

CERACLAD®
Fiber-Cement
Siding

Triple Coated
Caulk-Free
Rainscreen System

20-Year Fade Limited Warranty • 365 Days Self Cleaning • Low Maintenance

Running Bond
Freestyle Design Method

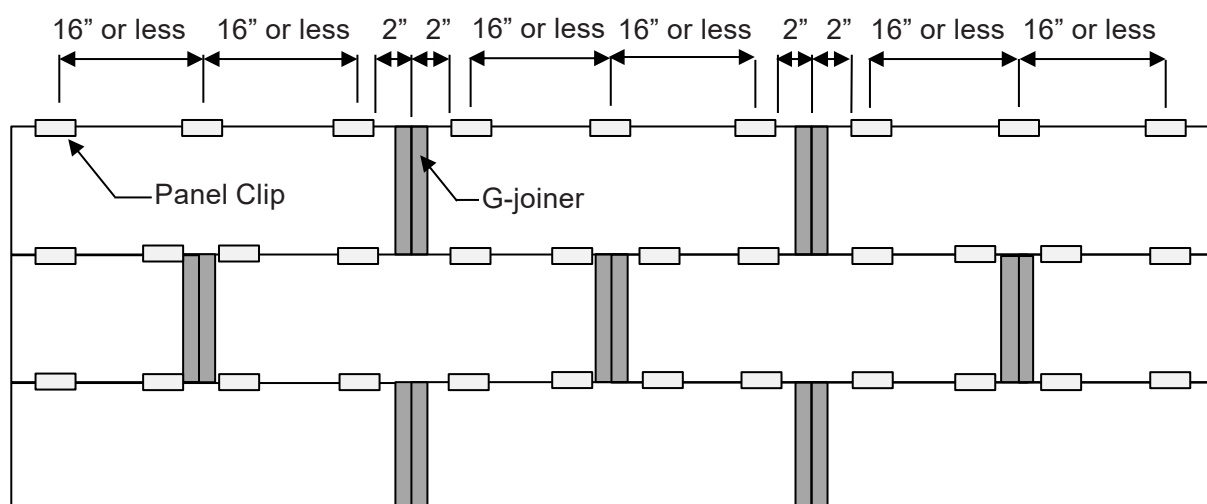
1. General Installation Standards

This manual contains general Installation standards for Running Bond installation only.

Refer to the published instructions for L-Joint or Caulk Joint installation for more information as required.

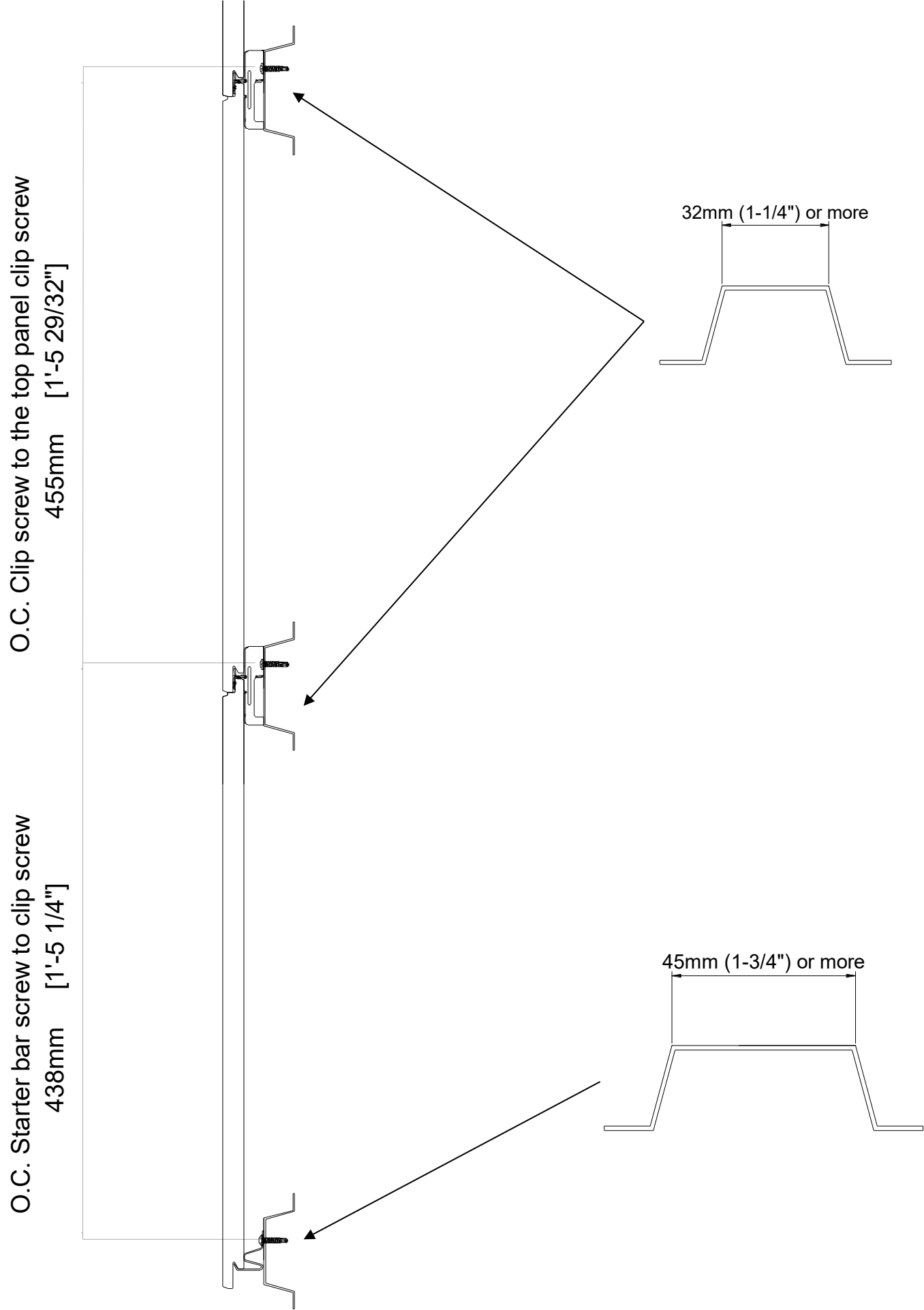
■ General Installation Standards

- This method is for horizontal application only. Vertical application is not approved.
- Install by fastening Gasket joiners (G-joiners) and panel clips as shown in the figure below.
 - ※ Panels and gasket joiner must be fully seated against each other with no gaps.
- Panel clips should be installed at intervals of 16" (400mm) on center or less.
- Panel clips are fastened to wood stud with one screw, to plywood sheathing only with two screws, and to steel stud or steel sub-frame with two screws.
- G-joiners are fastened to the top and bottom of the flange with screws.
- ※ Fasteners for two- or three-stack gasket joiners must be staggered at 18" O.C. See pages 23–25 for reference.
- Panel clip ends on either side of the G-jointer should be installed 2" (50mm) away from center line of vertical joint location.
- Apply the specified waterproof sealer to the panel edges where G-joiners are used.
- Locate the vertical joints in advance so that G-joiners and panel clips do not interfere with each other.



■ Specification of a hat channel (Furring strip)

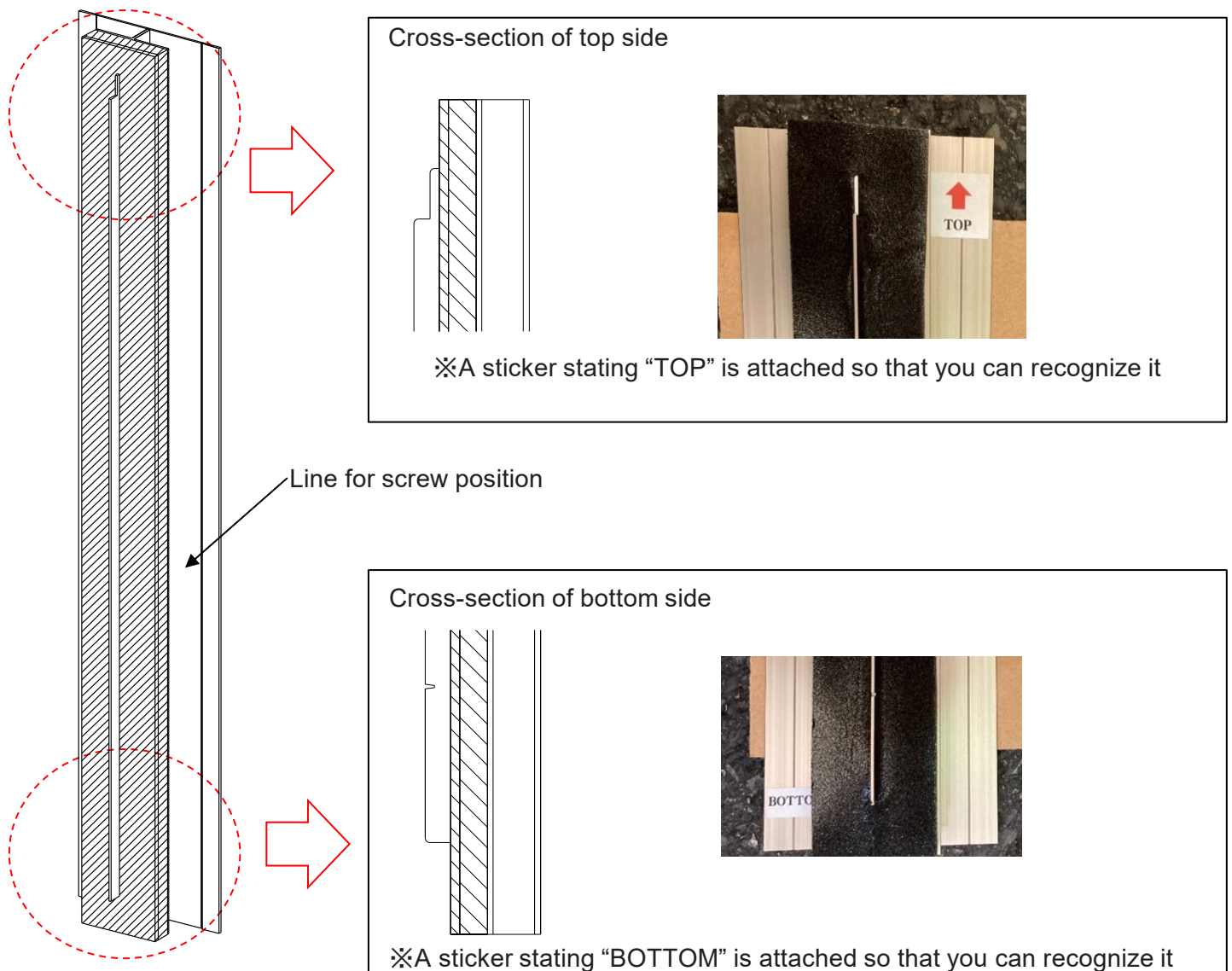
- Use a substrate for Starter bar with a width of 1-3/4 " or more for the furring strips.
- Use a substrate for Panel clip with a width of 1-1/4 " or more for the furring strips.



2. Installation Precautions

■ Shape of G-joiner

- The G-joiner has a screw position line – minimum 2 screws per joiner.
- **Install G-Joiner with correct top/bottom orientation**
- The top side of G-joiner flange is marked “↑top” and the bottom side is marked “bottom”.
- The top side of G-joiner has a notch that follows the shape of the shiplate of the panel.
- The bottom side of G-joiner has a notch at the location where it is to be cut so that it does not overlap the starter bar on the first panel course.
- Subsequent courses do not require the joiner to be cut.
- However, G-joiner should be cut and installed at under eaves and above and below openings.
- Only cut the joiner for the first panel course where the joiner meets the starter bar.



- **The G-Joiner must be installed with the correct top/bottom orientation.**
- **Do not install a G-Joiner that is deformed or damaged.**

2. Installation Precautions

■Cutting G - Joiner

- Use a chop saw when cutting G-joiners such as at the starter, top of the wall, opening above and below.
- If cutting is not smooth, adjust the cutting speed, etc.
- When cutting G-joiners, be sure to use a blade with tips.

Example: Blade

**With tips
Recommended**



**Without tips
Not recommended**



- Cutting extruded aluminum metal trims:
 - Non-Ferrous metal 80 tooth blade w/ chop saw (Recommended)
 - Quickest cleanest cutting method
 - Steel cut off blade (not recommended)
 - Relatively clean cut
 - Creates sparks when cutting
 - Leaves tag on the cut that requires snipping
 - Tin Snips – Hand cut (not recommended)
 - Least efficient, least clean cut
 - Tends to bend material during cut



**Rough handling of the G-joiner can lead to deformation or damage.
Please handle it with care**

2. Installation Precautions

■How to cut panels

- Panels should be cut with the back side up.
- Use a panel saw or circular saw with a vacuum attachment to cut panels.
- Cut panels straight using a guide.
- Clean cut panels by blowing dust away with compressed air or with a clean dry cloth.
- Surface chipping caused by the cut should be touched up with Ceraclad touch-up paint.
- We recommend using the cutting guide and CERACLAD blade to cut the panel.

Circular saw with a vacuum attachment

Cutting guide

Panel (back side up)



Surface chipping
Repair with touch-up paint
is required.



CERACLAD blade
(B49321)



※Use this blade only for cutting
Ceraclad siding panel only

Cutting Guide(Shinwa)
(B49311)

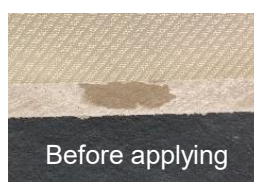


2. Installation Precautions

■ Treatment of panel edges

- Apply KMEW specified waterproof sealer to the following panel edges
- Soak the brush with the sealer and run the brush back and forth from edge to edge of the application surface to ensure that the wet color is applied firmly to the panel edge surfaces, including the chipped areas.

⚠ Ensure that the sealer does not extend beyond the panel edge.

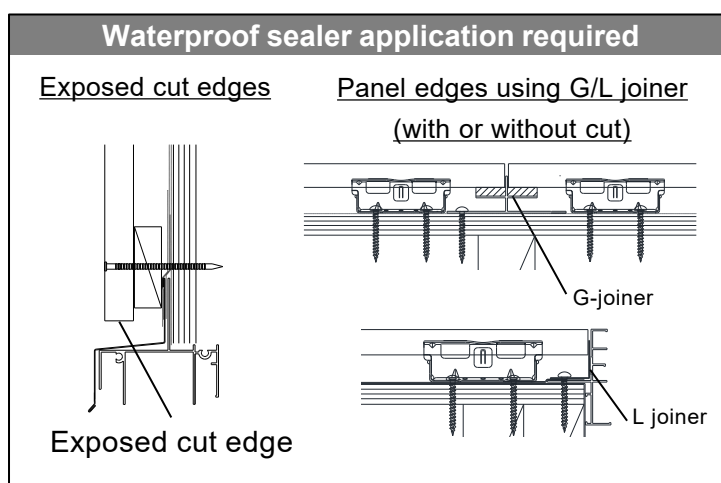


Before applying



After applying

The sealer is applied to make the panel edge surface water-repellent.



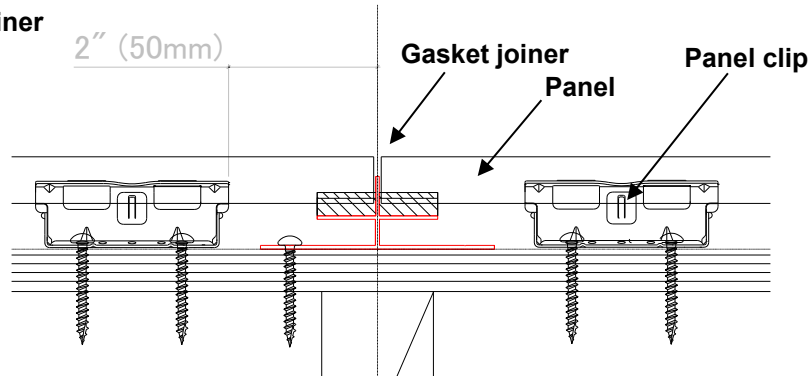
Do not apply waterproof sealer to panel edges where caulking is to be applied. It may cause the caulking to peel off.

2. Installation Precautions

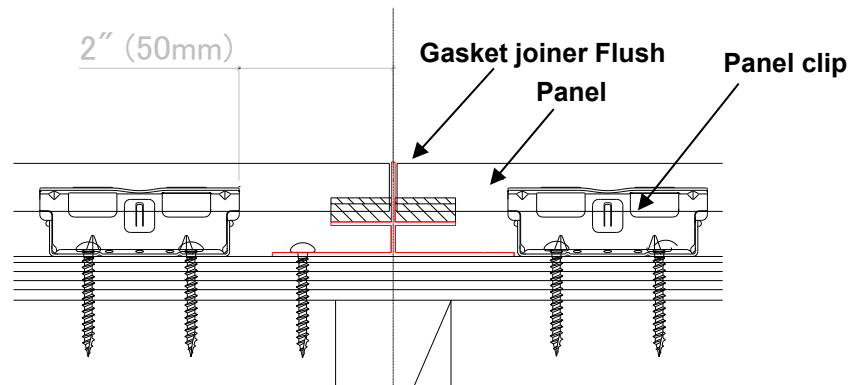
■ Install Gasket Joiner at Vertical Joints

- Gasket joiner has two design options
 - ① depending on the viewing angle, the joint may be noticeable.
- ※For darker panel colors, it is recommended to install per option 2. This helps minimize the visual contrast between the panel surface and the lighter-colored fiber cement core at the edges. For available color options, refer to the trims Technical Data Sheet.

① Gasket Joiner

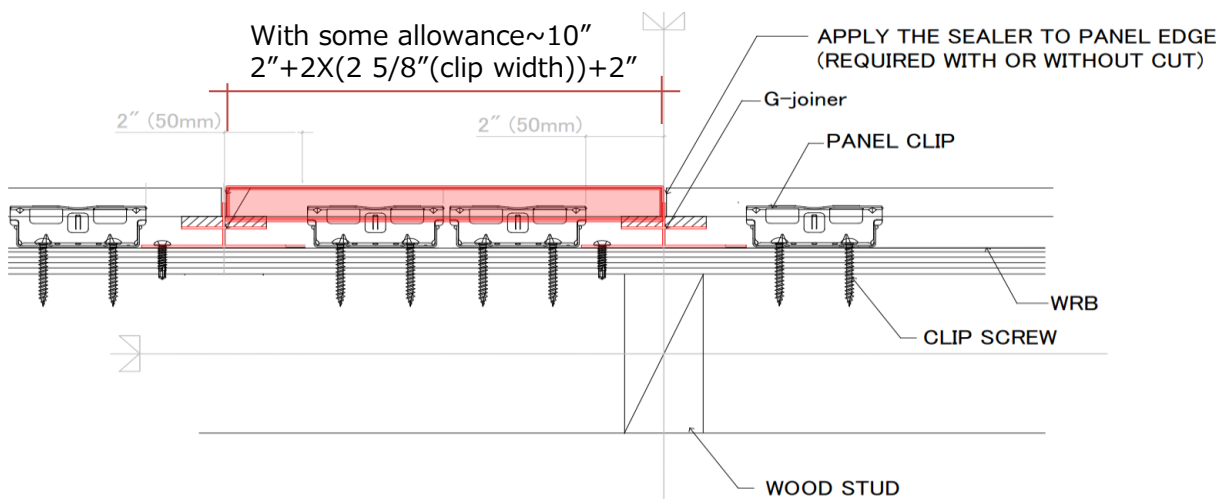


② Gasket Joiner Flush



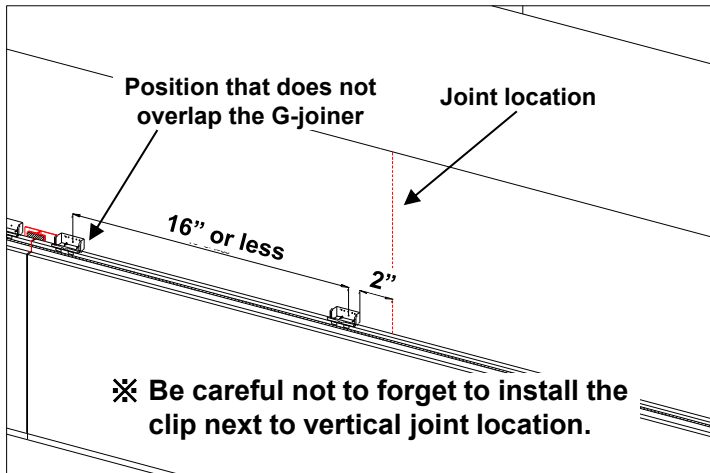
■ Minimum panel length with the running bond application

- ① Please ensure that the panel width allow for the installation of two panel clips.

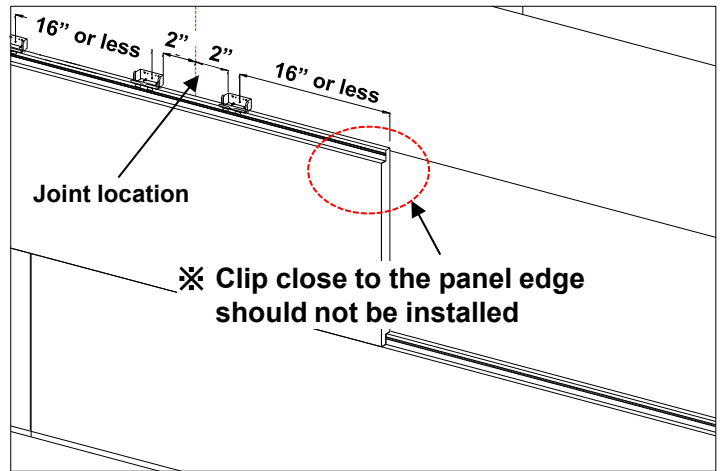


3. General Installation Procedure (for panel clip)

1. Install the first clip at a location that does not overlap the G-jointer and install the clip 2" away from next joint location and install other clips at 16" on center or less.

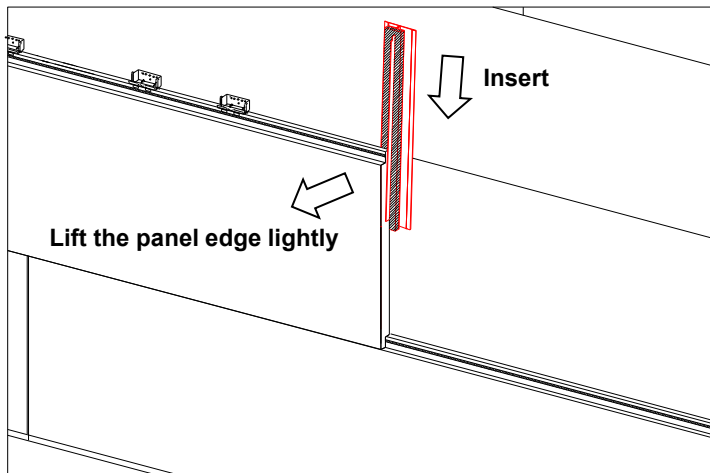


2. Install panel and Install the clips 16" or less. If there is a vertical joint location, the clip should be 2" away from the vertical joint location. At this step, do not install the clip at the panel edge, as it will make insertion of the G-jointer difficult.

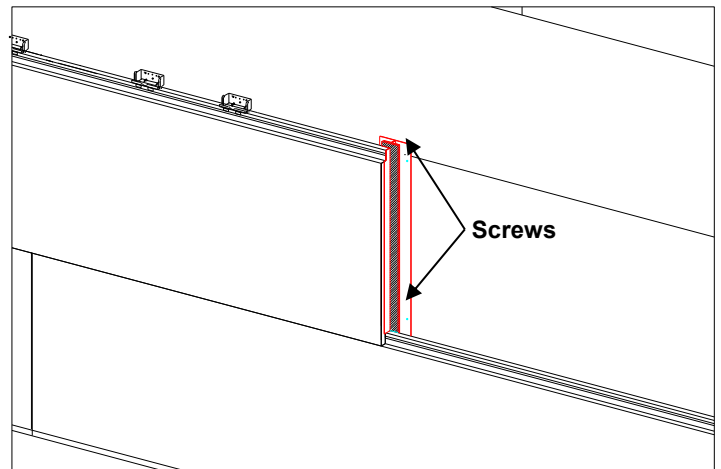


3. Insert the G-jointer from the upper side of the joint until it hits the shiplap. If the G-jointer is difficult to insert, lightly lift the panel edge to make insertion easier.

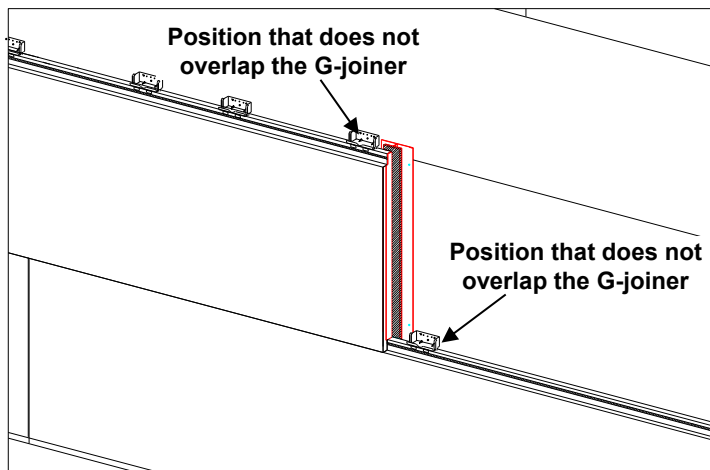
※ "Install the G-Jointer with the correct top-bottom orientation."



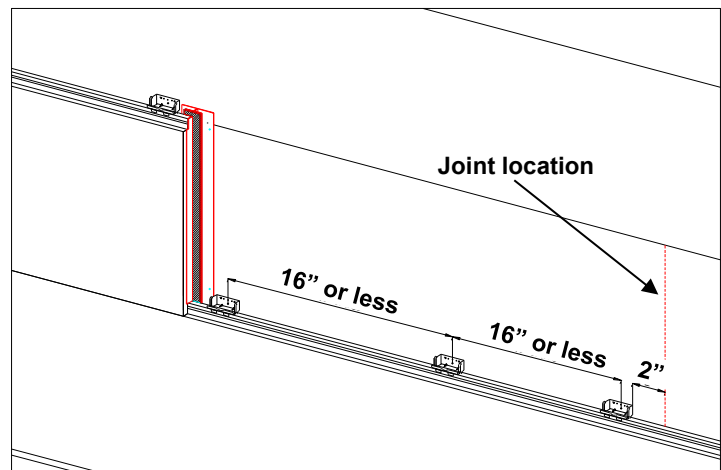
4. Butt the G-jointer to the panel edge and secure with two screws.



5. Install the clips in a position that does not overlap the above and below of the G-jointer.

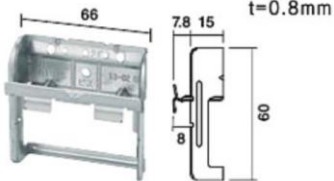
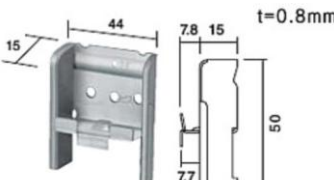
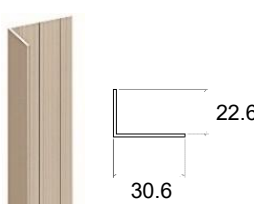


6. Install the clip 2" away from next vertical joint location and install other clips at 16" on center or less.



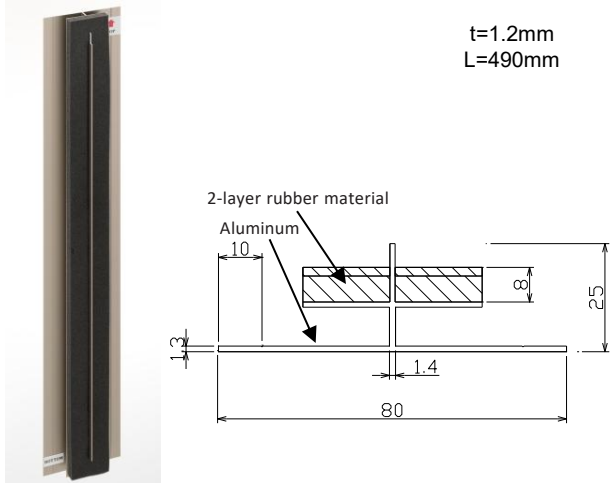
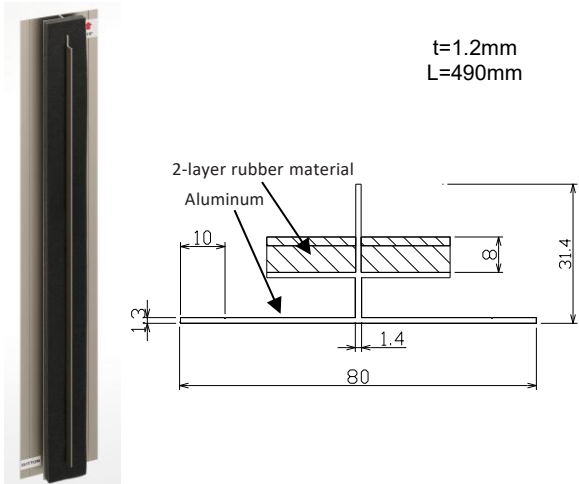
4. Installation Components

Common components

Name (SKU)	photo	Material	Places of application
Starter bar for horizontal application (B101152)		Hot-dip zinc-aluminum-magnesium alloy coated steel	Serve as a support for the first panels in the case of horizontal installation. Applied on the sill of the building before the installation of the panel.
	4 pieces/box		
Panel clip (B10115)		Hot-dip zinc-aluminum-magnesium alloy coated steel	Used for fixing the panel to substructure
	30 pieces/bag		
Corner Clip (B101153)		Hot-dip zinc-aluminum-magnesium alloy coated steel	Used for fixing the preformed corners
	20 pieces/bag		
L-joiner (B3616KF4)		Aluminum	It is applied on the inside and outside corners, jambs and other vertical abutments.
	15 pieces/box		

4. Installation Components

Gasket Joiner

Gasket Joiner (B3711F4)	 t=1.2mm L=490mm 2-layer rubber material Aluminum 10 8 25 1.4 80 30 pieces/box	Aluminum •Upper layer →EPDM •Lower layer →Repellent polyurethane foam	Used to form vertical panel joints of Running Bond (panel to panel)
Gasket Joiner Flush (B3711TF※) ※Color 1:Black 2:white 4:Gray	 t=1.2mm L=490mm 2-layer rubber material Aluminum 10 8 31.4 1.4 80 30 pieces/box	Aluminum •Upper layer →EPDM •Lower layer →Repellent polyurethane foam	Used to form vertical panel joints of Running Bond (panel to panel)

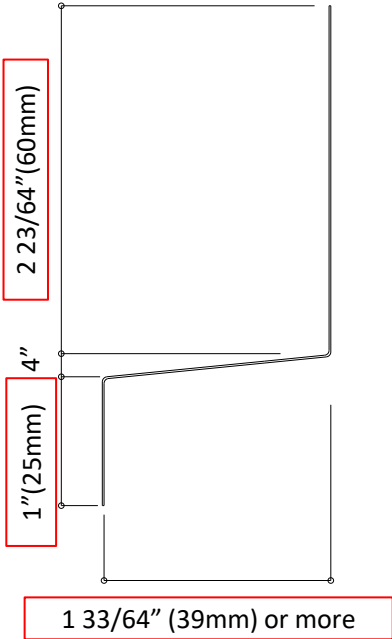
4. Installation Components

■ Common components

Siding Panel Installation Accessories (Purchase locally)

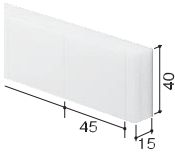
Reference : Through wall flashing

The recommended specifications are as follows:

Name	Drawing	Material	Places of application
Through wall flashing	Please ensure the width is at least 1 33/64"(39mm). If it is 1 33/64" (39mm) or less, there is a risk that a 7 mm gap for ventilation between the through-wall flashing and the panel surface cannot be maintained. 	Aluminum or Stainless ※Choose corrosion-resistant material as above	Separate section

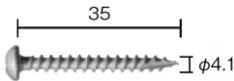
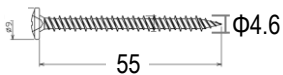
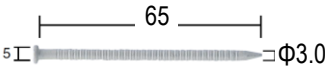
4. Installation Components

Common components

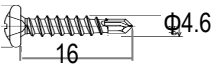
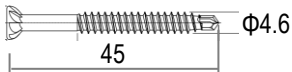
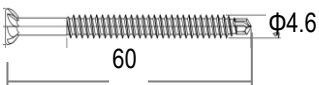
Name (SKU)	photo	Material	Places of application
Spacer 15 (RY82S15)		Polypropylene	Used as backing for face fastener locations to eliminate deflection of the panel.
	22 blocks/strip 6 strips/box		
Water proof sealer (LTKMB3103C)		Silane water repellent	It is applied on the cut edges
	1 piece		
Repair putty (B4901)		Acrylic emulsion	It is used for scratches, chips and holes from face screws.
	1 piece		
Repair paint (Different for each SKU)		—	It is used on spots where putty is applied and scratches.
	1 set/box		
Cutting Guide (B49311)		Main Body: Aluminum Guide Surface: Stainless Steel Protective Cap: ABS Resin Large Handle: ABS Resin, Elastomer Resin	It is used to assist in cutting panel
	1 piece		
CERACLAD Blade (B49321)		Cutting edge: Diamond tip	It is used to cut panel
	1 piece		

4. Installation Components

■ Fasteners for wood structure

Name (SKU)	photo	Material	Places of application
Clip screw 35 for wood substructure (B881135)		Stainless steel	Used for attaching clips to a wood substructure
Clip screw 55 for wood substructure (B88553)		Stainless steel	Used for attaching clips to a wood substructure
Face nail 65 for wood substructure (B8765R400)		Stainless steel	It is used to fasten the panel in places where the use of clips is impossible or necessary to strengthen the fastening

■ Fasteners for steel structure

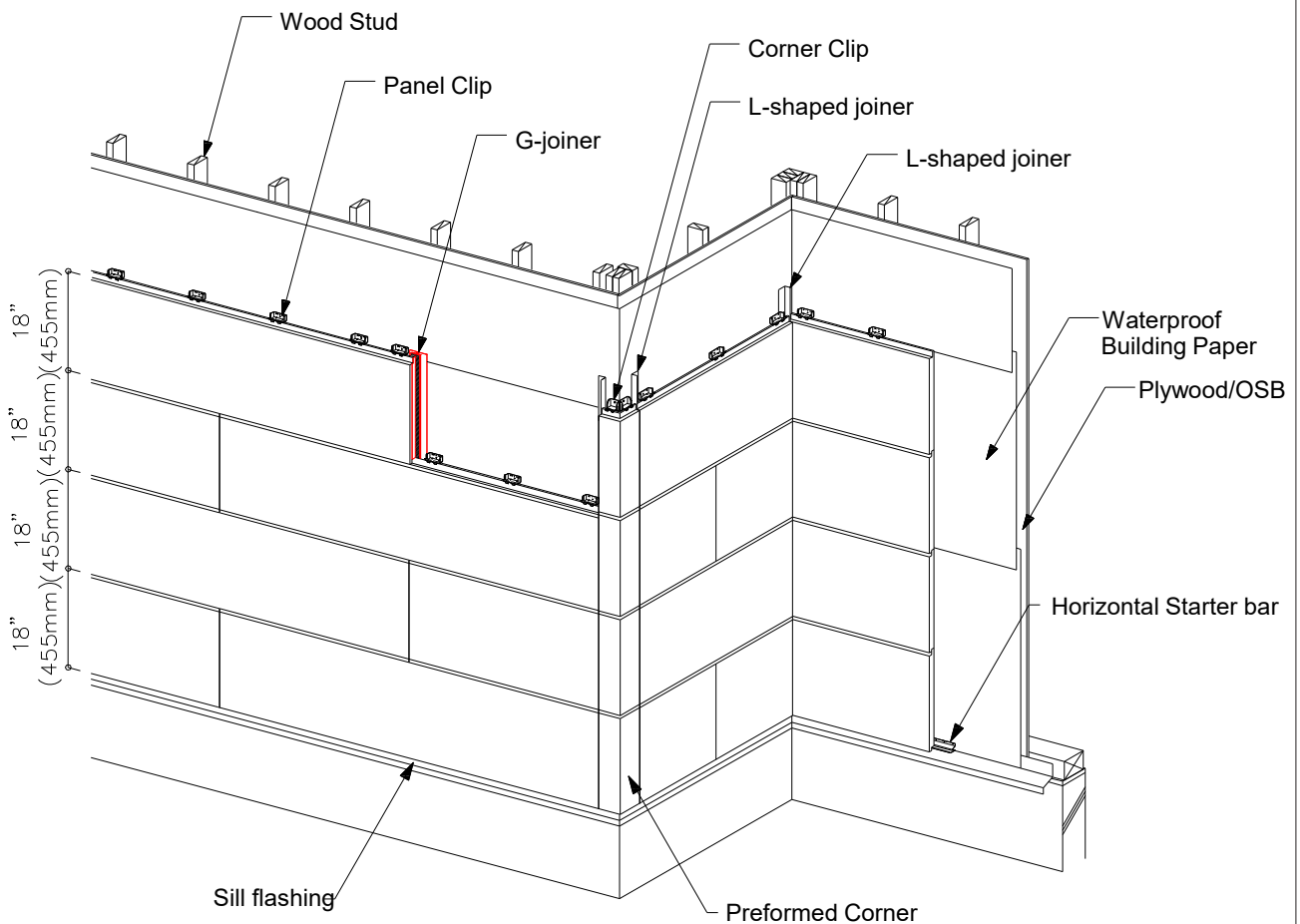
Name (SKU)	photo	Material	Places of application
Clip screw 16 for metal substructure (B885116)		Stainless steel	Used for attaching clips to a steel sub-structure such as hat channel
Clip screw 30 for metal substructure (B885130)		Stainless steel	Used for attaching clips to steel stud
Face screw 45 for metal substructure (B885245)		Stainless steel	It is used to fasten the panel in places where the use of clips is impossible or necessary to strengthen the fastening
Face screw 60 for metal substructure (B885260)		Stainless steel	It is used to fasten the panel in places where the use of clips is impossible or necessary to strengthen the fastening

5. Installation Drawing Details

(Wood Frame – Plywood Sheathing – Horizontal Application)

<1> Installation Overview

- First install the starter bar.
 - Install siding panels with panel clips and pre-formed corners with corner clips.
 - Install G-joiners at the vertical joints of the panels.
- ※The G-Joiner must be installed with the correct top/bottom orientation.
- ※ Do not install the G-Joiner upside down.
- L-joiners should be used at outside corners, inside corners, and openings.
 - Clips have several holes for screws. Fasten clips with one screw when fastening to a wood stud; use two screws when fastening only to sheathing.
 - At the top of a wall, below or above an opening, or in any situation where the panel's shiplaps have been removed, clips cannot be used. Install face fasteners with spacer blocks behind each fastener location. Pre-drill pilot holes and install fastener a minimum 1-1/4" away from panel edge.
 - Seal the exposed cut edges and the panel edges with G/L joiner (with or without cut) with the KMEW specified waterproof sealer.

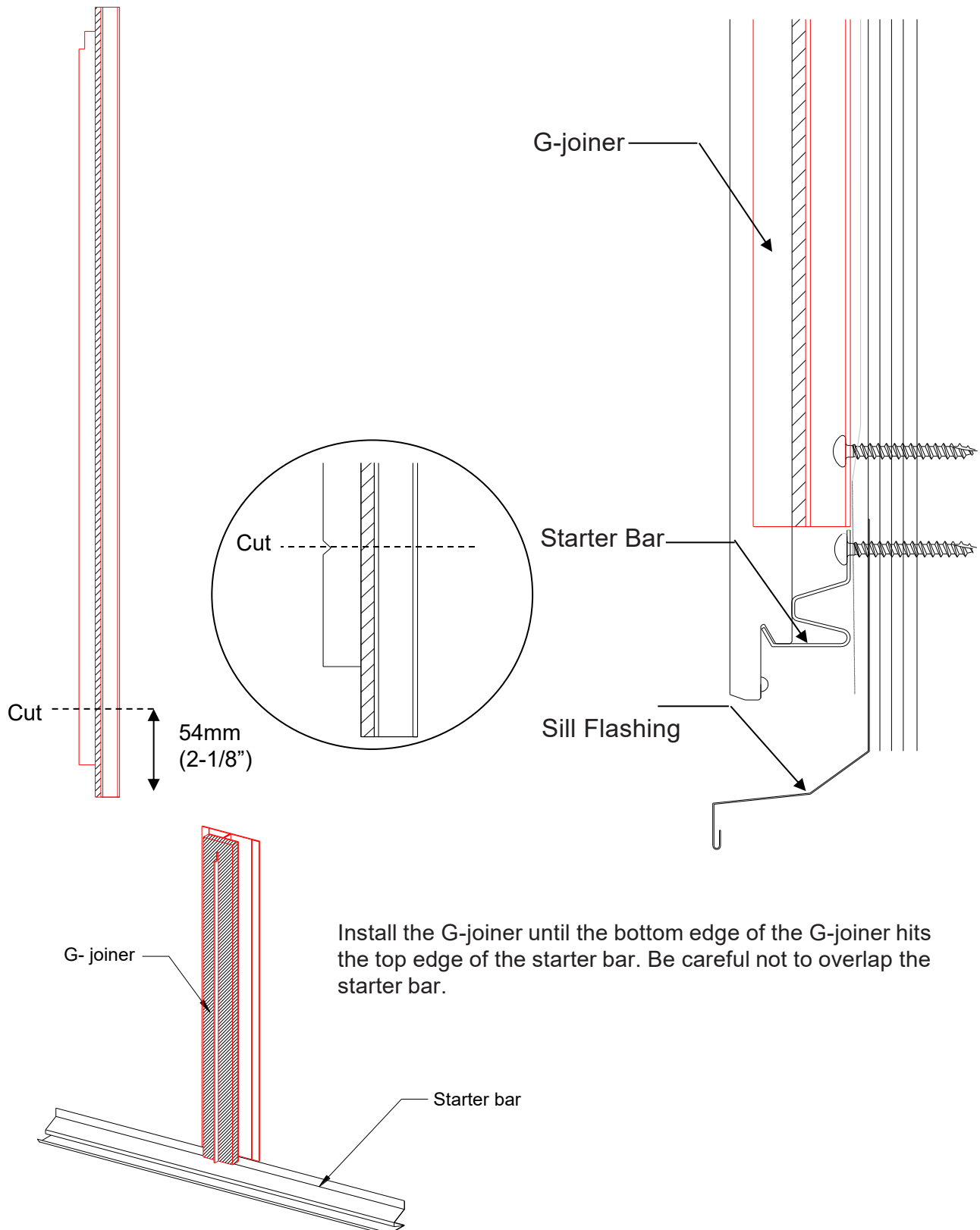


5. Installation Drawing Details

(Wood Frame – Plywood Sheathing – Horizontal Application)

<2> Intersection with starter bar

- The first panel course G-jointer should be cut where it contacts the starter bar before installation.
- The G-jointer have a top side and bottom side, do not install the jointer upside down.
- The bottom side of G-jointer has a notch at the location where it is to be cut so that it does not overlap the starter bar (2-1/8" from the bottom of the G-jointer).
- After cutting, install the G-jointer so the bottom edge of the G-jointer hits the top edge of the starter bar. Be careful not to overlap the starter bar.

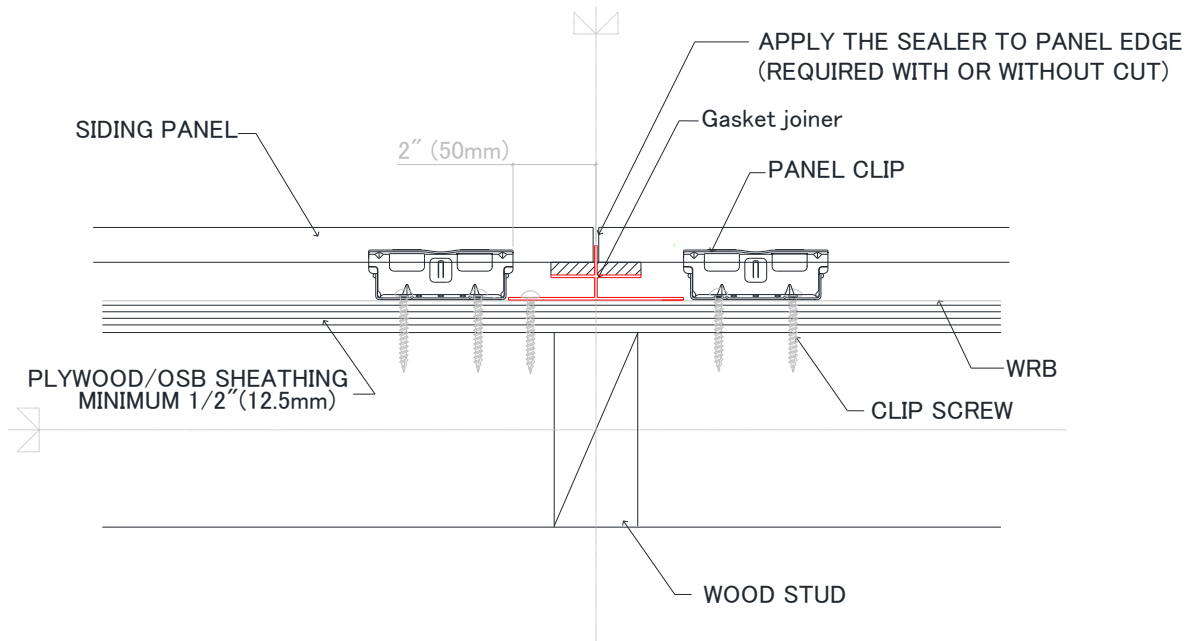


5. Installation Drawing Details

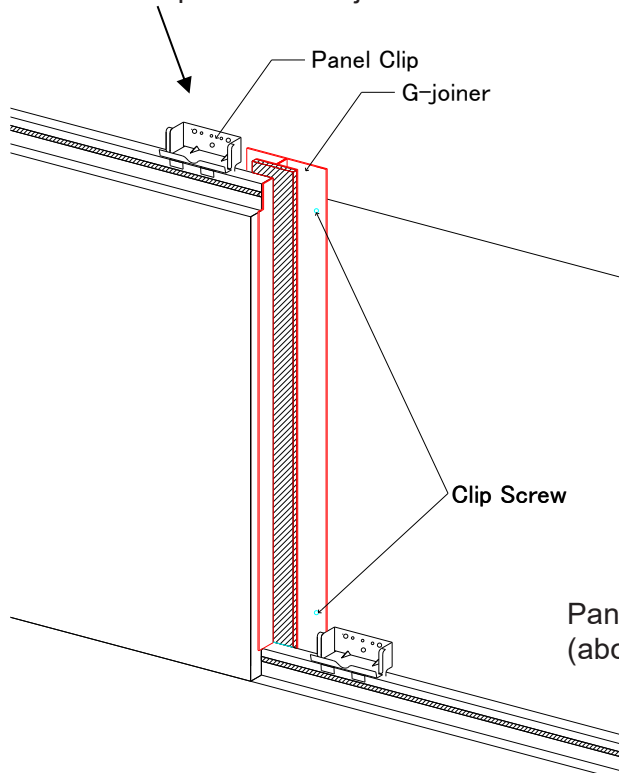
(Wood Frame – Plywood Sheathing – Horizontal Application)

<3> Vertical Joint

- The panel edge of the vertical joints, whether cut or not, should be sealed with waterproof sealer in advance.
- After installing the panel on one side, insert the G-joiner into the vertical joint from the upper side of the joint until it hits the shiplap.
- The G-joiner have a top side and bottom side, do not install the joiner upside down.
- If the G-joiner is difficult to insert, lightly lift the panel edge to make insertion easier.
- The panel clip right next to the joint is installed after the G-joiner is installed. If the clip is installed first, it will be difficult to insert the G-joiner.
- Fasten the top and bottom of the G-joiner flange with screws.
- Install the panel clips in a position where they do not overlap the G-joiner (about 2" away from vertical joint location).



Install this clip after the G-joiner is installed.



Panel clips do not overlap the G-joiner.
(about 2" away from vertical joint location)

5. Installation Drawing Details

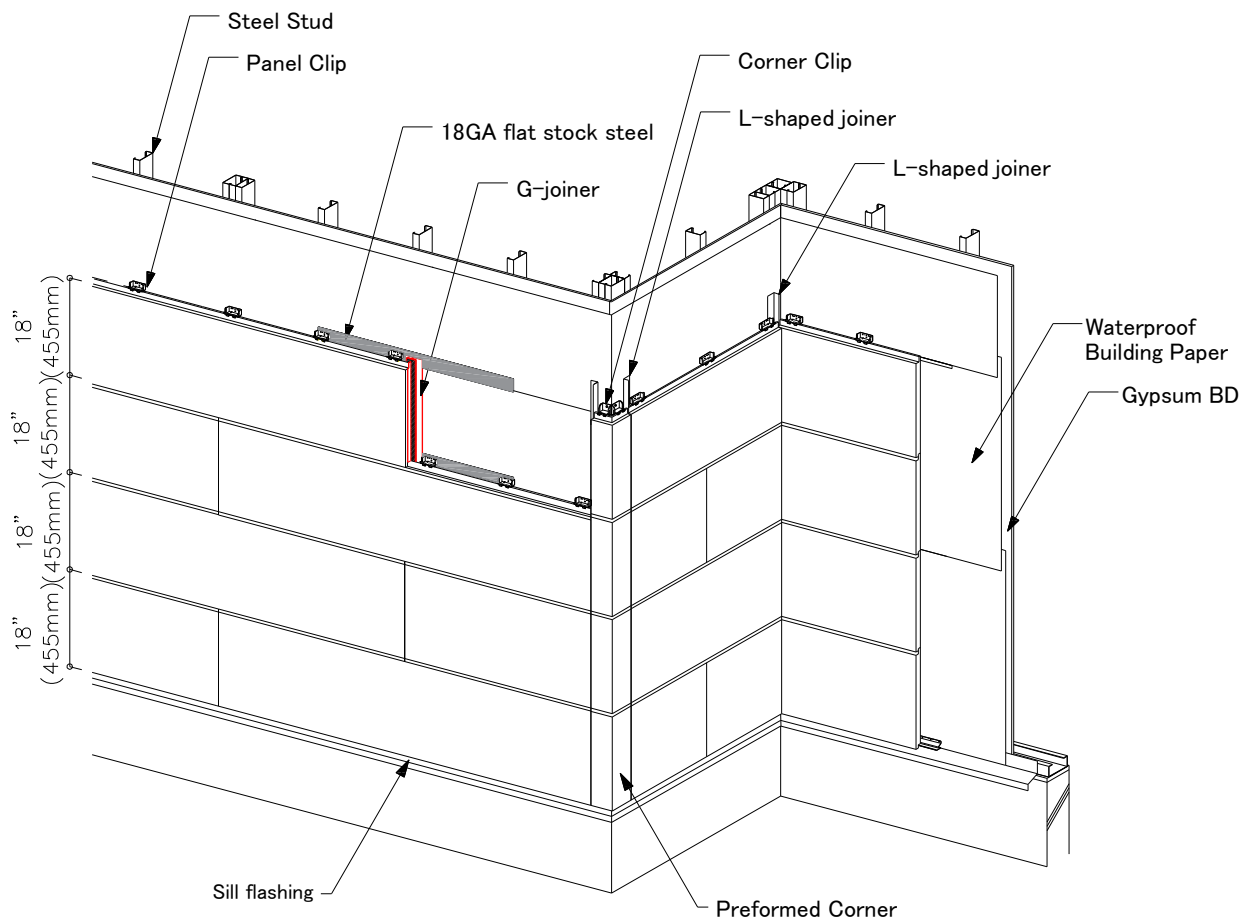
(Steel Frame – Gypsum Sheathing – Horizontal Application)

<1> Installation Overview

- First install the starter bar.
- Install siding panels with panel clips and pre-formed corners with corner clips.
- Install G-joiners at the vertical joints of the panels.

※The G-Joiner must be installed with the correct top/bottom orientation.

- L-joiners should be used at outside corners, inside corners, and openings.
- Fasten the panel clip to steel stud with two screws.
- If the vertical joint locations are between the studs and G-joiners and panel clips cannot be fastened to the stud, add flat stock steel (minimum 18GA, minimum width 2-1/2") across the studs and fasten G-joiners and panel clips to flat stock steel.
- Or install the horizontal furring (minimum 18GA, minimum width 1-1/4") at 18" on center similar to the panel size and fasten panel clips and G-joiners to the horizontal furring.
- At the top of a wall, below or above an opening, or in any situation where the panel's shiplaps have been removed, clips cannot be used. Install face fasteners with spacer blocks behind each fastener location. Pre-drill pilot holes and install fastener a minimum 1-1/4" away from panel edge.
- Seal the exposed cut edges and the panel edges with G/L joiner (with or without cut) with the KMEW specified waterproof sealer.

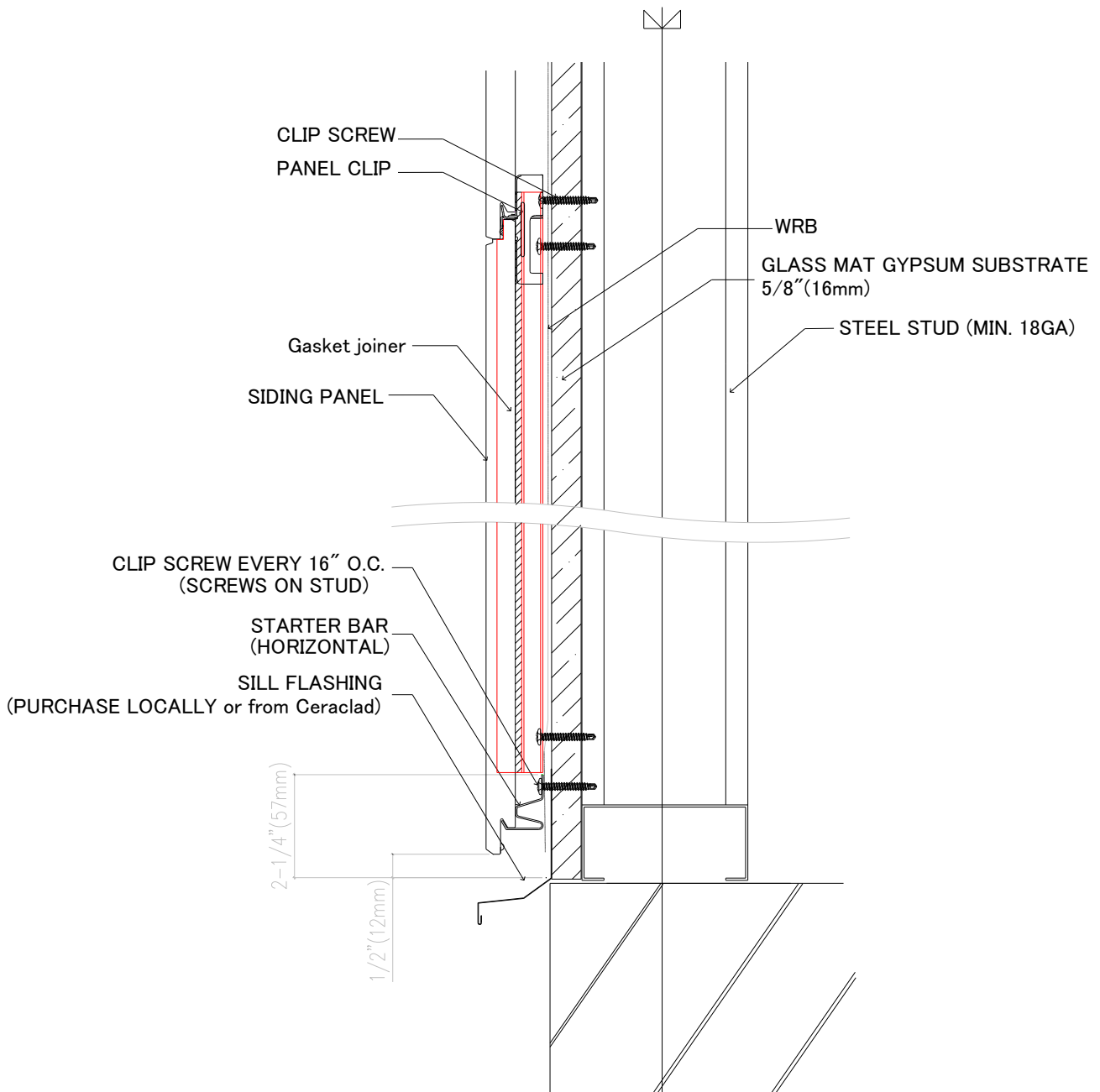


5. Installation Drawing Details

(Steel Frame – Gypsum Sheathing – Horizontal Application)

<2> Intersection with starter bar

- The first panel course G-joiner should be cut where it contacts the starter bar before installation.
- The G-joiner have a top side and bottom side, do not install the joiner upside down.
- The bottom side of G-joiner has a notch at the location where it is to be cut so that it does not overlap the starter bar (2-1/8" from the bottom of the G-joiner).
- After cutting, install the G-joiner so the bottom edge of the G-joiner hits the top edge of the starter bar. Be careful not to overlap the starter bar.

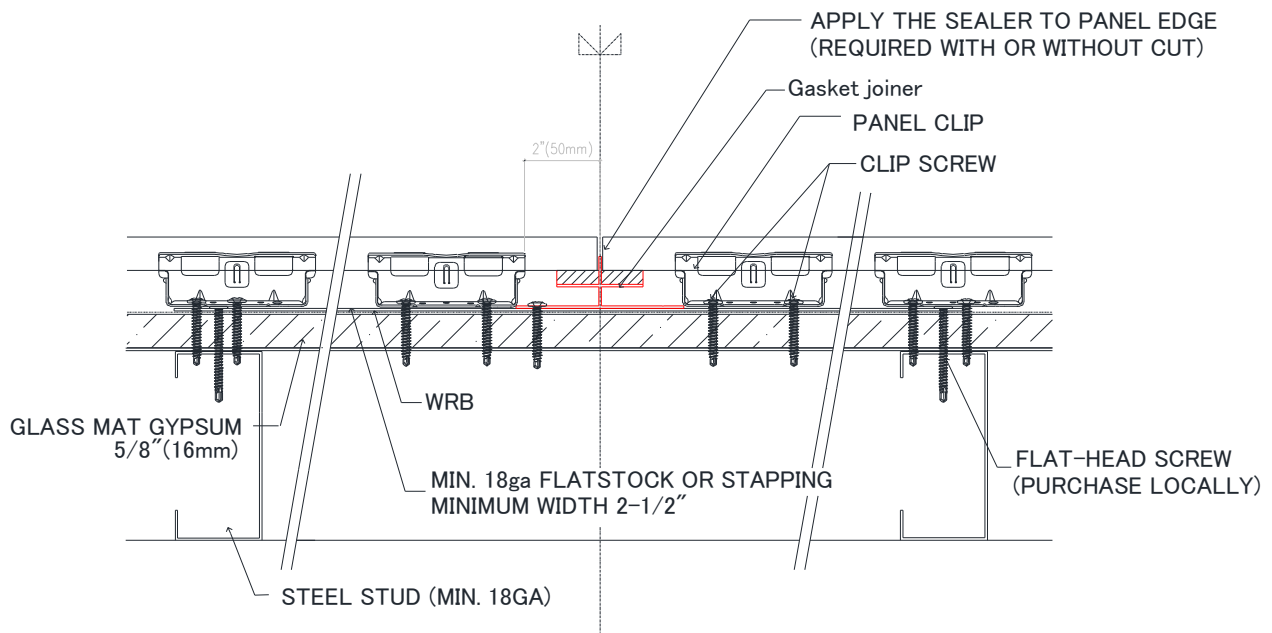


5. Installation Drawing Details

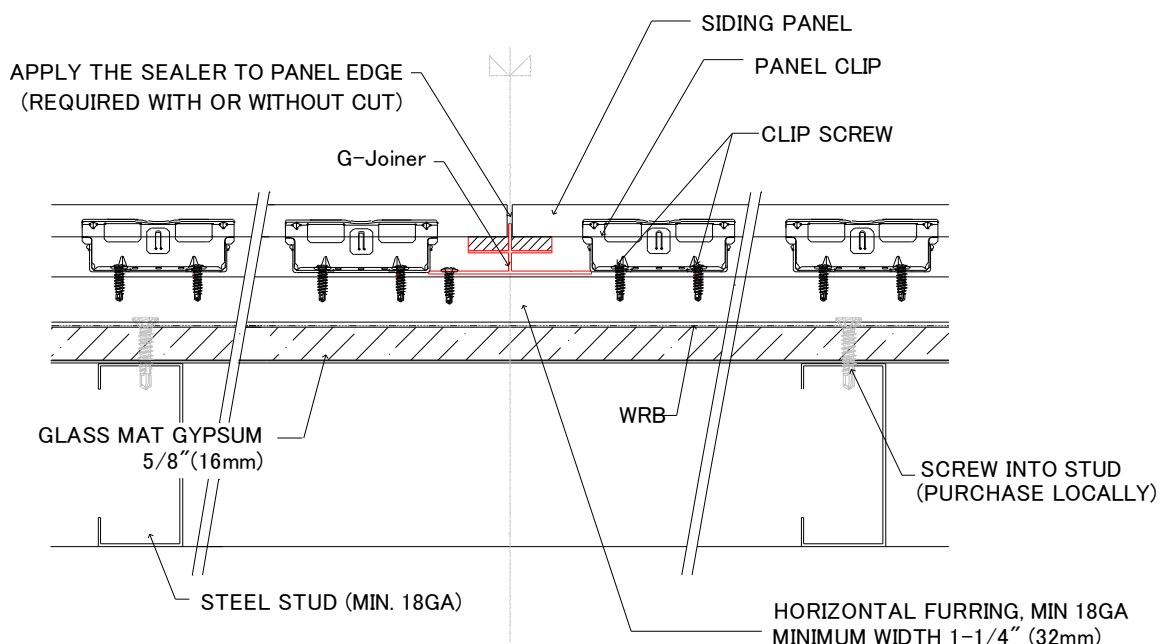
(Steel Frame – Gypsum Sheathing – Horizontal Application)

<3> Vertical Joint

- The panel edge of the vertical joints, whether cut or not, should be sealed with waterproof sealer in advance.
- After installing the panel on one side, insert the G-joiner into the vertical joint from the upper side of the joint until it hits the shi lap.
- The G-joiner have a top side and bottom side, do not install the joiner upside down.
- If the G-joiner is difficult to insert, lightly lift the panel edge to make insertion easier.
- The panel clip right next to the joint is installed after the G-joiner is installed. If the clip is installed first, it will be difficult to insert the G-joiner.
- Fasten the top and bottom of the G-joiner flange with screws.
- Install the panel clips in a position where they do not overlap the G-joiner (about 2" away from vertical joint location).



For horizontal furring



5. Installation Drawing Details

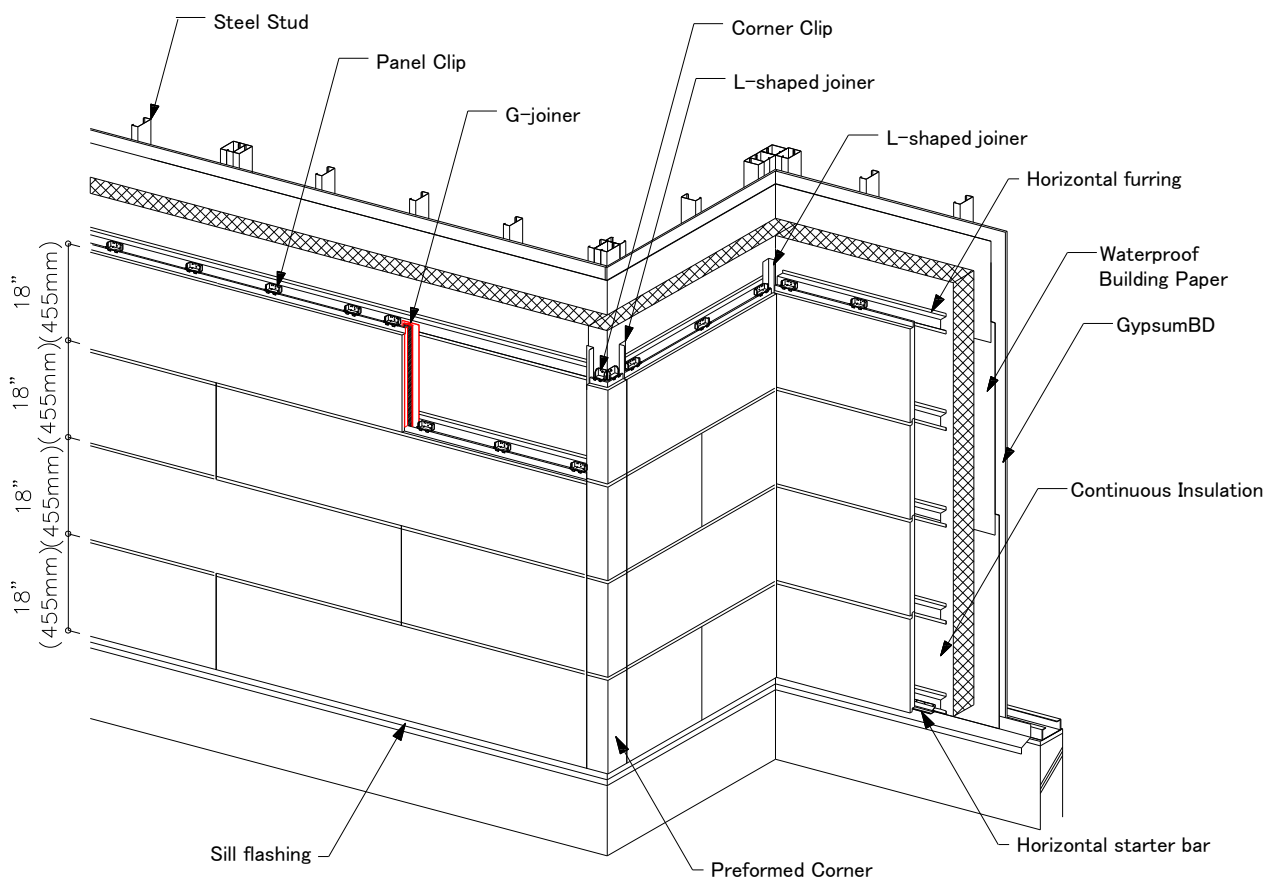
(Continuous Insulation (CI) – Horizontal Application)

<1> Installation Overview

- First install the starter bar.
- Install siding panels with panel clips and pre-formed corners with corner clips.
- Install G-joiners at the vertical joints of the panels.

✖The G-Joiner must be installed with the correct top/bottom orientation.

- L-joiners should be used at outside corners, inside corners, and openings.
- Install the horizontal furring (minimum 18GA, minimum width 1-1/4") at 18" on center similar to the panel size and fasten panel clips and G-joiners to the horizontal furring.
- Fasten the panel clip to horizontal furring with two screws.
- At the top of a wall, below or above an opening, or in any situation where the panel's shiplaps have been removed, clips cannot be used. Install face fasteners with spacer blocks behind each fastener location. Pre-drill pilot holes and install fastener a minimum 1-1/4" away from panel edge.
- Seal the exposed cut edges and the panel edges with G/L joiner (with or without cut) with the KMEW specified waterproof sealer.

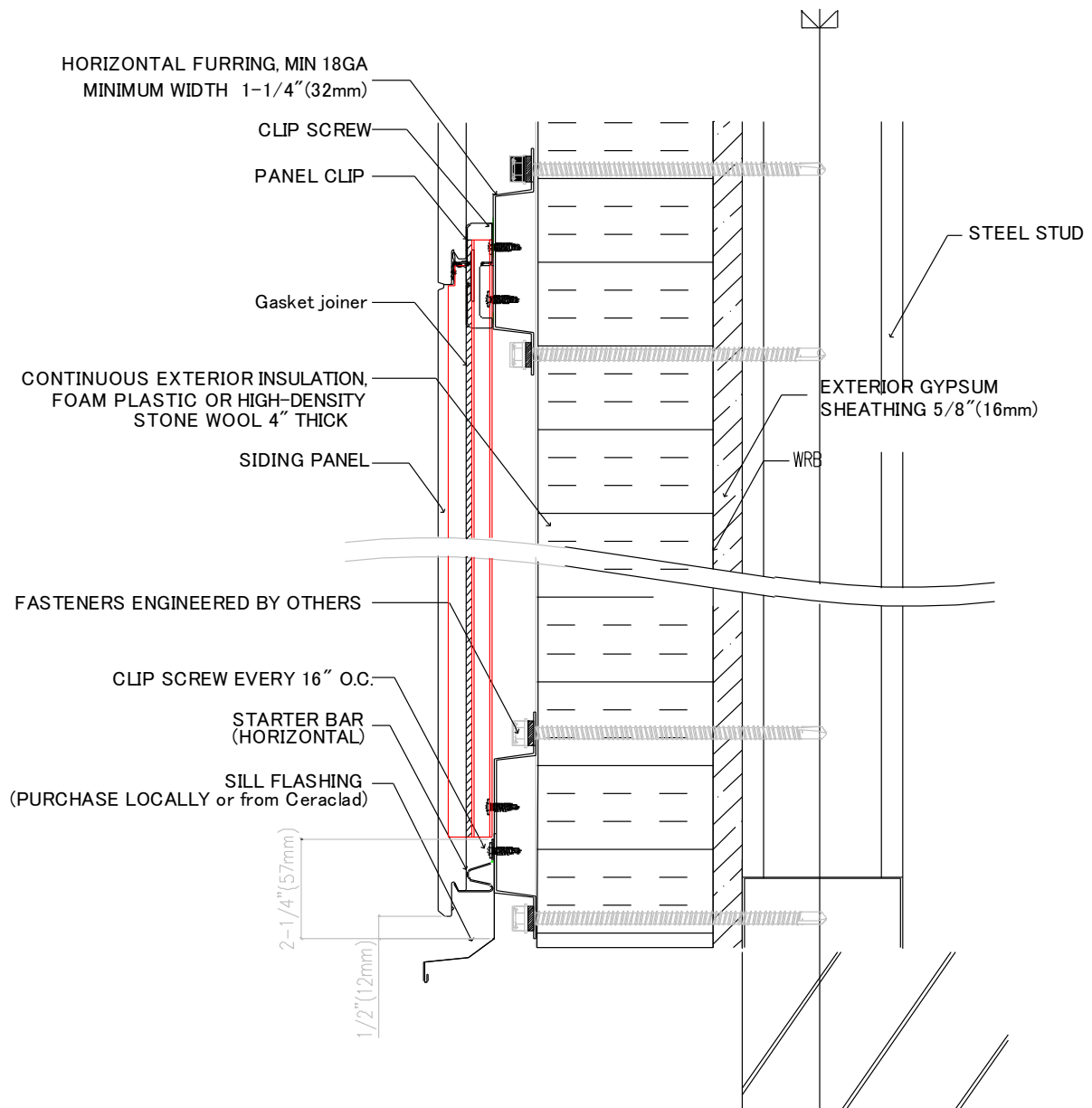


5. Installation Drawing Details

(Continuous Insulation (CI) – Horizontal Application)

<2> Intersection with starter bar

- The first panel course G-jointer should be cut where it contacts the starter bar before installation.
- The G-jointer have a top side and bottom side, do not install the joiner upside down.
- The bottom side of G-jointer has a notch at the location where it is to be cut so that it does not overlap the starter bar (2-1/8" from the bottom of the G-jointer).
- After cutting, install the G-jointer so the bottom edge of the G-jointer hits the top edge of the starter bar. Be careful not to overlap the starter bar.

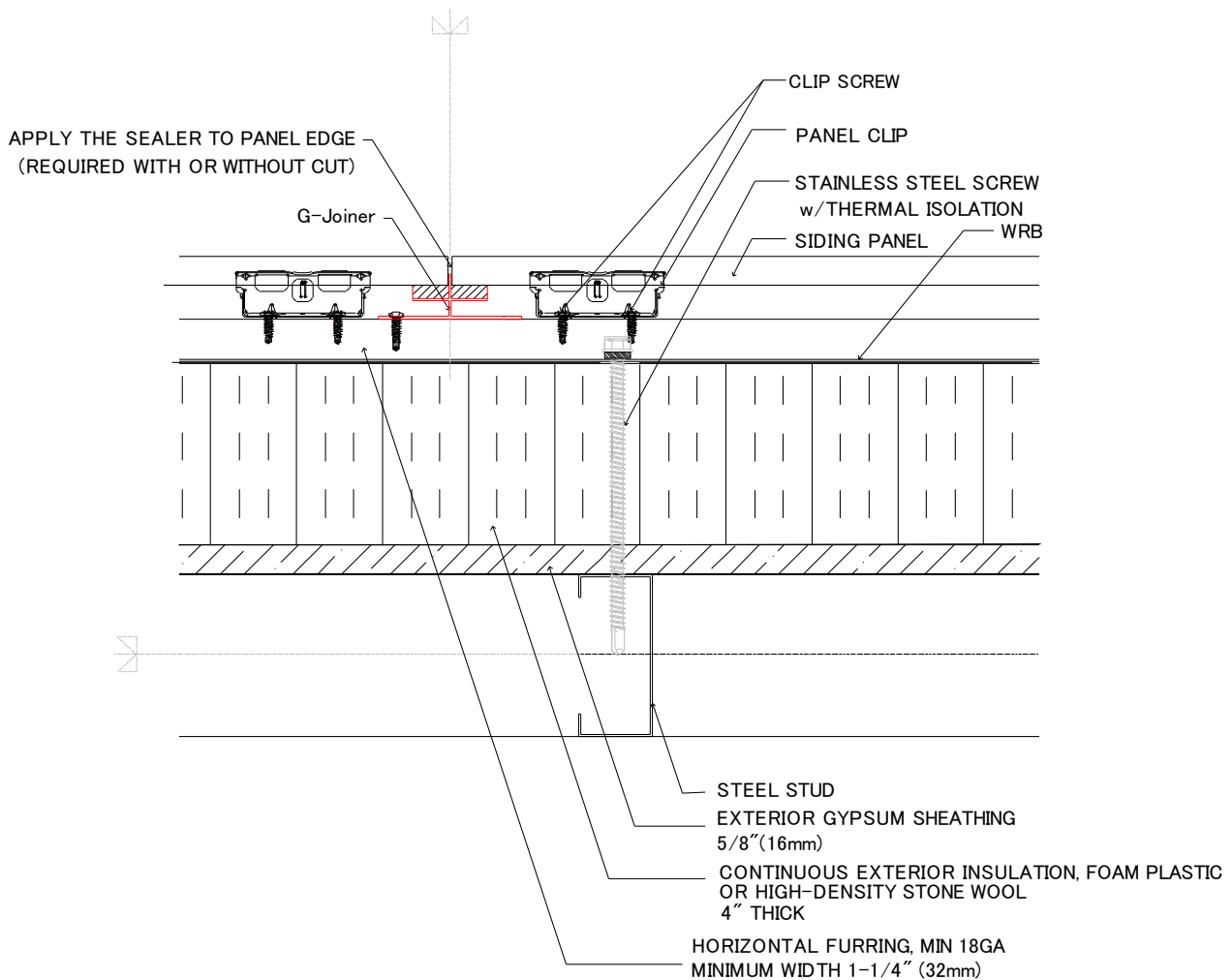


5. Installation Drawing Details

(Continuous Insulation (CI) – Horizontal Application)

<3> Vertical Joint

- The panel edge of the vertical joints, whether cut or not, should be sealed with waterproof sealer in advance.
- After installing the panel on one side, insert the G-joiner into the vertical joint from the upper side of the joint until it hits the shiplap.
- The G-joiner have a top side and bottom side, do not install the joiner upside down.
- If the G-joiner is difficult to insert, lightly lift the panel edge to make insertion easier.
- The panel clip right next to the joint is installed after the G-joiner is installed. If the clip is installed first, it will be difficult to insert the G-joiner.
- Fasten the top and bottom of the G-joiner flange with screws.
- Install the panel clips in a position where they do not overlap the G-joiner (about 2" away from vertical joint location).



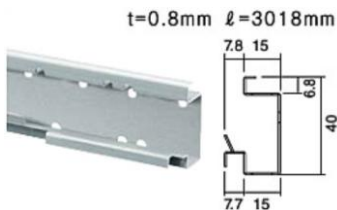
Appendix

Long Clip Installation for High Wind Load

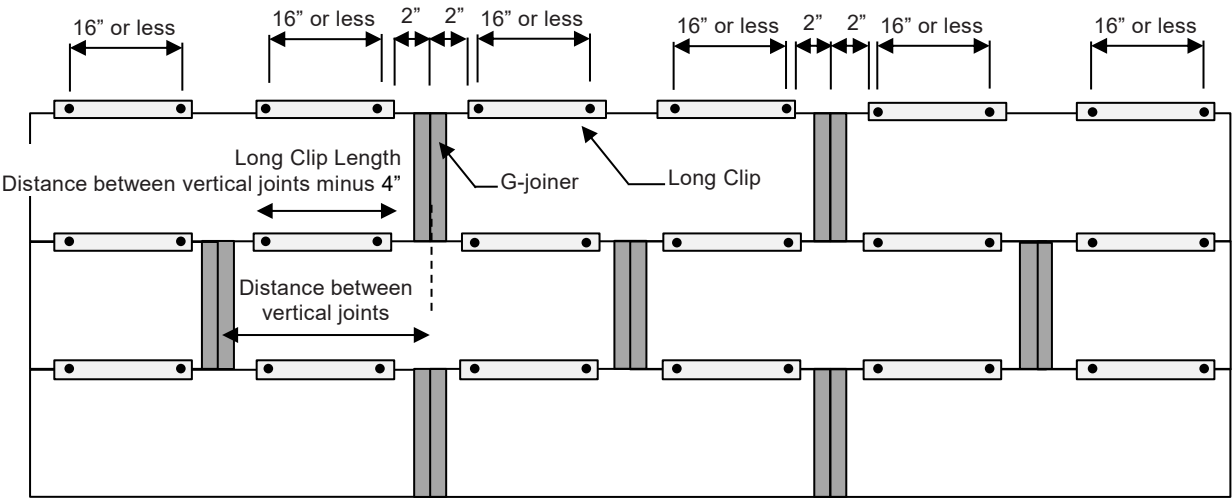
Long Clip Installation (for high wind load)

General Installation Standards for Long Clip

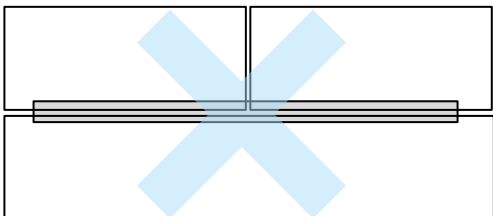
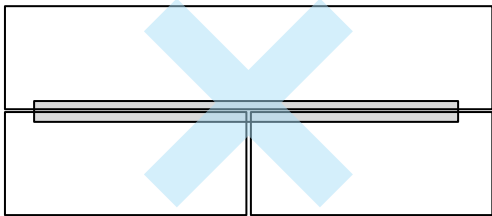
- Use Long Clips for high wind load as required by ESR 1627

Name (SKU)	photo	Material	Places of application
Long clip (B10155)		Hot-dip zinc-aluminum-magnesium alloy coated steel	Used for fastening the panel to substructure for higher wind load requirements.

- This method is for horizontal application only. Vertical application is not approved.
- Install by fastening G-joiners and long clips as shown in the figure below.
- Long clips are cut and installed at 4" (100mm) shorter than the distance between vertical joints.
- Long clips Long clips are fastened to wood stud with one screw, to plywood sheathing only with two screws, and to steel stud or steel sub-frame with two screws at 16" on center.
- G-joiners are fastened to the top and bottom of the flange with screws.
- Long clip ends are fastened 2" away from center line of vertical joint locations.
- Apply the specified waterproof sealer to the panel edges where G-joiners are to be used.
- Locate the vertical joints in advance so that G-joiners and long clips do not interfere with each other.



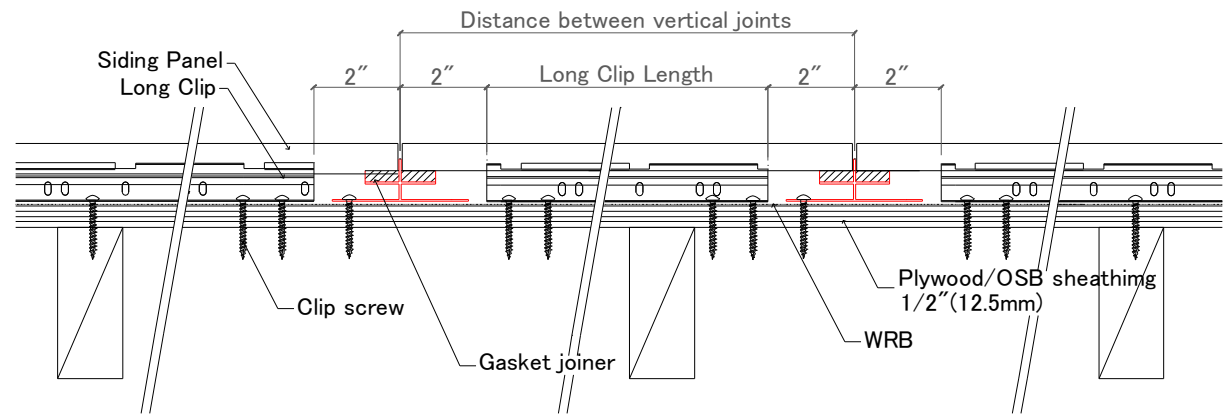
Long Clips cannot be installed across panel joints because it interferes with the joiner. Be sure to cut 4" shorter than the distance between vertical joints.



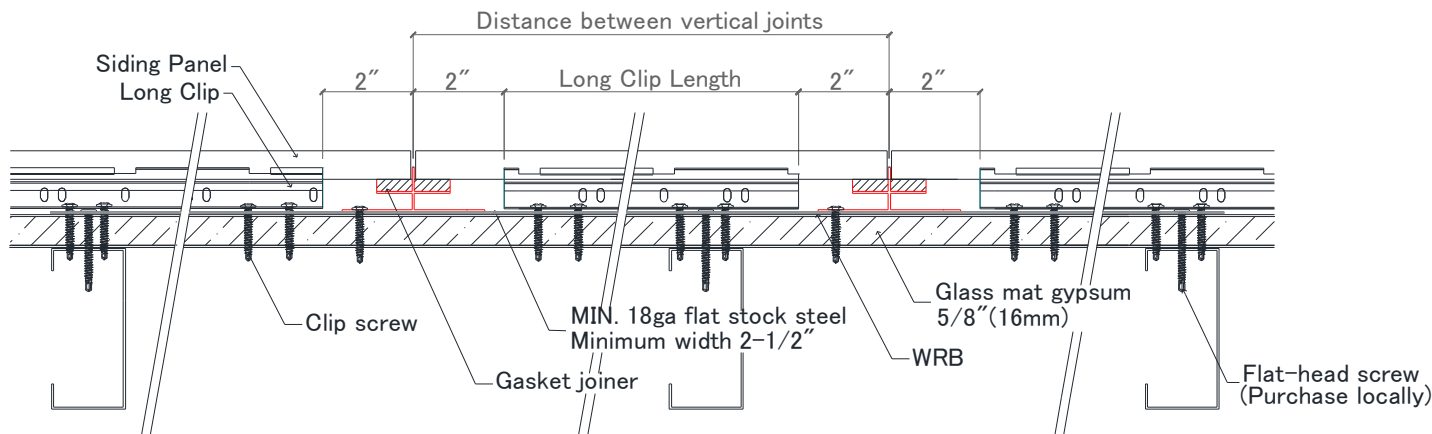
Long Clip Installation (for high wind load)

■ Cross section of vertical joint

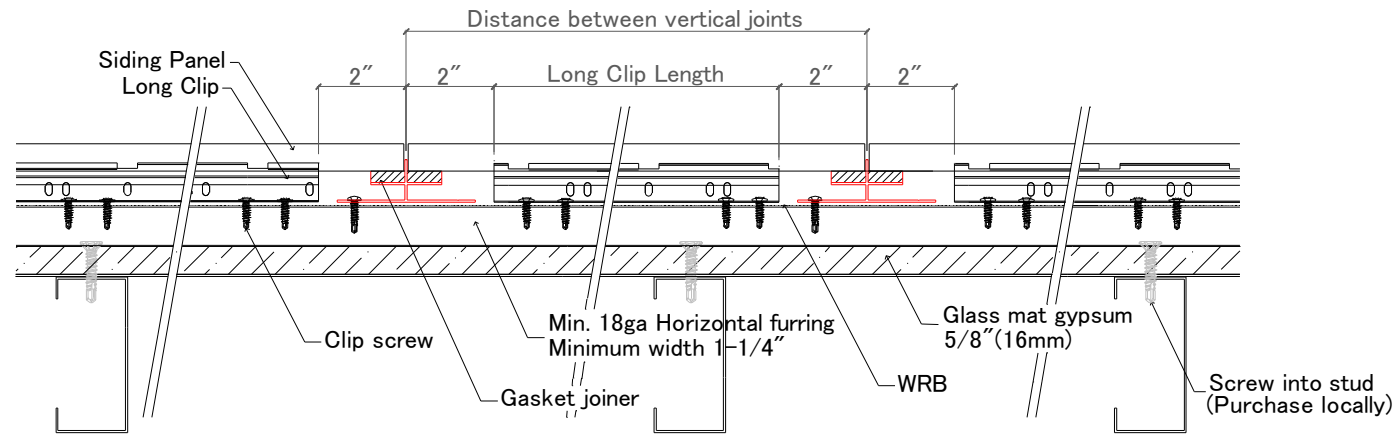
<For Wood Frame>



<For Steel Frame with flat sock steel>



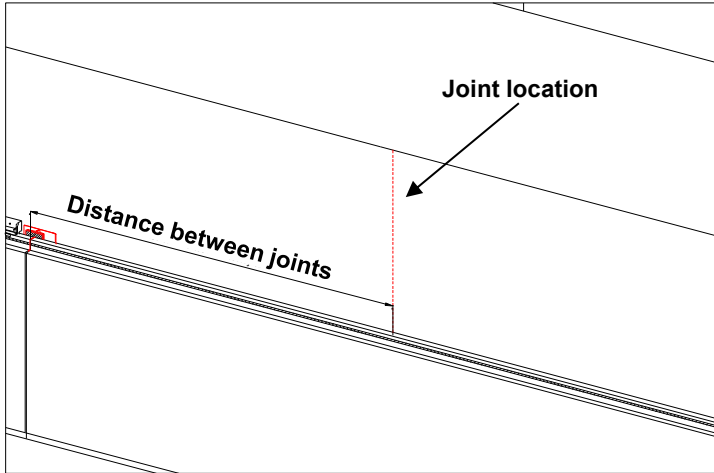
<For Steel Frame with horizontal furring>



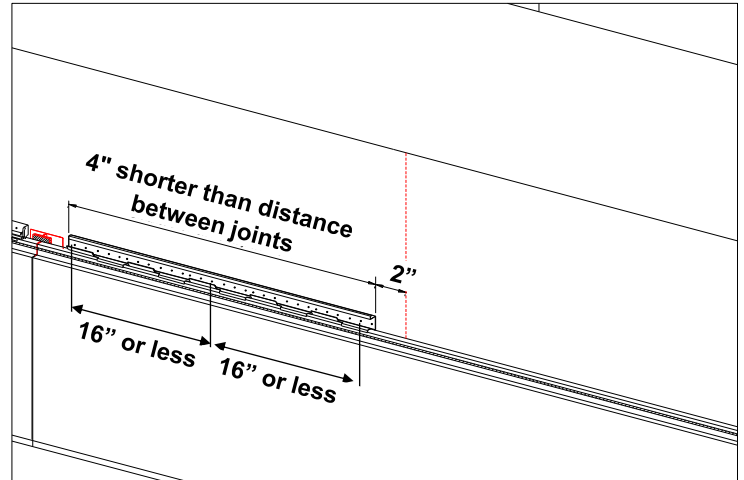
Long Clip Installation (for high wind load)

■ General Installation Procedure for Long Clip

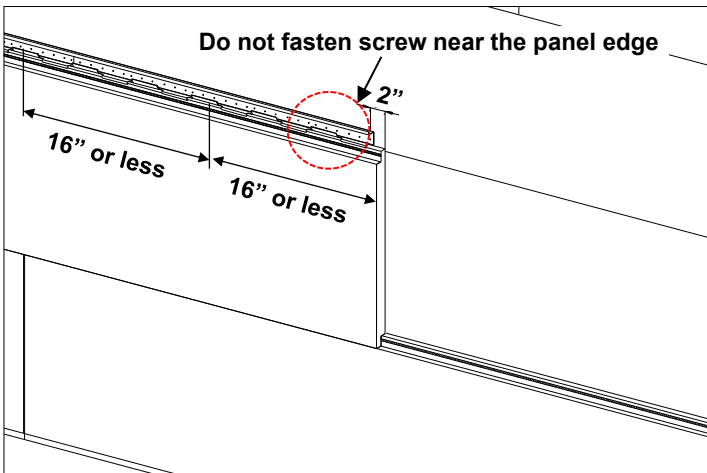
1. Check the next joint location and measure the distance between joints.



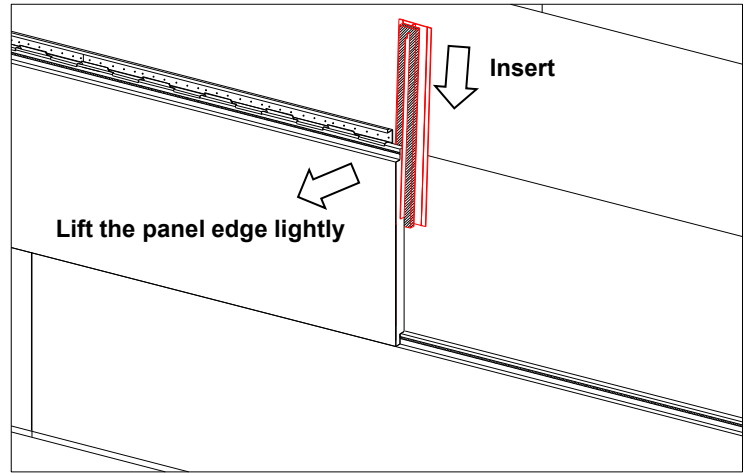
2. Cut a long clip 4" shorter than the distance between joints, install it 2" away from the joint location, and fasten with screws at 16" on center or less.



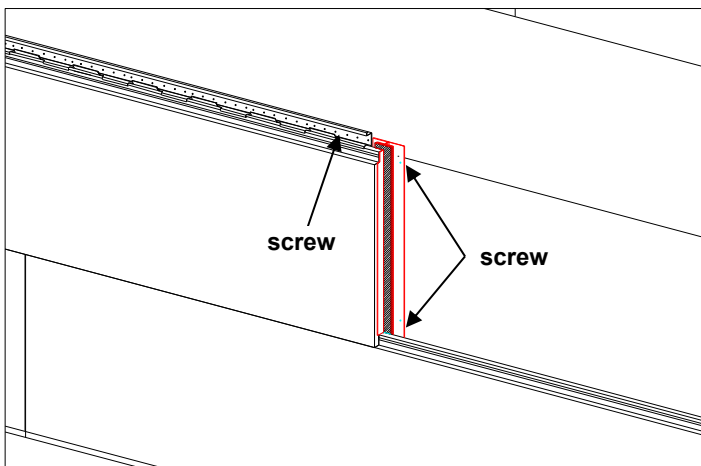
3. Install the panel and cut and install the long clip in the same manner as in step 2. At this step, do not fasten screw near the panel edge, as it will make insertion of the G-jointer difficult.



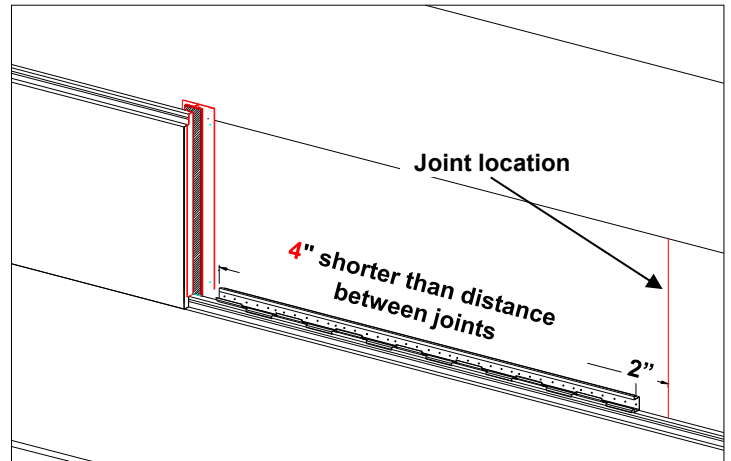
4. Insert the G-jointer from the upper side of the joint until it hits the shiplap. If the G-jointer is difficult to insert, lightly lift the panel edge to make insertion easier.
✖The G-Jointer must be installed with the correct top / bottom orientation.



5. Butt the G-jointer to the panel edge and secure with two screws. Fasten the long clip near the panel edge with screw as well. (The areas not screwed in step 3)



6. Check the next joint location, measure the distance between joints, and cut and install the long clip in the same manner as in step 2.

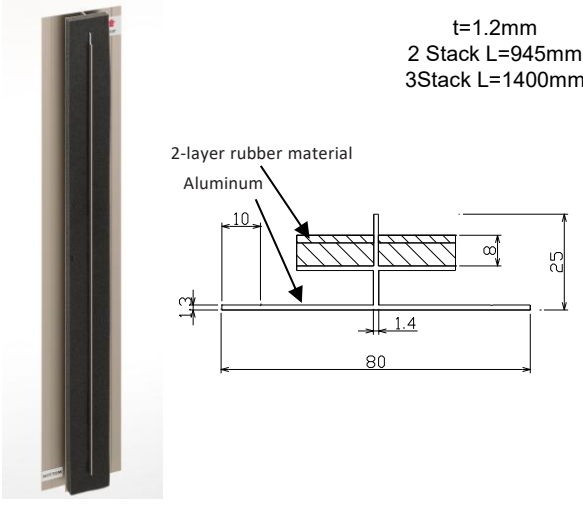
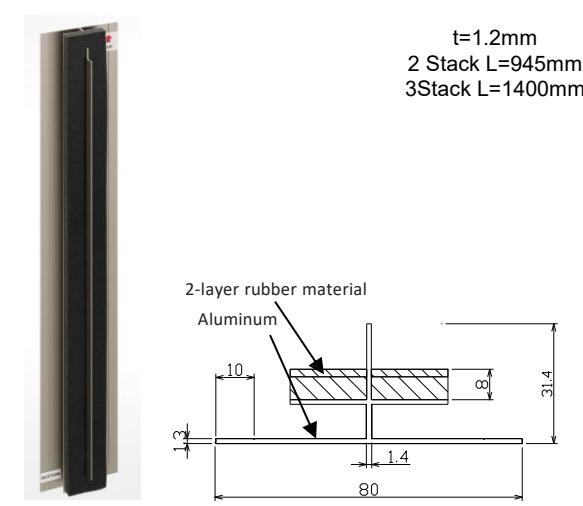


Appendix

2 or 3 Stack Gasket Joiner

1. Installation Components

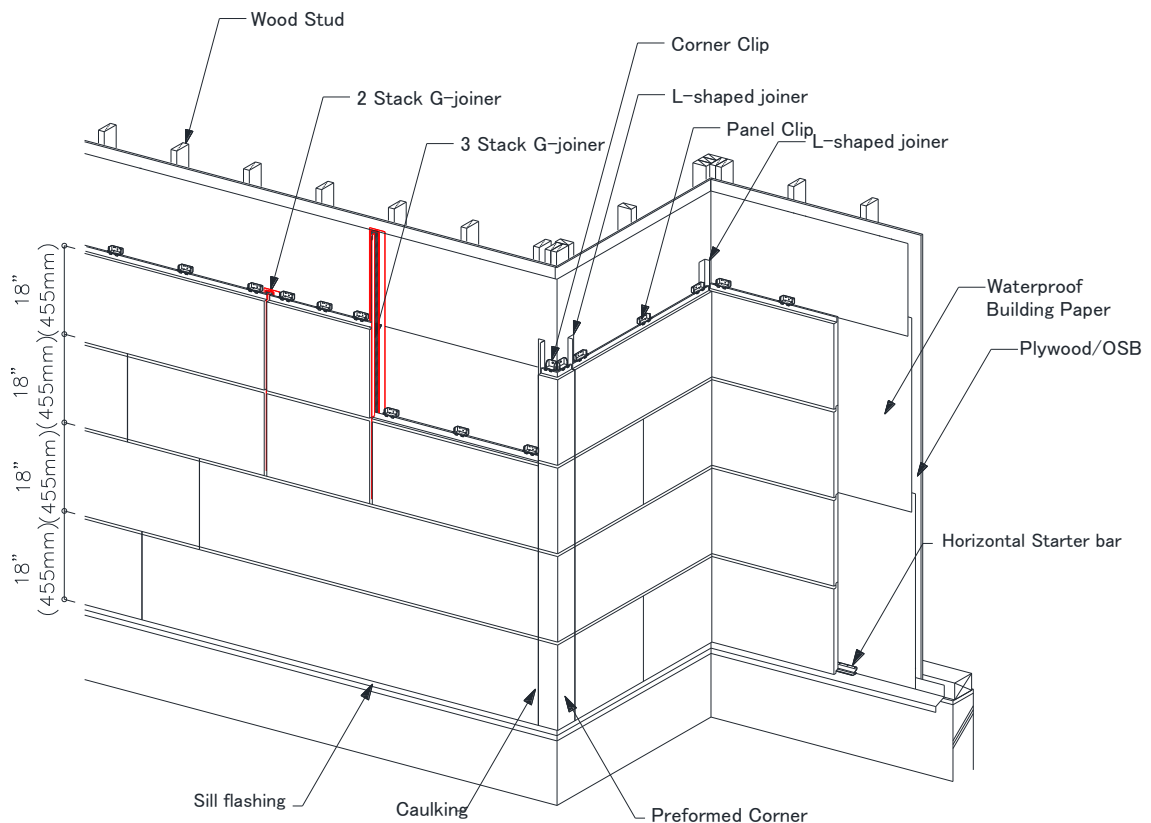
■ Gasket Joiner

2 Stack Gasket Joiner (B3721F4) 3Stack Gasket joiner (B3731F4)	 30 pieces/box	Aluminum •Upper layer →EPDM •Lower layer →Repellent polyurethane foam	Used to form vertical panel joints of Running Bond (panel to panel)
2 Stack Gasket Joiner Flush (B3721TF※) 3 Stack Gasket Joiner Flush (B3731TF※) ※Color 1:Black 2:white 4:Gray	 30 pieces/box	Aluminum •Upper layer →EPDM •Lower layer →Repellent polyurethane foam	Used to form vertical panel joints of Running Bond (panel to panel)

1. Installation Drawing Details

<1> Installation Overview

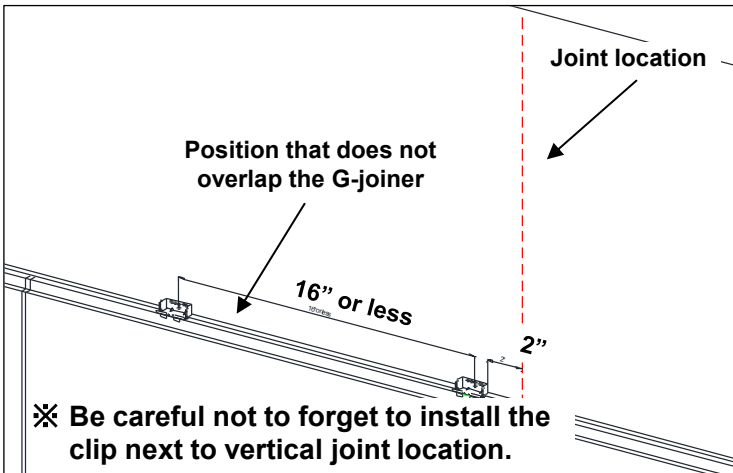
- First install the starter bar.
- Install siding panels with panel clips and pre-formed corners with corner clips.
- Install 2 or 3stack G-joiners at the vertical joints of the panels.
 - ※Attach the gasket joiner with screws staggered at 18" oc.
- ※ Panels and gasket joiner must be fully seated against each other with no gaps.
- L-joiners should be used at outside corners, inside corners, and openings.
- Clips have several holes for screws. Fasten clips with one screw when fastening to a wood stud; use two screws when fastening only to sheathing or steel.
- At the top of a wall, below or above an opening, or in any situation where the panel's shiplaps have been removed, clips cannot be used. Install face fasteners with spacer blocks behind each fastener location. Pre-drill pilot holes and install fastener a minimum 1-1/4" away from panel edge.
- Seal the exposed cut edges and the panel edges with G/L joiner (with or without cut) with the KMEW specified waterproof sealer.



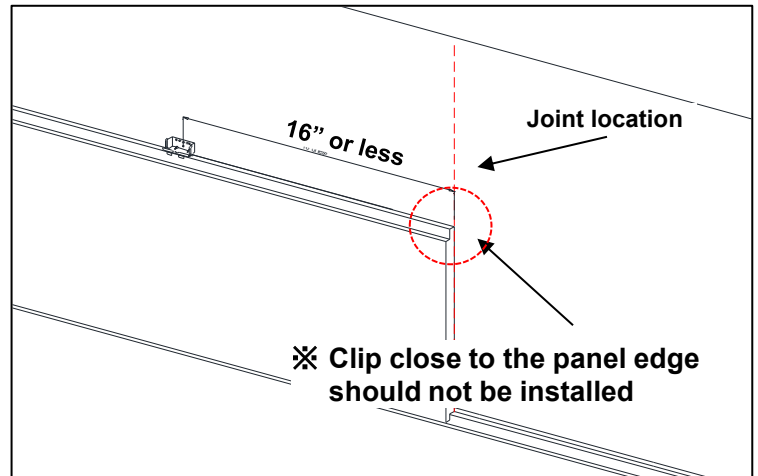
※Example: Wood structure

2. General Installation Procedure (for panel clip)

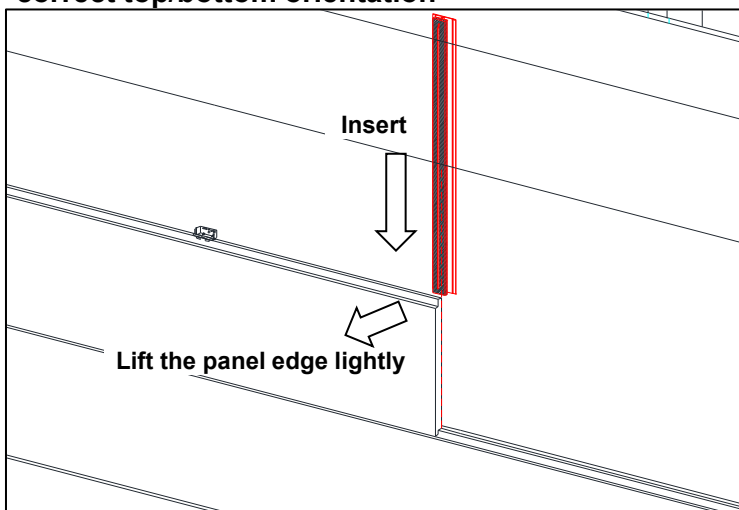
1. Install the first clip at a location that does not overlap the G-joiner and install the clip 2" away from next joint location and install other clips at 16" on center or less.



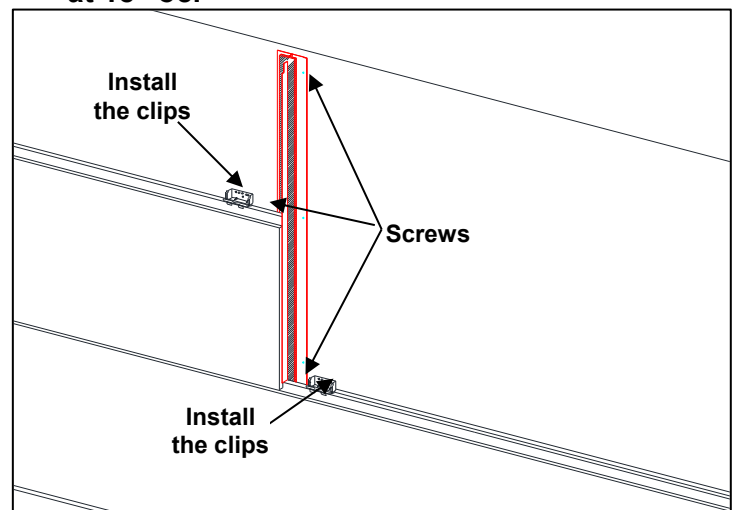
2. Install panel and Install the clips 16" or less. If there is a vertical joint location, the clip should be 2" away from the vertical joint location. At this step, do not install the clip at the panel edge, as it will make insertion of the G-joiner difficult.



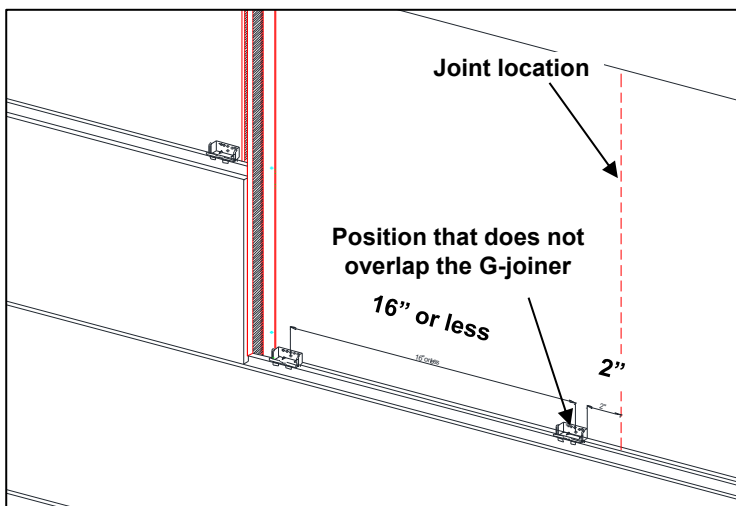
3. Insert the 2 or 3stack G-joiner from the upper side of the joint until it hits the shiplap. If the G-joiner is difficult to insert, lightly lift the panel edge to make insertion easier. **※The G-Joiner must be installed with the correct top/bottom orientation**



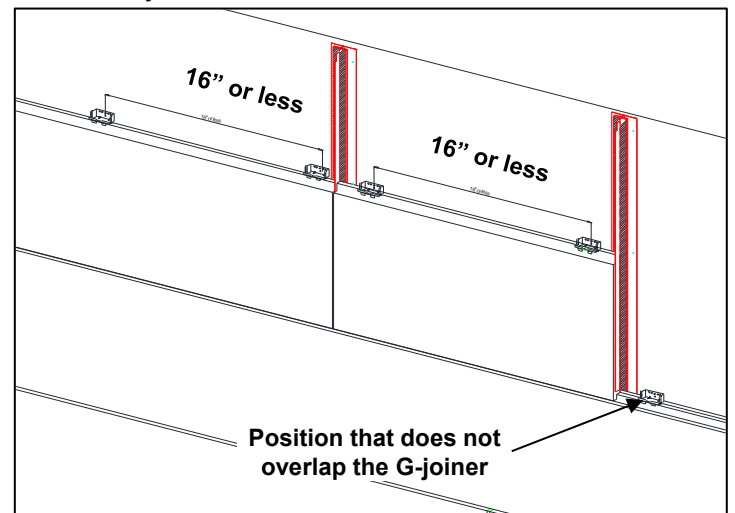
4. Butt the G-joiner to the panel edge and Fasten with screws. Install the clips in a position that does not overlap the above and below of the G-joiner. **※Attach the gasket joiner with screws staggered at 18" oc.**



5. Install the clip 2" away from next vertical joint location and install other clips at 16" on center or less.



6. Install panel and Install the clips 16" or less. Insert the 2 or 3stack G-joiner from the upper side of the joint until it hits the shiplap. Install the clips in a position that does not overlap the above and below of the G-joiner.



Technical Information

- Installation Instructions
- Reports and Certifications
- Specifications
- Technical Bulletins
- Technical Data Sheet
- Warranty
- Health, Safety and Sustainability



- **Technical Services Support**

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