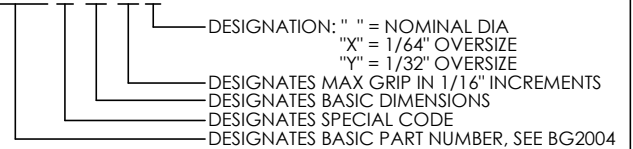


PART NUMBER	NOM DIA	B HEX	C REF	D DIA	E DIA MAX	F FLATS	H HEAD HTS	J DIA MIN	K MAX	L REF	N MIN	R MAX
BG2081(-)05(-)	5/32	.250 .244	1/4	.1635 .1625	.1615	.084 .082	.065 .058	.250	.670	.735	.272	.025
BG2081(-)06(-)	3/16	.312 .305	5/16	.1895 .1885	.1875	.112 .109	.075 .068	.290	.750	.800	.340	.030
BG2081(-)06(-)X	13/64			.2026 .2016	.1995			.300		.850		
BG2081(-)06(-)Y	7/32			.2182 .2172	.2150			.320		.850		
BG2081(-)08(-)	1/4	.375 .367	3/8	.2495 .2485	.2470	.135 .131	.090 .083	.380	.800	.950	.409	.040
BG2081(-)08(-)X	17/64			.2651 .2641	.2620			.400		1.025		
BG2081(-)08(-)Y	9/32			.2807 .2797	.2775							
BG2081(-)10(-)	5/16	.437 .429	7/16	.3120 .3110	.3090	.152 .149	.112 .105	.475	.950	1.000	.548	.040
BG2081(-)10(-)X	21/64			.3276 .3266	.3245			.495		1.075		
BG2081(-)10(-)Y	11/32			.3432 .3422	.3400			.515				
BG2081(-)12(-)	3/8	.500 .491	10	.3745 .3735	.3715	.184 .181	.140 .133	.560	1.100	1.200	.548	.040
BG2081(-)12(-)X	25/64			.3901 .3891	.3870			.580		1.275		
BG2081(-)12(-)Y	13/32			.4057 .4047	.4025			.600				

PART NUMBER	MIN AVAILABLE GRIP DASH NO.	RECOMMENDED HOLE SIZE FOR:		PREVAILING TORQUE (IN-LBS) MIN	DOUBLE SHEAR (LBS) MIN	TENSILE STRENGTH (LBS) MIN
		△ CLEARANCE INSTALLATION	△ INTERFERENCE INSTALLATION			
BG2081(-)05(-)	-02	.167 .165	.1635 .1622	2	4010	1350
BG2081(-)06(-)		.192 .190	.1890 .1875	4	5360	1600
BG2081(-)06(-)X		.205 .203	.2015 .1997		6130	
BG2081(-)06(-)Y		.2205 .2185	.2171 .2152	7100		
BG2081(-)08(-)		.252 .250	.2489 .2472	6	9300	3000
BG2081(-)08(-)X		.268 .266	.2640 .2622		10500	
BG2081(-)08(-)Y		.2835 .2815	.2796 .2777	11800		
BG2081(-)10(-)		.315 .313	.3110 .3092	8	14600	5000
BG2081(-)10(-)X		.3305 .3285	.3265 .3247		16000	
BG2081(-)10(-)Y		.346 .344	.3421 .3402	17600		
BG2081(-)12(-)		-03	.377 .375	.3735 .3717	21000	7000
BG2081(-)12(-)X			.393 .391	.3891 .3872	22700	
BG2081(-)12(-)Y	.409 .407		.4047 .4027	24600		

EXAMPLE OF PART NUMBER:

BG2081 (-)08-09 (-)



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

<p>MONOGRAM AEROSPACE FASTENERS a TriMas company 3423 SOUTH GARFIELD AVENUE COMMERCE, CALIFORNIA 90040 (323) 722-4760 FAX (323) 727-1029</p>	TITLE:	DRAWING NO:		
	OSI BOLT™ PROTRUDING HEX HEAD CLOSE TOLERANCE SHANK TITANIUM, 95 KSI SHEAR 1/16" GRIP VARIATION		BG2081(-)(-)(-)(-)	
	DRAWN BY: M. DOMINGUEZ	DRAWN DATE: 8/22/13	APPROVED BY:	CHECKED DATE:
	PROPRIETARY AND CONFIDENTIAL: NOTICE: THIS DRAWING IS PART OF THE PROPRIETARY ARTICLE HEREIN DISCLOSED, OWNED BY MONOGRAM AEROSPACE FASTENERS. ANY PARTY BY ACCEPTING THIS DOCUMENT ASSUME CUSTODY THEREOF AND AGREES: A: THE INFORMATION SET FORTH HEREIN IS GIVEN IN CONFIDENCE AND THIS DOCUMENT WILL NOT BE COPIED OR REPRODUCED IN WHOLE OR IN PART, NOR ITS CONTENTS REVEALED IN ANY MANNER TO ANY PERSON EXCEPT TO MEET THE PURPOSE FOR WHICH IT WAS DELIVERED. B: WITHOUT THE WRITTEN CONSENT OF MONOGRAM AEROSPACE FASTENERS, THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN UNDER NO CIRCUMSTANCES WILL BE USED IN THE MANUFACTURE OR REPRODUCTION OF THE ARTICLE DISCLOSED, AND THE DELIVERY OF THIS DOCUMENT SHALL NOT CONSTITUTE ANY RIGHT OR LICENSE TO DO SO.	MONOGRAM CAGE CODE: 98524	ECN NO: 15-0250 ECN DATE: 6/24/15	REV: K SHEET 1 OF 2

PART NUMBER	COMPONENTS							
	BODY		SLEEVE		NUT		COREBOLT	
	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH
BG2081A-(-)-((-))	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ALUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A	304 SS PER AMS5639 FULLY ANNEALED	PASSIVATE PER AMS2700	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2081B-(-)-((-))	6AL-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 AMS2700	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2081C-(-)-((-))	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	PHOSPHATE FLUORIDE PER BAC5861	304 SS PER AMS5639 FULLY ANNEALED	ALUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A OR HI-KOTEM™ PER NAS4006	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2081D-(-)-((-))	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ALUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A	304 SS PER AMS5639 FULLY ANNEALED	ALUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A OR HI-KOTEM™ PER NAS4006	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2081E(-)-((-))	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ALUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A	304 SS PER AMS5639 FULLY ANNEALED	IVD ALUM COAT PER MIL-C-83488 TYPE II, CL 3	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2081F-(-)-((-))	6AL-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 AMS2700	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2081G-(-)-((-))	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	ALUMINUM COAT HI-KOTEM™ PER NAS4006	304 SS PER AMS5639 FULLY ANNEALED	ALUMINUM COAT HI-KOTEM™ PER NAS4006	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN TENSILE	PHOSPHATE FLUORIDE PER BAC5861	6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2081H-(-)-((-))	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE	304 SS PER AMS5639 FULLY ANNEALED	ALUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN TENSILE	ALUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A	6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE

INSTALLATION SPECIFICATION: BG2003
 PROCUREMENT SPECIFICATION: BG2000

GENERAL NOTES:

- LUBRICANT: DRY FILM LUBRICANT PER THE CHEMICAL REQUIREMENTS OF MIL-L-PRF-46010, TYPE I AND/OR PARAFFIN WAX OR CETYL ALCOHOL AS REQUIRED FOR PERFORMANCE.
- LOCKING FEATURE CONSISTS OF THREE (3) INDENTATIONS LOCATED 120° APART ON THE PERIPHERY OF THE NUT COMPONENT.
- SEE BG2003 FOR INSTALLATION AND REMOVAL INFORMATION.
- GRIP LENGTHS NOT LISTED MAY BE AVAILABLE UPON REQUEST.
- INSTALLATION HOLE SHALL BE RADIUSUED TO CLEAR HEAD TO SHANK RADIUS.
- ALL DIMENSIONS TO BE MET AFTER FINISH AND BEFORE LUBRICATION.
- BEARING SURFACE OF HEAD SHALL BE PERPENDICULAR TO SHANK DIAMETER WITHIN .002 T.I.R.
- INSERT FABRICATED FROM ACETAL PLASTIC PER ASTM-D4181.

2ND DASH NO.	GRIP RANGE (INCHES)		2ND DASH NO.	GRIP RANGE (INCHES)	
	MIN GRIP	MAX GRIP		MIN GRIP	MAX GRIP
-02	.063	.125	-18	1.063	1.125
-03	.126	.187	-19	1.126	1.187
-04	.188	.250	-20	1.188	1.250
-05	.251	.312	-21	1.251	1.312
-06	.313	.375	-22	1.313	1.375
-07	.376	.437	-23	1.376	1.437
-08	.438	.500	-24	1.438	1.500
-09	.501	.562	-25	1.501	1.562
-10	.563	.625	-26	1.563	1.625
-11	.626	.687	-27	1.626	1.687
-12	.688	.750	-28	1.688	1.750
-13	.751	.812	-29	1.751	1.812
-14	.813	.875	-30	1.813	1.875
-15	.876	.937	-31	1.876	1.937
-16	.938	1.000	-32	1.938	2.000
-17	1.001	1.062			

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

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<small>PROPRIETARY AND CONFIDENTIAL: NOTICE: THIS DRAWING IS PART OF THE PROPRIETARY ARTICLE HEREIN DISCLOSED, OWNED BY MONOGRAM AEROSPACE FASTENERS, ANY PARTY BY ACCEPTING THIS DOCUMENT ASSUME CUSTODY THEREOF AND AGREES: A: THE INFORMATION SET FORTH HEREIN IS GIVEN IN CONFIDENCE AND THIS DOCUMENT WILL NOT BE COPIED OR REPRODUCED IN WHOLE OR IN PART, NOR ITS CONTENTS REVEALED IN ANY MANNER TO ANY PERSON EXCEPT TO MEET THE PURPOSE FOR WHICH IT WAS DELIVERED. B: WITHOUT THE WRITTEN CONSENT OF MONOGRAM AEROSPACE FASTENERS, THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN UNDER NO CIRCUMSTANCES WILL BE USED IN THE MANUFACTURE OR REPRODUCTION OF THE ARTICLE DISCLOSED, AND THE DELIVERY OF THIS DOCUMENT SHALL NOT CONSTITUTE ANY RIGHT OR LICENSE TO DO SO.</small>			MONOGRAM CAGE CODE:	98524	ECN NO:	15-0250	REV:	K
					ECN DATE:	6/24/15	SHEET 2 OF 2	