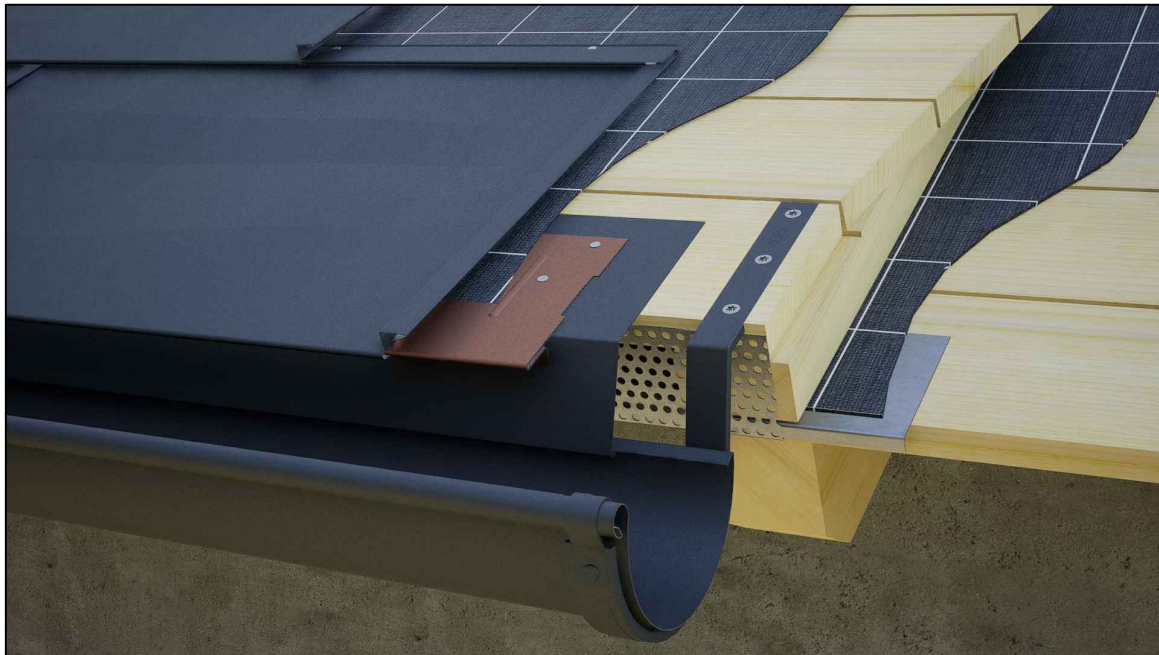




STARK WIE EIN STIER

FX.12 ROOF PANEL

CAD DETAILS



CONTENTS:

- 2 MINIMUM ROOF PITCH
- 3 snow guards – installation diagram FX.12 1
- 4 snow guards – installation diagram FX.12 2
- 5 snow guards – installation diagram FX.12 3
- 6 single-skin roof construction
- 7 double-skin roof construction
- 8 ridge construction — ridge vent
- 9 ridge construction — hip cap
- 10 mono-pitched roof construction
- 11 eaves construction with gutter
- 12 eaves construction with box gutter
- 13 eaves construction with upright gutter bracket
- 14 eaves construction with upright gutter bracket (variant 1)
- 15 eaves construction with upright gutter bracket (variant 2)
- 16 eaves construction with on-roof gutter
- 17 roof verge construction with verge flashing
- 18 roof verge construction with recess
- 19 roof verge construction with bargeboard
- 20 wall flashing
- 21 roof parapet flashing
- 22 lateral wall connection
- 23 valley construction with safety valley
- 24 valley construction with simple valley
- 25 valley construction with recessed valley
- 26 valley construction with recessed valley
- 27 frog-mouth vent cover
- 28 roof anchor hook
- 29 Roof window flashing on a roof pitch over 25°.
- 30 Roof window flashing with an insert wedge on a roof pitch over 25°.
- 31 Roof window flashing with wedge frames under 15°
- 32 Roof window flashing with wedge frames under 15°
- 33 mansard crease
- 34 construction of pitch transition
- 35 Vario (or Fix) solar bracket
- 36 pipe-style snow guard system
- 37 pipe-style snow guard system XL
- 38 mountain snow-guard bracket
- 39 roof anchor hook according on mounts
- 40 safety tread
- 41 walkway support



STARK WIE EIN STIER

MINIMUM ROOF PITCH

CAD DETAILS

MINIMUM ROOF PITCH	3°	5°	7°	12°	14°	16°	17°	22°	≥ 25°
Prefalz	<ul style="list-style-type: none"> Observe the national guidelines (roof underlay, no valleys or penetrations, etc.). Sealant in longitudinal seams. 								
* ROOF TILE				rafter length: up to 7 m					
				rafter length: 7–12 m					
				rafter length: > 12 m					
* R.16 ROOF TILE							up to 25°: to be installed on a separating layer		
* SHINGLE									
* RHOMBOID ROOF TILE 29 × 29									
* RHOMBOID ROOF TILE 44 × 44				rafter length: up to 7 m					
				rafter length: 7–12 m					
				rafter length: > 12 m					
* FX.12 ROOF PANEL							up to 25°: to be installed on a separating layer		

* In general, we recommend using suitable bitumen separating layers.

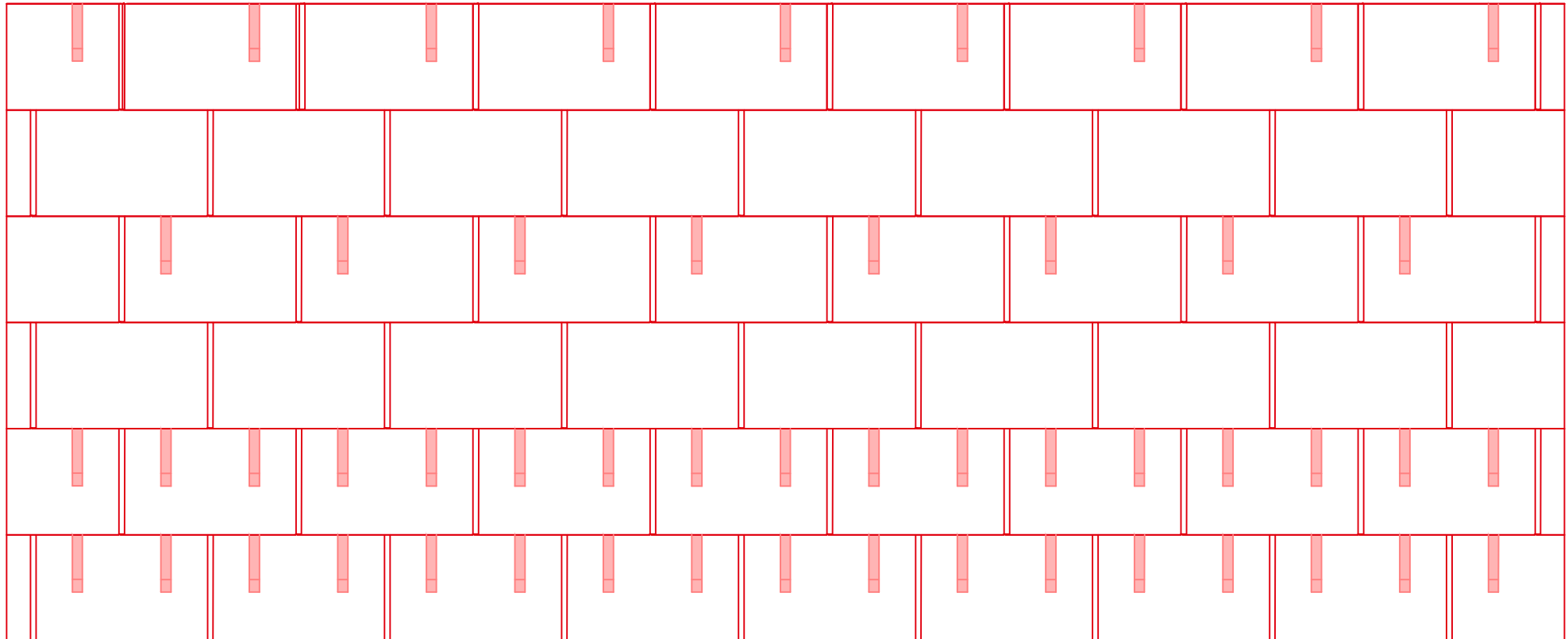
* In the case of snow loads greater than 3.25 kN/m² or in terrain categories 0, I or II, installation on fully boarded substrate with a separation layer is required.



STARK WIE EIN STIER

snow guards – installation diagram FX.12 1 FX.12 ROOF PANEL

CAD DETAILS



Installation diagram FX.12 1 (1,7 per m² — must be installed along the first two rows)

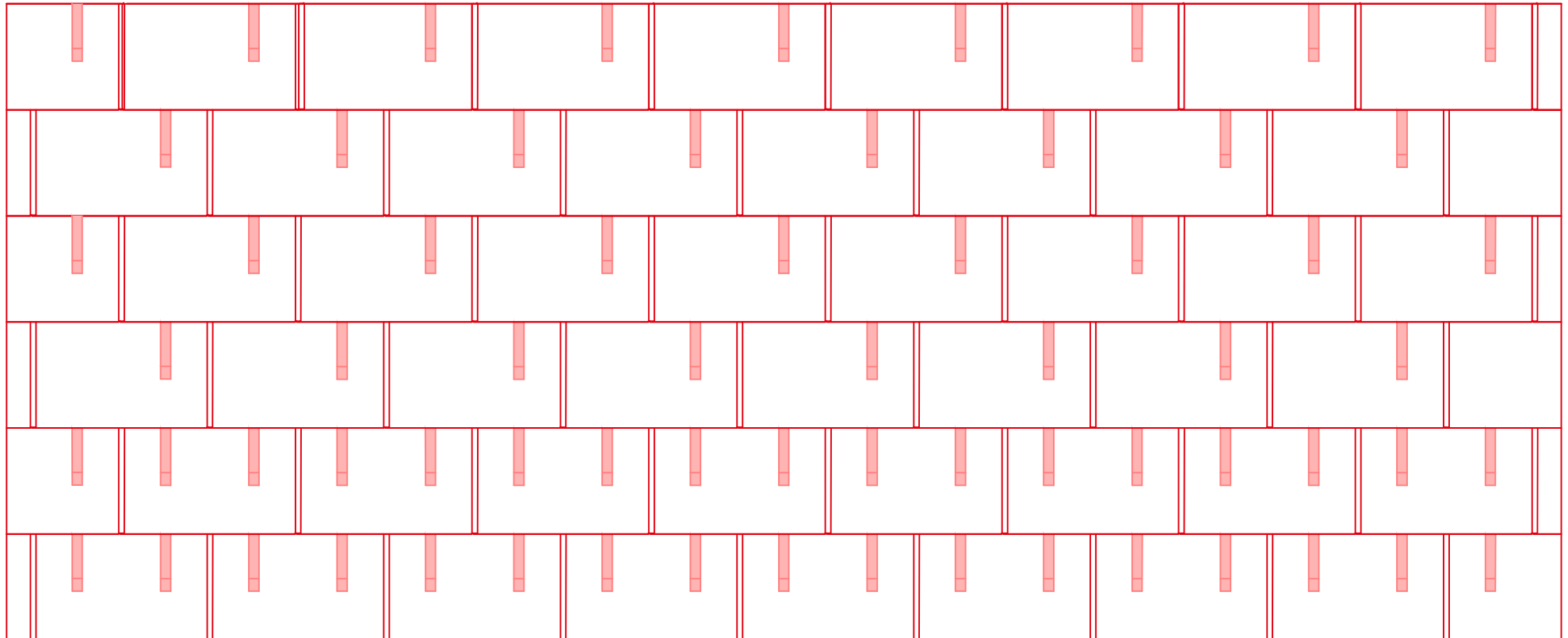
Basic principle: ÖNORM B 1991-1-3 and EN 1991-1-3



STARK WIE EIN STIER

snow guards – installation diagram FX.12 2 FX.12 ROOF PANEL

CAD DETAILS



installation diagram FX.12 2 (3,4 pc. per m²; must be installed along the first two rows)

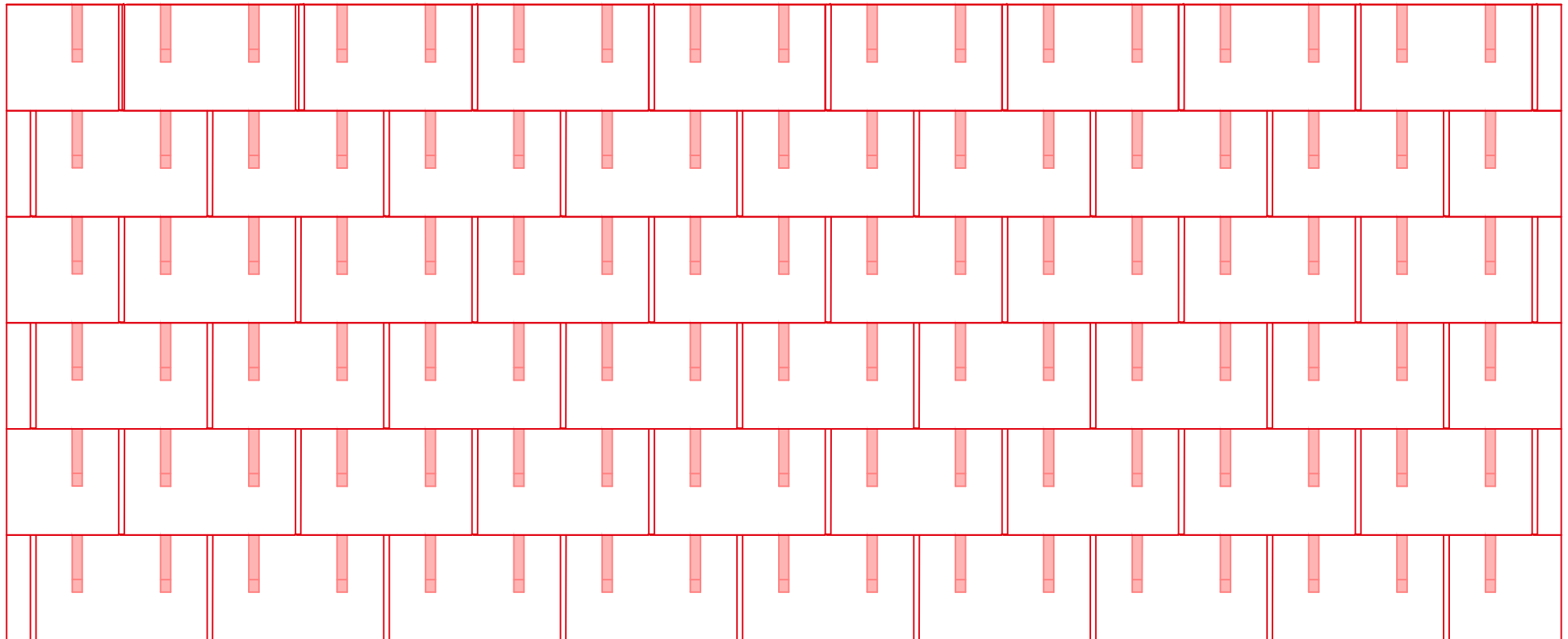
Basic principle: ÖNORM B 1991-1-3 and EN 1991-1-3



STARK WIE EIN STIER

snow guards – installation diagram FX.12 3 FX.12 ROOF PANEL

CAD DETAILS



installation diagram FX.12 3 (6,8 pc. per m²)

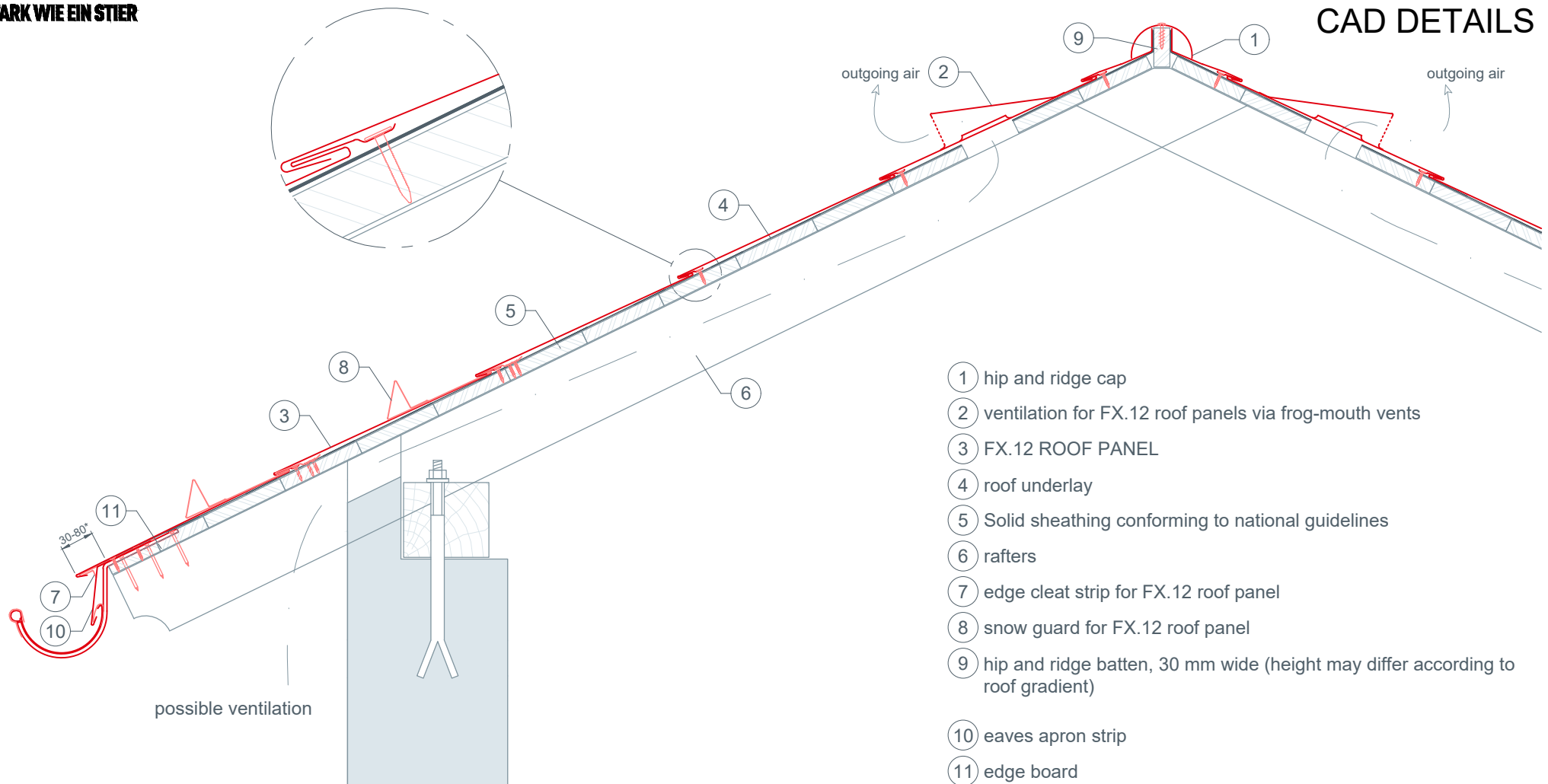
Basic principle: ÖNORM B 1991-1-3 and EN 1991-1-3



STARK WIE EIN STIER

single-skin roof construction FX.12 ROOF PANEL

CAD DETAILS



- ① hip and ridge cap
- ② ventilation for FX.12 roof panels via frog-mouth vents
- ③ FX.12 ROOF PANEL
- ④ roof underlay
- ⑤ Solid sheathing conforming to national guidelines
- ⑥ rafters
- ⑦ edge cleat strip for FX.12 roof panel
- ⑧ snow guard for FX.12 roof panel
- ⑨ hip and ridge batten, 30 mm wide (height may differ according to roof gradient)
- ⑩ eaves apron strip
- ⑪ edge board

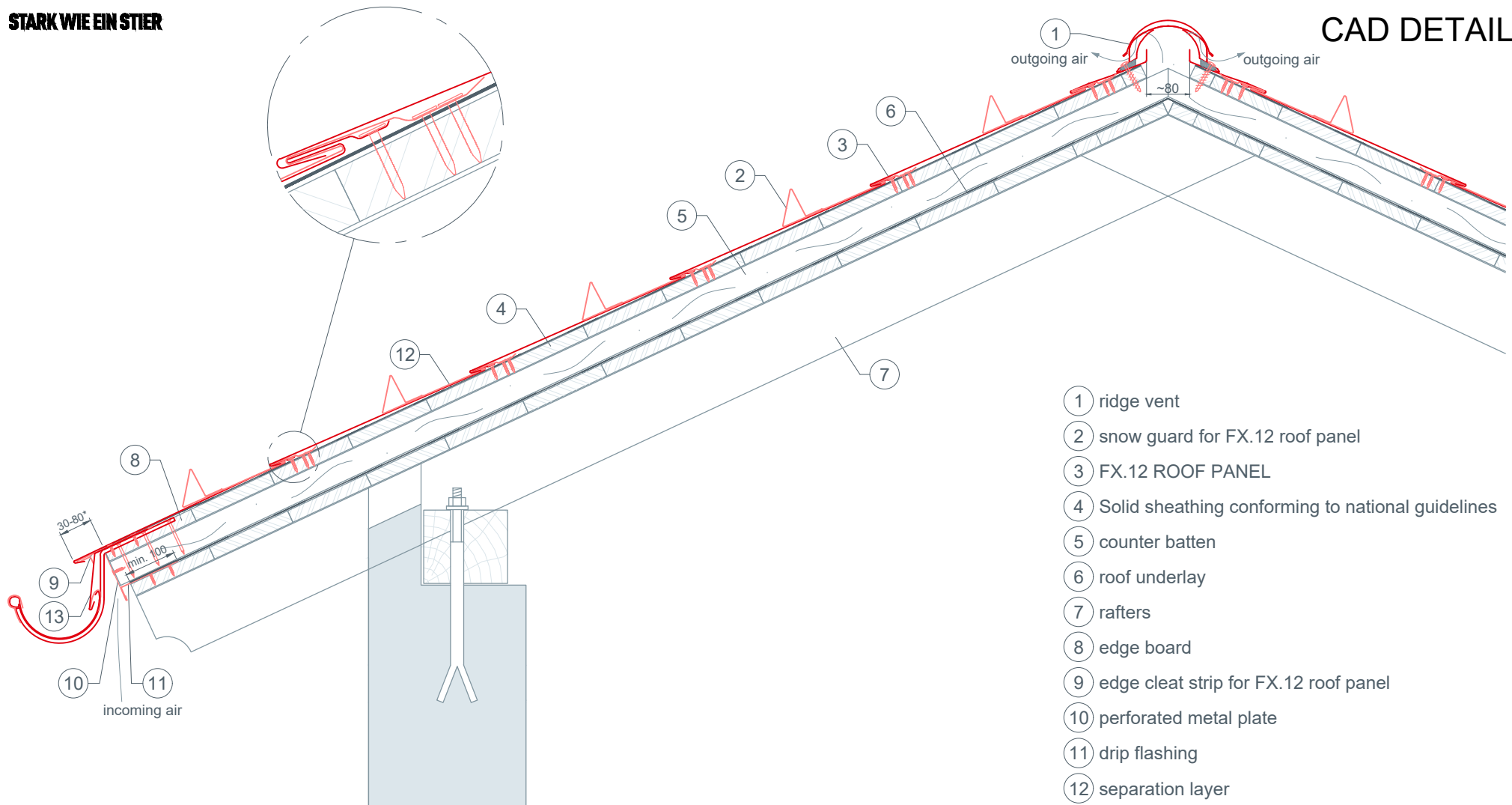
* The eaves projection must not exceed 80 mm.



STARK WIE EIN STIER

double-skin roof construction FX.12 ROOF PANEL

CAD DETAILS



- ① ridge vent
- ② snow guard for FX.12 roof panel
- ③ FX.12 ROOF PANEL
- ④ Solid sheathing conforming to national guidelines
- ⑤ counter batten
- ⑥ roof underlay
- ⑦ rafters
- ⑧ edge board
- ⑨ edge cleat strip for FX.12 roof panel
- ⑩ perforated metal plate
- ⑪ drip flashing
- ⑫ separation layer
- ⑬ eaves apron strip

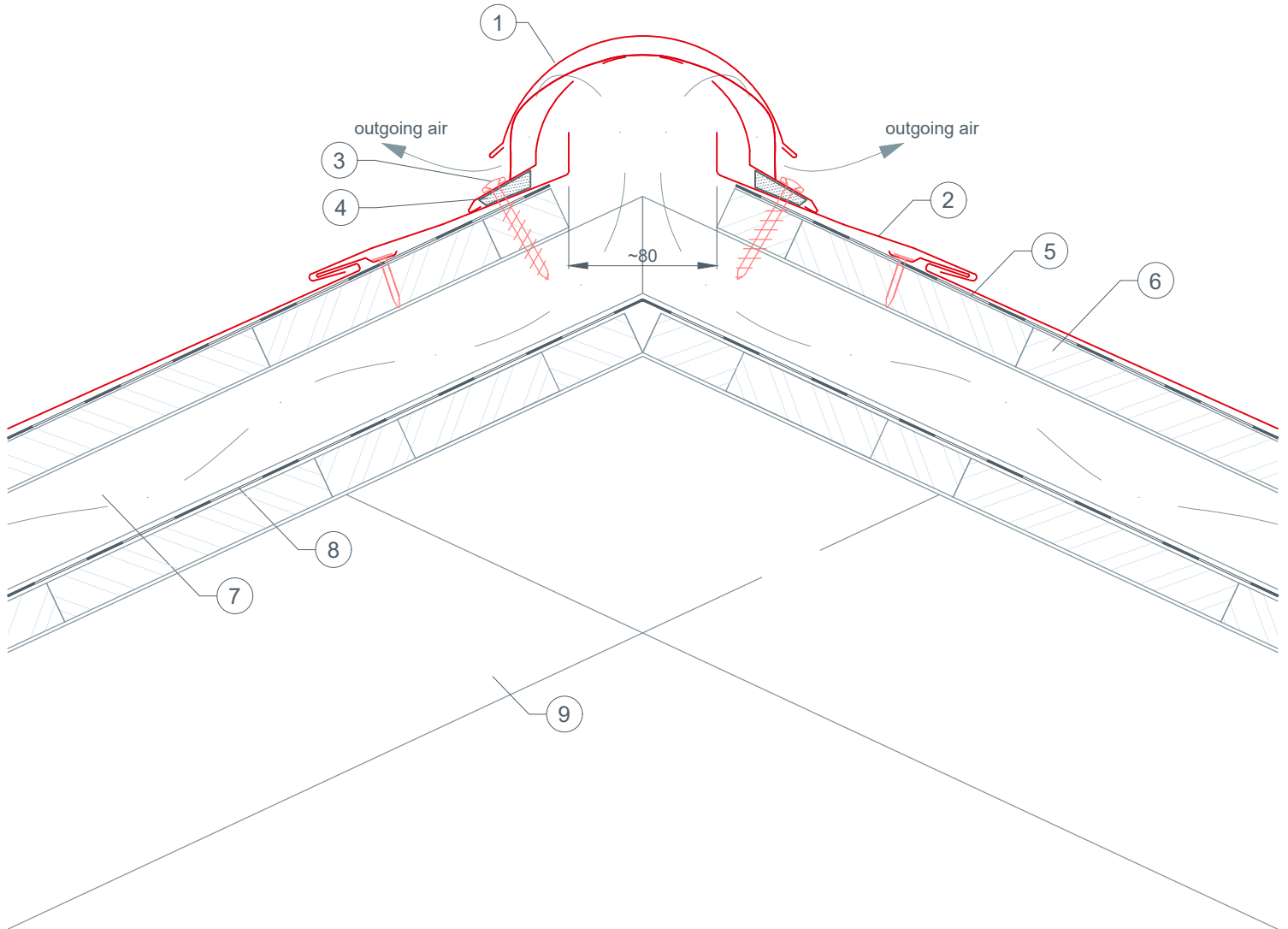
* The eaves projection must not exceed 80 mm.



STARK WIE EIN STIER

ridge construction — ridge vent FX.12 ROOF PANEL

CAD DETAILS



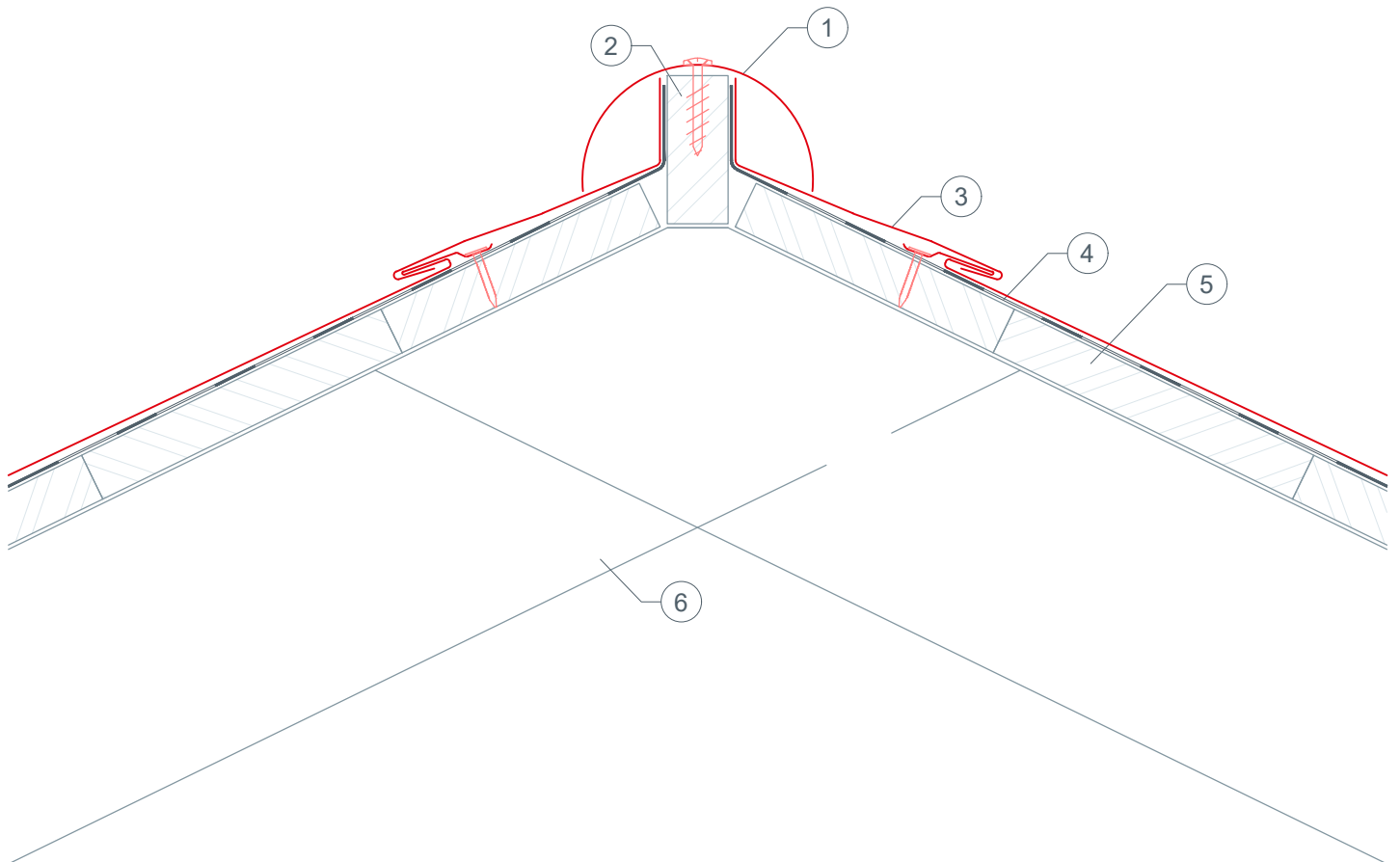
- ① ridge vent
- ② FX.12 ROOF PANEL
- ③ sealing screw
- ④ self-adhesive foam wedge
- ⑤ separation layer
- ⑥ Solid sheathing conforming to national guidelines
- ⑦ counter battens (ventilated channel)
- ⑧ roof underlay
- ⑨ rafters



STARK WIE EIN STIER

ridge construction — hip cap FX.12 ROOF PANEL

CAD DETAILS



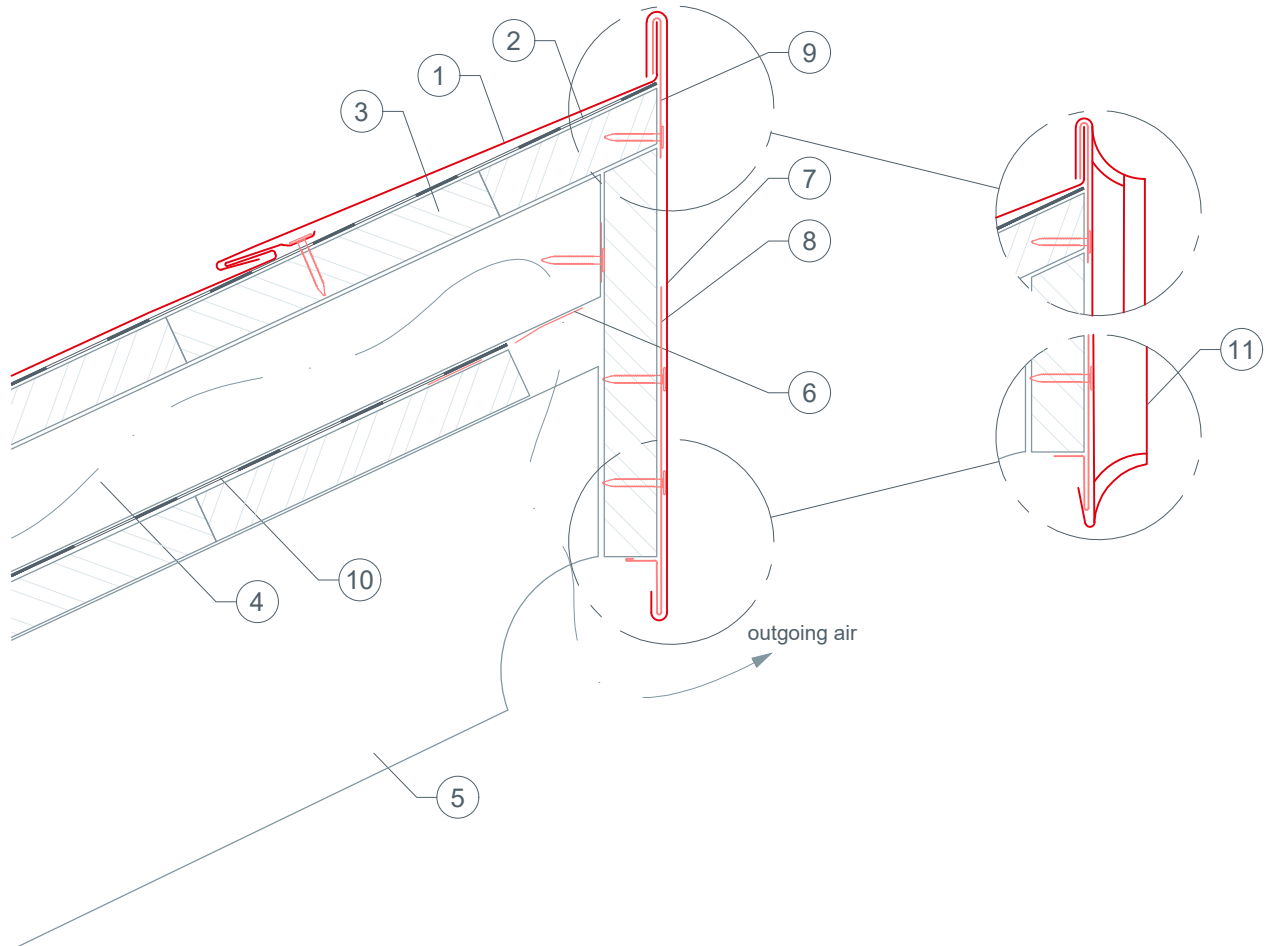
- ① hip and ridge cap
- ② hip and ridge batten, 30 mm wide (height may differ according to roof gradient)
- ③ FX.12 ROOF PANEL
- ④ separation layer
- ⑤ Solid sheathing conforming to national guidelines
- ⑥ rafters



STARK WIE EIN STIER

mono-pitched roof construction FX.12 ROOF PANEL

CAD DETAILS



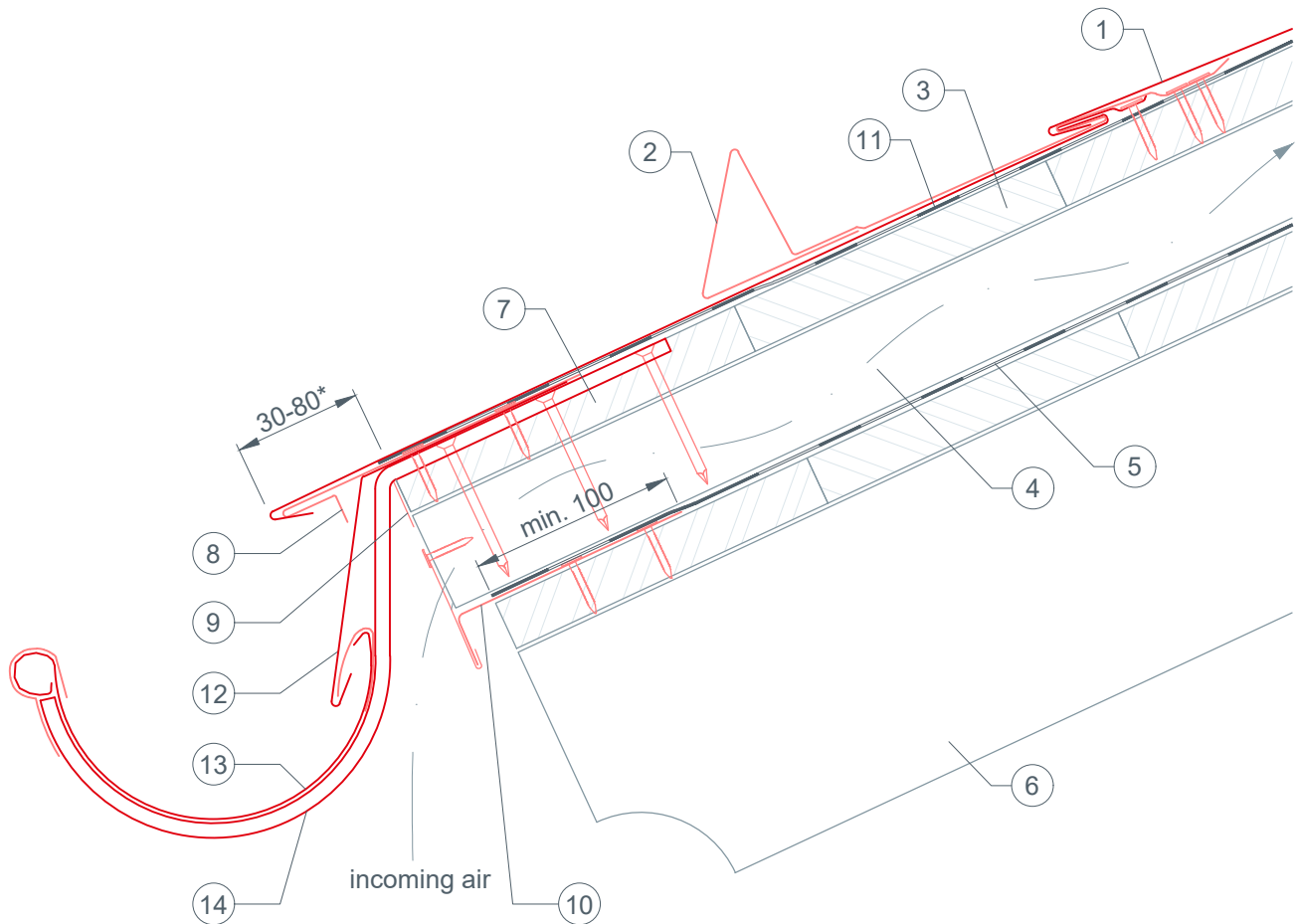
- ① FX.12 ROOF PANEL
- ② separation layer
- ③ Solid sheathing conforming to national guidelines
- ④ counter battens (8/5 cm)
- ⑤ rafter
- ⑥ perforated metal plate
- ⑦ end of mono-pitched roof
- ⑧ edge cleat strip
- ⑨ fixing strip
- ⑩ roof underlay
- ⑪ mono-pitched-roof end (variant)



STARK WIE EIN STIER

eaves construction with gutter FX.12 ROOF PANEL

CAD DETAILS



- ① FX.12 ROOF PANEL
- ② snow guard for FX.12 roof panel
- ③ Solid sheathing conforming to national guidelines
- ④ counter batten
- ⑤ roof underlay
- ⑥ rafters
- ⑦ edge board
- ⑧ edge cleat strip for FX.12 roof panel
- ⑨ perforated metal plate
- ⑩ underlayment eaves apron strip
- ⑪ separation layer
- ⑫ eaves apron strip
- ⑬ gutter
- ⑭ gutter bracket

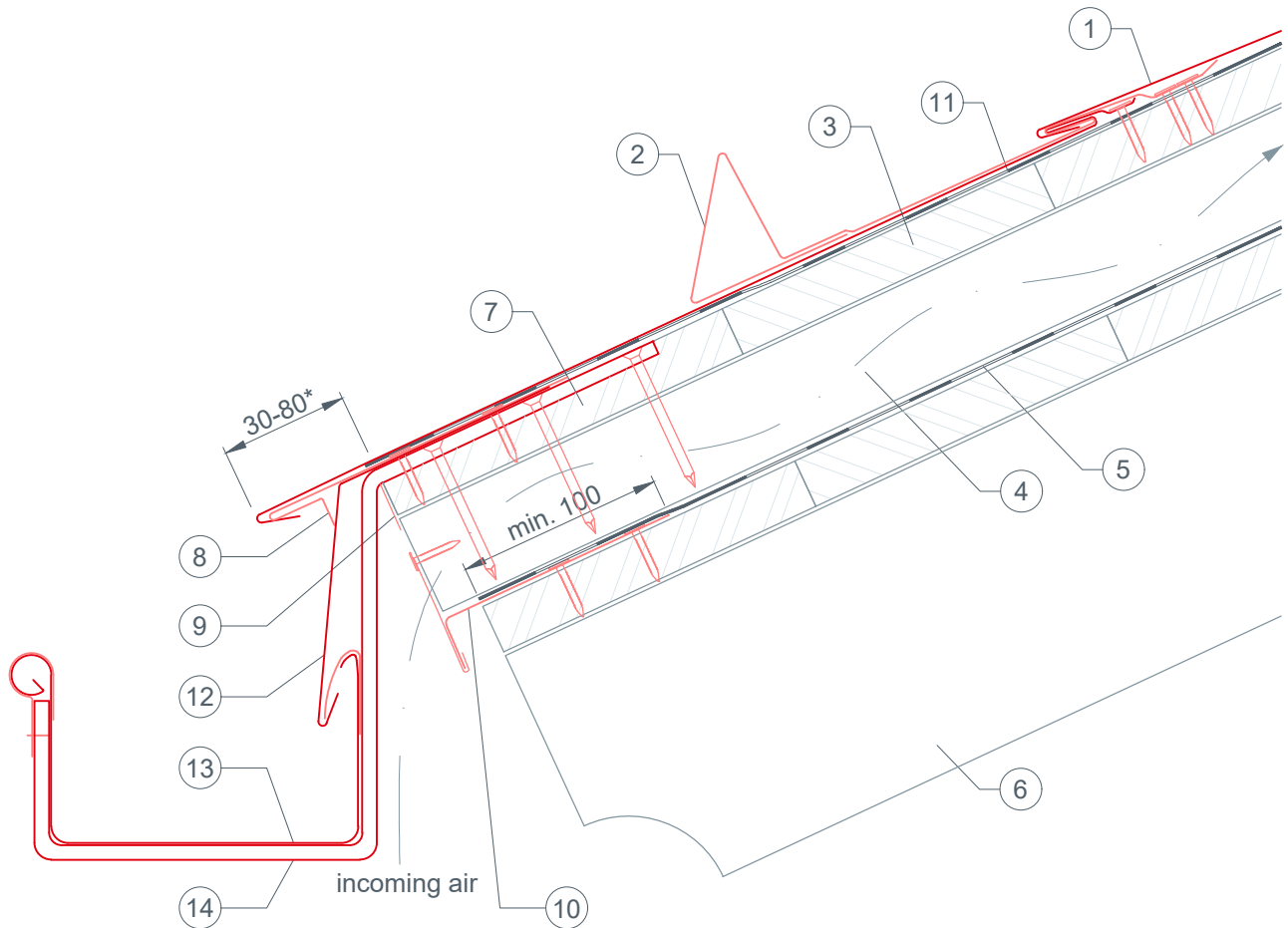
* The eaves projection must not exceed 80 mm.



STARK WIE EIN STIER

eaves construction with box gutter FX.12 ROOF PANEL

CAD DETAILS



- ① FX.12 ROOF PANEL
- ② snow guard for FX.12 roof panel
- ③ Solid sheathing conforming to national guidelines
- ④ counter batten
- ⑤ roof underlay
- ⑥ rafters
- ⑦ edge board
- ⑧ edge cleat strip for FX.12 roof panel
- ⑨ perforated metal plate
- ⑩ underlayment eaves apron strip
- ⑪ separation layer
- ⑫ eaves apron strip
- ⑬ aluminium box gutter
- ⑭ gutter bracket

* The eaves projection must not exceed 80 mm.

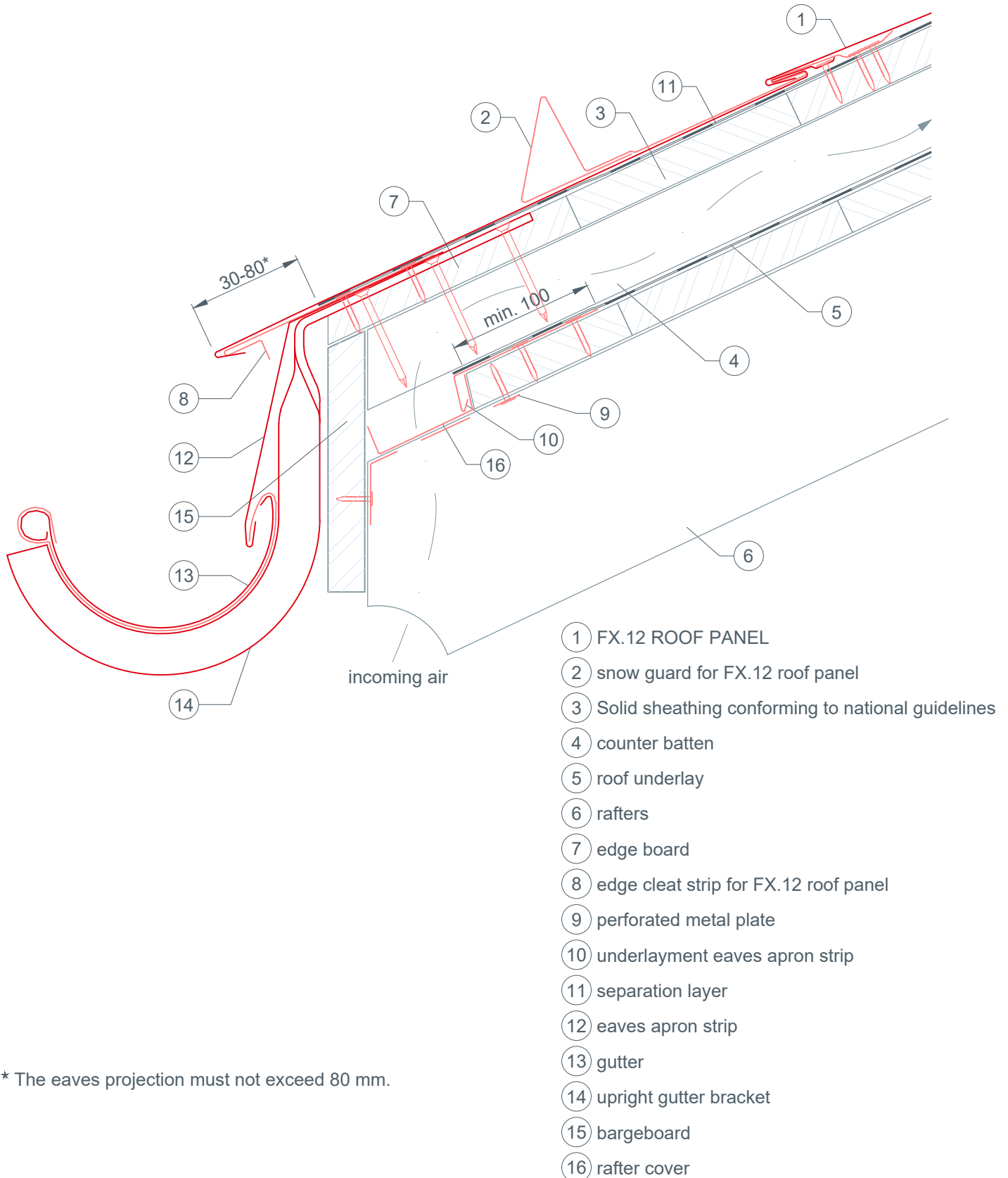


STARK WIE EIN STIER

eaves construction with upright gutter bracket

FX.12 ROOF PANEL

CAD DETAILS

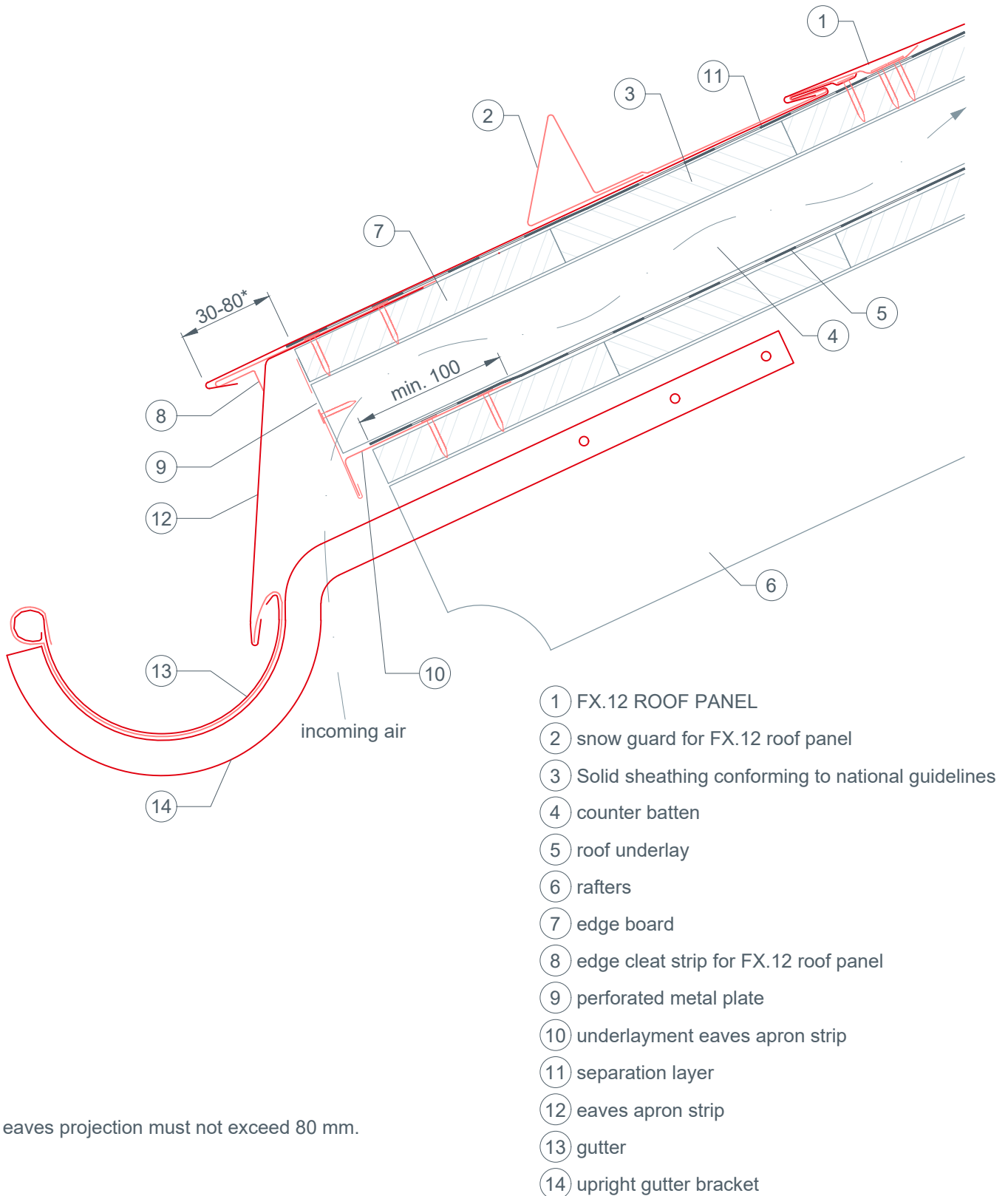




STARK WIE EIN STIER

eaves construction with upright gutter bracket (variant 1) FX.12 ROOF PANEL

CAD DETAILS



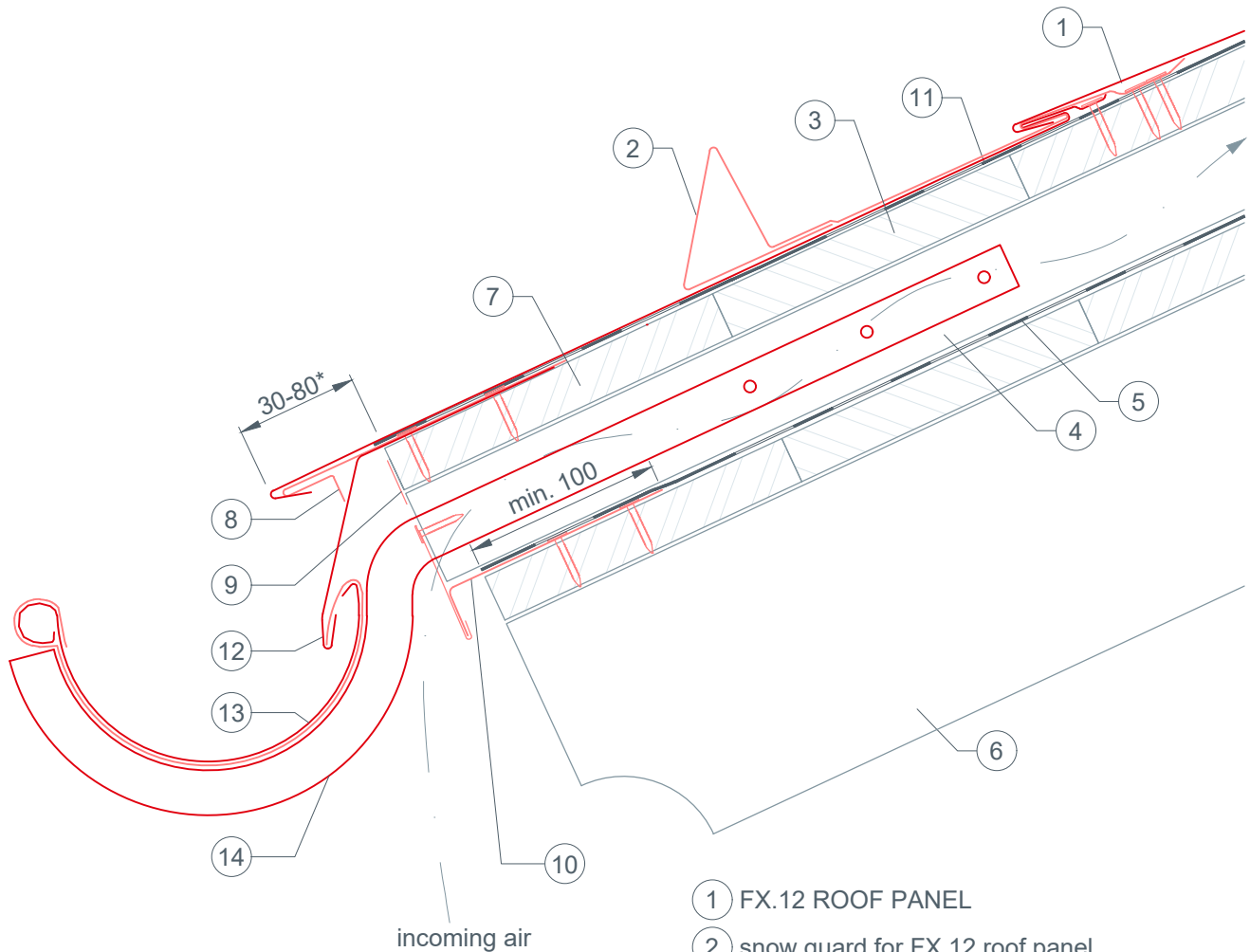
* The eaves projection must not exceed 80 mm.



STARK WIE EIN STIER

eaves construction with upright gutter bracket (variant 2) FX.12 ROOF PANEL

CAD DETAILS



- ① FX.12 ROOF PANEL
- ② snow guard for FX.12 roof panel
- ③ Solid sheathing conforming to national guidelines
- ④ counter batten
- ⑤ roof underlay
- ⑥ rafters
- ⑦ edge board
- ⑧ edge cleat strip for FX.12 roof panel
- ⑨ perforated metal plate
- ⑩ underlayment eaves apron strip
- ⑪ separation layer
- ⑫ eaves apron strip
- ⑬ gutter
- ⑭ upright gutter bracket

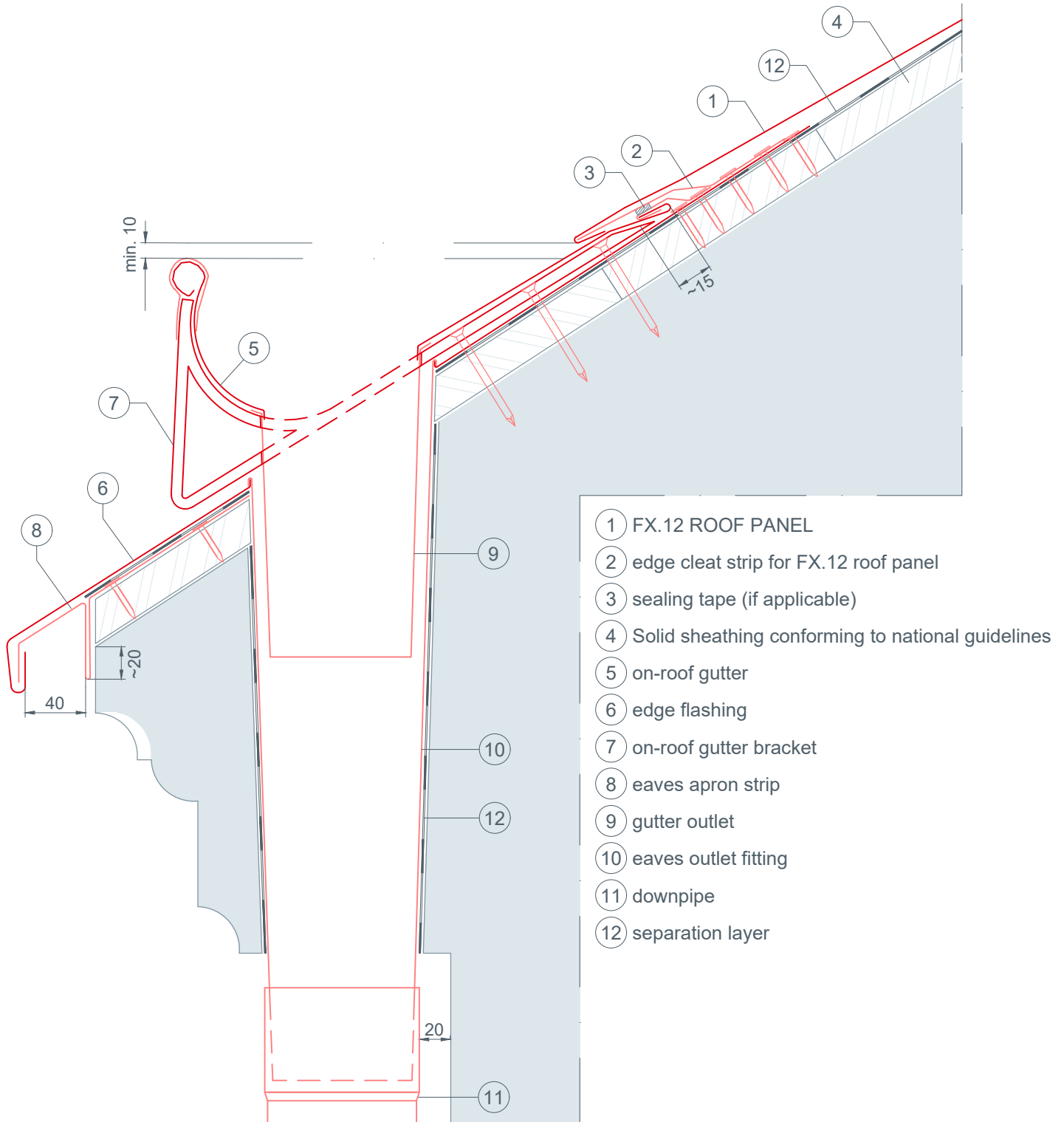
* The eaves projection must not exceed 80 mm.



STARK WIE EIN STIER

eaves construction with on-roof gutter FX.12 ROOF PANEL

CAD DETAILS

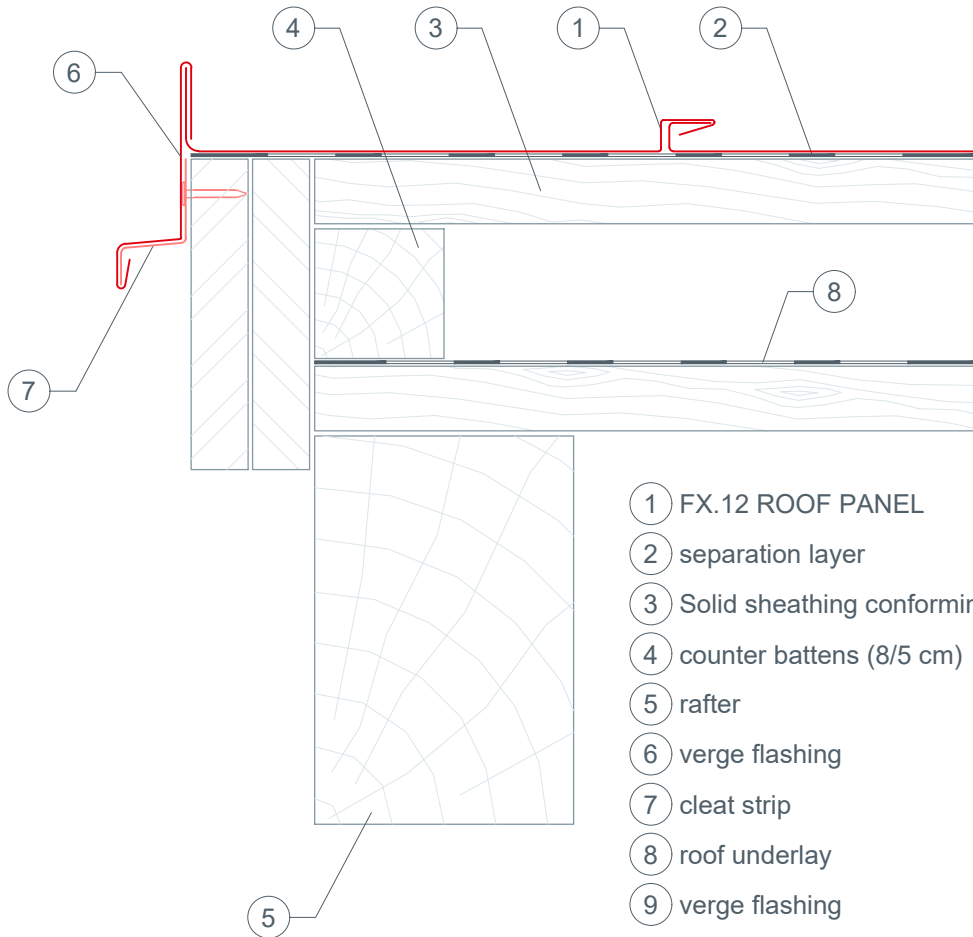




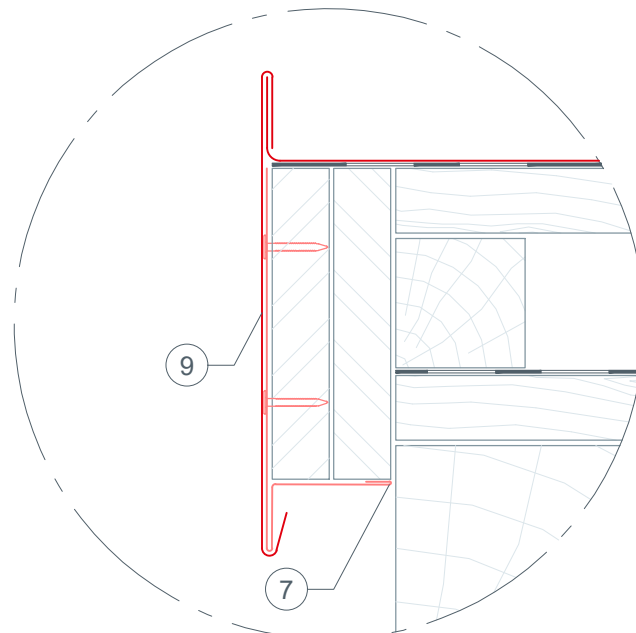
STARK WIE EIN STIER

roof verge construction with verge flashing FX.12 ROOF PANEL

CAD DETAILS



connection variant

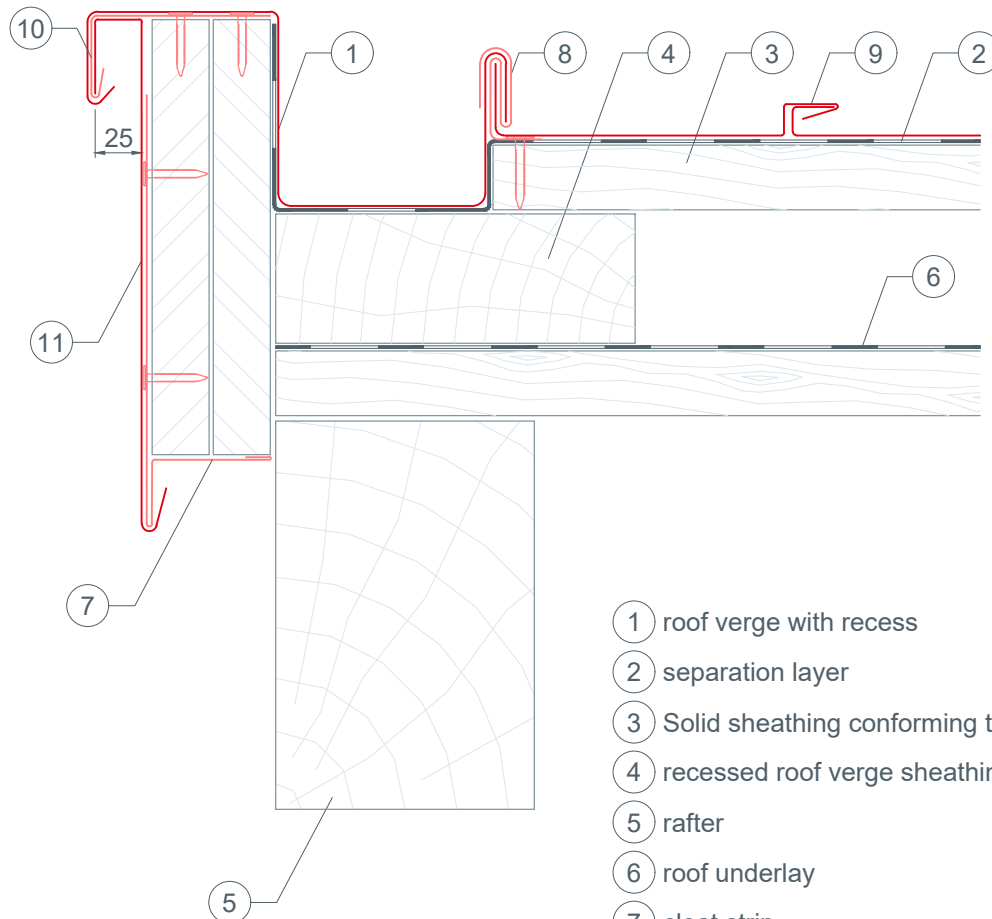




STARK WIE EIN STIER

roof verge construction with recess FX.12 ROOF PANEL

CAD DETAILS



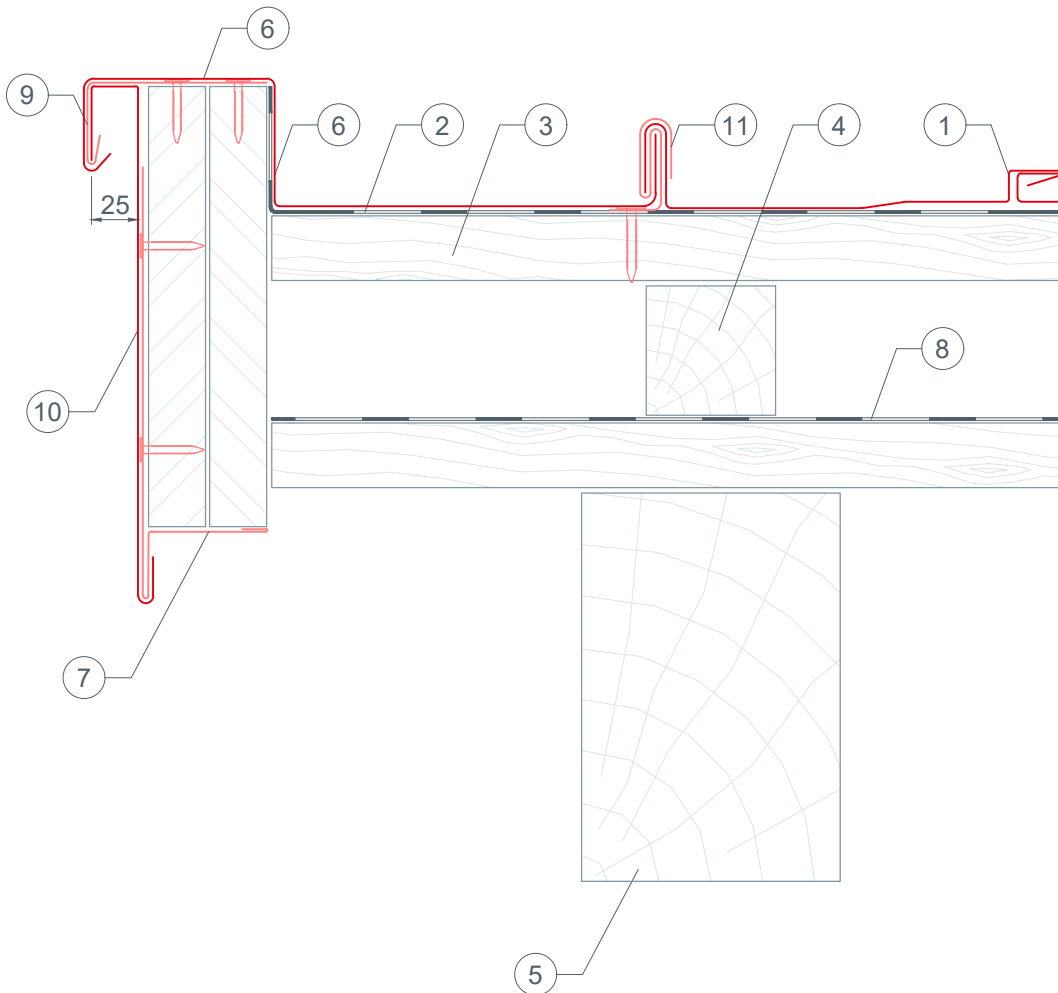
- ① roof verge with recess
- ② separation layer
- ③ Solid sheathing conforming to national guidelines
- ④ recessed roof verge sheathing
- ⑤ rafter
- ⑥ roof underlay
- ⑦ cleat strip
- ⑧ double-lock clip
- ⑨ FX.12 ROOF PANEL
- ⑩ cleat strip
- ⑪ verge flashing



STARK WIE EIN STIER

roof verge construction with bargeboard FX.12 ROOF PANEL

CAD DETAILS



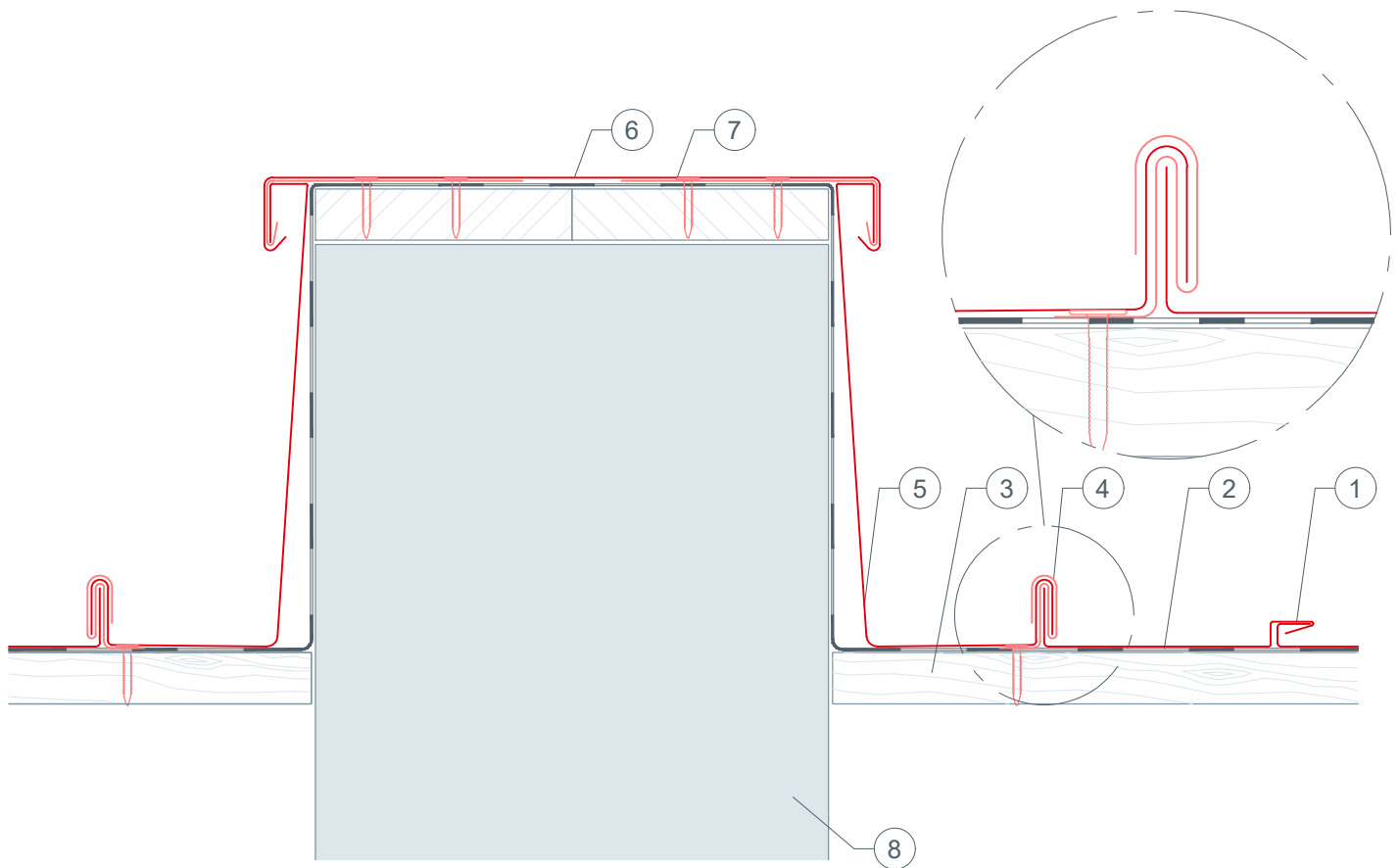
- ① FX.12 ROOF PANEL
- ② separation layer
- ③ Solid sheathing conforming to national guidelines
- ④ counter battens (8/5 cm)
- ⑤ rafter
- ⑥ verge flashing
- ⑦ cleat strip
- ⑧ roof underlay
- ⑨ cleat strip
- ⑩ verge flashing
- ⑪ double-lock clip



STARK WIE EIN STIER

wall flashing FX.12 ROOF PANEL

CAD DETAILS



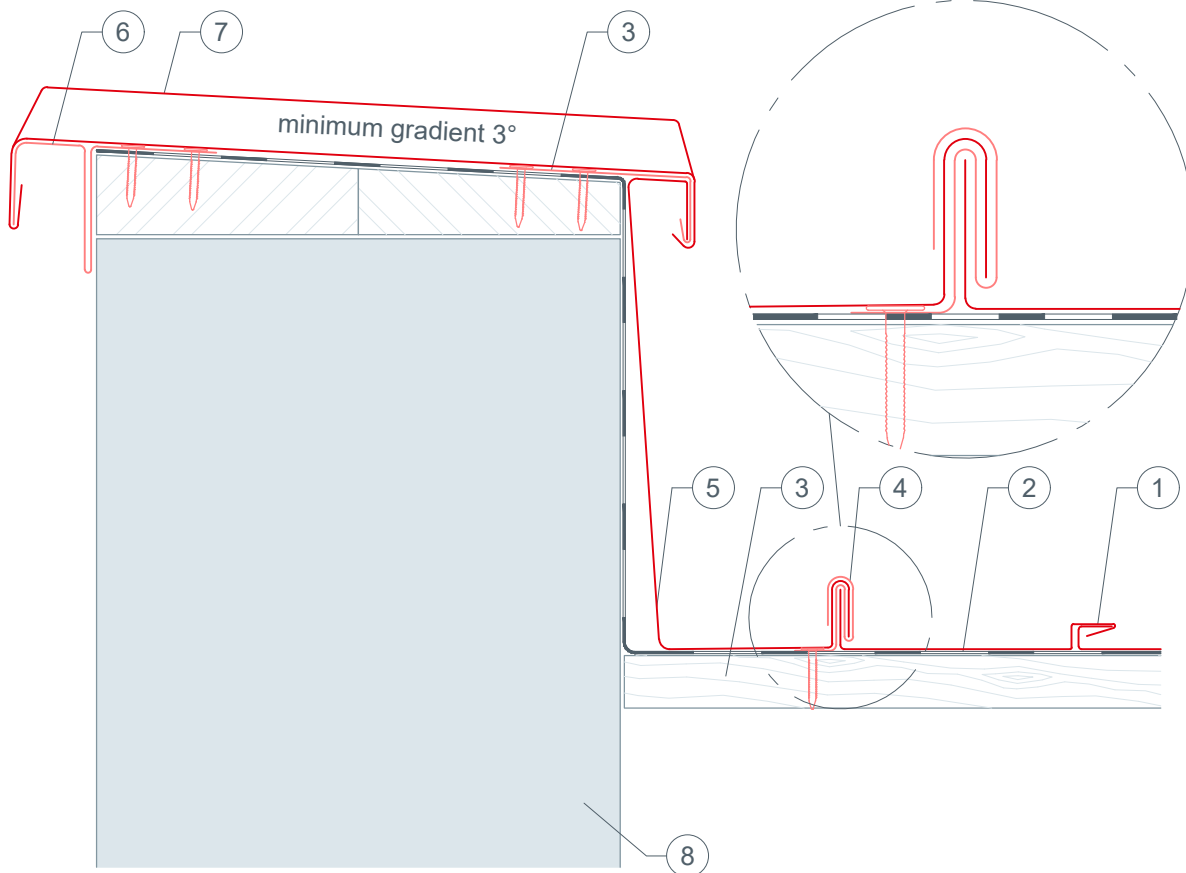
- ① FX.12 ROOF PANEL
- ② separation layer
- ③ Solid sheathing conforming to national guidelines
- ④ double-lock clip
- ⑤ wall connection plate
- ⑥ wall flashing
- ⑦ cleat strip
- ⑧ wall



STARK WIE EIN STIER

roof parapet flashing FX.12 ROOF PANEL

CAD DETAILS



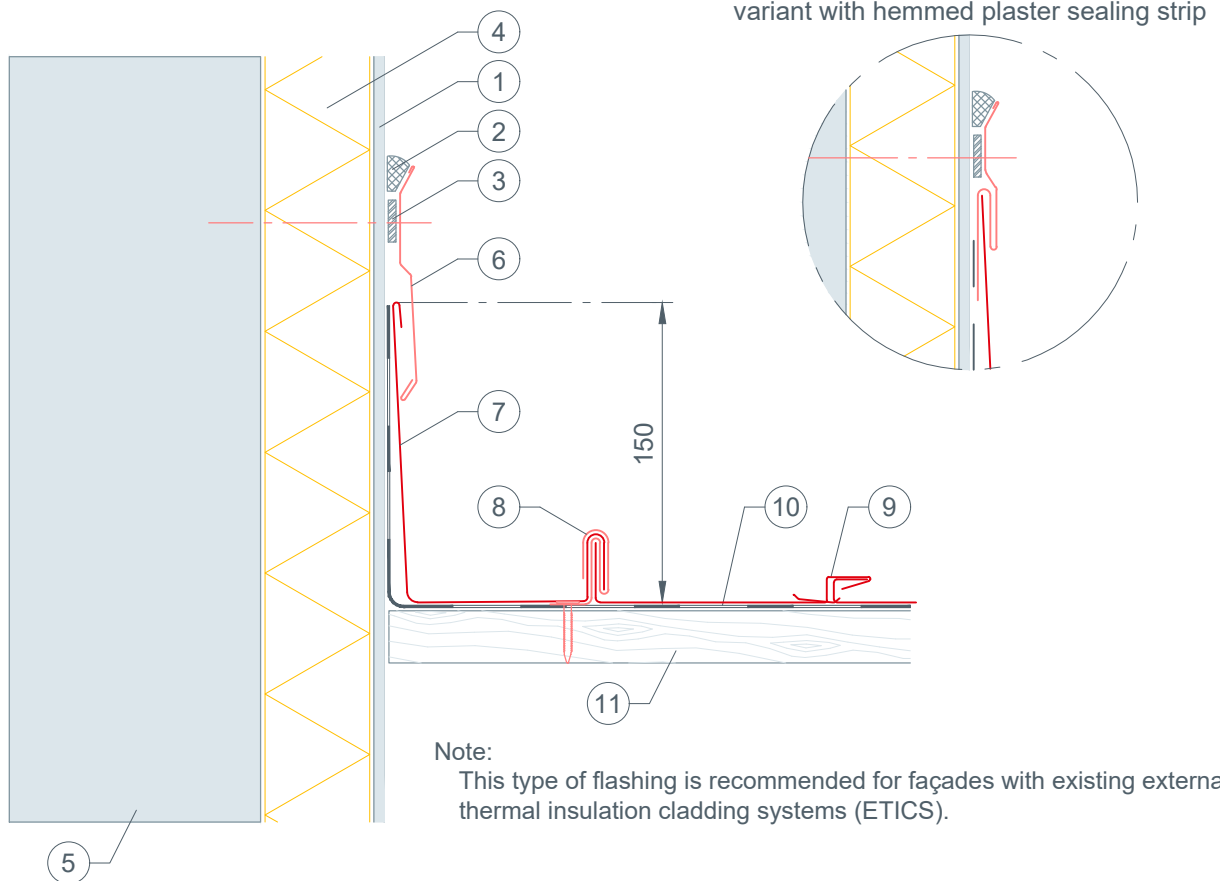
- ① FX.12 ROOF PANEL
- ② separation layer
- ③ Solid sheathing conforming to national guidelines
- ④ double-lock clip
- ⑤ wall connection plate
- ⑥ cleat strip
- ⑦ roof parapet flashing
- ⑧ wall



STARK WIE EIN STIER

lateral wall connection FX.12 ROOF PANEL

CAD DETAILS



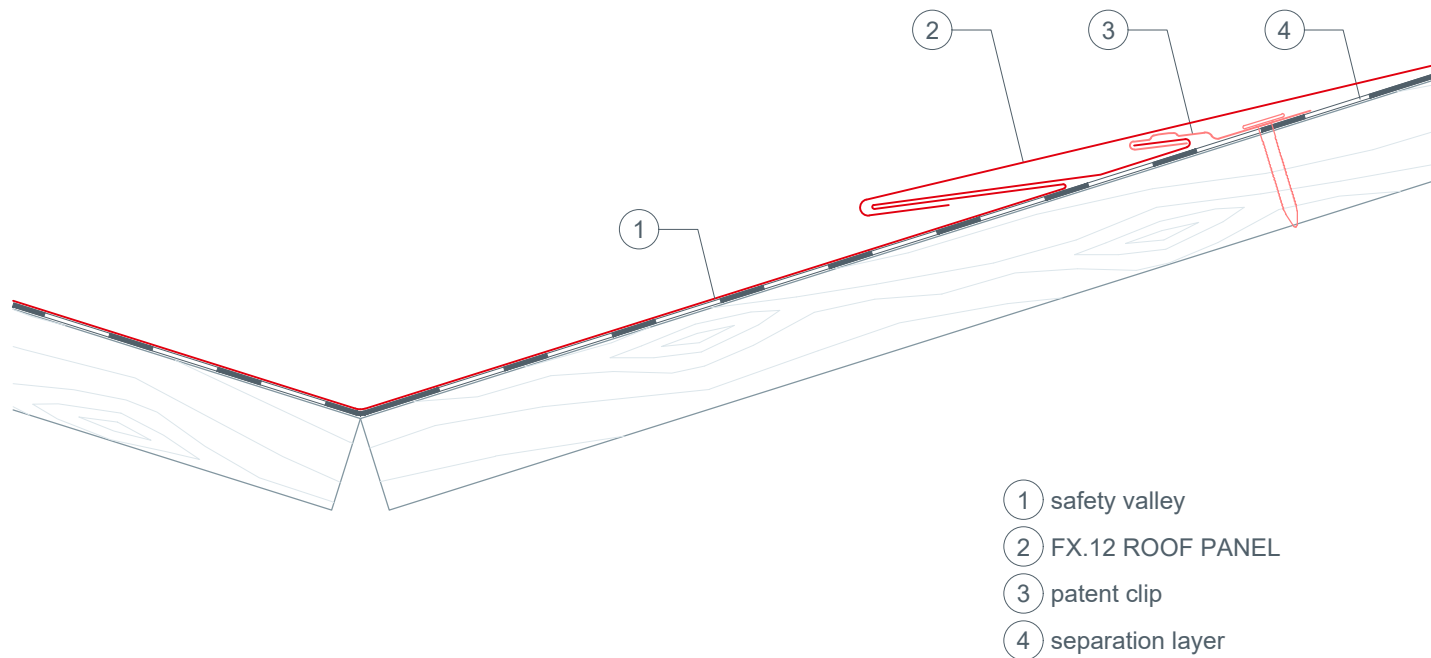
- ① plaster
- ② elastic sealant
- ③ sealing tape
- ④ full thermal insulation
- ⑤ wall
- ⑥ counter flashing (plaster sealing strip)
- ⑦ wall flashing (height: min. 150 mm)
- ⑧ double-lock clip
- ⑨ FX.12 ROOF PANEL
- ⑩ separation layer
- ⑪ Solid sheathing conforming to national guidelines



STARK WIE EIN STIER

valley construction with safety valley FX.12 ROOF PANEL

CAD DETAILS

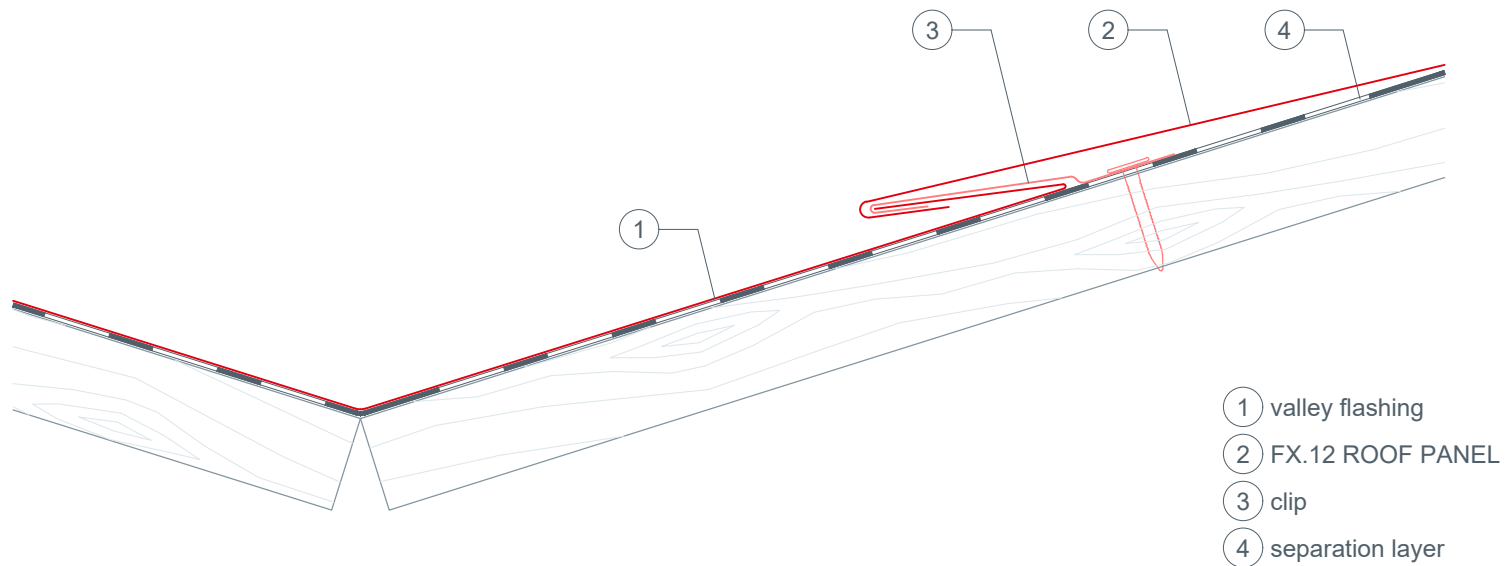




STARK WIE EIN STIER

valley construction with simple valley FX.12 ROOF PANEL

CAD DETAILS

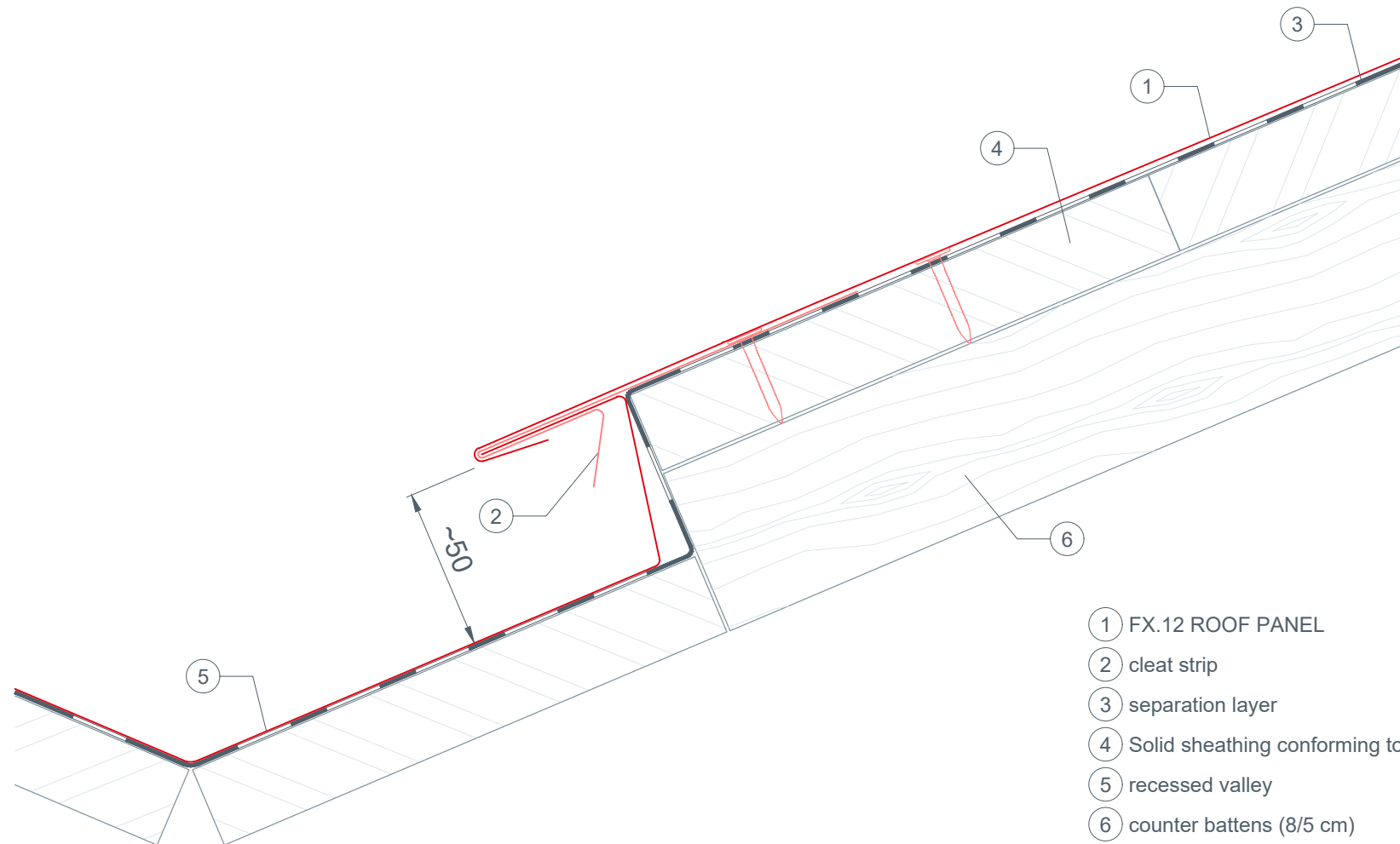




STARK WIE EIN STIER

valley construction with recessed valley FX.12 ROOF PANEL

CAD DETAILS

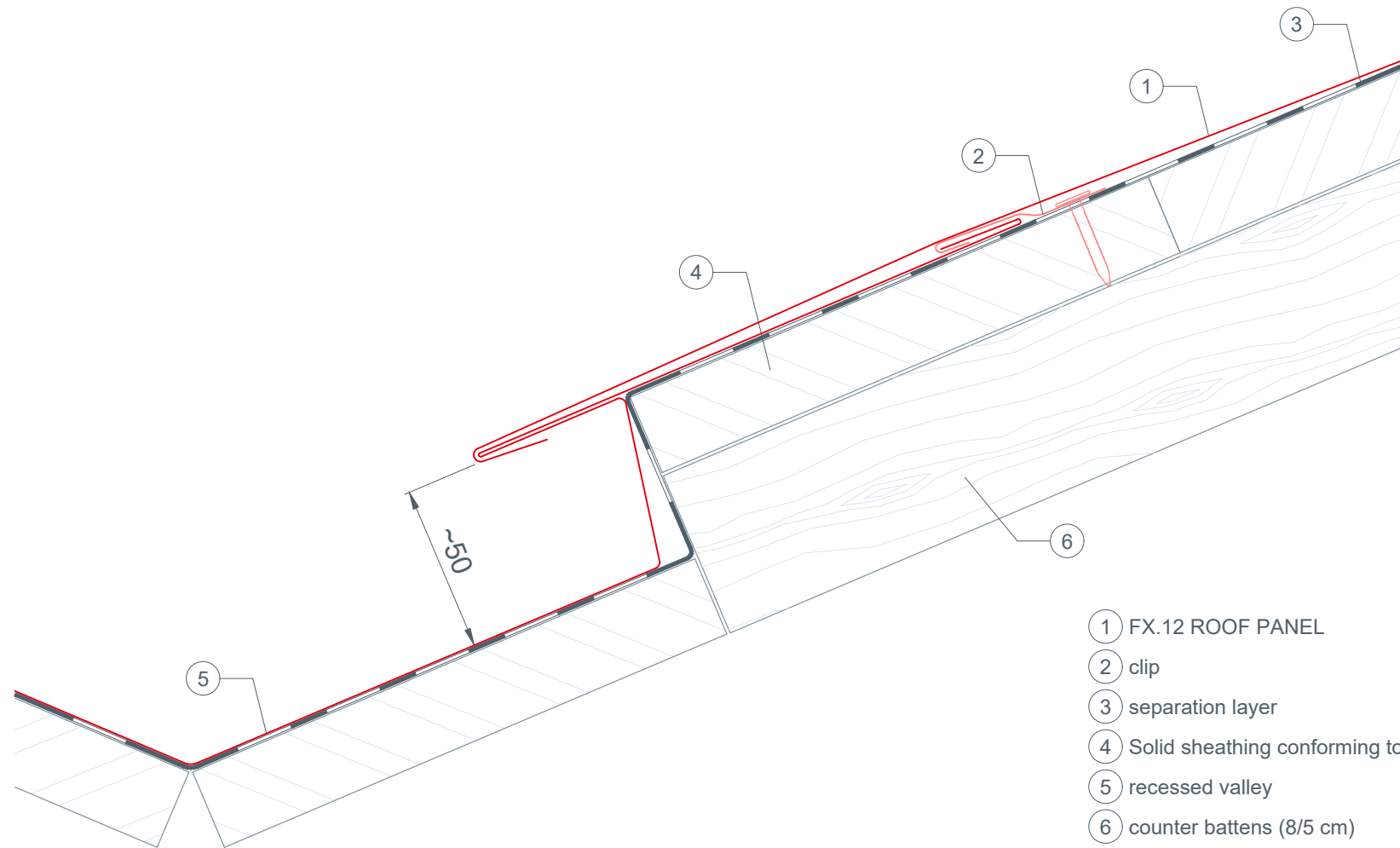




STARK WIE EIN STIER

valley construction with recessed valley FX.12 ROOF PANEL

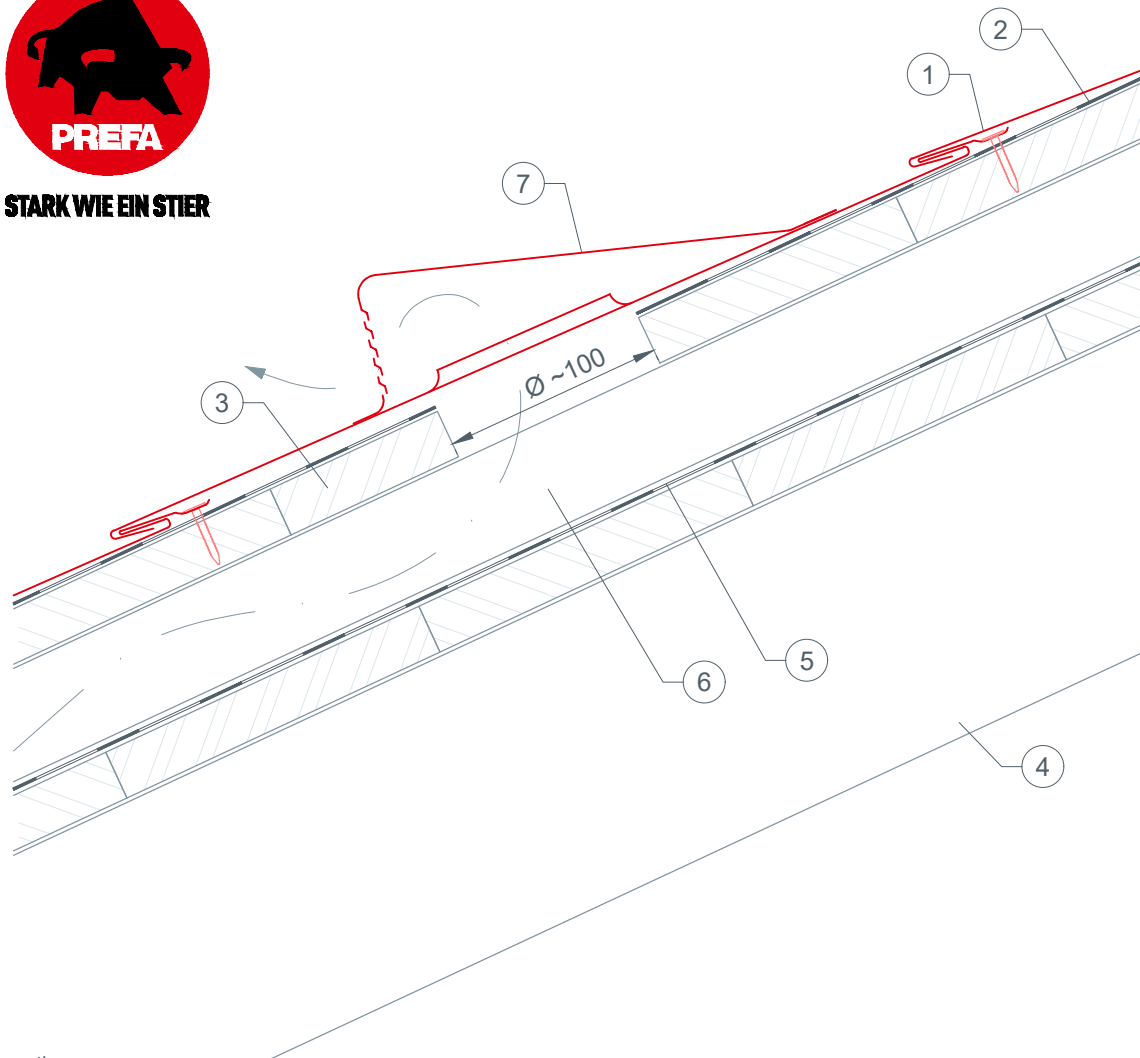
CAD DETAILS



- ① FX.12 ROOF PANEL
- ② clip
- ③ separation layer
- ④ Solid sheathing conforming to national guidelines
- ⑤ recessed valley
- ⑥ counter battens (8/5 cm)



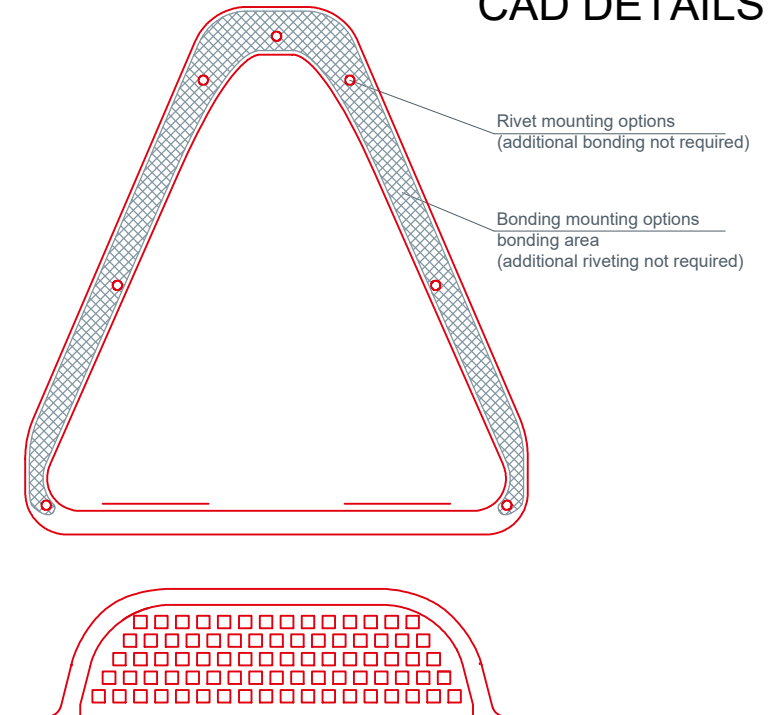
STARK WIE EIN STIER



Information:
air intake section of frog-mouth vents: approx. 30 cm²
The air intake section must be taken into account when cutting out the sheathing (diameter: approx. 10 cm).
The edges of the cut-outs on the roof covering must be surrounded by a raised curve with a height of 1 cm.

frog-mouth vent cover FX.12 ROOF PANEL

CAD DETAILS



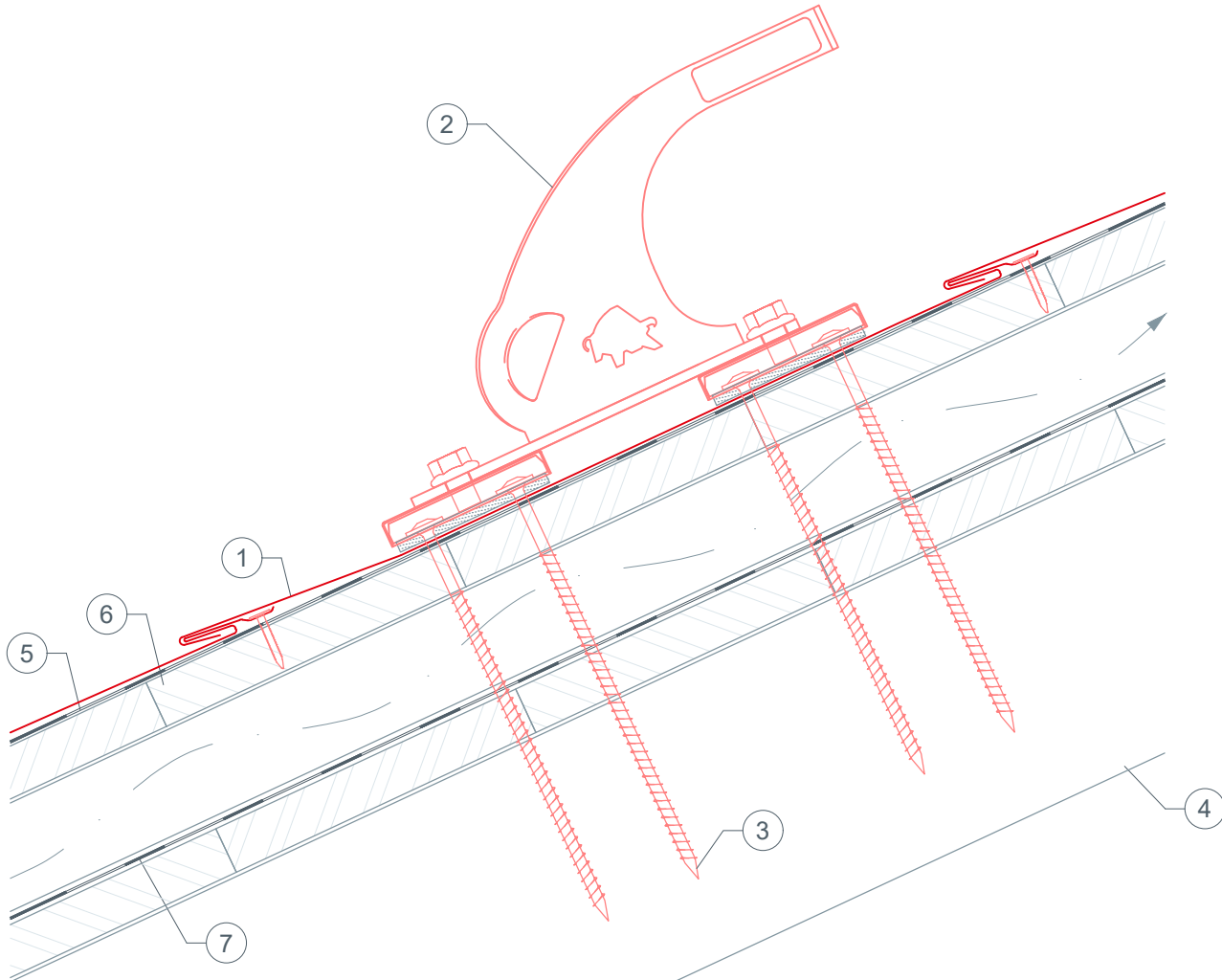
- ① FX.12 ROOF PANEL
- ② separation layer
- ③ Solid sheathing conforming to national guidelines
- ④ rafter
- ⑤ roof underlay
- ⑥ counter battens (8/5 cm)
- ⑦ frog-mouth vent cover



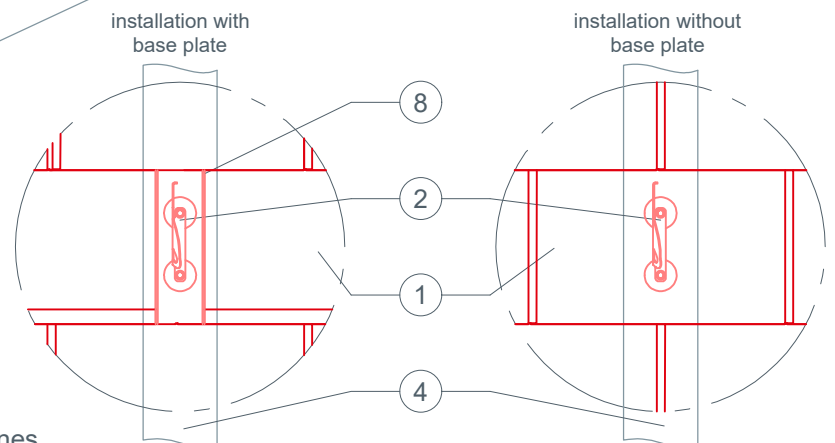
STARK WIE EIN STIER

roof anchor hook according on mounts FX.12 ROOF PANEL

CAD DETAILS



- ① FX.12 ROOF PANEL
- ② roof anchor hook
- ③ fasteners (timber construction screws)
- ④ rafter
- ⑤ separation layer
- ⑥ Solid sheathing conforming to national guidelines
- ⑦ roof underlay
- ⑧ base plate



With small-format roof elements, it may be necessary to install a base plate in order to mount the pipe-style snow guard system (e.g. if a seam is lying above a rafter in the installation area).

Double-skin roof structure: 2 fixing screws 8 × 220 mm.
Single-skin roof structure: 2 fixing screws 8 × 120 mm.



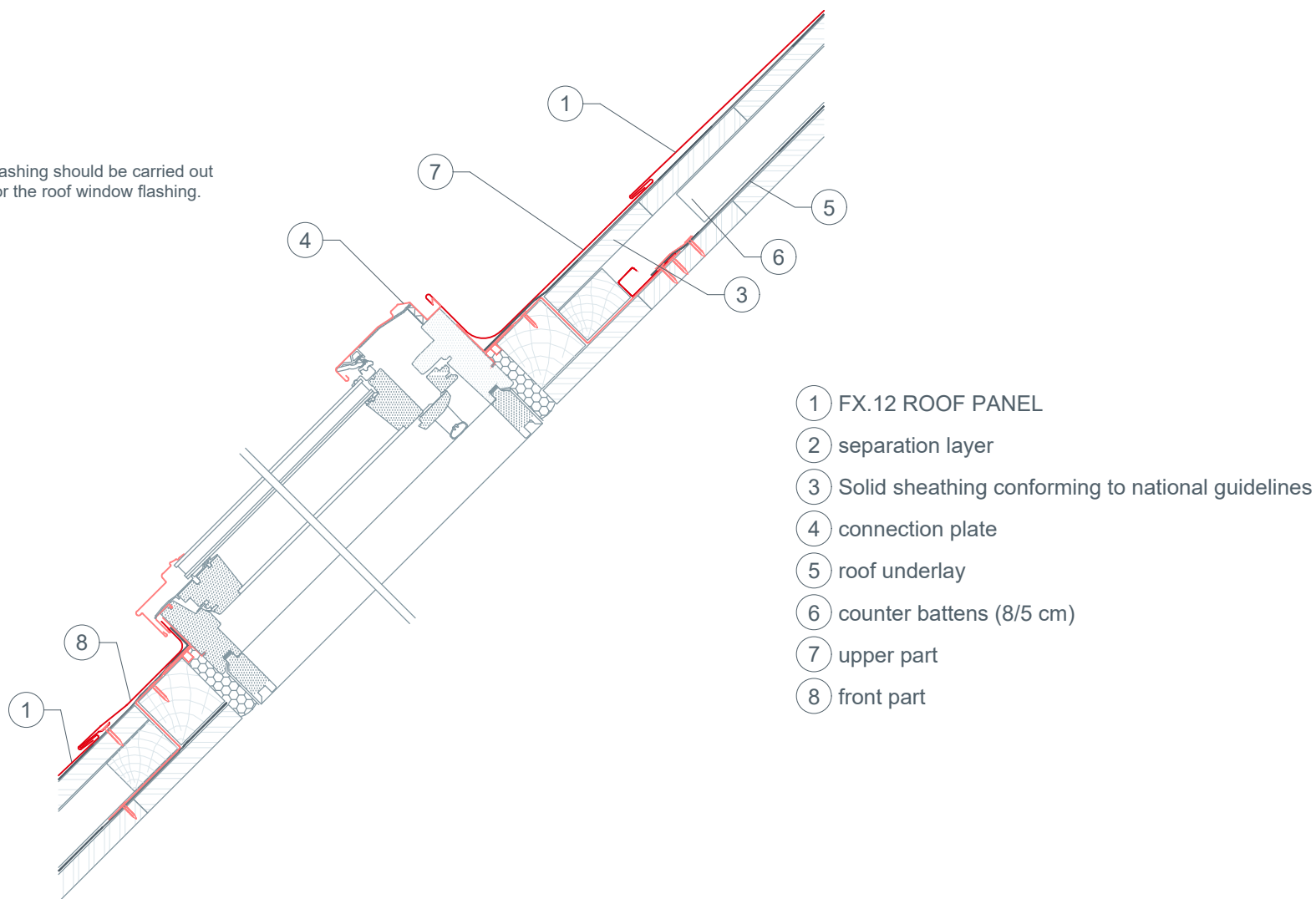
STARK WIE EIN STIER

Roof window flashing on a roof pitch over 25°.

FX.12 ROOF PANEL

CAD DETAILS

Professional installation of the roof window flashing should be carried out according to the manufacturer's guidelines for the roof window flashing.





STARK WIE EIN STIER

Roof window flashing with an insert wedge on a roof pitch over 25°.

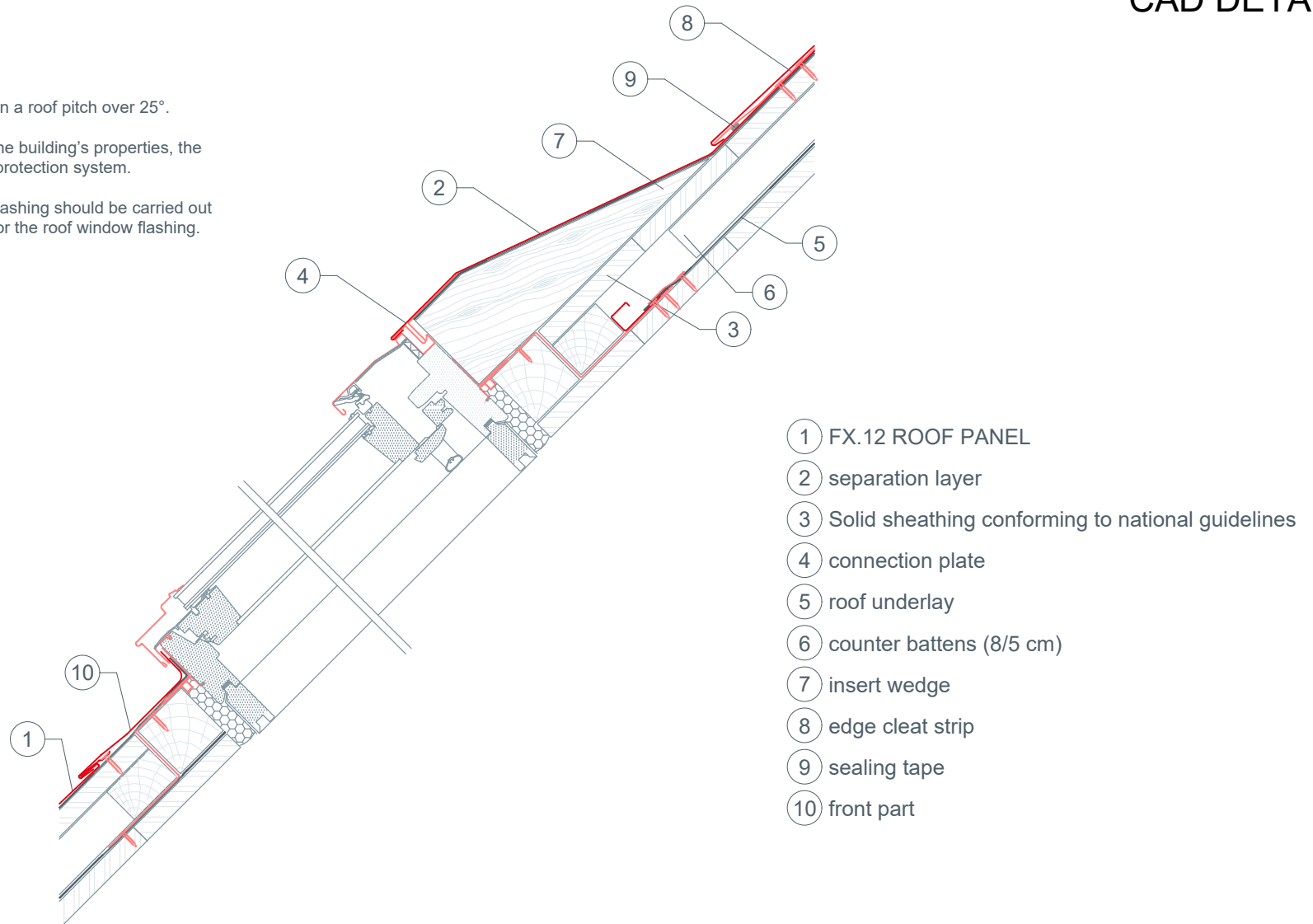
FX.12 ROOF PANEL

CAD DETAILS

Roof window flashing with an insert wedge on a roof pitch over 25°.
Installation in snowy areas.

The need for the insert wedge depends on the building's properties, the location and whether or not there is a snow protection system.

Professional installation of the roof window flashing should be carried out according to the manufacturer's guidelines for the roof window flashing.

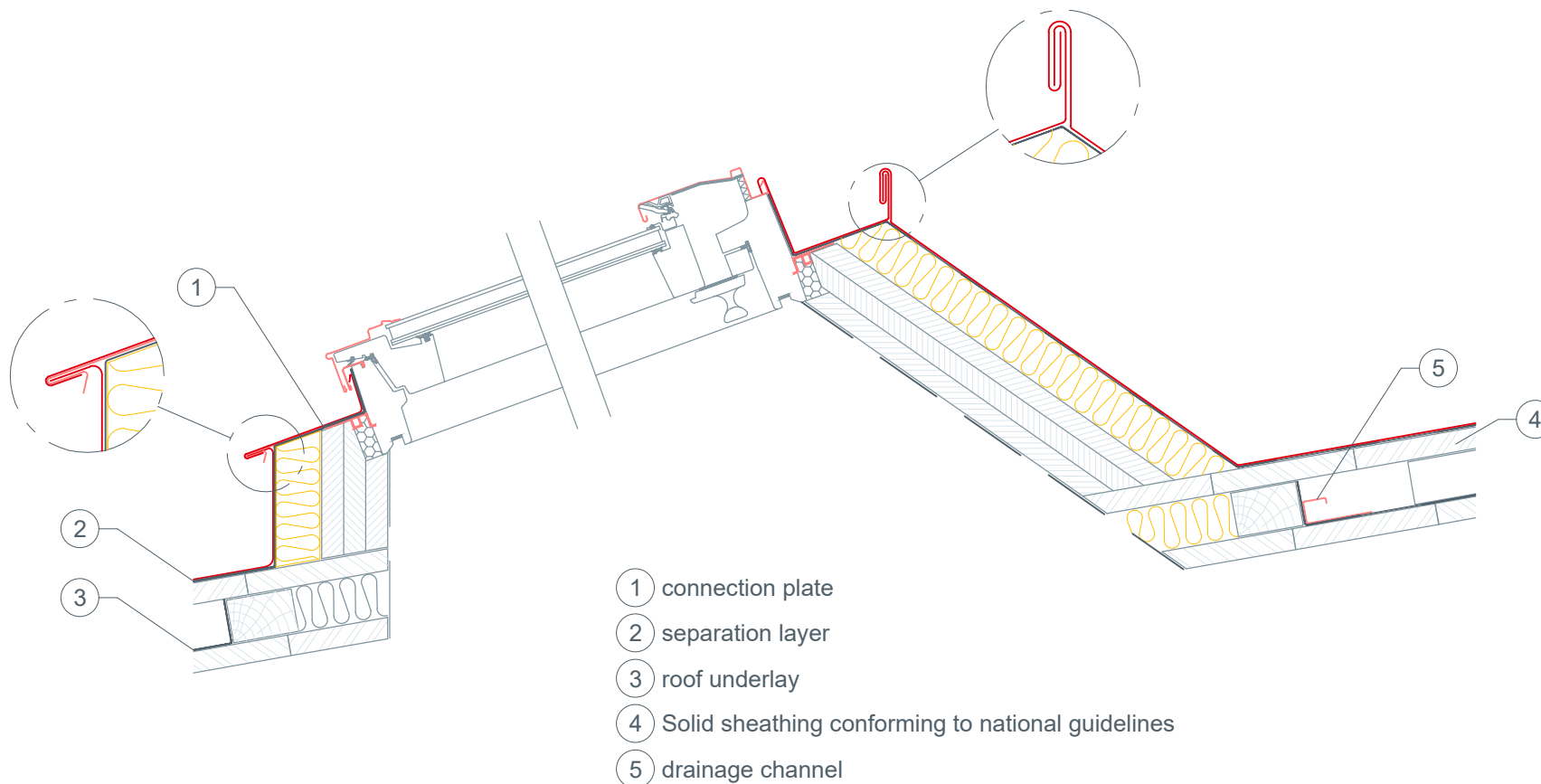




STARK WIE EIN STIER

ROOF WINDOW FLASHING WITH WEDGE FRAME FX.12 ROOF PANEL

CAD DETAILS



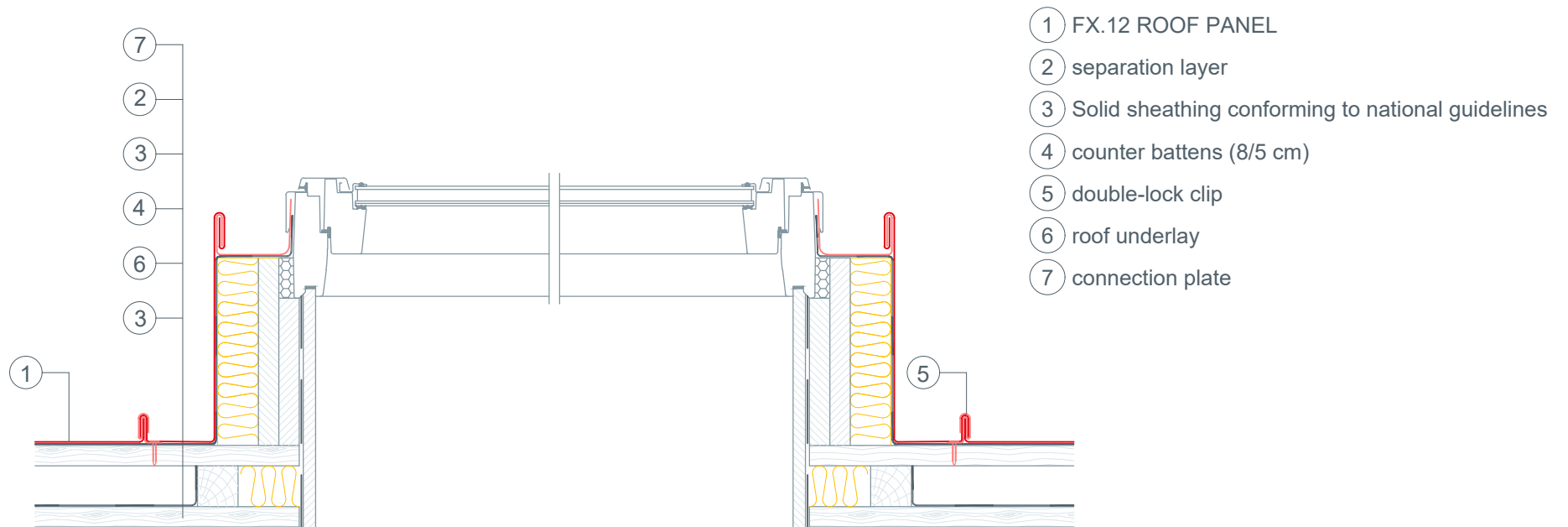
Professional installation should be carried out, and the need for the roof window flashing wedge frame assessed, according to the manufacturer's guidelines for the roof window.



STARK WIE EIN STIER

ROOF WINDOW FLASHING WITH WEDGE FRAME FX.12 ROOF PANEL

CAD DETAILS



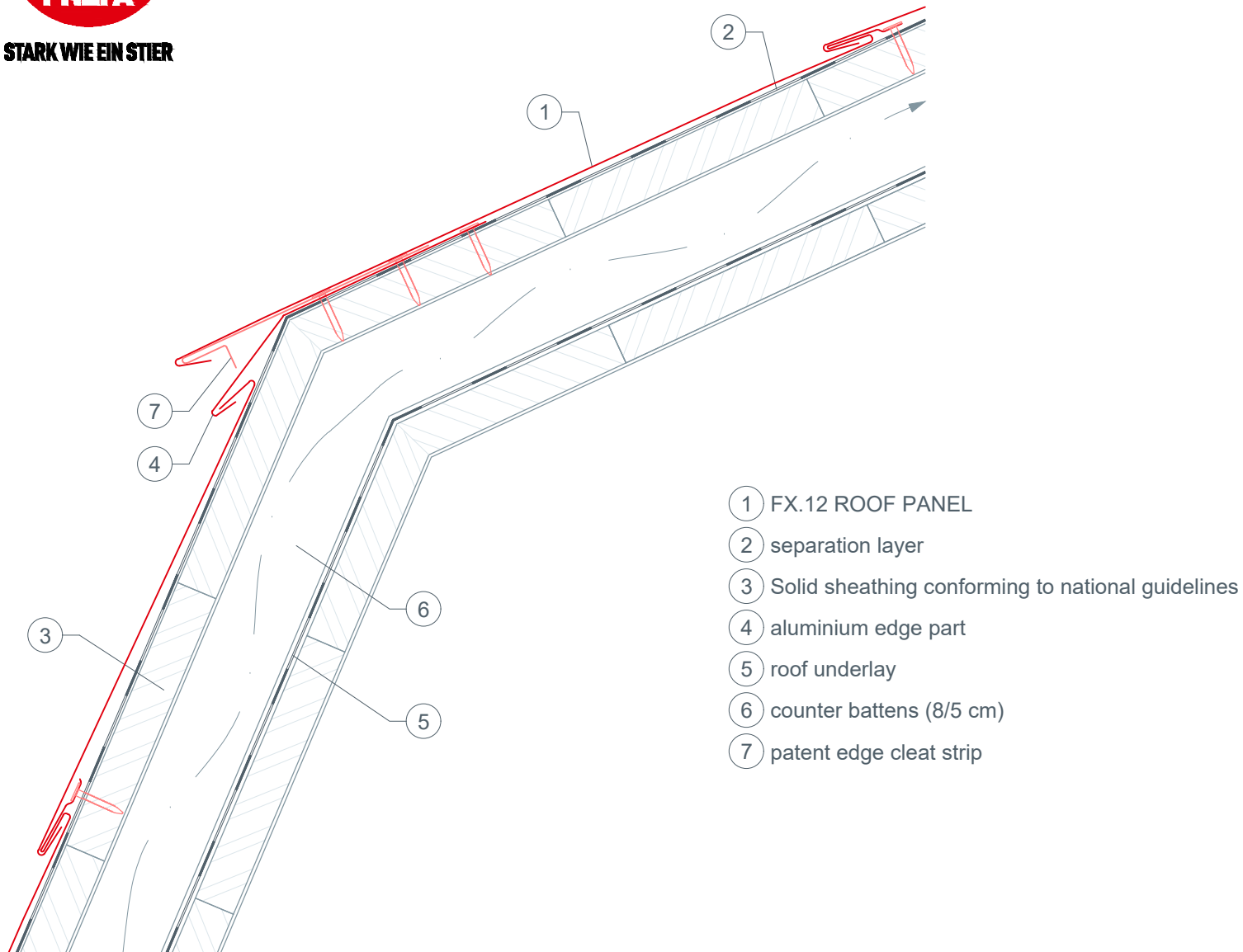
Professional installation should be carried out, and the need for the roof window flashing wedge frame assessed, according to the manufacturer's guidelines for the roof window.



STARK WIE EIN STIER

mansard crease FX.12 ROOF PANEL

CAD DETAILS



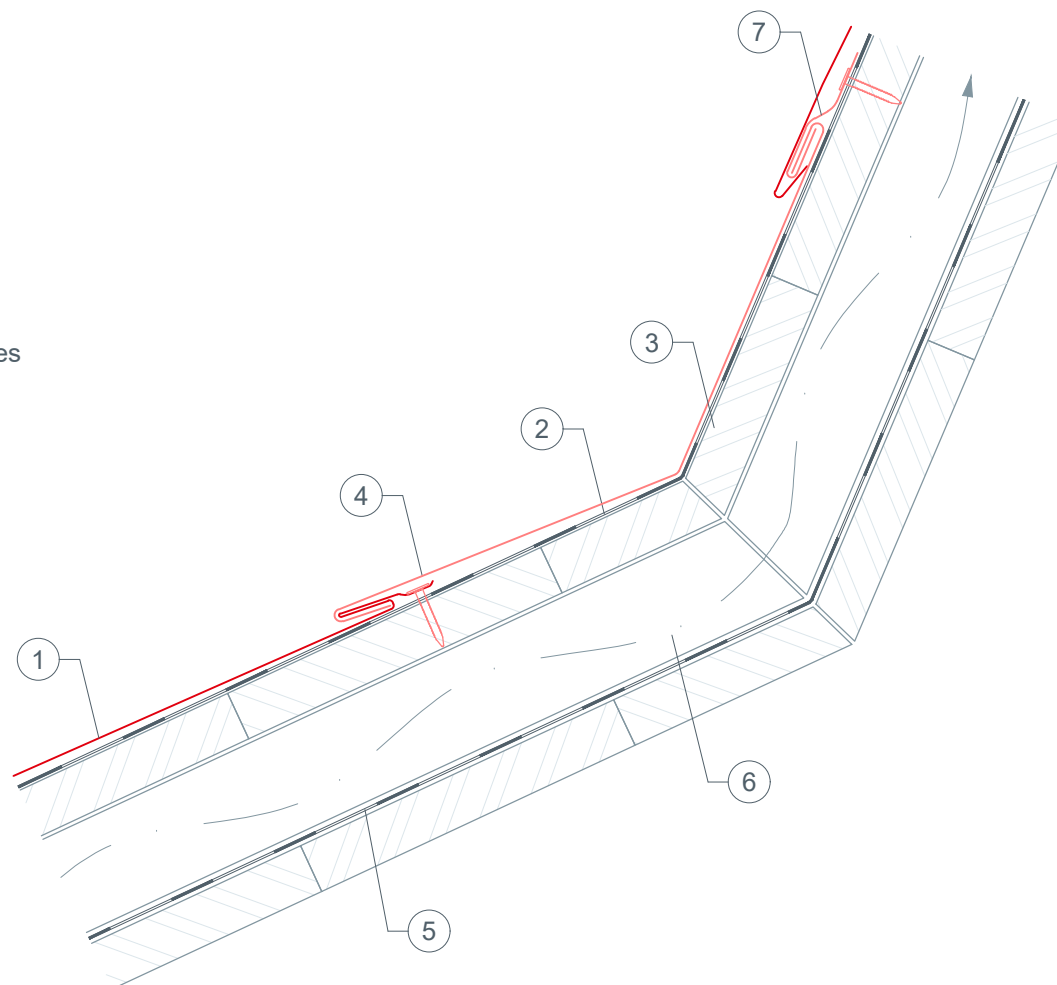


STARK WIE EIN STIER

construction of pitch transition FX.12 ROOF PANEL

CAD DETAILS

- ① FX.12 ROOF PANEL
- ② separation layer
- ③ Solid sheathing conforming to national guidelines
- ④ transition flashing
- ⑤ roof underlay
- ⑥ counter battens (8/5 cm)
- ⑦ clips

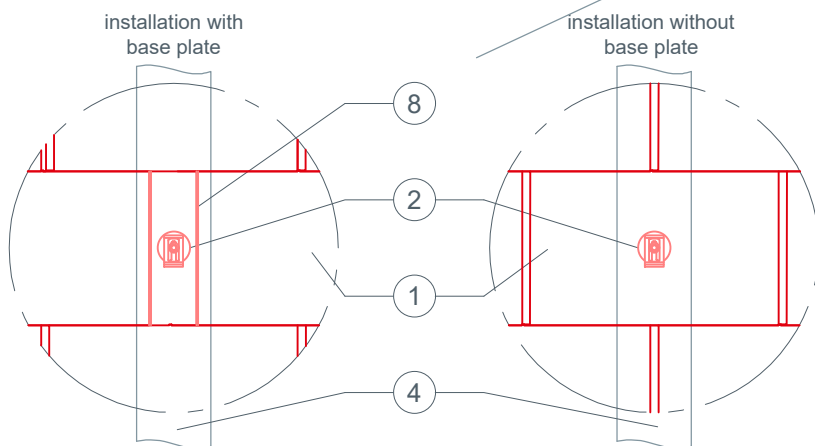
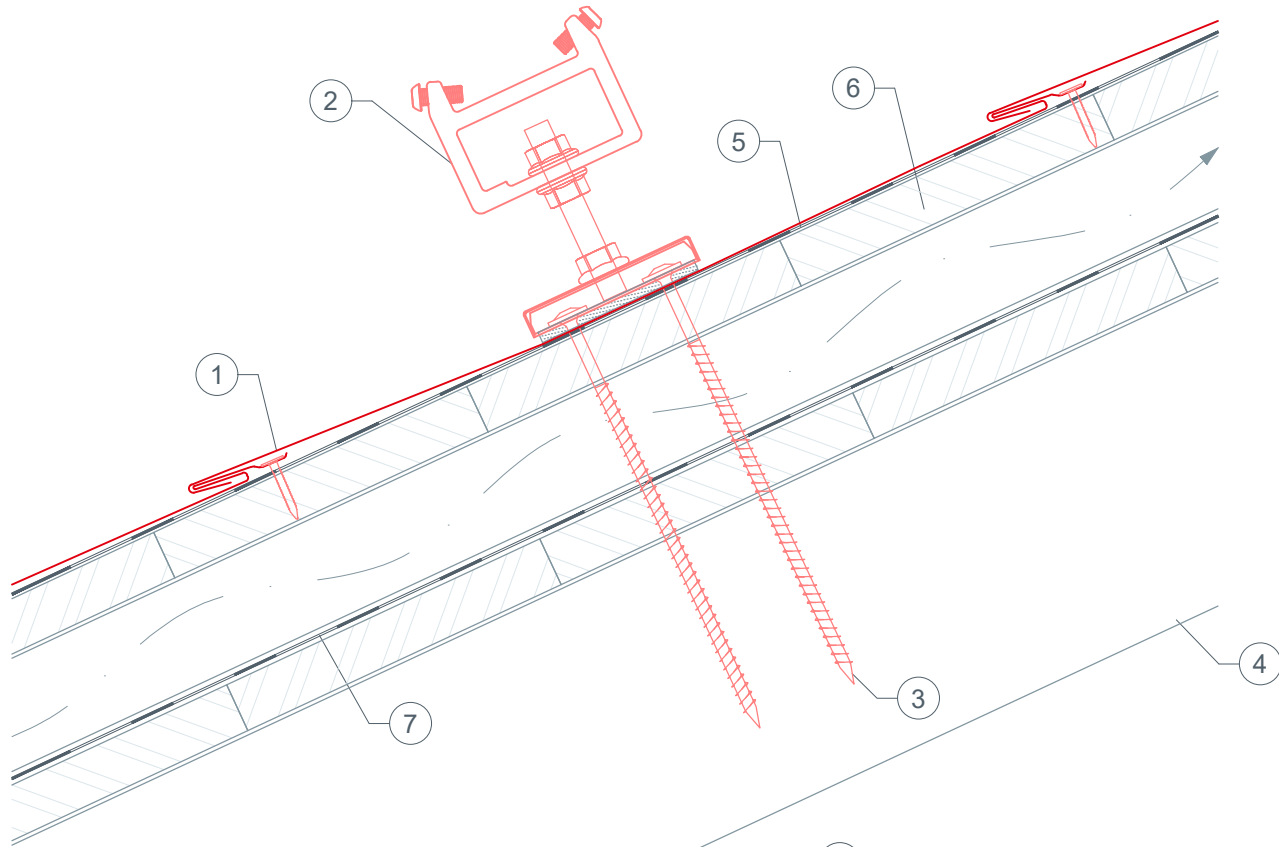




STARK WIE EIN STIER

Vario (or Fix) solar bracket FX.12 ROOF PANEL

CAD DETAILS



- ① FX.12 ROOF PANEL
- ② Vario (or Fix) solar bracket
- ③ fasteners (timber construction screws)
- ④ rafter
- ⑤ separation layer
- ⑥ Solid sheathing conforming to national guidelines
- ⑦ roof underlay
- ⑧ base plate

With small-format shingles, it may be necessary to install a base plate in order to mount the Vario or Fix solar bracket (e.g. if a seam is lying above a rafter in the installation area).

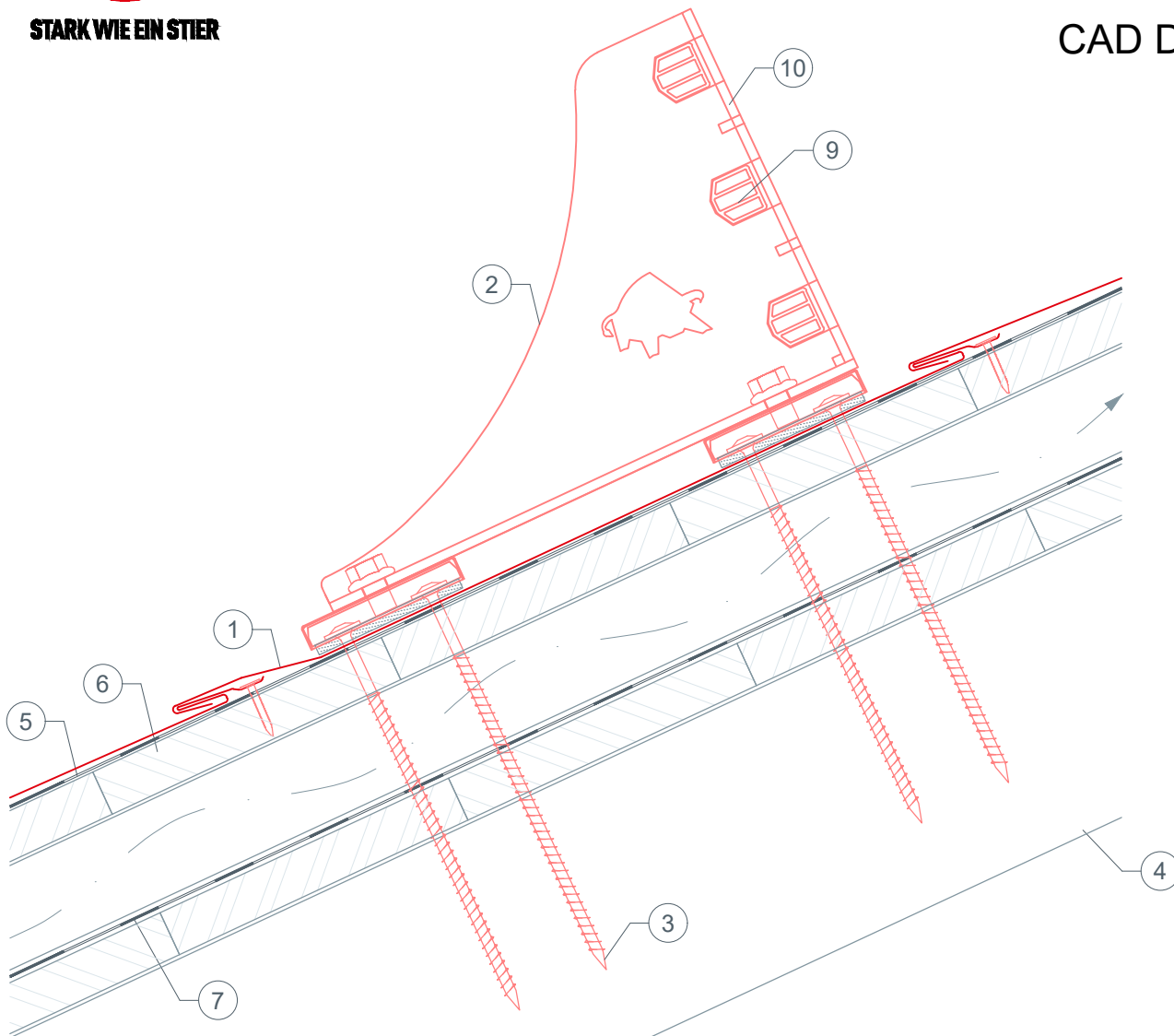
Double-skin roof structure: 2 fixing screws 8 × 220 mm.
Single-skin roof structure: 2 fixing screws 8 × 120 mm.



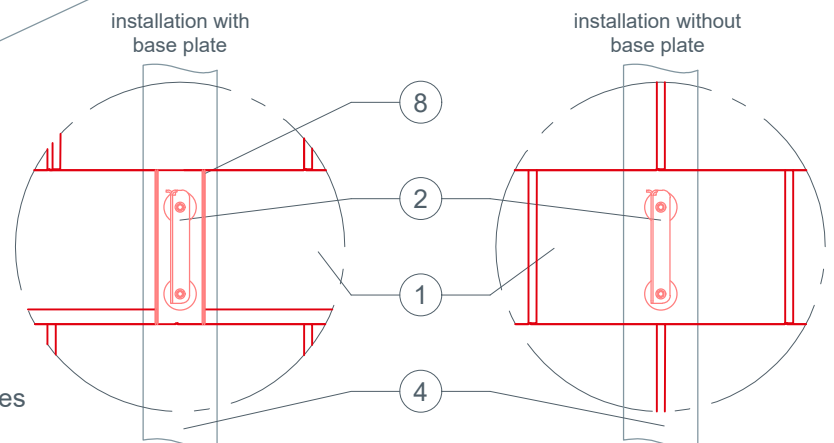
STARK WIE EIN STIER

pipe-style snow guard system FX.12 ROOF PANEL

CAD DETAILS



- ① FX.12 ROOF PANEL
- ② pipe-style snow guard system
- ③ fasteners (timber construction screws)
- ④ rafter
- ⑤ separation layer
- ⑥ Solid sheathing conforming to national guidelines
- ⑦ roof underlay
- ⑧ base plate
- ⑨ removable pipe for pipe-style snow guard system
- ⑩ fixing slide



With small-format roof elements, it may be necessary to install a base plate in order to mount the pipe-style snow guard system (e.g. if a seam is lying above a rafter in the installation area).

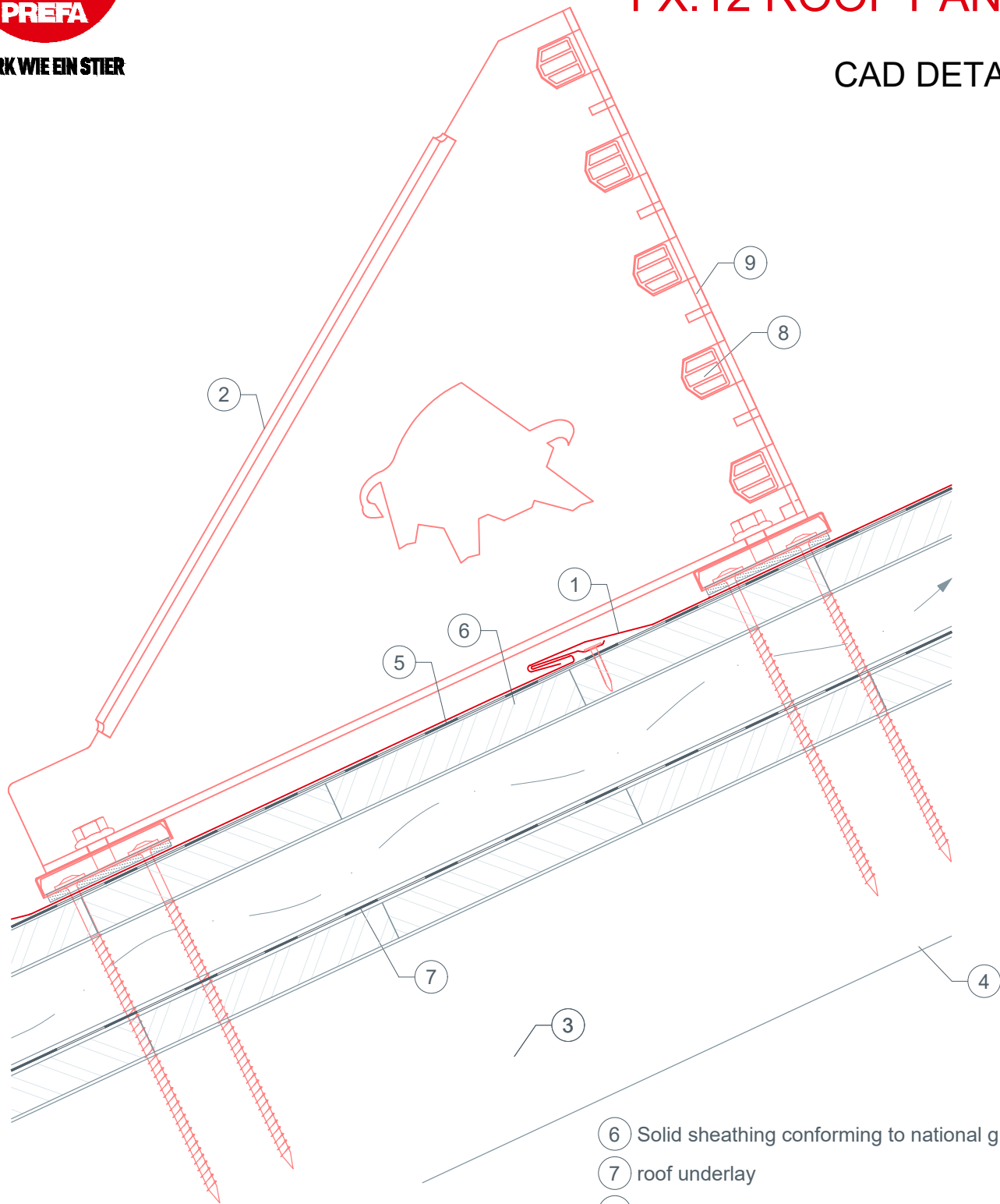
Double-skin roof structure: 2 fixing screws 8 × 220 mm.
Single-skin roof structure: 2 fixing screws 8 × 120 mm.



STARK WIE EIN STIER

pipe-style snow guard system XL FX.12 ROOF PANEL

CAD DETAILS



- ① FX.12 ROOF PANEL
- ② pipe-style snow guard system
- ③ fasteners (timber construction screws)
- ④ rafter
- ⑤ separation layer

- ⑥ Solid sheathing conforming to national guidelines
- ⑦ roof underlay
- ⑧ removable pipe for pipe-style snow guard system
- ⑨ fixing slide

With small-format roof elements, it may be necessary to install a base plate in order to mount the pipe-style snow guard system (e.g. if a seam is lying above a rafter in the installation area).

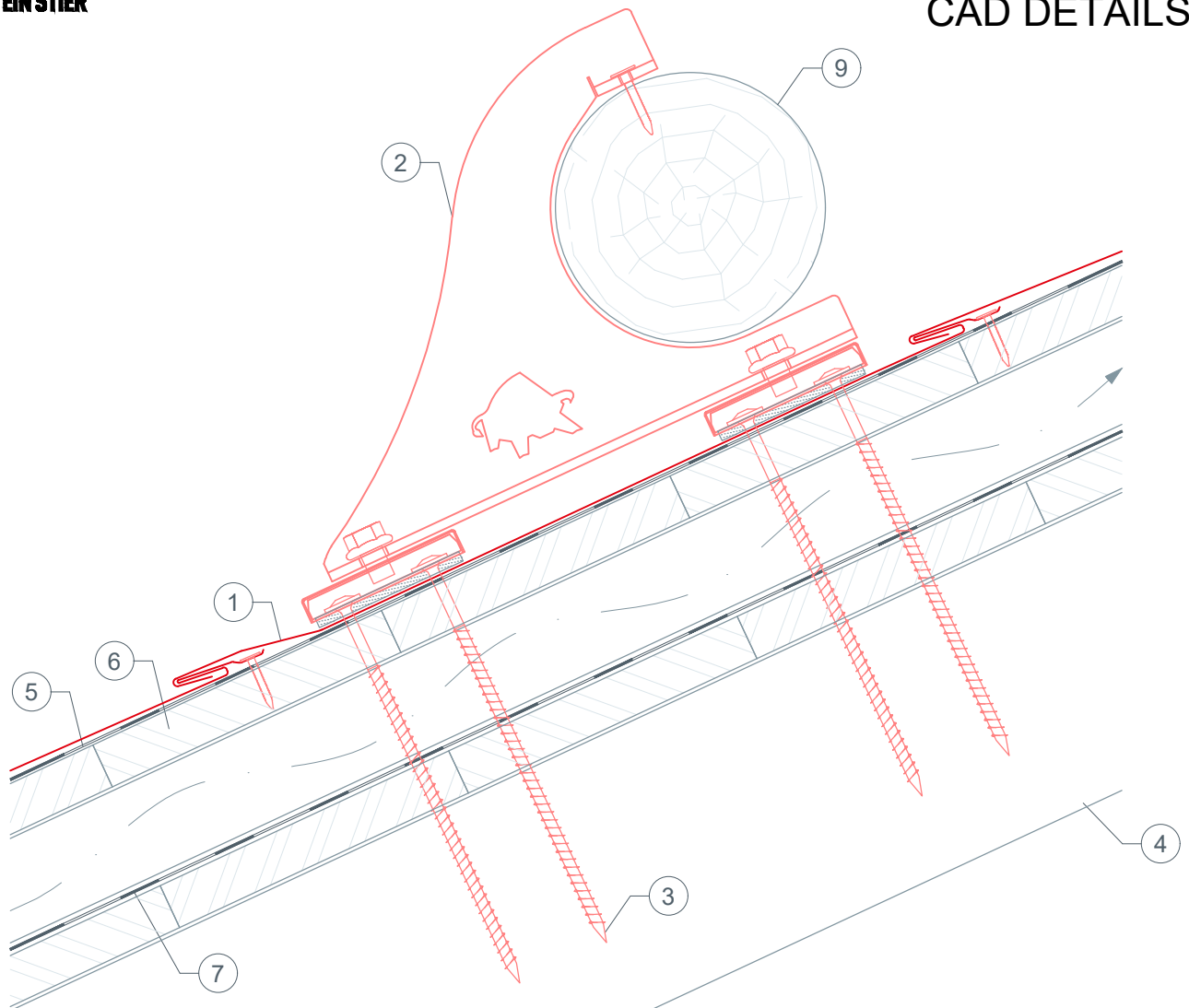
Double-skin roof structure: 2 fixing screws 8 × 220 mm.
Single-skin roof structure: 2 fixing screws 8 × 120 mm.



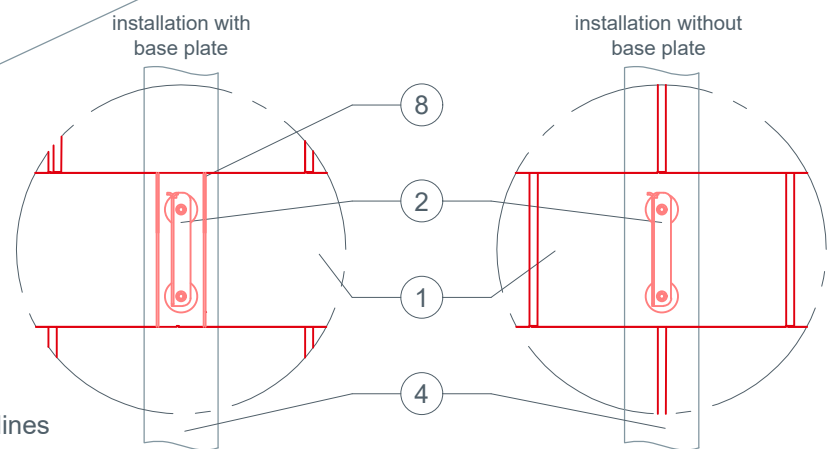
STARK WIE EIN STIER

mountain snow-guard bracket FX.12 ROOF PANEL

CAD DETAILS



- ① FX.12 ROOF PANEL
- ② mountain snow-guard bracket
- ③ fasteners (timber construction screws)
- ④ rafter
- ⑤ separation layer
- ⑥ Solid sheathing conforming to national guidelines
- ⑦ roof underlay
- ⑧ base plate
- ⑨ log (diameter 140 mm)



With small-format roof elements, it may be necessary to install a base plate in order to mount the mountain snow guard bracket (e.g. if a seam is lying above a rafter in the installation area).

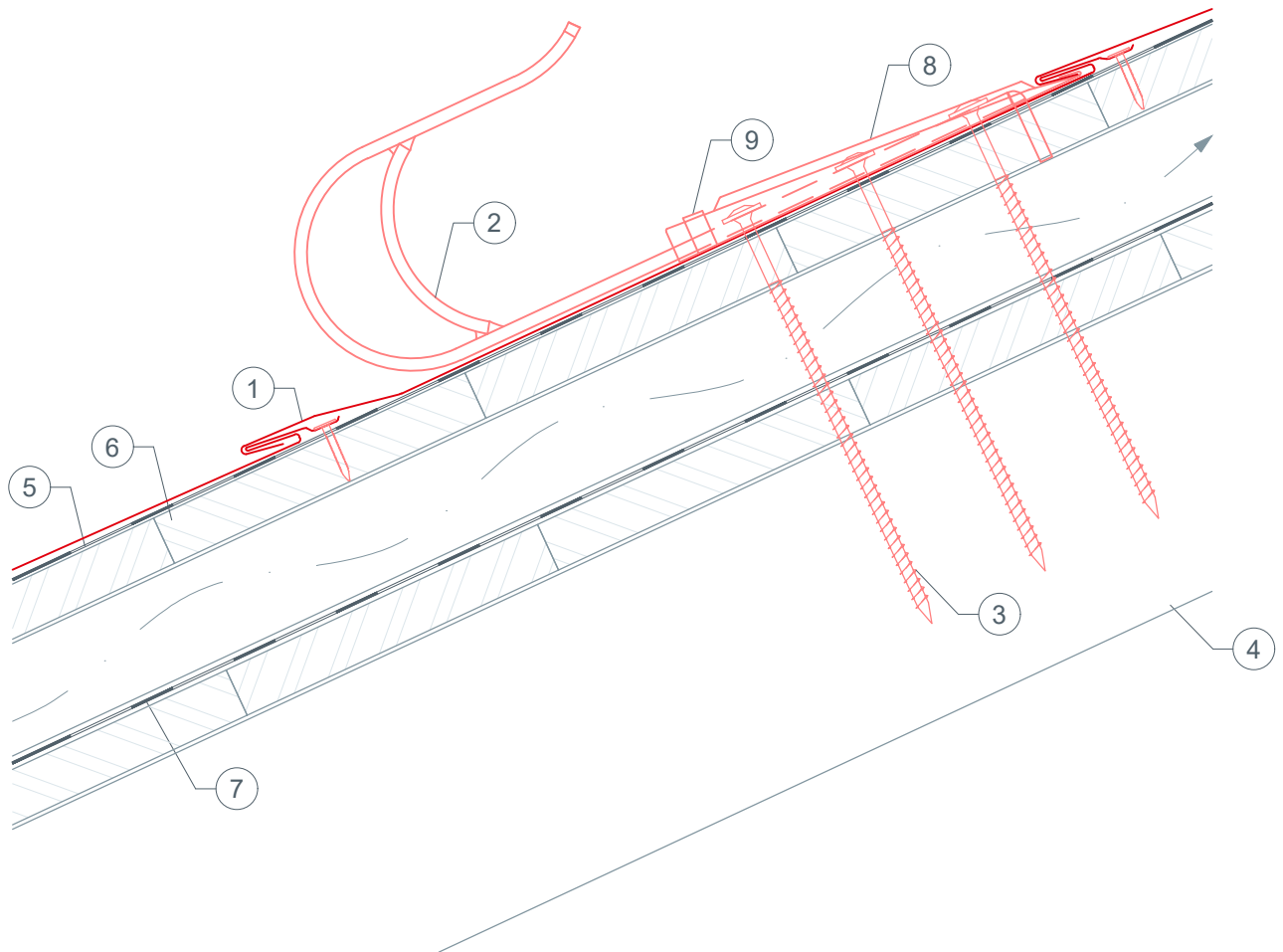
Double-skin roof structure: 2 fixing screws 8 × 220 mm.
Single-skin roof structure: 2 fixing screws 8 × 120 mm.



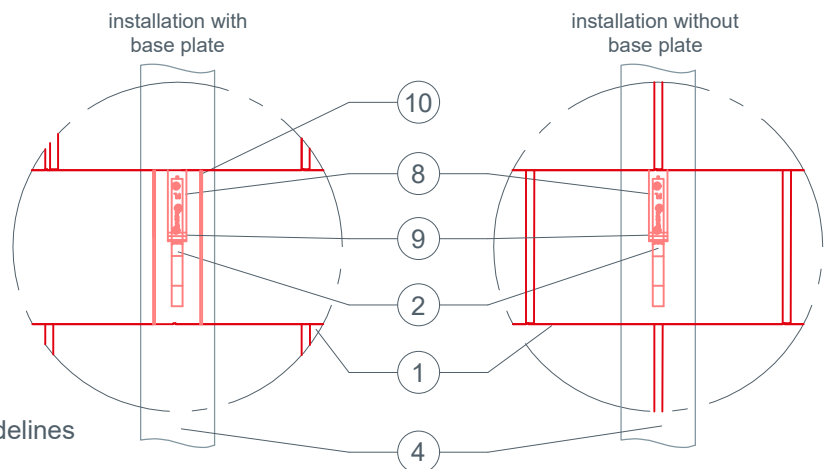
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roof anchor hook FX.12 ROOF PANEL

CAD DETAILS



- ① FX.12 ROOF PANEL
- ② roof anchor hook
- ③ fasteners (timber construction screws)
- ④ rafter
- ⑤ separation layer
- ⑥ Solid sheathing conforming to national guidelines
- ⑦ roof underlay
- ⑧ protective cap
- ⑨ fixing strip
- ⑩ base plate



With small-format shingles, it may be necessary to install a base plate in order to mount the roof anchor hook (e.g. if a seam is lying above a rafter in the installation area).

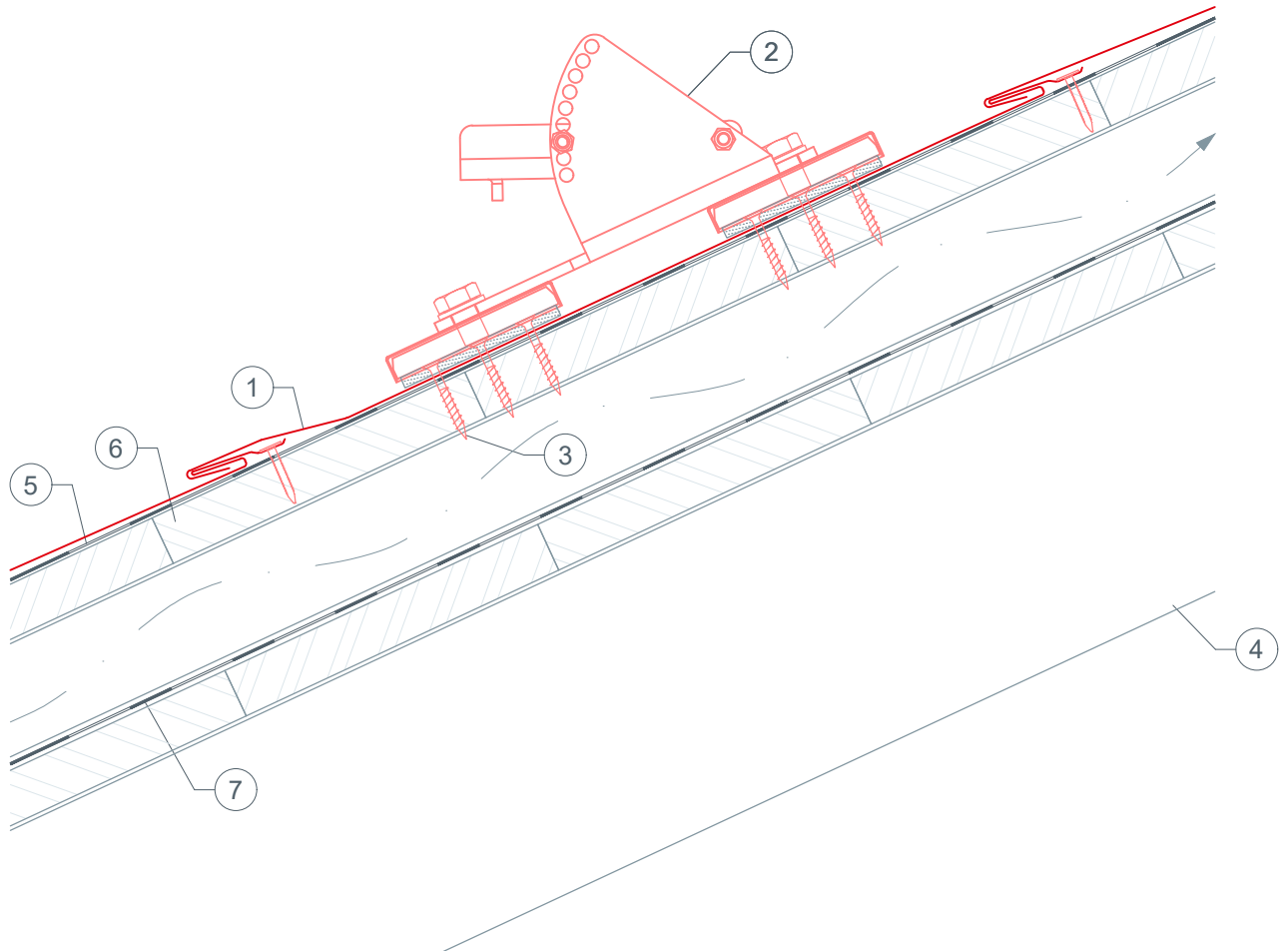
Double-skin roof structure: 2 fixing screws 8 × 220 mm.
Single-skin roof structure: 2 fixing screws 8 × 120 mm.



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safety tread FX.12 ROOF PANEL

CAD DETAILS



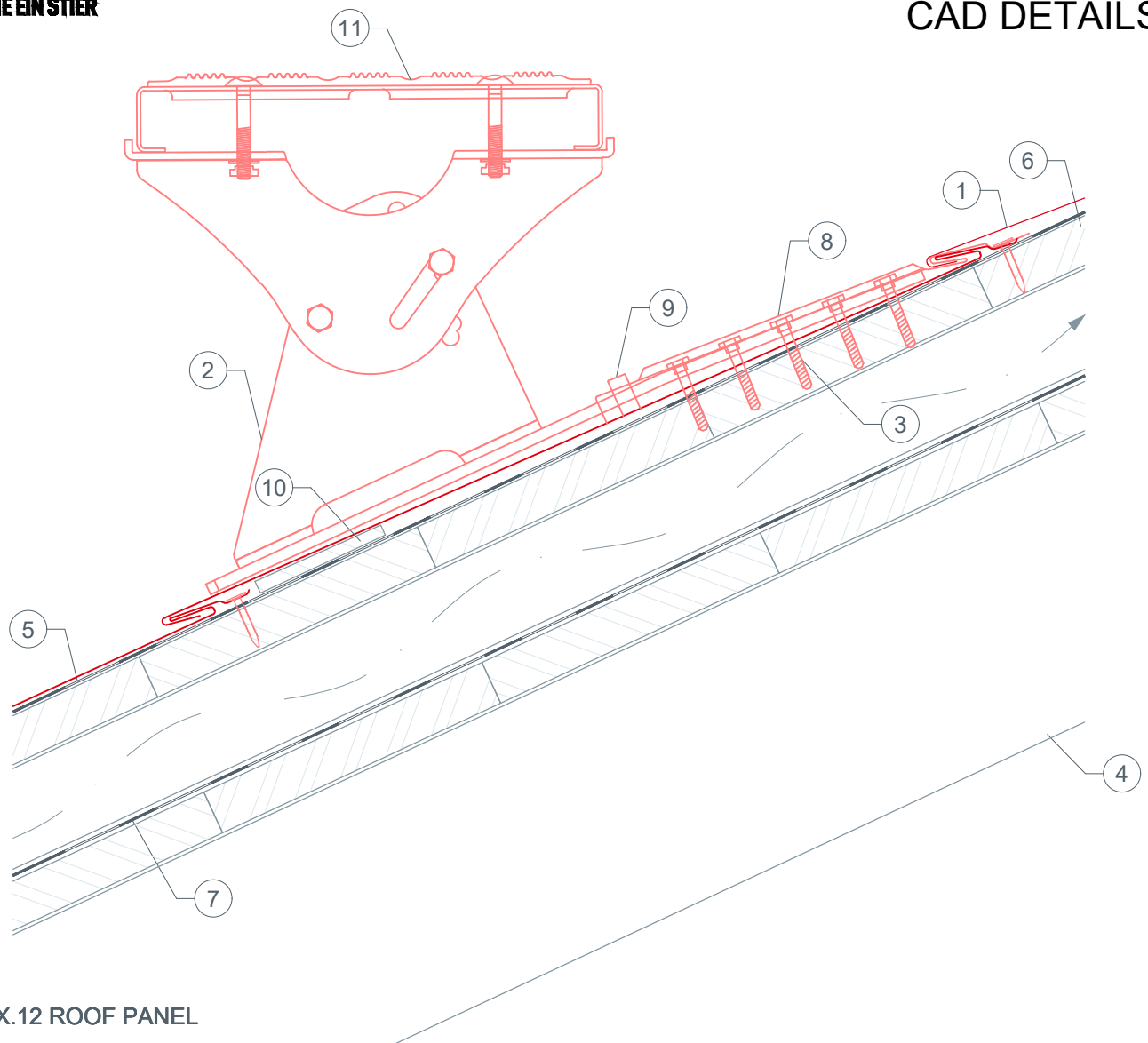
- ① FX.12 ROOF PANEL
- ② safety tread
- ③ fixing material
- ④ rafter
- ⑤ separation layer
- ⑥ Solid sheathing conforming to national guidelines
- ⑦ roof underlay



STARK WIE EIN STIER

walkway support FX.12 ROOF PANEL

CAD DETAILS



- ① FX.12 ROOF PANEL
- ② walkway support
- ③ fixing material
- ④ rafter
- ⑤ separation layer
- ⑥ Solid sheathing conforming to national guidelines
- ⑦ roof underlay
- ⑧ protective cap
- ⑨ fixing strip
- ⑩ underlay for walkway grating supports
- ⑪ walkway grating