



Wall Panel Installation Manual

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Since 1988 Dimensional Metals, Inc. (DMI) has specialized in the manufacturing of architectural metal roof and wall panel systems as well as fabricated architectural sheet metal for the construction industry. We are backed by decades of proven metal envelope design, dependable Technical Field Services, and an Engineering Department delivering sustainable solutions. You are sure to find the product that will best enhance your design.

The determining factors in the success of any architectural metal envelope system is a combination of proper design, engineering, fabrication, and installation. Unique to our organization is an expert level of product and application knowledge. This provides understanding and direction to the end-users of our systems.

Our full-service Engineering Department provides direction and consultation to both design professionals and installing contractors. Our Total System Watertight Warranties are regarded as the most complete available and are backed-up by project-specific shop drawings, stamped engineering reports (if desired), and final quality control is monitored by our Field Technical Inspectors through on-site inspections. DMI Total System Warranties give building owners and design professionals confidence that they are receiving the best quality and lasting warranty available in the industry.

Utilizing the most technologically advanced in-house CNC operated manufacturing equipment available today, we have complete and exacting control in the fabrication of our products. This combination of modern equipment, experience, and highly skilled personnel allows DMI to provide finished products of the highest quality, within the strictest tolerances possible and the capability to tackle most difficult and demanding design challenges.

At DMI, our philosophy is to provide our customers with the best overall value in the architectural metal envelope industry. By listening to our customers, we have developed a program which is designed to provide maximum benefit at a competitive cost. While providing the best overall value in the architectural metal industry, we maintain important features and benefits that make DMI's metal envelope systems the preferred choice of installing subcontractors, design professionals, and building owners.

Disclaimers

Information in this manual or any other Dimensional Metals, Inc. (DMI) publication are correct to the best of our knowledge at the time of preparation. This information is only provided in a general advisory capacity. DMI is not responsible for either selection or application of materials. Any recommendations must be modified by the purchaser to conform to local codes, conditions, and specifications. DMI reserves the right to change or amend any of the information contained herein without notice.

Project specific shop drawings provided by DMI supersede any information in this manual and are to be upheld.

Information is subject to change, please consult your Territory Manager for the most up-to-date instructions or our Engineering Department for technical assistance.

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Wall Panel Installation Instructions for Dimensional Metals, Inc.

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Material Storage

All Dimensional Metals Inc. Materials should be stored in a dry location. Exposure to the elements should be kept to a minimum, prolonged exposure to direct sunlight and high humidity may cause strippable film adhesive to adhere to metal leaving a residue and permanent discoloration of the finish.

If the material must be stored outdoors, one end of the packaging must be elevated to allow for water drainage.

Materials should never be stored in a location where ponding and standing water may occur.

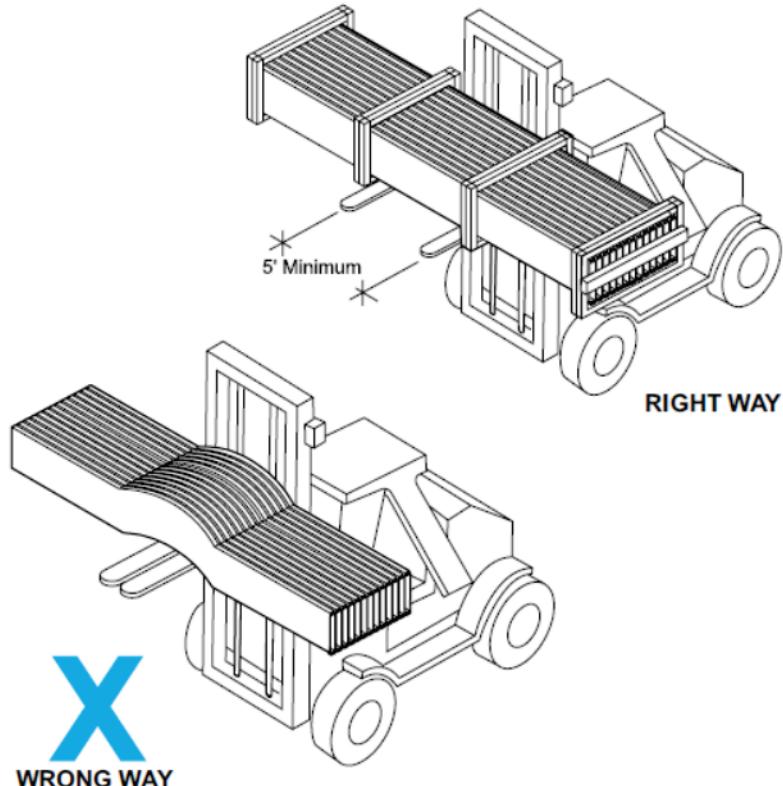
Under no circumstances should materials be stored near or come in contact with salt water, corrosive chemicals, corrosive fumes, ash, fertilizer, or green treated lumber.

When laying panels out on Roof or Ground panels must be adequately supported to prevent buckling.

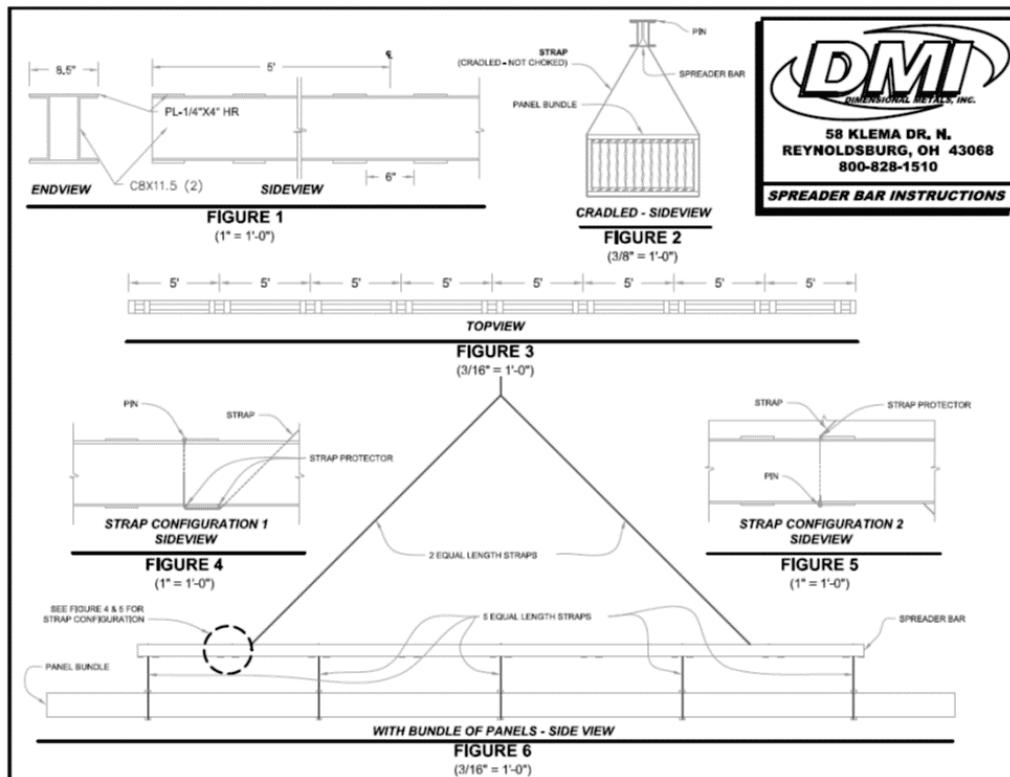
Material Handling

Panels are shipped from DMI are blocked and banded in crates and stacked on edge in a nested configuration. DMI recommends leaving the panels in this state during storage and when handling.

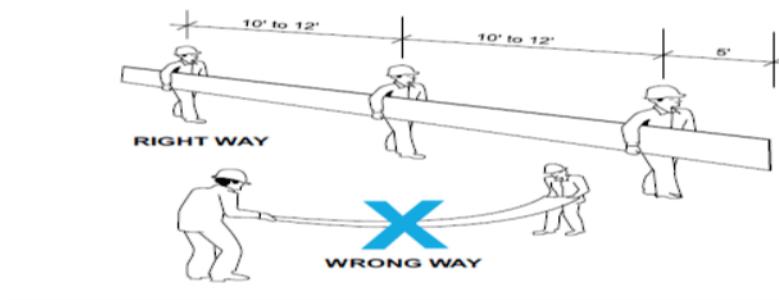
When moving crates of panels with fork lifts make sure loads are centered by weight and that packaging does not sag.



For long packaging (20'-0"+) a crane may be required to unload and move materials. In the advent of using a crane to move materials, a Spreader Bar should be used. Spreader Bar should be at least half the length of the crate. DMI has Spreader Bars and Rigging available for rent. Follow DMI Spreader Bar Instructions.



When handling individual panels, panels should be lifted and carried from a seam edge. Panels should be carried and placed by more than one person. On long panels one person for every 10' to 12', with no more than 6' unsupported.



Substrate & Underlayment Installation Instructions for DMI's Wall Panel Systems

Substrate Preparation

1. Special consideration should be made to make sure the substrates are straight and plumb. Panels installed over uneven and out of plumb surfaces will be difficult to install and can show excessive oil canning.
 - a. Solid Substrates such as plywood/OSB or Gypsum should be shimmed during installation to maintain a true plane.
 - b. Sub-girts such as ZEE's and Hat Channels should all be the exact same size. High and low spots on the wall can cause ZEE's and Hat Channels to twist, these areas should be shimmed to keep the sub-purlins in plane.
 - c. Engineered Rain Screen Systems, follow manufacturer's instructions.

Underlayment

The proper underlayment will be determined by the building's usage, consult local building codes or your design professional to determine the best type of underlayment to use. The use of a weather resistant barrier within the wall assembly is mandatory.

Panel Installation Instructions for DMI's Concealed Fastener Wall Panel Systems

DMI's Concealed fastener Wall Panel Systems can be installed over many different types of substrates plywood/OSB, Gypsum, Sub-Girts, and Engineered Rain Screen Systems.
(Gypsum is not a suitable substrate to fasten to, fasteners must penetrate Gypsum and attach to sub-framing or decking)

Panel Installation Instructions for DMI's Horizontal Wall Panel Systems (HWP)

HWP panels are installed by hooking the bottom of one panel into hemmed edge at the top of another panel. HWPA panels come standard with a nailing flange manufactured into the panel. Fasteners are driven through the nailing flange into the substrate. A maximum spacing of 24" is required for all fasteners.

All other HWP panels are manufactured without the nailing flange, a special clip is required to install these panels. A maximum spacing of 24" is required for all fasteners.

Note: When mixing HWP panels profiles on the same wall, all panels should be ordered without the nailing flange.
DMI's "HWP" Panel systems can be installed Horizontally or Vertically.

Horizontal Flashing Installation

1. Install Sill of Base Flashing, fasten to substrate adequately enough to allow flashing to remain in place until Starter Cleat is installed.
2. Install Starter Cleat. If installing over a sill or threshold, the bottom edge of the starter cleat needs 1" of clearance for the first panel to engage the starter cleat. Fasten with appropriate fastener 12" O.C.
3. Flashing around openings such as windows, doors, and louvers
 - a. Window Sills, panel may be attached directly to wall if panel ends on a low rib. If panel ends on a high rib, install a ZEE flashing 7/8" tall to support the panel. Attach panel to ZEE. Depending on conditions, additional trims may be required.
 - b. Window and Door Jambs, Install J-Closures with a hem for the panel ends to tuck into.
 - c. Window and Door Head, Install Sill or Base Flashing and J-Closures with a hem for panel to sit down in (Sill Flashing is optional).
4. Outside Corners
 - a. Option A: Install a J-Closure without hems on each side of the corner. Pop Rivet Outside Corner Flashing to J-Closures
 - b. Option B: Install a J-Closure without hems on each side of the corner. Hook open hems of Outside Corner Flashing over edges of J-Closures, pop rivet to J-Closure.
5. Inside Corners
 - a. Option A: Install a J-Closure without hems on each side of the corner. Pop Rivet Outside Corner Flashing to J-Closures.
 - b. Option B: Install a J-Closure without hems on each side of the corner. Hook open hems of Outside Corner Flashing over edges of J-Closures, pop rivet to J-Closure.
6. Panel Termination, Panel must be securely fastened at the top where it terminates.
 - a. Direct fasten panel through low rib.
 - b. If panel ends on a high rib, fasten a ZEE flashing to the wall and fasten the panel to the Zee.
 - c. A L-Closure Flashing should be used to cover the panel fasteners. This flashing can be pop-riveted into place.
7. Miscellaneous Penetrations
 - a. Install a piece of flat stock metal the same color as the wall panels to the substrate. (Blocking may be necessary if panel is installed over a lath system)
 - b. Box in the area with J-Closures with hems to create a picture frame affect.

- c. Exterior fixtures will mount to through the flat stock to the substrate or blocking.
- 8. Panel End Laps
 - a. Butt Joint with J-Closures
 - i. Install two J-Closures with hems back to back, fasten to substrate with appropriate fasteners.
 - ii. Panels will slide into the J-Closures from each direction. Take care to maintain horizontal alignment of each panel.
 - iii. Fasten panels to substrate with appropriate fastener 24" O.C. maximum.
 - b. Butt Joint with J-Closures and Reveal
 - i. Install flat strip of material that matches the color of the siding. The flat strip should be the width of the fastening flange of two J-closures plus the width of the desired reveal. Fasten to substrate with appropriate low profile fastener to hold in place until J-Closures are installed.
 - ii. Install two J-Closures with hems back to back, keep separated by the desired reveal dimension. Fasten to substrate with appropriate fasteners.
 - iii. Panels will slide into the J-Closures from each direction. Take care to maintain horizontal alignment of each panel.
 - iv. Fasten panels to substrate with appropriate fastener 24" O.C. maximum.
 - c. Butt Joint with Cover Plate
 - i. Install two J-Closures without hems back to back, keep separated by 3/8". Fasten to substrate with appropriate fasteners.
 - ii. Panels will slide into the J-Closures from each direction. Take care to maintain horizontal alignment of each panel.
 - iii. Fasten panels to substrate with appropriate fastener 24" O.C. maximum.
 - iv. Install Cover Plate by hooking one edge of the cover plate on to one of the J-Closures and pushing inward until the other edge hooks on the adjacent J-Closure.
 - v. Pop Rivet each side of the Cover Plate to the J-Closures 24" O.C.
 - d. Butt Joint with Splice Plate
 - i. Install first panel, leave end fastener out.
 - ii. Apply a continuous bead of sealant where the slice plate and first panel will overlap.
 - iii. Install Splice Plate by sliding splice plate into position matching up the corrugation of the plate and the panel.
 - iv. A pop rivet may be required at the bottom of the panels to draw them up together.
 - v. Install end fastener into first panel.
 - vi. Apply a continuous bead of sealant where the slice plate and second panel will overlap.
 - vii. Install second panel. (Leave 1/8" to 1/4" between panel ends for thermal expansion.)
- 9. Mitered Corners
 - a. Cut back the hemmed edge of the top of the panel back 4".
 - b. Cut back the back hook strip on the bottom of the panel 4".
 - c. Apply a continuous bead of sealant where the panel will be overlapped.
 - d. Install the next Mitered Corner by coming in from the bottom, hook the bottom of the panel into the starter cleat and fit the panel into corrugation with the other panel.
 - e. A pop rivet may be required at the bottom of the panels to draw them up together.

Vertical Flashing Installation

1. Install Sill or Base Flashing.
2. Install Starter Cleat.
 - a. Outside Corner, the starter cleat should be install square with Sill Flashing.
 - b. Inside Corner, hold starter cleat off of wall 1" minimum to allow for panel to clearance.
3. Flashing around openings such as windows, doors, and louvers
 - a. Window Sills, panel may be attached directly to wall if panel ends on a low rib. If panel ends on a high rib, install a ZEE flashing 7/8" tall to support the panel. Attach panel to ZEE.
 - b. Window and Door Jambs, Install J-Closures with a hem for the panel ends to tuck into.
 - c. Window and Door Head, Install Sill or Base Flashing and J-Closures with a hem for panel to sit down in (Sill Flashing is optional).
4. Outside Corners
 - a. Option A: Install a J-Closure without hems on each side of the corner. Pop Rivet Outside Corner Flashing to J-Closures
 - b. Option B: Install a J-Closure without hems on each side of the corner. Hook open hems of Outside Corner Flashing over edges of J-Closures, pop rivet to J-Closure.
 - c. Option C: Pop rivet Outside Corner Flashing directly to high ribs of panels. (ZEE flashing may be need to support cut panel)
5. Inside Corners
 - a. Option A: Install a J-Closure without hems on each side of the corner. Pop Rivet Outside Corner Flashing to J-Closures.
 - b. Option B: Install a J-Closure without hems on each side of the corner. Hook open hems of Outside Corner Flashing over edges of J-Closures, pop rivet to J-Closure
 - c. Option C: Pop rivet Outside Corner Flashing directly to high ribs of panels. (ZEE flashing may be need to support cut panel)
6. Top of Panel Termination
 - a. A J-Closure with hem installed at the top of the wall will allow for the panel to up into.
 - b. Cover top of panel with coping cap.
 - c. L-Closure hooked over top of panel to cover panel end.
7. Panel Termination, Panel must be securely fastened at the top where it terminates.
 - a. Direct fasten panel through low rib.
 - b. If panel ends on a high rib, fasten a ZEE flashing to the wall and fasten the panel to the Zee.
 - c. An L-Closure Flashing should be used to cover the panel fasteners. This flashing can be pop-riveted in to place.
8. Miscellaneous Penetrations
 - a. Install a piece of flat stock metal the same color as the wall panels to the substrate. (Blocking may be necessary if panel is installed over a lath system)
 - b. Box in the area with J-Closures with hems to create a picture frame affect.
 - c. Exterior fixtures will mount to through the flat stock to the substrate or blocking.

Panel Installation Instructions for DMI's Flush Panel Systems (FP10, FP15, FR10, and FR15)

The DMI Flush Panel System is typically used as a soffit panel, horizontal, or vertical siding panel. The DMI Flush Panel system is not to be used as a water shedding roof system. The DMI Flush Panel is considered a "directional panel" meaning the panels can only be installed in one direction. Vertical; Left to Right or Right to Left, Horizontal; Top to Bottom. Start panel installation at either end of the area or the top of wall. Be sure to push each panel together snug. Fasten the panel through the flange 24" O.C. (max). Panel clips may be required, consult DMI representative for clip requirements.

Panel Installation

1. The panels are installed by shifting the panel into the J-Channel at the top and at the corner, maintain $\frac{1}{4}$ " minimum space off of the sill flashing.
2. If the panel joints are to align with an adjacent area, install each area concurrently (install 4 or 5 panels in each area at a time). NOTE: If the panel area is not square, it will be difficult to maintain aligned panel joints. The installer may want to consider changing panel installation directions for adjacent areas giving a parquet effect.
3. The DMI Flush-Panel system may be installed over hat channels or furring strips spaced 24" O.C. (max.) or over a solid substrate (Follow Local Building Codes)
4. For project specific requirements contact a DMI Representative or follow DMI approved shop drawings and details.

Flashing Installation

1. Install a J-Closure with hem at the Head or Top of panel area.
2. Install Sill or Base Flashing at the base or Bottom of panel area.
3. Outside Corner and Inside Corners; install a J-Closure with hem for the Panel to tuck into. A ZEE-Closure may be needed to be installed to support a panel that is cut to fit.

Panel Installation Instructions for DMI's Exposed Fastener Wall Panel Systems

DMI's Exposed fastener Wall Panel Systems can be installed over many different types of substrates plywood/OSB, Gypsum, Girts, and Sub-Girts.

Panel Installation Instructions for DMI's WP72 Panel System (7.2-Panel)

DMI's 7.2-Panel WP72 has a symmetrical design that can be installed vertically or horizontally, it has a 1-½" rib height, the ribs are symmetrically spaced at 7.2" O.C., and 36" panel coverage. 7.2-Panel WP72 are considered a directional panel, they can be installed left to right, right to left or bottom to top. The 7.2-Panel WP72 features a purlin bearing leg the keeps the underlap stable and straight during installation. These panels are installed by over lapping one panel on to another and fastening through the low ribs into the substrate. Lap TEK fasteners are used to secure panels together.

Horizontal Flashing Installation

1. Install appropriate head flashing.
 - a. J-Closure with Hem when top of panel will not be hidden behind other building elements.
 - b. L-Closure when top of panel terminates at a soffit.
 - c. Blocking may need to be added where a panel is cut to provide support for additional flashing attachment.
2. Install Sill or Base Flashing at the base or Bottom of panel area.
3. Outside Corners and Inside Corners are fastened directly to the high ribs of the panel with #¼-14 x 7/8" Lap TEK fasteners. Foam Closures can be used to seal the voids of the low ribs.
4. Openings (Doors and Windows)
 - a. Install J-Closure with Hem vertical areas.
 - b. Install a sill flashing at the head of the opening.
 - c. For windows and other opening install an appropriate coping at the base of the opening.

Vertical Flashing Installation

1. Install appropriate head flashing.
 - a. J-Closure with Hem when top of panel will not be hidden behind other building elements.
 - b. L-Closure when top of panel terminates at a soffit.
 - c. Foam Closures may be installed between panel and closure flashings to close voids. Foam Closures will need to held in place with fasteners.
2. Install Sill or Base Flashing at the base or Bottom of panel area. Foam Closures may be installed behind panel to seal voids.
3. Outside Corners and Inside Corners are fastened directly to the high ribs of the panel with #¼-14 x 7/8" Lap TEK fasteners.
4. Openings (Doors and Windows)
 - a. Install J-Closure with Hem vertical areas.
 - b. Install a sill flashing at the head of the opening.
 - c. For windows and other opening install an appropriate coping at the base of the opening.

Panel Installation Instructions for DMI's WPRP Panel System (R-Panel)

DMI's R-Panel WPRP has a symmetrical design that can be installed vertically or horizontally, it has a 1-1/4" rib height, the ribs are spaced at 12" O.C., and 36" panel coverage. R-Panel WPRP are considered a directional panel, they can be installed left to right, right to left, or bottom to top. The R-Panel WPRP features a purlin bearing leg the keeps the underlap stable and straight during installation. These panels are installed by over lapping one panel on to another and fastening through the low ribs into the substrate. Lap TEK fasteners are used to secure panels together.

Horizontal Flashing Installation

1. Install appropriate head flashing.
 - a. J-Closure with Hem when top of panel will not be hidden behind other building elements.
 - b. L-Closure when top of panel terminates at a soffit.
 - c. Blocking may need to be added where a panel is cut to provide support for additional flashing attachment.
2. Install Sill or Base Flashing at the base or Bottom of panel area.
3. Outside Corners and Inside Corners are fastened directly to the high ribs of the panel with #1/4-14 x 7/8" Lap TEK fasteners. Foam Closures can be used to seal the voids of the low ribs.
4. Openings (Doors and Windows)
 - a. Install J-Closure with Hem vertical areas.
 - b. Install a sill flashing at the head of the opening.
 - c. For windows and other opening install an appropriate coping at the base of the opening.

Vertical Flashing Installation

1. Install appropriate head flashing.
 - a. J-Closure with Hem when top of panel will not be hidden behind other building elements.
 - b. L-Closure when top of panel terminates at a soffit.
 - c. Foam Closures may be installed between panel and closure flashings to close voids. Foam Closures will need to be held in place with fasteners.
2. Install Sill or Base Flashing at the base or Bottom of panel area. Foam Closures may be installed behind panel to seal voids.
3. Outside Corners and Inside Corners are fastened directly to the low ribs of the panel with #1/4-14 x 7/8" Lap TEK fasteners.
4. Openings (Doors and Windows)
 - a. Install J-Closure with Hem vertical areas.
 - b. Install a sill flashing at the head of the opening.
5. For windows and other opening install an appropriate coping at the base of the opening.

Panel Installation Instructions for DMI's CP75 Panel System (Corrugated Panel)

DMI's $\frac{3}{4}$ " Corrugated CP75 has a symmetrical design that can be installed vertically or horizontally, it has a $\frac{3}{4}$ " rib height, the ribs are spaced at $2\frac{7}{16}$ " O.C., and 31-11/16" panel coverage. The $\frac{3}{4}$ " Corrugated CP75 Panels are considered directional panels, they can be installed left to right, right to left, or bottom to top. These panels are installed by over lapping one panel on to another and fastening through the low ribs into the substrate. Lap TEK fasteners are used to secure panels together.

Horizontal Flashing Installation

1. Install appropriate head flashing.
 - a. J-Closure with Hem when top of panel will not be hidden behind other building elements.
 - b. L-Closure when top of panel terminates at a soffit.
 - c. Blocking may need to be added where a panel is cut to provide support for additional flashing attachment.
2. Install Sill or Base Flashing at the base or Bottom of panel area.
3. Outside Corners and Inside Corners are fastened directly to the high ribs of the panel with #1/4-14 x 7/8" Lap TEK fasteners. Foam Closures can be used to seal the voids of the low ribs.
4. Openings (Doors and Windows)
 - a. Install J-Closure with Hem vertical areas.
 - b. Install a sill flashing at the head of the opening.
 - c. For windows and other opening install an appropriate coping at the base of the opening.

Vertical Flashing Installation

1. Install appropriate head flashing.
 - a. J-Closure with Hem when top of panel will not be hidden behind other building elements.
 - b. L-Closure when top of panel terminates at a soffit.
 - c. Foam Closures may be installed between panel and closure flashings to close voids. Foam Closures will need to be held in place with fasteners.
2. Install Sill or Base Flashing at the base or Bottom of panel area. Foam Closures may be installed behind panel to seal voids.
3. Outside Corners and Inside Corners are fastened directly to the high ribs of the panel with #1/4-14 x 7/8" Lap TEK fasteners.
4. Openings (Doors and Windows)
 - a. Install J-Closure with Hem vertical areas.
 - b. Install a sill flashing at the head of the opening.
5. For windows and other opening install an appropriate coping at the base of the opening.