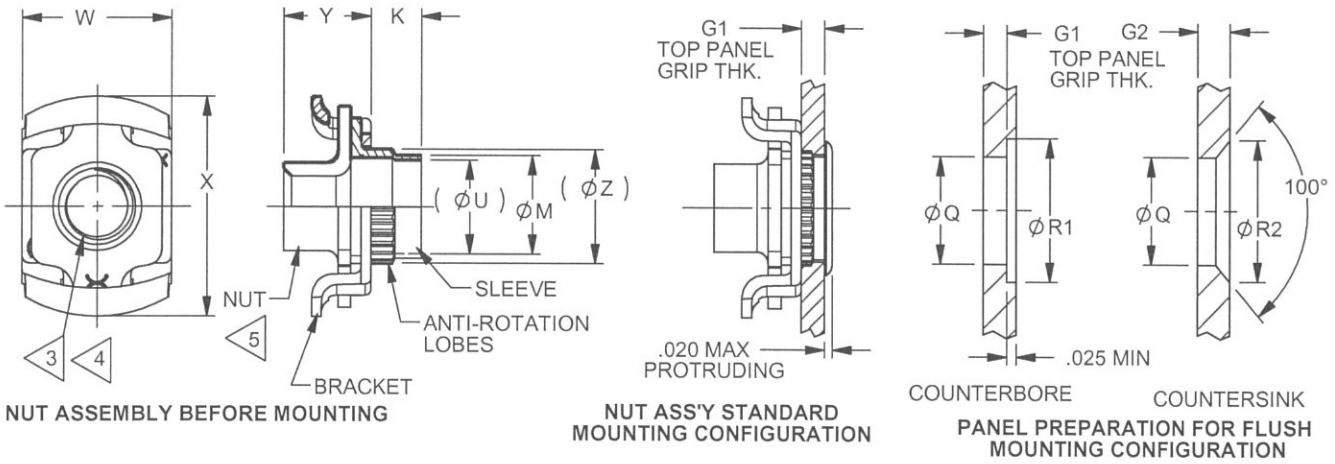


Alcoa Fastening Systems & Rings



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	(L)	Ø M MAX	2		Ø R1 + .020 - .000	Ø R2 ± .005	(Ø U)	W	X	Y ± .025	(Z)
			SOFT	HARD							
4, 4F, 6, 6F, M3, M3.5	.062	.217	.218	.218	.312	.307	.192	.295	.420	.192	.228
8, 8F, 10, 10C, 10F, M4, M5	.068	.270	.272	.281	.375	.370	.245	.390	.572	.228	.294
12, 12C, 12F, M6	.089	.335	.339	.348	.515	.437	.310	.450	.650	.303	.363

PART NUMBER CALLOUT
FW 6010 L - () - ()

MODEL
SERIES
LOCKING

GRIP CODE	G1	G2	K	GRIP CODE	G1	G2	K
AA	N/A	.055-.073	.073	M	.375-.405	.414-.444	.440
A	.031-.062	.074-.106	.099	N	.406-.436	.445-.475	.471
B	.063-.094	.107-.133	.130	P	.437-.467	.476-.506	.502
C	.095-.125	.134-.165	.161	R	.468-.498	.507-.537	.533
D	.126-.156	.166-.196	.192	S	.499-.529	.538-.568	.564
E	.157-.187	.197-.227	.223	T	.530-.560	.569-.599	.595
F	.188-.218	.228-.258	.254	U	.561-.591	.600-.630	.626
G	.219-.250	.259-.289	.285	Y	.592-.622	.631-.661	.657
H	.251-.281	.290-.320	.316	W	.623-.653	.662-.692	.688
J	.282-.312	.321-.351	.347	X	.654-.684	.693-.723	.719
K	.313-.343	.352-.382	.378	Y	.685-.715	.724-.754	.750
L	.344-.374	.383-.413	.409				

THREAD SIZE CODE	THREAD SIZE PER SAE-AS-8879	LEAD	THREAD SIZE CODE	THREAD SIZE PER SAE-AS-8879	LEAD	THREAD SIZE CODE	THREAD SIZE PER ASME B1.21M	LEAD
4	.112-40 UNJC-3B	SINGLE	4F	.112-40 UNJC-3B	DOUBLE	M3	MJ3 x 0.5-4H6H	METRIC
6	.138-32 UNJC-3B		6F	.138-32 UNJC-3B		M3.5	MJ3.5 x 0.6-4H6H	
8	.164-32 UNJC-3B		8F	.164-32 UNJC-3B		M4	MJ4 x 0.7-4H6H	
10	.190-32 UNJF-3B		10F	.190-32 UNJF-3B	M5	MJ5 x 0.8-4H6H		
12	.250-28 UNJF-3B		12F	.250-28 UNJF-3B	M6	MJ6 x 1.0-4H6H		
10C	.190-24 UNJC-3B		SINGLE (COARSE)					
12C	.250-20 UNJC-3B							

U PER DCN 13165, CHANGED FORMAT, LUBE SPEC

ISSUED: 1/4/2006
REVISED: 7/28/2015
PAGE: 1 OF 2

NUT PLATE, 450° F, FLOATING, RIVETLESS, LOCKING, ALL SIZES

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

DRAWN BY: J. SCHLOBOHM
CHECKED BY: SIGNATURE ON FILE

FW6010L
S-1618

DIMENSIONS IN INCHES

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MATERIAL:

NUT: 1050 CARBON STEEL PER AMS 5085, HEAT TREAT TO 140K PSI UTS. MIN. OR 4130 ALLOY STEEL PER OR AMS 6348, AMS 6370 AND MIL-S-6758. HEAT TREAT TO 160K PSI MIN. ULTIMATE TENSILE STRENGTH.

BRACKET: 1050 CARBON STEEL PER AMS 5085, HEAT TREAT TO HRC 42-47

SLEEVE: 304 CRES PER AMS 5639 OR AMS-QQ-S-763 OR 305 CRES PER AMS 5514

FINISH CODE:

BRACKET, SLEEVE & NUT: CAD PLATE PER AMS QQ-P-416, TYPE I I, CLASS 2.

NUT: DRI-FILM LUBE PER AS5272

NOTES:

- 1 "AA" GRIP RECOMMENDED PANEL PREPARATION:
SIZES 4, 4F, 6, 6F, M3 & M3.5 C'SINK: "Ø R2" DIMENSION IS .275
SIZE 8, 8F, 10, 10C, 10F, M4 & M5 C'SINK: "Ø Q" DIMENSION IS .276/.281; "Ø R2" DIMENSION IS .343
SIZE 12, 12C, 12F, M6: NOT RECOMMENDED FOR LESS THAN .060 PANEL THICKNESS
- 2 SOFT: DIMENSIONS FOR SOFT ALUMINUM ALLOYS AND PLASTICS
HARD: DIMENSIONS FOR HARD ALUMINUM ALLOYS AND STEEL
- 3 A MINIMUM OF TWO THREADS ARE DEFORMED TO PRODUCE SELF-LOCKING ACTION PER NASM25027 WHEN LOCKING FEATURE IS DESIRED.
- 4 NUT ELEMENT HAS .060 TOTAL RADIAL FLOAT FOR GRIP LENGTHS "AA" THRU "C" AND .046 MINIMUM FOR GRIP LENGTHS GREATER THAN "C".
- 5 FOR NUT ELEMENT REPLACEMENT PART NUMBER, SEE DRAWING S-0877.
- 6 NUT ELEMENT REMOVAL TOOL AVAILABLE, PART NUMBER RB 6527.
- 7 FOR GRIP CODE F THRU P, THE Ø "U" MINIMUM MAY BE .224 AS REQUIRED FOR MANUFACTURING. SIZE .190-32 UNJF-3B ONLY.
- 8 FOR HIGH VOLUME INSTALLATION RATES, ALTERNATIVE POWER TOOLING IS AVAILABLE: CONTACT ALCOA FASTENING SYSTEMS SALES DEPT.
- 9 TOOLING TYPE:
"N" DESIGNATES COUNTERBORE
"S" DESIGNATES COUNTERSINK
- 10 NUT ELEMENT COLOR CODE:
NONE: LOCKING STANDARD THREADS
YELLOW: COARSE THREADS
ORANGE: FAST LEAD THREADS
BLUE: METRIC THREADS
- 11 THREAD SIZE CODE
- 12 GRIP CODE

HAND INSTALLATION TOOL SELECTION TABLE:

COMPLETE HAND TOOL ASSEMBLY (INCLUDES:NOSE PIECE, PULLER & HANDLE)	
COUNTERBORE	COUNTERSINK
DCBT8600L-(11)-(12)	DCST8600L-(11)-(12)
NOSE PIECE	
COUNTERBORE	COUNTERSINK
DCBN86130-(12)	DCSN86130-(12)
PULLER: DTP86230L-(11)-(12)	
HANDLE ASS'Y: TA7533	

ARBOR PRESS TOOL: HW 9 7659-(12)

ANVIL: HW 9 7658-(12)

FORMER: HW 9 7657-(12)

U PER DCN 13165, CHANGED FORMAT, LUBE SPEC

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

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CHECKED BY SIGNATURE ON FILE

ISSUED 1/4/2006
REVISED 7/28/2015
PAGE 2 OF 2

**NUT PLATE, 450° F, FLOATING,
RIVETLESS, LOCKING, ALL SIZES**

DIMENSIONS IN INCHES

**FW6010L
S-1618**

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