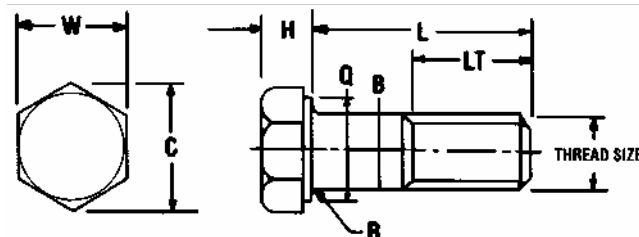


Hexagon Head Bolts/Screws

Inch Series, UNC/UNF-Dimensions

Note :

1. The bolts and screws will generally conform to ANSI B 18.2.1 (Bolts/Screws made to ANSI B.18.2.1 will also generally conform to B.S.1768).
2. Threads will conform to class 2A of ANSI B1.1 or BS 1580 for Unified threads (Coarse Fine).
3. Material : "UNILOK" High grade carbon/alloy steel.
4. Heat Treatment : As per SAE grade 5 or 8 (Bolts/Screws made to SAE grade 5 and 8 will also generally conform to requirements of grade 'S' & 'V' of BS 1768 respectively).
5. Thread Length LT:
LT1 for $L \leq 6$
LT2 for $L > 6$
6. Screw lengths equal to or shorter than those listed in row 'LFT' will be threaded to head.
7. All dimensions are in inches.



Thread Size	Pitch		W Max.	C Min.	B Max.	H Nom.	R Min.	Q Min	Length of Thread			Length Range L
	UNC	UNF							LT1	LT2	LFT	
1/4"	20	28	0.4375	0.505	0.2500	0.158	0.015	0.411	3/4	-	1	1/2-2.1/4
5/16"	18	24	0.5000	0.577	0.3125	0.206	0.015	0.473	7/8	-	1.1/8	1/2-4
3/8"	16	24	0.5625	0.650	0.3750	0.238	0.015	0.535	1	-	1.1/4	1/2-4
7/16"	14	20	0.6250	0.722	0.4375	0.286	0.015	0.595	1.1/8	-	1.3/8	3/4-3.1/2
1/2"	13	20	0.7500	0.866	0.5000	0.318	0.015	0.720	1.1/4	1.1/2	1.1/2	3/4-3.1/2
5/8"	11	18	0.9375	1.083	0.6250	0.398	0.020	0.908	1.1/2	1.3/4	1.7/8	1-8
3/4"	10	16	1.1250	1.300	0.7500	0.473	0.020	1.090	1.3/4	2	2.1/8	1.1/2-8
7/8"	9	14	1.3125	1.515	0.8750	0.553	0.040	1.275	2	2.1/4	2.3/8	1.1/2-8
1"	8	12	1.5000	1.732	1.0000	0.617	0.060	1.463	2.1/4	2.1/2	2.5/8	1.1/2-8

Hexagon Head Bolts/Screws



Inch Series, UNC/UNF-Physical Properties-Tightening Torques:

Grade	Grade 5	Grade 8
Tensile Strength(Min)	120000 lbs/in ²	150000 lbs/in ²
	84.5Kgf/mm ²	105.4 Kgf/mm ²
Proof Load Stress	85000 lbs/in ²	120000 lbs/in ²
	59.9Kgf/mm ²	84.5 Kgf/mm ²
Elongation % on GL= 4 x Gauge Dia	14%	12%
Rockwell Hardness	RC 25-34	RC 33-39

Recommended Tightening Torques and Induced Loads UNC Thread

Thread Size	Stress Area Sq. Inch	Grade 5		Grade 8	
		Torque (lbs-in)	Induced Load (lbs)	Torque (lbs-in)	Induced Load (lbs)
1/4"	0.0324	99.1	2086	140.	2948
5/16"	0.0532	203.4	3426	287.4	4841
3/8"	0.0786	360.5	5061	509.7	7152
7/16"	0.1078	577.1	6942	815.4	9809
1/2"	0.1438	879.6	9260	1243.2	13085
5/8"	0.2290	1705.2	14748	2409.5	20839
3/4"	0.3380	3020.0	21767	4267.6	30758
7/8"	0.4670	4868.5	30075	6878.7	42497
1"	0.6120	7291	39412	10302.9	55692

Recommended Tightening Torques and Induced Loads UNF Thread

Thread Size	Stress Area Sq. Inch	Grade 5		Grade 8	
		Torque (lbs-in)	Induced Load (lbs)	Torque (lbs-in)	Induced Load (lbs)
1/4"	0.0368	112.5	2370	159.1	3349
5/16"	0.0587	224.4	3780	317.2	5341
3/8"	0.0887	406.6	5706	574.5	8063
7/16"	0.1198	641.3	7715	906.2	10902
1/2"	0.1612	986.2	10381	1393.5	14669
5/8"	0.2580	1921.1	16615	2715.0	23478
3/4"	0.375	3351.0	24150	4735.0	34125
7/8"	0.513	5326.5	33037	7557	46683
1"	0.667	7946.2	42955	11229	60697

Note :

The tightening torques calculated to induce stress equal to approximately 70% of Yield Stress.