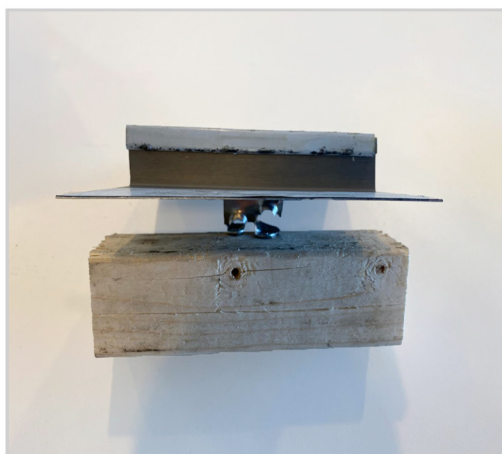
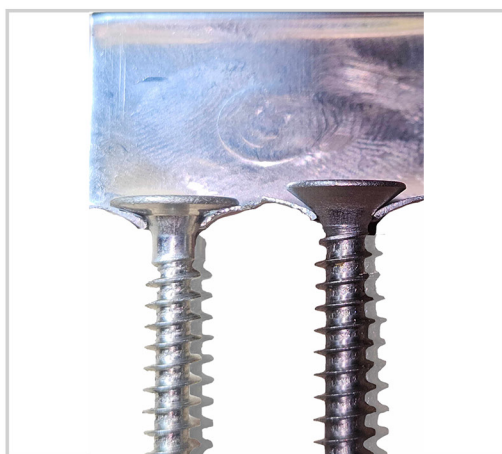


# Comparative Study on fixings for standing seam clips



## Mechanical tests Tensile tests on clips



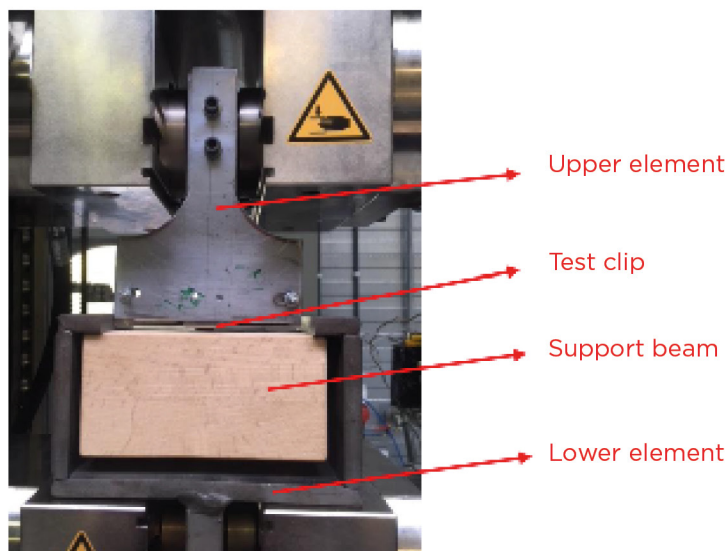
All tests were carried out by:

CENTRE DE RECHERCHES METALLURGIQUES asbl  
Domaine Universitaire du Sart-Tilman  
Av. du Bois St-Jean, 21 -  
B27/P59 - Quartier Polytech 4  
B-4000 LIEGE

The pull-out force was applied using a Zwick 250 kN (TRA-01) class 1 tensile testing machine, following the NBN EN ISO 7500-1: 2016 standard, while the deformations were recorded on the crossbar. For each test, the maximum force was determined.

The various results are summarized in the tables and test curves in the appendix.

The samples after testing are available to identify the type of fracture.



### Breakpoint



Following the tests carried out, it appears that the potential breakpoint to consider is always the location where the screw is pulled through the perforation. The most optimal result is achieved by adjusting the head of the screw.

### Test results

| BRAND     | FN MAX          | DIFF |
|-----------|-----------------|------|
| Connecton | <b>3.775,37</b> | 154% |
| Brand B   | 2.452,22        | 100% |
| Brand A   | 2.525,08        | 103% |

The standing seam clips with the Torx screws from Connecton have a **resistance level that is 51% higher** compared to the clips from brand A, and **54% higher** compared to brand B.

**Connecton    Brand A/B**





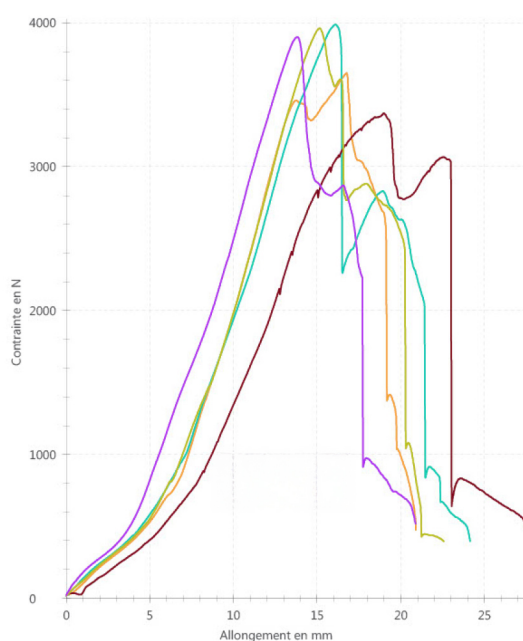
**CONNECTON**  
fasteners for builders

Comparative Study

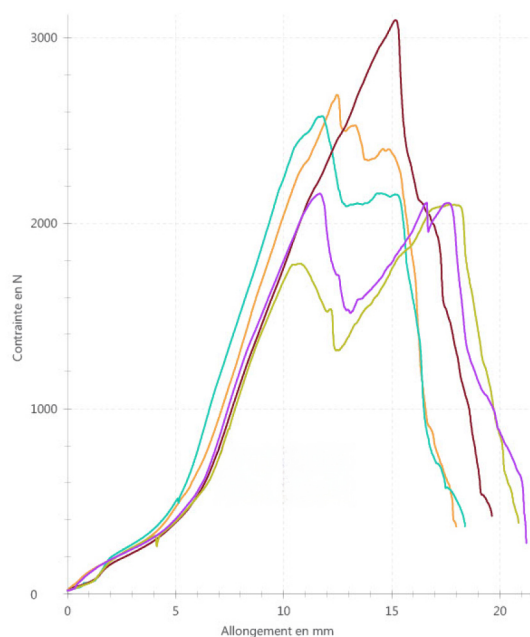
**TORX screws for standing seam clips**

## Graphs

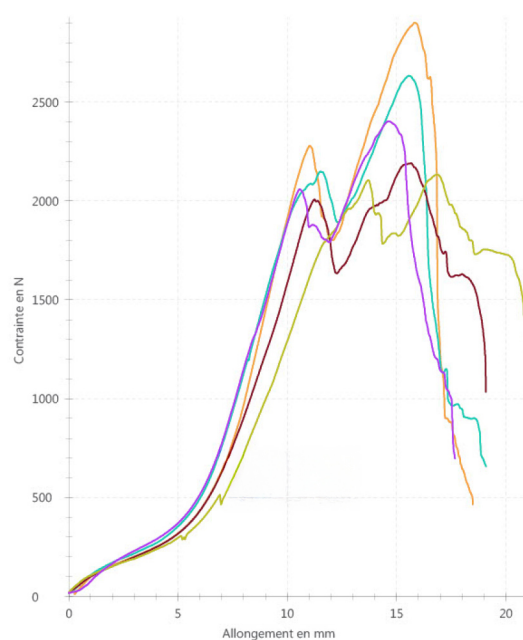
### Connecton



### Brand A



### Brand B



**CONNECTON**

Krommebeekstraat 49, B-8930 Menen • Tel : +32 (0)56 53 11 25 • Fax : +32 (0)56 53 11 26  
[www.connecton.be](http://www.connecton.be) • [info@connecton.be](mailto:info@connecton.be)

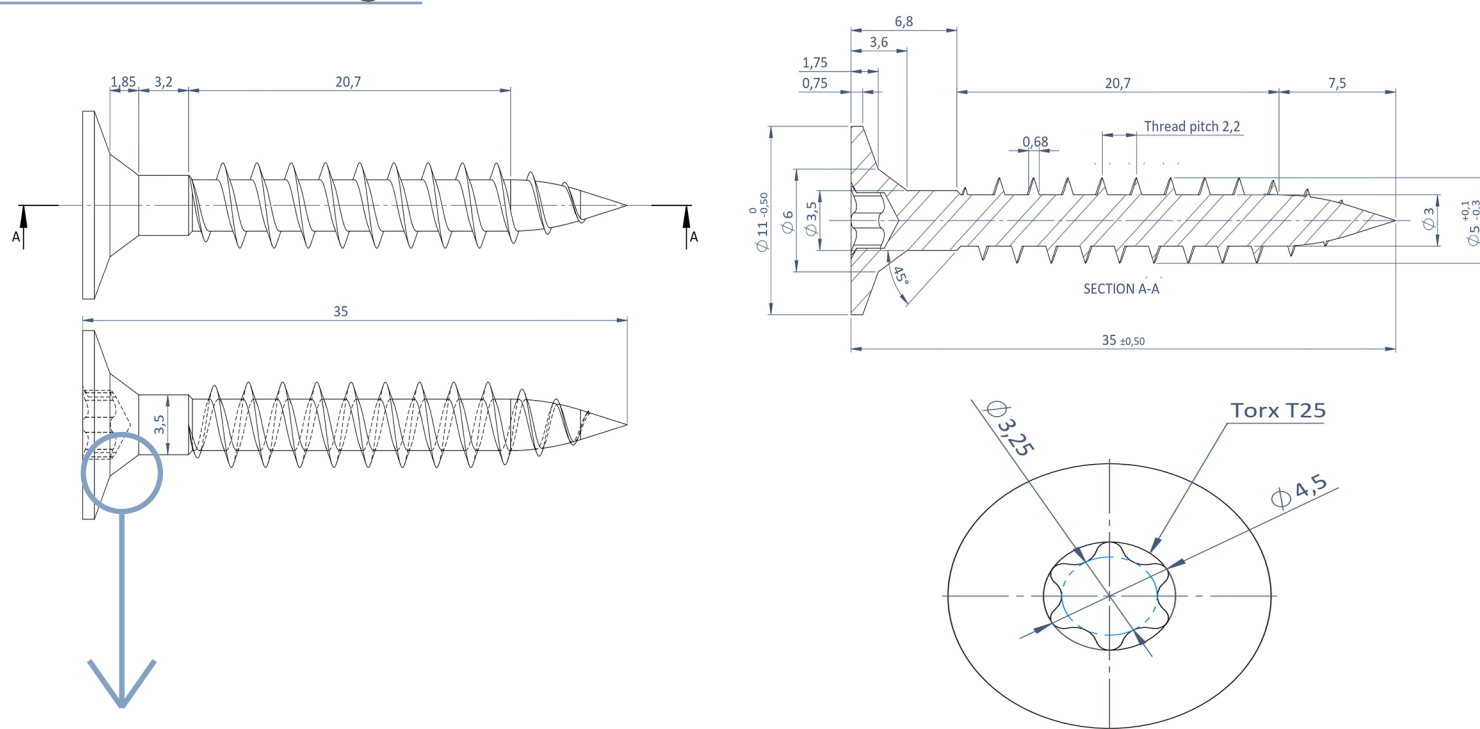


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## Comparative Study

### TORX screws for standing seam clips

#### Technical drawing



#### Advantages

The test results demonstrate that the new screw design provides a significant improvement compared to standard fastening systems. This results in:

- Stronger connections: Thanks to a perfect fit in the sliding collar, force transmission is optimized.
- Less material deformation: The screw prevents excessive stress in the collar, thereby extending its lifespan.
- Increased tensile strength: Tests show that the maximum load supported by the assembly can increase by up to 54%.

#### References

| CODE           | DESCRIPTION                                                  | MATERIAL      | BARCODE       |
|----------------|--------------------------------------------------------------|---------------|---------------|
| V5030TORXPC500 | 5x30mm Torx Large Head Screws Stainless Steel 304 500Pcs Box | Inox Aisi 304 | 5415227376800 |
| V5035TORXPC500 | 5x35mm Torx Large Head Screws Stainless Steel 304 500Pcs Box | Inox Aisi 304 | 5415227373243 |
| V5040TORXPC500 | 5x40mm Torx Large Head Screws Stainless Steel 304 500Pcs Box | Inox Aisi 304 | 5415227378743 |

**CONNECTON**

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