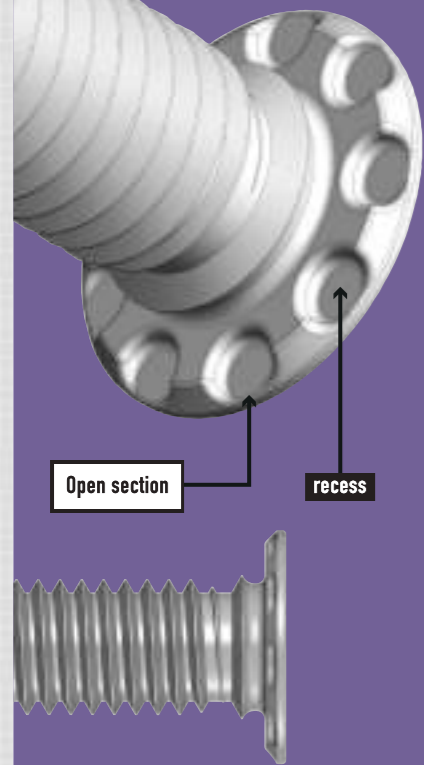


Flush-head

JOISTUD-FH



- Ultra-thin head thickness
- 9 circular recesses, each partially open, are provided.

New JOISTUD with a flat head

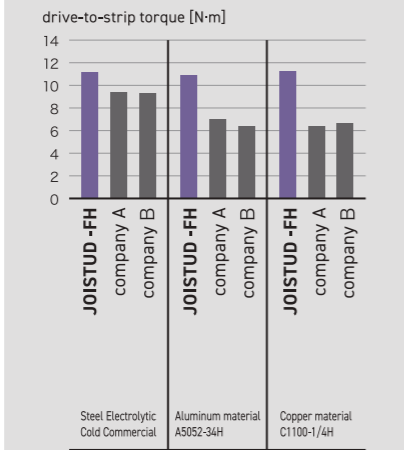
Significantly reduces head protrusion

The ultra-thin head and recessed design enable the entire head to be press-fit into the mating material. This minimizes head protrusion, contributing to space savings.



High rotation resistance

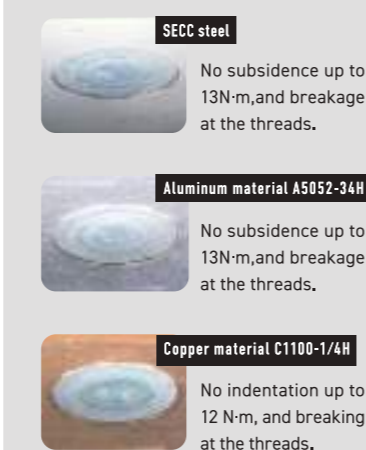
High rotation resistance is achieved as the mating material fills the recess on the head seating surface.



*According to our research *Screw size: M5

High pull-out strength

Increasing the head outer diameter reduces head indentation, enabling fastening at high torque.



*According to our research *Screw size: M5

JOISTUD

■ Applicable sizes

Type	S	HT	SS	WP	FH
Size	Φ5、Φ6	Φ5、Φ6	Φ6	Φ6	Φ4、Φ5、Φ6

Please feel free to contact us regarding specifications not listed.

■ Typical application examples

Automotive industry

Home appliances and energy industry

☒ Battery frame

☒ Battery module

☒ Junction box

☒ Inverter

☒ DC-DC converter

☒ Window regulator

☒ Seat frame

☒ Airbag

☒ Power sliding door

☒ Sunroof


☒ Solar panels

☒ Storage battery

☒ Wind power generator

☒ Power generator

☒ HDD



NITTOSEIKO CO.,LTD.

Fastener Division
Global Sales Section

Website : <https://global.nittoseiko.com/>



NITTOSEIKO



"Self-Clinching Stud Bolt" Series

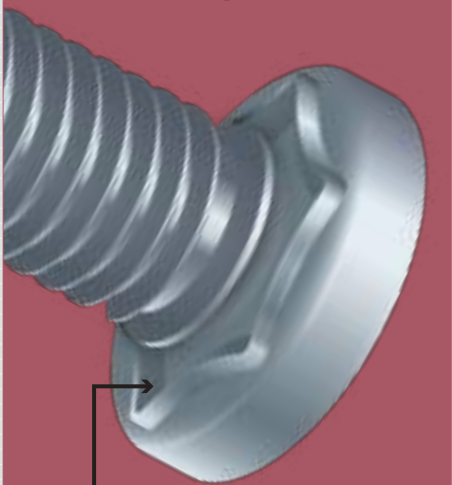
JOISTUD

Find the perfect fit for any application
“Self-Clinching Stud Bolt” Series

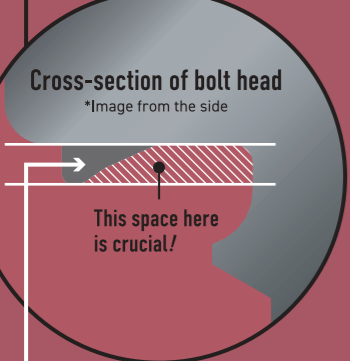


Our original brand of self-clinching stud bolts for press-fit installation.
Select the type to match your specific challenges.
Whether addressing “thin sheet metal,” “burr prevention,” “space savings,” or “embedded applications,”
you can confidently adopt our self-clinching stud bolts.

Standard JOISTUD-S



Cross-section of bolt head
*Image from the side



This space here is crucial!

It's not a lobe with uniform thickness.
A ring-shaped anti-rotation protrusion that leaves only the edge of the lobe.

The new standard in self-clinching stud bolts.
Its unique anti-rotation protrusion shape achieves “warp suppression,” “burr suppression,” and “enhanced anti-rotation strength.”
Ideal for applications requiring thin plates or contamination countermeasures.



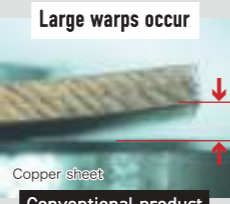
Product Video

Prevent warping

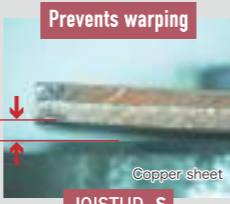
With the anti-rotation protrusion designed in a ring shape, outward material flow during press-fitting is reduced and stress is relieved, helping to prevent warping.

Important Highly effective for "thin sheets", "aluminum", and "copper" prone to warping!

Large warps occur



Prevents warping



Copper sheet

Conventional product


JOISTUD-S

Burr control


With the anti-rotation protrusion designed in a ring shape, material around the male thread shaft flows into the inside of the protrusion, which helps reduce burrs.

Important Addresses the contamination issue, which is top priority for electrification!

Burr formation



Burr control



Conventional product

JOISTUD-S

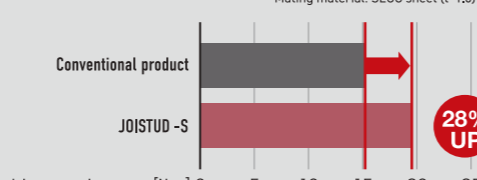
Improved anti-rotation strength

With the anti-rotation protrusion designed in a ring shape, the anti-rotation strength before the fasteners break and loosen (drive-to- strip torque) is improved.

Important Applicable to "thin sheets", "aluminum", and "copper" where anti-rotation strength is a concern!

Comparison of anti-rotation strength (drive-to-strip torque)

*For nominal diameter M6
*Mating material: SECC sheet (t=1.6)



Conventional product

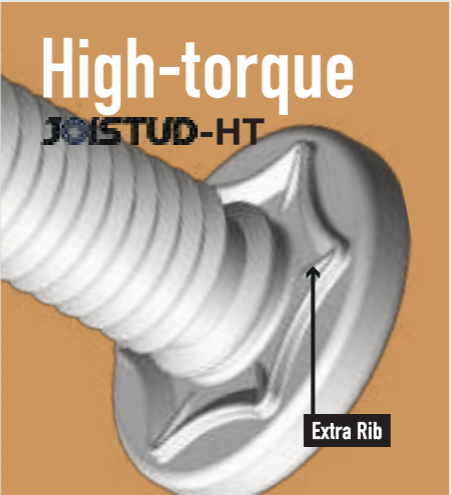
JOISTUD-S

drive-to-strip torque [N·m]

28% UP

*The ratio may vary depending on usage conditions.

High-torque JOISTUD-HT

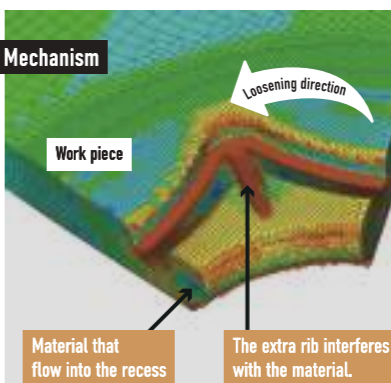


Extra Rib

- The extra rib with a gentle slope from the ring circumference to the center of the ring.

Further enhanced the “rotation resistance strength” of JOISTUD-S.

Mechanism



Work piece

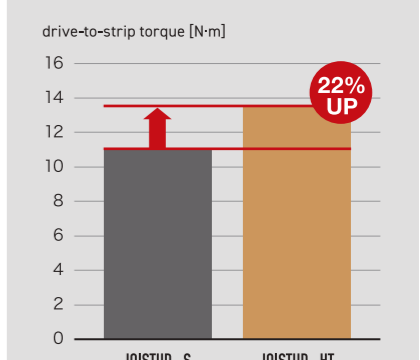
Material that flow into the recess

The extra rib interferes with the material.

Loosening direction

Combination of extra ribs with outer-rimmed protrusion provide an even greater anti-rotation effect.

Experiment Anti-rotation strength (drive-to-strip torque) measurement



drive-to-strip torque [N·m]

JOISTUD-S

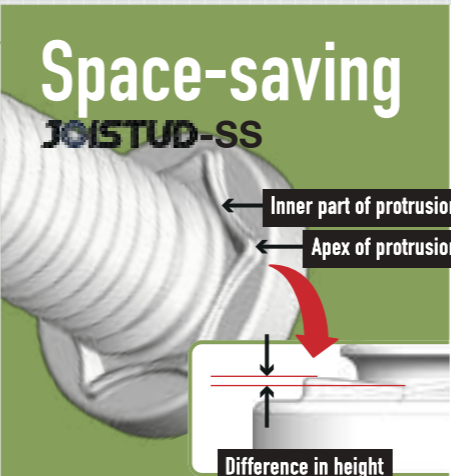
JOISTUD-HT

22% UP

For nominal diameter M6

*The ratio may vary depending on usage conditions.

Space-saving JOISTUD-SS



Inner part of protrusion

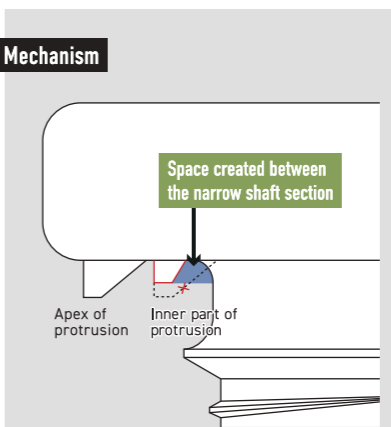
Apex of protrusion

Difference in height

- Difference in height between apex and inner part of protrusion
- Revised slope angle of the protrusion

Add space-saving design to JOISTUD-S

Mechanism



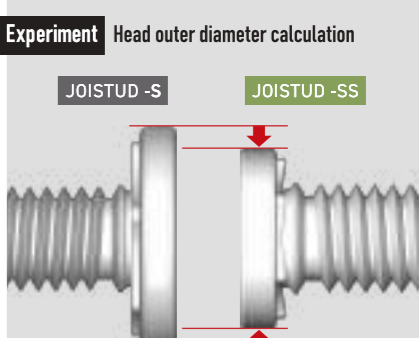
Space created between the narrow shaft section

Apex of protrusion

Inner part of protrusion

Reduced warping and burr even with a small head

Experiment Head outer diameter calculation



JOISTUD-S

JOISTUD-SS

Head outer diameter

Weight

13mm

3.91g

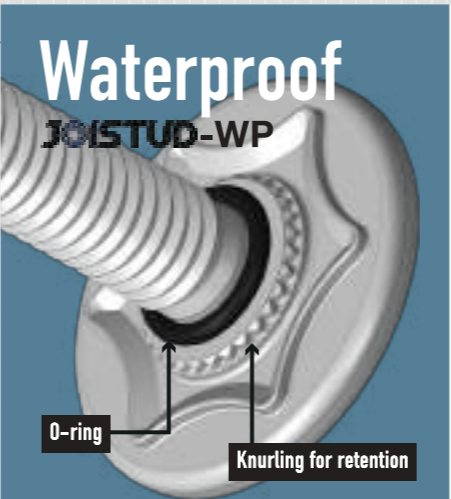
23% DOWN

10mm

3.01g

*The ratio may vary depending on usage conditions.

Waterproof JOISTUD-WP



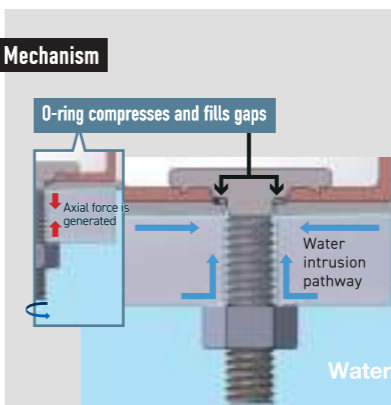
O-ring

Knurling for retention

- Knurling is placed outside to prevent O-ring from being crushed during installation.

Add waterproof function to JOISTUD-S

Mechanism



O-ring compresses and fills gaps

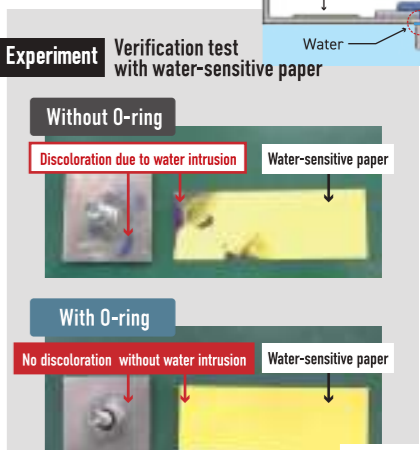
Axial force is generated

Water intrusion pathway

Water

O-ring compresses when torque is applied to the nut. Prevents water intrusion.

Experiment Verification test with water-sensitive paper



Without O-ring

With O-ring

Discoloration due to water intrusion

No discoloration without water intrusion

Water-sensitive paper

Water

Product Video

