



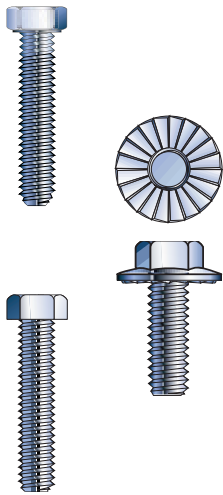
BOLTS

TECHNICAL DATA

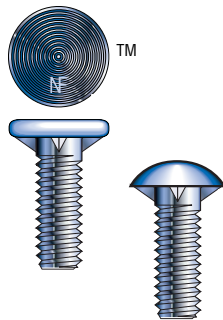
Allowable Dimensions

NOMINAL SIZE SCREW SIZE & THREADS PER INCH	SERIES DESIGNATION	ALLOWANCE	MAJOR DIAMETER		PITCH DIAMETER		TOLERANCE
			MAXIMUM	MINIMUM	MAXIMUM	MINIMUM	
1/4-20	UNC	.0011	.2489	.2408	.2164	.2127	.0037
5/16-18	UNC	.0012	.3113	.3026	.2752	.2712	.0040
3/8-16	UNC	.0013	.3737	.3643	.3331	.3287	.0044
7/16-14	UNC	.0014	.4361	.4258	.3897	.3850	.0047
1/2-13	UNC	.0015	.4985	.4876	.4485	.4435	.0050
5/8-11	UNC	.0016	.6234	.6113	.5644	.5589	.0055

Mechanical Requirements & Identification Marking for Bolts



GRADE DESIGNATION	PRODUCTS	NOMINAL DIAMETER / INCHES	FULL SIZE BOLTS, SCREWS, STUDS, SEMS		MACHINE TEST SPECIMENS OF BOLTS, SCREWS AND NUTS			SURFACE HARD- NESS	CORE HARDNESS		GRADE IDENTIFICATION MARKING	MANUFACTURERS IDENTIFICATION MARKING
			PROOF LOAD (STRESS) PSI	YIELD STRENGTH (STRESS) MIN. PSI	TENSILE STRENGTH (STRESS) MIN. PSI	ELONGATION MIN. %	REDUCTION OF AREA MIN. %	ROCKWELL 30N MAXIMUM	ROCKWELL			
									MINIMUM	MAXIMUM		
2	Bolts	1/4 thru 3/4	55000	57000	74000	18	35	-	B80	B100		NF
	Studs	1/2 to 3/4	33000	36000	60000	18	35	-	B70	B100		
8.2	Bolts	1/4 thru 1	120000	130000	150000	10	35	58.6	C33	C39	⚡	NF



Proof Load & Tensile Strength Requirements Coarse Thread Series - UNC

NOMINAL DIAMETER OF PRODUCT & THREADS PER INCH	GRADE 2		GRADE 8.2	
	PROOF LOAD, LBS.	TENSILE STRENGTH MIN. LBS.	PROOF LOAD, LBS.	TENSILE STRENGTH MIN. LBS.
1/4-20	1750	2350	3800	4750
5/16-18	2900	3900	6300	7850
3/8-16	4250	5750	9300	11600
7/16-14	5850	7850	12800	15900
1/2-13	7800	10500	17000	21300
5/8-11	12400	16700	27100	33900

All test results and suggestions are based on laboratory tests. Specific job site conditions should be taken into consideration when specifying the proper fastener. Because applications vary, we assume no liability for use of this information.