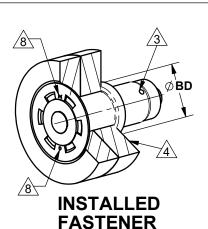
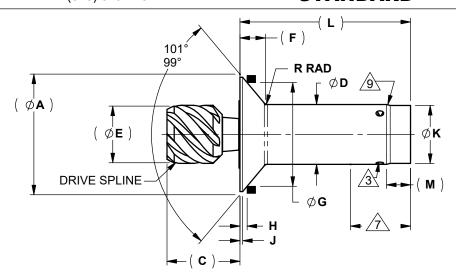


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# Ergo-Tech® BLIND BOLT ENGINEERING STANDARD





### **TABLE I**

PART/DIA. DASH NO.	(ØA) THEO INTER REF	MAX	(C) DRIVER LENGTH REF	Ø D SHANK	_	(F) HEAD HEIGHT REF	R RADIUS MAX	Ø G GAUGE	H GAUGE HEIGHT	SINGLE SHEAR LBS (MIN)	TENSILE LBS (MIN)	Ø K LEAD- IN	(M) REF	Ø BD MIN 5  EXTENDED GRIP 6	RECOMMENDED INSTALLATION HOLE SIZES
ER213-05	.3304	.010	.250	.1635 .1625	.180	.070	.015	.2832 .2830	.0202 .0175	2005	1400	.1565 .1539	.060	.205	.167 .164
ER213-06	.3813	.015	.250	.1895 .1885	.180	.081	.015	.3272 .3270	.0230 .0200	2690	1600	.1830 .1804	.065	.238	.193 .190
ER213-08	.5066	.015	.300	.2495 .2485	.235	.108	.020	.4320 .4318	.0322 .0288	4650	3000	.2430 .2404	.085	.313	.253 .250
ER213-10	.6335	.015	.350	.3120 .3110	.275	.135	.025	.5451 .5449	.0378 .0342	7300	5000	.3055 .3029	.230	.391	.316 .313
ER213-12	.7604	.020	.400	.3745 .3735	.320	.161	.030	.6582 .6580	.0439 .0401	10500	7000	.3680 .3654	.305	.469	.378 .375

					DIMENSI	ONS IN INCHES		
1	ECN 150	60 TABLE DEEODMATTING	Current Design Activity	PROCUREMENT	DRAWN BY	J. SCHLOBOHM		
AC ECN 15069 - TABLE REFORMATTING		09 - TABLE REFORMATTING	CAGE Code 0HDW7	SPEC T0108	CHECKED BY	SIGNATURE ON FILE		
ISSUED	05/15/2007	BLIND BOLT FASTENER, HIGH STRENGTH, FRICTION THREAD			ER213			
REVISED	05/15/2022		FLUSH TENSION HEAD, CLOSE			<b>5</b>		
PAGE	1 OF 4	TOLERANCE SHANK, II	TANIUM/A-286 (95 KSI SHEAR)		SK1282	22		

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## Ergo-Tech® BLIND BOLT ENGINEERING STANDARD

#### **TABLE II**

GRIP NUMBER TABULATION 10									
GRIP DASH NUMBE		N GRIP NGE	OVERLAP MAX GRIP	-05 DIA.	-06 DIA.	-08 DIA.	-10 DIA.	-12 DIA.	
R	MIN.	MAX.	6	(L)	(L)	(L)	(L)	(L)	
-03	.126	.187	.195	.513	.544	.649	-	-	
-04	.188	.250	.258	.576	.607	.711	-	-	
-05	.251	.312	.320	.638	.669	.774	.854	-	
-06	.313	.375	.383	.701	.732	.836	.916	1.010	
-07	.376	.437	.445	.763	.794	.899	.979	1.073	
-08	.438	.500	.508	.826	.857	.961	1.041	1.135	
-09	.501	.562	.570	.888	.919	1.024	1.104	1.198	
-10	.563	.625	.633	.951	.982	1.086	1.166	1.260	
-11	.626	.687	.695	1.013	1.044	1.149	1.229	1.323	
-12	.688	.750	.758	-	1.107	1.211	1.291	1.385	
-13	.751	.812	.820	-	1.169	1.274	1.354	1.448	
-14	.813	.875	.883	-	1.232	1.337	1.416	1.510	
-15	.876	.937	.945	-	-	1.399	1.479	1.573	
-16	.938	1.000	1.008	-	-	-	1.541	1.635	
-17	1.001	1.062	1.070	-	-	-	1.604	1.698	
-18	1.063	1.125	1.133	-	-	-	1.666	1.760	
-19	1.126	1.187	1.195	-	-	-	1.729	1.823	
-20	1.188	1.250	1.258	-	-	-	1.791	1.885	

SINGLE SHEAR TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NASM 1312-20 AND APPLIES TO GRIPS 05-05 MIN, 06-06 MIN, 08-07 MIN, 10-09 MIN AND 12-10 MIN AND LONGER. TENSILE STRENGTH TESTING SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF NASM 1312-8 AND APPLIES TO GRIPS 05-06 MAX, 06-07 MAX, 08-08 MAX, 10-10 MAX AND 12-12 MAX AND LONGER.

2. DIMENSIONS ARE IN INCHES AND ARE TO BE MET AFTER FINISH.

3.\(\) 3 INDENTATIONS 120° APART TO PROVIDE THREAD LOCK.

4. BLIND SIDE HEAD MAY BE INSTALLED ON 5° MAXIMUM SLOPE.

5 THE AVERAGE SMALLEST AND LARGEST OBSERVED VALUES ON THE SAME SPECIMEN SHAL

THE AVERAGE SMALLEST AND LARGEST OBSERVED VALUES ON THE SAME SPECIMEN SHALL BE EQUAL TO OR GREATER THAN THE STATED MINIMUM.

6\ EXTENDED GRIP "BD MIN" VALUE APPLIES TO A PART DRIVEN .008" ± .002" ABOVE THE DESIGN MAXIMUM GRIP. SEE GRIP TABLE ON PAGE 2.

SLEEVE DIA. MAY BE UP TO .0003" OVERSIZE IN BAND ANNEAL ZONE. ZONE EXTENDS FROM APPROXIMATELY BLIND END - .470" FOR THE -05 DIA., - .525" FOR THE -06 DIA, -.635" FOR THE -08 DIA., - .700" FOR THE -10 DIA., - .750" FOR THE -12 DIA.

					_	DIMENSI	ONS IN INCHES	
AC		ECN 15069 - TABLE REFORMATTING		Current Design Activity	PROCUREMENT	DRAWN BY	J. SCHLOBOHM	
				CAGE Code 0HDW7	SPEC T0108	CHECKED BY	SIGNATURE ON FILE	
ISS	UED	05/15/2007	BLIND BOLT FASTENER, HIGH STRENGTH, FRICTION THREAD			ER213		
RE	VISED	05/15/2022	/	LUSH TENSION HEAD, CLOSE		L1\2 1	<b>5</b>	
PA	(GE	2 OF 4	TOLERANCE SHANK, II	TANIUM/A-286 (95 KSI SHEAR)		SK1282	22	



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## Ergo-Tech® BLIND BOLT ENGINEERING STANDARD

### TABLE III 15.

FINISH	MAT	ERIAL	FINISH		PROCUREMENT	
CODE	NUT BODY	CORE BOLT	NUT BODY	CORE BOLT	SPECIFICATION	
NONE			PASSIVATE PER AMS 2700 TYPE 2 OR TYPE 8			
D			IVD ALUMINUM COAT PER MIL- DTL-83488, TYPE II, CLASS 3 AND EN6118			
AC 12.	A286 CRES PER CHEMICAL COMPOSITION AMS 5737 OR	6Al-4V TITANIUM PER AMS 4967 OR AMS 4928	CHROMATED ALUMINUM PIGMENTED COATING PER NAS4006 & EN4473, TYPE I, CLASS A	INCOTEC TEC-LUBE DRY FILM LUBE PER AS5272 OR EQUIVALENT	T0108	
ACN	AMS 5732	AMS 5732		NON-CHROMATED ALUMINUM PIGMENTED COATING PER NAS4006 AND EN4473		
ACP 111.			CHROMATED ALUMINUM PIGMENTED COATING PER NAS4006 & EN4473			

### NUMBER KEY:

FINISH CODE (SEE TABLE III )

NOMINAL GRIP NUMBER IN 1/16" INCREMENTS.(SEE TABLE I I, PAGE 2)

NOMINAL DIAMETER NUMBER IN 1/32" INCREMENTS.

BASIC CONFIGURATION PART NUMBER.

DENTIFICATION: -05 AND -06: MANUFACTURER'S ID. -08, -10 AND -12: MANUFACTURER'S ID AND AN OPTIONAL CIRCLE OR CIRCLE OUTLINE FOR ER213 HEAD CONFIGURATION. MARKING INDENTED .010 MAXIMUM, ARRANGEMENT OPTIONAL. -05 AND -06 PARTS MANUFACTURED WITHOUT MANUFACTURER'S ID MAY BE USED UNTIL STOCKS ARE DEPLETED.

- $\cancel{9}$ . TRANSITION, OPTIONAL RADIUS OR CHAMFER.
- 10 CONSULT HFS FOR AVAILABILITY OF LONGER GRIP LENGTHS
- $\cancel{11}$  THIS FINISH IS INACTIVE FOR NEW DESIGN AND PROCUREMENT. NO SUPERSESSIONS AVAILIBLE.
- $\cancel{12}$  THIS FINISH IS INACTIVE FOR NEW DESIGN AND PROCUREMENT AFTER 03/01/2022.
- ACN FINISH IS SUPERSESSION FOR THE AC FINISH CODE
- NOTE: COMPLETE COVERAGE OF SLEEVE INTERNAL FEATURES IS NOT REQUIRED. OVERSPRAY ONTO THE INTERNAL FEATURES IS ACCEPTED.
- NOTE: CETYL ALCOHOL LUBE PER AS87132 MAY BE APPLIED TO COMPONENTS (AT MFR'S OPTION)

  DIMENSIONS IN INCHES

ΔC	ECN 150	69 - TABLE REFORMATTING	Current Design Activity	PROCUREMENT SPEC	DRAWN BY	J. SCHLOBOHM
70			CAGE Code 0HDW7		CHECKED BY	SIGNATURE ON FILE
ISSUED	05/15/2007	-	ER213			
REVISED	05/15/2022	/	FLUSH TENSION HEAD, CLOSE			•
PAGE	3 OF 4	TOLERANCE SHANK, TI	TANIUM/A-286 (95 KSI SHEAR)		SK1282	22



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BLIND BOLT
ENGINEERING
STANDARD

#### **TABLE I V**

INSTALLED WEIGHT (LBS/1000)							
DIAMETER	GRIP	WEIGHT	ADDER				
-05 (.164)	-03	2.45	.259				
-06 (.190)	-03	3.58	.349				
-08 (.250)	-03	7.82	.598				
-10 (.313)	-05	15.57	.938				
-12 (.375)	-06	26.77	1.355				

DIMENSI	ONS	IN	INC	HES

PROCUREMENT DRAWN BY J. SCHLOBOHM **Current Design Activity** AC ECN 15069 - TABLE REFORMATTING SPEC T0108 CAGE Code 0HDW7 CHECKED BY SIGNATURE ON FILE 05/15/2007 BLIND BOLT FASTENER, HIGH STRENGTH, FRICTION THREAD ISSUED **ER213** LOCK, THREADED, 100° FLUSH TENSION HEAD, CLOSE REVISED 05/15/2022 TOLERANCE SHANK, TITANIUM/A-286 (95 KSI SHEAR) SK12822 PAGE 4 OF 4