



HARPER STEEL

ASTM A449 BOLTS

A 4 4 9 S C O P E

The ASTM specification covers quenched and tempered steel bolts and studs. Considered for more general applications A449 Hex bolts can have longer thread lengths and diameters greater than 1 1/2" unlike A325 Hex bolts. Although ASTM 1554 now covers most anchor rod specifications the A449 spec can still be applied to anchor bolts, all thread rod and single or double end studs. Cut or rolled threads are acceptable. A449 bolts and studs may be Hot Dip Galvanized per ASTM F2329.

A 4 4 9 T Y P E

1. Medium carbon steel bolts and studs 1/4"-3".
2. Low carbon martensite or medium carbon martensite bolts and studs 1/4"-1".

M E C H A N I C A L P R O P E R T I E S

SIZE	TENSILE, KSI	YIELD, KSI	ELONG % min	RA % min
1/4"-1	120	92	14	35
1 1/8"- 1 1/2"	105	81	14	35
1 5/8"-3"	90	58	14	35

E Q U I V A L E N T N U T A N D W A S H E R P A I R I N G

NUT PLAIN	NUT PLAIN	NUT GALV.	WASHER
1/4"-1 1/2" A563B	1 5/8"-3 A563A HEAVY	1/4"-3" A563DH	F436

Note: Different grade nuts having proof loads higher than those specified are also suitable.

HARPER STEEL

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Information cited above is for reference purposes only. For more details see ASTM PUB A325 2004, A449, A194. 1554 2004, F436, A563, 153, 123, B633.