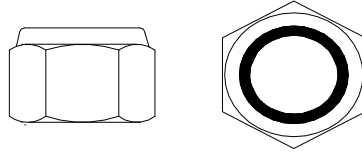


Nylon Insert Lock Nuts



Nylon insert lock nut (also called non-metallic insert lock nuts or nyloc nuts) manufacturers have historically used the strength designation of Grade A, B and C, established by the Industrial Fastener Institutes standard IFI-100/107, to designate the three different strength levels that these nuts can be manufactured to. End users typically order lock nuts using the more common industry standard strength levels (also called the SAE strength levels) of Grade 2, 5 and 8. In 2008 the US standards organization ANSI published a new nylon insert lock nut standard and introduced another grade designations for this style of lock nut: NE2, NE5 and NE8.

Each of these “grades” are designed to be used on the following strength level of bolts, studs or cap screws:

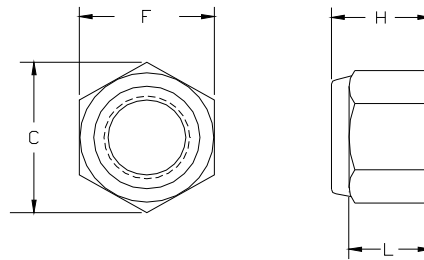
Bolt Strength Level	Lock Nut Strength Level
Grade 2	Grade A, 2 or NE2
Grade 5	Grade B, 5 or NE5
Grade 8	Grade C, 8 or NE8

Comparison of strength levels specified by IFI 100/107, SAE J995 and ASME B18.16.6

IFI 100/107				SAE J995				ASME B18.16.6			
Grade	Sizes	Proof Load (min)	Hardness	Grade	Sizes	Proof Load (min)	Hardness	Grade	Sizes	Proof Load (min)	Hardness
A	1/4 to 1 1/2	90,000	Rc 28 max	2	1/4 to 1 1/2	90,000	Rc 32 max	NE2	1/4 to 1 1/2	90,000	Rc 28 max
B	1/4 to 1	120,000	Rc 28 max	5	1/4 to 1 UNC	120,000	Rc 32 max	NE5	1/4 to 1	120,000	Rc 28 max
					1/4 to 1 UNF	109,000					
	1 1/8 to 1 1/2	105,000			1 1/8 to 1 1/2 UNC	105,000			1 1/8 to 1 1/2	105,000	
					1 1/8 to 1 1/2 UNF	94,000					
C	1/4 to 5/8	150,000	Rc 24/32	8	1/4 to 5/8	150,000	Rc 24/32	NE8	1/4 to 5/8	150,000	Rc 24/32
	3/4 to 1		Rc 26/34		3/4 to 1		Rc 26/34		3/4 to 1		Rc 26/34
	1 1/8 to 1 1/2		Rc 26/36		1 1/8 to 1 1/2		Rc 26/36		1 1/8 to 1 1/2		Rc 26/36

Nylon Insert Lock Nuts

Dimensionally these nuts these nuts are made to what is commonly referred to as the NE series dimensions.



Diameter	Width Across Flats		Width Across Corners Ref.	Thickness	Hex Height Ref.
	Nom	F	C	H	L
1/4	7/16	.439/.428	.482	.328/.298	.225
5/16	1/2	.502/.489	.552	.359/.329	.250
3/8	9/16	.564/.551	.622	.468/.438	.335
7/16	5/8	.627/.616	.698	.468/.438	.324
1/2	3/4	.752/.736	.837	.609/.579	.464
9/16	13/16	.877/.861	.978	.656/.626	.469
5/8	15/16	.940/.922	1.051	.765/.735	.593
3/4	1 1/16	1.064/1.052	1.191	.890/.860	.742
7/8	1 1/4	1.252/1.239	1.403	.999/.969	.790
1	1 7/16	1.440/1.427	1.615	1.078/1.016	.825
1 1/8	1 5/8	1.627/1.614	1.826	1.208/1.141	.930
1 1/4	1 13/16	1.815/1.788	2.038	1.422/1.360	1.125
1 3/8	2	2.008/1.973	2.232	1.609/1.547	1.282
1 1/2	2 3/16	2.197/2.159	2.444	1.640/1.576	1.313