



HEX TAP BOLTS

ZINC & STAINLESS STEEL



Hex tap bolts are low carbon hex head bolts with no point on the end and fully threaded to the head. Hex tap bolts are used in drilled and tapped holes which are threaded full length. They are used in place of studs with nuts.



KEY FEATURES

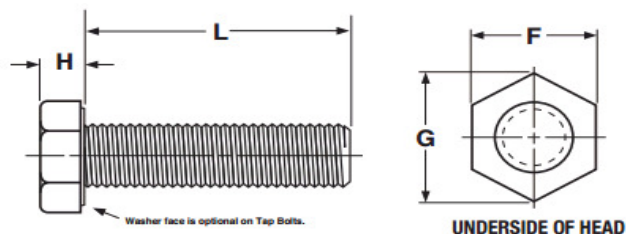
- Coarse Thread (UNC)
- Full Thread
- Zinc Plated - A307 - Grade A
- 304 Stainless Steel
- 316 Stainless Steel

DIMENSIONAL DATA

Fully Threaded Hex Tap Bolts						IFI-199(2014)		
Nominal or Basic Product Diameter	F			G		H		
	Width Across Flats			Width Across Corners		Head Height		
	Basic	Max	Min	Max	Min	Basic	Max	Min
1/4	7/16	0.438	0.425	0.505	0.484	11/64	0.188	0.150
5/16	1/2	0.500	0.484	0.577	0.552	7/32	0.235	0.195
3/8	9/16	0.562	0.544	0.650	0.620	1/4	0.268	0.226
7/16	5/8	0.625	0.603	0.722	0.687	19/64	0.316	0.272
1/2	3/4	0.750	0.725	0.866	0.826	11/32	0.364	0.302
* 9/16	13/16	0.812	0.798	0.938	0.910	23/64	0.371	0.348
5/8	15/16	0.938	0.906	1.083	1.033	27/64	0.444	0.378
3/4	1-1/8	1.125	1.088	1.299	1.240	1/2	0.524	0.455
7/8	1-5/16	1.312	1.269	1.516	1.447	37/64	0.604	0.531
1	1-1/2	1.500	1.450	1.732	1.653	43/64	0.700	0.591
1-1/4	1-7/8	1.875	1.812	2.156	2.066	27/32	0.876	0.749

Tolerance of Length	Nominal Screw Size	Nominal Size				
		Up to 1in., incl.	Over 1in. to 2-1/2in., incl.	Over 2-1/2 in. to 4in., incl.	Over 4 in. to 6 in., incl.	Over 6 in.
	1/4 to 3/8	+0.02 -0.03	+0.02 -0.04	+0.04 -0.06	+0.06 -0.10	+0.10 -0.18
	7/16 to 1/2	+0.02 -0.03	+0.04 -0.06	+0.06 -0.10	+0.08 -0.10	+0.12 -0.18
	9/16 to 3/4	+0.02 -0.03	+0.06 -0.08	+0.08 -0.10	+0.10 -0.10	+0.14 -0.18
	7/8 to 1	-	+0.08 -0.10	+0.10 -0.14	+0.12 -0.16	+0.16 -0.20
	1-1/4	-	+0.12 -0.12	+0.16 -0.16	+0.18 -0.18	+0.22 -0.22

Length of tap bolt is measured from the underhead bearing surface to the extreme end of the bolt. *Dimensions for 9/16" nominal diameter are independent of the IFI-199 standard.





HEX TAP BOLTS
ZINC & STAINLESS STEEL



DIMENSIONAL DATA

ZINC PLATED - A307 GRADE A

Description	ASTM A307 Tap Bolt: A low carbon, hex head bolt with a machined point which is threaded to the head.
Application/Advantages	ASTM A307 Tap Bolt: To be used in drilled and tapped holes which are threaded full length. Used instead of a stud and a nut.
Material	ASTM A307 Tap Bolt: Bolts shall be made from a carbon steel which conforms to the following chemical composition requirements-- Carbon: 0.33 maximum; Manganese: 0.93 maximum; Phosphorous: 0.041.
Core Hardness	ASTM A307 Tap Bolt: Rockwell B69 - B100
Tensile Strength	ASTM A307 Tap Bolt: 60,000 psi minimum.
Elongation*	ASTM A307 Tap Bolt: 18% minimum.

*These properties are tested only on machined specimens when the testing machine cannot provide for full testing of the parts.

**A307
Headmark**



DIMENSIONAL DATA

STAINLESS STEEL - 304 (18-8) & 316

**STAINLESS
STEEL - 304
(18-8) & 316**



D= Nominal diameter of the screw in inches; *These properties are tested only on machined specimens when the testing machine cannot provide for full testing of the parts.; ** Product standards require the manufacturer's head marking to appear on the top of all tap bolts 1/4" diameter or larger. "X" represents on location such a marking may appear.

Material	18-8: A tap bolt made from one of the following austenitic alloys: 303, 303Se, 304, XM7, all of which are characterized as having a chromium content of 17-19% and nickel content of 8-10%. 316: A tap bolt made from 316 stainless steel, an austenitic alloy which differs from 18-8 by its molybdenum content (2-3%) and a higher nickel content (10-14%).
Heat Treatment	The austenitic alloys develop their strength through work hardening during the fastener manufacturing process, as seen from the hardness properties below. The only heat treatment normally available on austenitic stainless alloys is annealing, which is done at approximately 1900°F to a dead soft condition and is not normally thermally reversible.
Hardness	1/4 through 5/8in. diameter: Rockwell B95 - C32. 3/4 through 1in. diameter: Rockwell B80 - C32.
Yield Strength*	1/4 through 5/8 in. diameter, 2.25D and longer: 65,000 psi 3/4" (2.25D & longer) & 7/8 through 1 in. diameter (3D & longer): 45,000 psi
Tensile Strength	1/4 through 5/8 in. diameter, 2.25D and longer: 100,000 - 150,000 psi 3/4" (2.25D & longer) & 7/8 through 1 in. diameter (3D & longer): 85,000 - 140,000 psi
Elongation in 4D*	1/4 through 5/8 in. diameter: 20% minimum; 3/4 through 1 in. diameter: 25% minimum

**HEX TAP BOLTS**
ZINC & STAINLESS STEEL**ORDERING INFORMATION**

ZINC PLATED - A307 GRADE A

PART #	SIZE	QUANTITY / BOX
2HTB14114	1/4-20 x 1-1/4	100 / BOX
2HTB14112	1/4-20 x 1-1/2	100 / BOX
2HTB14200	1/4-20 x 2	100 / BOX
2HTB14212	1/4-20 x 2-1/2	100 / BOX
2HTB14300	1/4-20 x 3	100 / BOX
2HTB14312	1/4-20 x 3-1/2	100 / BOX
2HTB14400	1/4-20 x 4	100 / BOX
2HTB14412	1/4-20 x 4-1/2	100 / BOX
2HTB14500	1/4-20 x 5	100 / BOX
2HTB14600	1/4-20 x 6	100 / BOX
2HTB56114	5/16-18 x 1-1/4	100 / BOX
2HTB56112	5/16-18 x 1-1/2	100 / BOX
2HTB56200	5/16-18 x 2	100 / BOX
2HTB56212	5/16-18 x 2-1/2	100 / BOX
2HTB56300	5/16-18 x 3	100 / BOX
2HTB38400	3/8-16 x 4	50 / BOX
2HTB56312	5/16-18 x 3-1/2	50 / BOX
2HTB56400	5/16-18 x 4	50 / BOX
2HTB56412	5/16-18 x 4-1/2	50 / BOX
2HTB56500	5/16-18 x 5	50 / BOX
2HTB56512	5/16-18 x 5-1/2	50 / BOX
2HTB56600	5/16-18 x 6	50 / BOX
2HTB38114	3/8-16 x 1-1/4	100 / BOX
2HTB38112	3/8-16 x 1-1/2	100 / BOX
2HTB38200	3/8-16 x 2	100 / BOX
2HTB38212	3/8-16 x 2-1/2	50 / BOX
2HTB38300	3/8-16 x 3	50 / BOX
2HTB38312	3/8-16 x 3-1/2	50 / BOX
2HTB38400	3/8-16 x 4	50 / BOX
2HTB38412	3/8-16 x 4-1/2	50 / BOX
2HTB38500	3/8-16 x 5	50 / BOX
2HTB38600	3/8-16 x 6	50 / BOX

PART #	SIZE	QUANTITY / BOX
2HTB12112	1/2-13 x 1-1/2	50 / BOX
2HTB12200	1/2-13 x 2	50 / BOX
2HTB12212	1/2-13 x 2-1/2	50 / BOX
2HTB12300	1/2-13 x 3	50 / BOX
2HTB12312	1/2-13 x 3-1/2	25 / BOX
2HTB12400	1/2-13 x 4	25 / BOX
2HTB12412	1/2-13 x 4-1/2	25 / BOX
2HTB12500	1/2-13 x 5	25 / BOX
2HTB12512	1/2-13 x 5-1/2	25 / BOX
2HTB12600	1/2-13 x 6	25 / BOX
2HTB58200	5/8-11 x 2	25 / BOX
2HTB58214	5/8-11 x 2-1/4	25 / BOX
2HTB58212	5/8-11 x 2-1/2	25 / BOX
2HTB58234	5/8-11 x 2-3/4	25 / BOX
2HTB58300	5/8-11 x 3	25 / BOX
2HTB58314	5/8-11 x 3-1/4	25 / BOX
2HTB58312	5/8-11 x 3-1/2	25 / BOX
2HTB58400	5/8-11 x 4	25 / BOX
2HTB58500	5/8-11 x 5	25 / BOX
2HTB58512	5/8-11 x 5-1/2	25 / BOX
2HTB58600	5/8-11 x 6	25 / BOX
2HTB34200	3/4-10 x 2	20 / BOX
2HTB34214	3/4-10 x 2-1/4	20 / BOX
2HTB34212	3/4-10 x 2-1/2	20 / BOX
2HTB34234	3/4-10 x 2-3/4	20 / BOX
2HTB34300	3/4-10 x 3	20 / BOX
2HTB34314	3/4-10 x 3-1/4	20 / BOX
2HTB34312	3/4-10 x 3-1/2	15 / BOX
2HTB34334	3/4-10 x 3-3/4	15 / BOX
2HTB34400	3/4-10 x 4	15 / BOX
2HTB34412	3/4-10 x 4-1/2	15 / BOX
2HTB34500	3/4-10 x 5	15 / BOX
2HTB34512	3/4-10 x 5-1/2	15 / BOX
2HTB34600	3/4-10 x 6	15 / BOX

**ORDERING INFORMATION (CONT'D)**

STAINLESS STEEL - 304 (18-8) & 316

316 STAINLESS STEEL

PART #	SIZE	QUANTITY / BOX
2HTBS414114	1/4-20 x 1-1/4	100 / BOX
2HTBS414112	1/4-20 x 1-1/2	100 / BOX
2HTBS414200	1/4-20 x 2	100 / BOX
2HTBS414300	1/4-20 x 3	100 / BOX
2HTBS414312	1/4-20 x 3-1/2	100 / BOX
2HTBS414400	1/4-20 x 4	100 / BOX
2HTBS414412	1/4-20 x 4-1/2	100 / BOX
2HTBS456114	5/16-18 x 1-1/4	100 / BOX
2HTBS456200	5/16-18 x 2	100 / BOX
2HTBS438114	3/8-16 x 1-1/4	100 / BOX
2HTBS438112	3/8-16 x 1-1/2	100 / BOX
2HTBS438200	3/8-16 x 2	100 / BOX
2HTBS438212	3/8-16 x 2-1/2	50 / BOX
2HTBS438300	3/8-16 x 3	50 / BOX
2HTBS438400	3/8-16 x 4	50 / BOX
2HTBS438412	3/8-16 x 4-1/2	50 / BOX
2HTBS438400	3/8-16 x 4	50 / BOX

PART #	SIZE	QUANTITY / BOX
2HTBS438500	3/8-16 x 5	50 / BOX
2HTBS438600	3/8-16 x 6	50 / BOX
2HTBS412112	1/2-13 x 1-1/2	50 / BOX
2HTBS412200	1/2-13 x 2	50 / BOX
2HTBS412212	1/2-13 x 2-1/2	50 / BOX
2HTBS412300	1/2-13 x 3	50 / BOX
2HTBS412400	1/2-13 x 4	25 / BOX
2HTBS412500	1/2-13 x 5	25 / BOX
2HTBS412600	1/2-13 x 6	25 / BOX
2HTBS458200	5/8-11 x 2	25 / BOX
2HTBS458212	5/8-11 x 2-1/2	25 / BOX
2HTBS458300	5/8-11 x 3	25 / BOX
2HTBS434200	3/4-10 x 2	20 / BOX
2HTBS434300	3/4-10 x 3	20 / BOX
2HTBS434400	3/4-10 x 4	15 / BOX
2HTBS434500	3/4-10 x 5	15 / BOX

304 STAINLESS STEEL

PART #	SIZE	QUANTITY / BOX
2HTBS214114	1/4-20 x 1-1/4	100 / BOX
2HTBS214112	1/4-20 x 1-1/2	100 / BOX
2HTBS214200	1/4-20 x 2	100 / BOX
2HTBS238114	3/8-16 x 1-1/4	100 / BOX
2HTBS238112	3/8-16 x 1-1/2	100 / BOX
2HTBS238200	3/8-16 x 2	100 / BOX
2HTBS238300	3/8-16 x 3	50 / BOX
2HTBS238400	3/8-16 x 4	50 / BOX
2HTBS212112	1/2-13 x 1-1/2	50 / BOX
2HTBS212200	1/2-13 x 2	50 / BOX
2HTBS258212	5/8-11 x 2-1/2	25 / BOX
2HTBS258300	5/8-11 x 3	25 / BOX