Code Compliance Research Report
CCRR-0431

Issue Date: 09-20-2021
Revision: Date: 10-02-2024
Renewal Date: 09-30-2025

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 42 43 – Composite Wall Panels

REPORT HOLDER:
Parklex Prodema USA, Inc.
218 River Park North Drive
Woodstock, Georgia 30188
www.parklexprodema.com

REPORT SUBJECT:
NATURCLAD-W F Wall Panel Cladding System

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

- 2024, 2021, and 2018 *International Building Code®* (IBC)
- 2024, 2021 and 2018 *International Residential Code®* (IRC)
- 2022 *California Building Code* (see Section 9)
- 2023, 2020 *Florida Building Code* (see Section 9)

NOTE: This report references the most recent Code editions noted. Section numbers in earlier editions may differ.

1.2 The NATURCLAD-W F Wall Panel Cladding System has been evaluated for the following properties (see Table 1):

- Physical properties
- Weather resistance
- Wind load resistance
- Surface burning characteristics

1.3 The NATURCLAD-W F Wall Panel Cladding System has been evaluated for the following uses (see Table 1):

- Use as exterior wall covering on buildings of Types I, II, III, IV and V construction
- Use as interior finish

2.0 STATEMENT OF COMPLIANCE

The NATURCLAD-W F Wall Panel Cladding System complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2, and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.0.

2.1 2024 IBC and IRC Evaluation Reports: The Intertek CCRR is an *Evaluation Report* for approval of an alternate material, design, or method of construction in accordance with Section 104.2.3.6.1 of the 2024 IBC and Section R104.2.2.6.1 of the 2024 IRC.

3.0 DESCRIPTION

3.1 NATURCLAD-W F Panels: The panels are decorative high-pressure laminates (HPL) complying with IBC Section 1408. The panels are supplied in the following nominal dimensions:

- 8mm, 10mm, and 12mm thicknesses and a 4-foot by 8-foot panel dimension when using the exposed installation systems.
- 10mm and 12mm thicknesses and a 4-foot by 8-foot panel dimension when using the concealed installation system.
- 8 mm thickness and 6-inch, 8-inch and 12-inch by 8-foot panel dimensions when using the siding installation system.

The panels have an integrated decorative wood-grain surface in a variety of colors.

3.2 Substructure System: The substructure may use the following components. See Table 2 for dimensions of these components:

- Z-girts of 16 ga. (0.0538 in.) galvanized steel (min. yield strength of 35 ksi)
- L-profile rails, J-channels, Hat channels, hanging rails, hangers of ASTM B317, 6063-T5 aluminum
- Treated lumber complying with Chapter 23 of the IBC and fixing clips (for use with the siding system)

3.3 Fasteners:

- Concealed Fasteners: Hangers are attached to the back of the NATURCLAD-W F panels at 24 inches on center using two TB-A2 TX30 fasteners per hanger.
- Exposed Fasteners: Fasteners used for the exposed fastening system are SX3 #12-11 irius Drive E420 or Torx Drive D12 pan-head, stainless steel self-drilling screws.
- Fasteners for Fixing Clips: Aluminum fixing clips are attached with DIN7505B M3.5 screws for wood battens.

4.0 PERFORMANCE CHARACTERISTICS

4.1 Flame Spread Characteristics: The panels have a Class A classification (flame spread index of 25 or less and a smoke developed index of 450 or less) when tested in accordance with ASTM E84 (UL 723)

4.2 Wind Resistance: Assemblies tested in accordance with ASTM E330 are described in Section 5.3.

4.3 Ignition Resistance: The panels, when installed in accordance with this report, comply with NFPA 268 when tested at an incident heat flux of 12.5 kW/m^2.

5.0 INSTALLATION

5.1 General: The NATURCLAD-W F Wall Panel Cladding System must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

The panels are installed as an open-jointed wall covering that allows air to circulate behind the panels. The cladding system must be installed over flashing and a water-resistive barrier complying with IBC Section 1402 or IRC Section R703.

The base wall to which the system is attached must be capable of supporting the applied loads.

The panels are installed over one of the following systems:

- Exposed fasteners: horizontal and vertical Z-girts
- Exposed fasteners: horizontal L-profile rails, J-channels and hat channels
- Concealed fasteners: vertical J-channels, horizontal hanging rails and hangers
- Siding: 2x preservative treated lumber attached to supporting wall; lumber is covered with a strip of EPDM membrane

The attachment system is designed to create space for insulation and to provide a 1-inch air space between the insulation or water-resistive barrier and the back of the wall panel. See Figures 1 through 10.

5.2 Interior Walls: The NATURCLAD-W F wall panels may be used where a Class A, B, or C interior finish is required. When installed with space between panels, the panels must be installed over a substrate having an equal classification.

5.3 Wind Resistance: See Table 3 for allowable wind loads when installed as described in this report.

Anchorage of the NATURCLAD-W F system and the supporting wall structure must be designed for each jobsite. Calculations must be provided to the building official demonstrating the system anchorage and supporting wall meets project specified design loads and local Code requirements. Design loads must not exceed the allowable wind loads for the system, as described in Table 3.

5.4 Exterior Walls of Types I, II, III, and IV Construction: Construction of exterior walls incorporating the NATURCLAD-W F Wall Panel Cladding System are described in Intertek Design Listings PUI/CWP 30-01, PUI/CWP 30-02, and PUI/CWP 30-04. See Intertek Listing Report 28296 on the Intertek Directory (https://bpdirectory.intertek.com).

5.5 Exterior Walls of Type V Construction: When installed in accordance with this report, the NATURCLAD-W F Wall Panel Cladding System may be used on exterior walls of buildings permitted to be of Type V construction.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 Wind design loads determined from nominal design wind speeds (V_{asd}) in accordance with Section 1609.3.1 of the IBC shall not exceed the maximum allowable wind loads given in Table 3.

6.3 Drawings, design details and calculations verifying compliance with this report and the adequacy of connections and supporting framing must be submitted to the Code official for approval. The drawings and calculations must be prepared by a registered design professional when required by the statutes of the jurisdiction in which the project is to be constructed.

6.4 Use on walls required to be of fire-resistance-rated construction is outside the scope of this report.

6.5 The cladding system must be installed by qualified installers acceptable to Parklex Prodema USA, Inc.

6.6 The NATURCLAD-W F wall panels are manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Reports of tests in accordance with ASTM E330, NFPA 268, NFPA 285, TAS 201, TAS 202 and TAS 203.

7.2 Data in accordance with the ICC-ES Acceptance Criteria Polymer-Based, Polymer-Modified and High-Pressure Laminate Exterior and Interior Wall Cladding (AC92), dated December 2013.

7.3 Intertek Listing Report "Parklex Prodema NATURCLAD-W F Panels," on the Intertek Directory of Building Products.

8.0 IDENTIFICATION

The NATURCLAD-W F Panels are identified with the manufacturer's name (Parklex Prodema USA, Inc.), the product name, the Intertek Mark as shown below, the Intertek Control Number and the Code Compliance Research Report number (CCRR-0431).

9.0 OTHER CODES

9.1 California Building Code: The NATURCLAD-W F Wall Panel Cladding System described in Sections 2 through 8 of this report complies with the 2022 *California Building Code* (excluding Chapter 7A) and 2022 *California Residential Code* (excluding Section R337). Section numbers referenced for the IBC and IRC are the same for the CBC and CRC, respectively.

9.2 Florida Building Code: The NATURCLAD-W F Wall Panel Cladding System described in Sections 2 through 8 of this report complies with the 2023 and 2020 *Florida Building Code - Building* and *Florida Building Code - Residential*, subject to the following conditions:

- Siding System: The Siding System is limited to areas not in the High Velocity Hurricane Zones.
- Concealed Fasteners: When installed with concealed fasteners, the panel system is limited to areas not in the High Velocity Hurricane Zones.
- Exposed Fasteners: When installed with exposed fasteners, the system may be installed in High Velocity Hurricane Zones.
- The system has been evaluated for maximum design pressures of 60 psf, positive and negative, in accordance with FBC Section 1626.
- The system may be used on construction units, assemblies and materials to be used above 30 feet in height in any and all structures, except Risk Category IV - Essential Facility buildings or structures, in accordance with FBC Section 1626.3.1.

Intertek is an approved evaluation entity and quality assurance entity pursuant to Florida Statute 553.842 – *Product Evaluation and Approval*.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the https://bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

TABLE 1A – PROPERTIES EVALUATED - IBC AND CBC

PROPERTY	APPLICABLE CODE SECTIONS[1]			
	IBC	IRC	CBC	CRC
Physical properties / durability	1408.7	R104.2.2.4	1408.7	104.11
Weather resistance	1408.6	R703.1.1	1408.6	R703.1.1
Wind load resistance	1408.4	R703.1.2	1408.4	R703.1.2
Surface burning characteristics	803.1 1408.9 1408.10.1	R302.9	803.1 1408.9 1408.10.1	R302.9
Use in Types I-IV construction	1408.10	Not applicable	1408.10	Not applicable

[1] Section numbers relate to the most recent Code edition cited in Section 1.1 of this report.

TABLE 1B – PROPERTIES EVALUATED - FBC

PROPERTY	2023 FBC-BUILDING SECTION	2023 FBC-RESIDENTIAL SECTION
Physical properties / durability	1405.1 1409.7	104.11
Weather resistance	1409.6	R703.1.1
Wind load resistance	1409.4	R703.1.2
Surface burning characteristics	803.1 1409.9 1409.10.1	R302.9
Use in Types I-IV construction	1409.10	Not applicable
High velocity hurricane zones	1626	R4401.1

TABLE 2 – ATTACHMENT SYSTEM COMPONENTS

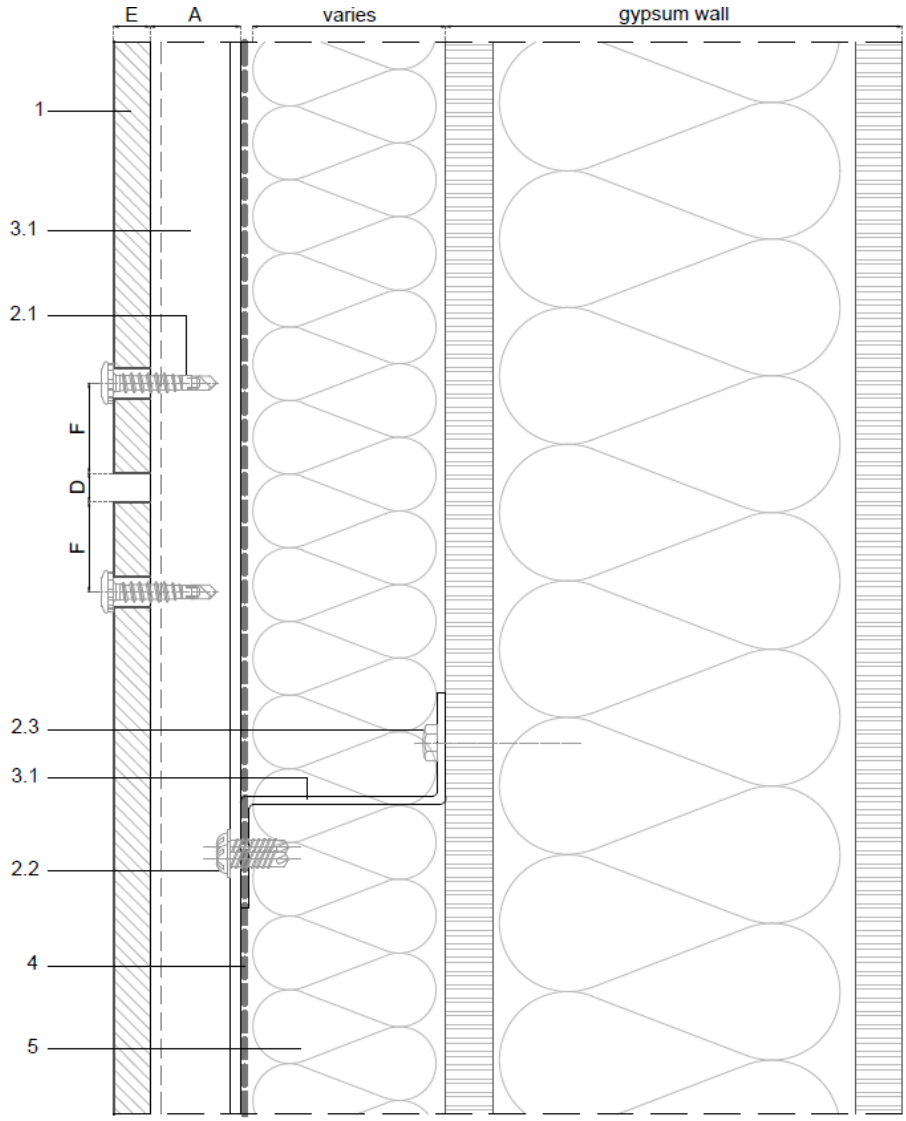
COMPONENT	DESCRIPTION
Horizontal Z-girt	1-1/2” x 3-1/2” x 2-1/2”
Vertical Z-girt	1-1/2” x 1” x 2-1/2”
Wall bracket	3/16” x 3-9/16” x 5-5/16”
L-profile rails	3/32” x 2-1/8” x 1-9/16”
J-channels, Hat channels	1/8” x 1”

[1]See Section 3.2 for material specifications.

TABLE 3 – ALLOWABLE WIND RESISTANCE

FASTENING SYSTEM	PANEL THICKNESS	MAXIMUM SPACING OF FASTENERS AND SUPPORTS[1]	ALLOWABLE WIND RESISTANCE (psf)	
			Positive	Negative
Exposed – 16 Ga. (0.0538 in.) galvanized-steel Z-Girts	10 mm	24 inches[2]	30	25
	12 mm			
Exposed – 1/8-inch-thick aluminum J-channels and hat channels placed vertically	8 mm		32	20
Concealed – Panel hang over horizontal hanging rails attached to J-channels	10 mm		27	17
	12 mm			
Siding – Panels attached to treated wood battens using a fixing clip[3]	8 mm	16 inches	62	20

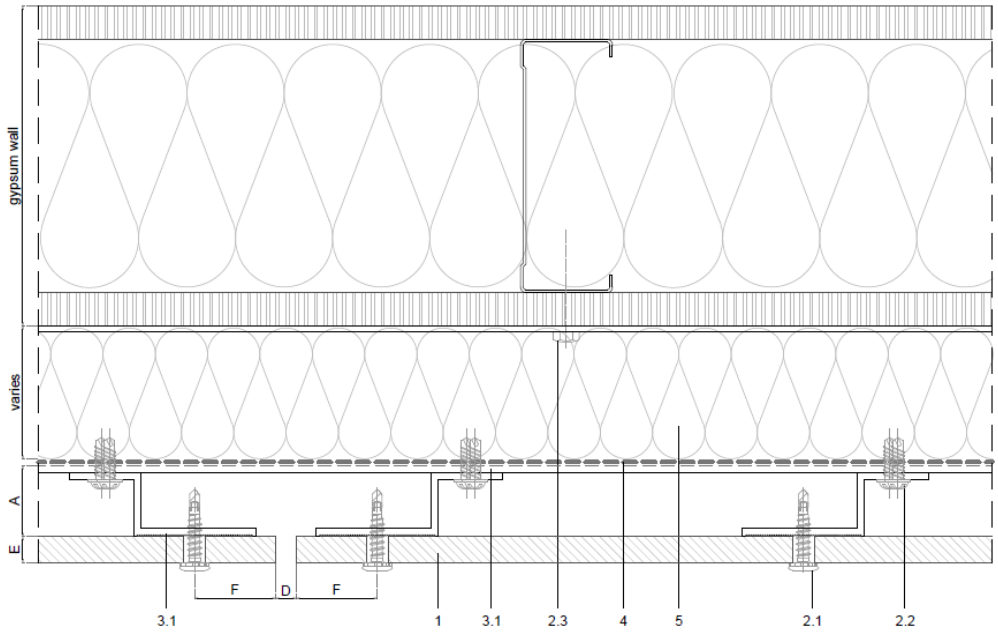
[1]Testing was carried out in a multi-span support configuration.
[2]Maximum spacing for girts, channels, fasteners, and panel span is 24 inches.
[3]Values based on SYP wood or other species with specific gravity equal or greater than 0.55.



1		NATURCLAD
2		Screws
	2.1	Panel fastener metal
	2.2	Channel fastener - by others
	2.3	Wall fixing screw - by others
3		Profiles
	3.1	Z-girt - by others
	3.2	Jamb profile - by others
	3.3	Sill profile - by others
	3.4	Coronation profile - by others
4		Water resistant barrier - by others
5		Thermal insulation - by others
6		Vent. screen - by others

A	Required min. air chamber = 1" (25,4mm)
B	Circulation of air • •3/4" (20mm)
D	Expansion joint 1/4" - 3/8" (6-10mm)
E	Panel thickness • •5/16" (8mm)
F	Distance from the screws to the panel edges 3/4" - 1 1/2" (20-40mm)

Figure 1 – Typical Installation - Horizontal Joint – Z-girts, Exposed Fasteners



1	NATURCLAD	
2	Screws	
	2.1	Panel fastener metal
	2.2	Channel fastener - by others
	2.3	Wall fixing screw - by others
3	Profiles	
	3.1	Z-girt - by others
	3.2	Jamb profile - by others
	3.3	Sill profile - by others
	3.4	Coronation profile - by others
4	Water resistant barrier - by others	
5	Thermal insulation - by others	
6	Vent. screen - by others	

A	Required min. air chamber = 1" (25,4mm)
B	Circulation of air - ·3/4" (20mm)
D	Expansion joint 1/4" - 3/8" (6-10mm)
E	Panel thickness - ·5/16" (8mm)
F	Distance from the screws to the panel edges 3/4" - 1 1/2" (20-40mm)

Figure 2 – Typical Installation – Vertical Joint – Z-girts, Exposed Fasteners

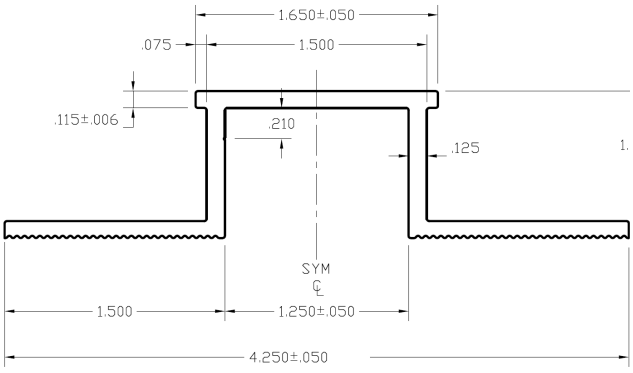


Figure 3 – Hat Channel

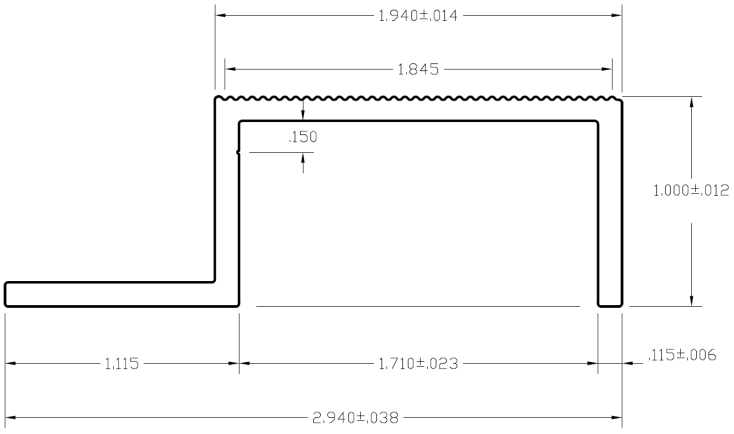
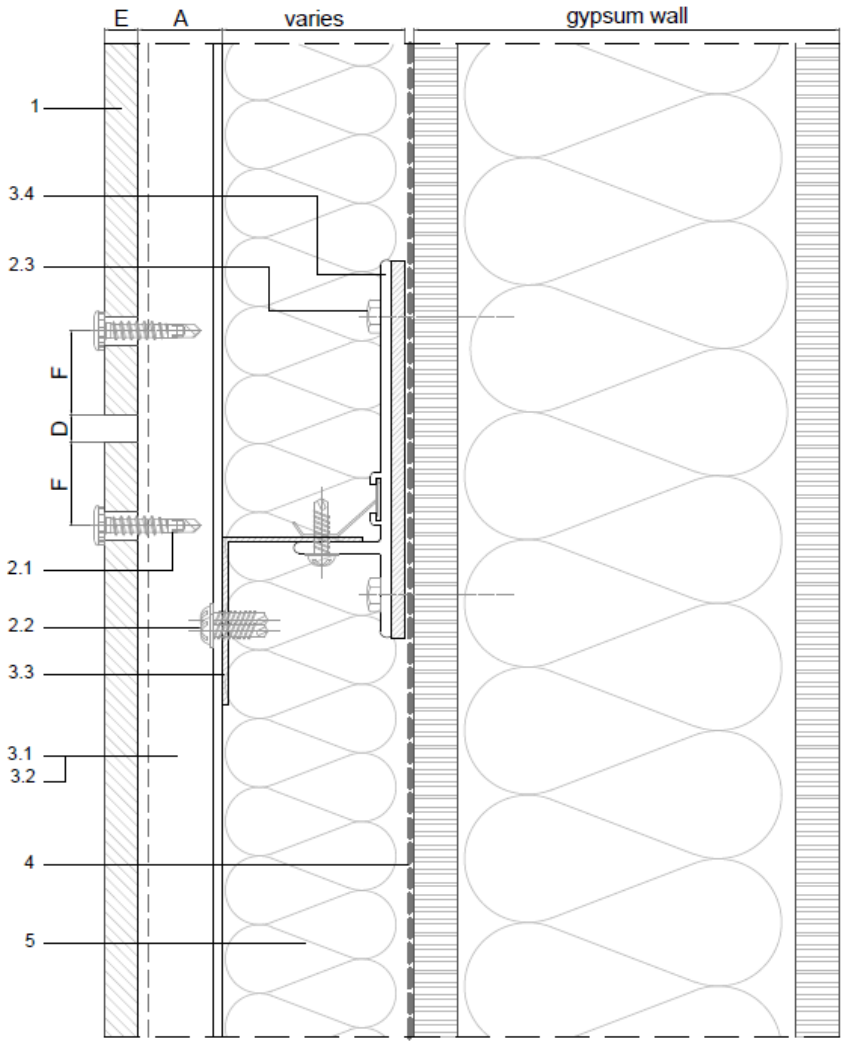


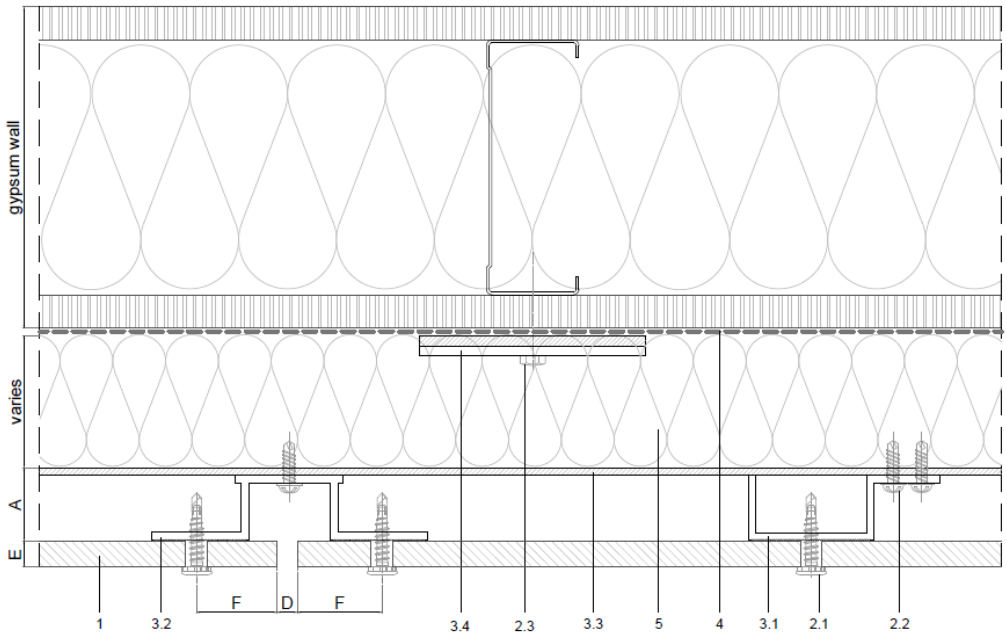
Figure 4 – J-channel



1	NATURCLAD	
2	Screws	
	2.1	Panel fastener metal
	2.2	Channel fastener - by others
	2.3	**Wall fixing screw - by others**
3	Profiles	
	3.1	Aluminum J profile
	3.2	Aluminum HAT profile
	3.3	Aluminum L profile
	3.4	Alum. wall bracket + Insulator pad
	3.5	Jamb profile - by others
	3.6	Sill profile - by others
	3.7	Coronation profile - by others
4	Water resistant barrier - by others	
5	Thermal insulation - by others	
6	Vent. screen - by others	

A	Air chamber= 1" (25,4mm)
B	Circulation of air • •3/4" (20mm)
D	Expansion joint 1/4" - 3/8" (6-10mm)
E	Panel thickness • •5/16" (8mm)
F	Distance from the screws to the panel edges 3/4" - 1 1/2" (20-40mm)

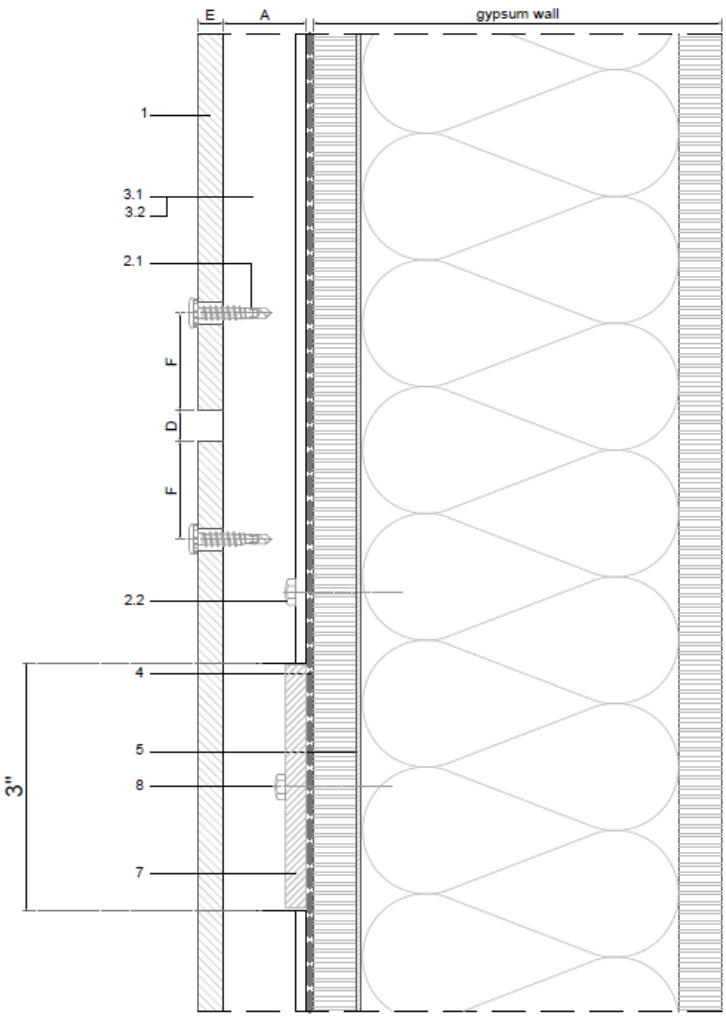
Figure 5 – Typical Installation – Horizontal Joint – Aluminum J and Hat Channel, Exposed Fastener



1	NATURCLAD	
2	Screws	
	2.1	Panel fastener metal
	2.2	Channel fastener - by others
	2.3	Wall fixing screw - by others
3	Profiles	
	3.1	Aluminum J profile
	3.2	Aluminum HAT profile
	3.3	Aluminum L profile
	3.4	Alum. wall bracket + Insulator pad
	3.5	Jamb profile - by others
	3.6	Sill profile - by others
	3.7	Coronation profile - by others
4	Water resistant barrier - by others	
5	Thermal insulation - by others	
6	Vent. screen - by others	

A	Air chamber= 1" (25,4mm)
B	Circulation of air - ·3/4" (20mm)
D	Expansion joint 1/4" - 3/8" (6-10mm)
E	Panel thickness - ·5/16" (8mm)
F	Distance from the screws to the panel edges 3/4" - 1 1/2" (20-40mm)

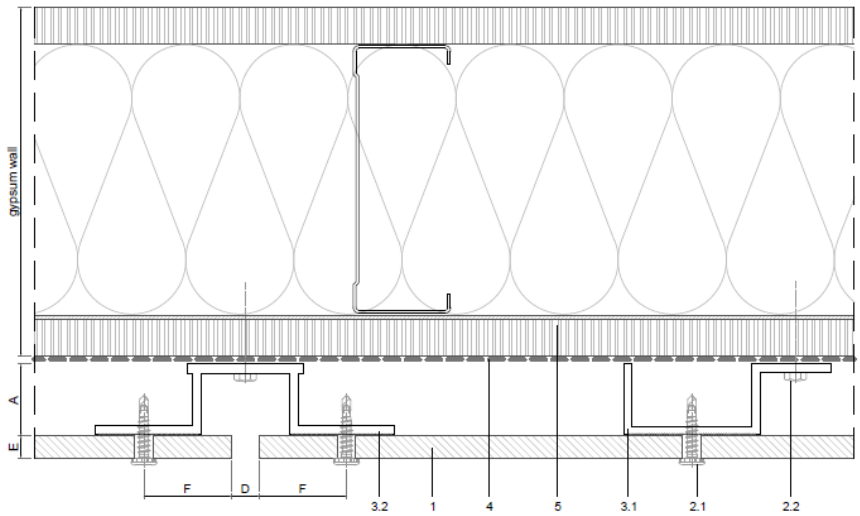
Figure 6 – Typical Installation – Vertical Joint – Aluminum J and Hat Channel, Exposed Fastener



1	NATURCLAD	
2	Screws	
	2.1	Panel fastener metal
	2.2	Wall fixing screw - by others
3	Profiles	
	3.1	Aluminum J profile
	3.2	Aluminum HAT profile
	3.3	Jamb profile - by others
	3.4	Sill profile - by others
	3.5	Coronation profile - by others
4	Water resistant barrier - by others	
5	Steel backing plate - by others	
6	Vent. screen - by others	
7	Tenmat FF102/50 Fire stopper vertically placed every 40" (1000mm) - by others	
8	Fastener horizontally placed every 10" (250mm) - by others	

A	Air chamber = 1" (25,4mm)
B	Circulation of air • •3/4" (20mm)
D	Expansion joint 1/4" - 5/16" (6-8mm)
E	Panel thickness • •5/16" (8mm)
F	Distance from the screws to the panel edges 3/4" - 1 1/2" (20-40mm)

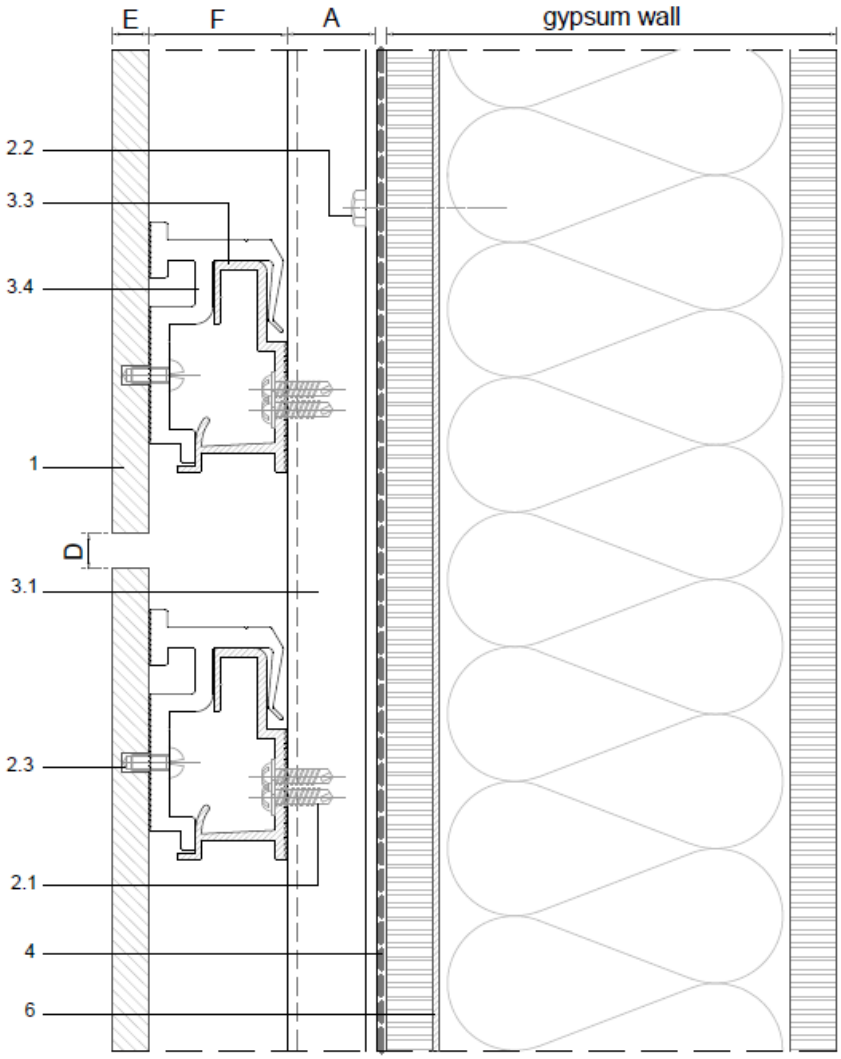
Figure 7 – Typical Installation – Horizontal Joint – Aluminum J and Hat Channel, Exposed Fastener



1	NATURCLAD
2	Screws
	2.1 Panel fastener metal
	2.2 Wall fixing screw - by others
3	Profiles
	3.1 Aluminum J profile
	3.2 Aluminum HAT profile
	3.3 Jamb profile - by others
	3.4 Sill profile - by others
	3.5 Coronation profile - by others
4	Water resistant barrier - by others
5	Steel backing plate - by others
6	Vent. screen - by others
7	Tenmat FF102/50 Fire stopper vertically placed every 40" (1000mm) - by others
8	Fastener horizontally placed every 10" (250mm) - by others

A	Air chamber = 1" (25,4mm)
B	Circulation of air • -3/4" (20mm)
D	Expansion joint 1/4" - 5/16" (6-8mm)
E	Panel thickness • -5/16" (8mm)
F	Distance from the screws to the panel edges 3/4" - 1 1/2" (20-40mm)

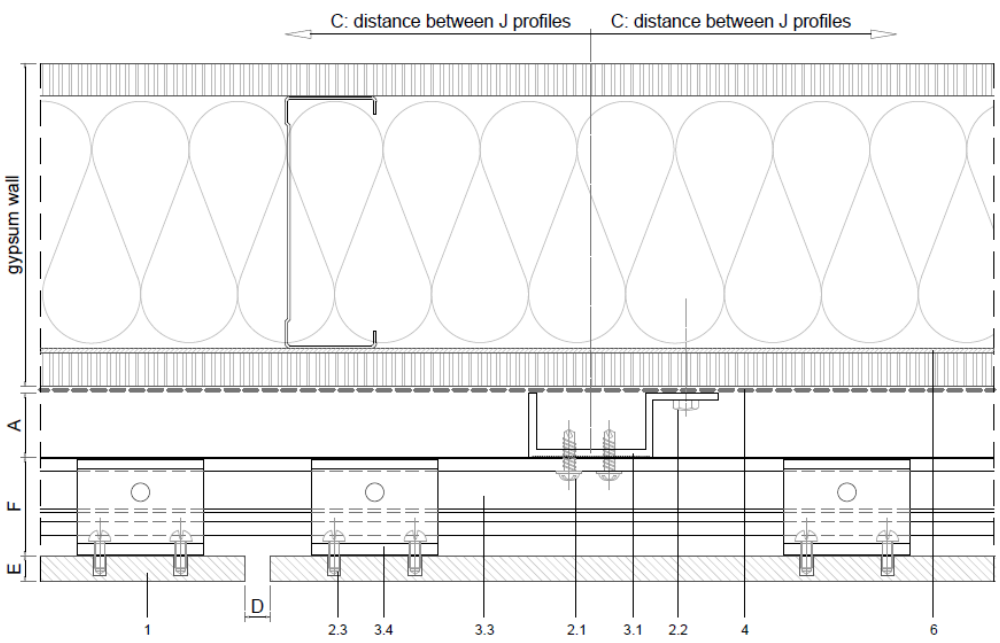
Figure 8 – Typical Installation – Vertical Joint – Aluminum J and Hat Channel, Exposed Fastener



1	NATURCLAD	
2	Screws	
	2.1	Channel fastener - by others
	2.2	Wall fixing screw - by others
	2.3	Fixing bracket fastener - by others
3	Profiles	
	3.1	Aluminum J profile
	3.2	Aluminum HAT profile
	3.3	Horizontal camel rail
	3.4	Panel fixing bracket
	3.5	Jamb profile - by others
	3.6	Sill profile - by others
	3.7	Coronation profile - by others
4	Water resistant barrier - by others	
5	Vent. screen - by others	
6	Steel backing plate - by others	

A	Air chamber = 1" (25,4mm)
B	Circulation of air • ·3/4" (20mm)
D	Expansion joint 1/4" - 3/8" (6-10mm)
E	Panel thickness 3/8" - 1/2" (10-12mm)
F	System depth= 1 $\frac{1}{2}$" (39mm)

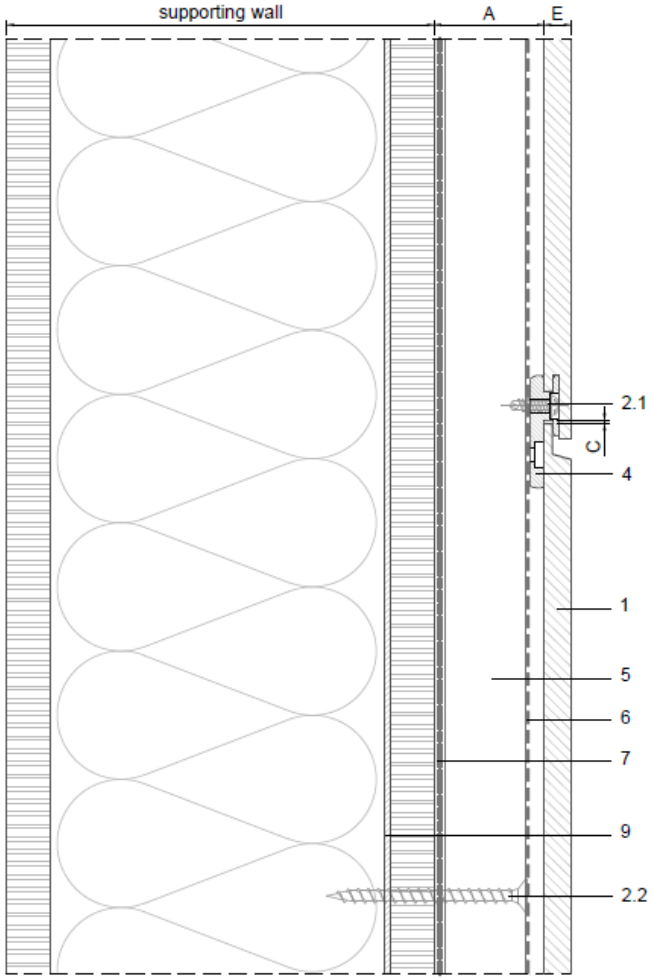
Figure 9 – Typical Installation – Horizontal Joint – Concealed Fasteners with Hangers



1	NATURCLAD	
2	Screws	
	2.1	Channel fastener - by others
	2.2	Wall fixing screw - by others
	2.3	Fixing bracket fastener - by others
3	Profiles	
	3.1	Aluminum J profile
	3.2	Aluminum HAT profile
	3.3	Horizontal carriel rail
	3.4	Panel fixing bracket
	3.5	Jamb profile - by others
	3.6	Sill profile - by others
	3.7	Coronation profile - by others
4	Water resistant barrier - by others	
5	Vent. screen - by others	
6	Steel backing plate - by others	

A	Air chamber = 1" (25,4mm)
B	Circulation of air • -3/4" (20mm)
D	Expansion joint 1/4" - 3/8" (6-10mm)
E	Panel thickness 3/8" - 1/2" (10-12mm)
F	System depth= 1 1/2" (39mm)

Figure 10 – Vertical Joint – Concealed Fasteners with Hangers



1	NATURCLAD	
2	Screws	
	2.1	Clip fixing screw
	2.2	Wall fixing screw - by others
	2.3	Twd-s screw
	2.4	Washer 1/8" (3mm) - by others
	2.5	Vent. screen fixing screw- by others
3	Profiles	
	3.1	Coronation profile - by others
	3.2	Sill profile - by others
	3.3	Jamb profile - by others
	3.4	Corner profile - by others
4	Fixing clip	
5	Wood batten - by others	
6	EPDM tape - by others	
7	Water resistant barrier - by others	
8	Vent. screen - by others	
9	Steel backing plate - by others	

A	Required min. air chamber - ø/4" (20mm)
B	Circulation of air - -3/4" (20mm)
C	Horizontal expansion joint 1/16" (1mm)
D	Vertical expansion joint 5/8" (8mm)
E	Panel thickness 5/16" (8mm)

Figure 11 – Typical Installation – Horizontal Joint - Siding System

1	NATURCLAD	
2	Screws	
	2.1	Clip fixing screw
	2.2	Wall fixing screw - by others
	2.3	Twd-s screw
	2.4	Washer 1/8" (3mm) - by others
	2.5	Vent. screen fixing screw- by others
3	Profiles	
	3.1	Coronation profile - by others
	3.2	Sill profile - by others
	3.3	Jamb profile - by others
	3.4	Corner profile - by others
4	Fixing clip	
5	Wood batten - by others	
6	EPDM tape - by others	
7	Water resistant barrier - by others	
8	Vent. screen - by others	
9	Steel backing plate - by others	

A	Required min. air chamber • -9/4" (20mm)
B	Circulation of air • -3/4" (20mm)
C	Horizontal expansion joint 1/16" (1mm)
D	Vertical expansion joint 5/6" (8mm)
E	Panel thickness 5/16" (8mm)

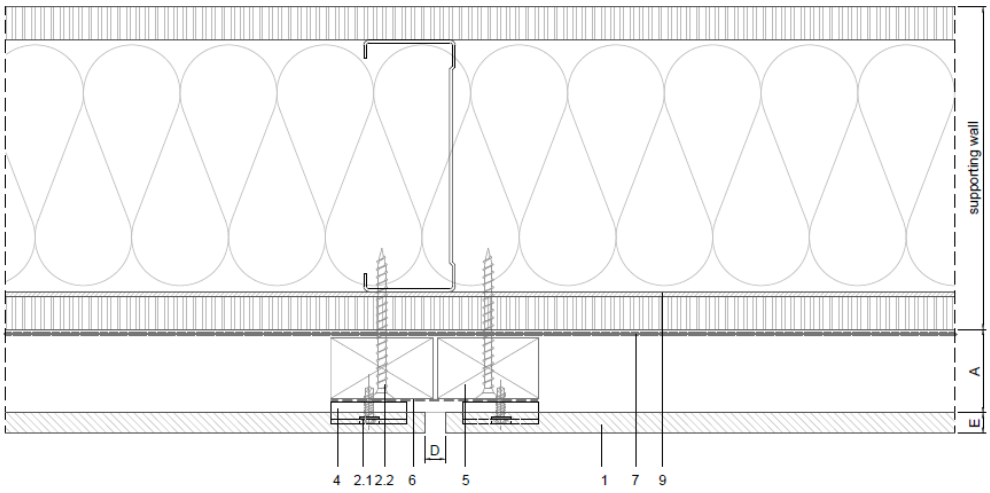


Figure 12 – Vertical Joint – Siding System