



**TABLE I**

PART NUMBER	Ø A		Ø D		Ø E MAX		F WRENCH FLATS		(G)		H		(L)		R RAD MAX		(T HEX ACROSS FLATS)		Z MAX	
	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm
MBF2310-05-( )	.354 .334	8.99 8.48	.1645 .1625	4.178 4.128	.1640	4.166	.086 .081	2.18 2.06	.058	1.47	.060 .053	1.524 1.346	.625	15.875	.030	0.76	.375	9.52	.030	0.762
MBF2310-06-( )	.416 .396	10.57 10.06	.1985 .1965	5.042 4.991	.1985	5.042	.104 .099	2.64 2.52	.058	1.47	.070 .063	1.778 1.600	.675	17.145	.030	0.76	.375	9.52	.030	0.762
MBF2310-08-( )	.541 .521	13.74 13.23	.2595 .2575	6.591 6.541	.2595	6.591	.135 .130	3.43 3.30	.058	1.47	.085 .078	2.159 1.981	.900	22.860	.030	0.76	.375	9.52	.040	1.016

**TABLE I (CONTINUED)**

PART NUMBER	△ 6 MIN AVAILABLE GRIP LENGTH	△ 6 MAX AVAILABLE GRIP LENGTH	INSTALLED DIMENSIONS								MECHANICAL PROPERTIES					
			RECOM. HOLE SIZE		Ø J MIN		K MAX		△ 5 BREAK-OFF LIMITS		TENSILE STRUCTURAL FAILURE MIN		DOUBLE SHEAR MIN		LOCKING TORQUE MIN	
			INCH	mm	INCH	mm	INCH	mm	INCH	mm	LBS	N	LBS	N	IN-LBS	N-m
MBF2310-05-( )	-100	-1000	.168 .165	4.27 4.19	.250	6.35	.370	9.40	+0.053 -0.000	+1.35 -0.00	900	4000	3150	14010	1.0	0.113
MBF2310-06-( )	-100	-1150	.202 .199	5.13 5.05	.300	7.62	.420	10.67	+0.063 -0.000	+1.60 -0.00	1400	6230	4600	20460	1.5	0.170
MBF2310-08-( )	-100	-1150	.263 .260	6.68 6.60	.400	10.16	.510	12.95	+0.078 -0.000	+1.98 -0.00	2100	9340	7900	35140	2.5	0.282

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

TITLE:  
**COMPOSI-LOK® 3 BLIND FASTENER, BREAK-OFF WITHIN PROTRUDING HEAD HEIGHT FOR ADVANCED COMPOSITE MATERIAL & METALLIC STRUCTURES, TITANIUM**

DRAWING NO.:  
**MBF2310(-)(-)(-)**

DRAWN BY:  
M. DOMINGUEZ

APPROVED BY:  
*J. [Signature]*

ECN NO.:  
17-0226

CAGE CODE:  
98524

DRAWN DATE:  
08/12/13

CHECKED DATE:  
11/22/17

REV:  
G

ECN DATE:  
09/08/17

SHEET 1 OF 2

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TABLE II

2ND DASH NO. (GRIP)	GRIP RANGE			
	MIN GRIP		MAX GRIP	
	INCH	mm	INCH	mm
100	.050	1.27	.100	2.54
150	.100	2.54	.150	3.81
200	.150	3.81	.200	5.08
250	.200	5.08	.250	6.35
300	.250	6.35	.300	7.62
350	.300	7.62	.350	8.89
400	.350	8.89	.400	10.16
450	.400	10.16	.450	11.43
500	.450	11.43	.500	12.70
550	.500	12.70	.550	13.97
600	.550	13.97	.600	15.24
650	.600	15.24	.650	16.51
700	.650	16.51	.700	17.78
750	.700	17.78	.750	19.05
800	.750	19.05	.800	20.32
850	.800	20.32	.850	21.59
900	.850	21.59	.900	22.86
950	.900	22.86	.950	24.13
1000	.950	24.13	1.000	25.40
1050	1.000	25.40	1.050	26.67
1100	1.050	26.67	1.100	27.94
1150	1.100	27.94	1.150	29.21

APPLICABLE SPECIFICATIONS:  
 PROCUREMENT SPECIFICATION: MBF2300  
 INSTALLATION AND INSPECTION SPECIFICATION: MBF2301  
 SPECIAL LUBE AND FINISH: MBF2002

MATERIAL AND HEAT TREAT:

NUT: 6Al-4V TITANIUM ALLOY PER AMS-T-9047 STA OR AMS4928 OR AMS4967 HEAT TREATED PER AMS-H-81200 TO 95 KSI SHEAR STRENGTH MINIMUM. MAXIMUM HYDROGEN CONTENT 125 PPM.  
 SCREW: A286 CRES PER AMS5731, AMS5732 OR AMS5737 HEAT TREATED TO 175 KSI TENSILE MINIMUM.  
 SLEEVE: 304 CRES PER AMS5639, FULLY ANNEALED.  
 INSERT: ACETAL PER ASTM-D6778  
 DRIVE NUT: LOW TO MEDIUM CARBON STEEL

FINISH:

(=) NUT: CONVERSION COATING OR PHOSPHATE FLOURIDE PER MONOGRAM SPECIFICATION PS741. MAY BE USED AT MANUFACTURER'S OPTION.  
 SLEEVE AND SCREW: PASSIVATE PER AMS2700, CONVERSION COATING OPTIONAL.  
 INSERT: NONE  
 DRIVE NUT: COLOR GRAY

LUBRICANT:

DRY FILM LUBE PER THE CHEMICAL REQUIREMENTS OF AS5272 TYPE I OR EVERLUBE # 812 PER MIL-PRF-81329, PARAFFIN WAX, AND/OR CETYL ALCOHOL PER AS87132 USED AS REQUIRED FOR PERFORMANCE.

GENERAL NOTES:

1. EXAMPLE OF PART NUMBER:

MBF2310 (-) - 06 - 100



2. LOCKING FEATURE CONSISTS OF THREE (3) INDENTATIONS LOCATED 120° APART ON THE PERIPHERY OF THE NUT COMPONENT AND APPROXIMATELY .040" ABOVE INTERSECTION OF THE NUT NOSE ANGLE AND O.D.

3. HEAD MARKINGS: MANUFACTURER'S IDENTIFICATION: MONOGRAM = "M"  
 FASTENER IDENTIFICATION = "2310"  
 POSITION OPTIONAL

4. DISTORTION SHALL NOT PREVENT INSERTION OF THE FASTENER INTO A RING GAUGE OF LENGTH EQUAL TO ONE DIAMETER AND HOLE DIAMETER EQUAL TO A MINIMUM RECOMMENDED HOLE SIZE. FORCE FOR INSERTION SHALL NOT EXCEED 5.0 POUNDS.

5. AN "L" IN PLACE OF THE DASH (-) BETWEEN THE DIAMETER DASH NUMBER AND THE GRIP DASH NUMBER DESIGNATES MODIFIED BREAK-OFF LIMITS OF +.053/-0.050 (E.G. MBF2110(L)-06L200).  
 AN "H" IN PLACE OF THE DASH (-) BETWEEN THE DIAMETER DASH NUMBER AND THE GRIP DASH NUMBER DESIGNATES MODIFIED BREAK OFF LIMITS OF +.153/+0.050 (E.G. MBF2110(H)-06H200).

6. STANDARD GRIP LENGTHS ARE SHOWN IN TABLE I. SHORTER OR LONGER GRIPS THAN THOSE LISTED MAY BE AVAILABLE AS SPECIALS. ON GRIP LENGTHS SHORTER THAN THOSE LISTED, THE BREAK-OFF LIMITS AND PREVAILING TORQUES SHOWN IN TABLE I DO NOT APPLY.

7. INSTALLATION AND REMOVAL INFORMATION T.B.A.