

# SOFFITS - INSTALLATION

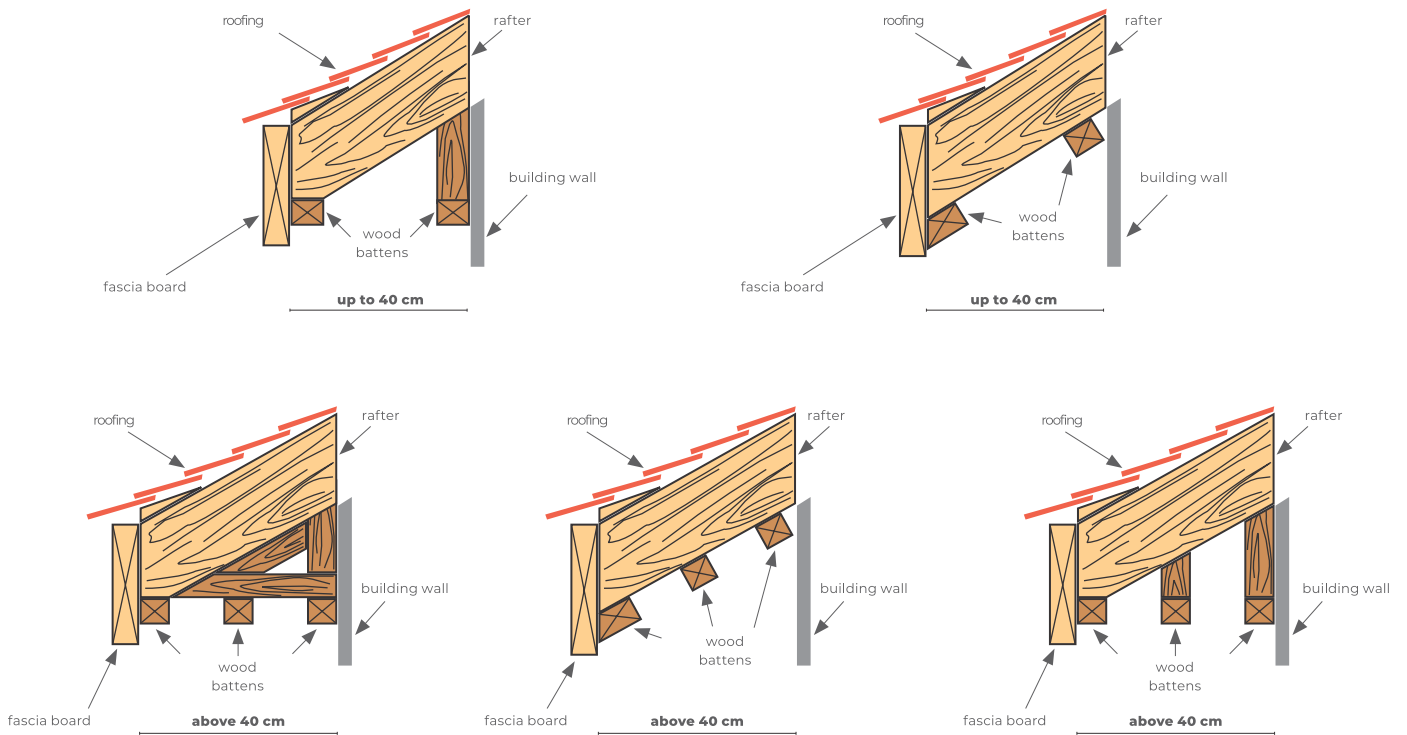
## INSTALLATION OF ROOF SOFFIT

The soffit shall be fixed to the timber grid in such a way as to allow for thermal movement, which is caused by changes in ambient temperature. Do not install at temperatures below 0°C.

**Do not use soffits for installation on building facades.**

## INSTALLATION SEQUENCE

1. The wood battens to which the soffit is to be fixed must be thoroughly dried, treated, and levelled. Use wood battens at least 25 mm x 50 mm. **Examples of supporting structures for different eaves overhangs:**



2. Fit the flashing profiles – J-channels – to the levelled and impregnated battens. Install these channels around the entire perimeter of the eaves to be fitted. The jointing of the J-channels is carried out as shown in **Figure A**. To finish the soffit on the eaves front, the properly prepared flashing of the fascia board can be used. J-channels should be nailed every 40 cm maximum. **Examples of J-channel fixing:**

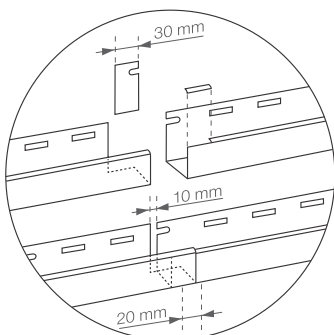
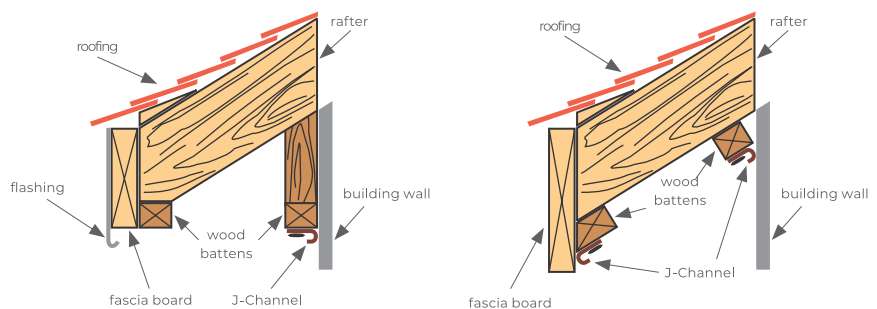
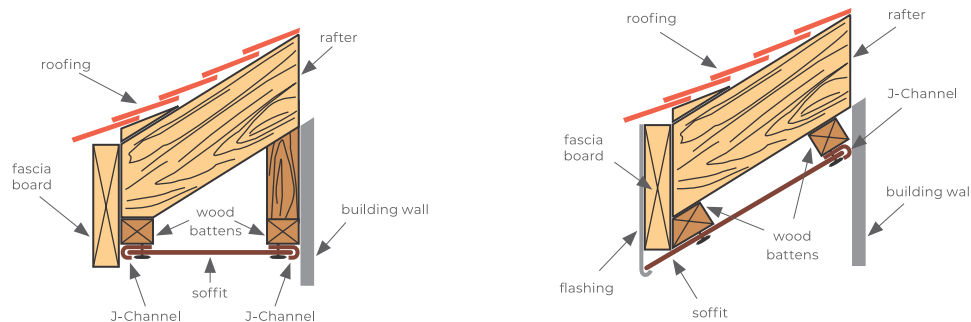


Figure A

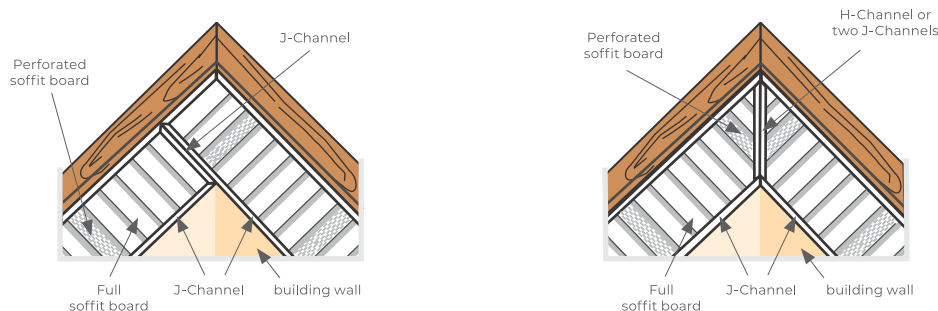


3. Bend the cut boards in the middle and slide them into the J-channels. Nail to the battens. Join the boards by snapping the edge of the next board into the lock of the previous board. It is recommended that the boards are laid perpendicular to the eaves. It is also permissible to lay them horizontally or diagonally. Fasten the boards 30 cm apart. Do not tighten the boards.

**Examples of soffit board fixing:**



4. Eaves corners can be made using two methods:



**NOTES**

- For installation, use aluminium or stainless steel nails with a minimum length of 20 mm and a minimum head width of 8 mm.
- Flat-head washer screws can also be used for installation.
- Fixings must be made in the centre of the pre-drilled holes and must not be overnailed/overtightened (leave a 1 mm gap) in order to allow for thermal movement of the soffit due to changes in length.
- Use a perforated product every third soffit board to ensure proper ventilation of the roof and eaves.
- The width of the soffit covering is 20.3 cm.
- Check the quality of the boards before fixing. Minor colour variations between production batches are acceptable.

**DETERMINING THE LENGTH OF THE ELEMENTS DEPENDING ON THE INSTALLATION TEMPERATURE**

Soffit boards up to 1 m in length should be cut to a length 4 mm shorter than the spacing of the inner edges of the J-channels. For boards longer than 1 m, the length of the board should be adjusted according to the installation temperature and the length of the element. Changes in soffit board length  $\Delta L$ , due to temperature changes, can be calculated using the following formula.

$$\Delta L = L \times \Delta t \times \alpha$$

$\alpha$  - linear expansion coefficient – for PVC  $\alpha = 0.08 \text{ mm} / \text{m}^\circ\text{C}$

L - length of the soffit board

$\Delta t$  - temperature difference between the extreme minimum temperature ( $t_{\text{min.}} = -30^\circ\text{C}$ ) or maximum temperature ( $t_{\text{max.}} = +40^\circ\text{C}$ ) and the installation temperature (inst. t.).

Example:

Soffit board is 2 m long, installation takes place at  $+20^\circ\text{C}$ .

$$\Delta L1 = L \times (t_{\text{max.}} - \text{inst. t.}) \times \alpha$$

$\Delta L1 = 2 \text{ m} \times (40^\circ\text{C} - 20^\circ\text{C}) \times 0.08 = 3.2 \text{ mm}$  – this is the maximum length by which the board will get longer.

$$\Delta L2 = L \times (t_{\text{min.}} - \text{inst. t.}) \times \alpha$$

$\Delta L2 = 2 \text{ m} \times (-30^\circ\text{C} - 20^\circ\text{C}) \times 0.08 = -8 \text{ mm}$  – this is the maximum length by which the board will get shorter.

The calculation shows that the soffit board must be cut to a length of 1.996 m. The panel shortening  $\Delta L2$  will be invisible (the depth of the J-channel is approximately 18 mm).

## **STORAGE AND TRANSPORT**

To avoid deformation, all elements should be stored and transported flat under cover and supported along their entire length. The storage height should not exceed 1 m. The temperature in the rooms where the soffit elements are stored should not exceed 50°C. Products packed in foil and without protective packaging should not be stored in areas exposed to direct sunlight. During transport, the load should be secured. Do not allow items to be locally crushed or thrown.

## **PACKAGING**

The soffit elements are packed in cardboard boxes. The packaging is adapted to the length of the boards and channels.

## **APPROVALS AND CERTIFICATIONS**

- National Technical Assessment ITB-KOT-2017/0302 Issue 1
- Declaration of Performance