



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

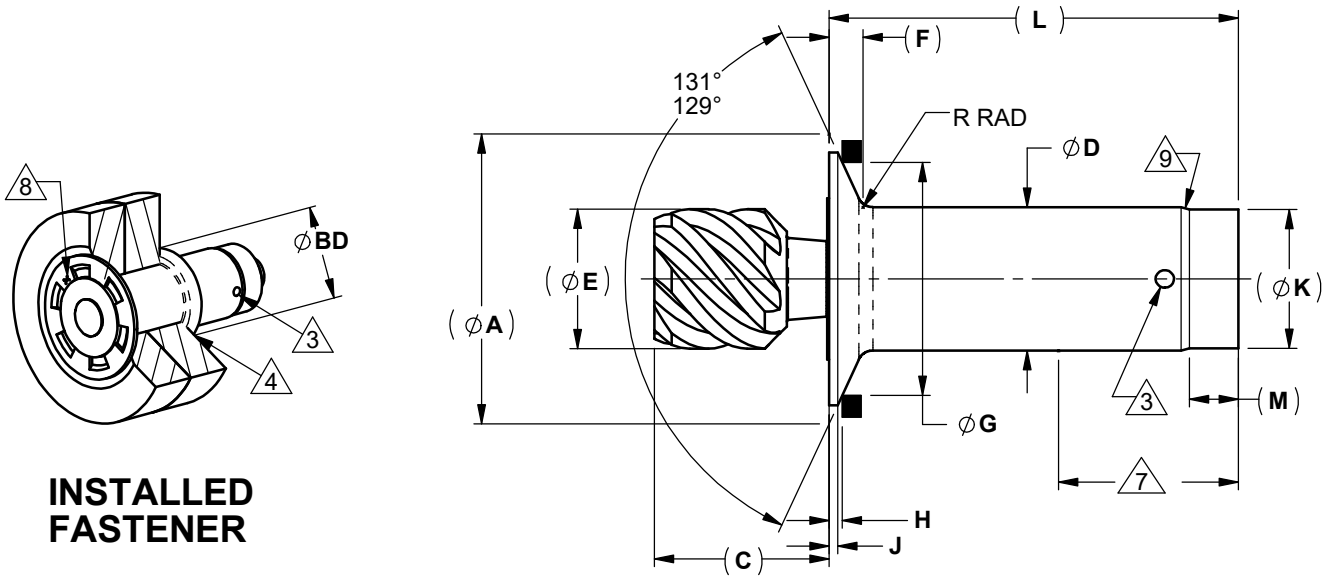


TABLE I

| PART/DIA DASH NO. | Ø A THEO INTER REF | J MAX | (C) DRIVER LENGTH REF | Ø D SHANK | (Ø E) SPLINE REF | (F) HEAD HEIGHT REF | R RADIUS MAX | Ø G GAUGE | H GAUGE HEIGHT | SINGLE SHEAR LBS (MIN) 1 | TENSILE LBS (MIN) 1 | (Ø K) LEAD-IN | (M) REF | Ø BD MIN. | | RECOMMENDED INSTALLATION HOLE SIZES |
|----------------------|-----------------------------|----------|--------------------------------|----------------|------------------------|------------------------------|--------------------|----------------|----------------------|--------------------------------------|------------------------------|------------------|------------|-----------|-----------------------|---|
| | | | | | | | | | | | | | | 5 | EXTENDED GRIP 6 | |
| ER2315-05 | .3351 | .012 | .250 | .1635 .1625 | .180 | .041 | .025 | .2560 .2558 | .0200 .0170 | 2005 | 1400 | .157 | .060 | .205 | .167 .164 | |
| ER2315-06 | .3868 | .015 | .250 | .1895 .1885 | .180 | .047 | .030 | .2982 .2980 | .0222 .0192 | 2690 | 1600 | .183 | .065 | .238 | .193 .190 | |
| ER2315-08 | .5068 | .015 | .300 | .2495 .2485 | .235 | .061 | .030 | .4050 .4048 | .0253 .0223 | 4650 | 3000 | .243 | .085 | .313 | .253 .250 | |

1. SINGLE SHEAR TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NASM 1312 -20 AND APPLIES TO GRIPS 05-05 MIN, 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 05-05 MAX, 06-07 MAX, AND 08-08 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 SHALL BE EQUAL TO OR GREATER THAN THE STATED MINIMUM.
6. EXTENDED GRIP "BD MIN" VALUE APPLIES TO A PART DRIVEN .008" ± .002" OVER THE DESIGN MAXIMUM GRIP. SEE GRIP TABLE II ON PAGE 2.
7. SLEEVE DIA. MAY BE UP TO .0003" OVERSIZE IN BAND ANNEAL ZONE WHICH EXTENDS FROM BLIND END APPROX:- 06 DIA. (.525"), -08 DIA. (.635")

DIMENSIONS IN INCHES

| | | | | | | | |
|-----------|--|--|--|--|------------------------------|--------------------------|--|
| AE | ECN 15978 FIX TYPO OF MISSING NOTES 8 - 11 | | Current Design Activity CAGE Code OHDW7 | | PROCUREMENT SPEC T0108 | DRAWN BY J. SCHLOBOHM | |
| | | | | | CHECKED BY | SIGNATURE ON FILE | |
| ISSUED | 11/28/2007 | BLIND BOLT FASTENER, HIGH STRENGTH, FRICTION THREAD LOCK, THREADED, 130° FLUSH SHEAR HEAD, CLOSE TOLERANCE SHANK, TITANIUM/A286 (95 KSI SHEAR) | | | | ER2315 | |
| REVISIED | 02/27/2025 | | | | | SK12825 | |
| PAGE | 1 OF 4 | | | | | | |

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TABLE II

GRIP NUMBER TABULATION

| GRIP DASH NO. | DESIGN GRIP RANGE | | OVERLAP MAX GRIP △ ₆ | -05 DIA | -06 DIA | -08 DIA |
|---------------------|-------------------|------|------------------------------------|---------|---------|---------|
| | MIN. | MAX. | | (L) | (L) | (L) |
| △ ₁₁ -02 | .077 | .125 | .133 | .451 | - | - |
| -02 | .084 | .125 | .133 | - | .482 | - |
| -03 | .126 | .187 | .195 | .513 | .544 | .649 |
| -04 | .188 | .250 | .258 | .576 | .607 | .711 |
| -05 | .251 | .312 | .320 | .638 | .669 | .774 |
| -06 | .313 | .375 | .383 | .701 | .732 | .836 |
| -07 | .376 | .437 | .445 | .763 | .794 | .899 |
| -08 | .438 | .500 | .508 | .826 | .857 | .961 |
| -09 | .501 | .562 | .570 | .888 | .919 | 1.024 |
| -10 | .563 | .625 | .633 | .951 | .982 | 1.086 |
| -11 | .626 | .687 | .695 | 1.013 | 1.044 | 1.149 |
| -12 | .688 | .750 | .758 | - | 1.107 | 1.211 |
| -13 | .751 | .812 | .820 | - | 1.169 | 1.274 |
| -14 | .813 | .875 | .883 | - | 1.232 | 1.336 |
| -15 | .876 | .937 | .945 | - | - | 1.399 |

- △₈ IDENTIFICATION: -06: MANUFACTURER'S ID; -08: MANUFACTURER'S ID AND A TRIANGLE OR TRIANGLE OUTLINE FOR ER2315 HEAD CONFIGURATION. MARKING INDENTED .010 MAX, ARRANGEMENT OPTIONAL.
- △₉ TRANSITION OPTIONAL. MAY BE RADIUS OR CHAMFER.
- △₁₀ CONSULT HFS FOR LONGER GRIP LENGTH AVAILABILITY.
- △₁₁ MIN GRIP FOR -06-02 IS .084.

DIMENSIONS IN INCHES

| | | | | | | |
|-----------|--|--|--|--|------------------------|--------------------------|
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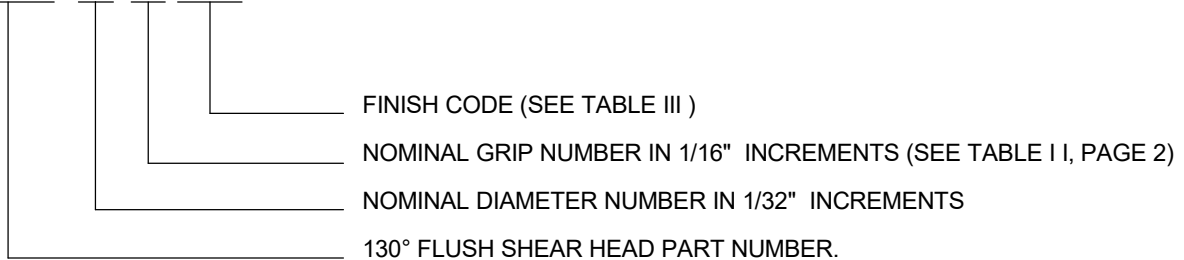
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TABLE III

| FINISH CODE | MATERIAL | | FINISH | | PROCUREMENT SPECIFICATION |
|----------------|---|--|--|---|---------------------------------|
| | NUT BODY | CORE BOLT | NUT BODY | CORE BOLT | |
| NONE | A286 CRES PER CHEMICAL COMPOSITION AMS 5737 OR AMS 5732 | 6Al-4V TITANIUM PER AMS 4967 OR AMS 4928 | PASSIVATE PER AMS2700 TYPE 2 OR 8 | INCOTEC TEC-LUBE DRY FILM LUBE PER AS5272 OR EQUIVALENT | T0108 |
| D 12. | | | IVD ALUMINUM COAT PER MIL-DTL-83488, TYPE II, CLASS 3 AND EN6118 | | |
| AC 13. 16. | | | CHROMATED ALUMINUM PIGMENTED COATING PER NAS4006 AND EN4473 | | |
| ACN 14. 16. | | | NON-CHROMATED ALUMINUM PIGMENTED COATING PER NAS4006 AND EN4473 | | |
| 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 |

NUMBER KEY:

ER2315 - XX - XX XXXX



- 12. THIS FINISH IS INACTIVE FOR NEW DESIGN AND PROCURMENT. NO SUPERSESSON AVAILABLE.
- 13. THIS FINISH IS INACTIVE FOR NEW DESIGN AND PROCURMENT AFTER 03/01/2022
- 14. THE ACN FINISH IS SUPERSESSON FOR THE AC FINISH CODE
- 15. NOTE: CETYL ALCOHOL LUBE PER AS87132 MAY BE APPLIED TO COMPONENTS (AT MFR'S OPTION)
- 16. NOTE: COMPLETE COVERAGE OF SLEEVE INTERNAL FEATURES IS NOT REQUIRED. OVERSPRAY ONTO THE INTERNAL FEATURES IS ACCEPTED

DIMENSIONS IN INCHES

| | | | | |
|-----------|--|--|------------------------|---------------------------------|
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TABLE IV

| INSTALLED WEIGHT (LBS/1000) | | | |
|-----------------------------|------|--------|-------|
| DIAMETER | GRIP | WEIGHT | ADDER |
| -05 (.164) | -02 | 2.04 | .259 |
| -06 (.190) | -02 | 2.91 | .350 |
| -08 (.250) | -02 | 6.12 | .598 |

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