

Cross-section of bolt head  
※Image from the side

This recess is crucial!

An outer-rimmed  
anti-rotation lobe.

## JOISTUD<sup>®</sup>-S

Strong support for manufacturing that  
requires high precision and high quality.

# NEW STANDARD

To be New standard of clinching fasteners  
for sheet metal assembly

- ✓ Outer-rimmed lobe which reduces burr solves contamination issues.
- ✓ Improves quality of assembly with Sheet Metal, Aluminum and Copper,  
by reducing warpage and enhancing anti-rotation force.
- ✓ It effects on costs and weight saving by thinning fastened material  
which reduces product's volume.

Typical application examples

Automotive industry

Home appliances and energy industry

Vehicle Electrification

Weight reduction

✓ Battery frame

✓ Vehicle body

✓ Battery module

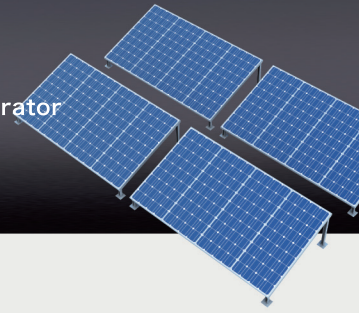
✓ Seat frame

✓ Solar panel

✓ Storage battery

✓ Wind power generator

✓ Power generator

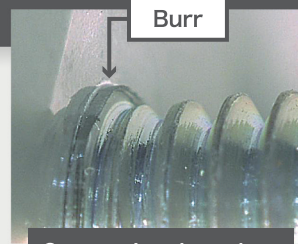


## TECHNICAL REPORT 01 Reduction of burr

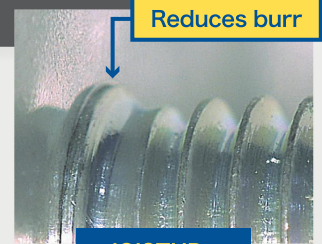
The outer-rimmed anti-rotation protrusion prevents burring by keeping the material flow around the male thread shank in the recess of the protrusion.

Important

It is a solution for contamination issue which is top priority for vehicle electrification!



Conventional product



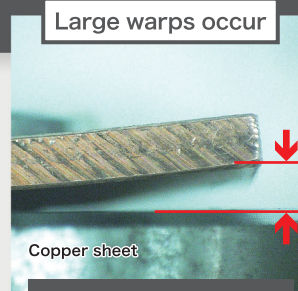
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## TECHNICAL REPORT 02 Warp reduction

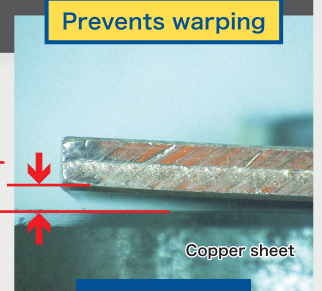
Out-rimmed anti-rotation protrusion reduces product's warpage by its function to reduce material flow and stress during press-fitting.

Important

Highly effective for Sheet Metal, Aluminum and Copper application which prone to warping!



Conventional product



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## TECHNICAL REPORT 03 Improved anti-rotation strength

The out-rimmed protrusion increases the area of contact between stud and clinched part. It improves the anti-rotation strength (drive to strip torque).

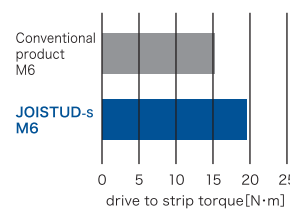
**+ 27.7%UP**  
to conventional fastener

※The ratio may vary depending on usage conditions.

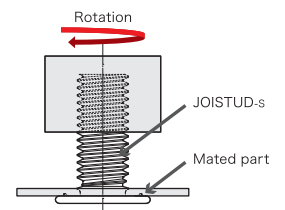
Important

Applicable to "Sheet metal", "Aluminum", and "Copper" where anti-rotation strength is a concern!

Comparison of anti-rotation strength



Measurement method of anti-rotation strength



**NITTOSEIKO CO.,LTD.**

Fastener Division  
Global Sales Section

Website : <https://www.nittoseiko.co.jp/en.html>



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