

# INSTALLATION MANUAL

**COLLECTOR FIXINGS**  
**Facade hp 80° (item number 20285)**

**suitable for df and hp collectors**



**AKOTEC**  
SOLARTHERMIE



## Notes

### General safety information:

Solar thermal collectors generate heat under solar radiation. All components such as tubes, connectors, sensors etc. carry the risk of injury from hot surfaces. In addition, solar thermal systems are operated with overpressure. Opening a solar thermal system can cause steam or hot water to escape. Persons working on solar thermal systems have to consider this, to wear protective clothing and to adopt safe working practices.

The tube sets have to be transported horizontally. A maximum of seven cartons may be stacked on top of each other. Our mounting sets are suitable for snow load zones 1 and 2. Collectors must not be installed in the roof edge areas of one meter because of increased turbulence. In stormy areas, separate static calculations must be carried out.

### Working on the roof:

When working on the roof, suitable accident prevention measures must be taken. Before carrying out installation work, acquaint with the accident prevention regulations for construction work of your employers' liability insurance association or have yourself instructed by suitable persons. The following points must be noted to ensure safe installation of the solar components:

- fall protection must be used for the installation of the collectors
- keep the safety regulations when using a single ladder
- workplaces on the steep roof must be secured
- safety glasses and gloves must be worn when working with the angle grinder
- collectors can reach a stagnation temperature of up to 200°C during installation and operation due to incident light. There is a risk of burns at the flow and return connections

## Occupational safety information:

- wear helmet, hearing protection and safety glasses!
- put on a fall protection!
- only touch glass tubes with gloves!



## Required tools:

- drilling machine
- measuring tape (folding rule)
- spirit level
- open-jawed spanner SW 13
- socket spanner SW 13
- hammer
- angle grinder

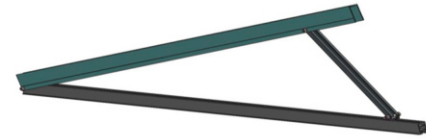




## Facade hp 80° (item number 20285) for mounting on AKOTEC hp collectors at the facade

### scope of delivery:

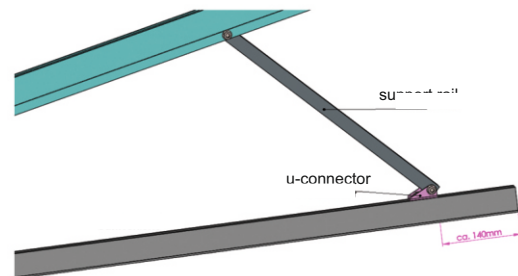
- 2x mounting triangle
- 2x diagonal bracing 1400mm
- 2x screw M8x40
- 6x locking nut M8
- 4x hex bolt M8x25
- 4x hammer head screw M8x20
- 4x washer DIN 125 A 8,4 A2
- 4x multi-purpose dowels 12x70
- 4x U-profile (22,8x9,5) l=40mm



### 1

### construction & stiffening of the mounting triangles:

- unfold the two pre-assembled 10° triangles
- move the u-connector with the attached support rail in the base rail so that the rear edge of the u-connector is approx. 140 mm from the end of the base rail
- in this position, tighten the 3 locking nuts so that the 10° angle of the triangle legs is fixed



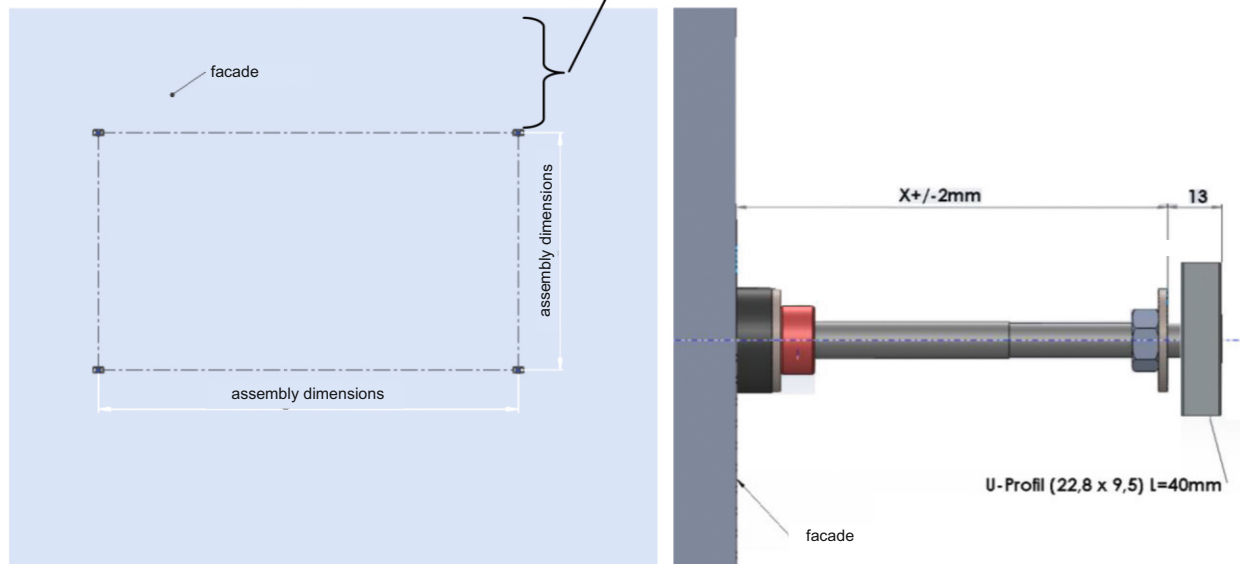
## 2

### part 1 - make mounting holes according to hole pattern:

Depending on the type of façade, the fixing materials for the fixing set has to be selected. This installation instruction describes how to fasten the set to concrete or masonry facades. The following table shows the drilling pattern spacing for different collectors.

collector	mounting dimension B in mm	mounting dimension A in mm
OEM Vario 500-5 hp	440 - 660	ca. 1600
OEM Vario 1000-10 hp	650 - 1000	ca. 1600
OEM Vario 2000-20 hp	640 - 960	ca. 1600
OEM Vario 3000-30 hp	940 - 1460	ca. 1600

Observe the installation clearance of 700mm above the upper row of hanger bolts to the roof overhang.





## Facade hp 80° (item number 20285)

### 2

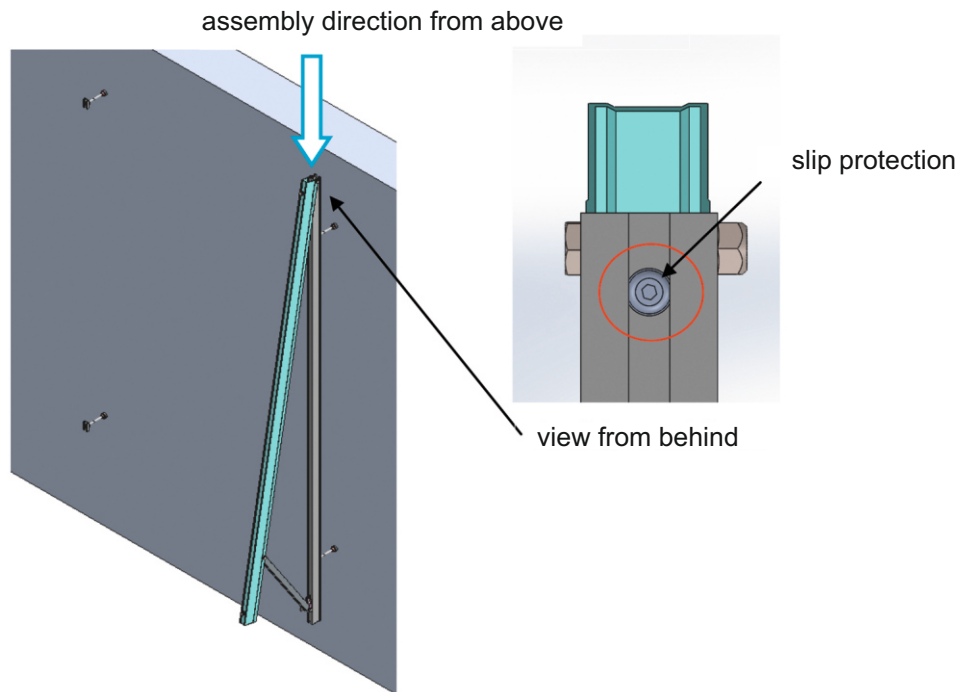
#### part 2 - making mounting holes according to hole pattern:

- holes with a diameter of 12 mm and a depth of approx. 80 mm must be drilled for the enclosed dowels
- after driving in the dowels, the hanger bolts are to be screwed into the dowels so deep that the rubber sealing washers close the drilled dowel holes
- Important: the ends of the hanger bolts has to be in one plane (see details on the previous page)
- attach the 4 U profiles (22.8 x 9.5) l = 40mm to the hanger bolts with the open side facing outwards
- the nut screwed on the outside and remove a washer from the hanger bolt
- put on the U-profile and screw it back on with the nut (without the removed washer)
- the nut should be flush with the end of the hanger bolt
- the distance between the remaining washer of the hanger bolt is adjusted with the inner nut so that the distance of 13 mm shown in the detailed view is created

### 3

#### Fastening the mounting triangles to the hanger bolts:

- thread the base rail of the mounting triangles with their lower groove onto the U-profiles of the hanger bolts from above
- the triangle is additionally secured against slipping by the drill head screw in the base rail
- when attaching the second mounting triangle, make sure that both mounting triangles are exactly aligned with each other
- fix the intended position with the hexagon nut of the hanger bolt



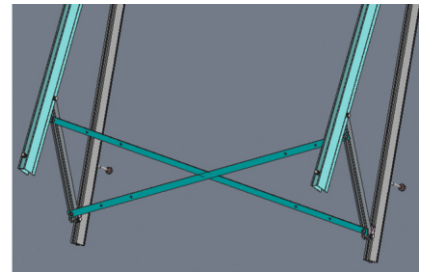
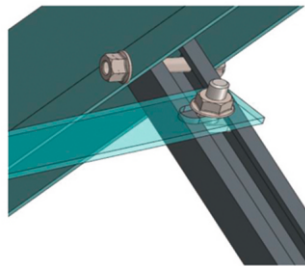


## Facade hp 80° (item number 20285)

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### Stiffening of the mounting triangles with diagonal struts:

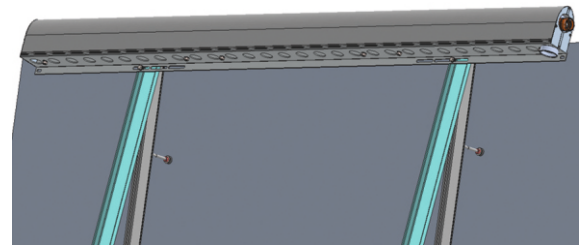
- fasten the diagonal struts to the support rails of the mounting triangle using hammer-head screws and locking nuts



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### Mounting of the collector on the mounting triangles:

- place the collector at the level of the upper press-in nuts on the brackets of the mounting triangles
- mediate laterally
- tighten with washers and hexagon screws M8x25 mm

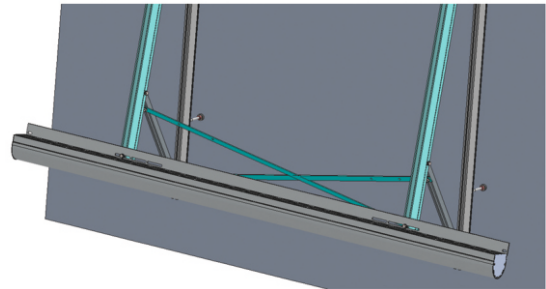




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### **Assembly of the foot section:**

- place the foot section at the level of the lower press-in nuts on the brackets of the mounting triangles
- align laterally with the collector
- tighten with washers and hexagon screws M8x25 mm



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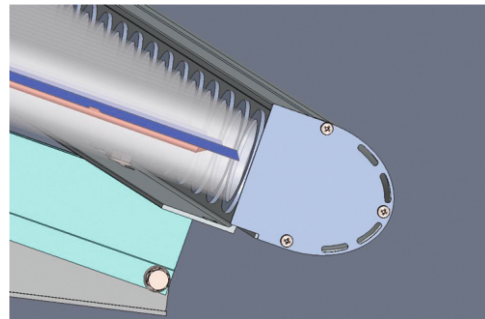
### **Assembly of the tubes / housing:**

- for df tubes: see assembly instructions OEM Vario df collector
- for hp tubes: see assembly instructions OEM Vario hp collector

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### **Assembly of the side covers:**

- screw each of the side covers to the housing with 3 flat head Phillips screws



### **Other uses:**

#### **collector fields:**

The coupling of several collectors to one collector field is possible and is described in the assembly instructions for the individual collector types.

### **Important:**

Please observe all planning, assembly and commissioning instructions.

These are available for you at any time

<https://www.akotec.eu/english/about/downloads/>.

WE ARE GLAD TO BE HERE FOR YOU:



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SOLARTHERMIE

■ AKOTEC Produktionsgesellschaft mbH | Grundmühlenweg 3 | D - 16278 Angermünde

■ T: +49 (0) 3331 25 716 30 | F: +49 (0) 3331 25 599 96 | M: [info@akotec.eu](mailto:info@akotec.eu) | W: [akotec.eu](http://akotec.eu)