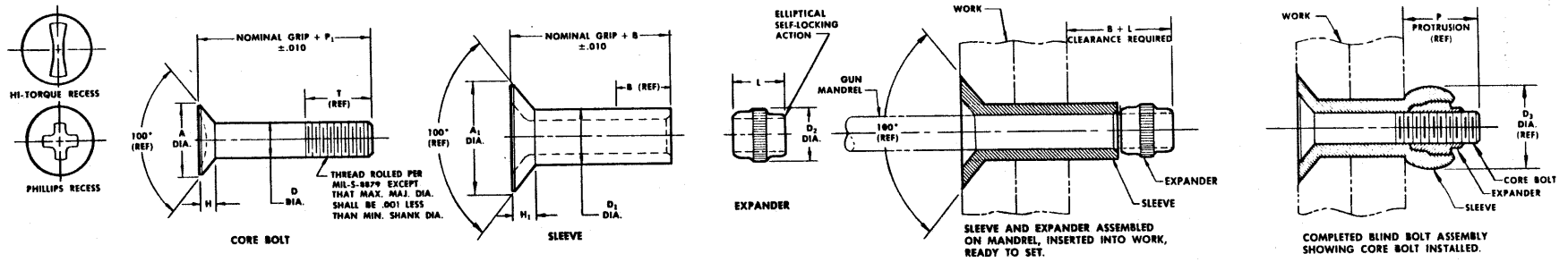
hi-shear CORPORATION
2600 SKYPARK DRIVE
TORRANCE, CALIFORNIA 90509
AREA CODE 213 · 775-3181 · 326-8110



BLIND BOLT ASSEMBLY		BB317 CORE BOLT								BB321 SLEEVE								BB346 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 0-¾	B GRIP RANGE 13/16-1 1/16	B GRIP RANGE 1⅛-1⅝		D_1 DIA.	H_1	DASH NUMBER	D_2 DIA.	L (LENGTH)	THREAD	J HOLE DIA.	CORE BOLT INSTALLATION TORQUE	P	D_2 DIA. (REF)
-5	5/32	-5	Phillips #1	.2274 .2226	.1120 .1100	.048 .046	.208	.274	4-40UNJC-3A	-5	.3310 .3262	.210	.225	.265		.169 .166	.0680 .0660	-5	.167	.153	4-40UNJC-3B	.173 .170	8 10 IN. LBS.	.208	.210
-6	3/16	-6	Phillips #1	.2514 .2466	.1240 .1220	.053 .051	.239	.304	5-40UNJC-3A	-6	.3813 .3765	.250	.265	.330		.196 .193	.0780 .0760	-6	.194	.184	5-40UNJC-3B	.201 .197	10 14 IN. LBS.	.239	.253
-8	1/4	-8	Phillips #2	.3304 .3256	.1650 .1630	.069 .067	.316	.397	8-32UNJC-3A	-8	.5066 .5018	.315	.330	.370		.257 .254	.1050 .1030	-8	.255	.245	8-32UNJC-3B	.264 .258	20 30 IN. LBS.	.316	.335
-10	5/16	-10	Hi-Torque #3	.4454 .4406	.2180 .2160	.095 .093	.414	.498	12-28UNJF-3A	-10	.6335 .6287	.380	.400	.420		.338 .335	.1240 .1220	-10	.328	.307	12-28UNJF-3B	.345 .339	50 80 IN. LBS.	.414	.438
-12	3/8	-12	Hi-Torque #4	.5066 .5018	.2490 .2470	.108 .106	.485	.567	1/4-28UNJF-3A	-12	.7604 .7556	.450	.450	.450		.390 .387	.1554 .1534	-12	.383	.368	1/4-28UNJF-3B	.397 .391	125 150 IN. LBS.	.485	.510
-14	7/16	-14	Hi-Torque #5	.6335 .6287	.3110 .3090	.135 .133	.543	.628	5/16-24UNJF-3A	-14	.8884 .8812	.500	.500	.500		.468 .465	.1764 .1734	-14	.458	.429	5/16-24UNJF-3B	.475 .469	200 220 IN. LBS.	.543	.600
-16	1/2	-16	Hi-Torque #6	.7604 .7556	.3740 .3720	.163 .160	.600	.685	3/8-24UNJF-3A	-16	1.0139 1.0068	.550	.550	.550		.530 .527	.2030 .2000	-16	.521	.491	3/8-24UNJF-3B	.539 .531	380 400 IN. LBS.	.600	.662
																		-10 MOD.	.3115	.307	12-28UNJF-3B	.3165 .3125	50 80 IN. LBS.	.414	.438

BB317 CORE BOLT

GENERAL NOTES:
1. Concentricity: Head to "D" diameter within .005 FIR.
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 17-4PH stainless steel per AMS5643.
HEAT TREAT: 120,000 psi shear mihimum.
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: BB317-8-12 = 8-32 core bolt for 1/4 nominal diameter sleeve, 3/4 mean assembly grip length.

BB321 SLEEVE

GENERAL NOTES:
1. Concentricity: Hole to "D_1" diameter within .005 FIR. Head to "D_1" diameter within .005 FIR.
2. "H_1" is dimensioned from maximum "D_1" diameter.

MATERIAL: Type 305 stainless steel per QQ-S-763.
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: BB321-8-12 = 1/4 nominal diameter sleeve, 3/4 mean assembly grip length.

BB346 EXPANDER

GENERAL NOTES:
1. Threads per MIL-S-8879.

MATERIAL: Type 17-4PH stainless steel per AMS5643.
HEAT TREAT: 120,000 psi shear minimum.
FINISH: No Code = Cadmium plate per QQ-P-416, Type I, Class 2. TF = Solid film Hi-Kote 2.
CODE: Dash number indicates diameter of Blind Bolt Assembly in 32nds.
EXAMPLE: BB346-8 = 1/4 nominal diameter Blind Bolt Assembly using 8-32 expander.

BB399 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: BB399-8-12
- 3/4 Mean Assembly Grip Length
- 1/4 Nominal Diameter Blind Bolt Assembly
- Blind Bolt Assembly which includes: BB317 Core Bolt, BB321 Sleeve, and BB346 Expander

① Editorially Updated

U.S. Patent 2,677,985. Other U.S. and foreign patents pending. "Hi-Torque" trademark. "Hi-Kote" trademark.

TITLE				
BLIND BOLT™ ASSEMBLY 100° COUNTERSUNK AN509 HEAD STYLE				
DRAWN / DATE	APPROVED / DATE	REVISION / DATE	DRAWING NUMBER	
Shrode 12-21-3	J.K. 5-4-63	① SHRODE 12-20-73	BB399	

CODE IDENTIFICATION NO. 73197

© 1973, Hi-Shear Corporation

BB399

2-1012

LISI AEROSPACE – Please refer to Central Documentation Website to check validity