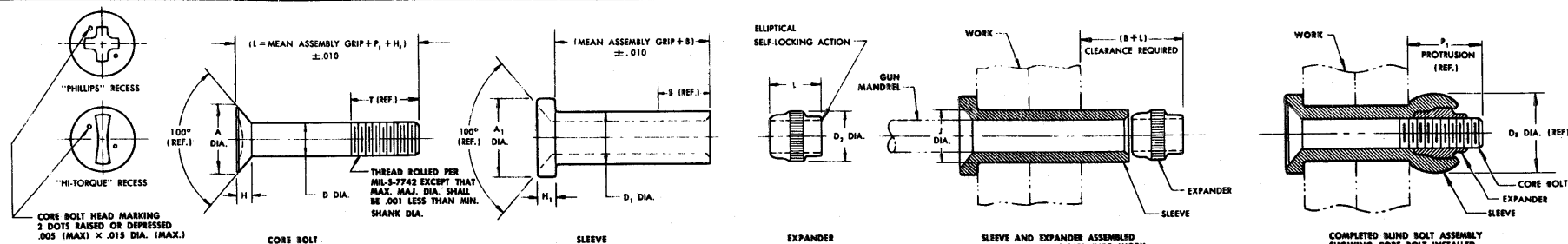


hi-shear
CORPORATION

2600 SKYPARK DRIVE
TORRANCE, CALIFORNIA 90509
AREA CODE 213 • 775-3181 • 326-8110



BB386 BOLT ASSEMBLY		BB302 CORE BOLT								BB322N SLEEVE								BB341N EXPANDER				SUGGESTED HOLE PREPARATION						PROTRUSION AFTER INSTALLATION	
FIRST DASH NUMBER	NOMINAL DIAMETER	FIRST DASH NUMBER	RECESS	A	T	D	H	P ₁	THREAD	FIRST DASH NUMBER	A ₁	3 GRIP RANGE 0-1/8"	3 GRIP RANGE 1/8-1/4"	3 GRIP RANGE 1/4-3/8"	3 GRIP RANGE 3/8-1/2"	D ₁	H ₁	DASH NUMBER	D ₂	L	THREAD	J HOLE DIA.				CORE BOLT INSTALLATION TORQUE	P ₁	D ₂	
-5	5/32	-5	PHILLIPS #1	.2274 .2226	.274	.1120 .1100	.048 .046	.208	4-40 NC-3A	5	.294 .274	.210	.225			.169 .166	.055 .045	-5	.167	.153	4-40 NC-3B	.173 .170				8 16 IN. LBS.	.208	.210	
-6	3/16	-6	PHILLIPS #1	.2514 .2466	.304	.1240 .1220	.053 .051	.239	5-40 NC-3A	6	.315 .295	.250	.265	.330		.196 .193	.065 .055	-6	.194	.184	5-40 NC-3B	.201 .197				10 14 IN. LBS.	.239	.253	
-8	1/4	-8	PHILLIPS #2	.3304 .3256	.397	.1650 .1630	.069 .067	.314	8-32 NC-3A	-8	.412 .387	.315	.330	.370		.257 .254	.090 .080	-8	.255	.245	8-32 NC-3B	.264 .258				20 30 IN. LBS.	.316	.335	
-10	5/16	-10	HI-TORQUE #3	.4454 .4406	.499	.2180 .2160	.095 .093	.414	12-28 NF-3A	-10	.530 .500	.380	.400	.420		.338 .335	.110 .100	-10	.328	.307	12-28 NF-3B	.345 .339				50 80 IN. LBS.	.414	.438	
-12	3/8	-12	HI-TORQUE #4	.5066 .5018	.567	.2490 .2470	.108 .106	.485	1/4-28 UNF-3A	-12	.615 .580	.450	.450	.450		.390 .387	.155 .145	-12	.383	.368	1/4-28 UNF-3B	.397 .391				125 150 IN. LBS.	.485	.510	
-14	7/16	-14	HI-TORQUE #5	.6335 .6287	.628	.3110 .3090	.135 .133	.543	5/16-24 UNF-3A	-14	.803 .768	500	500	500		.468 .465	.160 .150	-14	.458	.439	5/16-24 UNF-3B	.475 .469				200 220 IN. LBS.	.543	.600	
-16	1/2	-16	HI-TORQUE #6	.7604 .7556	.685	.3740 .3720	.162 .160	.600	3/8-24 UNF-3A	-16	.896 .861	.550	.550	.550		.530 .527	.185 .175	-16	.521	.491	3/8-24 UNF-3B	.539 .531				380 400 IN. LBS.	.600	.662	
GENERAL NOTES		BB302 CORE BOLT								BB322N SLEEVE								BB341N EXPANDER				BB386 BOLT ASSEMBLY						TITLE	
		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. 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: BB302-8-12 = 8-32 core bolt for 1/4 nominal diameter sleeve, 3/4 mean assembly grip length.								1. CONCENTRICITY: Hole to "D" diameter within .005 TIR. "D ₁ " diameter to head within .010 TIR. 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: BB322N 8-12 = 1/4 nominal diameter sleeve, 3/4 mean assembly grip length.								1. Threads per MIL-S-7742 CODE: Dash number indicates nominal diameter of Blind Bolt Assembly in 32nds. EXAMPLE: BB341N-8 = 1/4 nominal diameter Blind Bolt Assembly using 8-32 Expander.				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: BB386-8-12 = 3/4 mean assembly grip length, 1/4 nominal diameter (Blind Bolt Assembly) Blind Bolt Assembly which includes: BB302 Core Bolt, BB322N Sleeve, BB341N Expander							
		MATERIAL								Type 305 stainless steel per QQ-S-763								Type 431 stainless steel per Spec. QQ-S-763				U.S. Patents 2,959,999 - 2,677,985. Foreign patents issued and pending. 'HI-TORQUE' Trademark. *Trademark.							
		HEAT TREAT								125,000 psi shear minimum.								125,000 psi shear minimum				DRAWN 8-7-63							
FINISH										Nickel - Cadmium plate per AMS2416								Nickel - Cadmium plate per AMS2416				DATE 8-7-63						DRAWING NUMBER BB386	

BB386