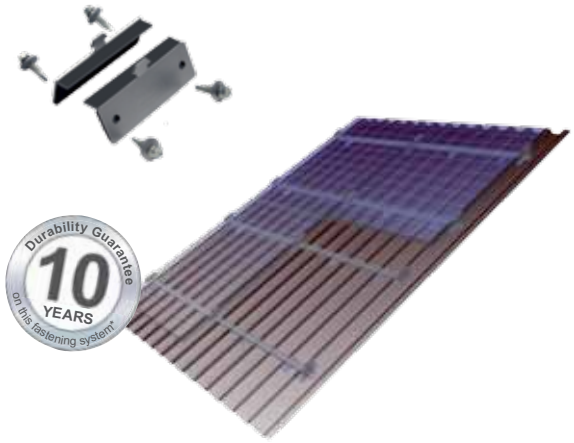
VarioFix-V

The fastening system for self-supporting trapezoidal sheet metal roofs and sandwich elements - now even simpler and quicker!



- suitable for all current trapezoidal sheet metal roofs
- structurally optimized by lateral fastening
- can be fastened quickly
- validated system structural analysis
- only little storage space required

Self-supporting trapezoidal sheet metal roofs in many cases do not allow a connection of fastening systems to the substructure, but often have a sufficient load-bearing capacity for quick and simple direct fastening. In most cases, sandwich elements provide sufficient stability in the upper deck, but do not allow any roof penetrations with fastening elements as this can lead to an accumulation of condensation. **VarioFix-V** is an unrivalled quick and easy fastening solution.

The **VarioFix-V** system is made up of a combination of Schletter standard rails with SingleFix V fastening elements and is intended for vertical module mounting. Each fastener is made up of 2 small metal plates. These plates always have to be fastened symetrically.

Schletter **VarioFix-V** can be referenced in the system structural analysis. It utilizes approved screw-types and is based on verified fastening forces. The distribution of fastening elements and their respective approved loads can be referenced in clearly laid out tables.

We recommend the fastening methods listed below:

For trapezoidal sheet metal

Pairwise to the legs of one trapezium

Pairwise to the outer legs of two trapeziums next to each other

For trapezoidal sheet metal

Pairwise to the legs of one trapezium

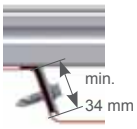
It is not allowed to use only one SingleFix-V plate!

Information on assembly

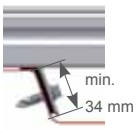
The SingleFix-V elements must be able to transmit specifically defined forces so that a reliable structural analysis can be provided for the entire system. Thus, the following items have to be taken into account:

- When screwing, the SingleFix-V fastening element has to pull the module-bearing rail onto the crown so that pressure loads can be transmitted. In order to achieve this, we recommend to apply the drilling screws slightly inclined from top to bottom.
- Overtightening of screws must be avoided in order to avoid loss of grip (use a depth-stop!).
- After mounting, screws must not be removed and redeployed in the same hole.
- To comply with the technical approval for screws, a minimum sheet thickness of 0.5 mm must be maintained with steel sheet metal and with trapezoidal aluminium sheet metal.
- In order to prevent surface damage to the coating of the trapezoidal sheet metal by thermal elongation, we recommend using individual sealing rubber parts at the crossing points of the cross beam with the crowns. (EPDM rubber is available as accessory item no. 973000-014, 48 mm wide, roles with a length of 10m).
- The roof must be capable of bearing the additional load of the PV-plant.
- The trapezoidal sheet fastening must be capable of absorbing the wind suction forces.
- With sandwich components, a mutually sufficient holding force must be guaranteed between the layers.
- For a better load distribution, the SingleFix-V fastening elements should be distributed on several trapeziums.
- When arranging the rails, please make sure that the profile connectors are not positioned on the trapeziums.
- As thermal elongations have to be reckoned with, it is recommendable not to use uninterrupted rail lengths of more than 10m.
- Do not fasten SingleFix at joints of trapezoidal metal sheets.
- Please ensure that SingleFix is mounted plain and flush.

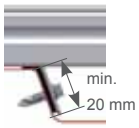
SingleFix-V Solo twin kit
Item no. 113009-100



SingleFix-V Profi twin kit
Item no. 113009-101



SingleFix 20 twin kit
Item no. 113009-103



When the trapeziums of the trapezoidal sheet metal are very low, the SingleFix 20 pair kit can be used instead of the standard SingleFix-V kit. The SingleFix 20 only has a height of 20 mm.

Information on sealing

- The screws that are included in the scope of delivery are equipped with sealing washers which prevent water entry in the fastening drillings.
- In order to safeguard a firm sealing between the SingleFix-V and the sheet metal roof, the SingleFixV plates are equipped with EPDM-rubber pieces on the inner side.

Important information on structural analysis:

- The verification of the fastening forces of the SingleFix-V in the trapezoidal sheet metal roof can be looked up in the general structural analysis of the Schletter system (pay regard to the special information about roof edge areas!).
- When calculating the maximum snow load, it has to be taken into account that the roof also has to bear the distributed load of the solar plant (individual verification required in certain cases).
- When calculating wind suction forces, it must be safeguarded that the forces in your SingleFix-V arrangement have to be absorbed by the trapezoidal sheeting and have to be transmitted into the roof construction (an individual structural verification may be required).
  In such cases, a shifted arrangement of the SingleFix-V fasteners on top of each other may be reasonable!
- In order to relieve the trapezoidal sheet metal, we recommend equipping the first two trapeziums in the edge area with fasteners.

Information on the glueing of the EPDM rubber parts

The surfaces must be dry as well as free of dust, oils, oxide layers, separating layers and other kinds of dirt when the rubber parts are glued. Cleaning agent: Water with neutral detergent and wiping off with clean water, isopropanol, ethanol or acetone. The detergent must not leave any remnants and must not affect the surface of the trapezoidal sheet metal.

10-30°C are good work temperatures. If the temperature is lower, the roof surface should be warmed up locally (for example using a hot air blower) so that there will be a sufficient adhesion of the glue to the sheet metal. Press on the rubber using a press on roller (for example a wallpaper seam roller).

Technical data

Material	Fastening components: Quality steel 1.4301; screws: High-grade steel, sealing strips EPDM-rubber
Forms	Suitable for all current trapezoidal sheet metal designs and sandwich elements
Structural analysis	Structural analysis in accordance with current national standards (in Germany DIN1055 and EC1). Structural analysis annexes on the dimensioning of the number of the required fixation spots, based on structural calculation. By all means, please make sure to observe the information on structural analysis. The verification of the holding force of the roof to the substructure is not included in the general structural analysis annexes!
Kit	2 SingleFix-V Solo or Profi elements and 4 self-drilling screws

System prices can be obtained quickly and easily with our Autokalkulator!
Further information and warranty declaration at www.schletter.eu

*acc. to the respective product sheet and our General Terms and Conditions of Sale and Supply(www.schletter.de/AGB) · Subject to modifications and also technical modifications.