel nuts A247, A248 and A249 shall have letter 'C' applied to one of the hexagonal surfaces.
8. **Axial tensile strengths.** Axial tensile strengths quoted are as shown in *American Airforce–Navy Aeronautical Standard AN 320 Revision 9, dated 17 September 1969.*
Until confirmatory test data become available these loads are to be used as reference loads only.

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Table 1. Dimensions

Dash No.	T Thread	A		B max.		G		L	
		mm	in	mm	in	mm	in	mm	in
-03	10-32 UNJF	9.55	0.376	11.02	0.434	5.08	0.200	2.54	0.100
		9.32	0.367			4.83	0.190	2.29	0.090
-04	1/4-28 UNJF	11.15	0.439	12.88	0.507	5.08	0.200	2.54	0.100
		0.90	0.429			4.83	0.190	2.29	0.090
-05	5/16-24 UNJF	12.75	0.502	14.73	0.580	5.08	0.200	2.54	0.100
		12.50	0.492			4.83	0.190	2.29	0.090
-06	3/8-24 UNJF	14.33	0.564	16.54	0.651	5.84	0.230	2.67	0.105
		14.07	0.554			5.59	0.220	2.41	0.095
-07	7/16-20 UNJF	17.53	0.690	20.24	0.797	5.84	0.230	2.67	0.105
		17.27	0.680			5.59	0.220	2.41	0.095
-08	1/2-20 UNJF	19.10	0.752	22.05	0.868	6.60	0.260	3.43	0.135
		18.80	0.740			6.35	0.250	3.17	0.125
-09	9/16-18 UNJF	22.28	0.877	25.73	1.013	8.13	0.320	4.70	0.185
		21.97	0.865			7.78	0.310	4.44	0.175
-10	5/8-18 UNJF	23.88	0.940	27.56	1.085	8.13	0.320	4.70	0.185
		23.57	0.928			7.78	0.310	4.44	0.175
-12	3/4-16 UNJF	27.03	1.064	31.22	1.229	9.78	0.385	6.22	0.245
		26.72	1.052			9.53	0.375	5.96	0.235
-14	7/8-14 UNJF	31.80	1.252	36.73	1.446	11.43	0.450	7.87	0.310
		31.39	1.236			11.18	0.440	7.62	0.300
-16	1-12 UNJF	36.58	1.440	42.24	1.663	12.95	0.510	9.40	0.370
		36.17	1.424			12.70	0.500	9.14	0.360
-18	1 1/8-12 UNJF	41.33	1.627	47.73	1.879	14.48	0.570	10.29	0.405
		40.92	1.611			14.23	0.560	10.03	0.395
-20	1 1/4-12 UNJF	46.08	1.814	53.21	2.095	16.13	0.635	11.81	0.465
		45.67	1.798			15.88	0.625	11.56	0.455

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Table 1 (continued)

Dash no.	<i>J</i> ref.		<i>K</i>		Axial tensile strength min. (see Note 8)		Mass approx.	
	mm	in	mm	in	N	lbf	kg/100	lb/100
-03	2.79 2.29	0.110 0.090	2.54 2.03	0.100 0.080	4 920	1 105	0.180	0.396
-04	2.79 2.29	0.110 0.090	2.54 2.03	0.100 0.080	9 070	2 040	0.245	0.540
-05	2.79 2.29	0.110 0.090	2.54 2.03	0.100 0.080	14 460	3 250	0.310	0.683
-06	3.43 2.92	0.135 0.115	3.68 3.17	0.145 0.125	22 460	5 050	0.386	0.852
-07	3.43 2.92	0.135 0.115	3.68 3.17	0.145 0.125	30 250	3 800	0.639	1.409
-08	3.43 2.92	0.135 0.115	3.68 3.17	0.145 0.125	41 150	9 250	0.854	1.883
-09	3.68 3.17	0.145 0.125	4.57 4.06	0.180 0.160	52 490	11 800	1.506	3.321
-10	3.68 3.17	0.145 0.125	4.57 4.06	0.180 0.160	66 950	15 050	1.683	3.711
-12	3.81 3.30	0.150 0.130	4.57 4.06	0.180 0.160	97 860	22 000	2.526	5.568
-14	3.81 3.30	0.150 0.130	4.57 4.06	0.180 0.160	133 450	30 000	4.249	9.368
-16	3.81 3.30	0.150 0.130	4.57 4.06	0.180 0.160	179 490	40 350	6.579	14.508
-18	4.45 3.94	0.175 0.155	4.57 4.06	0.180 0.160	226 410	50 900	9.471	20.879
-20	4.57 4.06	0.180 0.160	4.57 4.06	0.180 0.160	289 580	65 100	13.784	30.388

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Table 2. Physical characteristics

Part no.	Material	Strength min.		Finish
		*MPa	lbf/in ²	
A246	Alloy steel S139 condition 'D'	1 080	157 000	Cadmium plated to DTD 904
A247	Corrosion resist steel DTD 5076	970	140 000	None
A248	Corrosion resist steel DTD 5076	970	140 000	Cadmium plated to DTD 904
A249	Corrosion resist steel DTD 5076	970	140 000	Silver plated to DTD 939

*1 MPa = 1 MN/m² = 0.1 hbar

Example of complete part number

