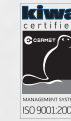


Over 40 years experience in nuts production
IMJINST
SPECIAL TECHNOLOGY

Nuts
shouldn't
be untied



**SAPER
LOCK**

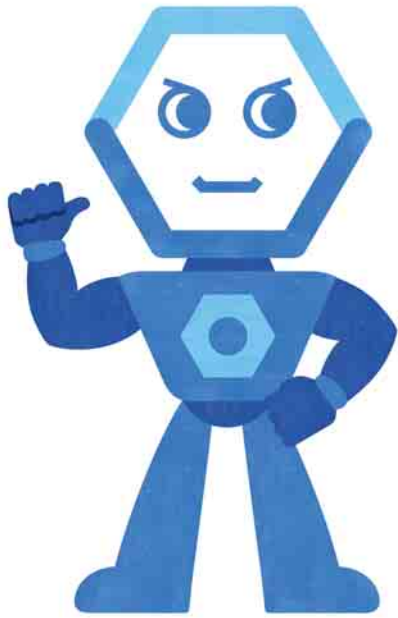


ABS



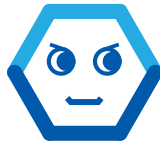
**Nuts
shouldn't
be untied
SAPERLOCK**





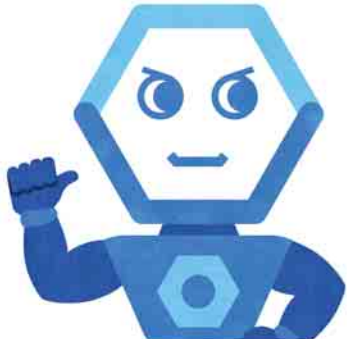
Industries need me, I'm SAPERLOCK!

Nuts
shouldn't
be untied



**SAPER
LOCK**

My name is SAPERLOCK!
Thanks to a special spring inside me,
I am not getting loose at all despite
extreme vibration and shock.
Let's have a look where I am working.



High-speed train needs me,
because I am very important to
guarantee safety.

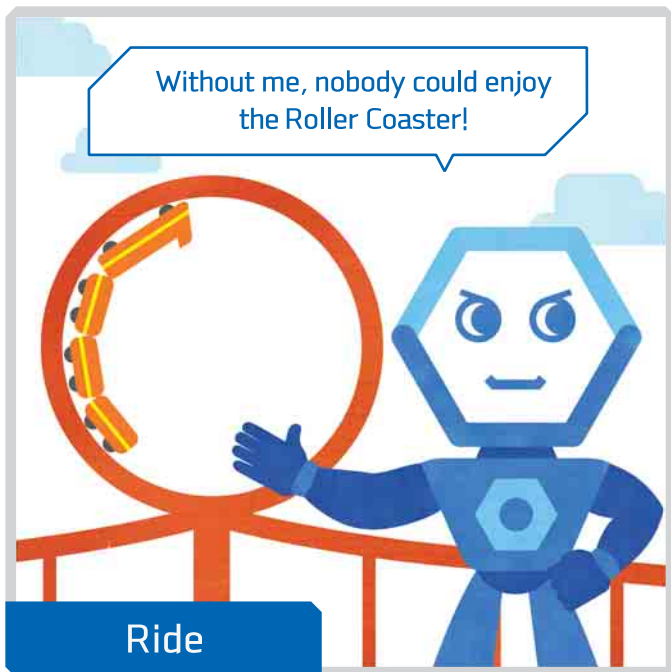
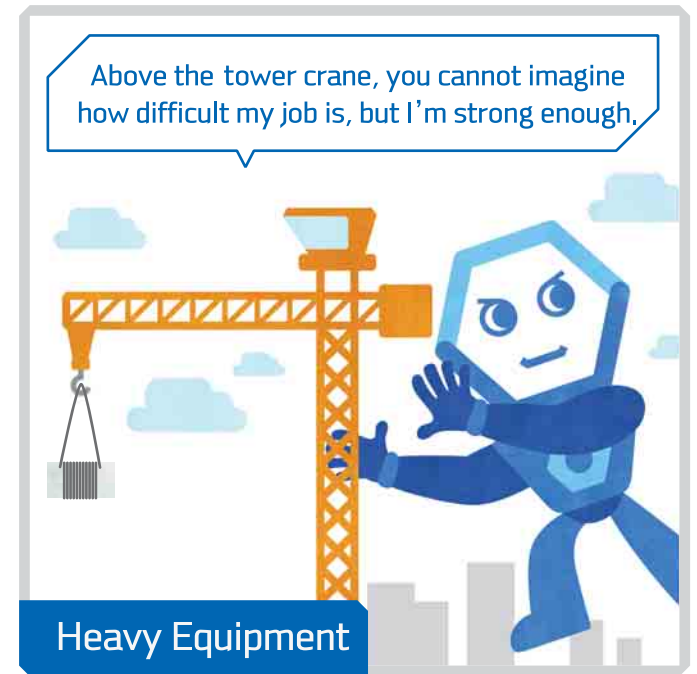
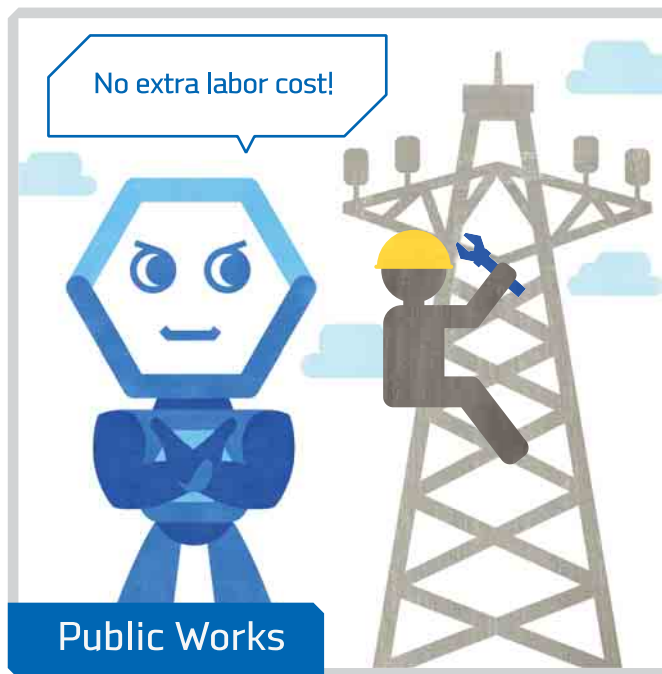
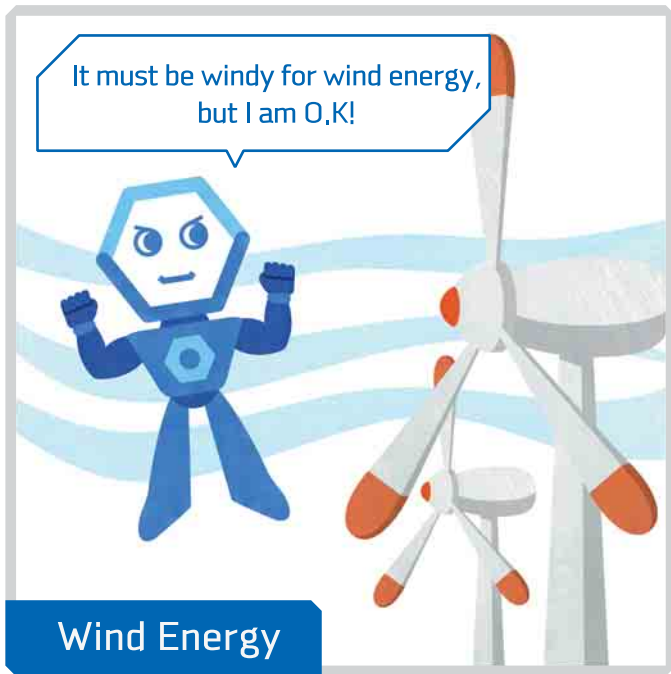


Transportation

No danger for the bridge also!



Public Works



What is SAPERLOCK?

SAPERLOCK is a special, reusable, self-locking loose-free nut!

By taking advantage of springs inserted in the nut, we developed superior self-locking and loose-free nut. It can be used as many times as the nut needs.

Technology of SAPERLOCK (How it works)

- The spring inside of the nut will absorb unlock torque and the spring transforms it to lock up torque.
- While tightening the nut, the spring expands itself and is easy to tighten without friction.
- When the nut gets unlocked, the spring narrows itself and it automatically locks up.

Where can we use and apply?

It can be used in places with extreme vibration or shock that can unlock the nut or places which are hard to maintain etc. Our SAPERLOCK can be used in many places.

Effects of SAPERLOCK

- Prevent untying even in frequent shock and vibration.
- Easy to tighten and boost efficiency in construction sites.
- Even if is not fully locked, still maintains tightness.
- Can be reused multiple times without damaging the bolt.



Side View



Bottom View



Model Type : M6 ~ M80

- Material : STS, S45C, SCM
- Plating : Electro Zinc Plating,
Melted Zinc,
Nickel,
Chrome,
Zinc Powder Plating



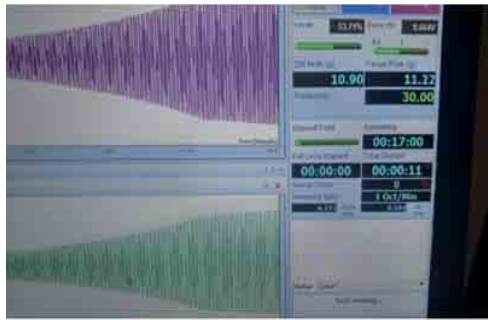
Approved for Shock Vibration Loose Proof Test

Vibration Test : KS W ISO 7481 Standards (NAS 3350)

The world's most stringent durability test!



Equipment



Exam condition



Before the test



After the test

Vibration durability test qualification

Test Level(peak to peak) : 0.45 ± 0.015 in

Acceleration Peak : 20G

Test Frequency : 30 Hz, (1,800 Cycle/min)

Duration : 17 min, (30,600 Cycle)

Tightening Torque : ISO 898-1, 2 Torque



Test completed without change of nuts.
Guaranteed quality and no looseness in any circumstances.

Licenses / Certifications

Certificate of Patent in KOREA



Certificate of Patent in JAPAN



kiwa CERMET



ABS



Certificate of Patent in China



Korea New Excellent Product

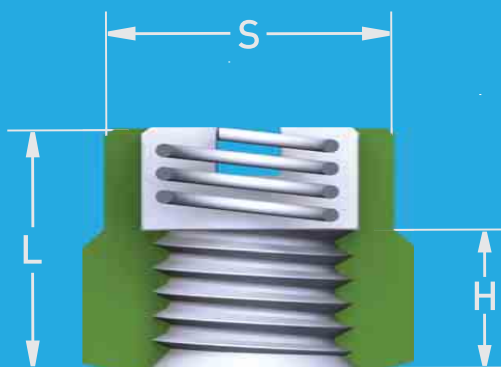
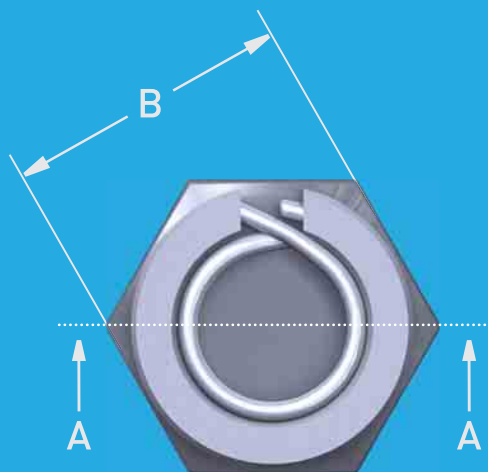


Korea New Excellent Technology



Korea Rail Network Authority





SECTION A-A

Model Number : M6-M80



Product Specification

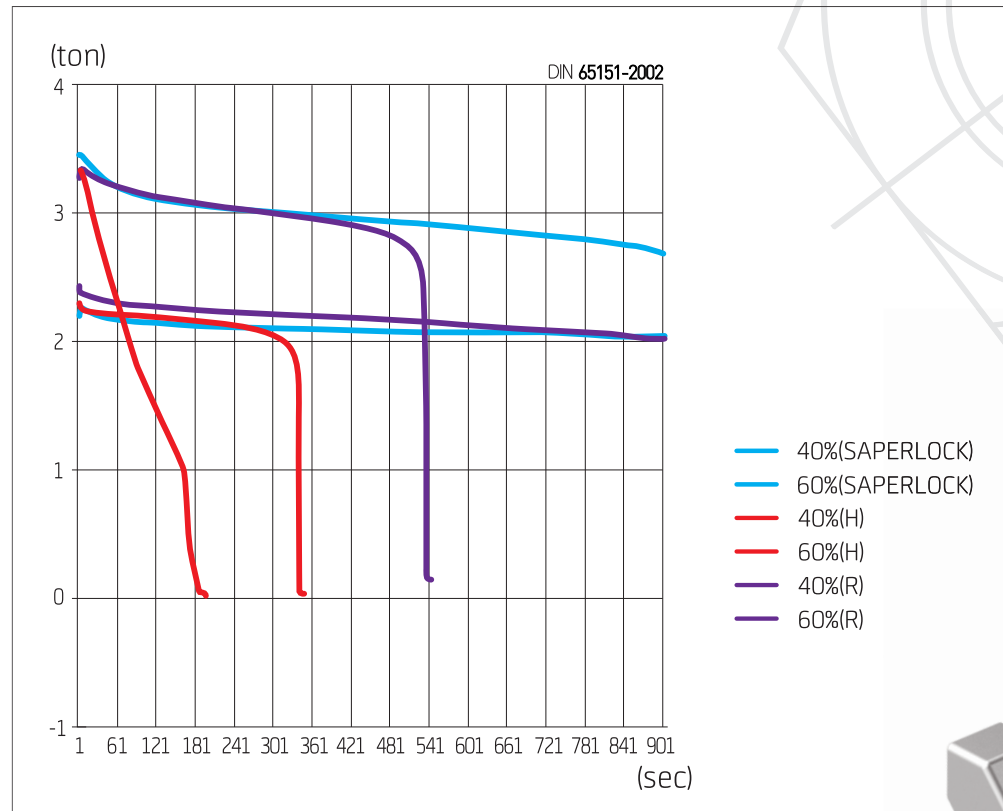
Unit : mm, B=S

Model No.	Size	Pitch	B	L	H
SP06	M6	1	10	9.5	5
SP08	M8	1.25	13	12.4	6.5
SP10	M10	1.5	17	15.5	8
SP12	M12	1.75	19	19.5	10
SP14	M14	2	22	20.6	11
SP16	M16	2	24	22.6	13
SP18	M18	2.5	27	26.8	15
SP20	M20	2.5	30	28.8	16
SP22	M22	2.5	32	30.8	18
SP24	M24	3	36	34.8	19
SP27	M27	3	41	37.5	22
SP30	M30	3.5	46	41.5	24
SP33	M33	3.5	50	44.5	26
SP36	M36	4	55	49.5	29
SP39	M39	4	60	52.5	31
SP42	M42	4.5	65	55	32
SP45	M45	4.5	70	59	36
SP48	M48	5	75	63.5	38
SP56	M56	5.5	85	72.1	44
SP60	M60	5.5	90	76.2	48
SP64	M64	6	95	81.7	51
SP72	M72	6	105	87.8	57
SP80	M80	6	115	94.7	64

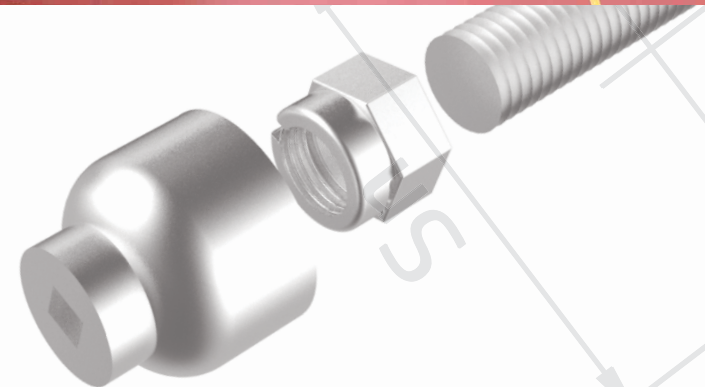
- Approved by KS standard
- Material : STS, S45C, SCM and so on

- Plating : Electro Zinc Plating, Melted Zinc, Nickel, Chrome, Zinc Powder Plating, also provide order production.
- Can modify size for better performance.

M12 (JUNKER TEST)



1. Frequency : 12.5Hz 2. Displacement : ± 1 mm 3. [%] : Ratio of Proof Strength





Various Application of SAPERLOCK



SAPERLOCK is used in various construction sites and equipment.



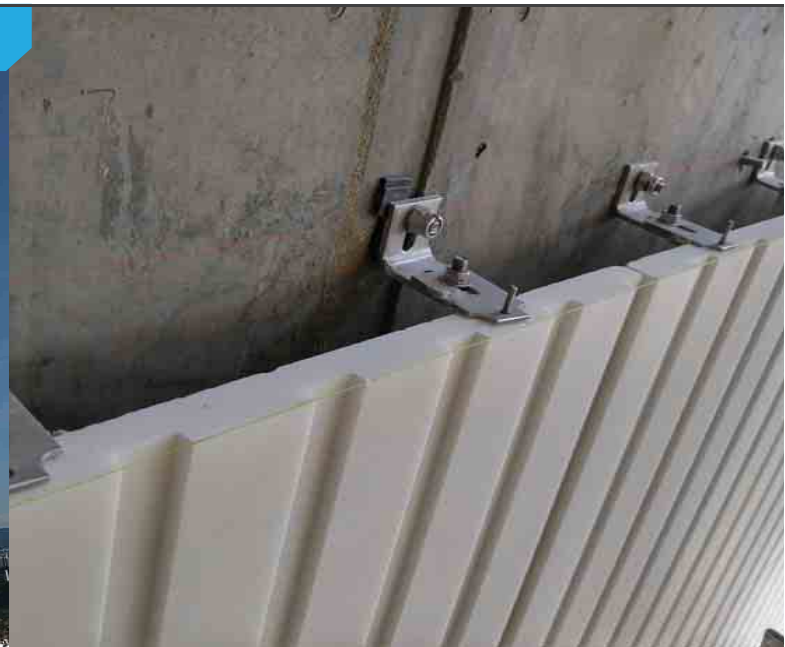
Construction Breaker

SAPERLOCK achieves worldwide recognition of its stability and quality in various industry fields.



Magnetic Levitation Train

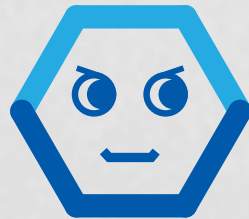
Lotte Tower



Soundproof Wall



Nuts
shouldn't
be untied



**SAPER
LOCK**



IMJINST
SPECIAL TECHNOLOGY

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