



BLIND BOLT ASSEMBLY		BB461 CORE BOLT									BB433 SLEEVE					BB459 EXPANDER				SUGGESTED HOLE PREPARATION		PROTRUSION AFTER INSTALLATION	
FIRST DASH NUMBER	NOMINAL DIAMETER	FIRST DASH NUMBER	RECESS	A DIA.	D DIA.	H	P ₁	T (REF)	THREAD	FIRST DASH NUMBER	A ₁ DIA.	B GRIP RANGE 0-7/16	B GRIP RANGE 1/2-1 1/16	D ₂ DIA.	H ₁	DASH NUMBER	D ₂ DIA.	L (LENGTH)	THREAD	J HOLE DIA.	CORE BOLT INSTALLATION TORQUE	P ₁	D ₂ DIA. (REF)
-5	5/32	-5	Phillips #1	.2274 .2226	.1120 .1100	.048 .046	.208	.274	4-40 UNJC-3A	-5	.2844 .2794	.210	.225	.169 .166	.0488 .0467	-5	.167	.153	4-40 UNC-3B	.173 .170	8 IN. LBS.	.208	.210
-6	3/16	-6	Phillips #1	.2514 .2466	.1240 .1220	.053 .051	.239	.304	5-40 UNJC-3A	-6	.3536 .3486	.250	.265	.196 .193	.0660 .0640	-6	.194	.184	5-40 UNC-3B	.201 .197	10 IN. LBS.	.239	.253
-8	1/4	-8	Phillips #2	.3304 .3256	.1650 .1630	.069 .067	.316	.397	8-32 UNJC-3A	-8	.4732 .4682	.315	.330	.257 .254	.0940 .0890	-8	.255	.245	8-32 UNC-3B	.264 .258	20 IN. LBS.	.316	.335
-10	5/16	-10	Hi-Torque #3	.4454 .4406	.2180 .2160	.095 .093	.414	.498	12-28 UNJF-3A	-10	.5619 .5569	.380	.400	.338 .335	.0980 .0930	-10	.328	.307	12-28 UNF-3B	.345 .339	50 IN. LBS.	.414	.438

BB461 CORE BOLT

GENERAL NOTES:

1. Concentricity: Head to "D" diameter within .005 TIR.
2. Complete threads shall begin within two thread pitches maximum. Two thread pitch maximum may consist of incomplete thread and extrusion angle.
3. "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: BB461-10-12 = 12-28 core bolt for 5/16 nominal diameter sleeve, 3/4 mean assembly grip length.

BB435 SLEEVE

GENERAL NOTES:

1. Concentricity: Hole to "D₁" diameter within .005 TIR; "D₁" diameter to head within .005 TIR.
2. "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: BB435-10-12 = 5/16 nominal diameter sleeve, 3/4 mean assembly grip length.

BB459 EXPANDER

GENERAL NOTES:

1. Threads per MIL-S-8879

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: BB459-10 = 12-28 expander for use with 5/16 nominal diameter Blind Bolt.

BB460 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: BB460-10-12
└─ 3/4 Mean Assembly Grip Length
└─ 5/16 Nominal Diameter Blind Bolt Assembly
Blind Bolt Assembly which includes: BB461 Core Bolt, BB435 Sleeve, and BB459 Expander

U.S. Patent 2,959,999. Foreign patents issued. Hi-Torque® trademark.

TITLE			
BLIND BOLT™ ASSEMBLY			
100° COUNTERSUNK AN426 HEAD STYLE WITH NYLON THREAD LOCK			
DRAWN	DATE APPROVED	DATE REVISION	DRAWING NUMBER
<i>Shirley</i>	9-15-72		BB460