

## FixPlan KlickTop

The proven fastening kit now with KlickTop

- Reliable roof sealing
- Quality materials (VA 1.4301 und EPDM)
- Defined connection to the substructure

### Description

Flat sheet metal roofs are generally implemented in the same way as standing seam roofs. Special standing seam clamps are available for the fastening of solar plants to standing seam roofs. Fastening the solar plant to the seams is, however, not always possible or not recommendable:

- Not all sheet metal roofs have standing seams that can be used for fastening
- Some sheet metal roofs are poorly secured to the roof deck; Fastening a solar plant to the roof covering is therefore not recommended due to potential uplift forces. In such cases, the plant should rather be fastened to the load-bearing substructure.
- Sheet roofs of titanium sheet metal become very brittle at low temperatures; fastening a solar plant to the standing seams is therefore not to be recommended due to the thermal expansion of the roof covering (inducing a risk of crack formation).

The FixPlan system allows for the fastening of a plant to the substructure rafters while ensuring that the penetration point through the sheeting remains watertight.

### KlickTop design

Optimized mounting time and improved structural analysis values at the same time

Item nr.

114003-001	M10 x 200 mm
114001-001	M12 x 200 mm
114002-001	M12 x 300 mm

### Application information

Thermal movements of the metal sheets, roof penetrations respectively fastenings to the substructure are only possible to a very limited extent. Long metal sheets are often laid on the roof in one piece. As the temperature fluctuates, (day/night or summer/winter) the roof covering expands and contracts relatively to the movement of the wooden substructure. There must be room for the sheet metal roof to expand beneath the sealing membrane but the penetration points must remain absolutely watertight. In the case of the FixPlan system, sufficiently large notches are cut or drilled into the metal sheeting to allow for the sheet to move adequately, relative to the fastening point. The sealing disc is enclosed by a sealing edge thus ensuring long-term impermeability. Corresponding notch sizes can be referenced in the section "Technical Details".



\*The terms of guarantee can be referenced at [www.schletter.de/AGB\\_en](http://www.schletter.de/AGB_en).

### Mounting example



❶ Drill the metal sheet with a sufficient diameter (for example 30mm), then pre-drill a hole for the hanger bolt with 0.7 x diameter (for M10: 7mm, for M12: 8.5mm). Use a corresponding drill template to maintain the vertical alignment.



❷ Placing of the sealing disc



❸ Place the cone gasket and fasten the sealing nut using a moderate torque. Next secure the mounting plate with two counter nuts and connect it to the supporting structure.

### Please note:

For this fastening solution, we recommend the following thread sealant: 195000-032 Screw retention 50ml

➔ [Thread sealant product sheet](#)

### Technical data

<b>Material</b>	High-grade steel 1.4301, Blasted and passivated surface Rubber moulded parts of vulcanized UV-resistant EPDM Mounting plate / KlickTop attachment: aluminium
<b>Structural analysis</b>	Structural analysis in accordance with current national standards (in Germany DIN1991 and EC1). Structural analysis annexes on the dimensioning of the number of required fastening points.  In any case, observe the information on structural safety! The verification of the adhesive force of the roof to the substructure is not included in the general structural analysis annexes!
<b>Dimensions</b>	The diameter of the sealing disc is 100mm Available with hanger bolt M10x200, M12x200 or M12x300; M10 drive: 7 spanner, M12 drive: 9 spanner Item no.: 114003-001 FixPlan with hanger bolts 10x200 KlickTop Item no.: 114001-001 FixPlan with hanger bolts 12x200 KlickTop Item no.: 114002-001 FixPlan with hanger bolts 12x300 KlickTop
<b>Application</b>	On flat metal sheets mounted on continuous boarding, only to be fastened to sufficiently dimensioned substructure components.
<b>Tips for the dimensioning of sheet metal cut-outs</b>	There are two different scenarios: a) If the metal sheet is fastened to the roof on one side, then the maximal effective distance is that from the bolt to the furthest fastening point from it. b) If sheeting can move freely on the roof, then the maximal effective distance is that between the fastening points located the furthest away from one another on one connected sheet.  With an effective length of, e.g. 10m and with an assumed temperature difference of e.g. 60K, a steel metal sheet expands by approx. +/- 5mm.  With a cut-out of e.g. 30mm, the maximum tolerable length deviation is +/- 9mm (Radius 15 - Radius 6).

Further information at: [www.schletter.eu](http://www.schletter.eu)