Evaluation Report

"Knotwood" Series KEC150

Metal Wall Assembly

Manufacturer:

OmniMax International, Inc.

30 Technology Pkwy S, Suite 400 / Suite 600
Peachtree Corners, GA 30092
(855) 566-8966

for

Florida Product Approval

 # FL 27460.3 R6

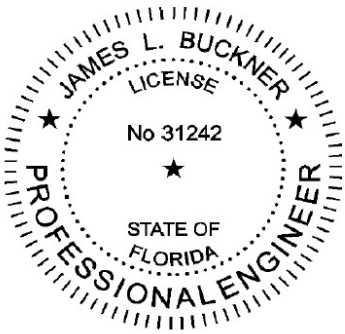
Florida Building Code 8th Edition (2023)

Method: **2 – B**
Category: **Panel Walls**
Sub - Category: **Siding**

Product: "Knotwood" Wall Panel
Material: Aluminum
Panel Series: KEC150

Prepared by:
James L. Buckner, P.E., S.E.C.B.
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Project Manager: Diana Galloway
Report No. 23-580-KWKEC-A8W-ER
(Revises 20-265-KWKEC-A8W-ER, FL27460.3 R5)
Date: 10/17/2023

This item has been digitally signed and sealed by James L. Buckner, P.E., on this date below. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.



James L. Buckner, P.E.
FL31242
Date: 2023.10.17
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Manufacturer:	**OmniMax International, Inc.** 30 Technology Pkwy S, Suite 400 / Suite 600 Peachtree Corners, GA 30092 (855) 566-8966 http://www.knotwood.com/
Product Name:	**"Knotwood" KEC150**
Product Category:	Panel Walls
Product Sub-Category	Siding
Compliance Method:	State Product Approval Rule 61G20-3.005 (2) (b)
Product/System Description:	"Knotwood" KEC 150 Wall Panel 0.055" Aluminum interlocking wall panel system with a wood-grain texture appearance, attached through plywood sheathing into wood supports.
Product Assembly as Evaluated:	Refer to Page 4 of this report for product assembly components/materials & standards: 1. Wall Panel 2. Wall Panel Clips 3. Fasteners 4. Plywood Sheathing
Support:	**Type: Wood Studs with 5/8" Plywood Sheathing** (Design of support system is outside the scope of this evaluation) **Wood Stud Description:** Stud Size: 2" (min. thickness) Dimensional Lumber Stud Spacing: 16" o.c. max. Stud Span shall be per site specific Design Professional **Sheathing Panel:** • 5/8" (nominal) or greater Plywood
Performance:	Wind Resistance: **± 120 PSF** • Allowable Design Pressure: (Refer to "Table A" attachment details herein)

Performance Standards:

The product described herein has demonstrated compliance with:

- TAS 202-94, Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure Loading
- TAS 203-94, Criteria for Testing Products Subject to Cyclic Wind Pressure Loading

Code Compliance:

The product described herein has demonstrated compliance with Florida Building Code 8th Edition (2023), Section 1708.2.

Evaluation Report Scope:

This product evaluation is limited to compliance with the structural requirements of the Florida Building Code, as related to the scope section to Florida Product Approval Rule 61G20-3.001.

Limitations and Conditions of Use:

- Diaphragm and axial load capacity are outside the scope of this evaluation.
- <u>Scope of "Limitations and Conditions of Use" for this evaluation:</u>
  This evaluation report for "Optional Statewide Approval" contains technical documentation, specifications and installation method(s) which include "Limitations and Conditions of Use" throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under "Optional Statewide Approval".
- <u>Option for application outside "Limitations and Conditions of Use"</u>
  Rule 61G20-3.005(1)(e) allows engineering analysis for "project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code". Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.
- This report is a building code product evaluation per FLPE rule (FAC) 61G15-36 to comply with Florida product approval rule (FAC) 61G20-3. This evaluation report is part of the Florida Building Commission approval for the listed code related criteria. This report by James Buckner, P.E. and CBUCK Engineering is not a design certification of code compliance construction submittal documentation, per FBC section 107, for any individual structure, site specific or permit design.
- Walls shall have a water-resistant barrier in accordance with FBC 8th Edition (2023), Section 1404.2.
- All metal components and fasteners shall be corrosion resistant in accordance with applicable sections of FBC.
- Design of support system is outside the scope of this report. Support shall be designed by others and shall comply with Chapter 16 for structural loading.
- Fire Classification is outside the scope of Rule 61G20-3 and is therefore not included in this evaluation.
- All panels shall be permanently labeled with the manufacturer's name and/or logo. All clips shall be permanently labeled with the manufacturer's name and/or logo, and/or model.
- This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties).

Quality Assurance:

The manufacturer has demonstrated compliance of products in accordance with the Florida Building Code and Rule 61G20-3.0005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

Components/ Materials (by Manufacturer):

Wall Panel System: "Knotwood"

Wall Panel Components
(All dimensions are nominal)

Wall Panel:	**KEC150-5650**
Material:	Aluminum
Thickness:	.055" (nominal)
Panel Width:	7-7/16" (5-7/8" Coverage)
Rib Height:	5/8"
Alloy Type:	6063 T5
Yield Strength:	21 ksi min.
Panel Clip:	**KAOCC45**
Material:	Aluminum
Thickness:	.060" (nominal)
Panel Clip Size:	1-7/64"
Alloy Type:	6063 T5
Yield Strength:	21 ksi min.
Fastener:	
Type:	Hex-Head Wood Screw w/WSW
Size:	10 x 2-1/2"
Standard:	Approved per FBC Section 1405.17
Cladding Starter Piece:	**KEDSTR-5650**
Material:	Aluminum
Thickness:	.080" (nominal)
Dimensions:	5/8" x 1-11/16"
Alloy Type:	6063 T5
Yield Strength:	21 ksi min.
Cladding Top Clip Large	**KECFTTLM-5650**
Material:	Aluminum
Thickness:	.060" (nominal)
Size:	2-9/16"
Alloy Type:	6063 T5
Yield Strength:	21 ksi min.
Cladding Flashing Base	**KECFBF-5650**
Material:	Aluminum
Thickness:	.060" (nominal)
Size:	2-3/4"
Alloy Type:	6063 T5
Yield Strength:	21 ksi min.
Corrosion Resistance:	In compliance with FBC Section 1405.2

Installation:

Installation Method:
(Refer to **"TABLE A"** below and drawings at the end of this report.)

- Attach panels with Clips and fasteners at spacing per Table "A"
- Support spacing: Per Table "A"
- Minimum fastener embedment into support, 1".
  (through plywood sheathing, into wood supports)
- For panel construction at the end of panels, including starter clip refer to manufacturer's instructions and any site specific design.

TABLE "A"	
Design Pressure:	**± 120 PSF**
Support Spacing:	**16" o.c. (max.)**
Panel Clip Spacing:	32" o.c. (max.)
# Fasteners per Clip:	1
Span Condition:	3 or more

Notes:

- Positive Pressure Inward/Negative Pressure Outward
- Allowable design pressure(s) for allowable stress design (ASD).
- Fastener Attachment to Steel Supports May Be Designed By A Qualified Design Professional As Required By The Florida Building Code For Site Specific Projects.
- Diaphragm and axial load capacity are not included in this evaluation.

Install the "Knotwood" wall panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 8th Edition (2023). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

Referenced Data:

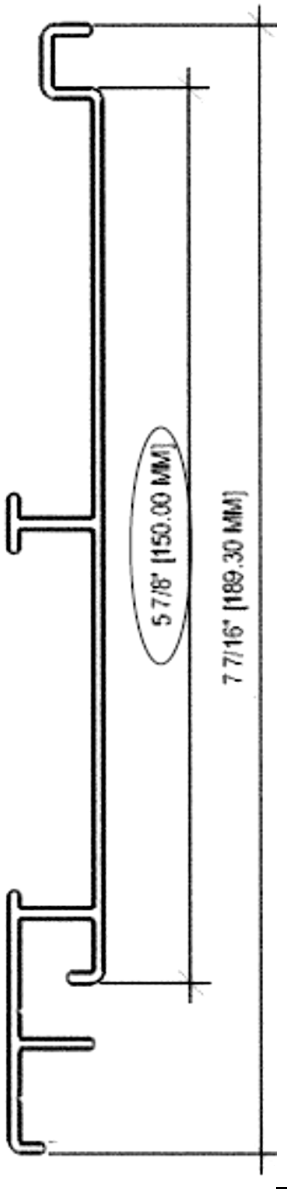
1. TAS 202-94 and Cyclic Wind Pressure Loading portion of TAS 203
   By Intertek Building & Construction) (FBC Organization
   (Intertek/Architectural Testing, Inc. Lancaster, PA #TST ID:1558)
   Report #: i6557.01-109-18, Report Date: 8/09/19

2. Quality Assurance
   National Accreditation and Management Institute, Inc. (NAMI)
   (FBC Organization #: QUA 1789)
   Omnimax QA ID #2119-1
   (Listed under Omnimax International, Inc. dba Amerimax Home Products,
   4455 River Green Parkway, Duluth, GA 30096)

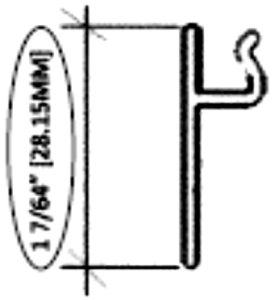
3. Certification of Independence
   By James L. Buckner, P.E. @ CBUCK Engineering
   (FBC Organization # ANE 1916)

Installation Method
Omnimax International, Inc.
"Knotwood" KEC150 Aluminum Wall Panel

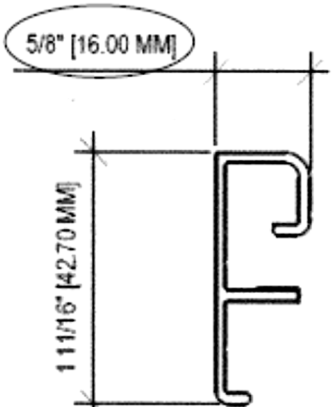
Component Drawings



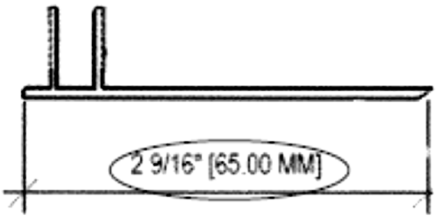
"Knotwood" (KEC150-5650)
Typical Panel Profile



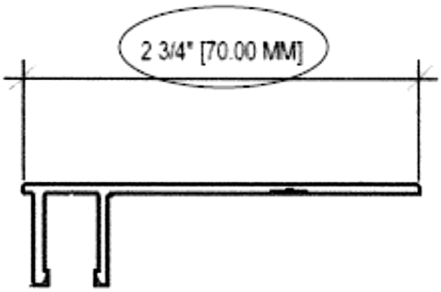
"Knotwood" (KAOCC45)
Cladding Clip



"Knotwood" (KEDSTR-5650)
Starter Piece



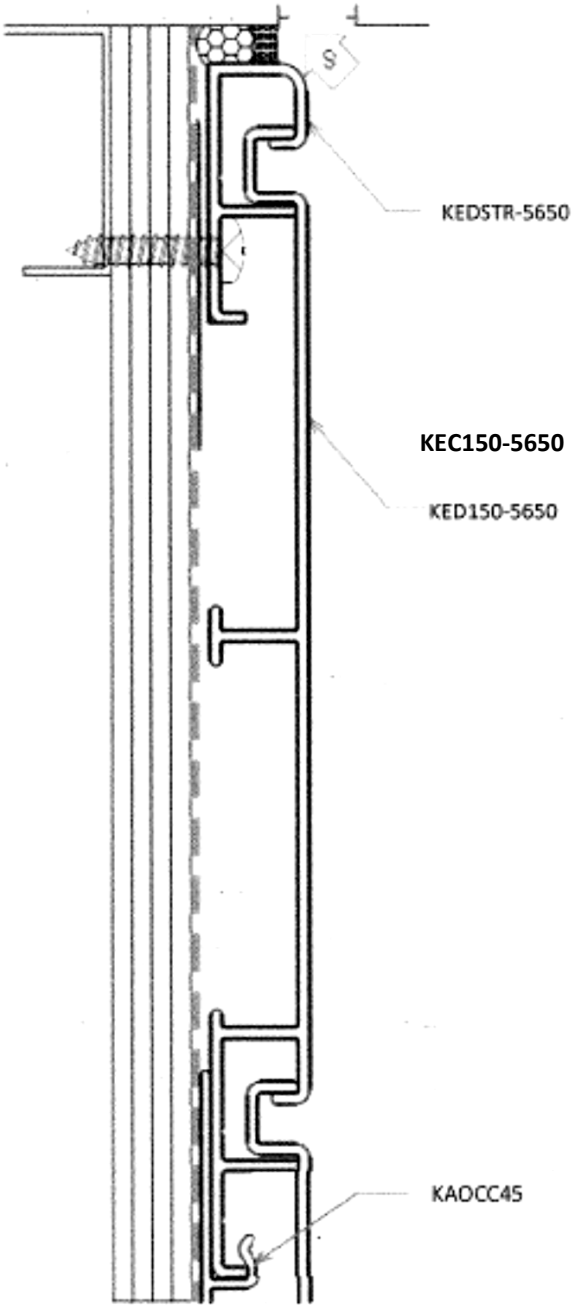
"Knotwood" (KECFTTLM-5650)
Top Clip Large



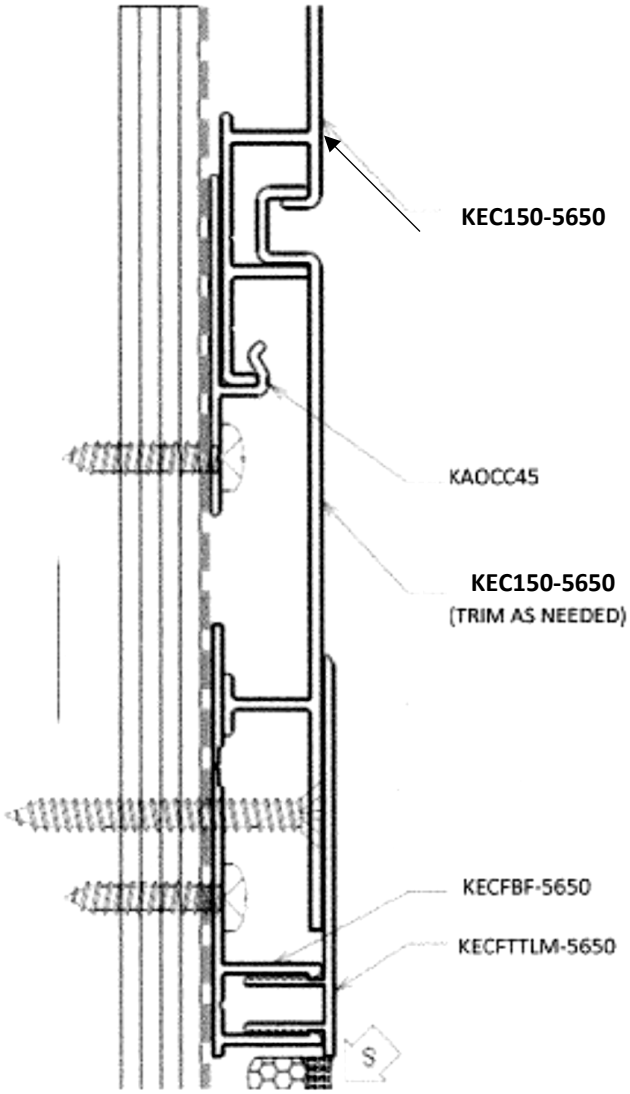
"Knotwood" (KECFBF-5650)
Flashing Base

Installation Method
Omnimax International, Inc.
"Knotwood" KEC150 Aluminum Wall Panel

Assembly Drawings



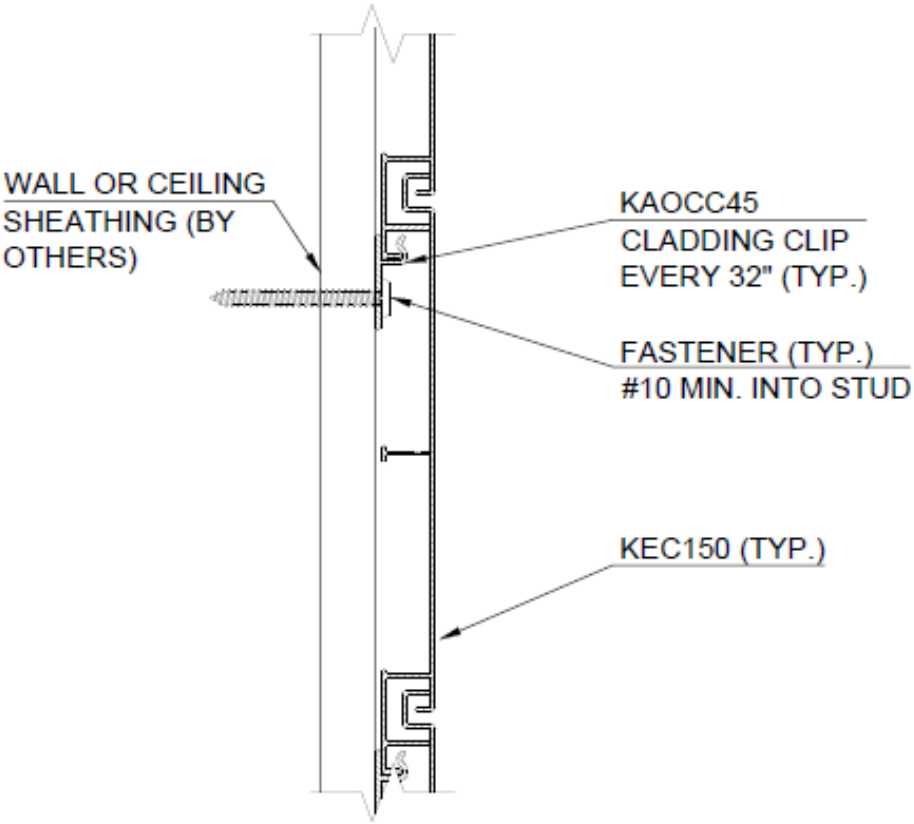
Typical Side Profile



"Knotwood" Bottom of Wall Assembly
Typical Side Profile

Installation Method
Omnimax International, Inc.
"Knotwood" KEC150 Aluminum Wall Panel

Assembly Drawings



"Knotwood" KEC150
Typical Assembly Side View