

What Are Nyloc Lock Nuts Used For?

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Nuts · DIN 985 / ISO 7040 · Application guide

Typical applications, the industries that specify nyloc lock nuts, and how to choose the right size, material and finish for the joint.

Nyloc Lock Nuts are used for the clamped counter-face of a bolted joint. They are manufactured to DIN 985 / ISO 7040, and the choice of size, property class and finish is driven by the load in the joint and the environment it sits in.

Primary duty

The clamped counter-face of a bolted joint

Governing standard

DIN 985 / ISO 7040

Thread size range

M3 to M36

Category

Nuts

Application notes are general engineering guidance. Verify the property class and any approval requirement against your own design calculation.



Application guide for Nyloc Lock Nuts to DIN 985 / ISO 7040. The core duty of the type is the clamped counter-face of a bolted joint. The typical industries, the how-to-specify checklist, assembly practice and the exclusion cases are set out below. Stocked across roughly M3 to M36, they cover general to heavy-duty work.

Typical Applications for Nyloc Lock Nuts

The most common settings where these are specified:

- **Vibration-prone equipment:** where a locking or flanged style resists loosening.
- **Frames & weldments:** captive or welded options for repeatable assembly.
- **General machine building:** fastening covers, brackets, motors and sub-assemblies on production equipment.
- **Maintenance & repair (MRO):** a stocked size for servicing existing plant where the original fastener spec must be matched.
- **Fabrication & metalwork:** bench and on-site assembly of steel frames, enclosures and weldments.

How to Specify Nyloc Lock Nuts for Your Application

- **Size:** Match the nominal size to the mating thread or hole. This product spans M3-M36; check the full table below for the exact dimensions of each size.

- **Locking & grade:** Match the strength grade to the bolt, and choose a locking style (nyloc, all-metal, serrated flange) if the joint sees vibration.
- **Environment:** For damp, coastal or chemical exposure prefer A4/316 stainless or a suitable coating; indoors, plated steel or A2 is usually sufficient.
- **Standard:** This product is supplied to DIN 985 / ISO 7040. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Installation & Assembly Practice

- Run the nut down by hand before applying the wrench to catch cross-threading early.
- Tighten the nut rather than the bolt head where access allows — the torque-to-preload relation is more consistent.
- For locking styles, note that nyloc inserts are single-use in critical joints and lose grip above roughly 120 °C.

Common Selection Mistakes with Nyloc Lock Nuts

- Pairing a high-class bolt with a lower-class nut — the nut strips before the bolt reaches proof load; the nut class must meet or exceed the bolt class.
- Using a plain nut with a spring washer in severe vibration instead of a prevailing-torque locking nut.
- Re-using nyloc nuts in critical joints.

Where Nyloc Lock Nuts Are Not the Right Choice

Not on their own — they need a matching bolt or stud — and a plain nut is not a substitute for a locking type under heavy vibration.

Technical Drawing

Customize the parameters below — every spec field is editable, and the drawing redraws to match the values you choose. Changing the size will snap the other fields to that size's standard values; you can then override any individual value.

Sends the selected values to the quote form below.

Request a Quote

The form below follows the current technical drawing configuration. Change the drawing values above and the request details update automatically.

Dimensions & Specifications (DIN 985 / ISO 7040)

Size	Pitch (mm)	Width across flats s (mm)	Width across corners e min (mm)	Total height m (mm)	Metal height (mm)	Reference standard	Notes
M3	0.5	5.5	6.01	4.0	2.4	DIN 985 / ISO 7040	With nylon insert, single use
M4	0.7	7.0	7.66	5.0	3.2	DIN 985 / ISO 7040	With nylon insert, single use
M5	0.8	8.0	8.79	5.0	3.7	DIN 985 / ISO 7040	With nylon insert, single use
M6	1.0	10.0	11.05	6.0	4.7	DIN 985 / ISO 7040	With nylon insert, single use
M8	1.25	13.0	14.38	8.0	6.14	DIN 985 / ISO 7040	With nylon insert, single use
M10	1.5	16.0	17.77	10.0	8.04	DIN 985 / ISO 7040	With nylon insert, single use
M12	1.75	18.0	20.03	12.0	9.64	DIN 985 / ISO 7040	With nylon insert, single use
M14	2.0	21.0	23.36	14.0	11.0	DIN 985 / ISO 7040	With nylon insert, single use
M16	2.0	24.0	26.75	16.0	13.0	DIN 985 / ISO 7040	With nylon insert, single use
M20	2.5	30.0	32.95	20.0	16.0	DIN 985 / ISO 7040	With nylon insert, single use

Size	Pitch (mm)	Width across flats s (mm)	Width across corners e min (mm)	Total height m (mm)	Metal height (mm)	Reference standard	Notes
M24	3.0	36.0	39.55	22.0	19.0	DIN 985 / ISO 7040	With nylon insert, single use
M30	3.5	46.0	50.85	25.0	24.0	DIN 985 / ISO 7040	With nylon insert, single use
M36	4.0	55.0	60.79	29.0	29.0	DIN 985 / ISO 7040	With nylon insert, single use

Inside the plant

Manufactured in our own plant

This part is cold-formed, threaded, heat-treated and finished in-house. The stages below are where its class and finish are actually decided.

1.



01

Cold heading

Wire rod is drawn to size and cold-formed into blanks. Forming rather than cutting keeps the grain flow continuous around the head, which is where a bolt is most likely to fail.

Head dimensions and under-head radius checked at set-up and per shift.



2.

02

Thread rolling

Threads are rolled between hardened dies rather than cut. Rolled threads are stronger in fatigue than cut threads and hold pitch and flank angle far more consistently across a batch.

Go / no-go ring gauges to ISO 965 tolerance class 6g.

3.



03

Heat treatment

Quench-and-temper brings carbon and alloy steel to the property class ordered — 8.8, 10.9 or 12.9 — with the furnace charge tracked so a finished lot can be traced back to it.

Core hardness and tensile tested per lot to ISO 898-1.

4.



04

Surface treatment

Zinc, zinc-nickel, hot-dip galvanizing, black oxide, phosphate and Dacromet, selected against the service environment rather than against the price list.

Coating thickness and neutral salt spray hours to ISO 9227.

Frequently Asked Questions

What material should Nyloc Lock Nuts be for outdoor use?

For damp, coastal or chemical environments specify A4 (316) stainless or a suitably coated steel. For indoor or dry use, A2 (304) stainless or zinc-plated steel is normally adequate.

Are Nyloc Lock Nuts made to a recognized standard?

Yes — they are manufactured to DIN 985 / ISO 7040, so dimensions are interchangeable between suppliers when you quote the standard on your order.

What are Nyloc Lock Nuts used for?

The clamped counter-face of a bolted joint. They are supplied to DIN 985 / ISO 7040.

Which industries use Nyloc Lock Nuts?

They are commonly specified in vibration-prone equipment, frames & weldments and general machine building, among other sectors.

Can I get a quote for Nyloc Lock Nuts in the size and material I need?

Yes. Use the technical drawing and quote form on this page to set the size and options, then send the exact configuration to our team for pricing and lead time.

Related Pages

Product page: [Nyloc Lock Nuts — specifications & sizes](#)

Nyloc Lock Nuts Specification Guides

- [M3 Nyloc Lock Nuts size guide](#)
- [A4 stainless Nyloc Lock Nuts](#)

Related Fastener Applications

- [All-Metal Lock Nuts applications](#)
- [All-Metal Prevailing Torque Hex Lock Nut \(Type 1\) — GB/T 6184 / ISO 7042 \(Series 047\) applications](#)
- [Cap \(Acorn\) Nuts applications](#)
- [Castellated Hex Nut — GB/T 6180 / ISO 7036 \(Series 048\) applications](#)
- [Custom Slotted Round Nut — GB/T 812 \(Series 070\) applications](#)
- [Hex Flange Nuts applications](#)