

TABLE I

PART NUMBER	ØA		ØD		ØE MAX		F WRENCH FLATS		(G)		H		(L)		R RAD MAX	
	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm
MBF2010-05-( )	.354 .334	8,99 8,48	.1640 .1625	4,166 4,127	.1640	4,166	.085 .080	2,16 2,03	.017	0,43	.060 .053	1,524 1,346	.450	11,43	.030	0,76
MBF2010-06-( )	.416 .396	10,57 10,06	.1985 .1970	5,042 5,000	.1985	5,042	.113 .108	2,87 2,74	.027	0,68	.070 .063	1,778 1,600	.558	14,17	.030	0,76
MBF2010-07-( )	.416 .396	10,57 10,06	.2275 .2260	5,779 5,740	.2275	5,778	.121 .116	3,07 2,95	.035	0,89	.070 .063	1,778 1,600	.650	16,51	.030	0,76
MBF2010-08-( )	.541 .521	13,74 13,23	.2595 .2580	6,592 6,553	.2595	6,591	.135 .130	3,43 3,30	.055	1,40	.085 .078	2,159 1,981	.692	17,58	.030	0,76
MBF2010-09-( )	.541 .521	13,74 13,23	.2895 .2880	7,354 7,315	.2895	7,353	.152 .147	3,86 3,73	.065	1,65	.085 .078	2,159 1,981	.815	20,70	.030	0,76
MBF2010-10-( )	.635 .615	16,13 15,62	.3110 .3095	7,900 7,861	.3110	7,899	.152 .147	3,86 3,73	.070	1,78	.105 .098	2,667 2,489	.892	22,66	.040	1,02
MBF2010-11-( )	.635 .615	16,13 15,62	.3433 .3418	8,720 8,681	.3433	8,720	.185 .180	4,70 4,57	.075	1,90	.105 .098	2,667 2,489	.941	23,90	.040	1,02
MBF2010-12-( )	.760 .740	19,30 18,80	.3740 .3725	9,500 9,461	.3740	9,500	.185 .180	4,70 4,57	.080	2,03	.125 .118	3,175 2,997	1,090	27,69	.040	1,02

TABLE I (CONTINUED)

PART NUMBER	MIN AVAILABLE GRIP DASH NO.	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
MBF2010-05-( )	-100	.168 .165	4,27 4,19	.250	6,35	.300	7,62	+.103 -.000	+2,62 -0,00	900	4000	3150	14010	1.0	0,113
MBF2010-06-( )	-100	.202 .199	5,13 5,05	.300	7,62	.350	8,89	+.103 -.000	+2,62 -0,00	1400	6230	4600	20460	1.5	0,170
MBF2010-07-( )	-100	.231 .228	5,88 5,79	.350	8,89	.400	10,16	+.103 -.000	+2,62 -0,00	1600	7120	6050	26910	2.0	0,226
MBF2010-08-( )	-150	.263 .260	6,68 6,60	.400	10,16	.450	11,43	+.103 -.000	+2,62 -0,00	2100	9340	7900	35140	2.5	0,282
MBF2010-09-( )	-150	.293 .290	7,44 7,37	.450	11,43	.500	12,70	+.103 -.000	+2,62 -0,00	2600	11565	9800	43590	3.0	0,339
MBF2010-10-( )	-150	.315 .312	8,00 7,92	.475	12,06	.550	13,97	+.103 -.000	+2,62 -0,00	3600	16010	11350	50480	3.5	0,400
MBF2010-11-( )	-150	.347 .344	8,81 8,74	.525	13,33	.575	14,60	+.103 -.000	+2,62 -0,00	4400	19570	13850	61600	4.0	0,452
MBF2010-12-( )	-150	.378 .375	9,60 9,52	.575	14,60	.625	15,87	+.103 -.000	+2,62 -0,00	5000	22240	16450	73170	4.0	0,452

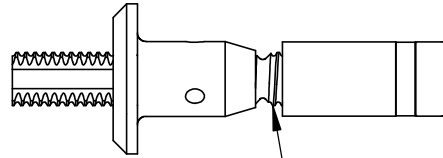
**MONOGRAM AEROSPACE FASTENERS**  
a TriMas company  
3423 SOUTH GARFIELD AVENUE  
COMMERCE, CALIFORNIA 90040  
(323) 722-4760 FAX (323) 727-1029

TITLE:  
**BLIND FASTENER, LOW PROFILE PROTRUDING HEAD  
FOR ADVANCED COMPOSITE MATERIALS  
TITANIUM**

DRAWING NO:  
**MBF2010( )-( )-( )**  
DRAWN BY:  
M DOMINGUEZ  
DRAWN DATE:  
06/25/13  
APPROVED BY:  
CHECKED DATE:

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MONOGRAM CAGE CODE: 98524  
ECN NO: 17-0211  
ECN DATE: 09/08/17  
REV: AF  
SHEET 1 OF 2



MBF2010SA( )-( )-( ) FOR SEALANT APPLICATION  
- EXPOSE TWO TO FOUR THREADS

**APPLICABLE SPECIFICATIONS:**

PROCUREMENT SPECIFICATION: MBF2000  
INSTALLATION AND INSPECTION SPECIFICATION: MBF2001  
SPECIAL LUBE AND FINISH: MBF2002  
PART NUMBER ASSIGNMENT: MBF2004

**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

**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

**LUBRICANT:**

SOLID FILM LUBRICANT PER AS5272 TYPE I OR TYPE II, PARAFFIN WAX, OR CETYL ALCOHOL PER AS87132 (AS REQUIRED FOR PERFORMANCE).  
(SEE FINISH CODE FOR ADDITIONAL RESTRICTIONS).

**TABLE IV**

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
1200	1.150	29.21	1.200	30.48
1250	1.200	30.48	1.250	31.75
1300	1.250	31.75	1.300	33.02
1350	1.300	33.02	1.350	34.29
1400	1.350	34.29	1.400	35.56
1450	1.400	35.56	1.450	36.83
1500	1.450	36.83	1.500	38.10
1550	1.500	38.10	1.550	39.37
1600	1.550	39.37	1.600	40.64
1650	1.600	40.64	1.650	41.91
1700	1.650	41.91	1.700	43.18

**GENERAL NOTES:**

1. EXAMPLE OF PART NUMBER:  
MBF2010 ( ) - 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 = "2010"  
POSITION OPTIONAL

4. COMPOSI-LOK FASTENERS WITH SELECTED COMBINATIONS OF THE ABOVE LUBRICANTS AND FINISHES ARE SPECIALLY CODED AND MAY BE SUBSTITUTED FOR EQUIVALENT NON-CODED PARTS AT MANUFACTURER'S OPTION. SEE INTERCHANGEABILITY SPECIFICATION MBF2007.

5. 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. FORCE FOR INSERTION SHALL NOT EXCEED 5.0 POUNDS.

TITLE:

BLIND FASTENER, LOW PROFILE PROTRUDING HEAD  
FOR ADVANCED COMPOSITE MATERIALS  
TITANIUM

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