

PART NUMBER	(ϕA)		$\phi A'$ MIN		ϕD		ϕE MAX		F WRENCH FLATS		(G)		(H)		(L)		R RAD		S MAX		(T HEX ACROSS FLATS)	
	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm
MBF3005-5-()	.332 .325	8.43 8.25	.296	7.52	.1645 .1625	4.178 4.128	.1640	4.166	.085 .080	2.16 2.03	.058	1.47	.070	1.78	.625	15.87	.030 .015	0.76 0.38	.015	0.38	.375	9.52
MBF3005-6-()	.385 .378	9.78 9.60	.342	8.69	.1985 .1965	5.042 4.991	.1985	5.042	.113 .108	2.87 2.74	.058	1.47	.077	1.96	.675	17.14	.030 .015	0.76 0.38	.019	0.48	.375	9.52
MBF3005-7-()	.416 .409	10.57 10.39	.373	9.47	.2275 .2255	5.778 5.728	.2275	5.778	.116	3.07 2.95	.058	1.47	.077	1.96	.862	21.94	.030 .015	0.76 0.38	.020	0.51	.375	9.52
MBF3005-8-()	.507 .499	12.88 12.67	.463	11.76	.2595 .2575	6.591 6.541	.2595	6.591	.135 .130	3.43 3.30	.058	1.47	.104	2.64	.900	22.86	.030 .015	0.76 0.38	.020	0.51	.375	9.52
MBF3005-9-()	.538 .530	13.66 13.46	.494	12.55	.2895 .2875	7.353 7.303	.2895	7.353	.152 .147	3.86 3.73	.068	1.73	.104	2.64	.930	23.62	.030 .015	0.76 0.38	.020	0.51	.500	12.70
MBF3005-10-()	.635 .626	16.13 15.90	.577	14.66	.3115 .3095	7.912 7.861	.3110	7.899	.152 .147	3.86 3.73	.073	1.85	.136	3.45	.912	23.16	.040 .025	1.02 0.64	.026	0.66	.500	12.70
MBF3005-11-()	.666 .657	16.92 16.69	.608	15.44	.3435 .3415	8.725 8.674	.3433	8.720	.185 .180	4.70 4.57	.078	1.98	.136	3.45	1.000	25.40	.040 .025	1.02 0.64	.026	0.66	.500	12.70
MBF3005-12-()	.762 .752	19.35 19.10	.696	17.68	.3745 .3725	9.512 9.462	.3740	9.500	.185 .180	4.70 4.57	.083	2.11	.162	4.11	1.100	27.94	.040 .025	1.02 0.64	.029	0.74	.500	12.70

PART NUMBER	MIN AVAILABLE GRIP DASH NO.	INSTALLED DIMENSIONS								MECHANICAL PROPERTIES						V (GAGE PROTRUSION)		ϕW (GAGE)	
		RECOM. HOLE SIZE		ϕJ MIN		K MAX		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	INCH	mm	INCH	mm
MBF3005-5-()	-150	.168 .165	4.27 4.19	.250	6.35	.370	9.40	+.103 -0.00	+2.62 -0.00	900	4000	3150	14010	1.0	0.113	.0207 .0174	0.526 0.442	.2832 .2830	7.193 7.188
MBF3005-6-()	-150	.202 .199	5.13 5.05	.300	7.62	.420	10.67	+.103 -0.00	+2.62 -0.00	1400	6230	4600	20460	1.5	0.170	.0245 .0212	0.622 0.538	.3272 .3270	8.311 8.306
MBF3005-7-()	-150	.231 .228	5.88 5.79	.350	8.89	.490	12.45	+.103 -0.00	+2.62 -0.00	1600	7120	6050	26910	2.0	0.226	.0358 .0324	0.909 0.823	.3315 .3313	8.420 8.415
MBF3005-8-()	-200	.263 .260	6.68 6.60	.400	10.16	.510	12.95	+.103 -0.00	+2.62 -0.00	2100	9340	7900	35140	2.5	0.282	.0318 .0279	0.808 0.709	.4320 .4318	10.973 10.968
MBF3005-9-()	-200	.293 .290	7.44 7.37	.450	11.43	.535	13.59	+.103 -0.00	+2.62 -0.00	2600	11565	9800	43590	3.0	0.339	.0441 .0407	1.120 1.034	.4320 .4318	10.973 10.968
MBF3005-10-()	-250	.315 .312	8.00 7.92	.475	12.06	.540	13.72	+.103 -0.00	+2.62 -0.00	3600	16010	11350	50480	3.5	0.400	.0405 .0365	1.029 0.927	.5389 .5385	13.688 13.678
MBF3005-11-()	-250	.347 .344	8.81 8.74	.525	13.33	.670	17.02	+.103 -0.00	+2.62 -0.00	4400	19570	13850	61600	4.0	0.452	.0539 .0500	1.369 1.270	.5389 .5385	13.688 13.678
MBF3005-12-()	-250	.378 .375	9.60 9.52	.575	14.60	.675	17.15	+.103 -0.00	+2.62 -0.00	5000	22240	16450	73170	4.0	0.452	.0458 .0415	1.163 1.054	.6532 .6528	16.591 16.581

MONOGRAM AEROSPACE FASTENERS
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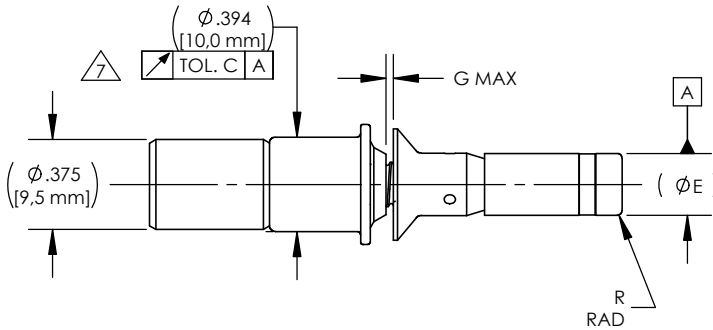
TITLE:
**BLIND FASTENER, 100° FLUSH HEAD
FOR ADVANCED COMPOSITE MATERIALS
TITANIUM**

DRAWING NO:
MBF3005(-)(-)(-)
DRAWN BY:
M. DOMINGUEZ
DRAWN DATE:
08/15/13
APPROVED BY:
CHECKED DATE:

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MONOGRAM CAGE CODE: 98524
ECN NO.: 17-0241
ECN DATE: 09/11/17
REV: AC
SHEET 1 OF 2

APPLICABLE SPECIFICATIONS:
 PROCUREMENT SPECIFICATION: MBF2008
 INSTALLATION AND INSPECTION SPECIFICATION: MBF2009
 SPECIAL LUBE AND FINISH: MBF2002



ROBOTIC PART NUMBER	R RAD		G MAX (GAP)		"TOL C" \triangle			
					GRIP < -500		GRIP > -500	
	INCH	mm	INCH	mm	INCH	mm	INCH	mm
MBF3005()-5-()A	.025 .010	0.635 0.254	.042	1.067	.030	0.762	.030	0.762
MBF3005()-6-()A	.030 .015	0.762 0.381	.050	1.270	.027	0.686	.030	0.762
MBF3005()-8-()A	.035 .020	0.889 0.508	.062	1.575	.022	0.559	.030	0.762

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 STAINLESS STEEL PER AMS5639, FULLY ANNEALED.
INSERT: ACETAL PER ASTM-D6778
DRIVE NUT: MILD STEEL

FINISH:

(-) NUT: PHOSPHATE FLOURIDE PER MONOGRAM SPECIFICATION PS741 AND AMS2486.
 SLEEVE AND SCREW: PASSIVATE PER AMS2700, CONVERSION COATING OPTIONAL.
 INSERT: NONE
 DRIVE NUT: COLOR BROWN

LUBRICANT:

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

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:

- EXAMPLE OF PART NUMBER:
 MBF3005 () - 06 - 100
 DESIGNATES GRIP (TABLE III)
 DESIGNATES BASIC DIMENSIONS (TABLE I)
 DESIGNATES SPECIAL FINISH CODE (SEE MBF2002)
 DESIGNATES BASIC PART NUMBER
- 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.
- SEE MBF2009 FOR INSTALLATION AND REMOVAL INFORMATION.
- THESE PARTS ARE SIMILAR TO MBF2112 EXCEPT AS FOLLOWS:
 A. IMPROVED OUT-OF-GRIP FLAGGING CAPABILITY (COREBOLT B/O)
 B. INCREASED BLIND SIDE PROTRUSION BEFORE AND AFTER UPSET
 C. INCREASED INSTALLED WEIGHT
- \triangle 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.
- \triangle HEAD MARKINGS: MANUFACTURER'S IDENTIFICATION: MONOGRAM = "MI"
 FASTENER IDENTIFICATION = "3005"
 POSITION OPTIONAL