**On-Roof Mounting Sets for Flat-Plate Collectors**

**Fig. 1 Installation set for 2 collectors – 1 basic installation set, 1 extension installation set**

**Basic installation set for each collector array and for the first collector (part #7739300440 portrait; 7739300442 landscape)**

- **Item 1:** Profile rail 2×
- **Item 3:** One-sided collector clamp 4×
- **Item 7:** Anti-slip protection 2×
- **Item 8:** M8x20 bolt 4×

**Extension installation set for each additional collector (part #7739300441 portrait; 7739300443 landscape)**

- **Item 1:** Profile rail 2×
- **Item 2:** Double-sided collector clamp 2×
- **Item 6:** Plug connector with threaded studs 2×
- **Item 7:** Anti-slip protection 2×
- **Item 8:** M8x20 bolt 4×
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Flat shingle roof jacks (part # 7739300281)

The following diagrams are an example of the installation of the flat shingle roof jacks and the watertight seal with customer-supplied flashing with a slate or composite shingle roof.

- Install flat shingle roof jack (Item 5) and gasket (Item 4) to the shingles using lag bolt (Item 6).
- To ensure that the installation is watertight, flashing (Item 1, 2) must be installed on the building above and below the special roof jacks.

Item 1: Flashing (not supplied)
Item 2: Flashing (not supplied)
Item 3: Multiple tiles
Item 4: Gasket (not supplied)
Item 5: Flat shingle roof jacks 4×
Item 6: Lag screw 16×

Proper anchoring of flat shingle roof jack

Item 1: Screw
Item 2: Roof jack
Item 3: Roof cover
Item 4: Rafter
On-Roof Mounting Sets for Flat-Plate Collectors

Roof connection, interlocking tile, per collector (part #7739300436)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Roof jack, adjustable</td>
<td>2×</td>
</tr>
<tr>
<td>5</td>
<td>Sliding nut</td>
<td>4×</td>
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</tbody>
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Installation sets for collectors

- Loosen the long hexagon nut (Fig. 2, Item 2) on the roof jack and move the lower part of the roof jack (Fig. 2, Item 1) to the correct position.
- Push the tile upwards according to the roof jack positions.
- Jack in the roof jack in such a way that the front brace lies in a tile valley (Fig. 3, Item 4).
- Push the lower part of the roof jack (Fig. 3, Item 3) upwards until it touches the roof batten (Fig. 3, Item 2).
- Tighten the long hex-nut (Fig. 3, Item 1). To do this, insert the size 5 Allen wrench into one of the holes in the hex-nut and turn.

Fig. 2   Turning the lower part of the roof jack

Fig. 3   Roof jack located in place (some tiles have been removed for a better view)
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Fastening roof jacks to rafters

Alternatively, the roof jack can also be used as a rafter anchor for fastening to the rafter.

Sufficiently strong boards/planks must be attached to the rafters (cut out counter-battens) so that the roof jacks can be installed between the rafters.

- Loosen the long hex-nut (Fig. 4, Item 2).
- Insert bolt into upper hole (Fig. 4, Item 3)
- Loosely fasten lower part of the roof jack (Fig. 4, Item 1). Do not tighten the connection yet.
- Lay front brace onto the tile so that when subjected to a load it lies in a tile valley (Fig. 5, Item 3).
- The roof jack must have some clearance along the upper edge of the tile (Fig. 5, Item 4). Adjust the top of the tile if necessary.
- Push the lower part of the roof jack down until it lies on the rafter or on the boards/planks (Fig. 5, Item 6).
- Tighten the long hex-nut (Fig. 5, Item 1). To do this, insert the size 5 Allen wrench into the hole in the hex-nut and turn.
- Using suitable screws, fasten the lower part of the roof jack into the first (Fig. 5, Item 2) and second holes (at least) of the rafter.

Fig. 4  Fastening roof jacks to rafters

| Item 1: | Lower part of roof jack |
| Item 2: | Long hex-nut |
| Item 3: | Upper hole for fastening the lower part |
| Item 4: | Underlay if necessary |
| Item 5: | Cut off if necessary |

Fig. 5  Roof jack installed (some tiles have been removed for a better view)

| Item 1: | Long hex-nut |
| Item 2: | Screw for fastening roof jack |
| Item 3: | Front brace |
| Item 4: | Adjust tile as necessary to install the roof jack |
| Item 5: | Toothed washer |
| Item 6: | Board/plank |
On-Roof Mounting Sets for Flat-Plate Collectors

Corrugated metal sheathing roof connection set (part #7739300439)

Post screws must be used instead of roof jacks for fastening the profile rails.

On corrugated roofs, the peaks determine the true distance between the post screws. During installation, please maintain the required distances between post screws as detailed in the installation manual.

Fig. 6  Roof connector for corrugated sheets

- **Item 1:** M8 screw  (4 x)
- **Item 2:** Holding bracket  (4 x)
- **Item 3:** M12 nut  (4 x)
- **Item 4:** Washer  (4 x)
- **Item 5:** Sealing disc  (4 x)
- **Item 6:** M12 post screw  (4 x)

Fig. 7  Post screw installed to corrugated roof

- **Item 1:** Holding bracket
- **Item 2:** M12 nut
- **Item 3:** Gasket

Fig. 8  Post screw installed to corrugated roof

- **Item 1:** Screw
- **Item 2:** Profile rail
- **Item 3:** Holding bracket