



PART NUMBER	NOM DIA.	THEO DIA.	A' DIA. MIN.	C MAX.	D DIA.	F DRIVING FLATS	H REF.	J DIA. MAX.	K MAX.	M GAGE PROT.	R RAD.	S MAX.	W GAGE DIA.	HOLE SIZE	BREAK-OFF LIMITS	PREVAILING TORQUE IN. LBS. MIN	DOUBLE SHEAR STRENGTH LBS. MIN	TENSILE STRENGTH LBS. MIN
PLT110-05(-)	.1635	.332 .325	.296	.268	.1645 .1625	.086 .081	.069	.244	.246	.0276 .0238	.030 .010	.012	.2671 .2667	.168 .165	+020 -068	1.0	3355	900
PLT110-06(-)	.1980	.385 .378	.342	.303	.1990 .1970	.104 .099	.077	.300	.281	.0299 .0259	.030 .015	.015	.3147 .3143	.202 .199	+015 -073	1.5	5240	1400
PLT110-08(-)	.2590	.507 .499	.463	.354	.2600 .2580	.135 .130	.102	.384	.325	.0353 .0307	.030 .015	.015	.4245 .4241	.263 .260	+010 -078	2.5	9000	2100
PLT110-10(-)	.3105	.635 .626	.577	.423	.3115 .3095	.152 .147	.134	.427	.390	.0409 .0357	.040 .020	.020	.5389 .5385	.315 .312	+010 -083	3.5	12000	3600
PLT110-12(-)	.3735	.762 .752	.696	.510	.3745 .3725	.185 .180	.160	.516	.470	.0466 .0407	.040 .020	.023	.6532 .6528	.378 .375	+010 -093	4.0	19500	5600

SECOND DASH NUMBER	G GRIP	GRIP RANGE		L REF.				
		MIN	MAX	PLT110				
				-05(-)	-06(-)	-08(-)	-10(-)	-12(-)
-	-	-	-	-	-	-	-	-
-02	.156	.094	.156	.733	.853	-	-	-
-03	.219	.157	.219	.795	.916	.944	-	-
-04	.281	.220	.281	.858	.978	1.006	1.158	1.242
-05	.344	.282	.344	.920	1.041	1.069	1.221	1.304
-06	.406	.345	.406	.983	1.103	1.131	1.283	1.367
-07	.469	.407	.469	1.045	1.166	1.194	1.346	1.429
-08	.531	.470	.531	1.108	1.228	1.256	1.408	1.492
-09	.594	.532	.594	1.170	1.291	1.319	1.471	1.554
-10	.656	.595	.656	1.233	1.353	1.381	1.533	1.617
-11	.719	.657	.719	1.295	1.416	1.444	1.596	1.679
-12	.781	.720	.781	1.358	1.478	1.506	1.658	1.742
-13	.844	.782	.844	1.420	1.541	1.569	1.721	1.804
-14	.906	.845	.906	1.483	1.603	1.631	1.783	1.867
-15	.969	.907	.969	1.545	1.666	1.694	1.846	1.929
-16	1.031	.970	1.031	1.608	1.728	1.756	1.908	1.992

SECOND DASH NUMBER	G GRIP	GRIP RANGE		L REF.				
		MIN	MAX	PLT110				
				-05(-)	-06(-)	-08(-)	-10(-)	-12(-)
-17	1.094	1.032	1.094	-	-	-	-	-
-18	1.156	1.095	1.156	1.791	1.819	1.971	2.054	-
-19	1.219	1.157	1.219	1.853	1.881	2.033	2.117	-
-20	1.281	1.220	1.281	1.916	1.944	2.096	2.179	-
-21	1.344	1.282	1.344	1.978	2.006	2.158	2.242	-
-22	1.406	1.345	1.406	2.041	2.069	2.221	2.304	-
-23	1.469	1.407	1.469	2.103	2.131	2.283	2.367	-
-24	1.531	1.470	1.531	2.166	2.194	2.346	2.429	-
-25	1.594	1.532	1.594	2.228	2.256	2.408	2.492	-
-26	1.656	1.595	1.656	2.291	2.319	2.471	2.554	-
-27	1.719	1.657	1.719	2.353	2.381	2.533	2.617	-
-28	1.781	1.720	1.781	2.416	2.444	2.596	2.679	-
-29	1.844	1.782	1.844	2.478	2.506	2.658	2.742	-
-30	1.906	1.845	1.906	2.541	2.569	2.721	2.804	-
-31	1.969	1.907	1.969	2.603	2.631	2.783	2.867	-
-32	2.031	1.970	2.031	2.666	2.694	2.846	2.929	-
-	-	-	-	2.728	2.756	2.908	2.992	-

▲ "G" TOLERANCE: FOR -05 AND -06 SIZES +.030/-010; FOR -08 & -10 SIZES +.040/-010; FOR -12 SIZES +.060/-010.

**MONOGRAM AEROSPACE FASTENERS**  
a TriMas company  
3423 SOUTH GARFIELD AVENUE  
COMMERCE, CALIFORNIA 90040  
(323) 722-4760 FAX (323) 727-1029

TITLE:  
**VISU-LOK, FASTENER, BLIND INTERNALLY THREADED, EXTERNAL SLEEVE ALLOY STEEL 100° FLUSH HEAD, SELF LOCKING**

DRAWING NO:  
**PLT110-(-)(-)**

DRAWN BY: G.MARTINEZ DRAWN DATE: 06-25-13

APPROVED BY: CHECKED DATE:

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Alcoa CAGE CODE: 5M902

MONOGRAM CAGE CODE: 98524

ECN NO: 14-0649

ECN DATE: 11/01/14

REV: P

SHEET 1 OF 2



PROCUREMENT SPEC: ESCBB-2 CLASS I.

MATERIAL: NUT & SCREW: ALLOY STEEL: 4130 PER AMS-S-6758, 4140 PER AMS6382 OR AMS6349 OR 8740 PER AMS6322.  
 SLEEVE: CORROSION RESISTANT STEEL: 303 OR 304 PER AMS-QQ-S-763, AMS5639 OR AMS5641.

HEAT TREAT: NUT & SCREW: HEAT TREAT PER AMS2759. APPROXIMATELY 180,000 - 200,000 PSI TENSILE (HRC 39-43).  
 SLEEVE: AS REQUIRED FOR PERFORMANCE.

FINISH: NUT & SCREW: CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2. CADMIUM PLATE PER NAS672 IS PERMISSIBLE PROVIDED IT IS FOLLOWED BY A DICHROMATE POST TREATMENT PER AMS-QQ-P-416.  
 SLEEVE: PASSIVATE PER AMS2700. CADMIUM PLATE PER AMS-QQ-P-416, TYPE I, CLASS 3.

LUBRICANT: LUBRICANTS LISTED BELOW MAY BE APPLIED TO ANY OR ALL COMPONENTS IF REQUIRED FOR PERFORMANCE.  
 NUT: WWM CARBO-WAX, PARAFFIN WAX AND/OR CETYL ALCOHOL PER AS87132.  
 SCREW & SLEEVE: DRY FILM LUBE PER AS5272 TYPE I OR MIL-PRF-81329, WWM CARBO-WAX, PARAFFIN WAX AND OR CETYL ALCOHOL PER AS87132.

PART CODE & EXAMPLE: PLT110 - 05 - 05

GRIP LENGTHS IN 1/16THS  
 NOMINAL BODY DIAMETER AS TABULATED  
 BASIC PART NUMBER, SELF LOCKING BLIND FASTENER

GENERAL NOTES:

- OUTSIDE DIAMETER OF HEAD OF SCREW AND OUTSIDE DIAMETER OF SLEEVE SHALL NOT EXCEED MAXIMUM "D" DIAMETER.
  - CONCENTRICITY OF NUT HEAD CONICAL SURFACE TO "D" DIAMETER SHALL BE WITHIN .005" T.I.R., EXCEPT OVER INDENTATIONS.
  - REMOVE ALL LOOSE OR HANGING BURRS.
  - LOCKING FEATURE CONSISTS OF THREE (3) INDENTATIONS LOCATED 120° APART ON THE PERIPHERY OF THE NUT COMPONENT AND APPROXIMATELY .040 ABOVE THE INTERSECTION OF THE NUT NOSE ANGLE AND O.D. (MEAN GRIP OF FASTENER).
  - MANUFACTURER'S IDENTIFICATION: (REFER TO NOTE 7 FOR INTERIM IDENTIFICATION)  
 LETTER "N" DESIGNATES MONOGRAM AEROSPACE FASTENERS.  
 LETTERS "VS" DESIGNATE VOI-SHAN.
  - HEAD MARKINGS ON NUT DEPRESSED .010 MAX.
  - THE PRODUCT DESCRIBED BY THIS DRAWING IS "EQUIVALENT TO" AND "INTERCHANGEABLE WITH" THE MANUFACTURER'S PRODUCT LISTED BELOW EXCEPT THE HEAD IDENTIFICATION MAY BE AS SHOWN BELOW:  
 MONOGRAM...: FL164-FL375 SERIES (MARKING: "-" AND /OR "N" OVERSTAMPED "L" OR "SL" NUT MAY BE COLORED RED).  
 VOI-SHAN...: VA 404 SERIES (MARKING: "VS", "AV", AND "SL"; NUT HEAD MAYBE COLORED BLUE).
  - STANDARD FINISHES AND LUBES ARE SHOWN ABOVE. REFER TO ESCBB-4 FOR SPECIAL FINISHES AND/OR LUBES, IF REQUIRED.
  - HALF-GRIP SIZES MAY BE ORDERED BY ADDING (.5) TO THE GRIP DASH NUMBERS.
- EXAMPLE: PLT110-06-4.5 INDICATES A NOMINAL GRIP LENGTH OF 4.5 SIXTEENTHS = 0.281.  
 THE GRIP RANGE FOR THESE HALF-GRIP SIZES WILL BE NOMINAL GRIP +.031/- .030.  
 EXCEPT: THE GRIP RANGE FOR -1.5 GRIP SHALL BE MAX GRIP = 0.125", MIN GRIP = 0.078".  
 THE BASIC "G" DIMENSION WILL BE NOMINAL GRIP +.031 AND THE OVERALL SCREW LENGTH "L" DIMENSION MAY VARY AT MANUFACTURER'S OPTION.
- STANDARD GRIP LENGTHS ARE AS TABULATED. SHORTER OR LONGER GRIPS THAN THOSE LISTED MAY BE AVAILABLE AS SPECIALS. ON GRIP LENGTHS SHORTER THAN THOSE LISTED, THE BREAKOFF LIMITS AND PREVAILING TORQUES AS TABULATED DO NOT APPLY.
  - DISTORTION OF "D" DIAMETER SHALL NOT PREVENT INSERTION OF THE FASTENER INTO A RING GAUGE OF LENGTH EQUAL TO ONE DIAMETER AND DIAMETER EQUAL TO MAXIMUM "D" MAX + .001". FORCE FOR INSERTION SHALL NOT EXCEED FIVE (5) POUNDS.
  - DIMENSIONS "A", "A'", AND "H" ARE FOR ENGINEERING REFERENCE PURPOSES ONLY AND ARE NOT TO BE USED FOR INSPECTION PURPOSES. THESE DIMENSIONS ARE THEORETICAL VALUES DERIVED FROM "D", "S", "V", "W" AND HEAD ANGLE DIMENSIONS.
  - DIMENSIONS ARE EXCLUSIVE OF LUBRICATION. "C" DIMENSION MAY INCREASE BY .002" FOR DRY FILM LUBE COMPONENTS.



TITLE: VISU-LOK, FASTENER, BLIND INTERNALLY THREADED, EXTERNAL SLEEVE ALLOY STEEL 100° FLUSH HEAD, SELF LOCKING

DRAWING NO: PLT110-( )-( )	
DRAWN BY: G.MARTINEZ	DRAWN DATE: 06-25-13
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