



Installation Manual Flat Roof Mounting System VarioPro





Flat Roof Mounting System VarioPro

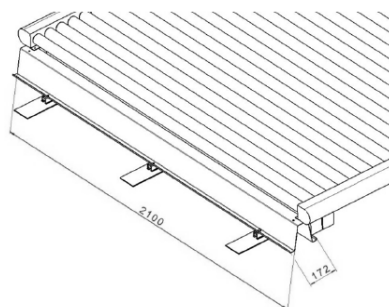
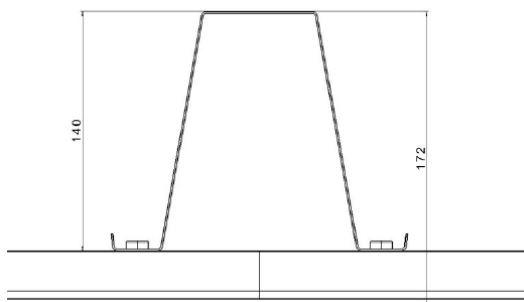


Product Datasheet

The VarioPro mounting system is the interface between the AkoTec collector line OEM Vario XXXX df and a flat roof.

Technical Data:

Measures: 2100 x 172 x 140mm (length x width x height)

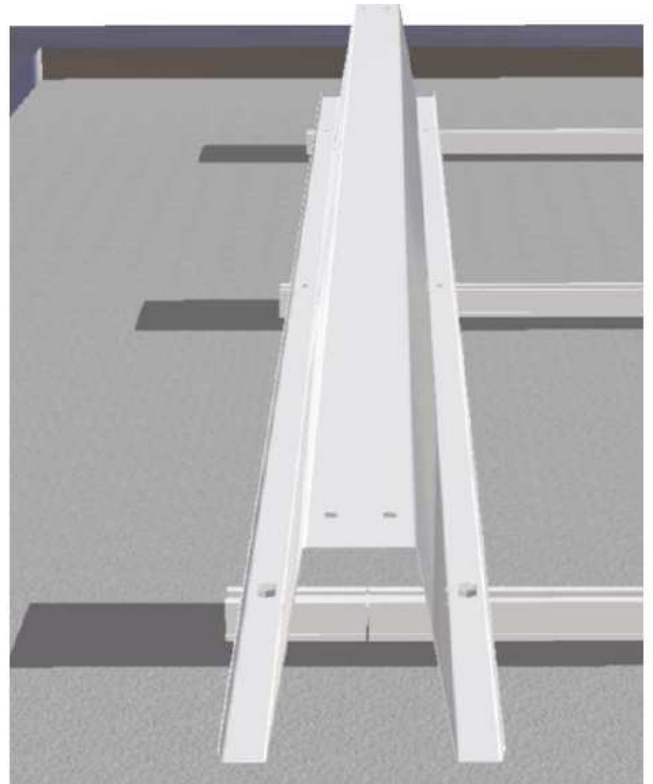


Weight: 2,4 kg/console
The total weight of the subconstruction for a Vario 3000 df amounts:
12 kg or 2,5 kg/m² gross collector area



Advantages Mounting System VarioPro

- Low own weight of only 2,4 kg per console
- Wind load optimized construction – less load necessary
- Coupling of the separate collectors to spread load peaks (load peaks always occur partially)
- Coupled mounting rails with a mean distance of 0,8 m. Thus the calculation of the roof load must not be assumed as surface load, as a point or linear load (structural engineering).
- Fast and easy mounting through optimum coordinated components
- Conservation of resources through minimal material usage





In Scope of Delivery Included:

Basic Kit:

- 2 x support bracket
- 3 x aluminium mounting rail 2250 mm
- 6 x rail connector 180 mm
- 6 x mounting rail – end piece
- 8 x flat washer DIN 125 A 8,4 A2
- 16 x hexagon screw DIN 933 M8x25 A2
- 16 x nut M8 DIN 934
- 12 x flat washer DIN 9021
- 1 x protective mat

Extension Kit:

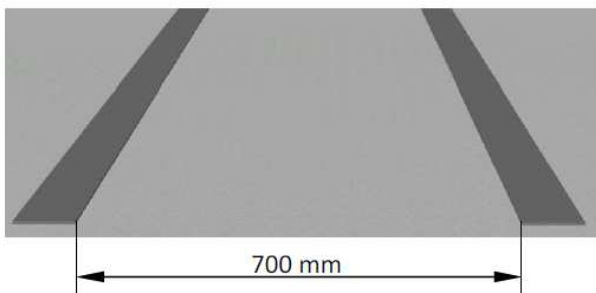
- 1 x support bracket
- 3 x aluminium mounting rail 2250 mm
- 3 x rail connector 180 mm
- 8 x flat washere DIN 125 A 8,4 A2
- 10 x hexagon screw DIN 933 M8x25 A2
- 10 x nut M8 DIN 934
- 6 x flat washer DIN 9021
- 1 x protective mat



Procedure of Mounting:

1. Lay protective mat stripe lengthwise from support brackets

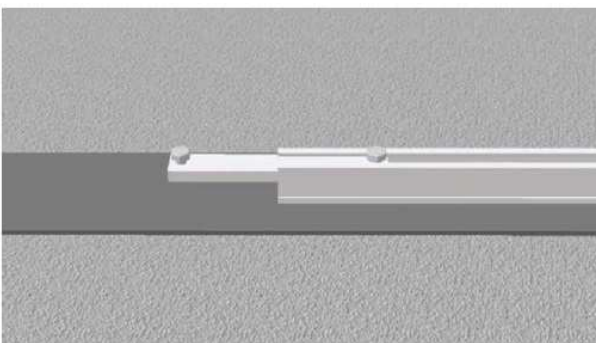
- Tools:* folding yardstick/measuring tape
Material: protective mat (rolled-up)



The protective mat ensures through its special characteristics slip resistance of the mounting rails and protects the roofing. The distance between the stripes amounts 700 mm.

2. Lay support brackets onto protective mat

- Tools:* folding yardstick/measuring tape
Material: mounting rails, rail connector

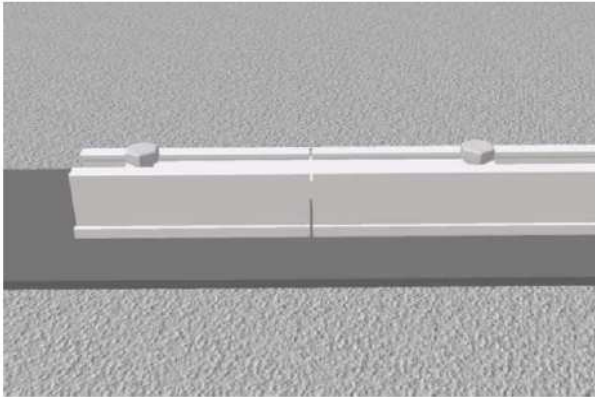


The mounting rails must be positioned with the wide side downwards onto the protective mat, so that the mean distance amounts 800 mm. When connecting several collectors, the mounting rails must be connected as well. The screws fix the brackets at the same time.



3. Add the end-pieces of the mounting rails

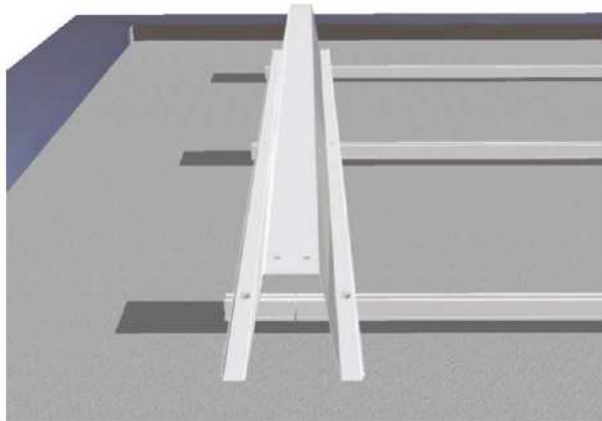
Tools: -
Material: mounting rails



The end-pieces of the mounting rails must be connected with help of the rail connectors with the mounting rails. The screws also fix the supporting brackets.

4. Mounting of the supporting brackets

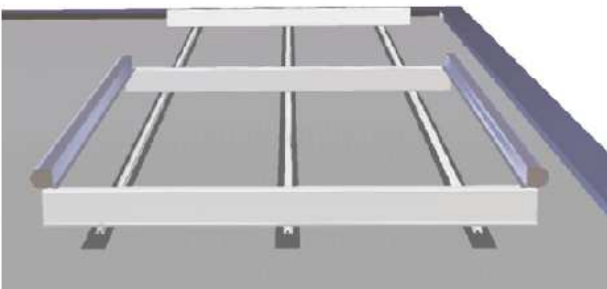
Tools: -
Material: supporting brackets



When mounting the supporting brackets, the hexagon screws M8 of the connector must be screwed into the designated holes, but must not be tightened yet. The supporting brackets must be placed within the connection point.

5. Mounting of the manifold

Tools: 2 x ring spanner SW 13
Material: manifold, hexagon screw M8 x 16 mm, hexagon nut with layer M8-endpieces



The mounting rails must be connected with help of the rail connectors with the mounting rails as well. The screws also fix the supporting brackets.



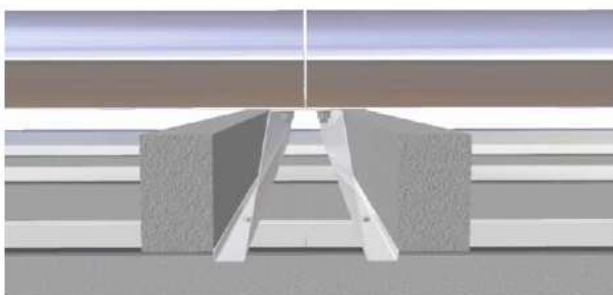
6. Mounting of the necessary extra loads

Work safety: *protective gloves*

Material: *concrete weights*



The system gets weighted down now. The weights must be spreaded onto the mounting rails, i.e. concrete lintels or edging stones.

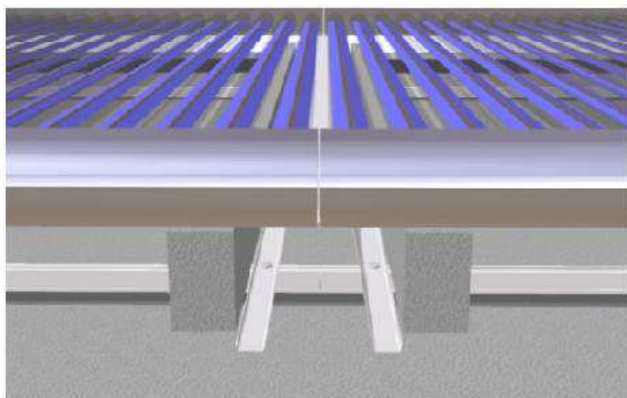


The necessary extra load must be calculated through a wind load calculation. We are pleased to take on this service for you. (The calculation can't replace a static proof of a structural consulting office and has no claim on warranty in the event of damage.)

7. Mounting of the vacuum tubes

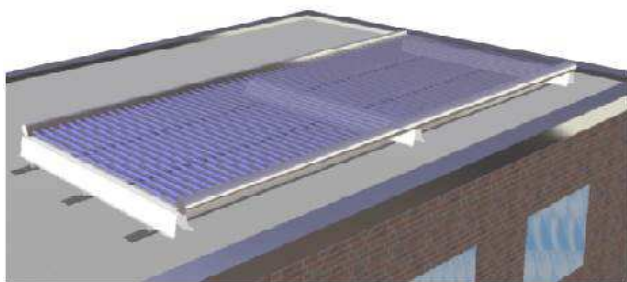
Work safety: *protective gloves*

Material: *vacuum tubes, insulation pieces, silicon grease*

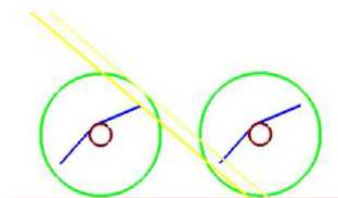


The AkoTec OEM Vario XXXX df product line can be mounted lengthwise or crosswise with south exposure.

When mounting crosswise, the vacuum tubes can be turned easily, so that at a low position of the sun as much absorber area as possible is illuminated. The maximum angle of attack amounts 35° and offers enhanced absorber area. Thus it reaches lower shading through the previous tube.



Example at 40° solar altitude and absorber angle of attack of 35° .



IMPORTANT: Please pay attention to all planning, installation and commissioning manuals. These documents are available at all times on <http://akotec.eu/downloads/>.