



WESTMAN STEEL

STATEMENTS IN STEEL™



CLEAN16+

PVC LINER PANEL
- INSTALLATION GUIDE -

Residential • Agricultural • Commercial

WESTMANSTEEL.COM

CLEAN16+

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- IMPORTANT NOTICE -

IMPROPER STORAGE, IMPROPER INSTALLATION OR INADEQUATE GAPS FOR EXPANSION AND CONTRACTION MAY CAUSE WARPING, BUCKLING AND PERMANENT DAMAGE OF MATERIAL(S)

1. Introduction



Clean 16+ Liner is a wide, glossy-finish, extruded PVC panel with interlocking tongue and groove joints along each panel edge. It provides a superior aesthetic and easy-to-maintain wall and ceiling finish. Trim accessories are available for perimeter conditions, edges of openings and panel joints to accommodate all of your project requirements.

We have made this installation guide available to provide guidelines which should be followed to achieve the most successful construction for your project. The Westman Steel team is always available to answer any questions that may arise and your feedback on this document and any part of your Clean 16+ experience would be gratefully received.

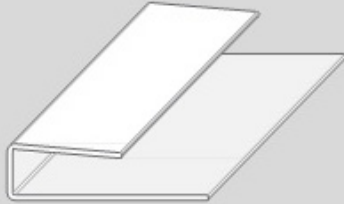




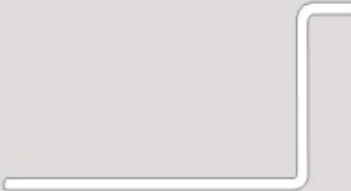


Start Here:

- Please read this guide completely before commencing installation.
- Follow all of the recommended fastening and installation procedures.
- Note that improper installation of Clean 16+ may cause buckling and permanent damage of the products, which will void any warranty.
- The purchaser is solely responsible for determining the suitability for use or application of Clean 16+ Liner and all components thereof.
- The purchaser is also responsible to determine if materials meet all requirements of applicable local building and safety codes for the specific applications.
- The purchaser is solely responsible for ensuring that selected fasteners and any support structure (e.g. timber frame, masonry walls etc) receiving these fasteners, are structurally adequate for their purpose in fixing the panels in place, for the required duration of their use.
- Improper handling, storage or installation of Clean 16+ may void warranty agreements.

CLEAN16+ Standard

STANDARD TRIM PIECES:

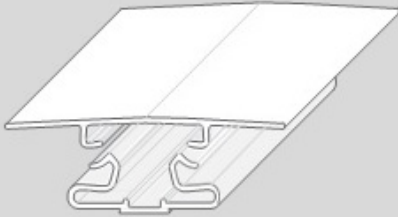



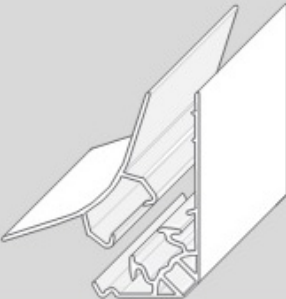



This table shows all of the Clean 16+ Liner products currently available. Please contact Westman Steel for any products required not noted in this table as we are constantly improving and expanding our product lines.

J-Trim CleanJ12		
Inside Corner Cove CleanCT12		
Bottom Drip Trim CleanBD12		
H-Trim CleanHD12		

Snap Trim Pieces

SNAP-TRIM SYSTEM

FASTER INSTALLS - EASIER REPAIRS (Patent Pending)

<p>H-Trim Snap CleanHD12B / CleanHD12C</p>		
<p>Multi-Trim Snap CleanMT12B / CleanMT12C</p>		
<p>Inside Corner Snap CleanCT12B / CleanCT12C</p>		
<p>Outside Corner Snap CleanOSC12B / CleanOSC12C</p>		

2. Preparation & General Information

Ordering Guidelines:

1. Westman Steel's Clean 16+ can be ordered in standard lengths of 10' (3.05m), 12' (3.66m), 16' (4.88m) & 20' (6.1m). Custom lengths are also available upon request.
2. When ordering Clean 16+ cut to size from the factory, ensure that all the wall heights and ceiling dimensions are consistent throughout the building and adjust the dimensions for the recommended clearances. Wall heights and ceiling dimensions may vary due to building irregularities.
3. Clean 16+ ceiling panel should run perpendicular to roof joists or strapping; take total lineal footage of ceiling and divided by 1.33. For Clean 16+ wall panels, take lineal footage of each wall individually and divide by 1.33 to get the # of panels and add them all together. Round up to whole number for the # of panels for each wall for both applications.
4. Trim: Calculate total lineal footage as required and divide by 12' for total quantity.
5. In dry environments, Clean 16+ may sit flush with the floor.

In wet environments, Clean 16+ shall not sit flush with the floor. Clean 16+ should be installed a minimum of 1" (25mm) above the finished floor, using the J-Trim. J-Trim shall have 1/4" holes drilled every 12" on site by the contractor, to allow for any water to escape.

Storage:

1. Clean 16+ material should not be restrained and/or tightly held in place for any period of time. Loosen or remove any tight packing material (2x4 lumber, strapping or similar) from packaging upon delivery to ensure no deformation occurs while in storage.
2. Clean 16+ shall not be stored in enclosed hot spaces, to ensure no deformation occurs.
3. Store Clean 16+ material(s) level and straight – panel deviations caused by improper storage can be apparent in the finished wall/ ceiling levels.
4. Store Clean 16+ in the shade or cover with loose tarps that provide shade - but do not restrict air flow or allow any condensation. To avoid discoloration, do not store in direct sunlight.



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SITE PREPARATION:

1. Inspect and plan the job in advance of the arrival of Clean 16+ to the site.
2. On receipt of product to site, check surfaces of all products for straightness and/or deformities. Contact your sales representative immediately in the event of any abnormalities.
3. Install furring, where necessary.
4. All surfaces to receive Clean 16+ shall be uniform and straight throughout.
5. Clean 16+ shall be supported and fastened every 16" (400mm) to 24" (600mm) maximum. Install continuous nailing strips or supports at the perimeters and around all openings to support all trims.
6. Any base materials (Steel, timber, block, concrete) are all suitable to receive Clean 16+ as long as the panels are supported and fastened every 16- 24" (max) centers and the correct method of fixing into the base material is used.
7. If the Clean 16+ runs parallel to ceiling joints, roof trusses or wall studs, install additional 1" x 3" (25mm x 75mm) metal or wood furring at 16" (400mm) to 24"(600mm) maximum centers.
8. Install furring or strapping at the location of butt joints, for support of the H-Trim.
9. When planning to suspend lighting fixtures, install wall fixtures or other items within the installation area of the Clean 16+, adequate additional support shall be provided at each location where required, as specified by either the manufacturer of the products and/or the structural engineer acting for the purchaser. Do not support anything directly from Clean 16+ panels.
10. Prior to start of installation, install all air, moisture and vapor barriers as required. These items are not provided as part of the Westman Steel's Clean 16+ system.

FASTENERS

Use Corrosion-Resistant Carbon Steel Fasteners or Stainless Steel Fasteners when installing Clean 16+

For use in Wood:

- #10 Diameter Low Profile Screw with a minimum of 1" embedment is recommended

For use in Concrete:

- 3/16" Diameter Low Profile Screw with a minimum of 1-1/2" embedment is recommended

**Do Not Use Staples.
Do Not use Power Nailing Guns.
Overtightening of fasteners may Damage Panels & Void Warranty.
All panels shall be able to slide freely, within the fastener slot holes.**

CAULKING/SEALANT

If caulking or sealant is being used with Clean 16+, ensure that all materials specified by your team are suitable for use with PVC. Typical products include those with one part neutral cure, oxide silicone such as:

Dow 1199 by DOW CORNING

Phone: 1.800.322.8733

Web: www.dowcorning.com

Tremsil 600 by TREMCO

Phone: 1.800.363.3213

Web: www.tremcosealants.com

Bondaflex Sil 200 GPN by BONDAFLEX

Phone 1.800.641.0234

Web: www.bondaflex.com

Adseal 4550 Series by ADFASTCORP (CFIA approved)

4551 (clear), 4552 (white), 4553 (black)

Phone: 1.524.337.7307

Web: www.adfastcorp.com

Adseal available in Canada from:

Auralite

266 Royal York Road Toronto, Ontario Canada M8V 2V9

Phone: (416) 259-9625

Toll Free: (800) 229-5083

- IMPORTANT NOTICE -

THE PURCHASER IS SOLELY RESPONSIBLE FOR ENSURING THAT SELECTED FASTENERS AND ANY SUPPORT STRUCTURE (E.G. TIMBER FRAME, MASONRY WALLS ETC) RECEIVING THESE FASTENERS FOR THE WESTMAN STEEL CLEAN 16+, ARE STRUCTURALLY ADEQUATE FOR THEIR PURPOSE IN FIXING THE PANELS IN PLACE, FOR THE REQUIRED DURATION OF THEIR USE.

Recommended Tool List:

Westman Steel recommends the following tools when installing our Clean 16+ Panels:

Ladders &/or Scaffolding	Chalk Line
Tape Measure	Spirit Level
Work Table	Utility Knife
Putty Knife	Tin Snips
Hammer	Drill (with drill / driver bits)
Square	Hack Saw
Sliding Radial Arm Saw Use a fine-tooth blade (12-16 teeth per inch) with the blade installed in the reverse direction. Some applicators prefer hand-held circular saws with a similar blade installation.	



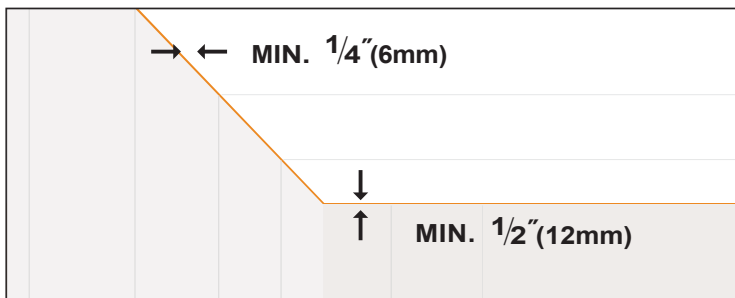
3. Installation

Installation Guidelines:

1. Westman Steel's Clean 16+ should only be installed at temperatures above 5°C (40°F).
2. All materials shall be stored at temperatures above 5°C (40°F) for 24 hours prior to installation. At temperatures below 5°C, panels may chip when cut.
3. The recommended maximum service temperature for Clean 16+ is 50°C (122°F).
4. Clean 16+ shall not be directly exposed to flame or radiant heat sources. Generally, all heaters, including radiant heaters shall be shielded and located more than 18" (450mm) from Clean 16+. Contact the manufacturer of any heater or radiant heater for installation details, heat shield requirements and all clearances from Clean 16+.
5. Clean 16+ in temperatures below 8°C (48°F), insert a dime (1.35mm/0.053") between panels as additional spacing to allow for expansion during hot weather. When installing in temperatures below 5°C (40°F), insert a nickel (1.95mm/0.077") between the panels to allow space for expansion in hot weather.

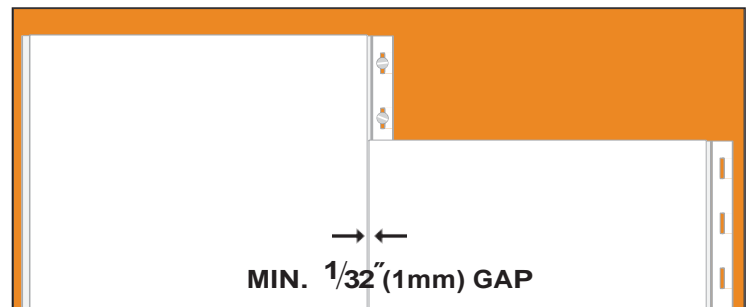
Note: The manufacturer and/or supplier of Westman Steel product is not responsible for problems related to storage, improper installation or temperature fluctuations.

WALL CEILING CLEARANCES



6. Provide clearances between all panels during installation as follows:
 - a. 1/4" (6mm) clearance minimum at each end of all Quick Liner ceiling panels
 - b. 1/2" (12mm) clearance minimum at top of all wall panels
 - c. 1/32" (1mm) gap minimum between panels at interlocking joints

MINIMUM JOINT GAP



When panel lengths are greater than 16ft, double the gap for fluctuations.

Recommended clearances are based on a Max Temperature fluctuation of 22°C (72°F) and lengths not greater than 16ft (4.9m).

7. For lengths greater than 16ft (4.9m) or if Clean 16+ will be subject to greater temperature fluctuations, increased clearances and oversized holes for fasteners are recommended. Contact your Westman Steel Sales Representative for recommendations to suit specific conditions.

8. On receiving Clean 16+ material, check all materials received against the shipping list and notify your Westman Steel sales representative of any abnormalities.

Ceiling Installation:

1. Where Clean 16+ is being installed on both walls and ceilings, **install the ceiling panels first.**
2. Determine panel layout and width of first panel so that the first or last panel in each course will be a minimum of 8" (200mm) wide.
3. Use a chalk line to establish a straight line across the ceiling for the end of the first course. Plan the layout of H-Trim and Inside Corner Cove Snap Trim to achieve an even balance or to align with adjacent work.
4. Always ensure that 1/8" (4mm) space is maintained for expansion at panel sides and minimum 1/4" (6mm) expansion at panel ends for panels up to 16ft in length.
5. Fasten every 24" (600mm) maximum along the length of the Clean 16+, positioning fasteners in the center of the slots. Do not fasten tightly. Fasten within 4" (100mm) to 6" (150mm) of the end of the panels.
6. Install H-Trim at joints leaving 1/4" (6mm) minimum for expansion. Nail the H-Trim on the other side to wood supports at 24" (600mm) on center.
7. For best appearance, monitor the joints to ensure that the panels are aligned and remain parallel.
8. For the last course, cut the length of the panels to suit, leaving room for the expansion of 1/4" (6mm) minimum at each end and 3/8" (9.5mm) on the side.



Wall Installation:

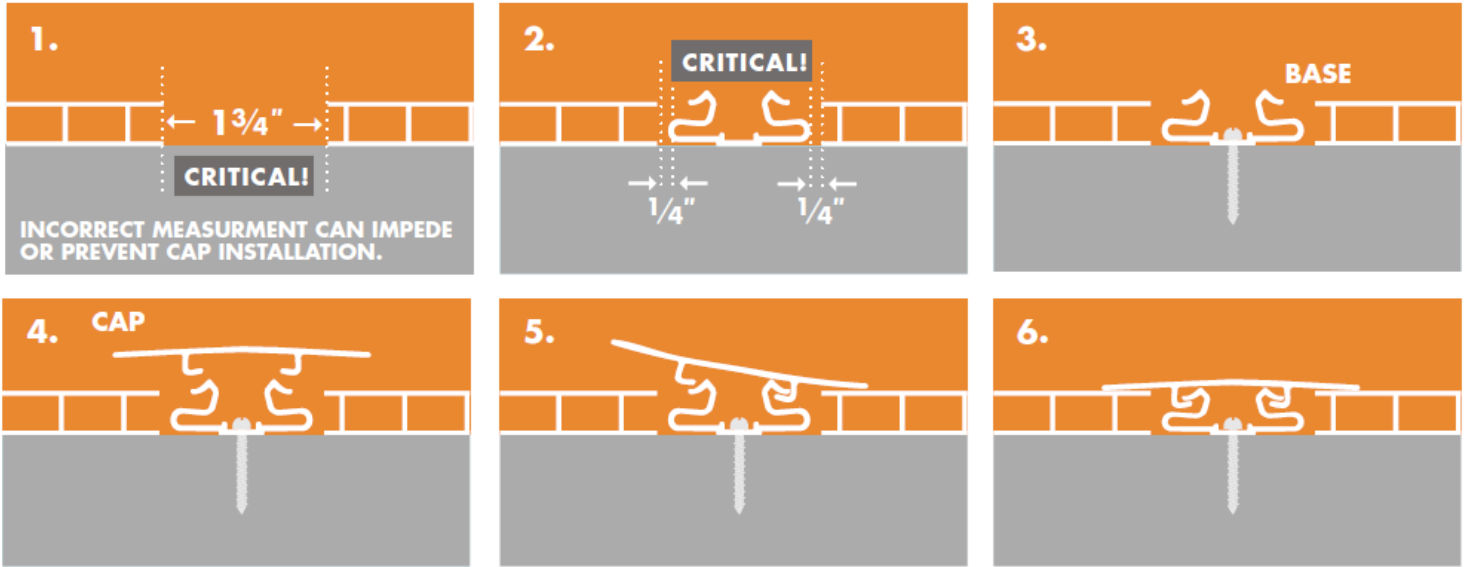
1. Where Clean 16+ is being installed on both walls and ceilings, install the ceiling panels first.
2. Plan the layout of the Clean 16+ and trims to achieve an even spacing and to align with other adjacent work.
3. Determine panel layout and width of first panel so that the first and last panel in each wall section will be a minimum of 8" (200mm) wide.
4. Use a chalk line to establish a horizontal line across the base of the wall and a vertical line for the edge of the first panel.
5. In wet environments (e.g. vehicle wash), begin by installing J-Trim or base trim along the bottom of the wall at least 1" (25mm) above top of slab or finished floor level.
6. Drill 1/4" (6mm) diameter drain holes in the bottom of the J-Trim at 16" (400mm) on center or as appropriate for the application of the particular project requirements.
7. Install Trim at the top of walls if the top of panels are not hidden behind other ceiling finish. Install panels into Corner Trim or J-Trim. Install Inside Cove or Outside Corner "base" pieces first, then then panels, and finish the walls by installing the "cap" pieces (see pg 12 & 14).
8. If panels are being installed on wall & ceiling, install Multi-Trim after both wall & ceiling panels are in place

Installation Check List:

- All panels shall be able to slide freely, within the fastener slot holes, after installation to allow for expansion and contraction over time. Allow a minimum, of 1/16" (1.6mm - about the thickness of a dime) between the back of the fastener head and the nailing strip of the Clean 16+ panel or trim.
- Do not nail/fasten tightly into position. Doing so may cause the Clean 16+ to be permanently damaged and/or deformed.
- Fasteners shall be not more than 24" (600mm) apart and located 4" (100mm) to 6" (150mm) maximum from ends of panels and trims.
- Always place fasteners in the center of the slots. If you must fasten near the end of a slot to hit a furring strip, extend the length of the slot with a slot-punch tool or router.
- Do not fasten at the end of a slot. Doing so may cause the Clean 16+ Panel to be permanently damaged and/or deformed.
- Leave a minimum of 1/4" (6mm) clearance at each end of all panels and trims to allow for expansion and contraction.
- No clearance at panel ends can cause ripples in the finish. Doing so may cause the Clean 16+ to be permanently damaged and/or deformed.
- For vertical panels supported at the bottom, provide minimum of 1/2" (12mm) clearance at top for panels 16ft or shorter. If panels are greater than 16ft, allow a minimum of 3/4" (19mm).
- Inadequate clearance can cause ripples in the panel and may cause the Clean 16+ to be permanently damaged and/or deformed.
- Do not face-fasten the panels as Clean 16+ expands and contracts with temperature changes.
- Face fastening can cause ripples in the panel and may cause the Clean 16+ to be permanently damaged and/or deformed.
- Install panels with a slight gap (1/32" or 1mm) between panels at the interlocking joint to allow for expansion and contraction. Use the blade of a putty knife to set the width of the joint.
- Do not fasten with tight joints in cold weather or cooler than normal ambient temperatures. Doing so may cause the Clean 16+ to be permanently damaged and/or deformed.
- Use a one-part, neutral cure, oxide, silicone sealant to seal all corners, to seal around all fixtures and to repair small holes.

Snap-Trim System: Faster Installs - Easier Repairs

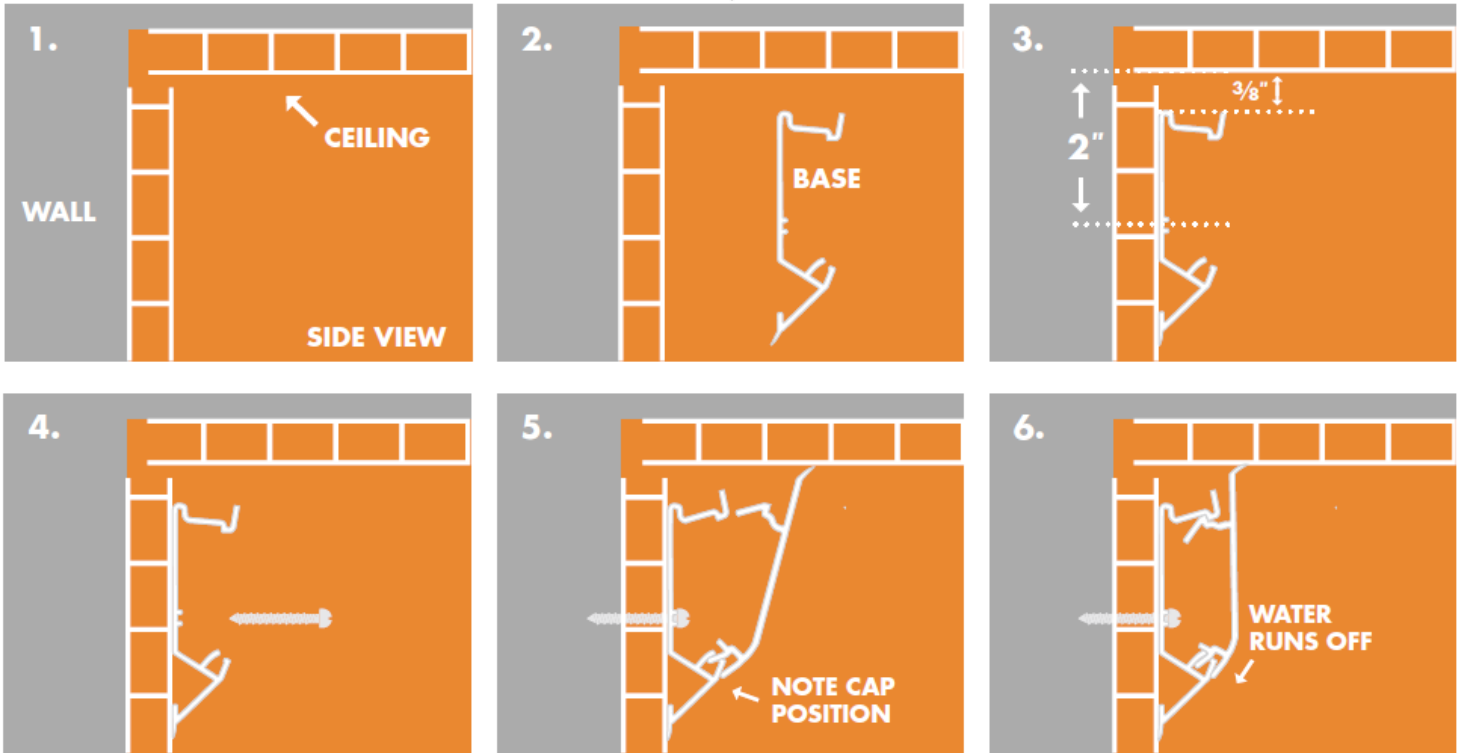
FINISH JOINT WITH H-TRIM SNAP (Patent Pending)



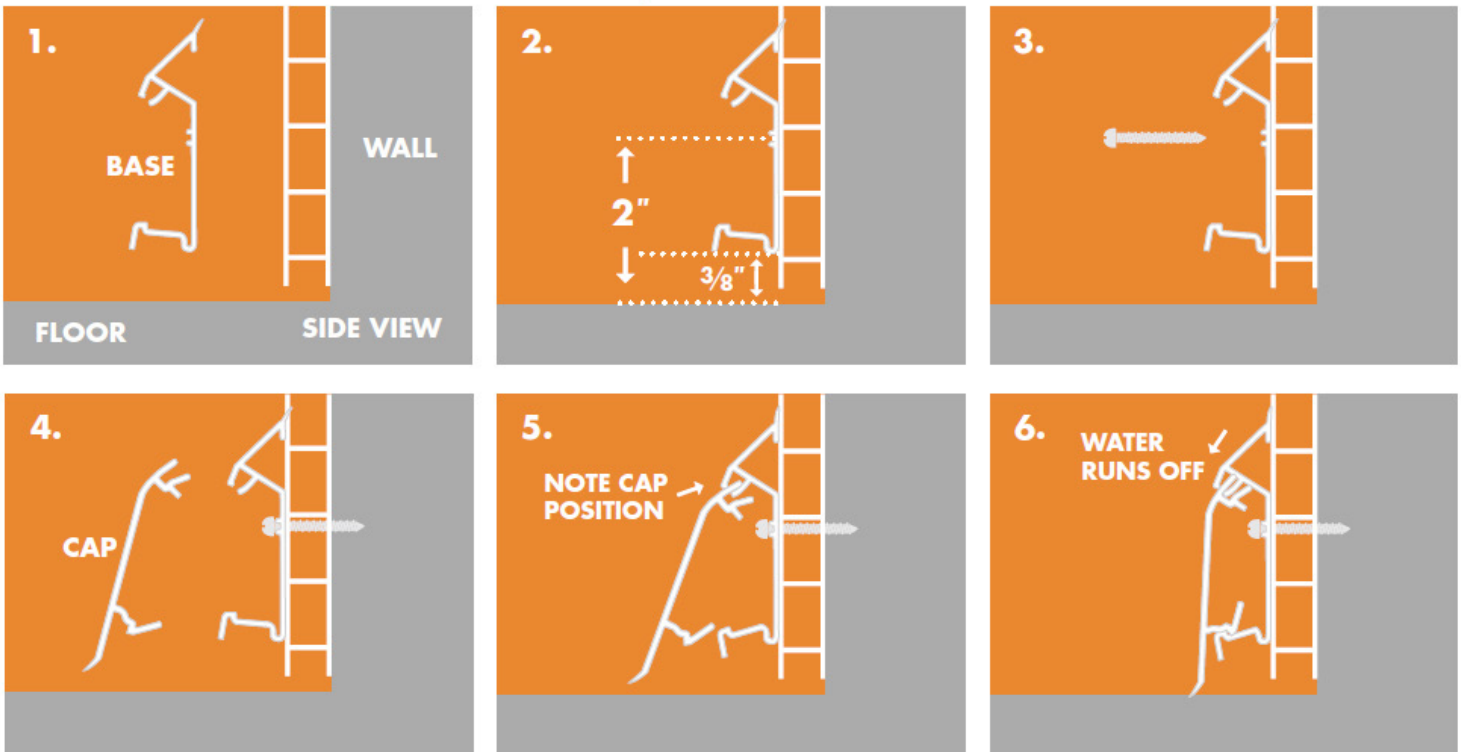
FINISH JOINT WITH INSIDE CORNER SNAP (Patent Pending)



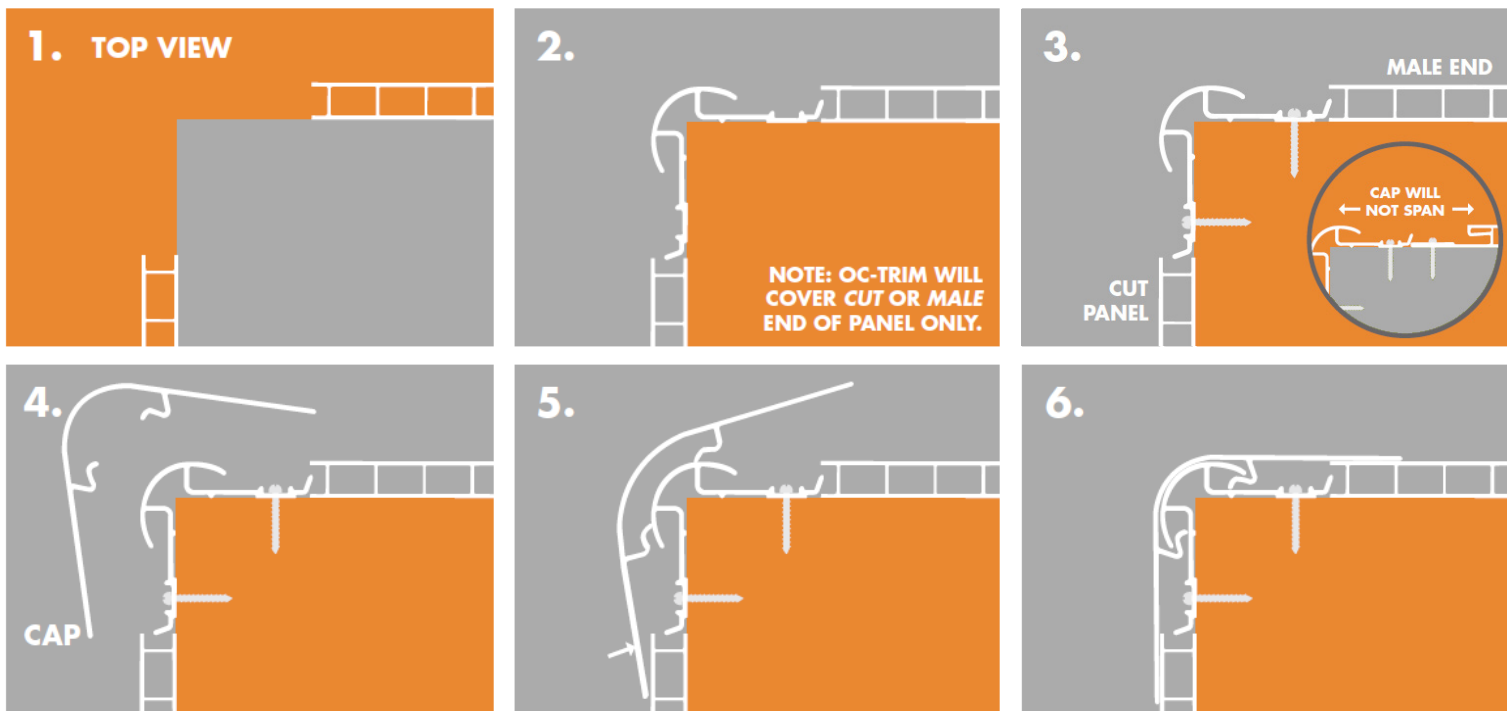
MULTI-TRIM CROWN INSTALL (Patent Pending)



MULTI-TRIM BASE INSTALL (Patent Pending)



FINISH JOINT WITH OUTSIDE CORNER SNAP (Patent Pending)



CAP IS DESIGNED TO FIT SNUGLY. START AT BOTTOM & APPLY PRESSURE TO ONE SIDE, MOVING UP AS CAP SNAPS IN PLACE.

Cleaning:

- To remove common dirt and grime, and to maintain the appearance of Clean 16+ PVC Liner Panels, wash using a general cleaner, applied with a sponge or soft bristle brush
- Some solvent cleaners may potentially damage the finish. Test on a small sample area first.
- Some cleaners Not Recommended: Clorox, Pine Power, Tide Power, Grease Relief, Paint Thinner and Nail Polish Remover.
- Protect your eyes and skin from direct contact with cleaning agents at all times.

Always follow the precautionary labeling and manufacturer instructions for all cleaning agent containers.

LANGLEY, BC (888) 937-8626
AIRDRIE, AB (800) 661-2826
SWIFT CURRENT, SK (800) 667-7468
BRANDON, MB (800) 661-2823
CAMBRIDGE, ON (855) 620-2720

