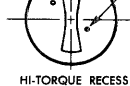


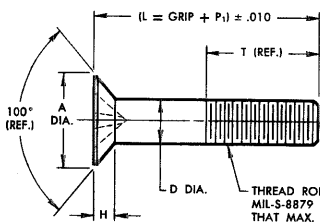
hi-shear
CORPORATION

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

CORE BOLT HEAD MARKING
2 DOTS RAISED OR DEPRESSED
.005 (MAX.) X .015 DIA. (MAX.)

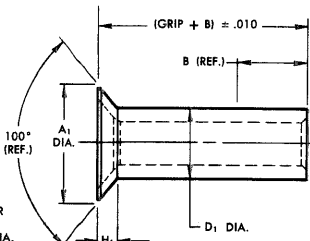


HI-TORQUE RECESS
FREARSON RECESS

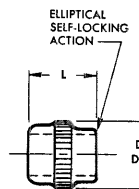


CORE BOLT

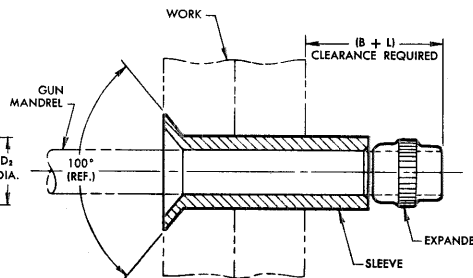
THREAD ROLLED PER
MIL-S-8879 EXCEPT
THAT MAX. MAJ. DIA.
SHALL BE .001 LESS
THAN MIN. SHANK DIA.



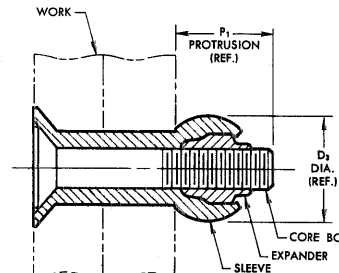
SLEEVE



EXPANDER



SLEEVE AND EXPANDER ASSEMBLED
ON MANDREL, INSERTED INTO
WORK, READY TO SET.



COMPLETE BLIND BOLT ASSEMBLY
SHOWING CORE BOLT INSTALLATION.

BB368 BOLT ASSEMBLY		BB309 CORE BOLT								BB332 SLEEVE						BB415 EXPANDER				HOLE PREPARATION		PROTRUSION AFTER INSTALLATION		CORE BOLT INSTALLATION TORQUE		INSTALLATION PRESSURE USING HI-SHEAR TOOLING	
FIRST DASH NO.	NOM. DIA.	FIRST DASH NO.	RECESS	A	T (REF.)	D	H	P ₁	THREAD	FIRST DASH NO.	A ₁	B GRIP RANGE 0—3/4	B GRIP RANGE 13/16—1-1/16	D ₁	H ₁	DASH NO.	D ₂	L	THREAD	HOLE DIA.		P ₁	D ₃		BG1750	BG2500	
-5	5/32	-5	Frearson	.2274 .2226	.274	.1120 .1100	.048 .046	.208	4-40UNJC-3A	-5	.2844 .2794	.210	—	.169 .166	.0488 .0467	-5	.167	.153	4-40UNJC-3B	.173 .170		.208	.210	⁸ 10 IN. LBS.	600	300	
-6	3/16	-6	Frearson	.2514 .2466	.304	.1240 .1220	.053 .051	.239	5-40UNJC-3A	-6	.3536 .3486	.250	—	.196 .193	.0660 .0640	-6	.194	.184	5-40UNJC-3B	.201 .197		.239	.253	¹⁰ 14 IN. LBS.	800	400	
-8	1/4	-8	Frearson	.3304 .3256	.397	.1650 .1630	.069 .067	.316	8-32UNJC-3A	-8	.4732 .4682	.315	.330	.257 .254	.0940 .0890	-8	.255	.245	8-32UNJC-3B	.264 .258		.316	.335	²⁰ 30 IN. LBS.	1250	700	
-10	5/16	-10	Hi-Torque #3	.4454 .4406	.498	.2180 .2160	.095 .093	.414	12-28UNJF-3A	-10	.5619 .5569	.380	.400	.338 .335	.0980 .0930	-10	.328	.307	12-28UNJF-3B	.345 .339		.414	.438	⁵⁰ 80 IN. LBS.		1100	

BB309 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: A-286 high temperature alloy per AMS5735.

HEAT TREAT: 95,000 psi shear minimum.

CODE: First dash number of core bolt indicates sleeve nominal diameter in 32nds.
Second dash number indicates grip length (thickness of work) in 16ths.

EXAMPLE: BB309-5-12 = 4-40 core bolt for 5/32 nominal diameter sleeve, 3/4 grip length.

BB332 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.

① MATERIAL: Type A-286 meeting composition limits of the AMS specifications.

① HEAT TREAT: Heat treated to meet the requirements of AMS5736.

CODE: First dash number indicates nominal diameter of sleeve in 32nds. Second dash number indicates grip length (thickness of work) in 16ths.

EXAMPLE: BB332-5-12 = 5/32 nominal diameter sleeve, 3/4 grip length.

BB415 EXPANDER

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

MATERIAL: A-286 stainless steel alloy per AMS5731.

HEAT TREAT: 110,000 psi shear minimum.

FINISH: Solid film lube per MIL-L-8937.

CODE: Dash number indicates diameter of blind bolt assembly in 32nds.

EXAMPLE: BB415-5 = 5/32 nominal diameter blind bolt assembly using 4-40 expander.

BB517 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: BB517-5-12
5/32 Grip Length
5/32 Nominal Diameter
Blind Bolt Assembly
Blind Bolt Assembly which includes: BB309 Core Bolt, BB332 Sleeve, and BB415 Expander

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

TITLE					
BLIND BOLT™ ASSEMBLY					
100° COUNTERSUNK MS20426 HEAD STYLE					
DRAWN	DATE	APPROVED	DATE	REVISION	DATE
Shank 5-23-69	5-23-69	RA	5-23-69	(2)	AHS 7-30-70
DRAWING NUMBER					
BB517					