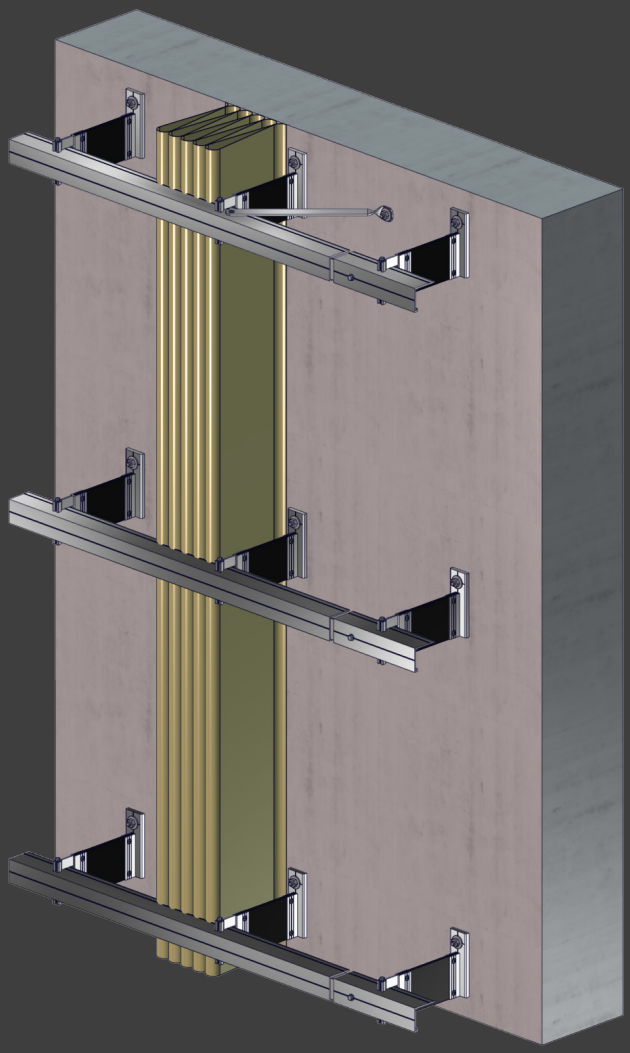
ECOLITE
FASSADENSYSTEME



Processing Guideline System Ecolite® H

Primary substructure Horizontal

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Description

Ecolite® substructure systems stand for the efficient fastening of ventilated façade claddings, based on the current VKF fire protection guidelines, the SIA standards and the guidelines of the SFHF and GH Switzerland associations.

Application

Horizontally aligned primary systems are particularly suitable for light to mediumheavy façades or for those with vertically running secondary profiles or timber battens. In some cases, the cladding is also fixed directly to the horizontal profiles. (Horizontal profiles may be perforated for rear ventilation).

Preparation

The following information must be available at least before the start of construction:

- Vertical spacing of the horizontal substructure profiles
- Horizontal spacing of the brackets
- Type and mounting method of the brackets
- Type and fastening method of the profiles

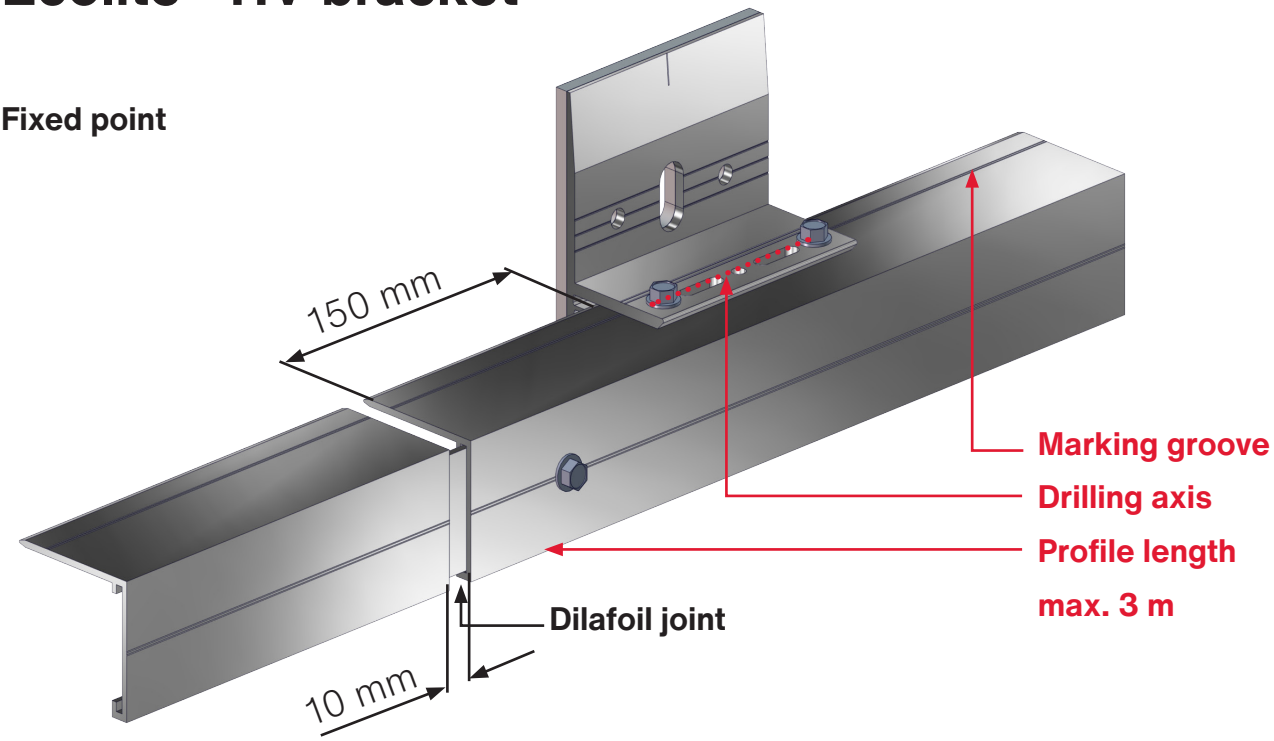
As a rule, either an implementation plan by a planner or at least a schematic, graphic interpretation of the statics on a representative façade section is available.

Version

- **There are usually no defined fixed and sliding point brackets.** Each bracket carries both its own weight and wind load.
- Profile lengths usually ≤ 3 m.
- Dila joints ≥ 10 mm, not randomly distributed, but vertically aligned with each other.
- Dila joints approx. 15 cm to 20 cm next to the nearest bracket.
- Profile connectors fixed on one side only, when using connecting plates provide the slotted holes with loose screws. (no constraint)
- Seismic protection according to statics

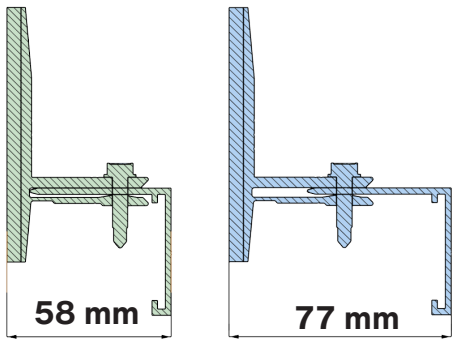
Ecolite® HV bracket

Fixed point

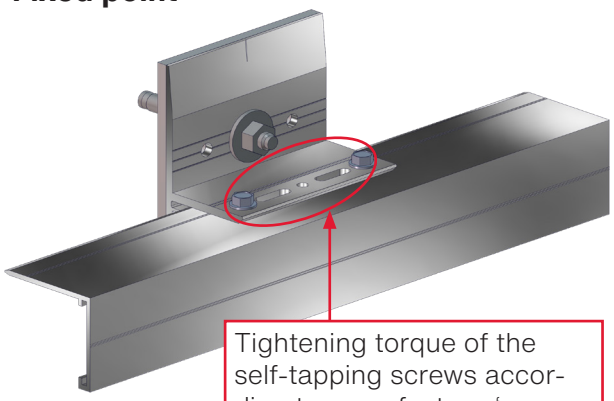


- Bracket with or without factory-applied THERMOSTOP® 5 mm
- Bracket foot with notch for alignment with the line lay
- Bracket with clamping finger: depth: 32, 42, or 72 mm for profile mounting
- Continuous adjustability of the profiles +/- 6, +/- 11, +/- 26 mm
- Only one type of bracket (combination brackets) for fixed and sliding points
- Dilafoil joint min. 10 mm
- The marking groove of the profile must not be pulled out of the bracket further than the screw axis.
- Dila joints approx. 15 to 20 cm next to the next bracket fastening point. Depending on the bracket grid, after max. 3 m profile length.

Adjustment range angle profile

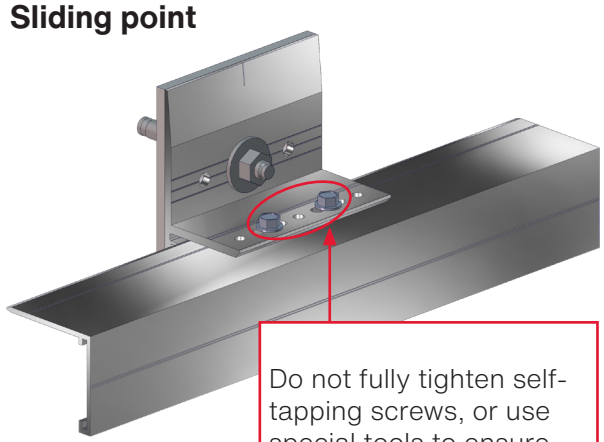


Fixed point



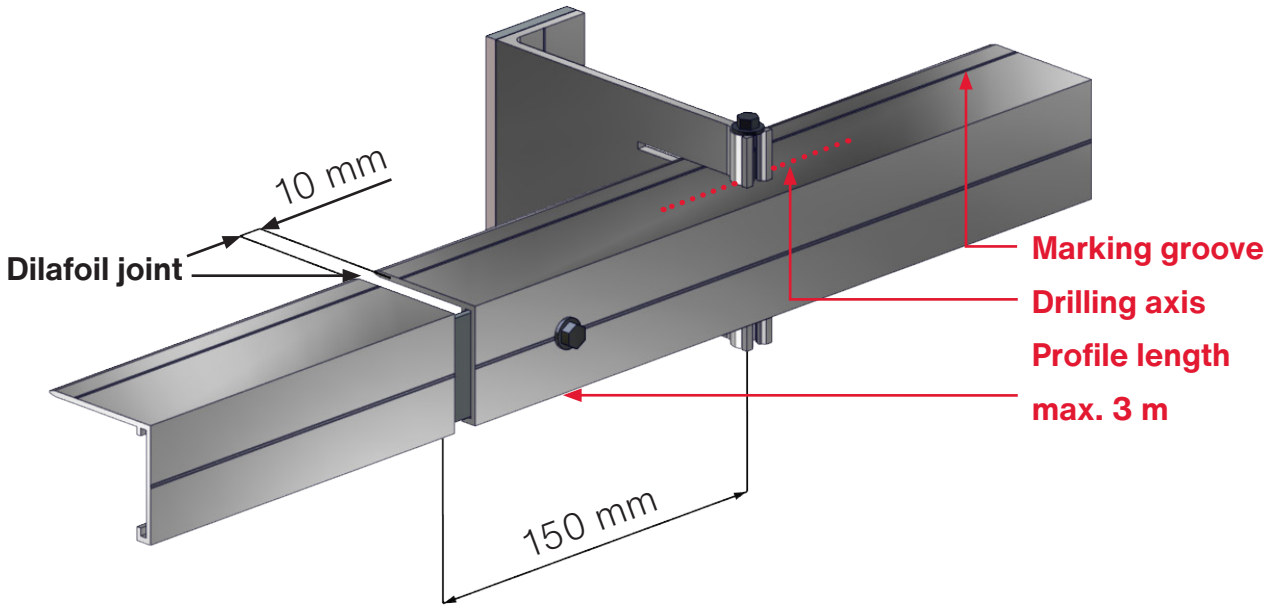
Tightening torque of the self-tapping screws according to manufacturer's instructions.

Sliding point



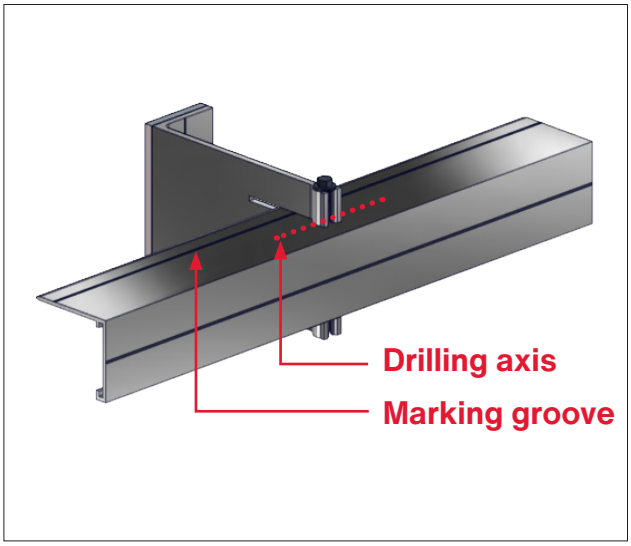
Do not fully tighten self-tapping screws, or use special tools to ensure that dilatation is possible without tension.
Bring the bracket into the stop with 1 mm play.

Ecolite® Alu H bracket

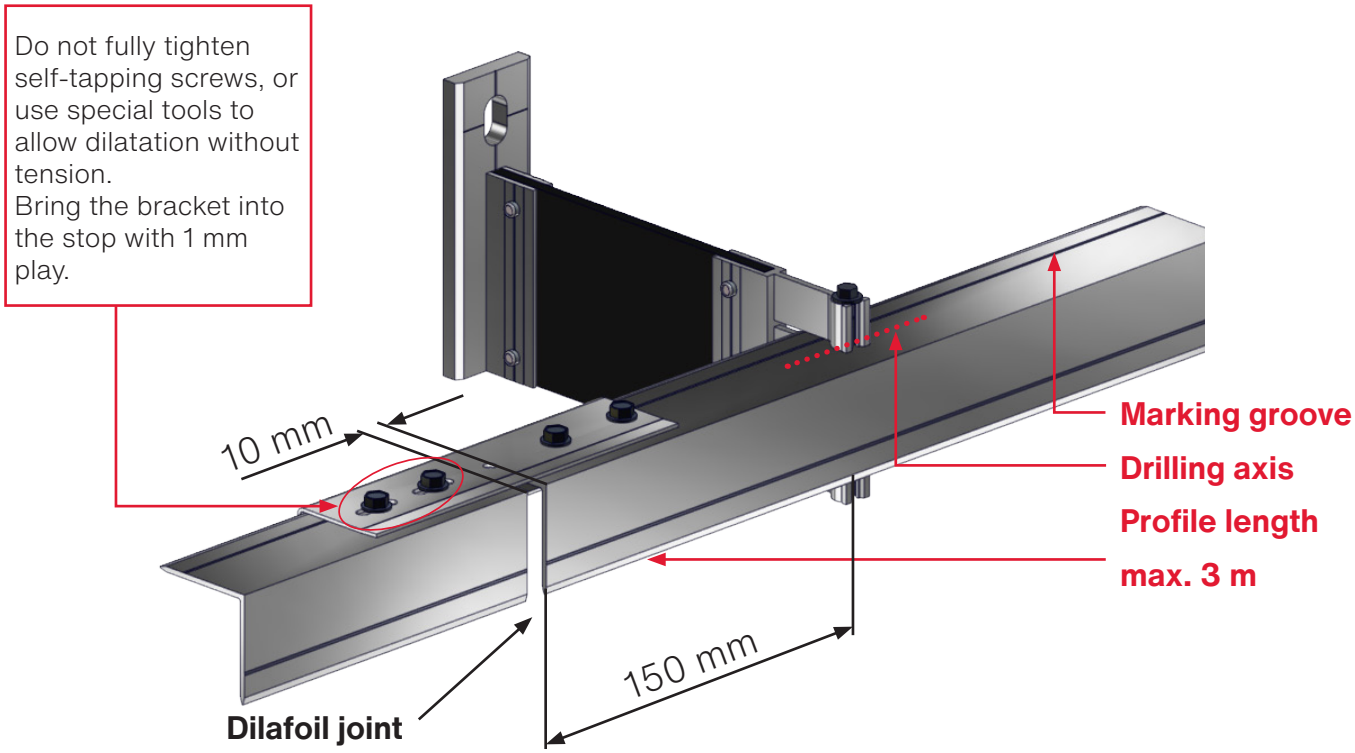


- Bracket with factory-applied THERMOSTOP® 5 mm and pre-mounted fixing screw
- Bracket foot with notch for alignment with the line lay

- Dilafoil joint min. 10 mm
- The marking groove of the profile must not be pulled out of the bracket further than the screwaxis.
- Dila joints approx. 15 to 20 cm next to the next bracket fastening point. Depending on the bracket grid, after max. 3 m profile length.



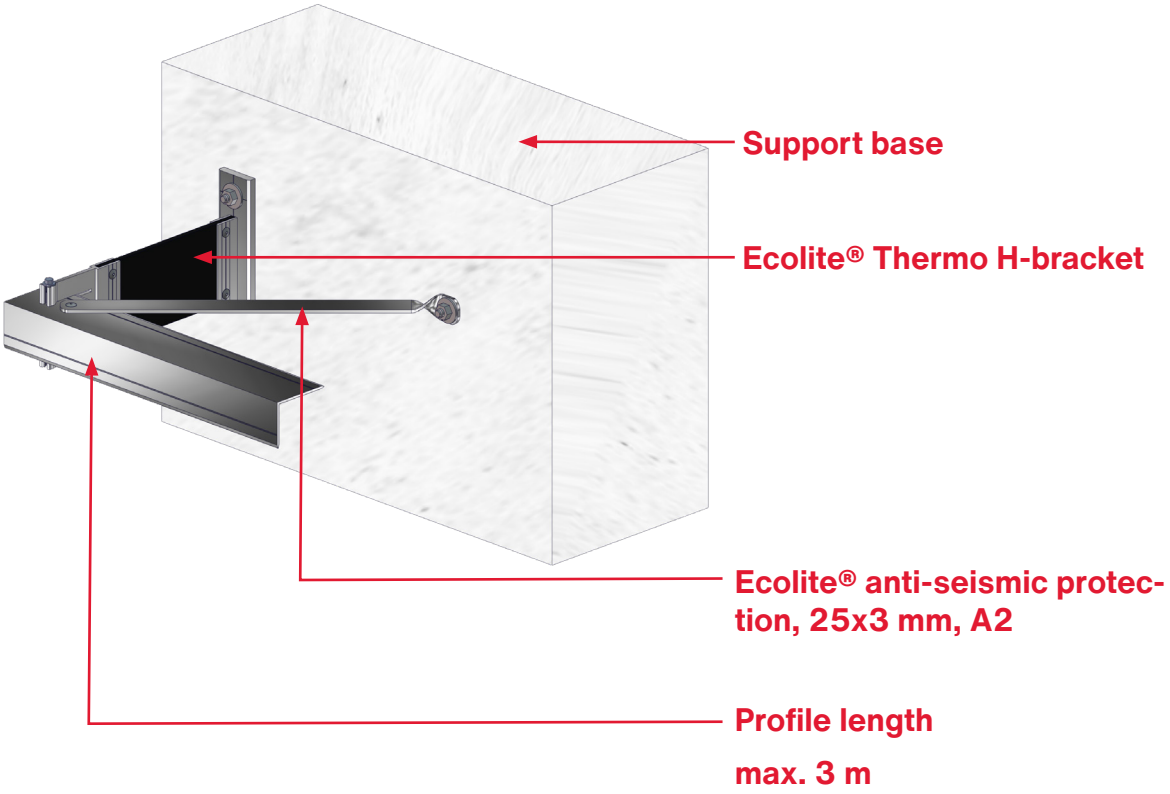
Ecolite® Thermo H bracket



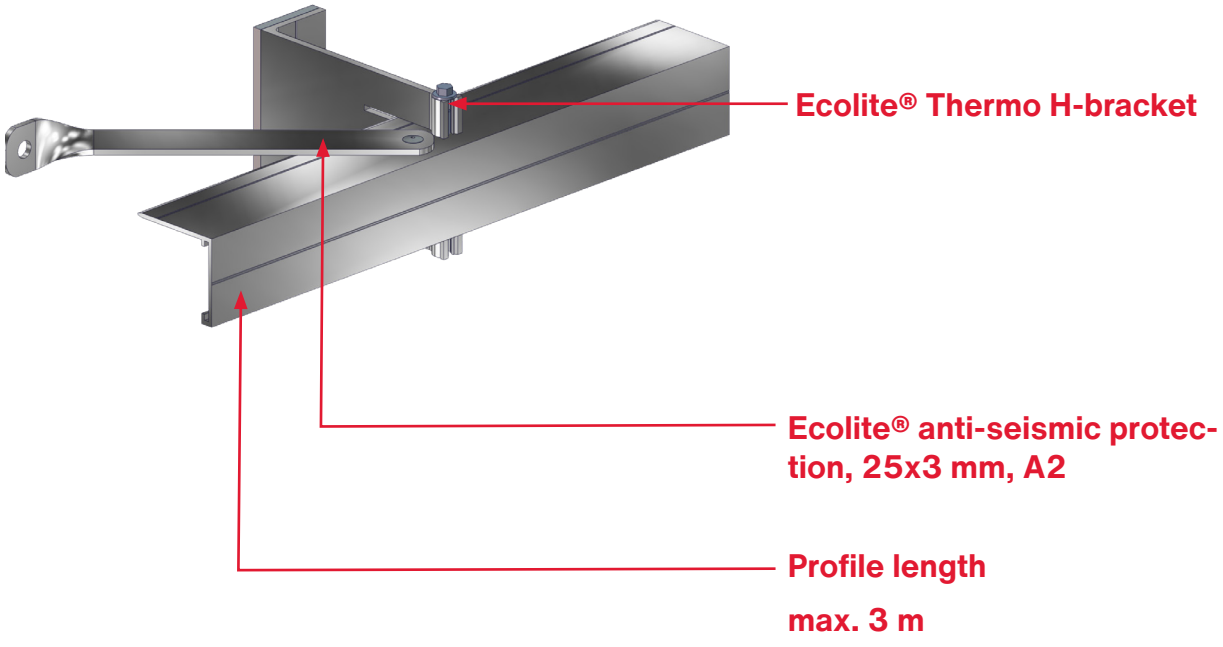
- Bracket with GRP web and pre-mounted fixing screw
- Bracket foot with notch for alignment with the line lay

- Dilafoil joint min. 10 mm
- The marking groove of the profile must not be pulled out of the bracket further than the screwaxis.
- Dila joints approx. 15 to 20 cm next to the next bracket fastening point. Depending on the bracket grid, after max. 3 m profile length.

Ecolite® anti-seismic protection

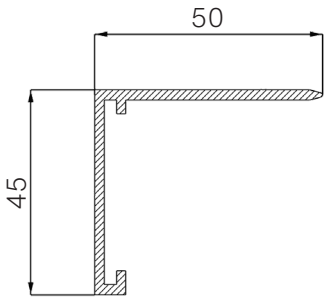


- anti-seismic protection in accordance with static requirements

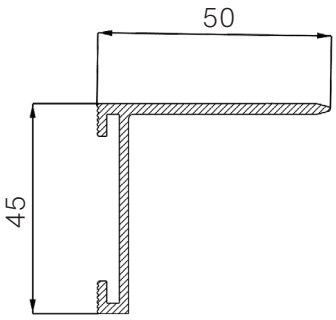


Profiles

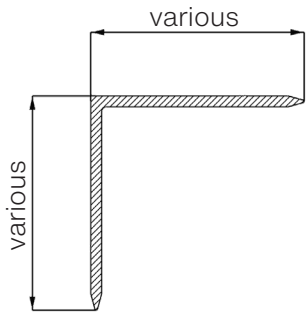
Angle profiles



Ecolite® Angle Profile MM
Metal-Metal
45x50x2.3 mm



Ecolite® Angle Profile HM
Wood-Metal
45x50x2.3 mm

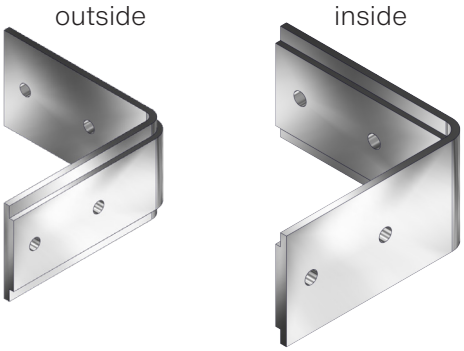


Ecolite® Angle profile

35x45x2.3 mm
40x30x2.0 mm
42x60x2.0 mm
45x45x2.0 mm
45x45x2.3 mm
45x60x2.3 mm
45x75x2.3 mm
45x90x2.3 mm
60x70x2.3 mm

Profile connector

Ecolite® Profile Connector
39x4.5x145 mm



Ecolite® connection bracket
39x4.5x75/75 mm

Ecolite® U profile connector
45x160x2.3 mm for Profiles
2.3 mm

Ecolite® U profile connector
45x160x3 mm for Profiles
3.0 mm

Fastener

Preconditions

- The clamping length (KL) of the fasteners must correspond to the existing material thickness.
- For aligning the support profiles by means of a laser or similar, the profiles are to be fixed with clamping tongs.

Assembly

- The self-tapping screw may only be moved by means of screwdrivers with torque limiters.

Fastener

RV4-B5, Sliding fixed point screw Drilling screw, hexagonal head with pressed-on washer, 5.0 x 19 mm, SW 8, stainless steel A4, blank

General notes

- The SIA standards 261, 179 and 160 (effects on load-bearing structures) are authoritative for the static calculation of the substructure. In the following cases, a chargeable and binding structural analysis is required for the design of the substructure including façade cladding:
  - According to the relevant SIA component standards:
    If the failure of a façade poses a direct danger to persons, proof of structural safety must be provided..
  - At the request of the client and/or the architect.
  - For critical substrates, for buildings that are exposed to high load effects or within the scope of guarantee obligations.

- To prepare a structural analysis for substructures on brick or other unknown substrates, either the 10 pullout tests of the anchoring means required according to SFHF must be carried out and evaluated or a permissible pull-out value specified by the anchor manufacturer must be taken into account.

- Dilatation: Aluminium changes its length with temperature fluctuations, which is called dilatation. A profile of 1000 mm length at +20°C shortens to 999 mm at -20°C and lengthens to 1001 mm at +60°C.
  To prevent dilatation from causing stresses and cracking noises, dilatation joints are necessary between individual profiles and sliding points are essential for some of the brackets.

- The following guidelines and brochures of the SFHF Association apply:
  - Guideline for the planning and execution of ventilated curtain facades.
  - Guideline, tolerances and assessment rules for ventilated curtain walls..
  - TECINFO brochures on individual specialist topics..

  All documents can be obtained via the SFHF homepage www.sfhf.ch.

- If required, instructions can be given before the start of construction and on-site assessments and acceptances can be arranged during construction or after completion of the work.

Disclaimer

This processing guideline does not claim to be complete and does not release the processor from assuming full responsibility for the creation of the complete work.

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