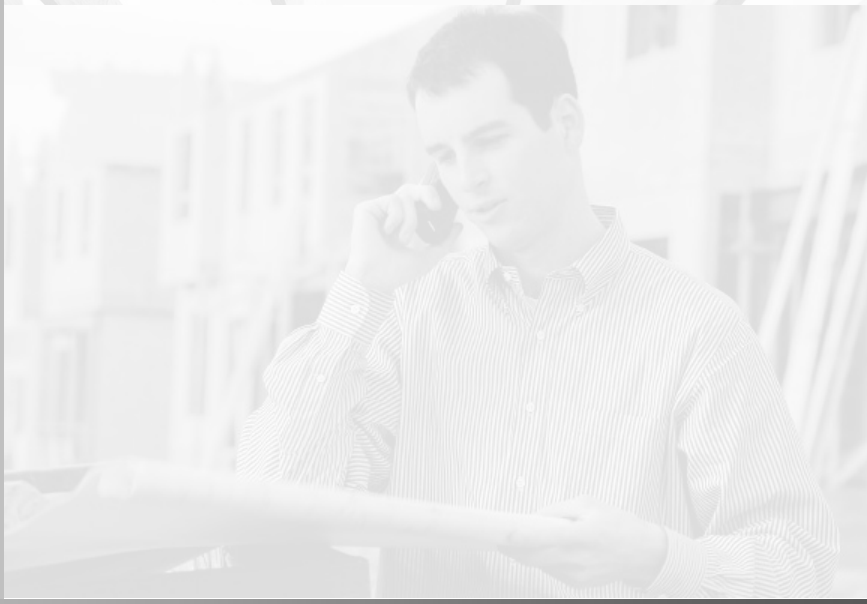




Brick, Stone & Block Panel Installation

- 9.1 Framing Members & Sheathing Requirements
- 9.2 Weather Resistant Barriers & Flashing Requirements
- 9.3 Fasteners
- 9.4 Fasteners Table A
- 9.5 Fasteners Table B
- 9.6 Installing The Starter Track
- 9.7 Installing The First Panel Course
- 9.8 Correct Clip Usage & Placement
- 9.9 Clip Usage Chart
- 9.10 Inside Corners, Doors & Windows
- 9.11 Safety Reminder
- 9.12 Cutting Reminder
- 9.13 Outside Corners
- 9.14 Installation Around Garage Doors & Other Large Openings
- 9.15 Installing Last Course
- 9.16 Gable & Overhang Installation
- 9.17 Vertical Expansion Joints
- 9.18 Horizontal Compression Joints
- 9.19 Interior Installations
- 9.20 Repairing Damaged Panels
- 9.21 Cleaning Panels
- 9.22 Removal of Exterior Acrylic Latex Paint From Nichiha Panels
- 9.23 Test Results of Paint Removal

- ◆ Read these installation guidelines completely and thoroughly before beginning installation.



9.1 Framing Members & Sheathing Requirements

All Applications

Dependent upon method of construction, minimum requirements must be met before Nichiha panels can be installed.

Wood Studs

- ◆ Framing member should be wood 2x4 studs, set at 16"-24" o.c.
- ◆ An exterior grade minimum 7/16" OSB or plywood is required for sheathing.

Metal Studs

- ◆ Framing members should be a minimum of 18-gauge, and set at 16"-24" o.c.
- ◆ If an exterior grade minimum 7/16" OSB or plywood is used for sheathing, a 20-gauge stud will meet requirements.

Concrete Masonry Unit (CMU)

- ◆ Must be installed in accordance with local building codes.
- ◆ Do not install the product directly onto CMU substrate.
- ◆ Nichiha requires the use of furring strips or hat channel as specified in fastener Table in section 9.4.

Structural Insulating Panel (SIP)

- ◆ SIPs should be installed in accordance with manufacturer's instructions, and local building codes.
- ◆ Two [2] fasteners per clip at 16" o.c. are required as there are no studs to secure clip into.

Pre-Engineered Metal Construction

- ◆ Nichiha panel clips should be installed to ridged steel siding (R-panels) with 12" o.c. reversed standard ridge, R-panels must be 24 ga. or heavier.
- ◆ If ridge on R-panels is greater than 12" o.c., additional furring or metal channel attached to structural framing, must be installed not to exceed 16" o.c.
- ◆ Framing must be in accordance with local building codes.
- ◆ Nichiha special approval is required for all installations over pre-engineered metal buildings.

9.2 Weather Resistive Barriers & Flashing Requirements

All Applications

A weather resistive barrier (WRB) is required when installing Nichiha panels. Use an approved WRB as defined by the 2006 IRC. Refer to local building codes.

A breathable WRB is highly recommended when installing Nichiha panels for residential applications.

Breathable WRB is required for all commercial applications.

All openings must have appropriate flashing to prevent moisture penetration. Follow manufacturer's guidelines and all local building codes.

When/if installing flashing and/or WRB, comply with all manufacturer's installation guidelines, all applicable building codes and in accordance with best construction practices.



Wood Studs

- ◆ As above.

Metal Studs

- ◆ As above.

Concrete Masonry Unit (CMU)

- ◆ As above.

Structural Insulating Panel (SIP)

- ◆ As above.

Pre-Engineered Metal Building

- ◆ The use of WRB may not be required dependent upon local building codes.

9.3 Fasteners

All Applications

Fasteners must be **corrosion resistant**. Stainless steel or corrosion resistant coated screws such as hot-dipped, zinc or ceramic are recommended. Comply with all local building codes for fastener requirements.

Refer to Sections 8.4 & 8.5 (following) for detailed fastener requirements and recommendations.

Wood Studs

- ◆ Fasteners must penetrate stud or sill plate a minimum of 1".

Metal Studs

- ◆ Screws must penetrate stud or sill plate a minimum of 1/2".
- ◆ Need three [3] threads for effective grab.

Concrete Masonry Unit (CMU)

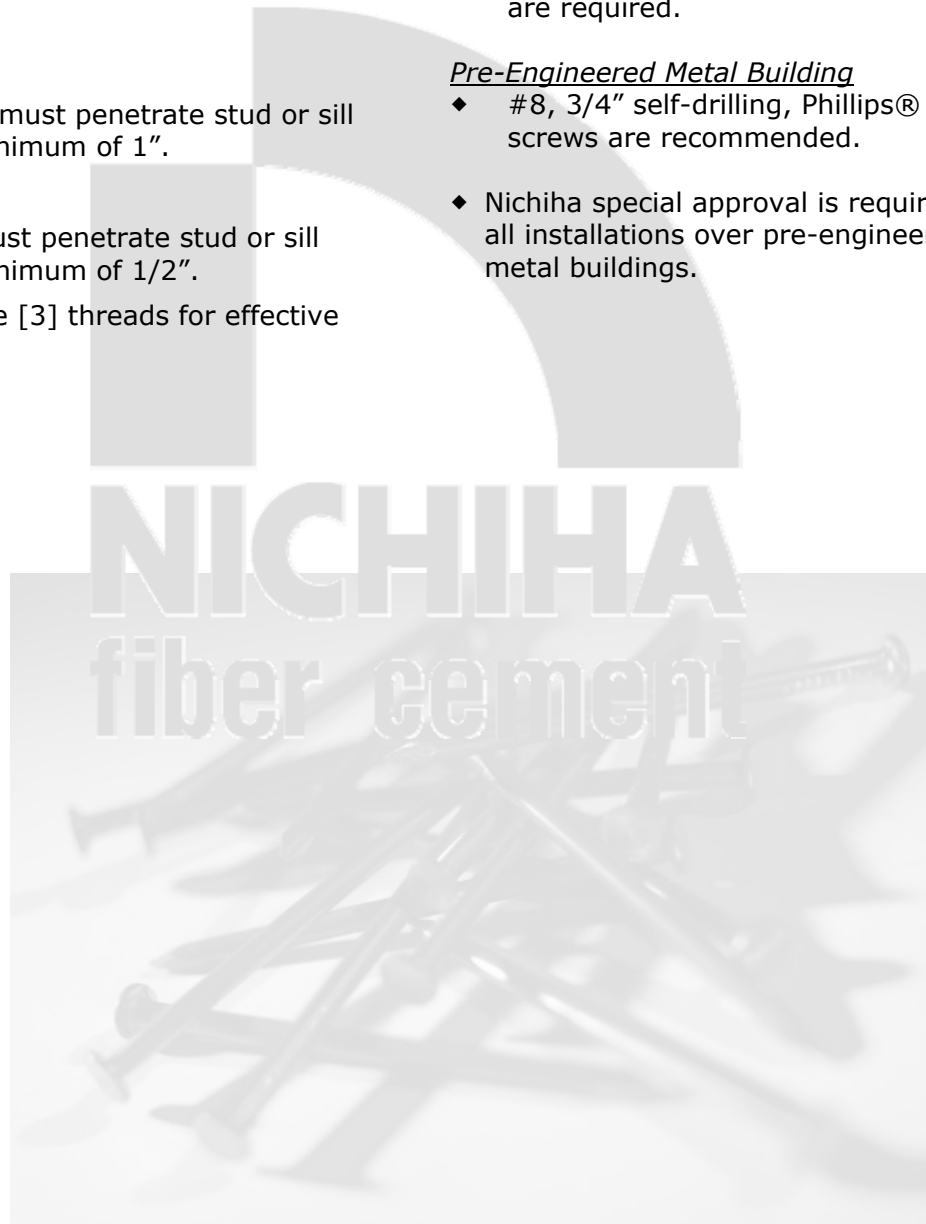
- ◆ Use corrosion resistant masonry screws or pneumatic masonry pins and penetrate furring strip and/or CMU appropriate distance in accordance with building codes.

Structural Insulating Panel (SIP)

- ◆ 1", full-thread, corrosion resistant wood screws must be used and penetrate SIP a minimum of 1/2".
- ◆ Two [2] fasteners per clip at 16" o.c. are required.

Pre-Engineered Metal Building

- ◆ #8, 3/4" self-drilling, Phillips® head screws are recommended.
- ◆ Nichiha special approval is required for all installations over pre-engineered metal buildings.



9.4 Panel Products & Furring Table

Rain Screen Type													
Clip System				Furring System									
				Wood Furring <i>Pressure Treated Lumber, 2x4 or 5/4" x 4" spaced at 16" o.c.</i>					Hat Channel / "Z" Furring <i>50 ksi; flange width: 1", 1.5" or 2"; depth: 2" max. Spaced at 16" o.c.</i>				
Substrate	Fastener: Starter Track to Substrate	Fastener: Support Clip to Substrate	Fastener: Top Panel to Substrate	Furring	Fastener: Furring to Substrate	Fastener: Starter Track to Furring	Fastener: Support Clip to Furring	Fastener: Top Panel to Furring	Furring	Fastener: Furring to Substrate	Fastener: Starter Track to Furring	Fastener: Support Clip to Furring	Fastener: Top Panel to Furring
Wood	N1*/S2	N2**/S2	S2	Wood	S2	S2	S2	S2	Hat/"Z"	S2	S4	S4	
Metal	S1	S4	S1	-	-	-	-	-	Hat/"Z"	S1	S1	S4	
CMU				Wood	S3	S2	S2	S2	Hat/"Z"	S3	S1	S4	
SIP	S2	S2	S2	-	-	-	-	-	-	-	-	-	
PEMB	S1	S4	S1	-	-	-	-	-	-	-	-	-	

* N1= 2" or 2-1/2" stainless steel nail at 16" o.c. No roofing nails.

**N2= 1-1/2" stainless steel nail provided with support clip, spaced at 16" o.c.

9.5 Fastener Requirements

Basic Wind Speed (mph)	Controlling Design Pressure (psf) ^{1,2}	Fasteners ¹		Furring Requirements ²			
		S1 ³	S2 ⁴	S3 ⁵	S4 ⁶	Wood	Hat/"Z"
90	26.5	#10 Self-Drilling Screw	#8 Wood Screw	3/16" Masonry Screw	#8-10 Self-Drilling Screw	5/4" x 4"	12 ga.
100	32.6	#10 Self-Drilling Screw	#8 Wood Screw	3/16" Masonry Screw	#8-10 Self-Drilling Screw	5/4" x 4"	12 ga.
110	39.5	#10 Self-Drilling Screw	#8 Wood Screw	3/16" Masonry Screw	#8-10 Self-Drilling Screw	5/4" x 4"	10 ga.
120	46.9	#10 Self-Drilling Screw	#10 Wood Screw	1/4" Masonry Screw	#8-10 Self-Drilling Screw	2" x 4"	8 ga.
130	55.0	#10 Self-Drilling Screw	#10 Wood Screw	1/4" Masonry Screw	#8-10 Self-Drilling Screw	2" x 4"	3/16"

1. For attachment of furring to substrate all screw size requirements are based on maximum 12" screw spacing.
2. All Furring shall be continuous.
3. Metal screw size requirements are based on minimum 18 ga. metal stud back-up and using a carbon steel screw with corrosion resistant coating*.
4. Wood screws shall penetrate a minimum of 2" into the existing 2x4 wood stud and meet the requirements of ANSI/ASME B18.6.1 & using carbon steel screw with corrosion resistant coating*.
5. Masonry screws shall penetrate CMU a distance equal to the thickness of the furring strip and using a carbon steel screw or pin with corrosion resistant coating*.

6. Metal screw size requirements are based on a minimum 12 gauge base metal thickness for basic wind speeds of 90 mph and 100 mph, 10 ga. base metal thickness for basic wind speeds of 110 mph, 8 ga. base metal thickness for basic wind speeds of 120mph, 3/16" base metal thickness for basic wind speeds of 130 mph with carbon steel screws with corrosion resistant coating*.

Notes:

Non-corrosive coatings include: zinc, hot-dipped galvanized, cadmium, stainless/cadmium, zinc/chromate/organic (ceramic), & nickel/zinc/chromate.

Design wind pressures are based on worst-case pressure coefficients for given wind speed and based on a mean roof height of 45 ft.

These recommendations apply only to 1/2" sheathing. For exterior insulation cases. Contact Nichiha Technical Department.

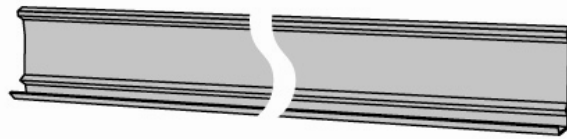
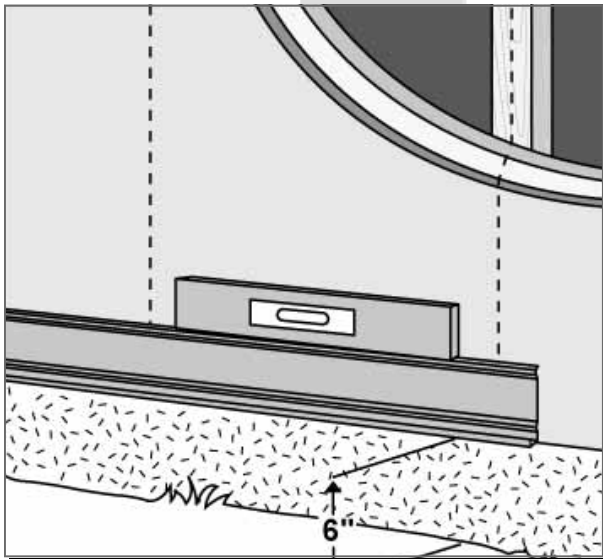
9.6 Installing The Starter Track

All Applications

- ◆ The Nichiha Starter Track (FA100) must be level and attached at a minimum of 6" above "finished" soil grade or per local building codes (use a laser level to verify). When installing over a hard surface such as driveways or sidewalks, a 2" clearance is acceptable.
- ◆ The starter track must be installed using corrosion resistant fasteners.
- ◆ Locate and mark studs.

Wood & Metal Studs

- ◆ Starter track must be secured at every stud line.



Nichiha Starter Track FA100



Concrete Masonry Unit (CMU)

- ◆ When installing over concrete construction, wall must be furred out with pressure treated lumber, or metal hat channel. Starter track must be secured through furring.

Structural Insulating Panel (SIP)

- ◆ Secure Starter Track not to exceed 16" o.c.

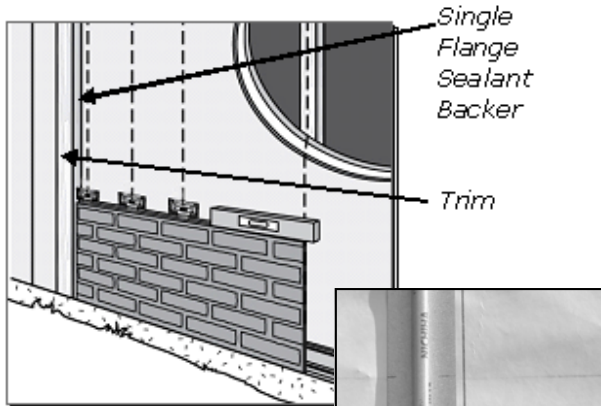
Pre-Engineered Metal Construction

- ◆ Starter Track must be secured to R-Panel ridge, furring or panel surface not to exceed 12" o.c.
- ◆ Nichiha special approval is required for all installations over pre-engineered metal buildings.

9.7 Installing The First Panel Course

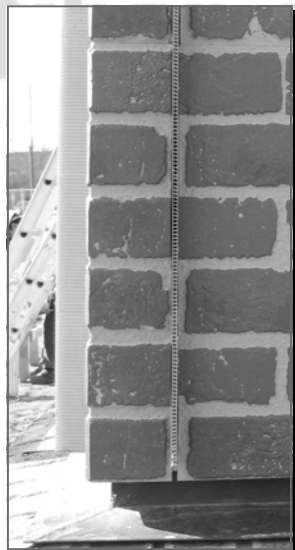
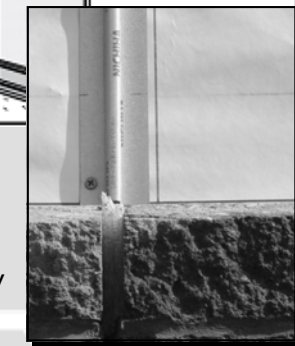
All trim must be installed before panels.

- ◆ The use of the single or double flange sealant backer is recommended with all trim or corner pieces.



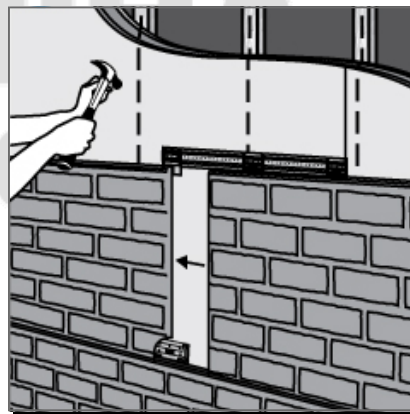
- ◆ Alternatively, place a 1/4" temporary spacer between any corner trim and the panel, ensuring a 1/4" gap. Keep spacer in place until sealant is applied. If using the Double Flange Sealant Backer (pre-manufactured corners), make sure panel is tight up against the backer.

- ◆ Trim off the left side ship-lapped edge of the panel, so that panel will fit tightly against spacer or sealant backer.



Panel Installation

- ➊ Set first panel into the starter track and attach using a panel clip at top of panel at each stud, working from left to right.
- ➋ Place a joint clip at the top of all vertical panel joints.
- ➌ Verify first course of panels is level. Large commercial buildings require checking level around entire building.
 - ◆ A rubber mallet or block of wood may be used to seat the panels firmly in place and tighten to the left. Do not hammer directly anywhere on the panels as direct contact may cause cracks, gouges or chipping.
- ➍ Fit panels tightly together on both horizontal and vertical joints ensuring that panel edges are properly butted together. Set the panels by tapping the edge with a block of wood until panel fits tightly.
- ◆ *Panel Clips* must be installed at every stud line.



- ◆ Continue using appropriate clips (see next section for correct clip usage) on top edge of panel as the work proceeds from the bottom of the wall to the top, moving left to right along the row.

9.8 Correct Clip Usage & Placement

Panel Clips

(JE650/JE550/JE710/ JE406)

Canada Short Panel Clip

- ◆ Use *Panel Clips* on top edge of panel as the work proceeds from the bottom of the wall to the top. Moving left to right along the row.
- ◆ A *Panel Clip* must also be inserted at the bottom of every vertical joint (panel bottom). This is a stabilizer clip. Do this by setting clip on the top edge of the panel beneath and tapping clip to the left until in place.

Joint Clips

(Short - JEJ607/JEJ505)

(Long - JEL651/JEL551/JEL652/
JEL552)

- ◆ A *Joint Clip* must be used at the top of all vertical ship-lapped joints. For proper clip identification see Clip Usage Chart on next page.
- ◆ *Short Joint Clips* may be used on OSB or plywood sheathing (at the top of the joint).
- ◆ *Long Joint Clips* must be used at the top of the joint on any non-structural sheathing i.e. foam insulating panels or gypsum sheathing (such as DensGlass® by Georgia Pacific).

Wood Studs

- ◆ Follow general instructions.

Metal Studs

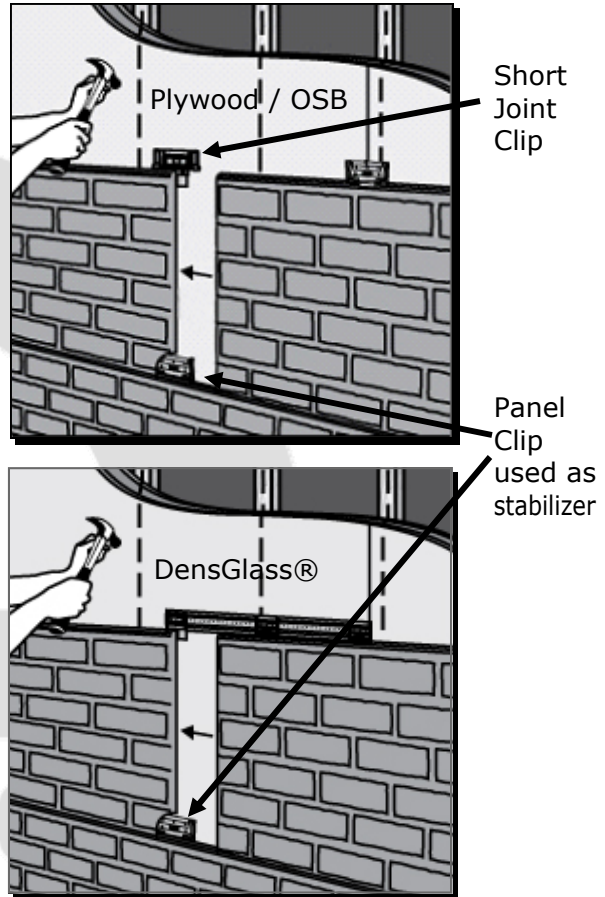
- ◆ Follow general instructions.

Concrete Masonry Unit (CMU)

- ◆ Install clips at each furring location.

Structural Insulating Panel (SIPs)

- ◆ Follow general instructions.

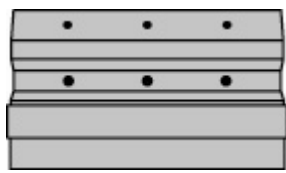


DENSGLOSS is a registered trademark of Georgia Pacific Corporation.

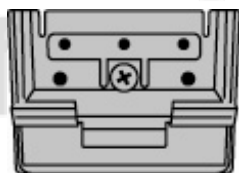
9.9 Clip Usage Charts

USA Requirements		Joint Clip	Panel Clip
Brick, Stone & Block Panels	Sheathing Type	(SKU #)	(SKU #)
5/8" (16mm) Panels ArchitecturalBlock™, CanyonBrick™, FieldStone™ QuarryStone™	7/16" or greater OSB or Plywood	JEJ 505/short	JE 550
	Foam Board, Black Board or no sheath- ing & all others	JEL 551/long	JE 550
3/4" (18mm), 7/8" (21mm) & 1" (25mm) Panels CinderStone™, NewportBrick™ VintageBrick™, CutStone™ & SandStone II™	7/16" or greater OSB or Plywood	JEJ 607/short	JE 650
	Foam Board, Black Board or no sheath- ing & all others	JEL 651/long	JE650

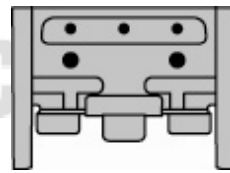
Canada Requirements	Joint Clip	Panel Clip
Brick, Stone & Block Panels	(SKU #)	(SKU #)
5/8" (16mm) Panels ArchitecturalBlock™, CanyonBrick™, FieldStone™, QuarryStone™	JEL 552/long	JE 710
3/4" (18mm), 7/8" (21mm) & 1" (25mm) Panels CinderStone™, NewportBrick™, VintageBrick™ & SandStone II™	JEL 652/long	JE 406



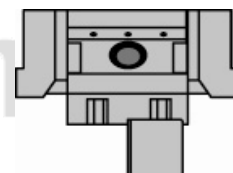
Panel Clip
JE 406
(Canada)



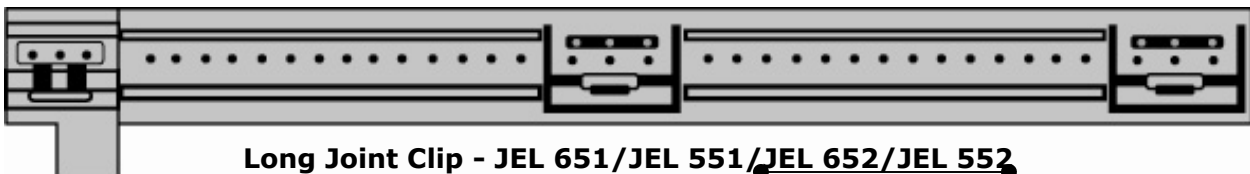
Panel Clip
JE 650/JE 550



Panel Clip
JE 710
(Canada)



**Short Joint
Clip**
**JEJ 607/
JEJ 505**



Long Joint Clip - JEL 651/JEL 551/JEL 652/JEL 552
(Canada)

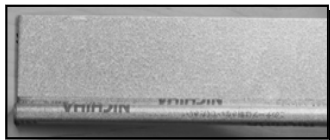
9.10 Inside Corners, Doors & Windows

All Applications

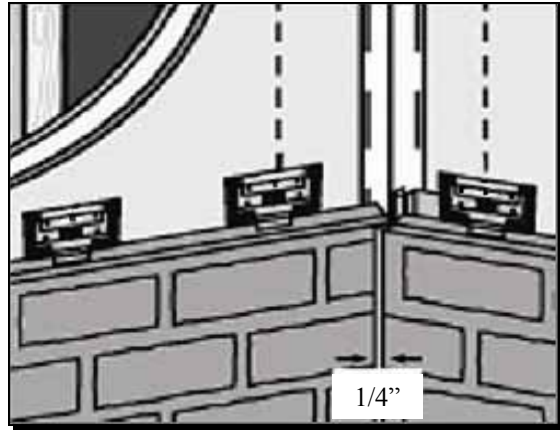
- ◆ There are several inside corner, door and window installation options:
 - ◆ Single Flange Sealant Backer
 - ◆ Fiber Cement & PVC Trim Boards
 - ◆ Vinyl & Plastic Trim
 - ◆ Face Fastening
- ◆ Appropriate flashing should be used to prevent moisture penetration on all inside corners, doors and windows. Refer to local building codes for best practices.
- ◆ When cutting around doors and windows the panels may be installed into a vinyl, metal, or aluminum J-channel. Panels must fit completely within trim, with no exposed panel edges and face fastened.
- ◆ A minimum gap of 1/4" is required when butting panels into windows, doors and corner trim. Use a Single Flange Sealant Backer, fill gap with polyurethane sealant. Sealant must be compliant with ASTM C-920.
- ◆ Cut and exposed panel edges must be primed or sealed with fiber cement sealer (e.g. DryLock®) or paint.

Single Flange Sealant Backer Inside Corners

- ❶ Decide location of line of sight to minimize visual of the sealant gap (this would be equivalent to the front of the building).
- ❷ Install the panel (ship-lap edges at the joint will need to be cut off) on the front wall first. Ensure panel is butted up tight to the inside corner wall. Fasten the Single Flange Sealant Backer onto the side wall right up against the front wall panel's edge at 12-14" o.c.



Single Flange Sealant Backer
 FHK 1110
 FHK 1117 (In Canada)

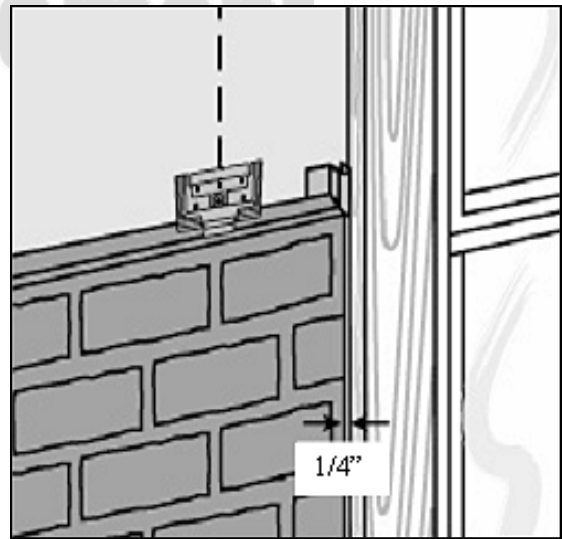


Butt-Jointed panels using Single Flange Sealant Backer

- ❸ Install side wall panel right up against the sealant backer and secure with panel clip. Fill space with sealant to about 75-80% in depth.

Single Flange Sealant Backer Doors & Windows

- ◆ Install the Single Flange Sealant Backer first butting to the door/window jamb or trim pieces, prior to installing the panels. The Single Flange Sealant Backer must be fastened a minimum of 12" to 14" o.c.
- ◆ Install panels and fill gap with recommended sealant.

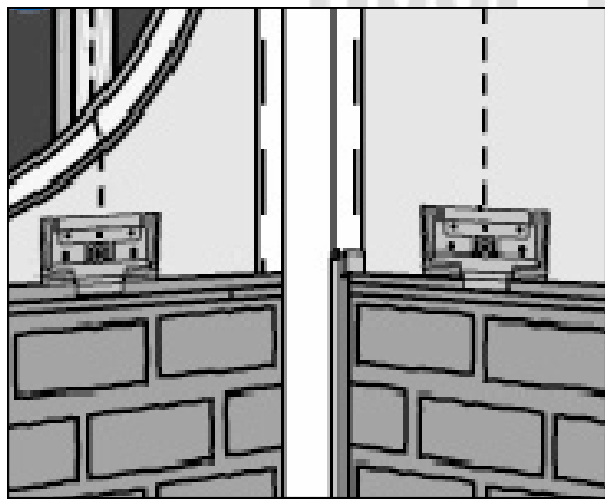
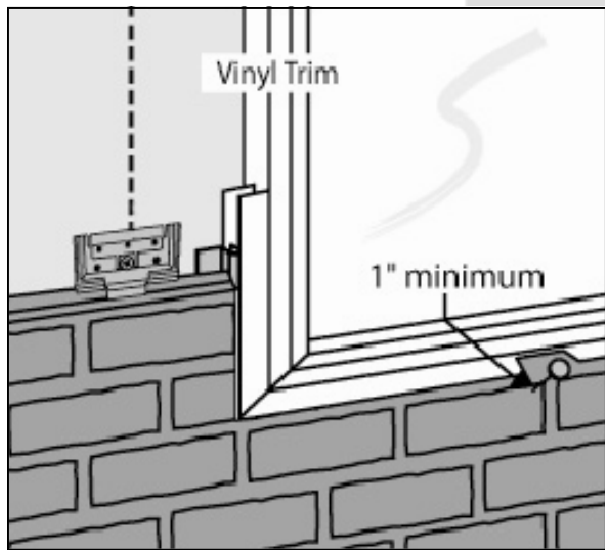


Fiber Cement & PVC Trim Boards

- ◆ When panels are to be butted to fiber cement or PVC trim, a minimum gap of 1/4" width is required.

Vinyl & Plastic Trim Channel

- ◆ Install trim channel in accordance with manufacturer's installation instructions. Fit panel into to channel trim snugly, so that panel edges are not exposed and face fasten panel.
- ◆ Apply polyurethane sealant into the gap.



Face Fastening Panels—All Options

- ◆ Fasten panels a minimum of 1" from all panel edges. This will avoid cracking or breaking panel. Best practice is to pre-drill panel before fastening.
- ◆ When face nailing panels, use Nichiha Spacer (FS1005 or FS1010*) behind the panels to ensure panel stability.
* In Canada use FS1010.

9.11 Safety Reminder

Everyone cutting Nichiha product must wear a properly fitted respirator when cutting panels (NIOSH/OSHA approved respirator with a rating of N100, O100 or P100 in accordance with applicable government regulations and manufacturer instructions).

Refer to the Nichiha Safety Guidelines for additional important safety information to protect you and others.



8.12 Cutting Reminder

All panels should be marked and cut from the back side.



9.13 Outside Corners

- ◆ There are several outside corner installation options.
 - ◆ Mitering Panel Corners
 - ◆ Pre-Manufactured Mitered Corners
 - ◆ Fiber Cement and PVC Trim Boards
 - ◆ Metal and Vinyl Trim
- ◆ Appropriate flashing must be used as required to prevent moisture penetration on outside corners.

Mitering Panel Corners

Outside corners can be fabricated in the field by mitering the panels at 45 degrees for a continuous clean look.

- ◆ Always cut panels from back.



- ◆ When installing brick panels, one side should have a full brick pattern on the panel, then the wrap-around brick should be a half-brick pattern for an authentic appearance.



- 1 Cut panels at a 45° angle and dry fit panels together to ensure best appearance.



- 2 Clean the cut edges of all panels with a damp cloth.



- 3 Apply polyurethane **adhesive** (such as PL Premium) on mitered edges to secure panel. Use a polyurethane adhesive for exterior applications. Follow manufacturer's instructions.



- ④ Attach panels to substrate. Leave edges untouched until the polyurethane adhesive has completely dried.



- ⑦ Apply a color matched 100% acrylic latex exterior paint to beveled edges for a clean finished appearance.



- ⑤ Bevel the edges utilizing a sander, putty knife, file or utility knife, until edges have a clean finished appearance.



Pre-Manufactured Mitered Corners

- ◆ Always install Nichiha Pre-Manufactured Corners before panels.

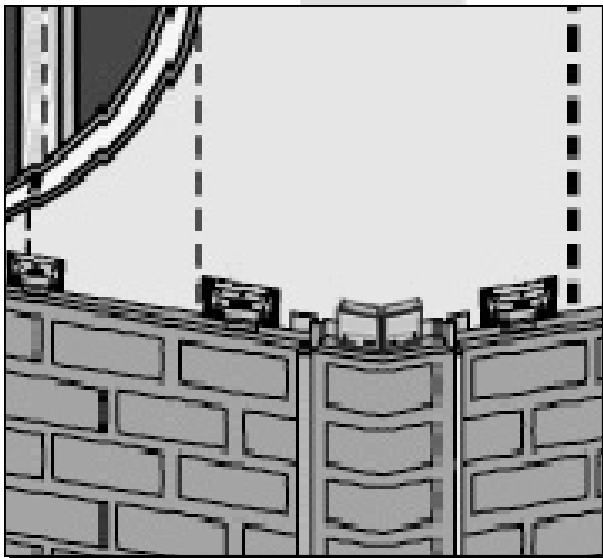


- ⑥ Fill any gap or crevices with exterior-grade cementitious filler such as MH Ready-Patch® by Zinsser. DO NOT USE POLYURETHANE SEALANT AS A REPLACEMENT FOR EXTERIOR FILLER.



Nichiha Recommended Method

- 1 Set corner piece on the starter track and secure with one Nichiha corner clip (JE 550C & JE 650C). Clips are to be placed at the bottom and top of the ship-lapped edges. ** In Canada, corner clip may require FS1005 Shim on both sides.*
- 2 Place the Double Flange Sealant Backer (FH 1010, FH 1020*) behind the corner piece (at both walls) all the way down into the starter track. Fasten at 12" - 14" o.c. only on the side butting up to the panel course. ** In Canada use FH1020.*
- 3 After all panels have been installed, apply sealant at 75% - 80% depth. Sealant must be compliant with ASTM C-

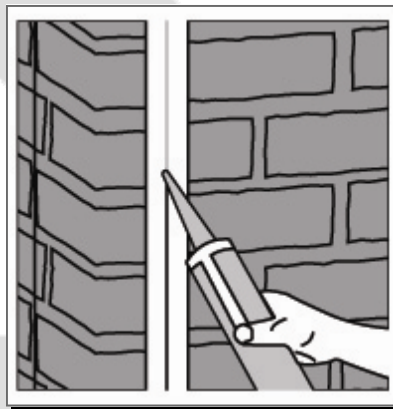


Alternative Method—Backer Rod

- 1 Shim out a 1/4" vertical space until all panels have been installed.
- 2 Use a commercially available 1/2" backer rod.
- 3 Apply sealant at 75% - 80% depth.

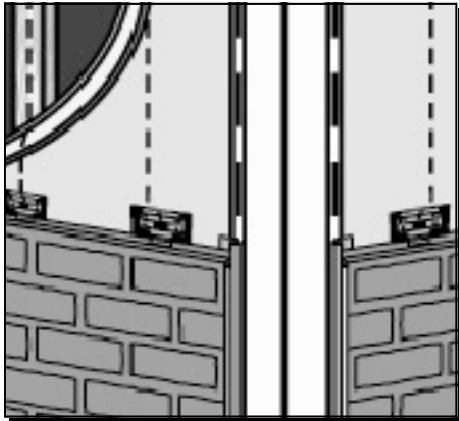
Fiber Cement & PVC Trim Boards

- ◆ Nichiha manufactures a full line of fiber cement trim boards - NichiTrim™. NichiTrim is available in 3 thicknesses, 6 widths and in 10 and 12 foot lengths.
- ◆ When panels are to be butted to fiber cement, wood or other trim piece, a gap of 1/4" width is required.
- ◆ Use Nichiha Single Flange Sealant Backer or commercially-available backer rod.
- ◆ Apply polyurethane sealant to joint width. Sealant must be compliant with



Metal & Vinyl Trim

- ◆ Install trim channel in accordance with manufacturer's installation instructions. Fit panel into to channel trim snugly, so that panel edges are not exposed.
- ◆ Install the Single-Flange Sealant Backer first butting to the door/window jamb or trim pieces, prior to installing the panels. The Single-Flange Sealant Backer must be fastened about 12"-14" o.c.
- ◆ Apply polyurethane sealant to joint width. Sealant must be compliant with ASTM C-920.

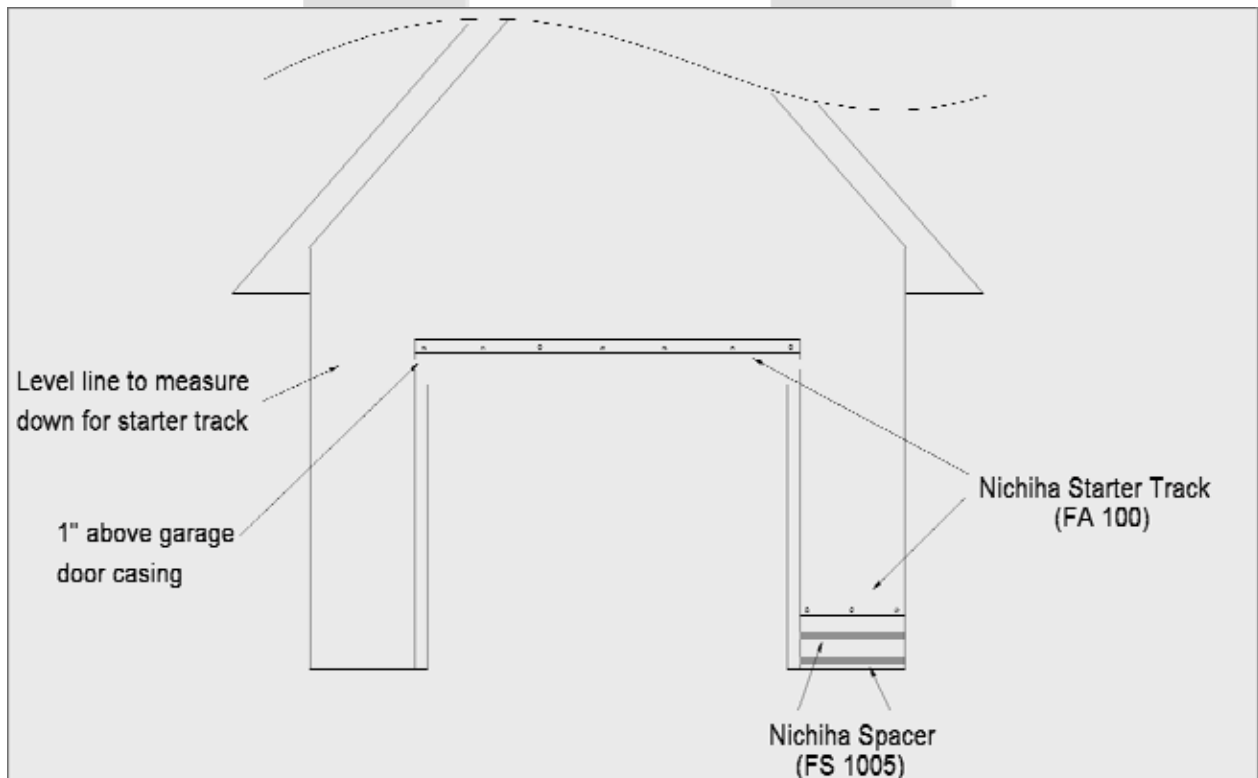


9.14 Installation Around Garage Doors & Other Large Openings

All Applications

- ◆ Install starter track 1" above garage door casing.
- ◆ Establish a level line from the bottom of the starter track out to the side on both ends with a laser level.

- ◆ Use this line to measure down the wall (each side of garage) to attach the starter track so that the panels will meet at the proper height.
- ◆ Use Spacer (FS 1005, FS 1010*) behind the panel at the bottom course, which will be scribed to the contour of the surface. * In Canada use FS1010.
- ◆ Panels at the bottom course of the garage door opening must be face fastened to the studs.
- ◆ Note: When face fastening, always fasten at least 1" from all panel edges to avoid panel cracking or breakage.



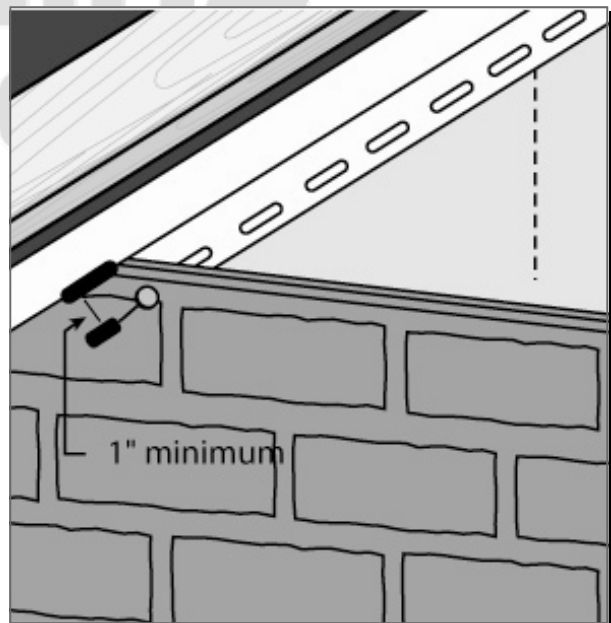
9.15 Installing The Last Course

All Applications

- ❶ Fasten vented spacer (FS-1005, FS 1010*) at studs at the top of the last of panel course. This is needed to maintain the rain screen without using the clips. * *In Canada use FS1010.*
- ❷ Cut panels (horizontally) to properly fit at the roof line (or at the proper transition point).
- ❸ Continue to use the stabilizer clip at the bottom of all vertical joints.
- ❹ Face-fasten panels at the studs and through the green spacer (FS 1005, FS 1010*) all along the top. Pre-drill panels 1" from the top (cut) edge. * *In Canada use FS1010 to prevent panel cracking.*
- ❺ Cover panels with roof cap, where applicable.
- ❻ Fill counter-sunk fastener holes with exterior cementitious filler, such as MH Ready Patch by Zinsser and paint to match panel with a high grade exterior latex paint.

9.16 Gable & Overhang Installation

- ◆ Cut the panel to follow the contour of the gable or overhang.
- ◆ When installing soffit, the wall panels should be installed first, with the soffit installed over the panels.
- ◆ Allow a minimum of 1" clearance (as per local building codes) from the roof line.
- ◆ Panels installed along gable or overhang edges must be face nailed or screwed. When face nailing or screwing apply fasteners at least 1" from any panel edge. This will avoid cracking or breaking of panel.
- ◆ All face-fastened panels must be shimmed out with a vented spacer such as Nichiha FS 1005 Spacer. * *In Canada use FS1010.*
- ◆ Seal all panel edges as described in Inside and Outside Corner sections of this manual. Do not leave any panel edges exposed.



9.17 Vertical Expansion Joints

All Applications

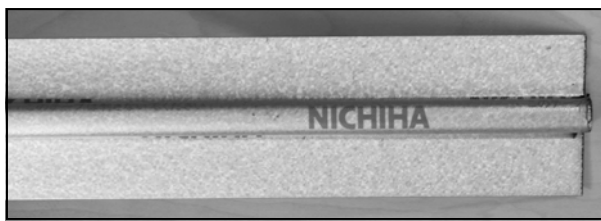
- ◆ Vertical Expansion Joints are required approximately every 30 feet on installations of 50 feet and greater without corners or off-sets (i.e. windows & doors), and within 2 to 10 feet of outside corners (on both walls).
- ◆ Double Flange Sealant Backer may be fastened on only one side (the right side) at 12" - 14" o.c.

Installing A Vertical Expansion Joint

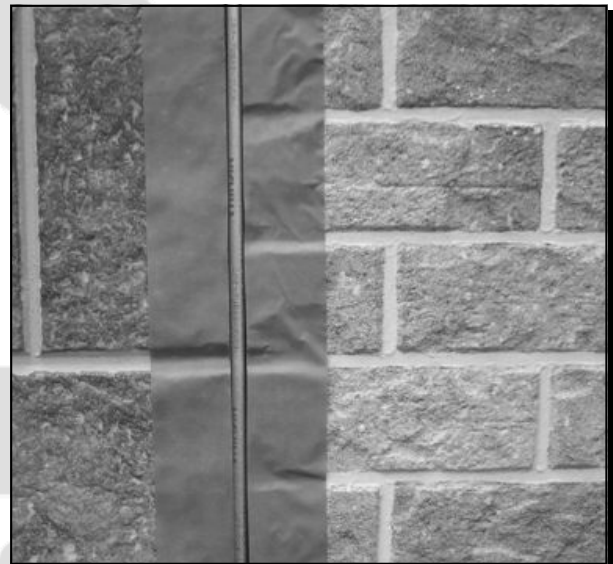
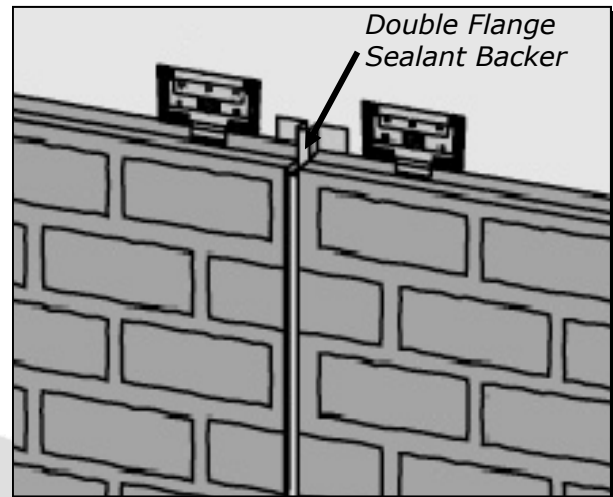
- ❶ Install vertical expansion joint (Nichiha Double Flange Sealant Backer FH 1010, FH1020) to butt up against panel and secure joint to substrate on one side. Panels ship-lapped edges must be cut off to achieve a tight fit against the sealant backer.
- ❷ Install next panel to joint and secure with appropriate clips.
- ❸ Apply low-adhesive tape along length of panel and trim edges, to protect panels from sealant, and for a smoother look. Apply sealant into the expansion joint, starting at the bottom and pushing sealant into the gap.

All Installation Methods

- ◆ Follow guidelines above.



**Double Flange Sealant Backer
FH 1010
(FH1020 in Canada)**



Vertical expansion joint using Nichiha Double Flange Sealant Backer

Benefits Of Using Nichiha Double Flange Sealant Backer

- ◆ Is an exact spacer for expansion joints.
- ◆ Provides a 2-point contact between the sealant and the panels.
- ◆ Provides the recommended depth of sealant (75-80%).
- ◆ Provides faster installation relative to a foam backer rod.
- ◆ Uses less sealant than a foam sealant than a foam backer rod.

9.18 Horizontal Compression Joints

All Applications

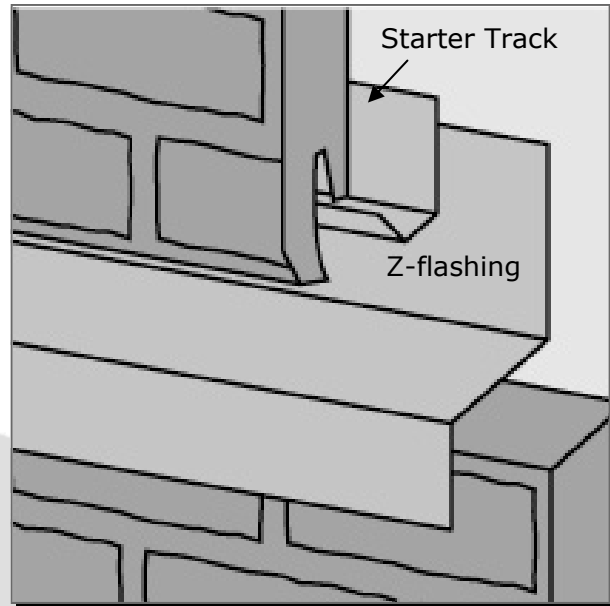
- ◆ For buildings greater than 45 feet in height, compression joints must be installed at a minimum of every 25 feet. Please contact the Nichiha Technical Department for assistance.

Installing a Horizontal Compression Joint

- ❶ Install z-shaped metal flashing or drip cap over the top edge of the bottom panels. Top ship-lapped edge of the bottom panel is cut and face fastened with the appropriate shim behind it.
- ❷ Install starter track above z-flashing, such that the next course of panels sit a 1/2 inch above the course below it. (Remember panels sit 3/4" below starter). Check for level.
- ❸ Continue to install panels according to these guidelines with compression joints at the appropriate elevation.

All Installation Methods

- ◆ Follow guidelines above.

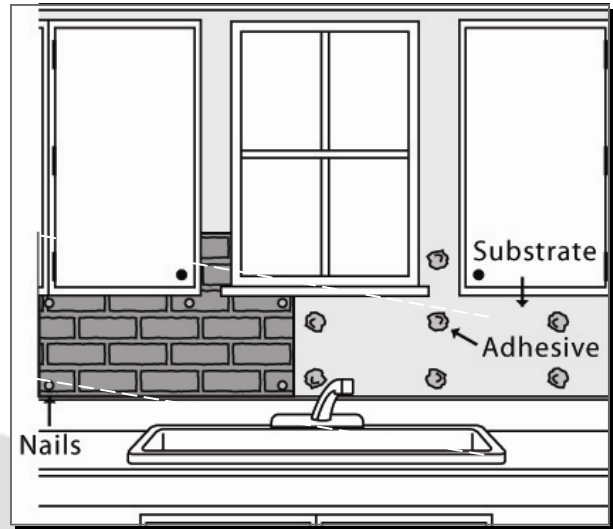
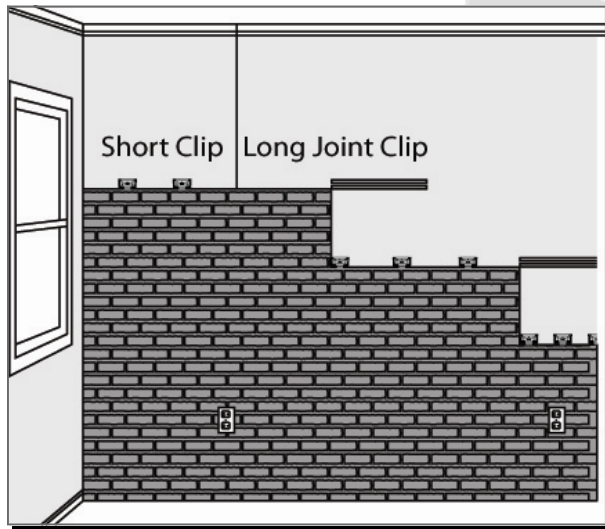


NICHIHA
fiber cement

9.19 Interior Wall Installation

Please follow the installation instructions for exterior applications with the following exceptions:

- ◆ Building paper or wrap is not needed for interior applications. Panel can be installed directly to wood and metal studs. Wall board or substrate is also not required for interior installations, providing stud spacing is appropriate.



- ◆ In applications such as a kitchen backsplash, use approved construction adhesive to secure panels to the substrate. Apply 1/2 oz. of adhesive to the panel or substrate every six inches vertically and every 16 inches horizontally. If possible, secure panels to substrate with fasteners until adhesive dries.



9.20 Replacing Damaged Panels



- 1 Set the depth of the circular saw blade slightly deeper than the panel so the saw blade does not cut into the building wrap or sheathing.



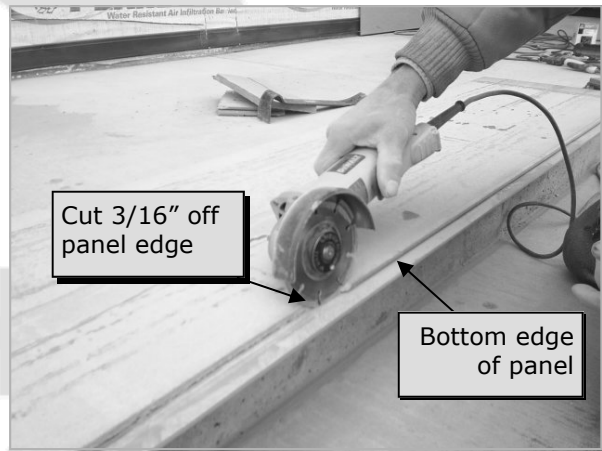
- 2 Make additional cuts into the damaged panel and break into pieces for easier removal of the damaged panel.



- 3 Remove damaged panel.



- 4 Cut 3/16" off ship-lapped edge at bottom of panel.

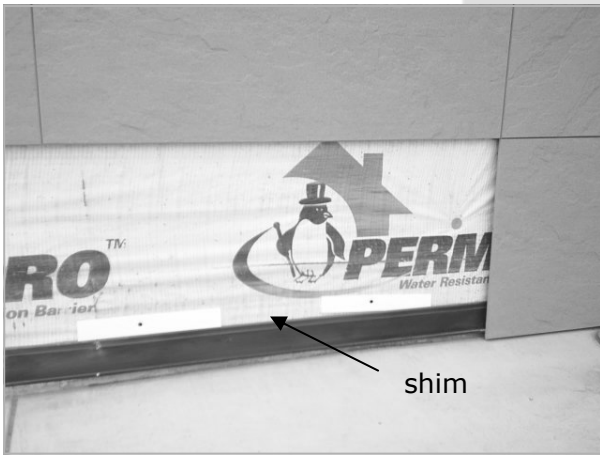


- 5 Cut the right side of ship-lapped edge off the panel.



Brick, Stone & Block Panel Installation

- ⑥ Use a 1/4" vented plastic shim and place behind the new panel at top and



- ⑦ Prepare to set new panel in place.



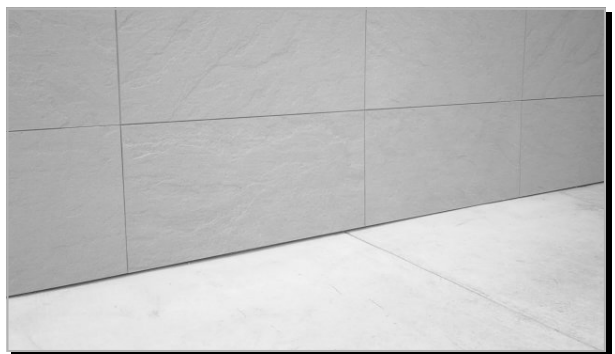
- ⑧ Lift panel into place by prying from the bottom upward. Pre-drill and face fasten panel with a screw into framing member.



- ⑨ Fill countersunk screw heads with color - matching polyurethane sealant.



Completed Replacement



9.21 Cleaning Panels

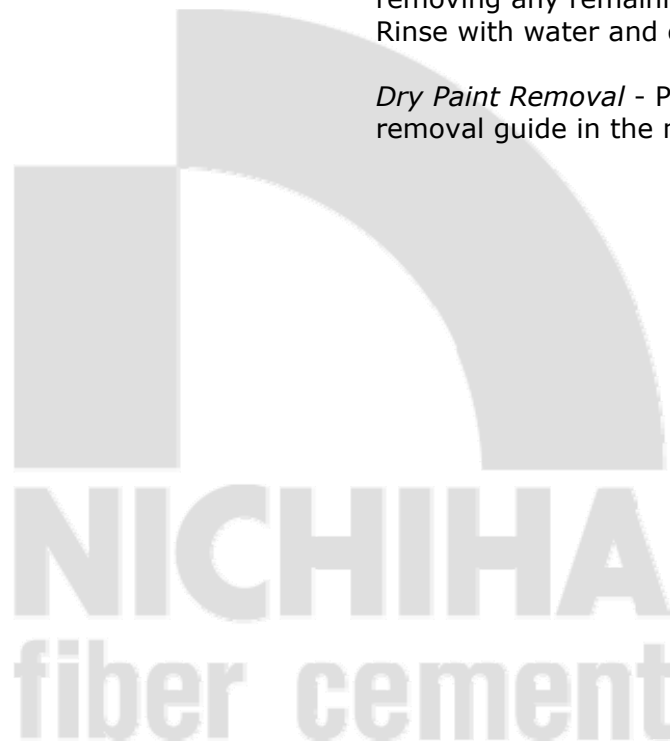
- ◆ After completion of installation, it may be necessary to clean panels.
- ◆ When cleaning panels, use no more than 400 psi of water pressure at 10" to 12" away.
- ◆ To clean heavily soiled areas a mild detergent and/or soft bristle brush may be required.

9.22 Removal of Exterior Acrylic Latex Paint From Nichiha Panels

Wet Paint Removal - While the paint is still wet, flush the area with clean water, using mild abrasion with a clean cloth or soft brush.

Semi-Dry Paint Removal - If paint has set, but not dried, flush and clean as above, followed with light scrubbing with alcohol removing any remaining paint residue. Rinse with water and clean cloth.

Dry Paint Removal - Please refer to paint-removal guide in the next section.



9.23 Test Results of Paint Removal On Panels

Paints and Graffiti Removal

- The following products have been tested on Nichiha panels to aid in the removal of graffiti type markings. The panels were sprayed with an indoor/outdoor aerosol spray paint, left to dry overnight then applied following the manufactures guidelines.
- All products tested achieved good results however the outcome may vary depending on the amount of paint needed to be removed. Be sure to follow all manufacture's guidelines and test in an inconspicuous area before working in a larger area.

** Nichiha is not liable for any damages to the panels caused by the use of these cleaners.*

❶ **Citristrip**

www.citristrip.com

Products tested:

- ◆Citristrip Striping Gel - One Quart container.
- ◆Citristrip Stripping Aerosol - 18 oz. spray can.
- ◆Available at do-it-your self stores.

❷ **Goof Off Graffiti Remover**

www.goof-off.com

Products tested:

- ◆Goof Off Aerosol - 16 oz. spray can
- ◆Goof Off - 22 oz. trigger spray bottle
- ◆Available at do-it-your self stores.

❸ **Tagaway**

www.tagaway.com

Product tested:

- ◆Tagaway - 32 oz. trigger spray bottle
- ◆Available online and local stocking distributors

❹ **Zinsser**

www.zinsser.com

Product tested:

- ◆Zinsser Graffiti Remover and Stripper - 16 oz. trigger spray bottle
- ◆Available at retail do it yourself stores