

BUTTONHEAD BNX (10Ab) SYSTEM TEST DATA CONVERSION - 15M, 20M, 25M, 30M & 35M (GRADE 500)

Lab Report & Reference No.		Bar Grade	ASTM Bar Size Designation	ASTM Bar Area (in ²)	Max Load (lb)	Max Stress (psi)	Developed Stress % <i>f_y</i> ASTM Gr 75 (metric Gr 520)	Equivalent CSA Designation	CSA Bar Area (mm ²)	Max Load (kN)	Equivalent Max Stress CSA Gr 500 (N/mm ²)	Equivalent Developed Stress % <i>f_y</i> CSA Gr 500
5T7679	5A	75	No. 5	0.31	33,300	107,419	143%	15M	200	148.1	741	148%
	5B	75	No. 5	0.31	34,380	110,903	148%	15M	200	152.9	765	153%
5T8052	5A	*80	No. 5	0.31	33,390	107,710	144%	15M	200	148.5	743	149%
5T8238	5A	*80	No. 5	0.31	33,600	108,387	145%	15M	200	149.5	747	149%
5T12105	5A	*80	No. 5	0.31	33,865	109,241	146%	15M	200	150.6	753	151%
	5B	*80	No. 5	0.31	34,023	109,750	146%	15M	200	151.3	757	151%
6T5550	6A	*80	No. 6	0.44	50,050	113,750	152%	20M	300	222.6	742	148%
6T5666	6A	*80	No. 6	0.44	49,270	111,977	149%	20M	300	219.2	731	146%
8T3466	8A	*80	No. 8	0.79	95,820	121,291	162%	25M	500	426.2	852	170%
8T3532	8A	*80	No. 8	0.79	96,900	122,658	164%	25M	500	431.0	862	172%
9T2244	9A	*80	No. 9	1	117,200	117,200	156%	30M	700	521.3	745	149%
9T2284	9A	*80	No. 9	1	112,800	112,800	150%	30M	700	501.7	717	143%
9T2518	9A	*80	No. 9	1	120,930	120,930	161%	30M	700	537.9	768	154%
11T4071	11A	*80	No. 11	1.56	180,940	115,987	155%	35M	1000	804.8	805	161%
11T5438	11A	*80	No. 11	1.56	171,096	109,677	146%	35M	1000	761.0	761	152%
	11B	*80	No. 11	1.56	172,374	110,496	147%	35M	1000	766.7	767	153%

NOTES

All headed devices meet ACI 318 Section 20, and ASTM A970 Class A & HA requirements (100% *f_u*) Grade 75 bar.
 ButtonHead BNX meets CSA A23.3 Clause 7.1.4 requirement of gross bearing area to be 10 times the bar area, 10Ab.
 Results shown are from routine testing of various heat lots of completed headed devices, per Barsplice Products, Inc. ISO 9001 Quality System.
 Conducted on reinforcing bars per ASTM A615 Grade 75/80 (or *A706 Grade 80). Minimum specified yield of Grade 75, *f_y* = 75,000 psi (520 N/mm²)
 Tests performed in accordance with ASTM A1034, Section 10.3, Monotonic Tension Tests, using load rates per ASTM A370
 See Lab reports for stress versus displacement curves (stress versus cross-head position).
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BUTTONHEAD BNH (5Ab) SYSTEM TEST DATA CONVERSION - 15M, 20M & 25M (GRADE 500)

Lab Report & Reference No.		Bar Grade	ASTM Bar Size Designation	ASTM Bar Area (in ²)	Max Load (lb)	Max Stress (psi)	Developed Stress % <i>f_y</i> ASTM Gr 75 (metric Gr 520)	Equivalent CSA Designation	CSA Bar Area (mm ²)	Max Load (kN)	Equivalent Max Stress CSA Gr 500 (N/mm ²)	Equivalent Developed Stress % <i>f_y</i> CSA Gr 500
5T8237	5A	*80	No. 5	0.31	33,470	107,968	144%	15M	200	148.9	744	149%
5T13755	5B	*80	No. 5	0.31	34,079	109,932	147%	15M	200	151.6	758	152%
6T4057	6A	75	No. 6	0.44	54,120	123,000	164%	20M	300	240.7	802	160%
	6B		No. 6	0.44	52,280	118,818	158%	20M	300	232.5	775	155%
	6C		No. 6	0.44	51,600	117,273	156%	20M	300	229.5	765	153%
6T4340	6A	75	No. 6	0.44	48,400	110,000	147%	20M	300	215.3	718	144%
6T8876	6A	*80	No. 6	0.44	51,843	117,826	157%	20M	300	230.6	769	154%
6T8980	6A	*80	No. 6	0.44	53,085	120,648	161%	20M	300	236.1	787	157%
8T2423	8A	75	No. 8	0.79	90,650	114,747	153%	25M	500	403.2	806	161%
	8B		No. 8	0.79	89,670	113,506	151%	25M	500	398.9	798	160%
	8C		No. 8	0.79	90,340	114,354	152%	25M	500	401.8	804	161%
	8D		No. 8	0.79	89,680	113,519	151%	25M	500	398.9	798	160%
8T2571	8A	80	No. 8	0.79	93,250	118,038	157%	25M	500	414.8	830	166%
	8B		No. 8	0.79	92,290	116,823	156%	25M	500	410.5	821	164%
	8C		No. 8	0.79	92,220	116,734	156%	25M	500	410.2	820	164%
8T5487	8A	*80	No. 8	0.79	94,154	119,182	159%	25M	500	418.8	838	168%
8T5528	8A	*80	No. 8	0.79	89,660	113,494	151%	25M	500	398.8	798	160%

NOTES

All headed devices meet ACI 318 Section 20, and ASTM A970 Class A & HA requirements (100% *f_u*) Grade 75 bar.
 Ask about the ButtonHead BNX system to meet CSA A23.3 Clause 7.1.4 requirement of gross bearing area to be 10 times the bar area, 10Ab.
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BUTTONHEAD BNH (5Ab) SYSTEM TEST DATA CONVERSION - 30M & 35M (GRADE 500)

Lab Report & Reference No.		Bar Grade	ASTM Bar Size Designation	ASTM Bar Area (in ²)	Max Load (lb)	Max Stress (psi)	Developed Stress % <i>f_y</i> ASTM Gr 75 (metric Gr 520)	Equivalent CSA Designation	CSA Bar Area (mm ²)	Max Load (kN)	Equivalent Max Stress CSA Gr 500 (N/mm ²)	Equivalent Developed Stress % <i>f_y</i> CSA Gr 500
9T1616	9A	75	No. 9	1.00	111,210	111,210	148%	30M	700	494.7	707	141%
9T1763	9A	80	No. 9	1.00	114,900	114,900	153%	30M	700	511.1	730	146%
	9B		No. 9	1.00	115,770	115,770	154%	30M	700	514.9	736	147%
	9C		No. 9	1.00	114,990	114,990	153%	30M	700	511.5	731	146%
9T3570	9B	*80	No. 9	1.00	114,123	114,123	152%	30M	700	507.6	725	145%
11T3136	11A	75	No. 11	1.56	186,939	119,833	160%	35M	1000	831.5	832	166%
	11B		No. 11	1.56	186,740	119,705	160%	35M	1000	830.6	831	166%
	11C		No. 11	1.56	186,021	119,244	159%	35M	1000	827.4	827	165%
	11D		No. 11	1.56	188,209	120,647	161%	35M	1000	837.2	837	167%
11T3250	11A	80	No. 11	1.56	195,460	125,295	167%	35M	1000	869.4	869	174%
11T4069	11A	*80	No. 11	1.56	182,570	117,032	156%	35M	1000	812.1	812	162%
11T4560	11A	*80	No. 11	1.56	190,669	122,224	163%	35M	1000	848.1	848	170%
11T4560	11B	*80	No. 11	1.56	191,991	123,071	164%	35M	1000	854.0	854	171%

NOTES

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BUTTONHEAD BNH (5Ab) SYSTEM TEST DATA CONVERSION - 45M (GRADE 500)

Lab Report & Reference No.		Bar Grade	ASTM Bar Size Designation	ASTM Bar Area (in ²)	Max Load (lb)	Max Stress (psi)	Developed Stress % <i>f_y</i> ASTM Gr 75 (metric Gr 520)	Equivalent CSA Designation	CSA Bar Area (mm ²)	Max Load (kN)	Equivalent Max Stress CSA Gr 500 (N/mm ²)	Equivalent Developed Stress % <i>f_y</i> CSA Gr 500
14T841	14A	75	No. 14	2.25	261,531	116,236	155%	45M	1500	1163.3	776	155%
	14B		No. 14	2.25	260,939	115,973	155%	45M	1500	1160.7	774	155%
	14C		No. 14	2.25	257,049	114,244	152%	45M	1500	1143.4	762	152%
	14D		No. 14	2.25	259,641	115,396	154%	45M	1500	1154.9	770	154%
14T1338	14A	*80	No. 14	2.25	246,400	109,511	146%	45M	1500	1096.0	731	146%
14T1361	14A	*80	No. 14	2.25	245,819	109,253	146%	45M	1500	1093.4	729	146%
14T1797	14A	*80	No. 14	2.25	254,284	113,015	151%	45M	1500	1131.1	754	151%
14T1798	14A	*80	No. 14	2.25	255,958	113,759	152%	45M	1500	1138.5	759	152%
14T1800	14A	*80	No. 14	2.25	254,941	113,307	151%	45M	1500	1134.0	756	151%

NOTES

All headed devices meet ACI 318 Section 20, and ASTM A970 Class A & HA requirements (100% *f_u*) Grade 75 bar.
 Ask about the ButtonHead BNH system to meet CSA A23.3 Clause 7.1.4 requirement of gross bearing area to be 10 times the bar area, 10Ab.
 Results shown are from routine testing of various heat lots of completed headed devices, per Barsplice Products, Inc. ISO 9001 Quality System.
 Conducted on reinforcing bars per ASTM A615 Grade 75/80 (or *A706 Grade 80). Minimum specified yield of Grade 75, *f_y* = 75,000 psi (520 N/mm²)
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