

Technical file

# - WALL



23/03/2011  
V 1.1



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# GENERAL

MATERIAL & BENEFITS  
COLOURS  
MACHINING & SAFETY PRECAUTIONS  
TWINSON RECYCLING  
WARRANTY  
STORAGE & TRANSPORT

## 1.1. Material & benefits

### Best of both worlds:

Welcome to the world of Twinson, where nature and technology go hand in hand. Twinson is made of wood and PVC. By combining the advantages of both materials in a single new material, Twinson offers the best of both worlds: the natural appearance and warm feel of wood, and the ease of maintenance and durability of PVC. Twinson is 100% recyclable. What's more, with its PEFC certification, Twinson is an environmentally friendly alternative to tropical hardwood. While tropical hardwood is only available from endangered rain forests, Twinson contains pinewood that grows quickly in continuously replanted forests.

- natural appearance
- low maintenance
- durable
- water resistant
- resistant to insects
- does not split
- environmentally friendly (100% recyclable)
- splinter free
- PEFC certified

### About PEFC:



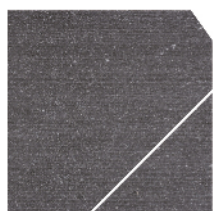
The international non-profit organisation PEFC is dedicated to sustainable forest management. With more than 200 million hectares of certified forest, PEFC is the largest certification system in the world. PEFC ensures that the number of trees harvested is not greater than the number replanted, and that biodiversity is retained. Essential here is respect for the natural habitat of fauna and flora, as well as for the soil and climate.



## 1.2. Colours

O-Wall cladding profiles and finishing trims are available in 3 different natural colours. With Twinson, you can transform your house into a stylishly finished environment that you can enjoy for years to come.

### Twinson O-Wall colours:



502  
liquorice black



504  
bark brown



505  
turf brown

The colour samples are reproductions and can deviate from the originals. The large inset shows the natural colour which the O-Wall will change to over time. **Twinson O-Wall contains wood fibres**, susceptible to differences in colour and appearance. As soon as the product is exposed to sun and rain, these fibres will undergo a **natural aging process** and will be subject to colour changes. After a couple of months, the final patina will be obtained. Planks should be mixed prior to installation to gain a natural effect.



## 1.4. Twinson recycling

- An important aspect of sustainable building is the lifetime expectancy of the materials and the impact that they have on the environment. There is no sense of using an environmentally friendly building material if the durability can not be guaranteed.
- That is why Deceuninck has created the Twinson bag. The intention is that after installation all the Twinson cut-offs are collected in the special Twinson bag. This material can be returned to Deceuninck to be recycled, enabling us to have a closed loop recycling system.



- To guarantee that the next generation of Twinson profiles are not polluted with saw dust, Aluminium or other material we ask you to only put Twinson cut-offs in the bag.
- Close the bag before returning it to Deceuninck.
- Maximum weight of 30kg.



## 1.5. Warranty

### DECEUNINCK NV

#### Warranty certificate Twinson® O-Wall products

Subject of the conditions set out below, Deceuninck NV warrants to the purchaser who directly purchases from Deceuninck NV (hereinafter "Purchaser"), that the Twinson® O-Wall products will correspond with their specification at the time of delivery.

SAVE AS EXPRESSLY PROVIDED IN THIS WARRANTY, DECEUNINCK NV DOES NOT PROVIDE ANY WARRANTY (WHETHER EXPRESS OR IMPLIED) AS TO THE QUALITY OF THE TWINSON® O-WALL PRODUCTS OR THEIR FITNESS FOR ANY PARTICULAR PURPOSE (EVEN IF THIS PURPOSE IS MADE KNOWN EXPRESSLY OR BY IMPLICATION BY DECEUNINCK NV) OR AS TO THE CORRESPONDENCE OF THE TWINSON® O-WALL PRODUCTS WITH ANY DESCRIPTION OR SAMPLE. NEITHER DOES DECEUNINCK PROVIDE ANY OTHER WARRANTY. SUCH WARRANTIES ARE HEREBY EXCLUDED TO THE FULLEST EXTENT PERMITTED BY LAW.

Notwithstanding the stipulations of this Warranty and subject to evidenced normal residential use, load and maintenance conditions, Deceuninck NV, (hereinafter "Deceuninck") warrants to the Purchaser that,

- (1) for a period of twenty-five (25) years from the date of original purchase, Twinson® O-Wall products shall not split, splinter or suffer structural damage as a sole and direct consequence of termites, insects or soft rotting micro-fungi;
- (2) for a period of ten (10) years from the date of original purchase, Twinson® O-Wall products shall not break, provided however that this warranty explicitly excludes occurrences where the break occurs or may have occurred as a consequence of impact loads;
- (3) for a period of ten (10) years from the date of original purchase, that accidental stains on the Twinson® O-Wall products due to spots of chlorinated water, spots of bleach solution or spots of road salt, as stated in the maintenance instruction for Twinson® O-Wall products ([www.twinson.net](http://www.twinson.net)), will disappear after sufficient outside exposure of the material.

If one of the above defects occur within the related Warranty period, Purchaser shall immediately notify Deceuninck in writing to the place of business of Deceuninck, and the Purchaser shall provide a description of the claimed defect, proof of purchase and of purchase date and of normal residential use, load and maintenance. If these conditions have not been complied with, the Warranty shall not be applicable. Upon timely notification and in accordance with the above, Deceuninck will at its option and in Deceuninck's sole discretion either, (a) provide Purchaser with non-defective replacement Twinson® O-Wall products or (b) substitute the defective Twinson® O-Wall product with a product that in its sole determination is of comparable value and quality or (c) refund the portion of the purchase price paid by Purchaser for such defective product taking into account the depreciated value of the product (not including the cost of its initial installation).

Any replacement or substitute products provided will be covered under this Warranty only for the time remaining under the original Warranty period.

Deceuninck reserves the right to discontinue availability of any Twinson® O-Wall product at any time.

The replacement, substitution or refund of defective Twinson® O-Wall products is Purchaser's sole remedy under this Warranty.

Deceuninck will have no liability or responsibility to the Purchaser other than as expressly provided in subparagraphs (1), (2) and (3) above.

Labour costs incurred in removing defective Twinson® O-Wall products or installing replacement or substitute products are NOT covered by this warranty. Any additional costs and expenses, such as shipping, delivery, installation, removal, and all other incidentals are not covered by the warranty and are expressly disclaimed.

Deceuninck can not be held responsible for: (1) improper installation of Twinson® O-Wall products and failure to abide by Deceuninck's installation guidelines; (2) use of Twinson® O-Wall products beyond normal residential use, or in an application not recommended by Deceuninck's guidelines and local building codes; (3) movement, distortion, collapse or settling of the ground or the supporting structure on which Deceuninck products are installed;

(4) any act of God (such as flooding, hurricane, earthquake, lightning, etc.), environmental condition (such as air pollution, superficial overgrowth due to mold and algae, etc.), or staining from foreign substances (such as dirt, grease, oil, or products having an effect on Twinson® O-Wall products etc.); (5) variations or changes in color; or (6) improper handling, storage, improper use or neglect of Twinson® O-Wall products by Purchaser or third parties; or (7) change of properties or damage as a result of paints, varnishes, protection oils other than Twinson Care applied to the Twinson® O-Wall surface.

No person or entity is authorized by Deceuninck to make any statement or representation as to the quality or performance of Twinson® O-Wall products other than as contained in this warranty and Deceuninck shall not be bound by any statement or representation. This warranty may not be altered or amended except in a written instrument signed by Deceuninck and Purchaser.

This warranty is governed by Belgian law.

This warranty is issued by Deceuninck NV on 1st May 2010 and accepted by Purchaser.

**Name, address and signature Purchaser**

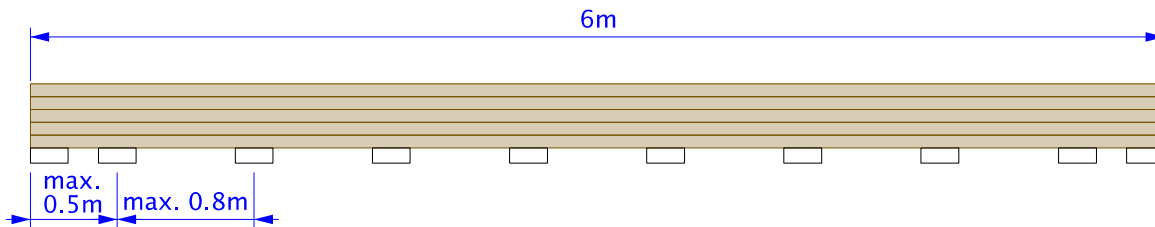
**This warranty must be returned signed to Deceuninck NV, att. Central Laboratory, Bruggesteeweg 164, B-8830 Hoogde-Gits where it will be registered.  
Photocopies are not accepted.**

## 1.6. Storage & transport

- Store profiles or stillages containing profiles inside:
  - In a dry and ventilated environment, away from direct exposure to sunlight.
- Stock and transport the profiles horizontally.
- Handle long profiles by 2 persons ( $> 2$  m).
- Unload the profiles with care.



- Ensure that the profiles are secured during transportation, Twinson profiles can easily slide over each other and this can leave shiny tracks and burrs on to the profiles.
- Distance between supports maximum 0.8 m.
- Profiles or stillages partially stored outside will result in differences in colour on the profiles. The parts of the profiles that are exposed to the elements (rain, UV) will incur some weathering and change in colour. Afterwards, when they are completely exposed outside, the normal weathering process will continue.

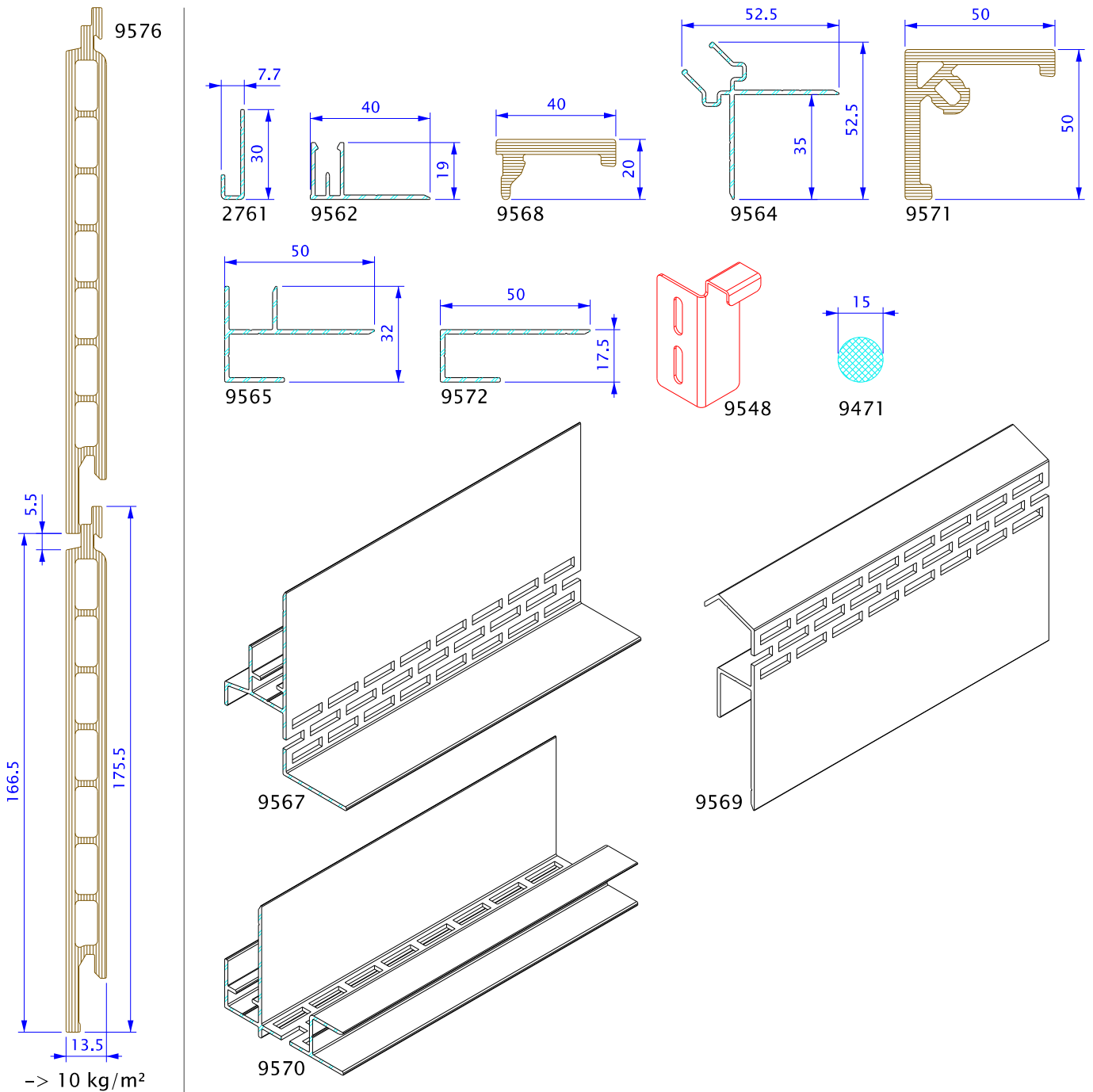




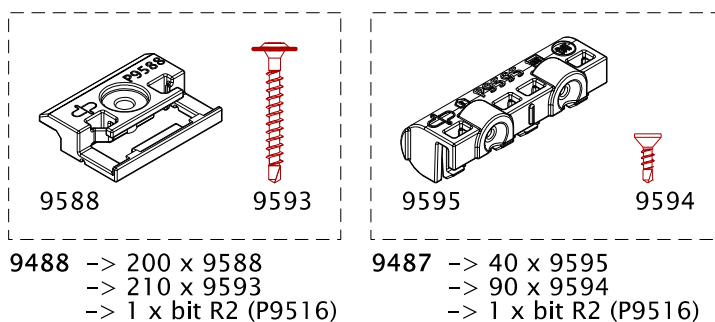
# SYSTEM PROPERTIES

PROFILE OVERVIEW  
LENGTH  
PRODUCT PROPERTIES  
TECHNICAL FILE  
CERTIFICATES

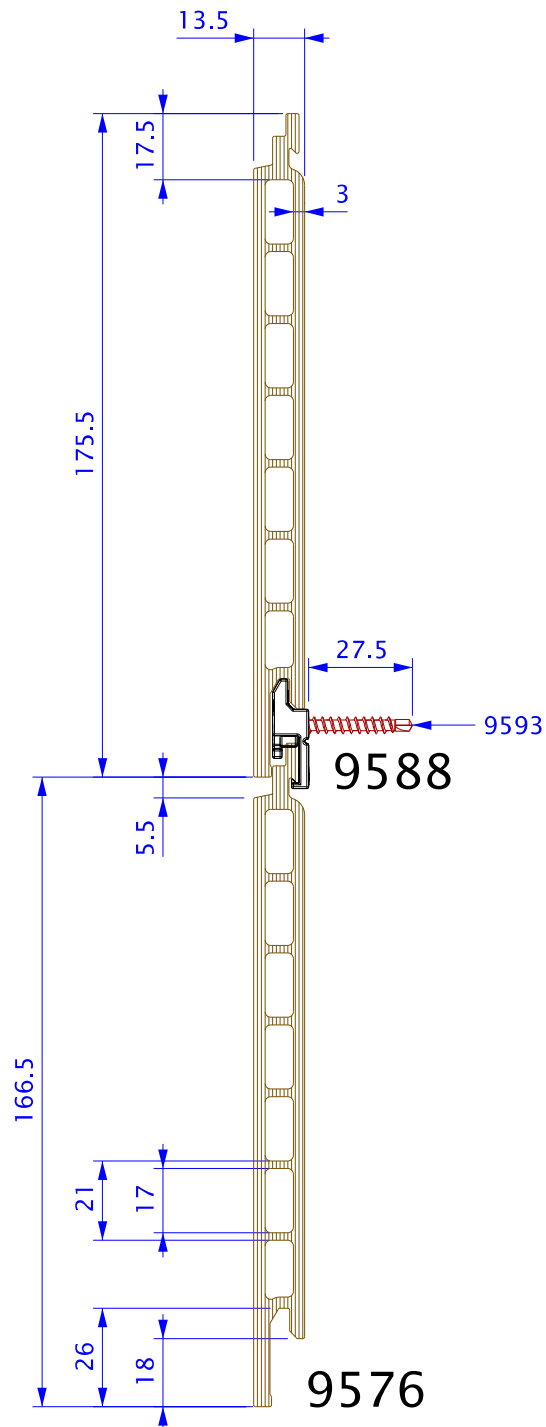
## 2.1. Profile overview



### Kits:

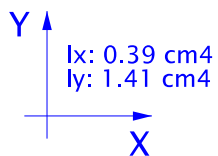
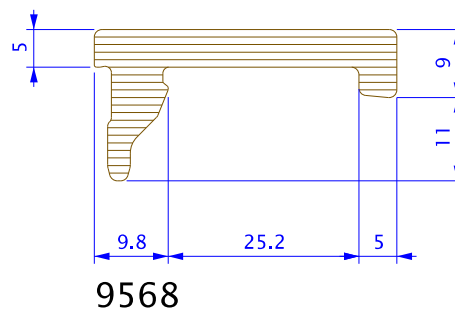
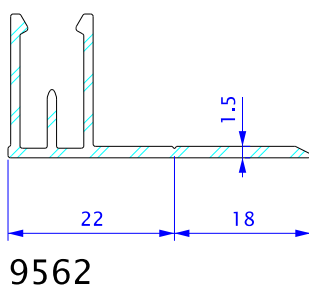
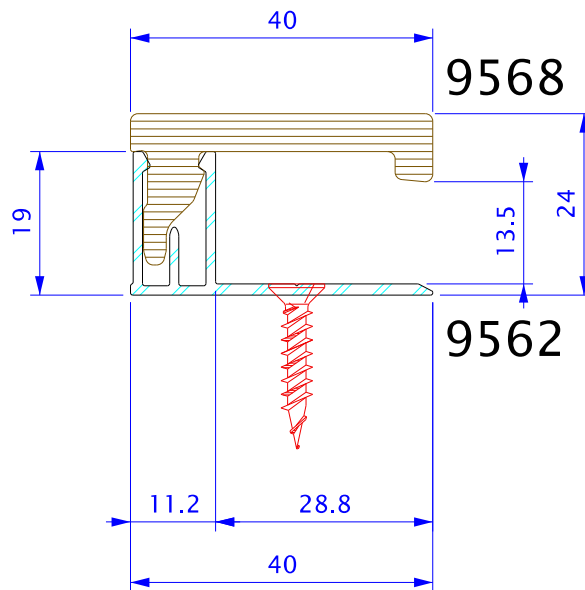


### 2.1.1. Profile sheet P9576:

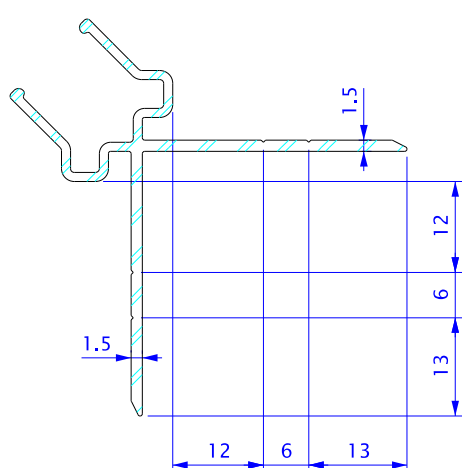
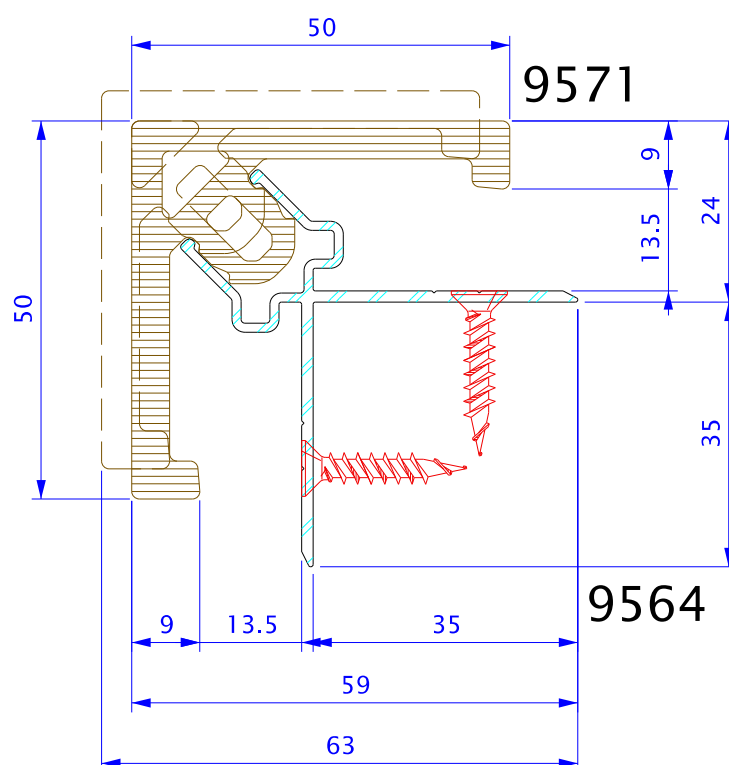




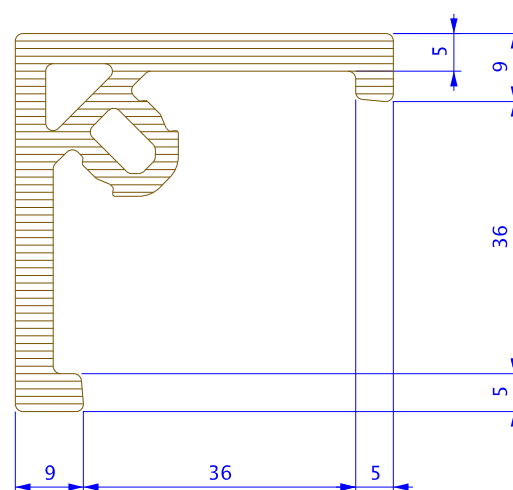
## 2.1.2. Profile sheet P9562/P9568:



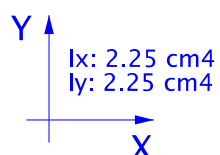
### 2.1.3. Profile sheet P9564/P9571:



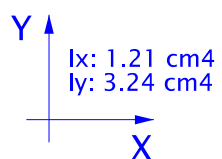
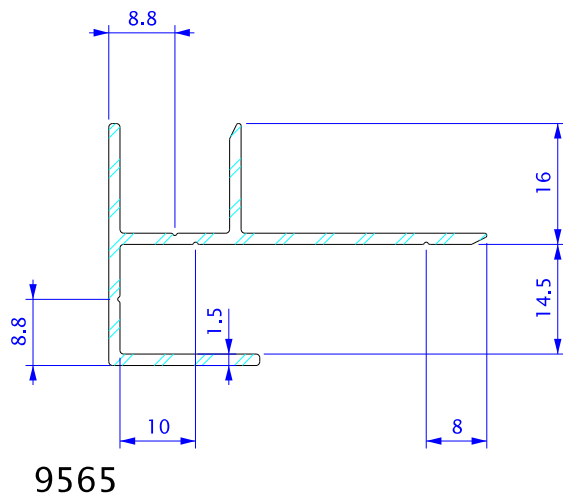
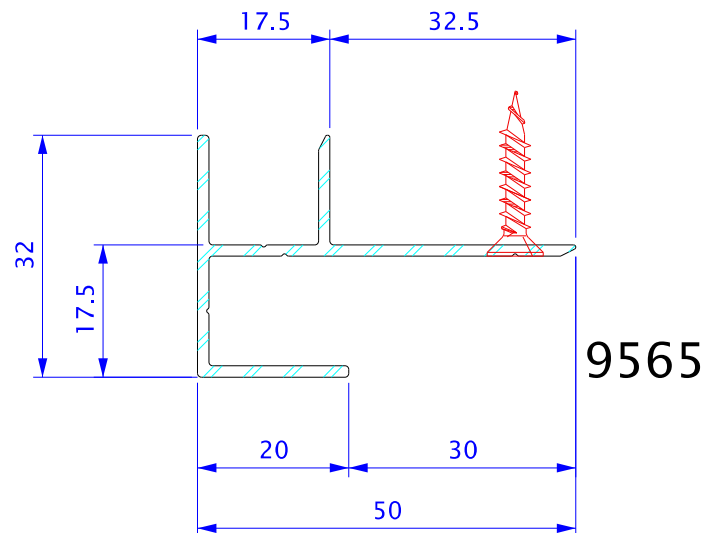
9564



9571

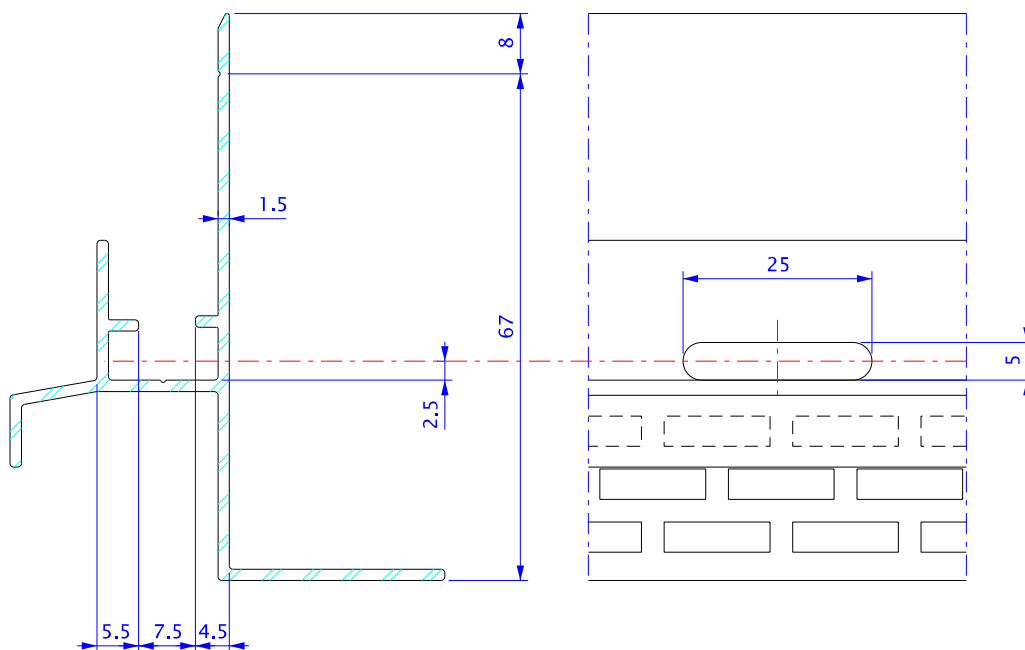
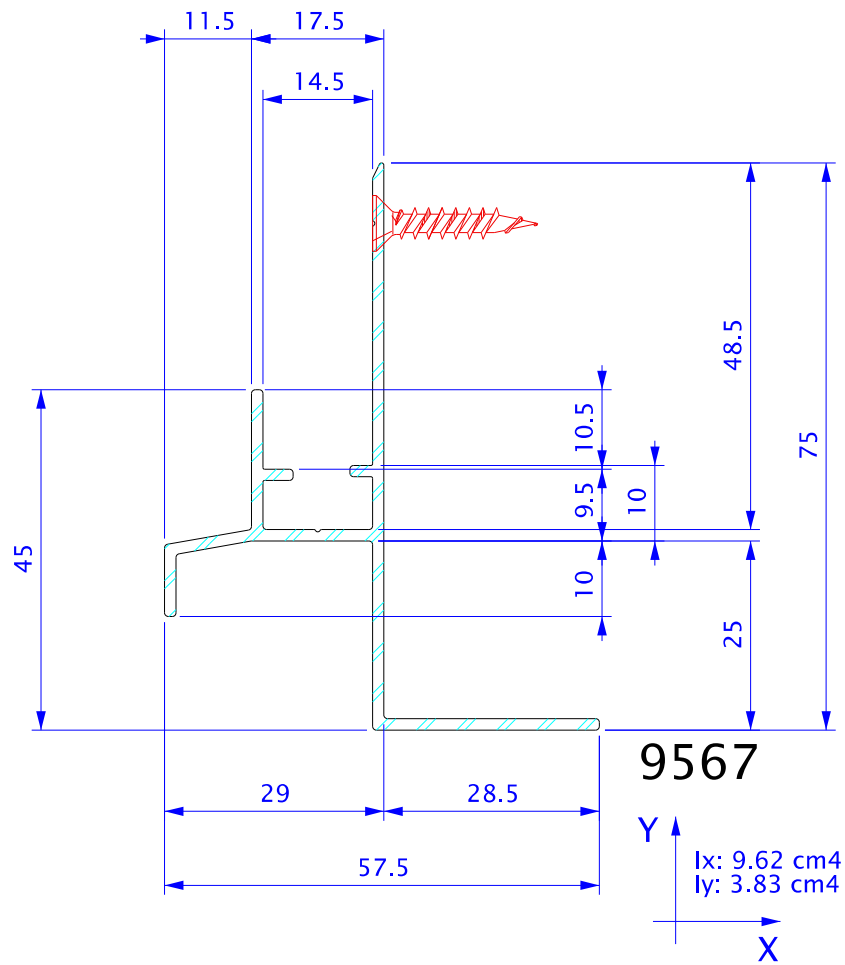


## 2.1.4. Profile sheet P9565:



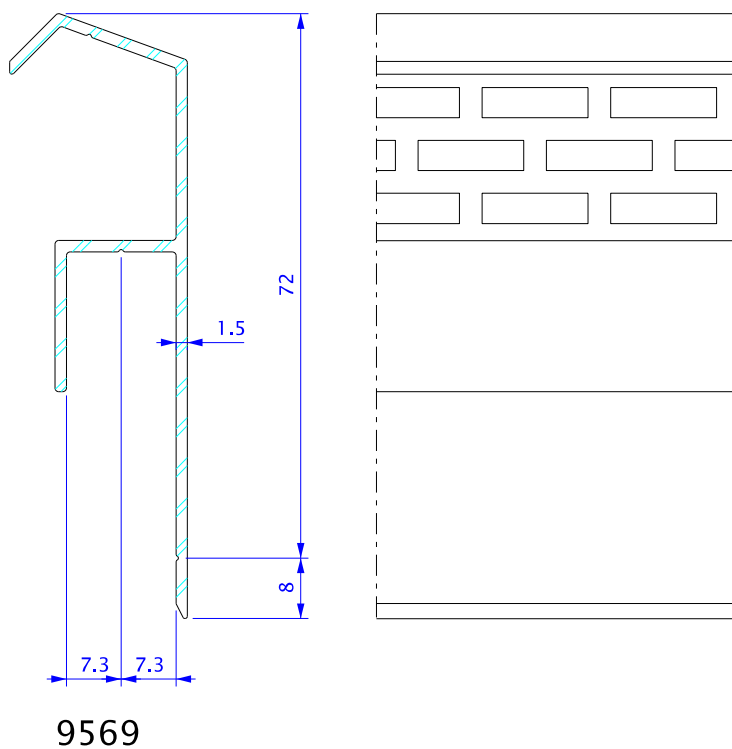
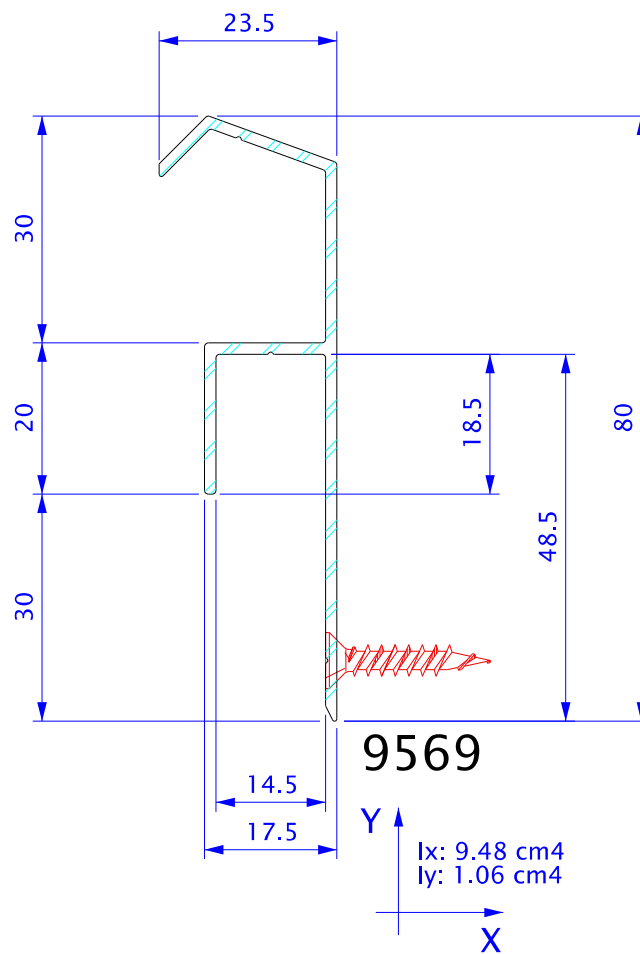


## 2.1.5. Profile sheet P9567:

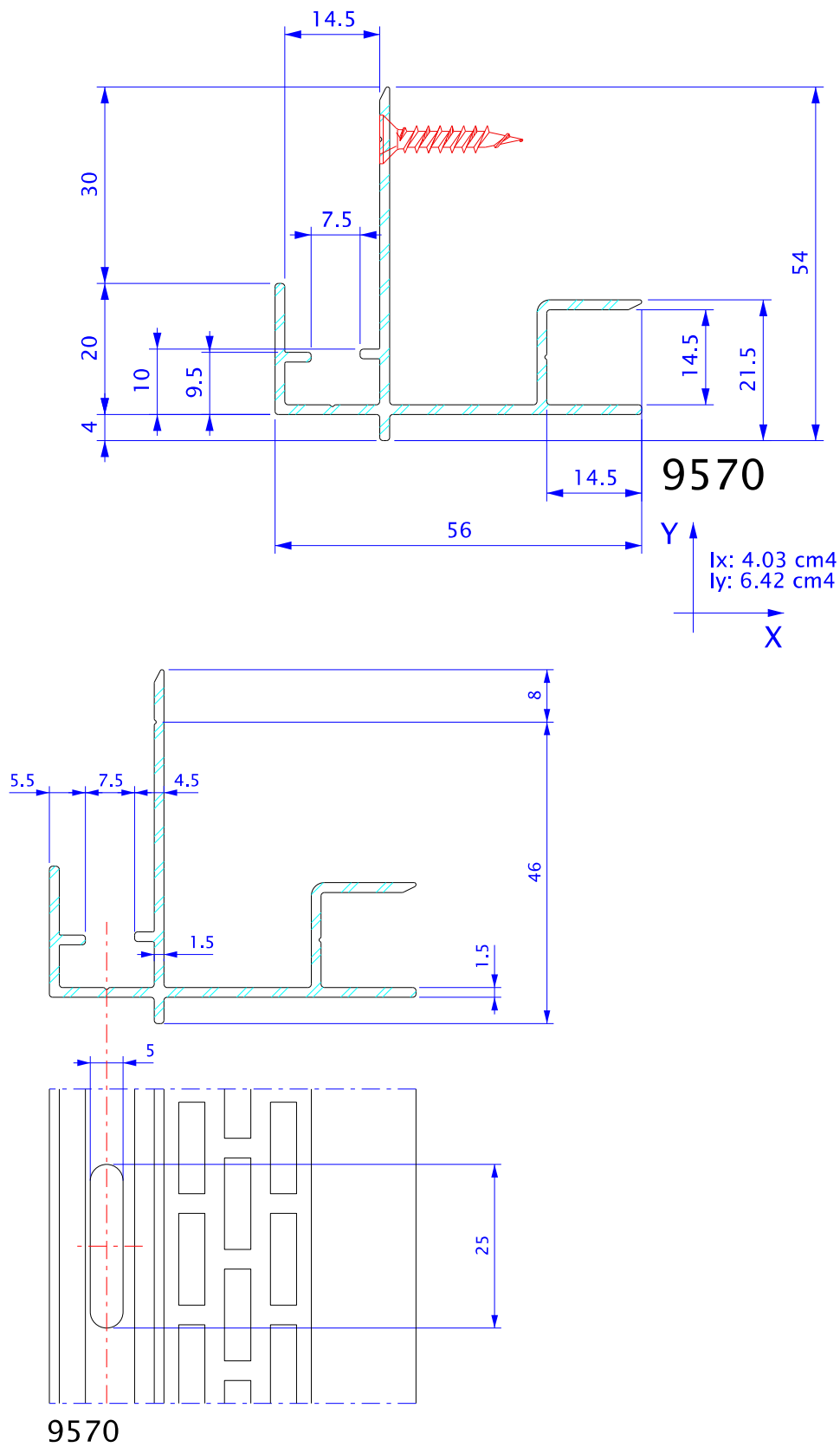


9567












## 2.1.6. Profile sheet P9569:



## 2.1.7. Profile sheet P9570:



## 2.2. Length

COLOUR	9576	9568	9571					
								
502 liquorice black	3 m / 6 m	3 m	3 m					
504 bark brown	3 m / 6 m	3 m	3 m					
505 turf brown	3 m / 6 m	3 m	3 m					
COLOUR	2761	9562	9564	9565	9567	9569	9570	9572
								
00 aluminium	3 m	–	3 m	–	–	–	–	–
12 black anodized	–	3 m	–	3 m	3 m	3 m	3 m	3 m
66 brown anodized	–	3 m	–	3 m	3 m	3 m	3 m	3 m

## 2.3. Product properties

### Looks and functionality:

A building's appearance is determined in part by its facade. With Deceuninck Twinson O-Wall, looks and functionality go hand in hand. O-Wall outdoor wall covering can be part of a total insulation concept or simply function as finish. O-Wall covering is not only suitable for cladding outdoor walls, but also bay windows, dormers and eaves. The result is always a pleasure to behold.

- **Integrated ventilation:** With a ventilated – and thus breathing – outer wall, air circulation ensures the efficient discharge of moisture and heat, making possible a healthy indoor climate.
- **Can be combined perfectly with insulation:** Thanks to its limited thickness, O-Wall is suitable not only for new construction but also for renovations. A well insulated outdoor wall contributes to lower heating costs and reduced CO2 emissions, for new constructions as well as renovations. Thus, it is an energy and cost-saving solution.
- **Quick and easy to install:** The tongue and groove system, and the specially developed patented concealed clips make it quick and easy to install the outdoor wall covering.
- **Simple to work with and process:** No special tools are needed for installing and processing the wall covering. Standard tools are all that is needed. O-Wall is available in 3 and 6-metre lengths.
- **Robust:** Exceptionally strong and robust thanks to its double-walled construction.
- **Down to the last detail:** For a perfect finish, a complete assortment of profiles has been created.
- **Unique material:** Thanks to Twinson's unique composition, O-Wall outdoor wall covering has all the advantages of the materials from which it is made: splinter free, durable, water resistant, natural look...



## 2.4. Technical file

Deceuninck Twinson products meet strict quality standards and are manufactured in accordance with established ISO 9000 quality management system procedures.

MATERIAL CHARACTERISTICS					
	prEN 15534-1	based on	specific property	unit	value
physical properties					
density	§ 6.1	ISO 1183-1/A		kg/dm <sup>3</sup>	1.42 ± 0.05
moisture content	§ 6.2	ISO 16979		%	< 0.2
HDT	§ 6.3	ISO 75-1/A		°C	70 ± 2
vicat softening point	---	ISO 306/B50		°C	82 ± 2
mechanical properties					
impact resistance	§ 7.1.1	ISO 179-1fU	charpy	kJ/m <sup>2</sup>	> 5
tensile properties	§ 7.2	ISO 527-2/1B	tensile modulus	MPa	5000 ± 10%
			tensile strength	MPa	> 35
			strain at break	%	1.3 ± 10%
flexural properties	§ 7.3.1	ISO 178	flexural modulus	MPa	5000 ± 10%
			bending strength	MPa	> 55
			bending at break	%	1.5 ± 10%
durability					
artificial weathering (300 hours WOM)	§ 8.1.1	ISO 4892-2	discoloration	dE	< 20
			impact retention	%	< 20
moisture resistance (28 days)	§ 8.3.1	EN 317	mass increase	%	< 8
			length increase	%	< 0.6
			width increase	%	< 1.5
			thickness increase	%	< 4
thermal properties					
linear thermal expansion (-20 °C ... +60 °C)	§ 9.1	ISO 11359-2	length direction	10 <sup>-6</sup> m <sup>-1</sup> ·K <sup>-1</sup>	20 - 25
			width direction	10 <sup>-6</sup> m <sup>-1</sup> ·K <sup>-1</sup>	45 - 50
			thickness	10 <sup>-6</sup> m <sup>-1</sup> ·K <sup>-1</sup>	55 - 65
thermal conductivity	---	ISO/CD 22007-2	room temperature	W/m·K	0.2 - 0.3
oxygen index	§ 10.1	ISO 4589-2		%	> 20
epiradiator	---	NF P92-501		class	M4
	---	NBN S21-203		class	A4
kleinbrenner	--	DIN 4102-1		class	B2

date: 19/01/2010  
version: v2

		prEN 15534-1	based on	specific property	unit	value
mechanical properties	impact resistance	§ 7.1.2.1	EN 477	falling mass	J	6 - 7
	durability	natural weathering (1 year Bandol)	ISO 877-2	discoloration	dE	< 20
impact retention				%	< 20	
bending strength retention				%	< 20	
boiling test		§ 8.3.3	ISO 1087-1	mass increase	%	< 8
	length increase			%	< 0.6	
	width increase			%	< 1.5	
thermal properties	heat reversion	§ 9.2	EN 479	thickness increase	%	< 4
	heat build-up	§ 9.3	ASTM D4083		%	< 0.2
	single flame source	§ 10.2.1	ISO 11925-2		°C	< 40
burning behaviour	single burning item	§ 10.2.2	EN 13823		pass	OK
					class	D s2 d0

date: 19/01/2010  
version: v2

# INSTALLATION

## HORIZONTAL INSTALLATION

- 3.1.1. System assembly
- 3.1.2. Understructure
- 3.1.3. Expansion allowance
- 3.1.4. Finishing

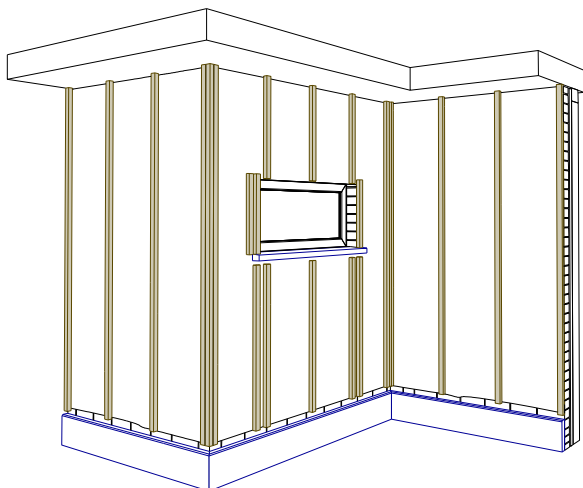
## VERTICAL INSTALLATION

- 3.2.1. System assembly
- 3.2.2. Understructure
- 3.2.3. Expansion allowance
- 3.2.4. Finishing

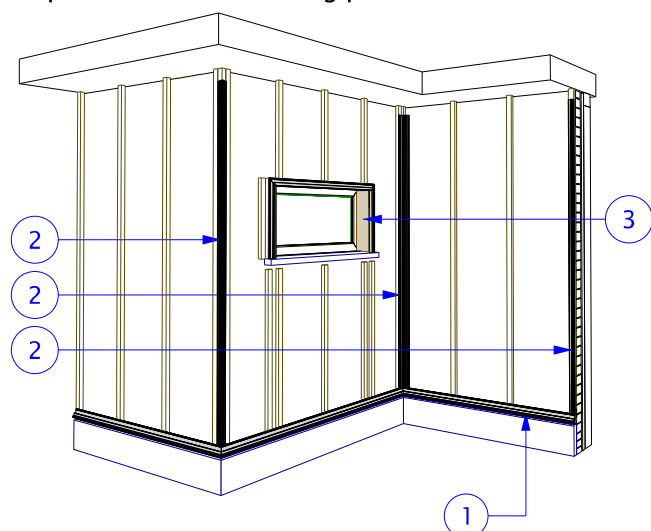
## 3.1. Horizontal installation

### 3.1.1. System assembly:

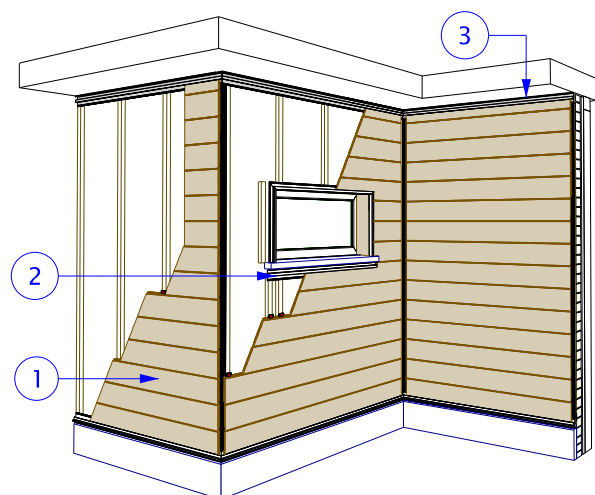
Step 1: The supports



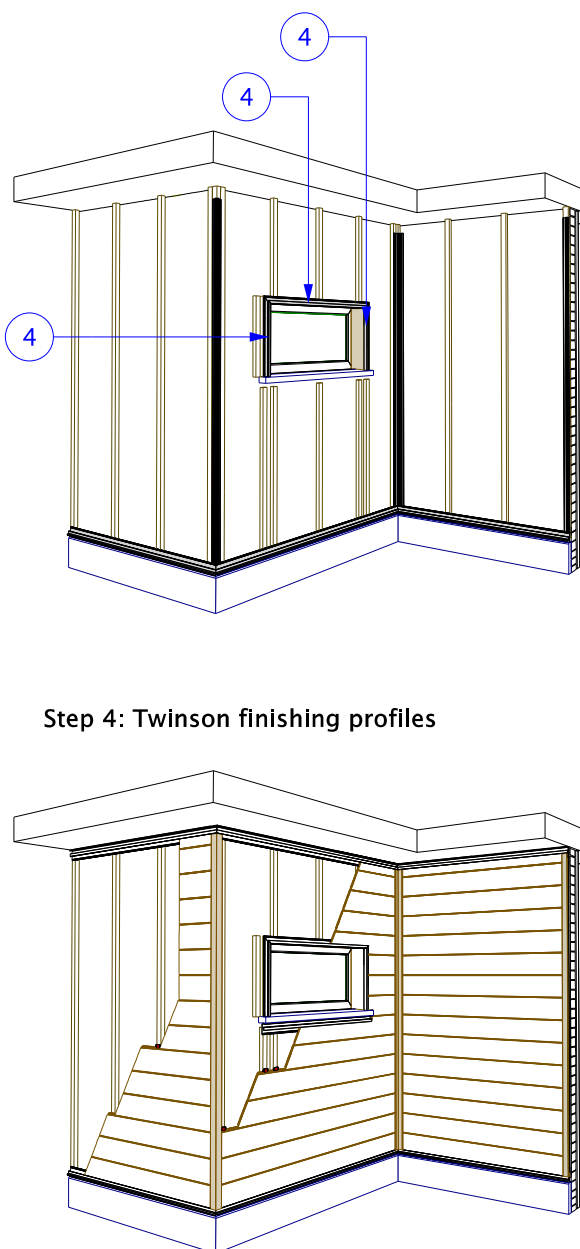
Step 2: Aluminium finishing profiles



Step 3: Main profiles (twinson planks P9576) + upper aluminium finishing profiles



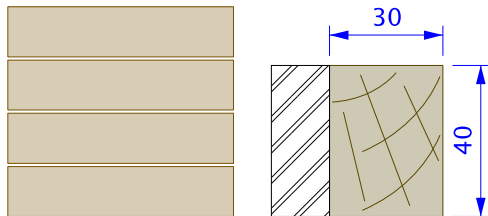
Step 4: Twinson finishing profiles



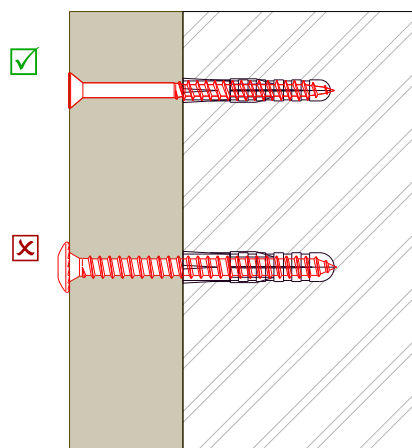
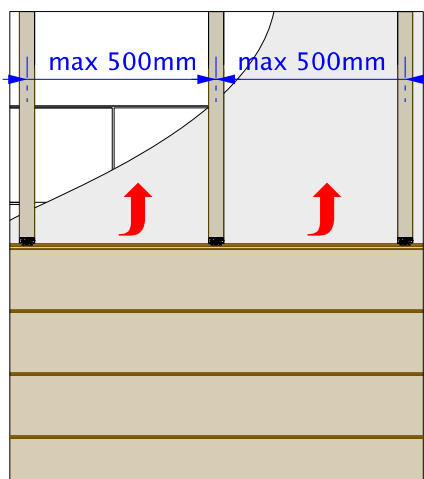
### 3.1.2. Understructure:

#### A. General rules:

- Twinson has to be installed on a solid and levelled structure.
- The dimensions of the battens required minimum 30mm (depth) by 40mm (width). This is to ensure that the recommended P9593 fixings are adequate to support the lead of the O-Wall profiles and to allow adequate ventilation.



- Distance between the battens have to be kept to a maximum of 50cm.
- If the width of the cladding is 50cm or less, use a minimum of 3 battens.
- Impregnated wood is advised.
- Where necessary we advise using a moisture barrier to protect the wall against moisture. The moisture barrier has to be applied between the battens and the supporting wall.



Ensure screws are countersunk.

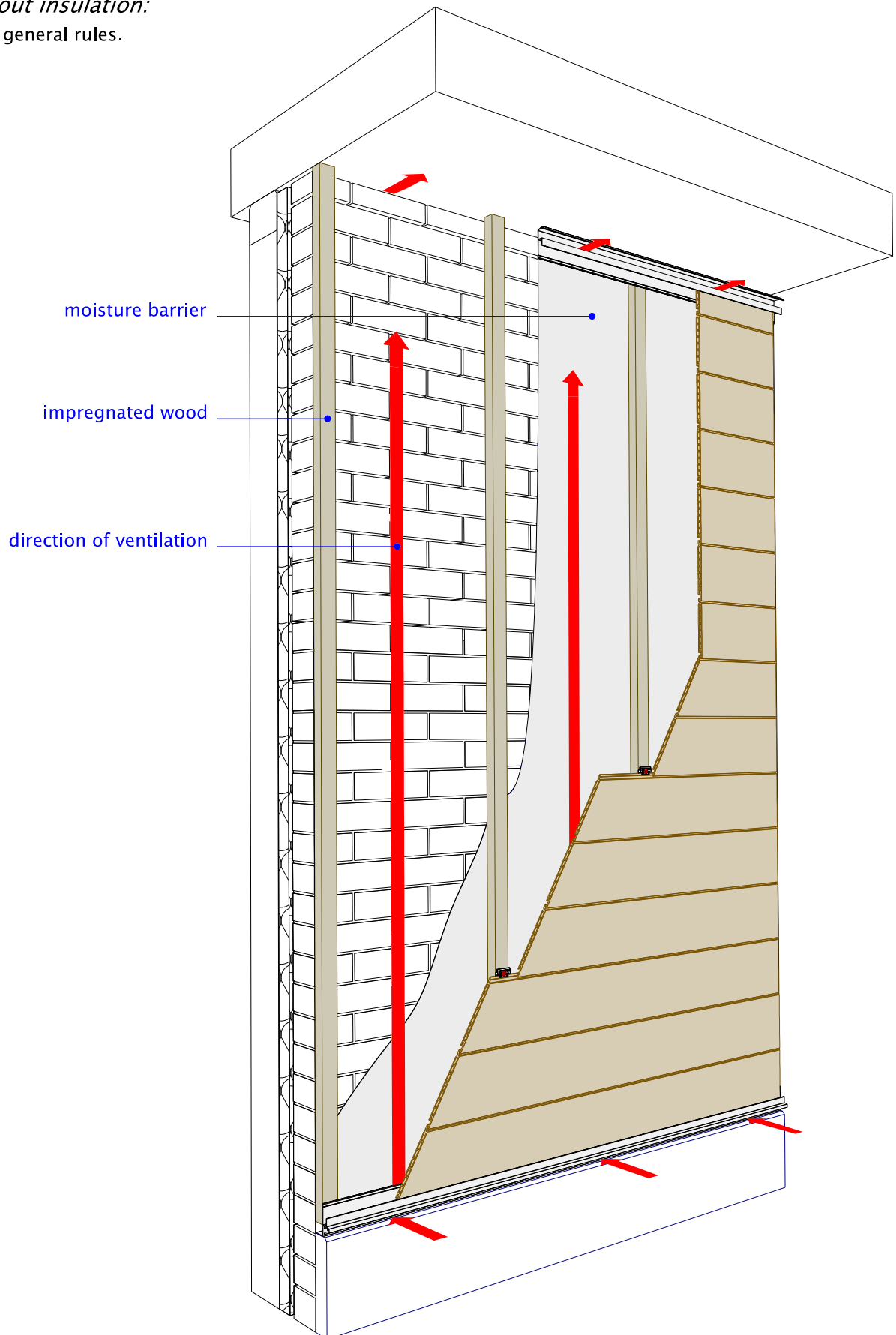
- **NOTES:**  
Keep in mind that if you are using finishing profiles you have to place additional battens. (more information in the chapter: finishing profiles)

- **Ensure the understructure is of good quality and craftsmanship and is in accordance with local codes of practice or legislation.**



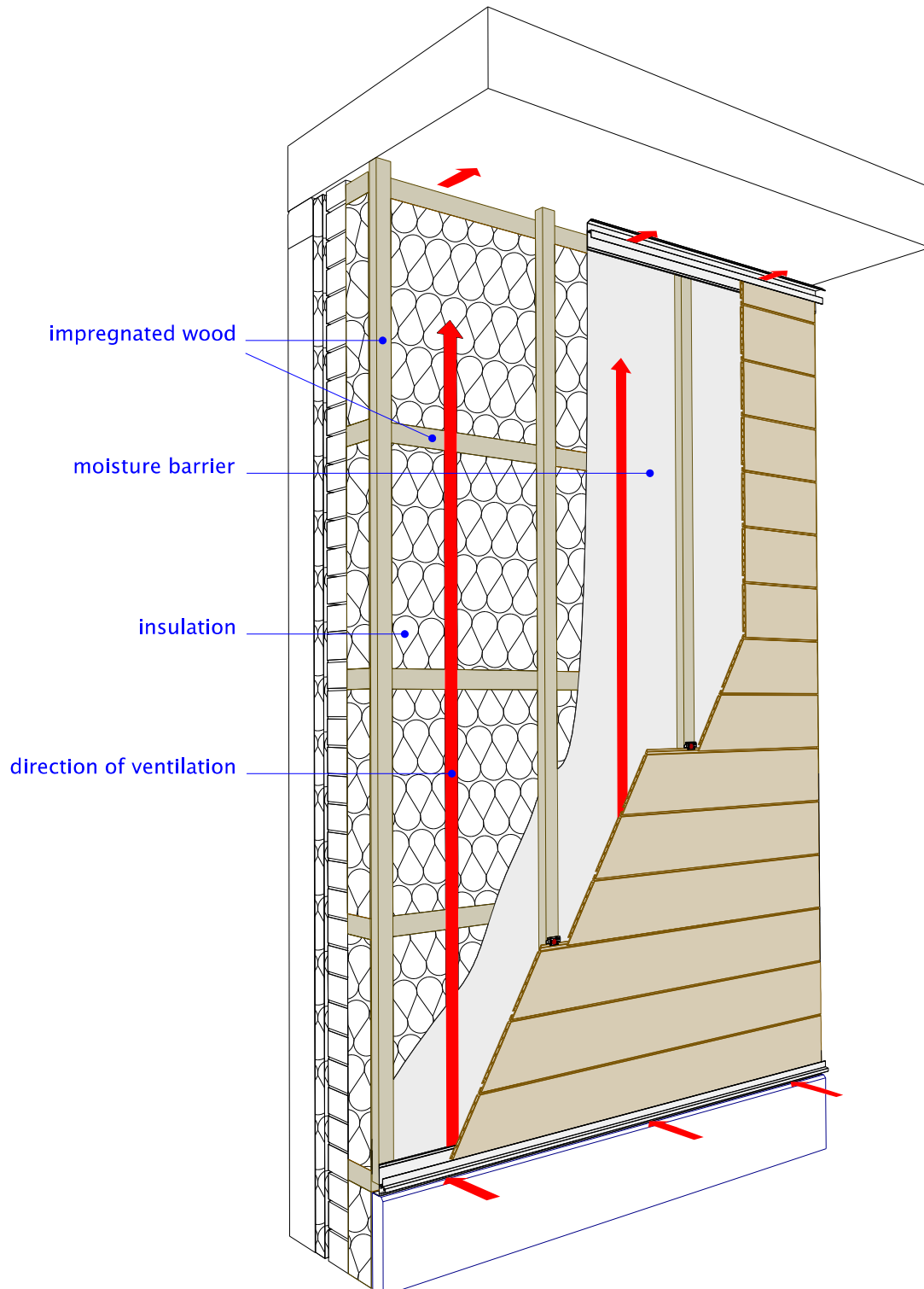
*B. Without insulation:*

- See general rules.



### C. With insulation:

- Follow same basic rules as without insulation.
- The illustration underneath is an example of one of the many types of insulation solutions. There are many different insulation materials on the market with their specificities and fixing methods.
- The same applies for the fixing of your battens into the wall/structure.
- We advise contacting the respective companies to help you with specifying your insulation and fixing system.
- General guidelines however have to be followed.

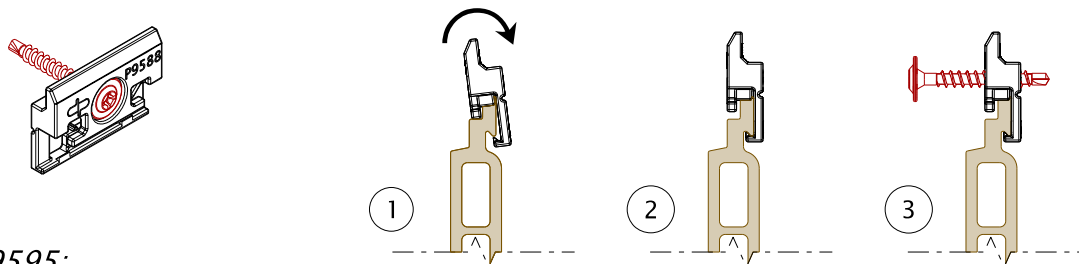


### 3.1.3. Expansion rules:

Twinson contains wood fibres and is therefore subject to moisture content, leading to potential expansion. This is allowed for in our system providing our installation guidelines are followed. The standard is 10mm elongation space unless specified otherwise.

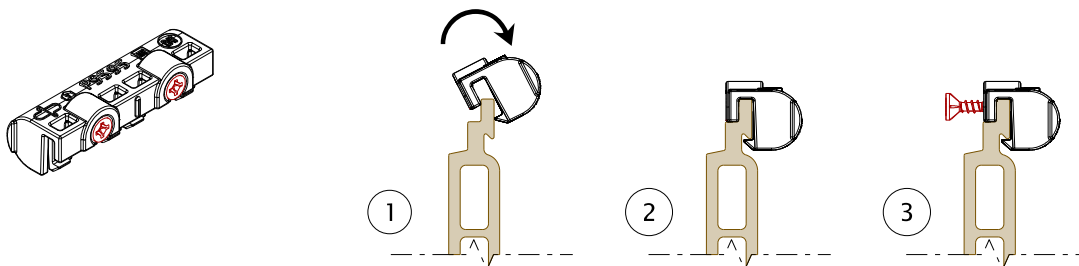
#### A. P9588:

The clip P9588 holds the plank P9576 in place while allowing it to elongate freely whilst also absorbing the width elongation. The clip P9588 is easily clipped to the plank P9576 and positioned on every batten. After positioning, the clip is screwed to the batten with the P9593. (Both available in the kit 9488)



#### B. P9595:

To ensure that the elongation of the plank is symmetrical on both sides we developed the P9595 which spaces the planks evenly while allowing width elongation.



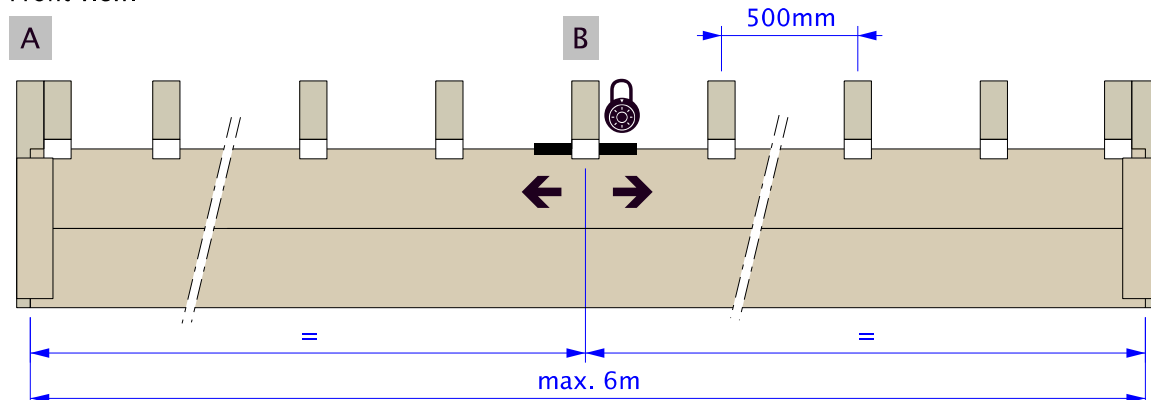
#### C. General expansion rules:

To ensure the elongation in length is managed by the system you can follow one of the 2 following rules depending on the installation.

##### • Length facade cladding: $\leq 6m$

- For installations upto 6 metres you can use max. one full length.
- On both sides you have to allow 10mm for the length elongation of the profile. This elongation is not visible, it's hidden underneath the Twinson finishing profiles. (for more information see chapter finishing profiles)
- To ensure that the elongation of the profiles is identical on both sides, fix the plank in the middle or nearest beam with 2 clips P9595, one on each side of the batten.

Front view:



Legend:

□ = clip P9588

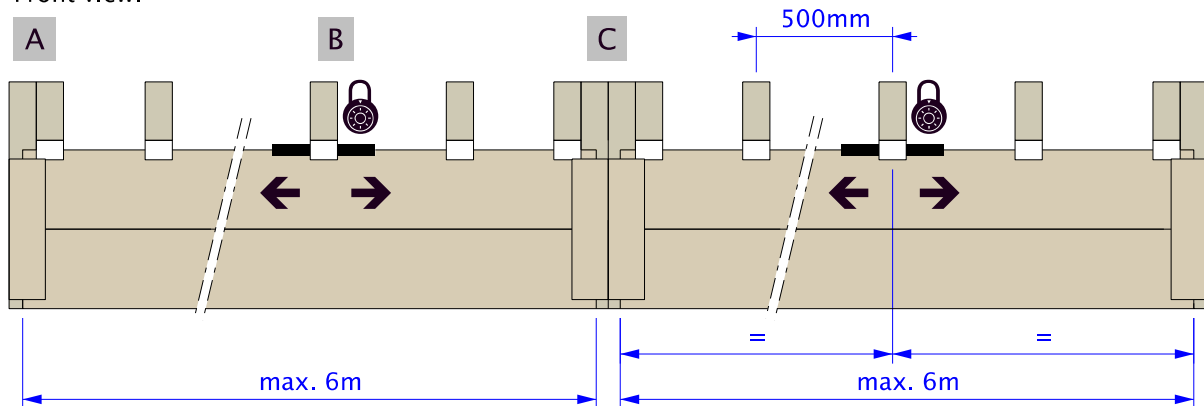
🔒 = blocked

■ = clip P9595

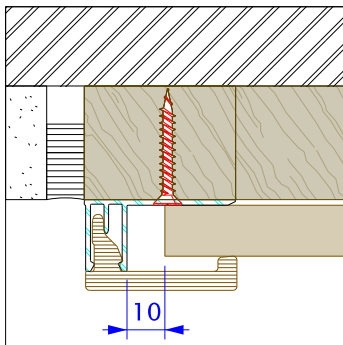
➡ = direction of elongation

- If you have a wall of more than 6m and you want to work with full lengths, you can use 2 x P9568 & P9562 back to back and start a new module of max. 1 length of 6m.

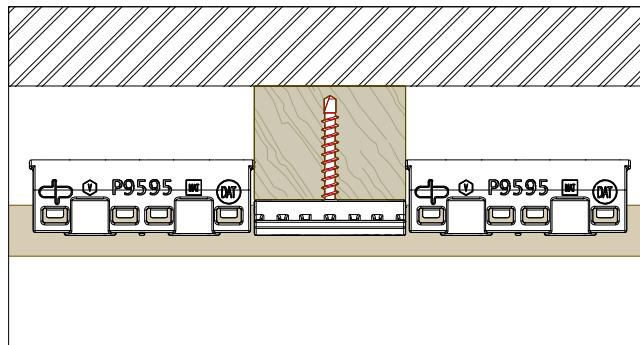
Front view:



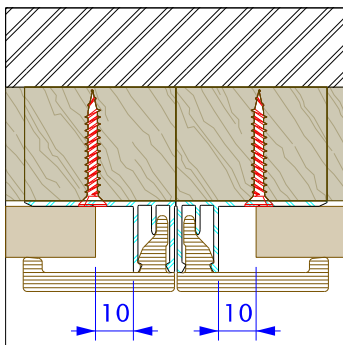
**A** Top view:



**B** Top view:



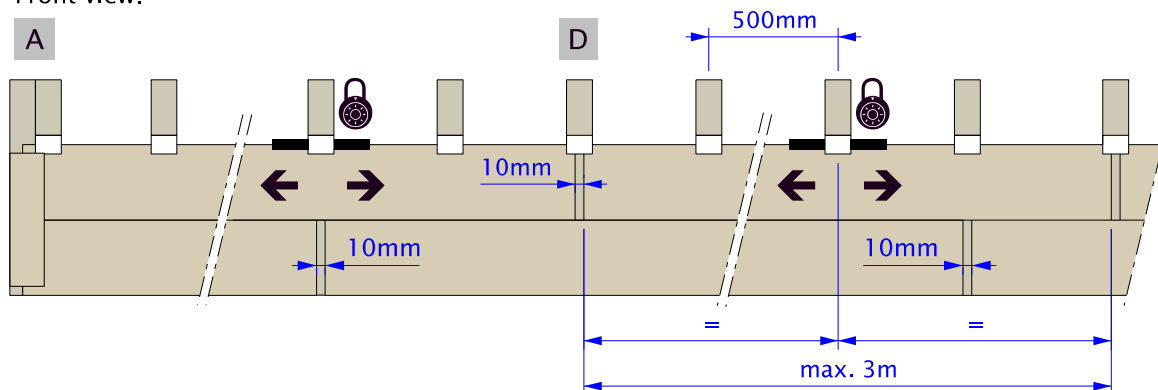
**C** Top view:



# • Length facade cladding: > 6m

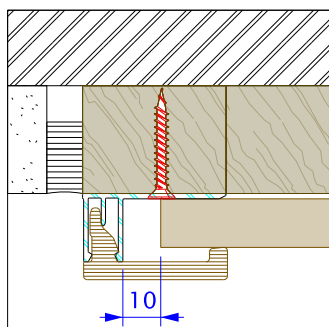
- For installations more than 6m or a multiple of planks installed on the same height after each other you will need to leave a gap of 10mm between the planks. This allows the planks to elongate freely. The length of one plank should never exceed 3m. Otherwise the gap of 10mm will not be enough.
- To insure that the elongation of the profiles is identical on both sides, fix the plank in the middle or nearest beam with 2 clips P9595, one on each side of the batten.

Front view:

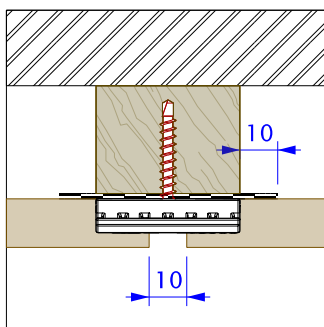


- Because there is a joint, it is necessary to protect the battens to insure the life span. This can easily be done with a flexible lipless seal (or other depending on the width of the batten).
- Try to have an overlap of 10mm on both sides. See D

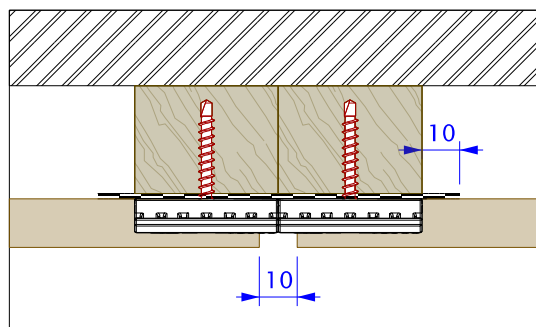
A Top view:



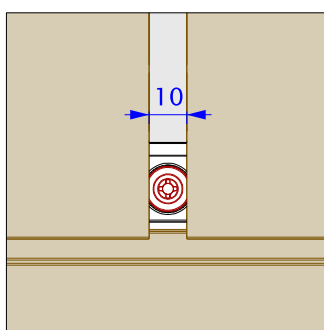
D Option 1: Top view:



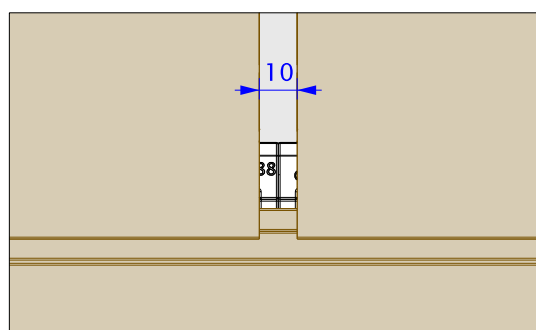
D Option 2: Top view:



D Option 1: Front view:



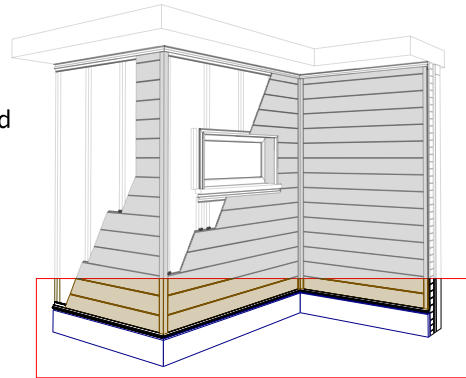
D Option 2: Front view:



### 3.1.4. Finishing:

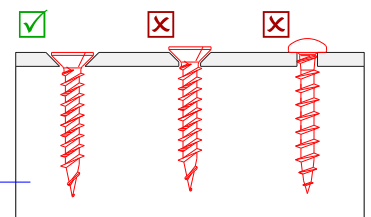
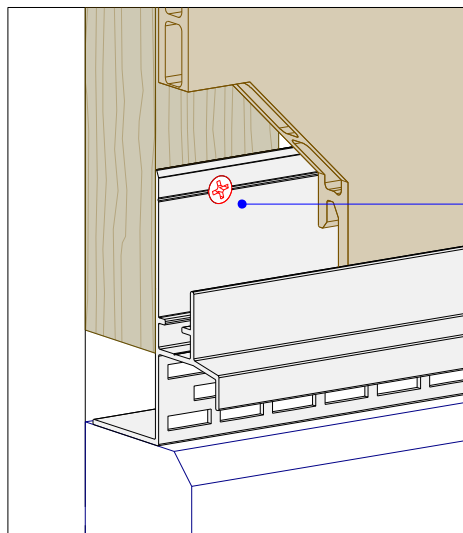
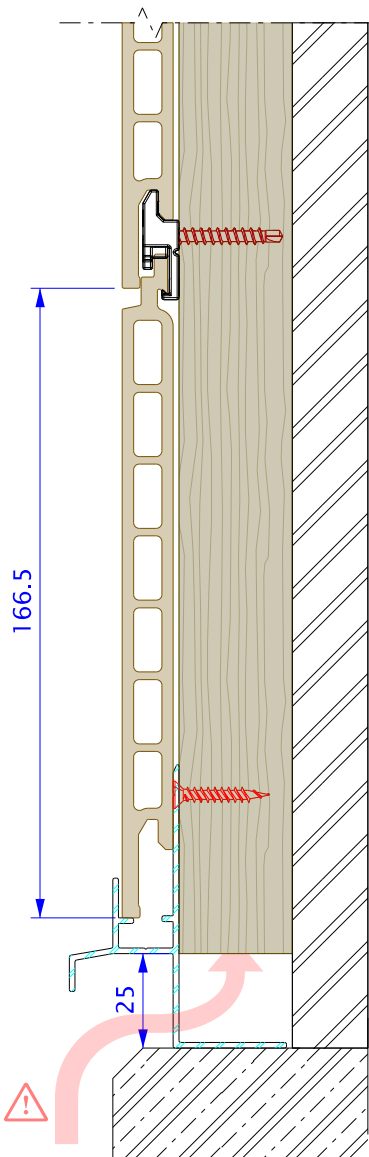
#### A. Start of installation:

- We strongly recommend to start with the P9567.
- We advise starting at a height of minimum 30 cm from the ground to avoid stains from splashing raindrops and dirt.



#### 1. Start of sill:

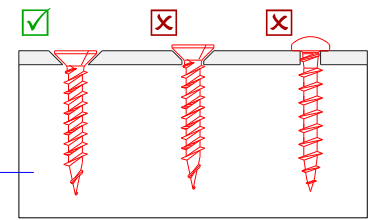
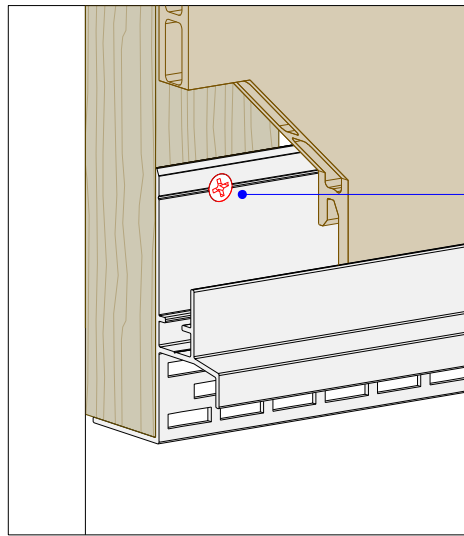
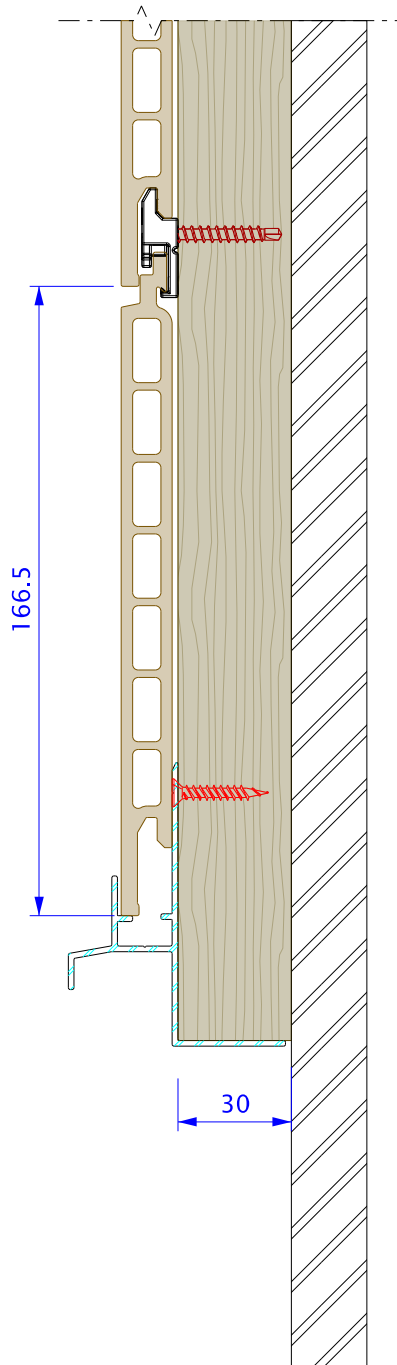
- For example: stone cills, bricks
- Install the starter profile P9567 directly onto the stone cill.
- The ventilation is allowed for within the design of the start profile.
- The profile has to be fixed every 50cm.
- Make sure that the screws are countersunk otherwise the cladding profiles will not fit into the starter profile P9567.
- Slide the plank P9576 into the P9567.



Stainless steel



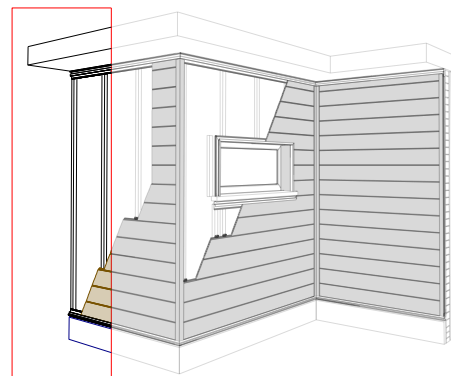
2. Starting at different/variable heights:



Stainless steel

### B. Sides:

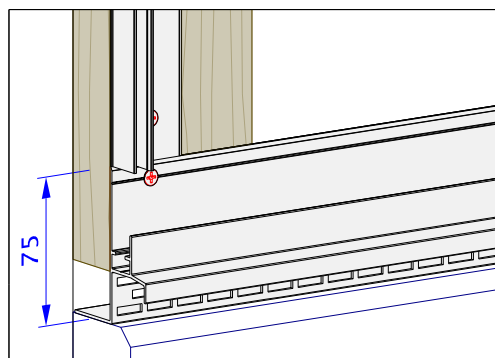
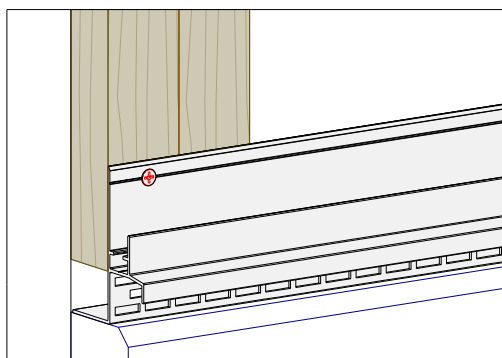
- The finishing trims on the ends consists of the aluminium profile P9562 in combination with the Twinson finishing profile P9568.



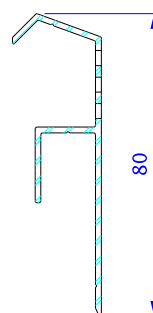
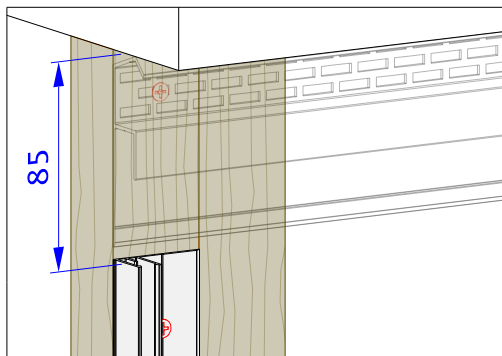
### SEQUENCE OF ASSEMBLY

#### Step 1

- Ensure that you place an additional batten adjacent where you will fix the finishing profile. This is necessary to ensure that you can fix a clip P9588 close to the finishing profile. Failure to do this compromises the fixed distance between the planks.
- Next take your starter profile P9567 and place the aluminium P9562 above the starter profile. The profile must be fixed every 50 cm. (3.1/8)



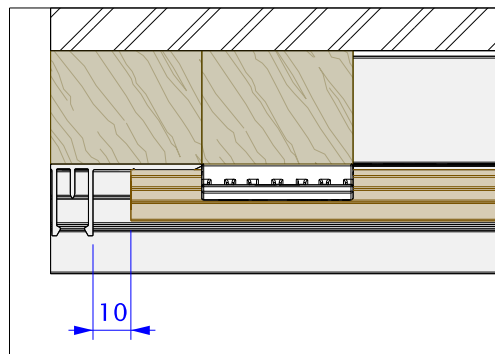
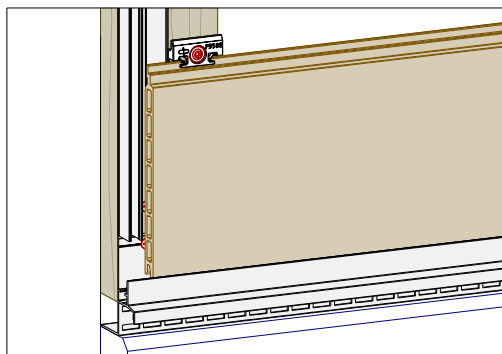
- For a quick installation, allow an extra 5mm expansion gap between the top finishing profile and the aluminium finishing profile at the sides.



Top finishing profile P9569:  
see chapter Top of installation.

#### Step 2

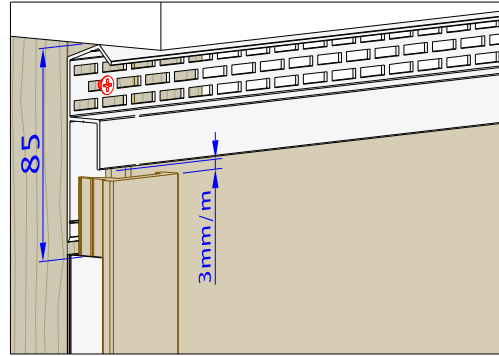
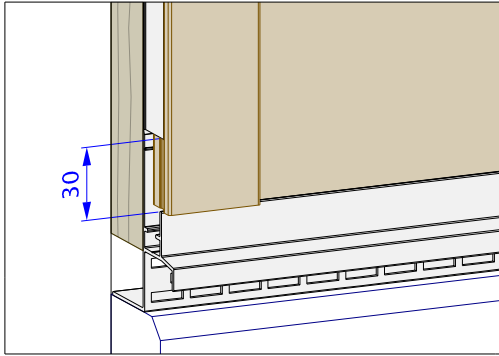
- Install planks (P9576) and follow the requirements regarding expansion. Allowing 10mm between the edge of the plank P9576 and the edge of the aluminium profile P9562.



- ⚠ If there are windows on the elevation, you first need to finish off before installing the planks. (see chapter window finishing)

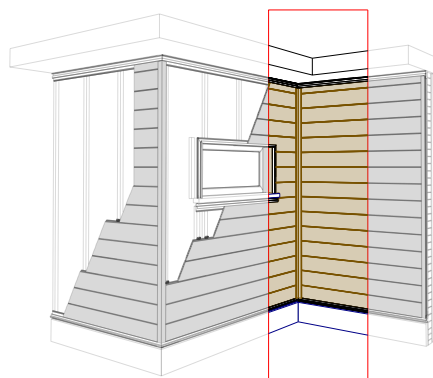
### Step 3

- Cut the Twinson profile P9568 to the right length (bear in mind that you need to allow 3mm/m expansion space for proper elongation) and clip it gently into the aluminium P9562 using your hands.



### C. Inner corner:

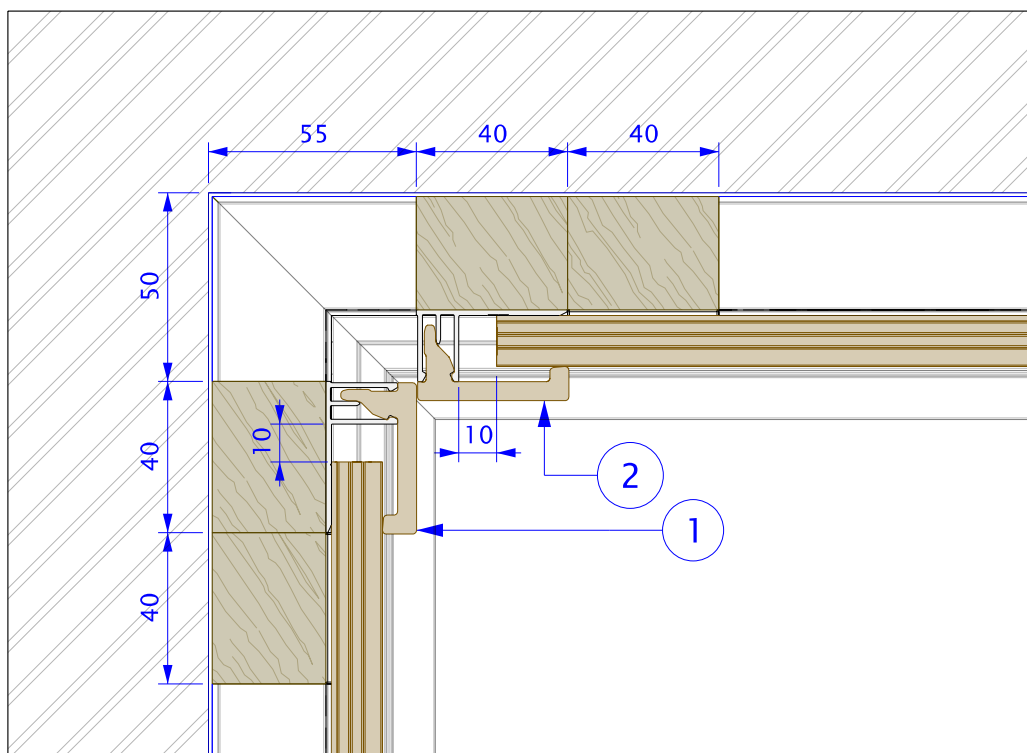
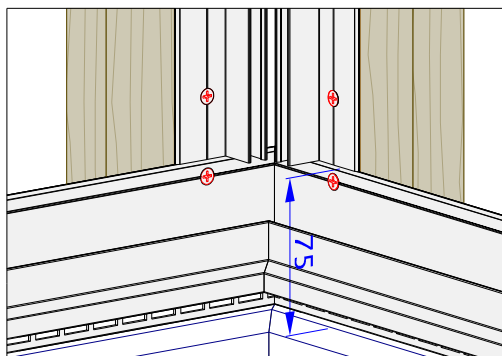
- The finishing on the sides consists of a pair of the aluminium profiles P9562 in combination with the Twinson finishing profile P9568.



### SEQUENCE OF ASSEMBLY

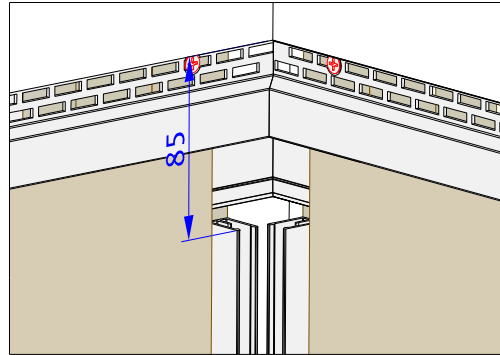
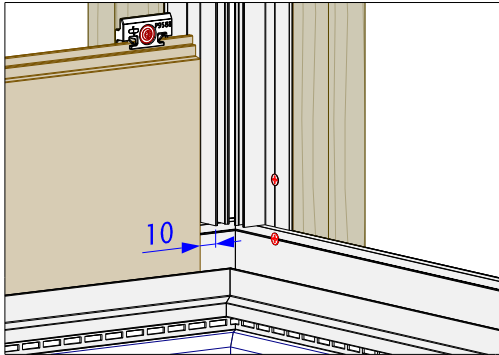
#### Step 1

- Ensure that you place an additional batten adjacent to the finishing profile. This is necessary to ensure that you can fix a clip P9588 close to the finishing profile. Failure to do this compromises the fixed distance between the planks.
- Next put your starter profile P9567 then place the aluminium P9562 above the starter profile. Ensure you position them so that both P9568 Twinson clips can fit in (see drawing top view). The profile must be fixed every 50 cm.



## Step 2

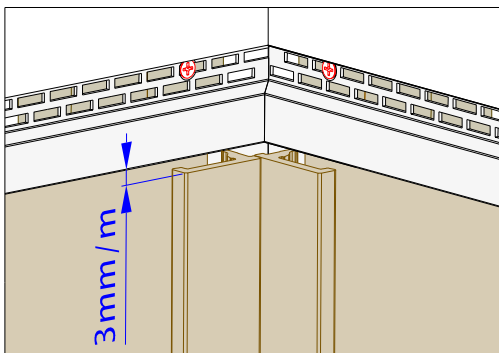
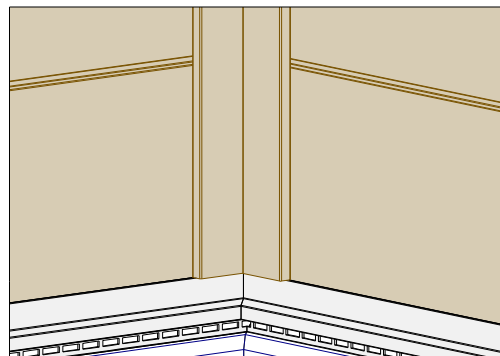
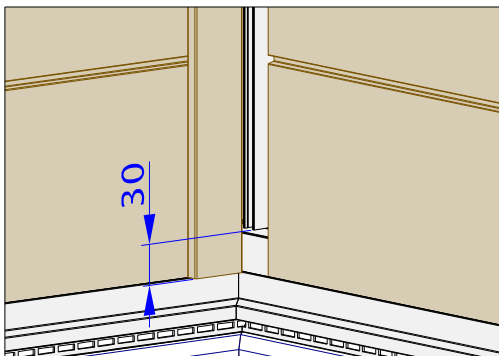
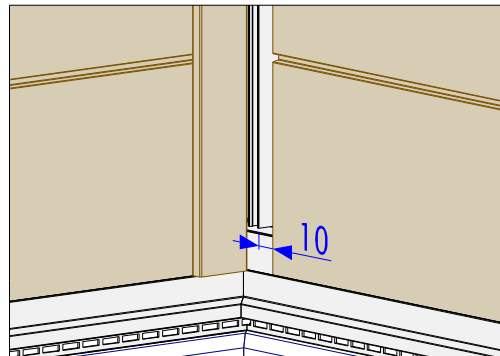
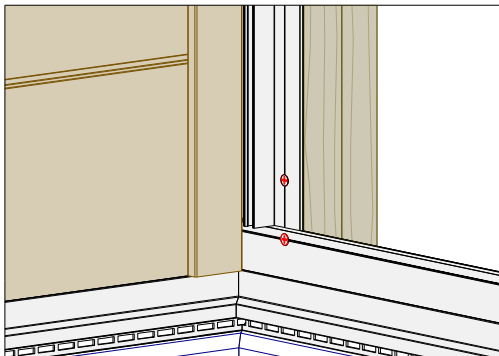
- Install planks (P9576) and follow the guidelines in chapter expansion rules (3.1/5 – 3.1/7). Ensure that you keep 10 mm between the edge of the plank P9576 and the edge of the aluminium profile P9562.



- If there are windows on the elevation, you first need to finish off before installing the planks.

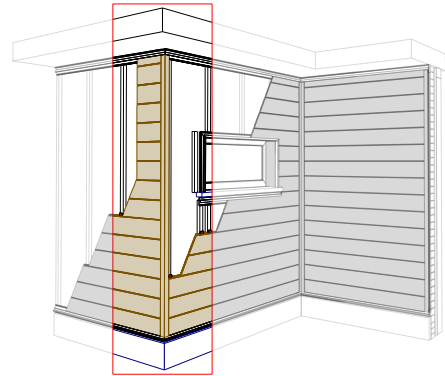
## Step 3

- Cut the Twinson profile P9568 to the right length (bear in mind that you need to allow 3mm/m expansion space for proper elongation) and clip it gently into the aluminium P9562 using your hands.



#### D. Outer corner:

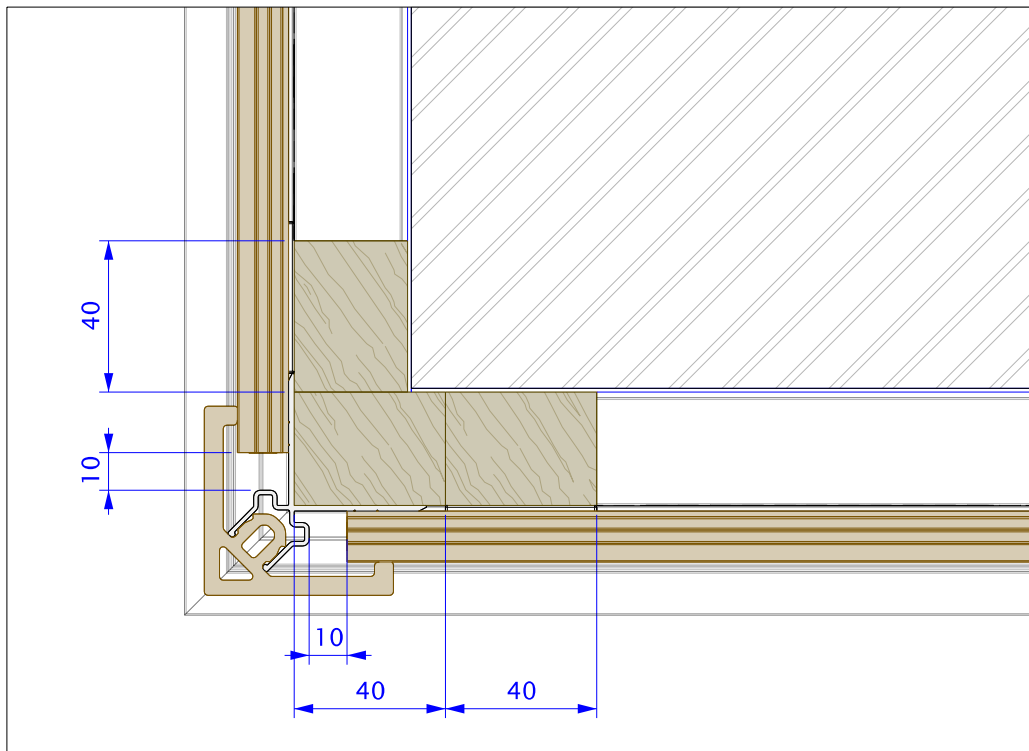
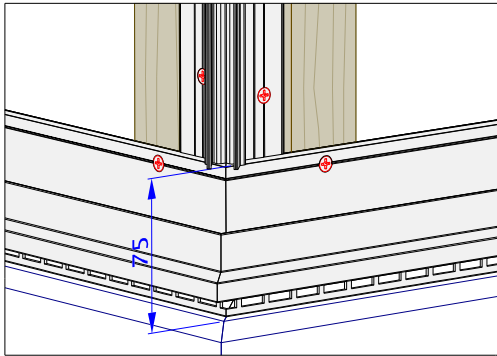
- The finishing on the sides consists of the aluminium profile P9564 in combination with the Twinson finishing profile P9571.



#### SEQUENCE OF ASSEMBLY

##### Step 1

- Ensure that you place an additional batten adjacent to the finishing profile. This is necessary to insure that you can fix a clip P9588 close to the finishing profile. Failure to do this compromises the fixed distance between the planks.
- ⚠ Next put your starter profile P9567 then place the aluminium P9564 above the starter profile. Ensure you position them so that both P9568 Twinson clips can fit in (see drawing top view). The profile must be fixed every 50 cm sequentially on both sides.

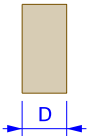




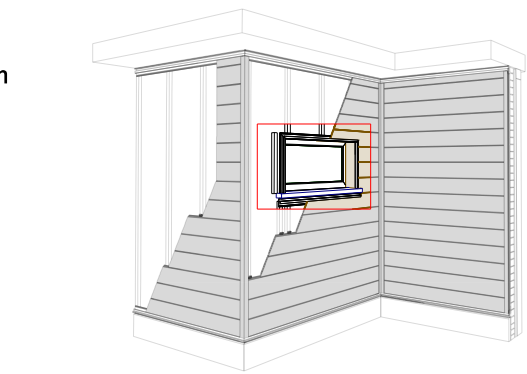
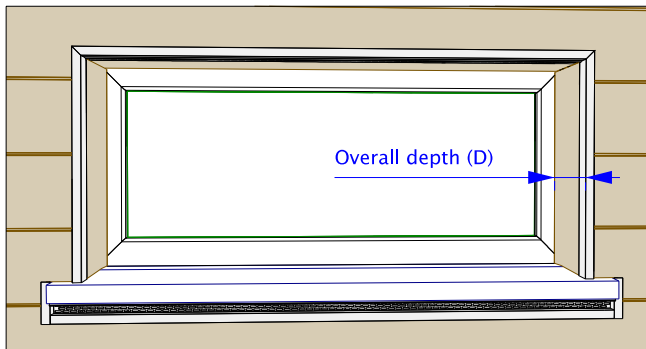
### F. Window:

- ⚠ When installing planks make sure you always first start with the finishing around the window.
- There are 2 possibilities:
  1. Overall depth  $\leq 160$  mm
  2. Overall depth  $> 160$  mm

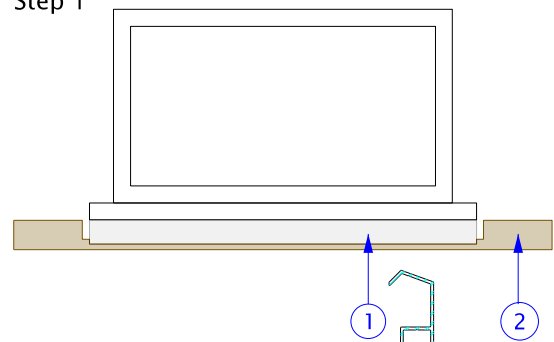
#### 1. Overall depth $\leq 160$ mm: one plank is sufficient



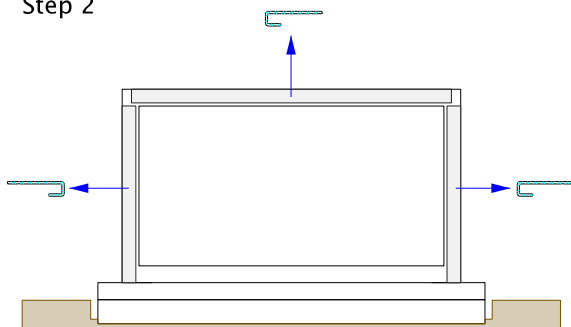
#### STEP BY STEP PLAN



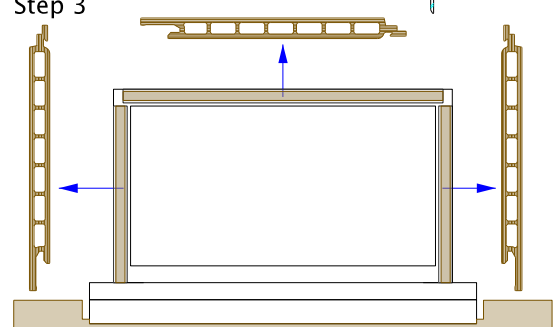
#### Step 1



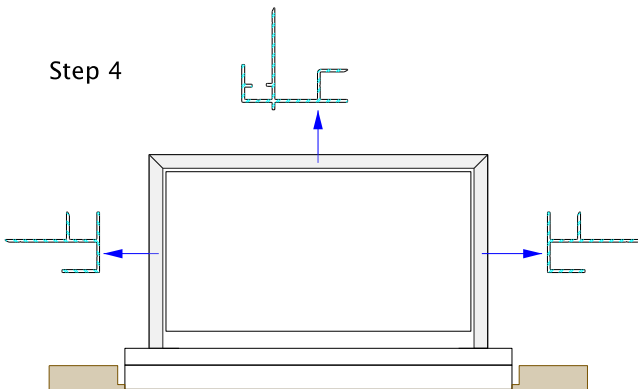
#### Step 2



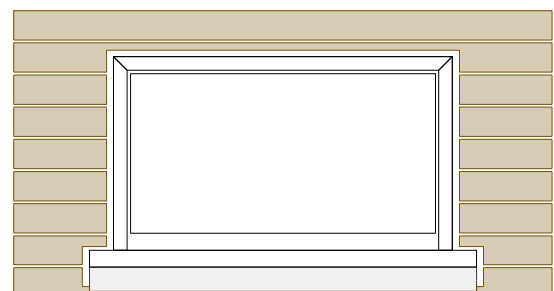
#### Step 3



#### Step 4

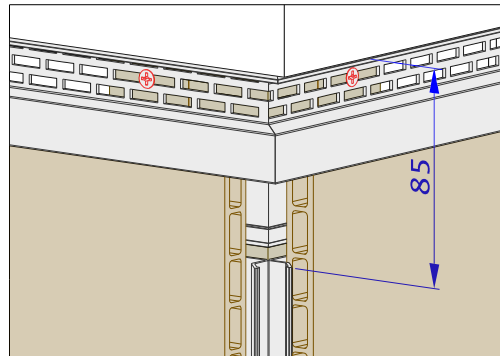
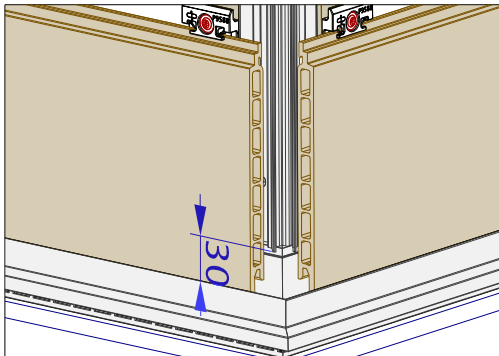


#### Step 5



## Step 2

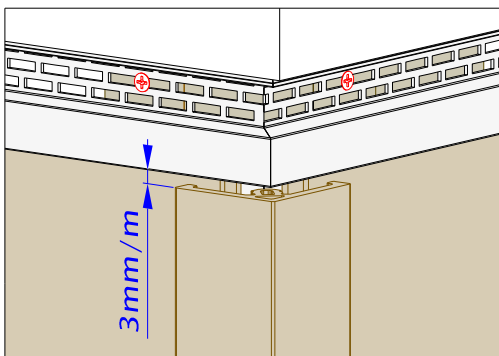
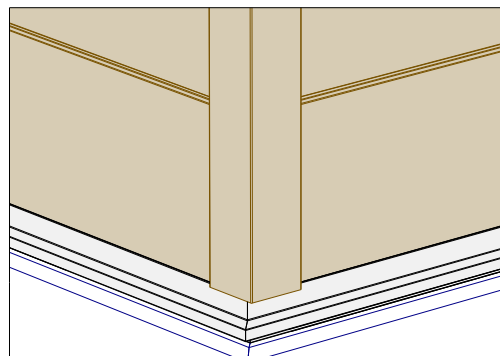
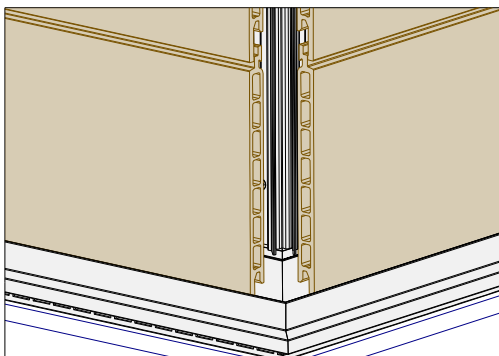
- Install planks (P9576) and follow the guidelines in chapter expansion rules (3.1/5 – 3.1/7). Ensure that you keep 10 mm between the edge of the plank P9576 and the edge of the aluminium profile P9564.



- If there are windows on the elevation, you first need to finish off before installing the planks. (see chapter window finishing)

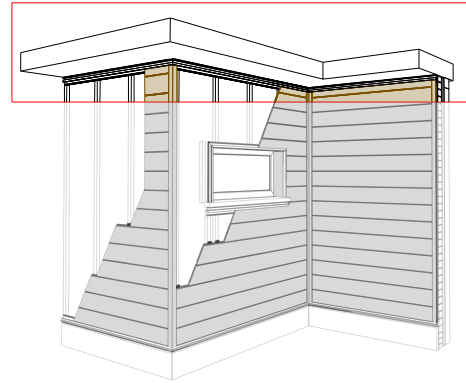
## Step 3

- Cut the Twinson profile P9571 to the right length (bear in mind that you need to allow 3 mm/m expansion space for proper elongation) and clip it gently into the aluminium P9564 using your hands.



### E. Top of installation:

- As with the starter profile, the P9569 allows ventilation for your installation. Ensure there is nothing obstructing the perforated zone preventing the air to circulate freely.

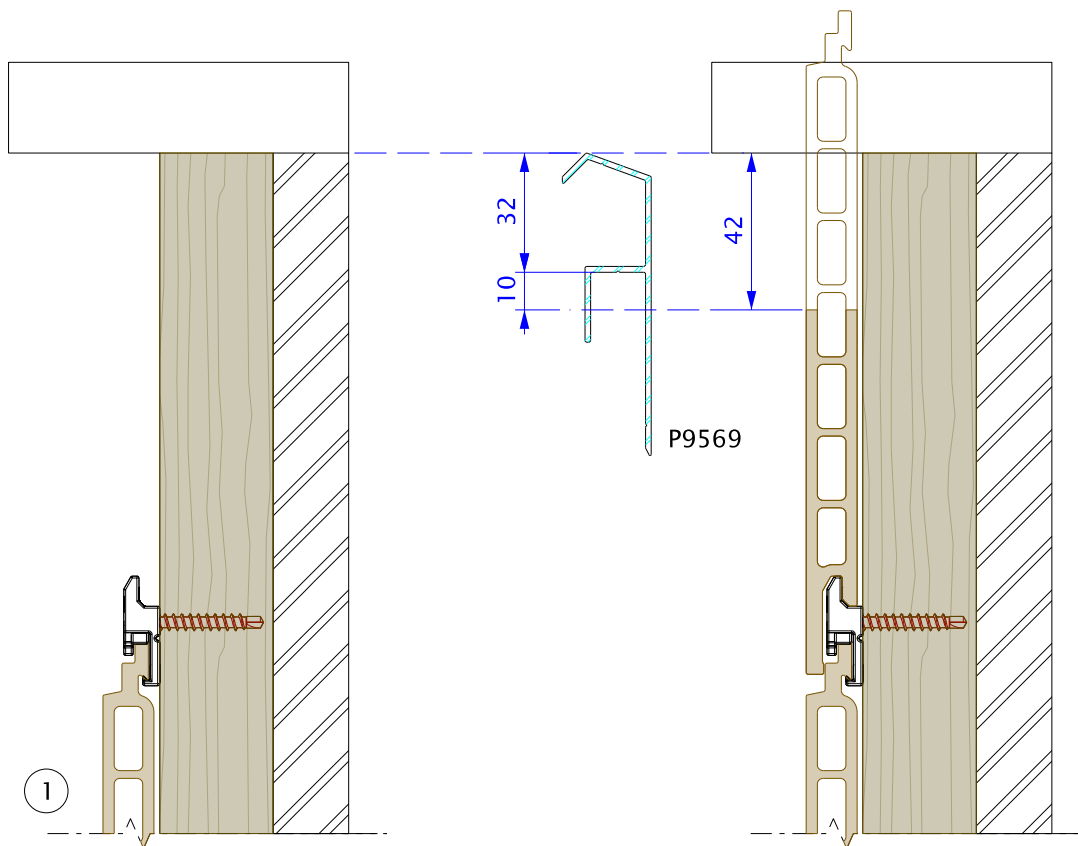


### SEQUENCE OF ASSEMBLY

#### Step 1

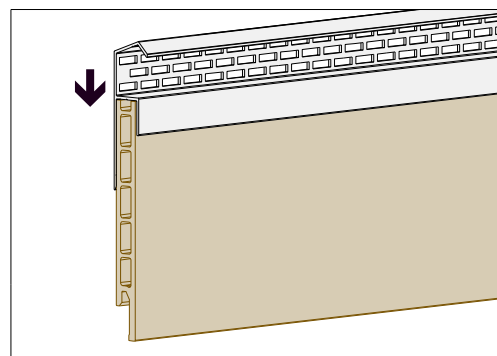
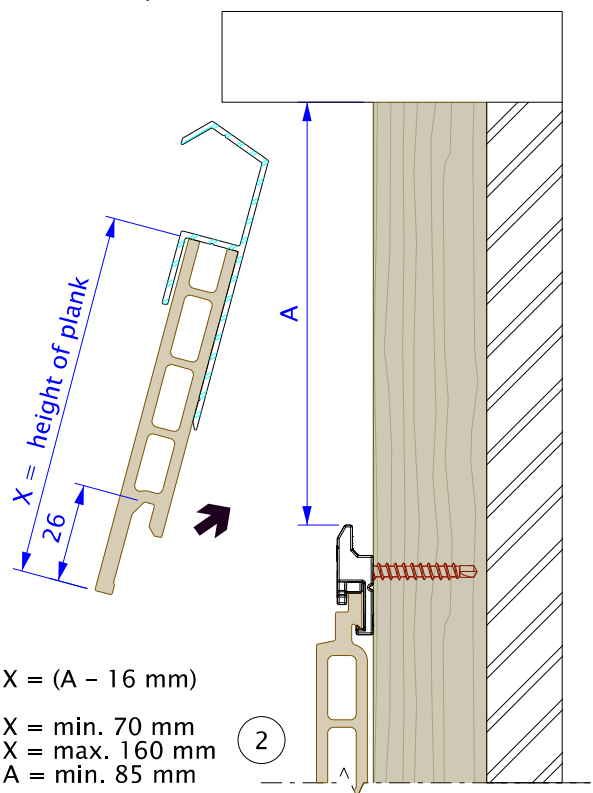


- Cut the profile P9576 along its length so that you have minimum 40 mm left between the plank P9576 and the edge of the top of the cladding (for example roof edge).
- An additional 10 mm is required to manoeuvre the plank over the clip P9588.

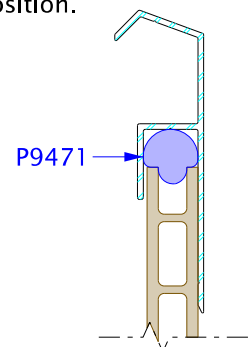


## Step 2

- Place the aluminium finishing profile P9569 over the plank P9576 and slide them both over the last P9588 clips.

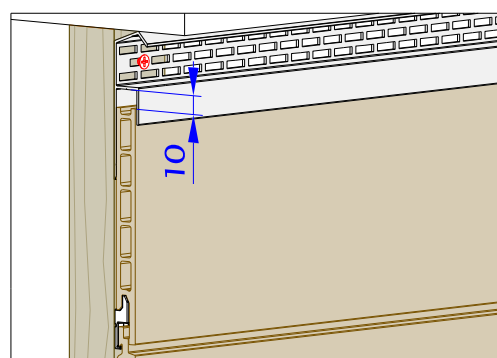
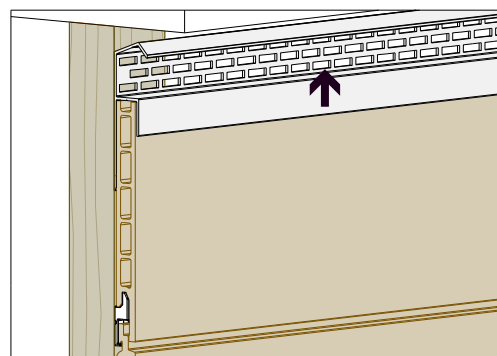
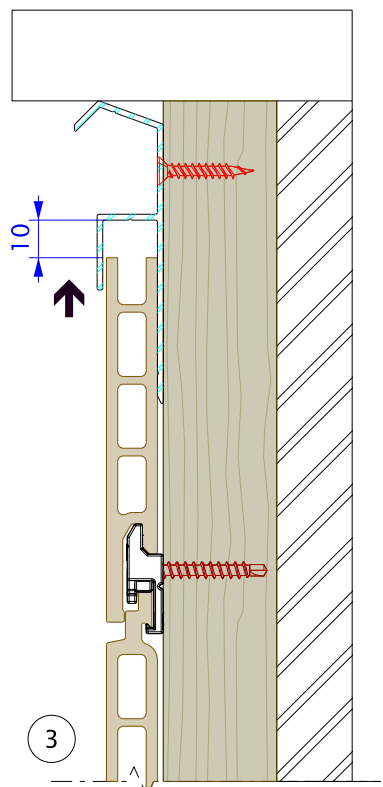


- To avoid movement of the plank, use some pieces of the P9471 to maintain the plank in its position.



## Step 3

- Push the aluminium finishing profile P9569 back upwards and fix at every 50 cm with a screw through the perforated holes.

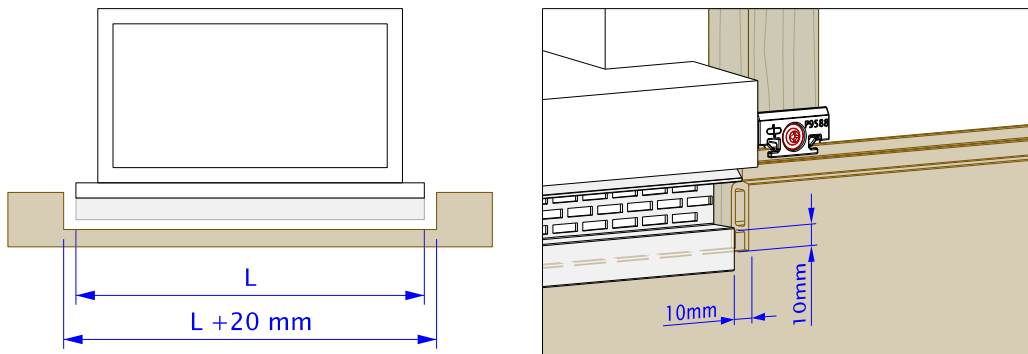


- To avoid any visibility of the battens, paint the top of the battens or use an EPDM strip.

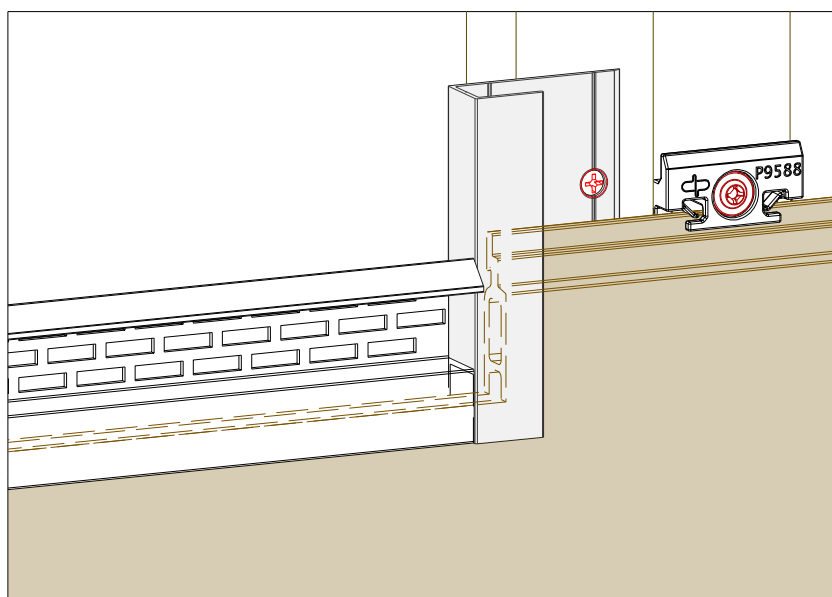
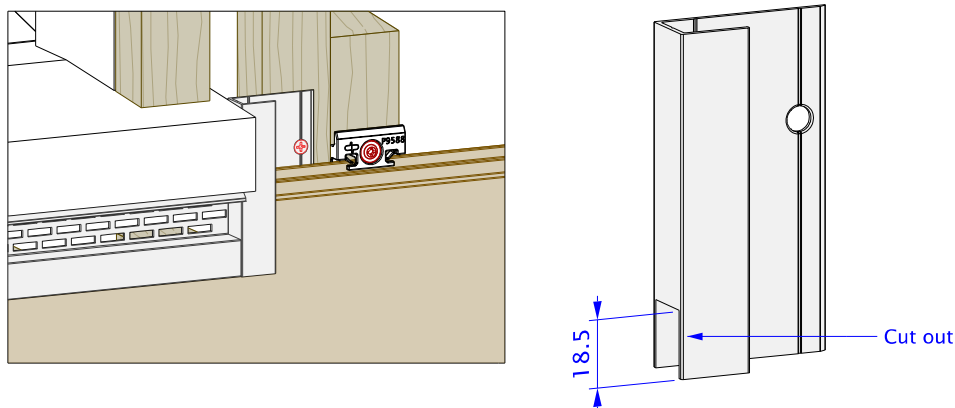
## SEQUENCE OF ASSEMBLY

### Step 1

- Start by installing the aluminium finishing profile P9569 under the window-sill.
- Ensure you allow 10 mm lengthways between the P9569 and the cut out of the plank P9576 to ensure the necessary elongation space.  
(for installation of the P9569 see chapter finishing top of installation on page 3.1/16)



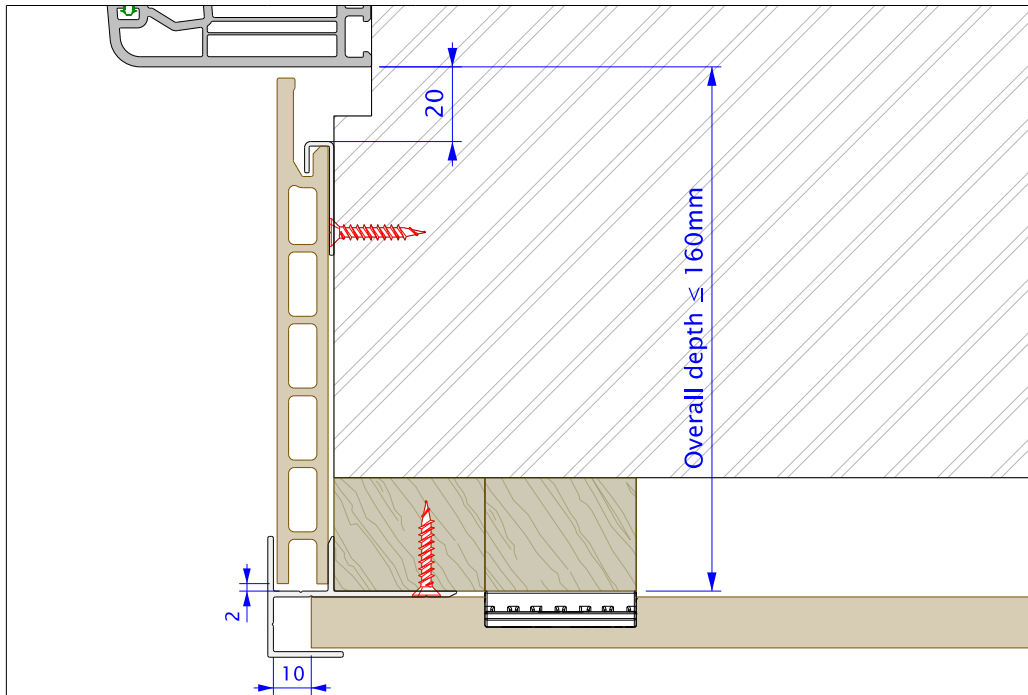
- **OPTIONAL:** The aluminium profile P9572 can be used to finish the cut out of the plank but you will need to install an extra batten.




- **NOTE:** If the wall is longer than 6m, install the planks with an weep hole.  
(see chapter 3.1.3 expansion rules on page 3.1/5)

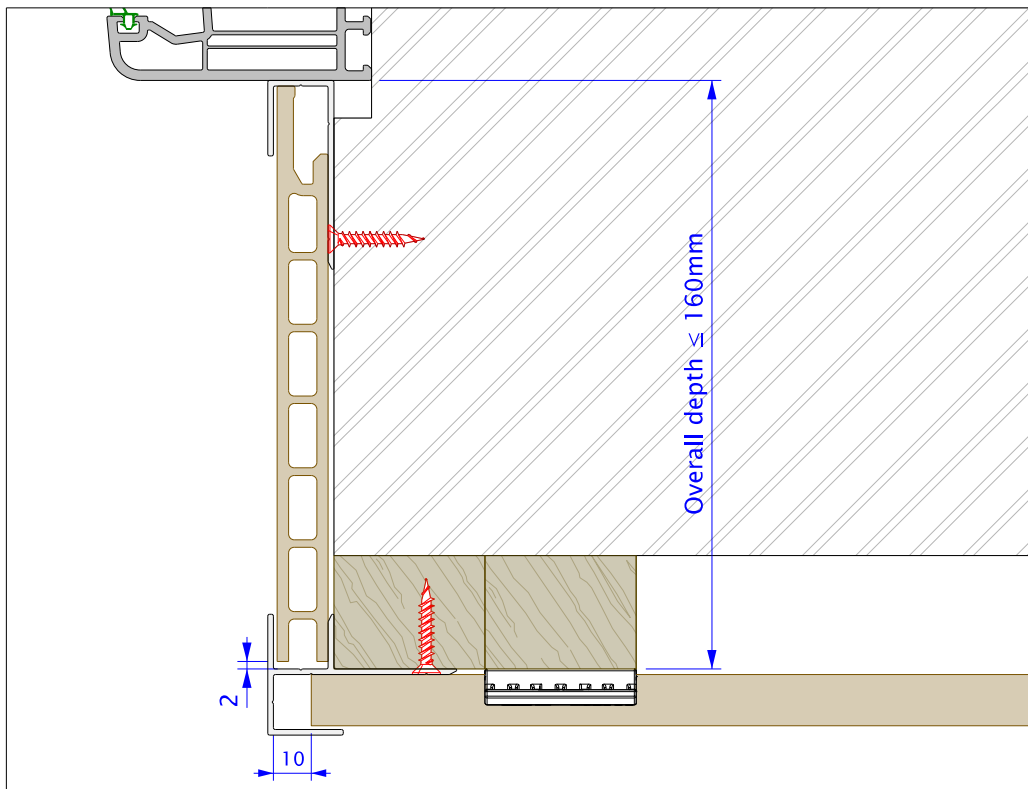
Step 2: Different possibilities of finishing:

- A: with P2761

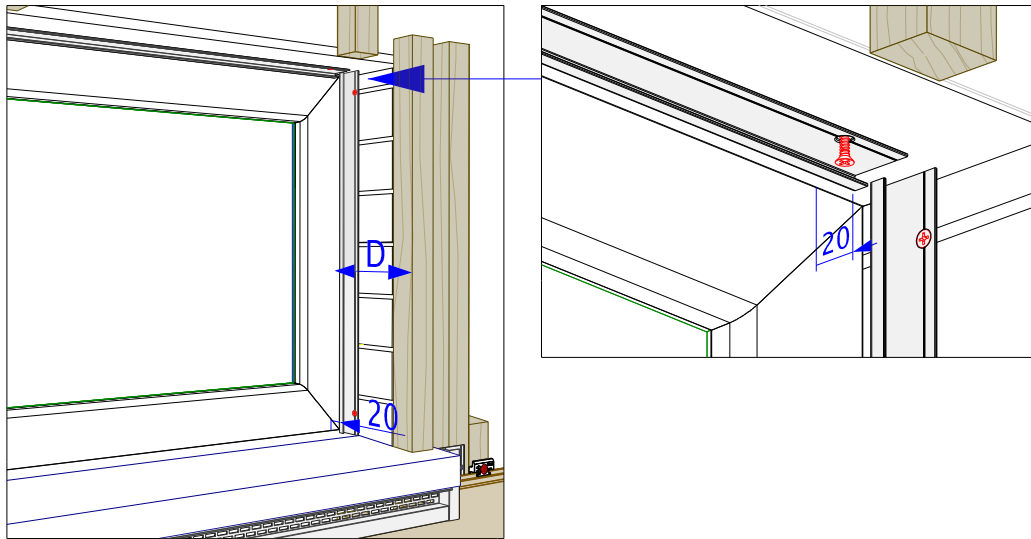


 Pieces of the P9471 can be used to maintain some positioning of the profile.

- B: with P9572 = Optional



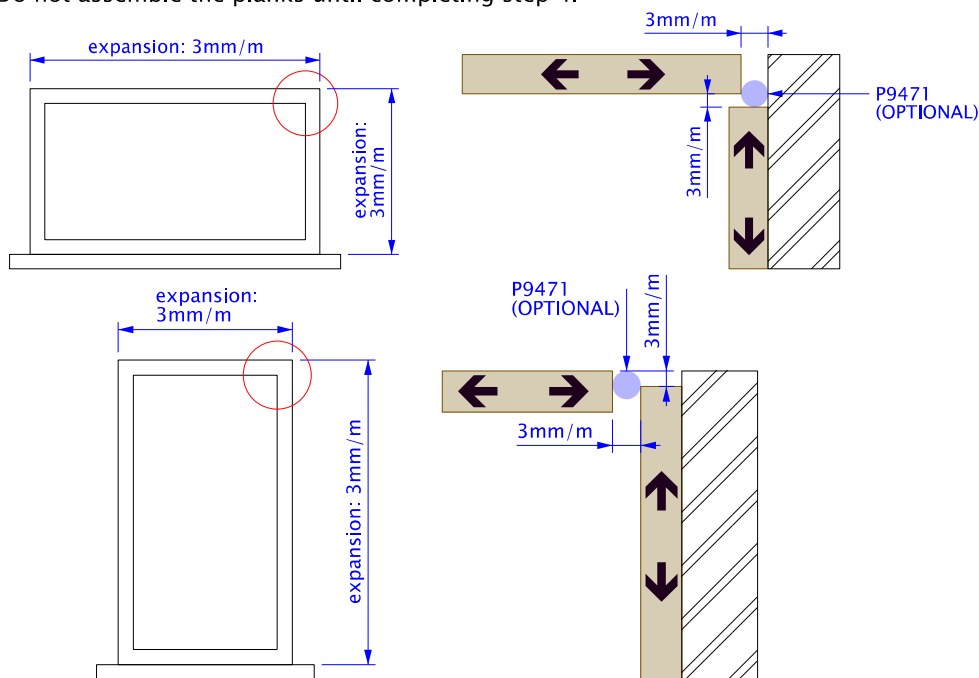
- Cut the starter profiles P2761 to the right length and fix them around the window. For correct positioning of the P2761 leave 20 mm between the window and the edge of the P2761.
- Countersink the screws into the P2761 to ensure easy passage of the plank.



### Step 3

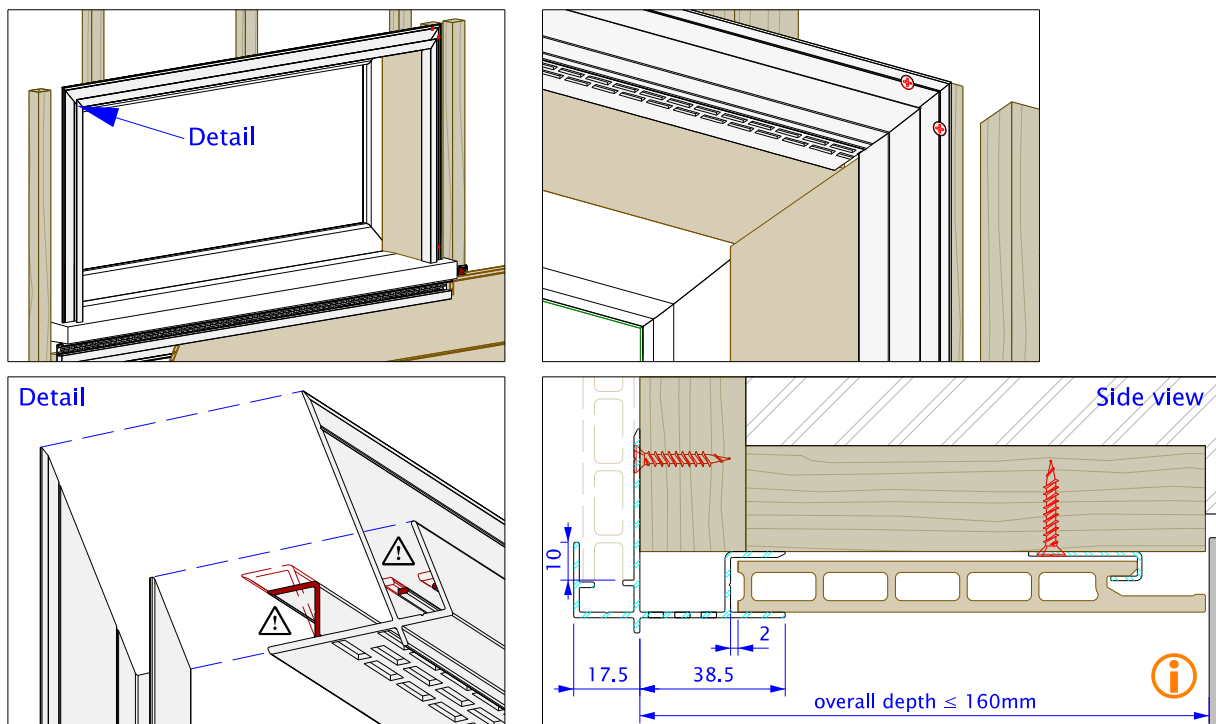


- Cut out the planks taking into account the need for expansion.
- Optional: For a proper finishing we propose using a round sealing profile (P9471) with a diameter of 15 mm. Do not use silicone to close the gap! Doing this can leave stains on your Twinson profiles.
- Do not assemble the planks until completing step 4.



#### Step 4

- Above the window use aluminium finishing profile P9570 with integrated ventilation and drip detail.
- On the sides of the window use aluminium finishing profile P9565. Remember to put an additional batten next to the P9565 to be able to fix the plank P9576 with the clip P9588.
- Cut the aluminium profiles to the right length with mitre return. Finally slide the planks mentioned in step 3 into the aluminium finishing profiles and assemble sequentially. The aluminium finishing profiles need to be fixed every 50 cm.



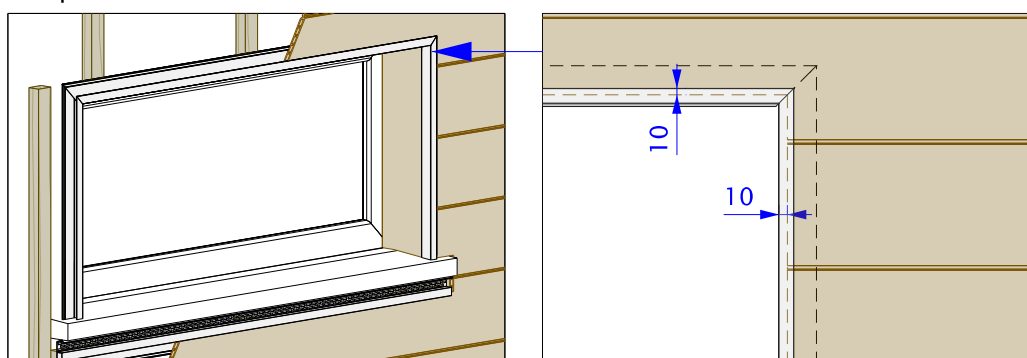
#### NOTE:

It is necessary to make an extra cut off of the P9570 top aluminium profile on both sides, otherwise the Twinson planks installed on the sides cannot be put into place.

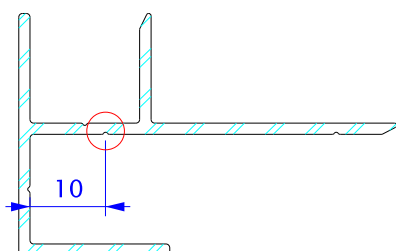
- Pieces of the P9471 can be used to maintain some positioning of the profile.

#### Step 5

- Now you can continue installing the planks around the window.
- Be sure to always leave 10 mm between the aluminium P9565 profiles and the P9576 to allow for expansion.

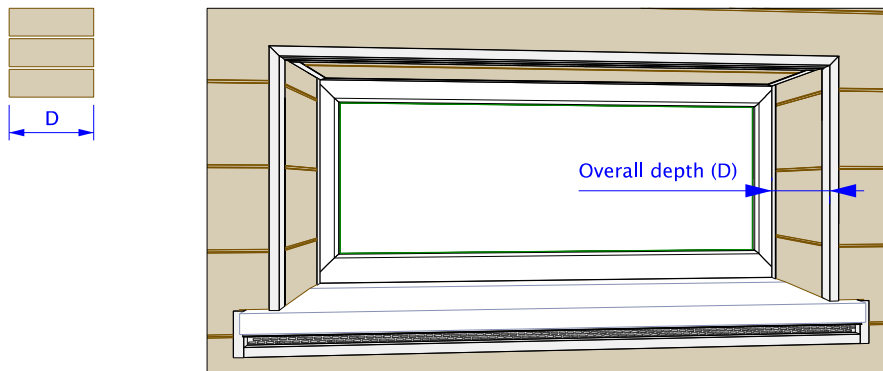


- Nice to know: in the aluminium P9565 profile there is a detail on 10 mm of the edge of the profile to help you with the positioning of the planks on the correct distance needed for expansion.



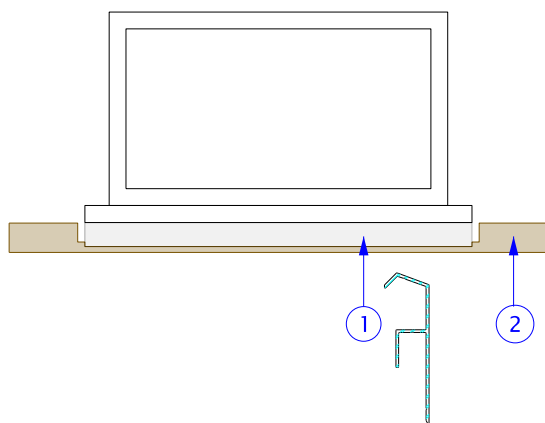


## 2. Overall depth > 160mm: different planks are necessary

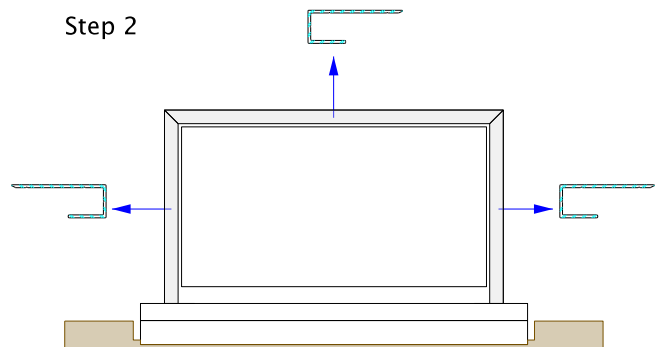


### STEP BY STEP PLAN

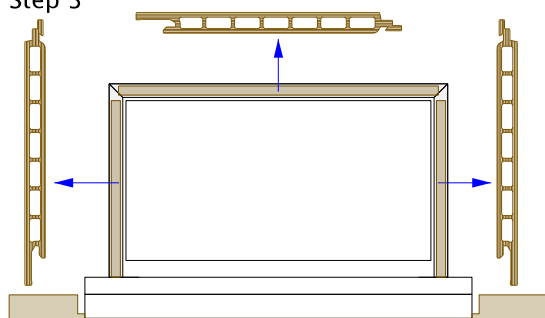
#### Step 1



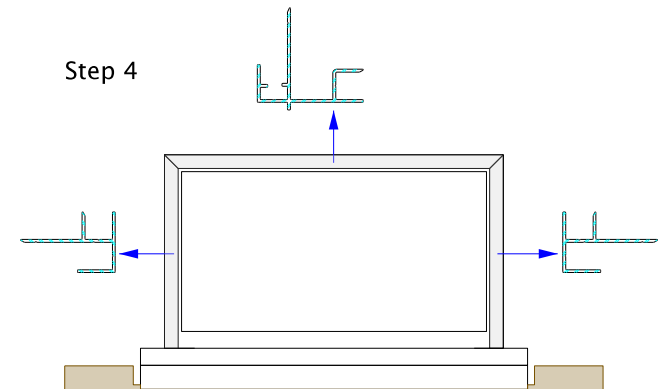
#### Step 2



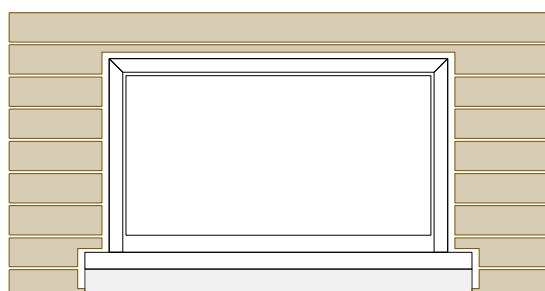
#### Step 3



#### Step 4



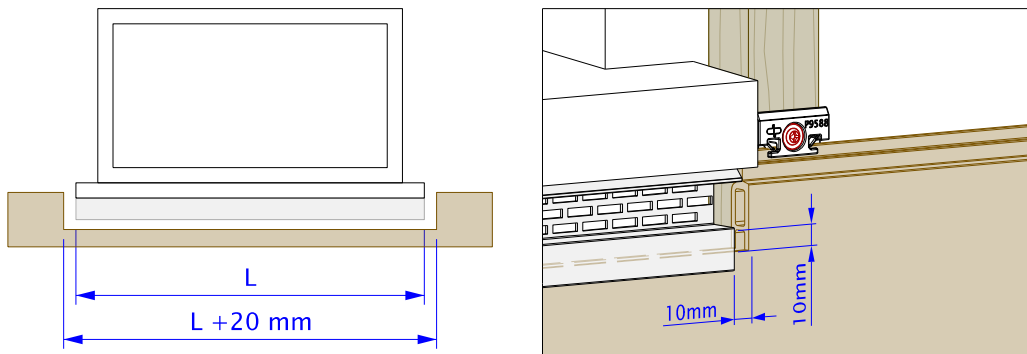
#### Step 5



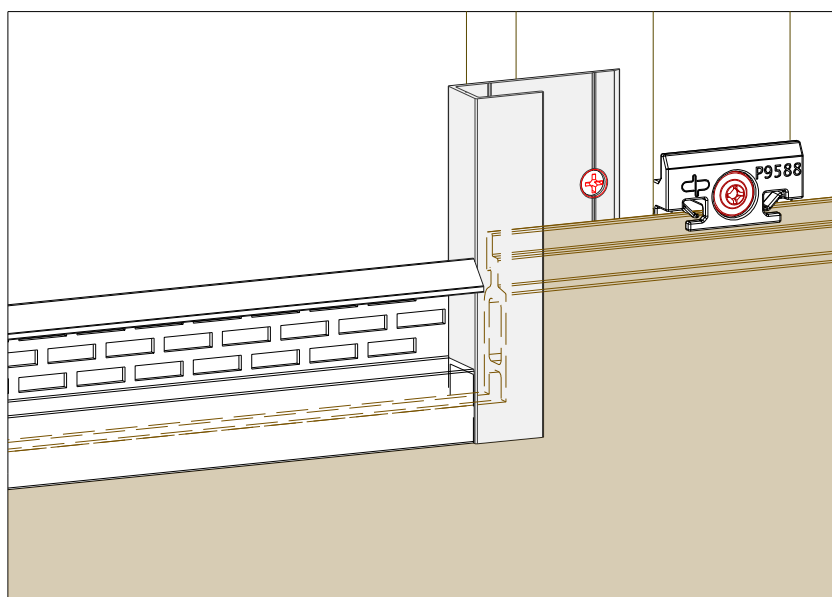
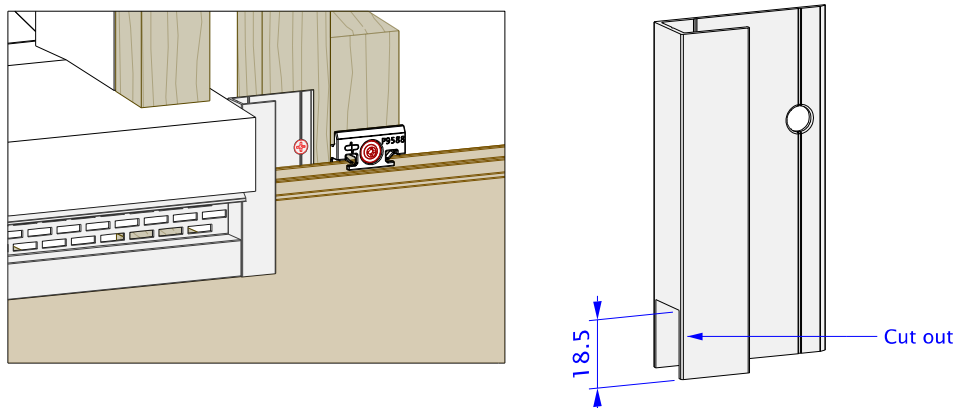
## SEQUENCE OF ASSEMBLY

### Step 1

- Begin by installing the aluminium finishing profile P9569 under the window-sill.
- Ensure you leave 10 mm lengthways between the P9569 and the cut out of the plank P9576 to ensure the necessary expansion space.  
(for installation of the P9569 see chapter finishing top of installation on page 3.1/16)

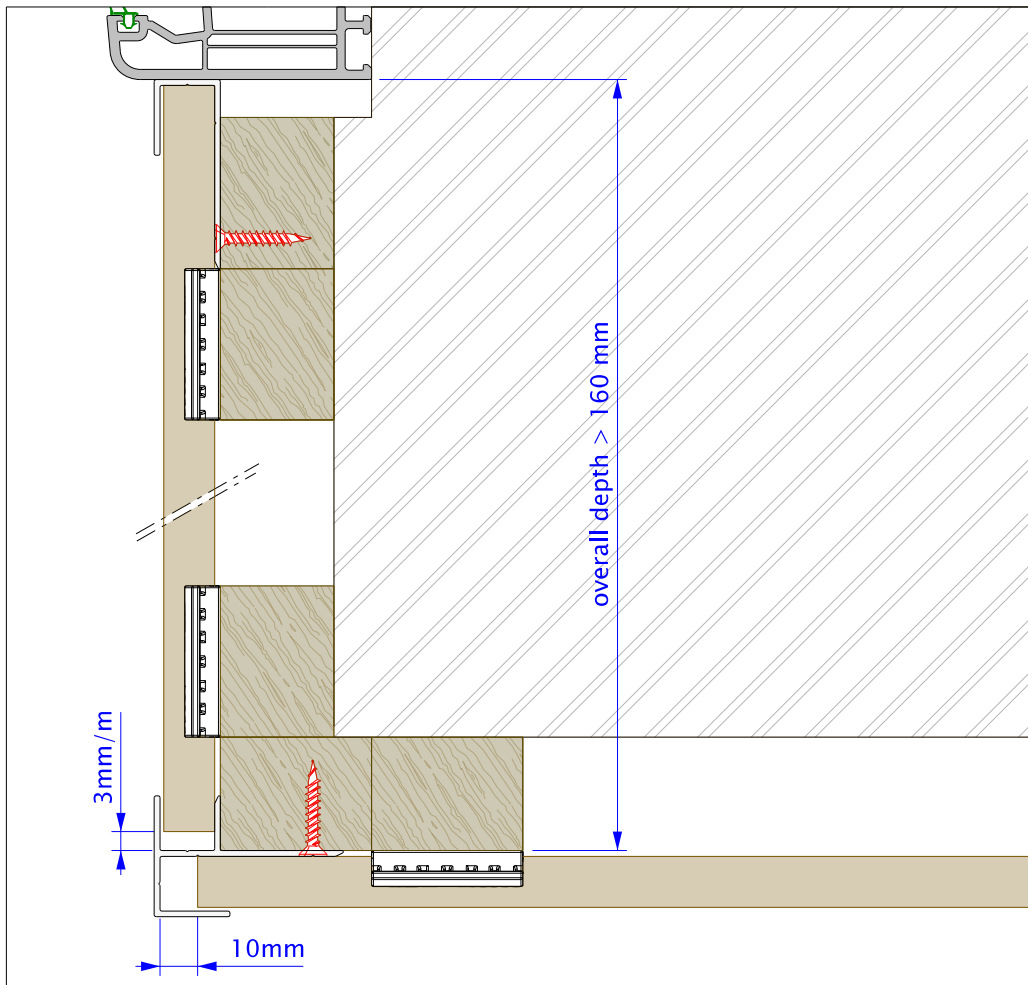


- **OPTIONAL:** The aluminium profile P9572 can be used to finish the cut out of the plank but you need to install an extra batten.

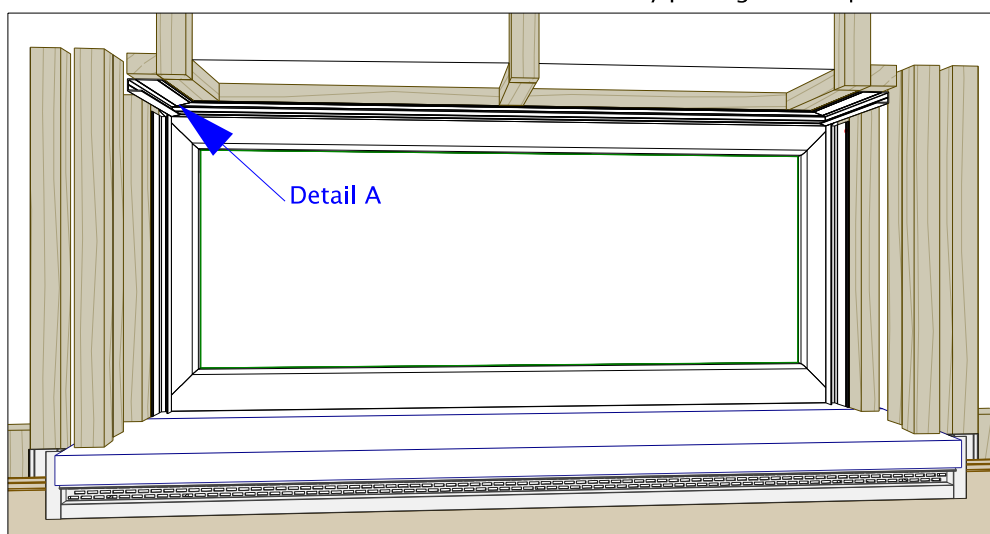


- **NOTE:** If the wall is longer than 6m, install the planks with a weep hole.  
(see chapter 3.1.3 expansion rules on page 3.1/5)

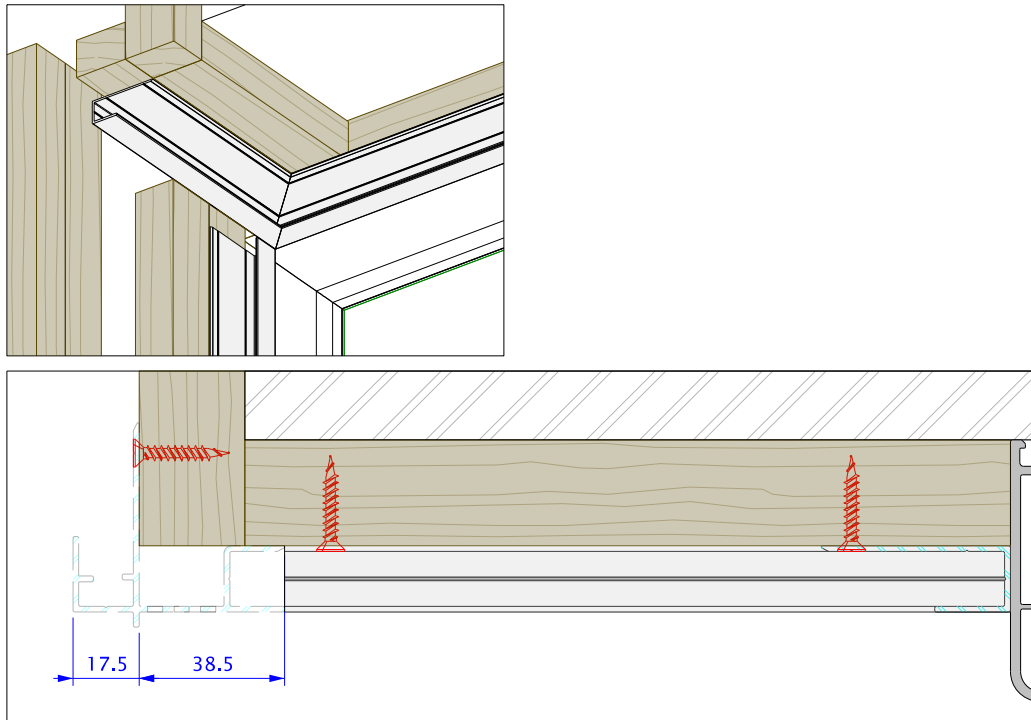
## Step 2: finishing with P9572



- Cut the starter profiles P9572 to the right length and install them around the window.
- Countersink the screws into the P9572 to ensure easy passage of the plank.

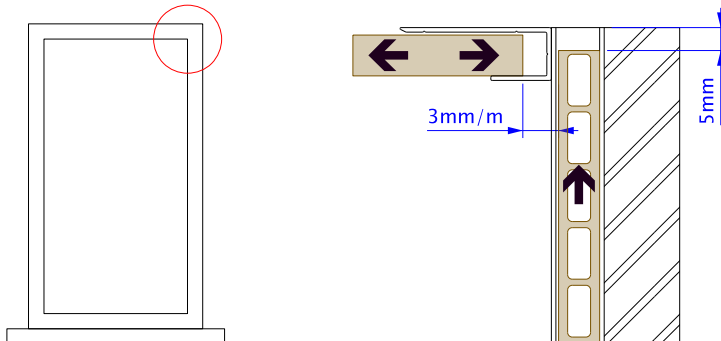


Detail A

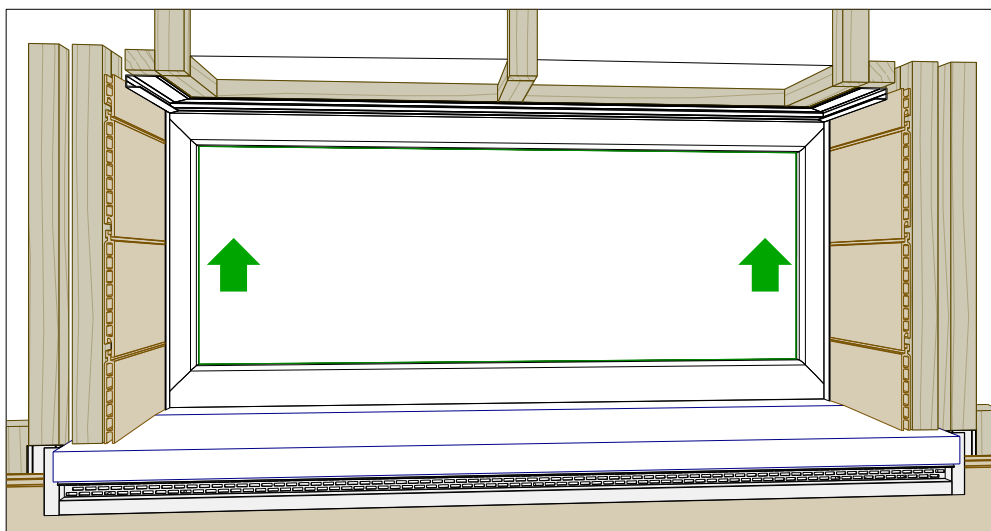


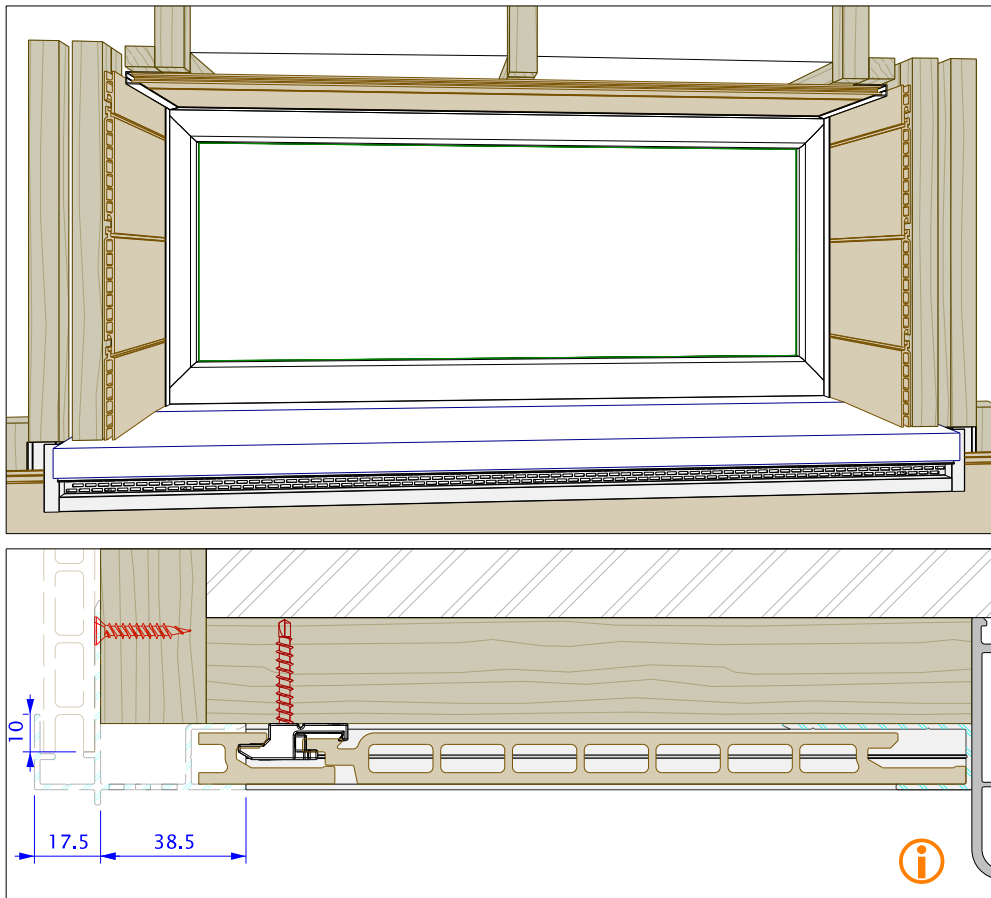
Step 3


- Install the planks whilst taking into account the needed expansion.



- Slide the planks into the aluminium finishing profiles to finish of the top of window. Use the clips P9588 to keep the exact distance between the planks.

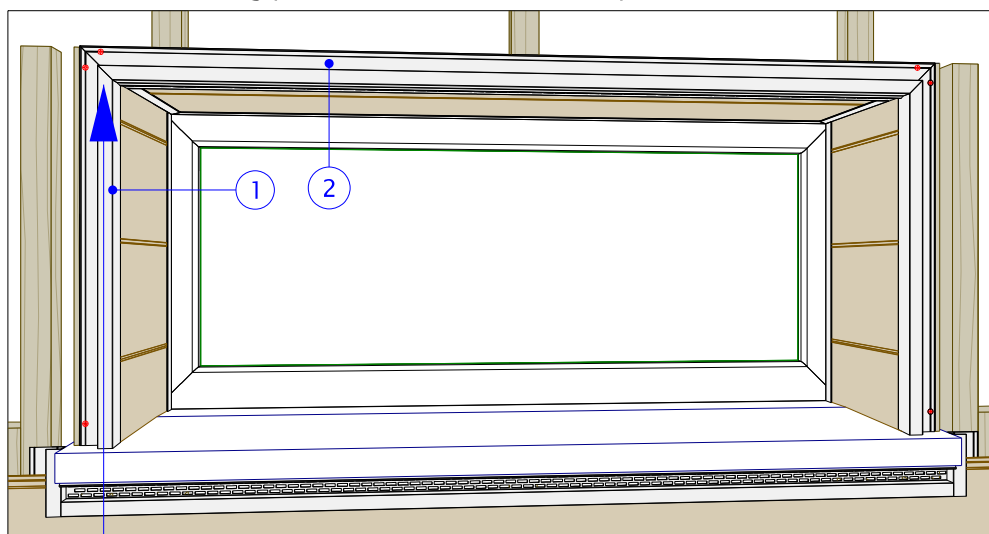




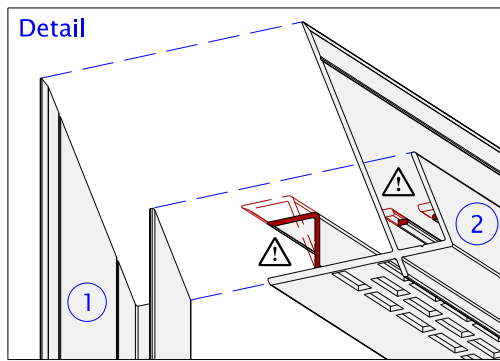
 Pieces of the P9471 can be used to maintain some positioning of the profile.

#### Step 4

- At the top of the window use the aluminium finishing profile P9570 with integrated ventilation and drip detail.
- On the sides of the window use the aluminium finishing profile P9565.
- Cut the aluminium profiles to the right length with mitre return and assemble sequentially. The aluminium finishing profiles need to be fixed every 50 cm.



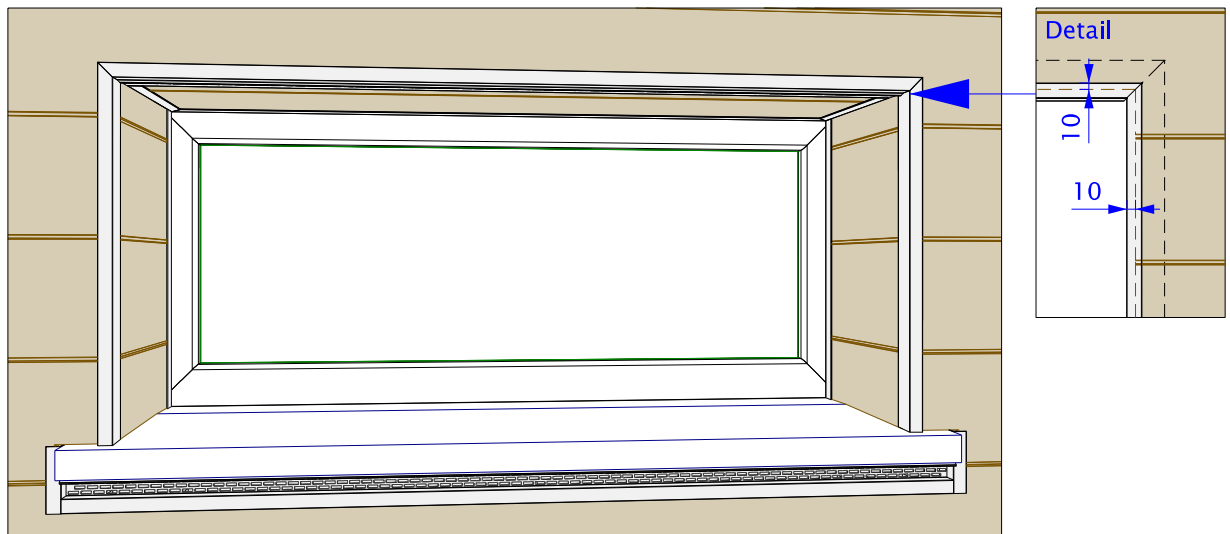
Detail, next page



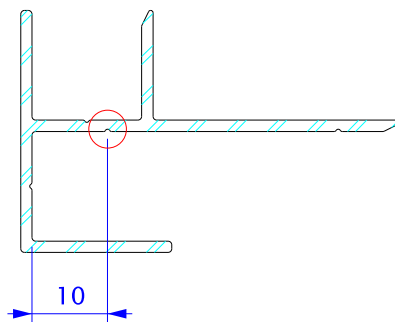
**NOTE:**  
It is necessary to make an extra cut out in the P9570 top aluminium profile on both sides, otherwise the Twinson planks installed on the sides cannot be slotted into place.

#### Step 5

- Continue installing the planks around the window.
- Be sure to leave 10 mm between the aluminium P9565 profiles and the P9576 to ensure expansion.



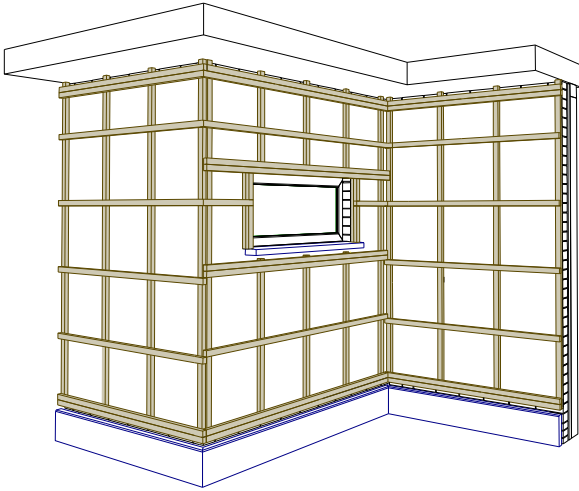
- Nice to know: in the aluminium P9565 profile there is a detail on 10 mm of the edge of the profile to help you with the positioning of the planks on the correct distance needed for expansion.



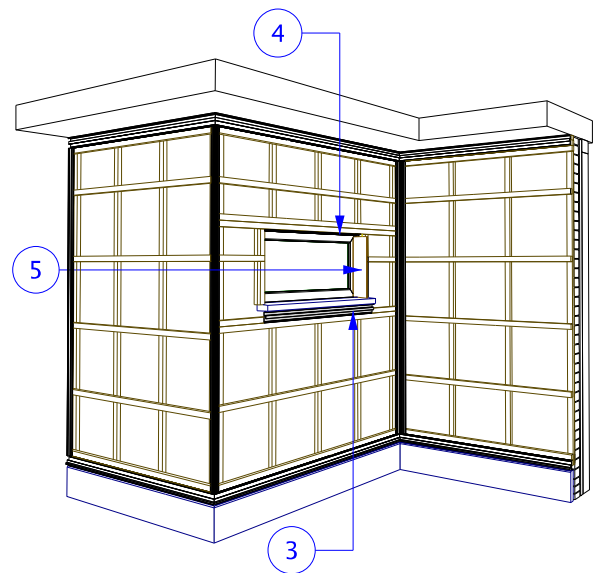
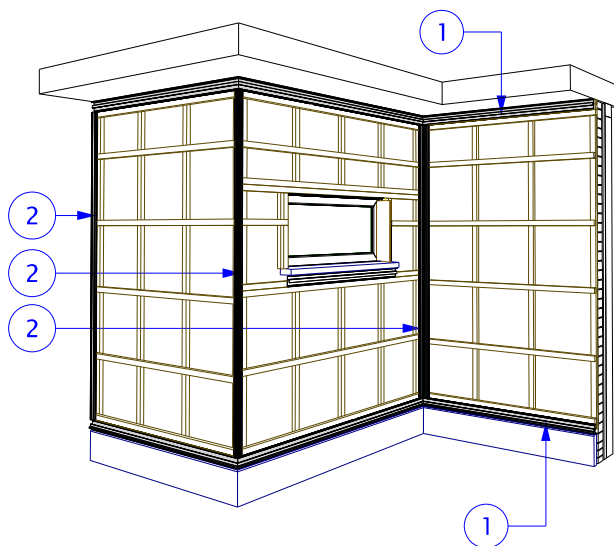
## 3.2. Vertical installation

### 3.2.1. System assembly:

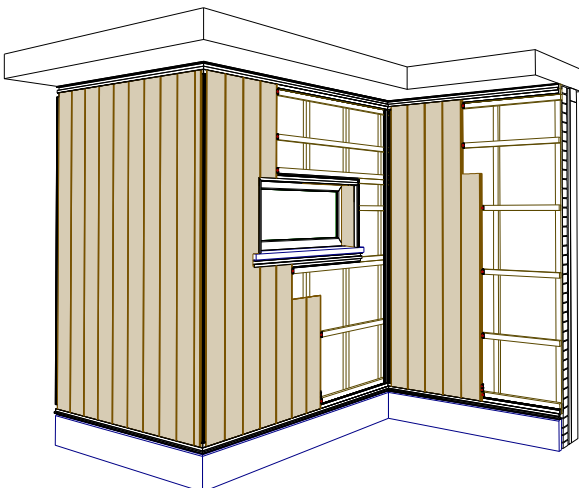
Step 1: The supports



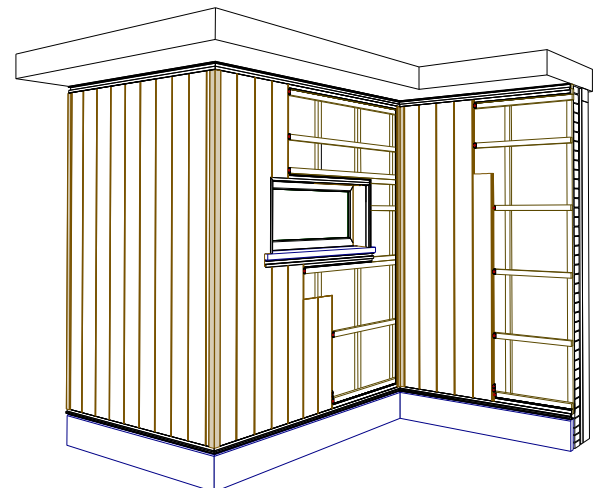
Step 2: Aluminium finishing profiles



Step 3: Main profiles (twinson planks P9576) + upper aluminium finishing profiles



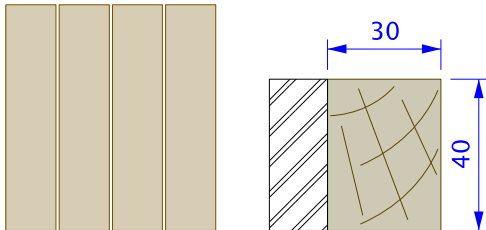
Step 4: Twinson finishing profiles



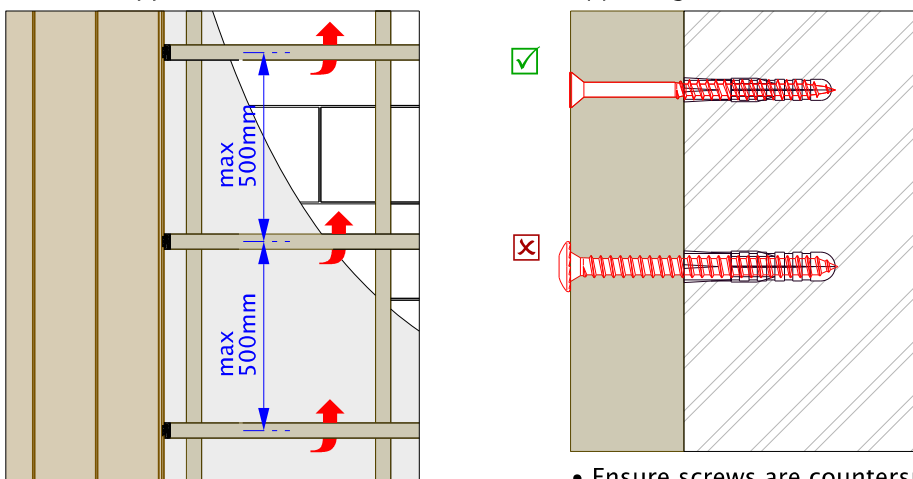
### 3.2.2. Understructure:

#### A. General rules:

- Twinson has to be installed on a solid and levelled structure.
- The dimensions of the battens required are minimum 30 mm (depth) by 40 mm (width). This is to ensure that the recommended P9593 fixings are adequate to support the load of the O-Wall profiles and to allow adequate ventilation.



- To be sure ventilation is adequate you need to use double battens. Please allow ventilation between the last batten and the highest point of the installation.
- Distance between the battens have to be kept to a maximum of 50 cm.
- If the height of the cladding is 50 cm or less, use a minimum of 3 battens.
- Impregnated wood is advised.
- Where necessary we advise using a moisture barrier to protect the wall against moisture. The moisture barrier has to be applied between the battens and the supporting wall.



- Ensure screws are countersunk.

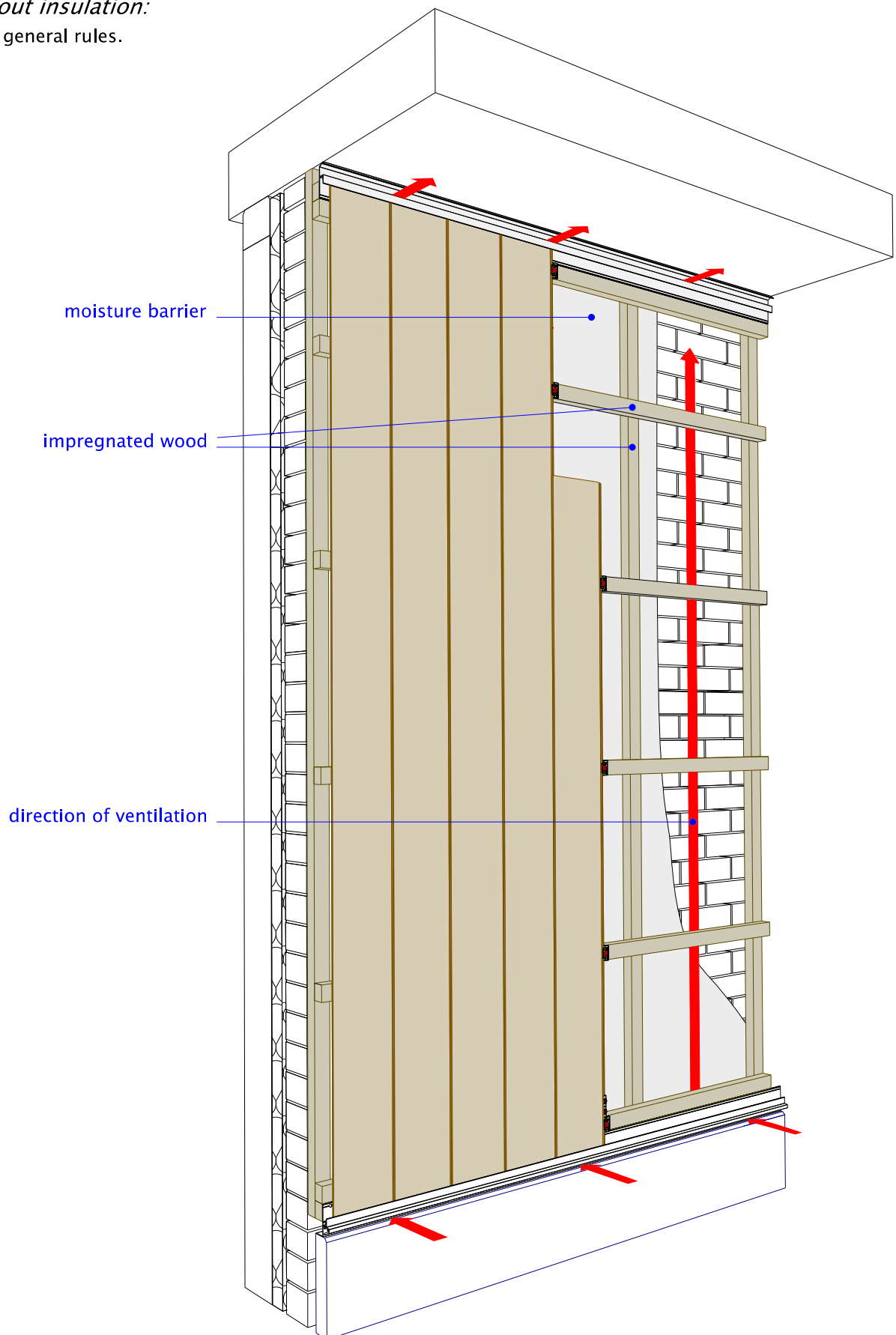
- **NOTES:**  
Keep in mind that if you are using finishing profiles you may have to place additional battens. (more information in the chapter: finishing profiles)

- **Ensure the understructure is of good quality and craftsmanship and is in accordance with local codes of practice or legislation.**



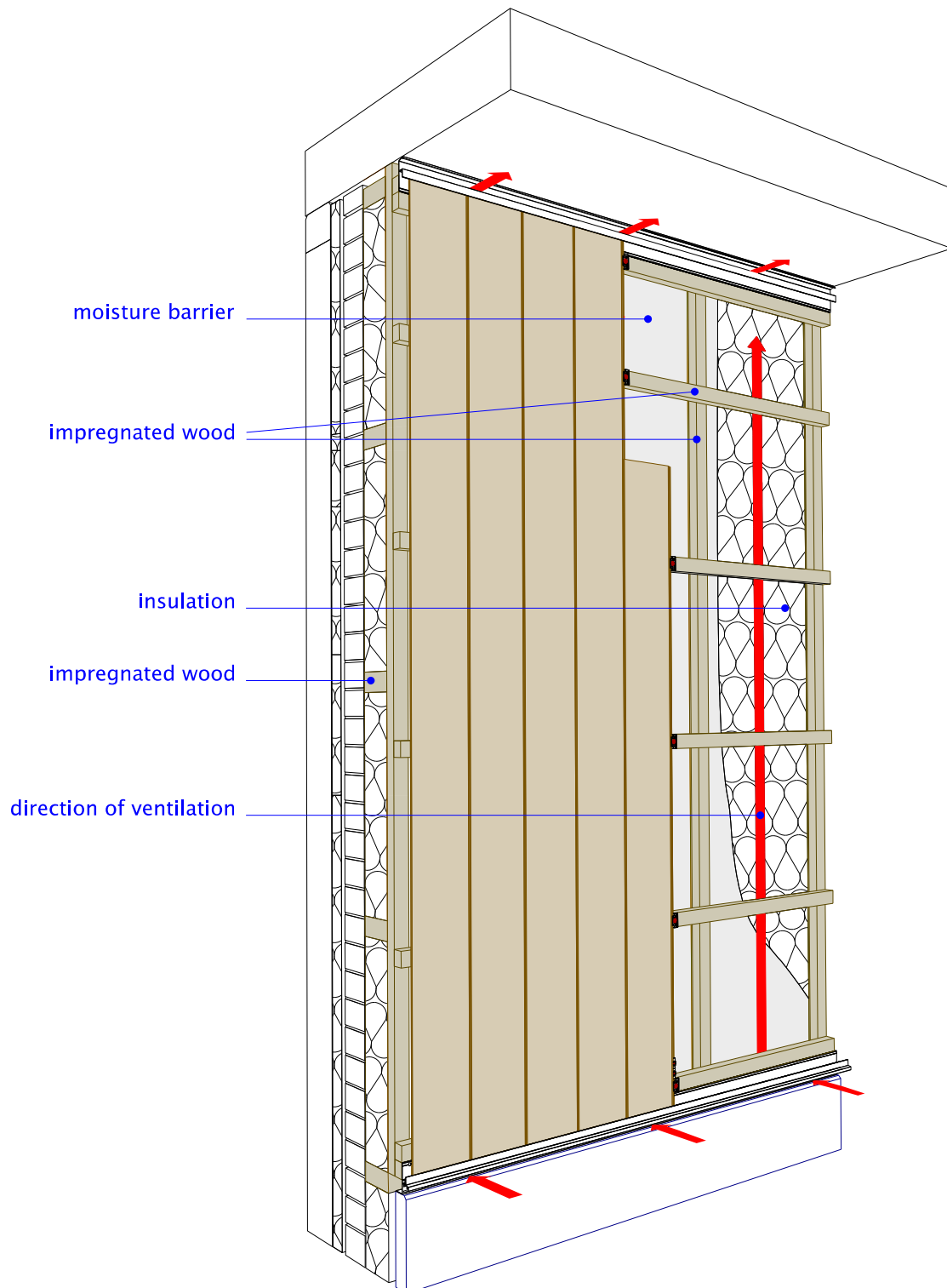
*B. Without insulation:*

- See general rules.



### C. With insulation:

- Follow same basic rules as without insulation.
- The illustration underneath is an example of one of the many types of insulation solutions. There are many different insulation materials on the market with their specificities and fixing methods.
- The same applies for the fixing of your battens into the wall/structure.
- We advise contacting the respective companies to help you with specifying your insulation and fixing system.
- General guidelines however have to be followed.

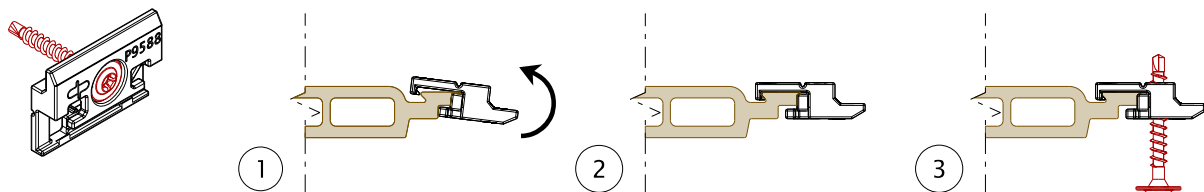


### 3.2.3. Expansion rules for vertical cladding:

Twinson contains wood fibres and is therefore subject to moisture content leading to potential expansion and contraction. This is allowed for in our system providing our installation guidelines are followed.

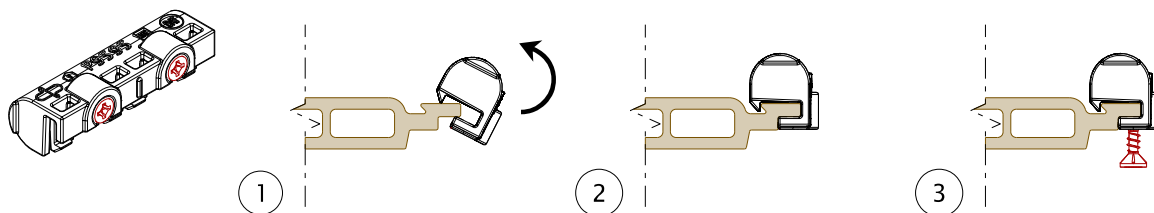
#### A. P9588:

The clip P9588 holds the plank P9576 in place while allowing it to elongate freely whilst also absorbing the width elongation. The clip P9588 is easily clipped to the plank P9576 and positioned on the batten. After positioning, the clip is screwed to the batten with the P9593. (Both available in the kit 9488)  
The plank has to be fixed with the clip every 50 cm.



#### B. P9595:

To ensure that the direction of the elongation can be controlled, we developed the P9595 who blocks the planks evenly while allowing width elongation.

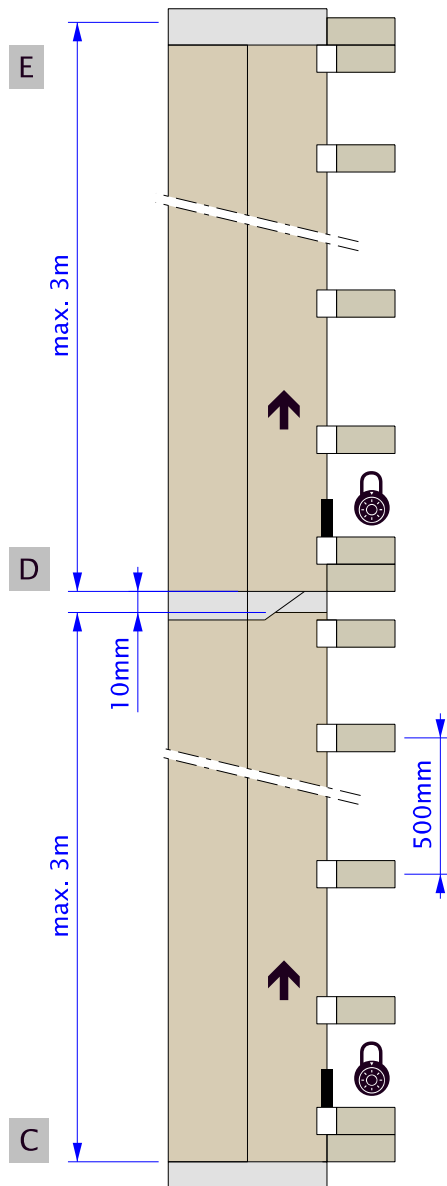


#### C. General expansion rules:

To ensure the required expansion is allowed for, see below:

- Length: modules of 3 m:
  - Because of the elongation and weight is in the same direction, the maximal length of 1 module is max. 3 m. To go larger you can start a new module on top using the starter profile P9567 to make the junction.
  - For proper elongation you need to leave a gap of 10 mm on top of the profile.
  - For finishing the top of the cladding we recommend using the P9569 to ensure proper ventilation of the profiles.

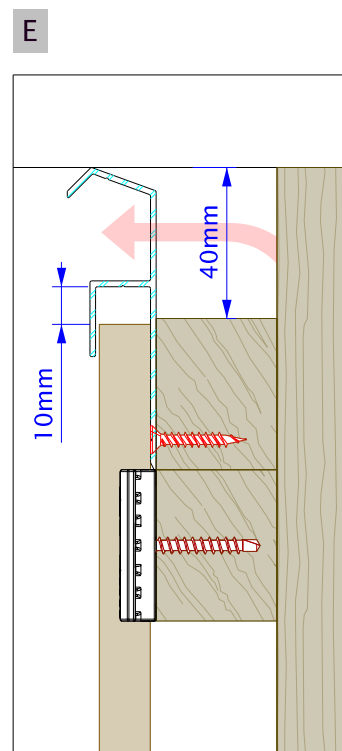
Front view:



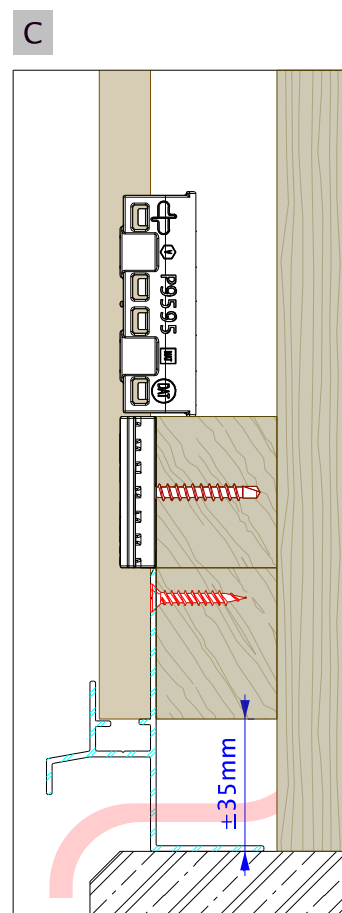
Legend:

- = clip P9588
- = clip P9595
- = blocked
- = direction of elongation

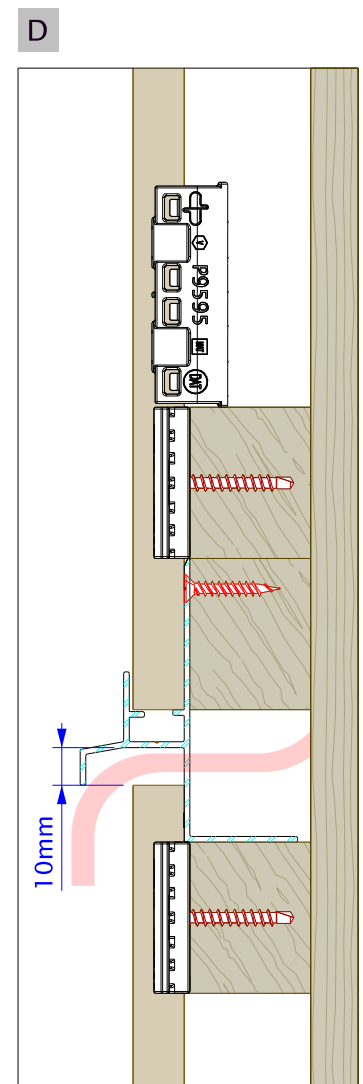
Side view:



Side view:



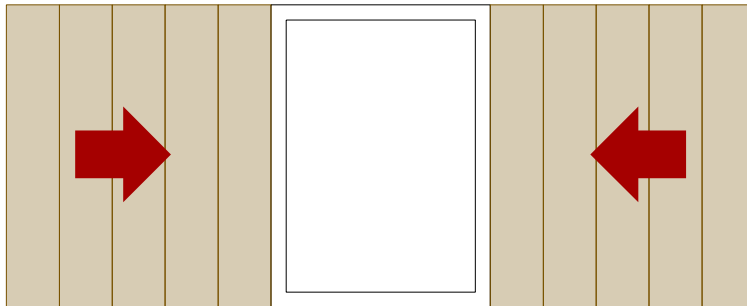
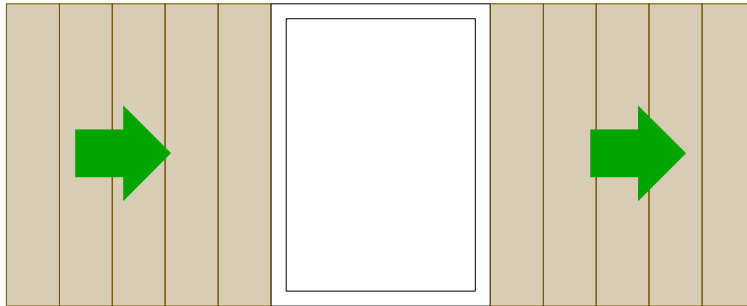
Side view:



### 3.2.4. Finishing:

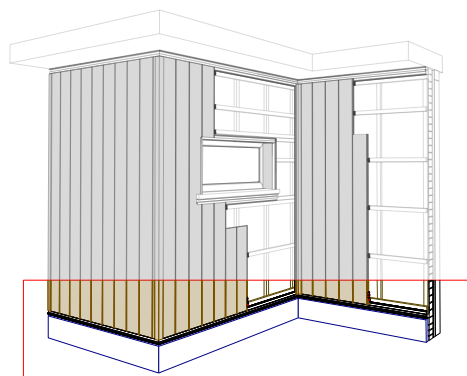
#### A. General: visual aspect

- To avoid colour differences avoid changing mounting direction of the planks in the same surface.



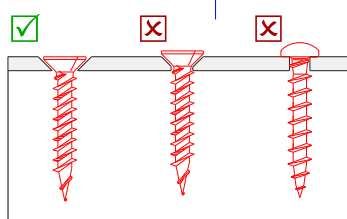
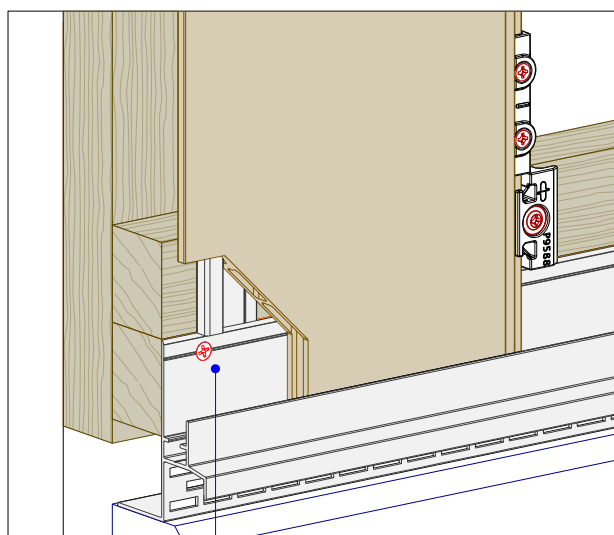
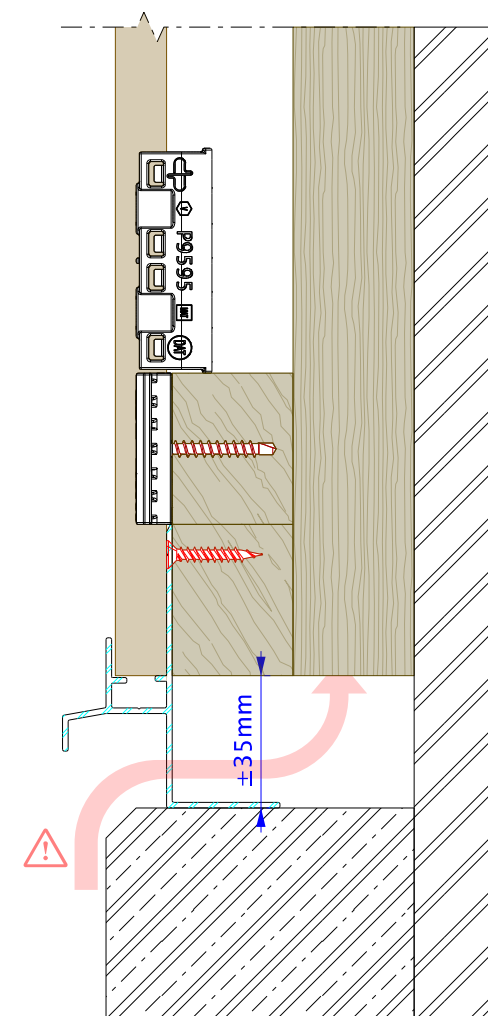
### B. Start of installation:

- We strongly recommend to start with the aluminium starter profile P9567.
- We advise starting at a height of minimum 30 cm from the ground to avoid stains from splashing raindrops and dirt.
- This profile is handy for a gradient.



#### 1. Start at sill:

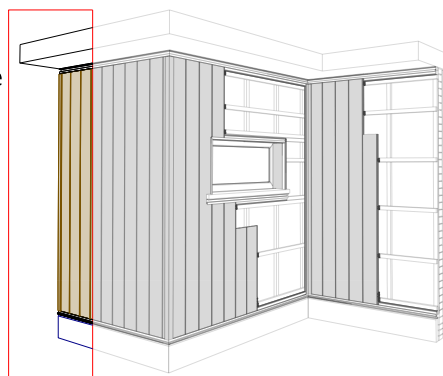
- For example: stone cill, bricks
- Install the starter profile P9567 directly on the granite.
- The ventilation is allowed for within the design of the start profile.
- The profile has to be fixed every 50 cm.
- ⚠ Make sure that the screws are countersunk otherwise the cladding profiles will not fit into the starter profile P9567.
- An extra batten is needed at the bottom to fix the clip P9588 to ensure a proper fixing of the plank.
- To start on the sides you need to use the P2761.
- Note:
- ⚠ The end profile at the top as well as the aluminium profiles on the sides have to be fixed before inserting the plank P9576.



Stainless steel

### C. Sides:

- The finishing trims on the ends consists of the aluminium profile P9562 in combination with the Twinson finishing profile P9568.

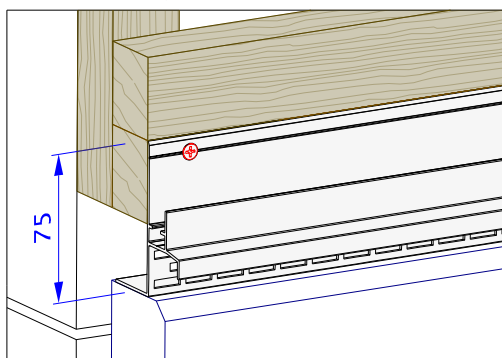


#### C.1. Starting from a side:

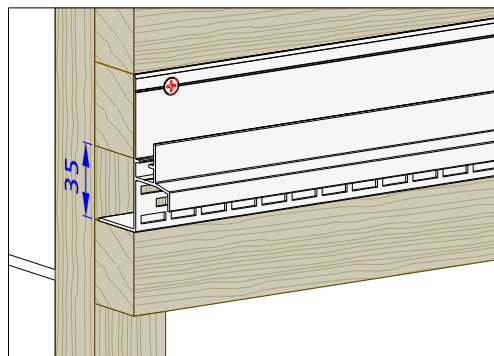
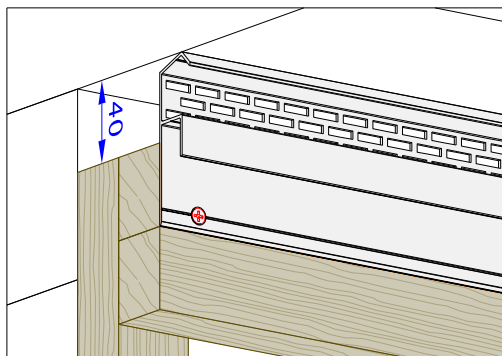
##### SEQUENCE OF ASSEMBLY

##### Step 1

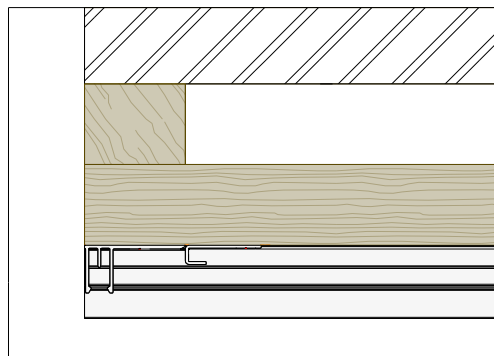
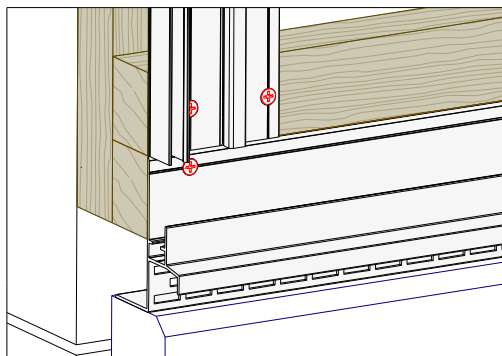
- Start placing your starter profile P9567 (see chapter start of installation on page 3.2/8).



- Next fix the end profile P9569 or the P9567 if you are to completing a number of modules.



- Cut the P9562 to the right length and fix every 50 cm.
- Use starter profile P2761 next to the P9562 to insure proper positioning of the plank.

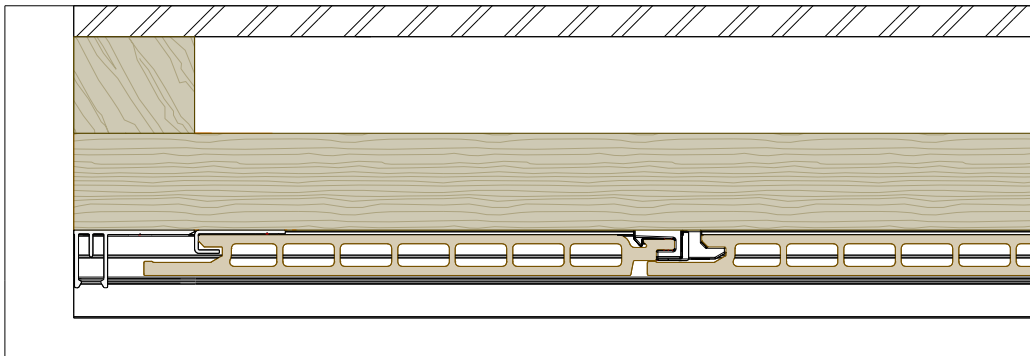
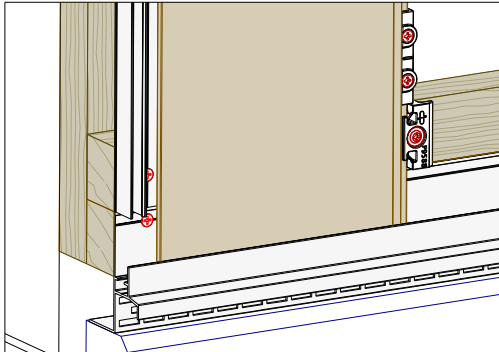


## Step 2

- Install your planks (P9576) and follow the guidelines in chapter expansion rules on page 3.2/5.

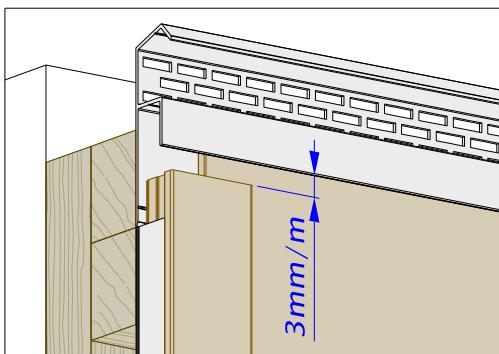
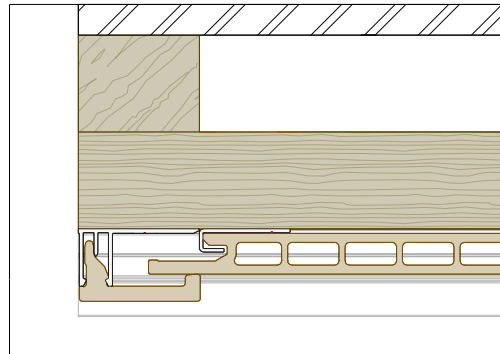
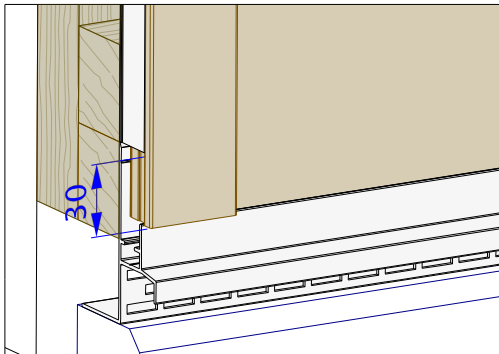


- If there are windows on the elevation, you first need to finish off before installing the planks. (see chapter window finishing on page 3.2/17)



## Step 3

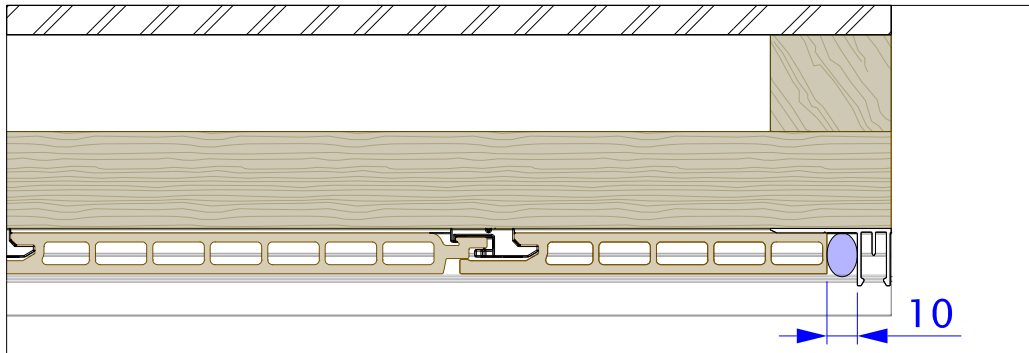
- Cut the Twinson profile P9568 to the right length (bear in mind that you need to allow 3mm/m expansion space for proper elongation) and clip it gently into the aluminium P9562 using your hands.



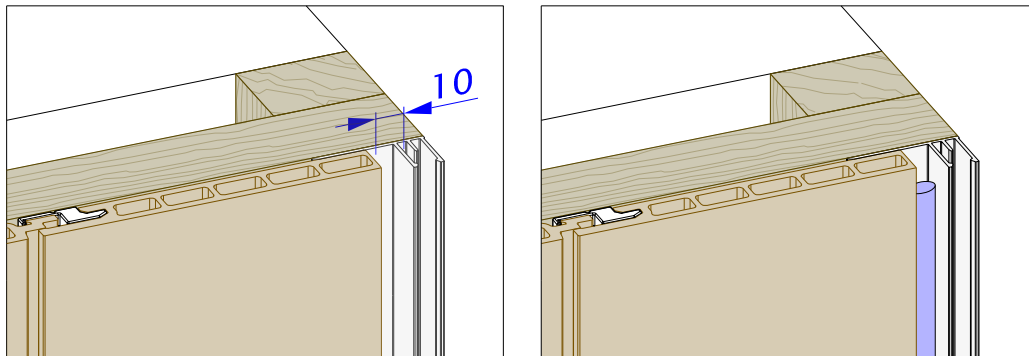


### C.2. Ending on a side:

- ⚠ In most situations you will have to end with a cut off plank. Allow a space of 10 mm between the plank and the aluminium finishing profile P9562 in order to clip the plank P9576 over the P9588 clip.



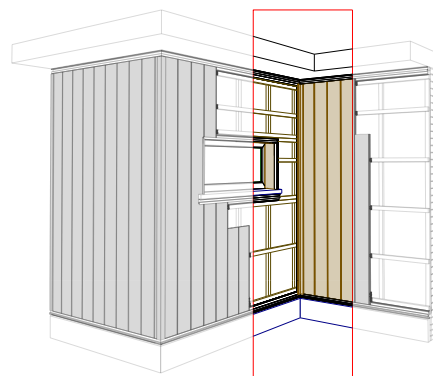
- Once the plank is placed over the P9588 clip you will have a gap of 10 mm between the edge of the aluminium finishing profile P9562 and the plank P9576. We advise using packing blocks of 10 mm or a sealing strip (P9471) in order to maintain an even gap between the planks.



- ⚠ In order to allow expansion of the last plank, do not screw!

#### D. Inner corner:

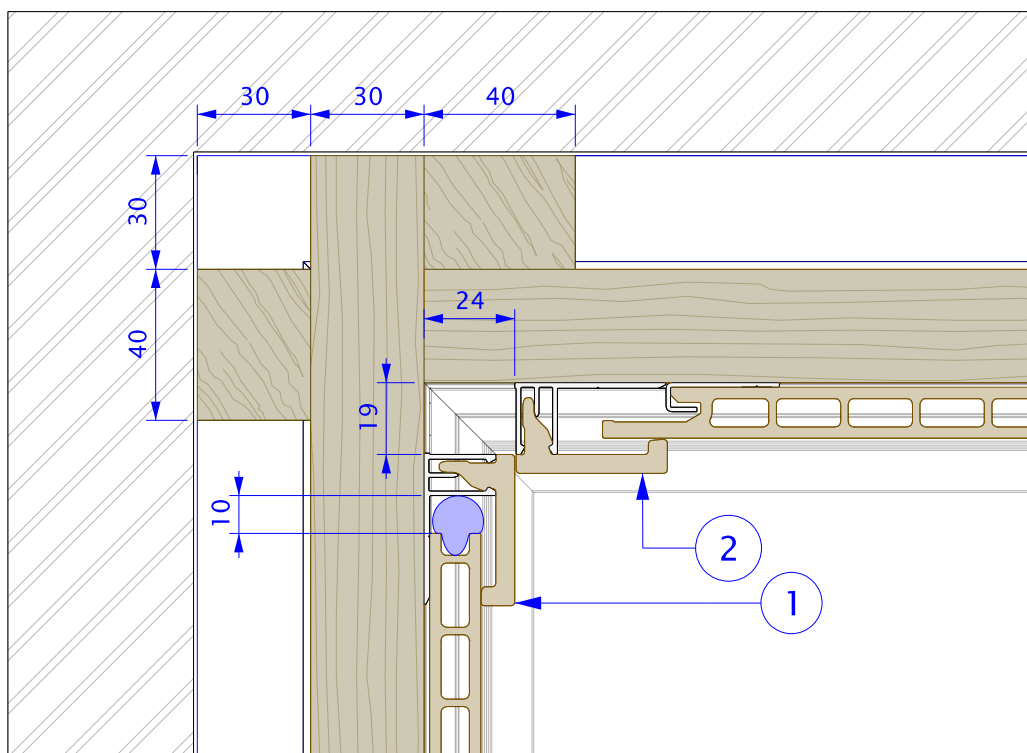
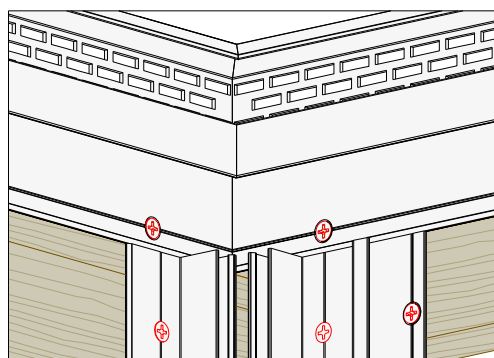
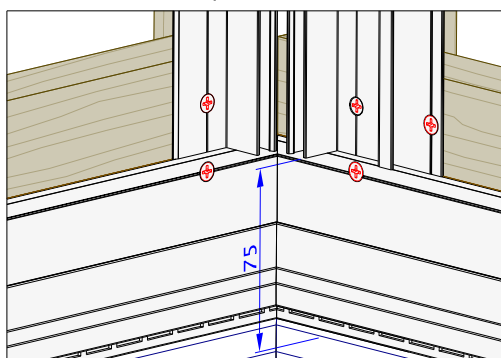
- The finishing on the sides consists of a pair of the aluminium profiles P9562 in combination with the Twinson finishing profile P9568.



#### SEQUENCE OF ASSEMBLY

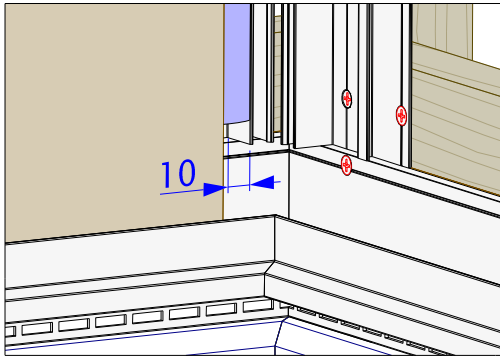
##### Step 1

- First install your starter profile P9567 and the end profile P9569 (see chapter start of installation on page 3.2/8 + finishing top on page 3.2/16), then place the aluminium P9562 above the starter profile. Ensure you position them so that both P9568 clips can fit in (see drawing top view).
- The aluminium profile has to be fixed every 50 cm.



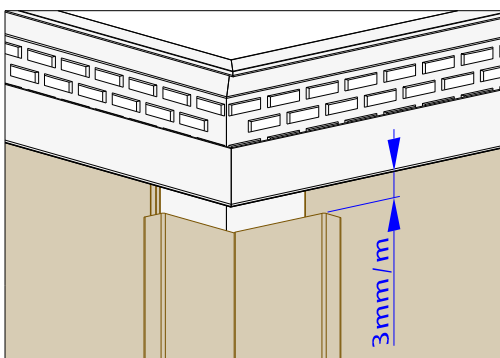
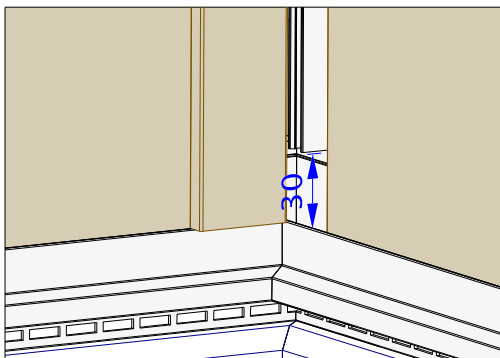
## Step 2

- Installing towards the corner. (see chapter sides on page 3.2/9)



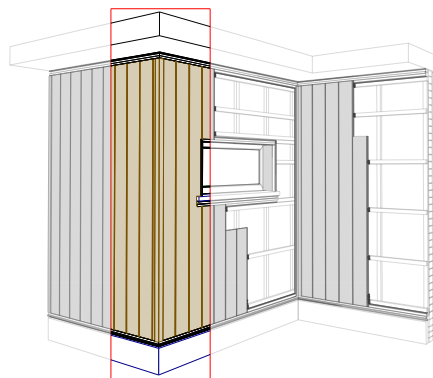
## Step 3

- Cut the Twinson profile P9568 to the right length (bear in mind that you need to allow 3mm/m expansion space for proper elongation) and clip it gently into the aluminium P9562 in a sequential way using your hands.



### E. Outer corner:

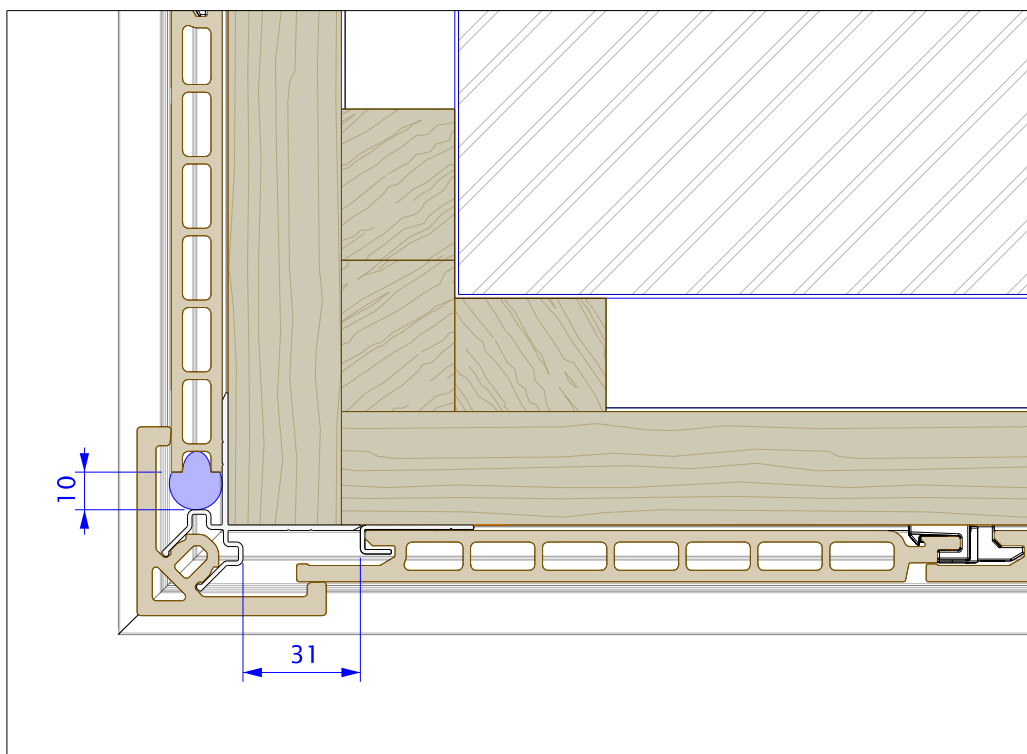
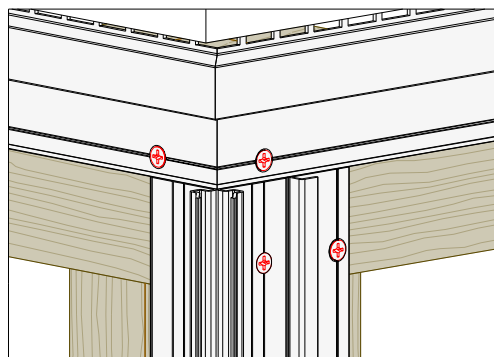
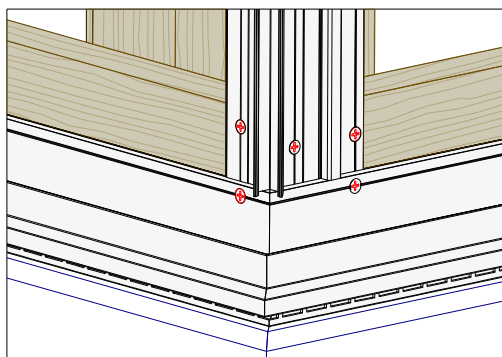
- The finishing on the sides consists of a pair of the aluminium profile P9564 in combination with the Twinson finishing profile P9571.



### SEQUENCE OF ASSEMBLY

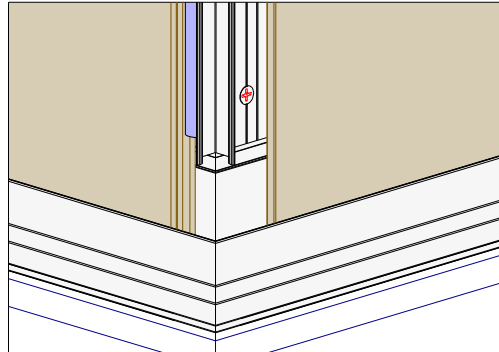
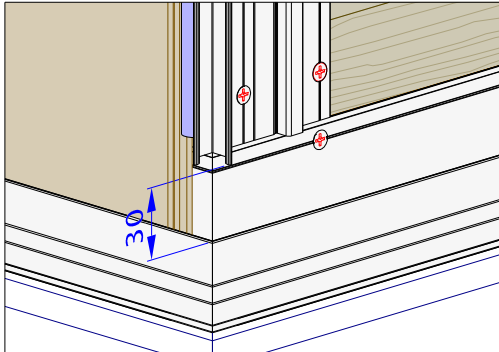
#### Step 1

- First put your starter and end profile (see chapter start on page 3.2/8 + top of installation on page 3.2/16) then place the aluminium P9564 above the starter profile (P9567). The profile P9564 needs to be fixed every 50 mm sequentially on both sides.



## Step 2

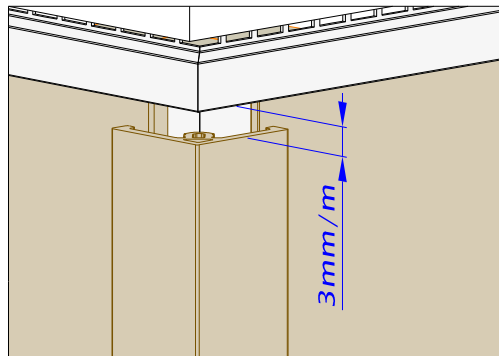
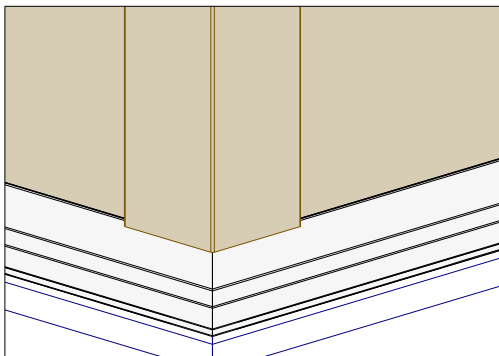
- Install planks (P9576) and follow the guidelines in chapter expansion rules on page 3.2/5. Ensure that you keep 10 mm between the edge of the plank P9576 and the edge of the aluminium profile P9564.
- It is also necessary to use packing blocks or a sealing strip (P9471) to keep the profiles in place. (see installation sides on page 3.2/9)



- If there are windows on the elevation, you first need to finish off before installing the planks. (see chapter window finishing on page 3.2/17)

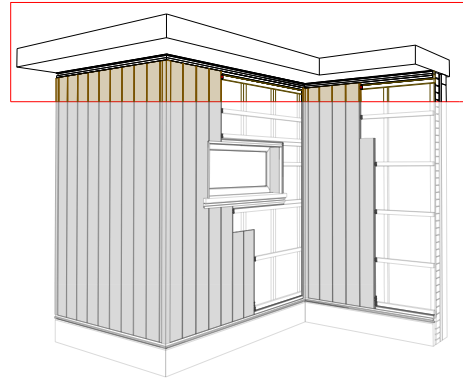
## Step 3

- Cut the Twinson profile P9571 to the right length (bear in mind that you need to allow 3mm/m expansion space for proper elongation) and clip it gently into the aluminium P9564 using your hands.



### F. Top of installation:

- As with the starter profile, the P9569 allows ventilation for your installation. Ensure there is nothing obstructing the perforated zone preventing the air to circulate freely.

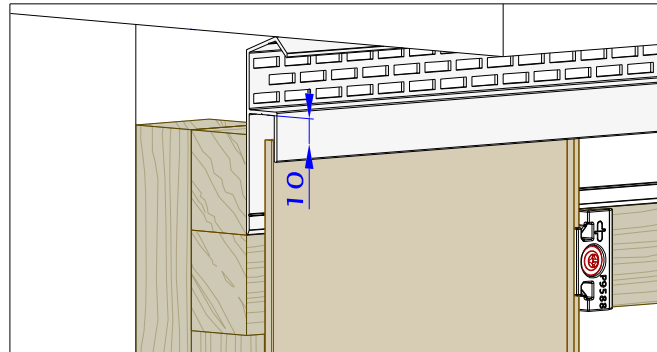
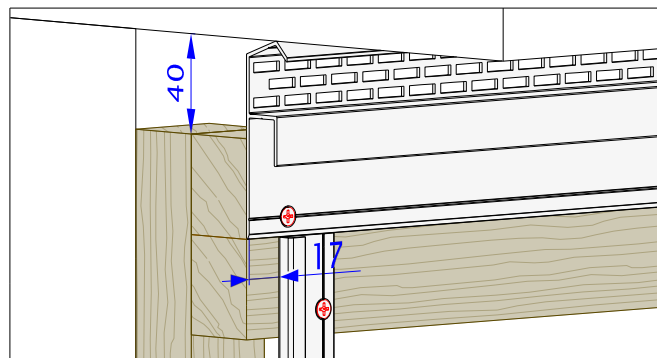
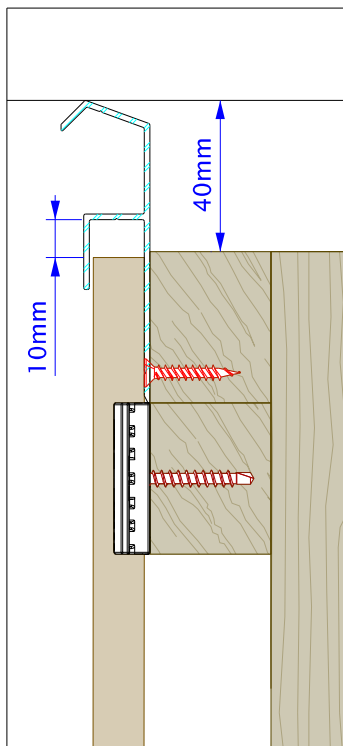


### SEQUENCE OF ASSEMBLY

#### Step 1

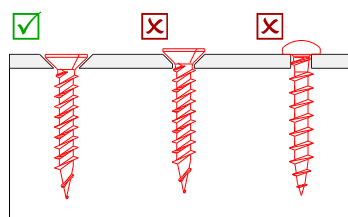
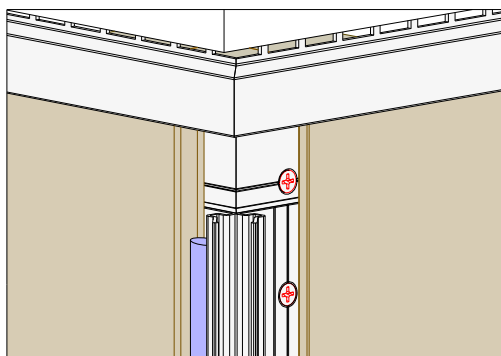


- Due to the fact you are using horizontal battens you will need to leave 40 mm between the edge of the highest batten and the roof or drip moulding. This will ensure the ventilation is not blocked.



#### Step 2

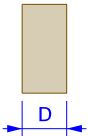
- Cut the profile to the right length. For corners we advise mitre cutting the profile. Position the profile at the top of your installation. This can be the edge of a flat roof or drip moulding. Make sure in all cases that the P9569 is fully covered. Fix the P9569 every 50 cm and do not forget to countersink the screws otherwise the planks will not fit in.



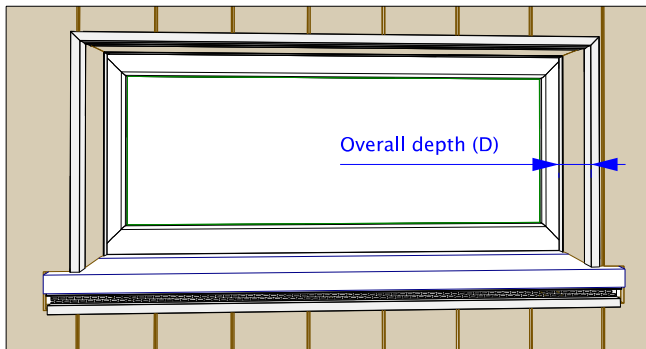
### F. Window:

- ⚠ When installing planks make sure you always start with the finishing around the window.
- There are 2 possibilities:
  1. Overall depth  $\leq 160$  mm
  2. Overall depth  $> 160$  mm

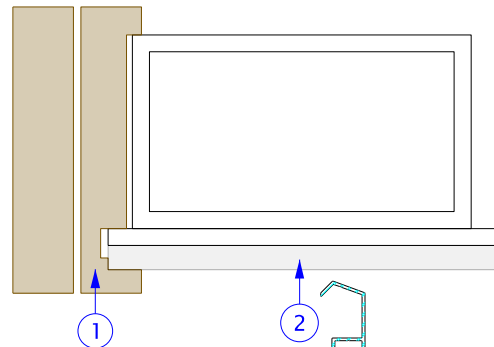
#### 1. Overall depth $\leq 160$ mm: one plank is sufficient



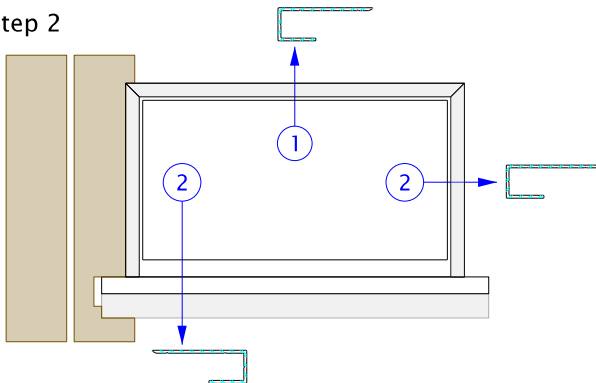
#### STEP BY STEP PLAN



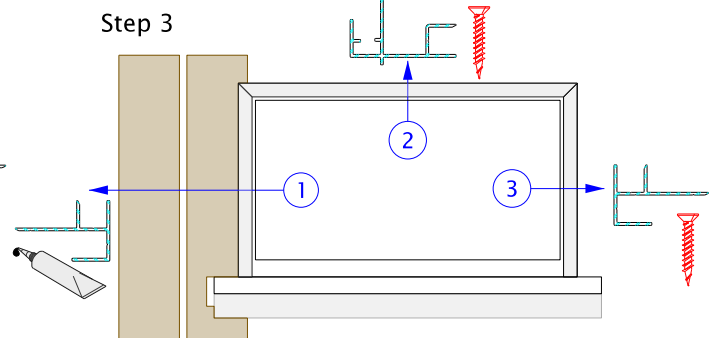
#### Step 1



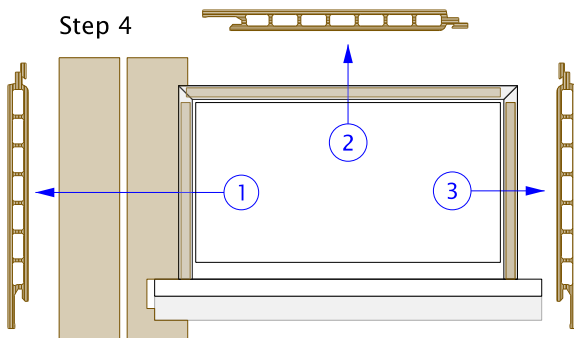
#### Step 2



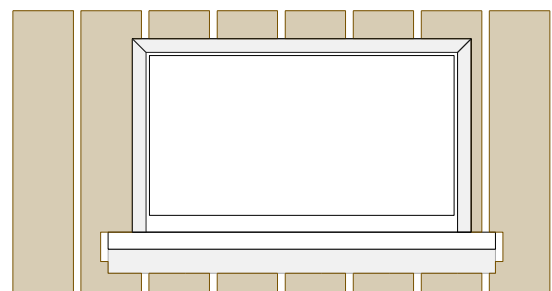
#### Step 3



#### Step 4



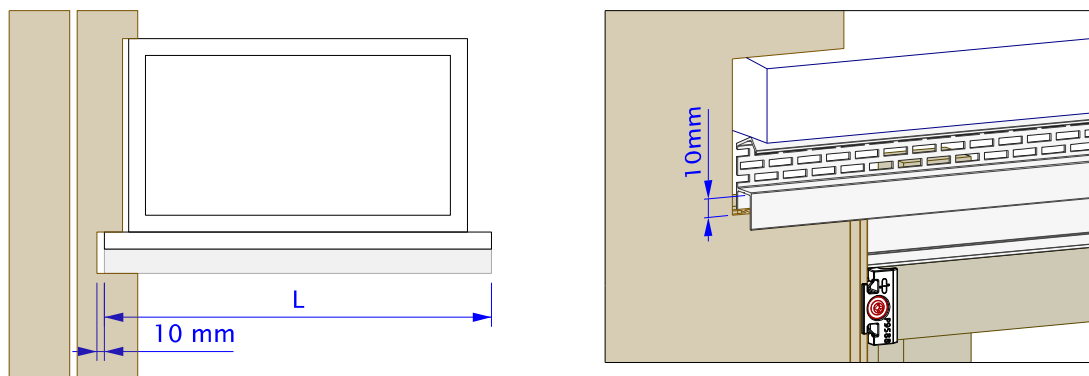
#### Step 5



## SEQUENCE OF ASSEMBLY

### Step 1

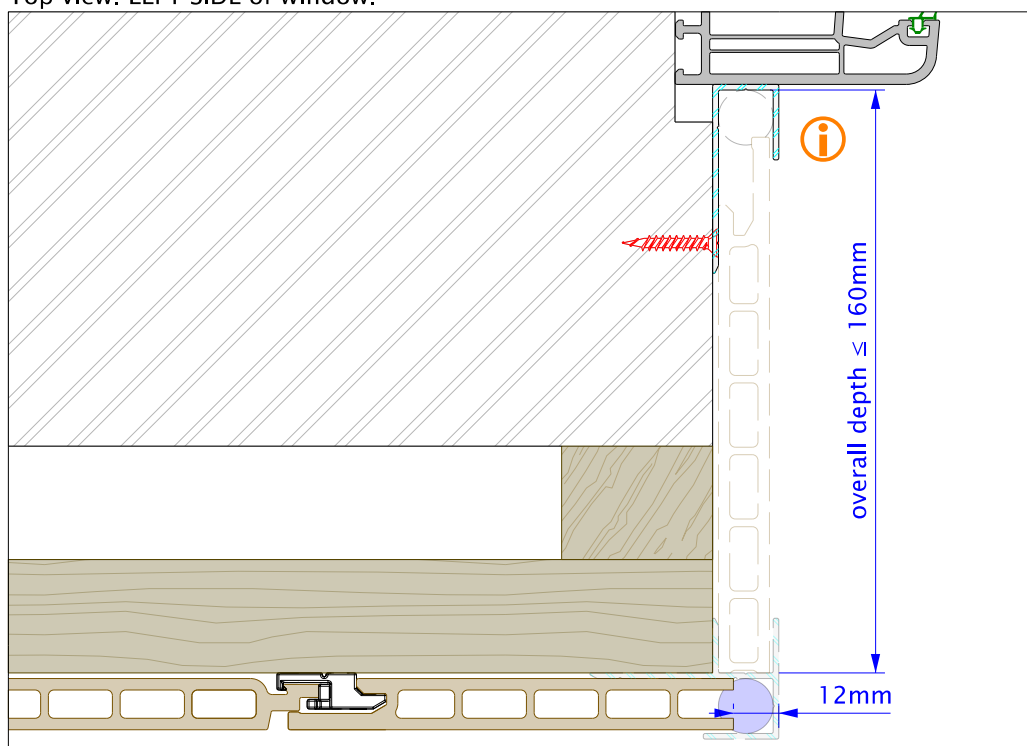
- Start by installing the aluminium finishing profile P9569 under the window-sill.
- Ensure you allow 10 mm lengthways between the P9569 and the cut out of the plank P9576 to ensure the necessary elongation space. (for installation of the P9569 see finishing top of installation on page 3.2/16)



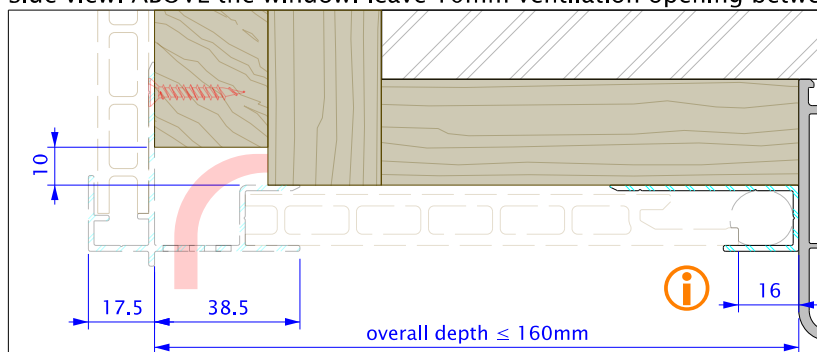
### Step 2: finishing with P9572

- Trim the finishing profiles P9572 to the right length and install them around the window.

Top view: LEFT SIDE of window:



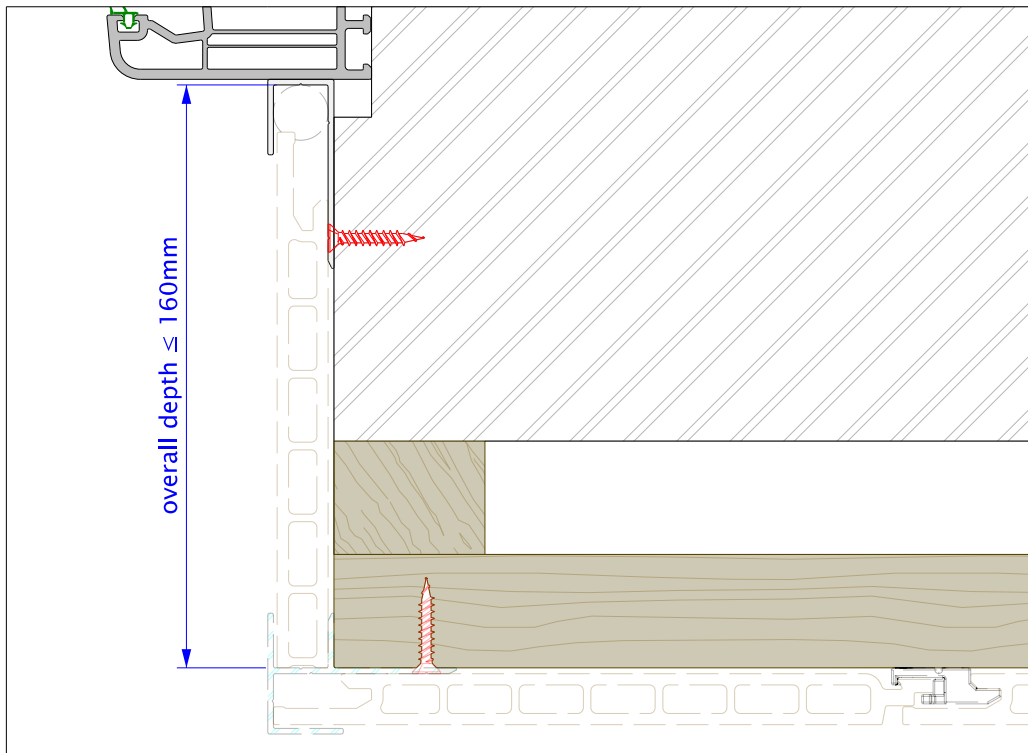
Side view: ABOVE the window: leave 10mm ventilation opening between the battens!



**i** Pieces of the P9471 can be used to maintain positioning of the profile.

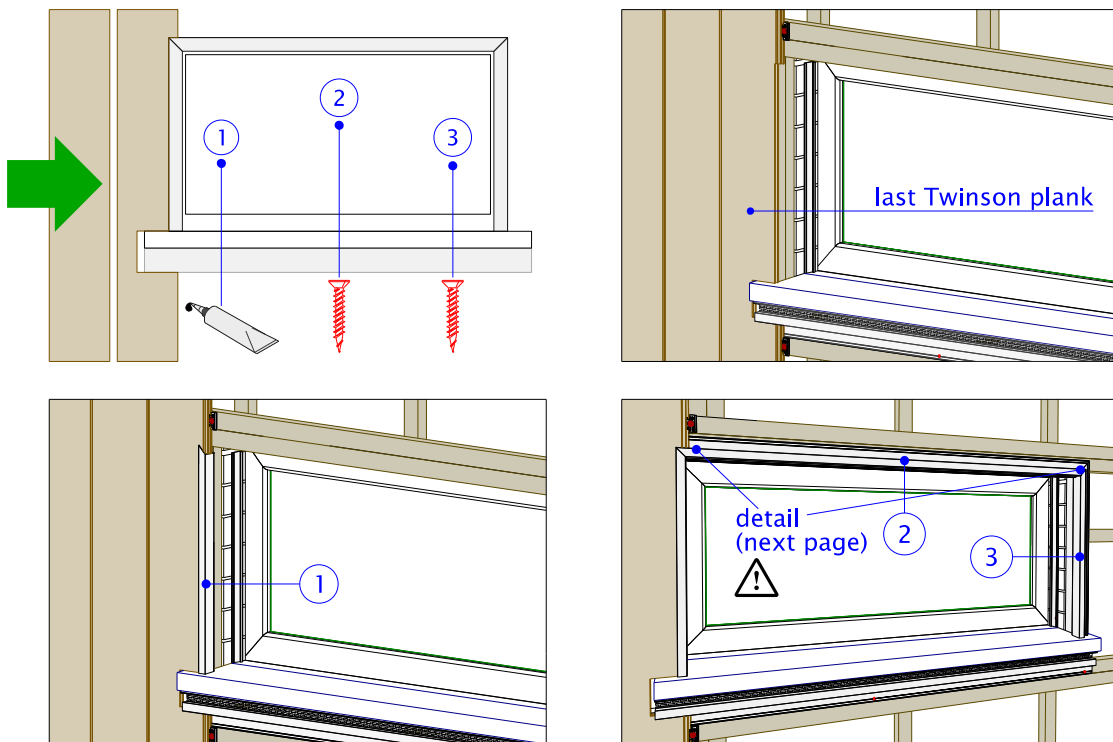


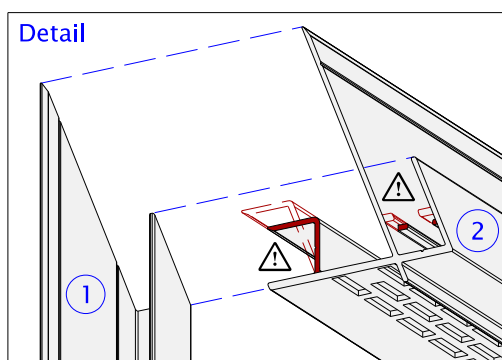
Top view: RIGHT SIDE of window:



### Step 3

- At the sides of the window use the aluminium finishing profile P9565.
- Put an additional batten for the P9565 to maintain proper fixing of the profile.
- Above the window use the aluminium finishing profile P9570 with integrated ventilation and drip detail.
- Cut the aluminium profiles to size with mitre return.
- Glue the left P9565 to the batten after installing the last plank, then screw the top and right aluminium finishing profiles and fix them every 50 cm.

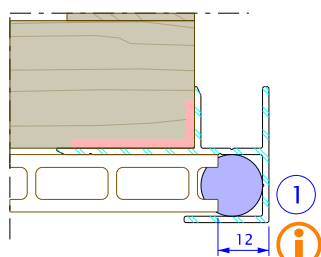




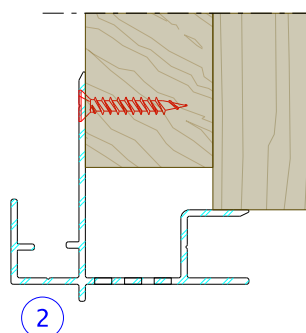
**NOTE:**  
It is necessary to make an extra cut out in the P9570 top aluminium profile at each end, otherwise the planks cannot be put into place.

Pieces of the P9471 can be used to maintain positioning of the profile.

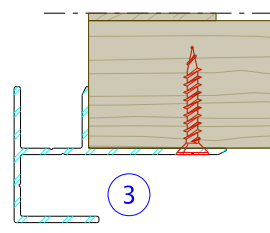
Top view:  
LEFT SIDE -> GLUE



Side view:  
TOP SIDE -> SCREW

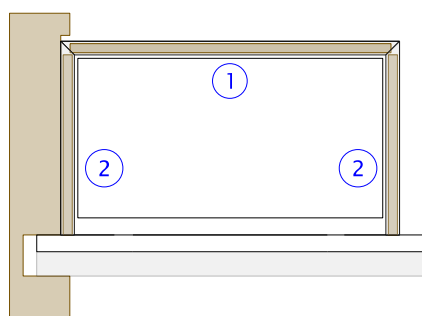


Top view:  
RIGHT SIDE -> SCREW

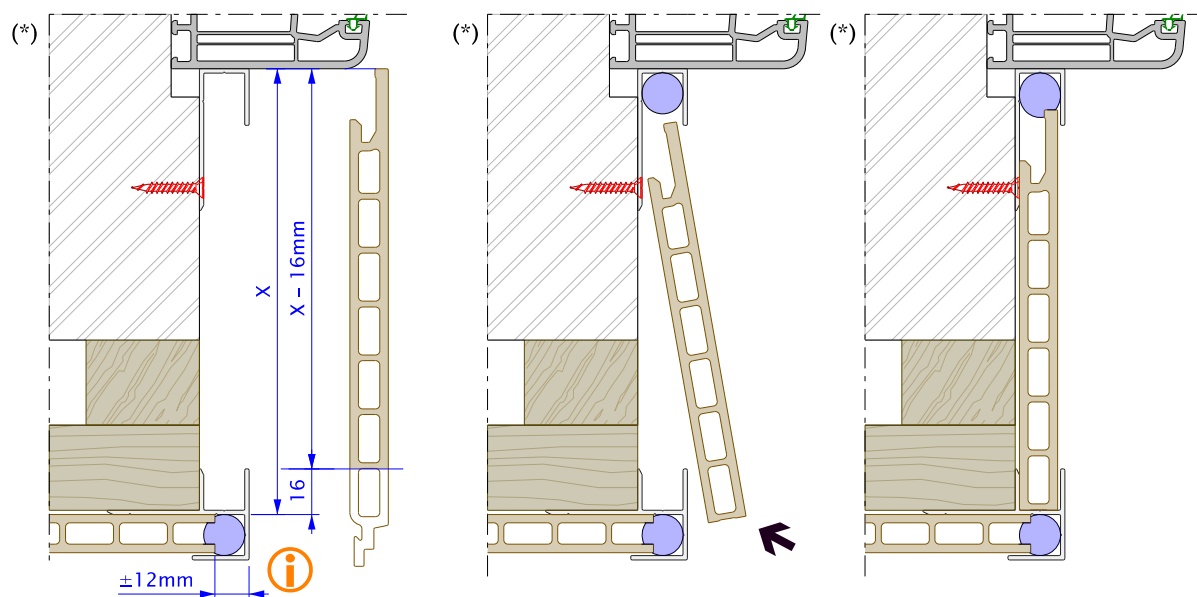


#### Step 4

- Now continue installing the planks around the window.

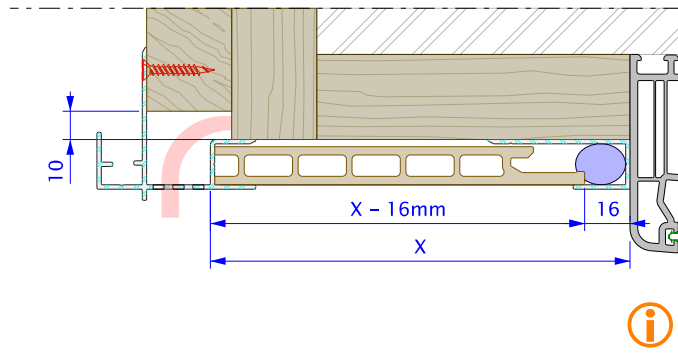


Top view: LEFT/RIGHT SIDE of window:



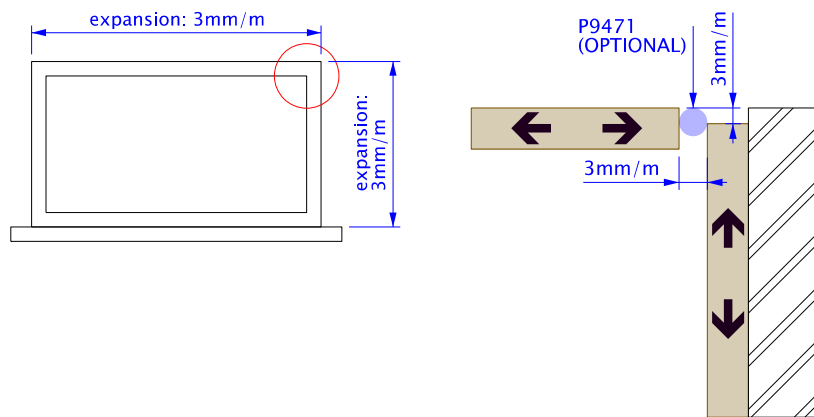
(\*) Repeat for left and right side of the window, except for gluing/screwing of the finishing profile

Side view: ABOVE of window:



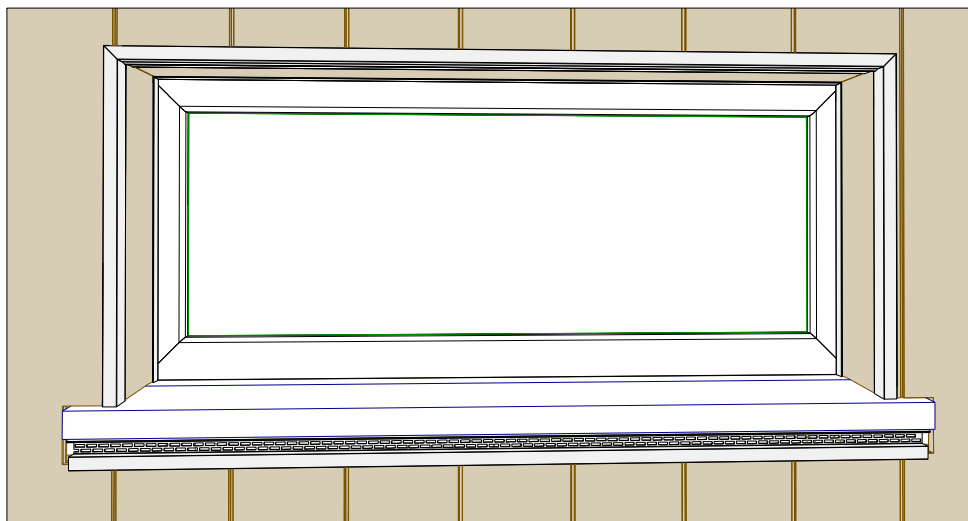
Pieces of the P9471 can be used to maintain some positioning of the profile.

- Cut out the planks taking into account the need for expansion.
- Optional: For a proper finish we propose using a round sealing profile (P9471) with a diameter of 15 mm. Do not use silicone to close the gap! Doing this can leave stains on your Twinson profiles.

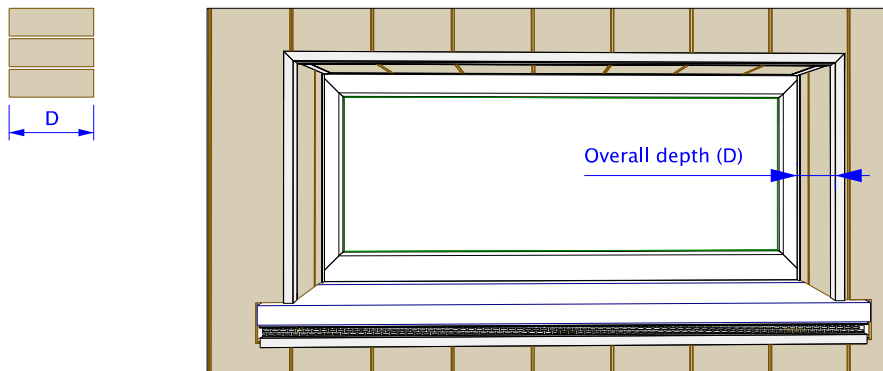


Step 5

- Continue installing the planks to the wall.

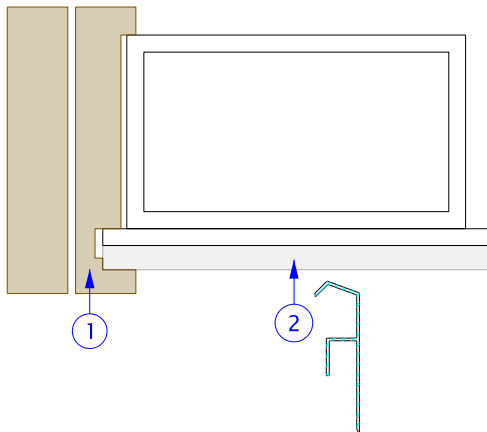


## 2. Overall depth > 160mm: different planks are necessary

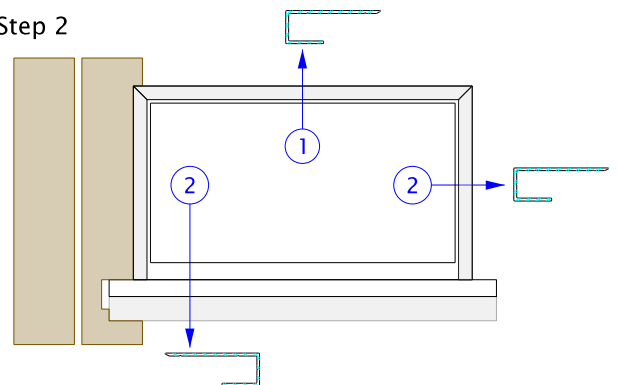


### STEP BY STEP PLAN

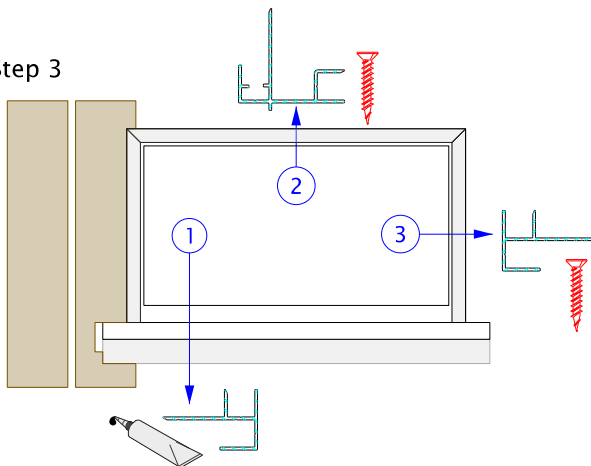
#### Step 1



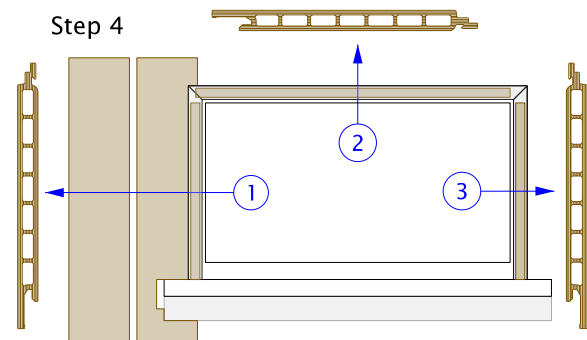
#### Step 2



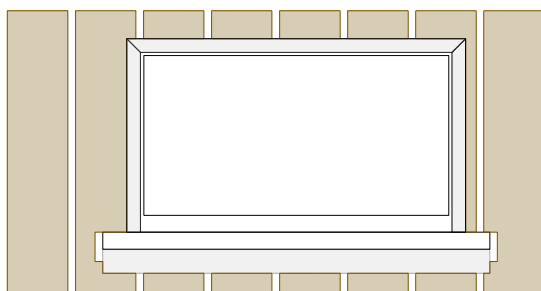
#### Step 3



#### Step 4



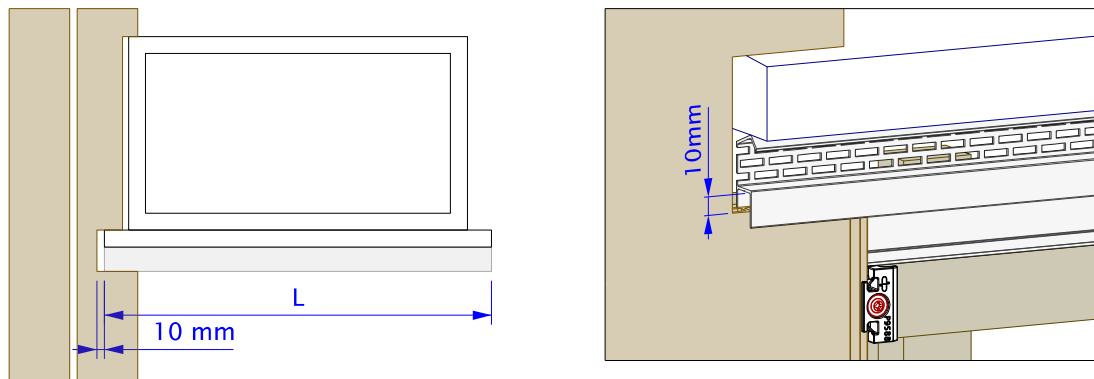
#### Step 5



## SEQUENCE OF ASSEMBLY

### Step 1

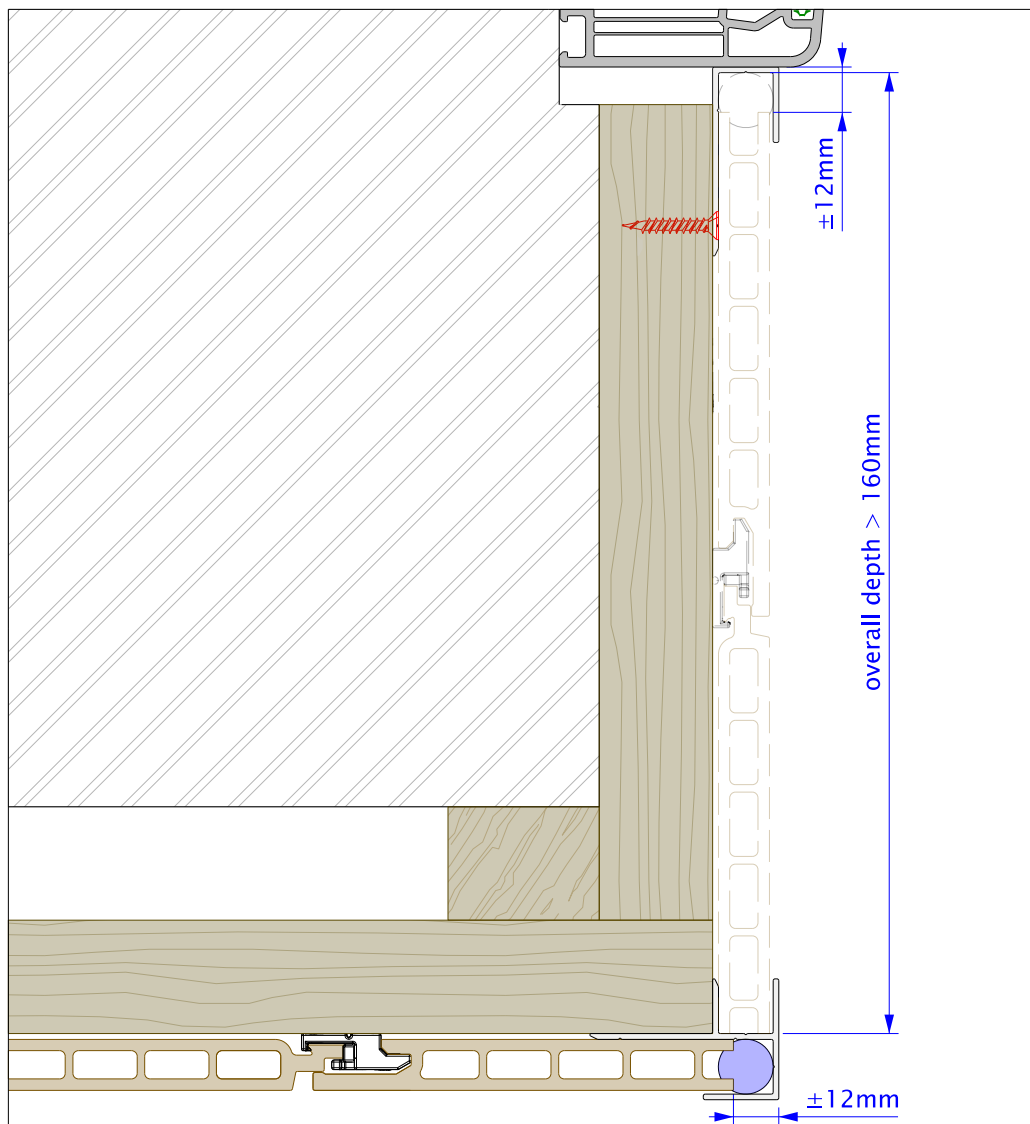
- Begin by installing the aluminium finishing profile P9569 under the window-sill.
- Ensure you leave 10 mm lengthways between the P9569 and the cut out of the plank P9576 to ensure the necessary expansion.  
(for installation of the P9569 see chapter finishing top of installation on page 3.2/16)



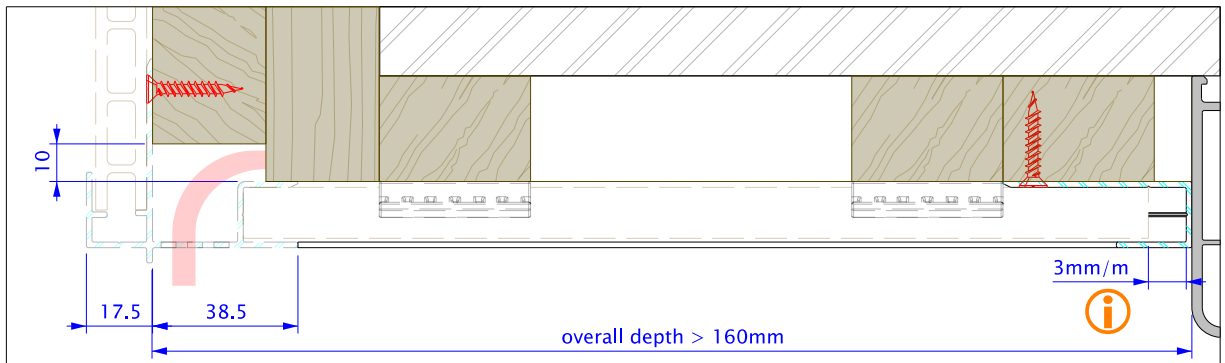
### Step 2: finishing with P9572


- Cut the finishing profiles P9572 to the right length and install them around the window.

Top view: LEFT SIDE of window:

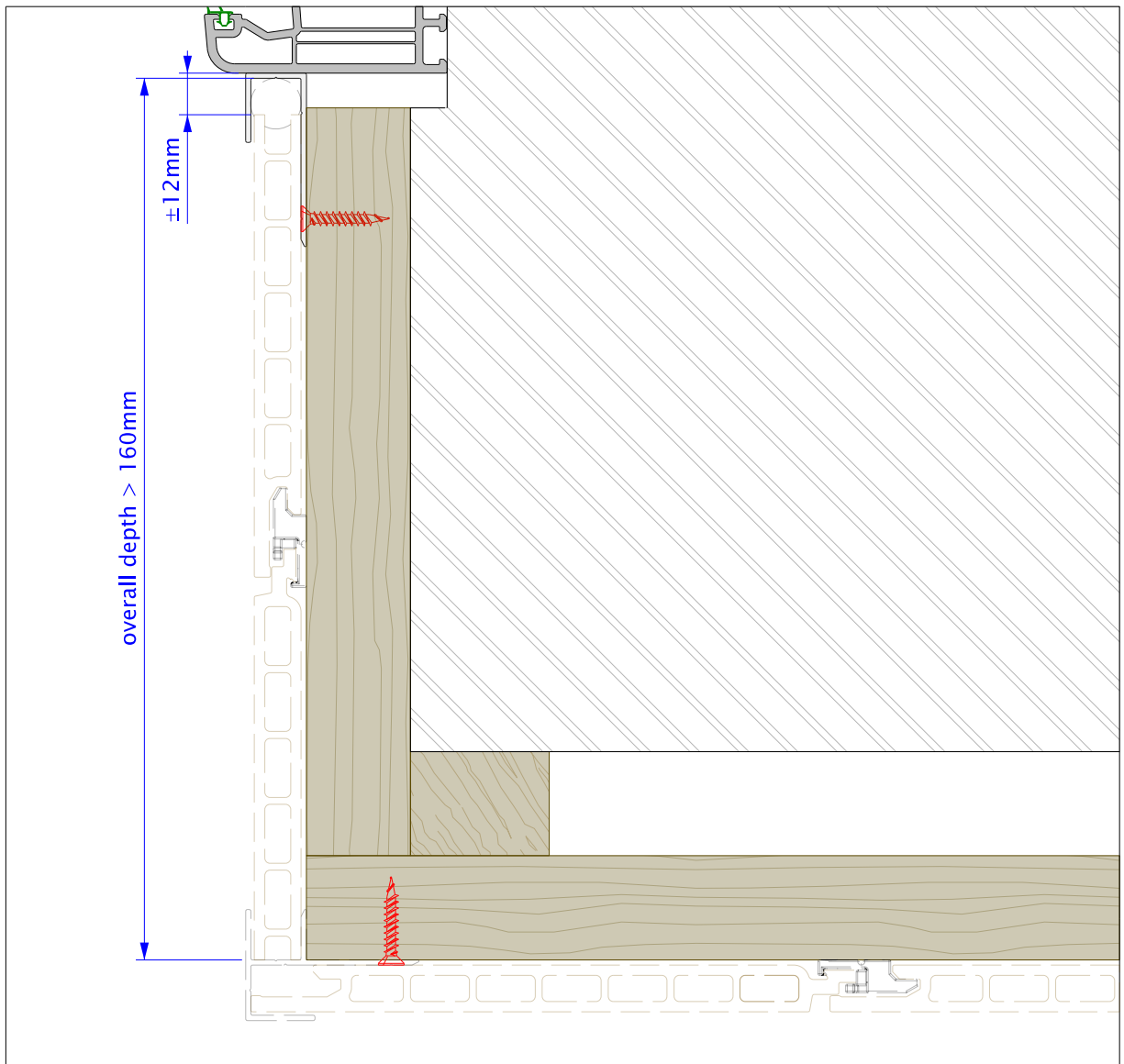


Side view: ABOVE the window:



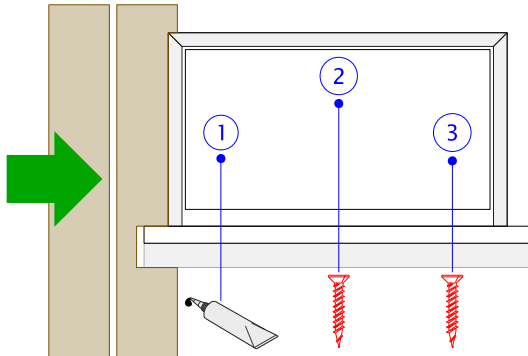
 Pieces of the P9471 can be used to maintain some positioning of the profile.

Top view: RIGHT SIDE of window:

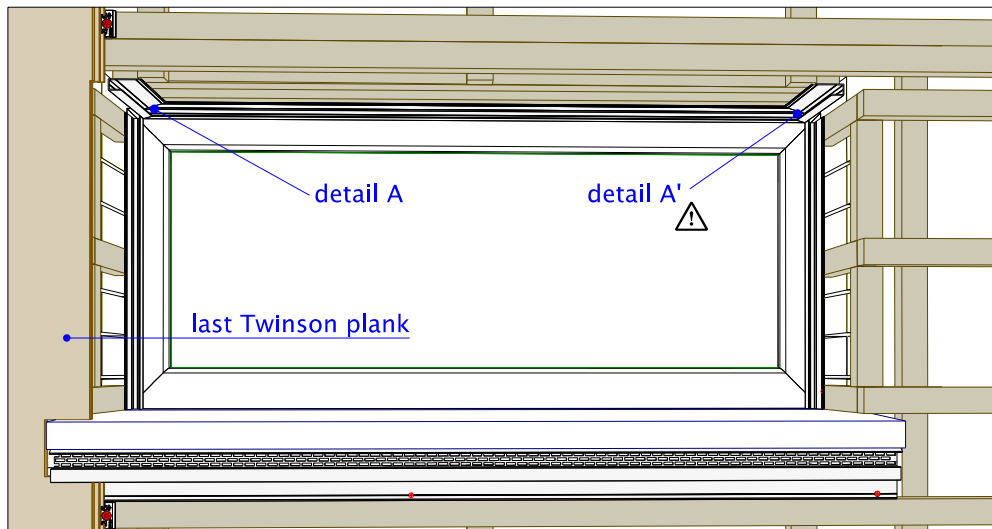
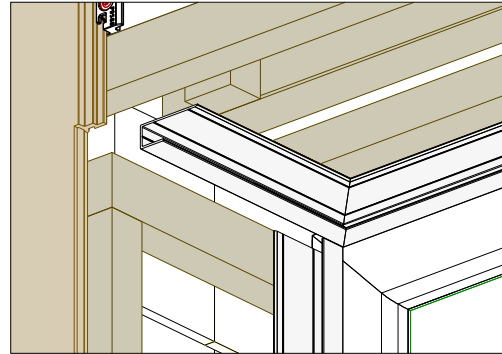


### Step 3

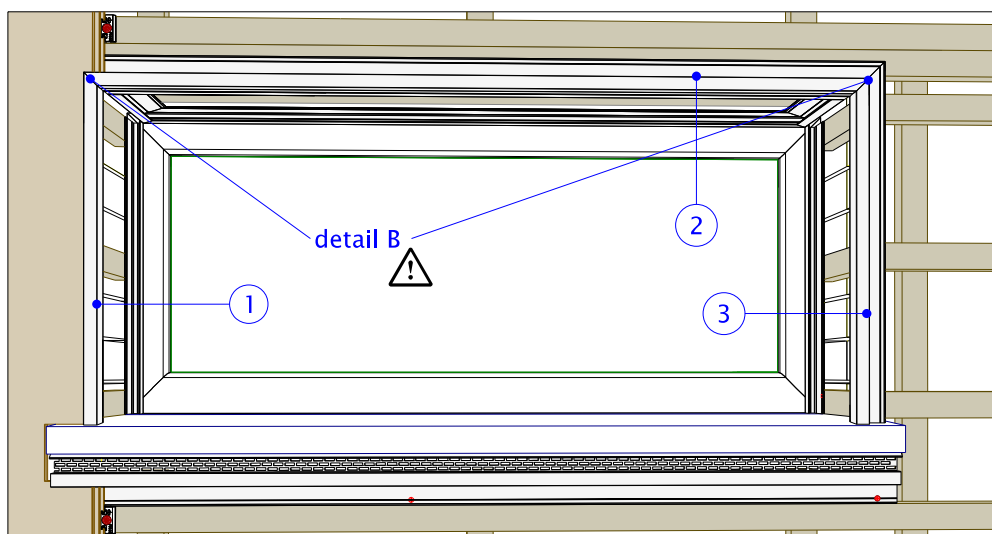
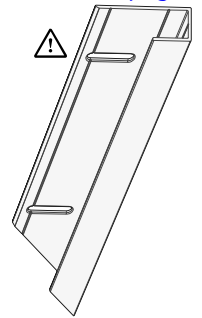
- For the sides of the window use aluminium finishing profile P9565.
- Put an additional batten next to the P9565 to maintain a proper fixing of the plank P9576 with the clip P9588.
- Above the window use aluminium finishing profile P9570 with integrated ventilation and drip detail.
- Cut the aluminium profiles to length with mitre return.
- Glue the left P9565 to the batten after installing the last plank, then screw the top and right aluminium finishing profiles and fix at every 50 cm.

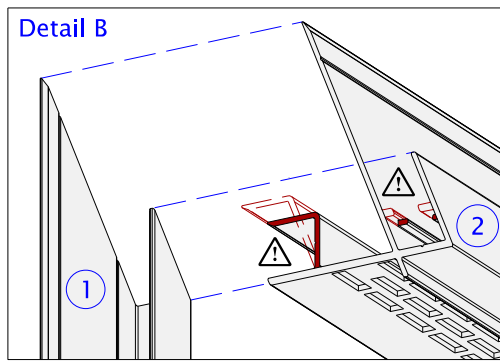


Detail A




Detail A' (see next page)

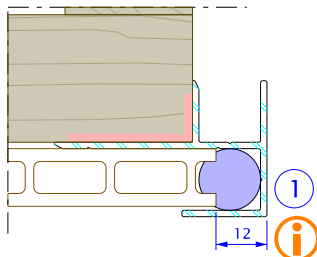




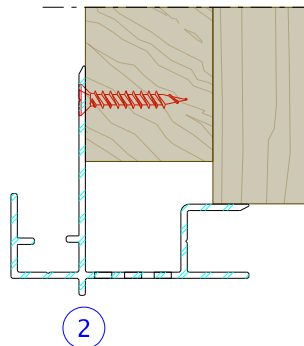
**NOTE:**  
It is necessary to make an extra cut out in the P9570 top aluminium profile on both sides, otherwise the Twinson planks installed on the sides cannot be slotted into place.

 Pieces of the P9471 can be used to maintain positioning of the profile.

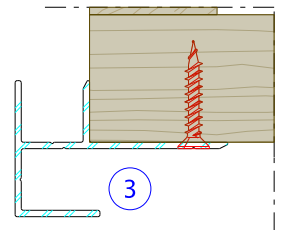
Top view:  
LEFT SIDE -> GLUE



Side view:  
TOP SIDE -> SCREW

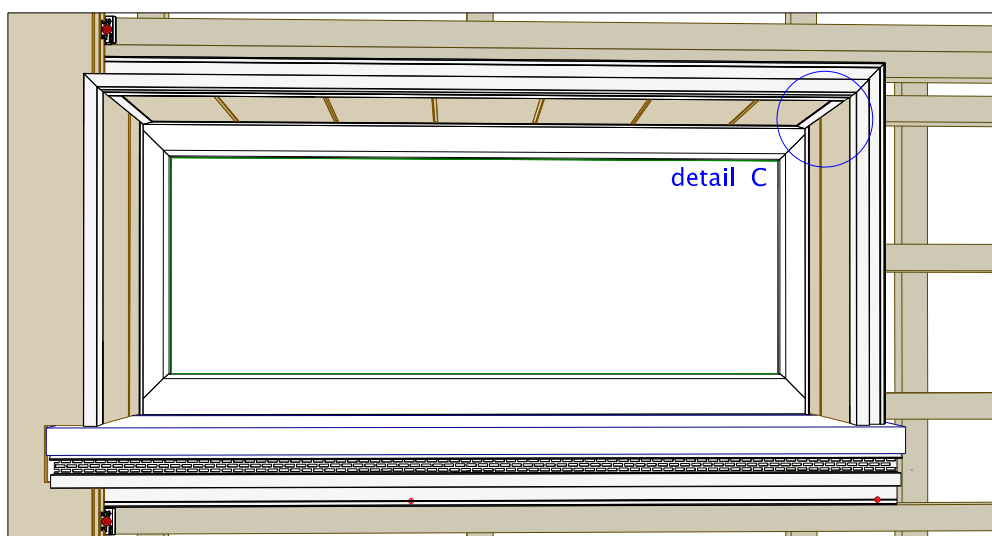
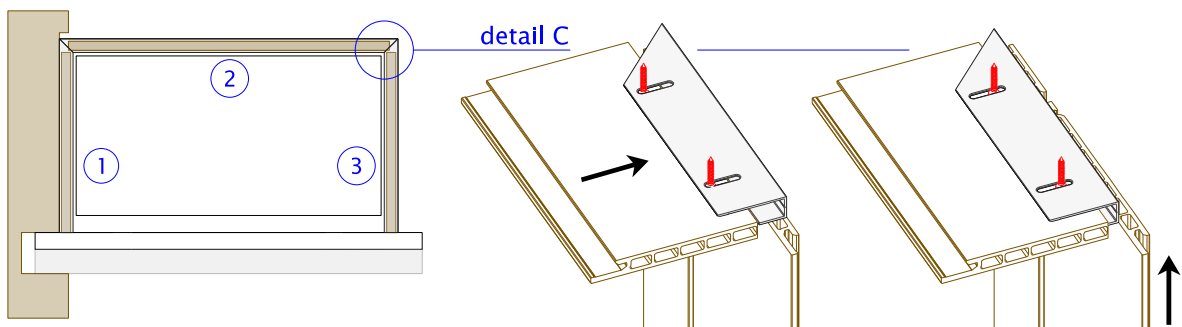


Top view:  
RIGHT SIDE -> SCREW



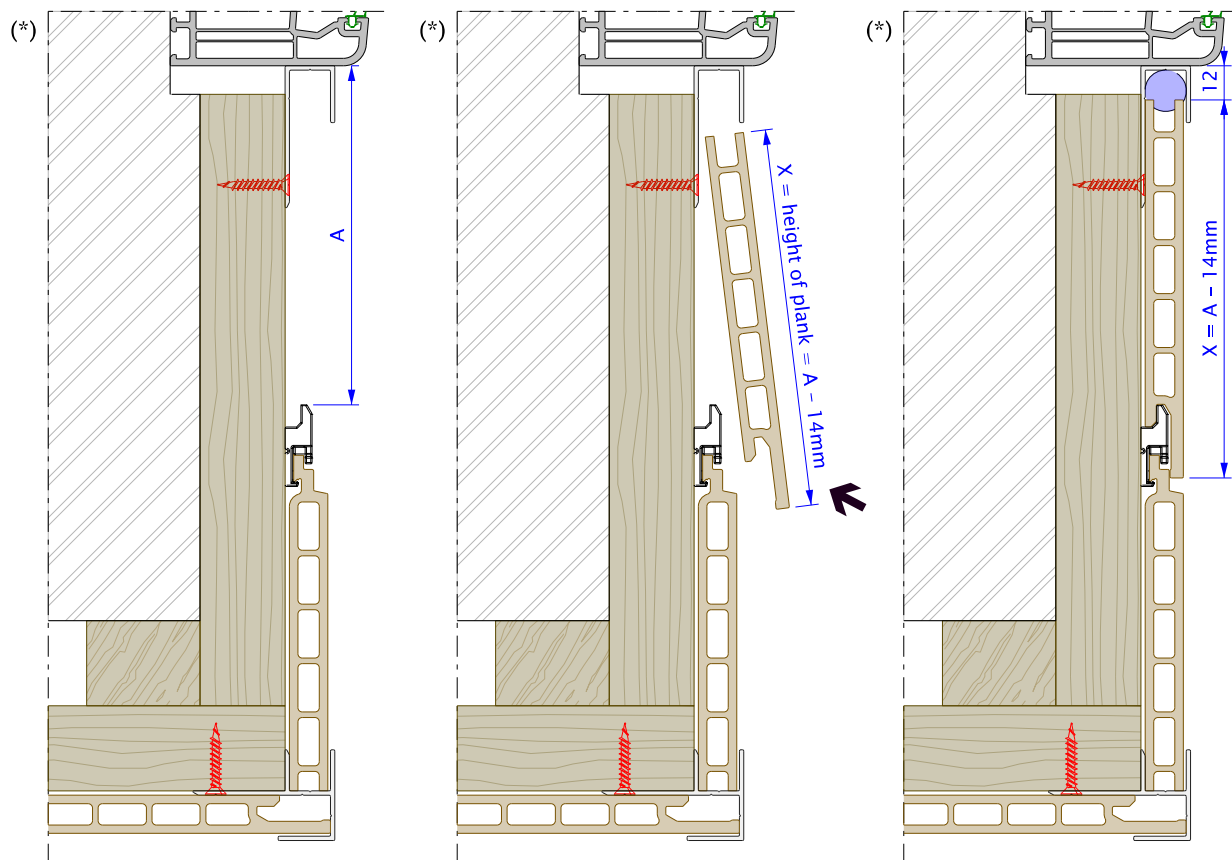
#### Step 4

- Continue installing the planks around the window.



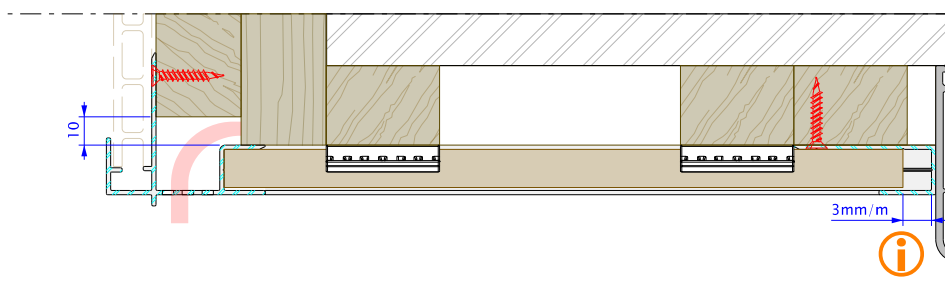


Top view: LEFT/RIGHT SIDE of window:



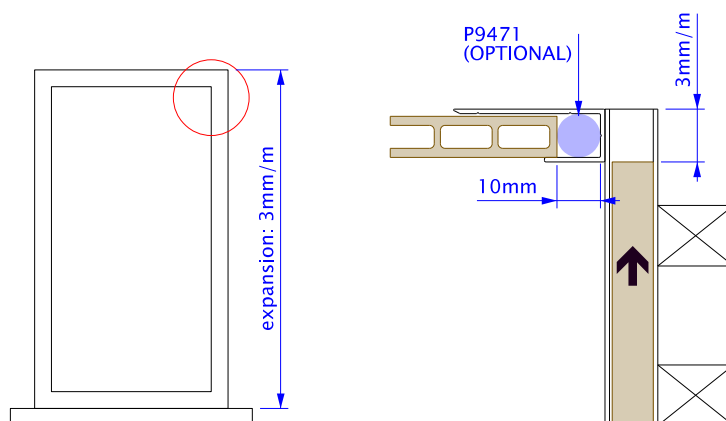
(\*) Repeat for left and right side of the window, except for gluing/screwing of the finishing profile

Side view: ABOVE of window:



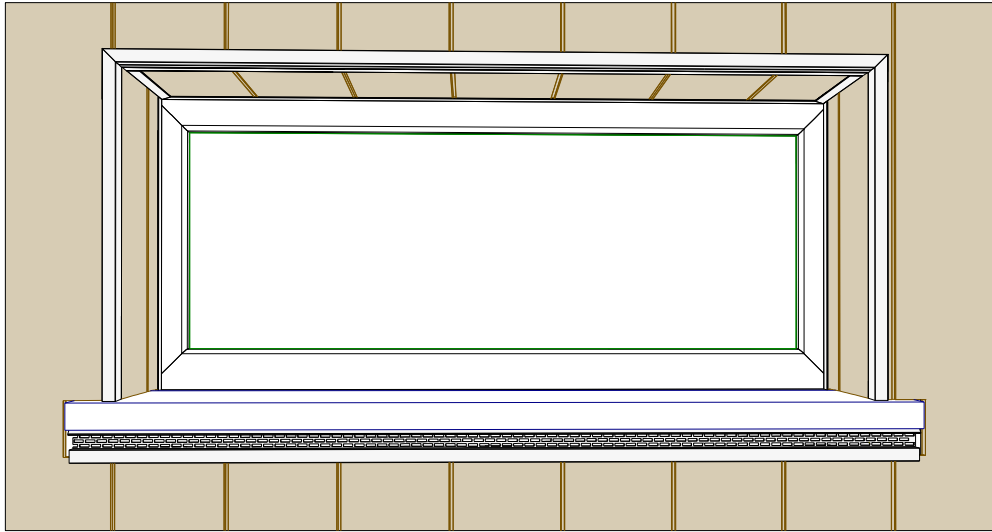
**i** Pieces of the P9471 can be used to maintain positioning of the profile.

- Cut out the planks taking into account the need for expansion.
- Optional: For a proper finish we propose using a round sealing profile (P9471) with a diameter of 15 mm. Do not use silicone to close the gap! Doing this can leave stains on your Twinson profiles.



Step 5

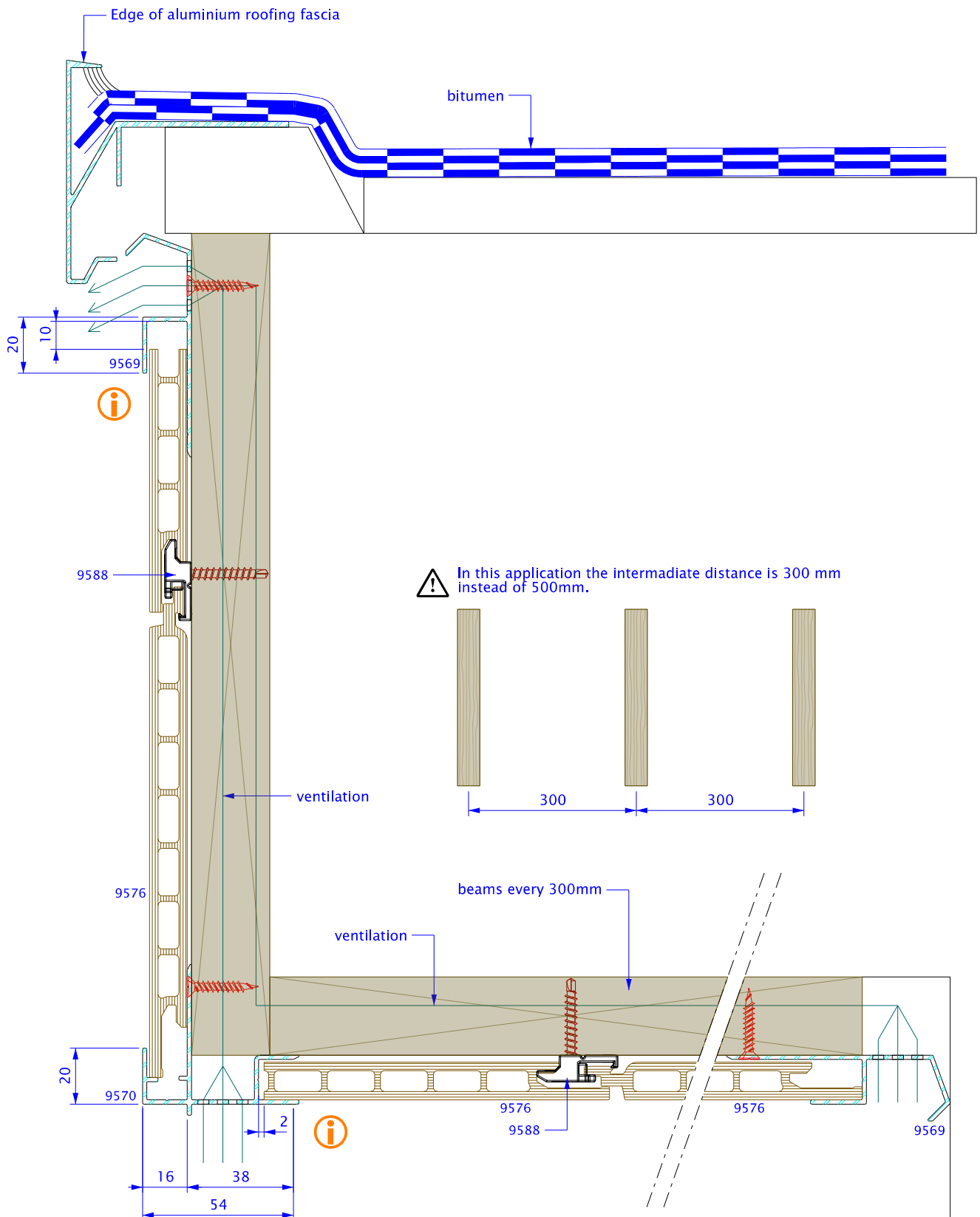
- Continue installing the planks.



# EXAMPLES

SOFFITS  
SPOTLIGHTS  
RAINWATER DRAINAGE

## 4.1. Soffits

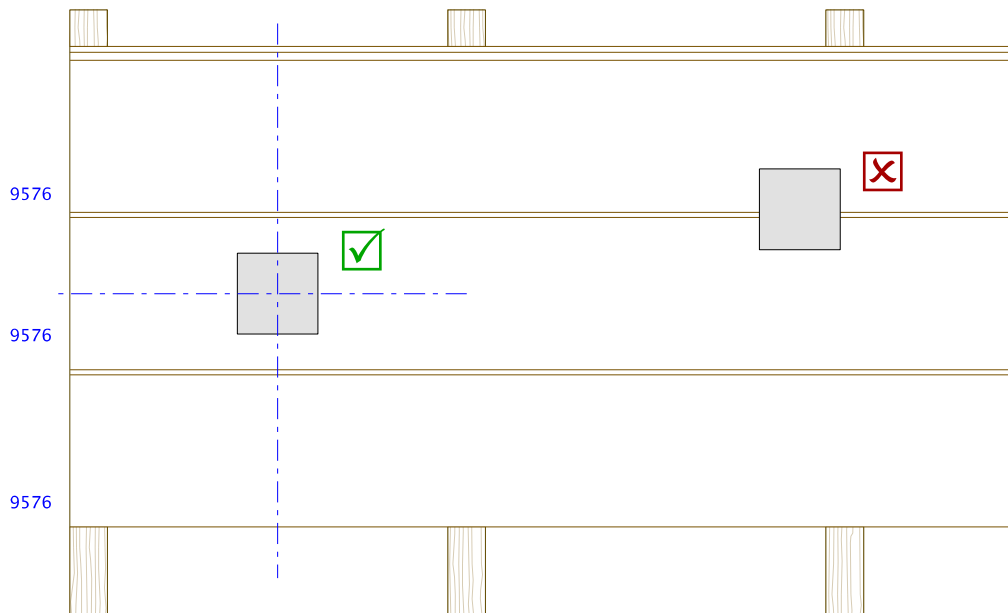


Pieces of the P9471 can be used to maintain some positioning of the profile.

## 4.2. Spotlights

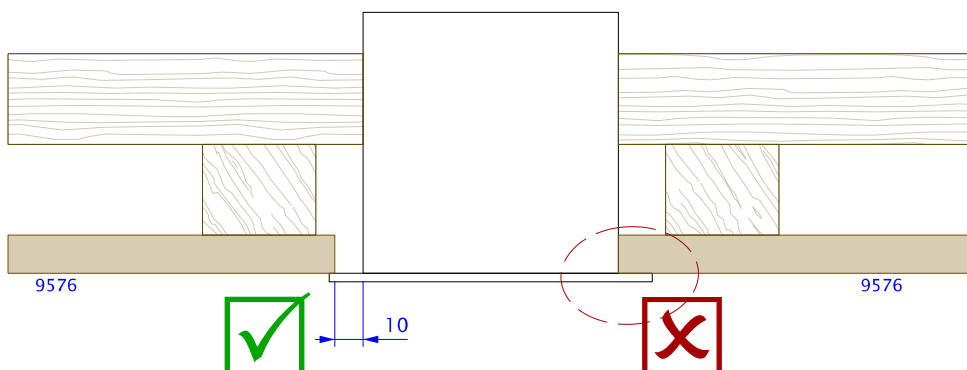
### 4.2.1. Light weight decking spotlights:

- Light weight Decking lights must to be installed between the batten supports and centrally in the middle of one plank. Installing lights that overlap different planks could lead to extra tension due to expansion which in turn may lead to deformation of the planks and/or damage to the lights.
- Positioning the decking lights in the middle of the planks between the battens is the best method of avoiding blocking the expansion.
- The temperature of the casing of the decking light should not exceed 60°C, please refer to the manufacturer for guidance.



### 4.2.2. Heavy weight decking spotlights:

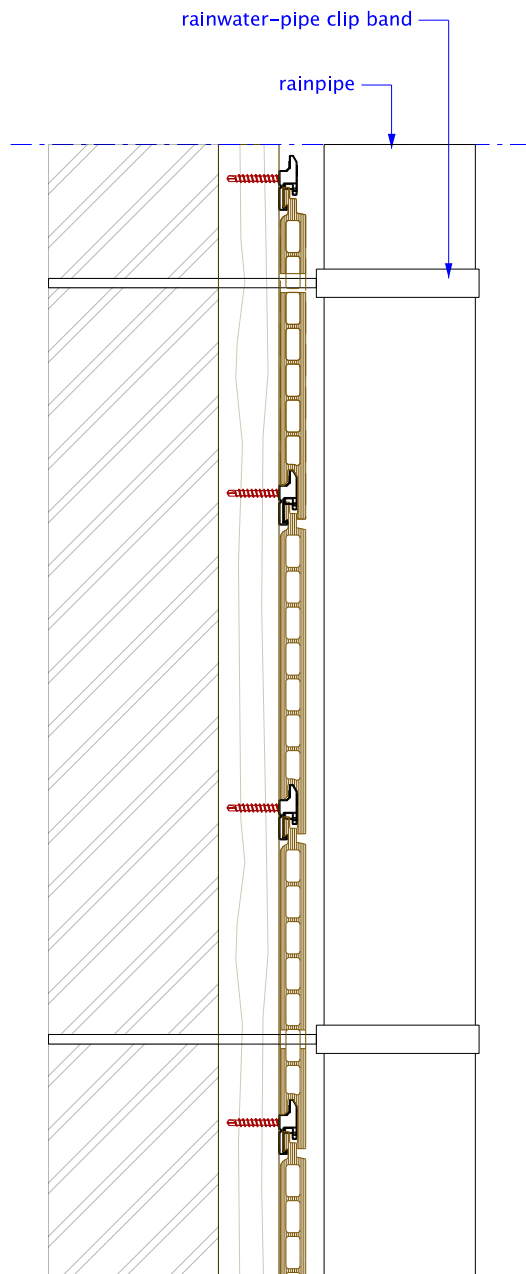
- Heavy decking lights should be fixed directly to a sufficient, reinforced under structure. In this case the spot needs to be considered as a fixed object so an expansion space of 10mm around the light is needed.
- Additional battens will be needed next to the light to fix the plank with the clip P9588 as close as possible.
- The temperature of the casing of the decking light should not exceed 60°C. Please refer to the manufacturer for guidance.



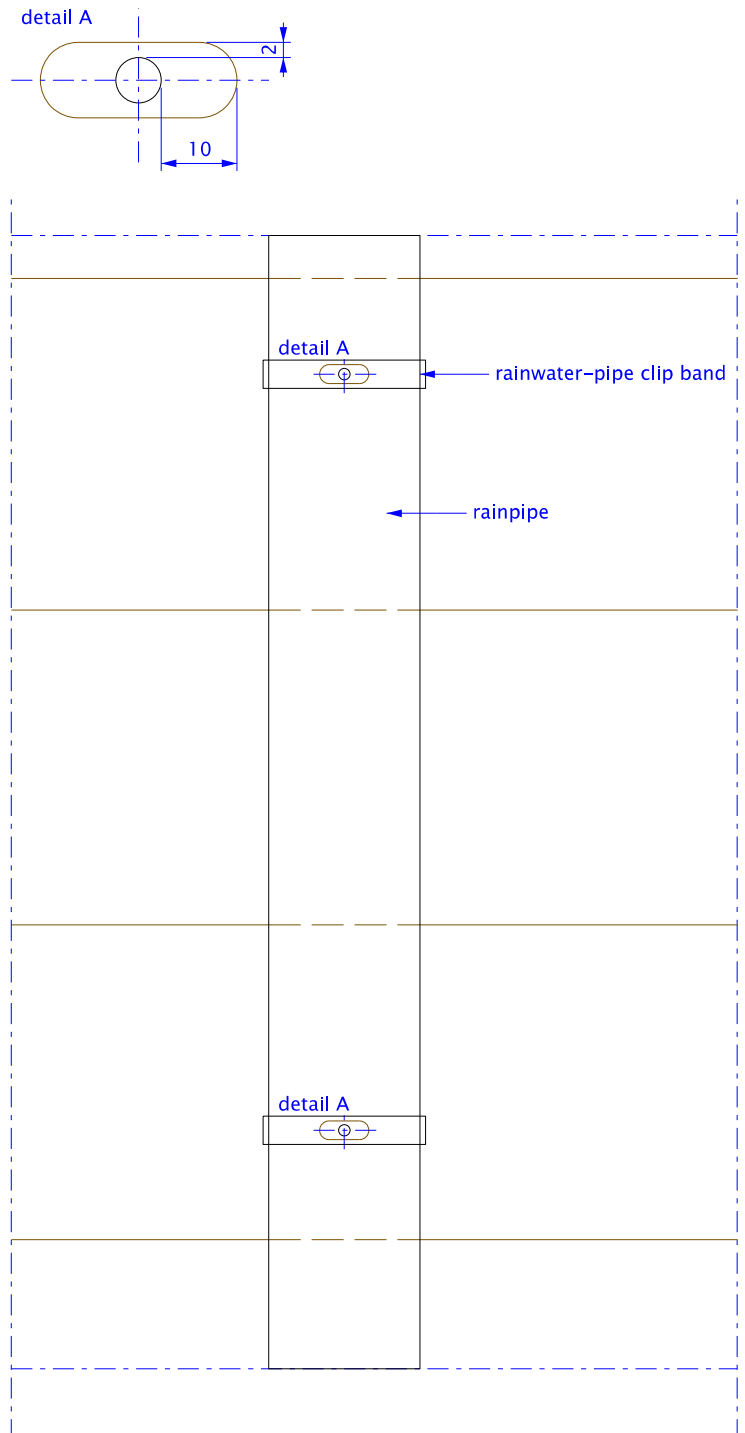
## 4.3. Rainwater drainage:

### 4.3.1. Horizontal installation:

Side view:

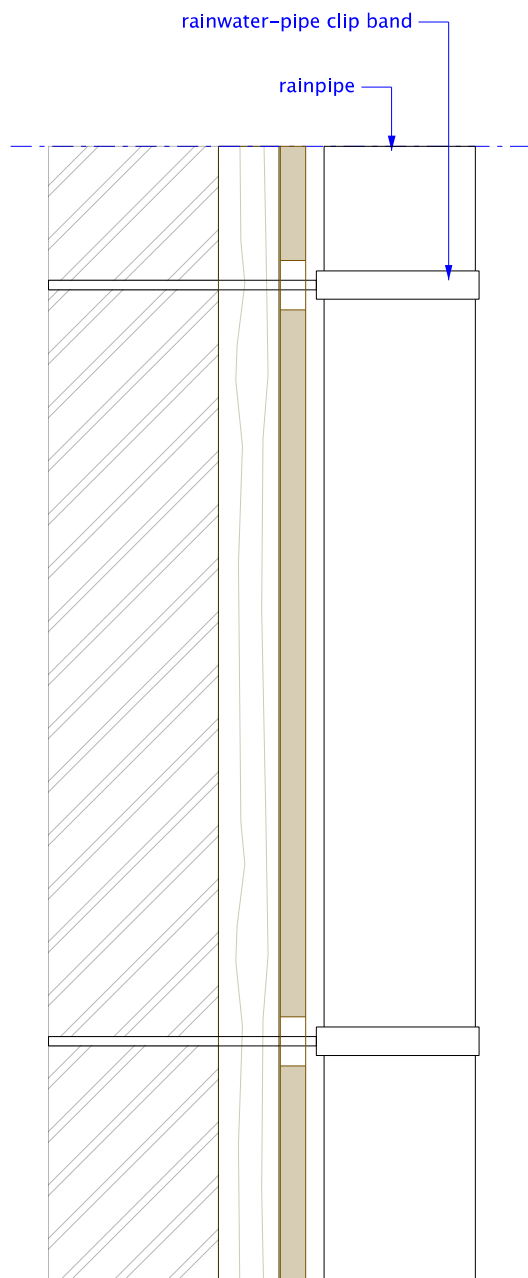


Front view:



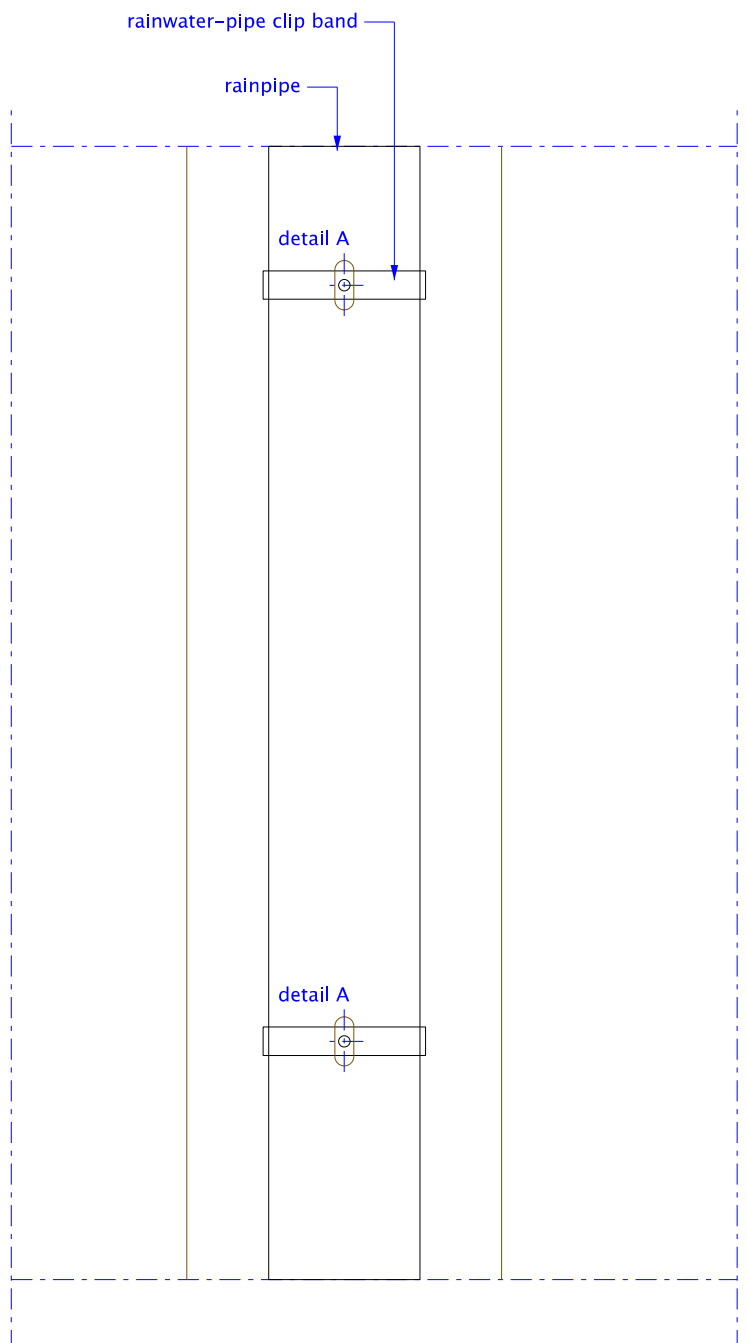
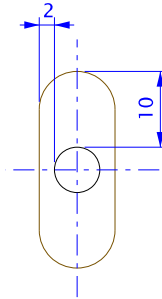
### 4.3.2. Vertical installation:

Side view:



Front view:

detail A



# MAINTENANCE GUIDELINES

MAINTENANCE  
CLEANING & CARE



## 5.1. Maintenance

Twinson O-Wall offers you the ultimate wall cladding solution and protection. It is durable, offering a low maintenance solution, there is no need to treat or protect Twinson O-Wall products with paint or varnish.

All wall coverings are subject to attack from external elements including weather (wood, PVC, bricks, etc.).

Environment, orientation, design and materials used in the building will often determine the performance and maintenance regime of your façade.

If your building is located close to forests, or near polluted urban areas or known pollution, opting for darker colours, can help as they are generally less sensitive to environmental pollution in the long-term.

In new build situations, building design is of vital importance. A number of measures could be taken in order to protect your façade particularly against build-up of dirt or grime caused from exposure to high water concentration.

### Design tips:

- In case of flat roofs: it is recommended to provide fascia boards and copings with a drip edge that sticks out at least 4 cm from the façade. Moreover, slopped capping stones which create a water run-off from the roof are preferable.
- External window sills should protrude at least 3 cm from the façade. Local dirt accumulation will reduce as a result. Note Circular windows should have an additional edge profile and drip edge in order to avoid concentration below the circle.
- In order to protect the façade against splashed dirt and mechanical stress, it is recommended to start installing 30 cm above ground level. The distance between the ground level and the O-Wall façade could be covered by a blue stone/brick.
- Finally, a proper rainwater system (eg: guttering, down pipes) is required.

Similar to other façades, the O-Wall façade will be cleaned naturally during heavy rain fall. An accumulation of dirt could occur on places (e.g. just below the soffits, window boards), where less or even no water gathers. This dirt can deface the façade, which is a result of air pollution (dust, dust particles etc.) if left to accumulate. These very small particles can merge with persistent rainfall and cause water spots/circles with dark edges on the surface. The dust particles will dilute and dissipate easily in places that are saturated on a regular basis in combination with UV-light.

It is recommended to remove local dirt accumulation or marks as soon as they are visible, using a mild cleaner (soft brush) or a sponge with a large quantity of water, combined, if necessary, with diluted bleach/soap solution for more stubborn marks.

The dirt accumulation will reduce in the course of time in most cases (but not in all) as the wall covering becomes weathered and less sensible to dirt.

## 5.2. Cleaning

See chapter 5.1. for maintenance.

As with other cladding systems, the weather (rainwater/UV-light) will clean, give O-Wall a natural appearance.

Where dirt and grime build-up and therefore cleaning manually is required, use a soft brush or sponge with large quantities of water (this can be done with or without a mild soap solution)

**Disclaimer:**

- The usage of abrasive, or corrosive chemicals and solvents such as paraffin, acetone, turpentine, petroleum, white spirit, etc ... are strictly prohibited.
- The use of a high pressure cleaner is not allowed.
- The use of PVC Cleanup P956, PVC Protect P960, Decoclean P961 and PVC Cement Wipe-off P965 are NOT ALLOWED.