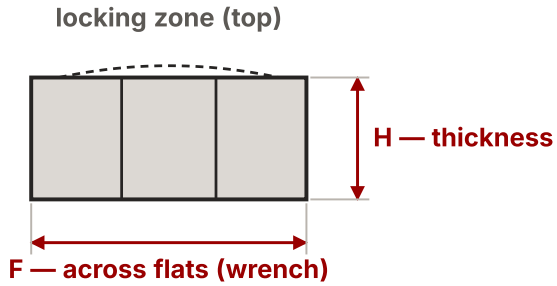
All-Metal Lock Nut Dimensions

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J & E Supply & FASTENER CO.

Wrench size and thickness for all-metal lock nuts: prevailing-torque (Grade C), top lock, two-way reversible and K-lock (Kep) nuts, by size.

An **all-metal lock nut** holds against vibration without a nylon ring. A **prevailing-torque** or **top lock** nut has its top threads squeezed out of round, so it grips the bolt as it turns on; a **two-way reversible** nut is squeezed in the middle, so either face can go on first; a **K-lock (Kep)** nut carries a free-spinning tooth washer that bites into the part. On every prevailing-torque, top lock, two-way and K-lock size below, the wrench is the **same as a hex nut** of that size (see our hex nut chart).



Letters match the table columns: **F** across flats (the wrench), **H** overall thickness. Not to scale.

Prevailing-torque lock nuts, Grade C — ASME B18.16.6 (inches)

SIZE	WRENCH F	F MAX / MIN	THICKNESS H MAX / MIN
1/4″	7/16″	.438 / .428	— / .212
5/16″	1/2″	.502 / .489	— / —
3/8″	9/16″	.564 / .551	— / .320
7/16″	11/16″	.689 / .675	— / .365
1/2″	3/4″	.752 / .736	— / .427
9/16″	7/8″	— / .861	— / .473
5/8″	15/16″	.939 / .922	— / .535
3/4″	1-1/8″	1.127 / 1.088	— / .617
7/8″	1-5/16″	1.314 / 1.269	— / .724
1″	1-1/2″	1.502 / 1.450	— / .831

Max / min in inches. Thickness: our sources agree on the minimum only — the maximum depends on the maker's locking style (a cone top or a crimped top is taller than the hex), so it is a dash. A dash: our sources differ, or only one lists it — give us a call.

Grade B prevailing-torque lock nuts (inches)

SIZE	WRENCH F	F MAX / MIN	THICKNESS H MAX / MIN
1/4″	7/16″	.438 / .428	.257 / .243
5/16″	1/2″	— / .489	.302 / .292
3/8″	9/16″	— / .551	.377 / .360
7/16″	11/16″	— / .675	.430 / .410
1/2″	3/4″	— / .736	.510 / .490
5/8″	15/16″	— / .922	.645 / .621
3/4″	1-1/8″	— / 1.088	.750 / .702
7/8″	1-5/16″	— / 1.269	.862 / .810
1″	1-1/2″	— / 1.450	.958 / .902

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Max / min in inches, from the RB&W and Locknut Technology tables (two makers). Wrench F: their across-flats minimum is the hex nut's on our hex nut chart, so it takes the same wrench. A dash: the two makers differ — give us a call.

Collar lock nuts, Grade C (inches)

SIZE	WRENCH F	F MAX / MIN	THICKNESS H MAX / MIN
1-1/8″	1-11/16″	— / 1.631	.999 / .939
1-1/4″	1-7/8″	1.875 / 1.812	1.094 / 1.030
1-3/8″	2-1/16″	2.062 / 1.994	1.206 / 1.138
1-1/2″	2-1/4″	2.250 / 2.175	1.317 / 1.245

Max / min in inches, from the RB&W and Locknut Technology full collar tables (two makers); H is the overall thickness, collar included. Wrench F: the hex nut's wrench on our hex nut chart where their across-flats values match it. A dash: the two makers differ — give us a call.

Top lock nuts (inches)

SIZE	WRENCH F	F MAX / MIN	THICKNESS H MAX / MIN
1/4″	7/16″	.438 / .428	.226 / .212
5/16″	1/2″	— / .489	.273 / .258
3/8″	9/16″	— / .551	.337 / .320
1/2″	3/4″	— / .736	.448 / .427
5/8″	15/16″	— / .922	.559 / .535
3/4″	1-1/8″	— / 1.088	.665 / .617
7/8″	1-5/16″	— / 1.269	.776 / .724
1″	1-1/2″	— / 1.450	.887 / .831

Max / min in inches. A dash: our sources differ, or only one lists it — give us a call. Top lock nuts here are the same thickness as a hex nut.

Two-way reversible lock nuts (inches)

SIZE	WRENCH F	F MAX / MIN	THICKNESS H MAX / MIN
#8	11/32″	.344 / .332	— / —
#10	3/8″	.375 / .362	.203 / .187
1/4″	7/16″	.438 / .428	— / —
5/16″	1/2″	.500 / .489	.273 / .258
3/8″	9/16″	— / .551	.337 / .320
7/16″	11/16″	.688 / .675	.385 / .365
1/2″	3/4″	.750 / .736	.448 / .427
9/16″	7/8″	.875 / .861	.496 / .473
5/8″	15/16″	.938 / .922	.559 / .535
3/4″	1-1/8″	1.125 / 1.088	.665 / .617
7/8″	1-5/16″	1.312 / 1.269	.776 / .724
1″	1-1/2″	1.500 / 1.450	.887 / .831

Max / min in inches. A dash: our sources differ, or only one lists it — give us a call.

K-lock (Kep) nuts — wrench (inches)

SIZE	WRENCH F
#4	1/4″
#6	5/16″
#8	11/32″
#10	3/8″
1/4″	7/16″
5/16″	1/2″
3/8″	9/16″

The hex wrench size. Thickness and washer diameter: only one of our sources lists them — give us a call.

Good to know

Grade C lock nuts go with Grade 8 bolts. A Grade C prevailing-torque or top lock nut is the all-metal lock nut made for Grade 8 strength; all-metal lock nuts also take heat (up to about 450°F) that a nylon ring can't.

Grade B lock nuts go with Grade 5 bolts. Use a Grade B prevailing-torque nut with a Grade 5 bolt (RB&W and Alma both say so); a Grade 8 bolt takes Grade C.

Two-way nuts lock in the middle. A two-way reversible nut grips the bolt in the center of its threads, so it can go on either face first and the bolt doesn't have to stick out past the nut to lock.

Top lock nuts are hex nut size. On this chart a top lock nut has the same wrench and the same thickness as a hex nut of its size, so it fits wherever the hex nut did.

A K-lock grips the part, not the bolt. Its tooth washer bites into the surface as the nut is tightened, so it locks only against a surface the teeth can dig into.

Quick answers

What size wrench fits a 3/8 lock nut?
A 3/8″ all-metal lock nut (prevailing-torque, top lock or two-way) takes a **9/16″** wrench, the same as a 3/8″ hex nut.

What size socket for a 1/2-13 top lock nut?
3/4″. A 1/2″ top lock nut is 0.427″ to 0.448″ thick.

What wrench fits a 1/4 Kep nut?
A 1/4″ K-lock (Kep) nut takes a **7/16″** wrench; a #10 takes 3/8″.

What is a two-way reversible lock nut?
An all-metal lock nut squeezed in the middle of its threads, so it locks with either face down. A 5/8″ one takes a **15/16″** wrench.

What bolt goes with a Grade C lock nut?
A **Grade 8** bolt. Grade C is the all-metal lock nut grade made for Grade 8 strength.

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