

CONCEALED FASTENING WITH CAPS
NATURCLAD, NATURSOFFIT-W, NATURHARDPANEL-W

PARKLEX PRODEMA

How to install PARKLEX PRODEMA using concealed fastening with caps

NATURCLAD-W, NATURCLAD-B, NATURSOFFIT-W and NATURHARDPANEL-W panels can be installed by using concealed fastening with caps.

This installation system is valid for installing on facades, exterior soffits or interior walls and ceilings.

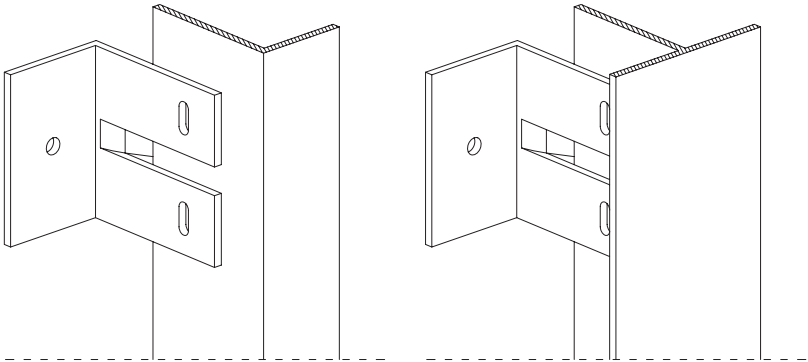
PARKLEX PRODEMA offers caps in the same finish as the cladding, soffit and interior panels, for concealed fastening using caps measuring 14 mm (9/16”) in diameter. The panels are mounted on vertical channels to create a ventilated air chamber behind the panels. In the event that the wall is not perfectly plumb, wall brackets or shims are used to adjust the depth of the channel installation.

Panel thicknesses:

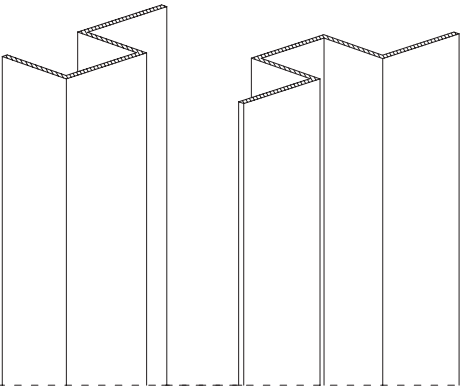
	6mm	8mm	10mm	12mm	14mm	16mm	18mm	20mm	22mm
NATURCLAD-W			√	√					
NATURCLAD-B			√	√					
NATURSOFFIT-W			√	√					
NATURHARDPANEL-W			√	√					

Subframe:

Aluminium Ls, T and wall brackets



Aluminium Js and Hats





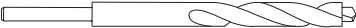
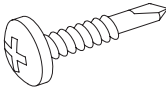
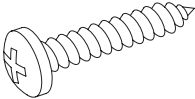
Panel dimensions:

2400 x 1220mm (8’ x 4’)
2700 x 1220 mm (8.86’ x 4’) *upon request*
2200 x 1220 mm (86,6” x 4’) *Chestnut, Boreal, Coffee*

Panel layout:

	HORIZONTAL	VERTICAL
NATURCLAD-W	√	√
NATURCLAD-B	√	√
NATURSOFFIT-W	√	√
NATURHARDPANEL-W	√	√

System Components:

TYPES OF FASTENERS Installation accessories for Concealed Fastening with Caps	
Fixing	Recommended installation tools
NATURCLAD made cap (Ø 14,25) 	  Bit for Floating Points Bit for Fixing Points
DIN 7504N M5,5/L32 mm screw 	
DIN 7505B M5,5/L30 mm screw 	

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Assembly instructions:

The ventilated facade has several advantages over a conventional facade:

- Permeability: Moving air difuses water vapour from the inside out and facilitates the ‘breathing’ of the facade, preventing condensation behind the panels.
- Water protection: Moving air provides protection from the elements, because it avoids water filtering the building.
- Thermal insulation: The load-bearing frame is insulated from the exterior subframe, eliminating thermal bridges. In this manner, temperature fluctuations are reduced in the interior, leading to energy savings.
- Solar protection: Thermal confort is improved inside the building by preventing overheating in the summer, as it facilitates ‘breathing’ of the facade. This reduces the amount of thermal energy that reaches the inside of the building. The internal structure is protected from direct radiation and from the elements
- Acoustic protection: The panels also act as a barrier for acoustic waves reducing the amount of noise coming from the outside, although it doesn’t provide acoustic insulation properties.

Ventilation behind the panel is required.

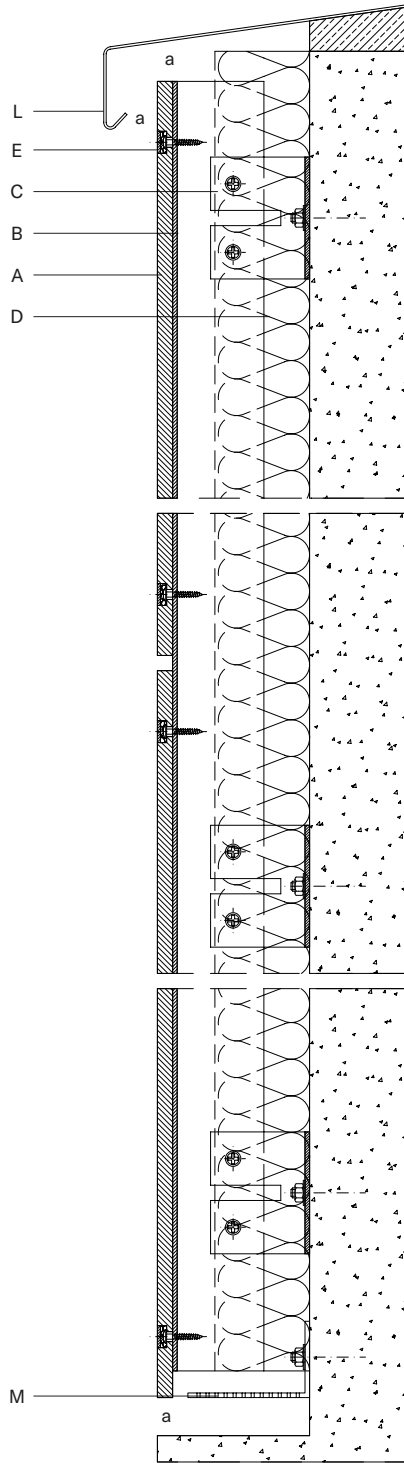
For the installation of panels in ventilated facade mode, the panels are installed on vertical channels, creating an uninterrupted flow of air in the rear part of the panel. Cladding panels must be installed as a ventilated facade; therefore, they must be separated from the wall with channels, which are installed vertically, forming a chamber with a space of $\geq 20\text{ mm}$ ($3/4''$), except in those countries with specific technical code requirements. In the event that some type of insulation is installed, a double-profile subframe or a single-profile subframe with adjustable supporting elements must be installed, ensuring that the chamber is maintained. To permit air circulation in the ventilated chamber, the air intake and output must be correctly proportioned.

Head ventilation:

The ventilation at the head of the chamber must be $\geq 20\text{ mm}$ ($3/4''$). This ventilation space must be left whenever there is an interruption in the face of the cladding panels.

Base ventilation:

The ventilation at the base of the chamber must be $\geq 20\text{ mm}$ ($3/4''$). This ventilation space must be left whenever there is a new base i.e. if the cladding panels are interrupted by windows or other elements.



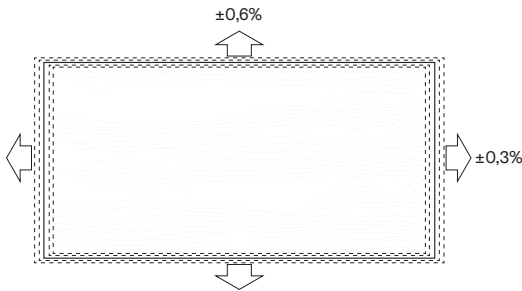
- A. Cladding panel
- B. Vertical metal profile
- C. Wall bracket
- D. Insulation
- E. Screw
- L. Metal sheet
- M. Screen

a $\geq 20\text{ mm}$ ($3/4''$) (except for specific code requirements)

Dimensional Stability:

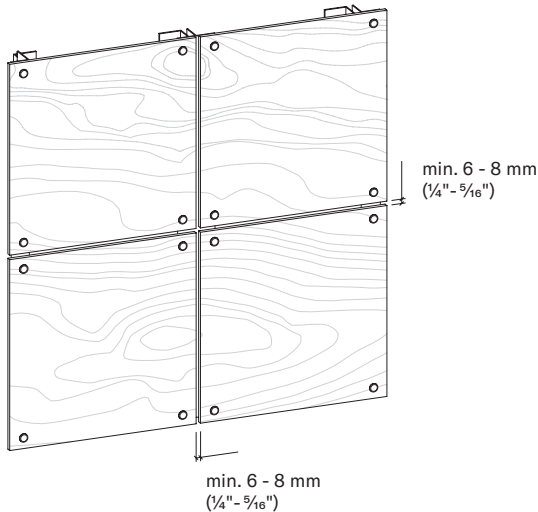
It must be kept in mind that the exterior panels will be exposed to changing seasons over the years, and they are composed of natural wood. Given that wood is a living material which suffers dimensional variations due to changes in humidity and temperature, it is important that the fasteners used are the indicated by PARKLEX PRODEMA, allowing the panels to move and not blocking their expansion and contraction.

All our cladding panels are resistant to vapor, water, snow and ice. However, we do not recommend submerging panels permanently or for extended periods of time.



Expansion Joints:

It is necessary to leave expansion joints around the perimeter of all panels to ensure they can absorb any expansion movements. The thickness of these joints depends on the panel dimensions and the facade design. As an example, for panels measuring 2440x1220 mm (4'x8'), these joints must be at least 6-8 mm ($1/4''$ - $5/16''$). It is recommended not to seal the joints with flexible materials, as this may lead to an accumulation of dirt around the edges of the panels.



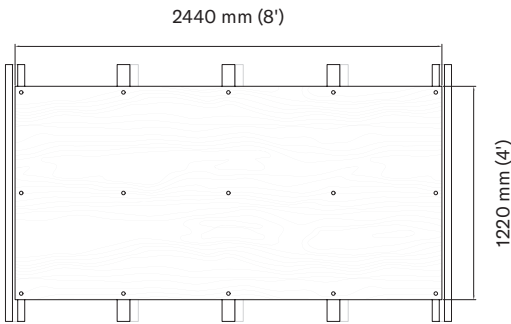
Minimum Support Points per Panel:

For fastening the screws on PARKLEX PRODEMA panels it is required to do predrilled holes.

The distances between supporting points depend on the panel thickness.

Distance between fasteners:

THICKNESS	MAXIMUM DISTANCE
10 mm ($3/8''$)	600 mm (24")
12 mm ($1/2''$)	800 mm (32")



Profile distribution for 10 mm ($3/8''$) Cladding.

Three supporting points are required in every direction:

Pieces between 350mm and 600mm (14"-24") need an additional intermediate point. Narrower pieces can be installed with only two supporting points. See table below.

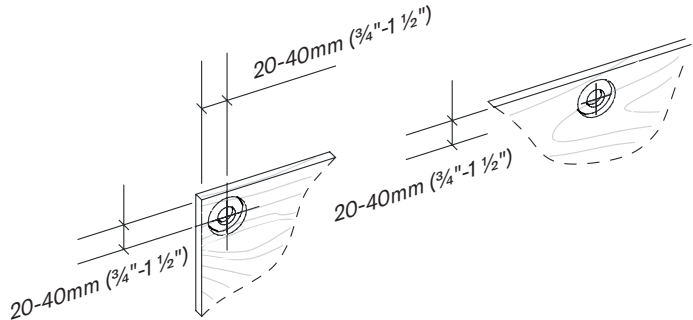
Exposed fixing	
2 support points	3 support points
100-350mm ($3/4''$ -14")	350-600mm (14"-24")
Exception	

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PARKLEX PRDOEMA supplies $\varnothing 14.25\text{mm}$ ($\frac{9}{16}$ "") and 2mm thick caps done with the same materials as the panels.

Distance from the edge of the panel to the panel perforation:

The distance between the center point of the screw and the panel edge must be between 20-40 mm ($\frac{3}{4}$ "-1 $\frac{1}{2}$ ").



Countersunk screws are not allowed:

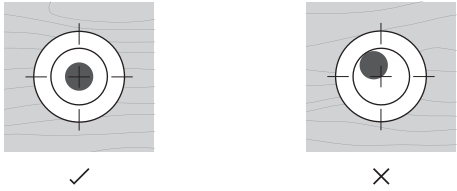
PARKLEX PRODEMA does not allow installing tongue and groove panels for exterior facades. This system is fastened using countersunk screws that prevent the panels from moving, which is insufficient for the proper functioning of the PARKLEX PRODEMA panels.

Diameter of holes for Screws:

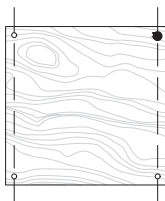
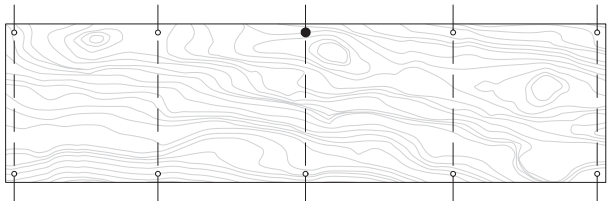
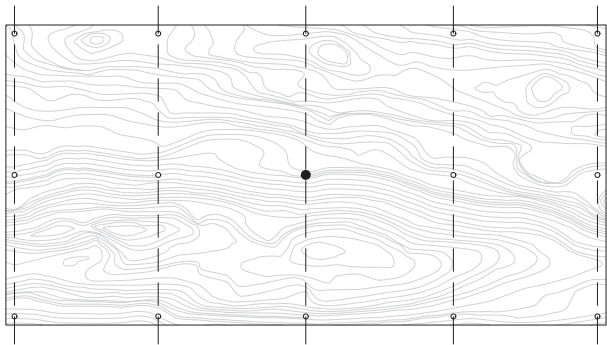
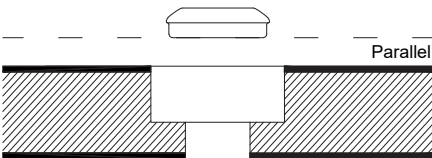
All mounting points for NATURCLAD panels must be floating with a diameter of at least 8,5mm (11/32"), except for one, which must be fixed with a diameter of at least 5,5mm (1/4"). This fixed point must be as close as possible to the center of the panel.

Position of the screw when installing the panel:

The screw must be centered in the hole to permit dimensional variations.



It is also very important for the fixing head to be completely parallel with the panel surface. Be sure that the head of the fastener doesn't make an excessive pressure on the panel and allows its movement due to dilatations. It is recommended the use of a depth locator during installation.



- Fixed Points
- Floating Points

Pre-drilling Panels:

In order to install the panels using this system it is necessary to pre-drill the panels as indicated below.

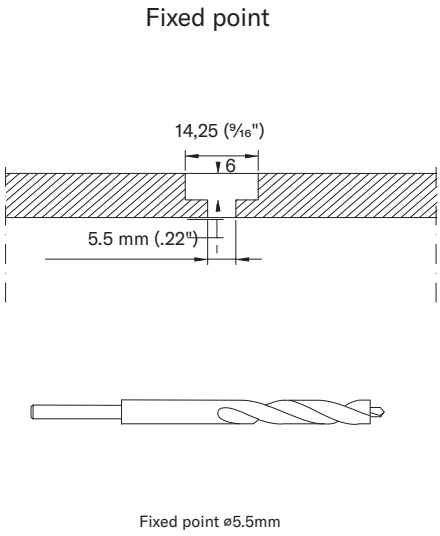
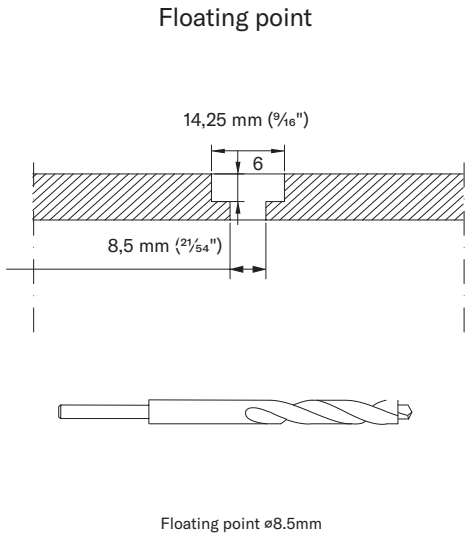
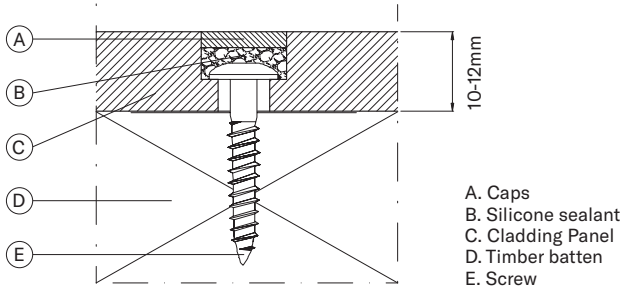
Fixed point and floating point:

PARKLEX PRODEMA offers specific bits for pre-drilling the cap fastening system.

Drill the panel with the double-diameter bit until reaching 6mm depth with the larger diameter, for both the fixed and floating points. The only difference is using a different drill.

Installing caps:

Once the panels have been fixed in place, the remaining cavity is filled with silicone sealant, leaving sufficient space to fit the 2 mm (1/13") caps.



Types of Fasteners:

SCREW
Metal profile
SX3-D12 (5.5 mm x 32 mm)
Torque of 5Nm (45 lb in)

SCREW
Timber batten
TWS D12 (4.8 mm x 38 mm)

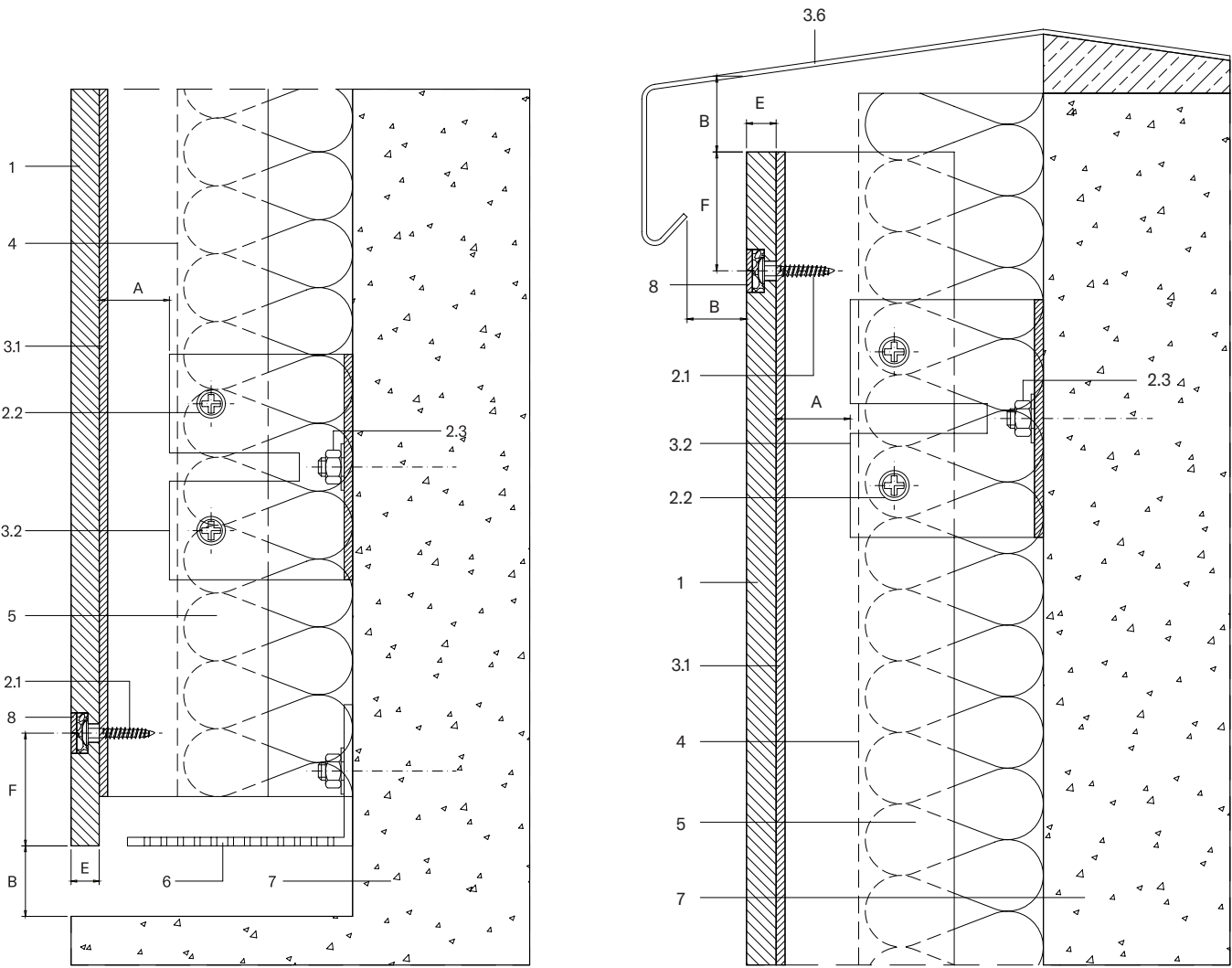
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Installation details:

PARKLEX PRODEMA has an extensive range of solutions showing all types of installation details to address corners, windows, crowns, etc. All of these details are available on the Technical Area of the PARKLEX PRODEMA website.

BASE DETAIL

HEAD DETAIL

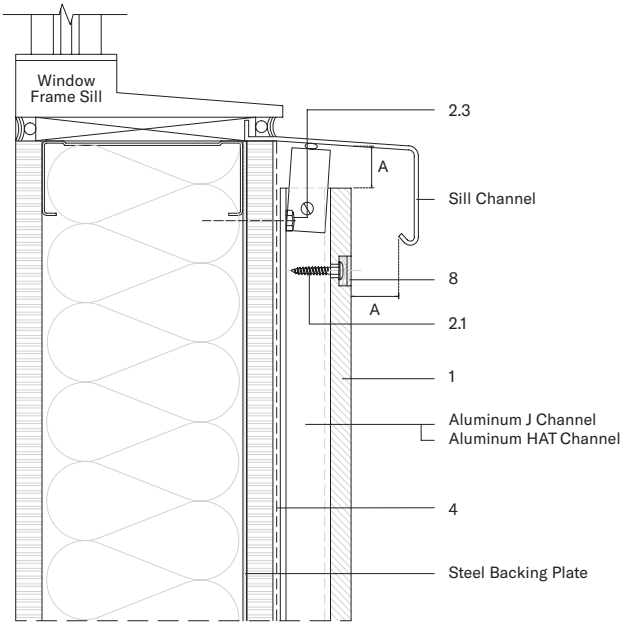


- 1. Cladding panel
- 2. Screws
- 2.1. Panel fastener metal
- 2.2. Channel fastener /by others
- 2.3. Wall fixing screw /by others
- 3. Profiles
- 3.1. Aluminium L profile (40x60)
- 3.2. Wall bracket
- 3.3. Aluminium T profile

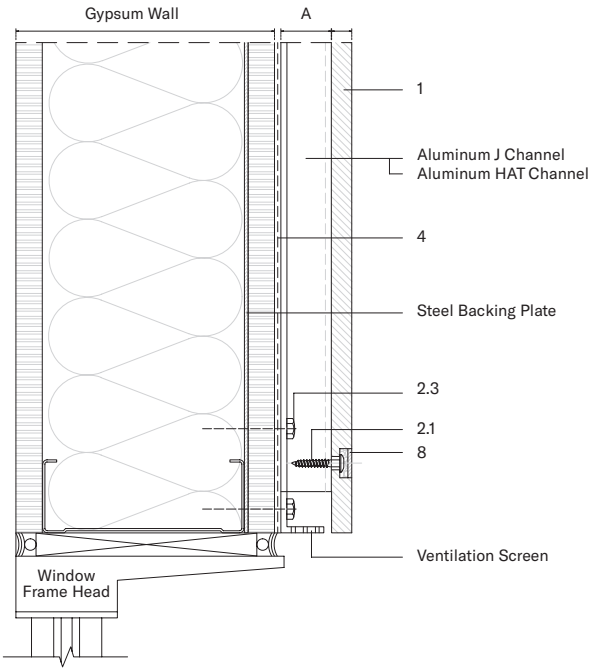
- 3.4. Jamb profile /by others
- 3.5. Sill profile /by others
- 3.6. Coronation profile /by others
- 4. Water resistant barrier /by others
- 5. Thermal insulation /by others
- 6. Ventilation screen /by others
- 7. Primary structure /by others
- 8. Plug

- A. Ventilation chamber $\geq 20\text{mm}$ ($\frac{3}{4}"$)
- B. Air circulation $\geq 20\text{mm}$ ($\frac{3}{4}"$)
- D. Expansion joint 6-10mm ($\frac{1}{4}"$ -)
- E. Panel thickness $\geq 8\text{mm}$ ($\frac{5}{16}"$)
- F. Distance from the screws to the panel edges 20-40mm ($\frac{3}{4}"$ - ")

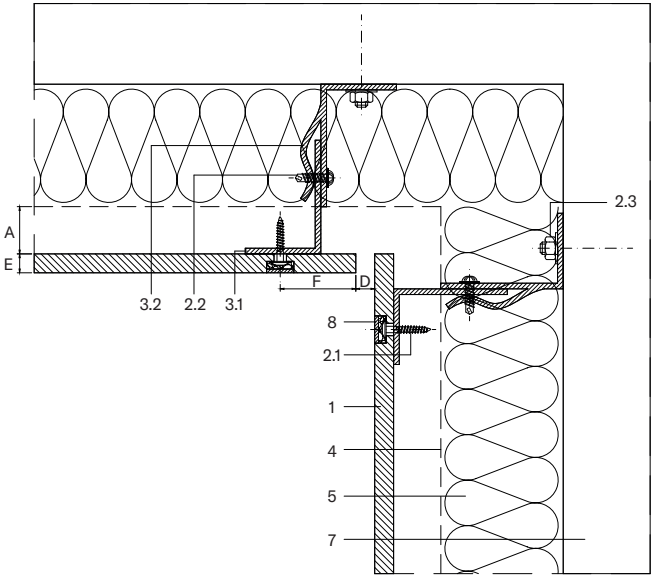
WINDOW SILL



WINDOW HEAD



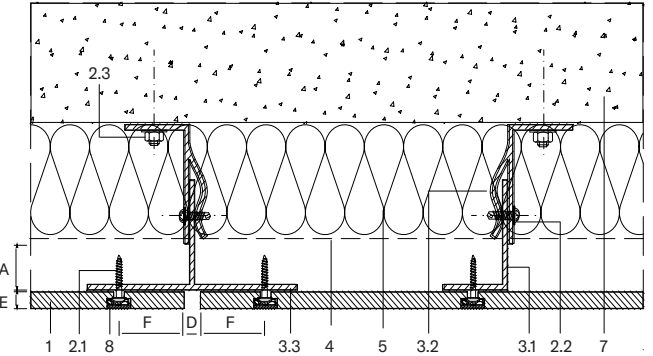
INSIDE CORNER



- 1. Cladding panel
- 2. Screws
- 2.1. Panel fastener metal
- 2.2. Channel fastener /by others
- 2.3. Wall fixing screw /by others
- 3. Profiles
- 3.1. Aluminium L profile (40x60)
- 3.2. Wall bracket
- 3.3. Aluminium T profile

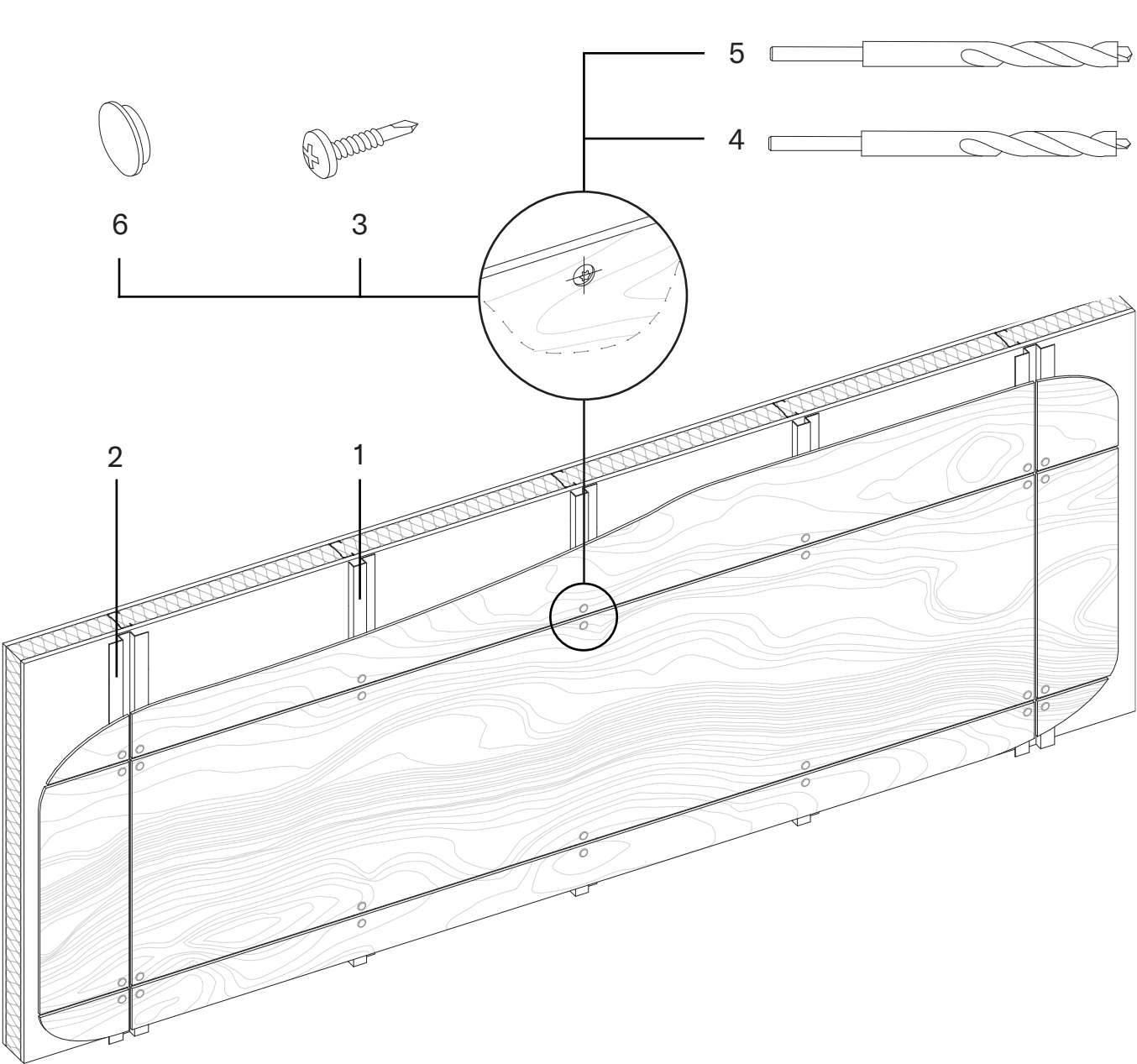
- 3.4. Jamb profile /by others
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- 3.6. Coronation profile /by others
- 4. Water resistant barrier /by others
- 5. Thermal insulation /by others
- 6. Ventilation screen /by others
- 7. Primary structure /by others
- 8. Plug

VERTICAL JOINT



- A. Ventilation chamber $\geq 20\text{mm}$ ($\frac{3}{4}"$)
- B. Air circulation $\geq 20\text{mm}$ ($\frac{3}{4}"$)
- D. Expansion joint 6-10mm ($\frac{1}{4}"$ -)
- E. Panel thickness $\geq 8\text{mm}$ ($\frac{5}{16}"$)
- F. Distance from the screws to the panel edges 20-40mm ($\frac{3}{4}"$ - ")

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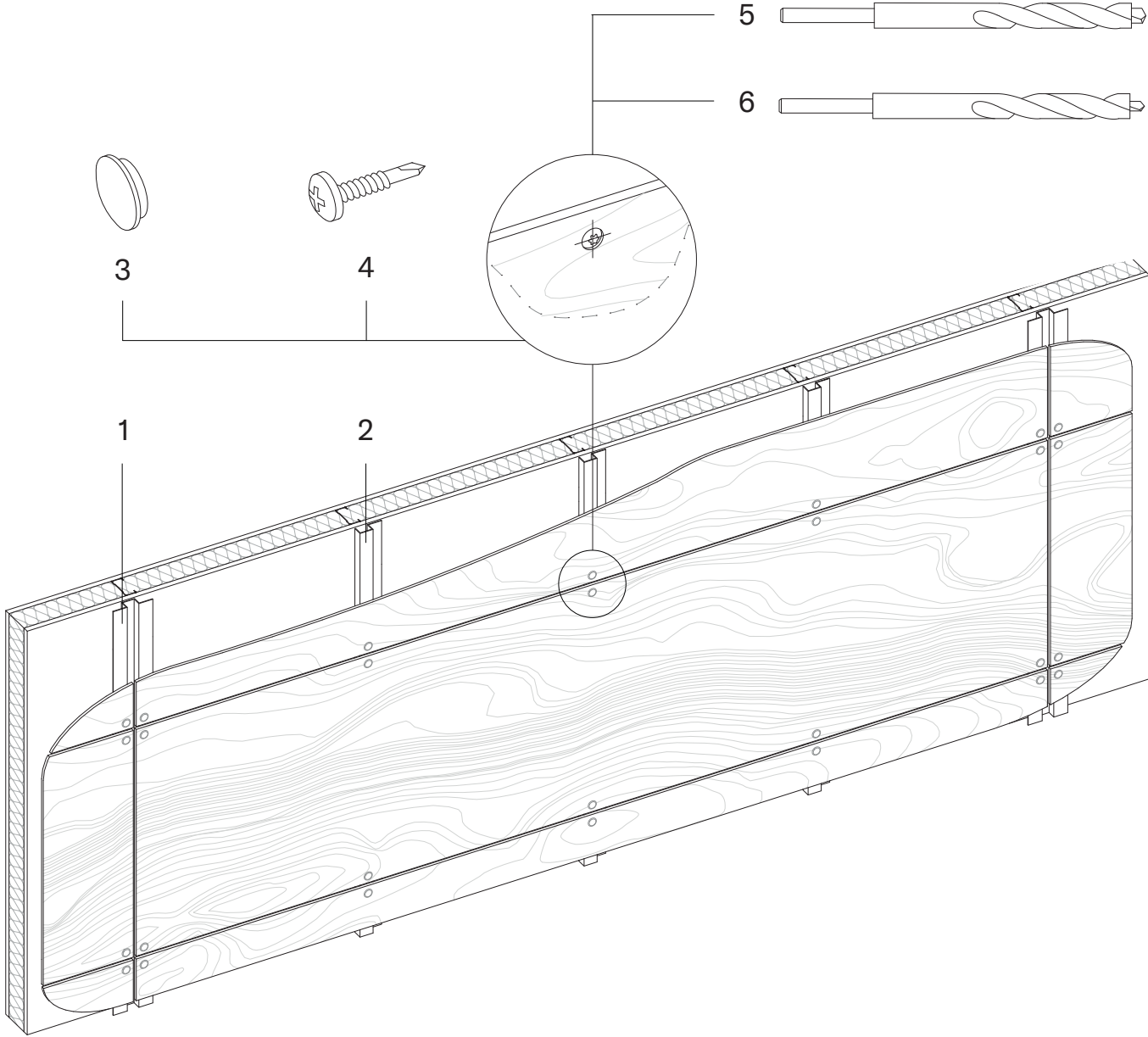


CONCEALED FASTENING WITH CAPS
JAYS AND HATS

- 1. J Profile: 10' Aluminum
- 2. Hat Profile: 10' Aluminium
- 3. Cap 14.25mm Diameter
- 4. DIN7504 Mill Screw - Metal Subframe
- 5. Fix Point Drilling Bit Cap System 14.5mm
- 6. Floating Point Drilling Bit Cap System 14.5mm
- 7. 1/16" x 3-1/2" Shimstack Shims for Channels

Available panel size: 2400 x 1220mm (8' x 4')
upon request 2700 x 1220 mm (8.86' x 4')
Chestnut, Boreal, Coffee 2200 x 1220 mm (86,6" x 4')

Panel thickness ≥ 10mm



Suitable for:
NATURHARDPANEL-W
NATURPANEL-W

CONCEALED FASTENING WITH CAPS FOR WALLS AND CEILINGS
METALLIC SUBFRAME

- 1. J Profile: 10' Aluminum
- 2. Hat Profile: 10' Aluminum
- 3. Cap 14.25mm diameter
- 4. DIN7504 Mill Screw - Metal Subframe
- 5. Fix Point Drilling Bit Cap System 14.5mm
- 6. Floating Point Drilling Bit Cap System 14.5mm

Available panel size: 2400 x 1220mm (8' x 4')
upon request 2700 x 1220 mm (8.86' x 4')
Chestnut, Boreal, Coffee 2200 x 1220 mm (86,6" x 4')

Panel thickness ≥ 10mm

