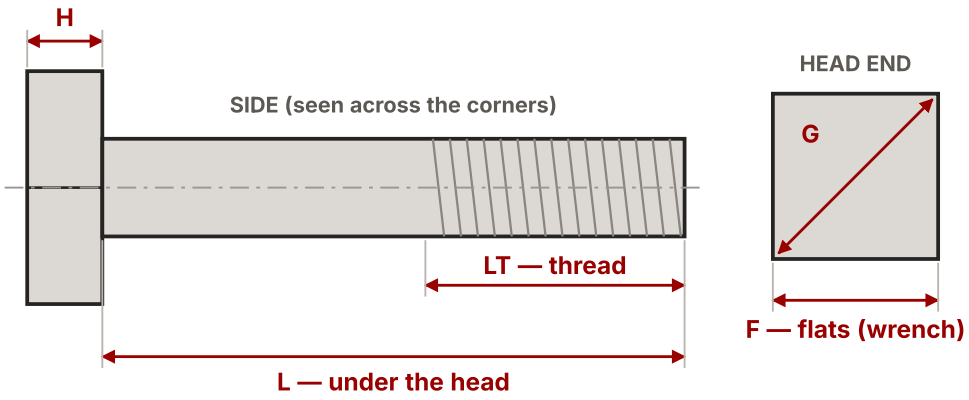
Square Head Bolt Dimensions

jandesupply.com/reference-square-head-bolt-dimensions.php

J & E Supply & FASTENER CO.

Wrench size (across the flats), across the corners, head height and thread length for square head bolts, 1/4″ to 1-1/2″. ASME B18.2.1.

A square head bolt is sized by its **thread**, and its wrench by the head's width **across the flats** (F). From 5/16″ up a square head takes the same wrench as a hex head of that size; a **1/4″** square head is **3/8″** across the flats (a 1/4″ hex head is 7/16″). It's measured like any bolt with a head that sits on top: **from under the head** to the end.



Letters match the table columns: **F** across the flats, **G** across the corners, **H** head height, **LT** thread length, **L** length.

Square bolts — ASME B18.2.1 (inches)

SIZE	FLATS F	F MAX / MIN	CORNERS G MAX / MIN	HEAD H	H MAX / MIN	THREAD LT, L ≤ 6″	LT, L > 6″
1/4″	3/8″	.375 / .362	.530 / .498	11/64″	.188 / .156	.750″	1.000″
5/16″	1/2″	.500 / .484	.707 / .665	13/64″	.220 / .186	.875″	1.125″
3/8″	9/16″	.562 / .544	.795 / .747	1/4″	.268 / .232	1.000″	1.250″
7/16″	5/8″	.625 / .603	.884 / .828	19/64″	.316 / .278	1.125″	1.375″
1/2″	3/4″	.750 / .725	1.061 / .995	21/64″	.348 / .308	1.250″	1.500″
5/8″	15/16″	.938 / .906	1.326 / 1.244	27/64″	.444 / .400	1.500″	1.750″
3/4″	1-1/8″	1.125 / 1.088	1.591 / 1.494	1/2″	.524 / .476	1.750″	2.000″
7/8″	1-5/16″	1.312 / 1.269	1.856 / 1.742	19/32″	.620 / .568	2.000″	2.250″
1″	1-1/2″	1.500 / 1.450	2.121 / 1.991	21/32″	.684 / .628	2.250″	2.500″
1-1/8″	1-11/16″	1.688 / 1.631	2.386 / 2.239	3/4″	.780 / .720	2.500″	2.750″
1-1/4″	1-7/8″	1.875 / 1.812	2.652 / 2.489	27/32″	.876 / .812	2.750″	3.000″
1-3/8″	2-1/16″	2.062 / 1.994	2.917 / 2.738	29/32″	.940 / .872	3.000″	3.250″
1-1/2″	2-1/4″	2.250 / 2.175	3.182 / 2.986	1″	1.036 / .964	3.250″	3.500″

F and H in bold are the basic (nominal) sizes. Thread length is for bolts 6″ and shorter; longer bolts add 1/4″. Bolts shorter than the thread length are threaded all the way.

Threads, grades and measuring

Thread pitch and tap drill for each size are on the thread pitch chart; grade marks and strength on Bolt Grades; how to measure any bolt on How to Measure a Bolt.

Quick answers

What size wrench fits a 1/2" square head bolt?

3/4″ — the head is 3/4″ across the flats (ASME B18.2.1).

Does a 1/4" square head bolt take the same wrench as a 1/4" hex bolt?

No — a 1/4″ square head is 3/8″ across the flats; a 1/4″ hex head is 7/16″. From 5/16″ up they match.

How tall is the head on a 3/4" square head bolt?

1/2″ nominal (.476–.524″).

How long is the thread on a square head bolt?

On bolts 6″ and shorter: 1.250″ for 1/2″, 1.750″ for 3/4″, 2.250″ for 1″; longer bolts add 1/4″.

Reference values drawn from the governing standards. For critical applications, confirm against the standard and the manufacturer's published data.
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