

AN3 thru AN20

Bolt - Machine, Aircraft

Notes:

- The information provided here is to assist in general part identification. For further information, please refer to the appropriate Standards documents.

- Dimensions are in inches. Unless otherwise specified, Tolerances: Decimals +/- .010. Angles +/- 5°.

- Material Key:

“C” before dash - corrosion-resistant steel

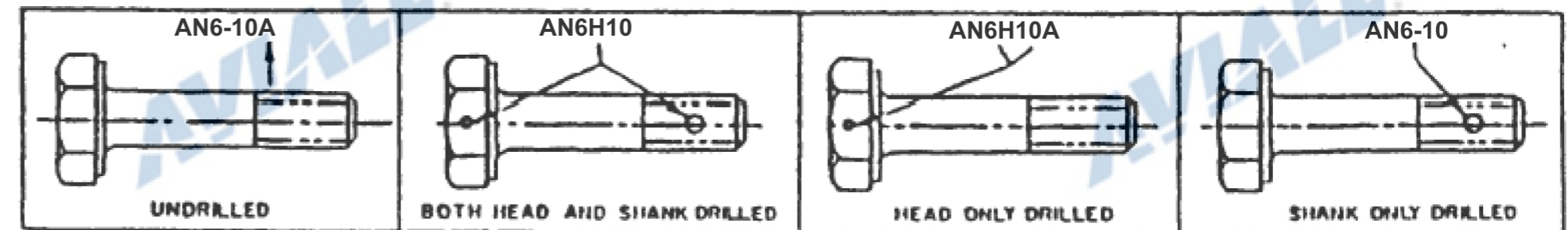
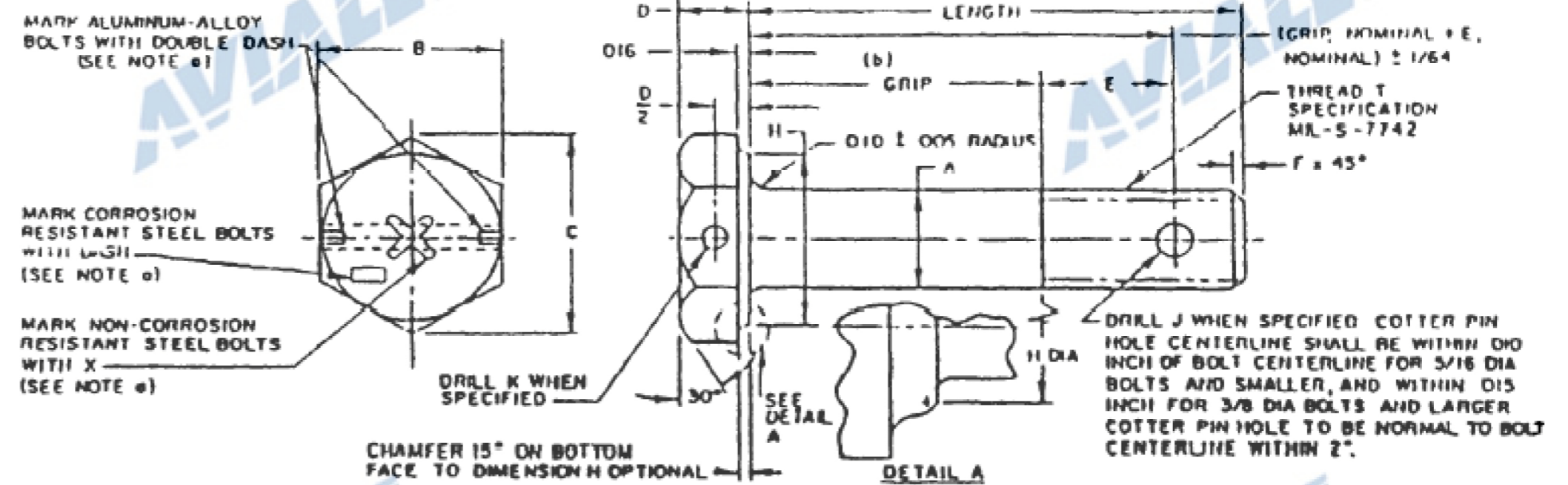
“DD” before dash - aluminum alloy

“A” after dash - undrilled bolt

“H” before dash - bolt with drilled head and shank

“H” before dash, “A” after dash - bolt with drilled head only

- Superseded by NASM3 thru NASM20.



BASIC AN PART NO	THREAD T	A DIA		B		C REF	D		E REF	F		H DIA	J DRILL +.010 -.000	K DRILL +.010 -.000
		MAX	MIN	MAX	MIN		MAX	MIN		MAX	MIN			
AN3	10-32 UNF-3A	.189	.186	.377	.365	.430	.141	.109	17/64	.047	.015	.335	.070	.046
AN4	1/4-28 UNF-3A	.249	.246	.440	.428	.510	.172	.140	5/16	.047	.015	.398	.076	.046
AN5	5/16-24UNF-3A	.312	.309	.502	.490	.580	.204	.172	23/64	.043	.031	.460	.076	.070
AN6	3/8-24 UNF-3A	.374	.371	.565	.553	.650	.235	.203	7/16	.031	.031	.523	.106	.070
AN7	7/16-20 UNF-3A	.437	.433	.627	.615	.720	.266	.234	31/64	.063	.031	.585	.106	.070
AN8	1/2-20 UNF-3A	.499	.495	.752	.740	.870	.297	.265	39/64	.031	.031	.710	.106	.070
AN9	9/19-18 UNF-3A	.562	.558	.877	.865	1.010	.328	.296	21/32	.046	.046	.835	.141	.070
AN10	5/8-18 UNF-3A	.624	.620	.940	.928	1.090	.360	.328	47/64	.078	.046	.898	.141	.070
AN12	3/4-16 UNF-3A	.749	.744	1.066	1.053	1.230	.422	.390	7/8	.046	.046	1.023	.141	.070
AN14	7/8-14 UNF-3A	.874	.869	1.253	1.240	1.440	.485	.453	63/64	.062	.062	1.210	.141	.070
AN16	1-14 NF-3A	.999	.993	1.441	1.428	1.660	.547	.515	1-3/32	.094	.062	1.398	.141	.070
AN17	1-12UNNF-3A	.999	.993	1.441	1.428	1.660	.547	.515	1-3/32	.094	.062	1.398	.141	.070
AN18	1-1/8-12 UNF-3A	1.124	1.118	1.628	1.615	1.880	.610	.578	1-3/16	.078	.078	1.585	.141	.070
AN20	1-1/4-12UNF-3A	1.249	1.243	1.815	1.802	2.090	.672	.640	1-3/8	.110	.078	1.772	.141	.070

AN3 thru AN20

Bolt - Machine, Aircraft

DASH NO	AN3		AN4		AN5		AN6		AN7		AN8		AN9	
	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64
3	1/16	15/32	1/16	15/32										
4	1/8	17/32	1/16	17/32	1/16	19/32								
5	1/4	21/32	3/16	21/32	3/16	23/32	1/16	45/64	1/16	23/32	1/16	27/32	1/16	31/32
6	3/8	25/32	5/16	25/32	5/16	27/32	3/16	53/64	3/16	27/32	3/16	31/32	3/16	1-1/32
7	1/2	29/32	7/16	29/32	7/16	31/32	5/16	61/64	5/16	31/32	5/16	1-3/32	5/16	1-5/32
10	5/8	1-1/32	9/16	1-1/32	9/16	1-3/32	7/16	1-5/64	7/16	1-3/32	7/16	1-7/32	7/16	1-9/32
11	3/4	1-5/32	11/16	1-5/32	11/16	1-7/32	9/16	1-13/64	9/16	1-7/32	9/16	1-11/32	9/16	1-13/32
12	7/8	1-9/32	13/16	1-9/32	13/16	1-11/32	11/16	1-21/64	11/16	1-11/32	11/16	1-15/32	11/16	1-17/32
13	1	1-13/32	15/16	1-13/32	15/16	1-15/32	13/16	1-29/64	13/16	1-15/32	13/16	1-19/32	13/16	1-21/32
14	1-1/8	1-17/32	1-1/16	1-17/32	1-1/16	1-19/32	15/16	1-37/64	15/16	1-19/32	15/16	1-13/32	15/16	1-25/32
15	1-1/4	1-21/32	1-3/16	1-21/32	1-3/16	1-23/32	1-1/16	1-45/64	1-1/16	1-23/32	1-1/16	1-23/32	1-1/16	1-29/32
16	1-3/8	1-25/32	1-5/16	1-25/32	1-5/16	1-27/32	1-3/16	1-53/64	1-3/16	1-27/32	1-3/16	1-27/32	1-3/16	1-29/32
17	1-1/2	1-29/32	1-7/16	1-29/32	1-7/16	1-31/32	1-5/16	1-61/64	1-5/16	1-31/32	1-5/16	1-31/32	1-5/16	1-31/32
20	1-5/8	2-1/32	1-9/16	2-1/32	1-9/16	2-3/32	1-7/16	2-5/64	1-7/16	2-3/32	1-5/16	2-3/32	1-5/16	2-5/32
21	1-3/4	2-5/32	1-11/16	2-5/32	1-11/16	2-7/32	1-9/16	2-13/64	1-9/16	2-7/32	1-7/16	2-7/32	1-3/8	2-9/32
22	1-7/8	2-9/32	1-13/16	2-9/32	1-13/16	2-11/32	1-11/16	2-21/64	1-11/16	2-11/32	1-9/16	2-11/32	1-1/2	2-13/32
23	2	2-13/32	1-15/16	2-13/32	1-15/16	2-15/32	1-13/16	2-29/64	1-13/16	2-15/32	1-11/16	2-15/32	1-5/8	2-17/32
24	2-1/8	2-17/32	2-1/16	2-17/32	2-1/16	2-19/32	1-15/16	2-37/64	1-15/16	2-19/32	1-13/16	2-19/32	1-3/4	2-21/32
25	2-1/4	2-21/32	2-3/16	2-21/32	2-3/16	2-23/32	2-1/16	2-45/64	2-1/16	2-23/32	1-15/16	2-23/32	1-7/8	2-25/32
26	2-3/8	2-25/32	2-5/16	2-25/32	2-5/16	2-27/32	2-3/16	2-53/64	2-3/16	2-27/32	2-1/16	2-27/32	2	2-29/32
27	2-1/2	2-29/32	2-7/16	2-29/32	2-7/16	2-31/32	2-5/16	2-61/64	2-5/16	2-31/32	2-3/16	2-31/32	2-1/8	3-1/32
30	2-5/8	3-1/32	2-9/16	3-1/32	2-9/16	3-3/32	2-7/16	3-5/64	2-7/16	3-3/32	2-5/16	3-3/32	2-1/4	3-5/32
31	2-3/4	3-5/32	2-11/16	3-5/32	2-11/16	3-7/32	2-9/16	3-13/64	2-9/16	3-7/32	2-7/16	3-7/32	2-3/8	3-9/32
32	2-7/8	3-9/32	2-13/16	3-9/32	2-13/16	3-11/32	2-11/16	3-21/64	2-11/16	3-11/32	2-9/16	3-11/32	2-1/2	3-13/32
33	3	3-13/32	2-15/16	3-13/32	2-15/16	3-15/32	2-13/16	3-29/64	2-13/16	3-15/32	2-11/16	3-15/32	2-5/8	3-17/32
34	3-1/8	3-17/32	3-1/16	3-17/32	3-1/16	3-19/32	2-15/16	3-37/64	2-15/16	3-19/32	2-13/16	3-19/32	2-3/4	3-21/32
35	3-1/4	3-21/32	3-3/16	3-21/32	3-3/16	3-23/32	3-1/16	3-45/64	3-1/16	3-23/32	2-15/16	3-23/32	2-7/8	3-25/32
36	3-3/8	3-25/32	3-5/16	3-25/32	3-5/16	3-27/32	3-3/16	3-53/64	3-3/16	3-27/32	3-1/16	3-27/32	3	3-29/32
37	3-1/2	3-29/32	3-7/16	3-29/32	3-7/16	3-31/32	3-5/16	3-61/64	3-5/16	3-31/32	3-3/16	3-31/32	3-1/8	4-1/32
40	3-5/8	4-1/32	3-9/16	4-1/32	3-9/16	4-3/32	3-7/16	4-5/64	3-7/16	4-3/32	3-5/16	4-3/32	3-1/4	4-5/32
41	3-3/4	4-5/32	3-11/16	4-5/32	3-11/16	4-7/32	3-9/16	4-13/64	3-9/16	4-7/32	3-7/16	4-7/32	3-3/8	4-9/32
42	3-7/8	4-9/32	3-13/16	4-9/32	3-13/16	4-11/32	3-11/16	4-21/64	3-11/16	4-11/32	3-9/16	4-11/32	3-1/2	4-13/32
43	4	4-13/32	3-15/16	4-13/32	3-15/16	4-15/32	3-13/16	4-29/64	3-13/16	4-15/32	3-11/16	4-15/32	3-5/8	4-17/32
44	4-1/8	4-17/32	4-1/16	4-17/32	4-1/16	4-19/32	3-15/16	4-37/64	3-15/16	4-19/32	3-13/16	4-19/32	3-3/4	4-21/32
45	4-1/4	4-21/32	4-3/16	4-21/32	4-3/16	4-23/32	4-1/16	4-45/64	4-1/16	4-23/32	3-15/16	4-23/32	3-7/8	4-25/32
46	4-3/8	4-25/32	4-5/16	4-25/32	4-5/16	4-27/32	4-3/16	4-53/64	4-3/16	4-27/32	4-1/16	4-27/32	4	4-29/32
47	4-1/2	4-29/32	4-7/16	4-29/32	4-7/16	4-31/32	4-5/16	4-61/64	4-5/16	4-31/32	4-3/16	4-31/32	4-1/8	5-1/32
50	4-5/8	5-1/32	4-9/16	5-1/32	4-9/16	5-3/32	4-7/16	5-5/64	4-7/16	5-3/32	4-5/16	5-3/32	4-1/4	5-5/32
51	4-3/4	5-5/32	4-11/16	5-5/32	4-11/16	5-7/32	4-9/16	5-13/64	4-9/16	5-7/32	4-7/16	5-7/32	4-3/8	5-9/32
52	4-7/8	5-9/32	4-13/16	5-9/32	4-13/16	5-11/32	4-11/16	5-21/64	4-11/16	5-11/32	4-9/16	5-11/32	4-1/2	5-13/32
53	5	5-13/32	4-15/16	5-13/32	4-15/16	5-15/32	4-13/16	5-29/64	4-13/16	5-15/32	4-11/16	5-15/32	4-5/8	5-17/32
54	5-1/8	5-17/32	5-1/16	5-17/32	5-1/16	5-19/32	4-15/16	5-37/64	4-15/16	5-19/32	4-13/16	5-19/32	4-3/4	5-21/32
55	5-1/4	5-21/32	5-3/16	5-21/32	5-3/16	5-23/32	5-1/16	5-45/64	5-1/16	5-23/32	4-15/16	5-23/32	4-7/8	5-25/32
56	5-3/8	5-25/32	5-5/16	5-25/32	5-5/16	5-27/32	5-3/16	5-53/64	5-3/16	5-27/32	5-1/16	5-27/32	5	5-29/32
57	5-1/2	5-29/32	5-7/16	5-29/32	5-7/16	5-31/32	5-5/16	5-61/64	5-5/16	5-31/32	5-3/16	5-31/32	5-1/8	6-1/32
60	5-5/8	6-1/32	5-9/16	6-1/32	5-9/16	6-3/32	5-7/16	6-5/64	5-7/16	6-3/32	5-5/16	6-3/32	5-1/4	6-5/32
61	5-3/4	6-5/32	5-11/16	6-5/32	5-11/16	6-7/32	5-9/16	6-13/64	5-9/16	6-7/32	5-7/16	6-7/32	5-3/8	6-9/32
62	5-7/8	6-9/32	5-13/16	6-9/32	5-13/16	6-11/32	5-11/16	6-21/64	5-11/16	6-11/32	5-9/16	6-11/32	5-1/2	6-13/32
63	6	6-13/32	5-15/16	6-13/32	5-15/16	6-15/32	5-13/16	6-29/64	5-13/16	6-15/32	5-11/16	6-15/32	5-5/8	6-17/32
64	6-1/8	6-17/32	6-1/16	6-17/32	6-1/16	6-19/32	5-15/16	6-37/64	5-15/16	6-19/32	5-13/16	6-19/32	5-3/4	6-21/32
65	6-1/4	6-21/32	6-3/16	6-21/32	6-3/16	6-23/32	6-1/16	6-45/64	6-1/16	6-23/32	5-15/16	6-23/32	5-7/8	6-25/32
66	6-3/8	6-25/32	6-5/16	6-25/32	6-5/16	6-27/32	6-3/16	6-53/64	6-3/16	6-27/32	6-1/16	6-27/32	6	6-29/32
67	6-1/2	6-29/32	6-7/16	6-29/32	6-7/16	6-31/32	6-5/16	6-61/64	6-5/16	6-31/32	6-3/16	6-31/32	6-1/8	7-1/32
70	6-5/8	7-1/32	6-9/16	7-1/32	6-9/16	7-3/32	6-7/16	7-5/64	6-7/16	7-3/32	6-5/16	7-3/32	6-1/4	7-5/32
71	6-3/4	7-5/32	6-11/16	7-5/32	6-11/16	7-7/32	6-9/16	7-13/64	6-9/16	7-7/32	6-7/16	7-7/32	6-3/8	7-9/32
72	6-7/8	7-9/32	6-13/16	7-9/32	6-13/16	7-11/32	6-11/16	7-21/64	6-11/16	7-11/32	6-9/16	7-11/32	6-1/2	7-13/32
73	7	7-13/32	6-15/16	7-13/32	6-15/16	7-15/32	6-13/16	7-29/64	6-13/16	7-15/32	6-11/16	7-15/32	6-5/8	7-17/32
74	7-1/8	7-17/32	7-1/16	7-17/32	7-1/16	7-19/32	6-15/16	7-37/64	6-15/16	7-19/32	6-13/16	7-19/32	6-3/4	7-21/32
75	7-1/4	7-21/32	7-3/16	7-21/32	7-3/16	7-23/32	7-1/16	7-45/64	7-1/16	7-23/32	6-15/16	7-23/32	6-7/8	7-25/32
76	7-3/8	7-25/32	7-5/16	7-25/32	7-5/16	7-27/32	7-3/16	7-53/64	7-3/16	7-27/32	7-1/16	7-27/32	7	7-29/32
77	7-1/2	7-29/32	7-7/16	7-29/32	7-7/16	7-31/32	7-5/16	7-61/64	7-5/16	7-31/32	7-3/16	7-31/32	7-1/8	8-1/32
80	7-5/8	8-1/32	7-9/16	8-1/32	7-9/16	8-3/32	7-7/16	8-5/64	7-7/16	8-3/32	7-5/16	8-3/32	7-1/4	8-5/32
81					7-11/16	8-7/32					7-7/16	8-7/32		
82											7-9/16	8-11/32		
83											7-11/16	8-15/32		
84											7-13/16	8-19/32		
85											7-15/16	8-23/32		
86											8-1/16	8-27/32		
87											8-3/16	8-31/32		

AN3 thru AN20

Bolt - Machine, Aircraft

DASH NO	AN10		AN12		AN14		AN16		AN17		AN18		AN20	
	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64	GRIP ± 1/64	LENGTH +1/32 -1/64
7	1/16	1-1/64												
10	3/16	1-9/64	1/16	1-5/32										
11	5/16	1-17/64	3/16	1-9/32	1/16	1-5/16								
12	7/16	1-25/64	5/16	1-13/32	3/16	1-7/16	1/8	1-1/2	1/8	1-1/2				
13	9/16	1-33/64	7/16	1-17/32	5/16	1-9/16	1/4	1-5/8	1/4	1-5/8	1/16	1-9/16		
14	11/16	1-41/64	9/16	1-21/32	7/16	1-11/16	3/8	1-3/4	3/8	1-3/4	3/16	1-11/16		
15	13/16	1-49/64	11/16	1-25/32	9/16	1-13/16	1/2	1-7/8	1/2	1-7/8	5/16	1-13/16	1/8	1-13/16
16	15/16	1-57/64	13/16	1-29/32	11/16	1-15/16	5/8	2	5/8	2	7/16	1-15/16	1/4	1-15/16
17	1-1/16	2-1/64	15/16	2-1/32	13/16	2-1/16	3/4	2-1/8	3/4	2-1/8	9/16	2-1/16	3/8	2-1/16
20	1-3/16	2-9/64	1-1/16	2-5/32	15/16	2-3/16	7/8	2-1/4	7/8	2-1/4	11/16	2-3/16	1/2	2-3/16
21	1-5/16	2-17/64	1-3/16	2-9/32	1-1/16	2-5/16	1	2-3/8	1	2-3/8	13/16	2-5/16	5/8	2-5/16
22	1-7/16	2-25/64	1-5/16	2-13/32	1-3/16	2-7/16	1-1/8	2-1/2	1-1/8	2-1/2	15/16	2-7/16	3/4	2-7/16
23	1-9/16	2-33/64	1-7/16	2-17/32	1-5/16	2-9/16	1-1/4	2-5/8	1-1/4	2-5/8	1-1/16	2-9/16	7/8	2-9/16
24	1-11/16	2-41/64	1-9/16	2-21/32	1-7/16	2-11/16	1-3/8	2-3/4	1-3/8	2-3/4	1-3/16	2-11/16	1	2-11/16
25	1-13/16	2-49/64	1-11/16	2-25/32	1-9/16	2-13/16	1-1/2	2-7/8	1-1/2	2-7/8	1-5/16	2-13/16	1-1/8	2-13/16
26	1-15/16	2-57/64	1-13/16	2-29/32	1-11/16	2-15/16	1-5/8	3	1-5/8	3	1-7/16	2-15/16	1-1/4	2-15/16
27	2-1/16	3-1/64	1-15/16	3-1/32	1-13/16	3-1/16	1-3/4	3-1/8	1-3/4	3-1/8	1-9/16	3-1/16	1-3/8	3-1/16
30	2-3/16	3-9/64	2-1/16	3-5/32	1-15/16	3-3/16	1-7/8	3-1/4	1-7/8	3-1/4	1-11/16	3-3/16	1-1/2	3-3/16
31	2-5/16	3-17/64	2-3/16	3-9/32	2-1/16	3-5/16	2	3-3/8	2	3-3/8	1-13/16	3-5/16	1-5/8	3-5/16
32	2-7/16	3-25/64	2-5/16	3-13/32	2-3/16	3-7/16	2-1/8	3-1/2	2-1/8	3-1/2	1-15/16	3-7/16	1-3/4	3-7/16
33	2-9/16	3-33/64	2-7/16	3-17/32	2-5/16	3-9/16	2-1/4	3-5/8	2-1/4	3-5/8	2-1/16	3-9/16	1-7/8	3-9/16
34	2-11/16	3-41/64	2-9/16	3-21/32	2-7/16	3-11/16	2-3/8	3-3/4	2-3/8	3-3/4	2-3/16	3-11/16	2	3-11/16
35	2-13/16	3-49/64	2-11/16	3-25/32	2-9/16	3-13/16	2-1/2	3-7/8	2-1/2	3-7/8	2-5/16	3-13/16	2-1/8	3-13/16
36	2-15/16	3-57/64	2-13/16	3-29/32	2-11/16	3-15/16	2-5/8	4	2-5/8	4	2-7/16	3-15/16	2-1/4	3-15/16
37	3-1/16	4-1/64	2-15/16	4-1/32	2-13/16	4-1/16	2-3/4	4-1/8	2-3/4	4-1/8	2-9/16	4-1/16	2-3/8	4-1/16
40	3-3/16	4-9/64	3-1/16	4-5/32	2-15/16	4-3/16	2-7/8	4-1/4	2-7/8	4-1/4	2-11/16	4-3/16	2-1/2	4-3/16
41	3-5/16	4-17/64	3-3/16	4-9/32	3-1/16	4-5/16	3	4-3/8	3	4-3/8	2-13/16	4-5/16	2-5/8	4-5/16
42	3-7/16	4-25/64	3-5/16	4-13/32	3-3/16	4-7/16	3-1/8	4-1/2	3-1/8	4-1/2	2-15/16	4-7/16	2-3/4	4-7/16
43	3-9/16	4-33/64	3-7/16	4-17/32	3-5/16	4-9/16	3-1/4	4-5/8	3-1/4	4-5/8	3-1/16	4-9/16	2-7/8	4-9/16
44	3-11/16	4-41/64	3-9/16	4-21/32	3-7/16	4-11/16	3-3/8	4-3/4	3-3/8	4-3/4	3-3/16	4-11/16	3	4-11/16
45	3-13/16	4-49/64	3-11/16	4-25/32	3-9/16	4-13/16	3-1/2	4-7/8	3-1/2	4-7/8	3-5/16	4-13/16	3-1/8	4-13/16
46	3-15/16	4-57/64	3-13/16	4-29/32	3-11/16	4-15/16	3-5/8	5	3-5/8	5	3-7/16	4-15/16	3-1/4	4-15/16
47	4-1/16	5-1/64	3-15/16	5-1/32	3-13/16	5-1/16	3-3/4	5-1/8	3-3/4	5-1/8	3-9/16	5-1/16	3-3/8	5-1/16
50	4-3/16	5-9/64	4-1/16	5-5/32	3-15/16	5-3/16	3-7/8	5-1/4	3-7/8	5-1/4	3-11/16	5-3/16	3-1/2	5-3/16
51	4-5/16	5-17/64	4-3/16	5-9/32	4-1/16	5-5/16	4	5-3/8	4	5-3/8	3-13/16	5-5/16	3-5/8	5-5/16
52	4-7/16	5-25/64	4-5/16	5-13/32	4-3/16	5-7/16	4-1/8	5-1/2	4-1/8	5-1/2	3-15/16	5-7/16	3-3/4	5-7/16
53	4-9/16	5-33/64	4-7/16	5-17/32	4-5/16	5-9/16	4-1/4	5-5/8	4-1/4	5-5/8	4-1/16	5-9/16	3-7/8	5-9/16
54	4-11/16	5-41/64	4-9/16	5-21/32	4-7/16	5-11/16	4-3/8	5-3/4	4-3/8	5-3/4	4-3/16	5-11/16	4	5-11/16
55	4-13/16	5-49/64	4-11/16	5-25/32	4-9/16	5-13/16	4-1/2	5-7/8	4-1/2	5-7/8	4-5/16	5-13/16	4-1/8	5-13/16
56	4-15/16	5-57/64	4-13/16	5-29/32	4-11/16	5-15/16	4-5/8	6	4-5/8	6	4-7/16	5-15/16	4-1/4	5-15/16
57	5-1/16	6-1/64	4-15/16	6-1/32	4-13/16	6-1/16	4-3/4	6-1/8	4-3/4	6-1/8	4-9/16	6-1/16	4-3/8	6-1/16
60	5-3/16	6-9/64	5-1/16	6-5/32	4-15/16	6-3/16	4-7/8	6-1/4	4-7/8	6-1/4	4-11/16	6-3/16	4-1/2	6-3/16
61	5-5/16	6-17/64	5-3/16	6-9/32	5-1/16	6-5/16	5	6-3/8	5	6-3/8	4-13/16	6-5/16	4-5/8	6-5/16
62	5-7/16	6-25/64	5-5/16	6-13/32	5-3/16	6-7/16	5-1/8	6-1/2	5-1/8	6-1/2	4-15/16	6-7/16	4-3/4	6-7/16
63	5-9/16	6-33/64	5-7/16	6-17/32	5-5/16	6-9/16	5-1/4	6-5/8	5-1/4	6-5/8	5-1/16	6-9/16	4-7/8	6-9/16
64	5-11/16	6-41/64	5-9/16	6-21/32	5-7/16	6-11/16	5-3/8	6-3/4	5-3/8	6-3/4	5-3/16	6-11/16	5	6-11/16
65	5-13/16	6-49/64	5-11/16	6-25/32	5-9/16	6-13/16	5-1/2	6-7/8	5-1/2	6-7/8	5-5/16	6-13/16	5-1/8	6-13/16
66	5-15/16	6-57/64	5-13/16	6-29/32	5-11/16	6-15/16	5-5/8	7	5-5/8	7	5-7/16	6-15/16	5-1/4	6-15/16
67	6-1/16	7-1/64	5-15/16	7-1/32	5-13/16	7-1/16	5-3/4	7-1/8	5-3/4	7-1/8	5-9/16	7-1/16	5-3/8	7-1/16
70	6-3/16	7-9/64	6-1/16	7-5/32	5-15/16	7-3/16	5-7/8	7-1/4	5-7/8	7-1/4	5-11/16	7-3/16	5-1/2	7-3/16
71	6-5/16	7-17/64	6-3/16	7-9/32	6-1/16	7-5/16	6	7-3/8	6	7-3/8	5-13/16	7-5/16	5-5/8	7-5/16
72	6-7/16	7-25/64	6-5/16	7-13/32	6-3/16	7-7/16	6-1/8	7-1/2	6-1/8	7-1/2	5-15/16	7-7/16	5-3/4	7-7/16
73	6-9/16	7-33/64	6-7/16	7-17/32	6-5/16	7-9/16	6-1/4	7-5/8	6-1/4	7-5/8	6-1/16	7-9/16	5-7/8	7-9/16
74	6-11/16	7-41/64	6-9/16	7-21/32	6-7/16	7-11/16	6-3/8	7-3/4	6-3/8	7-3/4	6-3/16	7-11/16	6	7-11/16
75	6-13/16	7-49/64	6-11/16	7-25/32	6-9/16	7-13/16	6-1/2	7-7/8	6-1/2	7-7/8	6-5/16	7-13/16	6-1/8	7-13/16
76	6-15/16	7-57/64	6-13/16	7-29/32	6-11/16	7-15/16	6-5/8	8	6-5/8	8	6-7/16	7-15/16	6-1/4	7-15/16
77	7-1/16	8-1/64	6-15/16	8-1/32	6-13/16	8-1/16	6-3/4	8-1/8	6-3/4	8-1/8	6-9/16	8-1/16	6-3/8	8-1/16
80	7-3/16	8-9/64	7-1/16	8-5/32	6-15/16	8-3/16	6-7/8	8-1/4	6-7/8	8-1/4	6-11/16	8-3/16	6-1/2	8-3/16
81							7	8-3/8	7	8-3/8	6-13/16	8-5/16	6-5/8	8-5/16
82							7-1/8	8-1/2	7-1/8	8-1/2				

