



# SVK TECHNICAL GUIDE

ROOF / BRICK / PAVER / **FACADE** / BLOCK



# Contents

## Section 1

<b>Wienerberger SVK Facade Panel Overview</b>	<b>3</b>
1.1 Panel Features	4
1.2 Approvals: United Kingdom	8
1.3 Approvals: Europe	10
1.4 Surface Finishes	12
1.5 Environmental: Certificate of Declaration	14

## Section 2

<b>Application of Rainscreen Facades</b>	<b>15</b>
2.1 Principles of Rainscreen Construction	16
2.2 Design Considerations	17
2.3 Design Wind Speeds/Load Span Tables	22
2.4 Impact Performance	24

## Section 3

<b>Wienerberger SVK Rainscreen Systems (Ornimat, Decoboard, Puro Plus, Colormat)</b>	<b>28</b>
3.1 Mechanical Secret Fix & Standard Details	29
3.2 Rivet Fixed to Aluminium Helping Hand System & Standard Details	37
3.3 Screw Fix to Timber Battens & Standard Details	45
3.4 Soffit Applications & Standard Details	61
3.5 Rivet Fixing: Omega and Zed Rails	65

## Section 4

<b>Wienerberger SVK Facade Panel General Information</b>	<b>74</b>
4.1 Fabrication & Drilling	75
4.2 Transportation, Handling & Storage	79
4.3 Cleaning & Maintenance	81
4.4 General Terms of Use	82

## **Section 1.0**

### Wienerberger SVK Facade Panel Overview

## 1.1 Overview of Panel Features

Ornimat, Decoboard, Puro Plus and Colormat

Fibre cement is manufactured by the Hatschek process, by means of forming thin individual filter layers that are subsequently built up to the required thickness. The sheets are cut to size and individually stacked between steel sheets. After the first curing in a maturing chamber at slightly elevated temperatures and humidity, the fibre cement sheets are de-stacked and piled on wooden pallets to further cure in the warehouse for 28 days. The sheets are dried to a moisture content < 5% before coating or otherwise finishing. The Colormat board is however placed into gas fired autoclave to complete the curing process.

Puro Plus		Decoboard		
		Classic	Elements	Pure
Finish	Grey panel with natural effect Untreated lightly sanded surface	High UV resistance Can be sawn to size in advance Colour paint pot available for maintenance		
		Coated in one colour Edge not coated in the same colour	Bright bold colours Edge not coated in the same colour	3 standard colours with a natural stone look Transparent and semi-transparent coating
Dimensions	Squared standard 3,070 x 1,220 mm 2,520 x 1,220 mm Non-squared standard 3,085 x 1,235 mm 2,535 x 1,235 mm	Squared standard 3,070 x 1,220 mm 2,520 x 1,220 mm Non-squared standard 3,085 x 1,235 mm 2,535 x 1,235 mm		
Reaction to fire classification in accordance with BS EN 13501-1	A2-s1, d0	A2-s1, d0		
Thickness	8 mm and 10 mm (12 mm on request)	8 mm and 10 mm (12 mm on request)		
Weight	± 14.60 kg/m <sup>2</sup>	± 14.60 kg/m <sup>2</sup>		
Screws	YES	YES		
Rivets	YES	YES		
Invisible Mechanical Fastening	YES	YES		

## 1.1 Overview of Panel Features

Ornimat, Decoboard, Puro Plus and Colormat

	Ornimat		Colormat		
	Elements	Essentials	Classic	Scripto	Touch
Finish	High-quality UV-resistant coating Sawn to size in advance Coated in one colour Edges coated in same colour		Waterproofed: water-repellent, transparent protective layer Through coloured		
			Lightly sanded line pattern	Deeply sanded line pattern	Stippled, velvety appearance
Dimensions	Squared Length (cut to size) Width (cut to size) max. dimensions 3,070 x 1,220 mm		Squared 3,050 x 1,220 mm 2,500 x 1,220 mm		
Reaction to fire classification in accordance with BS EN 13501-1	A2-s1, d0		A2-s1, d0		
Thickness	8 mm and 10 mm (12 mm on request)		8 mm and 10 mm		
Weight	± 14.60 kg/m <sup>2</sup>		± 14.40 kg/m <sup>2</sup>		
Screws	YES		YES		
Rivets	YES		YES		
Invisible Mechanical Fastening	YES		NO		

## 1.1 Overview of Panel Features: Board Properties

Ornimat, Decoboard, Puro Plus and Colormat

Tolerances (Squared Boards)	Standard	Ornimat	Decoboard	Puro Plus	Colormat
Length	BS EN 12467	± 1.5mm	± 1.5mm	± 1.5mm	± 2mm
Width	BS EN 12467	± 1.5mm	± 1.5mm	± 1.5mm	± 2mm
Straightness	BS EN 12467	0.1%	0.1%	0.1%	0.1%
Squareness	BS EN 12467	2mm/mm	2mm/mm	2mm/mm	2mm/m
Thickness	BS EN 12467	± 10%	± 10% e	± 10% e	± 10% e
<b>Physical Characteristics</b>					
Density— oven dry	BS EN 12467	≥ 1700 kg/m <sup>3</sup>	≥ 1700 kg/m <sup>3</sup>	≥ 1700 kg/m <sup>3</sup>	≥ 1600 kg/m <sup>3</sup>
Bending Strength	BS EN 12467	Class 5 (≥ 24 MPa)	Class 5 (≥ 24 MPa)	Class 4 (≥ 18 MPa)	Class 5 (≥ 24 MPa)
Modulus of Elasticity (wet)	BS EN 12467	14,000 MPa	14,000 MPa	14,000 MPa	12,000 MPa
Moisture Movement (30-90%) T	BS EN 12467	0.5mm/m	0.7 mm/m	1.2 mm/m	0.7 mm/m
Moisture Movement (30-90%)//	BS EN 12467	0.4mm/m	0.6 mm/m	1.0 mm/m	0.8 mm/m
Water Impermeability	BS EN 12467	No water drops.	No water drops.	No water drops	No water drops
<b>Durability</b>					
Class	BS EN 12467	A	A	A	A
Resistance to Frost	BS EN 12467	R <sub>L</sub> ≥ 0.75	R <sub>L</sub> ≥ 0.75	R <sub>L</sub> ≥ 0.75	R <sub>L</sub> ≥ 0.75
Resistance to warm water	BS EN 12467	R <sub>L</sub> ≥ 0.75	R <sub>L</sub> ≥ 0.75	R <sub>L</sub> ≥ 0.75	R <sub>L</sub> ≥ 0.75
Resistance to wet-dry	BS EN 12467	R <sub>L</sub> ≥ 0.75	R <sub>L</sub> ≥ 0.75	R <sub>L</sub> ≥ 0.75	R <sub>L</sub> ≥ 0.75
Resistance to heat-rain	BS EN 12467	Pass	Pass	Pass	Pass

## 1.1 Overview of Panel Features: Board Characteristics

Wienerberger SVK Facade Panels are all manufactured in accordance with BS EN 12467: 2012 “Fibre Cement Flat Sheets - Product Specification & Test Methods” (+ A1:2016)

Material	Ornimat	Decoboard Classic	Decoboard Elements	Decoboard Pure	Puro Plus	Colormat Classic	Colormat Scripto	Colormat Touch
Manufactured to BS EN 12467	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BS EN 12467 Tolerance Level I “Trimmed”	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BS EN 12467 Tolerance Level II “Un-Trimmed”	No	Yes	Yes	Yes	Yes	No	No	No
Directional Surface **	No	No	No	Yes	Yes	Yes	Yes	No
Panel Front Surface	Flat & Smooth Matt Appearance	Flat & Smooth Matt Appearance	Flat & Smooth Matt Appearance	Flat with Visible Cement Structure.	Sanded with Discrete Line Pattern	Sanded Slight Lines Visible	Additional Sanding with Clear Lines Visible	Fine Sanded Matt Finish
Panel Rear Surface	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Panel Front Finish ***	UV Resistant Polyurethane Paint	UV Resistant Water Based Acrylic Paint	UV Resistant Water Based Acrylic Paint	UV Resistant Water Based Acrylic Paint Semi Transparent	Un Treated	Transparent Hydrophobic Impregnation	Transparent Hydrophobic Impregnation	Transparent Hydrophobic Impregnation
Panel Rear Finish	Grey Coloured Coating	Water Based Protection Coating	Water Based Protection Coating	Water Based Protection Coating	Un Treated	Transparent Hydrophobic Impregnation	Transparent Hydrophobic Impregnation	Transparent Hydrophobic Impregnation
Panel Edges & Drill Holes	UV Resistant Polyurethane Paint	Edges treated and sealed with SVK Protector Paint (optional)	Edges treated and sealed with SVK Protector Paint (optional)	Edges treated and sealed with SVK Protector (Colourless)	Not Required	Not required	Not required	Not required
Dual Finish*	Upon Application	No	No	No	Not Applicable	Not Applicable	Not Applicable	Not Applicable
RAL & NCS Colour Range	Ornimat Inspirations bespoke colours available on request	Decoboard Inspirations bespoke colours available on request	Decoboard Inspirations bespoke colours available on request	3no Non uniform standard colours	Natural Fibre Cement Appearance	Through coloured with Natural Inclusion 12no standard range	Through Coloured with Natural Inclusions 12no standard range	Through coloured with Natural Inclusions 3no Neutral shades

Note:

\* Ornimat - Both Front and Rear faces of the panel can be coated on request.

\*\* Puro Plus & Decoboard Pure the pattern direction is as indicated on the protective layer; for Colormat Classic & Scripto please see the stamp on the rear of the panel.

\*\*\*Ornimat; Decoboard Classic the paint finish tolerance is to  $\Delta E^* \pm 1,00$ .

## 1.2 Approvals: BBA Certificate No 22/5993 (United Kingdom)

*Ornimat, Decoboard, Puro Plus and Colormat*



Wienerberger SVK have been awarded British Board of Agrément Certificate number 22/5993 for the full range of SVK Facade panels.

The receipt of this certificate demonstrates that the Wienerberger SVK products comply with the requirements of the NHBC Guidance published in NHBC Document Chapter 6.9.

A copy of the full BBA Certificate can be obtained from our website.



## 1.2 Approvals: CWCT (United Kingdom)

Ornimat, Decoboard, Puro Plus and Colormat



28 August 2019

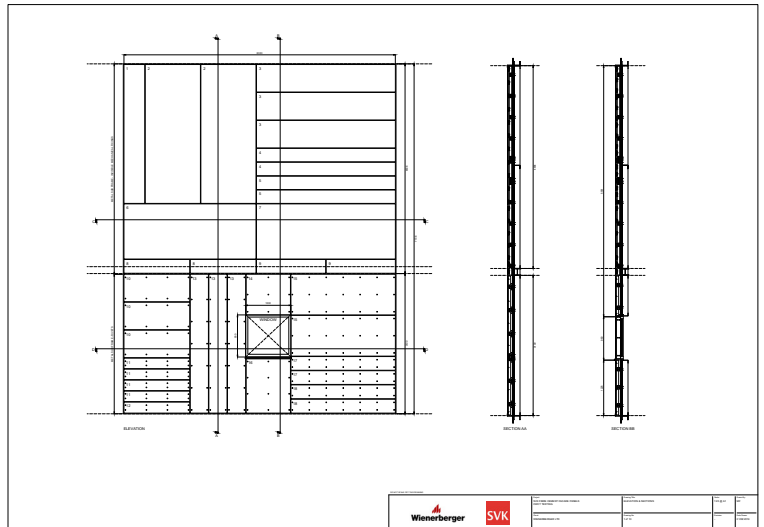
**WINTech**  
TESTING & CERTIFICATION  
by UL

  
2223

**Technical Report – R20129**  
**CWCT – Standard for systemised building envelopes – 2005**  
Wienerberger Ltd  
SVK Fibre Cement Facades



Wintech Engineering Limited, Halesfield 2, Telford, Shropshire, TF7 4QH  
www.wintechtesting.com | Tel: +44 (0)1952 586580







Wienerberger SVK Puro Plus Facade panels have successfully passed the CWCT tests using an open jointed rainscreen system, utilising both a visible and a mechanical secret fixed application. The tests were carried out in accordance with the CWCT “Standard for Systemised Building Envelopes”.

The CWCT test regime ensures that the products being assessed comply with the requirements of the NHBC and also the BBA.

A copy of the full test report is available upon request.

## 1.3 Approvals: European

Ornimat, Decoboard, Puro Plus and Colormat

Certification	Product
	<p>Ornimat Decoboard; Classic; Elements; Pure Puro Plus Colormat; Classic; Scripto; Touch</p>
 <p>QB 15 - Produits bardage rapportés N° ATT-20/010_V1 <a href="http://www.evaluation.cstb.fr">http://www.evaluation.cstb.fr</a></p>	<p>Ornimat; Decoboard; Puro Plus</p>
 <p>QB 15 - Produits bardage rapportés N° ATT-20/011_V1 <a href="http://www.evaluation.cstb.fr">http://www.evaluation.cstb.fr</a></p>	<p>Colormat Classic; Scripto; Touch</p>
<p>ETA 14/0284</p>	<p>Ornimat Decoboard; Classic; Elements; Pure Puro Plus Colormat; Classic; Scripto; Touch</p>
	<p>Ornimat Decoboard; Classic; Elements; Pure Puro Plus</p>
<p>Z-31.4-192</p>	<p>Ornimat Decoboard; Classic; Elements; Pure Puro Plus</p>

## 1.3 Approvals: ETA 14/0284 (European)


Ornimat, Decoboard, Puro Plus and Colormat

**UBAtc**  
Union belge pour l'Agrément technique de la construction


member of EOTA and UEAtc

# EUROPEAN TECHNICAL ASSESSMENT

**ETA 14/0284**  
Version 02  
Date of issue: 2018-03-12




UBAtc Assessment Operator:  
Belgian Construction Certification Association  
Rue d'Arlon 53 - 1040 Brussels  
www.bcca.be - info@bcca.be



**Technical Assessment Body issuing the European Technical Assessment: UBAtc.**  
UBAtc has been designated according to Article 29 of Regulation (EU) No 305/2011 and is member of EOTA (European Organisation for Technical Assessment)

<b>Trade name of the construction product:</b>	Ornimat, Decoboard, Puro Plus and Colormat
<b>Product family to which the construction product belongs:</b>	Wall cladding kit
<b>Manufacturer:</b>	SVK nv Aerschotstraat 114 B-9100 Sint-Niklaas, Belgium
<b>Manufacturing plant(s):</b>	Ornimat, Decoboard and Puro Plus: site 01 Colormat: site 02
<b>Website:</b>	www.svk.be
<b>This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:</b>	Guideline for European technical approval (ETAG), used as European Assessment Document (EAD): ETAG 034-1
<b>This version replaces:</b>	ETA 14/0284 issued on 2014-12-18
<b>This European Technical Assessment contains:</b>	11 pages, including 1 annex, which forms an integral part of the document.

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**European Organisation for Technical Assessment**

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Union belge pour l'Agrément technique de la construction A.S.B.L.  
Rue du Lombard 42  
B-1000 Brussels  
http://www.ubatc.be

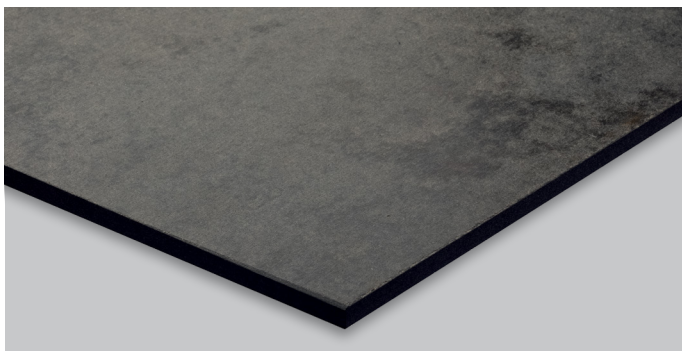
Tel. +32 (0)2 716 44 12  
Fax +32 (0)2 725 32 12  
info@ubatc.be

Wienerberger SVK Facade Panels have successfully passed the ETA tests and assessments using cladding kits as defined in the European Organisation for Technical Assessment criteria.

A copy of the full ETA 14/0284 report is available upon request.

## 1.4 Surface Finishes

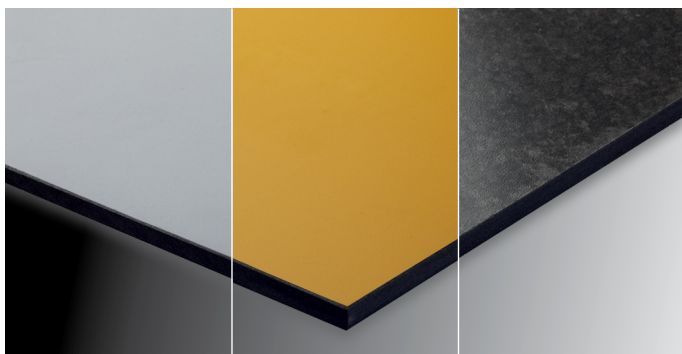
*Ornimat, Decoboard, Puro Plus and Colormat*



### **Puro Plus**

Puro Plus is fibre cement panel cladding in its simplest form, offering a distinctive aesthetic choice.

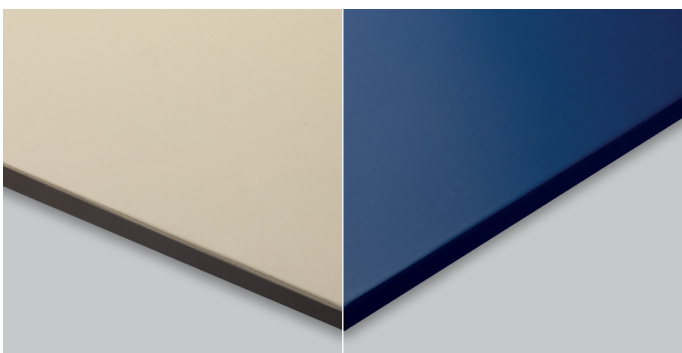
Puro Plus panels let the natural beauty and texture of cement take centre stage, with no covering or coating. Lightly sanded and air-dried for a striking grey concrete effect, unique colour variations are created as the weather and environment interact with each external cladding panel over time.



### **Decoboard**

The Decoboard collection offers a contemporary finish that meets the very highest quality demands. Coated with UV resistant paints that also boast a 10 year colour guarantee.

If your project requires a broader spectrum of colour, bespoke cladding panels can be manufactured in almost any RAL or NCS colour (minimum order quantity applies).



### **Ornimat**

To create a beautifully smooth, durable and easy clean finish, each Ornimat panel is coated with a high quality water-based, UV-resistant, matte polyurethane paint, machine-coloured to the face and edges for a uniform look.

Ornimat offers a premium colourfast surface treatment with a 10-year guarantee and the additional option to be painted on both sides if required.



### **Colormat**

Colormat through-coloured fibre cement boards combine a soft and neutral colour palette. A variety of colours and textures provide a natural finish for a modern cladding solution.

Colormat boards are fully-tinted during the manufacturing process, with pigment running throughout each panel. The finishing touch is a water-repellent, transparent protective layer for extra durability and an easy to clean finish.

## 1.4 Surface Finishes: Appearance

*Puro Plus and Colormat*

### **Puro Plus**

Note:

- *Puro Plus boards are untreated and uncoated, and therefore being a natural cementitious based flat sheet may show a number of nuances common in similar materials.  
Small surface inclusions in the decorative outer panel surface.  
Batch differences in the shades of grey colour and texture.  
Small areas of efflorescence may develop as the board weathers and should be left to naturally dissipate.  
The effect of the efflorescence will eventually be replaced by natural patination.*
- *Puro Plus should be ordered in a single consignment for a complete project, or alternatively phased orders placed per elevation of the building, if they are not adjacent to each other.*
- *When fabricating Puro Plus adhere to the Wienerberger SVK guidance and avoid a build up of cement dust on the surface of the board. Any residual dust may bond itself to the surface pores and distort the appearance.*
- *Any efflorescence will diminish as the board ages, however this is a slow process, if required the “chalk like dust” can be temporarily removed.*
- *By manually sanding lightly in a linear motion the affected area can be cleared of efflorescence, a suitable tool for this is a Scotch– Brite 3M 7447 pad. After completing the sanding the panel should be rinsed down with clean water.*
- *None of the nuances referred to are detrimental to the overall performance of the boards, they all comply with the requirements of BS EN 12467.*

### **Colormat**

Note:

- *Colormat boards are uniquely characterised by their natural appearance typical of a through coloured fibre cement board. Small nuances may be visible in the decorative surface for example;  
Small surface inclusions, (black; white; red or grey in colour), in the decorative outer panel surface.  
A reduction in colour over the service life, especially dark grey and black, this is due to UV exposure, orientation of the building, and air pollution.*
- *Colormat is treated with a hydrophobic process during the manufacturing process, the agent used impregnates the panel, however over the service life of Colormat the effect of the agent will gradually reduce, allowing moisture to randomly seep into the panel surface.*
- *The cut edges of the Colormat boards may have a “white” appearance this is due to a build up of the hydrophobic agent. This can easily be removed by manually sanding the panel edges.*
- *None of the nuances referred to are detrimental to the overall performance of the boards, they all comply with the requirements of BS EN 12467.*

# 1.5 Environmental: Product Declaration - LCA Study (November 2020)

Ornimat, Decoboard, Puro Plus and Colormat

## B-EPD ENVIRONMENTAL PRODUCT DECLARATION

# SVK FIBER CEMENT FLAT SHEETS

1 m<sup>2</sup> of fiber cement flat sheets with a thickness of 8 mm

Issued 17.03.2021  
Valid until 17.03.2026

Third party verified  
Conform to EN 15804+A2 and NBN/DTD B08-001

Modules declared					
A123	A4	A5	B2 B4 B6	C	D
*	*	*	*	*	*

[B-EPD n° 21\_0073\_006\_00\_01\_EN]



OWNER OF THIS ENVIRONMENTAL PRODUCT DECLARATION  
**SVK nv**

EPD PROGRAM OPERATOR  
**Federal Public Service of Health, Food Chain Safety  
and Environment**  
[www.b-epd.be](http://www.b-epd.be)

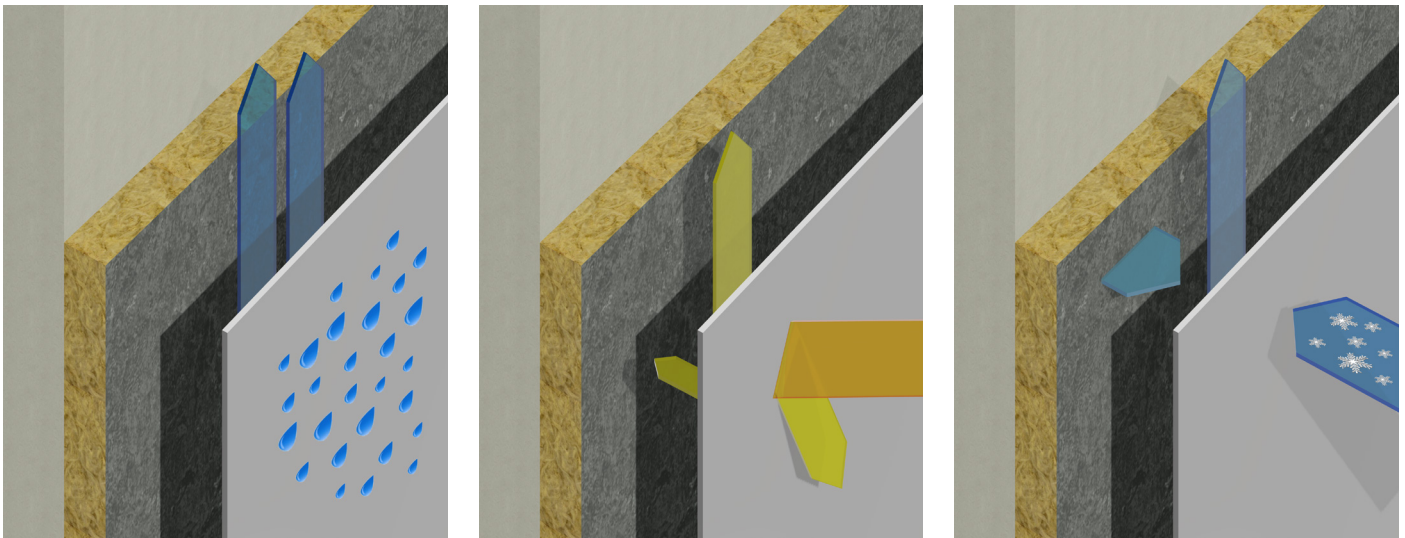
For a copy of the full report please contact our Technical Department at  
[WBUKFACADES@wienerberger.com](mailto:WBUKFACADES@wienerberger.com)

## Section 2.0

### Application of Rainscreen Facades

## 2.1 Principles of Rainscreen Construction

*Ornimat, Decoboard, Puro Plus and Colormat*



The principle features of a rainscreen system are, the outer skin of panels (i.e. the rainscreen), an air cavity zone, the support frame for the skin of panels, and an impermeable backing wall. As the name suggests the purpose of the outer rainscreen panels is to shield the wall from direct rainfall.

Modern rainscreen systems generally comprise of panels that are larger than traditional tiles. The size of the panels is dictated by the architectural intent and the materials to be used. With more brittle materials such as terracotta being smaller than metal or composite panels.

The joints between the panels may allow some water to penetrate past the panels and into the cavity zone. The degree of penetration (among other factors), will depend upon the joint design between the panels. Joints may range from open, for example when using natural stone, or labyrinth joints between metal panels.

The cavity between the panels and the backing wall is the primary feature of a rainscreen wall. Combined with the outer panels and the backing wall the assembly is designed to control/limit the passage of water into the wall.

There are two main ways in which the airgap may be treated. Firstly the gap may be left continuous, (possibly spanning over several storeys and bay widths). With this approach water entering the cavity is allowed to drain downwards and outwards, and air movement is encouraged to dry out any water remaining.

The term “drained and ventilated” is applied to this technique. The second method is to compartmentise the cavity. At least one joint at the perimeter of the panel is left unsealed or open, to enable pressurization of the airgap, which then limits the water penetration by virtue of the reduced pressure difference across the panel. The term “pressure equalised” may be applied to this technique.

Other components that make up the rainscreen system include support rails for the outer panels, insulation, breather membranes, vapour control layers, sheathing boards, and fixings.

Interfaces such as those around windows and doors, and the other elements of the building, for example the roof, floor slabs, and adjacent cladding systems are also vital to the overall performance.

*Extract from CWCT “Guidance on Built Up Walls” Publication.*

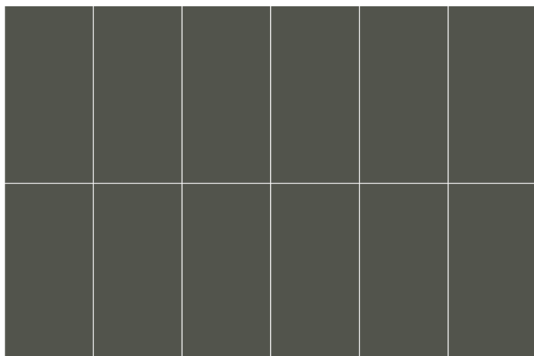


## 2.2 Design Considerations: Panel Layouts

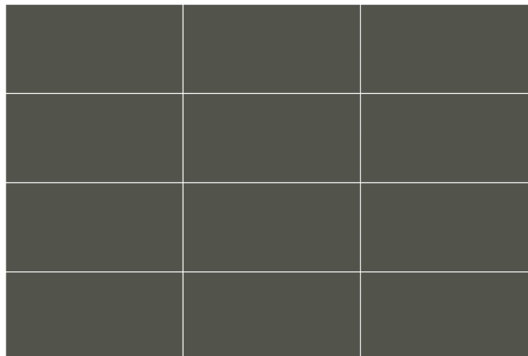
*Ornimat, Decoboard, Puro Plus and Colormat*

Wienerberger SVK facade panels can be installed in a variety of Single and Double span panel layouts and patterns. The examples below are just some combinations achievable with many more possible.

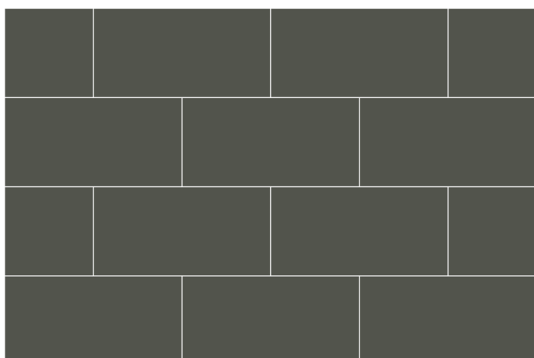
**Straight Bond - Vertical**



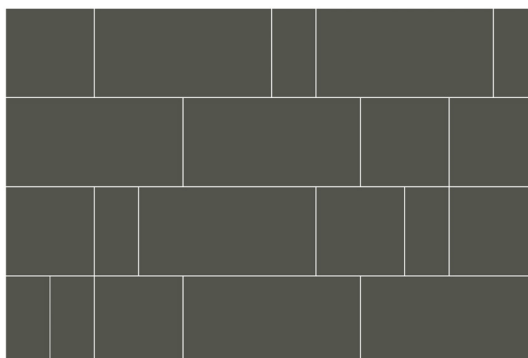
**Straight Bond - Horizontal**



**Stretcher Bond**



**Random Bond**



*Note:*

- *Ornimat and Decoboard Classic are non directional so the panels can be fitted in any format or style.*
- *Decoboard Pure, Puro Plus and Colormat Classic/Scripto panels are directional, with the sanded pattern being parallel to the longest edge of the sheet.*
- *The panel layout directly affects the design of the rainscreen support frame.*

## 2.2 Design Considerations: General Information

*Ornimat, Decoboard, Puro Plus and Colormat*

### **Ornimat, Decoboard, Puro Plus, Colormat Panels**

- 1) The Wienerberger SVK Facade Panels are designed for use as the outer layer of a ventilated and drained rainscreen system, where air is allowed into the cavity zone behind the panels through the horizontal open joints.
- 2) The use of a rainscreen system can reduce condensation in the building, provide protection to the building core, and regulate the amount of moisture affecting the building structure.
- 3) The painted edges of the Ornimat panel can provide an aesthetic feature if an open jointed system is chosen.
- 4) The backing wall behind the rainscreen should be watertight and impermeable to air.

### **Fire Resistance**

- 1) All Wienerberger SVK Facade Panels are rated as A2-s1-d0 in accordance with BS EN 13501.
- 2) In all cases compliance with all building and statutory regulations for fire performance is always required, the panels are not considered as suitable for providing fire protection.

### **Thermal Performance**

- 1) Insulation fitted in the cavity zone behind the rainscreen panels and on the backing wall should be in accordance with the requirements of ETA 14/0284.
- 2) Insulation used in a rainscreen cavity zone should be manufactured from non combustible mineral wool, and designed specifically for use in this type of application.
- 3) The insulation should comply with all building and statutory regulations.
- 4) The fibre cement cladding panels do not contribute to the thermal insulation of the building structure, and as such are excluded from any U value calculations.
- 5) Always install insulation in accordance with the manufacturers instructions.
- 6) Where practical thermal bridges in the wall structure when connecting the rainscreen should be kept to a minimum.

### **Cavity Fire Barriers**

- 1) Both horizontal and vertical cavity fire barriers should be installed in the rainscreen cavity zone to comply with building and statutory regulations.
- 2) The cavity fire barriers must be designed and tested for use in a rainscreen system and be fully passive and non combustible.
- 3) The number and location of the cavity fire barriers is determined by the respective design teams and their fire consultants on an individual project basis.

## 2.2 Design Considerations: General Information

Ornimat, Decoboard, Puro Plus and Colormat

### Ventilation and Moisture Control

- 1) The cavity zone behind the rear of the panels and the face of the insulation and/or backing wall should be continuous and unobstructed (apart from any cavity fire barriers that are installed to comply with building and statutory regulations).

Joint Type	Cavity Width	
	Timber Sub-Frame	Aluminium Sub-Frame
Open joints	minimum 50mm	minimum 50mm
Horizontal joint profiles*	minimum 38mm	minimum 38mm

*Minimum size of Cavity Zones*

- 2) The rainscreen is generally open-jointed, however those joints adjacent to lower floors of the building can be fitted with horizontal joint plates to prevent the incursion of foreign objects.
- 3) Ventilation gaps are required at the top and bottom of the rainscreen system, and above and below any structures that penetrate the rainscreen such as windows and doors.
- 4) All ventilation air gaps greater than 10mm should be fitted with a suitable perforated vent profile to prevent the ingress of insects and vermin.
- 5) The lower ventilation gaps also allow water droplets to drain away and out of the cavity zone.
- 6) The size of the ventilation gaps are determined as follows:-

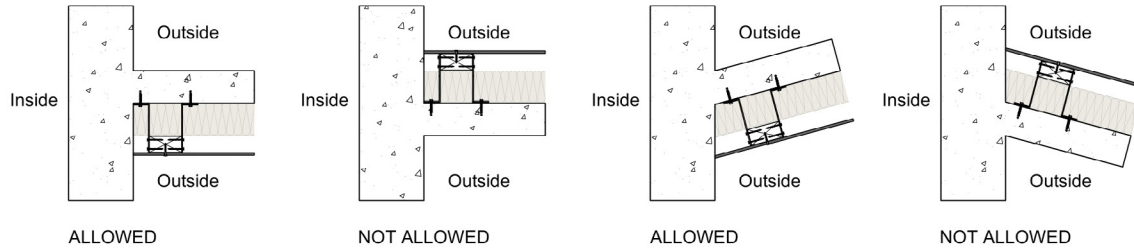
*Facade Height ≤ 1 metre: 50 cm<sup>2</sup> per facade length—The gaps should be continuous and a minimum width of 10mm. (narrow un-continuous air gaps cannot be used)*

*Facade Height ≥ 1 metre: An uninterrupted air gap of at least 100 cm<sup>2</sup> per metre of facade length is required. (This also takes into account the restriction to airflow of a vent profile installed to restrict the ingress of insects and vermin).*

- 7) Vertical and Horizontal Air Barriers may also be fitted to interrupt and control the flow of air into, around and out of the cavity zone. (refer to BBA and NHBC Guidance).
- 8) Moisture and water droplets will penetrate into the rainscreen cavity zone, usually due to high wind forces combined with inclement weather conditions. A suitable vapour barrier may be required to prevent water ingress into the insulation layer.
- 9) The vapour barrier should have a UV resistance and be non combustible, elastic and resistant to tearing. A black coated surface to the rear of the cavity zone can also be used so that the rear of the cavity is not easily seen through any open horizontal panel joints.
- 10) All overlapping joints between the sections of vapour barrier should be fully sealed.
- 11) When fixing Colormat Bando fixing head must be fully within band or on top of panel.
- 12) Poor ventilation and drainage of the rainscreen cavity zone may lead to the panels being subjected to higher humidity which could affect the surface appearance of the panels.

## 2.2 Design Considerations: General Information

*Ornimat, Decoboard, Puro Plus and Colormat*



- 1) The Wienerberger SVK Facade panels are designed for use as a self supporting external rainscreen cladding board.
- 2) The products can be used as a decorative internal lining material, and installed in the same way as an external rainscreen system.
- 3) The fibre cement panels should never be used as a roofing material.
- 4) Any architectural hardware, for example light fittings, signage, cable ducts, should not be attached directly to the panels, they should only be fixed to the rainscreen support frame.
- 5) Where sliding fixings penetrate the cladding panels, they should be installed following the same guidelines as for torx screw and rivet fixing, with a similar sized drill holes in the panels. This will ensure that the panel can move due to thermal expansion and contraction.
- 6) The rainscreen support frame should be adapted to carry and support the architectural hardware prior to the cladding panel installation.

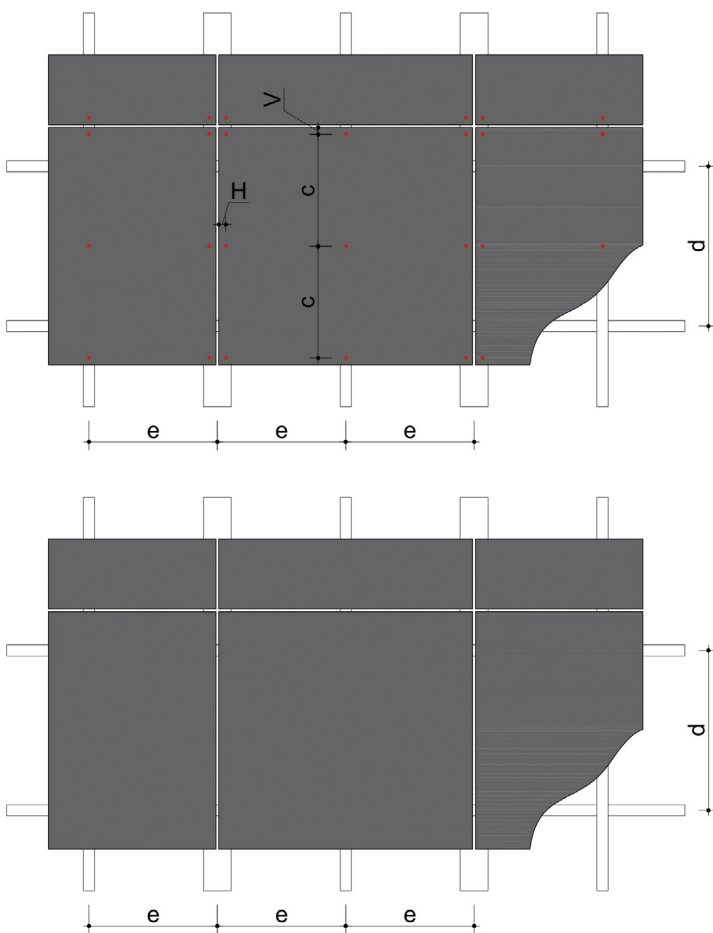
## 2.2 Design Considerations: Panel Support Frame

Ornimat, Decoboard, Puro Plus and Colormat

Note:

- The vertical support frame centres “e” and the fixing centres “c” are determined by using the span/load calculation charts, and the following criteria:-

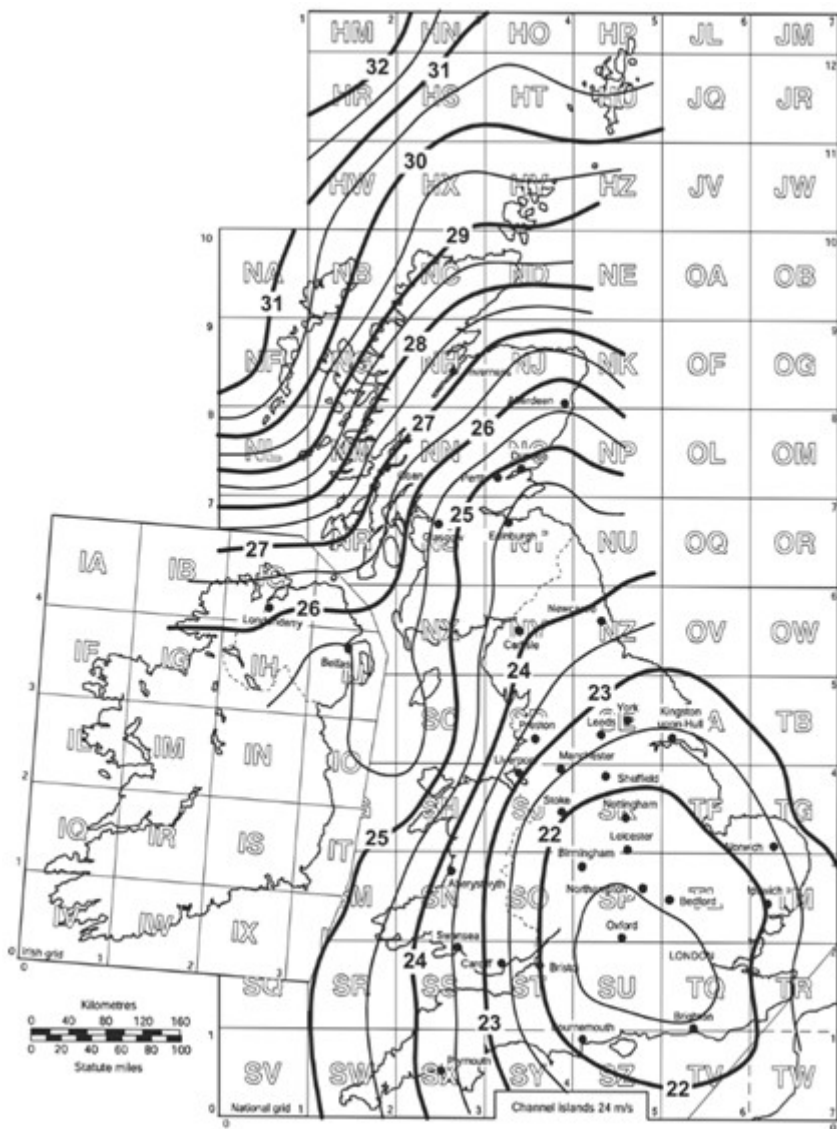
- (1) Panel Size and the type of Fixing Support Frame
- (2) The shape and height of the building.
- (3) The design wind speed as determined in EUROCODE 1991-1-4.
- (4) The surrounding terrain and the building location.



- V Vertical distance towards horizontal edge
- H Horizontal distance towards vertical edge
- c Distance between fasteners
- d intermediate distance between horizontal supports
- e intermediate distance between vertical supports

## 2.3 Design Wind Speeds: United Kingdom

The United Kingdom wind speed zones and terrain category's are as defined in BS EN 1991.1.4 and the National Annex.

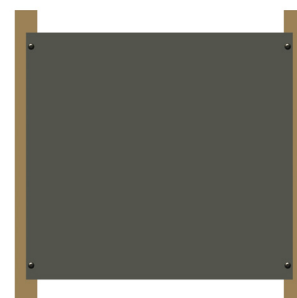


### Wind Zone

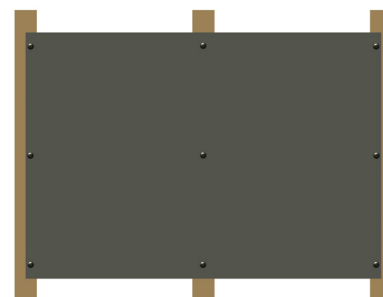
I	$v_{b,map} < 21$ m/s
II	$v_{b,map} = 21$ to 23 m/s
III	$v_{b,map} = 23$ to 25 m/s
IV	$v_{b,map} = 25$ to 27 m/s
V	$v_{b,map} > 27$ m/s

### Terrain Category

Sea	Terrain category 0 is referred to as Sea
Country	Terrain I and II have been considered together
Town	Terrain II and IV have been considered together



Configuration: 2 x 2



Configuration: 3 x 3

For confirmation of the support frame and fixing centres the building height and site location must always be taken into account. Determine the panel layout which is either a Single Span, (Configuration 2 x 2) or Double Span, (Configuration 3 x 3), will be applicable.

Note :

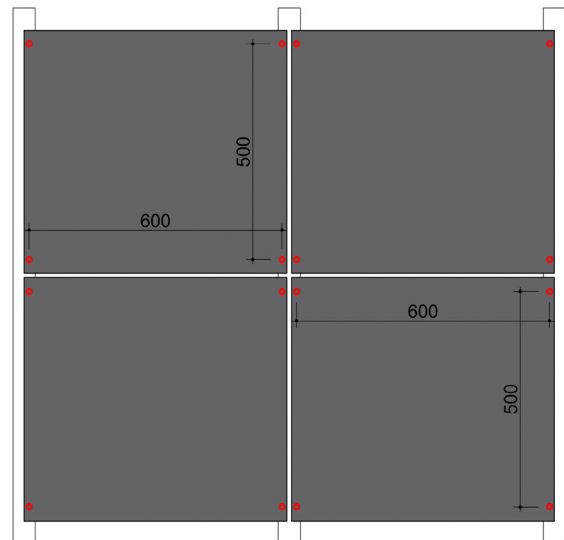
- Ensure that individual calculations applicable to each project are used.
- These tables are applicable only for the installation of the panels using either torx screws or rivet fixings.

## Example: How To Use The Load/Span Tables

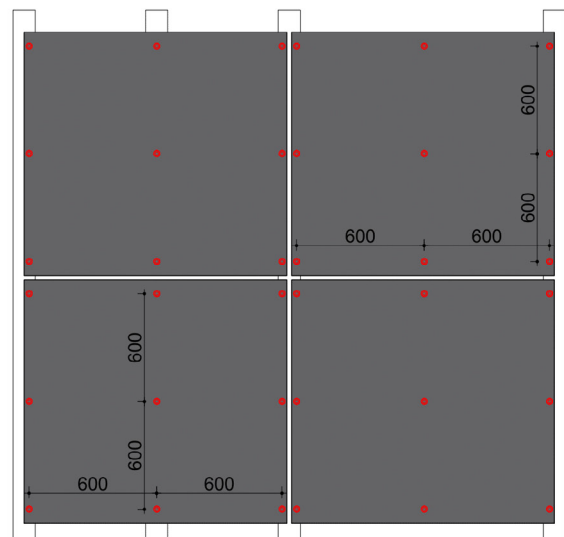
Wind Zone I [ $v_{b,map} = 21$  m/s]; Terrain = "Town"; Building Height  $\leq 10$ m

		Building height H						
		$H \leq 10$ m		$10\text{m} < H \leq 10$ m				
		Intermediate distance between screws/rivets						
Wind zone	Terrain	600	500	400	600	500	400	
$v_{b,map} = 21$ m/s	Sea	2x2	-	600	600	-	498	600
		3x3	600	600	600	600	600	600
	Country	2x2	-	600	600	-	543	600
		3x3	600	600	600	600	600	600
Town	2x2	-	600	600	-	541	600	
	3x3	600	600	600	600	600	600	

Single Span: The panels can be fixed with 4 rivets or torx screws and the maximum intermediate span between the fixing points is therefore 600mm x 500mm. Note: The lower intermediate centres can be used if additional support rails are introduced and/or the panel size is reduced.



Double Span: The panels can be fixed with 9 rivets or torx screws and the maximum intermediate span between the fixing points is therefore 600mm x 600mm. Note: The lower intermediate centres can be used if additional support rails are introduced and/or the panel size is reduced.

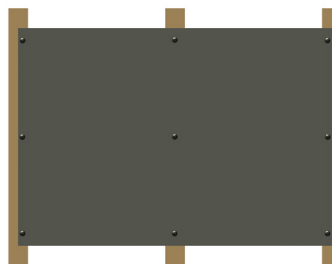


For confirmation of the support frame and fixing centres the building height and site location must always be taken into account.

The fixing centres are based upon the panel strength and the wind force applied to the panel face.



Configuration: 2 x 2



Configuration: 3 x 3

			Building height H					
			H ≤ 10m			10m < H ≤ 10m		
			Intermediate distance between screws/rivets					
Wind zone	Terrain		600	500	400	600	500	400
I [vb <sub>map</sub> = 21 m/s]	Sea	2x2	-	600	600	-	498	600
		3x3	600	600	600	600	600	600
	Country	2x2	-	600	600	-	543	600
		3x3	600	600	600	600	600	600
	Town	2x2	-	600	600	-	541	600
		3x3	600	600	600	600	600	600
II [vb <sub>map</sub> = 23 m/s]	Sea	2x2	-	514	600	-	-	519
		3x3	600	600	600	570	600	600
	Country	2x2	-	600	600	-	-	566
		3x3	600	600	600	600	600	600
	Town	2x2	-	600	600	-	-	564
		3x3	600	600	600	600	600	600
III [vb <sub>map</sub> = 25,0 m/s]	Sea	2x2	-	-	544	-	-	439
		3x3	598	600	600	483	579	600
	Country	2x2	-	508	600	-	-	479
		3x3	600	600	600	526	600	600
	Town	2x2	-	555	600	-	-	477
		3x3	600	600	600	524	600	600
IV [vb <sub>map</sub> = 27 m/s]	Sea	2x2	-	-	466	-	-	377
		3x3	512	600	600	-	497	600
	Country	2x2	-	-	544	-	-	410
		3x3	598	600	600	-	541	600
	Town	2x2	-	-	594	-	-	409
		3x3	600	600	600	-	539	600

Note :

- Ensure that individual calculations applicable to each project are always used.
- These tables are applicable only for the installation of the panels using either torx screws or rivet fixings.
- If a value is found to be between two of the figures shown, always use the higher value.
- Edge distances are set at a minimum of 25mm for calculation purposes.
- Terrain height is set at 0m.
- Distance to the marine shoreline is set at 10 km.
- Distance inside a town perimeter is set at 1 km.



## 2.4 Impact Resistance: ETAG 034-1 (United Kingdom)

Note: To increase the impact performance, additional support frame members should be considered. Wienerberger SVK Panels are not resistant to vandalism.

Product	Ornimat	Decoboard	Puro-Plus	Colormat
Impact - Hard Body	> 3 Joules	> 3 Joules	> 3 joules	> 3 joules
Impact - Soft Body	> 130 Joules	> 130 Joules	> 130 Joules	> 100 Joules

### Application Categories in Accordance with ETAG 034-1

Application Category	Description
I	Ground floor, accessible to the public and fragile for impact with a hard body but no abnormal heavy usage
II	Zone exposed to impacts of thrown or shot objects, in public domain where the height of the kit limits the impacts, or low level where the access is limited to maintenance work only
III	Zone that does not get damaged by normal impact or impact by thrown or shot objects
IV	Zone outside the reach of the ground floor

### Impact Categories in Accordance with ETAG 034-1

Impact	Category				
	Hard	IV	III	II	I
1 joule		Facade element not torn <sup>2</sup>			
3 joule			Facade element not torn <sup>2</sup>	No degradation <sup>1</sup>	No degradation <sup>1</sup>
10 joule				Facade element not torn <sup>2</sup>	No degradation <sup>1</sup>
<b>Soft</b>					
10 joule		No degradation <sup>1</sup>	No degradation <sup>1</sup>		
60 joule				No degradation <sup>1</sup>	No degradation <sup>1</sup>
300 joule				No degradation <sup>1</sup>	
400 joule					No degradation <sup>1</sup>

<sup>1</sup>Superficial damage is considered as “no degradation” as long as there are no cracks evident.

<sup>2</sup>If a circular shaped hole is present the result is considered as a “torn” panel.

## 2.4 Impact Resistance: CWCT Test Results (United Kingdom)

CWCT Test Report R20129 (28th August 2019).

Product Tested Puro Plus.

*Note: Ornimat & Decoboard Board Properties Similar to Puro Plus.*

### Soft Body Impact - Retention of Performance

Ambient Temperature (°C)	28.1
Humidity (%RH)	61
Impact Energy	120 Nm
Class Achieved	Class 1

### Hard Body Impact - Retention of Performance

Ambient Temperature (°C)	27.2
Humidity (%RH)	60
Impact Energy	10.Nm
Class Achieved	Class 1

### Soft Body Impact - Safety to Persons

Ambient Temperature (°C)	20.2
Humidity (%RH)	65
Impact Energy	500 Nm
Class Achieved	High Risk

### Hard Body Impact - Safety to Persons

Ambient Temperature (°C)	27.2
Humidity (%RH)	60
Impact Energy	10.Nm
Class Achieved	Negligible Risk

*Note:*

- *Impact Test carried Out in Accordance with CWCT Technical Notes TN75 & TN76.*
- *Refer to Assessment Criteria Tables for Interpretation of Results.*

Category Explanation for CWCT Technical Note TN76

Class	Definition	Explanation/Examples
1	No Damage	Nil damage visible from 1m, and any damage visible from closer than 1m unlikely to lead to significant deterioration.
2	Surface damage of an aesthetic nature which is unlikely to require remedial action	Dents or distortion of panels not visible from more than 5m (note visibility of damage will depend on surface finish and lighting conditions. Damage will generally be more visible on reflective surfaces), and any damage visible from closer than 5m unlikely to lead to significant deterioration.
3	Damage that may require action or replacement of components to maintain appearance or long term performance but does not require immediate action	Dents or distortion of panels visible from 5m, or spalling of edges of panels of brittle materials, or damage to surface finishes that could lead to deterioration of the substrate.
4	Damage requiring immediate action to maintain appearance or performance. Remedial action may include replacement of panel but does not require dismantling or replacement of supporting structure	Significant cracks in brittle materials e.g. cracks that may lead to parts of tie falling away subsequent to test or fracture of panels causing significant amounts of material to fall away during test.
5	Damage requiring more extensive replacement than 4	Buckling of support rails.

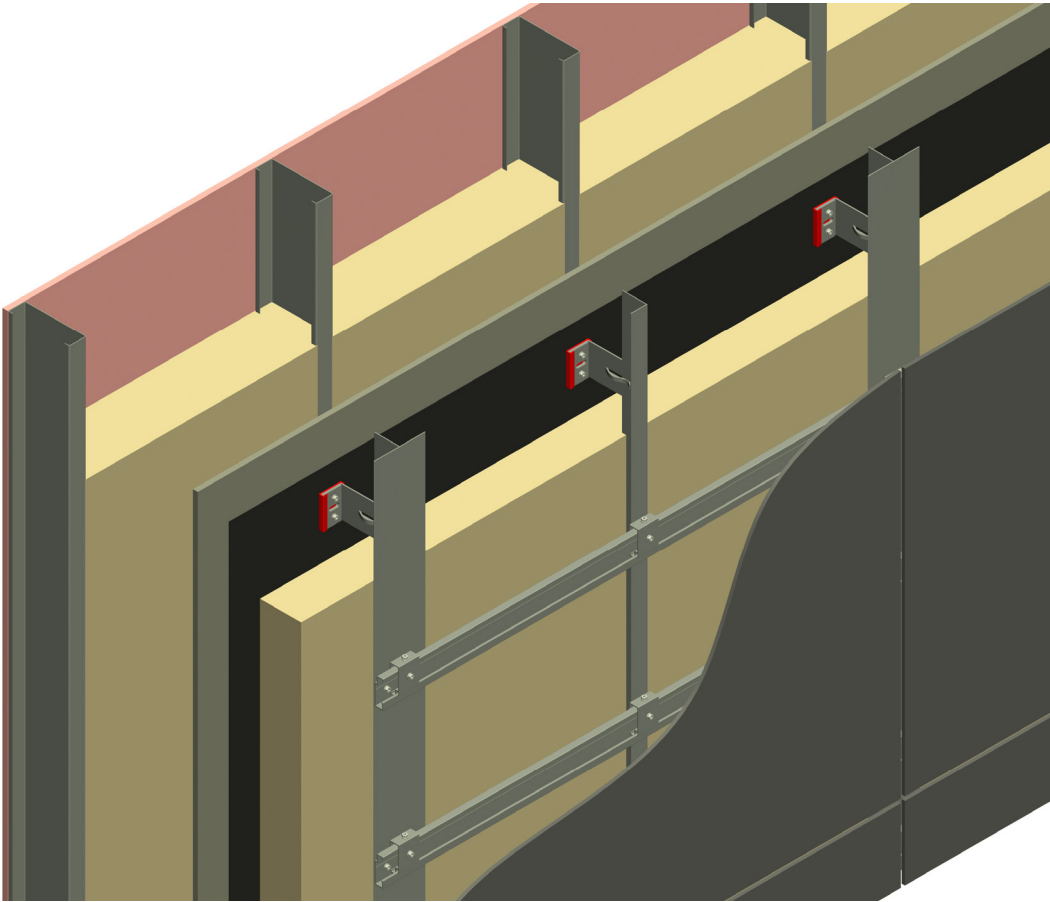
Class	Definition
Negligible risk	No material dislodged during test and No damage likely to lead to materials falling subsequent to test and No sharp edges produced that would be likely to cause severe injury to a person during impact, and Cladding not penetrated by impactor.
Low risk	Maximum mass of falling particle 50g, and Maximum mass of particle that may fall subsequent to impact 50g, and Cladding not penetrated by impact and No sharp edges produced that would likely to cause severe injury during impact.
Moderate risk	Maximum mass of falling particle less than 500g, and Maximum mass of particle that may fall subsequent to impact less than 500g, and Cladding not penetrated by impact and No sharp edges produced that would be likely to cause severe injury during impact.
High risk	Maximum mass of falling particle greater than 500g, or Cladding penetrated by impact, or Sharp edges produced that would be likely to cause severe injury during impact.

## **Section 3.0**

Wienerberger SVK Rainscreen Systems  
Ornimat; Decoboard; Puro Plus; Colormat

### 3.1 Mechanical Secret Fixing

*Ornimat, Decoboard, Puro Plus and Colormat*



Application using Double Span panels installed using a proprietary extruded aluminium rainscreen support system comprising a vertical sub grid constructed with vertical T or L rails, wall brackets, thermal isolators and horizontal cladding rails.

Typically the aluminium alloy used is EN-AW 6060 T5 and conforms with EN 573-3 and EN 755-2.

Each panel is hung onto the cladding rails with interlocking panel hangers fixed to the rear face of each panel with a Keil Undercut Anchor Fitting.

*Note:*

- *Refer to the rainscreen support system manufacturers installation manual, static calculation report and assembly instructions, prior to commencement of construction.*
- *The cavity zone at the rear of the panels must not be less than 50mm in depth.*
- *It is recommended that all fabrication and the installation of the Keil anchor system is always carried out in a factory environment.*

### 3.1 Mechanical Secret Fixing: Fabrication & Assembly




Ornimat, Decoboard and Puro Plus

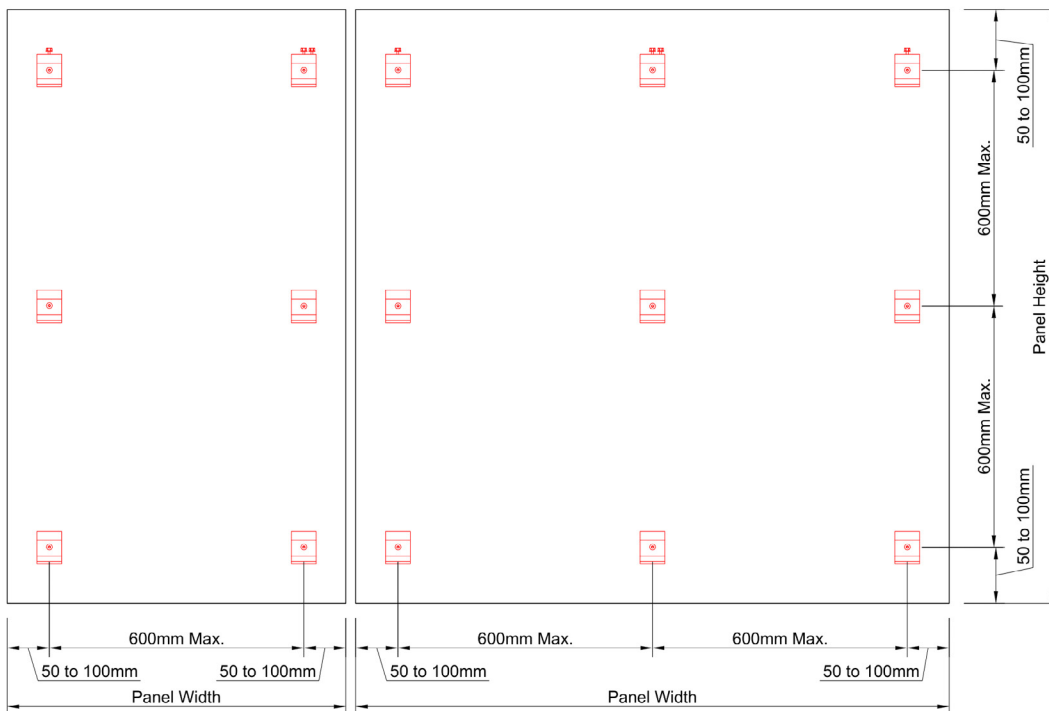
Note:

- Refer to the rainscreen support system manufacturers installation manual, static calculation report and assembly instructions, prior to commencement of construction.
- Refer to the project design drawings for the location and centres of all the panel hangers.
- The location of the Adjustable/Fix Panel Hanger should be the same on every panel.
- A standard panel should have a minimum of 2no panel hangers on width and 2 no panel hangers on height.

Note: Mechanical Secret Fix Edge Distances.

Edge distance of invisible fixing	Minimum	Maximum
Vertical distance (V)	50mm	100mm
Horizontal distance (H)	50mm	100mm

-  Adjustable / fix panel hanger
-  Adjustable panel hanger
-  Standard panel hanger

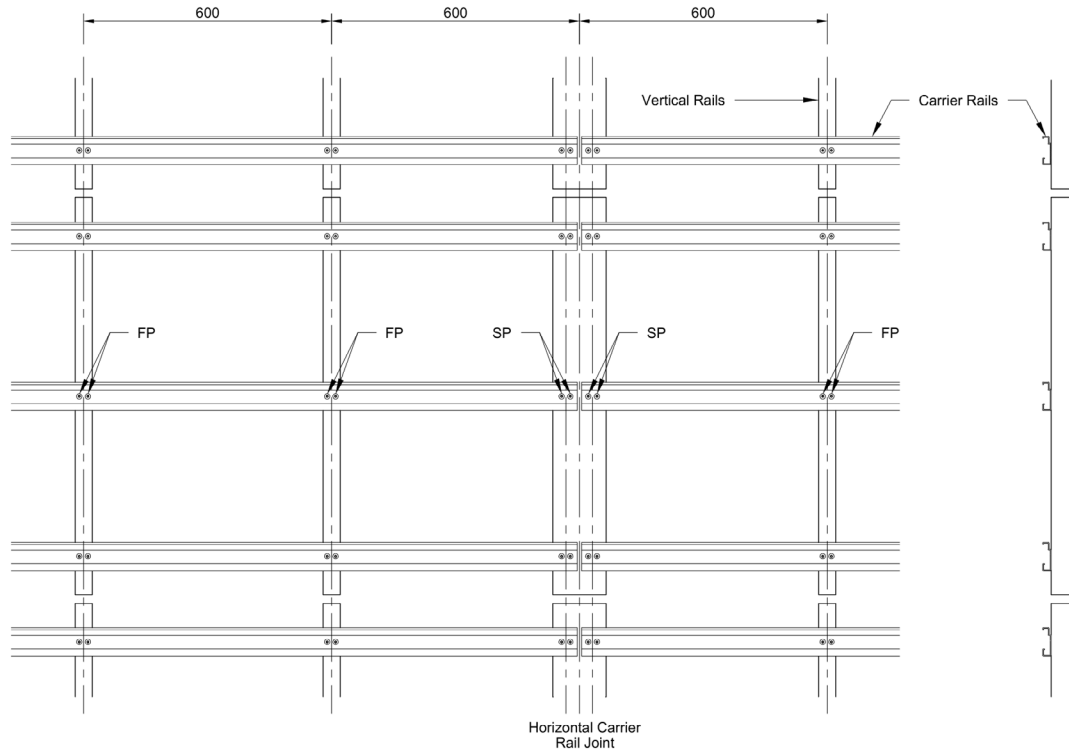


Note:

- Typical panel hanger layout for single and double span panels.

## 3.1 Mechanical Secret Fixing: Fabrication & Assembly

Ornimat, Decoboard and Puro Plus



Note:

- *Typical Mechanical Secret Fix sub grid layout.*
- *Refer to the rainscreen support system manufacturers installation manual, to check if a vertical expansion joint is required. This could be required every 3.5 metre run of rainscreen support frame.*

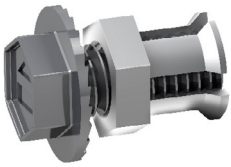
## 3.1 Mechanical Secret Fixing: Fabrication & Assembly

Ornimat, Decoboard and Puro Plus

Note:

- Refer to the rainscreen support system manufacturers installation manual, static calculation report and assembly instructions, prior to commencement of construction.
- It is recommended that all fabrication and the installation of the Keil anchor system is always carried out in a factory environment.

### Keil Anchor Installation - Undercut Anchor; Socket Cap Screw & Washer



The panel hanger thickness is to be 3mm for all hanger types.

For 8mm thick SVK panels Use Anchor Type Keil KH (h,s 5,5 M6) in stainless steel quality A4.

For 10 & 12mm thick SVK panels Use Anchor Type Keil KH (h,s 7 M6) in stainless steel quality

### Keil Anchor Installation - Drill Holes

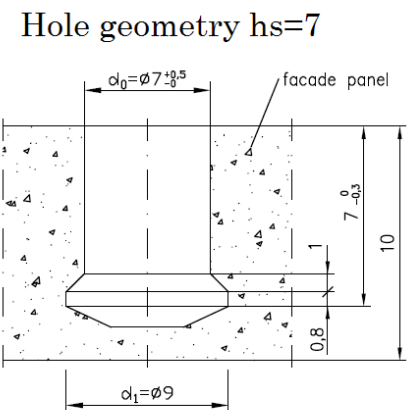
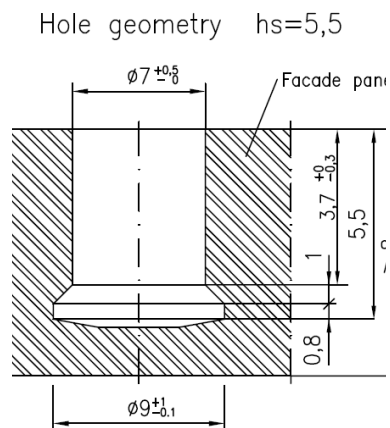
Ensure the panels are placed face down on a smooth and clean flat work surface.

Set out the location of the drill holes for the Keil anchors as shown in the fabrication drawings.

Follow the Keil Anchor drilling instructions and remove all swarf and drilling dust.

Note:

- Fibre cement panels should always be drilled dry, no coolant water is required, (this could mark the panel surface).





# 3.1 Mechanical Secret Fixing: Fabrication & Assembly

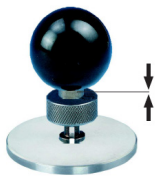
Ornimat, Decoboard and Puro Plus

## Keil Anchor Installation - Quality Control

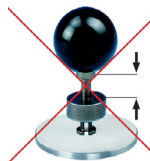
### Undercut Drill Hole

A control gauge is required for checking both the drill hole depth and shape.

**Test 1** - This is carried out to check the base cut of the drill hole and the “wedge” shaped undercut. The gauge should insert fully into the hole if this will not insert fully then, the drill hole is to deep, or there is no undercut.

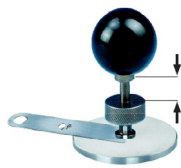


1. Move the gauge up to block.

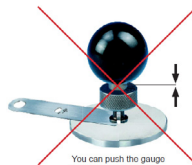


You can not push the gauge to the base part without probe.  
Fault: Drilling hole to deep or no undercut.

**Test 2** - This carried out by moving the probe between the panel and the base of the control gauge. If the gauge is pushed close to the base with the underplayed probe the drill hole may not be deep enough.



2. Move the probe between panel and control gauge base part. The hole is in order if you can not push the gauge up to the base part.



You can push the gauge up to the base with un-deplayed probe.  
Fault: Drilling hole not deep enough.

**Test 3** - The drill hole diameter is checked with a suitable vernier caliper.

## Frequency of Quality Control Checks

Note:

- At least 1% of the drill holes should be tested (e.g. if there are 25 panels with 10 holes in each panel, (250 holes in total) then at least 3 holes should be checked).
- If an incorrect drill hole is found then 25% of the drill holes should then be checked which is 63 holes.
- If any other drill holes fail the quality checks then all the drill holes should be checked.
- If a drill hole fails the QA checks then re drill a new hole no less than 20mm from the original hole, and always maintain the minimum distance from the panel edge.

## 3.1 Mechanical Secret Fixing: Fabrication & Assembly

Ornimat, Decoboard and Puro Plus

### Keil Anchor Installation - Panel Hangers

#### Undercut Drill Hole.

Note:

- Where possible the panel hangers should be fitted to the cladding panels in a factory environment.

- 1) Ensure the drill holes are clean and free of dust and debris.
- 2) Insert the body of the Keil Anchor into the drill hole and position the panel hanger on the panel.
- 3) Insert the socket cap machine screw through the hole in the panel hanger and into the Keil Anchor body and tighten.
- 4) Using a suitable torx wrench tighten the machine screw to  $2.5\text{Nm} \leq 4.0\text{Nm}$ .
- 5) Take care not to overtighten the machine screw as this could damage the anchor and reduce the pull out performance while also causing aesthetic issues with side decorative side of panels.

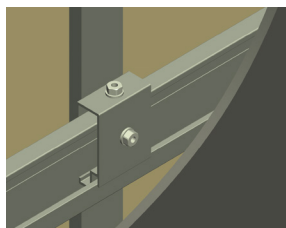


### Mechanical Secret Fix - Panel Installation

Note:

- Due to the method of attaching the panels to the support grid, the mechanical secret fix system is always installed from the ground upwards, and from left to right or right to left.

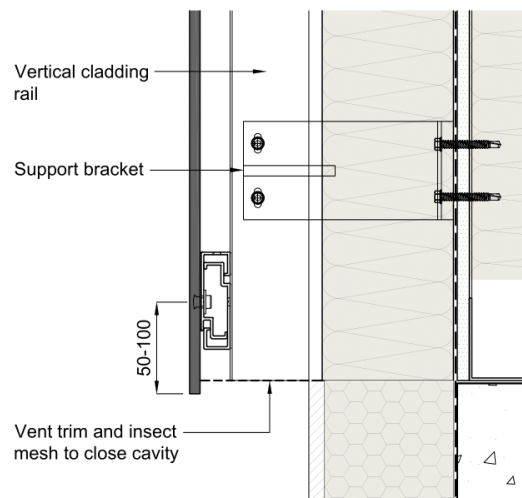
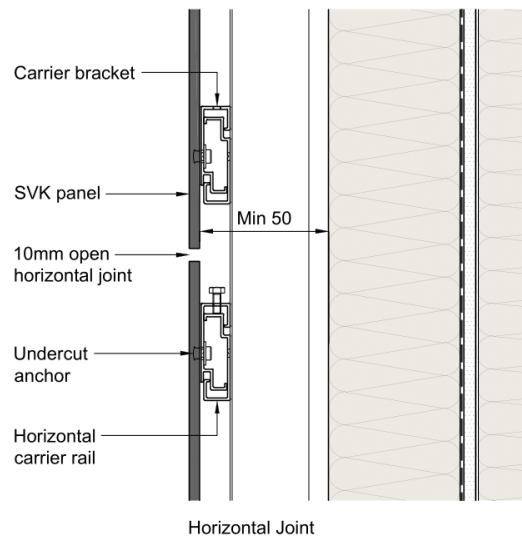
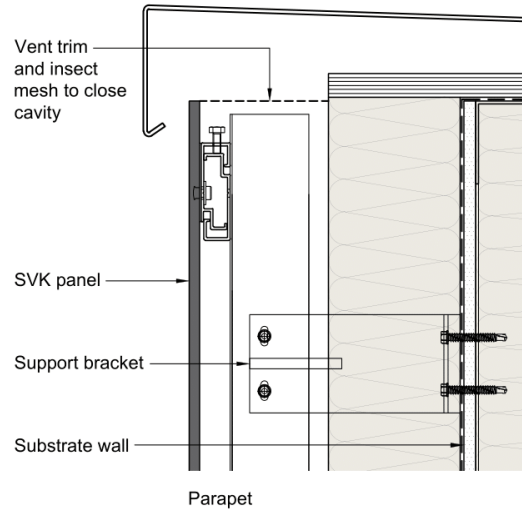
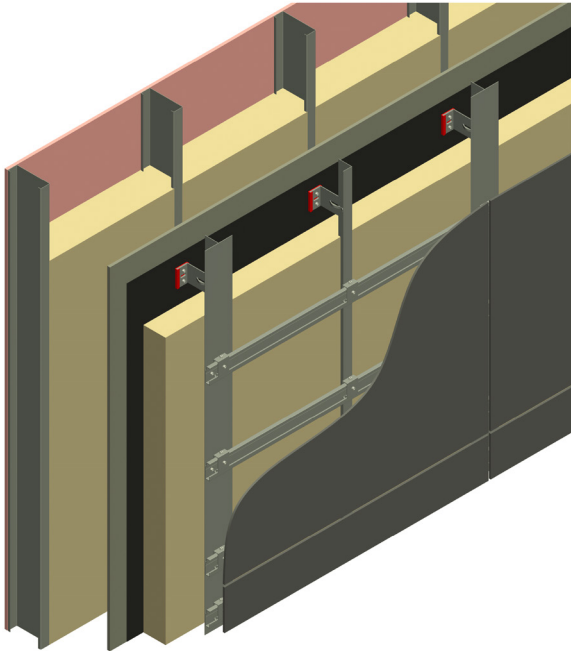
- 1) Ensure that the supporting subgrid and horizontal cladding rails are installed correctly and in accordance with the manufacturers instructions and the project design drawings.
- 2) Both the horizontal and vertical panel > panel joints are to be set to a minimum of 10mm.



- 3) After marking out the location of the first line of panels and the cladding rails hook the panel onto the corresponding rails ensuring that all the panel hangers are engaged.
- 4) Use the adjusting screws set into the top run of panel hangers to align and level the panel correctly, then fit the locking TEK screw through the drill hole in the Adjustable/Fixed panel hanger to secure the panel to the horizontal cladding rail.
- 5) Ensure that all the remaining panels are installed in the same way and that the same fixed point location is used on each panel.

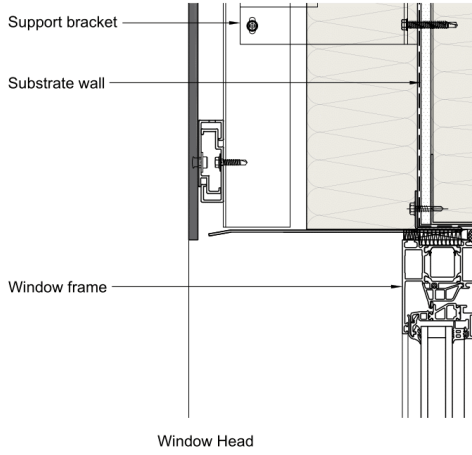
### 3.1 Mechanical Secret Fixing: Standard Details

Ornimat, Decoboard and Puro Plus

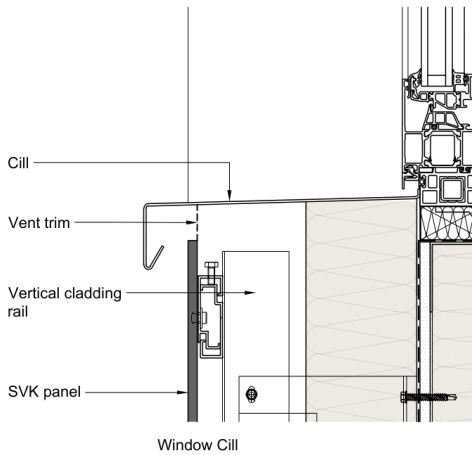


# 3.1 Mechanical Secret Fixing: Standard Details

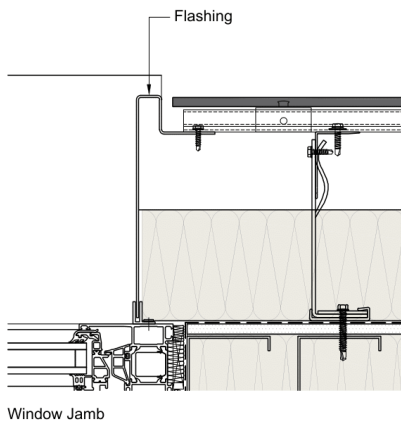
*Ornimat, Decoboard and Puro Plus*



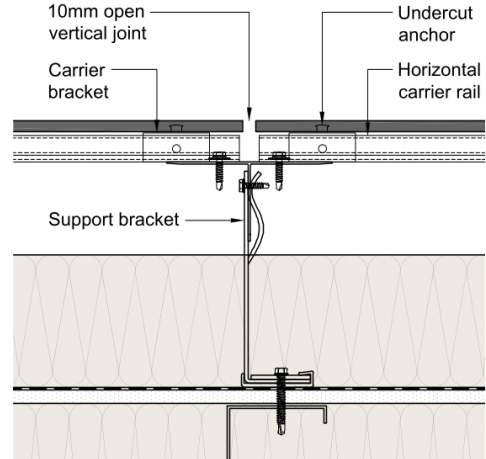
Window Head



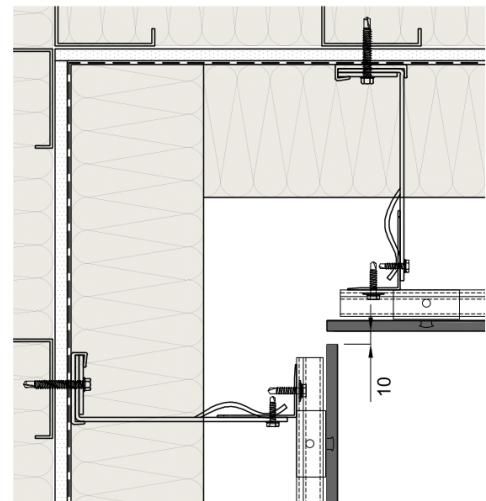
Window Cill



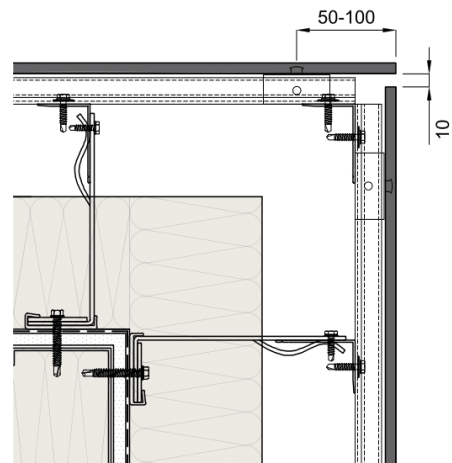
Window Jamb



Vertical Joint



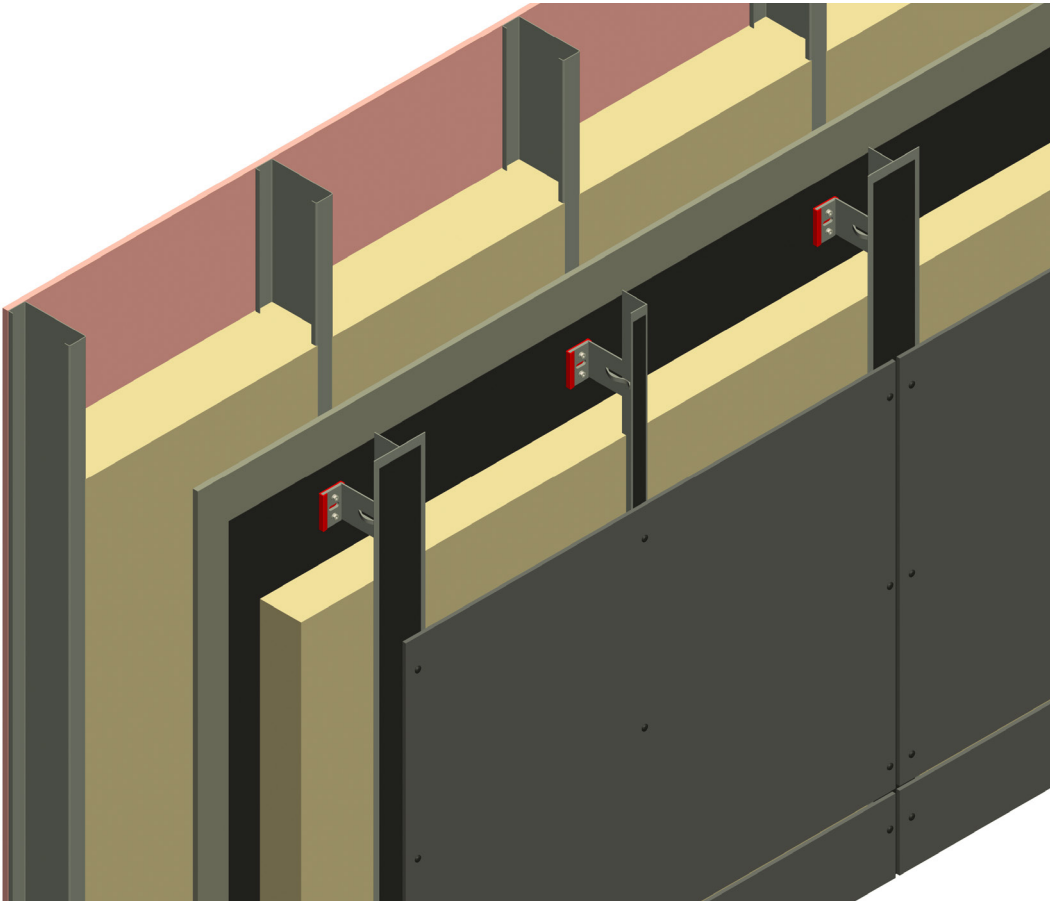
Internal Corner



External Corner

## 3.2 Rivet Fixing to Aluminium Helping Hand System

*Ornimat, Decoboard, Puro Plus and Colormat*



Application using Double and Single Span panels installed using a proprietary extruded aluminium rainscreen support system comprising a vertical grid constructed with vertical 120mm wide T rails, and 40mm wide L rails, wall brackets, thermal isolators and accessories. Typically the aluminium alloy used is EN-AW 6060 T5 and conforms with EN 573-3 and EN 755-2.

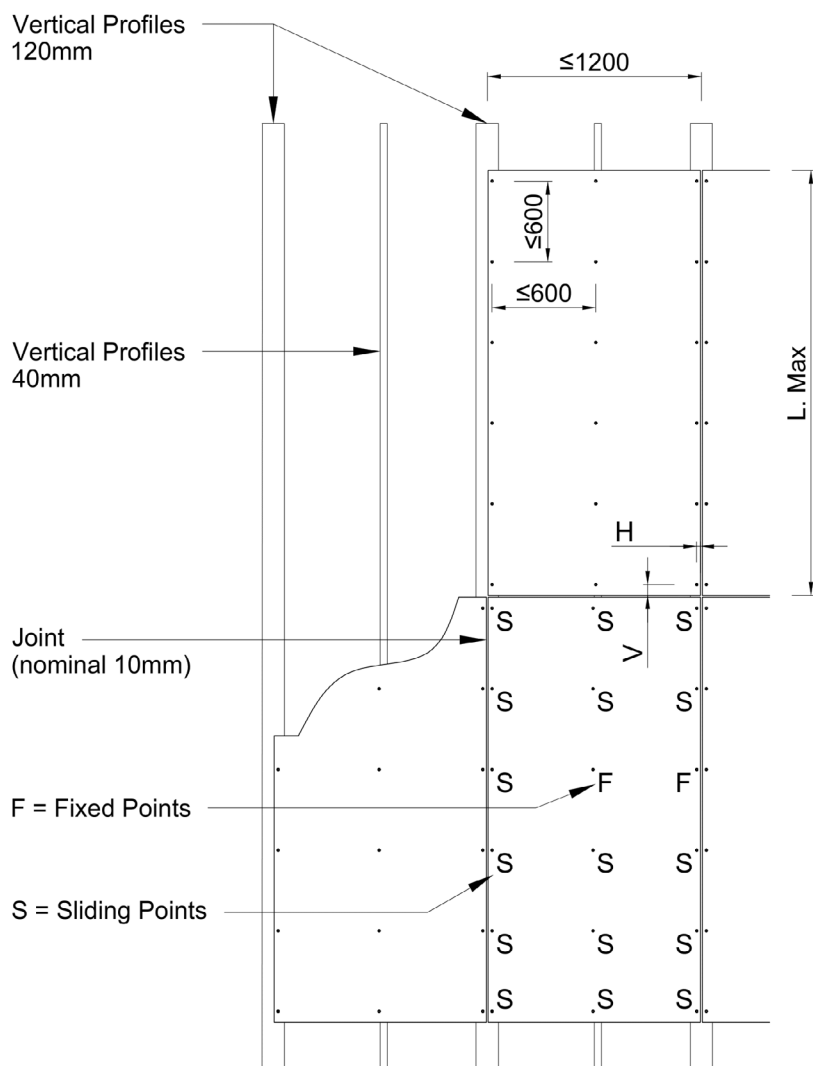
The support system should be constructed using fixed load bearing wall brackets and sliding wind restrain brackets, all capable coping with the thermal movement of the panels. Each panel is fixed to the vertical T and L rails with stainless steel rivets or aluminium rivets. The T rails provide support for the vertical panel to panel joints, and the L rails provide intermediate support for double span panels, reveals, corners and returns.

*Note:*

- *Refer to the rainscreen support system manufacturers installation manual, static calculation report and assembly instructions, prior to commencement of construction.*
- *The cavity zone at the rear of the panels must not be less than 50mm in depth.*

## 3.2 Rivet Fixing: Principles

Ornimat, Decoboard, Puro Plus and Colormat



	H min - max	V min - max	F	S	L max
Ornimat, Decoboard, Puro Plus	30 - 100 mm	70 - 100 mm	Ø5 mm	Ø8.5 mm	3070 mm
Colormat	30 - 100 mm	70 - 100 mm	Ø5 mm	Ø8.5 mm	3050 mm

Note:

- The same Vertical & Horizontal dimensions should always be avoided.

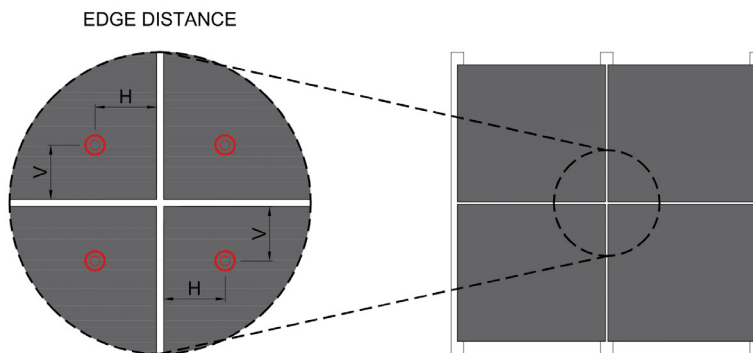
## 3.2 Rivet Fixing: Panel Drill Holes - Edge Distances

Ornimat, Decoboard, Puro Plus and Colormat

Note:

- *Blind Rivet Fixings Edge Distances.*

The dimension from the panel edge to the edge of the drill hole must be sufficient to prevent the panel edges and corners from breaking.



The minimum and maximum values are: Edge distance of screws	Ornimat - Decobard - Puro Plus		Colormat	
	Minimum	Maximum	Minimum	Maximum
Vertical distance (V)	70mm	100mm	70mm	100mm
Horizontal distance (H)	30mm	100mm	30mm	100mm

Note:

- *The same Vertical & Horizontal dimensions should always be avoided.*

### Drill Hole Diameters

Note:

- *Applicable for 8mm Ornimat, Decoboard, Puro Plus, and Colormat. (Refer to ETA 14/0284).*

Fixed Point Holes to be 5mmØ (2no adjacent and central to the board)

Sliding Point Drill Holes to be 8.5mmØ

## 3.2 Rivet Fixing: Rivet Fixings

*Ornimat, Decoboard, Puro Plus and Colormat*

*Note:*

- *Refer to ETA 14/0284 for full specification.*
- 1) The rivets to be used are to have 16mm Ø lacquered heads manufactured from A2 stainless steel or aluminium, (for marine environments us A4 stainless steel).
  - 2) The minimum size of the rivet shank is 4.8mm Ø x 16mm in length.
  - 3) Always check the (pull up) length of the rivet shank is adequate for the thickness of the T and L rails, and panel + accessories.



## 3.2 Rivet Fixing: Panel Installation

*Ornimat, Decoboard, Puro Plus and Colormat*

Note:

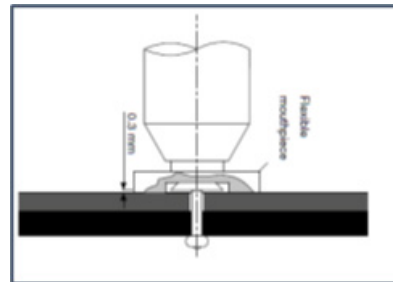
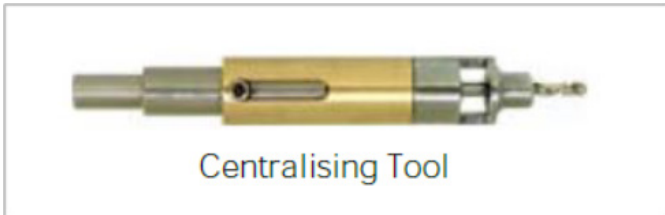
- *Due to the method of attaching the panels to the support grid, the panels can be installed from the ground upwards or from the top of the building downwards, and from left to right or right to left.*
- 1) Ensure that the supporting T and L rails are installed correctly and in accordance with the manufacturers instructions and the project design drawings.
  - 2) Both the horizontal and vertical panel > panel joints are to be set to a minimum of 10mm.
  - 3) Use a suitable vinyl black adhesive tape to cover the face of the T rail to form a shadow gap joint.
  - 4) Ensure all the drill holes in the panels are complete.
  - 5) After marking out the location of the first line of panels offer up and clamp the panel into place, use a datum starter rail to temporarily support the first line of panels or 10mm thick packers for adjacent panel to panel joints.
  - 6) Using a Centralizing Tool, drill the corresponding 4.9mmØ fixing hole in the face of the supporting T and L rails behind the panel.
  - 7) Ensure the hole is in the centre of the drill hole in the panel, this will prevent any restriction of the panel movement occurring.
  - 8) With an electric rivet gun fitted with a Soft Set Nose Piece, place the rivet perpendicular into the drill holes, and set the rivet. The nose piece will prevent over tightening of the rivet so the panel will be allowed to expand and contract correctly. (please check compatibility with nose piece and rivets being used)
  - 9) Install ventilation profiles, corner trims, horizontal joint plates and flashings as each panel area is installed, all as detailed in the project design drawings.

## 3.2 Rivet Fixing: Tools

*Ornimat, Decoboard, Puro Plus and Colormat*

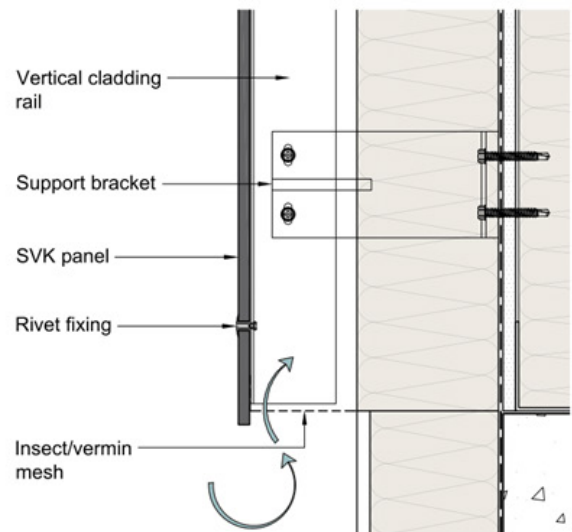
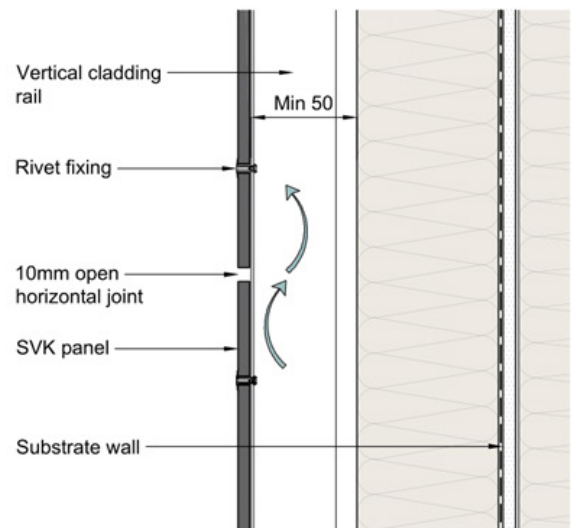
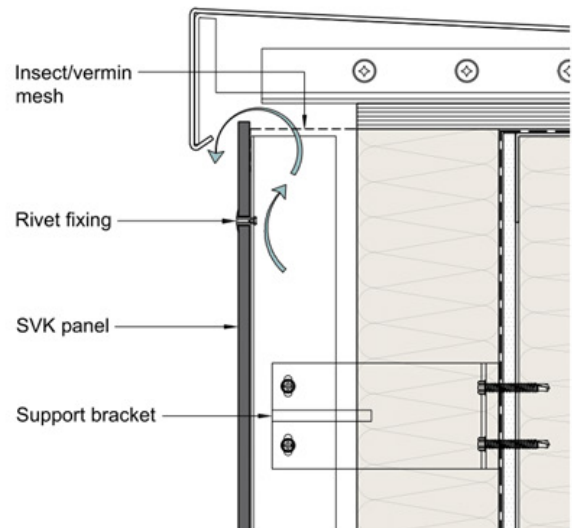
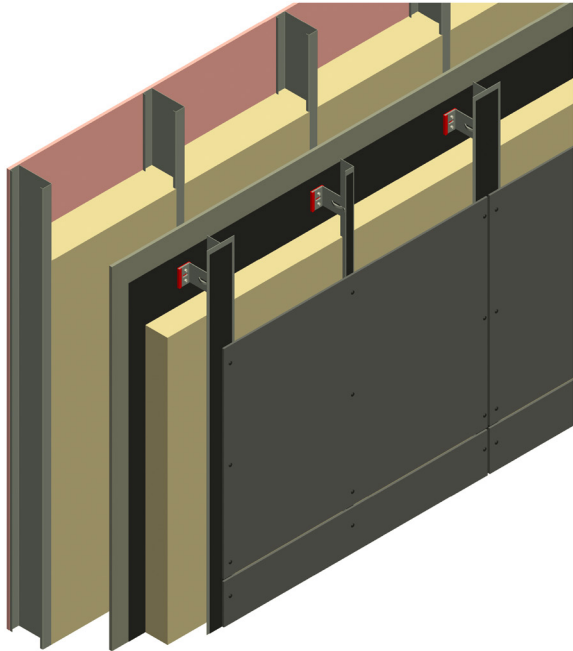
Note:

- *Applicable for 8mm Ornimat, Decoboard, Puro Plus, and Colormat.*
- *Soft set nosepiece should always be obtained from the rivet supplier to ensure compatibility with the rivets.*



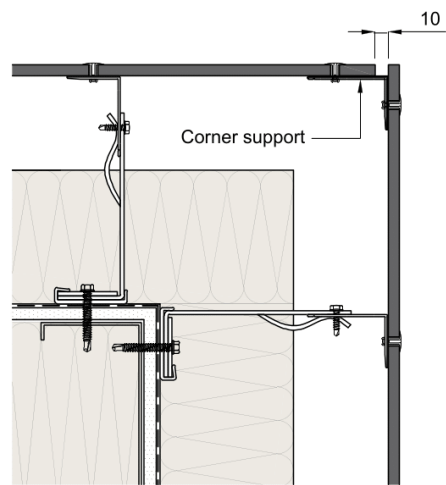
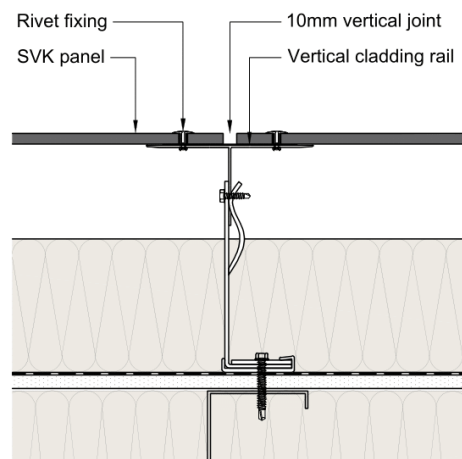
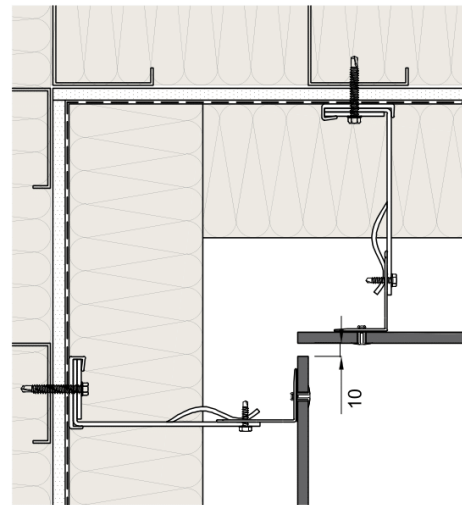
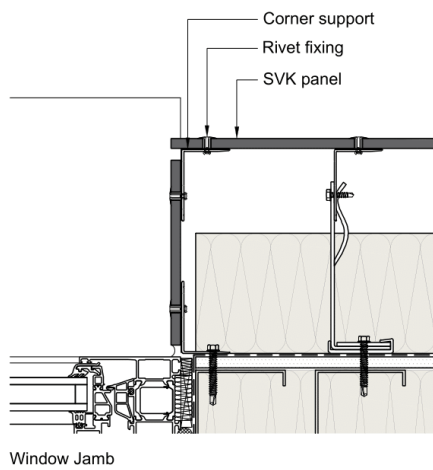
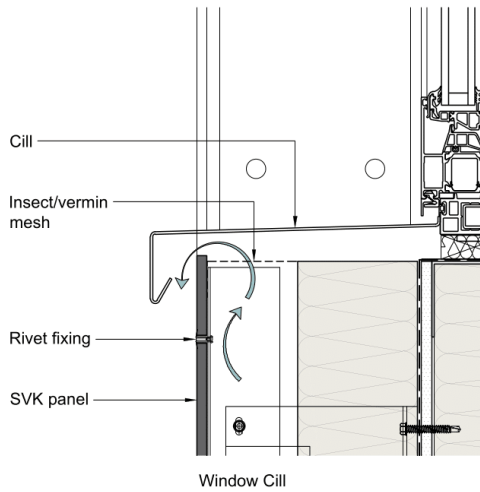
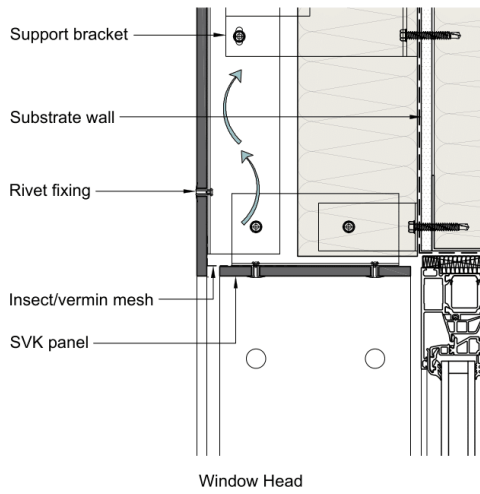
## 3.2 Rivet Fixing: Standard Details

Ornimat, Decoboard, Puro Plus and Colormat



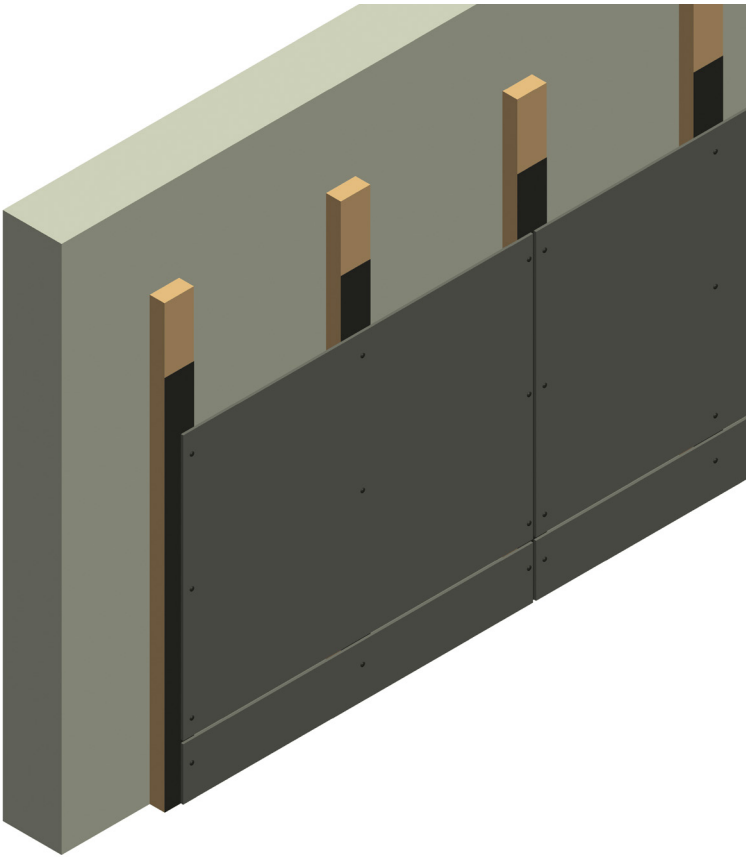
## 3.2 Rivet Fixing: Standard Details

Ornimat, Decoboard, Puro Plus and Colormat



### 3.3 Torx Screw Fixing: Timber Battens

*Ornimat, Decoboard, Puro Plus and Colormat*



#### Timber Battens - Standard Application

Application using Double and Single Span panels installed using a vertical grid of timber battens. Generally 100mm wide x 50mm deep for panel to panel joints, and 40mm wide x 50mm deep for intermediate panel support, reveals and corners.

The durable timber should be planed on all four sides, and treated in accordance with CFR EN 335, EN 460, and EN350-2. The strength of the timber should comply with Class C24 (EN338).

The timber should be clean, dry, dust and grease free and have a moisture content of <18%. The support system should be fixed direct to the load bearing and weathertight backing wall with suitable primary anchors.

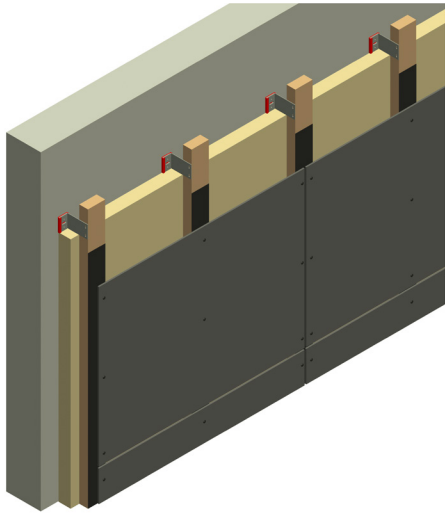
Each panel is fixed to the vertical timber battens with stainless torx screws.

#### Note:

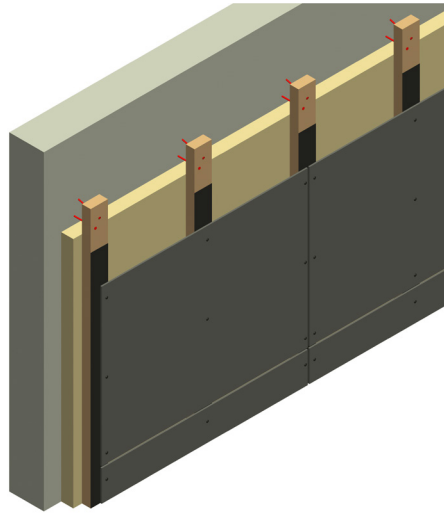
- Refer to the detailed rainscreen design drawings for the setting out of the battens.
- There is limited adjustment available for installing the battens, therefore this installation technique is usually applied to new timber backing walls or newly constructed masonry.
- For all timber batten applications ensure that the face of the battens are aligned correctly, so that the panels are fitted flat and true.
- The cavity zone at the rear of the panels must not be less than 50mm in depth.
- Advice should be sought for treating the timber to provide a resistance to fire.

### 3.3 Torx Screw Fixing: Timber Battens - Alternative Applications

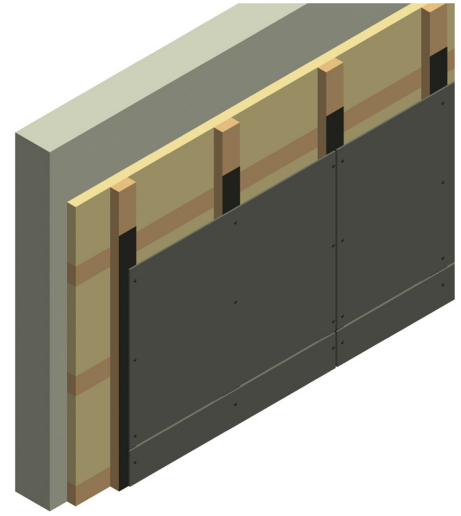
Ornimat, Decoboard, Puro Plus and Colormat



Batten Holder Bracket



Adjustable Shim Screw



Horizontal Counter Battens

Application using Double and Single Span panels installed using a vertical grid of timber battens. Generally 100mm wide x 50mm deep for panel to panel joints, and 40mm wide x 50mm deep for intermediate panel support, reveals and corners.

The durable timber should be planed on all four sides, and treated in accordance with CFR EN 335, EN 460, and EN350-2. The strength of the timber should comply with Class C24 (EN338).

The timber should be clean, dry, dust and grease free and have a moisture content of <18%.

The support system should be fixed direct to the load bearing and weathertight backing wall with Batten Holders, Counter Battens, or Adjustable Shim Screws.

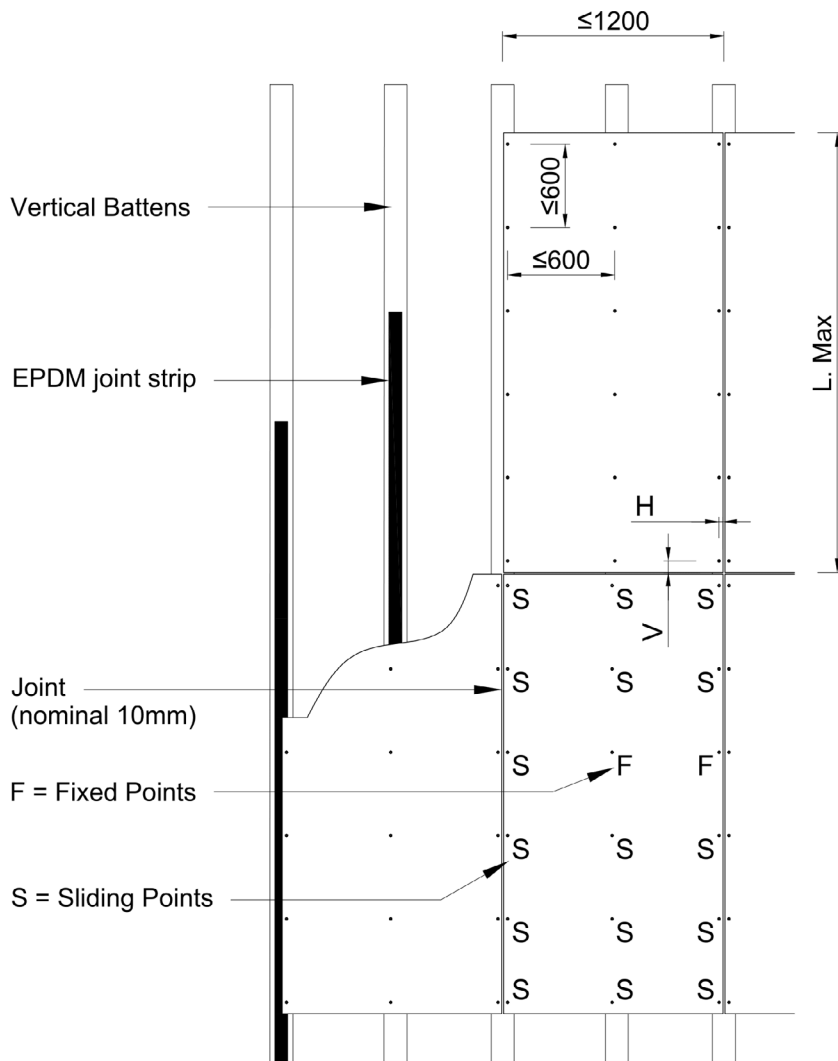
Each panel is fixed to the vertical timber battens with stainless torx screws.

Note:

- Refer to the detailed rainscreen design drawings for the setting out of the battens.
- Refer to the manufacturers instructions for installing the Batten Holders, and Adjustable Shim Screws.
- When using Batten Holders and Adjustable Shim Screws these methods of installation provide an opportunity for adjustment of the vertical battens without the need for shims or packers. Also the backing wall insulation remains uninterrupted and thermal breaches are minimized.
- Installing vertical battens onto horizontal counter battens may require shimming between the counter batten and the backing wall.
- The cavity zone at the rear of the panels must not be less than 50mm in depth.
- Advice should be sought for treating the timber to provide a resistance to fire.

### 3.3 Torx Screw Fixing: Timber Battens - Principles

Ornimat, Decoboard, Puro Plus and Colormat



	H min - max	V min - max	F	S	L max
Ornimat, Decoboard, Puro Plus	20 - 100 mm	20 - 100 mm	Ø5 mm	Ø8.5 mm	3070 mm
Colormat	25 - 100 mm	70 - 100 mm	Ø5 mm	Ø8.5 mm	3050 mm

Note:

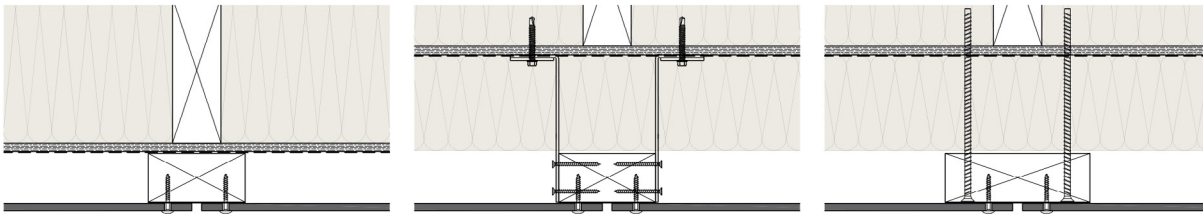
- The same H and V measurements should always be avoided.

### 3.3 Torx Screw Fixing: Timber Battens - General Advice

Ornimat, Decoboard, Puro Plus and Colormat

#### Timber Battens

- 1) All the timber to be used should be planed on all four sides and suitable for use to support rainscreen cladding supports.
- 2) Advice should be taken from specialist consultants for the application and use of both timber preservative and fire resistance pre treatment.
- 3) Always allow a 5mm wide expansion gap between the battens.
- 4) A structural engineer should determine the batten size always taking into account the minimum edge distances and depth of penetration of the torx screw fixings.
- 5) Every vertical batten should always be fitted with an EPDM gasket that sits between the rear of the cladding panel and the batten face.
- 6) For the panel to panel joints the batten width should be no less than 100mm.

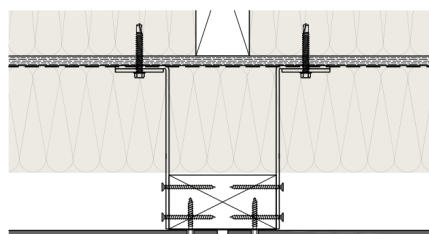


#### Minimum section battens (T x W) Screws

Fixing of battens:	Direct	Support brackets	L Adjustable screws
Vertical joint	50 x 90 mm	50 x 90 mm	50 x 90 mm
Intermediate batten	50 x 40 mm	50 x 40 mm	50 x 70 mm
Angle post	50 x 70 mm	50 x 70 mm	50 x 70 mm

#### Batten Holders

- 1) The batten holders should be manufactured from aluminium or galvanised steel, and they should always be fit for purpose.
- 2) Refer to the appropriate static calculations issued by the manufacturer for wall bracket centres and the fixing of the timber battens to the batten holders.
- 3) There is no direct contact between the backing wall and the vertical battens.
- 4) The support brackets can be installed alternated both left and right to provide additional stability and support for the timber batten.
- 5) Use a suitable Isopads between the wall bracket and the backing wall to minimize thermal transfer.





## 3.3 Torx Screw Fixing: Timber Battens - General Advice

*Ornimat, Decoboard, Puro Plus and Colormat*

### Adjustable Shim Screw Fixing

- 1) The Adjustable Shim Screws chosen must be capable of withstanding all the loads that will be imposed upon the rainscreen system.
- 2) Adjustable Shim Screws are suitable for installing timber battens fixed to a solid masonry backing wall.
- 3) A structural or rainscreen engineer will need to calculate the correct length and location of the Adjustable Shim Screws.
- 4) The screws must be manufactured from galvanised steel (or stainless steel), and need to be coated to protect them from oxidization and other forms of degradation.
- 5) The screws should be a type with a rotating body that can turn independently from the positioning head.
- 6) The pair of screws at each anchor point should be installed with the first horizontally and the second obliquely.
- 7) The screws will allow the vertical timber battens to be adjusted up to 1/1000 without affecting the pull out connection with the backing wall.

### Counter Battens

- 1) Where insulation is to be installed fixed to the backing wall along with timber counter battens, the size of the battens is determined by the thickness of the insulation. (the minimum sizes are Batten Width  $\geq$  60mm, Insulation Thickness  $\geq$  50mm).
- 2) The centres for the counter battens is determined by the size of the insulation batts.
- 3) The intermediate distance of the counter battens is also based upon the size of the vertical battens.
- 4) Counter Battens are also used where the location of the primary support for the vertical elements are not positioned directly behind the main batten location.
- 5) For the application to a double timber frame the vertical battens are fixed to the horizontal counter battens with 2no stainless steel woodscrews diagonally placed at their intersection.
- 6) The stainless steel screws should be embedded into the counter batten by at least 30mm. The minimum distance from the screw to edge of the timber should be 15mm.

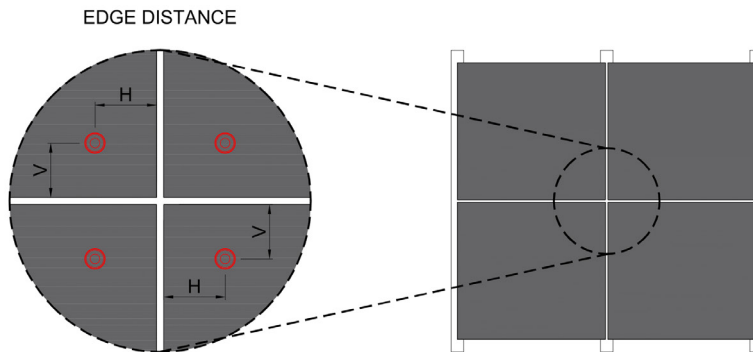
### 3.3 Torx Screw Fixing: Panel Drill Holes - Edge Distances

Ornimat, Decoboard, Puro Plus and Colormat

Note:

- Torx Screw Fixings Edge Distances.

The dimension from the panel edge to the edge of the drill hole must be sufficient to prevent the panel edges and corners from breaking.



The minimum and maximum values are: Edge distance of screws	Ornimat - Decobard - Puro Plus		Colormat	
	Minimum	Maximum	Minimum	Maximum
Vertical distance (V) - with open joint	20mm	100mm	70mm	100mm
Horizontal distance (H) - with joint profile (*)	50mm	100mm	70mm	100mm
Horizontal distance (H)	20mm	100mm	25mm	100mm

#### Drill Hole Diameters

Note:

- Applicable for 8, 10 & 12mm Ornimat, Decoboard, Puro Plus, and 10mm Colormat. (Refer to ETA 14/0284)

Fixed Point Holes to be 5mmØ (2no adjacent and central to the board)

Sliding Point Drill Holes to be 8.5mmØ

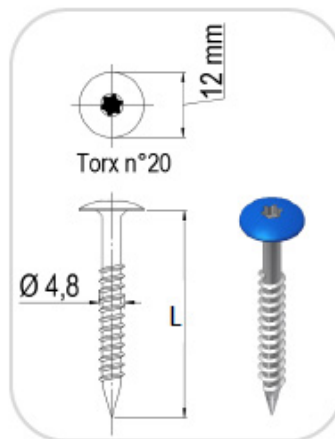
### 3.3 Torx Screw Fixings

*Ornimat, Decoboard, Puro Plus and Colormat*

Note:

- Refer to ETA 14/0284 for full specification.

- 1) The torx screws to be used are to have 12mm Ø lacquered heads manufactured from A2 stainless steel, (for marine environments us A4 stainless steel).
- 2) The minimum size of the torx screw is 4.8mm Ø x 38mm in length.
- 3) Install the torx screw fixings with a suitable electric screw driver with a torx setting to prevent overtightening, the torx setting is 20.
- 4) Do not use impact driver tools to install torque screws.



## 3.3 Torx Screw Fixing: Installation Method

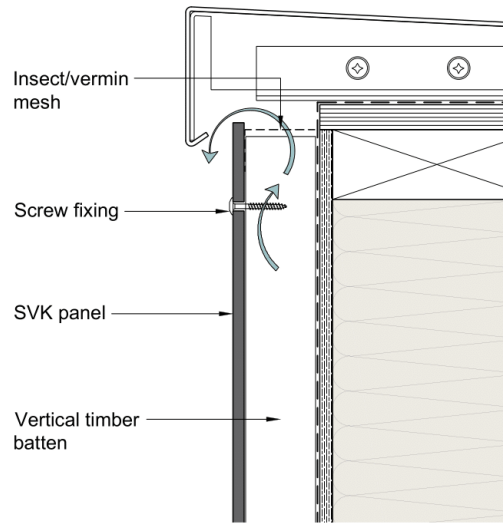
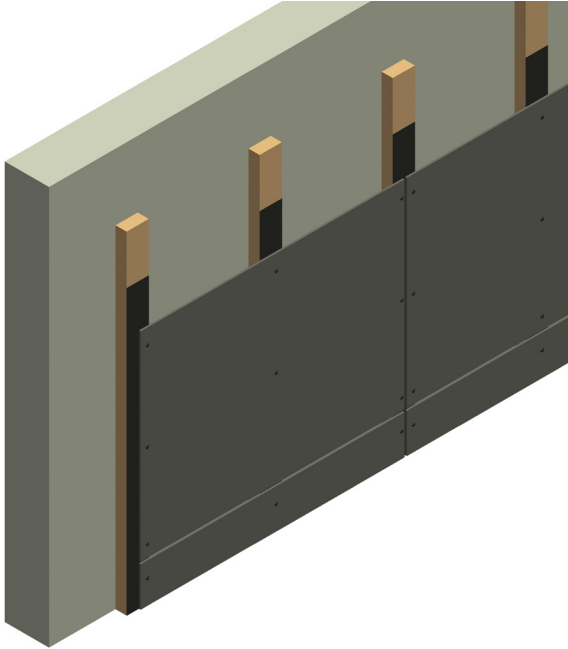
*Ornimat, Decoboard, Puro Plus and Colormat*

Note:

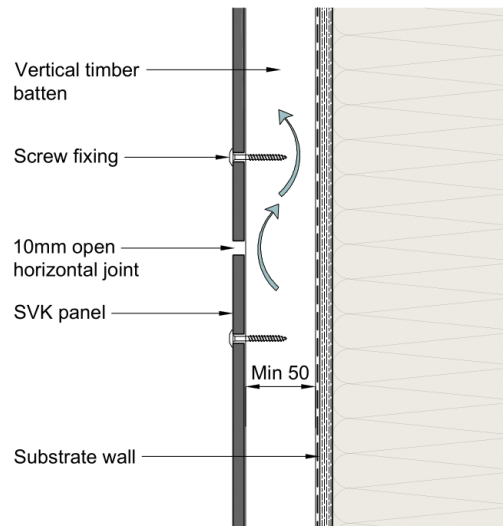
- *Due to the method of attaching the panels to the support grid, the panels can be installed from the ground upwards or from the top of the building downwards, and from left to right or right to left.*
- 1) Ensure that the supporting timber battens are installed correctly and in accordance with the manufacturers instructions and/or the project design drawings.
  - 2) If the batten holder is to be used, mark out and install the wall bracket locations prior to fitting insulation to the backing wall. Drill the backing wall and fit the wall brackets using the primary anchors, then install the insulation.
  - 3) Use the adjustment in the connection between the batten holder and wall brackets to correctly align the face of the timber battens.
  - 4) If installing the timber battens with adjustable shim screws, first fit the insulation to the backing wall, then install the screws as recommended by the adjustable shim screw manufacturer.
  - 5) Use the shim fitting embedded into the timber batten to align the face of the timber battens.
  - 6) Both the horizontal and vertical panel > panel joints are to be set to a minimum of 10mm.
  - 7) Use a suitable EPDM black gasket to cover the face of all the timber battens, staple these in place working from the top of each batten downwards.
  - 8) Ensure all the drill holes in the panels are complete.
  - 9) After marking out the location of the first line of panels, offer up and clamp the panel into place, use a datum starter rail to temporarily support the first line of panels or 10mm thick packers for adjacent panel to panel joints.
  - 10) Ensure that the 10mm panel to panel joints are positioned centrally to the 100mm wide battens, thus will ensure that the maximum edge distance for the screw is maintained the intermediate battens should always be aligned centrally to the drill holes.
  - 11) Pilot drill a corresponding 3mm diameter fixing hole through the EPDM gasket and 5mm into the face of the batten. (Use a suitable Centralising Tool for Sliding Points).
  - 12) When using sliding points ensure the hole is in the centre of the drill hole in the panel, this will prevent any restriction of the panel movement occurring.
  - 13) With an electric screw gun/torque fitting, insert the torx screw perpendicular into the pilot hole and batten.
  - 14) Carefully tighten the screw onto the panel until the face is seen to move slightly against the EPDM gasket, rotate the torx screw backwards by 180°.
  - 15) Take care not to overtighten the torx screws as this will restrict the thermal movement of the panels, and could cause cracking between the panel drill holes.
  - 16) Do not use impact driver tools to install the torx screws.
  - 17) Install ventilation profiles, corner trims, horizontal joint plates and flashings as each panel area is installed, all as detailed in the project design drawings.

### 3.3 Torx Screw Fixing: Timber Battens - Standard Details

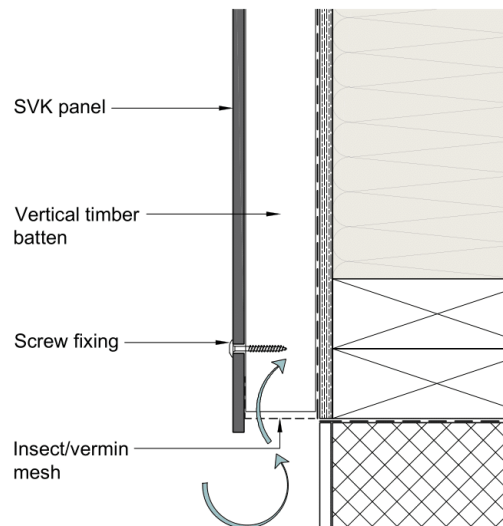
Ornimat, Decoboard, Puro Plus and Colormat



Parapet



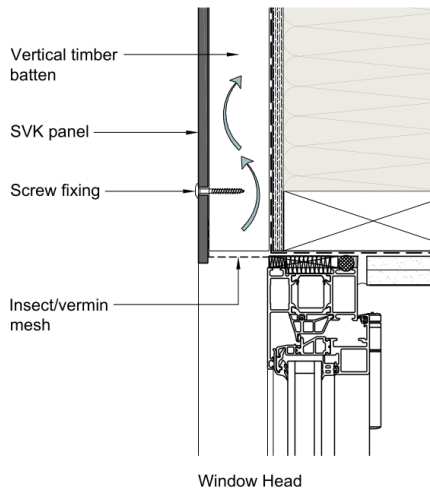
Horizontal Joint



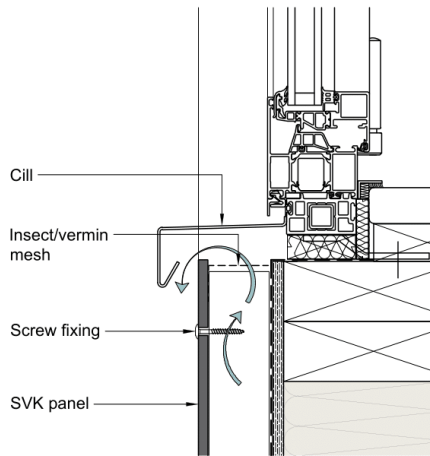
Base

### 3.3 Torx Screw Fixing: Timber Battens - Standard Details

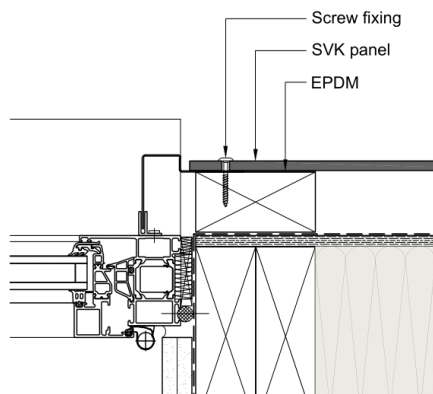
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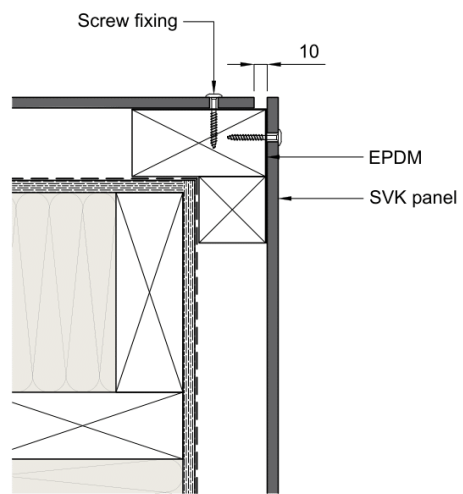
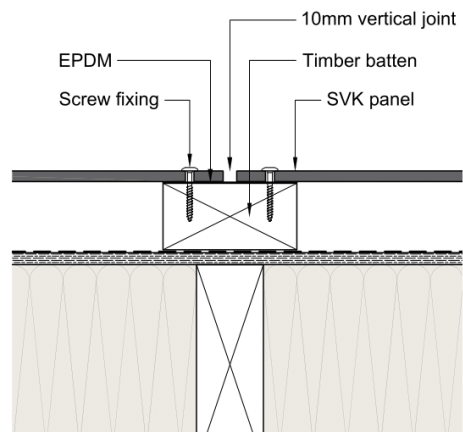
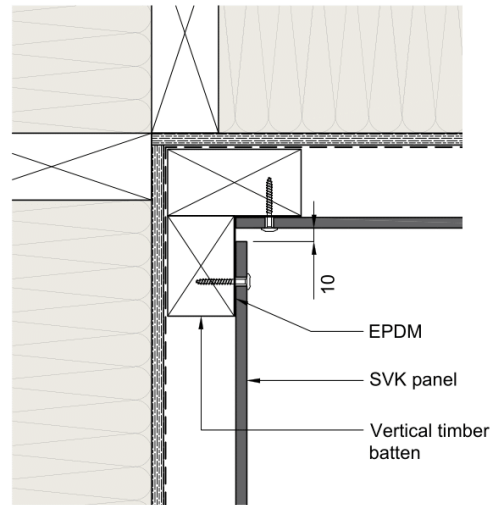
Window Head



Window Cill



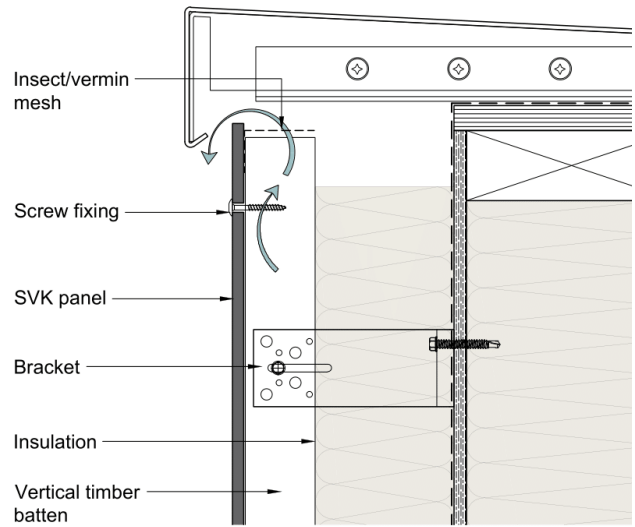
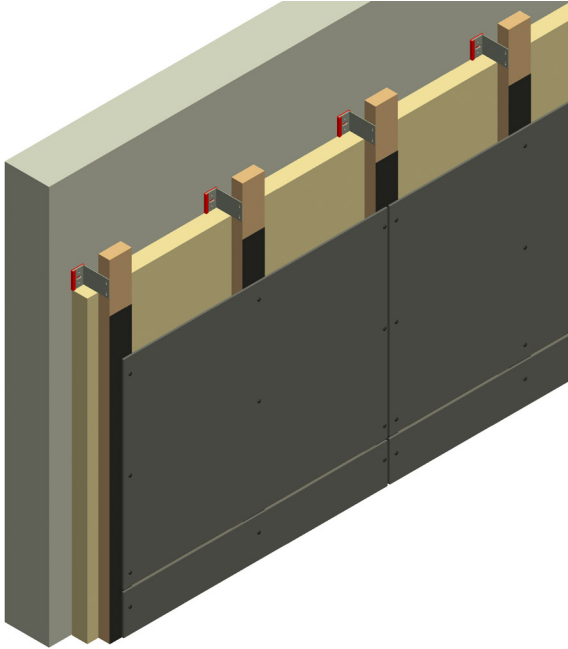
Window Jamb



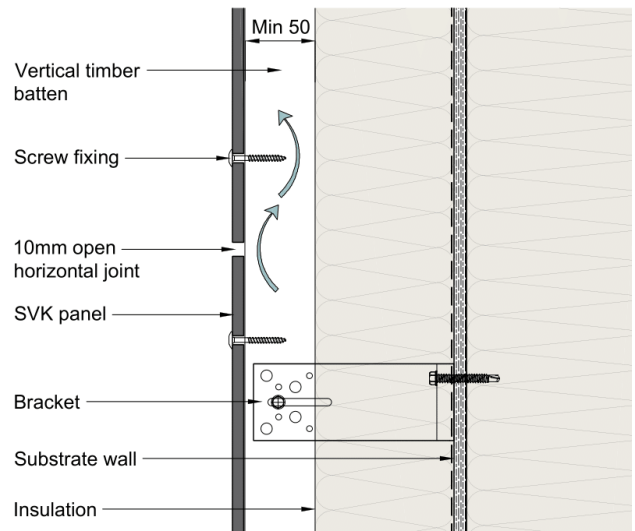
External Corner

### 3.3 Torx Screw Fixing: Timber Batten Holders - Standard Details

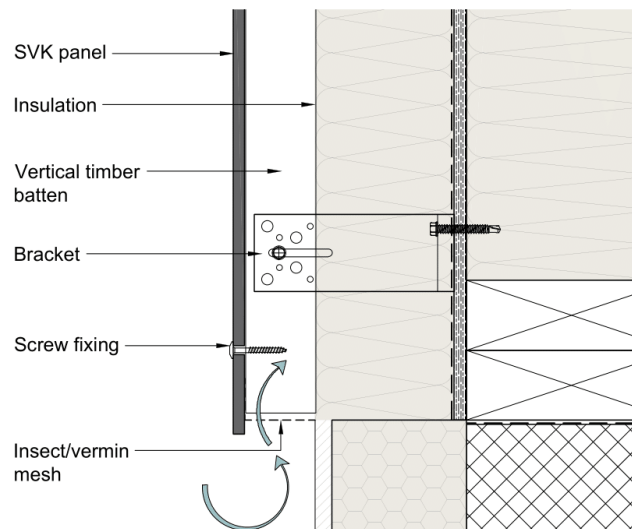
Ornimat, Decoboard, Puro Plus and Colormat



Parapet



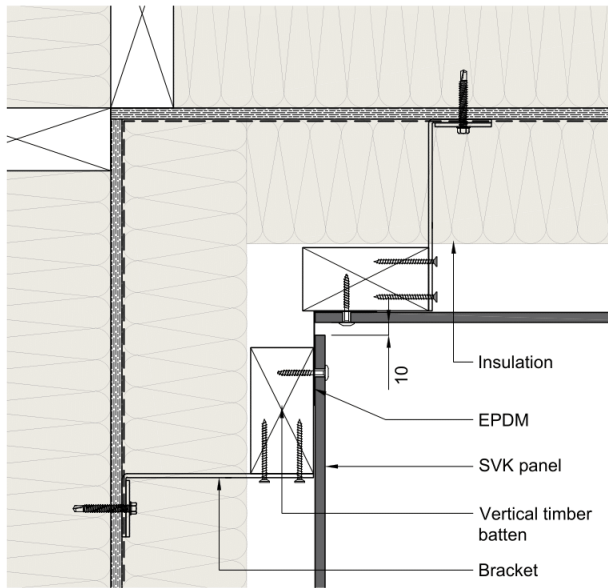
Horizontal Joint



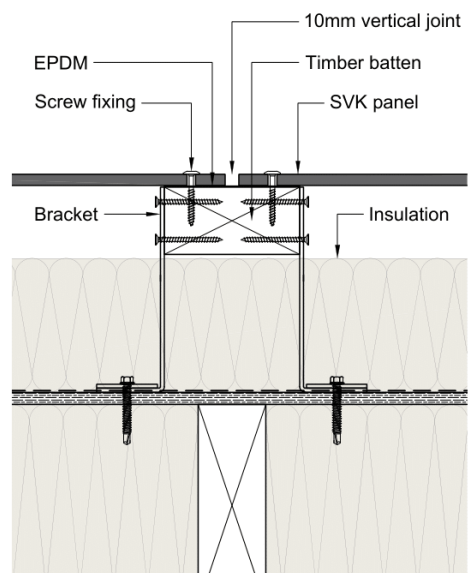
Base

### 3.3 Torx Screw Fixing: Timber Batten Holders - Standard Details

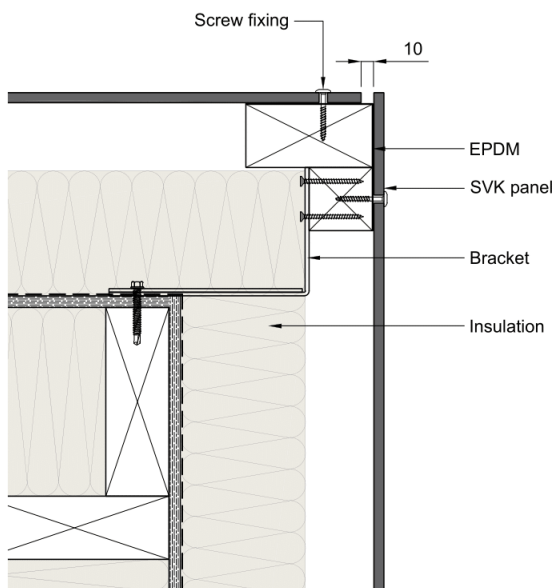
Ornimat, Decoboard, Puro Plus and Colormat



Internal Corner



Vertical Joint

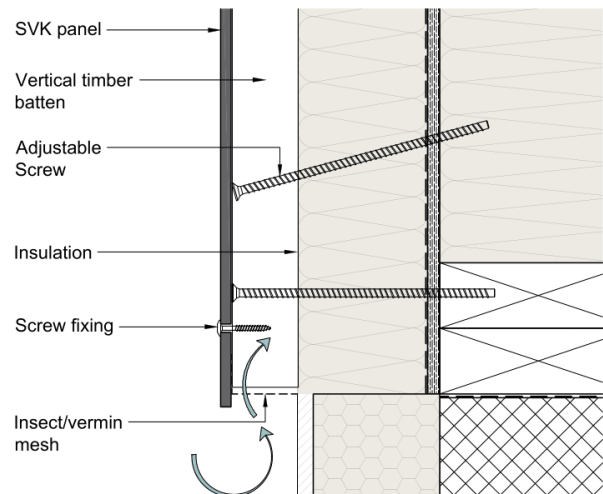
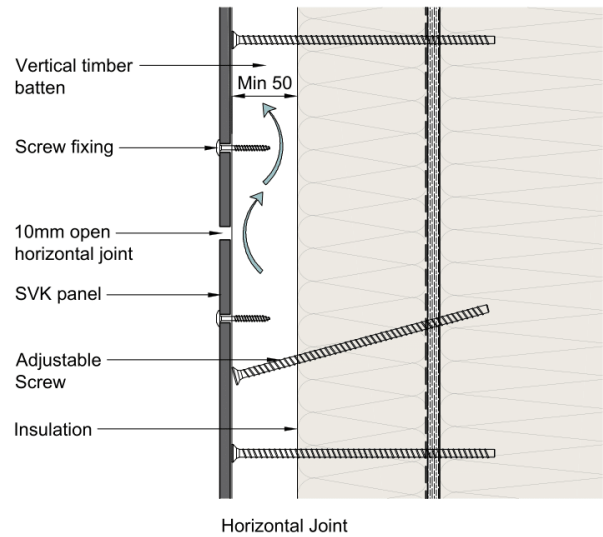
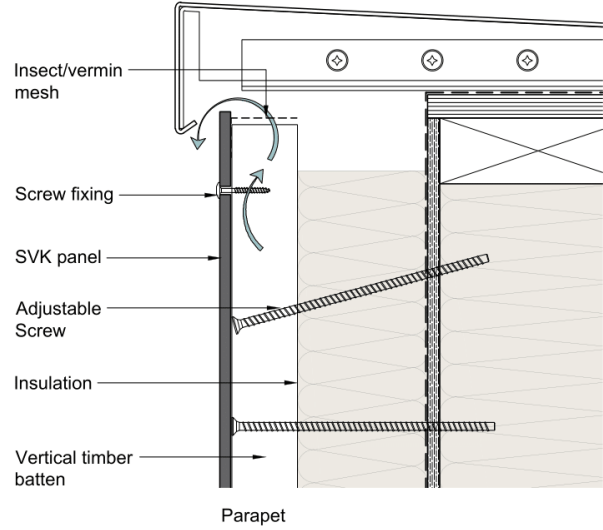
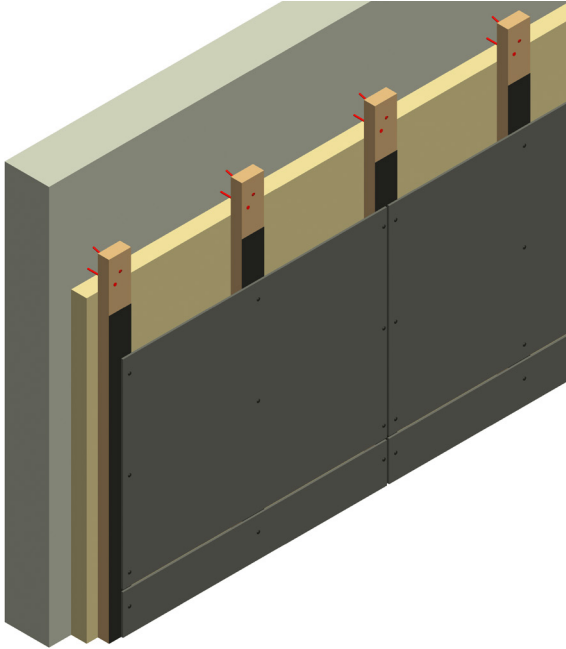


External Corner



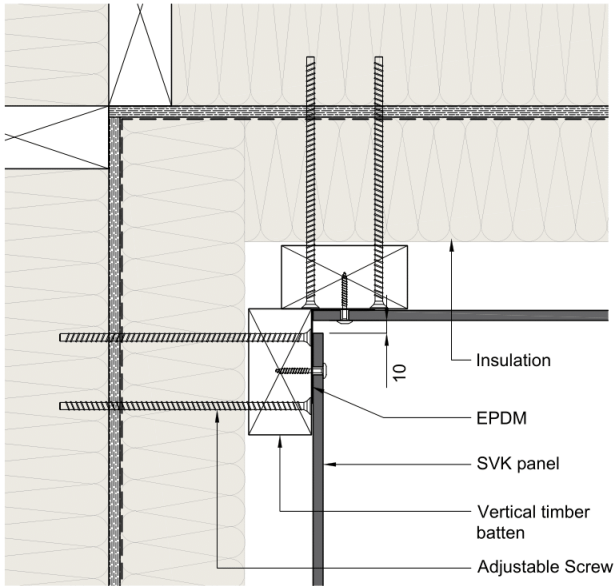
### 3.3 Torx Screw Fixing: Adjustable Shim Screws - Standard Details

Ornimat, Decoboard, Puro Plus and Colormat

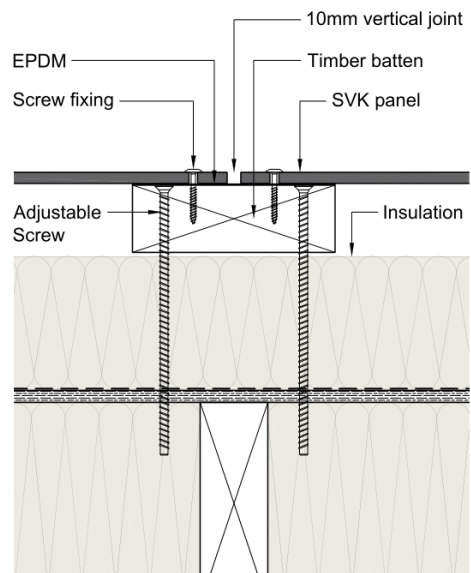


### 3.3 Torx Screw Fixing: Adjustable Shim Screws - Standard Details

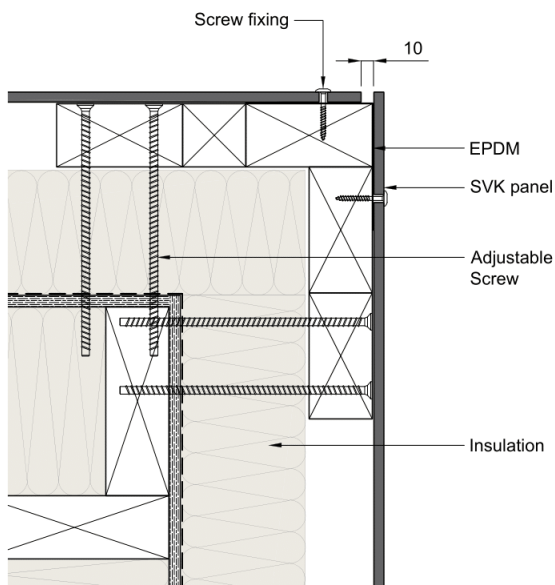
Ornimat, Decoboard, Puro Plus and Colormat



Internal Corner

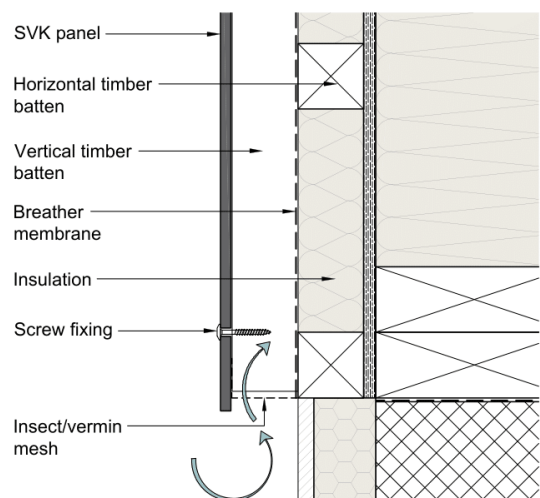
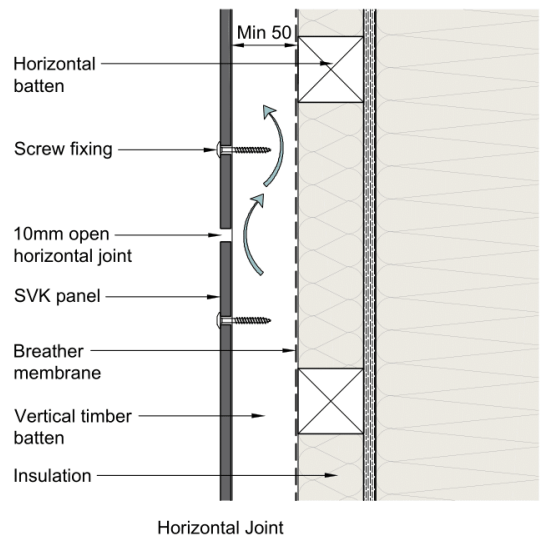
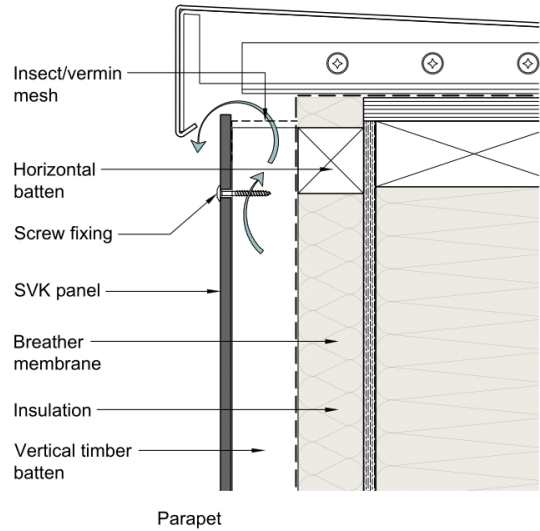
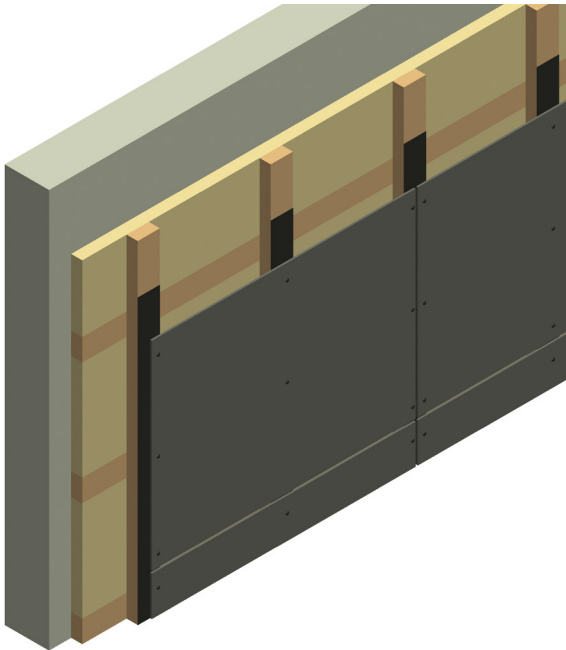


Vertical Joint



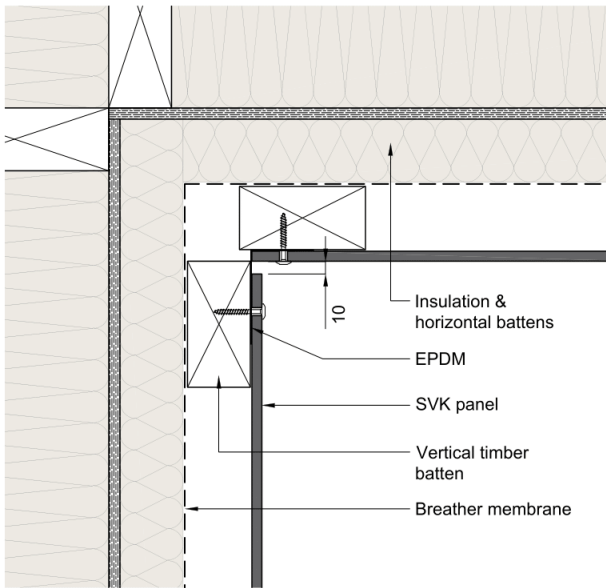
### 3.3 Torx Screw Fixing: Counter Battens - Standard Details

Ornimat, Decoboard, Puro Plus and Colormat

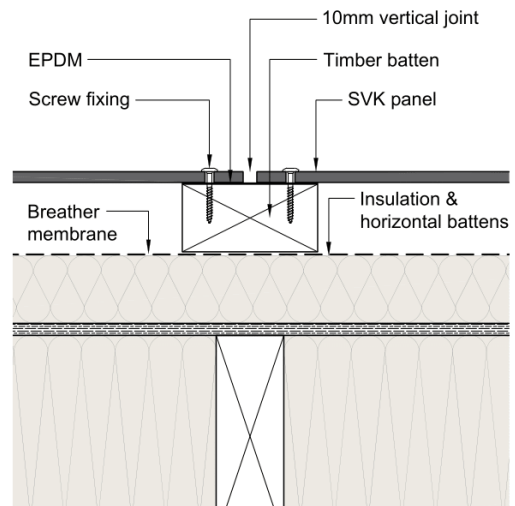


### 3.3 Torx Screw Fixing: Counter Battens - Standard Details

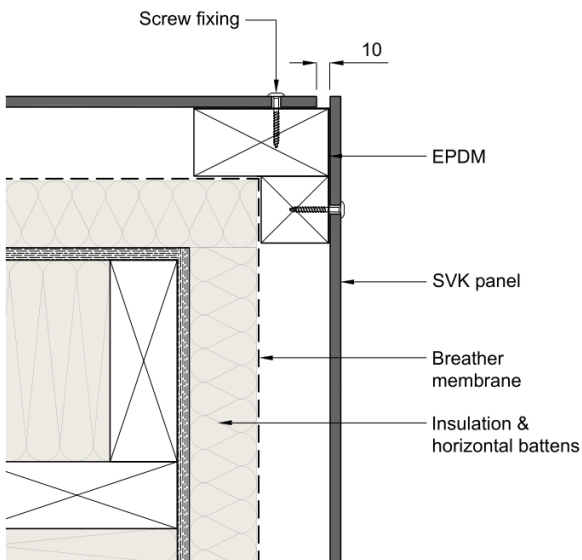
Ornimat, Decoboard, Puro Plus and Colormat



Internal Corner

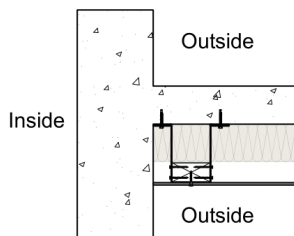
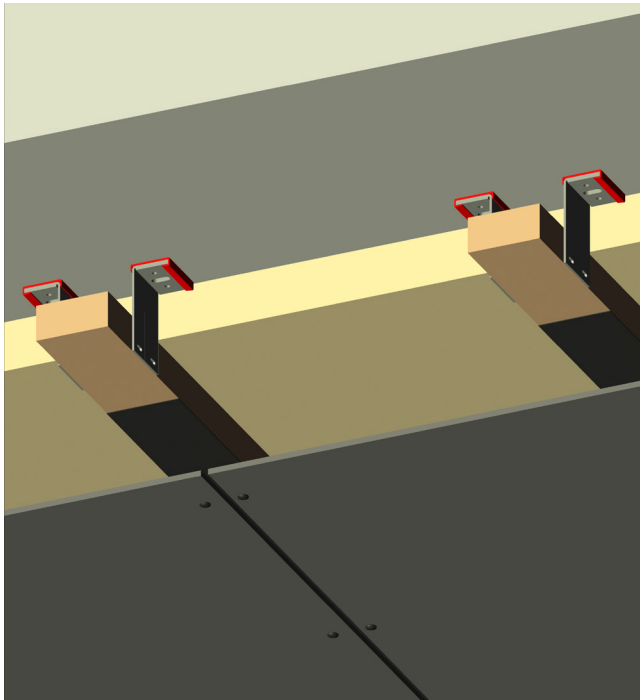


Vertical Joint

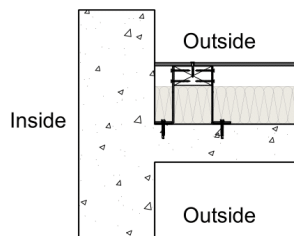


## 3.4 Soffit Application

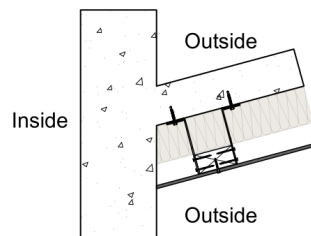
Ornimat, Decoboard, Puro Plus and Colormat



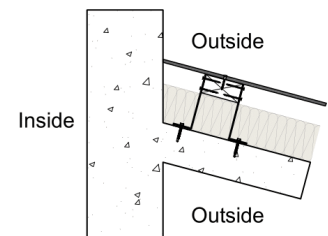
ALLOWED



NOT ALLOWED



ALLOWED



NOT ALLOWED

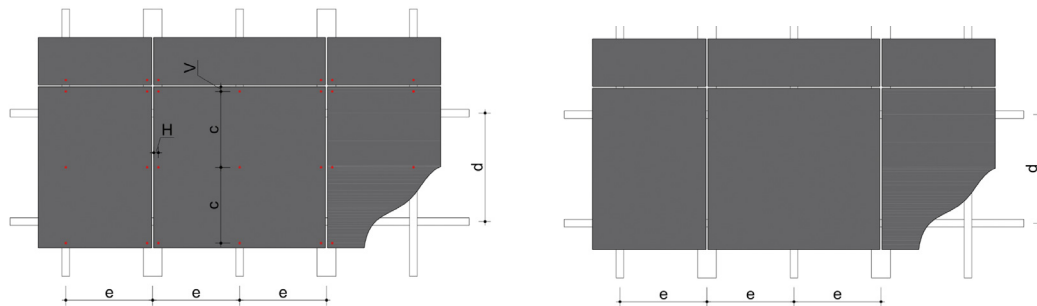
- 1) The Wienerberger SVK Facade panels can be used as a self supporting fully ventilated soffit cladding, (horizontally or sloping).
- 2) The building structure above the soffit boards should be fully watertight.
- 3) Any architectural hardware, for example light fittings, signage, cable ducts, should not be attached directly to the panels, they should only be fixed to the main building structure.
- 4) Where hardware fixings penetrate the cladding panels, they should be installed following the same guidelines as for torx screw and rivet fixing. This will ensure that the panel can move due to thermal expansion and contraction.
- 5) A timber batten or aluminium rainscreen support system can be used, to carry the soffit panels, and the installation techniques as stated in our soffit tables.
- 6) The panels can be fixed to the support frame using torx screws, rivets or mechanical secret fixing.

### 3.4 Soffit Application: Support Frame

Ornimat, Decoboard, Puro Plus and Colormat

Note:

- Refer to the rainscreen support system manufacturers installation manual, static calculation report and assembly instructions, prior to commencement of construction.
- The cavity zone at the rear of the panels must not be less than 50mm in depth.
- If batten hangers are to be used the brackets should be located on each side of the timber battens.
- Refer to the table for the support frame fixing centres.



- V Vertical distance towards horizontal edge
- H Horizontal distance towards vertical edge
- c Distance between fasteners
- d intermediate between fasteners
- e intermediate distance between vertical supports

	Panel with intermediate support(s) in the middle of the ceiling	Panel without intermediate support and /or ceiling edge
Intermediate distance sub-frame (e)	450mm	400mm
Intermediate distance fixings (c)	450mm	400mm

Edge distance of the screws	Ornimat - Decoboard - Puro Plus		Colormat	
	Minimum	Maximum	Minimum	Maximum
Vertical distance (V) - with open joint	20mm	100mm	70mm	100mm
Vertical distance (V) - with open joint profile(*)	50mm	100mm	70mm	100mm
Horizontal distance (H)	20mm	100mm	25mm	100mm

Edge distance of blind rivets				
Vertical distance (V)	70mm	100mm	70mm	100mm
Horizontal distance (H)	30mm	100mm	30mm	100mm

Edge distance of invisible fixing		
Vertical distance (V)	50mm	100mm
Horizontal distance (H)	50mm	100mm

\* This is a non standard option

## 3.4 Soffit Application: Installation, Insulation, Ventilation

Ornimat, Decoboard, Puro Plus and Colormat

Note:

- The cavity zone at the rear of the panels must not be less than 50mm in depth and adequate ventilation is required, please refer to the table below

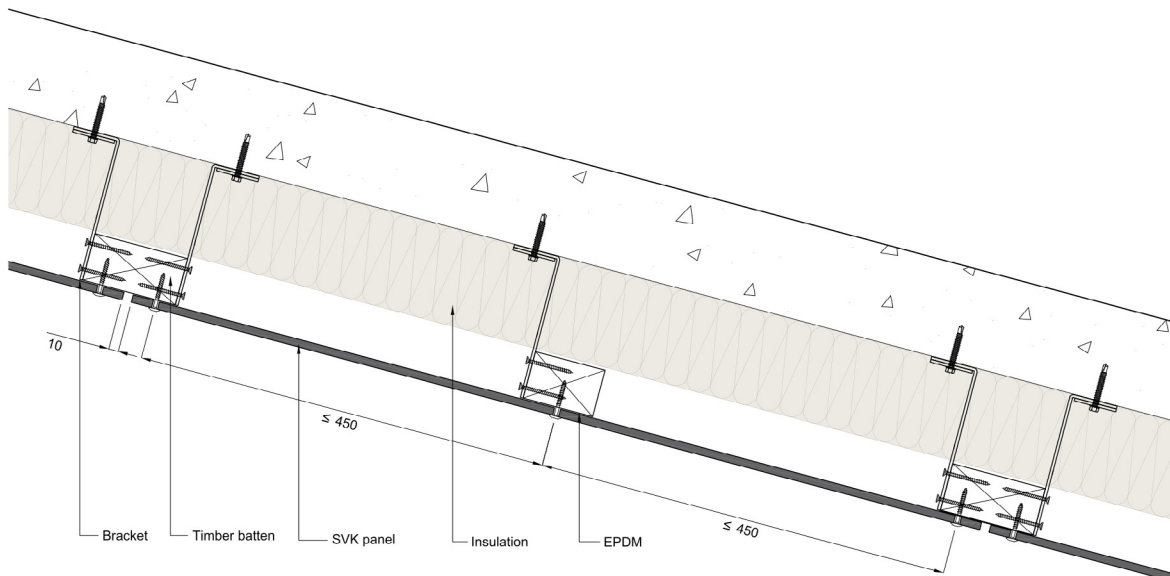
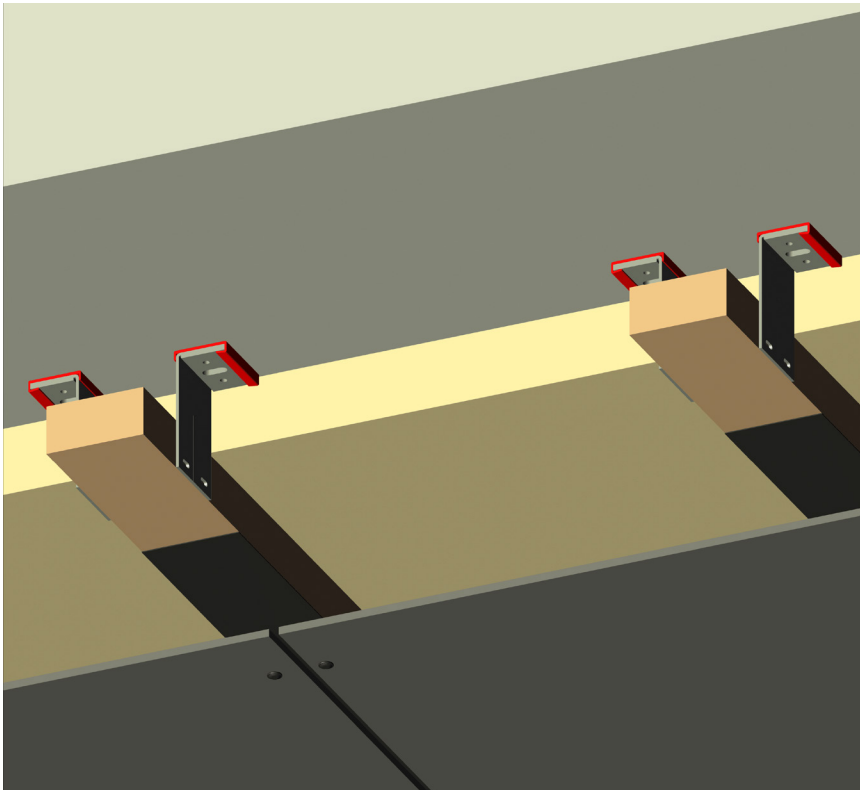
Joint Type	Cavity Width	
	Timber Sub-Frame	Aluminium Sub-Frame
Open joints	minimum 50mm	minimum 50mm
Horizontal joint profiles*	minimum 38mm	minimum 38mm

Note:

- The cavity zone should be continuous and uninterrupted, also adequate ventilation gaps are required around apertures and at the soffit perimeter.
- The ventilation airgap should be no less than 10mm in width between panels.
- The amount of ventilation required should be no less than 100cm<sup>2</sup> per metre of air gap. The presence of a perforated closer section has been allowed for in this calculation.
- All air gaps should be fitted with a ventilation closer section to prevent the ingress of insects and vermin.

### 3.4 Soffit Application: Standard Details

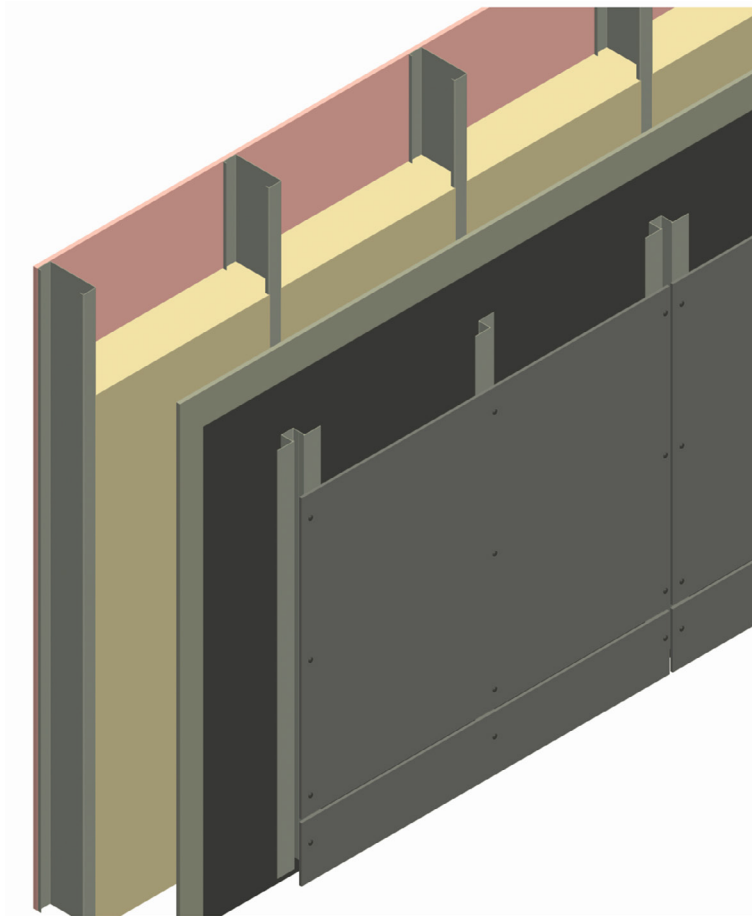
*Ornimat, Decoboard, Puro Plus and Colormat*





### 3.5 Rivet Fixing: Omega and Zed Rails

*Ornimat, Decoboard, Puro Plus and Colormat*



Application using Double and Single Span panels installed using a proprietary extruded aluminium rainscreen support system comprising a vertical grid constructed with vertical Omega (or Top Hat) rails, Zed rails and accessories. Typically the aluminium alloy used is EN-AW 6060 T5 and conforms with EN 573-3 and EN 755-2.

The support system should be fixed direct to the load bearing and weathertight backing wall with suitable primary anchors.

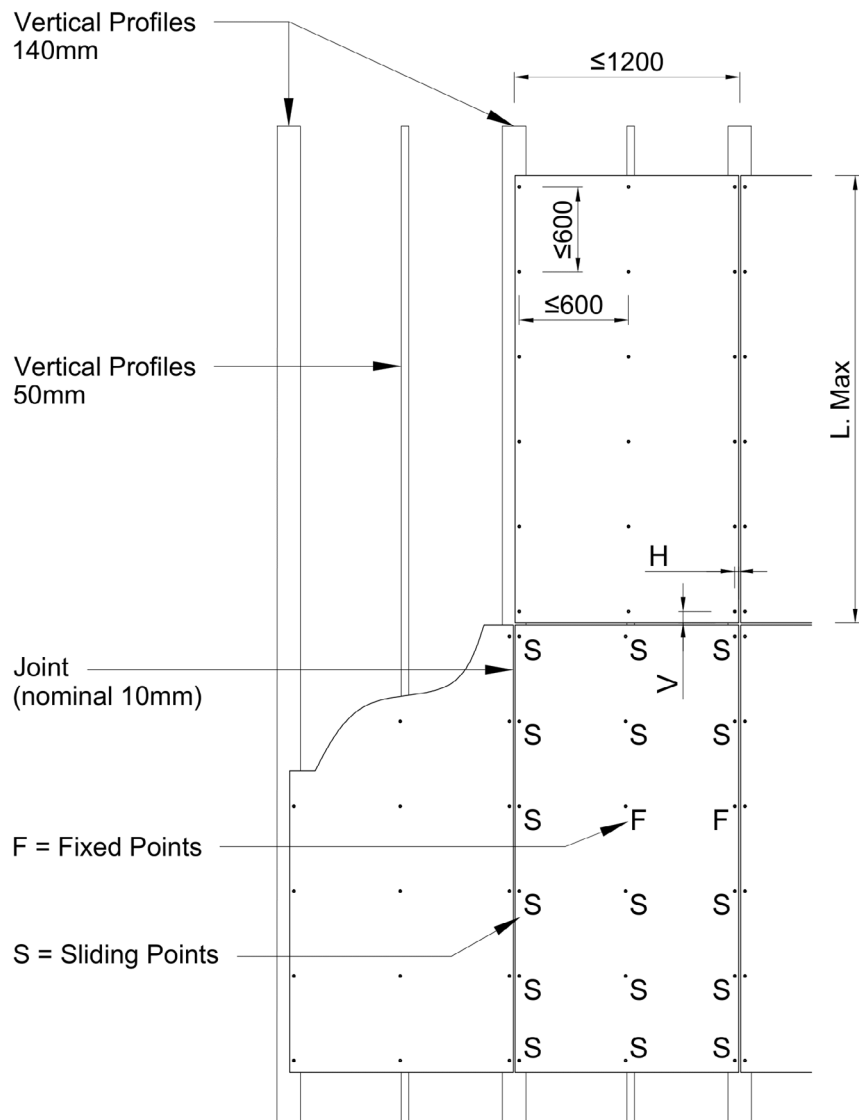
Each panel is fixed to the vertical Omega and Zed rails with stainless steel or aluminium rivets. The Omega rails provide support for the vertical panel to panel joints, and the Zed rails provide intermediate support for double span panels, reveals, corners and returns. This method of installation is a sustainable alternative to using a timber batten system.

*Note:*

- Refer to the rainscreen support system manufacturers installation manual, static calculation report and assembly instructions, prior to commencement of construction.
- The cavity zone at the rear of the panels must not be less than 50mm in depth.

### 3.5 Rivet Fixing: Omega and Zed Rails - Principles

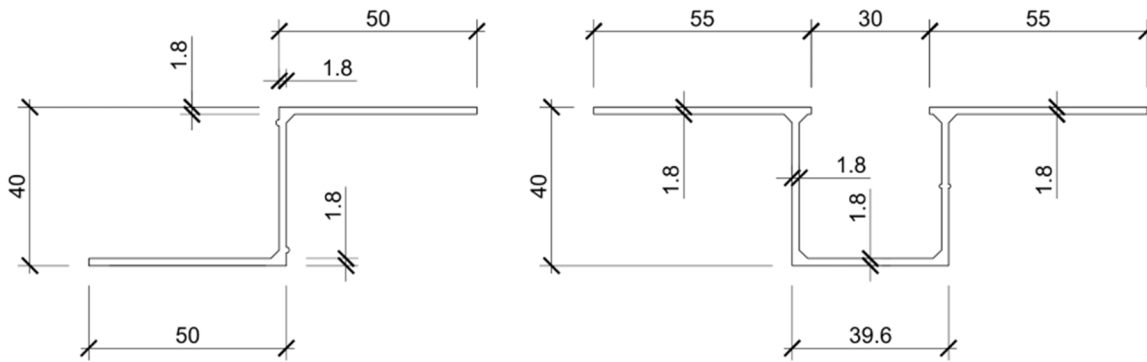
Ornimat, Decoboard, Puro Plus and Colormat



	H min - max	V min - max	F	S	L max
Ornimat, Decoboard, Puro Plus	30 - 100 mm	70 - 100 mm	Ø5 mm	Ø8.5 mm	3070 mm
Colormat	30 - 100 mm	70 - 100 mm	Ø5 mm	Ø8.5 mm	3050 mm

### 3.5 Rivet Fixing: Omega and Zed Rails - Rail Details

Ornimat, Decoboard, Puro Plus and Colormat



Note:

- Typical Omega and Zed Rails.

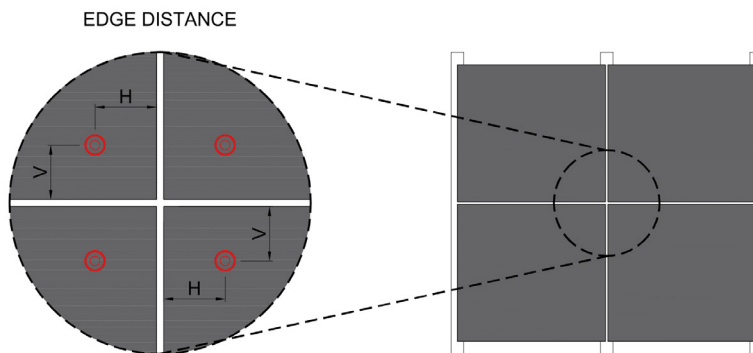
### 3.5 Rivet Fixing: Panel Drill Holes - Edge Distances

Ornimat, Decoboard, Puro Plus and Colormat

Note:

- *Blind Rivet Fixings Edge Distances.*

The dimension from the panel edge to the edge of the drill hole must be sufficient to prevent the panel edges and corners from breaking.



The minimum and maximum values are: Edge distance of screws	Ornimat - Decobard - Puro Plus		Colormat	
	Minimum	Maximum	Minimum	Maximum
Vertical distance (V)	70mm	100mm	70mm	100mm
Horizontal distance (H)	30mm	100mm	30mm	100mm

## 3.5 Rivet Fixing: Rivet Fixings

*Ornimat, Decoboard, Puro Plus and Colormat*

*Note:*

- *Refer to ETA 14/0284 for full specification.*
- 1) The rivets to be used are to have 16mm Ø lacquered heads manufactured from A2 stainless steel or aluminium, (for marine environments us A4 stainless steel).
  - 2) The minimum size of the rivet shank is 4.8mm Ø x 16mm in length.
  - 3) Always check the (pull up) length of the rivet shank is adequate for the thickness of the Omega and Zed, and panel + accessories.

## 3.5 Rivet Fixing: Rivet Fixings

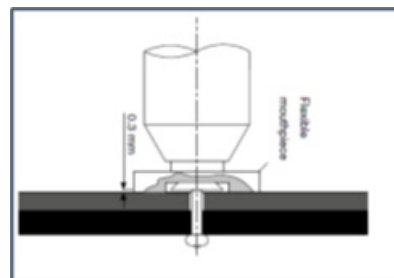
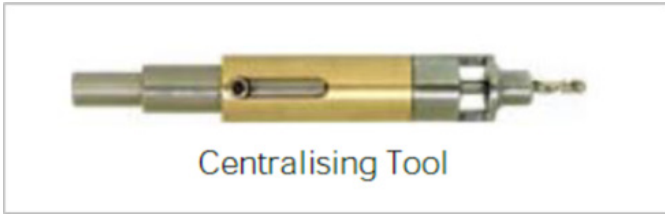
*Ornimat, Decoboard, Puro Plus and Colormat*

Note:

- *Due to the method of attaching the panels to the support grid, the panels can be installed from the ground upwards or from the top of the building downwards, and from left to right or right to left.*
- 1) Ensure that the supporting Omega and Zed rails are installed correctly and in accordance with the manufacturers instructions and the project design drawings.
  - 2) Both the horizontal and vertical panel > panel joints are to be set to a minimum of 10mm.
  - 3) Use a suitable vinyl black adhesive tape to cover the inner face of the Omega rail to form a shadow gap joint (if required).
  - 4) Ensure all the drill holes in the panels are complete (these should be drilled in a factory environment, although site drilling can be undertaken)
  - 5) After marking out the location of the first line of panels offer up and clamp the panel into place, use a datum starter rail to temporarily support the first line of panels or 10mm thick packers for adjacent panel to panel joints.
  - 6) Using a Centralising Tool, drill the corresponding 4.9mmØ fixing hole in the face of the supporting T and L rails behind the panel.
  - 7) Ensure the hole is in the centre of the drill hole in the panel, this will prevent any restriction of the panel movement occurring.
  - 8) With an electric rivet gun fitted with a Soft Set Nose Piece, place the rivet perpendicular into the drill holes, and set the rivet.
  - 9) Install ventilation profiles, corner trims, horizontal joint plates and flashings as each panel area is installed, all as detailed in the project design drawings.

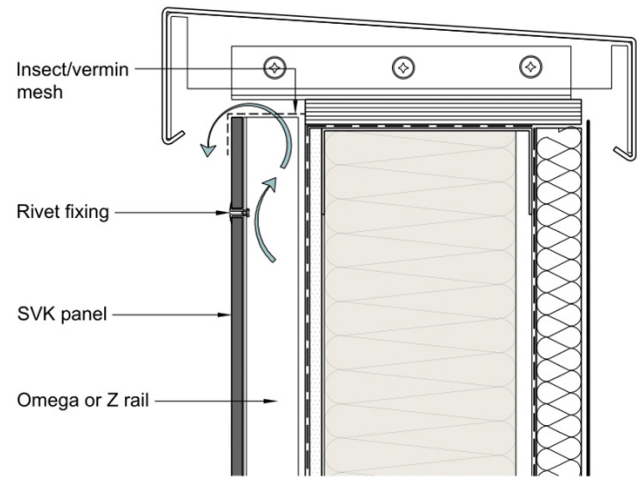
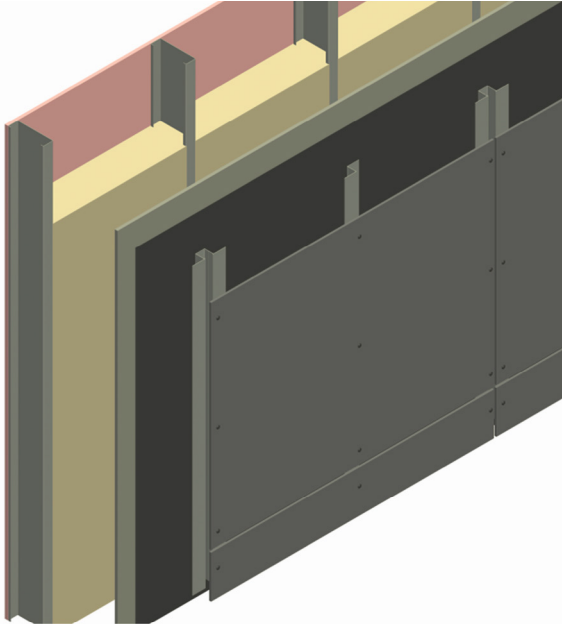
### 3.5 Rivet Fixing: Tools

*Ornimat, Decoboard, Puro Plus and Colormat*

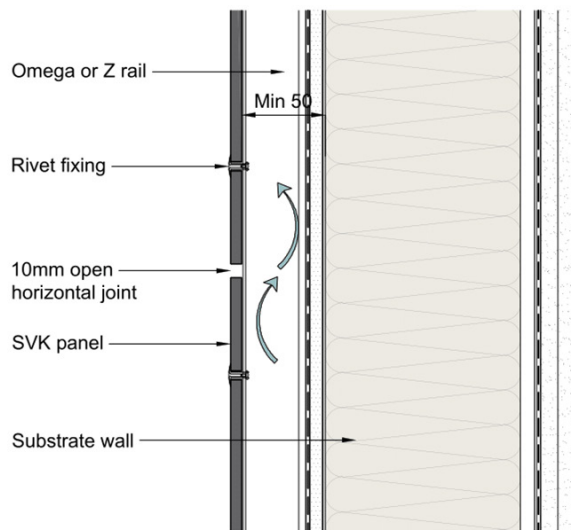


### 3.5 Rivet Fixing: Standard Details - Omega and Zed Rails

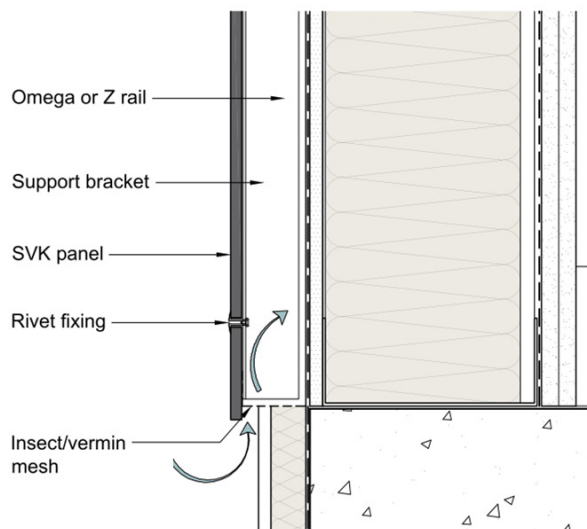
Ornimat, Decoboar, Puro Plus and Colormat



Parapet



Horizontal Joint

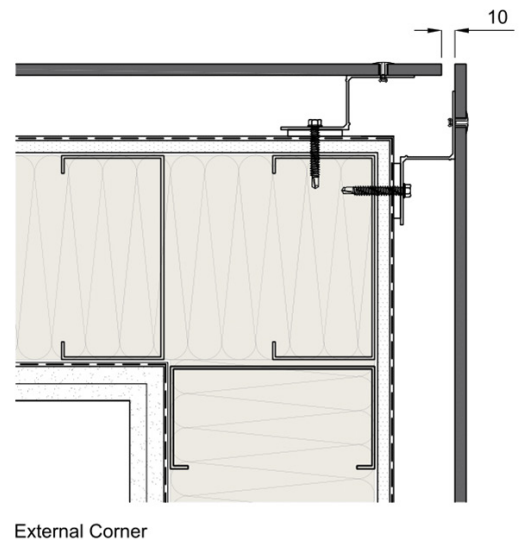
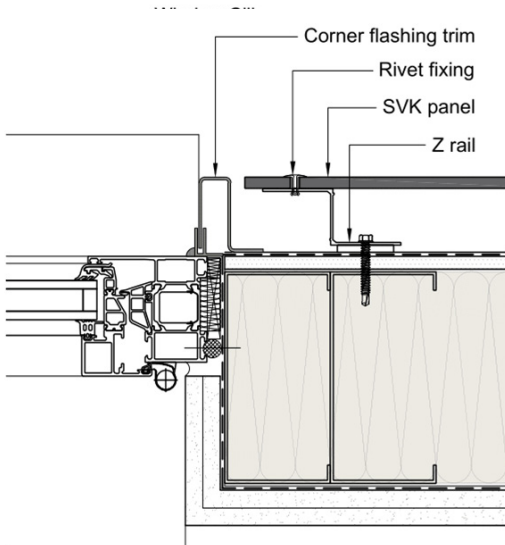
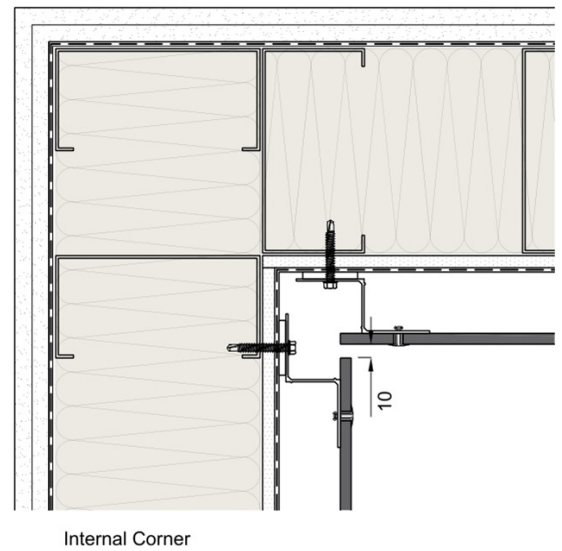
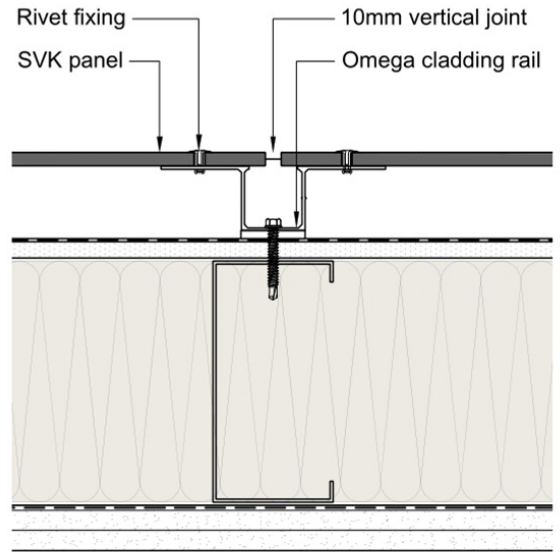
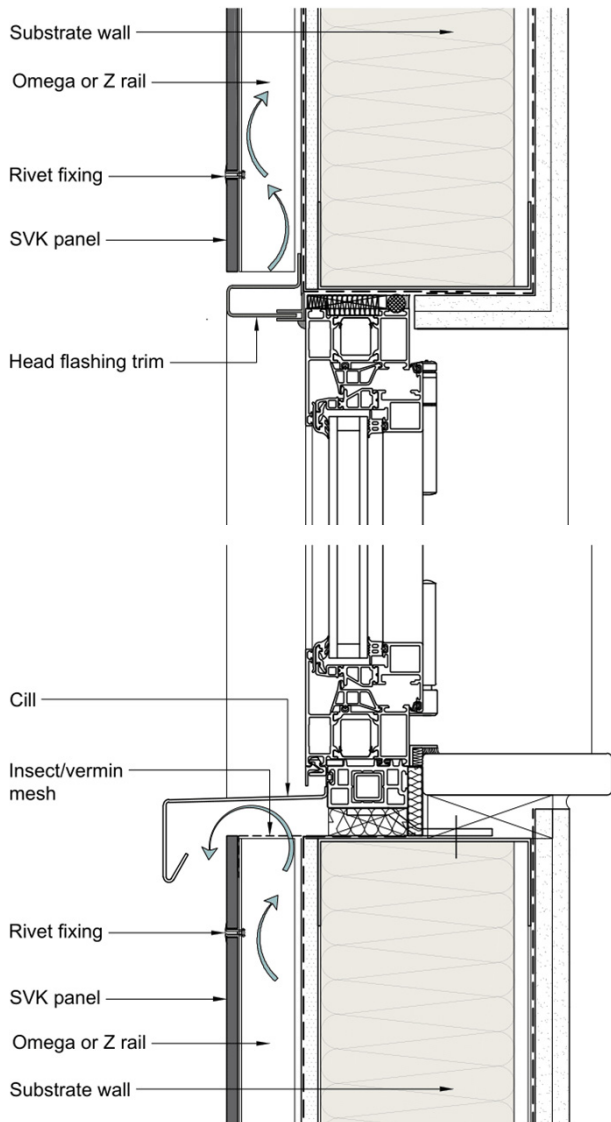


Base



### 3.5 Rivet Fixing: Standard Details - Omega and Zed Rails

Ornimat, Decoboard and Puro Plus



Window Jamb

## **Section 4.0**

### Wienerberger SVK Facade Panels - General Information

## 4.1 Fabrication: General Guidance - Panel Cutting & Drilling

Ornimat, Decoboard, Puro Plus and 10mm Colormat

Note:

- Ornimat panels are supplied cut to size with mechanically painted edges.  
For help and assistance with ordering fully fabricated panels please contact our Technical Department at [WBUKFACADES@wienerberger.com](mailto:WBUKFACADES@wienerberger.com)
- Decoboard & Puro Plus panels should be fabricated and drilled before the removal of the protective foil.
- Puro Plus panels should be kept clean, dust and sediment (cement dust) free during fabrication. Any contamination will adhere and fill the surface pores.
- Any dust or other contamination should be removed using a soft, dry and pure micro-fibre cloth or soft brush. Failure to adhere to this guidance may lead to a defective panel surface appearance.
- Avoid sweat and grease stains on the panel surface by always wearing woolen gloves.
- Sand all sharp cut edges with a smooth No 220 grade sanding block, this will add a small aris to the leading edge of the panel outer face.
- During the fabrication process all the panels should be fully supported on solid base with vibrations and panel stress kept to a minimum.
- Always cut and drill the panels from the front to the rear face.
- Fibre cement panels are cut DRY and no coolant is required.
- Always wear the correct Personal Protective Equipment (PPE), any machinery used for cutting should be fitted with a suitable dust extraction system.



### Gloves

Non-beveled cut edges are sharp and pose a risk of injury. To protect against this when handling fibre cement panels, wear gloves for protection category II with a minimum cut resistance of 2.



### Hearing Protection

During the mechanical fabrication of fibre cement boards the sound level can exceed 80dBA. Please ensure that you wear adequate ear protection at all times when working with these materials.



### Dust Protection

As with the manufacturing of most fibre cement based boards, the process can produce dust especially during the fabrication of the sheets. For sufficient respiratory protection, a suitable dust mask should be worn.



### Protective Goggles

As with the manufacturing of most fibre cement based boards, tightly sealed eye protection must be always worn.

## 4.1 Fabrication: Panel Cutting

*Ornimat, Decoboard, Puro Plus and Colormat*

Note:

- *Computer operated automatic cutting equipment is recommended for fabricating Wienerberger SVK Facade panels.*



Continuous Diamond Blade

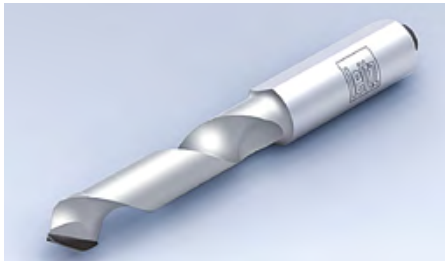


Segmented Diamond Blade

- 1) The correct speed for cutting fibre cement panels is between 60 and 80 m/s, (any speed adjustment would be based upon the board thickness and density). Wienerberger SVK facade panels are manufactured to a high density, therefore the rotation speed of the cutting blades should be between 2000 & 3000 rpm.
- 2) The “feed in” speed of the panels is dependent upon the number of sheets to be cut at any one time. To cut a single 8mm thick fibre cement sheet the feed in speed would be 2-6m/min; the blade should extend approximately 10mm above the sheet surface if multiple cutting is undertaken, this will allow the blade to air cool.
- 3) A “segmented” blade is more efficient when processing and cutting a number of sheets at the same time.
- 4) Limited site cutting can be carried out using a suitable hand held circular saw fitted with a dust extraction system. A large sturdy work bench that can support a full board is also required, this should also be fitted with a suitable guide rail.

## 4.1 Fabrication: Panel Drilling

*Ornimat, Decoboard, Puro Plus and Colormat*



Facade drill piece 8, 8.5 & 10mm

- 1) Always use a drill bit that is specifically designed for drilling fibre cement materials e.g. diamond or tungsten carbide tipped.
- 2) Fibre cement panels are drilled DRY and no coolant is required.
- 3) The panel should be fully supported at the point where the drill hole is to be placed.
- 4) Never use a hammer drill setting to drill holes in a fibre cement panel.
- 5) Always wear the correct Personal Protective Equipment (PPE). The machine used for cutting should be fitted with a suitable dust extraction system.

## 4.1 Fabrication: Circular & Shaped Apertures

*Ornimat, Decoboard, Puro Plus and Colormat*

- 1) Always use a powered hand tool that is specifically designed for cutting fibre cement materials.
- 2) Use diamond or tungsten carbide hole cutter for circular holes and a carbide coated jigsaw blade for shaped apertures.
- 3) Fibre cement panels are cut DRY and no coolant is required.
- 4) The panel should be fully supported at the point where the hole or aperture is to be placed.
- 5) Always wear the correct Personal Protective Equipment (PPE). The machine used for cutting should be fitted with a suitable dust extraction system.

## 4.2 Transportation, Handling & Storage: General Guidance

*Ornimat, Decoboard, Puro Plus and Colormat.*

Note:

- *Ornimat panels are supplied cut to size with the decorative finishes packed face to face. When re stacking the panels this should always be carried out in a similar way and always using the protective foil interlayer.*
- *Colormat adhesive labels, tape, or similar materials should never be applied to the decorative surface. Due to the presence of the hydrophobing agent used, random patterning may occur on the panel surface were the adhesive residue is present*
- *Decoboard & Puro Plus boards are supplied with and adhesive protective foil applied to the decorative surface.*

### **The following instructions are important:**

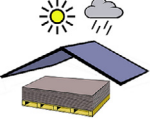
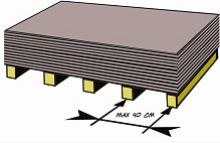
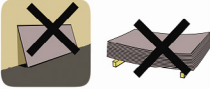
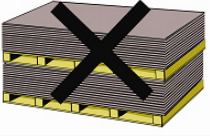
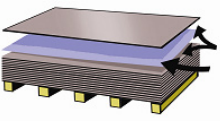
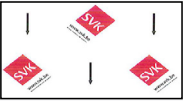
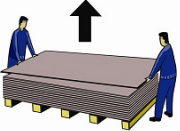
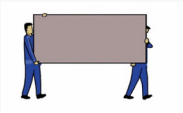

- *Avoid prolonged exposure to high temperatures as this will affect the foil.*
- *For installation with rivet or torx screw fixing first remove the protective foil.*
- *For a mechanical secret fix installation, remove the foil after the panel installation is complete.*
- *Avoid leaving the foil on installed panels for a prolonged period.*
- *Exposure to inclement weather conditions may delaminate the foil leading to water penetration and surface defects and stains.*
- *Puro Plus panels should never be stored outside and never in humid locations nor areas with high moisture. These panels should never be stored individually if possible. If stored separately then a clean weight should be placed on top to keep panel flat.*

### **The following instructions are important:**

- *The panels should be installed as soon possible after delivery.*
- *After delivery to site they should be stored indoors and fully protected from the weather and site contamination.*
- *The delivery packaging should only be opened as and when the panel installation takes place.*
- *Puro Plus panels due to their properties should never be exposed directly to condensation, water, dust or any other pollutant.*
- *Always protect the decorative surface from adhesives, silicone, and polyurethane foam, as these materials can effect the surface of the boards.*
- *Generally limit the time that the boards are stored either in a suitable warehouse or on site, and always protect the panels from becoming wet and dirty.*
- *If exposure to inclement weather is unavoidable use a suitable watertight breathable canvas cover to cover the panels, avoid disturbing the packaging and in the event that they do become wet, dry them out as soon as possible.*
- *Always transport the Wienerberger SVK boards in accordance with the UK legislation for mobile handling equipment, cranes, and heavy goods vehicle regulations.*
- *Limit the storage period on site to time needed and keep packaging sealed until needed for installation or fabrication. If fabricated the panels should be repackaged to the same standard received before being delivered to site.*

## 4.2 Transportation, Handling & Storage

Ornimat, Decoboard, Puro Plus and Colormat

	Ornimat	Decoboard	Puro Plus	Colormat
	Transport under watertight canvas & store indoors	Transport under watertight canvas & store indoors	Transport under watertight canvas & store indoors	Transport under watertight canvas & store indoors
	Store on a firm, level surface. Avoid uneven soft surface or storage on top of other materials	Store on a firm, level surface. Avoid uneven soft surface or storage on top of other materials	Store on a firm, level surface. Avoid uneven soft surface or storage on top of other materials	Store on a firm, level surface. Avoid uneven soft surface or storage on top of other materials
	Store horizontally only & fully supported at 400mm centres	Store horizontally only & fully supported at 400mm centres	Store horizontally only & fully supported at 400mm centres	Store horizontally & fully supported at 400mm centres
	Do not stack pallets on each other	3 Pallets high only	3 Pallets high only	3 Pallets high only
	Finished faces are packed facing each other with a protective foil placed between. If restacking panels replace the foil between the panels.	Panel is delivered with a protective adhesive foil applied to the finished surface.	Panel is delivered with a protective adhesive foil applied to the finished surface	Finished faces are packed facing each other with a protective foil placed between. If restacking panels replace the foil between the panels.
	Not applicable	Surface texture direction is as indicated on the protective foil for Decoboard Pure	Surface texture direction is as indicated on the protective foil	Surface texture direction is as indicated on the panel.
	Always vertically lift with 2 persons, do not drag the panel over the lower panel.	Always vertically lift with 2 persons, do not drag the panel over the lower panel.	Always vertically lift with 2 persons, do not drag the panel over the lower panel.	Always vertically lift with 2 persons, do not drag the panel over the lower panel.
	Always carry individual panels vertically.	Always carry individual panels vertically.	Always carry individual panels vertically.	Always carry individual panels vertically.
	Wear woolen gloves to protect the panels from stains, fingermarks, and grease. Do not stick labels or tape to the decorative face.	Wear woolen gloves to protect the panels from stains, fingermarks, and grease. Do not stick labels or tape to the decorative face.	Wear woolen gloves to protect the panels from stains, fingermarks, and grease. Do not stick labels or tape to the decorative face.	Wear woolen gloves to protect the panels from stains, fingermarks, and grease. Do not stick labels or tape to the decorative face.



## 4.3 Cleaning & Maintenance: Product Specific

*Ornimat, Decoboard, Puro Plus and Colormat*

### General Maintenance Guidelines

- *Regular cleaning of the facade panels is recommended so the appearance and performance of the panels is maintained for the duration of their service life.*
- *Please refer to Wienerberger SVK Facade Panel BBA Certificate 22/5993 Section 9.*
- *When considering the design of the building it is prudent to avoid any contact between corrodible materials (e.g. copper, zinc and lead) and the panels. Also the drainage of waste water down the face of the panels from parapets, projecting pipes, overhangs etc. should be avoided if at all possible. This will help to reduce the level of surface contamination on the facade.*

### Coated Panels - Ornimat & Decoboard

- *Due to their low porosity, Ornimat and Decoboard panels are less susceptible to pollution affects. For standard cleaning we recommend the use of clean warm water, and for more deep cleaning use a neutral, non abrasive diluted all-purpose foaming cleaner.*
- *Always try a small panel area first before proceeding further and never use soaps containing linseed oil or ordinary household soap.*
- *The following detailed guidance applies:-  
Clean with a sponge, or a soft cloth, for larger areas a soft brush can be used for soap application, (take care that the brush handle does not scratch the panel face).*
- *Avoid a hard scrubbing action as this will have a “polishing” effect on the panel and change the appearance.*
- *Do not let the soap solution dry out and always amply rinse down the area with clean water.*
- *To rinse down the panels the water can be “vapourised” using an un pressurised container and a large broad angled spray head.*

### Un-Coated Panels - Puro Plus & Colormat

- *For standard panel cleaning the following detailed guidance applies:-*
- *Rinse down the panels with “vapourised” water using an un pressurised container and a large broad angled spray head.*
- *Avoid the use of any cleaners, soaps or detergents.*

### Graffiti Protection

- *This specialist coating should always be applied by an experienced company, in a factory environment and before the panels are delivered to site.*
- *Wienerberger SVK Facade panels all have different decorative surface treatments on their exterior face. It is recommended that a sample of the board should always be test treated before proceeding further. This will indicate if there is going to be a significant visual change to the board appearance.*

### Stain Removal

- *Please contact our technical department at [WBUKFACADES@wienerberger.com](mailto:WBUKFACADES@wienerberger.com) for assistance with severe and stubborn staining.*

## 4.4 Terms of Use

*Ornimat, Decoboard, Puro Plus and Colormat*

### Terms of Use Wienerberger SVK- Guarantee

- *The Wienerberger SVK Facade panels must always be used in accordance with our published recommendations.*
- *Due care must always be taken when handling, transporting, fabricating and installing the panels.*
- *The facade panels must only be used as a decorative outer layer in a rainscreen facade system.*
- *The panels must not be changed, tampered with or modified in any way, and no other fittings, objects or items should be secured to the panels.*
- *The panels should be regularly inspected, cleaned and maintained for the duration of their service life.*
- *For assistance and information on the warranty and guarantee provided by Wienerberger SVK please contact the technical department at [WBUKFACADES@wienerberger.com](mailto:WBUKFACADES@wienerberger.com)*

The designs and/or information in respect of the SVK fibre cement facade panels (the “SVK Information”) are provided to you for general information purposes only and to demonstrate an example use of the SVK fibre cement facade panels.

The SVK Information is subject to change without notice and whilst it has been prepared with reasonable precaution and in good faith, no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted, by Wienerberger in relation to the adequacy, accuracy, reasonableness or completeness of the SVK Information or the use (or incorrect use) of the SVK Information. All and any such responsibility and liability (whether in contract, tort (including negligence), misrepresentation, under any statute or otherwise) is expressly excluded.

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# Wienerberger

## Wall Solutions

 **Terca**

 **Porotherm**

 **Corium**

 **SVK**

## Roof Solutions

 **Sandtoft**

 **Koramic**

**KEYMER**

## Landscaping Solutions

 **Penter**

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