



BB452 BOLT ASSEMBLY				BB313 CORE BOLT										BB451 SLEEVE														
FIRST DASH NUMBER	NOMINAL DIAMETER	FIRST DASH NUMBER	RECESS NUMBER	A DIA.	D DIA.	H	G (REF)	J	M	R	T (REF)	THREAD	O-RING ₁ DATA			DOUBLE SHEAR STRENGTH LBS. MIN.	TENSILE STRENGTH LBS. MIN.	FIRST DASH NUMBER	A ₁ DIA.	B GRIP RANGE 0-3/4	B GRIP RANGE 1 1/16-1 1/16	B GRIP RANGE 1 3/4-1 9/16	C	D ₁ DIA.	H ₁	O-RING ₂ DATA		
													I.D.	W	PART NO.											I.D.	W ₁	PART NO.
-6	3/16	-6	2	.2514 .2466	.1240 .1220	.053 .051	.200	.031 .027	.100	.020 .010	.304	5-40UNJC-3A	.115 .105	.020 .016	425018-2	3000	1380	-6	.3813 .3765	.250	.265	.330	.023 .017	.196 .193	.0780 .0760	.255 .245	.020 .016	425018-4
-8	1/4	-8	2	.3304 .3256	.1650 .1630	.069 .067	.224	.039 .036	.100	.025 .010	.397	8-32UNJC-3A	.160 .150	.020 .016	425018-3	5,210	2100	-8	.5066 .5018	.315	.330	.370	.033 .027	.257 .254	.1050 .1030	.275 .265	.027 .023	425018-9
-10	5/16	-10	3	.4454 .4406	.2180 .2160	.095 .093	.305	.045 .042	.110	.030 .015	.498	12-28UNJF-3A	.215 .205	.027 .023	425018-7	9,200	4150	-10	.6335 .6287	.380	.400	.420	.043 .037	.338 .335	.1240 .1220	.400 .390	.037 .033	425018-13
-12	3/8	-12	4	.5066 .5018	.2490 .2470	.108 .106	.422	.054 .051	.134	.030 .015	.567	1/4-28UNJF-3A	.244 .234	.027 .023	425018-8	12,000	5550	-12	.7604 .7556	.450	.450	.450	.053 .047	.390 .387	.1554 .1534	.400 .390	.037 .033	425018-13

BB313 CORE BOLT

- GENERAL NOTES:
- Concentricity: Head to "D" diameter within .005 FIR.
 - 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.
 - O-ring is assembled onto core bolt.

MATERIAL: Bolt - PH13-8Mo stainless steel per AMS5629.
O-Ring - Fluorsilicone rubber Type I, Class 1, Grade 70 per MIL-R-25988

HEAT TREAT: 125,000 psi shear minimum.
CODE: First dash number of core bolt indicates sleeve nominal diameter in 32nds. Second dash number indicates assembly grip length in 16ths (+ .031, - .062)
EXAMPLE: BB313-6-12 = 3/16 nominal sleeve diameter, .688 to .781 assembly grip variation (.735 mean grip)

BB451 SLEEVE

- GENERAL NOTES:
- Concentricity: Hole to "D₁" diameter within .005 FIR. Head to "D₁" diameter within .005 FIR.
 - "H₁" is dimensioned from maximum "D₁" diameter.
 - O-ring is assembled onto sleeve.

MATERIAL: Sleeve - 305 stainless steel per QQ-S-763.
O-Ring - Fluorsilicone rubber Type I, Class 1, Grade 70 per MIL-R-25988

CODE: First dash number indicates nominal diameter of sleeve in 32nds. Second dash number indicates assembly grip length in 16ths (+ .031, - .062)

EXAMPLE: BB451-6-12 = 3/16 nominal sleeve diameter, .688 to .781 assembly grip variation (.735 mean grip)

BB567 EXPANDER

- GENERAL NOTES:
- Threads per MIL-S-8879.
- MATERIAL: PH13-8Mo SST per AMS5629.
HEAT TREAT: 125,000 psi shear minimum.
① FINISH: Dry film lube per MIL-L-8937, (.0002-.0005 thick), and cetyl alcohol lube per Hi-Shear Spec. 305.
CODE: Dash number indicates nominal diameter of Blind Bolt Assembly in 32nds.
EXAMPLE: BB567-6 = 3/16 nominal diameter Blind Bolt Assembly.

BB452 BOLT ASSEMBLY

CODE: First dash number indicates nominal diameter of Blind Bolt Assembly in 32nds. Second dash number indicates assembly grip length in 16ths (+ .031, - .062)

EXAMPLE: BB452-6-12 = .688 to .781 Assy. Grip Var. (.735 mean grip)
3/16 Nominal Diameter Blind Bolt Assembly

Blind Bolt Assembly which includes:
BB313 Core Bolt, BB451 Sleeve, and BB567 Expander (O-rings included)

Assembly Mech. Properties		
Bolt Assembly	Double Shear Lbs. Min.	Ultimate Tensile Lbs. Min.
BB452-6	4,980	2,400
BB452-8	8,335	3,920
BB452-10	14,415	6,675
BB452-12	20,400	8,815

BB567 EXPANDER				SUGGESTED HOLE PREPARATION		PROTRUSION AFTER INSTALLATION	
DASH NUMBER	D ₂ DIA.	L (LENGTH)	THREAD	HOLE DIA.	CORE BOLT INSTALLATION TORQUE (INCH LBS)	P ₁	D ₂ DIA. (REF)
-6	.193	.184	5-40UNJC-3B	.201 .197	10 14	.239	.253
-8	.255	.245	8-32UNJC-3B	.264 .258	20 30	.316	.335
-10	.328	.309	12-28UNJF-3B	.345 .339	50 80	.414	.438
-12	.383	.370	1/4-28UNJF-5B	.397 .391	125 150	.485	.510

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

TITLE
BLIND BOLT™ ASSEMBLY
SEALING TYPE 100° FLUSH MS24694 HEAD STYLE
STAINLESS STEEL
(McDONNELL PART NO. ST3M577)

DRAWN: Shrode 1-8-72
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