



ARCHITECTURAL WALL PANELS | AWP 3030 | MARCH 2021

## Vertical Installation Guide

# AWP 3030

## VERTICAL INSTALLATION GUIDE

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## GENERAL

This guide covers installation of Nichiha's 3030mm Architectural Wall Panels (AWP 3030) in a **vertical** application. Further installation information and technical resources such as animated instructional videos, Technical Bulletins, three-part specifications, product testing and certifications, architectural details, and other technical documents are available on our website: [nichiha.com/resource-center](https://nichiha.com/resource-center).

Install products in accordance with the latest installation guidelines and all applicable building codes and other laws, rules, regulations, and ordinances. Review all installation instructions and other applicable product documents before installation. *Product building code evaluations for the U.S. and Canada contain critical engineering and installation requirements and must be reviewed.* Access such documents on the website Resource Center. This install guide's effective date is March 2021.

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## PRODUCT INSPECTION

Inspect all products thoroughly prior to installation. Do not install any product which may have been damaged in shipment or appears to have a damaged or irregular finish. Should you have a question or problem with your order, contact your local dealer or Nichiha Customer Service, toll-free, at 1.866.424.4421. **Keep the products dry prior to installation. It is best to store the products indoors, otherwise keep them covered.** Do not stack pallets more than two high.

# BASICS OF THE AWP 3030 SYSTEM

Nichiha AWP 3030 dimensions are 455 mm (h) x 3,030 mm (l) x 16 mm (t). It is important to keep in mind the actual metric dimensions when considering panel layouts, joint alignments, placement of compression joints, and with respect to sizing window and door openings. Approximate Imperial dimensions are 17-7/8 inches (h) x 119-5/16 inches (l) x 5/8 inch (t).

**AWP 3030** (aligned vertically)  
HEIGHT: 119-5/16"

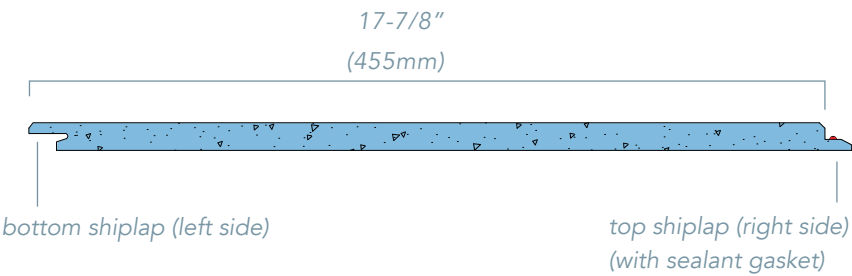


119-5/16"  
(3030mm)

AWP 3030 panel edges are shiplapped on the long edges and a factory sealant gasket is included on one edge, providing a factory seal on all vertical joints. AWP attachment hardware engages the long edges, holding the panels off the substrate surface by 10 mm (~3/8") and creating a closed-joint, drained/back-ventilated rainscreen system with concealed fastening. When accounting for the overall thickness of the AWP system, add this 10 mm plus the thickness of the panel (16 mm) for total system thickness of 26 mm.

AWP 3030 may be installed horizontally or vertically. See also *Horizontal Installation Guide AWP 1818, AWP 3030*.

PANEL SECTION (PLAN VIEW)



AWP 3030 dimensions are measured from the edges of the panel face, which includes the bottom (left side) shiplap only. The short edges, 17-7/8" (455 mm), are flat/square-cut, so they do not have shiplaps.



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## LIMITATIONS AND TECHNICAL DESIGN REVIEWS

Natural limitations on product usage are inherent to any cladding product's design, physical characteristics, and attachment system. Nichiha AWP are generally intended as a low-to-mid-rise cladding product.

Any project of more than three stories or 45 feet (13.7m), as well as those located in high wind coastal areas (Exposure Categories C and D with Basic Wind Speed in excess of 130 mph), or those with any wall assembly not described in *Framing & Sheathing Requirements*, require a technical review by Nichiha to evaluate feasibility via our Technical Design Review process.

By evaluating a project's unique criteria and design, we can reference independently test-derived and calculated wind load performance data for our products to determine whether and how the panels can safely be installed on the project. Contact your local rep or Nichiha technical department for details or to initiate a Technical Design Review.

AWP are not to be used in any applications/uses not specified or described in this installation guide or other Nichiha technical documents. Any such use shall not be backed by the manufacturer's product warranty.

Do not use AWP on open screen walls.

Insulated Concrete Forms (ICFs) [require additional measures](#).

Installation of AWP products on modular structures that are factory-constructed and then transported to a final site are not approved without full technical review; and further, excluded from the Limited Product Warranty, per Section 2.F.

For soffit applications of AWP, refer to pages 38-41 of the [AWP Horizontal Installation Guide](#).

Please contact Nichiha Technical Services for assistance.

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## SAFETY

As with any natural stone, masonry, or concrete based product, when cutting, drilling, sawing, sanding, or abrading fiber cement cladding, proper safety measures must be taken due to the potential for airborne silica dust, an OSHA-identified hazardous substance that can pose serious medical risks.

Always wear safety glasses and a NIOSH/OSHA approved respirator with a rating of N, O, or P 100. Carefully follow the respirator manufacturer's instructions as well as applicable governmental safety regulations concerning silica. Refer to Nichiha's SDS for more information.

Always cut fiber cement panels outside and with a dust-collecting HEPA system. Do not cut the products in an enclosed area.

Use a dust-reducing circular saw with diamond-tipped or carbide-tipped fiber cement saw blades.

Always clean panels after cutting. Fiber cement dust can bind to the panel finish. Vacuum dust with a HEPA-filtered vacuum.

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## FRAMING AND SHEATHING REQUIREMENTS

Prior to Nichiha installation, closely inspect the exterior wall substrate and correct any problems. Walls that are out of plumb, for example, can negatively impact the installation quality of AWP. If necessary, Nichiha Spacer may be used in conjunction with panel attachment hardware to ensure a smooth, even substrate.

Nichiha AWP cladding may be installed on flat walls only. No curved surfaces. Refer to pages 38-41 of the [Horizontal AWP Install Guide](#) concerning soffits and forward-leaning (non-vertical wall) applications. Vertical AWP installations are not directly compatible with PEMBs.

Refer to our third party building code certification(s) and/or state/local approvals for allowable wind design pressures at [nichiha.com/resource-center](http://nichiha.com/resource-center).

When furrings are to be used as the installation base for AWP, an engineer must design the furring anchors to account for site-specific loading criteria as well as the weight (dead load) of the AWP system. Special attention must be paid to the furring that will support Vertical Starter Track (FA710T) because it will bear the full weight of the AWP System. Full size AWP 3030 weigh 57.3 pounds (26 kg) each. Vertical Starter Tracks are 10 feet (3030 mm) wide, supporting 6.7 panels each, or 382 pounds (173.3 kg).

AWP may be installed on wood or steel framing/furring, concrete/masonry with furring, and Structural Insulating Panels (SIP) meeting the following requirements:

### WOOD OR METAL STUDS

#### *Structural Sheathing Method*

Size: min. 2x4 wood, or min. 1-3/8" (35mm) flange metal C-stud - gauge 18 (min.)

Spacing: 16" o.c (406mm) max

Sheathing: APA rated exterior grade minimum 7/16" (11mm) OSB or plywood is **required** (clips will not align over or intersect the studs). Contact the Technical Department concerning structural insulated sheathing (nailbase) products.

#### *Custom Stud/Furring Spacing Method*

Size: min. 2x4 wood, or min. 1-3/8" (35mm) flange metal C-stud - gauge: 18 (min.)

Spacing: 17-7/8" (455 mm) o.c.

Sheathing: APA rated exterior grade minimum 7/16" (11mm) OSB or plywood, or 1/2" (13mm) or 5/8" (16mm) gypsum

#### *Horizontal Furring Method*

Furring type: Minimum 18 gauge hat channels

Spacing: 16" (406mm) o.c max for Ultimate Clip fastening plus additional channel(s) for Vertical Starter Track locations - Align the hat channels horizontally and secure them to vertical wall framing. Sheathing (on wall studs): APA rated exterior grade minimum 7/16" (11mm) OSB or plywood, or 1/2" (13mm) or 5/8" (16mm) gypsum

### CONCRETE/MASONRY

*Furring is required for installation of AWP over concrete and masonry structures.*

*Vertical Furring Method:* wood or metal furring - pressure treated lumber (min. 2x4's), or min. 18 ga. hat, z, or c-studs, oriented vertically, spaced 17-7/8" (455mm) o.c. Include additional furring segments to enable 8" (203mm) o.c. Vertical Starter Track fastening.

#### *Horizontal Furring Method: metal furring only*

*For Vertical Starter Tracks:* hat channels - minimum 18 gauge, oriented horizontally, placed at all Vertical Starter Track locations

*For Ult. Clips:* hat channels or z furring - minimum 18 gauge, oriented horizontally, spaced 16" (406mm) o.c. max.

*Sheathing: optional* APA rated exterior grade minimum 7/16" (11mm) OSB or plywood, or 1/2" (13mm) or 5/8" (16mm) gypsum

### STRUCTURAL INSULATING PANELS (SIP) AND STRUCTURAL INSULATED SHEATHING (NAILBASE)

SIPs should be constructed in accordance with the manufacturer's instructions and local building codes. Generally, vertical AWP installation over SIPs follows the *Structural Sheathing Method*. The horizontal framing elements of SIPs allow for Vertical Starter Tracks and face fasteners to be secured to solid framing.

Install nailbase sheathing in accordance with the manufacturer instructions and load tables. AWP installation specifics over nailbase insulated sheathings depend upon the nailbase type and thickness.

Contact the Technical Department for assistance with these substrates.

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## CONTINUOUS INSULATION

When exterior/continuous insulation is to be used with AWP 3030 in vertical applications, please contact Nichiha Technical Services for assistance. Framing/sheathing/furring adjustments will be necessary.

### VERTICAL AWP 3030 OVER C.I. ATTACHMENT REQUIREMENTS

Furring requirements are as follows:

*Special attention must be paid to supporting the Vertical Starter Track, which bears the full weight of AWP 3030 in vertical applications. The Ultimate Clips do not share the dead loads for vertical panels.*

1. Horizontal furring can be used as direct attachment
  - Shaped metal furring must be a minimum 18 gauge spaced at 16" o.c. max
  - If Z-furring is being used, hat channels must be utilized at the starter track to support the weight of the panels
  - No wood furring allowed
2. Shaped metal furrings (Z, hat channel, C, etc.) or solid lumber
  - Minimum 18 gauge shaped metal or 2x lumber
  - Aligned vertically
  - Spaced 16" (406mm) o.c. (max)
  - Min. 7/16" (11mm) APA Rated OSB or Plywood **required** for Ultimate Clip fastening
3. Shaped metal furrings (two layers)
  - Layer One (Z, hat channel, C, etc.)
    - Minimum 18 gauge
    - Aligned vertically at wall stud spacing
  - Layer Two
    - Minimum 18 gauge hat channels
    - Aligned horizontally at 16" (406mm) o.c.
    - Additional hat channels at Vertical Starter Track locations

#### 4. CL-TALON® 300

- Base Track and Wall Mount T-Tracks (vertical) at 16" o.c. (406mm) (aligned with framing), and Therme Clips spaced per project loading requirements
- Wall Mount Supports (horizontal) at 16" (406mm) o.c.

#### 5. Minimum 5/8" (16mm) plywood nail-base/structural insulated sheathing panels (such as Hunter Xci Ply)

- The nail-base panel anchoring schedule must account for AWP dead loads and site wind loads
- Contact Nichiha Technical Services for additional information concerning Vertical Starter Track and Ultimate Clip fastening

*\*When furrings are to be used as the installation base for AWP, an engineer must design the furring anchors to account for site-specific loading criteria as well as the weight (dead load) of the AWP system. Full size AWP 3030 weigh 57.3 pounds (26 kg) each. Vertical Starter Tracks are 10 feet (3030mm) wide, supporting 6.7 panels each, or 382 pounds (173.3 kg). Furring must account for expected building compression. Nichiha does not provide fastener design for anchoring the furring to structure. Refer to IBC 2015 Table 2603.12.2 for more info.*

## VERTICAL AWP AT C.I. CORNERS

Normally, edges of AWP 3030 at terminations are cut and secured via face fasteners into framing or furring. With c.i. conditions at corners, the use of min. 18 gauge, galvanized steel brake metal to wrap the corner is appropriate. See Figure A. Attach the angle to furring on both sides of the corner. Face fasten the vertical AWP cut edge no more than every 16" (406mm) to the 18 ga. metal angle. If using a furring grid with horizontal hat channels, the hat channels can be extended as in *Figure B*.

### IBC 2015 TABLE 2603.12.2

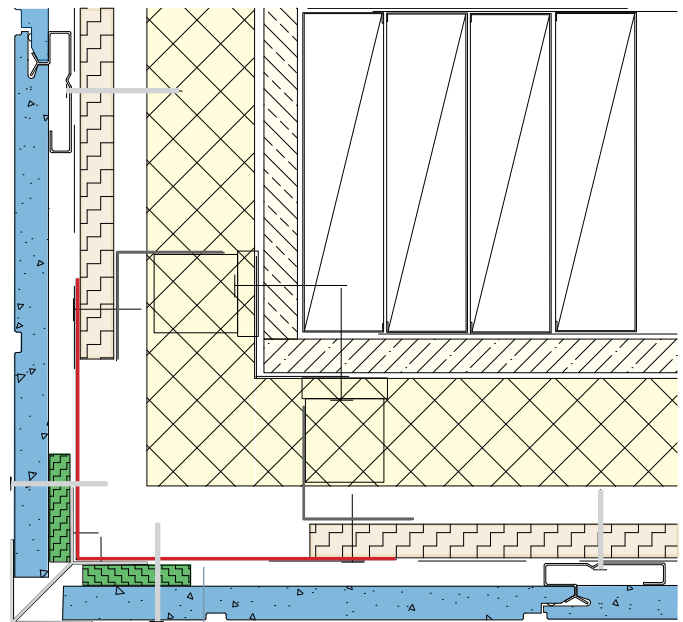
The model building code for 2015 includes information in Chapter 26 about foam plastic insulation/sheathing and furring minimum fastening requirements. Table 2603.12.2 shows various configurations depending upon framing gauge and spacing, fastener size and spacing, thickness of insulation and cladding weight. As an example, according to the table, 3" (76mm) is the maximum thickness of foam sheathing on which a furring can be added directly on top, spaced at 16" (406mm) o.c. and fastened with #8 screws every 12"-16" (into 18 gauge wall framing), that can support a cladding weight of 3 psf.

### ENERGY CODE FRIENDLY MARKET OPTIONS

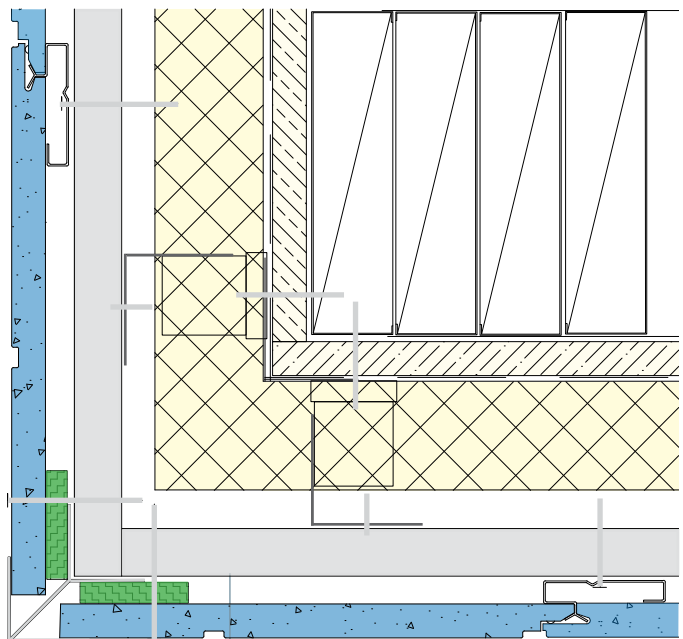
A number of engineered third party systems exist that are designed to solve the conflicts between energy code compliance and the safe installation of exterior claddings over continuous insulation.

Nichiha has direct experience with these products:

- Bracket and rail systems:
  - Cascadia Clips®
  - FERRO Cladding Support
  - ISO Clip
  - Knight Wall MFI®
- CL-TALON®
- Hunter Xci Ply
- Knight Wall CI® and HCI™ Systems
- SMARTci GreenGirts



*Figure A (Furring Option 1): Wrap corner with 18 gauge steel angles anchored (along with wood sheathing) to thermally-broken vertical furring. Face fasten vertical AWP to brake metal angle.*



*Figure B (Furring Option 2): Horizontal hat channel furring, anchored to thermally broken vertical furring angles, wraps a continuous insulation outside corner.*

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## WEATHER RESISTIVE BARRIERS

A weather resistive barrier (WRB) is required when installing Nichiha panels over stud walls and SIPs. For CMU/concrete assemblies, Nichiha defers to local code requirements. Use an approved WRB as defined by the 2015 IBC. Refer to local building codes.

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

A permeable WRB is required for all commercial applications. A fluid applied WRB is acceptable.

Sheathings and insulations with an integrated code-compliant WRB such as ZIP System® and DensElement™ are acceptable.

All openings, corners, and transitions must have appropriate flashing to prevent moisture penetration.

Follow moisture management best practices, WRB manufacturer's guidelines, window manufacturer instructions, and all local building codes. *Nichiha assumes no responsibility for moisture infiltration.*

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## STORAGE & HANDLING

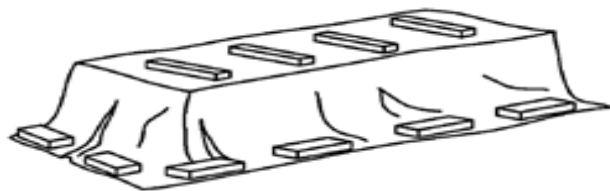
AWP are a finished product and care must be taken to protect them against damage prior to and during installation. Panels must be stored flat and kept dry. Indoor storage is best. Refer to the storage information included on product pallets.

Ensure panels are completely dry before installing. Direct contact between the panels and the ground must be avoided at all times. It is necessary to keep panels clean during the installation process.

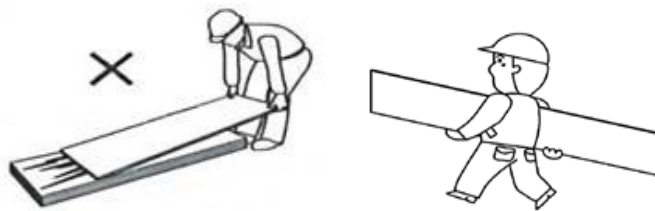
Cut panels face down.

Always clean panels with a HEPA-filtered vacuum after cutting. *Dust can bind to the finish.*

*When sidewalks are poured after awp installation, take steps to cover/protect panels near grade. Cement dried on AWP cannot be removed.*



*Always cover pallets with a breathable tarp or store indoors!*



*Don't unpack and re-stack panels!  
Always carry panels on edge!*



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## FASTENERS

### All Applications

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

Number 10, pan-head screws (HD .365" (9.3mm)) were used as clip fasteners for AWP wind load testing. The minimum size for clip and track fasteners is #8. Ultimate Clip and Starter Track screws must have a pan, wafer, or hex type full head.

Min. Number 7 finish screws with a bugle or flat head (min. head diameter 0.255" (6.5mm)) are appropriate for face fastening locations. These must penetrate framing per the minimum requirements below. Refer to the *Face Fastening Best Practices* section for face fastening procedure.

When installing AWP with the *Structural Sheathing Method* on stud framing, over SIPs, or nailbase, ensure clip fasteners are at least 1" (25mm) in length to fully penetrate the plywood or osb. Wherever possible when face fasteners are needed, screws must be long enough to penetrate all the way through the sheathing and into the framing/furring.

For the *Horizontal Furring and Custom Stud/Furring Spacing Methods*, the fasteners must always penetrate the studs or furring with minimum 1" (25mm) penetration for wood or ½" (13mm) for metal.



# INSTALLATION HARDWARE & ACCESSORIES



## ULTIMATE VERTICAL STARTER TRACK

Ultimate Vertical Starter Track serves as the foundational support for the AWP system while also providing faster and greater ease of installation. *With Vertical AWP 3030, the Starter Track carries the entirety of the dead loads and is required for each course.*

FA 710 T Vertical Starter Track – 10 mm rainscreen

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## ULTIMATE CLIP II

Ultimate Clips are secured to the vertical panels' shiplaps, securing AWP to the wall while holding their back surface off the substrate to create the 10mm (3/8") rainscreen space. *In vertical applications, clips do not support panel weight.*

JEL 778 CLIP Compatible with all 3030mm AWP - 10 mm rainscreen

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Joint Tab Attachments included with Ultimate Clips are not needed for vertical panel installations.



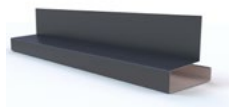
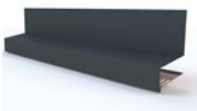
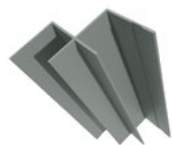
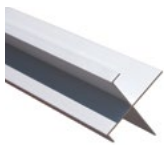
## CORRUGATED SPACER

At termination points where Ultimate Clips cannot be used, Nichiha Corrugated Spacer is required to maintain the rainscreen space and prevent panel deflection at face fastening locations such as window jambs and outside corners.

FS 1005 SPACER – 5 mm rainscreen

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FS 1010 SPACER - 10 mm rainscreen



## SEALANT BACKERS

Nichiha Sealant Backers provide exact spacing for expansion and termination joints and the recommended depth of sealant (75-80% of cut vertical edges).

They provide faster installation than a foam backer rod and require less sealant. At sealant joints, use a sealant that complies with ASTM C920, Class 35 (min.). Refer to the *Sealant* section on page 15 for more information.

Single Flange Sealant Backer: FHK 1015 – 10 mm rainscreen

Double Flange Sealant Backer: FH 1015 – 10 mm rainscreen

## METAL TRIM OPTIONS

Nichiha metal trim provides aesthetically pleasing design options for corners, openings, and transitions.

TRIM	APPLICATIONS
Corner Key	Outside Corners
H-Mold	Vertical Joints
Open Outside Corner	Outside Corners
J-Mold	Terminations
Inside Corner	Inside Corners

ESSENTIAL FLASHING SYSTEM	APPLICATIONS
Starter*	Base/Clearance Concealment
Compression Joint	Horizontal/Compression Joints
Overhang*	Fascia-to-Soffit Transitions

\* Inside and outside corner segments are available.

# GENERAL PANEL & ACCESSORY BASICS

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## PANEL SELECTION

Nichiha AWP are packaged with two panels in a pack, which are placed on pallets consisting of two stacks. Due to alternating patterns of texture and color between individual panels as well as how the panels are manufactured and packaged, it is best to install all panels from each individual stack before taking and installing panels from the second stack on the same pallet. Do not alternate installing from one stack and the second, which may result in undesirable patterns.

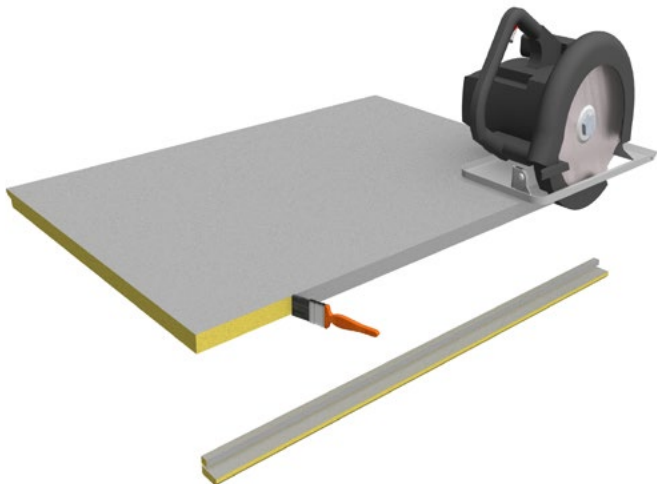
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## COATING CUT PANEL EDGES

When cutting AWP 3030, it is best to cut with the panel face down.

Cut and exposed panel edges must be coated with fiber cement sealer (e.g. DryLock®) or paint such as Kilz Premium® or Kilz Max®. **Do not use supplied Color Xpressions Touch-Up paint for treating cut edges as there will not typically be sufficient supply.** Acquire color-matching exterior acrylic latex paint for edge coating.

Be sure to clean panels with a dry, soft, clean cloth or HEPA-filtered vacuuming after cutting to prevent dust from bonding to the finish.



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## CUTTING ULTIMATE CLIPS

JEL778 Ultimate Clips are 26" (660mm) long. Where full length clips can be used, they are required. However, there may be conditions where clips must be cut to accommodate shortened vertical panels such as under windows.

Notches on the upward panel engagement flanges indicate where clips can be cut evenly into thirds. These 1/3 segments can be further reduced evenly into two or four pieces each with weep holes serving as dividing points. The smallest segment must include at least one downward panel engagement flange. Always use the widest clip segment possible. Cut clips with a non-ferrous saw blade on a band or chop saw.





# PLANNING AND PANEL LAYOUT

To ensure a successful installation, it is important to first plan how the panels will be laid out, where horizontal/compression joints will be located for each course, and line of sight regarding inside corners decided.

**Reminder:** AWP 3030 actual dimensions are metric: 455 mm (h) x 3,030 mm (l). Imperial equivalents: 17-7/8" (h) x 119-5/16" (l).

**Panel to Clip Ratio:** Full height AWP 3030 edges are held by four Ultimate Clips each. There must be no more than 4-6" (102-152mm) of space between clips. The first and last clips must be no more than an inch (25mm) from the top/bottom edges of the panels. When panels are shortened, maintain the same ratio in proportion to the reduced panel height(s). Clips can be cut as needed per *Cutting Ultimate Clips*.

**Horizontal/Compression Joints** (Page 21): Minimum 1/2" (13mm) horizontal, flashed break detail to allow for building compression at floor lines. *Horizontal joints may not be staggered.*

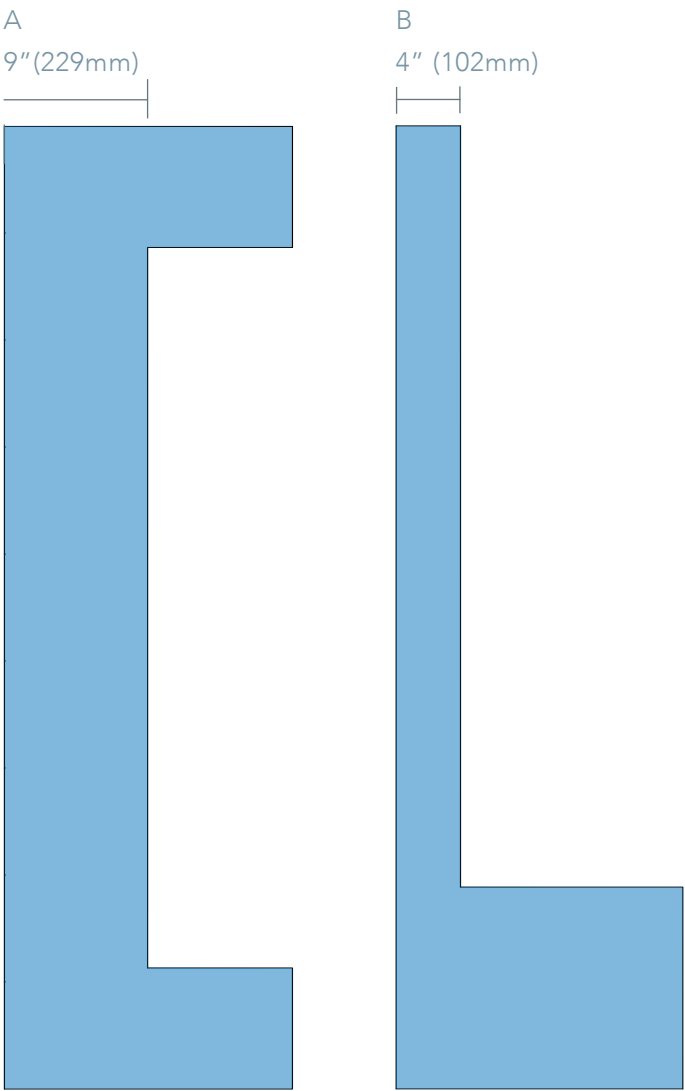
**Inside Corner Line of Sight** (Page 22): Sealant joints at inside corners can be placed out of view from the primary line of sight of a wall. Place the sealant joint on the less-viewed corner wall. Alternatively, utilize Inside Corner metal trim.

**Cut Panels:** In general, it is best to avoid cutting AWP to short or narrow strips and segments of less than 9" (229mm). The hard minimum width or height is 4" (102mm). Adjust the layout or use alternate materials when needed to avoid cutting AWP smaller than 4" (102mm).

Specifically, when an individual panel is taller than a window or other opening and is used over the head or under the sill, do not cut it to less than 9" (229mm) in width along the opening jamb. (see image A)

When an opening is taller than an individual panel, do not cut the panel to less than 4" (102mm) in width along the jamb (see image B).

**Design Wind Pressures:** Refer to our [code approval documents](#) when determining the best vertical panel installation method for a specific project. The *Structural Sheathing Method* and *Custom Stud/Furring Spacing methods* result in different allowable design pressures, dependent upon thickness of wood sheathing or type/gauge of custom spaced studs/furring. Refer also to the *Limitations, Technical Reviews* section regarding Nichiha's technical review process.



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## FACE FASTENING BEST PRACTICES

To minimize the appearance of face fasteners, utilize the following steps:

1. Apply low adhesive tape such as painters tape to the panel at face fastening locations.
2. Pre-drill panels 1" (25mm) from the cut edge to be face fastened. Use a countersink drill bit with chamfer matching the head diameter of the bugle-head type screws to be used for face fastening.
3. Fill counter-sunk fastener holes with exterior patching compound, such as MH Ready Patch® and later dab touch-up paint with cotton swabs or artist brush.
4. Remove the painter's tape only after applying patch and touch up paint.



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## SEALANT

Sealants to be used with AWP must match the following requirements:

- Comply with ASTM C920
- Have a Class of 35, 50, or 100/50 (minimum 35% joint movement)
- Be a polyurethane, polyurethane hybrid, or Adfast Adseal 4580
- Provide two-sided adhesion at joints

OSI® QUAD® may not be used for Nichiha expansion joints:

- It is a class 25 product.
- QUAD® MAX is acceptable since it is a Class 50.

Refer to the Technical Bulletin: *Sealants* available at [nichiha.com/resource-center](http://nichiha.com/resource-center).

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## SEALANT JOINTS / CAULKING

Fasten Single Flange Sealant Backers at inside corners (one wall at corner), along window and door jambs, and transition points with other cladding. Fasten to framing, blocking or plywood/OSB sheathing at 12-14" (305-356mm) o.c. with the 3/8" (10mm) bump/sealant portion butting the corner or jamb.

Sealant complying with ASTM C920, Class 35 (min.) is required where Single and/or Double Flange Sealant Backer is used.

Refer to the sealant manufacturer's instructions or requirements.

1. Place low-adhesive tape (masking or painter's) over the panel along the areas requiring sealant joints for a clean caulk line.
2. Fill the gap between the panels with a color-matched/coordinating ASTM C920, Class 35 (min.) sealant. The Nichiha Sealant Backer allows for the proper depth of sealant (75-80% of panel cut vertical edge).
3. Before removing tape, press the surface of the sealant with a caulk spatula or similar tool to ensure an even surface.
4. Remove masking tape before sealant cures.

If excess sealant adheres to panel, remove completely using a putty knife or soft cloth.

# AWP 3030 – VERTICAL: INSTALLING THE FA710T VERTICAL STARTER TRACK

## All Applications

Without custom stud/furring spacing outlined in the *Framing & Sheathing Requirements* section, 7/16" (11mm) or thicker APA rated OSB or plywood sheathing MUST be used to enable vertical installation of AWP 3030. Refer also to the *Continuous Insulation* information on pages 6-7. Plywood/OSB shall be secured to building framing or furring in compliance with best practices and local building codes. *With respect to nailbase insulation sheathings, please contact Nichiha Technical Services for guidance.*

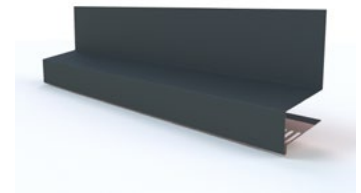
*Starter Track must remain continuous and level. Staggering of horizontal joints is not permitted.*

## MINIMUM CLEARANCES

*The Starter must be level and attached at a minimum of 6" (152mm) above finished soil grade or per local building codes (use a laser level to verify). (The National Building Code of Canada requires minimum 200mm clearance.)* When installing over a hard surface such as driveways or sidewalks, a 2" (51mm) clearance is acceptable.

Keep AWP at least 1" (25mm) above sloped roofs.

**Essential Starter Flashing** may be installed prior to the Starter Track to conceal the clearance gap above hardscape and decking. Beginning with outside and inside corner segments, fasten trim at each stud location or every 10" (254mm) o.c. to the sill plate. Fasten inside and outside corner segments to framing on both sides of the trim, keeping at least 1" (25mm) from trim vertical edges. Main segments will slide into/overlap the corner trim. Position Starter Track to leave 1/4" (6mm) clearance between the panel edge and trim/flashings.



*Vertical (Panel) Starter Track fastened every 6" to 9" (152-229mm) to framing.*



## ALL APPLICATIONS

To fully secure Vertical Starter Track, use corrosion resistant screws of sufficient length to ensure full penetration of the sheathing and into framing by 1" (25mm) for wood or ½" (13mm) for metal.

*Starter must be level.*

### WOOD & METAL STUDS

Vertical Starter Track must be secured every 6-9" (152-229mm) into the sill plate or to the studs/ furring and, if applicable, halfway between into the wood sheathing.

### CONCRETE/MASONRY

When installing over concrete construction, the wall must be furred out with pressure treated lumber, metal hat channel, or z-furring. Refer to *Framing & Sheathing Requirements* on page 5 for furring design options. Starter Track must be secured with an overall fastener spacing of 6-9" (152-229mm) o.c.

### STRUCTURAL INSULATING PANELS (SIP)

Secure Vertical Starter Track every 6-9" (152-229mm) o.c. max into the sill/horizontal base framing of the SIP.

## LARGE OPENINGS

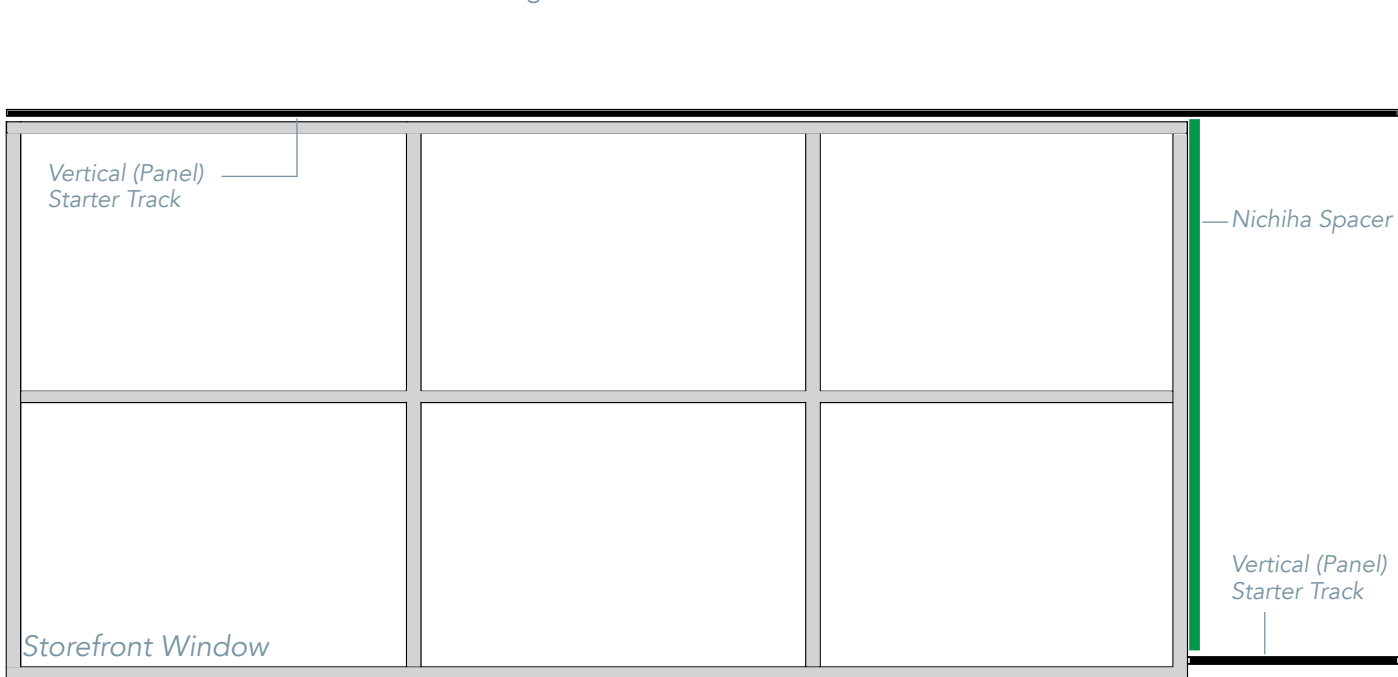
### All Applications

Install Vertical Starter Track at the wall base in keeping with standard instructions on both sides of the opening.

Install Vertical Starter Track at the head of all openings, either the width of the opening or all the way across the wall.

Add panels per the standard procedure as in a typical *Window or Door Opening* for the jamb conditions.

Do not span floor lines with panels. Plan for a *Horizontal/Compression Joint* at the head of the opening or above, at the same level where the panels along the sides of the opening terminate, assuming the storefront, garage or other large opening is shorter than full height panels.



# AWP 3030 – VERTICAL INSTALLATION

Reference the *Framing & Sheathing Requirements* and *Continuous Insulation* sections for wall assembly requirements and adjustments. With standard wall stud or vertical furring spacings, 7/16" (11mm) or thicker APA rated OSB or plywood sheathing **MUST** be used to enable vertical installation of AWP 3030. Wall surfaces must be flat.

## STRUCTURAL SHEATHING METHOD

Use fully-threaded corrosion resistant screws of sufficient length to ensure full penetration of wood sheathing to secure Ultimate Clips. Face fasteners must account for the AWP system thickness (~1" (26mm)) plus adequate length for minimum 1" (25mm) penetration into wood studs or 1/2" (13mm) minimum into metal studs or furrings.

Single Flange Sealant Backer and metal trims should typically be installed before panels. Refer to the *Inside Corners, Windows & Doors* and *Outside Corners* sections.

AWP installation proceeds by working from left to right.

If starting at an inside corner, predetermine which wall will include the Single Flange Sealant Backer. Consider the location to minimize the visibility of the sealant line. Clad the higher visibility wall without the sealant joint first so that the adjoining wall panels can terminate to it with the Single Flange Sealant Backer detail. Alternatively, utilize Inside Corner metal trim.

Looking at an AWP 3030 oriented horizontally, remove the bottom ship-lapped edge (*Fig. 18*). This will be the left side of the panel when it is aligned vertically. If necessary, cut the panel to the proper height of the area(s) to be clad. Coat all cut edges with exterior acrylic latex paint and be sure to clean dust from cut panels with a dry, soft cloth or HEPA vacuum.

Prior to installing the first vertical panel, add 10mm corrugated Spacer at the wall edges (starting and termination locations). The Spacer should extend upwards to where the panel will end (*Fig. 19A*).

Set the short panel edge on the FA 710T Vertical (Panel) Starter Track with the cut edge on the left. The freshly cut and sealed edge should butt to the corner/starting point and will cover the 10mm Spacer. Secure the panel by adding the first Ultimate Clip on the right, factory edge at the Starter Track, no more than 1" (25mm) up. Use min. #8 washer, hex, or pan head wood screws to fully penetrate the wood sheathing, with 4 screws per clip (*Fig. 19B*).

Along the edge to be face fastened, apply low-adhesive tape to be removed later, after patching/touch-up. Pre-drill and face fasten the first edge with bugle head screws into framing every 12-16" (305-406mm) vertically. Keep screws a minimum 1" (25mm) from the panel edge (*Fig. 19B,C*).

On the right, factory panel edge, add three more Ultimate Clips evenly spaced along the full-height AWP 3030 panel. There must be four (4) clips per full-height panel edge with only 4-6" (102-152mm) of space between clips. Add four (4) fasteners per clip, evenly spaced (*Fig. 19B*) no more than 6" (152mm) apart vertically. The clips will be fastened only to the plywood/osb sheathing. Position the highest clip no more than 1" (25mm) down from the top edge. When panels are shortened to less than 3030mm, keep the same panel edge to clip ratios and spacings. Refer to *Cutting Ultimate Clips*.

Fill any counter-sunk fastener holes with an exterior patching compound, such as MH Ready Patch® and later dab touch-up paint with cotton swabs. Remove the painter's tape. Refer to the *Face Fastening Best Practices* section on Page 14.

Working from left to right, install the next panel with its ship-lapped edges intact. A rubber mallet or block may be used to seat panels firmly in place and tighten together on vertical joints. Do not hammer directly on the panels as direct contact may cause cracks, gouges, or chipping. Install four Ultimate Clips as with the first panel, each with four screws.

Continue likewise until reaching a termination or transition point. The right side (top) factory edge must be removed from the last panel, and this cut edge must be face fastened over 10mm Spacer. Space the fasteners every 12-16" (305-406mm) vertically, with a minimum 1" (25mm) distance from the cut, vertical edge. Again, whenever possible, use face fastening screws long enough to penetrate all the way through the sheathing and into the framing: 1/2" (13mm) into metal, 1" (25mm) into wood.

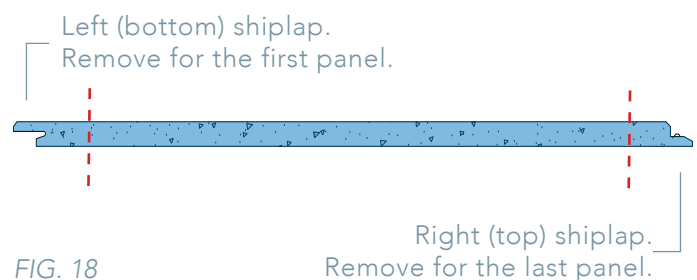


FIG. 19A

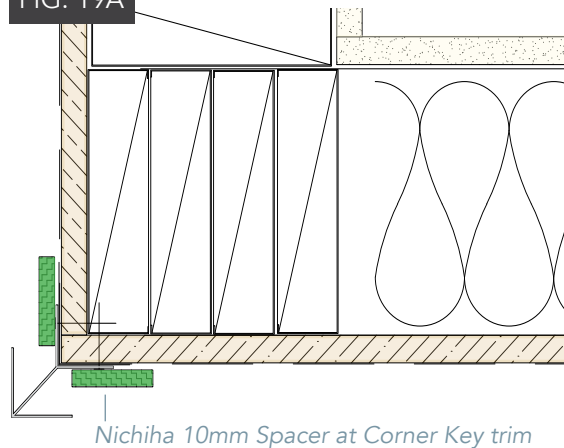


FIG. 19B

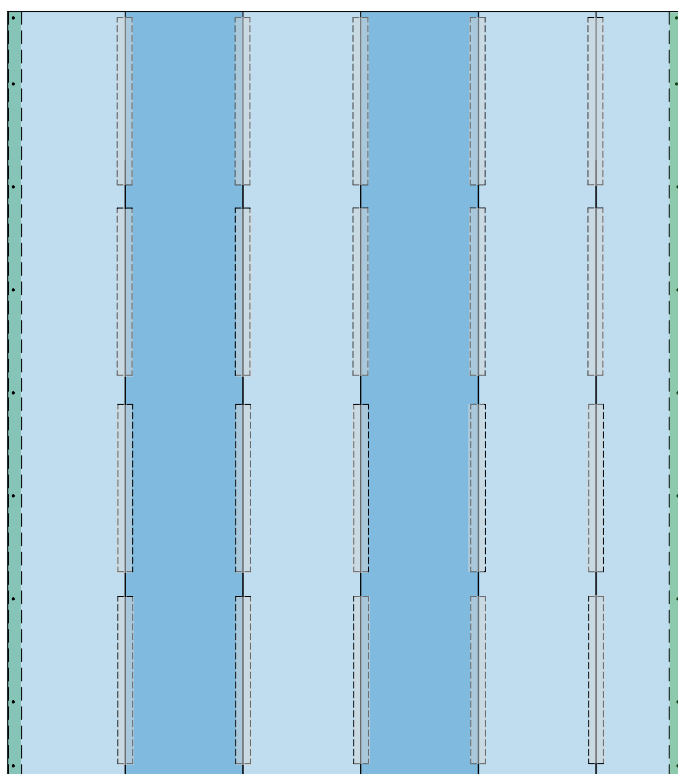


FIG. 19C



1. If beginning at an outside corner, refer to the Outside Corners section regarding when it is best to add metal trim. Add 10mm Spacer at the starting and stopping locations.
2. Prepare the panel edge for insertion into corner trim or to butt against Single Flange Sealant Backer and set the panel on the FA710T Vertical (Panel) Starter Track.
3. With the panel in position, secure the right-side factory edge first with a single JEL778 Ultimate Clip positioned at the Starter Track.
4. Along the cut edge, with low-adhesive/painter's tape applied, pre-drill panels at face fastening locations. Add bugle head screws long enough to penetrate into framing or furring every 12-16" (305-406mm) vertically.
5. Add three more JEL778 Ultimate Clips to the right side panel edge. Four (4) total clips per full height panel edge are required. Fasten with screws every 5-6" (152mm) vertically with at least four (4) min. #8 screws per clip.
6. Add the next panel, mating it snugly with the first and secure it with Ultimate Clips: 4 per edge with 4 screws each.

Vertical AWP and Ultimate Clip layout.



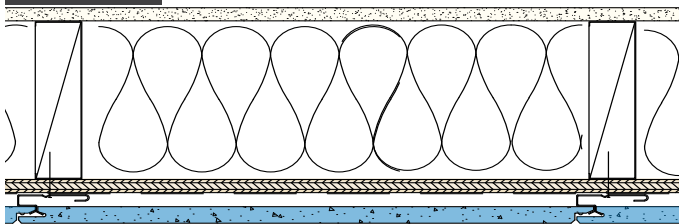
## CUSTOM STUD/FURRING SPACING AND HORIZONTAL HAT CHANNEL METHODS

Refer to the *Framing & Sheathing* and *Continuous Insulation* sections on pages 5-7.

Since these methods allow Ultimate Clips to align with or intersect framing or furring, the fasteners will be secured to these every 16" (406mm), vertically, with two screws per clip (*Figures 20A, B*).

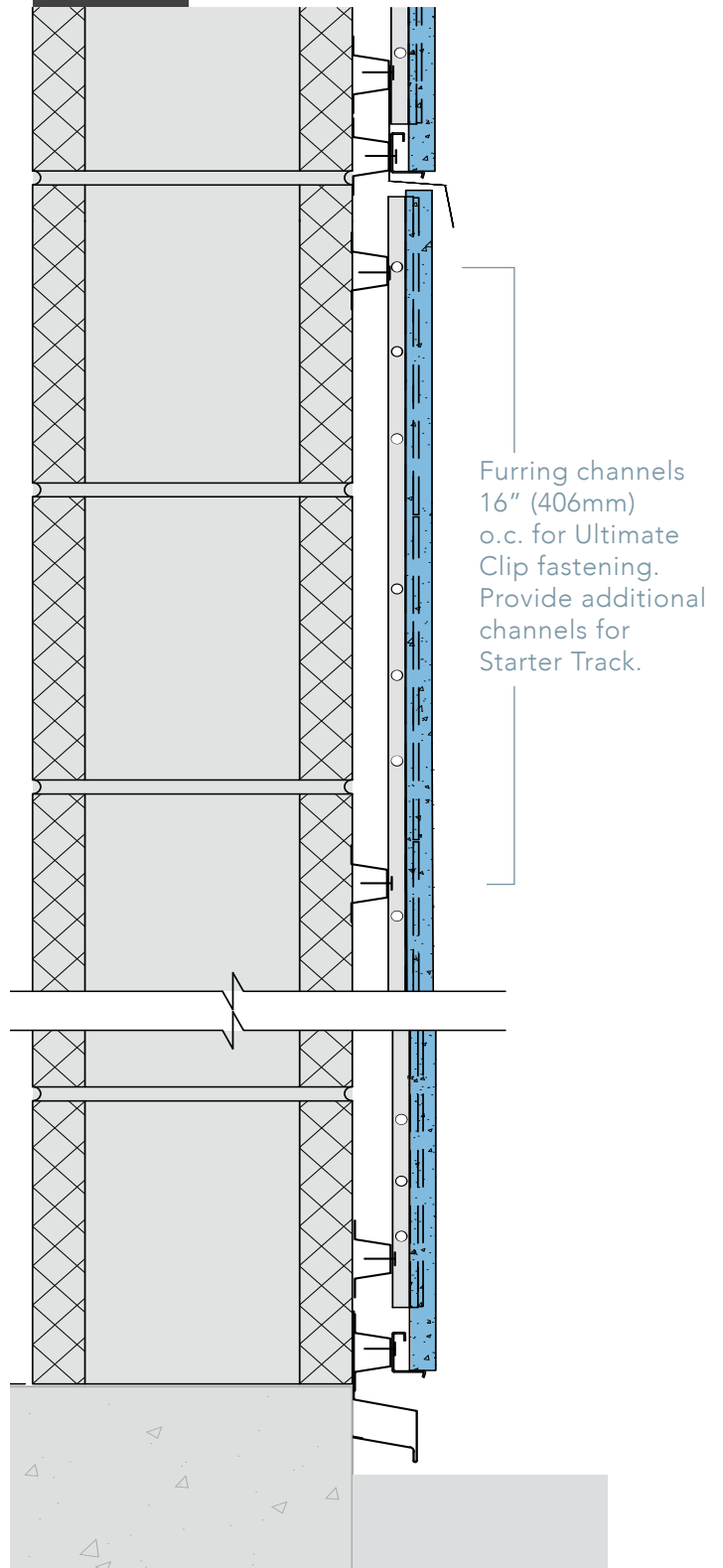
**HORIZONTAL HAT CHANNELS:** At Ultimate Vertical Starter Track (FA710-T) locations, the anchors securing the horizontal hat channel to the base wall or furring must be designed to account for the full weight of the AWP. A full (3030mm) length of Vertical Starter Track supports 6.7 panels which collectively weigh 382 pounds (173.3 kg).

FIG. 20A



*Custom Stud Spacing: 17-7/8" (455mm) o.c. framing/furring allows Ultimate Clips to align over members and enables 16" o.c. (406mm), vertical, fastener spacing.*

FIG. 20B



*Horizontal Hat Channels: 16" (406mm) o.c. horizontal furring allows Ultimate Clips to fasten to these members 16" o.c. (406mm) (vertically).*



# HORIZONTAL/ COMPRESSION JOINTS

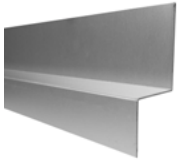
To begin a second course of panels, the module of Vertical AWP 3030 necessitates a continuous Horizontal/Compression Joint every 119-5/16 inches (3030mm) (repeating after each course).

*Horizontal joints may not be staggered.*

Do not span floor lines with panels.

## INSTALLING A HORIZONTAL COMPRESSION JOINT

Install Essential Compression Joint Flashing or heavy gauge z-shaped metal flashing or drip cap over the top edge of the course of panels terminating under the Horizontal Compression Joint location. Fasten Essential Flashing at each stud location.



*Follow relevant WRB manufacturer instructions and local code for moisture management best practices and detailing for through-wall flashings.*

Install Vertical Starter Track over the flashing and check for level. Place Vertical Starter at least 1/2 inch (13mm) above the course below and 1/4" (6mm) above flashing/trim.

Continue to install panels according to these guidelines with compression joints every 119-5/16 inches (3030mm) (max).



# CORNERS & OPENINGS

## All Applications

Appropriate flashing and moisture management best practices must be used to prevent moisture penetration at all inside corners, doors, and windows. Follow moisture management best practices, WRB manufacturer's guidelines, window/door manufacturer instructions, and all local building codes. *Nichiha assumes no responsibility for moisture infiltration.*

Nichiha cut and exposed panel edges must be primed or sealed with fiber cement sealer or paint.

As necessary, add trim, jamb/sill extenders, and/or other flashings at corners, windows, doors, and other openings prior to AWP installation.

## INSIDE CORNERS

### **Single Flange Sealant Backer (FHK 1015):**

Decide the primary line of sight in order to minimize visibility of the sealant joint.

Install the AWP 3030 on the more visible wall first. For the first panel, remove the left side (bottom) factory edge and coat the cut edge. Add 10mm Spacer and place the panel on the Vertical Starter Track. Ensure the panel is butted up tight to the inside corner wall. Secure it per the steps given on pages 18-20.

On the adjacent wall, fasten Single Flange Sealant Backer right up against the front wall/installed panel's edge at 12-14" (305-356mm) o.c. to framing, plywood/osb sheathing, furring, or blocking.

Add 10 mm Spacer over the fastening flange of the Sealant Backer.

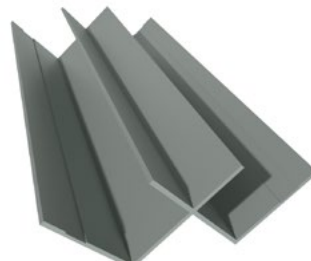
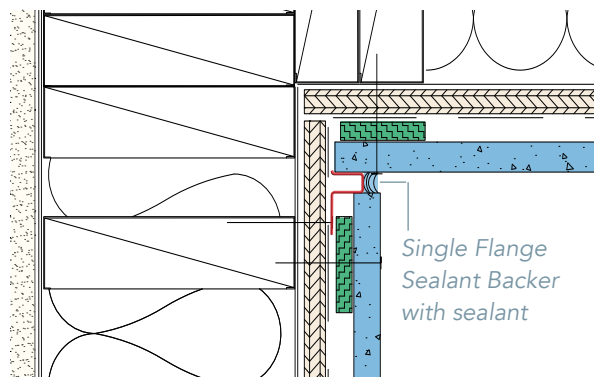
Once work proceeds again to the inside corner, install the last side wall panel, with the factory edge removed, and cut edge sealed, directly against the sealant backer and over the Spacer. Secure the cut edge with face fasteners\*. Fill the sealant joint space with ASTM C920, Class 35 (min.) sealant.

**Inside Corner Metal Trim:** Install Nichiha Inside Corner metal trim directly against the inside corner sheathing or furring. Fasten metal trim every 12-16" (305-406mm) in a staggered fashion on alternating flanges.

Remove the shiplapped edges that will be inserted into the trim, treating the cuts, and install panels normally, butting to the Inside Corner trim in moderate contact.

**Trim Boards:** Install trim boards at the inside corner first and then add Single Flange Sealant Backer. Add ASTM C920, Class 35 (min.) compliant sealant to the gap.

\*Face fasteners should fully penetrate OSB or plywood sheathing and into the framing whenever possible, or furring if applicable. With c.i. conditions, refer to pages 6-7. Refer also to *Face Fastening Best Practices* for info on patching face fasteners.



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## WINDOWS AND DOORS

### WINDOW SILLS (J-MOLD OPTIONAL):

For recessed windows, add the window manufacturer's sill flashing/extension attachments or other flashing cap where the panels will terminate so that the top edges are covered or capped at the sill.

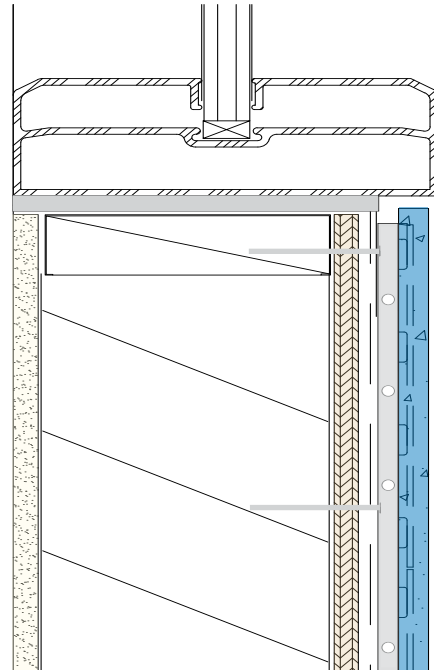
As needed, cut the panel to the required height to fit below the window sill, leaving a 1/4" (6mm) gap between the top of the cut panel edge and the window sill or trim board.

Cut panel edges must be sealed with 100% acrylic latex exterior primer or paint, such as Kilz Premium or Kilz Max. *Clean any dust off the panels with a dry, soft clean cloth.*

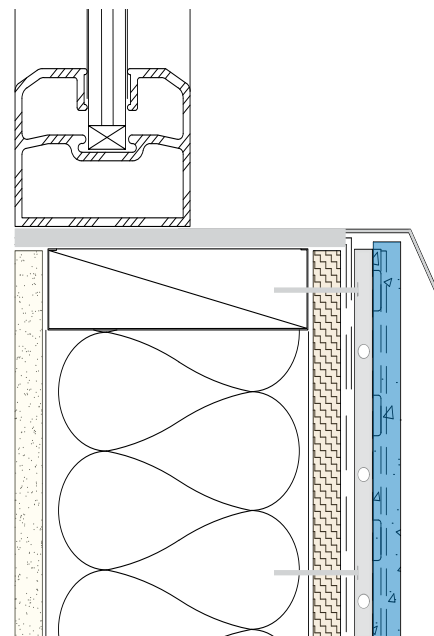
Fasten Ultimate Clips along the sides of the panel to sheathing, framing, or furring with a clip positioned within an inch (25mm) of the top end of the panel meeting the sill and the lowest clip at the Vertical Starter Track edge below.

If the top edge of the panel is fully sheltered under the sill, it is not necessary to seal the 1/4" (6mm) gap. For better system performance, Nichiha recommends the vented approach.

If desired, install J-Mold trim, fastened every 12-16" (305-406mm), under the sill prior to panels.



*To allow for ventilation, if the top edge of AWP is fully sheltered at a window sill, sealant is not required at the 1/4" (6mm) gap.*



*Use window manufacturer sill extensions/flashing or brake metal to cap over the panels at recessed sill returns.*

## WINDOW/DOOR JAMBS

A minimum gap of 1/4" (6mm) is required when butting panels into windows, doors, and trim boards. Refer to window/door manufacturer guidelines for spacing trims around windows.

**Single Flange Sealant Backer:** 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 every 12" (305mm) to 14" (356mm) to framing/furring, plywood/osb sheathing, or blocking.

Add 10mm Corrugated Spacer along the jamb.

Remove the appropriate ship-lapped edge of panels, clean off dust with soft, dry cloth, and treat cut edges.

Install panels, face fastening through Spacer along the jamb edge every 12-16" (305-406mm), keeping a minimum 1" (25mm) from panel edge. Use face fasteners long enough to penetrate framing or furring when applicable.

Fill the 10mm sealant gap with recommended sealant.

**J-Mold:** Pre-install J-Mold trim at window and door jambs prior to AWP. For J-Mold positioning, refer to the window/door manufacturer instructions regarding trim attachments to determine if the J-Mold can be butted directly to the window or door jamb or if a gap is required.

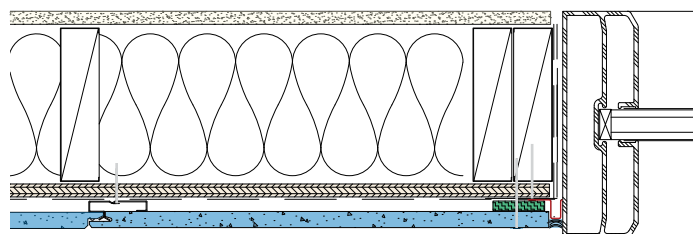
After installing the next-to-last panel, measure from the edge of the face of this panel to the J-Mold edge (the 90 degree angle edge). From this measurement, subtract 1/4" (6mm) and cut the last panel to this width. Paint or prime cut edges and clean off dust from panel.

Install 10mm Corrugated Spacer next to the metal trim.

Install panels by inserting the cut edge into the metal channel and then shifting the panel over onto the side Ultimate Clips along the adjacent panel, fitting ship-lapped edges together.

Face fasten the through Spacer along the jamb edge every 12-16" (305-406mm). Use face fasteners long enough to penetrate framing.

Lastly, add closed-cell foam backer rod and sealant to any gap between the J-mold and jamb, if applicable.



Single Flange Sealant Backer



J-Mold trim may be used at opening jambs.

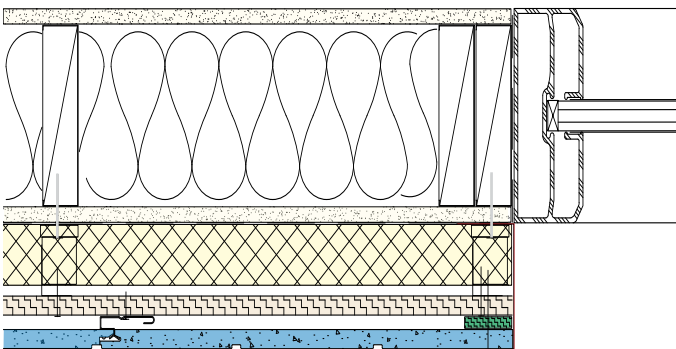
## RECESSED JAMBS

At recessed openings, the best option for finishing the jamb returns/recesses is with jamb extension accessories from the window or door manufacturer. The extenders must account for the depth of the return, inclusive of the Nichiha system (26mm). With these in place, the standard Single Flange Sealant Backer or J-Mold steps can be followed.

### **Brake Metal**

Another option at recessed jambs is to use brake metal to cover the return over furring, continuous insulation, or other assembly components that create the recessed window condition. Because of thermal expansion and contraction of AWP, the brake metal must be of a heavier gauge sheet steel (24 or thicker) or equivalent aluminum.

For an L-angle shaped metal, terminate the AWP to a Single Flange Sealant Backer meeting the outward fin, which must extend to just beyond the panel face. Or include a face return flange on the brake metal to form a J-Mold type profile. With a minimum 10mm (3/8") return leg covering the panel edge and face, the sealant joint can be eliminated. Insert the panel edge in moderate contact with the metal. Face fasten through Spacer along the jamb edge every 12-16" (305-406mm), keeping a minimum 1" (25mm) from the panel edge. Use face fasteners long enough to penetrate framing, furring, or blocking.



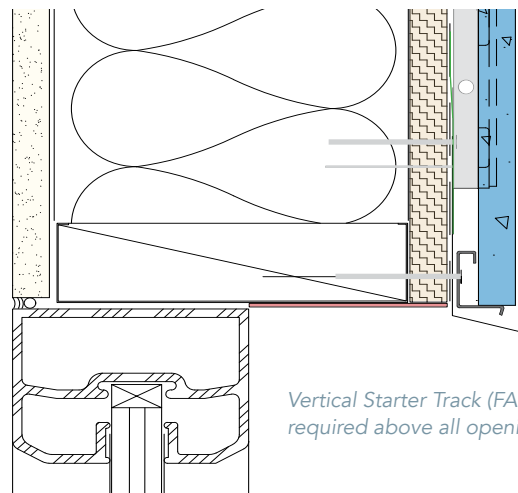
*Recessed window jamb: J-profile brake metal with a min. 10mm panel face return flange. C.I. assembly shown includes thermally-broken vertical furring with min. 7/16" (11mm) OSB or plywood (See page 6 - Option 1).*

## WINDOW/DOOR HEADERS

**Starter Track:** When starting a course of vertical panels above a window or door, add flashing and FA 710 T Vertical Starter Track at the header, installed with fasteners every 6-9" (152-229mm) into the opening header (or c.i. assembly substrate).

Add the window manufacturer's extenders, brake metal, or other trim for recess returns.

*Always follow the window/door manufacturer, WRB manufacturer, and/or local code concerning moisture management best practices directly above openings.*



*Vertical Starter Track (FA710T) is required above all openings.*

**Window Head:** Flash over the window head. Add window manufacturer extenders, brake metal, or trim to cover any recess returns.

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## OUTSIDE CORNERS

*Refer to pages 5-7 for Framing & Sheathing and Continuous Insulation requirements and options for detailing outside corners with c.i./furring conditions.*

There are two primary outside corner installation options for vertical AWP 3030:

Trim Boards: Fiber Cement, Wood, or PVC

Metal channels (Open Outside, Corner Key) or vinyl trim channels.

Appropriate flashing must be used as required to prevent moisture penetration at outside corners.

### FIBER CEMENT & PVC TRIM BOARDS

Nichiha manufactures a full line of fiber cement trim boards - NichiTrim™, which are available in the Southeast U.S. Refer to [Nichiha.com](http://Nichiha.com) for more information.

When panels are to be butted to fiber cement, wood or other trim pieces, use Nichiha Single Flange Sealant Backer.

Add 10mm Spacer, remove the appropriate panel shiplap, and face fasten panel edges every 12-16" (305-406mm), vertically, keeping 1" (25mm) from edges. Apply sealant to joint width. Sealant must be compliant with ASTM C920, Class 35 (min).

### METAL & VINYL TRIM

(including Nichiha Corner Key and Open Outside Corner trim)

When installing Nichiha AWP 3030 in a vertical orientation, pre-fasten corner trim channels, securing trim to framing every 12-16" (305-406mm), alternating/staggering the fasteners on both flanges.

At the starting point, such as an outside corner, remove the panel edge, add 10mm Spacer to the wall at the corner. Set the panel on the Starter and into the corner trim channel, and then face fasten the panel as described at in the *AWP 3030 Vertical Panel Installation* section (pages 18-20).

Working from left to right, when reaching the next outside corner, follow the steps for the appropriate trim profile:

**Corner Key:** After installing the next-to-last panel, measure from the edge of the face of this panel to the Corner Key edge (the 90 degree corner angle edge). From this measurement, subtract 1-3/8" (35mm) and cut the panel to this width. Paint or prime cut edges and clean off dust from panel. (*Fig. 24a*)

**Open Outside Corner:** After installing the next-to-last panel, measure from the edge of the face of this panel to the Open Outside Corner edge (the 90 degree angle edge). From this measurement, subtract 1/4" (6mm) and cut the panel to this width. Paint or prime cut edges and clean off dust from panel.

Install 10mm Spacer next to the metal trim. Install panels by inserting the cut edge into the metal channel, rotating into the wall plane, and then shifting the panel over onto the side clips along the adjacent panel, fitting ship-lapped edges together.

Face fasten panels through Spacer along the corner edge every 12-16" (305-406mm) (*Fig. 24b*). Use face fasteners long enough to penetrate framing/furring.

Fit panels into channel trim so that panel edges are not exposed. Nichiha metal trim pieces are each 10 feet (3030mm) in length. To cut metal trim, use a non-ferrous carbide miter saw blade. When butting/stacking metal trim pieces, add a bead of polyurethane sealant at the seam/joint.

Metal trim can be pre-finished when purchased to match Nichiha Color Xpressions color(s) and some stock colors. Otherwise, for field painting primed metal trim, refer to Tamlyn's XtremeTrim Painting Guide.

### NON-90 DEGREE CORNERS

Corners other than 90 degrees can be achieved with custom metal trim, butting panels to trim board with a minimum 1/4" (6mm) sealant gap, or with the use of Double Flange Sealant Backer to set cut panel edges at the desired corner angle. Please contact Nichiha Technical.



FIG. 24A

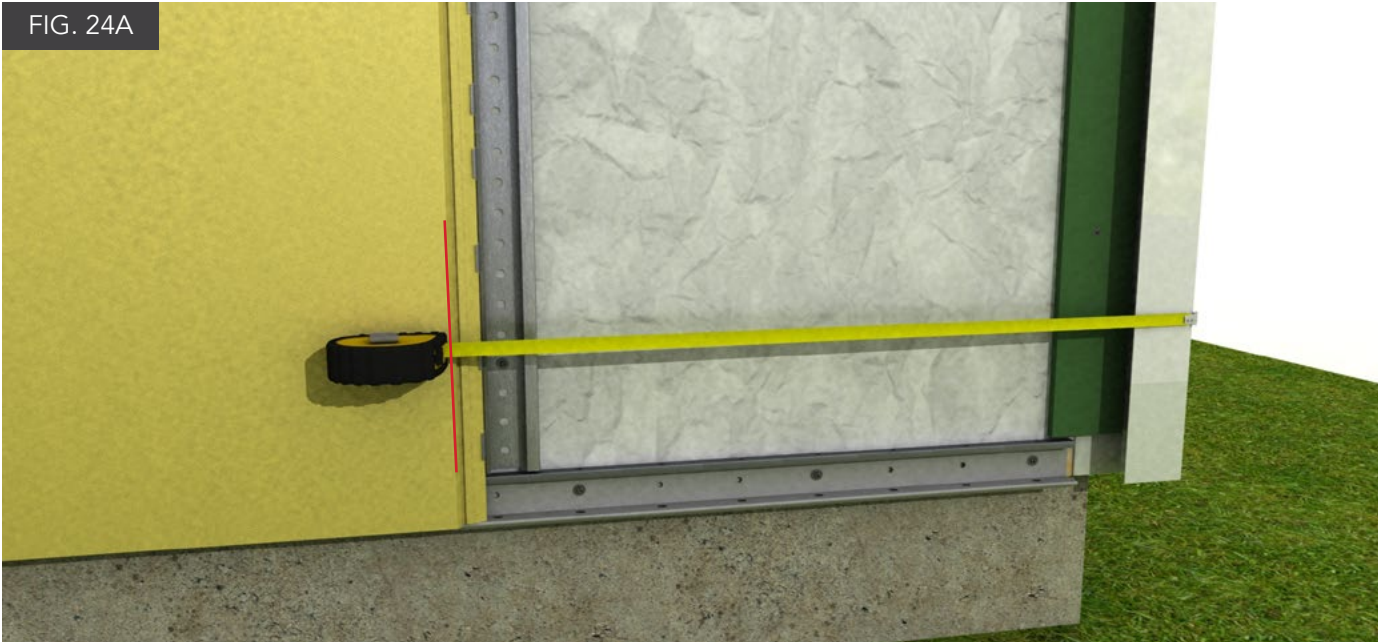


FIG. 24B



# VERTICAL CONTROL/ EXPANSION JOINTS

## All Applications

Because thermal expansion occurs in the long (3030mm) dimension of the panels, Vertical Control/Expansion Joints are not required for vertical installations of AWP 3030.

# PENETRATIONS, RAILINGS, AND SIGNAGE

## ALL APPLICATIONS

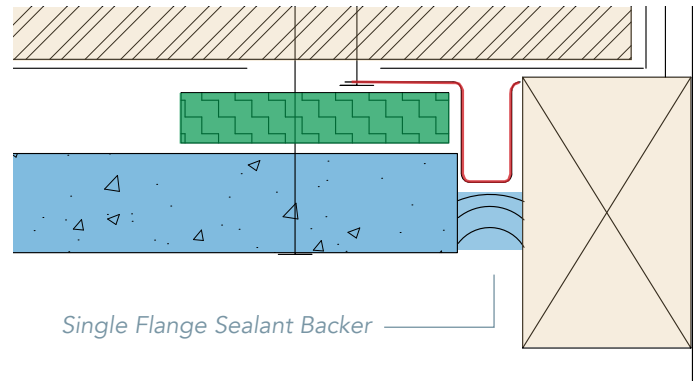
Openings for small penetrations for pipes or conduits may be cut through a panel and the hole sealed with ASTM C920 compliant sealant. For larger penetrations greater than 1.5" (38 mm), it is best to block or frame out the opening. Treat the penetration like a small window.

Along the jambs of the opening install Single Flange Sealant Backer and 10mm Spacer. Cut panel edges as needed to butt to Single Flange Sealant Backer and add recommended sealant. Face fasten vertical AWP cut (vertical) edges.

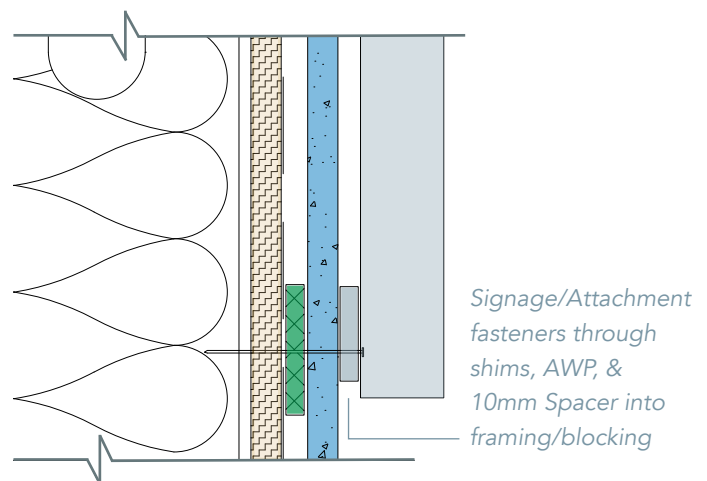
Underneath the opening block out, install vertical AWP cut to height and position Ultimate Clips no more than an inch (25mm) below the top edges. Terminate the panels with a ¼" (6mm) gap. Sealant here is optional, depending on the depth of the blocking.

Above the penetration, add flashing and install FA710T Vertical Starter Track as needed. Ensure a minimum ¼" (6mm) gap between the bottom of the panel edge and penetration blocking, flashing.

If installing railings, signage, or other items directly over AWP, ensure the fasteners are secured through Spacers to the framing or other structural support. Do not fasten any attachment solely to AWP. Further, add a small spacer (up to 10mm) between signage/attachments and AWP to prevent moisture pooling on top of the attachment and seeping between it and the AWP, becoming trapped.



Blocked Penetration Jamb detail



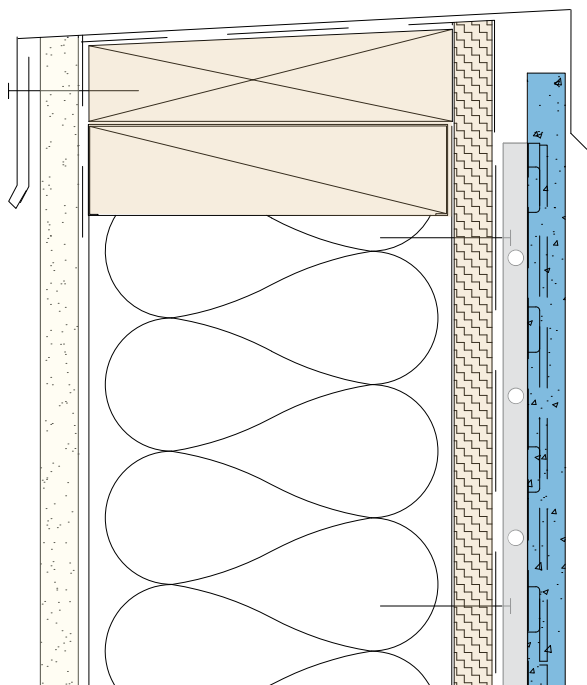
Signage/Attachments detail

# LAST COURSE

## All Applications

Cut panels (horizontally) to properly fit at the roof line under a soffit or parapet cap (or at the proper transition point). Ensure Ultimate Clips along factory edges are secured no more than 1 inch (25mm) from the top of the panels.

Cover the top panel row edge with a roof cap/coping, where applicable.



## GABLES & OVERHANGS

Allow a minimum of 1" (25mm) clearance (or per local building codes) above a sloped roof line.

At the top of the gable area, cut the panel to follow the slope of the gable or overhang.

When installing soffit, the wall panels should be installed first, with the soffit installed over the panels.

Seal all cut panel edges with 100% acrylic primer or paint. Do not leave any panel edges exposed.

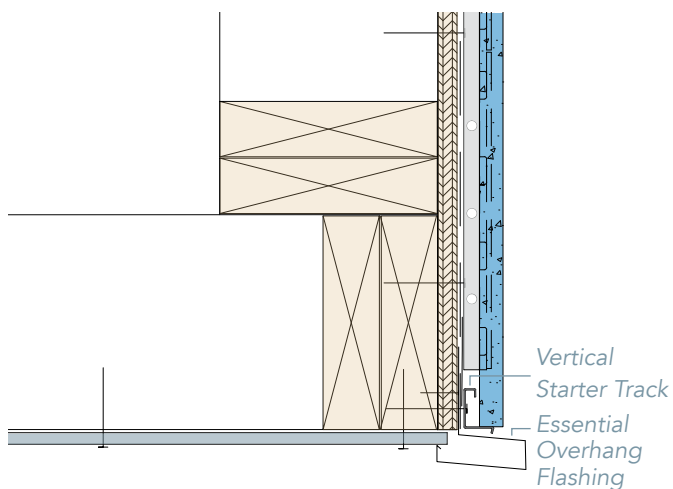
**Essential Overhang Flashing** may be used at the base of overhangs/bump-outs or porte-cochères. Alternatively, **Essential Compression Joint Flashing** may also be used. Keep a minimum clearance of 1/4" (6mm) for the panel edge above flashings.

Do not seal this gap. *Always follow WRB manufacturer instructions and local code with respect to moisture management best practices for treating and detailing metal through-wall flashings.*

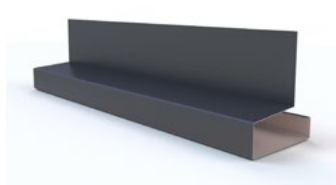
Prior to panel installation, fasten Overhang Flashing at each stud location, beginning with corner segments. Main segments will slide under/overlap corner segments.

Use Joint Clip segments to join main segments together. After the first piece is secured, add a Joint Clip, fastening through both it and the first main segment. The next main piece will slide behind the Joint Clip.

Position Overhang Flashing so that its bottom/return flange overlaps soffit materials. The bottom return portion must extend beyond the face of the fascia substrate. Positioning the flashing too high can deform it from its normal shape. The bottom return should slope away from the soffit as pictured.



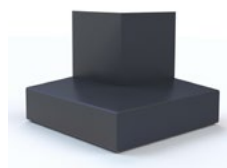
### Essential Overhang Flashing & Joint Clip



Outside Corner



Inside Corner



# TRANSITIONS WITH HORIZONTAL AWP

On projects also utilizing horizontally-installed AWP, expansion and compression type joints will be required as there is no way to naturally joint horizontal and vertical AWP directly.

## VERTICAL JOINTS

A Double Flange Sealant Backer or H-Mold trim is necessary at vertical joints/transitions between horizontally oriented panels and vertically oriented ones.

## HORIZONTAL JOINTS

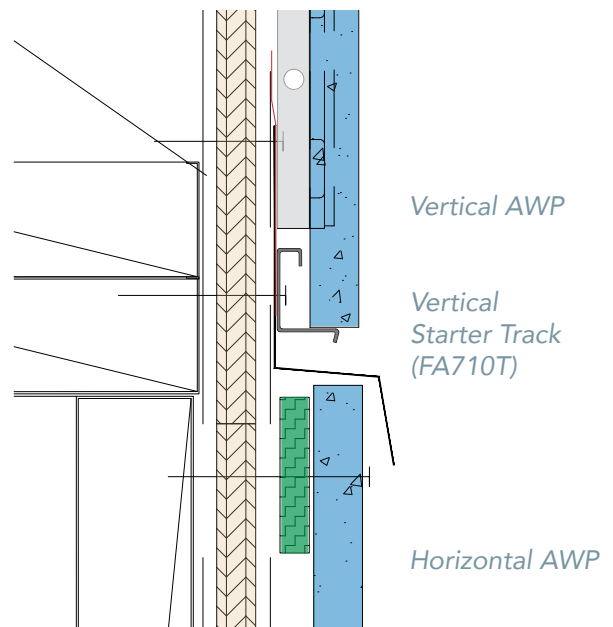
A horizontal/compression joint style detail is necessary to transition between horizontal and vertical AWP. Please refer to *Horizontal/Compression Joints* on page 21.

### Horizontal panel to Vertical panel Transitions

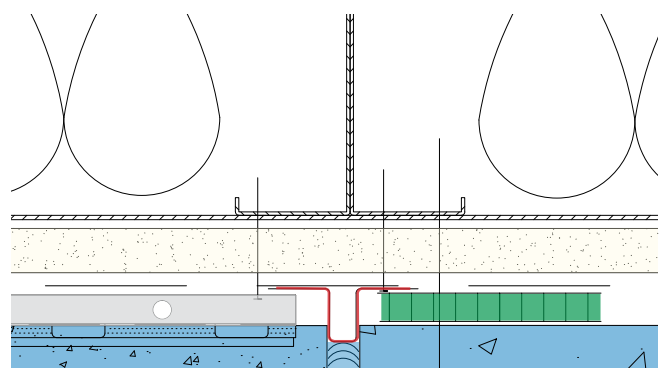
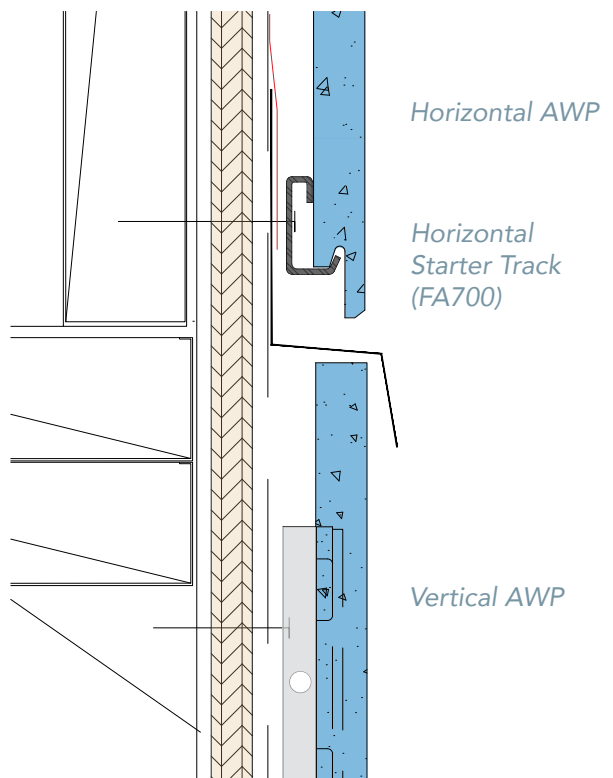
Face fasten the top, cut edge of the horizontal AWP, cap it with Essential Compression Joint Flashing or Z-flashing. To then install vertical AWP with Vertical Starter Track following the standard procedure and fastening requirements.

### Vertical panel to Horizontal panel Transitions

Install vertical panels to the desired transition level and cap with Essential Compression Joint Flashing or Z-flashing. Install the Horizontal Starter Track 1-1/4" (32mm) above the flashing, following the standard procedure and fastening requirements. Refer to the *Horizontal Installation Guide AWP 1818, AWP 3030*.



Horizontal transition joint: Compression Joint details



Horizontal AWP

Vertical AWP

Vertical transition joint: Double Flange Sealant Backer joint (H-Mold also OK)

# CLEANING & MAINTENANCE

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## CLEANING PANELS

After completion of the installation or for periodic maintenance, it may be necessary to clean panels.

When cleaning panels, use no more than 400 psi of water pressure at 10" to 12" (254-305mm) away.

Do not pressure wash custom color panels.

To clean heavily soiled areas, a mild household detergent and/or soft bristle brush may be required.

Do not allow any detergent/cleaner to dry on panels. Rinse immediately after cleaning.

---

## PAINT TOUCH-UP

*It is impossible to fully match the AWP factory finish sheen in the field. It is imperative that the least amount of touch-up paint be applied to AWP as possible.*

Touch up paint must be exterior grade 100% acrylic latex and can be color matched by taking a panel sample to your local paint or home improvement store.

A small amount of touch-up paint is supplied with your custom color panel order (touch-up kit). Do not use touch-up paint for edge treatment/sealing due to the limited quantity provided.

Utilize low-adhesive tape to isolate patching and touch-up locations such as face fastened areas. Where face fasteners have been used and patched by cementitious filler, use a cotton swab to lightly dab touch-up paint.

For scratches, use a cotton swab for small ones or a 1" (25mm) foam brush for longer ones. Employ a dabbing motion rather than brushing in order to minimize the amount of paint applied.

---

## REMOVAL OF EXTERIOR ACRYLIC LATEX PAINT

**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 by light scrubbing with alcohol to remove any remaining paint residue. Rinse with water and a clean cloth.

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

---

## OTHER PAINT & GRAFFITI REMOVAL

The following products have been tested on Nichiha panels to aid in the removal of graffiti type markings.\* These citrus-based products can also be used for basic panel cleaning purposes. The panels were sprayed with an indoor/outdoor aerosol spray paint and left to dry overnight, and then the paint removal products were applied following the manufacturer's guidelines.

All products tested achieved good results. However, the outcome may vary depending on the amount of paint that needs to be removed. Be sure to follow all manufacturer's guidelines and first test in an inconspicuous area before working on a larger area.

*Do NOT use these cleaners with custom color panels. \*Nichiha is not liable for any damage caused by the use of these cleaners.*

### CITRISTRIP

[www.citristrip.com](http://www.citristrip.com)

#### Products tested:

Citristrip Striping Gel - One Quart container  
Citristrip Stripping Aerosol - 18 oz. spray can

### GOOF OFF GRAFFITI REMOVER

[www.goof-off.com](http://www.goof-off.com)

#### Products tested:

Goof Off Aerosol - 16 oz. spray can  
Goof Off - 22 oz. trigger spray bottle

### TAGAWAY

[www.tagaway.com](http://www.tagaway.com)

#### Product tested:

Tagaway - 32 oz. trigger spray bottle

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## REPAIRING MINOR DAMAGE

Isolate the blemish with a low adhesive tape such as painters tape. This will help protect the surrounding area of the panel and aide in creating a more polished, clean repair.

Lightly brush/abrade the surface within the taped off area in order to remove any loose material.

Carefully fill and smooth the resultant prepped area with exterior patching compound, such as MH Ready Patch®. Allow to dry/cure fully.

Gently smooth the patch and then apply touch-up paint to the affected area. Allow touch-up paint to dry and remove the tape.

---

## PANEL REPLACEMENT

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

Make cuts into the damaged panel and break into pieces for easier removal.

Remove damaged panel.

If necessary, cut the new panel to appropriate height.

Looking at the panel oriented horizontally, cut the top ship-lapped edge off the panel. (*Figure 33a*)

Clean off dust and seal the cut edge.

Add 10 mm Spacer along the right side of the uncovered wall surface. (*Figure 33b*)

Set the new panel in place on the Vertical Starter Track with the intact factory edge fitting on the exposed clips on the left side of the uncovered space.

Pre-drill and face fasten the right edge of panel through the Spacer with a screw every 12-16" (305-406mm) into framing, furring, or blocking. (*Figure 33c*) When only wood sheathing is available for the face fasteners, reduce the screw spacing to 6-8" (152-203mm).

Fill countersunk screw heads per *Paint Touch Up* and *Minor Repairs*.



FIG. 33

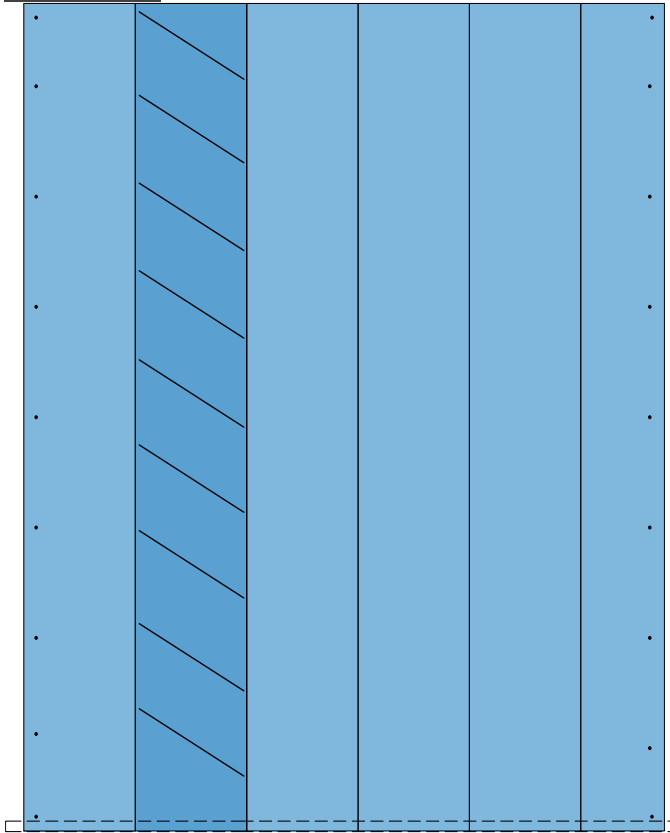


FIG. 33B

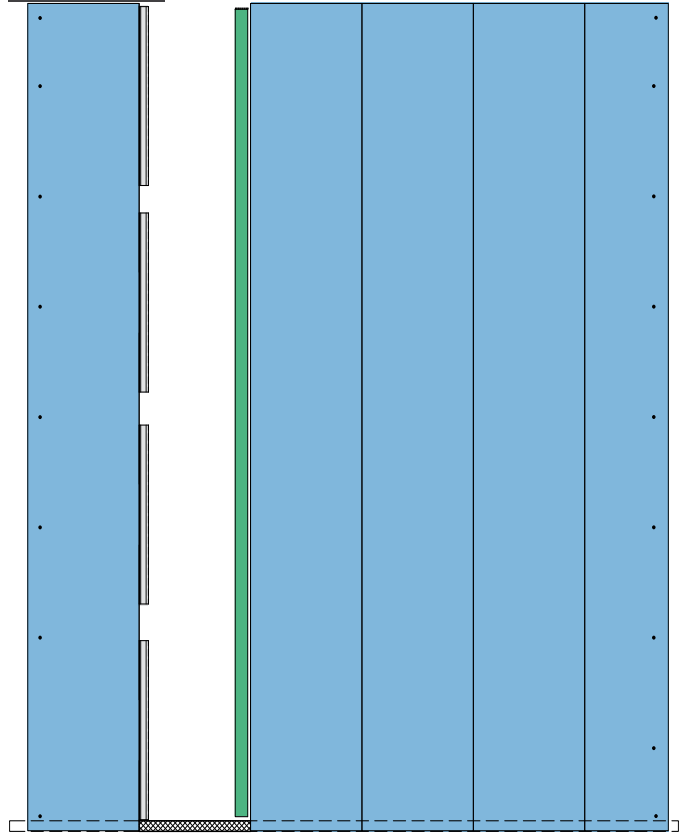


FIG. 33C

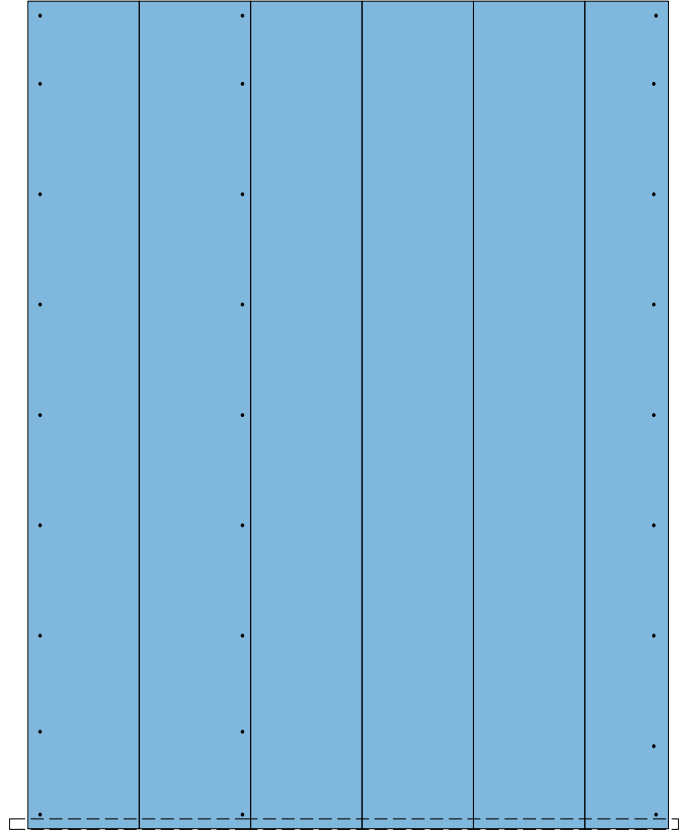
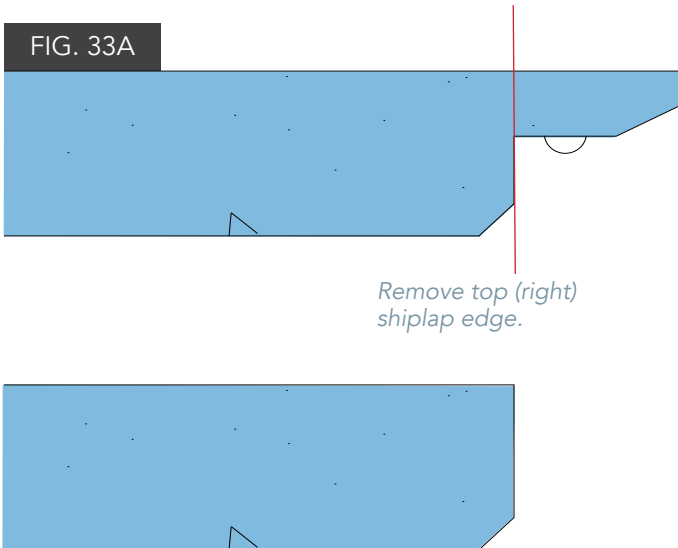


FIG. 33A



Remove top (right)  
shiplap edge.

# Behind our Architectural Wall Panels is SOME SERIOUS TECHNOLOGY.



## EASY INSTALLATION

Time-saving Clip Installation System that reduces construction time and minimizes mistakes.



## NO MORTAR, NO MESS

Pre-finished panels that eliminate the need for messy mortar or costly masonry-skilled labor.



## ANY WEATHER PRODUCT

Products that can be installed year round in any climate across the country. No geographical restrictions means more possibilities.



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No-fuss products. Little ongoing cleaning or regular maintenance needed. You get to bring your vision to life and ensure it looks great for a long time.



## ENGINEERED FOR PERFORMANCE

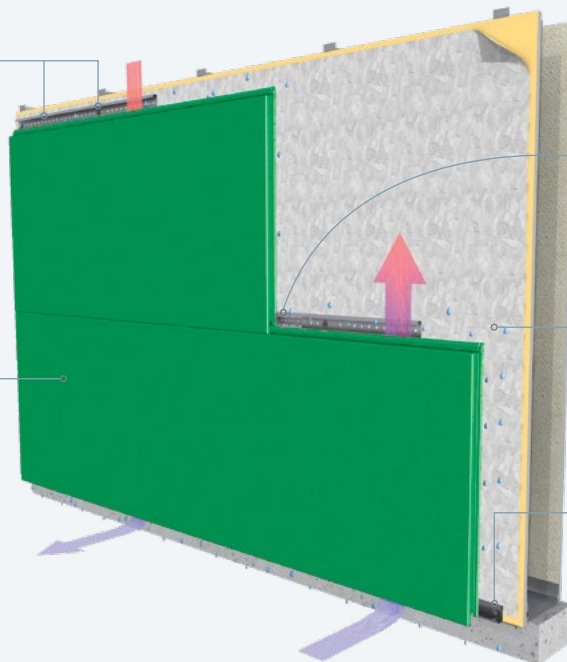
Go beyond our durable panels and discover a meticulously engineered moisture management system that provides a vertical drainage point for air and moisture to exit.

### THE ULTIMATE CLIP

creates a hidden fastening system that all but eliminates face fastening. Installation is quick and easy and never requires specialty subcontractors.

### NICHIHA ARCHITECTURAL WALL PANELS

are lightweight, easy to handle and available in a virtually endless color palette and a diverse offering of textural finishes.



### NICHIHA'S JOINT TAB ATTACHMENT

is designed to support panel lateral stability, helping vertical joints stay tightly closed. The tab fits in place easily and is fastened to the Ultimate Clip with provided screw.

### DRENCHED AND BACK VENTILATED RAINSCREEN

design allows water to escape and air to circulate, reducing the risk of mold and water damage inside the building.

### THE ULTIMATE STARTER TRACK

pulls double-duty. It ensures a fast, level installation and its patented drainage channel directs water out and away from the base of the wall.

# Never underestimate the power of REALLY GOOD TOOLS.

---

Whether you are an architect, a builder or a contractor, Nichiha wants to ensure that you have all the information you need to make your project go as smoothly as possible. The way we see it, we are partners. Our website offers a comprehensive collection of technical information, installation videos, architectural details, in-depth specifications and everything you'll ever need to know about installing Nichiha products. You can even schedule a Technical Design Review via [nichiha.com/technical-design-review](https://nichiha.com/technical-design-review), and our Field Technical Services team can make site visits for installation training and/or preconstruction guidance.



## DESIGN REVIEW GUIDE

Download our quick reference guide to get an overview on our Architectural Wall Panels.

[nichiha.com/resource-center](https://nichiha.com/resource-center)



## ARCHITECTURAL DETAILS

Take a closer look and download our conceptual detail drawings.

[nichiha.com/architectural-details](https://nichiha.com/architectural-details)



## INSTALL VIDEOS

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[nichiha.com/resource-center/install-support](https://nichiha.com/resource-center/install-support)



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Our field and in-house technical teams are here to assist. If you have questions, comments, concerns, or wish to schedule a site visit or pre-con meeting, please call or email us.

1.866.424.4421 or [technicalservices@nichiha.com](mailto:technicalservices@nichiha.com)

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Your creative vision is unique. That's why Nichiha wants to offer you the power of cooperation to help your project move from conception to completion. Our ever-expanding offering of textures and finishes lift buildings to new and unexpected places and we want to share them with you. We place a high value on our relationships and are proud to work with our dedicated partners across the country. Join us and discover the power of possibilities and partnerships with Nichiha.

## NICHIHA WARRANTIES

- ILLUMINATION SERIES PANELS  
15-year limited warranty\* on panels,  
15-year limited warranty\* on finish.
- ARCHITECTURAL WALL PANELS  
(Brick, Block, Stone, Wood, Kurastone)  
15-year limited warranty\* on panels,  
15-year limited warranty\* on finish.
- METAL TRIM  
Tamlyn warrants defective-free products for a period of  
10 years for the original purchaser. Please visit [tamlyn.com](http://tamlyn.com) for  
detailed information on terms, conditions and limitations.

\*See Nichiha warranties for detailed information on terms, conditions and limitations. Visit [nichiha.com](http://nichiha.com) for easy downloadable warranties or call toll-free 1.866.424.4421 for a copy.

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WUI  
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Report  
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LARR 26081



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