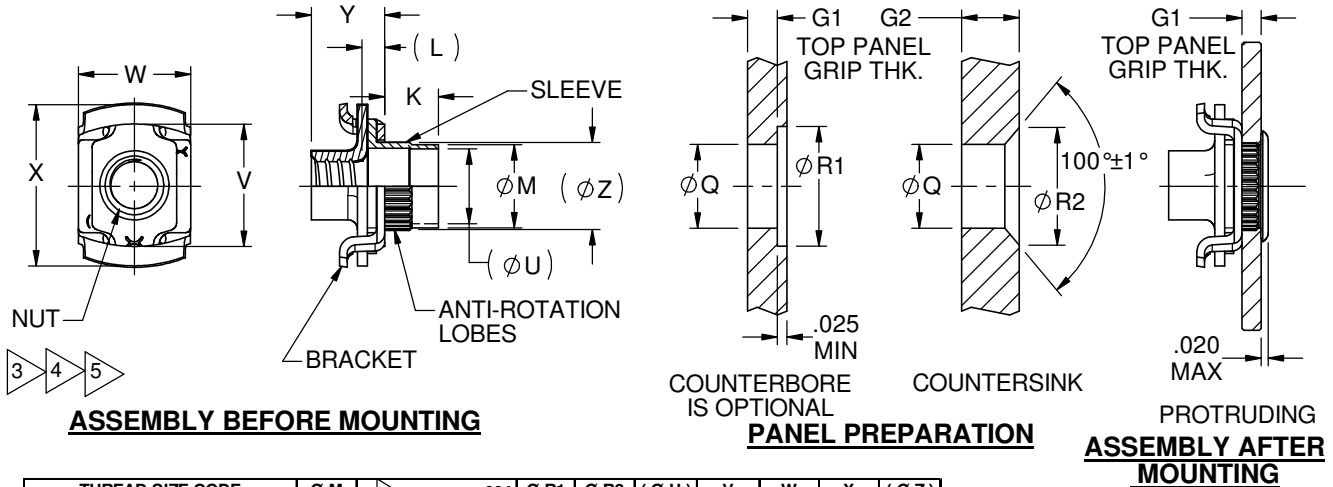


Alcoa Fastening Systems & Rings



CURRENT DESIGN ACTIVITY
 CAGE CODE 0HDW7
 AFSR TUCSON OPERATIONS
 3724 EAST COLUMBIA STREET
 TUCSON, ARIZONA 85714
 PHONE (520) 519-7400
 FAX (520) 519-7454

NUT PLATE ENGINEERING STANDARD



THREAD SIZE CODE	Ø M MAX	Ø Q		Ø R1 +0.020 -0.000	Ø R2 ±.005	(Ø U)	V ±.010	W	X MAX	(Ø Z)
		SOFT	HARD							
4, 4F, 6, 6F, M3, M3.5	.217	.218	.218	.312	.307	.192	.318	.295	.435	.228
8, 8F, 10, 10C, 10F, M4, M5	.270	.272	.281	.375	.370	.245	.425	.390	.587	.294
12, 12C, 12F, M6	.335	.339	.348	.515	.437	.310	.496	.450	.665	.363

PART NUMBER CALLOUT

GFP 6010 ()-()-()-()

MODEL

SERIES

CODE	NUT TYPE
L	LOCKING
NL	NONLOCKING

NUT HEIGHT CODE	(L)			Y±.025		
	4, 4F, 6, 6F, M3, M3.5	8, 8F, 10, 10C, 10F, M4, M5	12, 12C, 12F, M6	4, 4F, 6, 6F, M3, M3.5	8, 8F, 10, 10C, 10F, M4, M5	12, 12C, 12F, M6
NONE	.062	.068	.089	.189	.230	.303
2	.109	.113	.174	.254	.295	.366
3	.172	.176	.237	.317	.357	.428
4	.234	.239	.300	.380	.420	.490

GRIP CODE	G1	G2	K ±.010	GRIP CODE	G1	G2	K ±.010
A	.031 - .062	.074 - .106	.099	G	.219 - .250	.259 - .289	.285
B	.063 - .094	.107 - .133	.130	H	.251 - .281	.290 - .320	.316
C	.095 - .125	.134 - .165	.161	J	.282 - .312	.321 - .351	.347
D	.126 - .156	.166 - .196	.192	K	.313 - .343	.352 - .382	.378
E	.157 - .187	.197 - .227	.223	L	.344 - .374	.383 - .413	.409

THREAD SIZE CODE	THREAD SIZE PER SAE-AS-8879	LEAD	LB/100			THREAD SIZE CODE	THREAD SIZE PER SAE-AS-8879; ASME B1.21M FOR METRIC	LEAD	LB/100		
			1, 2	3	4				1, 2	3	4
4	.112-40 UNJC-3B	SINGLE	.131	.151	.171	8F	.164-32 UNJC-3B	QUAD	.365	.405	.445
6	.138-32 UNJC-3B		.140	.161	.201	10F	.190-32 UNJF-3B		.370	.415	.455
8	.164-32 UNJC-3B		.365	.405	.445	12F	.250-28 UNJF-3B		.682	.742	.802
10	.190-32 UNJF-3B		.370	.415	.455	M3	MJ3 x 0.5-4H6H		.131	.151	.171
12	.250-28 UNJF-3B		.682	.742	.802	M3.5	MJ3.5 x 0.6-4H6H		.140	.161	.201
10C	.190-24 UNJC-3B		DOUBLE	.370	.415	.455	M4		MJ4 x 0.7-4H6H	.365	.405
12C	.250-20 UNJC-3B (COARSE)	.682		.742	.802	M5	MJ5 x 0.8-4H6H	.370	.415	.455	
4F	.112-40 UNJC-3B	.131		.151	.171	M6	MJ6 x 1.0-4H6H	.682	.742	.802	
6F	.138-32 UNJC-3B	.140		.161	.201						
8D	.164-32 UNJF-3B	.365		.405	.445						

AA PER DCN 12954, CHANGED FROM Alcoa Fastening Systems AND AFS TO Alcoa Fastening Systems & Rings AND AFSR

TOLERANCE UNLESS OTHERWISE NOTED:
 .X = ±.05
 .XX = ±.02
 .XXX = ±.015
 ANGLES ±0.5°

DRAWN BY J. SCHLOBOHM
 CHECKED BY SIGNATURE ON FILE

ISSUED 10/13/2005
 REVISED 3/31/2015
 PAGE 1 OF 2

NUT PLATE, RIVETLESS, 450° F, FLOATING,
 ALL CRES, STANDARD DIAMETER SLEEVE, ALL SIZES

DIMENSIONS IN INCHES

**GFP6010
 S-1216**

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MATERIAL:
SLEEVE: CRES PER AMS 5639 (304) OR AMS 5514 (305)
BRACKET: 17-7 PH CRES PER AMS 5528, H.T. TO 180 KSI MIN ULTIMATE TENSILE STRENGTH
NUT: A-286 CRES PER AMS 5525 OR 5737, H.T. TO 160 KSI MIN ULTIMATE TENSILE STRENGTH
FINISH CODE:
BRACKET, NUT & SLEEVE: PASSIVATE PER AMS2700
NUT: DRI-FILM LUBRICANT PER AS5272

NOTES:

- 1 "AA" GRIP RECOMMENDED PANEL PREPARATION:
SIZES 12, 12C, 12F, M6 NOT RECOMMENDED FOR LESS THAN .060 PANEL THICKNESSES
SIZES 8, 8F, 10, 10C, 10F, M4, M5 - "ØQ" DIMENSION .276-.281, "ØR2" DIMENSION .343
SIZES 4, 4F, 6, 6F, M3, M3.5 - "ØR2" DIMENSION .275
- 2 SOFT - DIMENSION FOR SOFT ALUMINUM ALLOYS & PLASTICS
HARD - DIMENSION FOR HARD ALUMINUM ALLOYS & STEEL
(SEE PCD 160012 FOR MORE DETAILS)
- 3 A MINIMUM OF TWO THREADS ARE DEFORMED TO PRODUCE SELF-LOCKING ACTION PER NASM25027, WHEN LOCKING FEATURE IS REQUIRED.
- 4 NUT ELEMENT HAS .060 TOTAL RADIAL FLOAT FOR GRIP LENGTHS "AA" THRU "C" AND .046 MIN. FOR GRIP LENGTHS GREATER THAN "C".
- 5 FOR NUT ELEMENT REPLACEMENT P/N SEE DWG. S-0877.
- 6 NUT ELEMENT REMOVAL TOOL AVAILABLE, P/N RB 6527.
- 7 TO OBTAIN ADDITIONAL WEIGHTS ADD INCREMENTS OF .010 LBS/100 PER LETTER CODE FOR SIZES 4, 4F, 6, 6F, M3, M3.5; .020 LBS/100 FOR SIZES 8, 8D, 8F, M4, 10, 10C, 10F, M5, 12, 12C, 12F, M6.
- 8 NUT ELEMENT COLOR CODE: (PCD 160147)
NONE - LOCKING STANDARD THREADS
GREEN - NONLOCKING STANDARD THREADS
YELLOW - COARSE THREADS
ORANGE - FAST LEAD THREADS
BLUE - "MJ" METRIC THREADS.
- 9 COMPLETE TOOL ASSEMBLY INCLUDES NOSE PIECE, PULLER, & HANDLE. "N" DESIGNATES COUNTERBORE, "S" DESIGNATES COUNTERSINK.
- 10 FOR HIGH VOLUME INSTALLATION RATES, ALTERNATE POWER TOOLING IS AVAILABLE. PLEASE CONTACT AFSR INSTALLATION SYSTEMS FOR MORE INFORMATION.
- 11 THREAD DIMENSIONS APPLY PRIOR TO APPLICATION OF DRI-FILM LUBRICANT. POSSIBLE THREAD TIGHTNESS DUE TO LUBE BUILDUP WILL DIMINISH FOLLOWING ENGAGEMENT OF MATING PART.
- 12 THREADS ARE CUT FOR THREAD SIZE CODES 8, 8F, M4, 10, 10C, 10F, M5, 12, 12C, 12F, M6.
- 13 LOCKING TORQUE VALUES OF SIZES 8, 8F, M4, 10, 10C, 10F, M5, 12, 12C, 12F, M6 ARE TO SATISFY SNECMA DT57-11.

HAND INSTALLATION TOOL SELECTION TABLE				
COMPLETE HAND TOOL ASSEMBLY		PULLER	NOSE PIECE	
C'BORE	C'SINK		C'BORE	C'SINK
DCBT8600-()	DCST8600-()	DTP86230-()	DCBN86130-()	DCSN86130-()

INSTALLATION TOOLS:

ARBOR PRESS TOOL HW (*) 7659-()
ANVIL HW (*) 7658-()
FORMER HW (*) 7657-()

() = THREAD SIZE CODE
* "N" DESIGNATES C'BORE
"S" DESIGNATES C'SINK

HAND INSTALLATION TOOLS: 9
NOSE PIECE
PULLER
HANDLE ASSEMBLY TA7533

AA	PER DCN 12954, CHANGED FROM Alcoa Fastening Systems AND AFS TO Alcoa Fastening Systems & Rings AND AFSR		TOLERANCE UNLESS OTHERWISE NOTED: .X = ±.05 .XX = ±.02 .XXX = ±.015 ANGLES ±0.5°	DRAWN BY	J. SCHLOBOHM
				CHECKED BY	SIGNATURE ON FILE
	ISSUED	10/13/2005	NUT PLATE, RIVETLESS, 450° F, FLOATING, ALL CRES, STANDARD DIAMETER SLEEVE, ALL SIZES	GFP6010	
REVISED	3/31/2015	S-1216			
PAGE	2 OF 2	DIMENSIONS IN INCHES			

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