

Bolt Lock™

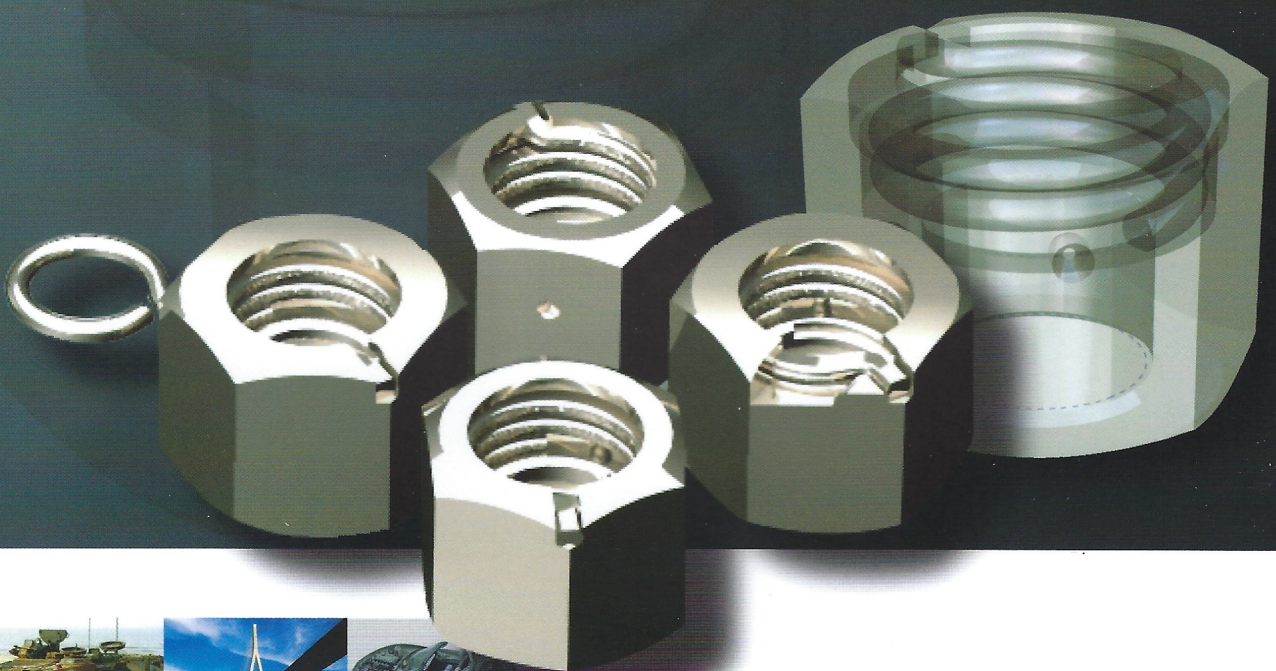
“World’s best locknut”

“Never loosens, even under an extreme vibration or impact”

“Used just like a conventional nut”

“Reusable”

“Does not damage the thread of the bolt”



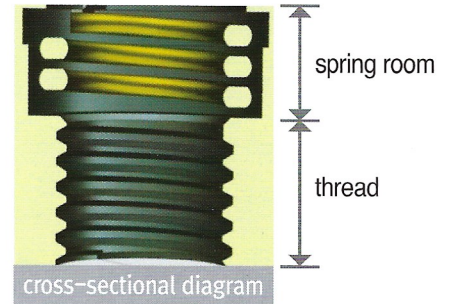
KS Lock Nut Co., Ltd.
Locknut specialist company

PRODUCT

Boa Lock nut's loosening prevention principle and Distinct Features

Structure

- Boa Lock nut has spring housing on the top of the nut that prevents loosening.
- Of all the locknuts available, Boa Lock nut has most simple design that offers best functionality. (patented technology)
- Never loosens, even under an extreme vibration or impact. At the same time, the locking mechanism can be released simply by utilizing the built in stopper in the locknut body. (patented technology)
- Depending on the design specification, 2.5 or 1.5 turn ratio spring winding product can be manufactured.
- In case of 1.5 winding product, it can be produced in same physical dimension as regular nut.



Operation principle

Tightening

During tightening, the nut body holds and pushes the fixed point anchor causing the diameter of the spring to increase for a smooth and easy tightening.

Fixed point anchor in the nut body

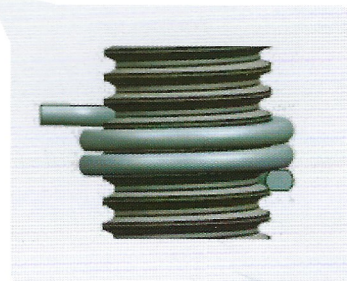


Loosening

If you want to intentionally disassemble the nut from the bolt, it is possible to loosen by turning the nut counterclockwise until the bottom end of spring reaches the stopper inside of the nut body which assists loosening of the spring grip on the thread of the bolt, allowing easy disassembly.

Nut Loosening Prevention

When the nut tries to loosen due to an extreme vibration or impact applied, the loosening motion of the nut increases the gripping tension of the spring to prevent the nut from loosening.



features

- Best **reliability** (passed NAS3350 and other standard tests.)
- Boa Lock nut can be **used** like a regular nut.
- Boa Lock nut can be **reusable**.
- Boa Lock nut does **not damage** the thread of the bolt.
- Boa Lock nut can meet or exceed many **standard specifications**.
- Versatile, order to made for any **custom requirements**.
- **Simplicity** in design, **competitive pricing** and highly reliable.
- Globally **patented**.
- Awarded as Superior Product by the Public **Procurement** Agency of Korea.
- Boa Lock nut has many **references**. Korail, Samsung Heavy industries and many other top companies in Korea.

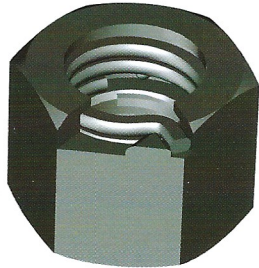


- ※ Please take caution: some other company's product requires usage of extra special socket only.
- ※ Some other company's product does not allow use of impact tools or standard 12 point socket.
- ※ Be aware of imitation products.
- ※ Any conventional standard tools can be used on Boa Lock.

Boa Lock nut has passed an extreme vibration test. [Test Conditions(NAS3350): 30Hz, 30,000 cycles]

PRODUCT

Boa Lock nut's Models



Used where reuse is desired **Patented**

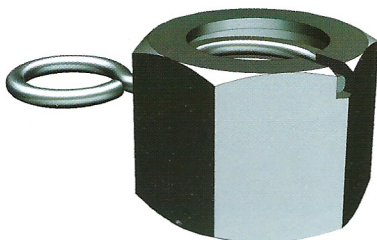
RU(Reusable)

When tightening adjustment and/or reuse is required, RU can be used just like a conventional nut. When loosening, the fixed end anchor of the spring slides over and rests on the bump and when the spring end reaches the stopper, the nut can be loosened smoothly.

Lock and forget one time use **Patented**

EZ(Permanent)

The spring is fixed on the stationary bump. When loosening, the portion of the spring that is fixed on the stationary bump become free and the spring rotates counterclockwise with some tension until the spring end reaches the stopper which allows smooth loosening.



Used where adjustment is required **Patented**

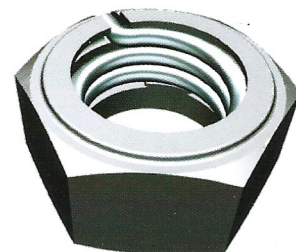
AD(Adjustable)

While the stopper pin is in place, the nut can be freely turned to tightening or loosening direction. Once desired tightening is achieved, stopper pin can be removed to initiate locking. Once stopper pin is removed, AD utilizes same patented Boa Lock nut's locking principle.

Used with regular nuts or where built-in nut is required **Patented**

CP(Compact)

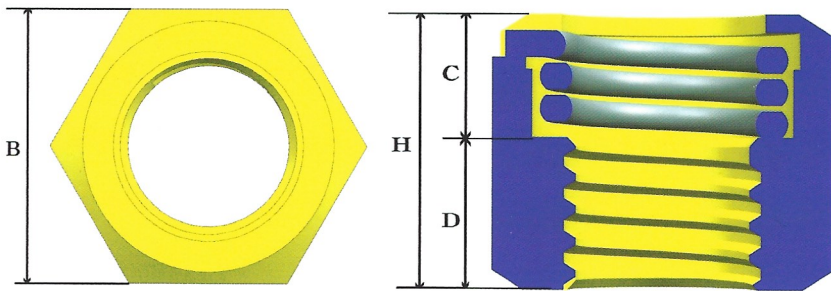
This model is made of only the spring housing portion of the Boa Lock nut. It can be used on the bolt with a conventional nut to add anti-loosening capability. It can also be used on the surface with tap where a conventional nut can't be used.



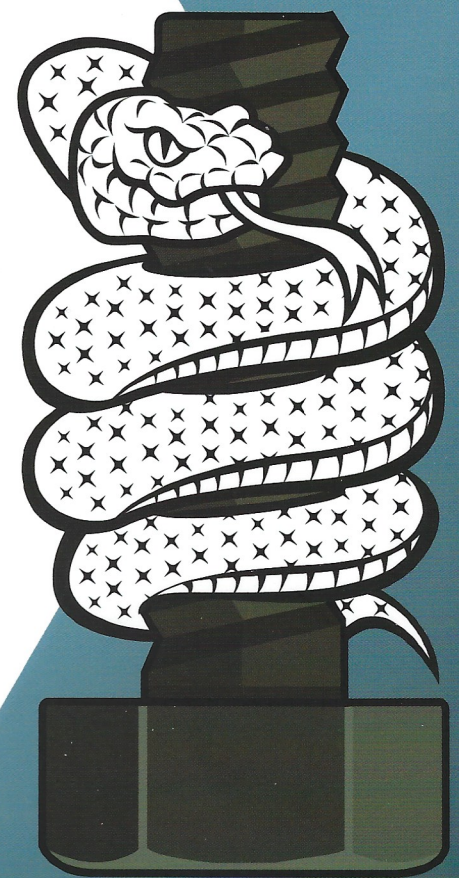
NAS(National Aerospace Standard)3350: is an accelerated impact vibration test which is referred to as the NASA test.

The passing standard is that after 30,000 cycles on the impact vibration testing apparatus, there is no physical damage on the nut and it does not loosens more than one 360 degrees turn.

Some examples of Boa Lock nut specification



| Std | Pitch | B | H | Std | Pitch | B | H |
|-----|-------|----|------|--------|-------|------|------|
| M3 | 0.5 | 6 | 4.5 | 1/4" | 1.27 | 11.1 | 10 |
| M4 | 0.7 | 7 | 5.8 | 5/16" | 1.41 | 12.6 | 11.7 |
| M5 | 0.8 | 8 | 7 | 3/8" | 1.58 | 14.3 | 13.3 |
| M6 | 1.0 | 10 | 8.5 | 7/16" | 1.81 | 15.8 | 15.2 |
| M8 | 1.25 | 13 | 10.8 | 1/2" | 1.95 | 19 | 17 |
| M10 | 1.5 | 17 | 13.6 | 5/8" | 2.3 | 23.8 | 20.5 |
| M12 | 1.75 | 19 | 15 | 3/4" | 2.54 | 26.9 | 23.5 |
| M14 | 2.0 | 22 | 18 | 7/8" | 2.82 | 31.9 | 26.6 |
| M16 | 2.0 | 24 | 19.5 | 1" | 3.17 | 38 | 30.3 |
| M18 | 2.5 | 27 | 22 | 1-1/8" | 3.62 | 42.8 | 34.1 |
| M20 | 2.5 | 30 | 24 | 1-1/4" | 3.62 | 47.6 | 36.5 |
| M22 | 2.5 | 32 | 25.4 | 1-1/2" | 4.23 | 57.1 | 43.2 |
| M24 | 3.0 | 36 | 29.6 | | | | |
| M27 | 3.0 | 41 | 31 | | | | |
| M30 | 3.5 | 46 | 35.1 | | | | |
| M33 | 3.5 | 50 | 37.4 | | | | |
| M36 | 4.0 | 55 | 41.2 | | | | |
| M39 | 4.0 | 60 | 43.6 | | | | |
| M42 | 4.5 | 65 | 47.7 | | | | |



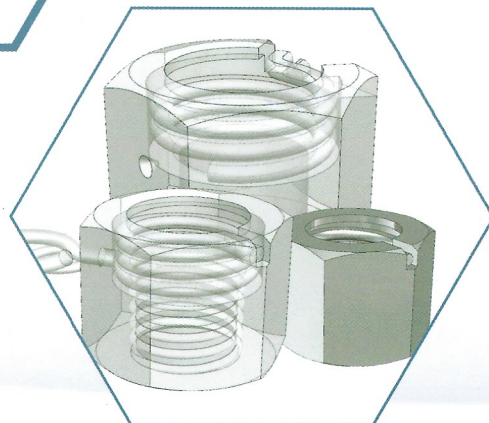
- material: nut body - S20C, S45C, SCM, SUS304, brass and etc.
spring – Music wire, Oil-tempered wire, SUS and etc.
- pitch: Metric, Unified, Acme, Buttress, Whitworth and etc.,
- mechanical property (hardness): Class 4 ~ Class 10
- precision of the screw: 6H(4H, 8H capable)
- Surface treatment: electro plating or any plating requirement request by the customer
- C, D dimension: determined based on turn ratio(1.5 or 2.5)


Custom order to made production

Almost any custom pitch and size nuts can be produced as per customer's requirement

www.kslocknut.com

Visit our homepage to see the comparison tests against the available competitor's locknuts and see why Boa Lock nut is the best.



 **KS Lock Nut Co., Ltd.**

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