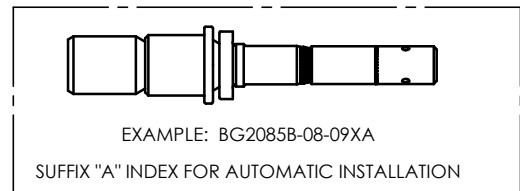
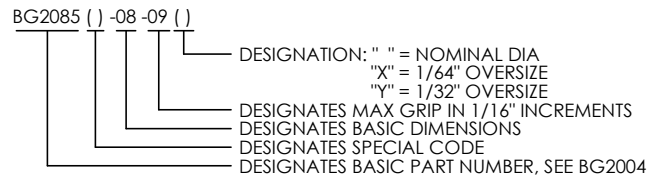


PART NUMBER	NOM DIA	A DIA	C REF	D DIA	E DIA MAX	F FLATS	H HEAD HTS	J DIA MIN	K MAX	L REF	M	N	R MAX
BG2085 ( )-05- ( )	5/32	.322 .315	1/4	.1635 .1625	.1615	.084 .082	.065 .058	.250	.670	.735	.270 .260	.037 .034	.025
BG2085 ( )-06- ( )	3/16	.377	5/16	.1895 .1885	.1875	.112 .109	.075 .067	.290	.750	.800	.320 .310	.047 .044	.030
BG2085 ( )-06- ( )X	13/64	.370		.2026 .2016	.1995			.300		.850	.330 .320		
BG2085 ( )-06- ( )Y	7/32	.390 .383		.2182 .2172	.2150			.320		.850	.330 .320		
BG2085 ( )-08- ( )	1/4	.440 .430		.2495 .2485	.2470			.380		.800	.405 .395		
BG2085 ( )-08- ( )X	17/64	.430	.2651 .2641	.2620	.400	.950	.420 .410						
BG2085 ( )-08- ( )Y	9/32	.460 .450	.2807 .2797	.2775	.415	1.025	.420 .410						
BG2085 ( )-10- ( )	5/16	.505 .499	.3120 .3110	.3090	.475	1.000	.460 .450	.068 .063					
BG2085 ( )-10- ( )X	21/64	.520 .510	.3276 .3266	.3245	.495	1.075	.480 .470						
BG2085 ( )-10- ( )Y	11/32	.520 .510	.3432 .3422	.3400	.515	1.075	.480 .470						
BG2085 ( )-12- ( )	3/8	.600 .594	.3745 .3735	.3715	.560	1.200	.560 .550		.082 .077				
BG2085 ( )-12- ( )X	25/64	.620 .610	.3901 .3891	.3870	.580	1.100	.575 .565						
BG2085 ( )-12- ( )Y	13/32	.620 .610	.4057 .4047	.4025	.600	1.275	.565						
BG2085 ( )-14- ( )	7/16	.676 .668	.4370 .4360	.4335	.655	1.250	.640 .630	.094 .089					
BG2085 ( )-14- ( )X	29/64	.676 .668	.4526 .4516	.4490	.680	1.480	.630						
BG2085 ( )-14- ( )Y	1/2	.770 .762	.4995 .4985	.4955	.750	1.350	.740 .730						
BG2085 ( )-16- ( )	1/2	.770 .762	.4995 .4985	.4955	.750	1.350	.740 .730						

PART NUMBER	MIN AVAILABLE GRIP DASH NO.	RECOMMENDED HOLE SIZE FOR:		PREVAILING TORQUE MIN	DOUBLE SHEAR MIN	TENSILE STRENGTH MIN
		CLEARANCE INSTALLATION	INTERFERENCE INSTALLATION			
		INCH	INCH	IN-LBS	LBS	LBS
BG2085 ( )-05- ( )	-02	.167 .165	.1635 .1622	2	4010	1350
BG2085 ( )-06- ( )		.192 .190	.1890 .1875	4	5380	1600
BG2085 ( )-06- ( )X		.205 .203	.2015 .1997		6130	
BG2085 ( )-06- ( )Y		.2205 .2185	.2171 .2152		7100	
BG2085 ( )-08- ( )		.252 .250	.2489 .2472		9300	
BG2085 ( )-08- ( )X		.268 .266	.2640 .2622	6	10500	3000
BG2085 ( )-08- ( )Y		.2835 .2815	.2796 .2777	11800		
BG2085 ( )-10- ( )		.315 .313	.3110 .3092	8	14600	5000
BG2085 ( )-10- ( )X		.3305 .3285	.3265 .3247	16000		
BG2085 ( )-10- ( )Y		.346 .344	.3421 .3402	17600		
BG2085 ( )-12- ( )		.377 .375	.3735 .3717	21000		
BG2085 ( )-12- ( )X		.393 .391	.3891 .3872	22700	7000	
BG2085 ( )-12- ( )Y		.409 .407	.4047 .4027	10	24600	
BG2085 ( )-14- ( )		.440 .438	.4360 .4340	28500	9500	
BG2085 ( )-14- ( )X		.456 .454	.4516 .4496	30600		
BG2085 ( )-16- ( )		.502 .500	.4985 .4965	12		37000



EXAMPLE OF PART NUMBER:



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™ PROTRUDING HEAD TITANIUM, 95 KSI SHEAR STRENGTH 1/16" GRIP VARIATION






DRAWING NO: BG2085 ( ) - ( ) - ( ) ( )

DRAWN BY: M. DOMINGUEZ DRAWN DATE: 08/20/13

APPROVED BY: CHECKED DATE:






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MONOGRAM CAGE CODE: 98524 ECN NO: 15-0259 REV: AA ECN DATE: 06/26/15 SHEET 1 OF 2

PART NUMBER	COMPONENTS							
	BODY		SLEEVE		NUT		COREBOLT	
	MATERIAL	FINISH 	MATERIAL	FINISH 	MATERIAL	FINISH 	MATERIAL	FINISH
BG2085A-(-)(-)(-)(-)	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
BG2085B-(-)(-)(-)(-)	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
BG2085C-(-)(-)(-)(-)	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
BG2085D-(-)(-)(-)(-)	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
BG2085E(-)(-)(-)(-)	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 ALUMINUM 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
BG2085EE-(-)(-)(-)(-)	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	IVD ALUMINUM 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 PS741	6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2085F-(-)(-)(-)(-)	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
BG2085G-(-)(-)(-)(-)	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
BG2085H-(-)(-)(-)(-)	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		6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2085HH-(-)(-)(-)(-)	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE	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	ALUMINUM COAT HI-KOTEM™ PER NAS4006	6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE
BG2085J-(-)(-)(-)(-)	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED AS REQ'D FOR PERFORMANCE	IVD ALUMINUM COAT PER MIL-C-83488 TYPE II, CL 3	304 SS PER AMS5639 FULLY ANNEALED	IVD ALUMINUM COAT PER MIL-C-83488 TYPE II, CL 3	6AL-4V Ti PER AMS4967 OR AMS4928 HEAT TREATED TO 160 KSI MIN TENSILE		6AL-6V-2Sn Ti PER AMS4971 HEAT TREATED AS REQ'D FOR PERFORMANCE	NONE

INSTALLATION SPECIFICATION: BG2003  
 PROCUREMENT SPECIFICATION: BG2000

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. OVERSPRAY AND/OR FULL COVERAGE OF SOLID FILM LUBRICANT ON EXTERIOR OF BODY HEAD IS ALLOWED. FULL COVERAGE OF SOLID FILM LUBRICANT ON EXTERIOR OF BODY SHANK FOR NON-ALUMINUM FINISH PARTS IS REQUIRED.
- 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 RADIUSED 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 .002 T.I.R.
-  INSERT FABRICATED FROM ACETAL PLASTIC PER ASTM-D6778.
-  ALUMINUM PIGMENTED COATING PER BMS-10-85, TYPE I, CL. A IS EQUIVALENT TO NTA69555, TYPE I, CL. A
-  ASSEMBLIES HAVING THE NUT COMPONENT MANUFACTURED BEFORE 2-23-12 SHALL NOT BE REJECTED FOR ALUMINUM COAT FINISH AND CAN BE USED UNTIL STOCK DEPLETION.

 2ND DASH NO.	GRIP RANGE (INCHES)	
	MIN GRIP	MAX GRIP
-02	.063	.125
-03	.126	.187
-04	.188	.250
-05	.251	.312
-06	.313	.375
-07	.376	.437
-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

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



TITLE:

OSI BOLT™  
 PROTRUDING HEAD  
 TITANIUM, 95 KSI SHEAR STRENGTH  
 1/16" GRIP VARIATION

DRAWING NO:

BG2085(-)(-)(-)(-)

DRAWN BY:

M. DOMINGUEZ

DRAWN DATE:

08/20/13

APPROVED BY:

CHECKED DATE:

PROPRIETARY AND CONFIDENTIAL:

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SHEET 2 OF 2