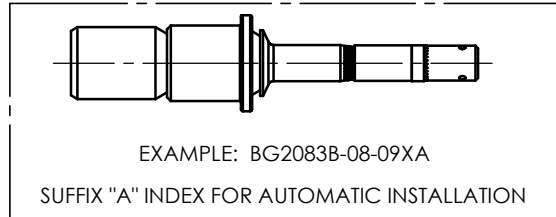


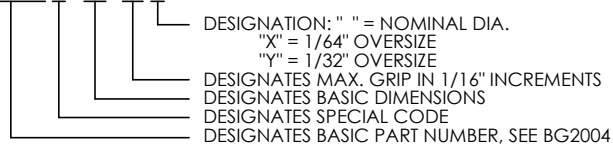
PART NUMBER	NOM DIA	A DIA THEO.	A' DIA MIN.	C REF	D DIA	E DIA MAX	F FLATS	H REF	J DIA MIN	K MAX	L REF	M	N	R MAX	V GAGE PROT	W GAGE DIA	Z MAX	
BG2083(-)05(-)	5/32	.332 .325	.296	1/4	.1635 .1625	.1615	.084 .082	.039	.250	.670	.735	.270 .260	.037 .034	.025	.0115 .0095	.2832 .2830	.010	
BG2083(-)06(-)	3/16	.385 .378	.342	5/16	.1895 .1885	.1875	.112 .109	.045	.290	.750	.800	.305 .295	.047 .044	.030	.0140 .0114	.3272 .3270	.015	
BG2083(-)06(-)X	13/64				.2026 .2016	.1995		.042	.300						.400 .390	.055 .050		.0180 .0151
BG2083(-)08(-)	1/4	.507 .499	.463		.2495 .2485	.2470	.135 .131	.059	.380	.800	.950	.490 .480	.068 .063		.040	.0227 .0201		.5389 .5385
BG2083(-)08(-)X	17/64				.2651 .2641	.2620		.055	.400							TBD		
BG2083(-)10(-)	5/16	.635 .626	.577	3/8	.3120 .3110	.3090	.152 .149	.075	.475	.950	1.000	.625 .620	.082 .077	.0255 .0228		.6532 .6528		
BG2083(-)10(-)X	21/64			.3276 .3266	.3245		.073	.495					TBD					
BG2083(-)12(-)	3/8	.762 .752	.696	7/16	.3745 .3735	.3715	.184 .181	.089	.560	1.100	1.200	.625 .620						
BG2083(-)12(-)X	25/64			.3901 .3891	.3870		.085	.580					TBD					

PART NUMBER	MIN AVAILABLE GRIP DASH NO.	RECOMMENDED HOLE SIZE FOR:		PREVAILING TORQUE (IN-LBS) MIN	DOUBLE SHEAR (LBS) MIN	TENSILE STRENGTH (LBS) MIN	BREAK-OFF LIMITS MAX
		CLEARANCE INSTALLATION	INTERFERENCE INSTALLATION				
BG2083(-)05(-)	-02.5	.167	.1635	2	4010	900	.015
BG2083(-)06(-)		.165	.1622				
BG2083(-)06(-)X	.192	.1890	4	5380	1200		
BG2083(-)08(-)	.205	.2015					
BG2083(-)08(-)X	.203	.1997	6	9300	3000		
BG2083(-)10(-)	.252	.2489					
BG2083(-)10(-)X	.250	.2472	8	14600	3600		
BG2083(-)12(-)	.268	.2640					
BG2083(-)12(-)X	.266	.2622	10	21000	5600		
BG2083(-)12(-)X	.315	.3110					
BG2083(-)12(-)X	.313	.3092				.020	
BG2083(-)12(-)X	.3305	.3265					
BG2083(-)12(-)X	.3285	.3247					
BG2083(-)12(-)X	.377	.3735					
BG2083(-)12(-)X	.375	.3717					
BG2083(-)12(-)X	.393	.3891					
BG2083(-)12(-)X	.391	.3872					



EXAMPLE OF PART NUMBER:

BG2083 (-) - 08 - 09 ()



U.S. PATENT NO.: 5,498,110; 5,634,751 AND FOREIGN PATENTS PENDING

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

TITLE:
OSI BOLT™
 130° FLUSH TENSION HEAD
 CLOSE TOLERANCE SHANK
 TITANIUM, 95 KSI SHEAR STRENGTH
 1/16" GRIP VARIATION

DRAWING NO:
BG2083(-)(-)(-)(-)

DRAWN BY: **G.MARTINEZ** DRAWN DATE: **08-22-13**

APPROVED BY: _____ CHECKED DATE: _____

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MONOGRAM CAGE CODE: **98524** DCN NO: **17-0059** REV: **T**

DCN DATE: **03/03/17** SHEET 1 OF 2

PART NUMBER	COMPONENTS							
	BODY		SLEEVE		NUT		COREBOLT	
	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH
BG2083AA-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ALUMINUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A	304 SS PER AMS5639 FULLY ANNEALED	PASSIVATE PER AMS-QQ-P-35, NO LUBE ALLOWED ON O.D.	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2083A-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ALUMINUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A	304 SS PER AMS5639 FULLY ANNEALED	PASSIVATE PER AMS-QQ-P-35	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2083B-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	PHOSPHATE FLUORIDE PER BAC5861	304 SS PER AMS5639 FULLY ANNEALED	PASSIVATE PER AMS-QQ-P-35	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2083C-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	PHOSPHATE FLUORIDE PER BAC5861	304 SS PER AMS5639 FULLY ANNEALED	ALUMINUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL. A OR HI-KOTE PER NAS4006	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2083D-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ALUMINUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A	304 SS PER AMS5639 FULLY ANNEALED	ALUMINUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL. A OR HI-KOTE PER NAS4006	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2083E-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ALUMINUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A	304 SS PER AMS5639 FULLY ANNEALED	IVD ALUM. COAT PER MIL-C-83488 CL 3, TYPE II	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2083EE-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ALUMINUM COAT HI-KOTE PER NAS4006	304 SS PER AMS5639 FULLY ANNEALED	IVD ALUM. COAT PER MIL-C-83488 CL 3, TYPE II	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	PHOSPHATE FLUORIDE PER P5741	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2083F-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ANODIZE PER ISO 8080-1985	304 SS PER AMS5639 FULLY ANNEALED	PASSIVATE PER AMS-QQ-P-35	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2083G-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ALUMINUM COAT HI-KOTE PER NAS4006	304 SS PER AMS5639 FULLY ANNEALED	ALUMINUM COAT HI-KOTE PER NAS4006	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2083H-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE	304 SS PER AMS5639 FULLY ANNEALED	ALUMINUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	NONE ⁹	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2083HH-(-)(-)(-)	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE	304 SS PER AMS5639 FULLY ANNEALED	ALUMINUM COAT HI-KOTE PER NAS4006	6AI-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN, TENSILE	ALUMINUM COAT HI-KOTE PER NAS4006	6AI-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE

4 2ND DASH NO.	GRIP RANGE (INCHES)	
	MIN GRIP	MAX GRIP
-02.5	.092	.156
-03	.126	.187
-04	.188	.250
-05	.251	.312
-06	.313	.375
-07	.376	.437
-07.5	.406	.469
-08	.438	.500
-09	.501	.562
-10	.563	.625
-11	.626	.687
-12	.688	.750
-13	.751	.812
-14	.813	.875
-15	.876	.937
-16	.938	1.000
-17	1.001	1.062
-18	1.063	1.125
-19	1.126	1.187
-20	1.188	1.250
-21	1.251	1.312
-22	1.313	1.375
-23	1.376	1.437
-24	1.438	1.500
-25	1.501	1.562
-26	1.563	1.625
-27	1.626	1.687
-28	1.688	1.750
-29	1.751	1.812
-30	1.813	1.875
-31	1.876	1.937
-32	1.938	2.000

INSTALLATION SPECIFICATION: BG 2003
 PROCUREMENT SPECIFICATION: BG 2000

GENERAL NOTES:

- LUBRICANT: SOLID FILM LUBRICANT PER AS5272, TYPE I AND/OR PARAFFIN WAX OR CETYL ALCOHOL AS REQUIRED FOR PERFORMANCE. AS5272 THICKNESS AND PAINT ADHESION REQUIREMENTS DO NOT APPLY. SOLID FILM LUBRICANT NOT ALLOWED ON COREBOLT HEAD AND BODY HEAD SURFACES. SLIGHT OVERSPRAY INTO RECESS IS ACCEPTABLE. FULL COVERAGE OF SOLID FILM LUBRICANT ON EXTERIOR OF BODY SHANK IS REQUIRED FOR NON-ALUM COATED BODY.
- LOCKING FEATURE CONSISTS OF THREE (3) INDENTATIONS LOCATED 120° APART ON THE PERIPHERY OF THE NUT COMPONENT.
- SEE BG2003 FOR INSTALLATION AND REMOVAL INFORMATION.
- ⁴ GRIP LENGTHS NOT LISTED MAY BE AVAILABLE UPON REQUEST.
- ⁵ INSTALLATION HOLE SHALL BE RADIUS TO CLEAR HEAD TO SHANK RADIUS.
- ALL DIMENSIONS TO BE MET AFTER FINISH AND BEFORE LUBRICATION.
- CONICAL SURFACE OF HEAD SHALL BE CONCENTRIC TO SHANK DIAMETER WITHIN .005" T.I.R.
- ⁸ INSERT FABRICATED FROM ACETAL PLASTIC PER ASTM-D4181.
- ⁹ ASSEMBLIES HAVING THE NUT COMPONENT MANUFACTURED BEFORE 02-23-12 SHALL NOT BE REJECTED FOR ALUM COAT FINISH AND CAN BE USED UNTIL STOCK DEPLETION.

U.S. PATENT NO.: 5,498,110; 5,634,751 AND FOREIGN PATENTS PENDING



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

TITLE:
**OSI BOLT™
 130° FLUSH TENSION HEAD
 CLOSE TOLERANCE SHANK
 TITANIUM, 95 KSI SHEAR STRENGTH
 1/16" GRIP VARIATION**

DRAWING NO:
BG2083(-)(-)(-)

DRAWN BY: **G.MARTINEZ** DRAWN DATE: **08-22-13**

APPROVED BY: _____ CHECKED DATE: _____

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