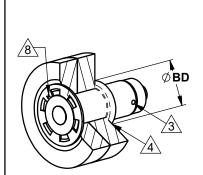


Howmet Fastening Systems Tucson Operations 3724 East Columbia Street Tucson, Arizona 85714 USA Phone (520) 519-7400 Fax (520) 519-7454

Ergo-Tech® BLIND BOLT

ENGINEERING STANDARD





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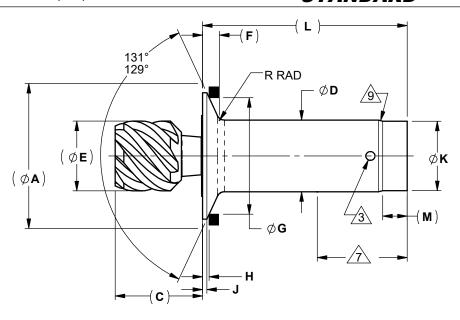


TABLE I

PART/DIA DASH NO.	Ø A THEO INTER REF	J MAX	(C) DRIVER LENGTH REF	Ø D SHANK	(ØE) SPLINE REF	(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
ER2315-06	.3868	.015	.250	.1895 .1885	.180	.047	.025	.2982 .2980	.0222 .0192	2690	1600	.1830 .1804	.065	.238	.193 .190
ER2315-08	.5068	.015	.300	.2495 .2485	.235	.061	.025	.4050 .4048	.0253 .0223	4650	3000	.2430 .2404	.085	.313	.253 .250

AC ECN 15069 TABLE REFORMATTING

CUrrent Design Activity
CAGE Code OHDW7

CAGE Code OHDW7

BLIND BOLT FASTENER, HIGH STRENGTH, FRICTION THREAD LOCK,
THREADED 130° FLUSH SHEAR HEAD CLOSE TOLERANCE SHANK

ER2315

UISD 11/28/2007

WISD 05/15/2022

THREADED, 130° FLUSH SHEAR HEAD, CLOSE TOLERANCE SHANK,
TITANIUM/A286 (95 KSI SHEAR)

SK12825



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TABLE II

	GRIP NUMBER TABULATION 10								
	GRIP DASH NO.	DESIGN RAN	-	OVERLAP MAX GRIP	-06 DIA	-08 DIA			
	NO.	MIN.	MAX.	<u>6</u>	(L)	(L)			
1	-02	.084	.125	.133	.482	-			
	-03	.126	.187	.195	.544	.649			
	-04	.188	.250	.258	.607	.711			
	-05	.251	.312	.320	.669	.774			
	-06	.313	.375	.383	.732	.836			
	-07	.376	.437	.445	.794	.899			
	-08	.438	.500	.508	.857	.961			
	-09	.501	.562	.570	.919	1.024			
	-10	.563	.625	.633	.982	1.086			
	-11	.626	.687	.695	1.044	1.149			
	-12	.688	.750	.758	1.107	1.211			
	-13	.751	.812	.820	1.169	1.274			

1. SINGLE SHEAR TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NASM 1312 -20 AND APPLIES TO GRIPS 06-06 MIN AND 08-07 MIN AND LONGER.

TENSILE STRENGTH TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NASM 1312 - 8 AND APPLIES TO GRIPS 06-07 MAX AND 08-08 MAX AND LONGER.

 $\stackrel{\frown}{2}$ DIMENSIONS ARE IN INCHES AND ARE TO BE MET AFTER FINISH.

 $\stackrel{\frown}{3.}$ 3 INDENTATIONS 120° APART TO PROVIDE THREAD LOCK.

 $\stackrel{\frown}{4.}$ BLIND SIDE HEAD MAY BE INSTALLED ON 5° MAXIMUM SLOPE.

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

 $\stackrel{\frown}{0.}$ EXTENDED GRIP "BD MIN" VALUE APPLIES TO A PART DRIVEN .008" \pm .002" OVER THE DESIGN MAXIMUM GRIP. SEE GRIP TABLE II ON PAGE 2.

 $_{\perp}$ SLEEVE DIA. MAY BE UP TO .0003" OVERSIZE IN BAND ANNEAL ZONE WHICH EXTENDS FROM BLIND END APPROX:- 06 DIA. (.525"), -08 DIA. (.635")

					DIMENSI	ONS IN INCHES
ΛC	EON 450	69 TABLE REFORMATTING	Current Design Activity	PROCUREMENT	DRAWN BY	J. SCHLOBOHM
70	ECN 150	09 TABLE REFORMATTING	CAGE Code OHDW7	SPEC T0108	CHECKED BY	SIGNATURE ON FILE
ISSUED	11/28/2007		STRENGTH, FRICTION THREAD LOCK,	ER2315		
REVISED	05/15/2022		R HEAD, CLOSE TOLERANCE SHANK,			
PAGE	2 OF 4	III ANIUM/A	286 (95 KSI SHEAR)		SK1282	25



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TABLE III

FINISH	MAT	ERIAL	FINISH	PROCUREMENT SPECIFICATION	
CODE	NUT BODY CORE BOLT		NUT BODY		
NONE			PASSIVATE PER AMS2700 TYPE 2 OR 8		
D 12.			IVD ALUMINUM COAT PER MIL-DTL-83488, TYPE II, CLASS 3 AND EN6118		
AC 13. 16.	A286 CRES PER CHEMICAL		CHROMATED ALUMINUM PIGMENTED COATING PER NAS4006 AND EN4473	INCOTEC TEC-LUBE	T0108
ACN 14. 16.	COMPOSITION AMS 5737 OR AMS 5732	PER AMS 4967 OR AMS 4928	NON-CHROMATED ALUMINUM PIGMENTED COATING PER NAS4006 AND EN4473	DRY FILM LUBE PER AS5272 OR EQUIVALENT	
ACP 12.			CHROMATED ALUMINUM PIGMENTED COATING PER NAS4006 AND EN4473 WITH INCOTECH WCA-9P (PINK)		
ACPD 12.			CHROMATED ALUMINUM PIGMENTED COATING PER NAS4006 AND EN4473 WITH INCOTECH WCA-9P (PINK)		T0108 AND DGQT 1.8.2.0028

PINISH CODE (SEE TABLE III)

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

NOMINAL DIAMETER NUMBER IN 1/32" INCREMENTS

130° FLUSH SHEAR HEAD PART NUMBER.

12. THIS FINISH IS INACTIVE FOR NEW DESIGN AND PROCURMENT. NO SUPERSESSION AVAILABLE.

THIS FINISH IS INACTIVE FOR NEW DESIGN AND PROCURMENT AFTER 03/01/2022

THE ACN FINISH IS SUPERSESSION FOR THE AC FINISH CODE

NOTE: CETYL ALCOHOL LUBE PER AS87132 MAY BE APPLIED TO COMPONENTS (AT MFR'S OPTION)

NOTE: COMPLETE COVERAGE OF SLEEVE INTERNAL FEATURES IS NOT REQUIRED. OVERSPRAY ONTO THE INTERNAL FEATURES IS ACCEPTED

					DIMENSI	ONS IN INCHES
A C			Current Design Activity	PROCUREMENT	DRAWN BY	J. SCHLOBOHM
AC	ECN 150	69 TABLE REFORMATTING	CAGE Code OHDW7	I SEEC		SIGNATURE ON FILE
ISSUED	11/28/2007		STRENGTH, FRICTION THREAD LOCK,		ER231	5
REVISED	05/15/2022		R HEAD, CLOSE TOLERANCE SHANK,			3
DACE	3 OE 4	ITTANIUM/Az	286 (95 KSI SHEAR)		SK1282)5



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TABLE IV

INSTALLED WEIGHT (LBS/1000)							
DIAMETER	GRIP	WEIGHT	ADDER				
-06 (.190)	-02	2.91	.350				
-08 (.250)	-02	6.12	.598				

DIMENSIONS IN INCHES

PROCUREMENT SPEC T0108 **Current Design Activity** DRAWN BY J. SCHLOBOHM AC ECN 15069 TABLE REFORMATTING CAGE Code OHDW7 CHECKED BY SIGNATURE ON FILE BLIND BOLT FASTENER, HIGH STRENGTH, FRICTION THREAD LOCK, ISSUED 11/28/2007 **ER2315** THREADED, 130° FLUSH SHEAR HEAD, CLOSE TOLERANCE SHANK, REVISED 05/15/2022 TITANIUM/A286 (95 KSI SHEAR) SK12825 PAGE 4 OF 4