



| BLIND BOLT ASSEMBLY |                  | BB301 CORE BOLT   |              |        |        |      |      |         |              | BB435 SLEEVE      |         |                    |                         |         | BB341 EXPANDER |             |         |            | SUGGESTED HOLE PREPARATION |             | PROTRUSION AFTER INSTALLATION |      |               |
|---------------------|------------------|-------------------|--------------|--------|--------|------|------|---------|--------------|-------------------|---------|--------------------|-------------------------|---------|----------------|-------------|---------|------------|----------------------------|-------------|-------------------------------|------|---------------|
| FIRST DASH NUMBER   | NOMINAL DIAMETER | FIRST DASH NUMBER | RECESS       | A DIA. | D DIA. | H    | P1   | T (REF) | THREAD       | FIRST DASH NUMBER | A1 DIA. | B GRIP RANGE 0-3/4 | B GRIP RANGE 3/4-1 1/16 | D1 DIA. | H1             | DASH NUMBER | D2 DIA. | L (LENGTH) | THREAD                     | J HOLE DIA. | CORE BOLT INSTALLATION TORQUE | F1   | D2 DIA. (REF) |
| -5                  | 5/32             | -5                | Phillips #1  | .2274  | .1120  | .048 | .208 | .274    | 4-40NC-3A    | -5                | .2844   | .210               | .225                    | .169    | .0488          | -5          | .167    | .153       | 4-40UNC-3B                 | .173        | 8                             | .208 | .210          |
|                     |                  |                   |              | .2226  | .1100  | .046 | .208 | .274    | 4-40NC-3A    |                   | .2794   | .166               | .0467                   | .170    | 10             |             | .170    |            |                            |             |                               |      |               |
| -6                  | 3/16             | -6                | Phillips #1  | .2514  | .1240  | .053 | .239 | .304    | 5-40NC-3A    | -6                | .3536   | .250               | .265                    | .196    | .0660          | -6          | .194    | .184       | 5-40UNC-3B                 | .201        | 10                            | .239 | .253          |
|                     |                  |                   |              | .2466  | .1220  | .051 | .239 | .304    | 5-40NC-3A    |                   | .3486   | .193               | .0640                   | .197    | 14             |             | .197    |            |                            |             |                               |      |               |
| -8                  | 1/4              | -8                | Phillips #2  | .3304  | .1650  | .069 | .316 | .397    | 8-32UNJC-3A  | -8                | .4732   | .315               | .330                    | .257    | .0940          | -8          | .255    | .245       | 8-32UNC-3B                 | .264        | 20                            | .316 | .335          |
|                     |                  |                   |              | .3256  | .1630  | .067 | .316 | .397    | 8-32UNJC-3A  |                   | .4682   | .254               | .0890                   | .258    | 30             |             | .258    |            |                            |             |                               |      |               |
| -10                 | 5/16             | -10               | Hi-Torque #3 | .4454  | .2180  | .095 | .414 | .498    | 12-28UNJF-3A | -10               | .5619   | .380               | .400                    | .338    | .0980          | -10         | .328    | .307       | 12-28UNF-3B                | .345        | 50                            | .414 | .438          |
|                     |                  |                   |              | .4406  | .2160  | .093 | .414 | .498    | 12-28UNJF-3A |                   | .5569   | .335               | .0930                   | .329    | 80             |             | .329    |            |                            |             |                               |      |               |

### BB301 CORE BOLT

**GENERAL NOTES:**

- Concentricity: Head to "D" diameter within .005 TIR.
- Complete threads shall begin within two thread pitches maximum. Two thread pitch maximum may consist of incomplete thread and extrusion angle.
- "H" is dimensioned from maximum "D" diameter.

**MATERIAL:** Type 431 stainless steel per Spec. QQ-S-763.  
**HEAT TREAT:** 125,000 psi shear minimum.  
**CODE:** First dash number of core bolt indicates sleeve nominal diameter in 32nds. Second dash number indicates mean assembly grip length (thickness of work) in 16ths.  
**EXAMPLE:** BB301-5-12 = 4-40 core bolt for 5/32 nominal diameter sleeve, 3/4 mean assembly grip length.

### BB435 SLEEVE

**GENERAL NOTES:**

- Concentricity: Hole to "D1" diameter within .005 TIR; "D1" diameter to head within .005 TIR.
- "H1" is dimensioned from maximum "D1" diameter.

**MATERIAL:** Aluminum 2017.  
**HEAT TREAT:** Annealed.  
**FINISH:** Anodize.  
**CODE:** First dash number indicates nominal diameter of sleeve in 32nds. Second dash number indicates mean assembly grip length (thickness of work) in 16ths.  
**EXAMPLE:** BB435-5-12 = 5/32 nominal diameter sleeve, 3/4 mean assembly grip length.

### BB341 EXPANDER

**GENERAL NOTES:**

- Threads per MIL-S-7742.

**MATERIAL:** Type 431 stainless steel per Spec. QQ-S-763.  
**HEAT TREAT:** 125,000 psi shear minimum.  
**FINISH:** Cadmium plate per QQ-P-416, Type I, Class 3.  
**CODE:** Dash number indicates diameter of Blind Bolt Assembly in 32nds.  
**EXAMPLE:** BB341-5 = 5/32 nominal diameter Blind Bolt Assembly using 4-40 Expander.

### BB382 BOLT ASSEMBLY

**CODE:** First dash number indicates nominal diameter of Blind Bolt Assembly in 32nds. Second dash number indicates mean assembly grip length (thickness of work) in 16ths.

**EXAMPLE:** BB436-5-12

- 5/32 Mean Assembly Grip Length
- 5/32 Nominal Diameter Blind Bolt Assembly
- Blind Bolt Assembly which includes: BB301 Core Bolt, BB435 Sleeve, and BB341 Expander

U.S. Patents 2,959,999; 2,677,985. Foreign patents issued and pending. "Hi-Torque" trademark.

| TITLE                             |        |                  |              |
|-----------------------------------|--------|------------------|--------------|
| <b>BLIND BOLT™ ASSEMBLY</b>       |        |                  |              |
| 100° COUNTERSUNK AN426 HEAD STYLE |        |                  |              |
| DRAWN                             | DATE   | APPROVED         | DATE         |
| <i>Phode</i>                      | 6-1-71 | <i>E. J. ...</i> | 6-2-71       |
| DRAWING NUMBER                    |        |                  | <b>BB436</b> |