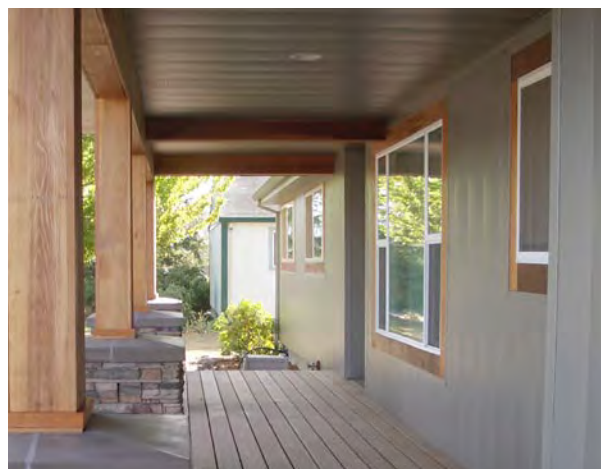


SmoothWall™ P A N E L



INSTALLATION INSTRUCTIONS


CHAMPION METAL
a Taylor Metal Company

5927 234th St SE,
Woodinville, WA 98072
(425) 485-3003
www.championmetal.com

Table of Contents

Introduction	1	FLASHINGS	
Delivery and Will Call	2	CF C-Flashing	7
Handling and Storage	3	DF Drip/Sill Flashing	8
Tools	4	CO Outside Corner	9
Fasteners	5	CI Inside Corner	10
Smooth Wall Installation	6	ZF Z-Flashing	11



Champion Metal SmoothWall™ panels are designed for use on residential and commercial structures.

The SmoothWall™ panels can be used on vertical wall or mansard applications to provide an appealing, long lasting alternative to common siding products or as an accent area to add color or texture to any building.

SmoothWall™ panels are also available with a polystyrene backer. The primary function of the backer is to provide support for the panel to minimize denting and buckling due to impact. When using the polystyrene backer it is advisable to use solid sheathing or space sheathing set 4 to 6 inches apart to gain the greatest benefit of the polystyrene. The entire panel is not filled with polystyrene. There is a 5/8" gap on each panel that is not filled with polystyrene, therefore it is not intended to provide insulation or be used for sound absorption, although some insulation value and sound absorption can be gained from the polystyrene.

These installation instructions are intended to offer suggested application procedures for common building construction. No attempt is made to provide installation details for every application or possible use.

Please contact Champion Metal for use of custom flashing details as they pertain to specific conditions or to discuss a specific project.

Conformity to local building codes, details for specific applications, and use of safety and health procedures are the sole responsibility of the installer.

Champion Metal assumes no liability for the improper installation of the SmoothWall™ panel nor for any personal injury or property damage that may occur with the product's use.

Oil Canning – All light gauge metals can display waviness often referred to as “oil canning.” This is caused by steel mill tolerances, substrate variation and relative reflectivity. “Oil canning” is an inherent characteristic of steel products, not a defect, and is not a cause for material rejection.

Delivery and Will Call

Delivery Policy

Champion Metal delivers using diesel trucks with 5th wheel, low-boy flat bed trailers. Overall combined length can be as long as 65 feet. Our fleet includes trucks, with and without knuckle cranes, and a variety of trailer sizes to assist in deliveries. We will make every effort to accommodate requests for a specific delivery mechanism but we cannot guarantee availability of specific resources.

We will make every attempt to deliver material to the desired location. We may be unable to gain access on tight corners or steep terrain. If the site is deemed inaccessible by our driver, the customer may choose an alternate delivery site within a reasonable proximity. If we are unable to make the delivery, additional charges may be assessed.

The customer is responsible for:

- Determining adequate access for delivery ahead of time.
- Meeting the delivery at the agreed upon time.
- Any balance owing on C.O.D invoices.
- Providing adequate resources (1-4 people as needed) for off-loading materials.
- \$35 per half hour charge if delivery takes longer than one-hour.

Delivery times are usually scheduled one day in advance. Champion Metal will make every effort to make the delivery at the scheduled time. Please be aware that there may be conditions beyond our control such as traffic, mechanical failure, road closures, etc. which may affect our schedule.

Will Call and Loading Policies

Flat bed trailers and trucks are best suited to transport metal roofing materials. These can be loaded from the side with a forklift and tied down in a safe and secure manner.

We are not able to load materials onto vehicles and/or trailers which are not suitable or may be hazardous to load. Please be aware that if we find a vehicle to be inappropriate, we reserve the right to refuse to load your order.

Examples are: boat trailers, vans, buses, motor homes, campers and box trailers. Pickup racks which do not have sufficient supports for the weight or are not long enough to support bundles are also unacceptable.

Champion Metal is not responsible to tie down loads nor do we provide any tie down materials. Please bring tie downs to secure your load (string or twine are not acceptable for this purpose.) We do offer a delivery service at reasonable rates to accommodate the customer who needs the materials delivered to an accessible job-site.

Please see our delivery pricing pages for more information.



SmoothWall™ panels are available in lengths between 2 feet and 25 feet in 1/4 inch increments. For best results, Champion Metal recommends panel lengths of 12' or less. For taller wall heights, use a Z-flashing (ZF - page 11) to break up the distance into two panels.

Panels shorter than 2 feet are available, however, they are subject to a per panel handling charge. Please see current price list.

SmoothWall panels are smooth faced and available with an optional center v-groove (6" reveal) or two v-grooves (4" reveal).

Handling and Storage

Check the shipment at the time of delivery.

Verify material quantities against the shipping/packing list. Note any damage or discrepancies upon the paper work at the time of delivery and notify Champion Metal within 48 hours of delivery.

Handle materials with care when off loading or moving to avoid damage to panels or flashings. Long panels may require two or more pick-up points, properly spaced to avoid damaging panels. Plan ahead. Contact Champion Metal for recommendations on handling/hoisting long panels.

Store the panels, flashings, and accessories in a dry, well ventilated area, off the ground. If covering, allow ventilation around panels. Elevate one end of bundles to allow drainage of wet materials.

Take care when painting to avoid getting over-spray on the material. Remember that wind can carry paint particles some distance. Over-spray can cause the finish to look dull and may void your warranty.

Secure materials, especially when leaving the site, on the ground or roof to prevent winds from moving or dislodging. Wind may cause damage to the material, property or persons.

Safety considerations are the responsibility of the installer and crew. Be sure to **use common sense** and generally accepted safety practices when installing soffit materials.

Tools

The following tools may be used for proper installation.

- Screw Gun: Clutch type, variable torque, cordless screw guns will give the best results.
 - Extra batteries
 - Bit holder - magnetic
 - #2 square drive bits or phillips drive bits (for panel screws)
 - 1/4" Hex head - magnetic - bit driver (for woodfast flashing screws)
 - 1/8" drill bit (for rivets & pre-drilling fastener holes)
 - Belt & holster (keeps all the above tools safely on your hip)
- Cutting Tools:
 - Cutters/Offset (curved jaw) left & right (for precision cutting, long cuts)
 - Snips (straight jaw) left & right (for short cuts & circular cuts)
 - Hack Saw - 32 TPI Blade
 - Circular & Sabre saws (with metal cutting blades speeds up panel cutting but leaves very rough edges and burrs paint)
 - CAUTION: POWER SAWS MAY CAUSE PANEL DAMAGE!
 - Electric Shears (aids in long panel rips)
 - DeBurring Tool
- Hole Punch (for pre-punching holes in metal)
- Rubber Mallet - Soft Type (for adjusting panels & flashings)
- Quick Square, Framing Square & Bevel Square (aids in squaring flashings & panels)
- Duck Bill Vise Grips/Pliers (for various bending)
- Tape Measures - 16' for most work - larger sizes for larger surface & panel measurements
- Rivet Tool (for riveting flashings)
- Marking pen or pencil
- Chalk Line (for marking long panel rips and to align panels)
- Protective gloves to protect hands
- Cotton gloves for working with copper (to protect against fingerprints on finish)

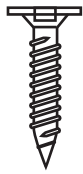
WARNING - Filings, debris and chips must be wiped off panels, otherwise rust will develop!



Champion Metal recommends the following fasteners for 26ga and 24ga galvanized steel Smooth Wall™ panels. Waferhead screws are used to attach flashings and panels to the structure.

Recommended Fastener Spacing

- 24 inches maximum spacing for Smooth Wall™ panel application



Waferhead, Sharp point

Sizes:
#9-16 x 1" #2 Phillips Drive (also available in #2 Square drive)
#9-16 x 1-1/2" #2 Phillips Drive

Waferhead screws are recommended for attaching the panels to a wood deck or substrate. They are concealed fasteners and made of carbon steel coated with Zinc and an Oxyseal/Xylon Coating for long life.



Lathhead Screws, Sharp Point

Size: #6 x 9/16"

Lathhead screws are used to attach the panels to the wood deck. While generally not recommended for most applications, this concealed fastener is useful for areas where a longer fastener will penetrate the substrate and exhibit an objectionable appearance, such as exposed overhangs. The pull out rating for this fastener is less than the waferhead, so these fasteners need to be placed more often.



Woodfast, Sharp Point

Sizes:
#9-16 x 1" 1/4" Hex Drive- Color Match
#9-16 X 1-1/2" 1/4" Hex Drive- Color Match

Woodfast screws are recommended for attaching metal to wood in some cases metal to metal. They are exposed fasteners made of carbon steel, coated with Zinc and an Oxyseal/Xylon Coating for long life.



Stitch Screw, Sharp Point

Size #12 x 3/4" 1/4" Hex Drive-Color Match

Stitch screws are used to attach metal to metal such as lap joints in flashing. They can be used interchangeably with rivets. They are exposed fasteners.



Rivets

Size: #42 or #44 (1/8" x 1/8") Stainless Steel rivet-color matched

Rivets are used to attach metal to metal such as lap joints in flashing.

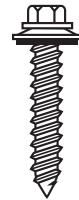
Champion Metal recommends the following fasteners for use with COPPER:



Pancake Head, Sharp Point

(Silicon Bronze)
Size: #10 x 1" #2 Phillips Head-natural finish

The Silicon Bronze fasteners are used with copper roofing panels to prevent reactions between unlike metals. The pancake head is used for panel attachment, and is a concealed fastener.



Woodfast, Sharp Point

(Silicon Bronze)
Size: #10 x 1" 1/4" Hex head -Natural finish

The Silicon Bronze fasteners are used for metal to wood applications, typically for the attachment of flashings. They are exposed fasteners.

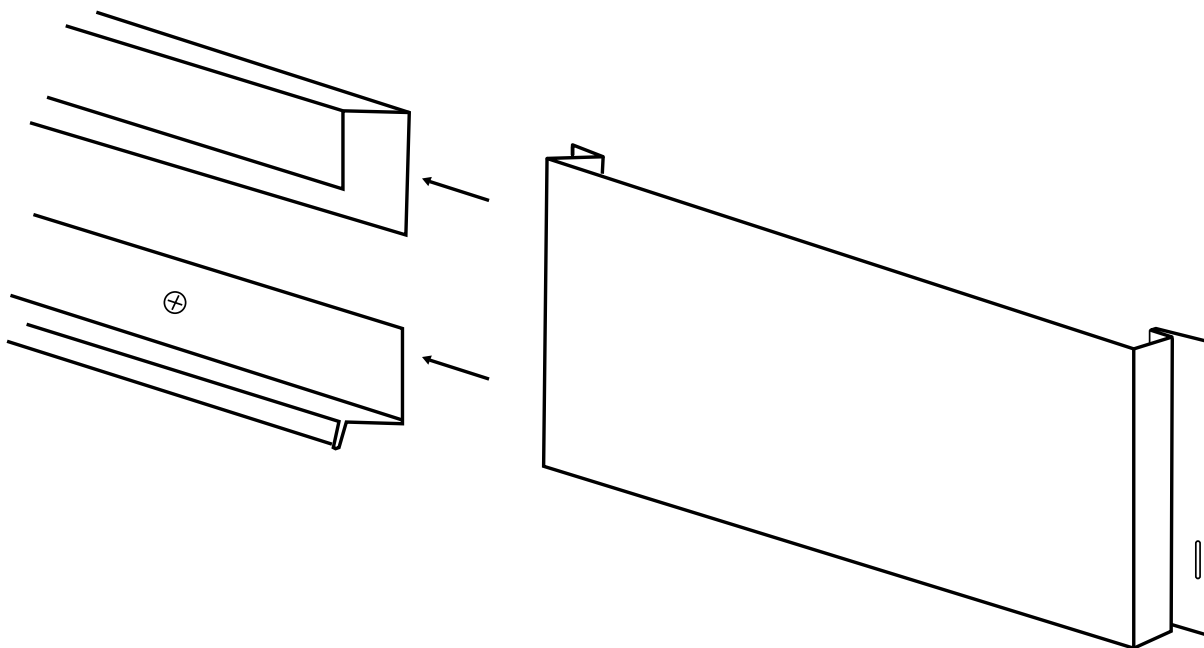


Rivets

(copper rivet/brass mandrel)
Size: #42 or #44 1/8" x 1/8"

Rivets are used to join metal to metal such as lap joints in flashings.

SmoothWall™ Panel Installation

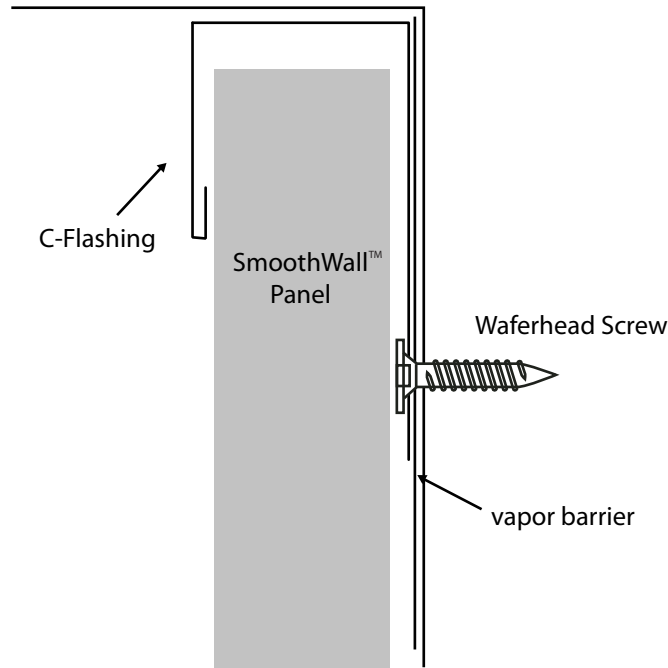


SmoothWall™ panels are attached to the wall by fastening the wide flange of the panel to the substructure and can be attached to solid or space sheathing, with the space sheathing at no greater than 2' on center. A vapor barrier, such as 30lb felt paper, should be used over the sheathing. Fasten the panels to the sheathing through the wide flange every two feet (maximum).

Flashing details may vary with the application. It is most common to use a C-flashing at the top of the panel and a drip or sill type flashing at the bottom of the panel. C-flashing is typically used around the sides and bottom of window and door penetrations. Sill flashing is used at the top of windows and doors. Outside and inside corner flashings are also common.

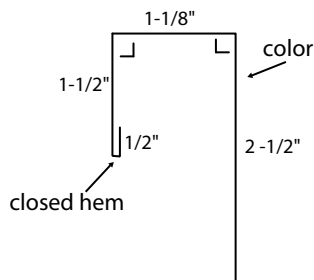
Typical installation sequence: Fasten C-flashing at top of the wall and the drip flashing at bottom of the wall. Slide the panel into the C-flashing until it clears the drip flashing and push the panel against the wall until flat, making sure the panel is straight and vertical, pull the panel down until it meets with the drip flashing, leaving 1/16 to 1/8" gap between panel and drip flashing. Fasten the panel through the wide flange and into the sheathing.

The next panel is installed by placing the top of the panel into the C-flashing and sliding the short leg of the panel into the groove on the previous and push the panel against the last panel installed until there is little or no gap. Adjust the panel up or down to align with the previous panel and fasten the panel into place. Repeat the process on subsequent panels. Check for plumbness every few panels to keep straight.



CF C-Flashing

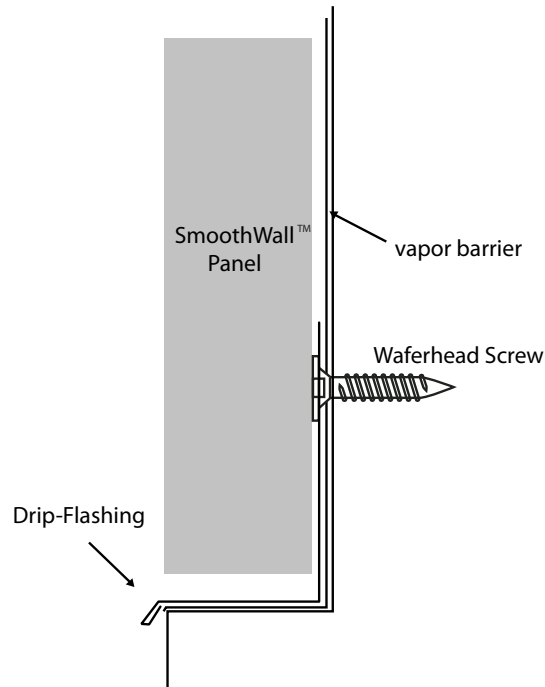
C-flashings are commonly used to flash the ends and sides of the panels. The purpose is to trim the panels for the best appearance. C-flashings also typically used around the sides and bottom of windows and doors.



SmoothWall™ C-Flashing Application

- The C-flashings are applied to the wall, attached every 24" to 48" with a waferhead screw. Apply C-flashing at the top of the wall or when starting and finishing panel runs if no corners are used. For longer runs, it is usually better to apply 10' of flashing on each end at a time, that way you don't have to slide panels a great distance.
- Slide the wall panels into the channel created by the C-flashing. The short leg of the panel should be pointed into the C-flashing at the start of the run. Be sure to fasten the panel to the structure at least every 24" through the wide flange of the panel.
- Successive panels are installed the same way, but are installed so they attach to the previous panel. Push the panels together so there is little or no gap between them.

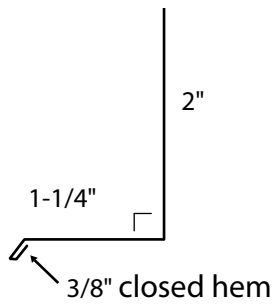
Drip Flashing



SmoothWall™ Drip Flashing Application

DP Drip Flashing

The drip flashing is used to cap the bottom of the wall panels and to keep water from draining onto a ledge/sill or to drain away from a foundation. Also used above doors and windows.

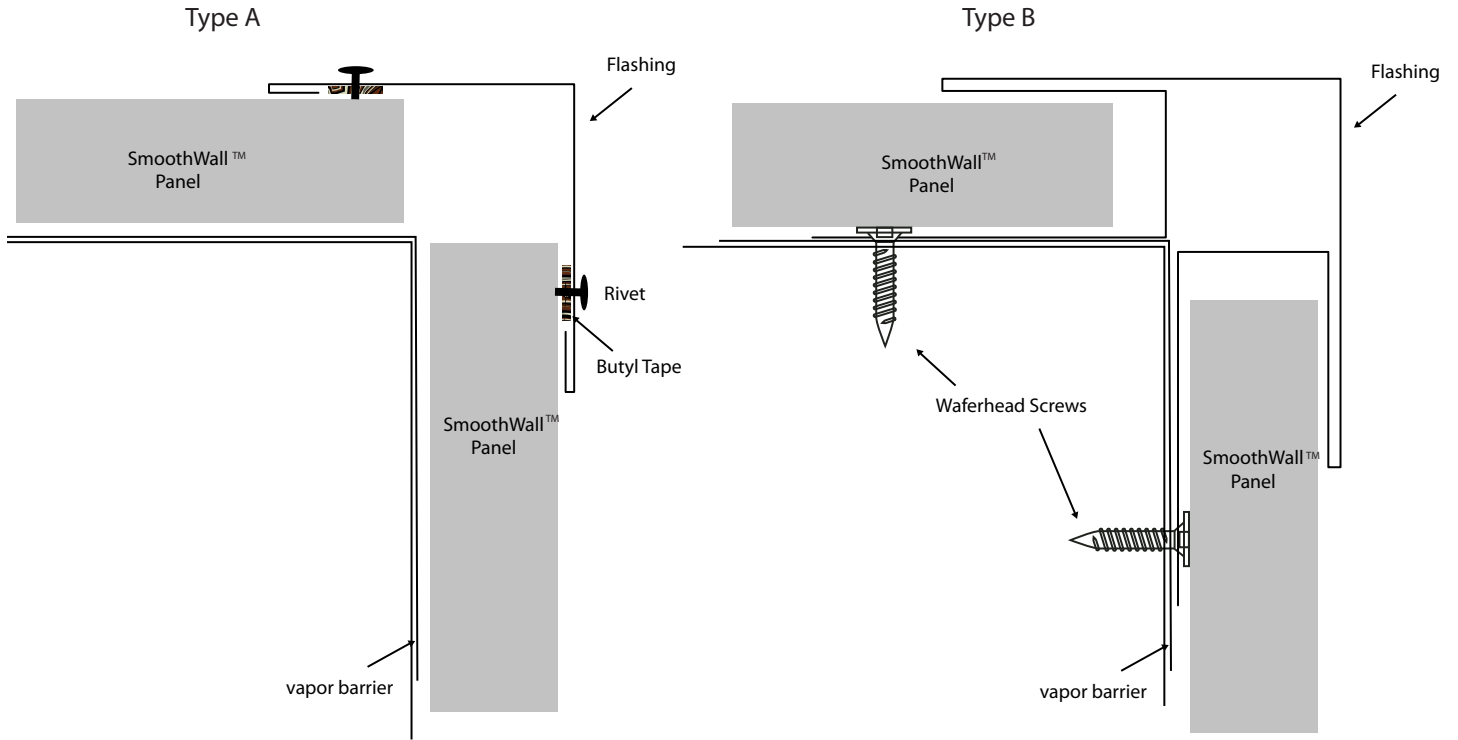


Place the drip flashing over the ledge/sill at the bottom of the wall.

Fasten the drip flashing to the wall with a waferhead screw through the upright 2" leg every 24" to 48".

Install the first panel so the bottom is 1/16" to 1/8" from the base of the flashing.

Subsequent panels are to be installed the same as the first, so that they are even and uniform.

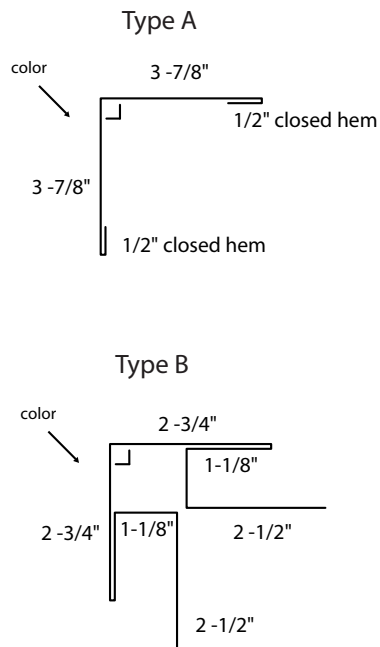


CO Outside Corner

There are two types of outside corner flashing:

Option A: This option is a simple angle which is attached to the panels themselves.

Option B: This flashing is attached to the structure and the panels are fitted into the channels on the flashing.



Outside Corner Flashing Application

Type A

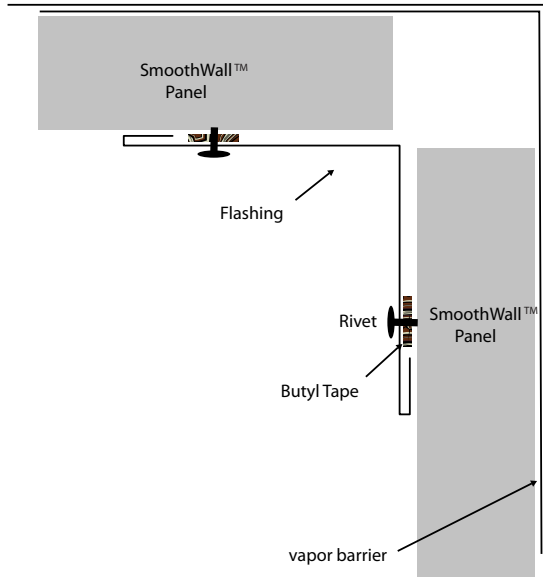
Install the panels on the wall running the panels to the corner. Trim as necessary. Run a strip of butyl tape or caulking on the inside of the flashing, 1" in from each outside edge of the corner flashing. Attach the outside corner flashing to the panels with a rivet or a woodfast screw every 24" on both sides of the corner flashing, placing the fastener through the butyl tape.

Type B

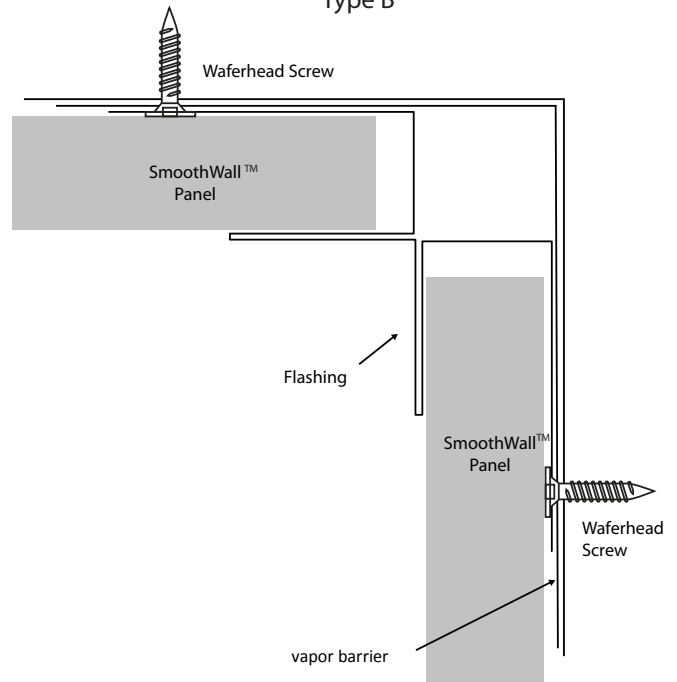
Install the outside corner flashing to the corner of the structure, using a waferhead type screw every 24". Fit the edges of the panels into the channel of the corner flashing. Rivet the panels into place as needed.

Inside Corner

Type A



Type B

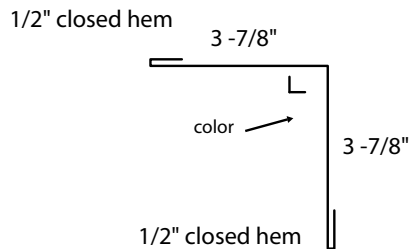


CI Inside Corner

Type A

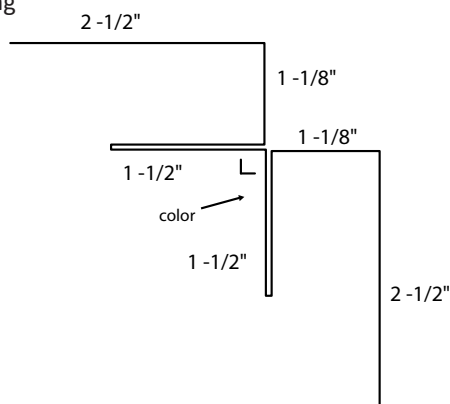
There are two types of inside corner flashing:

Option A: This option is a simple angle which is attached to the panels themselves.



Type B

Option B: This flashing is attached to the structure and the panels are fitted into the channels on the flashing.



Inside Corner Flashing Application

Type A

Install the panels on the wall running the panels to the corner. Trim as necessary.

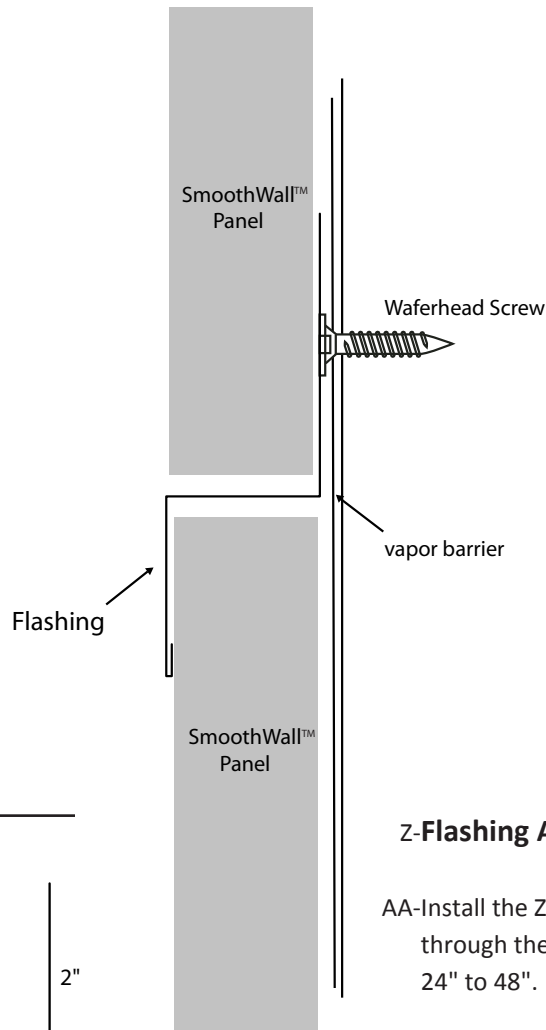
Run a strip of butyl tape or caulking on the inside of the flashing, 1" in from each outside edge of the corner flashing. Attach the outside corner flashing to the panels with a rivet or a woodfast screw every 24" on both sides of the corner flashing, placing the fastener through the butyl tape.

Type B

Install the inside corner flashing to the corner of the structure, using a waferhead type screw every 24".

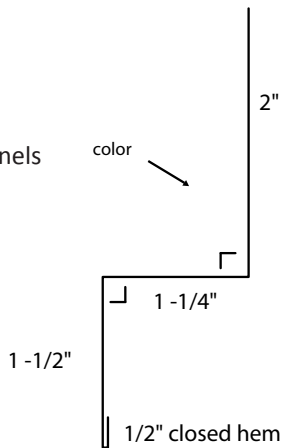
Fit the edges of the panels into the channel of the corner flashing.

Rivet the panels into place as needed.



ZF Z-Flashing

Use where the ends of two panels come together when the panels require a joint due to excessive height.



Z-Flashing Application

- AA-Install the Z-Flashing by fastening to the structure through the 2" leg with a waferhead screw every 24" to 48".
- AB-Install Z-Flashing straight and square perpendicular to panels and fasten into position.
- AC-Install panels as with C-flashing and drip/sill flashing as previously stated.



Customer Name: _____ Job Name: _____

Drawing #: _____ Pitch: _____ # of Pieces: _____
 Description: _____
 Hems: Open Closed Slightly Open

Drawing #: _____ Pitch: _____ # of Pieces: _____
 Description: _____
 Hems: Open Closed Slightly Open

Drawing #: _____ Pitch: _____ # of Pieces: _____
 Description: _____
 Hems: Open Closed Slightly Open

Drawing #: _____ Pitch: _____ # of Pieces: _____
 Description: _____
 Hems: Open Closed Slightly Open

Please provide a drawing for each flashing with precise measurements and angles
Fax to: 425-485-2710

WOODINVILLE BRANCH
5927 234th St. SE
Woodinville, WA 98072

Office: 425-485-3003
Toll Free: 1-800-574-1388
Fax: 425-485-2710



CHAMPION METAL
a Taylor Metal Company