



CERACLAD
Triple-Coated Rainscreen Siding Systems

Custom Running Bond Technical Guide



CERACLAD® Triple Coated
Fiber-Cement Caulk-Free
Siding Rainscreen System

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

30- Year Product Limited
Warranty

20-Year Fade Resistance Limited
Warranty

365 Days of Self-Cleaning
Surface

Hundreds of Cladding Design
Options

- _ Size-Free
- _ Caulk-Free
- _ Less-Waste
- _ Rich Design Options
- _ Low Maintenance

Design now for Spring 2024 Installations

Empowering You To Freely Design Sustainable Buildings

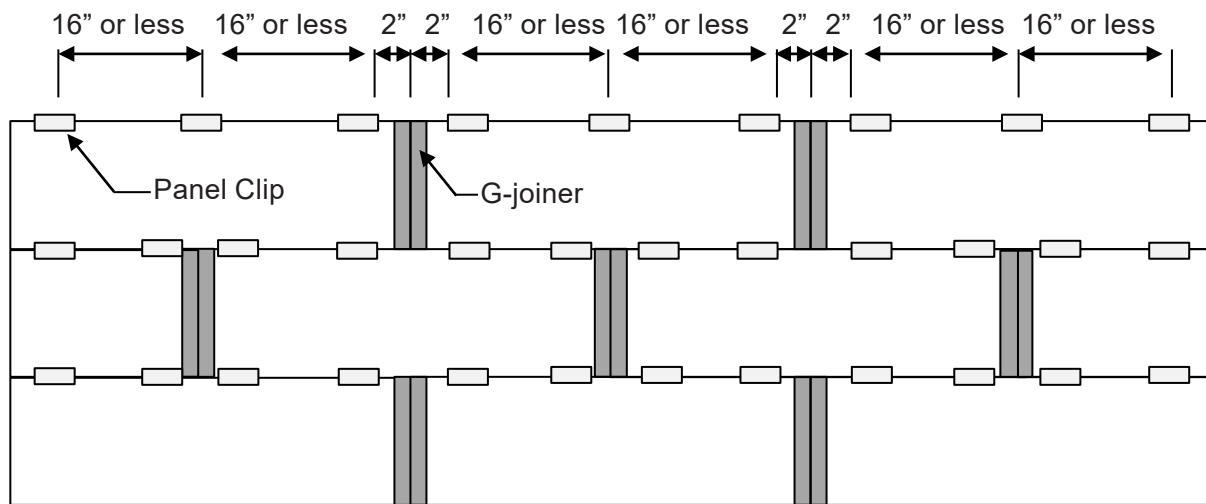
Ver 3, Jan 2024

1. General Installation Standards

This manual contains general Installation standards for Running Bond installation only. Refer to the published instructions for T-Joint or Caulk Joint installation for more information as required.

■ General Installation Standards

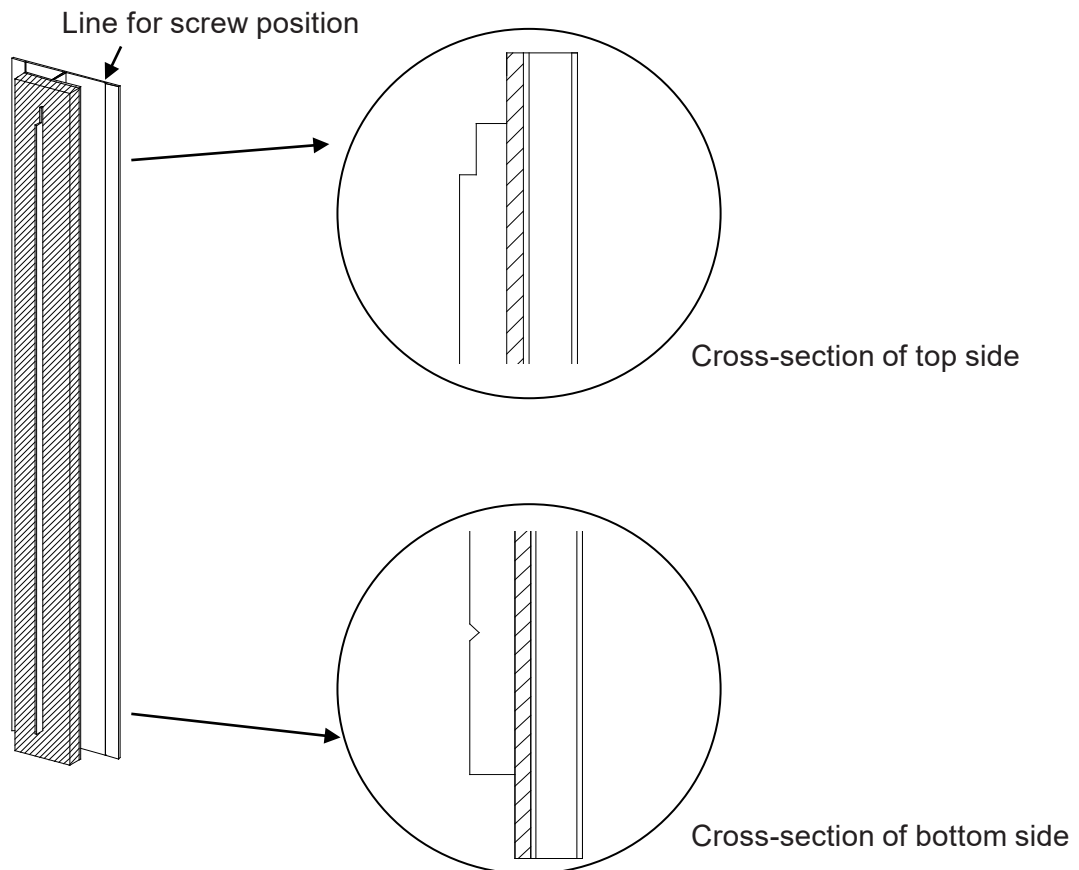
- This method is for horizontal application only. Vertical application is not approved.
- Install by fastening Gasket joiners (G-joiners) and panel clips as shown in the figure below.
- Panel clips should be installed at intervals of 16"(400mm) on center or less.
- Panel clips are fastened to wood stud 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.
- 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.



2. Installation Precautions

■ Shape of G-joiner

- The G-joiner has a screw position line – minimum 2 screws per joiner.
- The G-joiner have a top side and bottom side, do not install the joiner upside down.
- 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 shiplap 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.
- Only cut the joiner at the notch for the first panel course where the joiner meets the starter bar.
- Note, G-joiner should be cut at the top and installed under eaves, above and below openings as required.



■ Cutting G-joiner

- Best Practice -Use a chop saw with a non-ferrous metal blade when cutting G-joiners such as at the starter, top of the wall, opening above and below.

2. Installation Precautions

■ Cutting 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.

Circular saw with a vacuum attachment

Cutting guide

Panel (back side up)



Surface chipping
Repair with touch-up paint
is required.



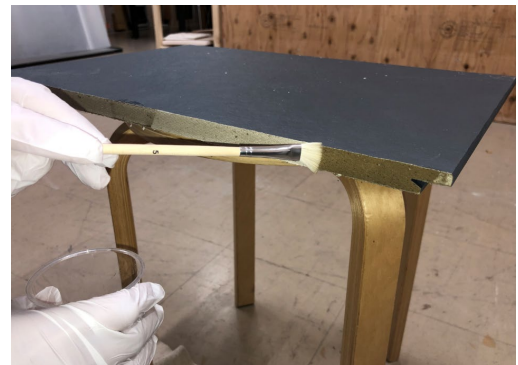
■ Treatment of panel edges

- Apply KMEW specified waterproof sealer to the following panel edges



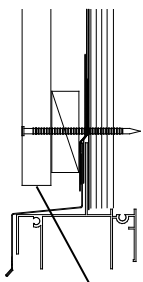
- Soak the brush with the sealer and brush back and forth from edge to edge of the application surface to ensure that the wet color is firmly applied to the panel edge surface.

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



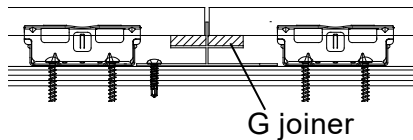
Waterproof sealer application required

Exposed cut edges

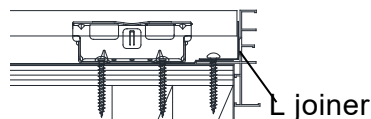


Exposed cut edge

Panel edges using G/L joiner (with or without cut)



G joiner



L joiner



Before applying



After applying

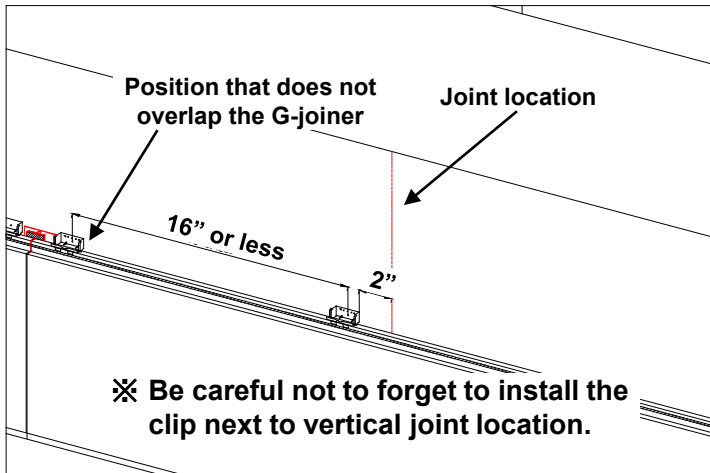
The sealer is applied to make the panel edge surface water-repellent.



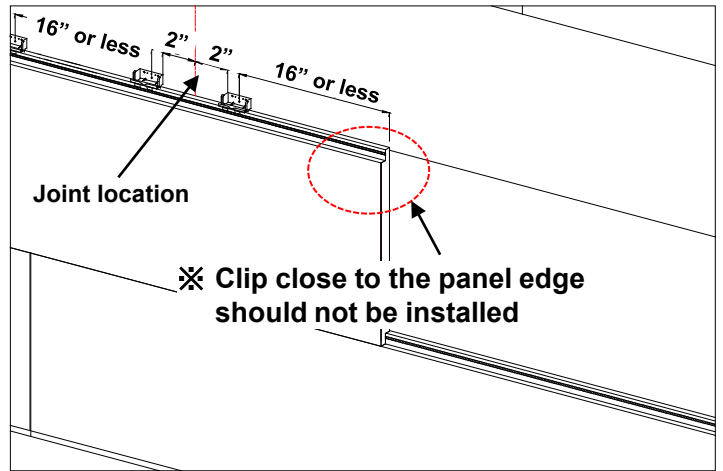
Do not apply waterproof sealer to panel edges where caulking is to be applied.
It may cause the caulking to peel off.

3. General Installation Procedure (for panel clip)

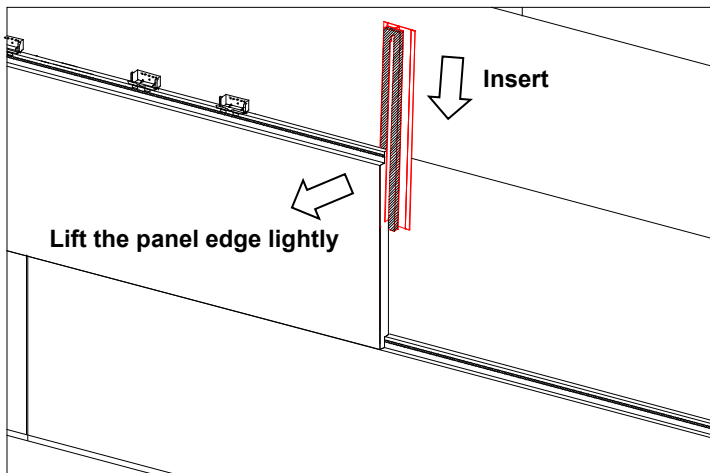
1. Install the first clip at a location that does not overlap the G-jointer and install the clip 2" away from next joint location and install other clips at 16" on center or less.



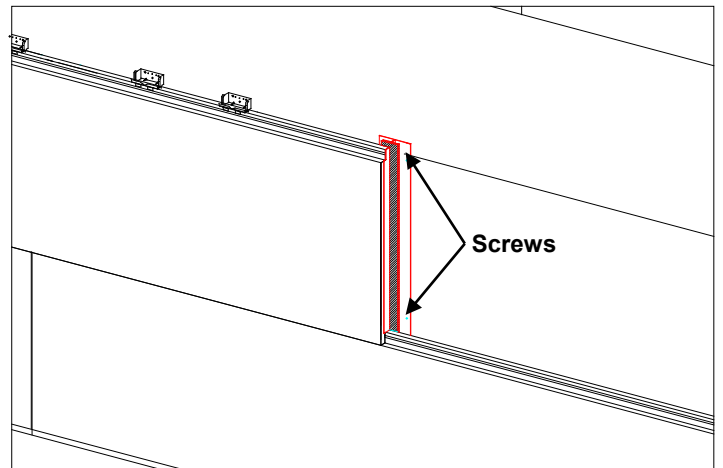
2. Install panel and Install the clips 16" or less. If there is a vertical joint location, the clip should be 2" away from the vertical joint location. At this step, do not install the clip at the panel edge, as it will make insertion of the G-jointer difficult.



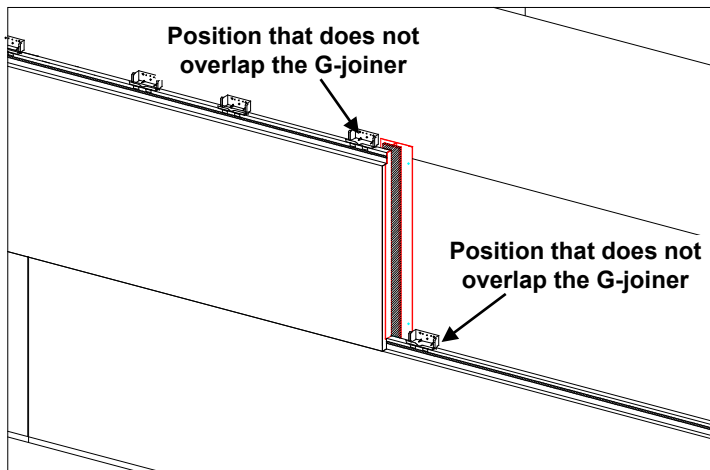
3. Insert the G-jointer from the upper side of the joint until it hits the shiplap. If the G-jointer is difficult to insert, lightly lift the panel edge to make insertion easier.



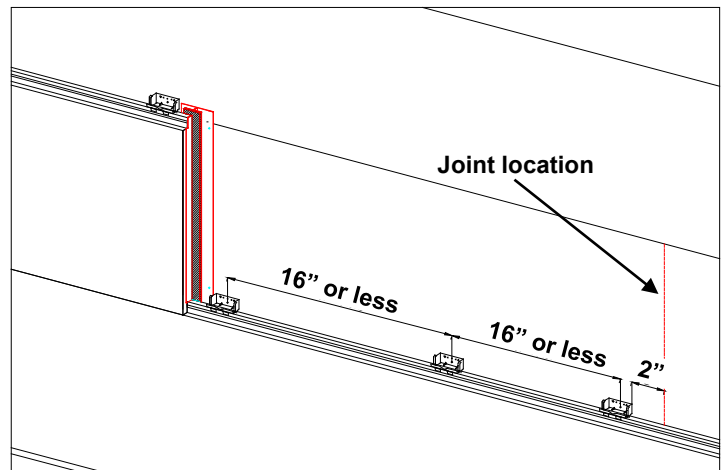
4. Butt the G-jointer to the panel edge and secure with two screws.



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

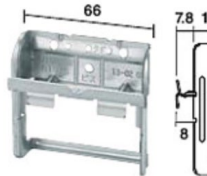
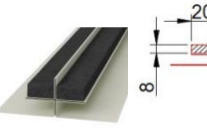
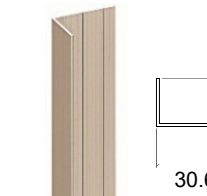


6. Install the clip 2" away from next vertical joint location and install other clips at 16" on center or less.



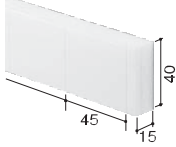
4. Installation Components

Common components

Name (SKU)	photo	Material	Places of application
Starter bar for horizontal application (B101152)	t=0.8mm L=3030mm 	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.
Panel clip (B10115)	t=0.8mm 	Hot-dip zinc-aluminum-magnesium alloy coated steel	Used for fixing the panel to substructure
Corner Clip (B101153)	t=0.8mm 	Hot-dip zinc-aluminum-magnesium alloy coated steel	Used for fixing the preformed corners
Gasket Joiner		Aluminum + Repellent polyurethane foam gasket	Used to form vertical panel joints of Running Bond (panel to panel)
L-shaped aluminum joiner (B3616KF4)	t=1.2mm L=3000mm 	Aluminum	It is applied on the inside and outside corners, jambs and other vertical abutments.

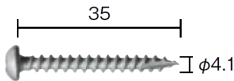
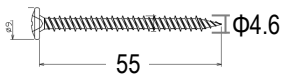
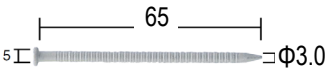
4. Installation Components

■ Common components

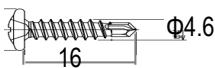
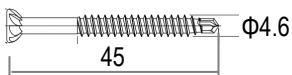
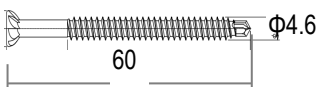
Name (SKU)	photo	Material	Places of application
Spacer 15 (RY82S15)		Polypropylene	Used as backing for face fastener locations to eliminate deflection of the panel.
Water proof sealer (LTKMB3103C)		Silane water repellent	It is applied on the panel edges
Repair putty (B4901)		Acrylic emulsion	It is used for scratches, chips and holes from face screws.
Repair paint (Different for each SKU)		—	It is used on spots where putty is applied and scratches.

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

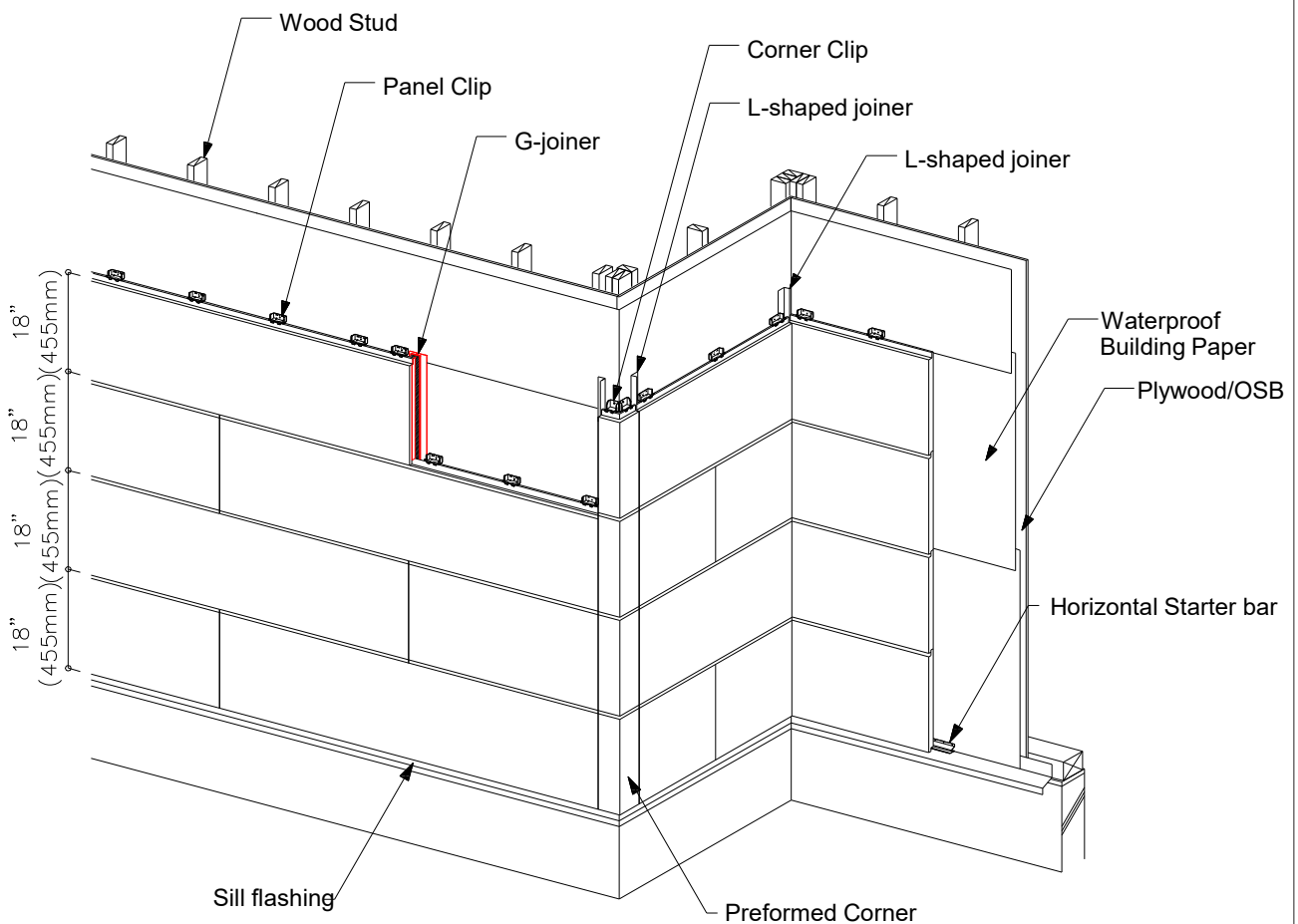
Name (SKU)	photo	Material	Places of application
Clip screw 16 for metal substructure (B885116)		Stainless steel	Used for attaching clips to a steel sub-structure such as hat channel
Clip screw 30 for metal substructure (B885130)		Stainless steel	Used for attaching clips to steel stud
Face screw 45 for 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.
- 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.

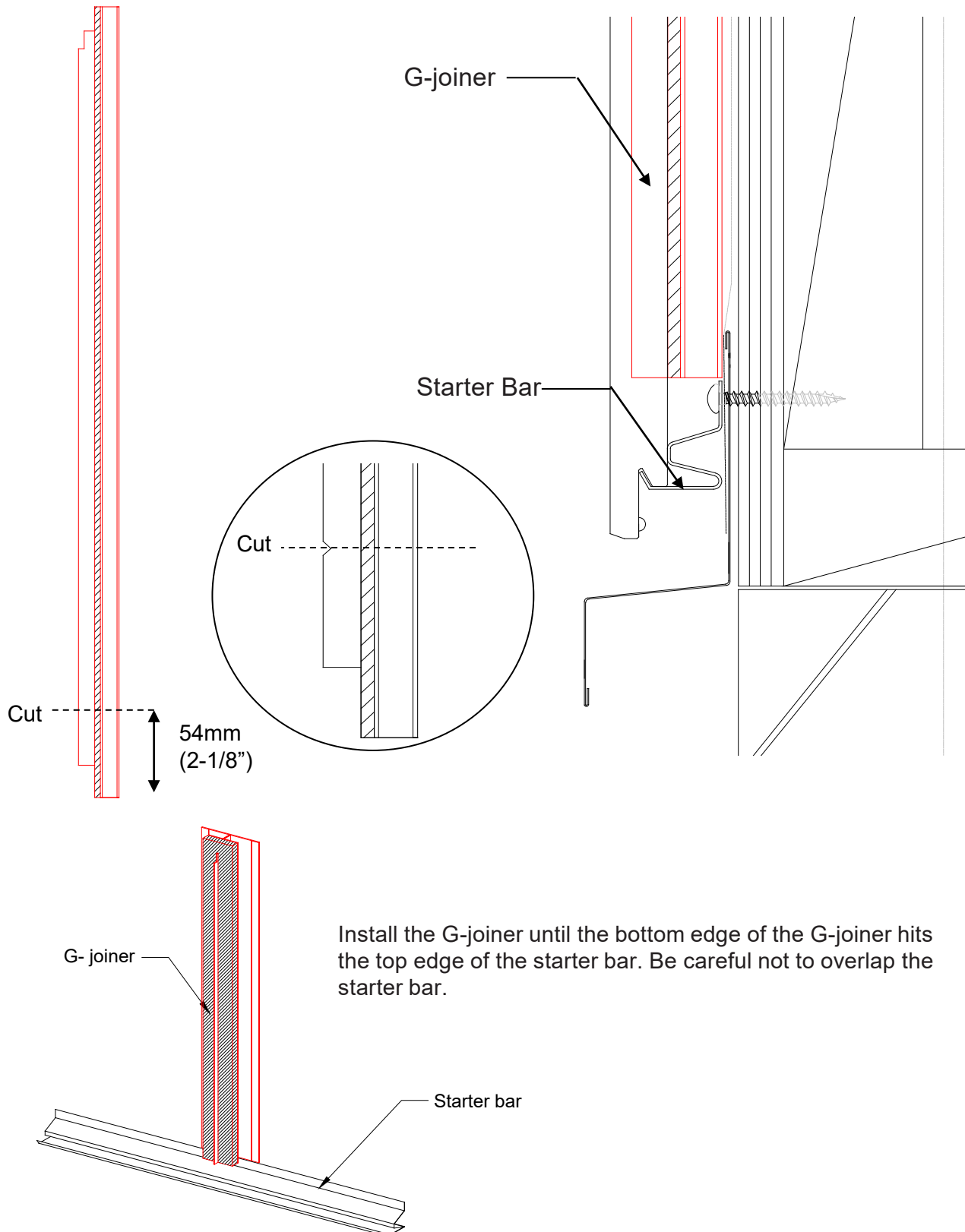


5. Installation Drawing Details

(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 has 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.

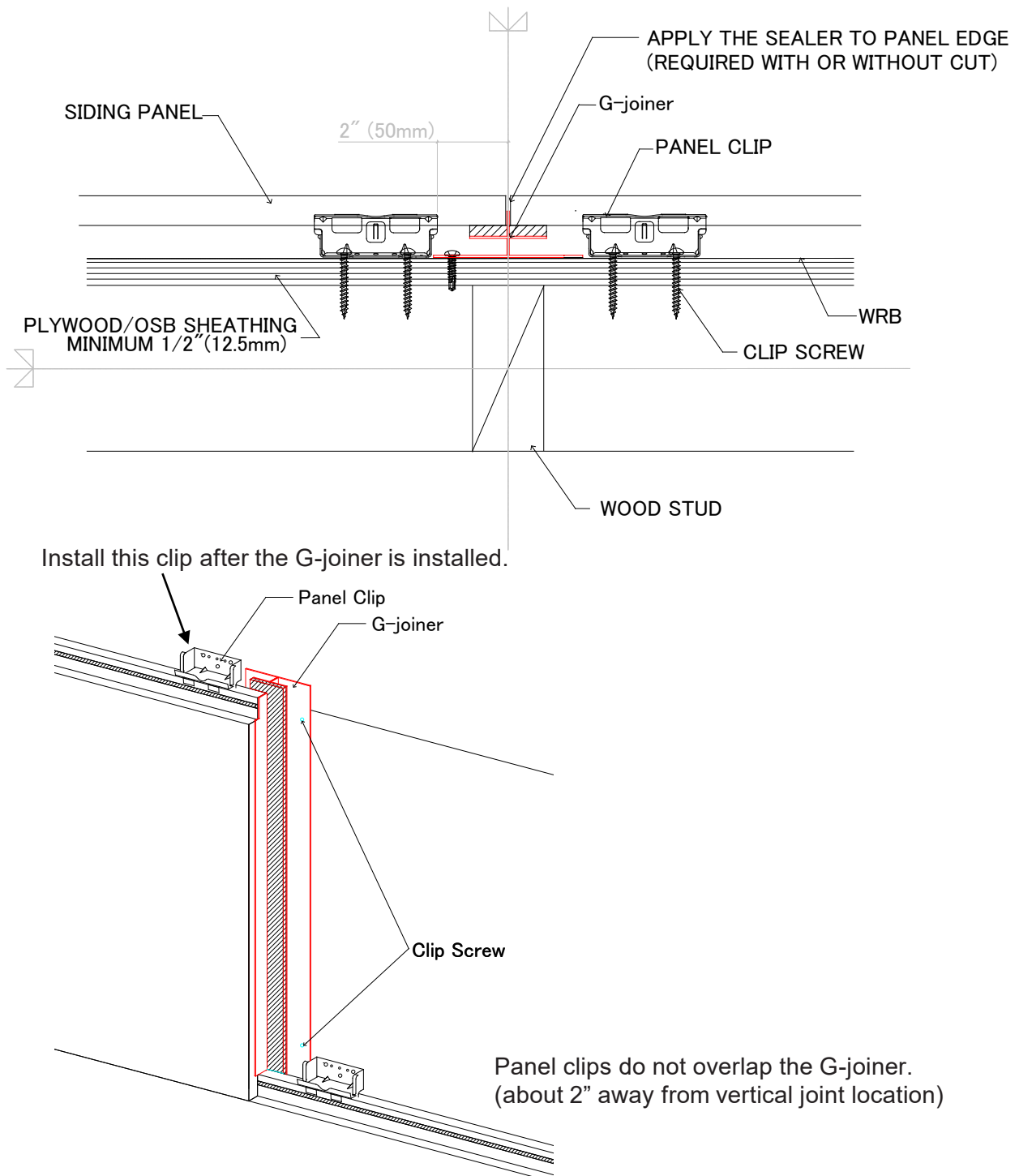


5. Installation Drawing Details

(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 has 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 the vertical joint location).

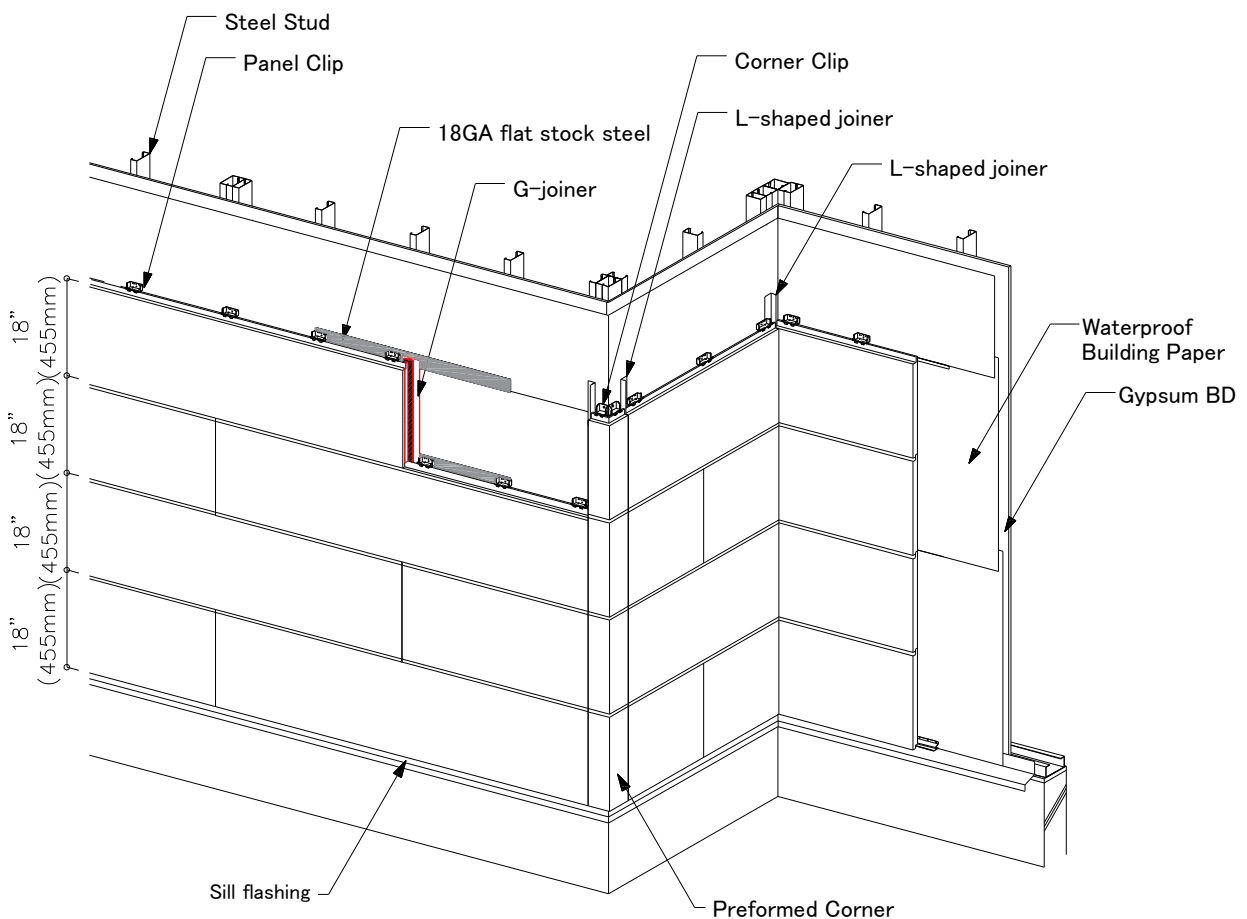


5. Installation Drawing Details

(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.
- 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 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.

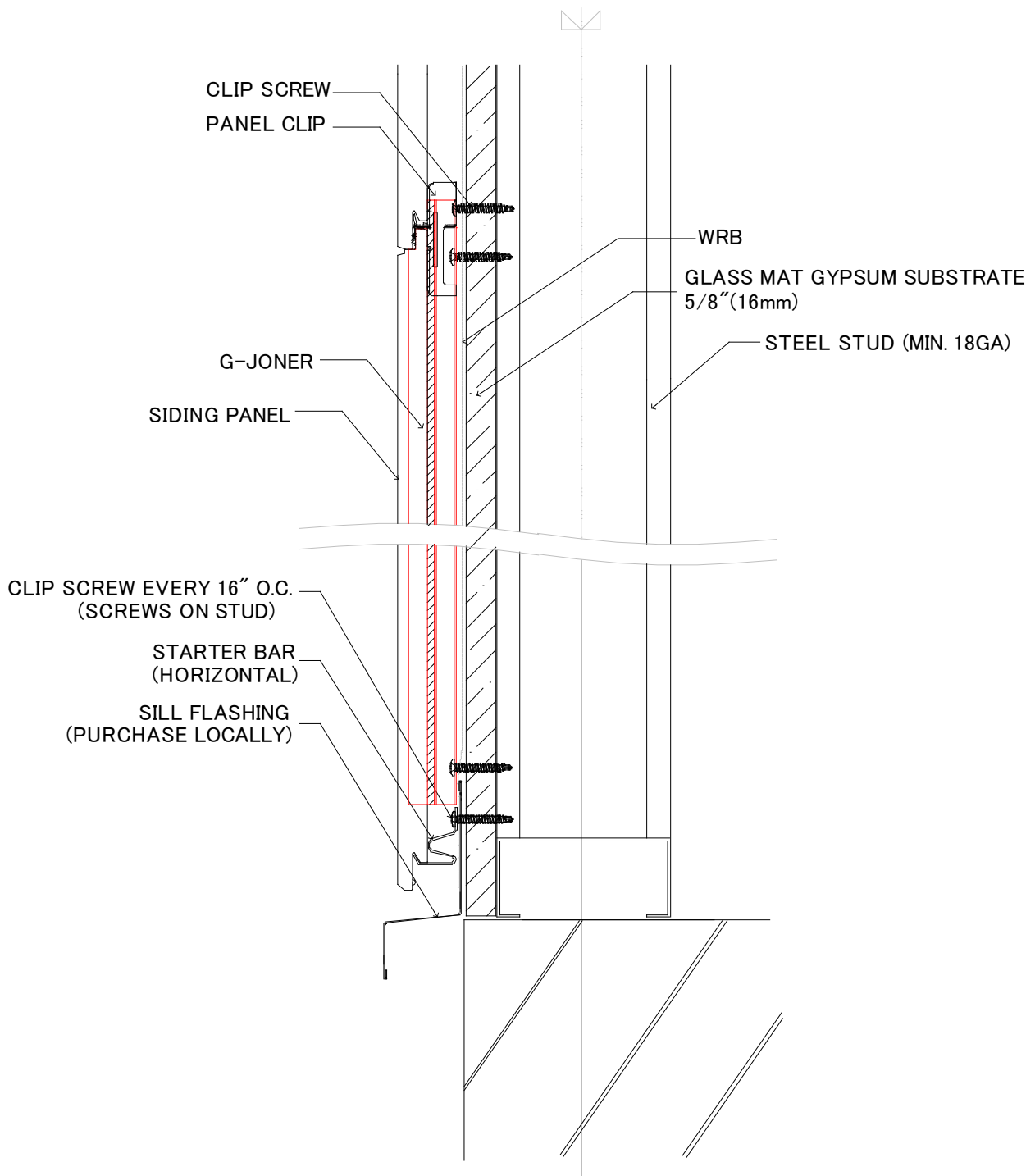


5. Installation Drawing Details

(Steel Frame – Gypsum Sheathing – Horizontal Application)

<2> Intersection with starter bar

- The first panel course G-jointer should be cut where it contacts the starter bar before installation.
- The G-jointer has 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.

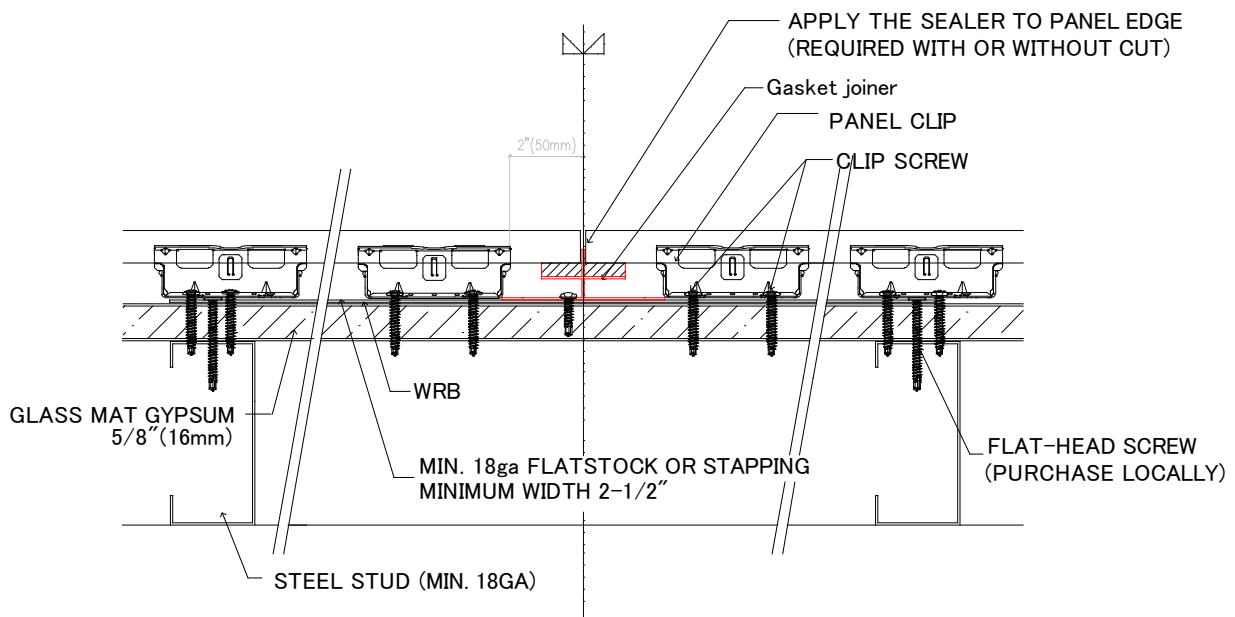


5. Installation Drawing Details

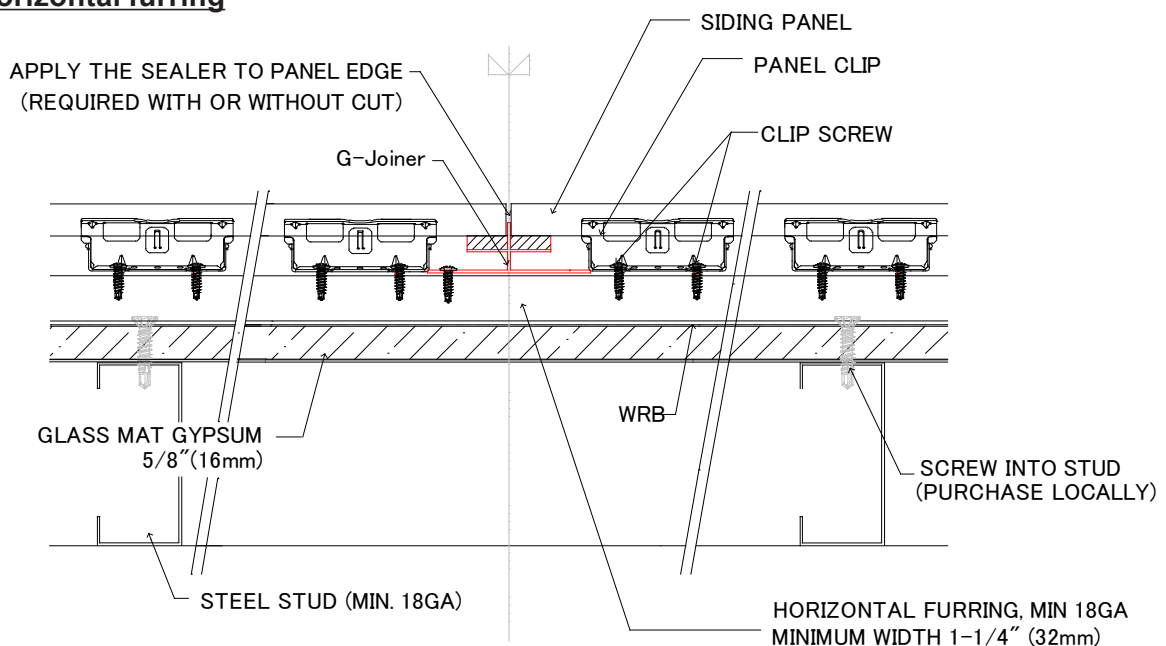
(Steel Frame – Gypsum Sheathing – Horizontal Application)

<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 shiplap.
- The G-joiner has 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

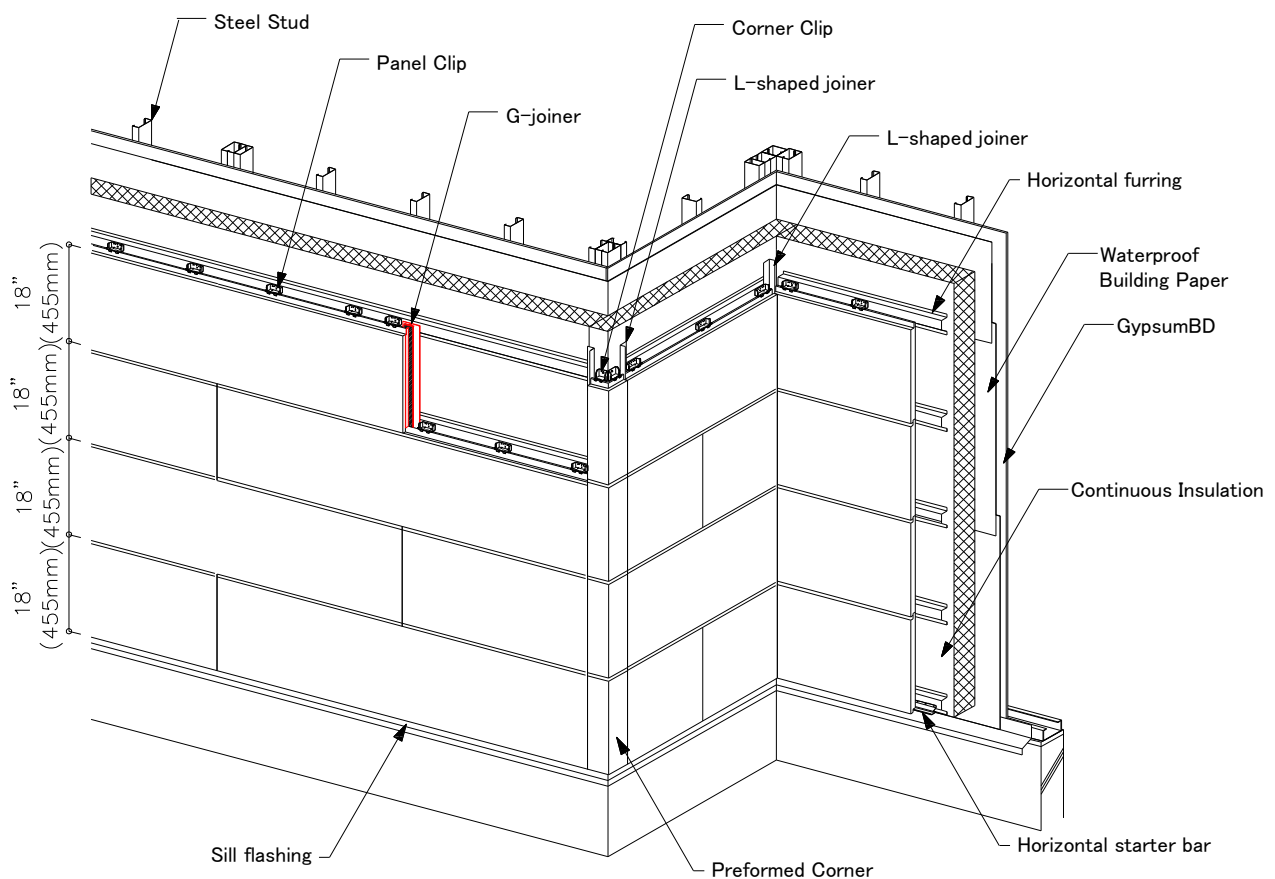


5. Installation Drawing Details

(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.
- L-joiners should be used at outside corners, inside corners, and openings.
- Install 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.

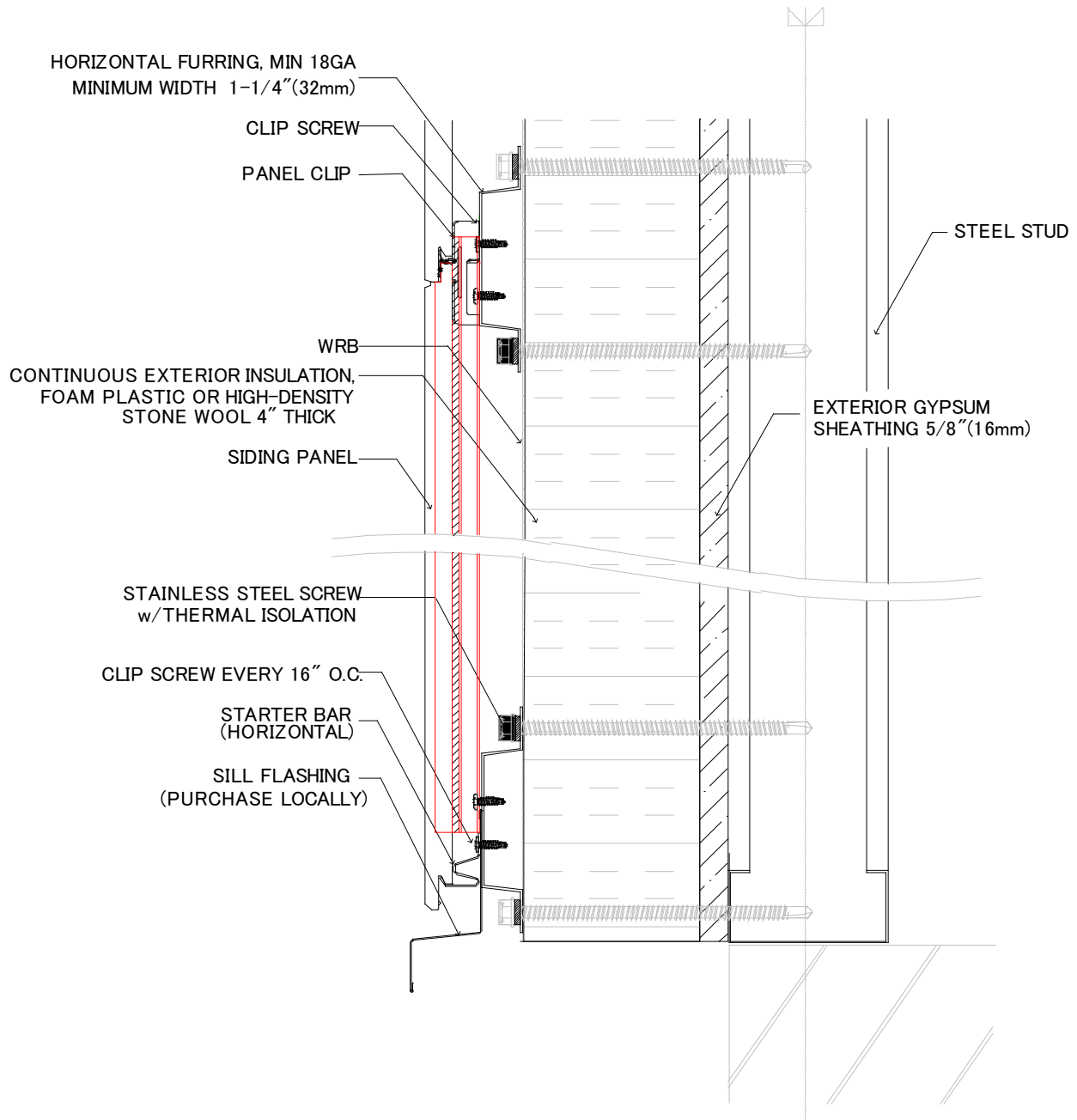


5. Installation Drawing Details

(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 has 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.

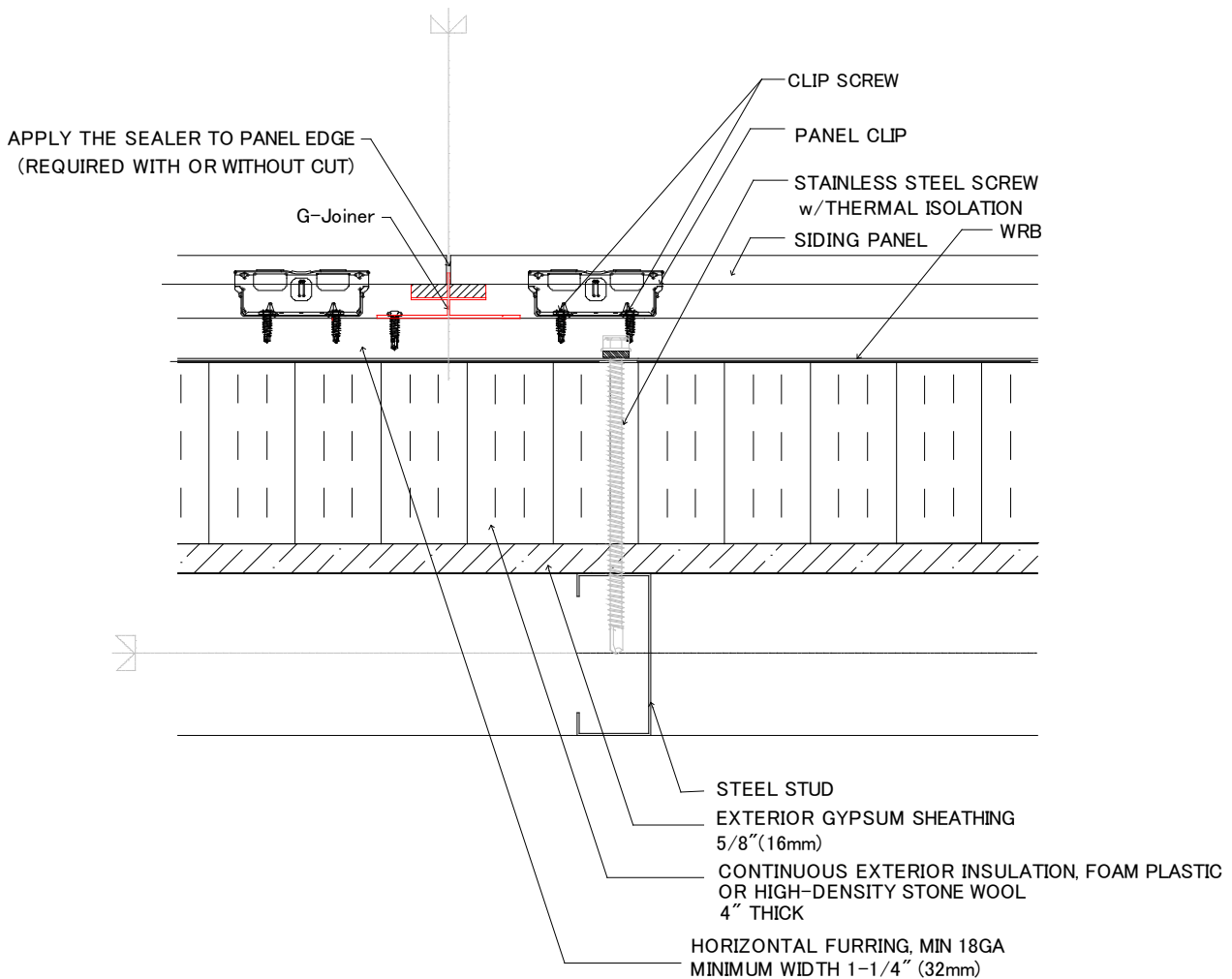


5. Installation Drawing Details

(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 has 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).



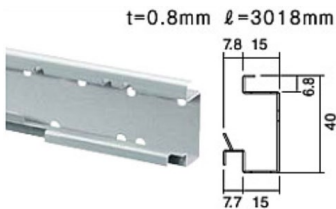
Appendix

Long Clip Installation for High Wind Load

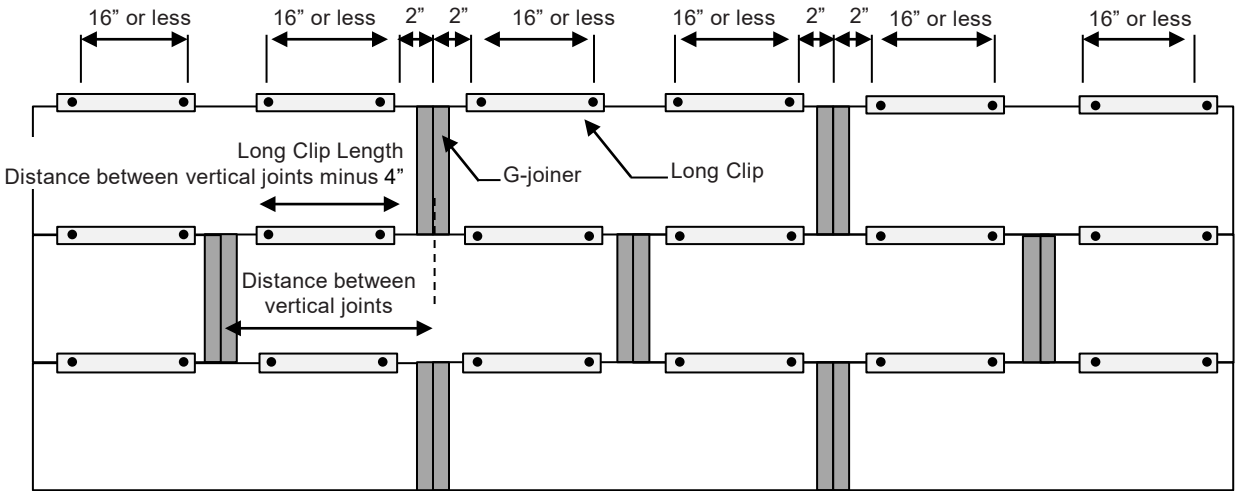
Long Clip Installation (for high wind load)

■General Installation Standards for Long Clip

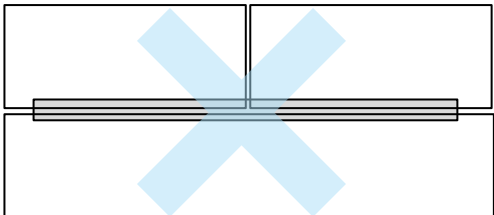
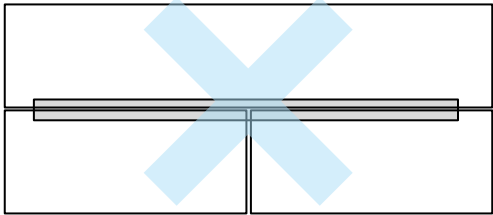
- Use Long Clips for high wind load as required by ESR 1627

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 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.



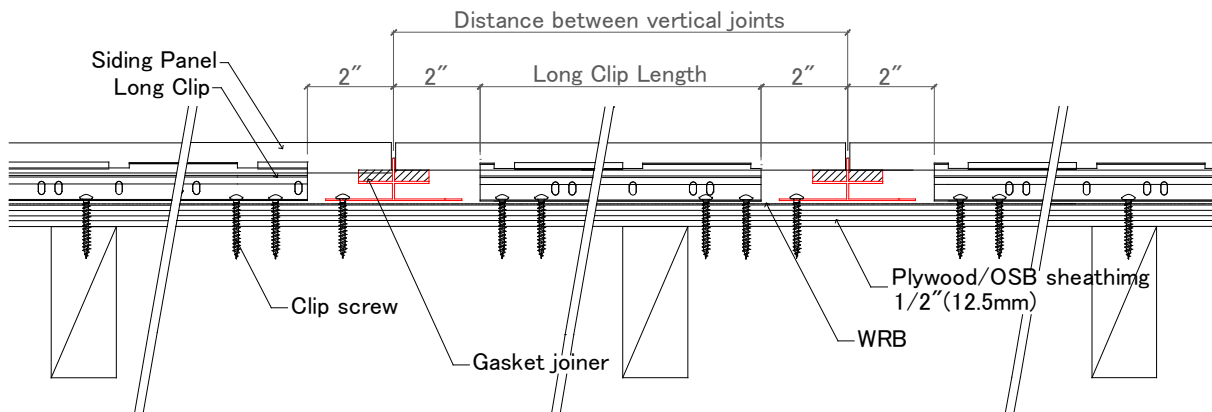
Long Clips cannot be installed across panel joints because it interferes with the joiner. Be sure to cut 4" shorter than the distance between vertical joints.



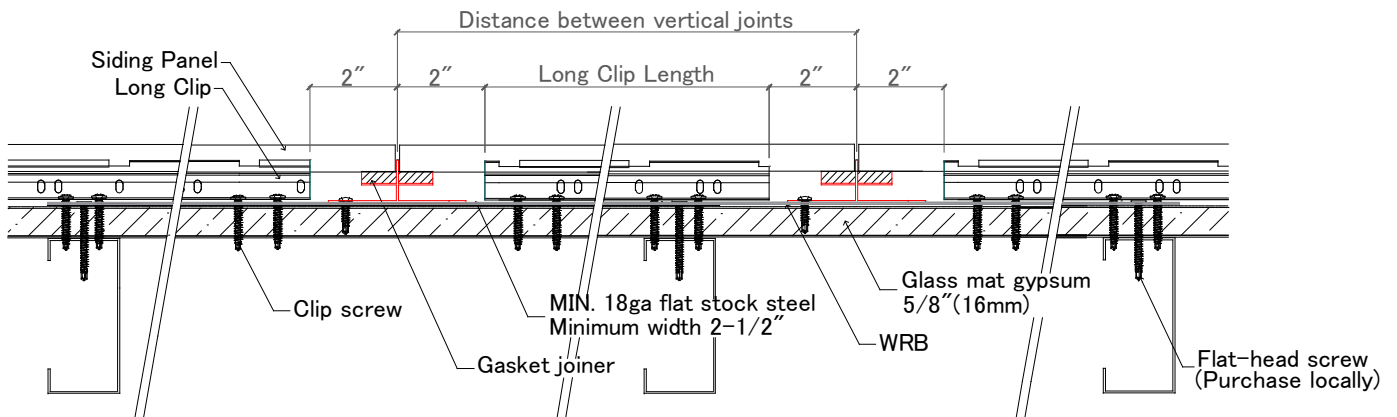
Long Clip Installation (for high wind load)

■ Cross section of vertical joint

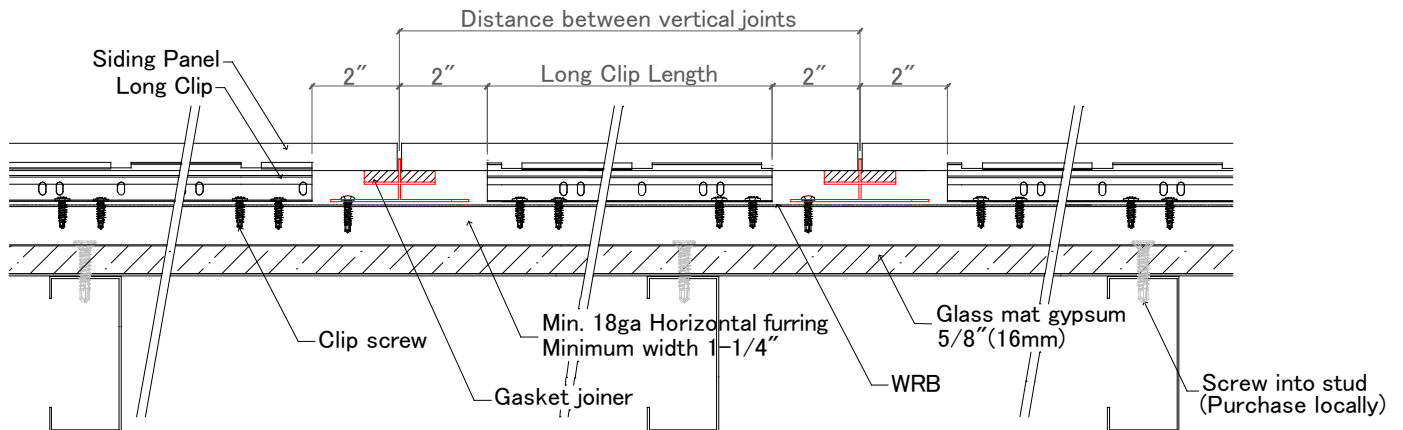
<For Wood Frame>



<For Steel Frame with flat stock steel>



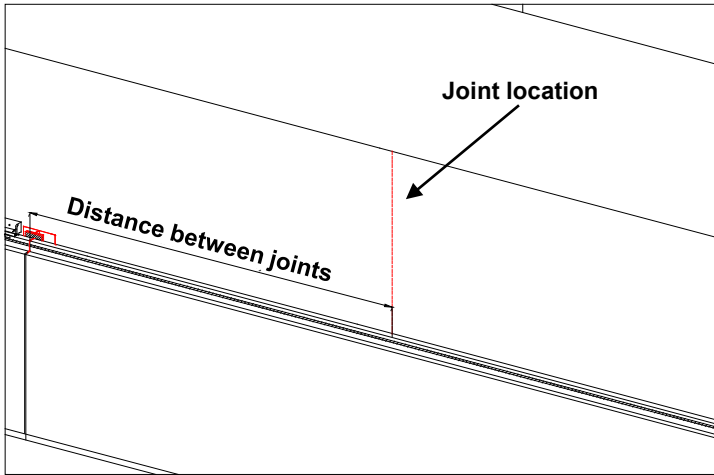
<For Steel Frame with horizontal furring>



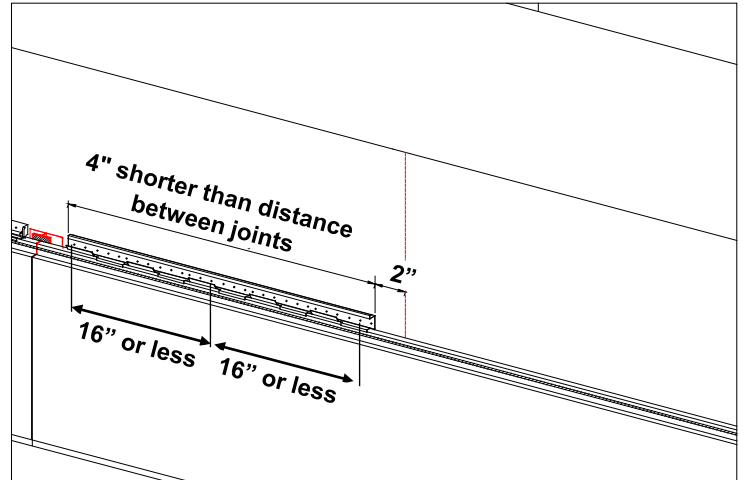
Long Clip Installation (for high wind load)

■ General Installation Procedure for Long Clip

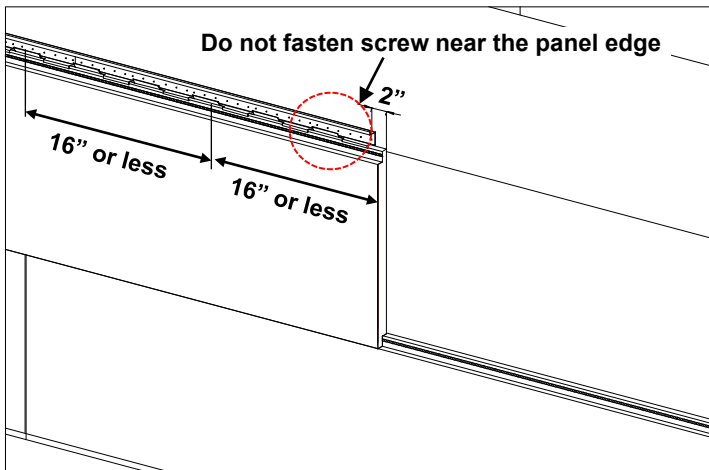
1. Check the next joint location and measure the distance between joints.



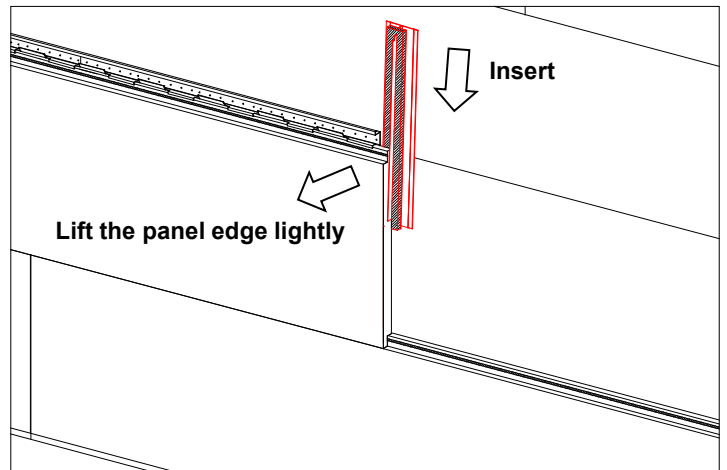
2. Cut a long clip 4" shorter than the distance between joints, install it 2" away from the joint location, and fasten with screw at 16" on center or less.



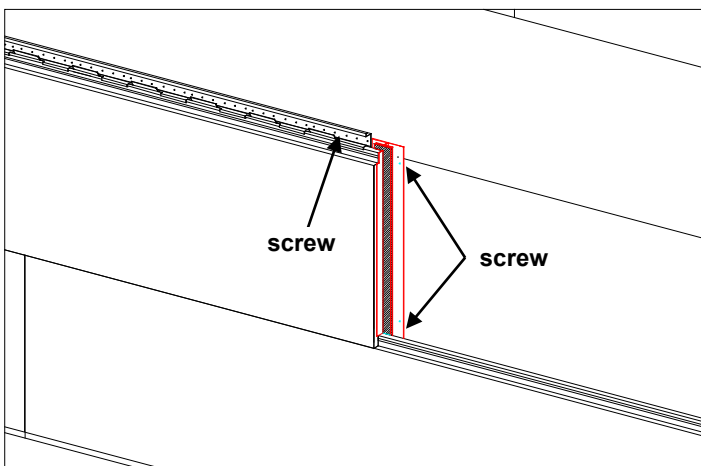
3. Install the panel and cut and install the long clip in the same manner as in step 2. At this step, do not fasten screw near the panel edge, as it will make insertion of the G-joiner difficult.



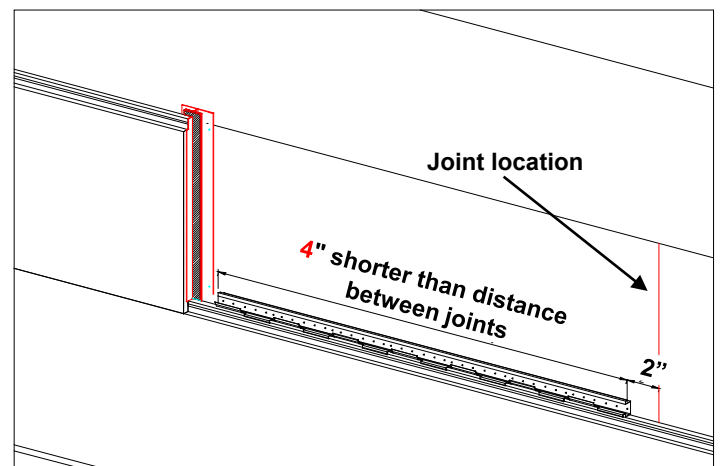
4. Insert the G-joiner from the upper side of the joint until it hits the shi lap. If the G-joiner is difficult to insert, lightly lift the panel edge to make insertion easier.



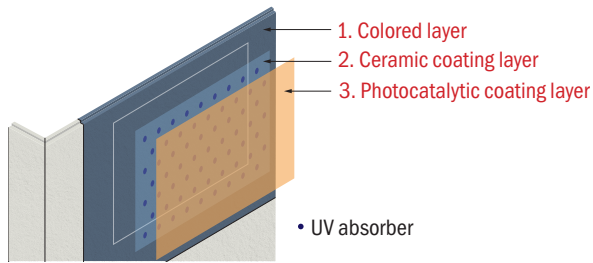
5. Butt the G-joiner to the panel edge and secure with two screws. Fasten the long clip near the panel edge with screw as well. (The areas not screwed in step 3)



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.



Triple Coating Technology



**20-Year Fade Limited Warranty
+ 365 Days of Self-Cleaning and Air Purifying**

Green Material

Recycled Materials

Consisting of approximately 45% recycled material, the panels are 100% recyclable, factory finished with no VOC, and contain no asbestos.



LIVING FUTURE
CORPORATE MEMBER

Rainscreen Moisture Management

Our exclusive technology combines a durable weather-resistant exterior with an internal ventilation layer that allows moisture to escape.



Product Description

CERACLAD is a fiber cement panel rain screen system manufactured by KMEW Co., Ltd. All panel products meet or exceed the standards of ASTM 1186 and ICC-ES AC-90. **CERACLAD** Hollow Core products are Type A, Grade I as defined in ASTM 1186.

FIRE AND COMBUSTIBILITY Summary of Test Methods

US

ASTME84, ASTME119, NFPA285, NFPA268

Canada

ULC-S114, ULC-S135

TRANSVERSE LOADING

Consult ICC-ESR 1627 code compliance report for Allowable Transverse Loads (design pressure/ ASD) with 3.0 safety factor applied.

Design Options

CERACLAD siding panels also come in a wide range of rich textures and colors and provide you with hundreds of possible combinations. And our exclusive **CREATIV™** custom color program allows you to order your components in colors that will match your exact specifications.

15 Standard Colors

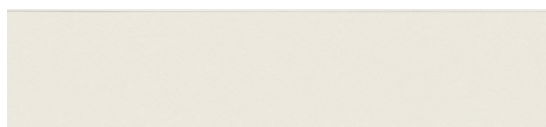
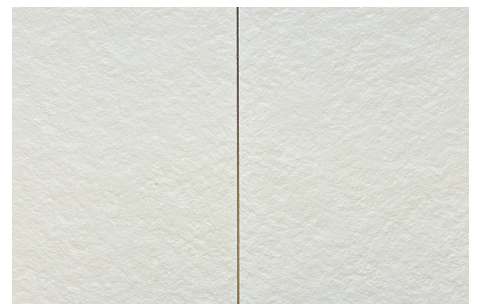


More Textures and Colors



Please visit ceraclad.com to see the latest textures and colors.

CERACLAD's T-jointer and L-jointer eliminate the need for caulking, achieving a clean, sleek surface in a more economical way



Cashmere Smooth
Panel dimensions: 10'L (3030mm) x 18"W (455mm) x 5/8"T (16mm)
Weight: 60 lbs (27 kg)



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