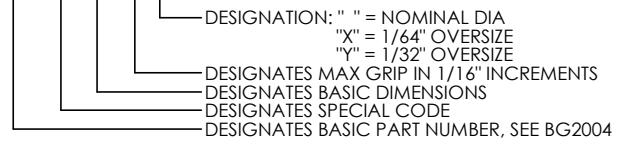


PART NUMBER	NOM DIA		A DIA THEO		A' DIA MIN		C REF		D DIA		E DIA MAX		F FLATS		H REF		J DIA MIN		K MAX		L REF		R MAX		V GAGE PROT		W GAGE DIA		Z MAX		MIN AVAILABLE GRIP DASH NO.								
	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm	INCH	mm											
BG2186(-)05(-)	5/32	3.97	.283	7.19	.258	6.55	1/4	6.35	.1635	4.15	.1625	4.13	.1615	4.10	.084	2.13	.081	2.06	.049	1.24	.250	6.35	.670	17.02	.735	18.67	.025	0.64	.0330	0.84	.0298	0.76	.2028	5.151	.010	0.25	-02.5		
BG2186(-)06(-)	3/16	4.76	.327	8.31	.291	7.39	5/16	7.94	.1895	4.81	.1885	4.79	.1875	4.76	.112	2.84	.109	2.77	.056	1.42	.290	7.37	.750	19.05	.800	20.32	.030	0.76	.0345	0.88	.0313	0.79	.2441	6.200	.2439	6.195	.015	0.38	-03
BG2186(-)08(-)	1/4	6.35	.428	10.87	.392	9.95		.2495	6.34	.2485	6.31	.2475	6.27	.135	3.43	.131	3.33	.073	1.85	.380	9.65	.800	20.32	.950	24.13	.0402			1.02	.0370	0.94	.3315	8.420	.3313	8.415				
BG2186(-)10(-)	5/16	7.94	.536	13.61	.500	12.70	3/8	9.53	.3120	7.92	.3110	7.90	.3095	7.85	.152	3.86	.149	3.78	.092	2.34	.475	12.07	.950	24.13	1.000	25.40	.040	1.02	.0432	1.10	.0396	1.01	.4320	10.973	.4318	10.968	.015	0.38	-04
BG2186(-)12(-)	3/8	9.53	.641	16.28	.605	15.36	7/16	11.11	.3745	9.51	.3735	9.49	.3720	9.44	.184	4.67	.181	4.60	.110	2.79	.560	14.22	1.100	27.94	1.200	30.48			.0649	1.65	.0613	1.56	.4854	12.329	.4852	12.324			

EXAMPLE OF PART NUMBER:

BG2186 (-) - 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™**  
 100° FLUSH (ASNA2391) SHEAR HEAD  
 CLOSE TOLERANCE SHANK  
 TITANIUM, 95 KSI SHEAR STRENGTH  
 1/16" GRIP VARIATION

DRAWING NO:  
**BG2186(-)-(-)-((-)**

DRAWN BY: **M. DOMINGUEZ** DRAWN DATE: **08/22/13**

APPROVED BY: CHECKED DATE:

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MONOGRAM CAGE CODE: **98524** ECN NO: **13-0511** REV: **G**  
 ECN DATE: **12/03/13** SHEET 1 OF 2

TABLE IB

PART NUMBER	RECOMMENDED HOLE SIZE FOR:				PREVAILING TORQUE MIN		DOUBLE SHEAR MIN		TENSILE STRENGTH MIN		BREAK-OFF MAX			
	CLEARANCE INSTALLATION		INTERFERENCE INSTALLATION											
	INCH	mm	INCH	mm	IN-LBS	N-M	LBS	kN	LBS	kN	INCH	mm		
BG2186(-)-05(-)	.167 .165	4.24 4.19	.1635 .1622	4.15 4.12	2	0.23	4010	17.8	1350	6.4	.015	0.38		
BG2186(-)-06(-)	.192 .190	4.88 4.83	.1885 .1877	4.79 4.77	4	0.45	5380	23.8	1600	7.1				
BG2186(-)-08(-)	.252 .250	6.40 6.35	.2485 .2472	6.31 6.28	6	0.68	9300	41.4	3000	13.3				
BG2186(-)-10(-)	.315 .313	8.00 7.95	.3110 .3092	7.90 7.85	8	0.90	14600	64.9	5000	22.2			.020	0.51
BG2186(-)-12(-)	.377 .375	9.58 9.53	.3735 .3717	9.49 9.44	10	1.15	21000	93.4	7000	31.1				

TABLE II

2ND DASH NO.	GRIP RANGE (INCHES)		GRIP RANGE (mm)	
	MIN GRIP	MAX GRIP	MIN GRIP	MAX GRIP
-02	.063	.125	1.60	3.18
-02.5	.092	.156	2.34	3.96
-03	.126	.187	3.20	4.75
-04	.188	.250	4.78	6.35
-05	.251	.312	6.38	7.92
-06	.313	.375	7.95	9.53
-07	.376	.437	9.55	11.10
-08	.438	.500	11.13	12.70
-09	.501	.562	12.73	14.27
-10	.563	.625	14.30	15.88
-11	.626	.687	15.90	17.45
-12	.688	.750	17.48	19.05
-13	.751	.812	19.08	20.62
-14	.813	.875	20.65	22.23
-15	.876	.937	22.25	23.80
-16	.938	1.000	23.83	25.40
-17	1.001	1.062	25.43	26.97
-18	1.063	1.125	27.00	28.58
-19	1.126	1.187	28.60	30.15
-20	1.188	1.250	30.18	31.75
-21	1.251	1.312	31.78	33.32
-22	1.313	1.375	33.35	34.93
-23	1.376	1.437	34.95	36.50
-24	1.438	1.500	36.53	38.10
-25	1.501	1.562	38.13	39.67
-26	1.563	1.625	39.70	41.28
-27	1.626	1.687	41.30	42.85
-28	1.688	1.750	42.88	44.45
-29	1.751	1.812	44.48	46.02
-30	1.813	1.875	46.05	47.63
-31	1.876	1.937	47.65	49.20
-32	1.938	2.000	49.23	50.80

TABLE III


PART NUMBER	COMPONENTS							
	BODY		SLEEVE		NUT		COREBOLT	
	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH
BG2186A(-)-(-)-(-)	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
BG2186B(-)-(-)-(-)		PHOSPHATE FLUORIDE PER BAC5861		ALUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A OR HI-KOTETM PER NAS4006				
BG2186C(-)-(-)-(-)		ALUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A		IVD ALUMINUM COAT PER MIL-C-83488 TYPE II, CL 3				
BG2186D(-)-(-)-(-)		ANODIZE PER ISO 8080-1985		PASSIVATE PER AMS2700				
BG2186E(-)-(-)-(-)		ALUMINUM COAT HI-KOTETM PER NAS4006		ALUMINUM COAT HI-KOTETM PER NAS4006				
BG2186F(-)-(-)-(-)		NONE		ALUM PIGMENTED COAT PER BMS-10-85 TYPE I, CL A				
BG2186G(-)-(-)-(-)		IVD ALUMINUM COAT PER MIL-C-83488 TYPE II, CL 3		IVD ALUMINUM COAT PER MIL-C-83488 TYPE II, CL 3				
BG2186H(-)-(-)-(-)								
BG2186J(-)-(-)-(-)								

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. SOLID FILM LUBRICANT NOT ALLOWED ON COREBOLT HEAD AND BODY SURFACES. SLIGHT OVERSPRAY INTO RECESS IS ACCEPTABLE. 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 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.
- INSERT FABRICATED FROM ACETAL PLASTIC PER ASTM-D4181.
- RAISED TABS.

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

 a TriMas company 3423 SOUTH GARFIELD AVENUE COMMERCE, CALIFORNIA 90040 (323) 722-4760 FAX (323) 727-1029	TITLE:	OSI BOLT™ 100° FLUSH (ASNA2391) SHEAR HEAD CLOSE TOLERANCE SHANK TITANIUM, 95 KSI SHEAR STRENGTH 1/16" GRIP VARIATION		DRAWING NO:	BG2186(-)-(-)-(-)				
				DRAWN BY:	M. DOMINGUEZ	DRAWN DATE:	08/22/13		
				APPROVED BY:			CHECKED DATE:		
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