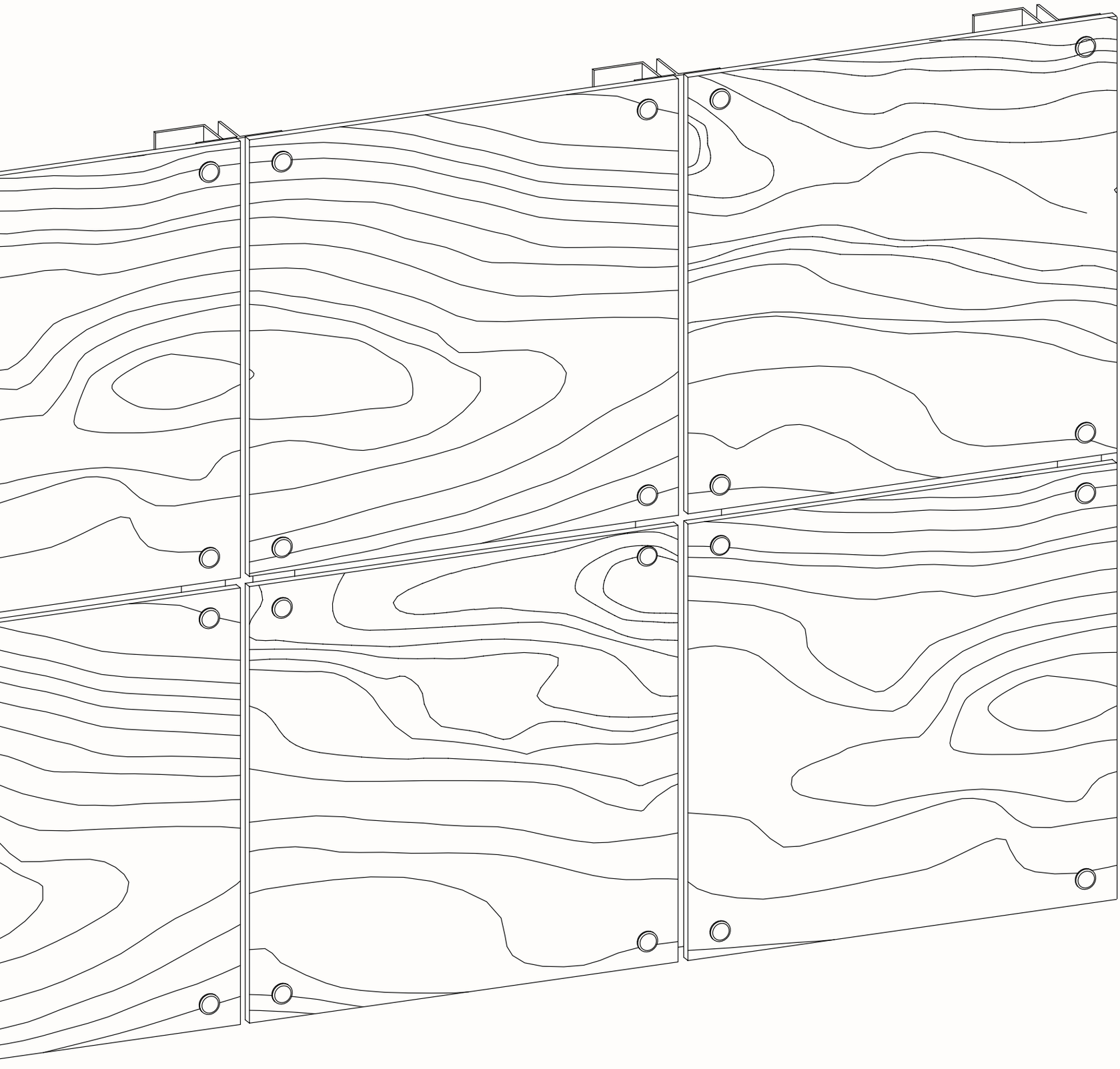

CLADDING, SOFFIT AND SIDING
TECHNICAL GUIDE

PARKLEX PRODEMA

Measures in inches are approximate. Real measurements are in mm.

The latest version of this technical guide will be updated and available for downloading and reading on the PARKLEX PRODEMA website.

www.parklexprodema.com

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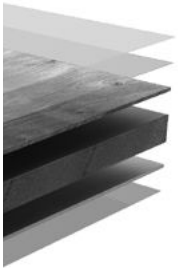
NATURCLAD, NATURSOFFIT and NATURSIDING are high-density timber faced panels, manufactured with a core of paper fibres treated with thermosetting resins. These are compressed at a high temperature and pressure and protected by an exterior coating highly resistant to UV radiation and weathering. These panels include a component introduced into the wood to provide outstanding life-cycle benefit in terms of colour stability, in all climatic conditions with no varnish need at all over the years. It also allows the development of new finishes to our range of timber veneers.

The entire PARKLEX PRODEMA range is manufactured with natural wood materials, with each panel reflecting unique characteristics such as changes in tone, colour and highlights, with grain and knots. This provides surfaces with an appearance that only products manufactured in natural wood can offer.

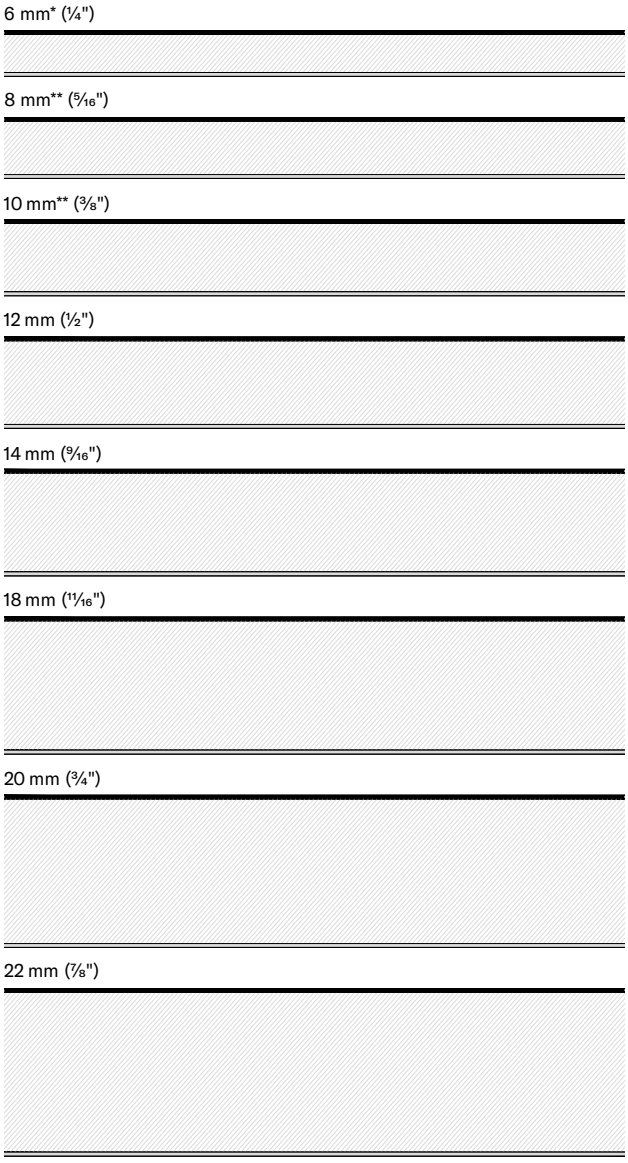


PVDF Antigraffiti overlay
Protection Overlays
Natural timber veneer
HPL core
Natural timber veneer
Balancing film

The required panel thickness is selected according to the element to be covered (walls, ceilings or façades). The thickness of a panel influences the distance between the supporting profiles; the greater the thickness, in general the greater the possible distance between the profiles.

This may vary, depending on the specific type of installation. The ideal thickness for external façades is 8 mm (5⁄16") or 10 mm (3⁄8").

The standard panel size is 2440 x 1220 mm (96"x 48"). For larger sizes, please contact PARKLEX PRODEMA.



* 6 only for special applications
** 8 and 10 mm are the most usual thicknesses

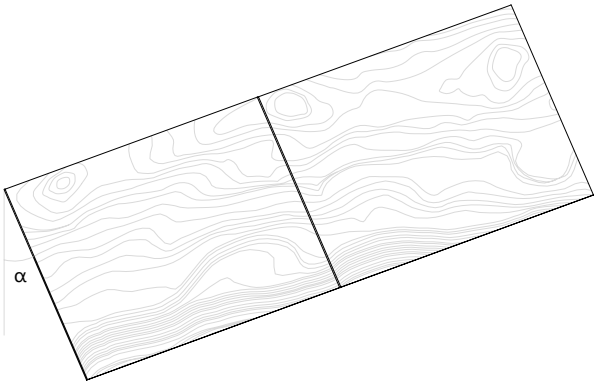
1.1. Construction Kit Certificates

PARKLEX PRODEMA products may be installed in both internal and external environments*. They are subject to constant wear from the sun, humidity and abrasion in extreme traffic areas, for this reason, a great deal of effort and investment in R+D is made, ensuring the durability and stability of PARKLEX PRODEMA coverings.

*Except for NATURSOFFIT, which can not be installed vertically and for which highly humid climates are not recommended.

Panels are subjected to rigorous testing both at our in-house R+D Department as well as independent, accredited laboratories throughout the world.
Our commitment to quality ensures the outstanding performance of our products. The panels comply with the standards laid down by international certification schemes, including DIT Plus (Spain), ATT (France), Zulassung (Germany), ETA (Europe), CCRR (USA), Agrément Certificate (United Kingdom), as well as other national schemes throughout the world.

PARKLEX PRODEMA offers a 10-year guarantee* on its products. If the panel's installation angle is greater than 30º as regards the vertical plane, we offer a 5-year guarantee due to the increased solar radiation and potential for deposit of water on the face of the panels.



Max. α for 10 years warranty ≤ 30º
If α > 30º = 5 years warranty
* General terms and conditions of the guarantee may be changed without prior warning.

1.2. Sustainability and Environmental Management

PARKLEX PRODEMA has had a long-standing commitment to the conservation of the environment and so we continually strive to develop initiatives to keep us at the forefront of sustainable practices. We have stayed true to this commitment and continue to contribute to our clients' environmental responsibilities and that of society in general.

PARKLEX PRODEMA products have environmental product declarations (ECOlabels) according to ISO14025 which recognizes environmental aspects of the products in their design phase, reducing the negative impacts during their lifecycle.

Since 2007, PARKLEX PRODEMA products also have the PEFC certificate, which guarantees that our products are manufactured with wood extracted from socially well managed and environmentally sustainable forests.

Certificate of Conformity of the Forestry Products Chain of Custody
PEFC / 14-35-000416-AEN
Environmental Product Declaration (EPD)
FSC / AEN-COC-000450

2.1. Material Receipt

Verify condition of package, in case of visible damage, leave details on the transporter's delivery note and in case of hidden damage, notify within 72 hours.

No claims will be accepted for transport damage if any of these instructions are not followed.

2.2. Handling and Storage

Handling:

Standard requirements should be kept in mind when handling NATURCLAD, NATURSOFFIT and NATURSIDING panels, especially with regards to:

– Dust removal
– Dust collection
– Fire precautions, etc.

Due to the possible presence of sharp edges, protective gloves should always be worn when handling the panels. Contact with dust from HPLs does not normally present a problem, although some people may be sensitive or even allergic to it.

Storage:

It is recommended to store the panels in their original packaging until the time of installation. In case of having to repackage any panel, this should be done under the same conditions as the original packaging.

Once the packaging has been opened, it is recommended to remove only those that will be installed immediately. The remaining panels must then be stored under the same conditions in the original packaging. The packaging includes protection films and additional panels at the bottom and at the top of the panels. In case the fabrication is done by others, it is necessary to reuse the same films to cover the material and the extra panels at the top and at the bottom of the panels properly strapped to keep the panels in the same conditions of the packaging.

Panels must be stored in horizontal position, never in a vertical or inclined position. It is essential to keep them from resting on objects or debris that prevent the panels from being completely horizontal. The distance between supports must be 600 mm (24").

To prevent deformation, store in clean, dry place, protected from rain and sun. Recommended storage conditions include a Temperature of 10-25°C (50-77ºF) and a Relative Humidity of 30-70 %. Climatic and humidity differences on both panel surfaces should be avoided. In cases involving the installation of panel fixings (fixing brackets for example), they must be stored face to face and rear side to rear side. Storage time should never exceed five months from the date indicated on the delivery invoice. These instructions are also valid for components.

2.3. Random Positioning of Panels

PARKLEX PRODEMA panels are manufactured with natural wood and therefore will exhibit variations in tone. Prior to fabrication and installation, it is recommended to mix panels to achieve an even distribution of tones throughout the facade.

The steps to follow are detailed below:

1 – Number all the pallets 1, 2, 3, etc. The pallets must be stored throughout the fabrication / installation process according the requirements described in section 2.2 (p. 9).

2 – Open pallet number 1 and remove two panels. Place these two panels on a flat pallet, with a maximum distance of 800 mm (32") between supports.

3 – Turn over the third panel from pallet number 1 without removing it from the pallet.

4 – Close pallet number 1 and store it respecting the packaging conditions in section 2.2 (p. 9).

5 – Repeat the same process with the other pallets, selecting them in a random order until 10 to 20 panels have been removed. For example, if there are 20 pallets, remove panels from numbers 1, 8, 13, 15 and 20, or other random order.

6 – Mix 10 to 20 panels that have been removed and install them within 2 to 3 hours from the time first panel was removed.

7 – Repeat the first six steps until all the panels have been installed.

Panel module size:

Depending on the module size selected for the façade, the aesthetic result in the majority of cases summarized as the following two options:

– Installation of slats
– Installation of full size panels or large modules

Natural wood will always show variations of tone from panel to panel. This variation of color between panels is more obvious when installing large size panels. However, the difference in color will be minimized when smaller size panels are used. This is most notable in Rustik and Pale colors. If you wish to see less color variance, a control sample must be sent with material order. We will then do our best to produce panels that are more homogeneous in color, although there will always be variations.

2.4. Fabrication

2.4.1. Cutting Recommendations

Panels need to be squared before cutting begins.

Cuts for exterior panels must be performed using tools with a material hardness of K-05 and K-01 (Tungsten carbide / Widia), be well sharpened and avoid over-heating at all times.

Saw:

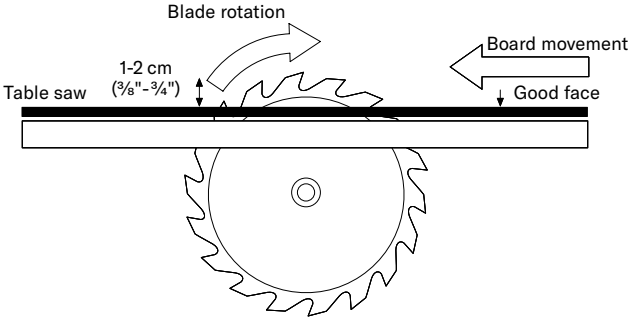
Circular saw blades for wood made from hard material (Widia tip) or blades designed for HPL (high pressure laminate) panels.

Parameters for saw blades according to tool type:

	Blade diameter	Teeth (z)	Speed (rpm)	Blade thickness	Types of tooth
Static circular saw	300 mm (12")	80	4000 - 6000	3.2 mm (⅛")	Flat, trapeze, alternate and all their combinations
	250 mm (10")				
Manual circular saw	190 mm (17.5")	30	3000 - 3500	2.2 mm (3⁄32")	

The saw blade must always begin cutting on the front side (face) of the panel. Using the table saw, the front face of the panel must be facing up and in case of the manual saw, the front face of the panel must be facing down.

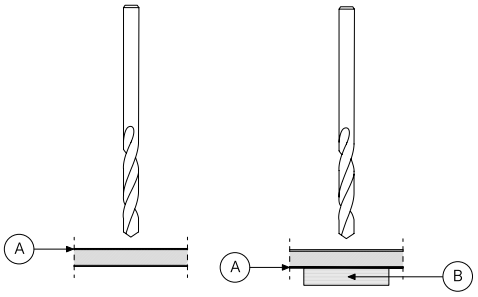
In order to obtain a clean cut, it is recommended to keep the height of the blade 1-2 cm (⅜"-¾") above the panel face.



After fabrication (cutting, drilling, sanding of edges, if needed), no other treatment for finishing or protecting is required. Rough edges may be smoothed out with sand paper.

2.4.2. Drilling Recommendations

The panels must be drilled using hard metal or “Widia” tools with a cutting angle greather than 100º. Supporting sheets (martyr boards) must be used under the panel in order to drill a clean hole, without ‘breakout’.



A. Good Face
B. Supporting Sheet

2.4.3. Machining Recommendations

– Water jet cut: This system is compatible with cladding panels, although it is advisable to carry out a preliminary test in order to adjust the parameters.

– Laser cut: This system is not recommended for cladding panels given that it blackens and burns the wood veneer.

– CNC: The cladding panel can be machined on CNC machining centers. The milling bits must be perfectly sharp, with the following recommendations:

Turning speed	16,000 rpm
Movement speed	4 m/min (13'/min)

3.1. General Concepts

3.1.1. Ventilated Façades

For the installation of panels in ventilated façade mode, the panels are installed on vertical profiles, creating an interrupted flow of air in the rear part of the panel.

Cladding panels must be installed as a ventilated façade; therefore, they must be separated from the wall with profiles, which are installed vertically, forming a chamber with a free ventilated space of ≥ 20 mm (¾"), except in those countries with specific technical documents. In the event that some type of insulation is installed, a double-profile structure or a single-profile structure 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 ≥ 20 mm (¾"). 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 ≥ 20 mm (¾"). 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.

The ventilated facade has several advantages over a conventional façade:

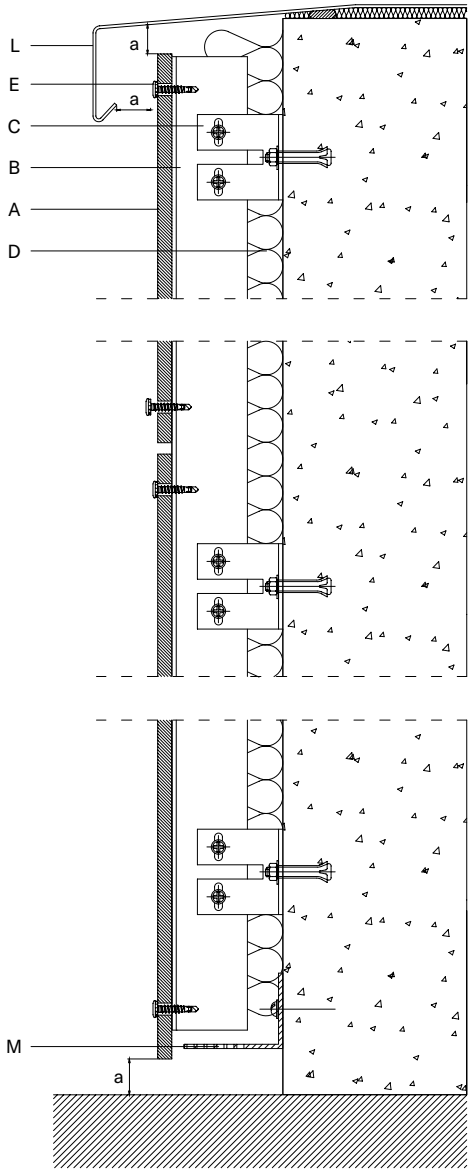
– Permeability: Moving air difuses water vapour from the inside out and facilitates the ‘breathing’ of the façade, preventing condensation behind the panels.

– Water protection: Moving air provides protection from the elements, because it avoids water filtering the building.

– Thermal insulation: The load-bearing structure is insulated from the exterior structure, 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 façade.
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

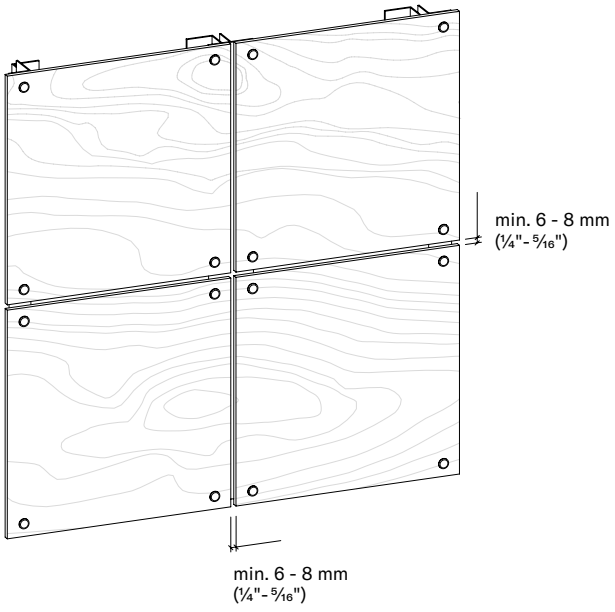
– Acoustic protection: The panels also act as a barrier for acoustic waves reducing the amount of noise coming from the outside, although it doesn't provide acoustic insulation properties.



A. Cladding panel
B. Vertical metal profile
C. Wall bracket
D. Insulation
E. Screw
L. Metal sheet
M. Screen
a ≥ 20 mm (¾") (except for specific technical documents)

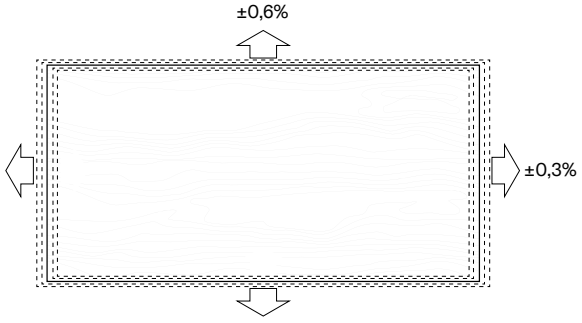
3.1.2. Expansion Joints

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 façade design. As an example, for panels measuring 2440x1220 mm (4'x8'), these joints must be at least 6-8 mm (¼"-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.



3.1.3. 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 fixings used are the indicated by PARKLEX PRODEMA, allowing the panels to move and not blocking their free 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.

3.1.4. Subframing Options:

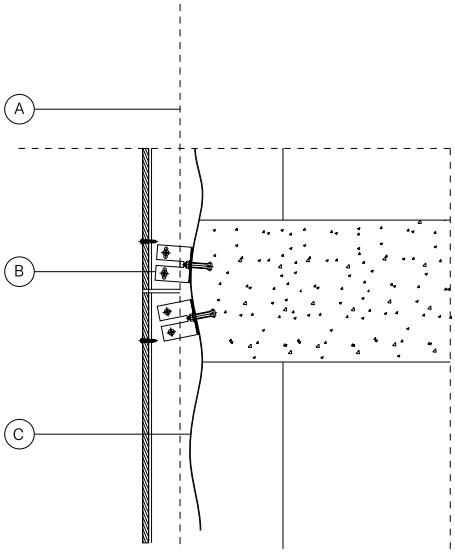
Cladding require a ventilated air cavity for their proper performance. The subframe used to create this air cavity must be installed vertically and fastened to the substrate with fastening elements compatible with the materials used.

The subframing system must comply with local wind-load and building code requirements and must be protected against corrosion, regardless of the material or type of installation.

– Metal subframe: If located in rainy or humid locations, it is preferable to use metal vertical profiles made from galvanized steel or aluminum. In areas that suffer obvious effects from the sea, stainless steel profiles must be used, or those made from an appropiate anodized aluminum. PARKLEX PRODEMA offers L and T, Jay and Hat cannels depending on the wall behind.

– Wood subframe: If the substructure is built from timber battens, they must be suitable treated. It is recommended to install PVC joints or closed-cell polyethylene foam over the exposed surfaces, as these protect, improve and extend their service life. This type of substructure may be used in dry areas, generally without frequent rainfall.

– Irregular subframe: it is not usual to have surface irregularities. In these cases, the use of profiles with brackets that allow for adjustment of the vertical alignment is recommended. The brackets are fixed to the profile with stainless steel self-tapping screws.

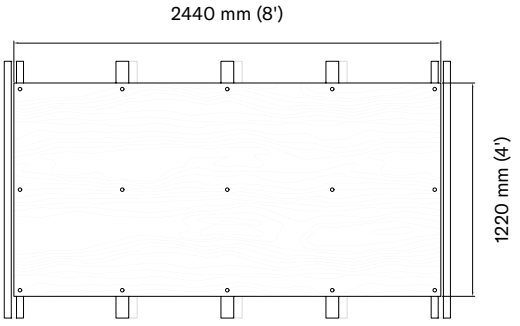


A. Line of reference
B. Bracket
C. Irregular wall face

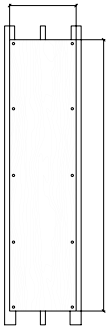
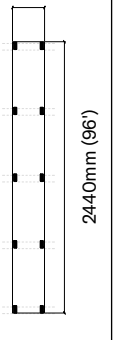
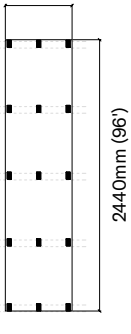
3.1.5. Minimum Support Points per Panel

Cladding panels must be fixed to at least three points of structural support*. The distances between support points depend on the mounting type and the thickness of the panel.

*See exceptions in the table below.



Profile distribution for 8-10 mm (5/16"- 3/8") Cladding.

Exposed fixing		Concealed fixing	
2 support points	3 support points	2 support points	3 support points
100-350mm (¾"-14")	350-600mm (14"-24")	150-400mm (6"-16")	350-600mm (16"-24")
			
Exception		Exception	

3.1.6. Tongue and Groove and Contersunk Screws

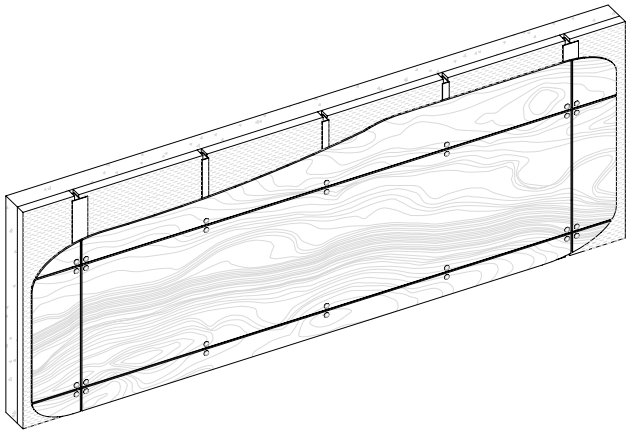
PARKLEX PRODEMA does not allow installing tongue and groove panels for exterior façades. This system is fastened using countersunk screws that prevent the panels from moving, which is insufficient for the proper functioning of the PARKLEX PRODEMA panels.

3.2. NATURCLAD

NATURCLAD panels can be installed by using any of the following installation systems.

3.2.1. Exposed Fastening with Screws or Rivets

Panels may be installed using visible mechanical fasteners, such as screws or rivets lacquered in a shade similar to the panel veneer. The panels are mounted on vertical profiles to create a ventilated chamber behind the panels. In the event that the wall is not perfectly vertically aligned, fixing brackets or slims are used to regulate the depth of the profile installation.



Distance between vertical profiles:

THICKNESS	MAXIMUM DISTANCE
8 mm (5⁄16"), 10 mm (3⁄8")	600 mm (24")
≥12 mm (1⁄2")	800 mm (32")

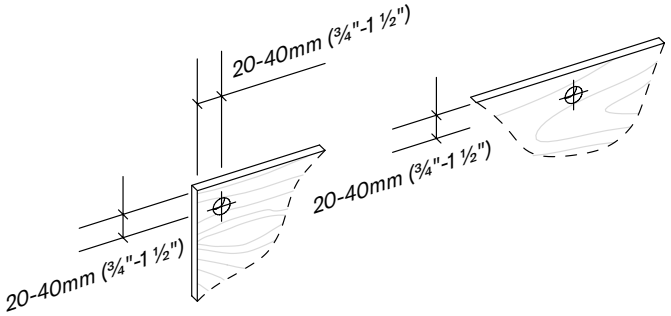
There must be at least 3 fastening points in each direction for every panel.

Distance between fasteners:

THICKNESS	MAXIMUM DISTANCE
8 mm (5⁄16"), 10 mm (3⁄8")	600 mm (24")
≥12 mm (1⁄2")	800 mm (32")

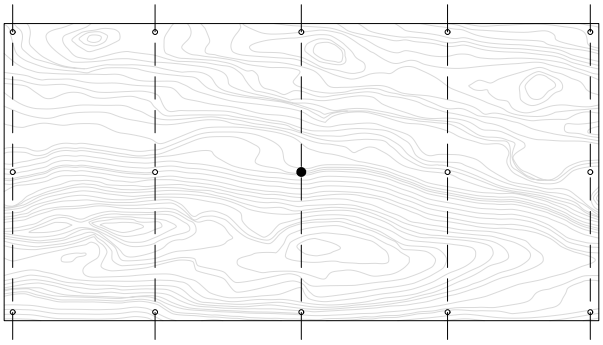
Distance from the edges:

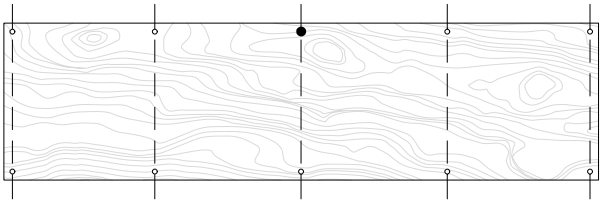
The distance between the center point of the screw/ rivet and the panel edge must be between 20-40 mm (¾"–1 ½").

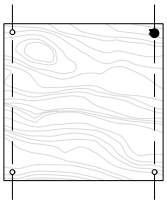


Diameter of holes for Screws or Rivets:

All mounting points for NATURCLAD panels must be floating (with a diameter of at least 3mm (⅛") larger than that of the screw or rivet), except for one, which must be fixed. This fixed point must be as close as possible to the center of the panel.





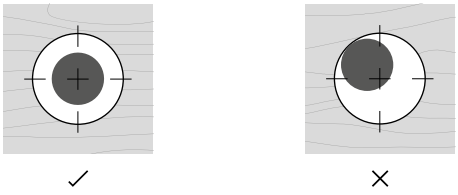


● Fixed Points

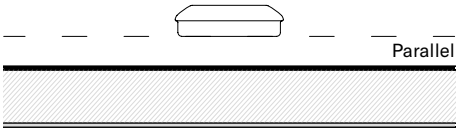
○ Floating Points

Position of the Screw or Rivet when installing the panel:

The screw / rivet 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 excesive pressure on the panel and allows its movement due to dilatations. It is recommended the use of a depth locator during installation.



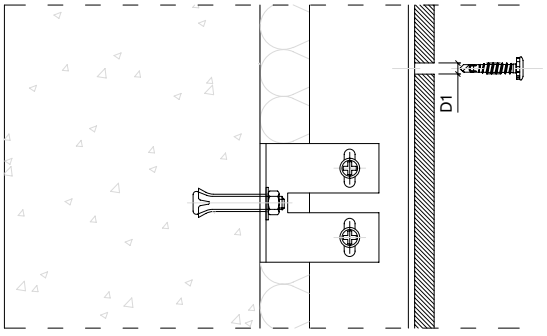
When using rivets for the facade installation, it is mandatory to use the specified centering seat and AP nozzle in order to allow a correct tolerance between the rivet and the panel. This accessories also avoid overclamping the rivets to the panel, which can lead to possible issues.

PARKLEX PRODEMA also recommends using either GESIPA Accubird PRO CAS, GESIPA Powerbird PRO CAS or GESIPA Accubird riveting guns to ensure a correct application.

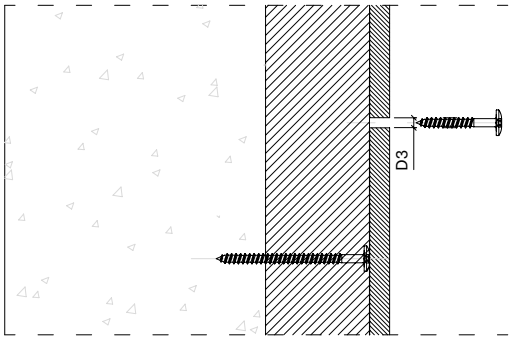
Types of Fasteners:

SCREW
Metal profile
SX3-D12 (5.5 mm x 32 mm), SX3-L12
Torque of 5Nm (45 lb in)

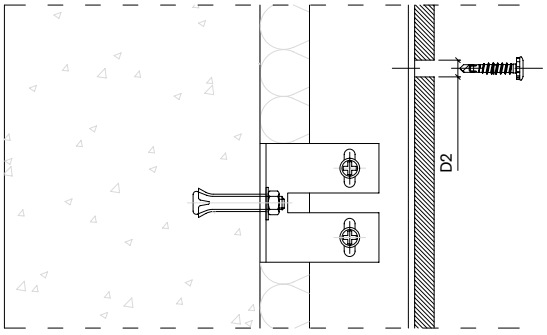
SCREW
Timber batten
TWS D12 (4.8 mm x 38 mm)



[Fixed point]

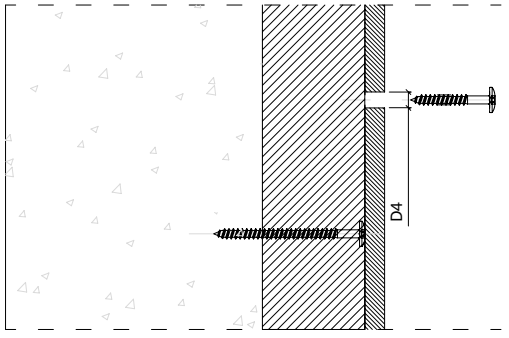


[Fixed point]



[Floating point]

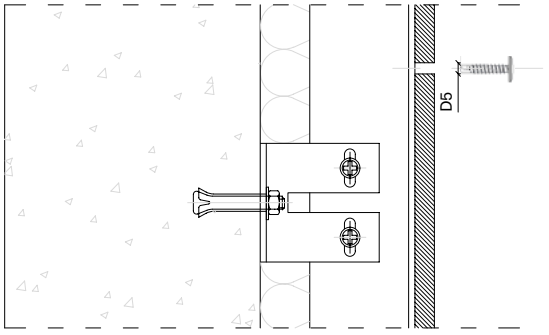
D1 - 5.5mm (¼")
D2 - 8.5mm (11/32")



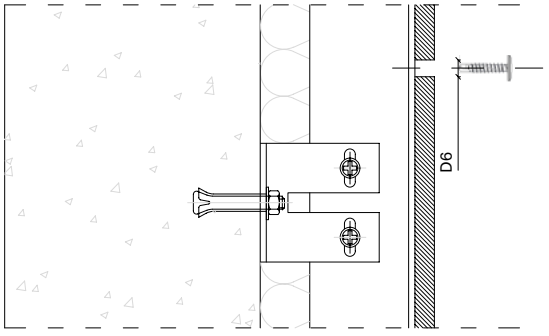
[Floating point]

D3 - 5mm (¼")
D4 - 8mm (11/32")

SCREW (for dry climates)
Metal profile
SX3-D16 (5.5 mm x 32 mm)
Torque of 5Nm (45 lb in)



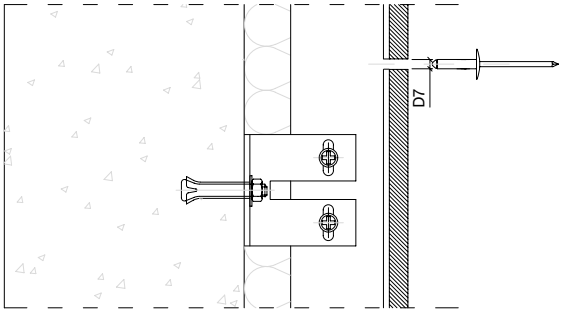
[Fixed point]



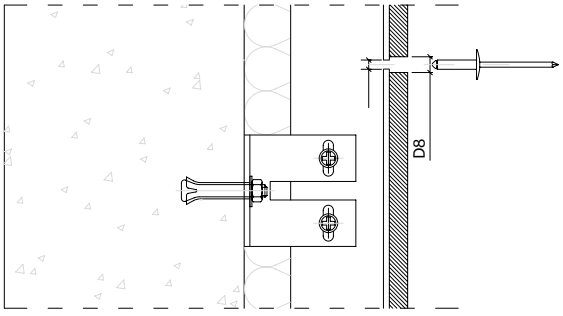
[Floating point]

D5 - 5.5 mm (¼")
D6 - 9.5 mm (⅜")

RIVET
Aluminum profile
AP16 (5 mm x 18 mm)



[Fixed point]



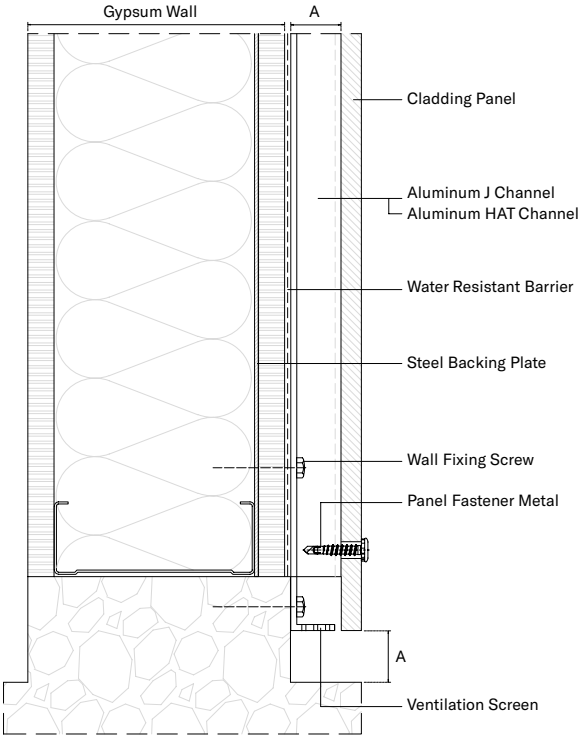
[Floating point]

D7 - 5.1 mm (¼")
D8 - 8.5 mm (11/32")

Installation details:

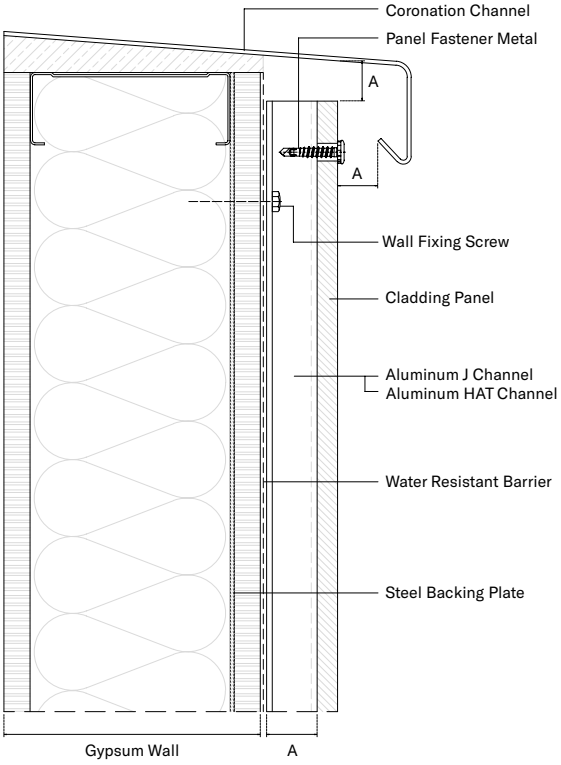
PARKLEX PRODEMA has an extensive range of solutions showing all types of installation details to address corners, windows, crowns, etc. All of these details are available on the Technical Area of the PARKLEX PRODEMA website.

BASE DETAIL



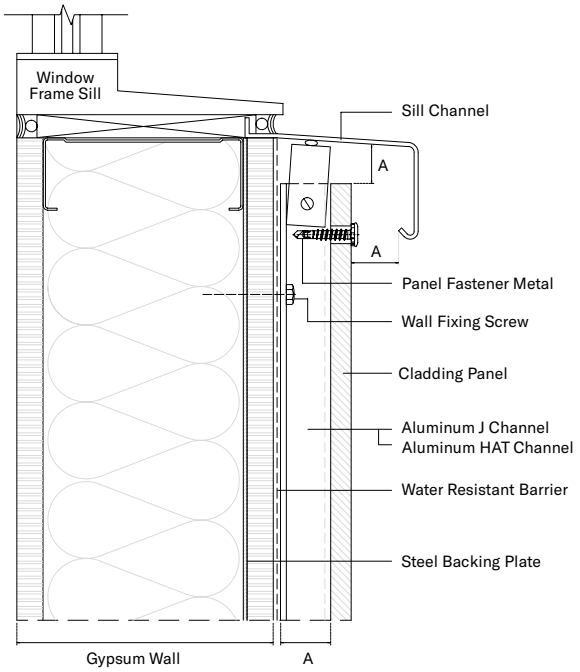
A > 20 mm (¾")

HEAD DETAIL



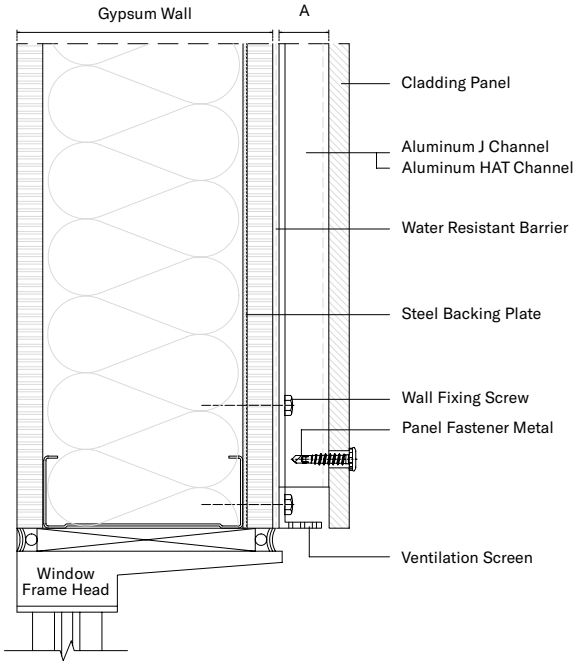
A > 20 mm (¾")

WINDOW SILL



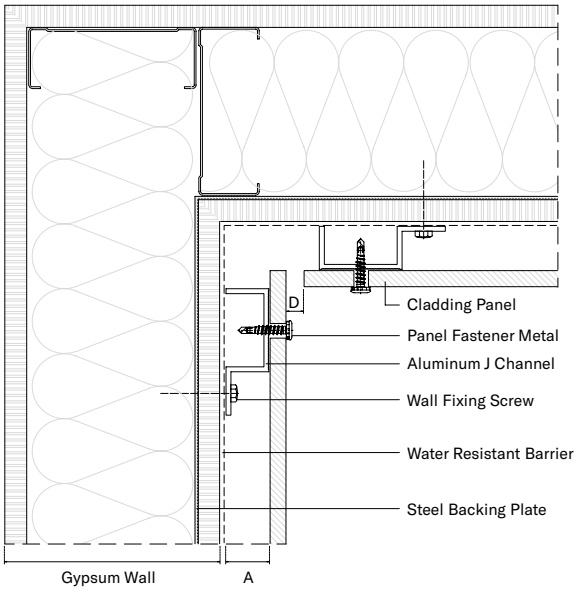
A > 20 mm (¾")

WINDOW HEAD



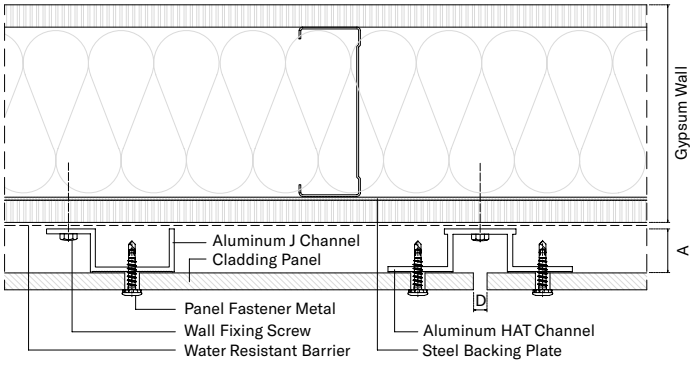
A > 20 mm (¾")

INSIDE CORNER



A > 20 mm (¾")
D > 6 mm (¼")

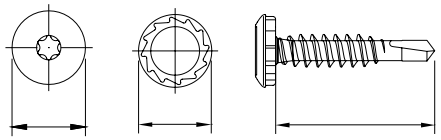
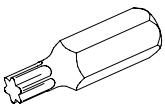
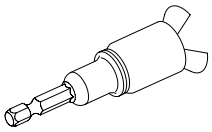
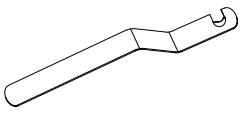
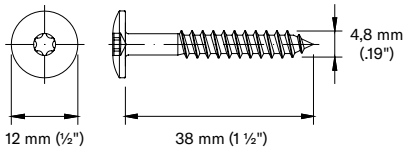
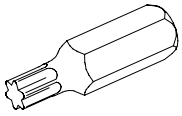
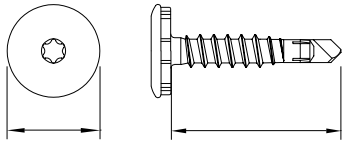
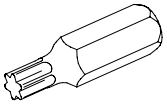
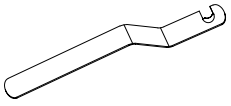
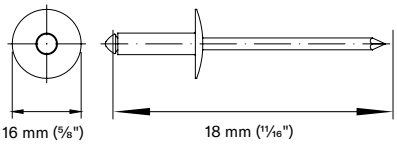
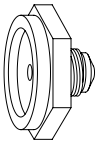
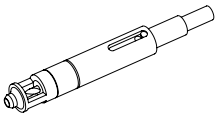
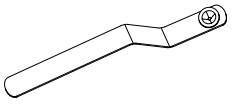
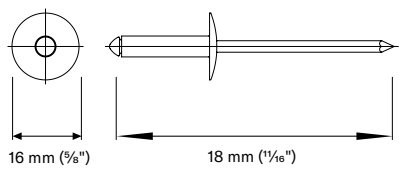
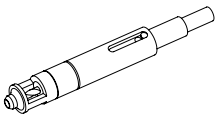
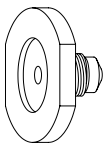
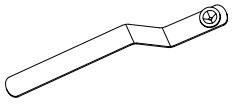
VERTICAL JOINT



A > 20 mm (¾")
D > 6 mm (¼")

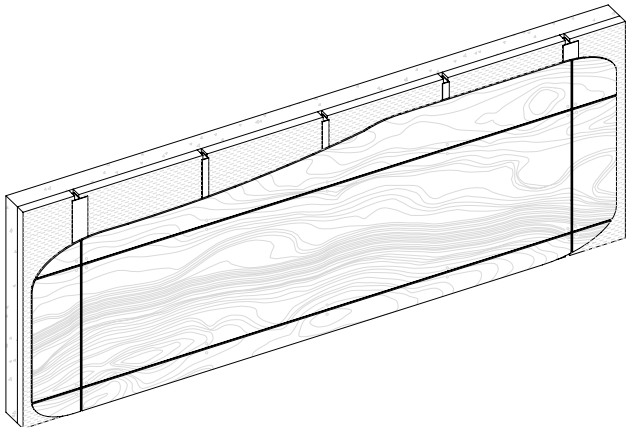
TYPES OF FASTENERS

Installation accessories for Exposed Fastening with Screws or Rivets

Fixing	Recommended installation tools
SX3-L12, SX3 D12: Screw for mounting on metal profiles. Drill capacity in aluminum: max. 3 mm (⅛") and min. 2,5 mm (3⁄32"). Drill capacity in steel: max. 2 mm (5⁄64") and min. 1,5 mm (1⁄16")  12 mm (½") 12 mm (½") 32 mm (1 ½")	 T25W Adapter For SX3 screws with Torx head  E420 Screwdriver For SX3 screws with Irius head.  SX Centering seat Ensures the concentric insertion of the screw to the panel, as well as its perpendicularity.
TWS-D12: Screw for fixing to timber battens. Torx head.  12 mm (½") 38 mm (1 ½") 4,8 mm (.19")	 T20 W Adapter For TW-S screws with Torx head.
SX3-D16 Screw for mounting on metal profiles specially designed for dry areas. Torx head. Drill capacity in aluminum: max. 3 mm (⅛") and min. 2,5 mm (3⁄32"). Drill capacity in steel: max. 2 mm (5⁄64") and min. 1,5 mm (1⁄16"). Torque of 5Nm (45 lb in).  16 mm (⅝") 30 mm (3⁄16")	 T25W Adapter For SX3 screws with Torx head  SX Centering seat Ensures the concentric insertion of the screw to the panel, as well as its perpendicularity.
AP16: Rivet for fixing to aluminum profiles. Assembly capacity: 18 mm (1⁄16"): 9,5 mm (⅜") - 13,5 mm (1⁄32") .  16 mm (⅝") 18 mm (1⁄16")	 AP Nozzle This is fitted into the riveter for rivet installation on floating points.  Centering seat with integrated bit Enables to perform the pre-drilling of the subframe concentrically to the wall.  ZL Centering seat Enables to perform the pre-drilling of the subframe concentrically to the wall.
SSO-D15: Rivet for fixing to aluminum profiles in the event of applications located at a distance of ≤ 1 Km from the sea. Assembly capacity depending on the shaft length: 18 mm (1⁄16"): 8 mm (5⁄16") - 12 mm (15⁄32").  16 mm (⅝") 18 mm (1⁄16")	 Centering seat with integrated bit Enables to perform the pre-drilling of the subframe concentrically to the wall.  SSO-D15 Rivet Nozzle This is fitted into the riveter for rivet installation on floating points.  ZL Centering seat Enables to perform the pre-drilling of the subframe concentrically to the wall.

3.2.2. Concealed Fastening with Caps

PARKLEX PRODEMA offers caps in the same finish as the cladding, Soffit and Siding panels, for concealed fastening using caps measuring 14 mm (9⁄16") in diameter. This system may only be used with panels that are 10 or 12 mm thick, and must be inserted with great care.



Installing the subframe and fasteners:

For distance between fasteners, refer to page 18 (section 3.2.1). The distance between channels varies depending on panel thickness, per table below.

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

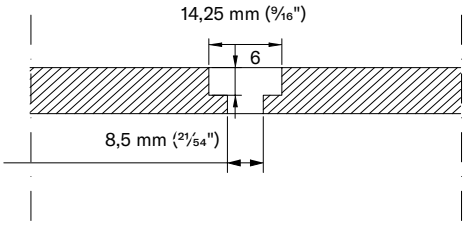
Pre-drilling Panels:

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

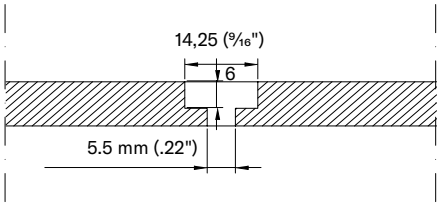
Fixed point and floating point:

The same specifications must be followed for the fixed point and floating point as indicated in page 19 (section 3.2.1)

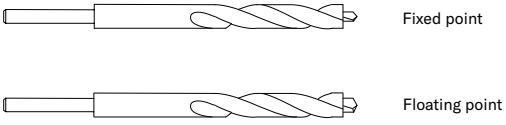
PARKLEX PRODEMA offers specific bits for pre-drilling the cap fastening system.



Fixed point

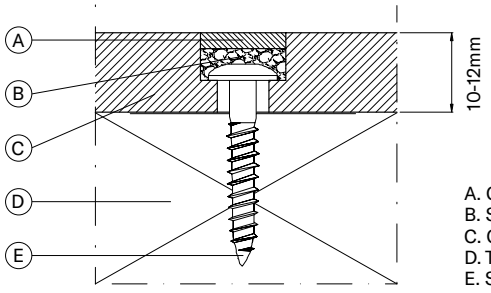


Floating point



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.

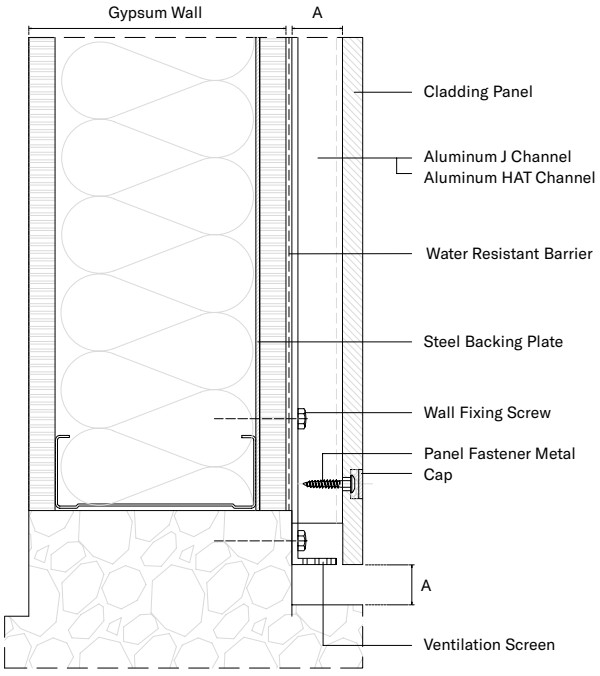


A. Caps
B. Silicone sealant
C. Cladding Panel
D. Timber batten
E. Screw

Installation details:

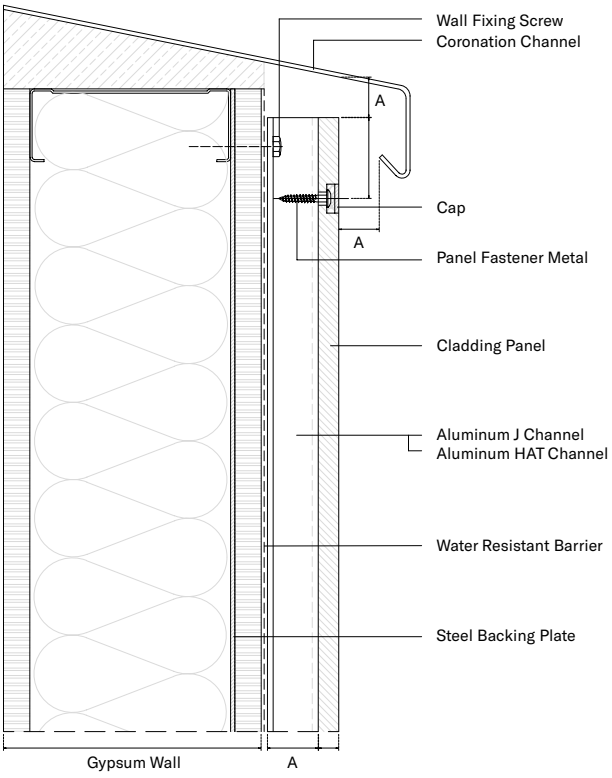
PARKLEX PRODEMA has an extensive range of solutions showing all types of installation details to address corners, windows, crowns, etc. All of these details are available on the Technical Area of the PARKLEX PRODEMA website.

BASE DETAIL



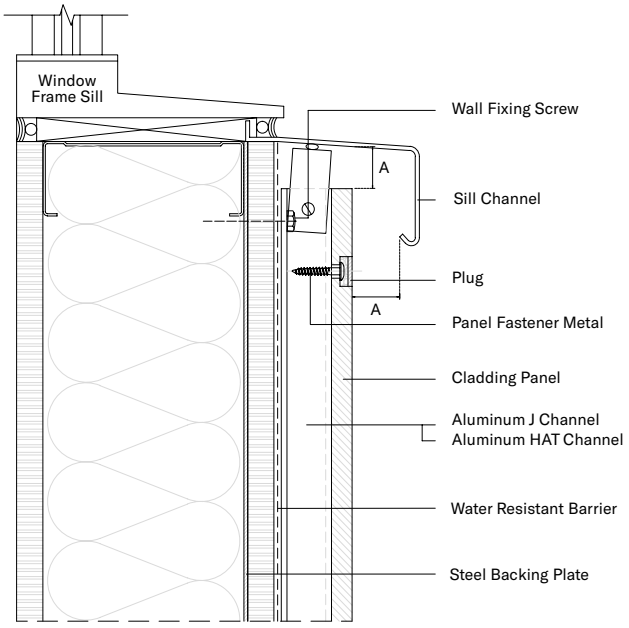
A > 20 mm (¾")

HEAD DETAIL



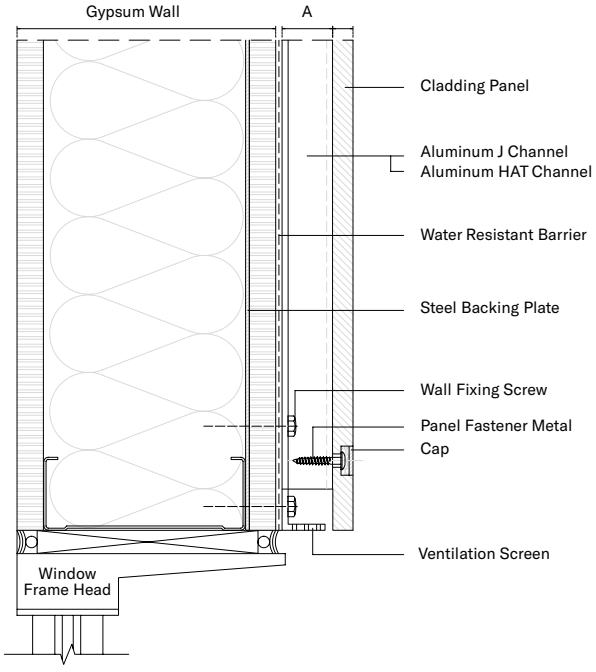
A > 20 mm (¾")

WINDOW SILL



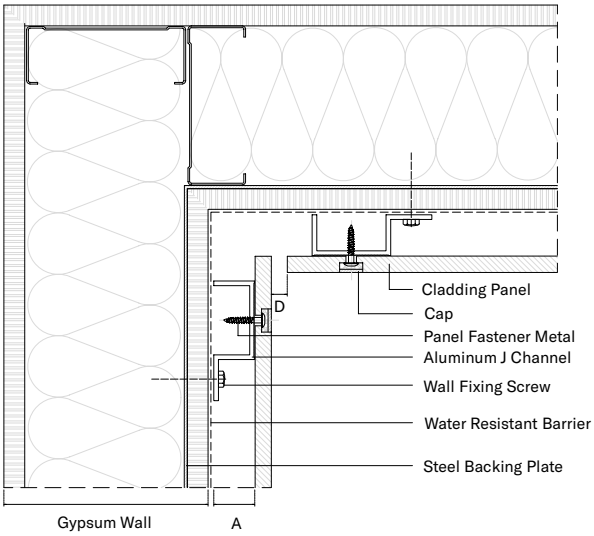
A > 20 mm (¾")

WINDOW HEAD



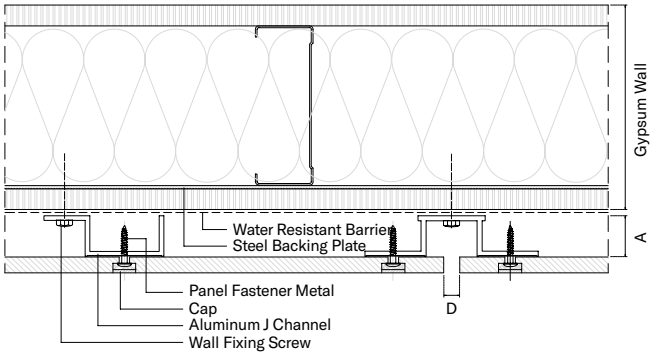
A > 20 mm (¾")

INSIDE CORNER



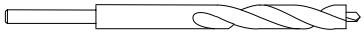
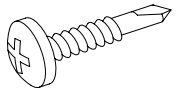
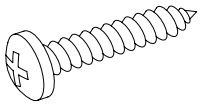
A > 20 mm (¾")
D > 6 mm (¼")

VERTICAL JOINT



A > 20 mm (¾")
D > 6 mm (¼")

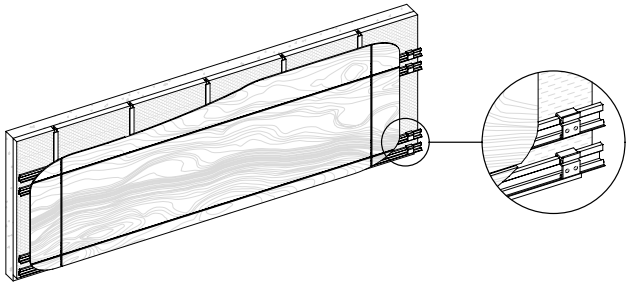
Accessories:

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 	

3.2.2. Concealed Fastening with Hanging Hooks

The concealed fastening with hanging hooks introduces the hanging hook as the concealed mounting mechanical element. This system can be used with panels 8 mm (5⁄16"), 10 mm (3⁄8") and 12 mm (1⁄2") thick.

Keep in mind the importance of a good layout. PARKLEX PRODEMA sells all of the parts required for concealed mounting with hanging hooks, such as special hanging rails, hanging hooks, milling screws, etc.



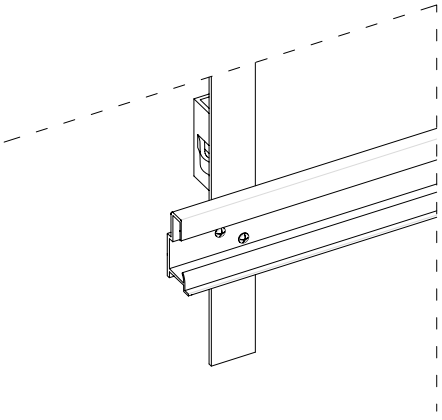
Distance between vertical profiles:

In this type of installation, there is a primary substructure of vertical profiles that create the necessary air chamber. The maximum distance between there vertical profiles in any case is 1 m (40").

THICKNESS	MAXIMUM DISTANCE
8, 10, 12 mm (5⁄16", 3⁄8", 1⁄2")	1 m (40")

Distances between hanging rails:

Hanging rails are installed horizontally to the front of the vertical profiles using 2 fixing screws installed diagonally to one another.



The distance between the hanging rails must be 600 mm (24") with an 8 or 10 mm thick NATURCLAD panel and 800 mm (32") with an 12 mm thick NATURCLAD panel, with a minimum of three hanging rails for each panel.

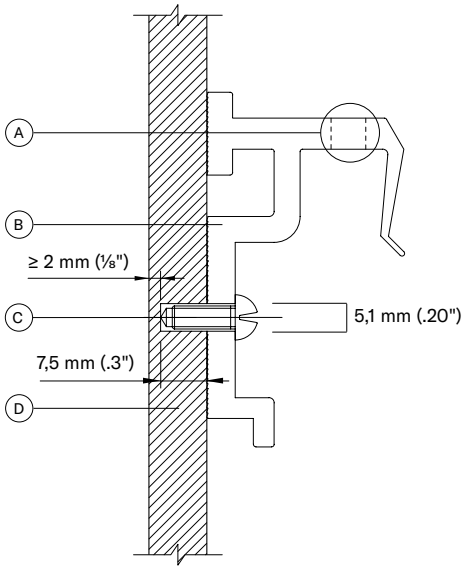
Hanging hooks are screwed to the rear of the panel. These panel fixing brackets are machined with an M8 metric hole at the top, which is used to adjust the height (using a bolt) or to lock them in place.

PARKLEX PRODEMA offers 2 screwing options:

OPTION 1 – Hanging hooks fastening with 10 mm and 12 mm thick NATURCLAD panels:

Minimum board thickness of 10 mm (⅜"). The hanging hooks are screwed to the rear of the panels using stainless steel milling screws. A 7.5 mm (.3") deep and 5.1 mm (.20") diameter hole must be drilled, slightly smaller than the screw, so that it will cut its own thread as it is screwed in place. This hole must be deeper than the insertion length of the screw to permit accumulation of the shaving created when carving. However, a margin of at least 2 mm (⅛") must be left with respect to the exposed side of the panel.

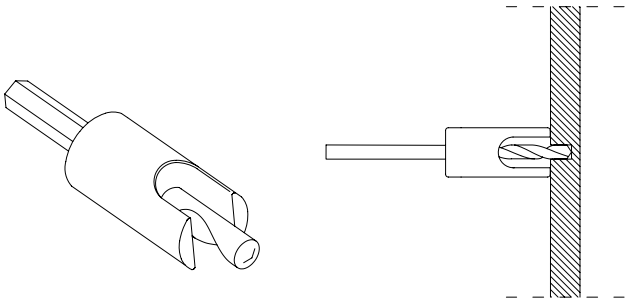
Taking care that the holes are clean and free of wood shavings, place the hanging hook in its place over the predrilled holes on the backside of the NATURCLAD panel.



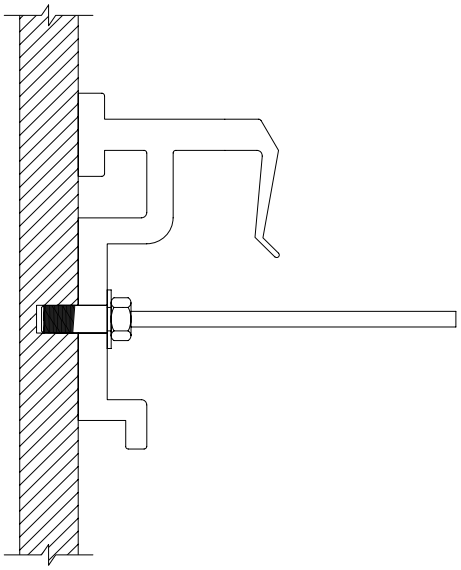
A. Machined M8 hole
B. Fixing bracket
C. Milling screw
D. Cladding Panel

OPTION 2 – Hanging hooks fastening with 8 mm thick NATURCLAD panels:

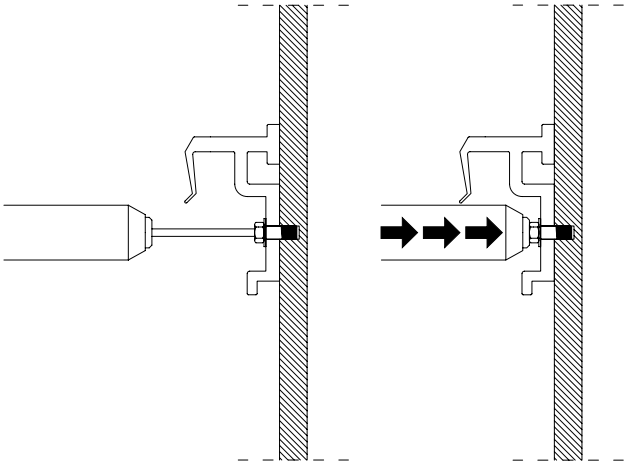
The hanging hooks are fastened to the backside of the panel using TU-S Ø6X11 mm fasteners. As the cladding material is very hard, a 6 mm (¼") diameter perforation and a 6 mm (¼") deep blind must be made before fastening the panel screw on the backside of the cladding panel. The perforation must be done with a computerized numeric control (CNC) machine or manually with a PARKLEX PRODEMA HSS-6.0x41 bit equipped with a PARKLEX PRODEMA depth stopper.



Taking care that the holes are clean and free of wood shavings, place the hanging hook in its place over the predrilled holes on the backside of the NATURCLAD panel.



Remove completely the rivet mandrel with a riveter with a 17/32 or 17/40 nozzle (PowerBird or similar, for example) assuring that a slight perpendicular force against the surface is made during riveting operation.



If TU-S fixing removal is needed, it is possible to unfix it with hexagonal head. For later installation of the hanging hook move it slightly horizontally, drill again the panel as described before and proceed to install the new TU-S fixing again. Do not use the original holes for new TU-S fixings.

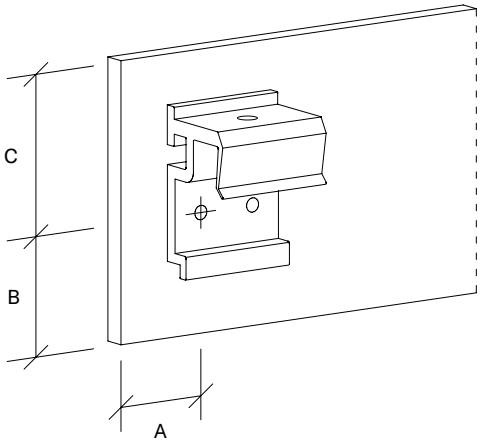
Distance between hanging hooks:

THICKNESS	MAXIMUM DISTANCE
8 mm* (5⁄16"), 10 mm (3⁄8")	600 mm (24")
12 mm (1⁄2")	800 mm (32")

There must always be at least 3 panel hanging hooks in each direction for every panel. *Only for screwing with Option 2.

Bracket distance from the panel edge:

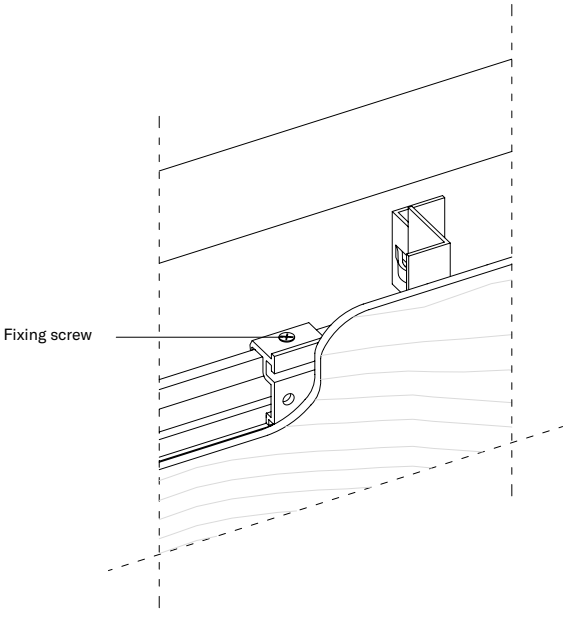
The required distances from screw to panel edges are detailed below:



A. Lateral edge distance: 24 mm (15⁄16")
B. Bottom edge distance: 45 mm (1 49⁄64")
C. Upper edge distance: 58 mm (2 9⁄32")

Fixing screw:

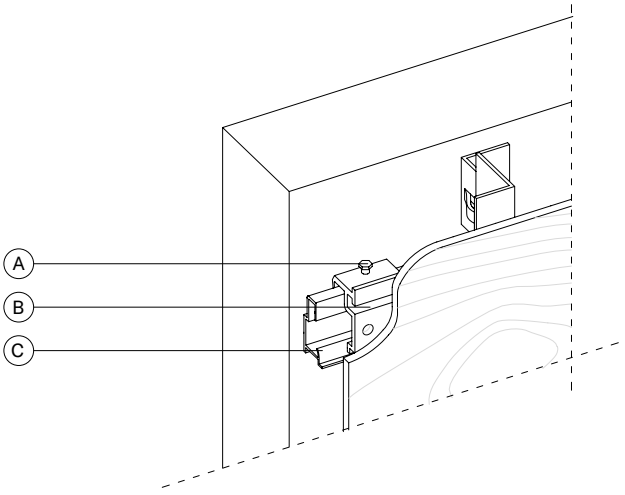
The central hanging hook of the top line of the panel must be screwed in place. Once the panels have been aligned in their final position with the help of the height adjustment screw, a stainless steel self-tapping screw fixes the bracket to the horizontal rail to prevent it from moving sideways.



Levelling panels:

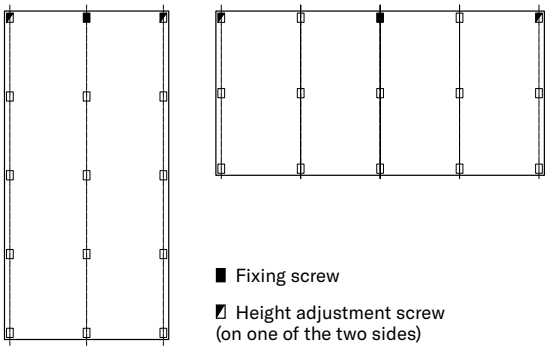
For good alignment between the NATURCLAD panels, the first thing to use is the height adjustment screw. This screw enables you to correct small deviations in the panel horizontal installation line.

Usually, only one screw per panel is required, which is fixed to one of the side brackets of the top line.



A. Height adjustment screw
B. Panel fixing bracket
C. Horizontal carrier rail

Example:

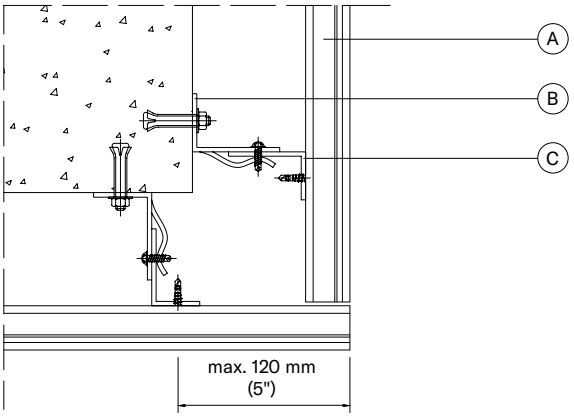


■ Fixing screw

◪ Height adjustment screw (on one of the two sides)

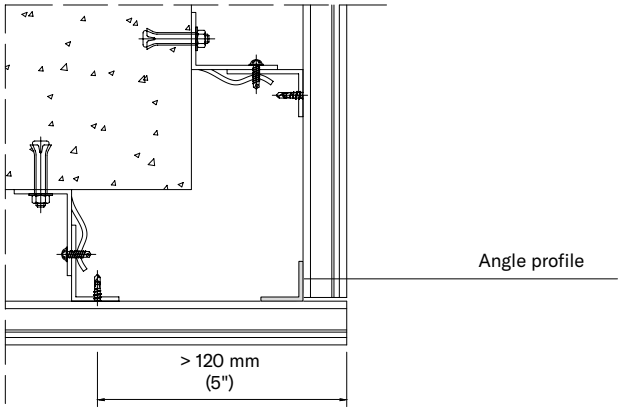
Maximum cantilever of the hanging rail:

The maximum cantilever of the hanging rail must be controlled on corners and finishes to maintain their rigidity; the maximum cantilever distance is 120 mm (5").



A. Horizontal carrier rail
B. Fixing bracket
C. Metal Batten

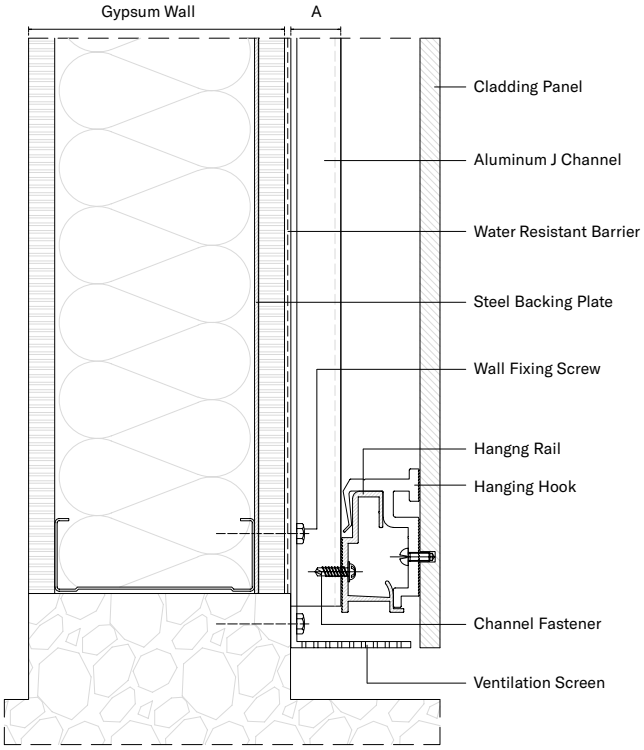
If the cantilever distance exceeds the maximum allowable distance, the hanging rail must be reinforced using an angular profile as shown in the following image.



Installation details:

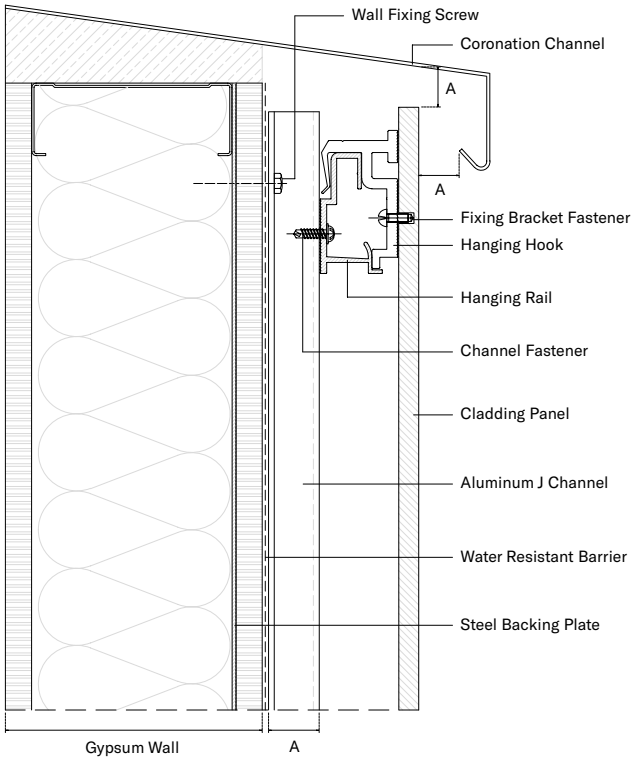
PARKLEX PRODEMA has an extensive range of solutions showing all types of installation details to address corners, windows, crowns, etc. All of these details are available on the Technical Area of the PARKLEX PRODEMA website.

BASE VENTILATION



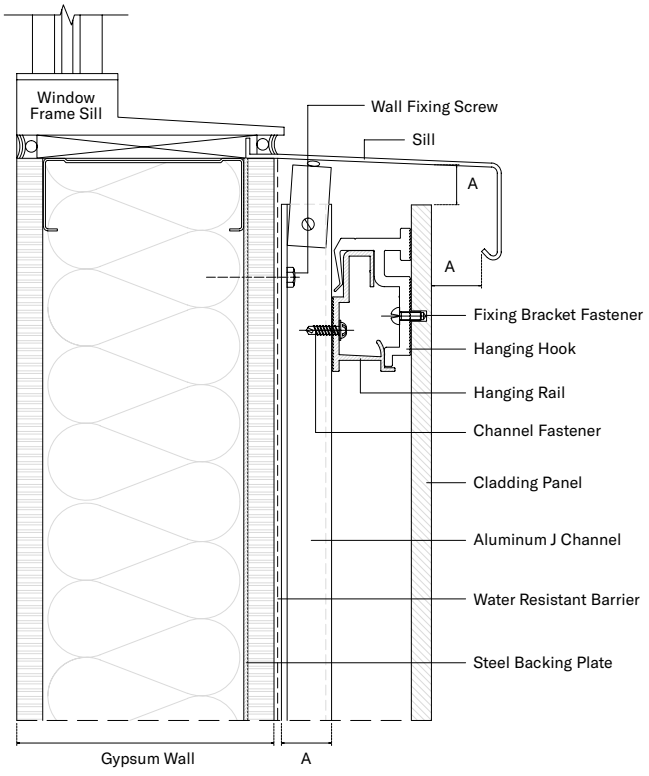
A > 20 mm (¾")

HEAD VENTILATION



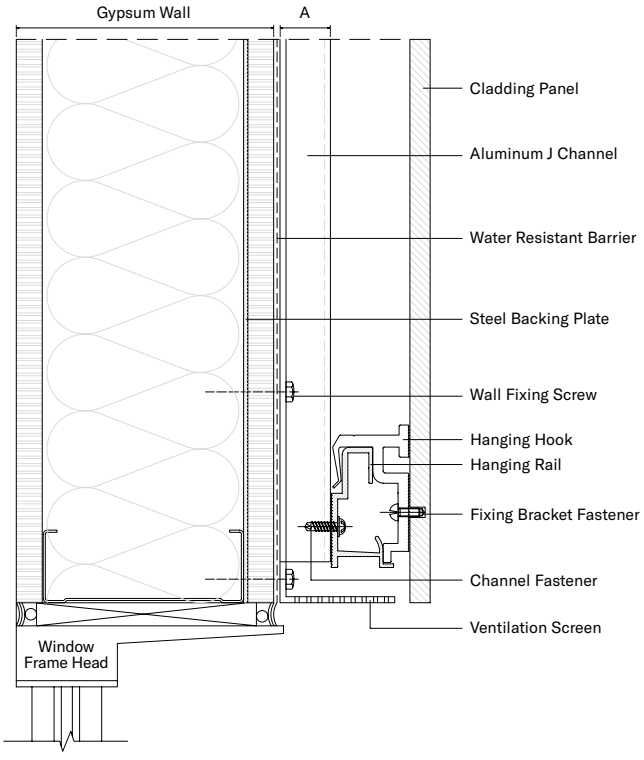
A > 20 mm (¾")

WINDOW SILL



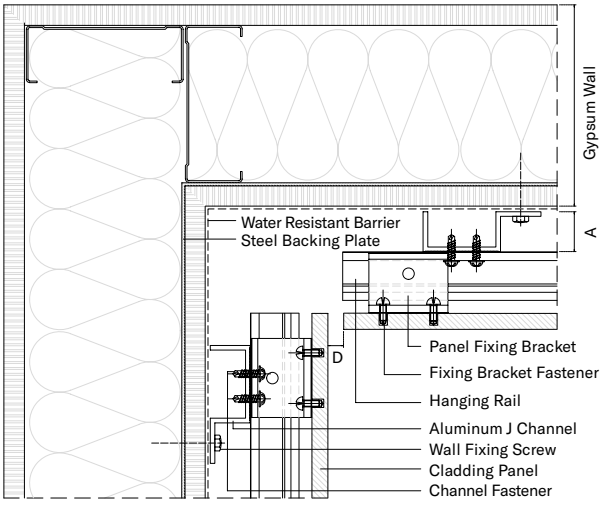
A > 20 mm (¾")

WINDOW HEAD



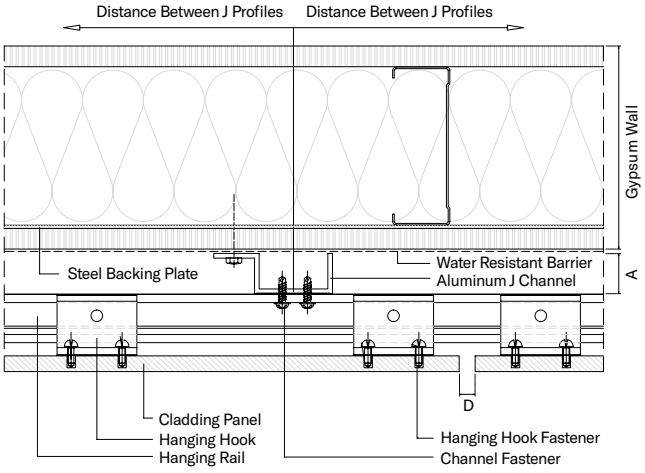
A > 20 mm (¾")

INSIDE CORNER



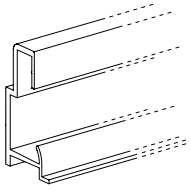
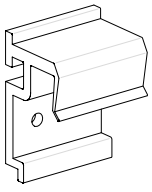
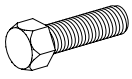
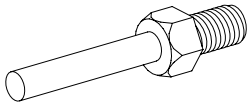
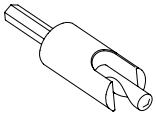
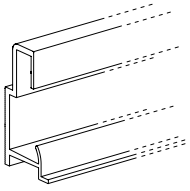
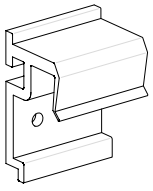
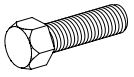
A > 20 mm (¾")
D > 6 mm (¼")

VERTICAL JOINT



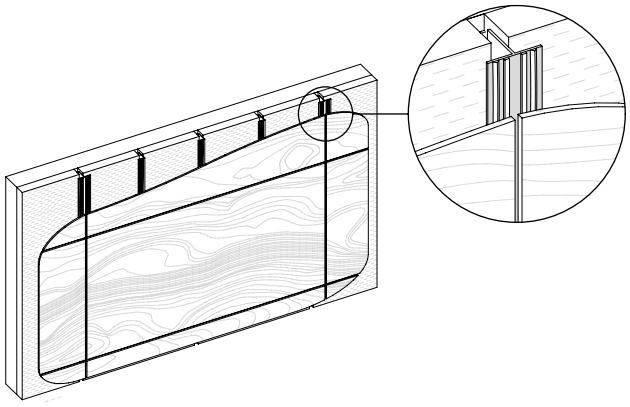
A > 20 mm (¾")
D > 6 mm (¼")

Accessories:

TYPES OF FASTENERS Installation accessories for Concealed system with Hanging Hooks	
Fixing	Recommended installation tools
OPTION 1: TB-A2 TX30 for 10 or 12 mm panels 	 Hanging Rail  Hanging Hook  Levelling Pin
OPTION 2: TU-s rivet-screw for 8 mm panels 	 Depth Locator with drill bit  Hanging Rail  Hanging Hook  Levelling Pin

3.2.4. Concealed Fastening with Adhesive

Currently, PARKLEX PRODEMA has several certified processes for mounting cladding panels using structural adhesive systems. Due to the continuous variations that occur in adhesive system designs, as well as in their application procedures, we recommend you to contact PARKLEX PRODEMA for the application procedures currently in use. This system may only be used with panels that are 8 mm (5⁄16"), 10 mm (3⁄8")or 12 mm (½") thick.



Distance between vertical profiles:

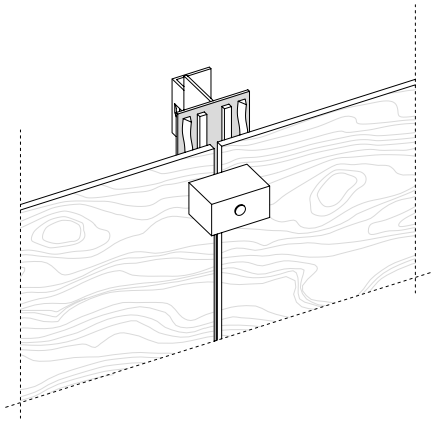
Using adhesive systems, the distances between profiles must be reduced when compared to those using screws or rivets, in order to ensure good adhesive polymerization.

THICKNESS	MAXIMUM DISTANCE
8 mm (5⁄16")	400 mm (16")
10 mm (3⁄8") / 12 mm (½")	600 mm (24")

There must always be at least 3 fastening points in each direction for every panel.

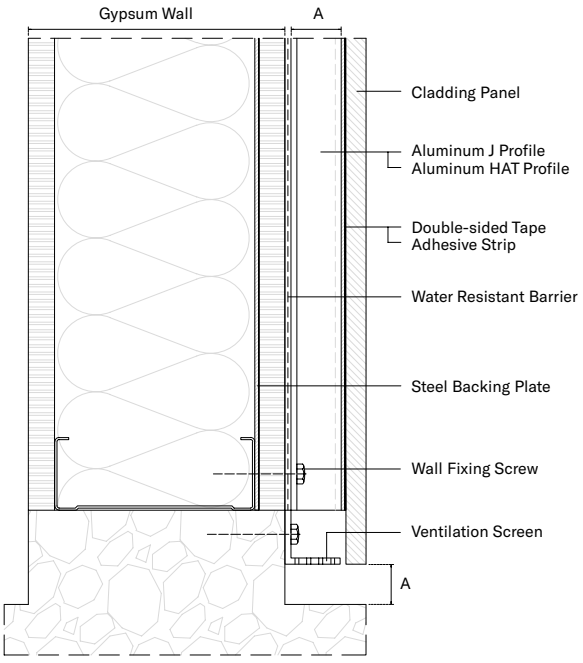
Clamps:

Once NATURCLAD panels are installed using this system and until the adhesive polymerizes, clamps must be placed around the perimeter of the pieces every 200 mm (8") or 300 mm (12"), specially at the corners. It is essential that applying pressure beyond the thickness of the double-sided tape is avoided.



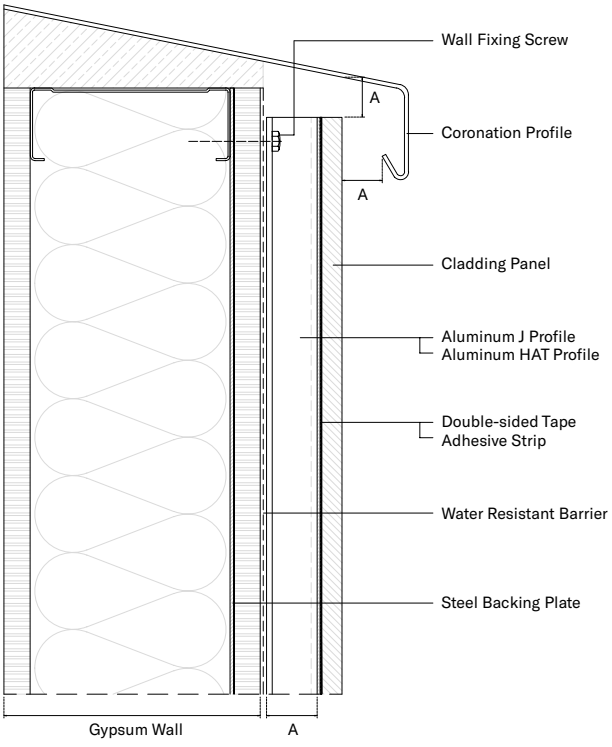
Installation details:

BASE DETAIL



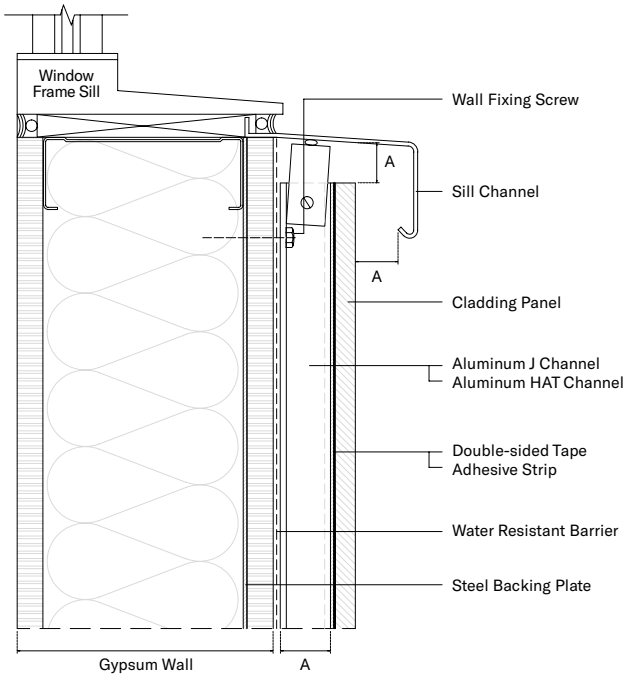
A > 20 mm (¾")

HEAD DETAIL



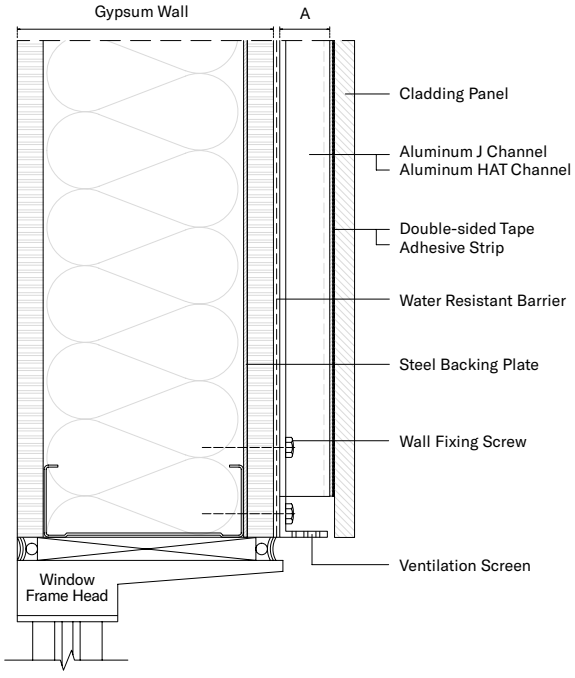
A > 20 mm (¾")

WINDOW SILL



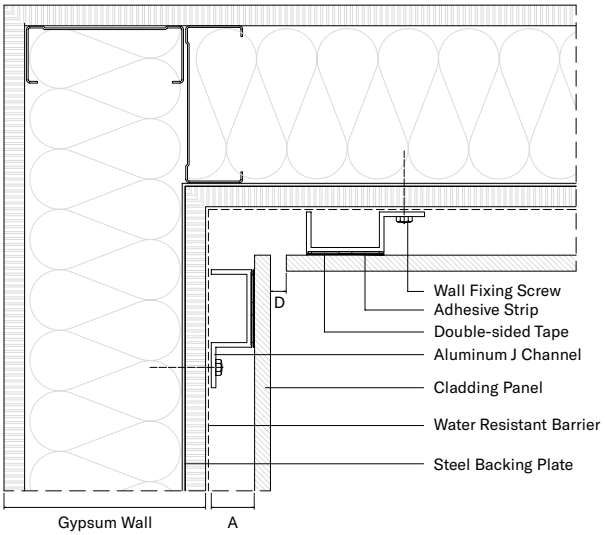
A > 20 mm (¾")

WINDOW HEAD



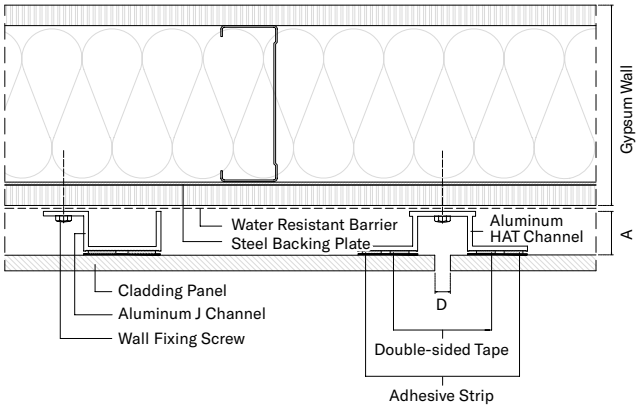
A > 20 mm (¾")

INSIDE CORNER



A > 20 mm (¾")
D > 6 mm (¼")

VERTICAL JOINT



A > 20 mm (¾")
D > 6 mm (¼")

3.3. NATURSIDING

NATURSIDING can be installed using any of these installation systems:

- Horizontal Siding
- Vertical Siding
- Lap Siding

This system is designed to quickly and easily place ready-to-install Siding slats using specially designed clips. The following standard slat widths are available:

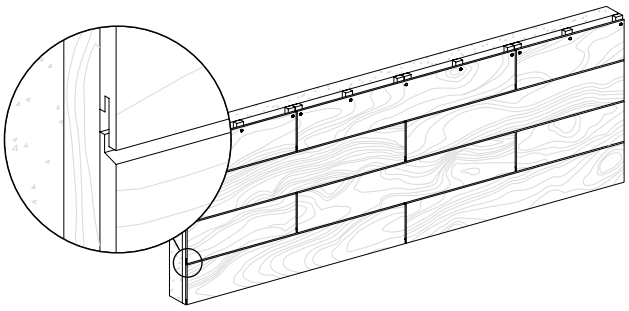
SLAT DIMENSIONS	THICKNESS	MAXIMUM DISTANCE BETWEEN PROFILES
2440 x 137 mm (5.35" x 8')	8 mm (5/16")	600 mm (24")
2440 x 188 mm (7.40" x 8')		
2440 x 290 mm (11.40" x 8')		

*There must always be at least 3 support points in each direction for every slat.

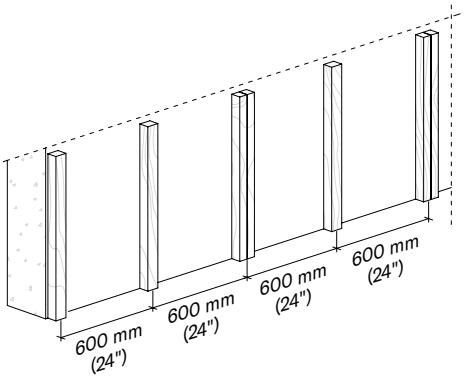
Siding slats must be installed keeping a minimum of 20 mm (¾") ventilated air chamber behind, so the substructure must be installed allowing the air flow behind.

3.3.1. Horizontal Siding System:

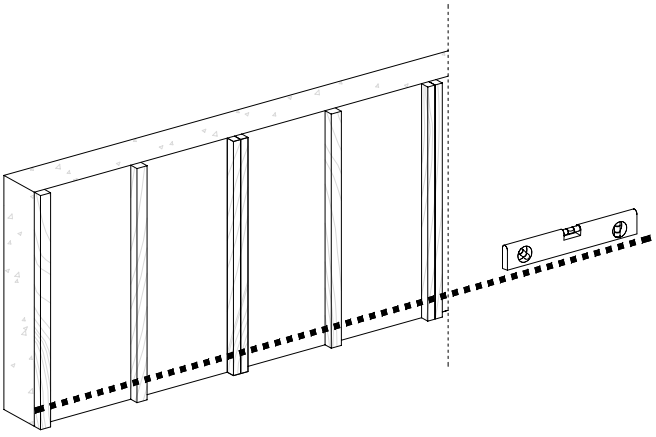
The following procedure is used for installing Siding slats horizontally.



The slats require supporting points every 600 mm (24"). For pieces between 300 to 600 mm (12"-24") a third supporting point in the middle is needed. Pieces shorter than 300 mm (12") only need two supporting points.



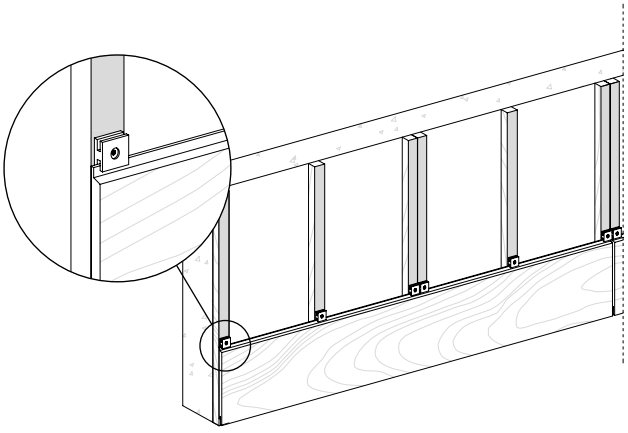
The façade must be installed from the bottom to the top and the substructure must be totally aligned to avoid the panel acquire the imperfection of the façade.



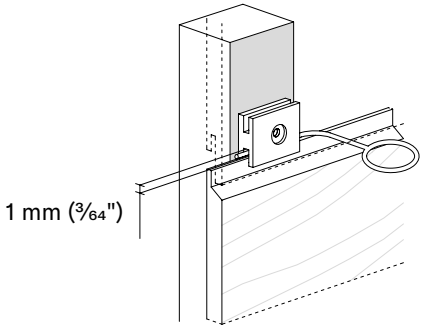
Install the first row of fixing clips at the bottom. The first clip should be placed facing up.

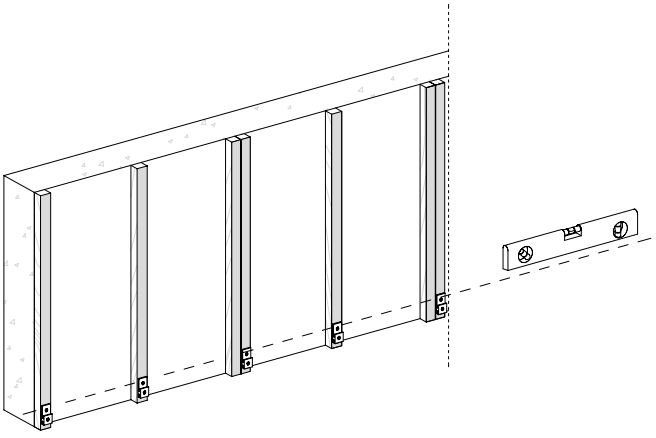
Use the spirit level to get the perfect alignment of the first row of the fixing clips. See picture of the first row below.

Once the first row of fixing clips has been installed, add the first row of machined slats. The groove in the slat fits into the fixing clip. Once the first row of slats is installed, place the second fixing clip row on the machined edge at the top of the slat. The second fixing clip should be installed upside down, see image below.

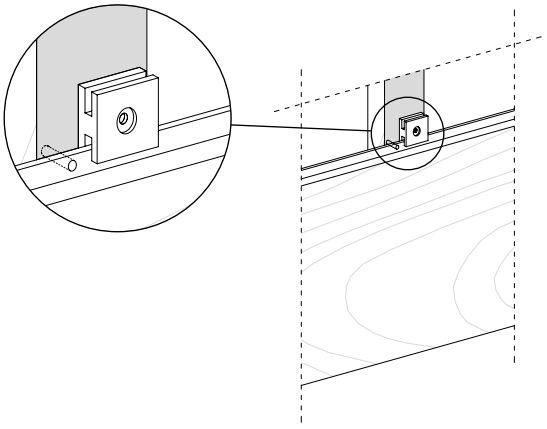


Keep a 1 mm (3⁄64") distance between the fixing clip and the slat to allow the contraction and expansion of the slat. Use the gap gauge tool for this task.

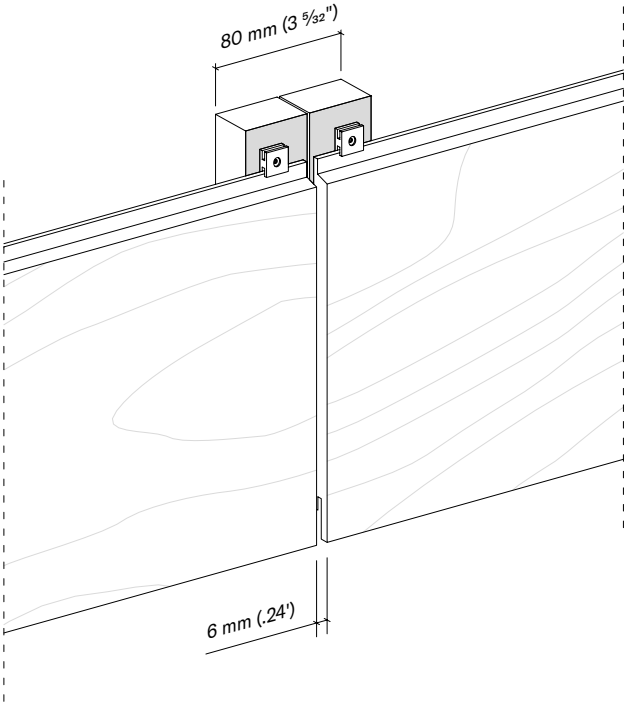




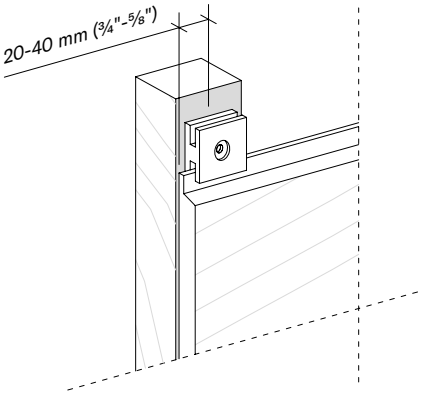
Every slat needs a fixed point, in order to avoid the slat sliding horizontally. In case of wooden substructure use a wooden nail and in case of metal substructure use a BCPA2 screw. This pin should be placed in the center of the slat, so that the expansion/ contraction of the material is under control. First, predrill the groove in the center of the slat.



A joint of 6 mm must be kept between slats placed in the same row. Two fixing clips are necessary to do the joint between panels, so the supporting point behind the joints should be at least 80 mm (3 5⁄32") wide.

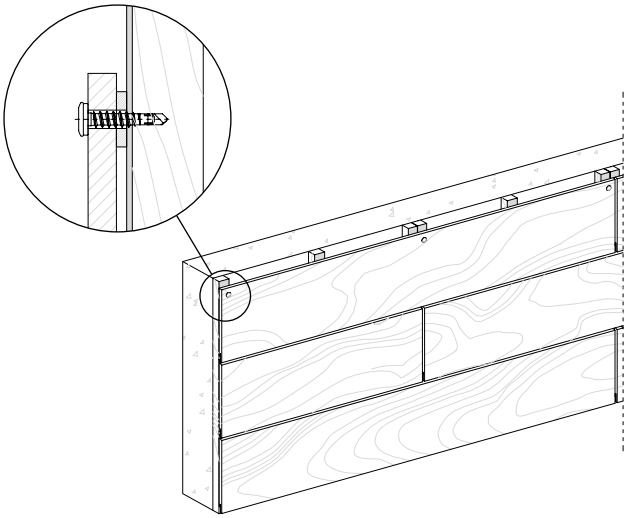


Leave between 20 mm-40 mm (¾"- 5⁄8") distance from the center of the fixing clip to the edge of the panel.



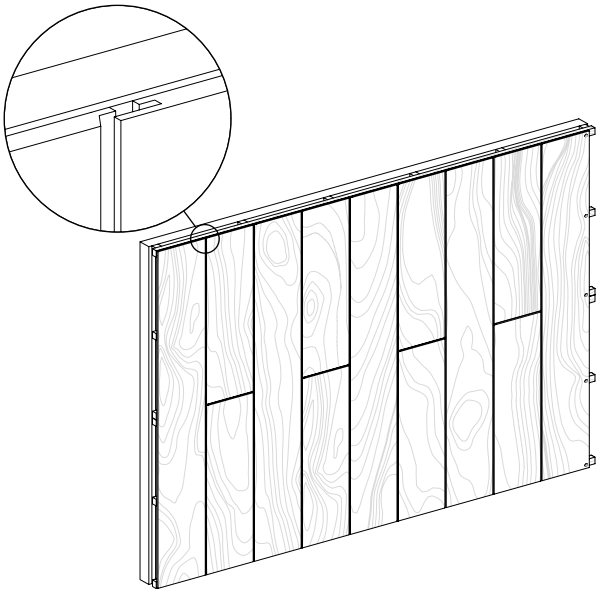
Place the following slat rows one on top of the other.

Finally, fix the last row of slats in place using TWS (in case of wooden substructure) or SX3 (in case of metallic substructure) PARKLEX PRODEMA lacquered screws. To ensure the last slat is totally flat, place a 4 mm (5⁄32") washer behind the top panel or a 4 mm (5⁄32") thick EPDM tape.



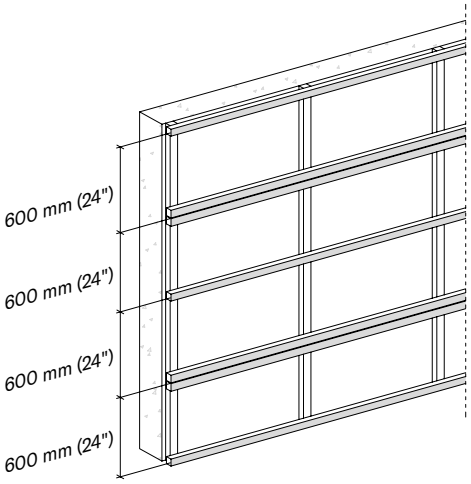
3.3.2. Vertical Siding System

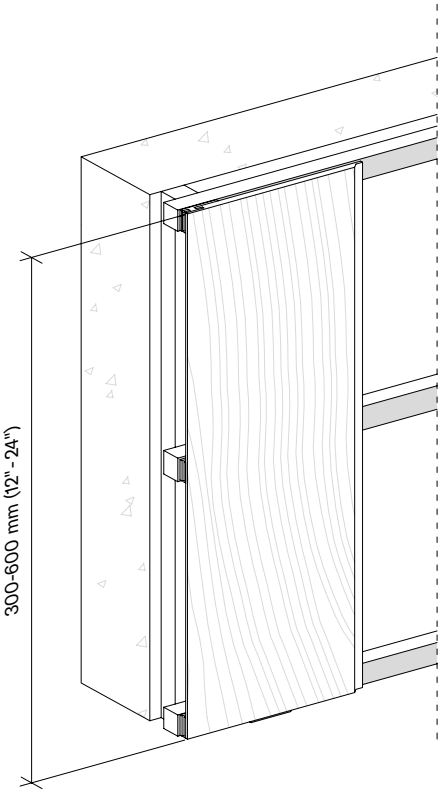
Siding can be also easily installed vertically following almost the same procedure as horizontal installation. See below the procedure:



Vertical Siding requires a ventilated air chamber of 20 mm (¾") (instructions described in page 13, section 3.1.1), and for that, a double substructure might be necessary. The double substructure consists of a primary vertical subframe and a secondary horizontal subframe. The primary vertical subframe must be fixed to the supporting wall,and the secondary horizontal subframe to the primary vertical subframe. When using aluminum L and T shape subframes, horizontal wall brackets can be used in order to create a 20 mm (¾") ventilated air chamber behind the panel.

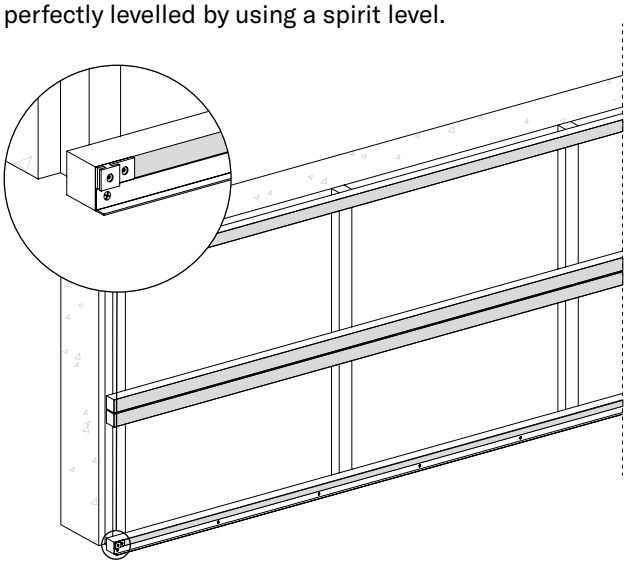
The slats require supporting points every 600 mm (24"). For pieces between 300 to 600 mm (12"-24") a third supporting point in the middle is needed. Pieces shorter than 300 mm (12") only need two supporting points.





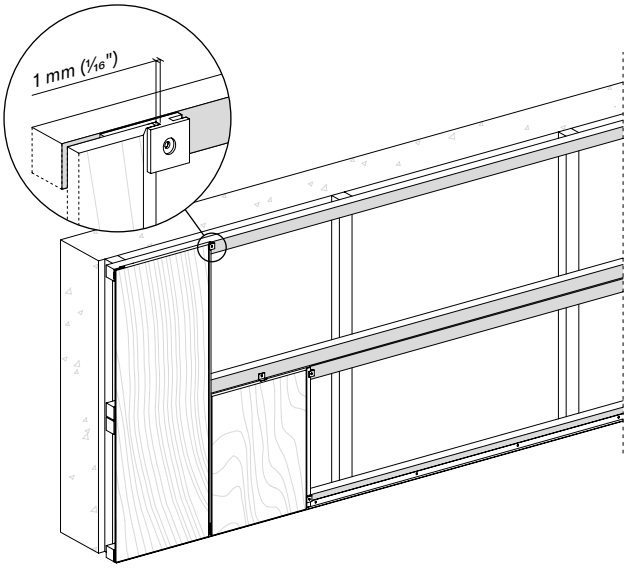
Fixing clip and stopper piece installation:

The use of a L20X10 stopper rail is needed to ensure that the Siding slat keeps its position. Use a spirit level to ensure a perfect alignment.
Install the first column of fixing clips at the side.
The first fixing clip should be placed facing up and perfectly levelled by using a spirit level.

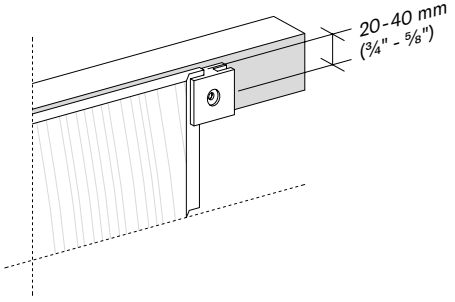


Once the first row of fixing clips has been installed, install the first column of machined slats. The groove in the slat fits into the fixing clip. Once the first column of slats is installed, place the second fixing clip column on the machined edge at the top of the slat. The second fixing clip row should be installed upside down.

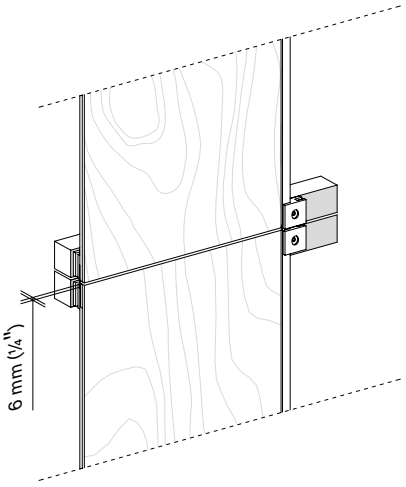
The second slat must be installed keeping a 1 mm (3/64") distance between the fixing clip and the slat to allow the contraction and expansion of the material. Use the gap gauge tool for this task.



Leave between 20 mm - 40 mm (¾"-⅝") distance from the center of the fixing clip to the edge of the panel.

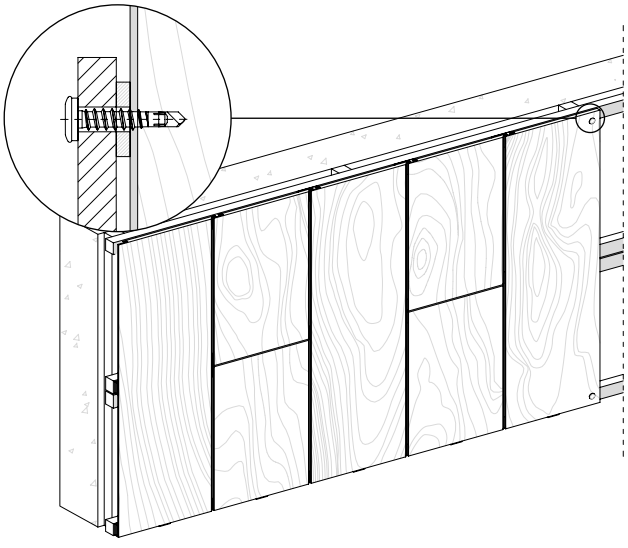


A joint of 6 mm (¼") must be kept between slats placed in the same row. Two fixing clips are necessary to do the joint between panels, so the supporting point behind the joints should be at least 80 mm (5⁄32") wide.

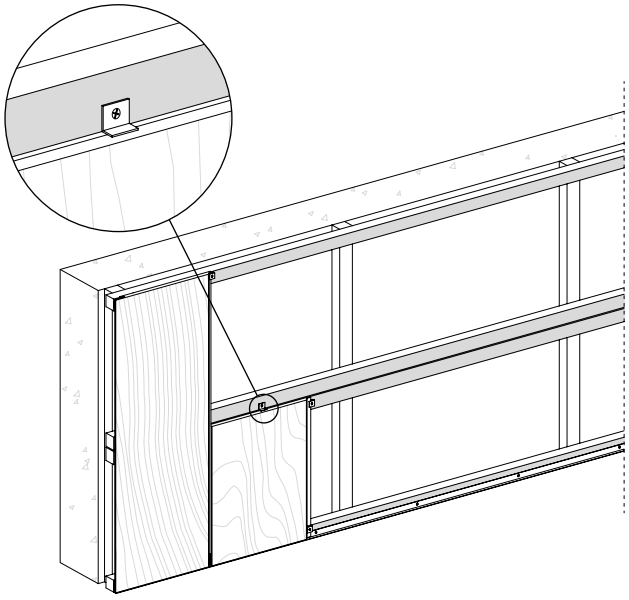


Place the slats one next to the other.

Finally, fix the last row of slats with PARKLEX PRODEMA lacquered screws. To ensure the last slat is flat, place a 4 mm (5⁄32") washer or EPDM tape behind the top panel.

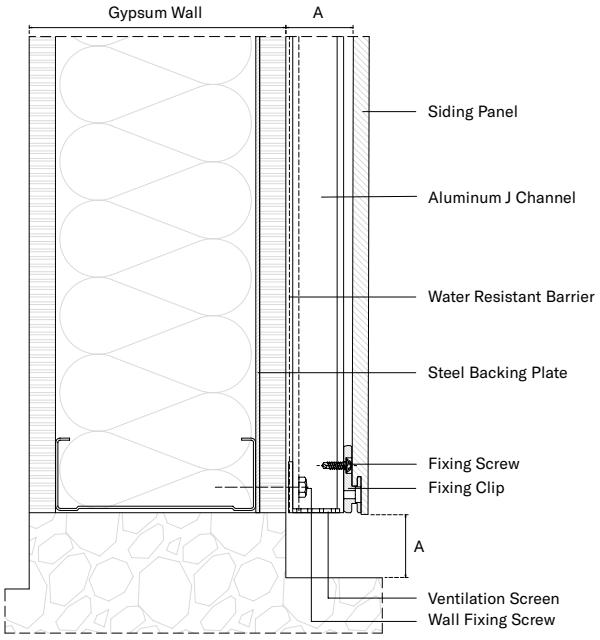


Every slat needs a fixed point to avoid the piece from moving vertically. In order to do so, placing an L20X10 stopper piece below every slat is required. This element creates a fixing point in every piece and avoids them from sliding downwards. Use a DIN 7505B screw to fasten the stopper piece to a wooden subestructure, and a DIN 7504N to fasten it to a metal one.



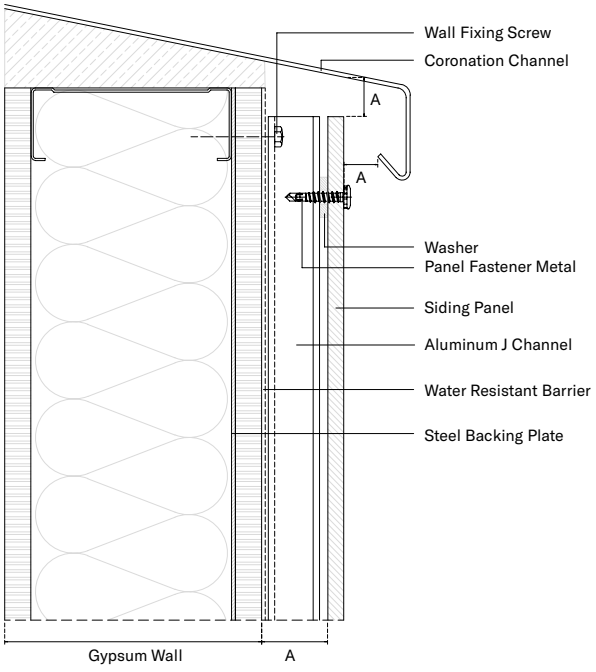
Installation details:

BASE DETAIL



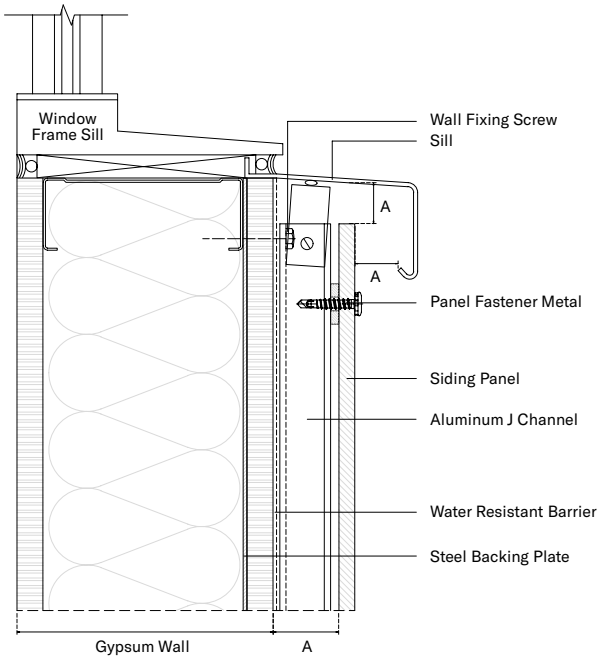
A > 20 mm (¾")

HEAD DETAIL



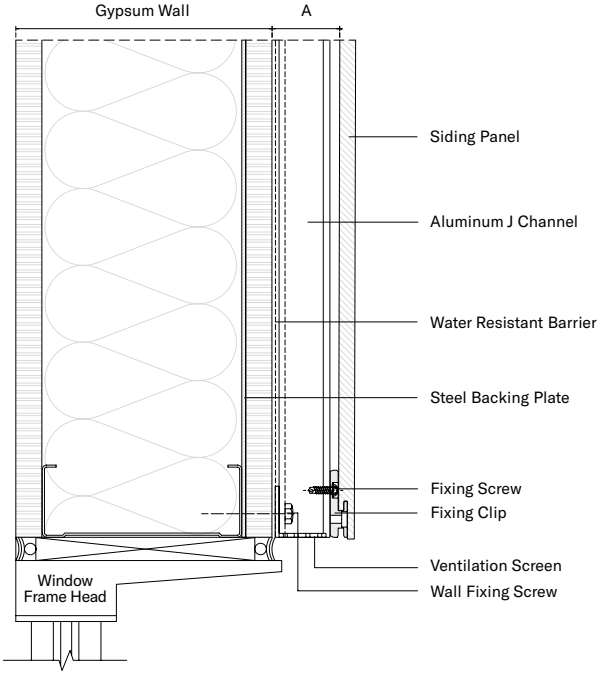
A > 20 mm (¾")

WINDOW SILL



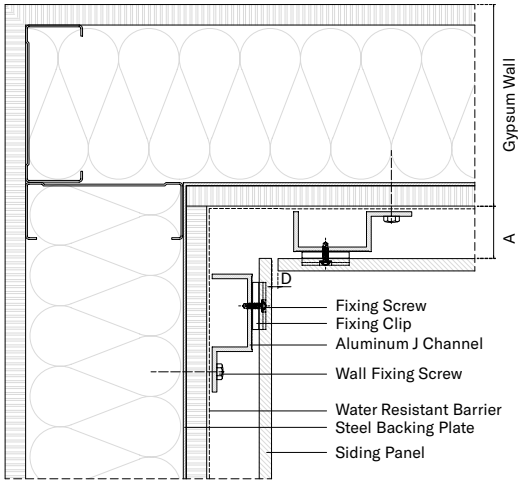
A > 20 mm (¾")

WINDOW HEAD



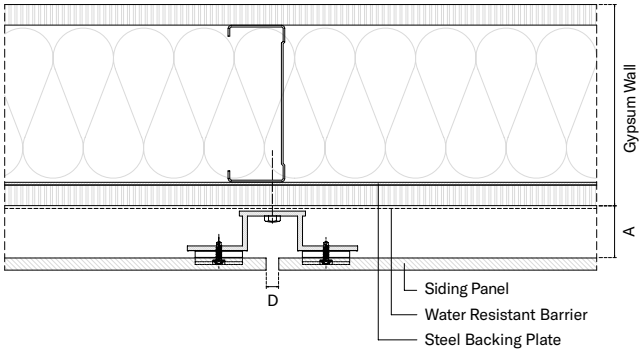
A > 20 mm (¾")

INSIDE CORNER



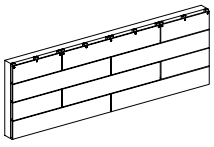
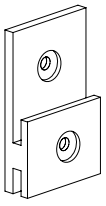
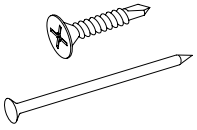
A > 20 mm (¾")
D > 6 mm (¼")

VERTICAL JOINT



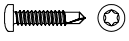
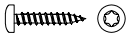
A > 20 mm (¾")
D > 6 mm (¼")

Accessories:

<table>
<tr><td colspan="2">TYPES OF FASTENERS
Installation accessories for Siding</td></tr>
<tr><td>Fixing</td><td>Accessories</td></tr>
<tr><td> 
Horizontal</td><td> 
Siding Clip
 
Fixing Point

Gauge Tool

SX3-D12

TWS-D12
 
7504N M3,5/L= 19 mm
 
7505B M3,5/L= 25 mm</td></tr>
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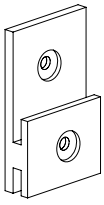
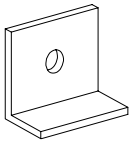
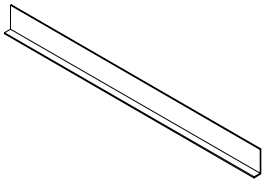
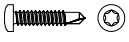
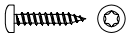
Vertical</td><td> 
Siding Clip
 
L20X10 Stopper Piece
 
L20X10 Stopper Rail

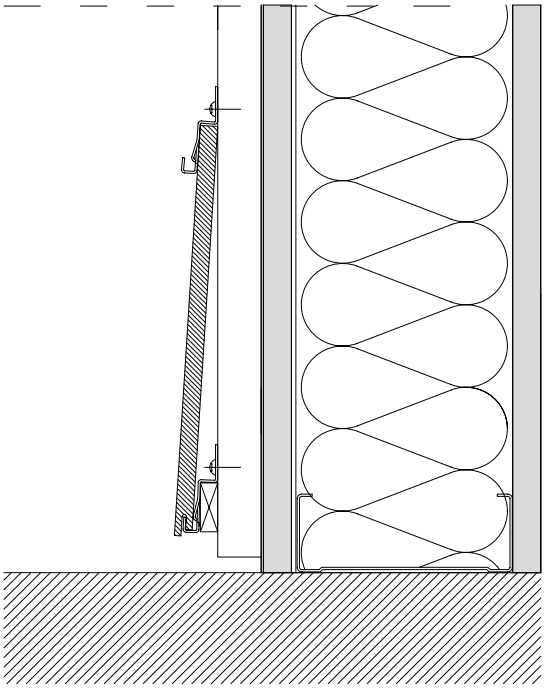
Gauge Tool

SX3-D12

TWS-D12
 
7504N M3,5/L= 19 mm
 
7505B M3,5/L= 25 mm</td></tr>
</table>

3.3.3. Lap Siding

Two different slat widths are supplied: 198 mm (7.80") and 300 mm (11.81"), both with a maximum length of 2440 mm (8'). This concealed fixing system is only valid for thicknesses of 8 mm (5⁄16").

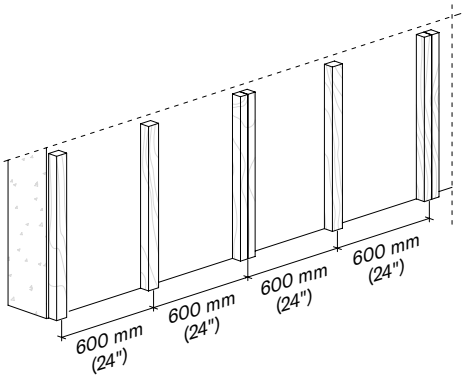


SLAT DIMENSIONS	THICKNESS	MAXIMUM DISTANCE
2440 x 198 mm (8' x 7.80")	8 mm (5/16")	600 mm (24")
2440 x 300 mm (8' x 11.81")		

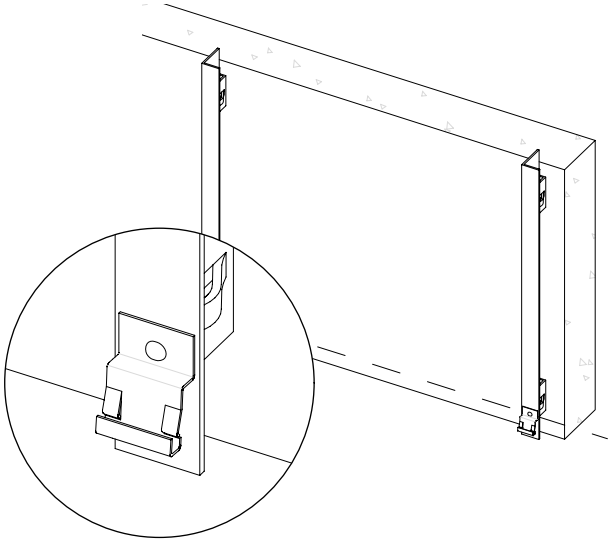
There must always be at least 3 support points in each direction for every panel.

For the correct installation of this system, PARKLEX PRODEMA supplies staples and slats with a machined edge that fits perfectly into them.

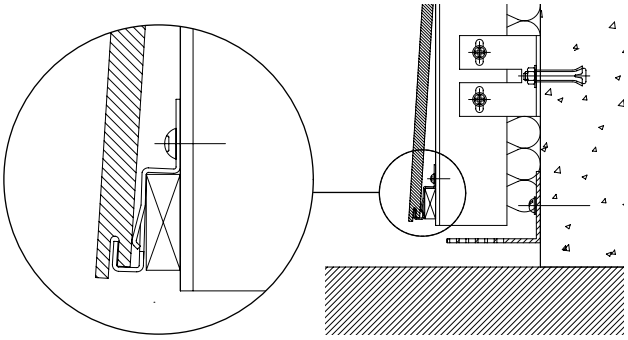
The distance between profiles must never exceed 600 mm (24"). Each panel must be supported by a minimum of three vertical battens.



The lap siding clips, made in black-lacquered stainless steel, are fixed to the lower part of the vertical profiles.



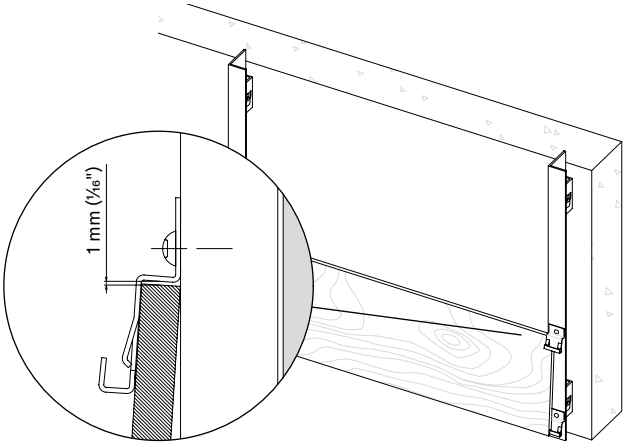
An 8 mm (5⁄16") stud is placed behind the lap siding clips in the first row to act as a stop.



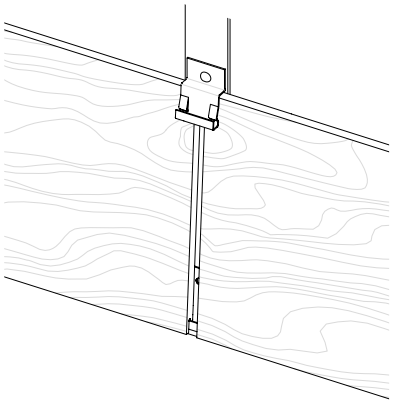
Once the first row of lap siding clips has been installed, add the first row of machined slats. The groove in the slats fits into the lap siding clip.

Alignment of the first row of lap siding clips is important, since the panels will rest on these pieces.

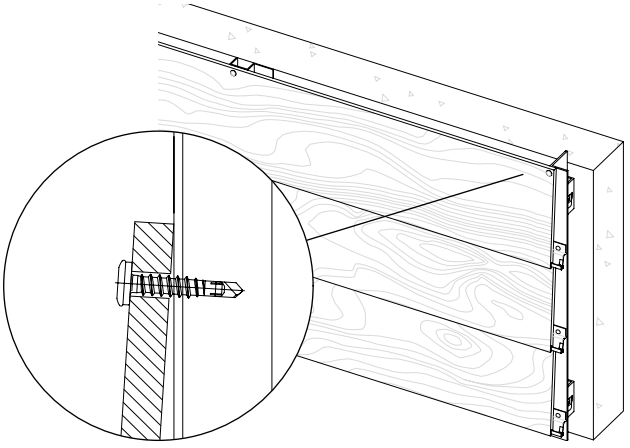
In the upper part of the slat, another lap siding clip is fastened in place, building the base for the second row, and so on. Keep a expansion joint of 1mm between the lap siding clip and the siding board, using the gauge tool.



The lap siding clip is designed to solve the joint between two panels. A 1 mm gap is required between the staple and the slat to absorb the material dilatation. An 6 mm (1/4") expansion joint must be left between the slats.



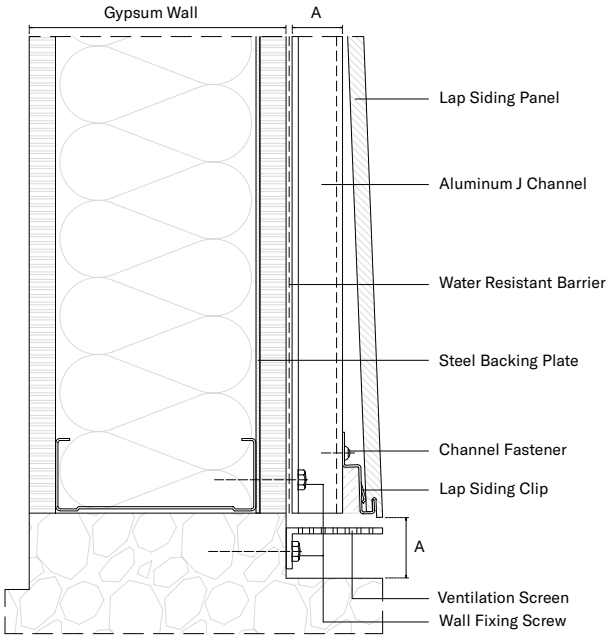
To finish off, fix the last row of slats in place using screws, following the same steps as the aforementioned system in page 18 (section 3.2.1).



Installation details:

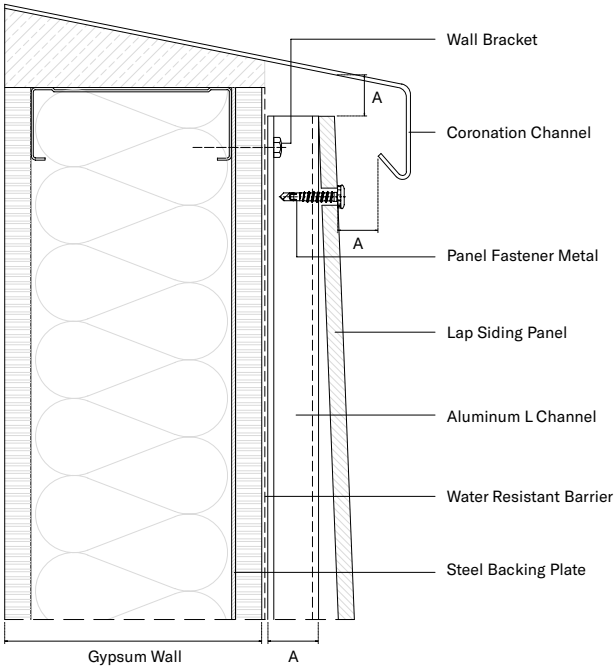
PARKLEX PRODEMA has an extensive range of solutions showing all types of installation details to address corners, windows, crowns, etc. All of these details are available on the Technical Area of the PARKLEX PRODEMA website.

BASE DETAIL



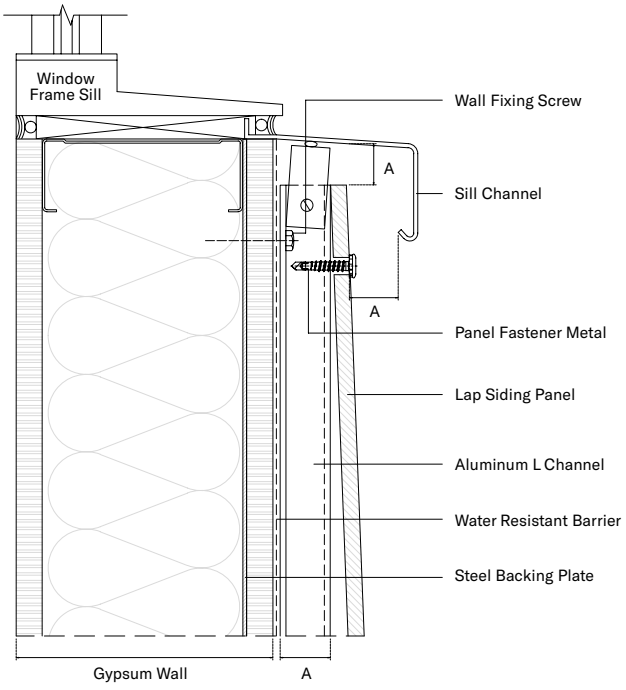
A > 20 mm (¾")

HEAD DETAIL

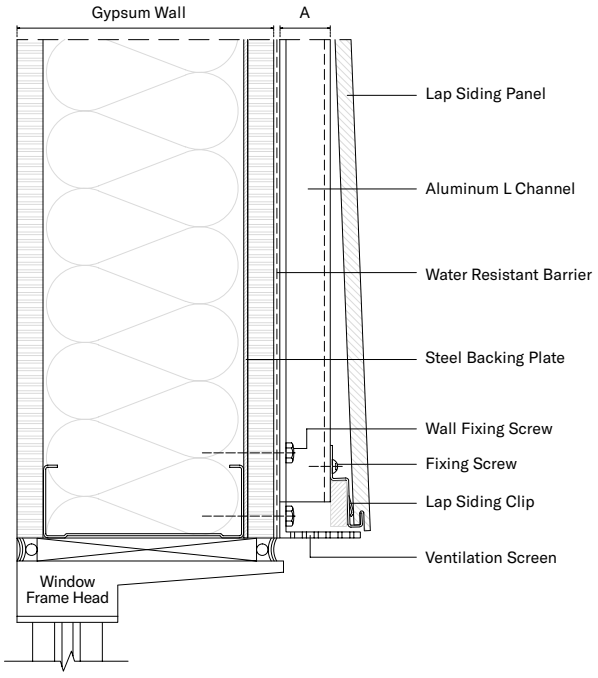


A > 20 mm (¾")

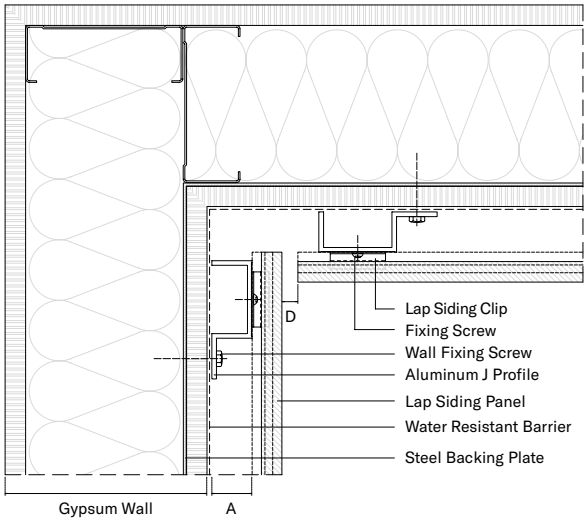
WINDOW SILL



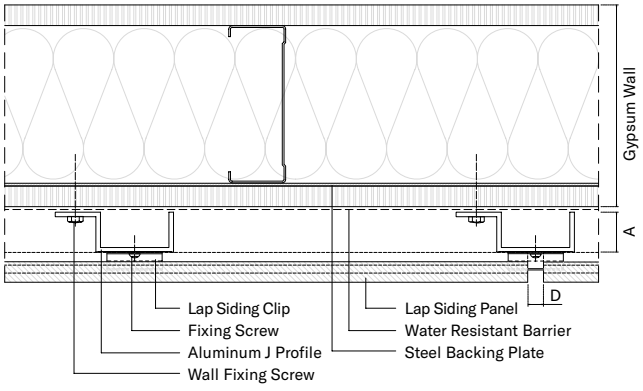
WINDOW HEAD



INSIDE CORNER



VERTICAL JOINT



Accessories:

<table>
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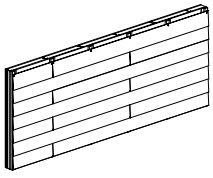
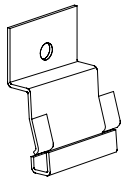
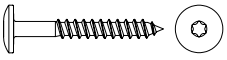
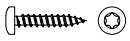
Installation accessories for Lap Siding</td></tr>
<tr><td>Fixing</td><td>Accessories</td></tr>
<tr><td> 
Horizontal</td><td> 
Lap Siding Clip

Gap Gauge Tool

SX3-D12
 
TWS-D12

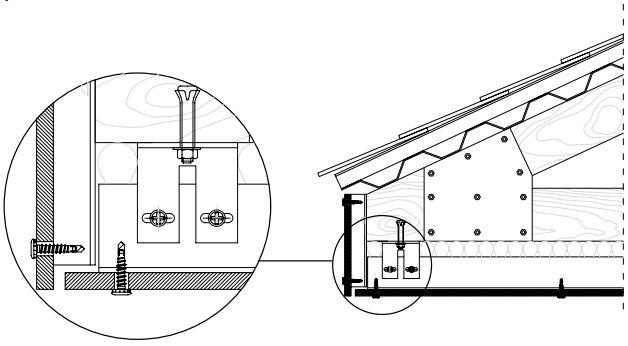
7504N M3,5/L= 19 mm
 
7505B M3,5/L= 25 mm</td></tr>
</table>

3.4. NATURSOFFIT and Suspended Ceilings

For suspended ceilings PARKLEX PRODEMA offers NATURSOFFIT, NATURCLAD and NATURSIDING panels. Select the installation method that is best suited to your project and follow the recommendations listed below.

3.4.1. Exposed Fastening with Screws or Rivets

To install NATURCLAD or NATURSOFFIT panels in ceilings with the exposed fastening system, you must pay attention to the instructions described in page 18 (section 3.2.1). This fastening system can be used with 8 mm (5⁄16"), 10 mm (3⁄8"), 12 mm (1⁄2") and 14 mm (9⁄16") panels.



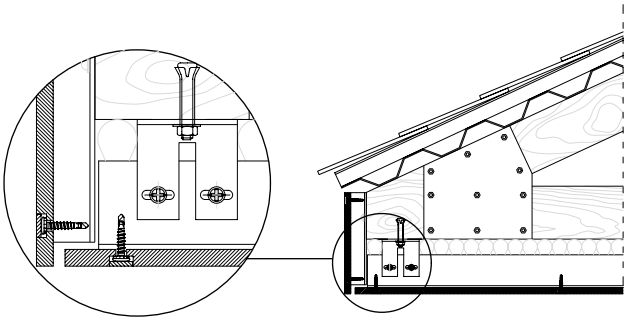
Distance between profiles:

THICKNESS	MAXIMUM DISTANCE
8 mm (5⁄16") / 10 mm (3⁄8")	600 mm (≤ 24")
12 mm (1⁄2")	800 mm (≤ 32”)
14 mm (9⁄16")	1000 mm (≤ 40”)

There must always be at least 3 fastening points in each direction for every panel.

3.4.2. Concealed fastening with Caps

This system permits the installation of 10 mm (3⁄8") and 12 mm (1⁄2") thick panels. To install NATURCLAD or NATURSOFFIT with caps, it is essential to consult the instructions described in page 26 (section 3.2.2).



Distance between profiles:

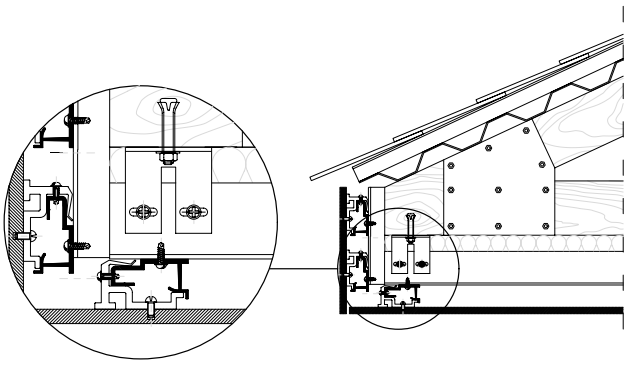
THICKNESS	MAXIMUM DISTANCE
10 mm (3⁄8")	600 mm (24")
12 mm (1⁄2")	800 mm (32")

There must always be at least 3 fastening points in each direction for every panel.

3.4.3. Concealed fastening with Hanging Hooks

This system permits the installation of panels with a thickness of 8 mm (5⁄16"), 10 mm (3⁄8") and 12 mm (1⁄2") as ceilings.

To install NATURCLAD or NATURSOFFIT panels using concealed fastening system with hanging hooks, it is essential to consult the instructions described in page 31 (section 3.2.3).



Panel fixing:

Once the pieces have been aligned to their final position, a stainless steel self-tapping screw fixes the bracket to the hanging rail to prevent it from moving sideways. The central hanging hook at the top of the panel must be screwed in place.

DISTANCE BETWEEN PROFILES:

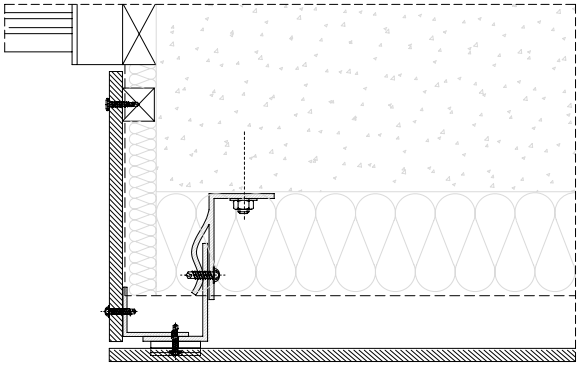
THICKNESS	MAXIMUM DISTANCE
8 mm (5⁄16") / 10 mm (3⁄8")	600 mm (24")
12 mm (1⁄2")	800 mm (32")

There must always be at least 3 fastening points in each direction for every panel.

3.4.4. Siding installation system on soffits

Siding system can be also applied on horizontal surfaces as ceilings or soffits with NATURSIDING or NATURSOFFIT fabricated slats.

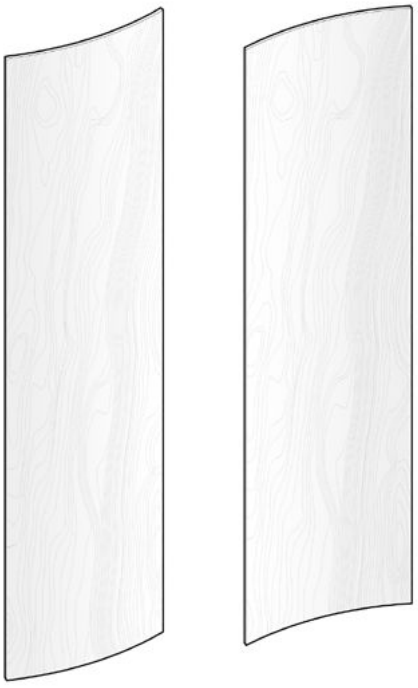
To install NATURSIDING or NATURSOFFIT slats using this system, please follow the instructions described in page 43 (section 3.3.1).



3.5. Curved Surfaces

PARKLEX PRODEMA provides three different solutions for projects requiring the installation of NATURCLAD panels in curved walls:

– Using flat panels if the surface can be faceted
– Using standard panels for radii greater than 3 m*
– Using pre-curved panels for smaller radii



3.5.1. Curved Surfaces with Faceted Panels

The curving technique consists of using flat (standard) panels to create a faceted, curved surface. Select the installation method appropiate for the project and follow the technical instructions in this catalog.

3.5.2. Curved Surfaces with Flat Panels

Each radius requires a specific panel thickness. In the event of wanting to use thicknesses other than those detailed below, or to create a curve against the grain, consult the PARKLEX PRODEMA technical department.

Curved panels can only be installed using Exposed Fastening with Screws or Rivets described in page 18 (section 3.2.1).

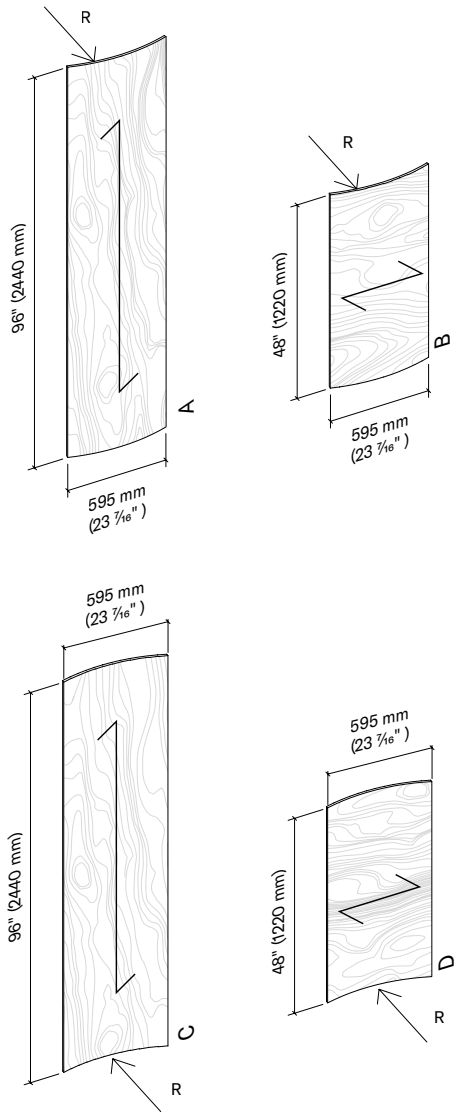
When installing the panels on a curved structure, the distance between profiles must be reduced. The distance between the center of the fastening and the edge of the panel must be between 20-25 mm (¾"- 1").

CURVATURE RADIUS	THICKNESS	DISTANCE BETWEEN PROFILES
≥ 3 m (10')	6 mm (¼")	≤ 300 mm (12")
≥ 10 m (32')	≤ 8 mm (⁵⁄₁₆")	≤ 400 mm (16")
≥ 20 m (64')	≤ 10 mm (⅜")	≤ 450 mm (18")

* This table indicates the achievable radii of curvature for a panel measuring 2.440x1.220 mm (96"x48"). Alighter radius can be achieved when the width of the panel is reduced.

3.5.3. Precurved NATURCLAD Panels

Smaller radii than 3 m (10') can be achieved using pre-curved panels. PARKLEX PRODEMA provides 6 mm (¼") thick concave and convex pre-curved NATURCLAD panels with different radii, depending on project needs.



Dimensions vary depending on the direction of the selected grain.

Available radii:

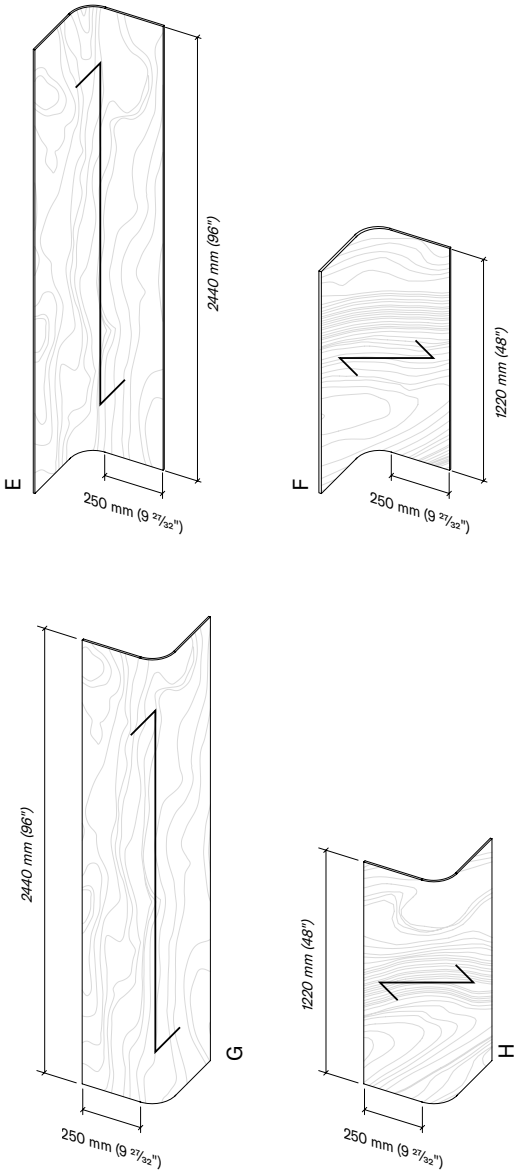
- 0.33 m (13")
- 0.5 m (20")
- 1 m (39")
- 2 m (79")
- 4 m (160")

Pre-curved panels are only installed using Exposed Fastening with Screws or Rivets described in page 18 (section 3.2.1), with a distance between profiles of ≤ 600 mm (24") with a central support profile in case of convex pieces. The selected panel's curvature radius has to be as close as possible to the required radius, but always higher. The available radii of precurved panels can later be adapted on site to meet any specific curvature requirements.

To choose the most suitable curvature radius, please contact the PARKLEX PRODEMA technical department.

3.5.4. NATURCLAD Precurved Corner Panels

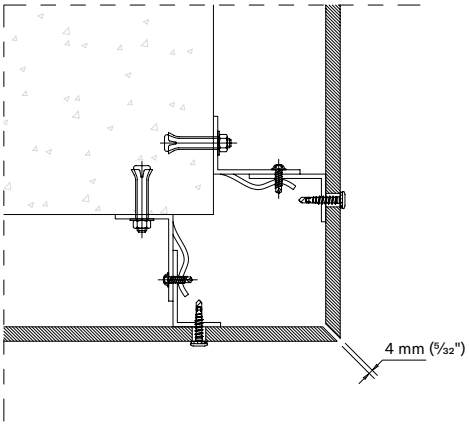
PARKLEX PRODEMA provides 6 mm-thick (¼") pre-curved Cladding pieces for concave or convex corners using Exposed System described in page 18 (section 3.2.1) with a 50 mm radius, to suit both vertical and horizontal wood grain directions.



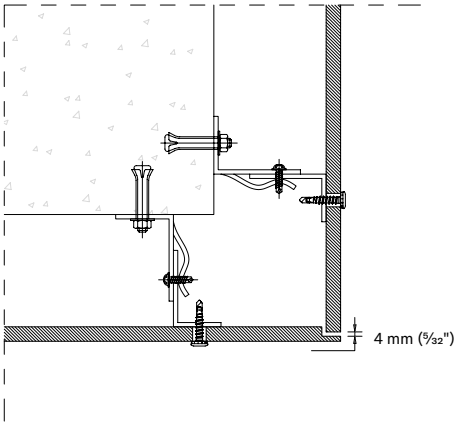
3.5.5. Corner Details

PARKLEX PRODEMA has an extensive range of solutions to address interior or exterior straight corners regardless of the used installation system.

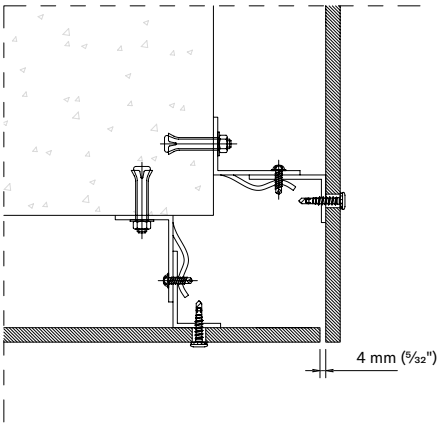
MITERED CORNER



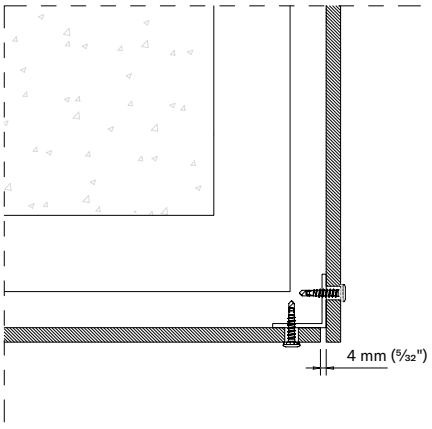
PILASTER EDGE



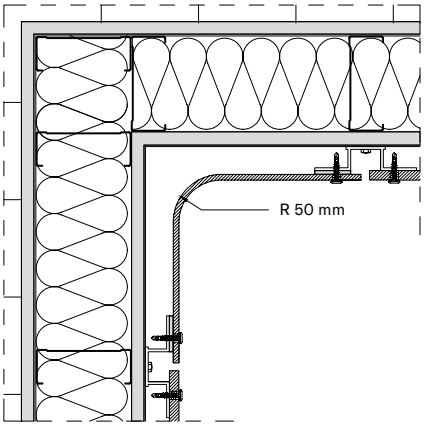
OVERLAPPING EDGE



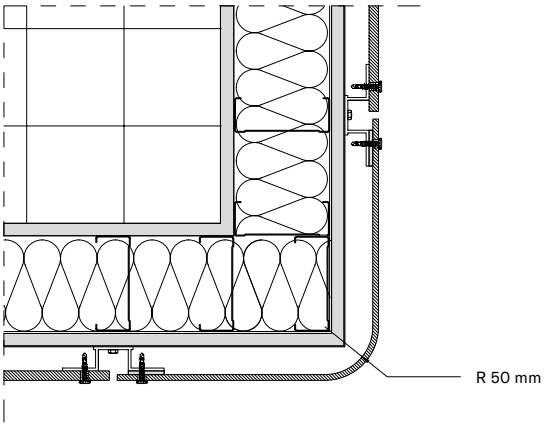
OVERLAPPING EDGE WITH REINFORCED CORNERS



INTERIOR PRE-CURVED CORNER



EXTERIOR PRE-CURVED CORNER



4.1. Removing the protective film

NATURCLAD, NATURSOFFIT and NATURSIDING panels are protected by a special film on the finished side. The protective film, applied at the factory, must be removed from the panel surface as soon as the product has been installed. Never try to remove the film from the reverse side as this is not a protective film and is necessary for the stability of the panel.

Never leave an installed panel, or one exposed to the elements, with its protective film in place for more than 2-3 hours. This will prevent the film from leaving residue on the panel surface and avoid having to remove it using special products. It will also prevent the panel from warping.

4.2. Maintenance and Cleaning

Simple cleaning of the panels is the only maintenance needed. The surface does not require any specific preventative treatment designed for wood.

The non stick composition of their surface panels will allow most stains to be removed easily, with water and mild household detergents.

However, if the surface is dirty or there are traces of the adhesive of the protective film, this can be cleaned with warm water mixed with liquid detergent, using a soft and clean cloth but never rubbing the surface when dry. Never use abrasive detergents.

In case of stubborn stains, the surface of the panel can be cleaned with a soft cloth (not dyed), dampened with universal solvent (petroleum naphta or white spirit). Never use cloths or sponges with abrasive cleaning or sanding agents, as they may damage the surface of the panel.

Nor harsh solvents as Acetone, Ethyl Acetate, MEK, nail polish remover, etc... should be used. They can cause permanent damage by dissolving the surface protection film partially, totally or by causing cracks, which may not be obvious at first glance. These products should also not be used at the rear side of the boards.

The surface of the panel must be dried using an absorbent, fluff-free cloth.

It is recommended to always test clean a small part of the affected area, and once the effectiveness of the procedure has been verified, proceed with the rest of the surface.

Solvents and chemical cleaning products must be used following appropiate health and hygiene regulations at all times.

Cleaning graffiti:

The specially treated non-stick surface of panels will prevent aerosol paints from permanently adhering to the surface of the panel. However, removal may require products specifically designed for removing this type of paint. A final cleaning with soapy water and a full rinse with clean water are recommended.

We have specific Resistance to Graffiti tests available for stains made with the following materials:

– Permanent blue marker and red spray paint (solvent-based)

– Black wax

– Water-based clack marker

Never use abrasive cleaning powders or pastes, which will scratch the surface.

If you would like to see the results of these tests, please request them from the PARKLEX PRODEMA sales network.

4.3. Repair

There is currently no prescribed method for repairing PARKLEX PRODEMA panels. In case of severe damage, affected panels must be replaced with new.

5. Removal Information

5.1. Removal

NATURCLAD, NATURSOFFIT and NATURSIDING products are part of a ventilated facade system, the main components of which (aluminum, steel, wood and plastic) are easy separable and recyclable.

5.2. Waste Management

Reuse:

Reuse of the panel for other applications with different requirements is encouraged.

Recycling:

The cellulose fibers of the core and the thermostable wooden sheet can be recycled. Recycling possibilities include its use for piller material for wood-based panels for construction use.

Dumping at landfills sites: the specifications that regulate and manage construction and demolition waste shall be followed. as well as any applicable local regulations. Disposal in industrial incinerators can also be considered.

Sub-construction:

The wood, aluminum or steel profiles may be reused for their original use, or recycled if the buildings have been carefully deconstructed.

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