

# PVC INTERLOCKING LINER PANEL

## Technical & Install Guide



*Focused on the Customer Experience*



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## About AmeriLux International

AmeriLux is a value-adding distributor of multiwall and corrugated polycarbonate sheets, PVC liner panels, HDPE panels, acrylic sheet, and many other plastic sheet products. Our products are used in a variety of glazing, cladding, and daylighting applications in the industrial, agricultural, horticultural, residential, and architectural markets.

Headquartered in De Pere, Wisconsin, AmeriLux sources and distributes materials from and to companies around the world. It is by building and maintain strategic, win-win partnerships with vendors, customers, and employees that AmeriLux is able to profitably – and sustainably – grow its business.

## What is EZ Liner™ PVC Interlocking Panel?

Manufactured from 100% virgin PVC material, EZ Liner™ PVC interlocking panels are easy-to-clean, low-maintenance, hygienic, and abuse resistant. Non-flammable and impact resistant, these PVC panels are perfect for use on the most demanding agricultural, industrial, commercial, and residential applications.



Easy to handle, EZ Liner™ PVC interlocking panels can be cut using basic woodworking tools and require no special equipment to install. The following technical overview provides basic information on the performance, handling, and installation of EZ Liner™ PVC interlocking panels.

- **All-Weather Interlocking System**
- **Impact & Scratch Resistant**
- **Highly Durable**
- **Easy-to-Install & Clean**
- **Low Maintenance**
- **Corrosion Resistant**
- **Class A Fire & Smoke Rating**
- **No Special Tools Needed**
- **Meets FDA & CFIA Requirements**

Perfect for lining indoor walls and ceilings, owners of agricultural structures, light industrial buildings, cannabis facilities, and vehicle washbays regularly choose EZ Liner™ PVC interlocking panels for its remarkable durability, ease of installation, and outstanding versatility.

EZ Liner™ PVC is an ideal alternative for conventional walls and ceilings in a broad range of applications including garages, public restrooms, workshops, horse stables, kennels, factories, warehouses, farm buildings, commercial kitchens, and indoor grow rooms.

## Performance of EZ Liner™ PVC Panels

### Durability

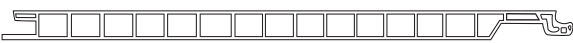


Designed for demanding applications, the corrosion resistant surface of the EZ Liner™ PVC panel is resistant to mold, mildew, and most chemicals. In addition, the panels smooth surface is easy to clean.

### Easy Maintenance

The EZ Liner™ PVC panel requires minimal maintenance and cleans easily with basic power washing. The panel's water resistant layer can also withstand many corrosive chemicals commonly found in vehicle wash buildings and agricultural facilities.

### Product Specifications

The following chart provides an overview of the product specifications for the EZ Liner™ PVC interlocking panel. (Actual values may vary.)

Product Specifications				
<b>Profile</b>	3/8" 			
<b>Panel Colors &amp; Widths</b>	Ultra White*	<b>Panel Widths</b>	16" & 18"	
	Gray & Black	<b>Panel Width</b>	18"	
<b>Panel Lengths</b> (Custom lengths available)	8', 10', 12', 14', 16', 18', 20' & 24' (Some lengths not available in all colors)			
<b>Fire Rating</b>	Class A Smoke & Flame Spread			
<b>Hygienic Rating</b>	Meets FDA & CFIA Requirements			
<b>Warranty</b>	20-Year Limited Warranty			
<b>Max Deflection</b>	3.278mm Based on 2 lbs. psf. (Ceiling applications)			

\* Ultra white panels and trims are UV rated for exterior applications, '100% exterior grade virgin PVC'

### Physical Properties

The following chart provides the physical properties for the EZ Liner™ PVC Interlocking Panel.

Physical Properties			
Property	Typical Values (Values are not intended for preparing specifications)		Test Method
	Imperial	Metric	
Specific Gravity	1.48		ASTM D792
Notched Izod Impact (method A, 23°C)	17.1 ft-lb./in	-	ASTM D256
Drop Impact Resistance (Procedure B)	>3.7in-lb./mil	-	ASTM D4226
Tensile Yield Strength	6,065 psi	41.8 Mpa	ASTM D638
Modulus of Elasticity	355,000 psi	2447.6 Mpa	ASTM D790
Flexural Modulus	13,562 psi	93.5 Mpa	ASTM D790
Deflection Temperature Under Load (@264psi)	158°F	70°C	ASTM D648
Coefficient of Thermal Expansion	0.000044 in/in/°C		ASTM D696
Flame Spread	15	15	ASTM E84 CAN/ULC S102.2
Smoke Developed	320	210	ASTM E84 CAN/ULC S102.2

## Chemical Resistance

The chemical resistance of PVC products differs significantly from the mechanism of corrosion of metals. Chemical attack on PVC sheet, where it occurs, consists generally of absorption of the chemical by the PVC sheet and its subsequent swelling.

For a complete list of chemicals and corrosive media, please call us at 800-602-4441 or send an email to [info@amerilux.com](mailto:info@amerilux.com). It is important to note that PVC sheets are generally not recommended for use with acetone, ketones, ethers, or aromatic and chlorinated hydrocarbons.

## Transportation, Handling, and Storage

### Transportation

- Use a sturdy pallet (or wooden crate) that is as long as the longest panel.
- Stack horizontally starting with longest panel on the bottom (longest to shortest).
- If using a pallet, secure panels to limit movement during transportation.

### Handling

- Even though PVC is durable, protect panels from abrasion while handling.
- To avoid unnecessary scratches, pick up and carry instead of dragging panels.
- Do not walk, jump, or drive on panels!

### Storage

- Do not store PVC panels in direct sunlight or in a high heat enclosed space.
- Ideally, PVC panels should be stored in cool spot indoors on a flat, raised surface.
- If PVC panels are kept outdoors, cover and store in a dry place out of direct sun.
- Stack longest panel on the bottom (longest to shortest).
- Cover PVC panels with an opaque material that does not absorb or conduct heat.
- To avoid solar heat buildup between panels, make sure to cover the entire panel surface.
- If panels are shipped and packaged on a skid, make sure to cut all straps and loosen any 2x4's (wood framing) so the PVC panels are not restricted from expanding due to a confined environment.

**Note:** Original crating is not sufficient protection from solar heat gain damage. While in transportation and storage, keep panels out of direct contact with sunlight. Thick wooden boards work well to isolate panels while transporting or storing. Improper storage will void any warranty due to damage by direct sunlight or not being able to breath in a confined location.

## Before You Start

### Safety Tips

For the safe installation of EZ Liner™ PVC interlocking panel, use ladders and/or scaffolding, protective goggles, a face mask, and other necessary safety equipment.



## Installation Tools

Lightweight and easy to install, EZ Liner™ PVC panels can be fabricated on site and require no special equipment to install. Common tools needed: ladders/scaffolding, rubber mallet, rotary hammer drill, drill c/w hole saws, caulking gun, circular saw w/fine toothed blade, tape measure, box cutter, battery drill, square and straight edge, chalk line, and sheet rock putty knife.

## Acclimate Panels

To avoid warping or deformation, store EZ Liner™ PVC panels inside the room where they will be installed for at least 24 hours before installation. This will minimize the amount of expansion or contraction after the panels are installed. Make sure to remove or loosen any packaging material.

- Do not install panels until building is fully enclosed.
- Heating and cooling equipment should be in operation.
- Residual moisture from construction has been removed.
- Do not install panels in a room with temperatures under 40° Fahrenheit (5° Celsius) or above 86° Fahrenheit (30° Celsius).

## Important Information

Please read this entire guide prior to installation. There are different installation methods for walls only vs. walls and ceilings. The information provided in this install guide is applicable for the 16", and 18" wide EZ Liner™ PVC interlocking panel.

- EZ Liner™ should not be used in applications where the ambient or surface temperature of the PVC material will be above 122° Fahrenheit (50° Celsius).
- EZ Liner™ should not be used when installed as a component of an air duct system.
- All radiant heat must be at a minimum 18" (450mm) clearance from the PVC panel surface.
- If EZ Liner™ is being installed on walls and ceilings, it does not matter which is installed first.
- Plan the layout of the EZ Liner™ and trims to achieve even spacing and alignment with adjacent work.
- Determine panel layout and width of first panel so the first and last panel in each wall section will be a minimum of 8" (200mm) wide.
- For ceiling applications, provide a clearance at either panel end of 1/4" (6mm) for expansion.
- For wall applications, provide a clearance of 1/2" (12mm) at the top of the wall for expansion.
- When installing in cold temperatures, make sure to open the gap between each panel with a sheet rock putty knife to allow for expansion in hotter temperatures.

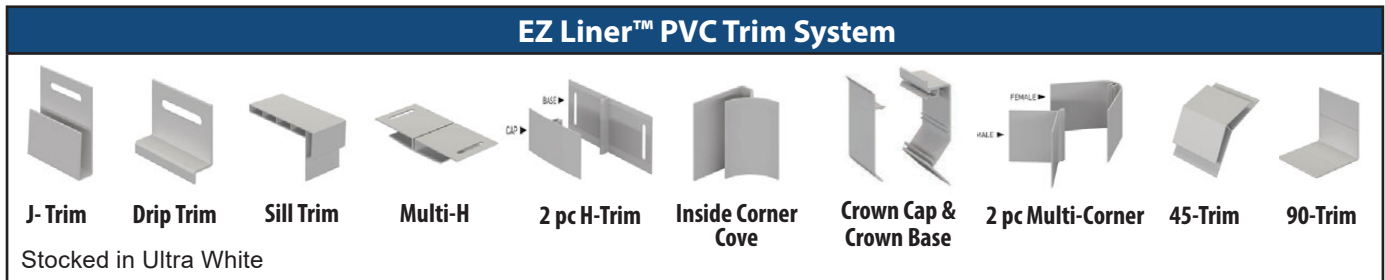
**Note:** EZ Liner™ PVC panels must be shielded from radiant heat with a minimum clearance of 18" (450mm) between the heat source and the panel. Consult manufacturer of heater before installing panels. If installing an epoxy floor, make sure the spray does not get onto the EZ Liner™ panels.

## Install Components

Before beginning your project, confirm you have all the necessary install components. Most projects will require one or more of the following:

### PVC Trim Pieces

EZ Liner™ PVC comes with a full line of trims to help make your installation effortless. Standard trim lengths are 12' and 16'. See chart on next page for available trim pieces.

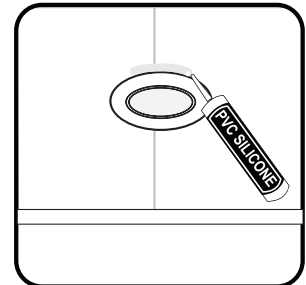


**Note:** Only select trims available in the colors gray and black. Call for more information.

### Silicone Sealant

A manufacturer approved silicone sealant may be used around fixtures, seal corners, and repair small holes. A one-part, neutral cure, clear or transparent sealant is recommended. **Always check the product label to ensure PVC compatibility. Unapproved sealant may chemically attack the panel. For food preparation areas such as commercial kitchens, make sure to use a food-grade, NSF certified, 100% silicone sealant.**

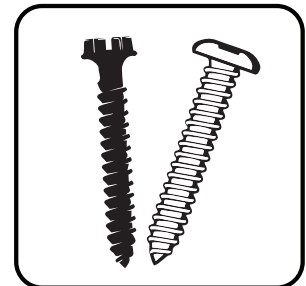
**Note:** Painting PVC panels is not recommended. If painting is necessary, check with the manufacturer to ensure the paint is compatible with PVC. Never use paint thinner to remove paint from the panel. Paint thinner is highly incompatible with PVC.



### Fasteners

Below is a recommended fastener hardware guide for typical EZ Liner™ PVC interlocking applications.

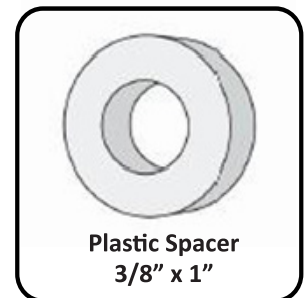
- Wood - #8 x 1 1/4" Square Truss Head
- Metal - #8 x 1 1/4" Square Pan Head
- Concrete - #11 x 1 1/4" Tapcon



**Note:** Do not use nails or staples. Only use fasteners recommended for your specific application. Length of screw is determined by specific installation.

### Plastic Spacers

In a wet environment installation, plastic spacers may be used to create the necessary gap off the floor (about 1" or 25mm). Spacers may also be used when mounting a heavy object to the wall like an electrical box, preventing the PVC panel from being crushed if the mounting screws are overtightened.



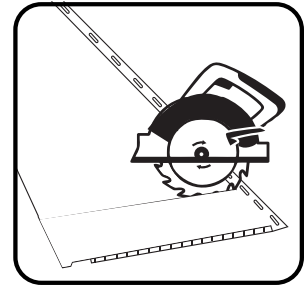
If you have any questions concerning the install components required for your project, please contact AmeriLux International at 888.602.4441 or send an email to [info@amerilux.com](mailto:info@amerilux.com).

## EZ LINER™ PVC Panel Installation

### Cutting

EZ Liner™ PVC interlocking panels can be cut with common power or manual tools depending on the type of cut. We recommend using a circular saw with a fine tooth blade. For cutouts such as electrical boxes, a jigsaw is recommended.

- Before cutting, clamp the panel to the work surface to avoid vibration.
- Use a fine-tooth blade (12 to 16 teeth per inch) designed to cut plastic.
- Install the blade in the reverse direction.
- Move saw at a slow advance rate to avoid chipping or cracking.
- Clean panels of any debris before installing.



**Note:** For all cutouts, first drill a hole in a corner of the opening. Then, insert the jigsaw blade into the hole and cut along the marked lines of the opening.

## Wall Only Installation

EZ Liner™ PVC interlocking panels can be installed on walls with the panel's running perpendicular or parallel to the main supports. For sloped applications, panels should run with the slope.

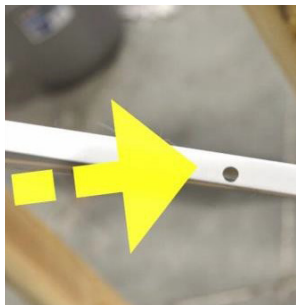
**Before you start your installation, determine if your PVC application is in a wet environment or a controlled (non-wet) environment.**

### Wet Environment

- Install the Multi-Corner trim piece for the inside corners first. Take the trim to the top of the wall and 1" (25mm) up off the floor.
- If the PVC wall panels are being installed in a wet environment such as a car wash, the bottom J-Trim piece needs to be installed next.
- Before installing the J-Trim, make sure to drill a ¼" (6mm) hole in the bottom of the J-Trim piece at 16" (400mm) on center for water drainage (Pictures A & B). This is especially important if the walls will be washed with a power washer.



Picture A



Picture B



Picture C

- Before installing panels, run a chalk line all around the bottom of the floor about 1" (25mm) off the floor or use plastic spacers to create the necessary gap off the floor (Picture C).
- Install trims at a maximum of 12" (300mm) centerline between screws.
- Jump to Wall Installation Continued (page 7).

### Controlled Environment

- Install the Multi-Corner trim piece for the inside corners first. Take the trim to the top of the wall and to the floor for a controlled environment.
- If the PVC wall panels are installed in a controlled environment (non-wet), then the J-Trim piece can be installed directly to the floor and no drain holes are required.
- Jump to Wall Installation Continued (page 7).



## Wall Installation Continued ( Wet and Controlled Environment)

- Install the J-Trim pieces around the top of the wall at whatever height the PVC wall panel will be installed. At each corner, cut back the face of the J-Trim the same as the bottom J-Trim (Pictures D & E).

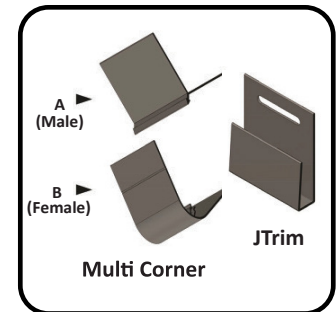


Picture D



Picture E

- Make sure to account for expansion with J-Trim!
  - If the PVC wall panel is not going to the ceiling, then install the J-Trim ½" (12mm) above the height of the panel to allow for panel expansion.
  - If the PVC wall panel is going to the ceiling, make sure the panel is cut ½" (12mm) shorter than the wall height for panel expansion.
- It is important to do a physical layout of as it may be beneficial to have a panel seam at an obstruction or pipe penetration.
  - If the seam does not meet an obstruction, measure the total distance and deduct the width of the panels being used so that you do not end up with a small sliver of a panel at one end. (Determine whether you have a 12" (300mm), 16" (400mm) or 18" (450mm) panel.)
  - If you need to cut the first panel after you pre-measure, start with the panel in the corner. The cut end should go inside the Multi-Corner and in the bottom track of the J-Trim piece.
- Use a level to vertically plumb the first panel (Picture F). This should be done before installing each PVC panel.
- You will need to "bow" the panel slightly to get it into the top J-Trim piece (Picture G).
- Continue to install the balance of the panels with a 24" (600mm) centerline between screws. The top and bottom screw should start at 12" (300mm) (Picture H).
- If installing in a concrete or block wall, pre-drill with a rotary hammer drill. A battery drill works well to screw the Tapcon screws.



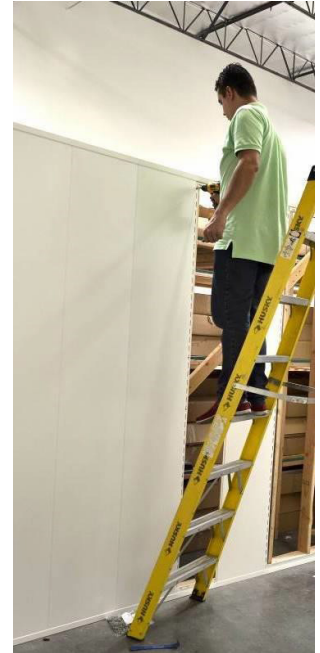
Picture F

- The last panel may need to be inserted into the slot of the Multi-Corner trim with a sheet rock putty knife. Make sure the last panel is cut  $\frac{1}{4}$ " (6mm) less than the opening width to allow for panel expansion.
- If you are mounting a heavy object to the wall such as an electrical box, use plastic spacers to prevent the panel from being crushed if the screws are overtightened.
- The spacer is just a little thicker than the panel. Drill a 1" (25mm) hole into the panel and insert the spacer into the hole.
- The inner hole of the spacer can now receive any bolt or screw up to  $\frac{1}{2}$ " (12mm) in diameter. This will keep the heavy object from hitting the PVC wall panel.

**Note:** Account for expansion when installing in cold temperatures, ensure you have the correct stainless steel screw for the substructure. Make sure to open the gap between each panel with a sheet rock putty knife to allow for expansion in hotter temperatures.



Picture G



Picture H

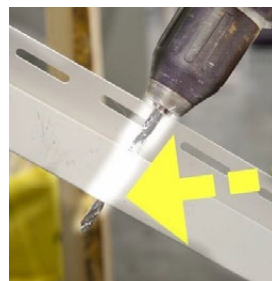
## Ceiling and Wall Installation

EZ Liner™ PVC interlocking panels can be installed on walls and ceilings with the panel's running perpendicular or parallel to the main supports. For sloped applications, panels should run with the slope.

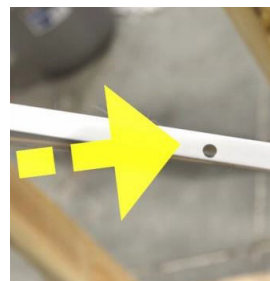
**Before you start your installation, determine if your PVC application is in a wet environment or a controlled (non-wet) environment. If you have any questions concerning the installation of your panels, please contact AmeriLux International at 888.602.4441 or send an email to [info@amerilux.com](mailto:info@amerilux.com).**

### Wet Environment

- If the PVC wall panels are being installed in a wet environment such as a car wash, the bottom J-Trim piece needs to be installed first.
- Before installing the J-Trim, make sure to drill a  $\frac{1}{4}$ " (6mm) hole in the bottom of the J-Trim piece at 16" (400mm) on center for water drainage. This is especially important if the walls will be washed with a power washer (see images A & B).



Picture A



Picture B

- Before installing panels, run a chalk line all around the bottom of the floor about 1" (25mm) off the floor or use plastic spacers to create the necessary gap off the floor (Picture C).
- Install trims at a maximum of 12" (300mm) centerline between screws.
- Jump to Ceiling and Wall Installation Continued (page 9).



Picture C

### **Controlled Environment**

- If the PVC wall panels are installed in a controlled environment (non-wet), then the J-Trim piece can be installed directly to the floor and no drain holes are required.
- Jump to Ceiling and Wall Installation Continued (page 9).

## **Ceiling and Wall Installation Continued**

### **Ceiling Installation**

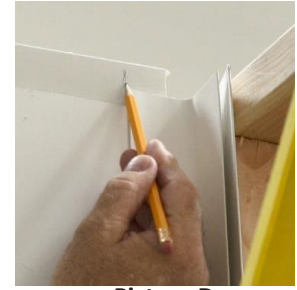
- Before beginning installation, it is important to determine the direction of the EZ Liner™ PVC ceiling panels first.
  - If the panels are running the length of the room and perpendicular to the trusses, make sure to use Multi-H Trims to join the panel lengths together.
  - If both the panels and joists are running the width of the room, a sub-frame needs to be installed at 24" (600mm) on center. After the sub frame is completed, proceed to install the PVC ceiling panels as indicated in Picture I.
- Start at one end and clip the PVC panel into the Multi-Corner.
- If installed in cold weather, make sure to cut back the PVC ceiling panel a 1/2" (12mm) to create a gap for panel expansion.
- Fasten to the joists at a minimum of every 24" (600mm) centerline. If you do not hit a joist, add a piece of wood blocking at the end of the PVC panel so the Multi-H Trim has a fastening point.
- Continue with these steps until the last panel. The last panel will need to be cut a 1/2" (12mm) smaller to create a gap for it to slide into the Multi-Corner.



Picture I

## Wall Installation

- At each corner, insert the wall panels into the track of the Multi-Corner. Cut back the face of the bottom J-Trim piece (Pictures D & E).
  - If the PVC wall panel is going to the ceiling, make sure the panel is cut  $\frac{1}{2}$ " (12mm) shorter than the wall height for panel expansion.
- It is important to do a physical layout as it may be beneficial to have a panel seam at an obstruction or pipe penetration.
  - If the seam does not meet an obstruction, measure the total distance and deduct the width of the panels being used so that you do not end up with a small sliver of a panel at one end. (Determine whether you have a 12" (300mm), 16" (400mm) or 18" (450mm) PVC panel.)
  - If you need to cut the first panel after you pre-measure, start with the panel in the corner. The cut end should go inside the Multi-Corner and in the bottom track of the J-Trim piece.
- Use a level to vertically plumb the first panel (Picture F). This should be done before installing each PVC panel.
- You will need to "bow" the panel slightly to get it into the top J-Trim piece (Picture G).
- Continue to install the balance of the panels with a 24" (600mm) centerline between screws. The top and bottom screw should start at 12" (300mm) (Picture H).
- If installing in a concrete or block wall, pre-drill with a rotary hammer drill. A battery drill works well to screw the Tapcon screws.
- The last panel may need to be inserted into the slot of the Multi-Corner trim with a sheet rock putty knife. Make sure the last panel is cut  $\frac{1}{4}$ " (6mm) less than the opening width to allow for panel expansion.



Picture D



Picture E



Picture F



Picture G



Picture H

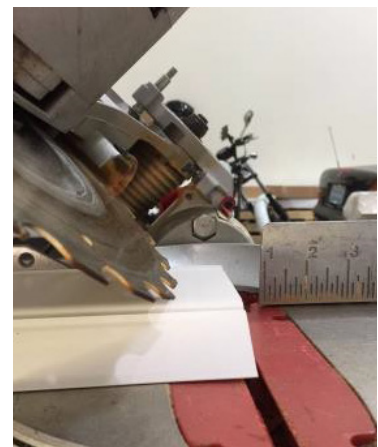
- If you are mounting a heavy object to the wall such as an electrical box, use plastic spacers to prevent the panel from being crushed if the screws are overtightened.
- The spacer is just a little thicker than the panel. Drill a 1" (25mm) hole into the panel and insert the spacer into the hole.
- The inner hole of the spacer can now receive any bolt or screw up to ½" (12mm) in diameter. This will keep the heavy object from hitting the PVC wall panel.

**Note:** Account for expansion when installing in cold temperatures, ensure you have the correct stainless steel screw for the substructure. Make sure to open the gap between each panel with a sheet rock putty knife to allow for expansion in hotter temperatures.

If you have any questions concerning the installation of your panels, please contact AmeriLux International at 888.602.4441 or send an email to [info@amerilux.com](mailto:info@amerilux.com).

### **Regular Installation Method**

- Install the PVC ceiling panels without any trim at the junction of the ceiling and wall.
- If panels are installed in cold weather, make sure to follow recommended clearances for panel expansion.
- After installation of the ceiling panels, install the J-Trim piece based on the method of whether the J -Trim goes all the way to the floor or not.
- Once all the PVC wall panels are installed (as per Wall Only Installation) go back and install the Crown-Base and Crown-Cap.
- Pre-measure and miter cut each corner with the base and cap installed together (Picture J). Install the Crown-Base first and ensure the screw is fastened in the track (Picture K). This will allow the flex piece to not have any bulges.
- Slip in the Crown-Cap to cover up all the screws.

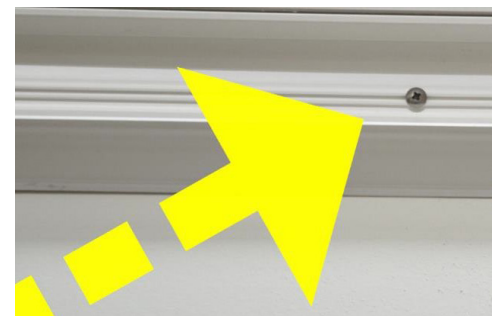


Picture J

### **Food Safe Environment Installation Method**

- If it is a food safe environment, use the Multi-Corner trim piece for the wall to ceiling transition.
- Make sure to install the Multi-Corner around the perimeter of the wall to ceiling joint first.
- The wall or ceiling PVC panels can be installed next.
- Jump to Wall and Ceiling Installation (page 8).

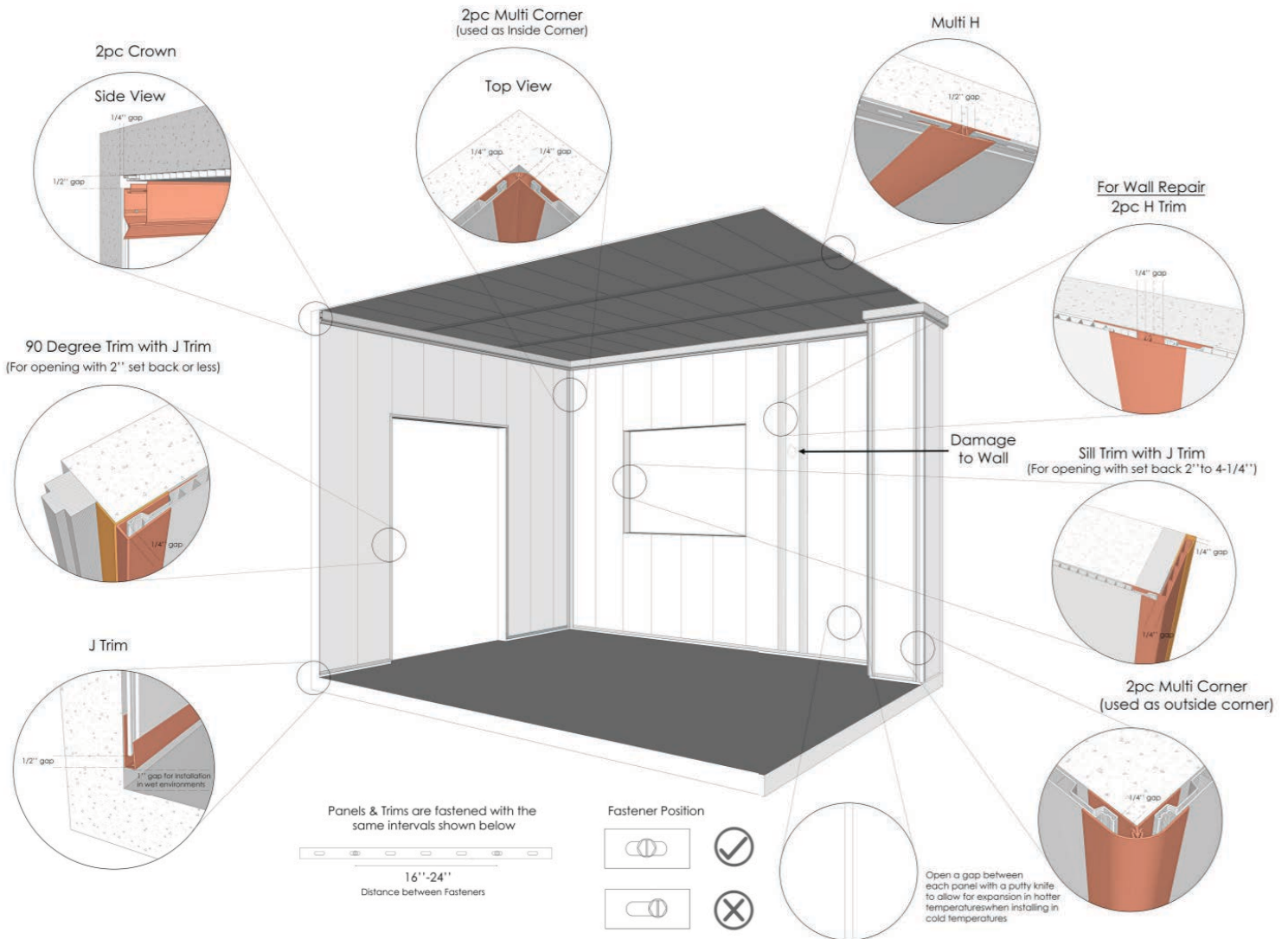
**Note:** If it's not a food safe environment, you will need to use a 2-piece Crown-Trim for the wall to ceiling transition. Jump to Wall and Ceiling Installation steps (page 8).



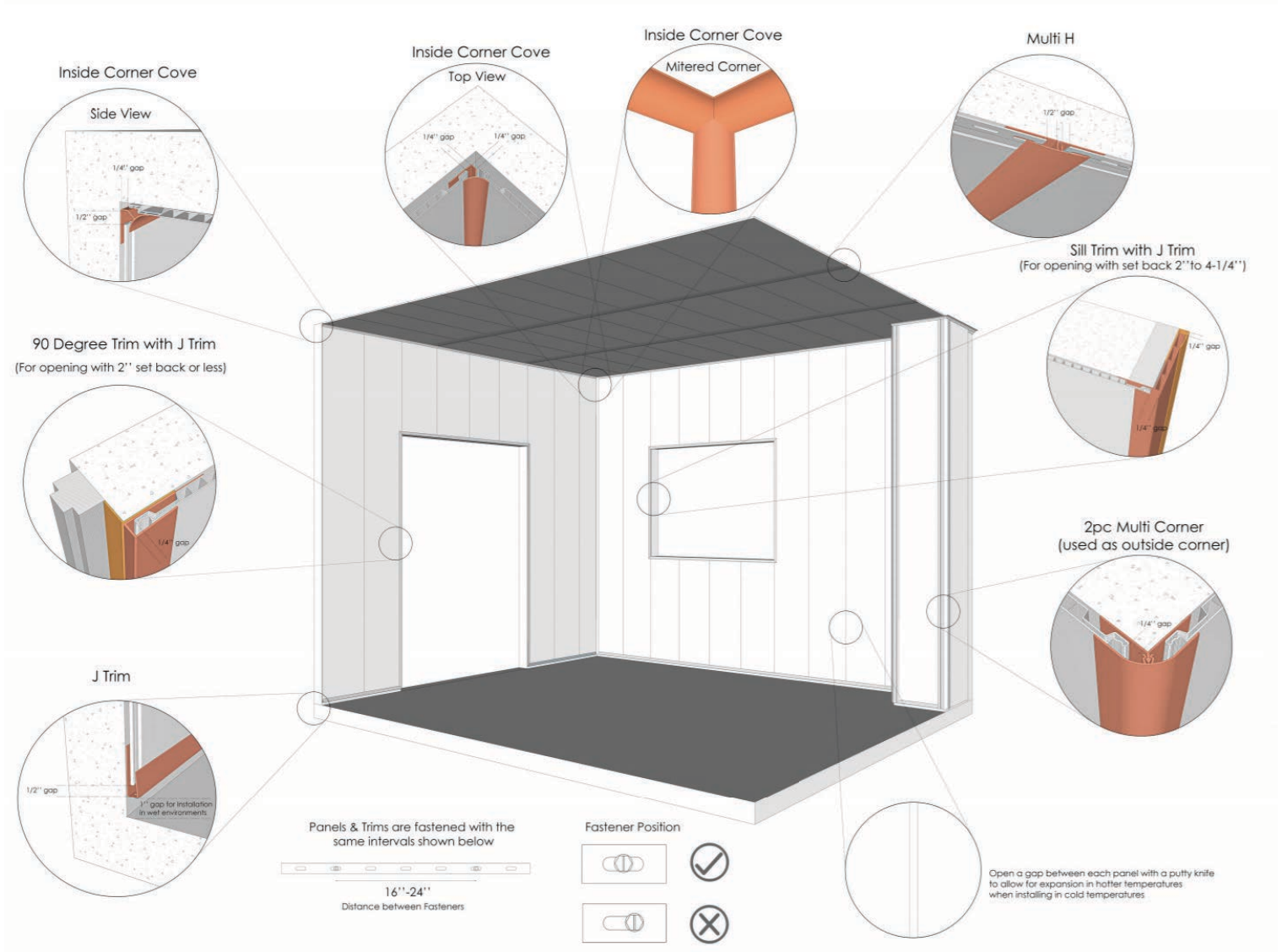
Picture K

# Trim Installation

## Standard Installation



## Food Safe Installation



## Cleaning

Regular cleaning of EZ Liner™ PVC will help prolong the life of the panels. Use of incompatible cleaning products can cause structural and/or surface damage.

- To remove common dirt, hand wash with a soft cloth or sponge and a mild cleaning solution.
- Regular rinsing of panels with clean lukewarm water is sufficient in dry areas.
- For hard to clean areas, a small- to mid-sized power washer may be used. Keep nozzle 4-6 feet away from wall and use a wide spray to distribute water pressure.

**Note:** *Abrasive cleaning agents or pads should never be used as they may scratch the panel's surface.*

### **Recommended Cleaners:**

- Nu-Wall by Arcadian Services 1-800-289-7627
- Solutions Plus by Solutions Direct 1-855-225-2700
- Vision Wall Cleaner by VER-TECH Labs 1-877-866-9742

## Additional Information

If additional technical or installation information is needed, please contact AmeriLux International. If you have a specific question about requirements in your region, contact your local code office or building inspector.

Drawings and technical reports are provided for reference only. Drawings are not project-specific and are for product representation only. Actual products may vary. These drawings are the property of AmeriLux International and are to be used solely as a representation of AmeriLux products. These designs may not be recreated or produced without the expressed, written consent of AmeriLux.

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