

NewTechWood

CANADA



FLUTED SIDING

VERTICAL INSTALLATION GUIDE



PROFILES UH61 & UH58

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IMPORTANT

READ ALL SECTIONS BEFORE YOU START

Prior to installing any composite cladding system, it is recommended that you check with local building codes for any special requirements or restrictions. The diagrams and instructions outlined in this guide are for illustration purposes only and are not meant or implied to replace a licensed professional. Any construction or use of NewTechWood must be in accordance with all local zoning and/or building codes. The consumer assumes all risks and liability associated with the construction and use of this product.

Ensure that the delivered product matches the order (color, model, size, quantity, accessories); inspect each piece before installation.

Do not install a product that appears or is believed to be defective.

A defective product will not be covered by the warranty if it is installed.

Stocking

NewTechWood siding boards are a finished product. Boards MUST be stored flat and off the ground prior to installation. NewTechWood recommends storing on pallets.

NewTechWood products MUST be kept dry and stored in a covered area. Material on-site must be covered with a tarp before installation. Moisture saturation before installation may result in swelling, shrinkage or board damage. Do not install saturated boards.

NewTechWood is not responsible for damage caused by improper storage and handling of the NewTechWood product.

Safety

When dealing with any type of construction project, it is necessary to wear appropriate safety equipment to avoid any risk of injuries. NewTechWood recommends, but is not limited to the following safety equipment, when handling, cutting, and installing NewTechWood: gloves, respiratory protection, long sleeves, pants, and safety glasses.

Tools

Standard woodworking tools may be used. Begin each project with a new blade. It is recommended that all blades have a carbide tip. Standard stainless steel or acceptable coated deck screws are recommended.

Environment

A clean, smooth, flat, and strong surface is needed to install NewTechWood's products correctly. Please check with local building codes before ever installing any type of cladding. If installation does not occur immediately, NewTechWood's products need to be put on a flat surface at all times. It should NEVER be put on a surface that is NOT flat.

IMPORTANT

READ ALL SECTIONS BEFORE YOU START

Planning

Plan a layout for your cladding before starting it to ensure the best possible looking cladding for your project. Building codes and zoning ordinances generally apply to permanent structures, meaning anything that is anchored to the ground or attached to the house. So nearly every kind of cladding requires permits and inspections from a local building department. We recommend drawing out a site plan of your proposed project that you intend to do to minimize errors and make your perfect wall cladding.

Pressure wash on a scrap piece of material before using a pressure washer on the profiles to make sure that your settings will not damage the Ultrashield coating.

Construction

NewTechWood UltraShield is NOT intended for use as columns, support posts, beams, joist stringers, support against a force, or other primary load-bearing members. NewTechWood must be supported by a code-compliant substructure. While NewTechWood products are great for retrofits, NewTechWood's products CANNOT be installed on existing cladding boards.

Heat and Fire

Excessive heat on the surface of NewTechWood products from external sources such as but not limited to fire or reflection of sunlight from energy efficient window products. This extreme elevation of surface temperatures, which exceeds that of normal exposure, can possibly cause NewTechWood products to melt, sag, warp, discolor, increase expansion/contraction, and accelerate weathering.

Fasteners

When fastening NewTechWood's products all screws that are face fastened should always be driven in at a 90 degree angle to the cladding surface. Toe nailing/screwing should never be done to the products. An extra furring strip should be added if a 90 degree angle cannot be driven into the board. All fasteners should be on their own independent furring strips, when two boards ends meet each other there must be a sister furring strip. The end of each board must sit on its own furring strip.

Use white chalk, straight boards, or string lines as templates for straight lines. **NEVER USE COLORED CHALK.** Colored chalk will permanently stain NewTechWood's products and are highly not recommended.

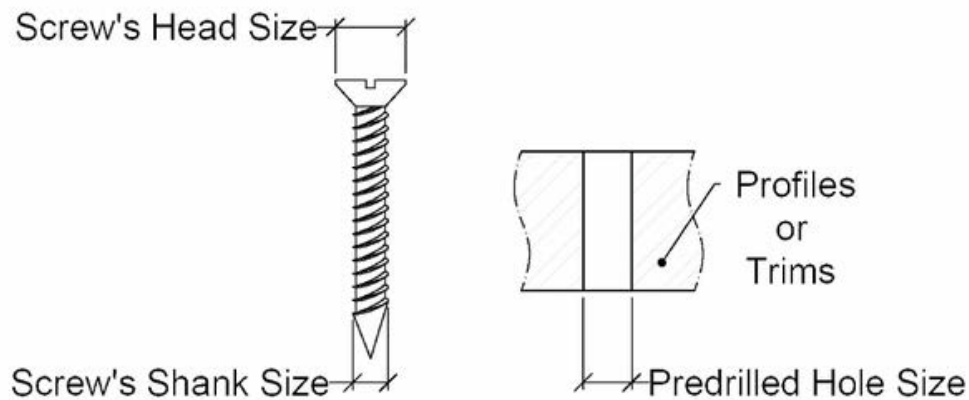
All screws that are face fixed should always be NewTechWood coloured stainless steel screws (CS-100).

IMPORTANT

READ ALL SECTIONS BEFORE YOU START

Predrill




It is recommended to use NewTechWood's #8 pan head colour screw for face fixing the profiles onto the furring strips. When face fixing, it is recommended to predrill the holes slightly larger on the profiles to allow for expansion and contraction response to temperature change, as shown in below diagram.






The predrilled hole size should be larger than the screw thread size, from 1/16" (1.5 mm) to 5/64" (2 mm). Moreover, the predrilled hole size should also be smaller than the screw head size, at least 5/64" (2 mm). A washer can be applied if the predrilled hole size is smaller than the screw head size below 5/64" (2 mm).

Fluted siding

- NORWEGIAN SIDING BOARD AND TRIMS






PRODUCT	PURPOSE	PART
UH61	Norwegian siding board. Available in 12 and 16 feet.	
UH50	F-trim, used as the first and the last board when exposed. Available in 16 feet.	
UH51	Outside corner trim, used on the outside corners. Available in 16 feet.	

- BELGIAN SIDING BOARD AND TRIMS

PRODUCT	PURPOSE	PART
UH58	Belgian siding board. Available in 12 and 16 feet.	
UH59	F-trim, used as the first and the last board when exposed. Available in 16 feet.	
UH60	Outside corner trim, used on the outside corners. Available in 16 feet.	

Fluted siding

- NORWEGIAN AND BELGIAN SIDING ACCESSORIES

PRODUCT	PURPOSE	PART
AW02	Siding Starter Bar	
AW08	Cladding Clip used at every furring strip to support each board to the strip	
AW24	Double clip designed to secure butt joint	
T7	Rubber Stopper, serves as a spacer to support the final board when clips cannot be installed	
CS	Coloured Screws	

Fluted siding

- SCREWS FOR WOOD FURRING STRIP

The table below shows the screws recommended to use for the installation, but not included.




PRODUCT	PURPOSE	PART
#5 x 1/2" Stainless Steel SS304	Used when locking the board into AW08	
#8 x 1" Stainless Steel SS304 (pan head)	Used when installing the Clip (AW08) and the Rubber Stopper (T7) onto the wood furring strips	
#8 x 1 1/4" Stainless Steel SS304 (flat head)	Used when face fixing the boards and the trims onto the wood furring strips	

Table 1

***Note:** All screws are based on our recommendation and if the installation requires something different than what is shown, a professional should be consulted before installing.

The following installation guide will use the above screw sizes.

Fluted siding

- SCREWS FOR ALUMINUM FURRING STRIPS

The table below shows the screws recommended to use for the installation, but not included.




PRODUCT	PURPOSE	PART
#5 x 1/2" Stainless Steel SS304	Used when locking the board into the clip (AW08)	
#8 x 1" Self-tapping Stainless Steel SS410 (pan head)	Used when installing the clip (AW08) and the Rubber Stopper (T7) onto aluminum furring strips	
#8 x 1 1/4" Self-tapping Stainless Steel SS410 (flat head)	Used when face fixing the boards and the trims onto the aluminum furring strips	

Table 2

***Note:** All screws are based on our recommendation and if the installation requires something different than what is shown, a professional should be consulted before installing.

The following installation guide will use the above screw sizes.

Fluted siding

• WALL PREPARATION

We recommend for the under construction aluminum or wood furring strips. Each cladding board needs to be supported by a furring strip **NO MORE than 16 inches (406 mm)** from center to center. Extra care is required in order to provide sufficient strapping in and around obstacles such as windows, fascia's, soffits, guttering, ventilation points etc.

When used as **SOFFIT** or **CEILING**, the maximum distance between furring strips, center-to-center is **12 inches (305mm)**

Double furring is highly recommended for any vertical installation of NewTechWood siding products.

DOUBLE FURRING

Double furring is mandatory in Quebec and the Atlantic provinces to allow continuous ventilation and wall drainage, and it is highly recommended in the rest of Canada.

- First, apply vertical furring strips with a minimum thickness of 3/8", secured to the wall framework.
- Then, install 1" x 3" horizontal furring strips over the vertical ones, spaced at a maximum of 16" apart.

DIAGONAL FURRING

• *Diagonal furring is permitted in Quebec, Ontario, and the Maritimes.* The furring must be at least 1" thick and nailed directly into the framework and primary wood sheathing.

HORIZONTAL FURRING

- *Horizontal furring alone is permitted in Ontario, provided that:*
 - The strips are spaced every 16".
 - There is a 1" gap between the ends of the strips to allow for water drainage.
 - There is a true 1" nailing base, either by combining a strip with OSB or plywood, or using a true 1" or 2" x 3" strip.

INSTALLATION ON ICF / RIGID INSULATION

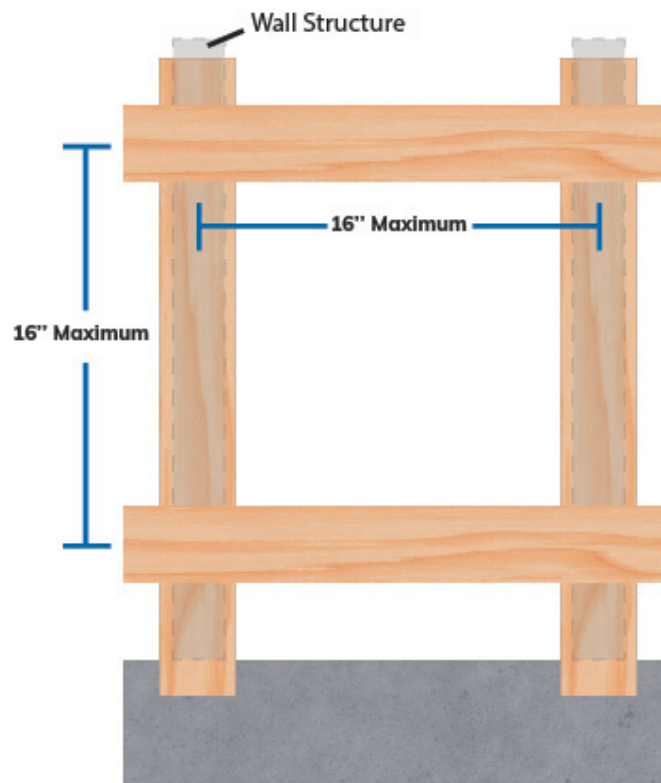
For installation on rigid insulation or ICF, double furring is highly recommended to more effectively evacuate heat/moisture that may accumulate between the cladding and the rigid insulation/ICF. It is also recommended to level the strips well with shims or use sufficiently thick aluminum strips to have perfectly straight and leveled strips.

Fluted siding

- WALL PREPARATION

NOTE:

For all illustrations in this manual, only the horizontal strips will be shown for visual clarity. Double furring remains mandatory in certain provinces and is highly recommended throughout the country.



Fluted siding

- EXPANSION AND CONTRACTION VALUES

NewTechWood siding boards will experience expansion and contraction with changes in temperature. Expansion and contraction are most significant where extreme temperature changes occur. Fastening the boards according to the gapping requirements noted in the following table accommodates for this movement.

Expansion and Contraction table of values for Canada

Installation temperature (°C)	12 feet (3.66 m)	16 feet (4.88 m)
0	3/16 in	1/4 in
5	3/16 in	1/4 in
10	1/8 in	3/16 in
15	1/8 in	3/16 in
20	1/16 in	1/8 in
25	1/16 in	1/16 in
30	3/64 in	1/16 in

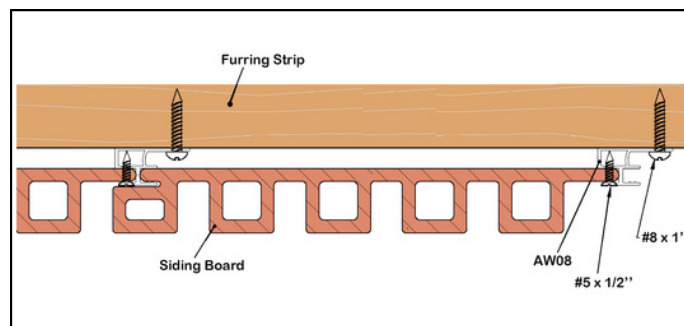
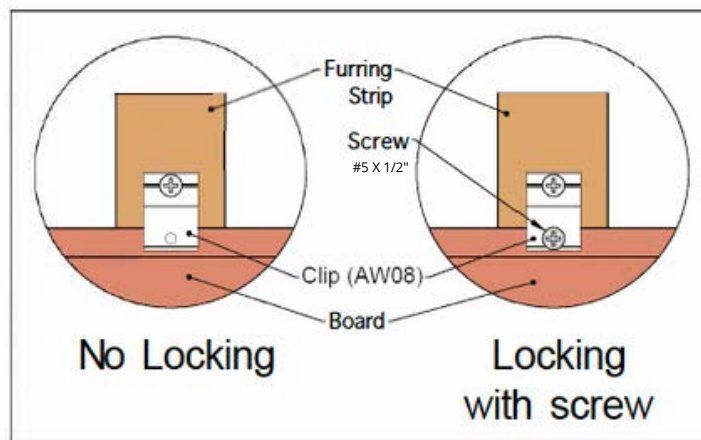
Note: If you are still unsure of what gapping to use, contact the manufacturer and they will give you the correct gapping requirements based on your environment and area.

Fluted siding

- LOCKING THE SIDING BOARD

Since the composite wood must allow for expansion and contraction due to temperature change, the board **must be locked at one fixed point but only one point** to allow the remaining board to expand and contract freely. In the case there is a need to lock the board, Clip (AW08) comes with a separate hole.

It is important **NOT TO LOCK** any other clips for the same board.



When installing vertically, it is required to lock the clip (AW08) at the top of the board to allow the remaining board to expand and contract freely.

Fluted siding

- LOCKING THE SIDING BOARD

Note:

1. When the board's length is below 78 3/4" (2m), it is ok to lock only the first clip (AW08) at the top of the board, as shown in Diagram A1.
2. When the board's length is equal to or longer than 78 3/4" (2 m), it is required to lock the first and second clip (AW08) counted from the top of the board, as show in Diagram A2.
3. For stronger support, we recommend the use of AW24 double clips to replace the AW08 when locking the board at the top furring strip.

DO NOT LOCK any other Clips for the same board.

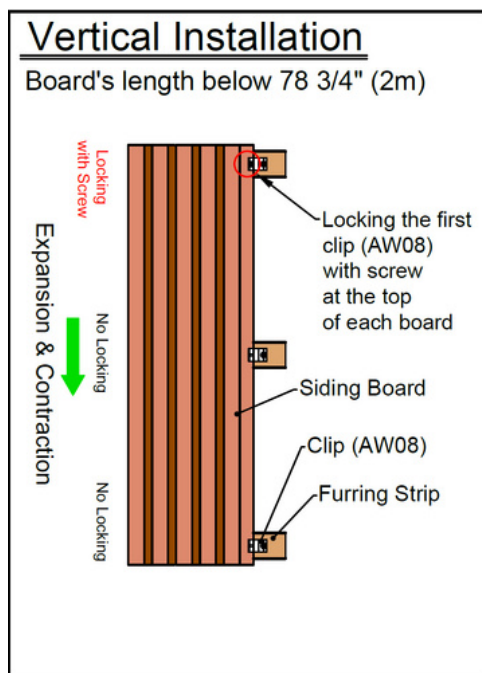


Diagram A1

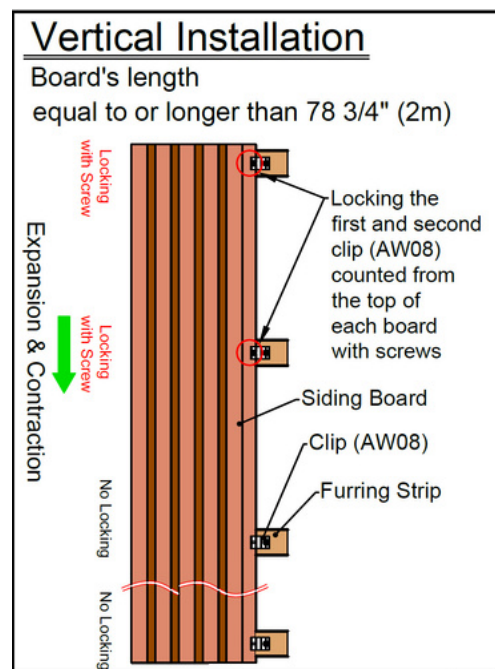


Diagram A2

Fluted siding

- INSTALLATION PROCEDURE

- STEP 1: Framing**
 - Measure and Chalk the Furring Strips
 - Furring Strips Installation
- STEP 2: Trim Installation**
- STEP 3: Siding Board Installation**
 - Installing the First course
 - Installing the Second course
 - Continuing the remaining installation
 - Installing the Last board
- STEP 4: Finish the Top**

1 FRAMING

The frame needs to be Level before installing the siding boards. Diagram 16 shows the wall replicating different scenarios potentially occurring when installing the siding boards.

- Wall Side A: Wall between the Outermost Edge and the Inside Corner
- Wall Side B: Wall between the Inside Corner and the Outside Corner
- Wall Side C: Wall between two Outside Corners
- Wall Side D: Wall between the Outside Corner and the Outermost Edge

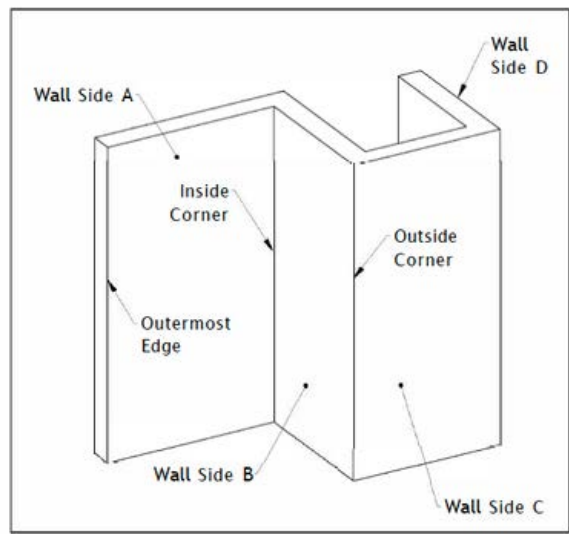


Diagram 16

Fluted siding

• INSTALLATION PROCEDURE

For all illustrations in this manual, only the horizontal strips will be shown for visual clarity. Double furring remains mandatory in certain provinces and is highly recommended throughout the country.

2

Measure and chalk the furring strips according to the span data specified on page 10 of this installation guide, as shown in Diagram 17.

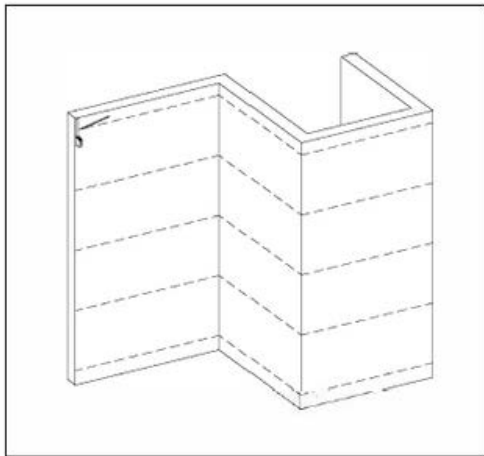


Diagram 17

Note:

1. We are using wood furring strips for this installation. If you are using aluminum furring strips, please refer to page 8 of this installation guide for the correct recommended screws.

2. An adequate span between the furring strips is required to keep the Siding boards from bending. Please review page 11 of this installation guide to see what span is needed.

3

Fix the horizontal furring strips onto every vertical furring strips onto the walls that you intend to install the siding on, as shown in Diagram 18.

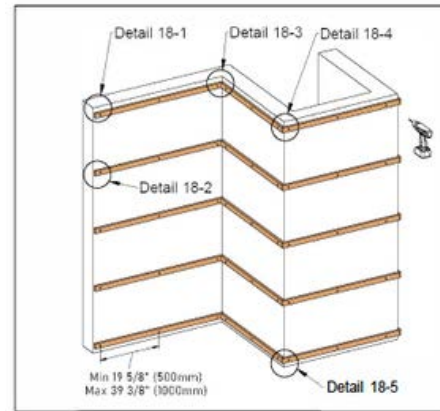
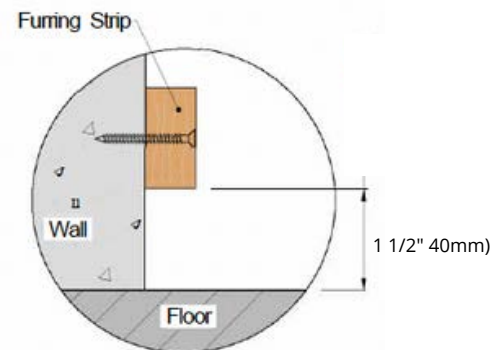


Diagram 18

Note:

1. A minimum gap of 1 1/2" (40mm) needs to be left at the bottom of each furring strip opposite the floor, as shown in Detail 18-1.

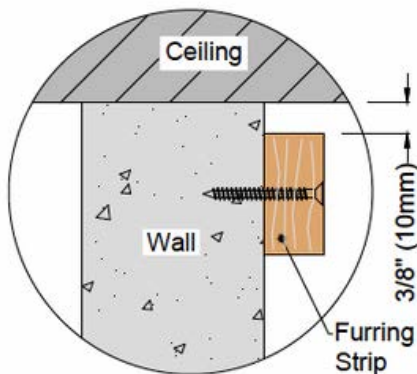


Detail 18-1

Fluted siding

- INSTALLATION PROCEDURE

Note: 2. A minimum gap of 3/8" (10mm) needs to be left between the Ceiling and the furring strip's end, as shown in Detail 18-2.



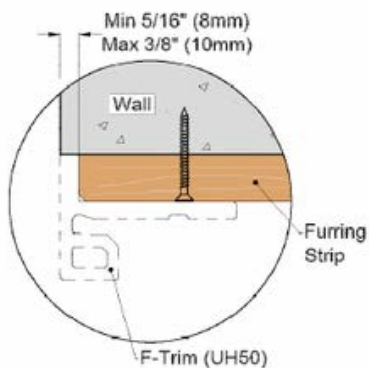
Detail 18-2

Note:

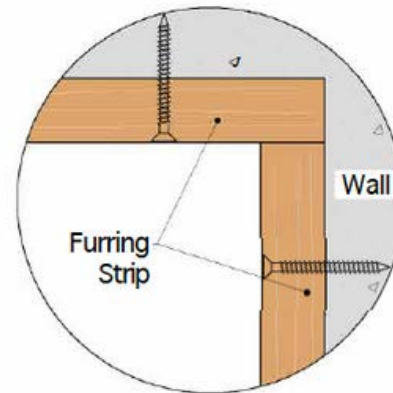
3. For the Outermost Edge, please install according to Detail 18-3.

4. For the Inside Corner, please install according to Detail 18-4.

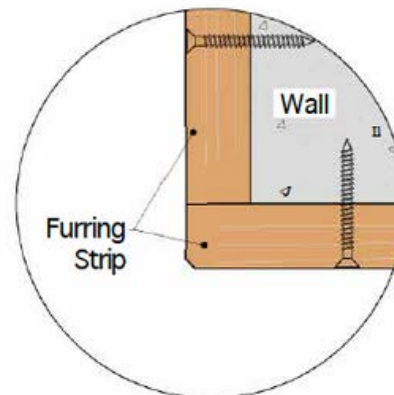
5. For the Outside Corner, please install according to Detail 18-5.



Detail 18-3



Detail 18-4



Detail 18-5

Fluted siding

• INSTALLATION PROCEDURE

For all illustrations in this manual, only the horizontal strips will be shown for visual clarity. Double furring remains mandatory in certain provinces and is highly recommended throughout the country.

4 TRIM INSTALLATION

Secure the F-Trim (UH50) onto the wall outermost edge furring strip and the Outside Corner Trim (UH51) onto the wall outside corner furring strip with screws in distance at least 19 5/8" (500mm) and max ta 39 3/8" (1000mm) on center, respectively, as shown in Diagram 19.

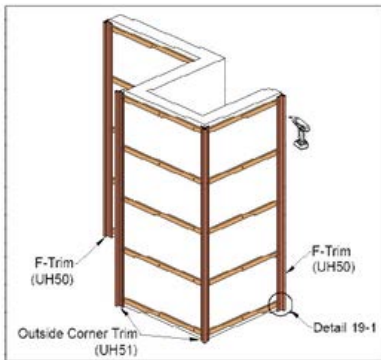
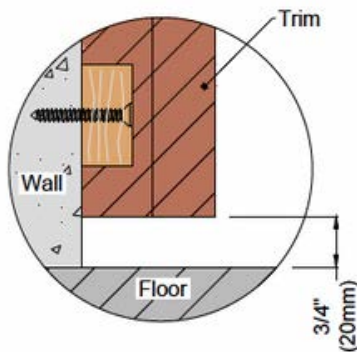


Diagram 19

Note:

A minimum gap of 3/4" (20mm) needs to be left between the bottom of trims and the floor, as shown in Detail 19-1.



Detail 19-1

5 INSTALLING THE FIRST COURSE

Start the installation according to the Diagram 20.

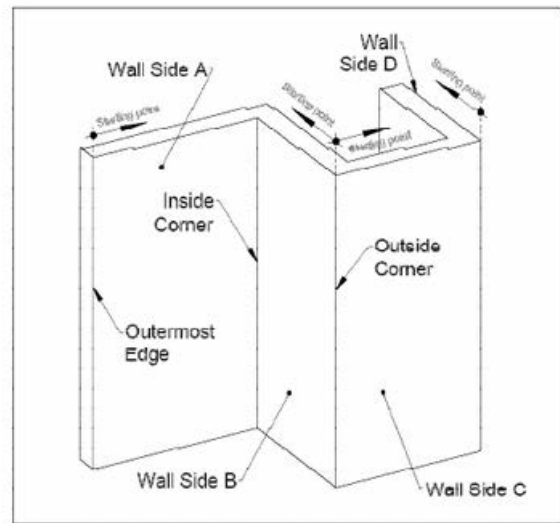


Diagram 20

Note:

1. Wall between the Outermost Edge and the Inside Corner:
 - Start from the Outermost Edge.
2. Wall between the Inside Corner and the Outside Corner:
 - Start from the Outside Corner
3. Wall between two Outside Corners:
 - Start from one of the Outside Corners.
4. Wall between the Outside Corner and the Outermost Edge:
 - Start from the Outside Corner.

Fluted siding

• INSTALLATION PROCEDURE

For all illustrations in this manual, only the horizontal strips will be shown for visual clarity. Double furring remains mandatory in certain provinces and is highly recommended throughout the country.

6

Put the first Fluted Siding board (UH61 or UH58) in place over the trims, then face fix it the side next to the F-Trim (UH50) onto the furring strip with screws, and fasten it's another side onto the furring strip with Clip (AW08), as shown in Diagram 21, Outermost edge Detail 21-1 and Outside Corner Detail 21-2.

Note:

Pre-drill the face fixing holes on the first board before installation to allow for expansion and contraction. Please review page 4, "Predrill", of this installation guide for further information.

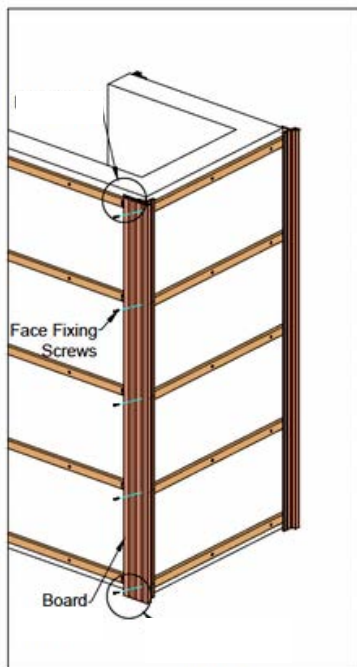
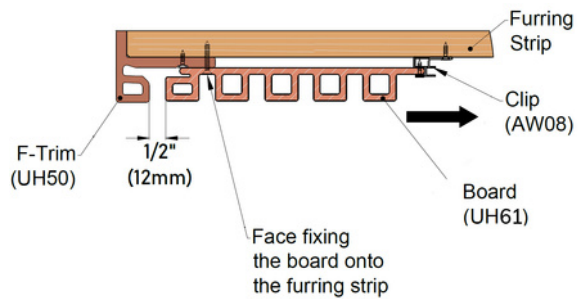


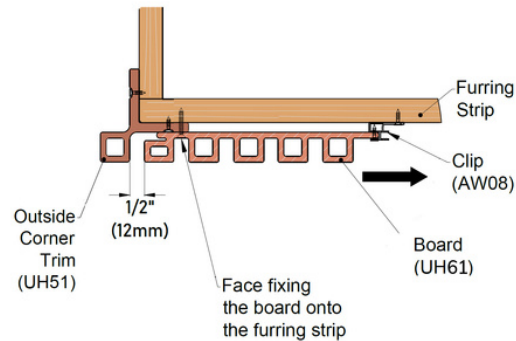
Diagram 21

Detail 21-1 shows the first board installation on the **Outermost Edge** with F-Trim (UH50).



Detail 21-1

Detail 21-2 shows the first board installation on the **Outside Corner** with Outside Corner Trim (UH51).



Detail 21-2

Fluted siding

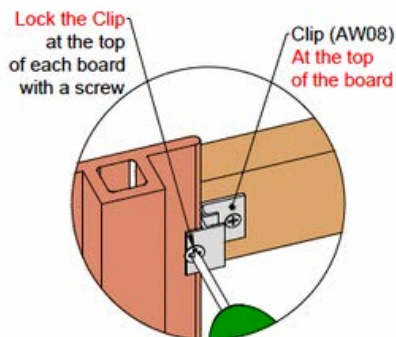
• INSTALLATION PROCEDURE

For all illustrations in this manual, only the horizontal strips will be shown for visual clarity. Double furring remains mandatory in certain provinces and is highly recommended throughout the country.

Note:

Since the composite wood must allow for expansion and contraction due to temperature change, lock the board **at one or two adjacent fixed points** to enable the remaining board to move freely. When installing vertically, it is required to **lock the Clip (AW08) at the top of each board**, as shown in Detail 21-3.

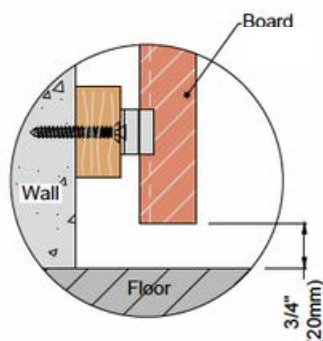
IT IS IMPORTANT to review page 13, "Locking the Siding Board" of this installation guide for further information



Detail 21-3

Note:

1. Allow a gap at least 3/4" (20mm) between the floor and the siding board, as shown in Detail 21-4.



Detail 21-4

7 INSTALLING THE SECOND COURSE

Put the second board over the first board's Clips (AW08) and fasten it's another side onto the furring strip with the Clip (AW08), as shown in Diagram 22, Detail 22-1, Outermost Edge Detail 22-2 and Outside Corner Detail 22-3.

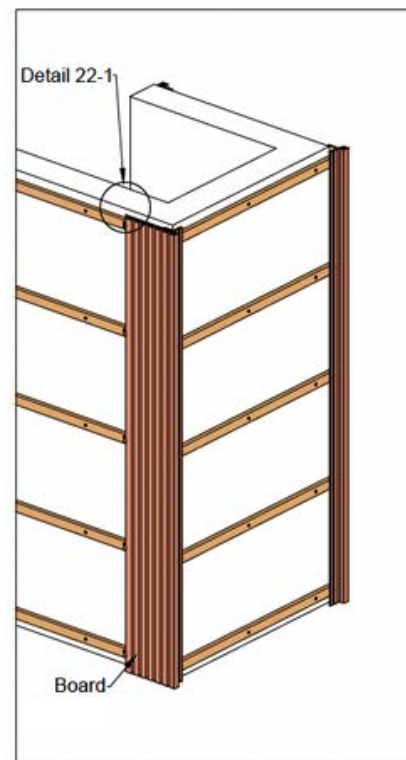


Diagram 22

Ensure that the board is properly inserted into all the clips of the previous boards, as it can be easy to miss one. Missing a clip can result in noticeable waves on the finished surface.

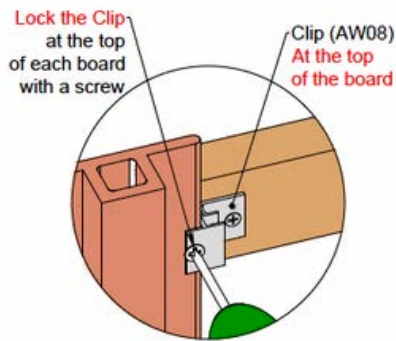
Fluted siding

- INSTALLATION PROCEDURE

Note:

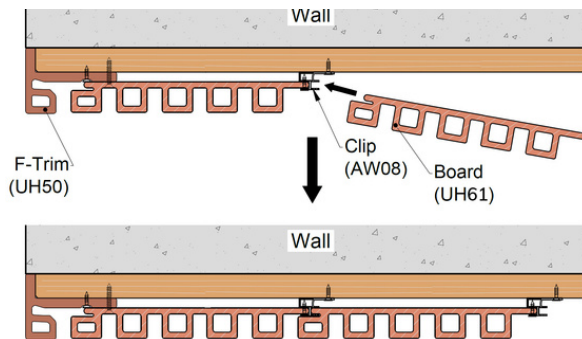
Since the composite wood must allow for expansion and contraction due to temperature change, lock the board at **one or two adjacent fixed points** to enable the remaining board to move freely. When installing vertically, it is required to **lock the Clip (AW08) at the top of each board**, as shown in Detail 22-1.

IT IS IMPORTANT to review page 13, "Locking the Siding Board" of this installation guide for further information



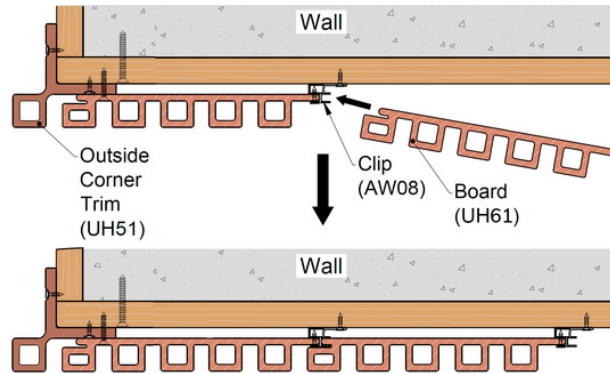
Detail 22-1

Outermost Edge with F-Trim (UH50), as shown in Detail 22-2.



Detail 22-2

Outside Corner with Trim (UH51), as shown in Detail 22-3.



Detail 22-3

Fluted siding

• INSTALLING THE SIDING BOARDS

For all illustrations in this manual, only the horizontal strips will be shown for visual clarity. Double furring remains mandatory in certain provinces and is highly recommended throughout the country.

8 INSTALLING THE LAST BOARD

When you are at the last board, measure the distance between the trim or the adjacent installed siding board and the Clip (AW08) to obtain the appropriate board's cutting dimension, as shown in Diagram 23.

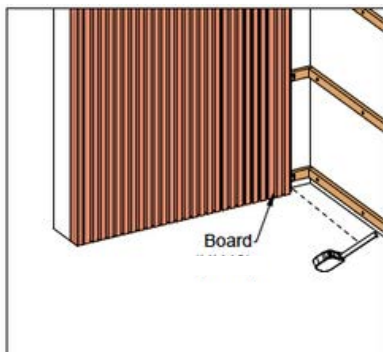
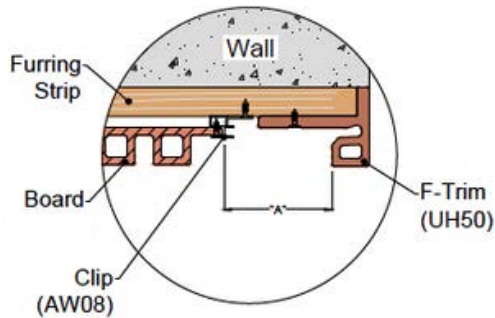


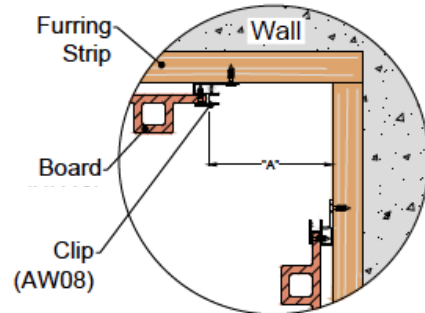
Diagram 23

Note:

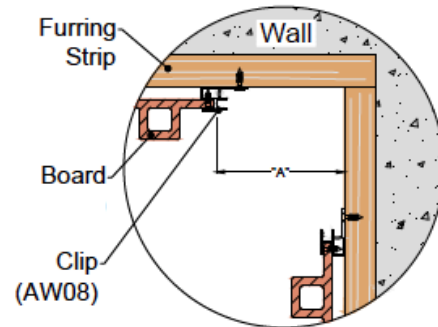
1. Outermost Edge with F-Trim (UH50), as shown in Detail 23-1.
2. Outside Corner with Outside Corner Trim (UH51), as shown in Detail 23-3.
3. Inside Corner, as shown in Detail 23-4 and Detail 23-5.



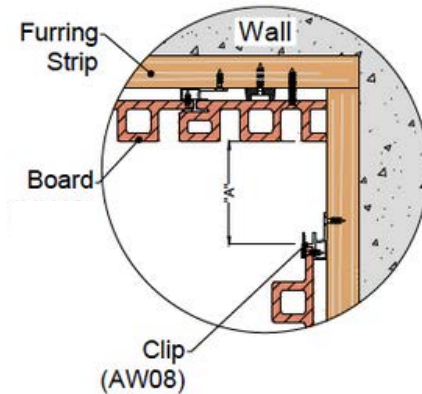
Detail 23-1



Detail 23-2



Detail 23-3



Detail 23-4

Fluted siding

- INSTALLING THE SIDING BOARDS

9

Cut the board according to the measured dimension, as shown in Diagram 24 and Detail 24-1.

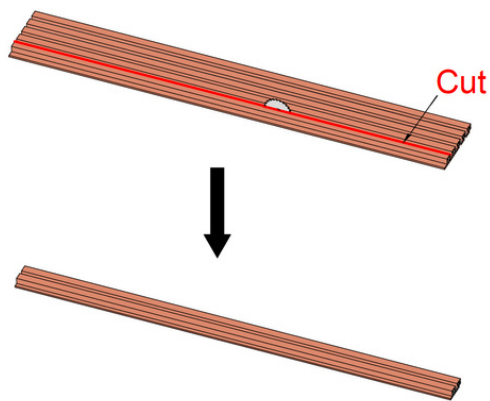
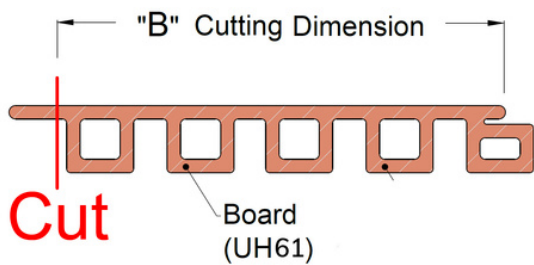


Diagram 24



Detail 24-1

10

Install the Rubber Stopper (T7) onto the furring strip in the Inside Corner to back up the last board, as shown in Diagram 25.

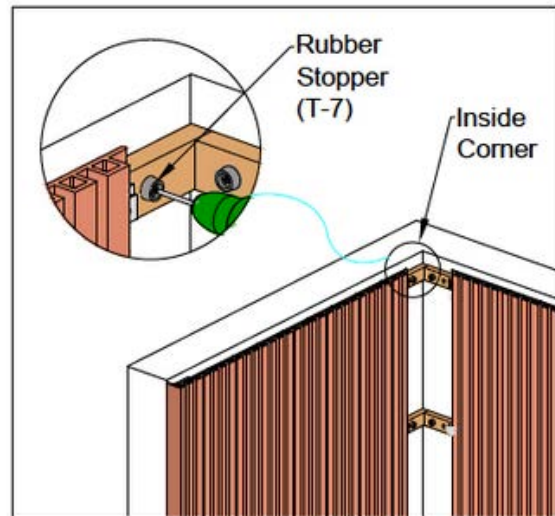


Diagram 25

Fluted siding

- INSTALLING THE SIDING BOARDS

11

Put the cut siding board over the Clip (AW08) in place and then face fix it onto the furring strip with screws, as shown in Diagram 26.

Note:Pre-drill the face fixing holes on the last board before installation to allow for expansion and contraction. Please review page 4, "Predrill ", of this installation guide for further information.

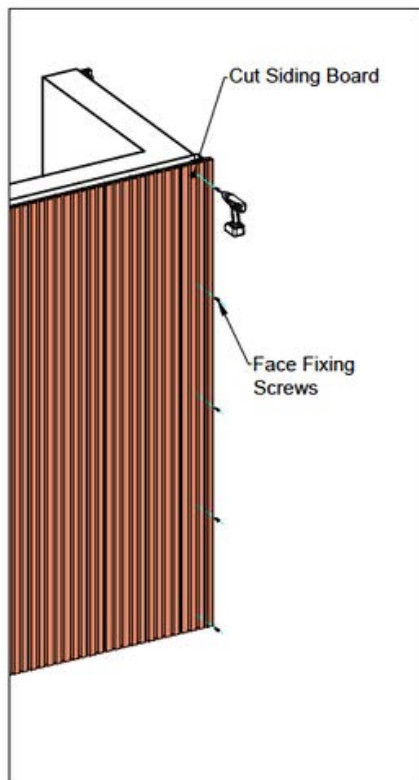
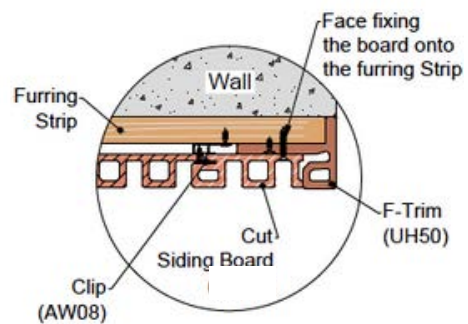


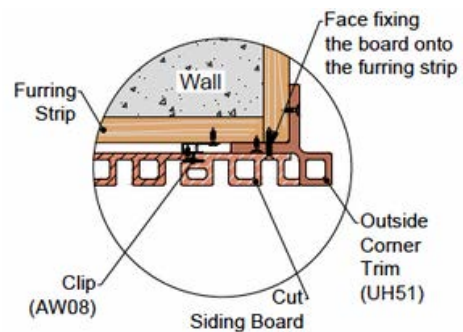
Diagram 26

Detail 26-1 shows the last board installation on the Outermost Edge with F-Trim (UH50).



Detail 26-1

Detail 26-2 shows the last board installation on the Outside Corner with Outside Corner Trim (UH51).

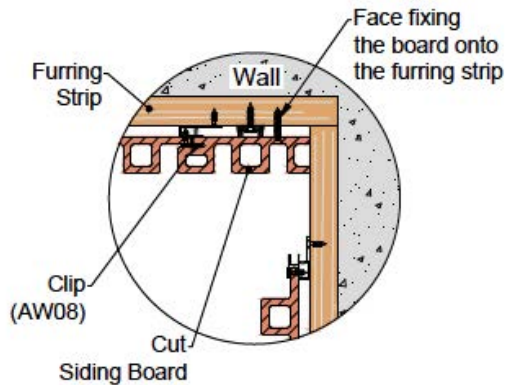


Detail 26-2

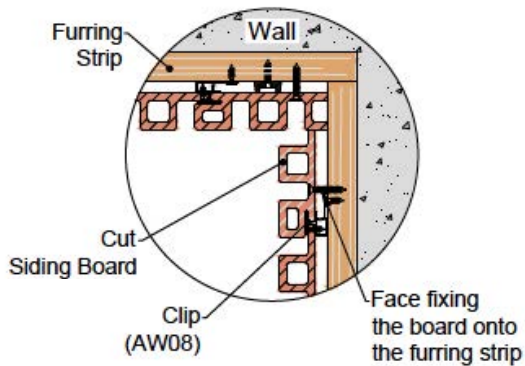
Fluted siding

- INSTALLING THE SIDING BOARDS

Detail 26-3 and Detail 26-4 show the last board installation in the Inside Corner.



Detail 26-3



Detail 26-4

12 FINISH THE TOP

It is recommended to use metal flashing to finish the top of the siding.

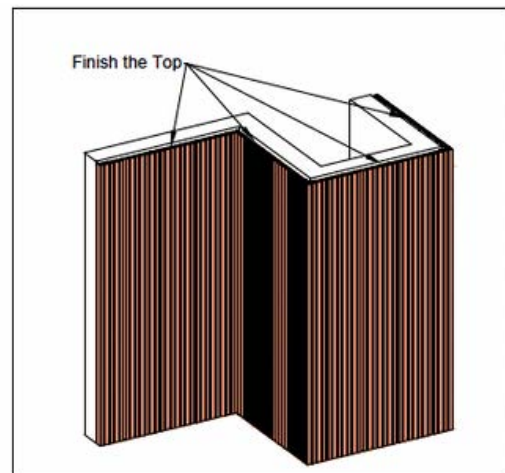
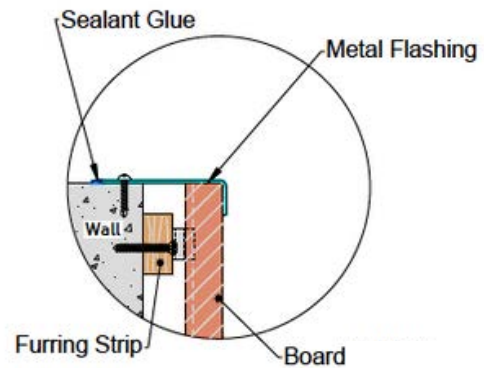


Diagram 27

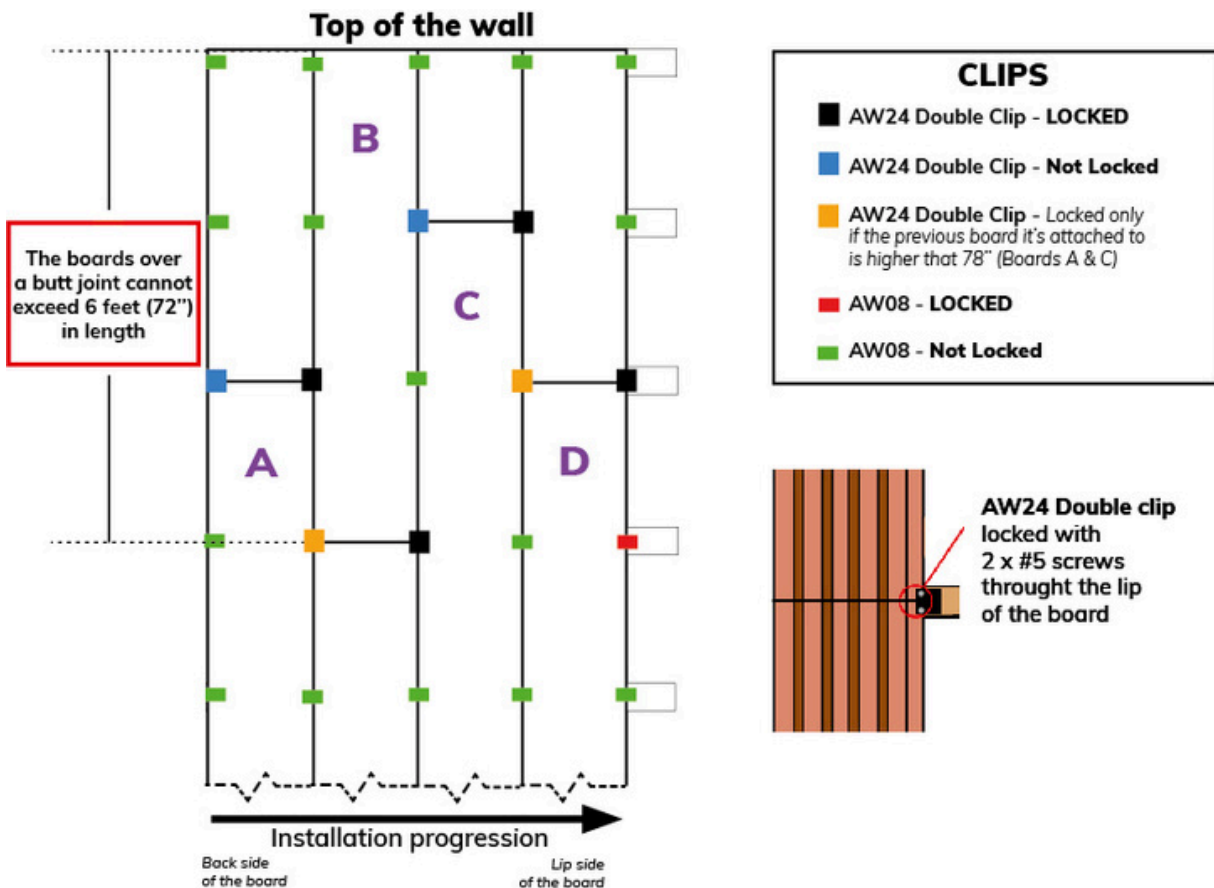
Put metal flashing against the top of the siding along the length of the installed siding boards and secure it onto the wall with screws, as shown in Detail 27-1.



Detail 27-1

Fluted siding

- BUTT JOINTS GUIDELINES



1. Butt joints must be centered on furring strips
2. Never join more than 2 boards in the same line
3. Top board must not exceed 6 feet (72 inches)
4. Remember to always lock the first AW08 clip to the board on the first furring strip under the butt joint when the bottom board is longer than 78 inches.

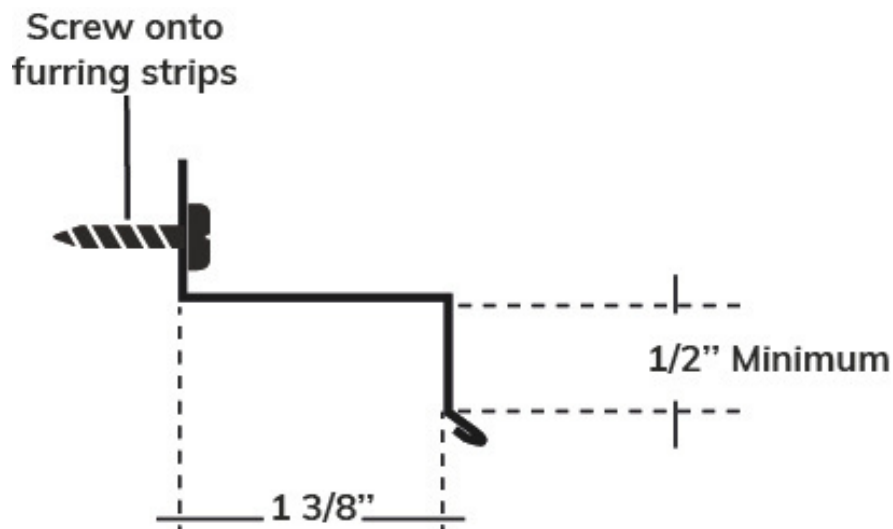
Fluted siding

- BUTT JOINTS GUIDELINES – **MORE THAN 2 BOARDS**

When you have to have more than 2 boards in line or the top board needs to be longer than 72", you have no other choice than creating a transition trim.

Most installers will fold aluminum to create a transition flashing. This is a design choice up to the Architect, builder, installer or homeowner.

Following is an example of a trim that can be prefabricated in aluminum or folded on site if you have the right equipment.



FLUTED SIDING

VERTICAL INSTALLATION GUIDE



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