

CONTINUOUS INSULATION AND AWP

GENERAL

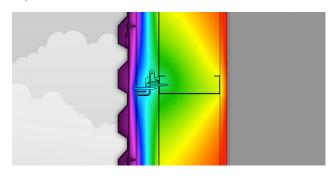
Nichiha horizontal AWP may be installed directly over up to one inch of continuous insulation with a minimum compressive strength of 15 psi. Wood or gypsum sheathing is required with continuous insulation. If gypsum sheathing is used, it may be installed to a maximum thickness of 5/8". Continuous insulation thicker than one inch or mineral wool of any thickness must be paired with furring or other solutions to satisfy the Framing & Sheathing Requirements set out in the AWP install guides, and is subject to a required Technical Review. This bulletin is not intended to prohibit options or furring combinations not covered herein. Please contact the Technical Department for assistance.

NO THERMAL BRIDGES!

The energy code, in its definition of c.i., does not allow for thermal bridges, to penetrate through the layer of "continuous" insulation (c.i). Fasteners are an exception of this requirement. This means that simple z furring is not compliant since the metal bridging through the insulation board provides a major pathway for energy transfer, particularly when fastened over metal stud wall framing. This lowers the effective value of the insulation layers overall and the building's energy efficiency.

Fasteners are allowed to penetrate continuous insulation, but because the insulation does not provide much, if any, support for fasteners holding up exterior claddings, there are natural limits to "cantilevered fastening." Over time the cladding could creep downward if the fasteners begin to succumb to the cantilevered shear. For this reason, horizontal AWP clips can only be directly installed over c.i. with a maximum thickness of 1" and a minimum compressive strength of 15 psi.

Thermal profile with bridging



Thermal profile without bridging

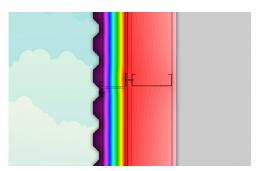


image credit: SMARTci/AAP

fiber cement

CONTINUOUS INSULATION AND AWP

AWP 1818 & 3030 HORIZONTAL APPLICATIONS

When adding a furring grid* to enable AWP installation over c.i., the following general criteria are applicable:

- 1. VERTICAL STEEL FURRING CAN BE USED AS DIRECT ATTACHMENT
- Shaped Steel furring must be a minimum 18 gauge spaced at 16" o.c. max (Z, hat channel, etc.)

2.VERTICAL SOLID LUMBER FURRING CAN BE USED AS DIRECT ATTACHMENT

- Solid Lumber furring must be a minimum 2x spaced at 16" o.c. max
- Do not use strips of wood sheathing as furring
- 3. SHAPED METAL STEEL FURRINGS (GRID SYSTEM)

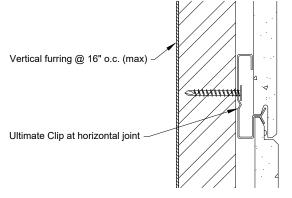
-Layer One (Z, hat channel, etc.)

- Minimum 18 gauge
- Aligned horizontally and spaced per engineer's design

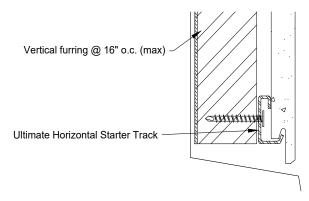
-Layer Two (Z, hat channel, etc.)

- Minimum 18 gauge
- Aligned vertically at 16" o.c. max

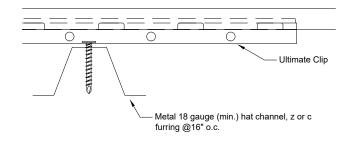
*Consult a structural engineer to design the furring system to manage the AWP system dead load of minimum 5 psf and also meet the project wind load design criteria. Furring must account for expected building compression. Nichiha does not provide fastener design for anchoring the furring to structure. Refer to IBC Section 2603.12 and 2603.13 for more info.



SECTION VIEW - CLIP TO FURRING



SECTION VIEW - STARTER TRACK TO FURRING



PLAN VIEW - CLIP TO FURRING

Re-Issue Date: 8/22/23



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AWP-3030 VERTICAL APPLICATIONS

Continuous Insulation of any thickness requires furring for vertical installation.

Special attention must be paid to supporting the Vertical Starter Track, which bears the entire weight of AWP-3030 panel in vertical applications. The clips do not share the dead loads for vertical panels.

1. HORIZONTAL FURRING CAN BE USED AS DIRECT ATTACHMENT

- Shaped Steel 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. VERTICAL SHAPED STEEL FURRINGS (Z, HAT CHANNEL, ETC.) OR SOLID LUMBER W/ STRUCTURAL SHEATHING

- Minimum 18 gauge shaped steel or 2x lumber spaced at 16" O.C. max.
- Min. 7/16" APA Rated OSB or Plywood required for Ultimate Clip Fastening

3. SHAPED METAL STEEL FURRINGS (GRID SYSTEM)

-Layer One (Z, hat channel, etc.)

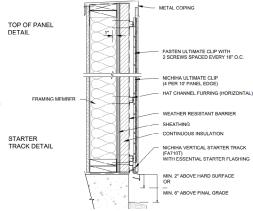
- Minimum 18 gauge
- Aligned vertically at wall stud spacing
 - -Layer Two
- Minimum 18 gauge hat channels
- Aligned horizontally at 16" o.c.
- Hat channels must be utilized at the starter track to support the weight of the panels

4. CL-TALON® 300

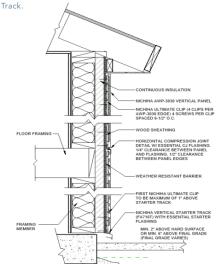
- Base Track and Wall Mount T-Tracks (vertical) at 16" o.c. (aligned with framing), and Therme Clips spaced per project loading requirements
- Wall Mount Supports (horizontal) at 16" o.c.

5. PLYWOOD NAILBASE/STRUCTURAL INSULATED SHEATHING PANELS (SUCH AS HUNTER XCI PLY)

- The nailbase panel anchoring schedulemust account for AWP dead loadand site wind loads
- Contact Nichiha Technical Services for additional information concerning Vertical Starter Track and Ultimate Clip fastening



1. Horizontal steel furring method. No z-furring at starter track locations. Must use hat channel for Vertical Starter



2. Vertical Shaped Steel furrings (Z, hat channel, etc.) with solid lumber. One layer of vertical furring with min 7/16"



3. Vertical furring at 17-7/8" o.c. over horizontals. Additional vertical segments added to enable 9" o.c. Vertical Starter Track fastening. (Knight HCI[™] System girts shown)

Refer to Nichiha.com/resources for the latest installation guides and technical bulletins as such information is subject to change. Re-Issue Date: 8/22/2023

TECHNICAL BULLETIN



Continuous Insulation and AWP

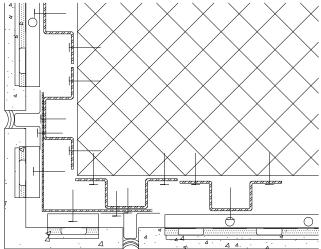
ACCESSORY ATTACHMENTS

Nichiha Double and Single Flange Sealant

Backers and metal trims, such as H-Mold and Corner Key, must be fastened to furring, blocking, or 18 gauge flat stock. Sealant backers must be fastened every 16" vertically, so any use of flat stock must accommodate this fastening schedule.

Outside corners may be wrapped with 18 gauge flat stock fabricated to fit the corner. Attach the stock to furring on both sides of the corner.

Corner Clips are used to secure Nichiha factory panel Corners and can be fastened to the flat stock, as can metal trim corners. (Figure 1).



1. Wrapped outside corner with 18 gauge flat stock

IBC SECTIONS 2603.12 & 2603.13

The International Building Code (IBC) includes information in Chapter 26 about foam plastic insulation/ sheathing and furring minimum fastening requirements based on cladding weights. The Nichiha AWP System has a dead-load of 5 psf. Sections 2603.12 & 2603.13 addresses various configurations depending upon framing gauge and spacing, fastener size and spacing, thickness of insulation and cladding weight.