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LISTING INFORMATION OF
Alfrex - Aluminum Composite Panels
SPEC ID: 36858

Alfrex, Inc
943 GAINESVILLE HWY
BUILDING 100, Suite 4000
Buford, GA 30518
United States

LISTING INFORMATION

Alfrex ACM is an Aluminum composite material panel product composed of a fire-resistant core sandwiched between aluminum skins.

RATINGS

Standard	Rating	Design Number
ASTM E84 (4mm ACM, exterior side exposed)	Flame Spread Index < 25 Smoke Developed Index < 450	NA
ASTM E84 (4mm ACM, core exposed)	Flame Spread Index < 25 Smoke Developed Index < 450	NA
ASTM E84 (6mm FR ACM, exterior side exposed)	Flame Spread Index < 25 Smoke Developed Index < 450	NA
NFPA 285 (4mm ACM)	Met requirements	UCL/MCMWP 30-01 UCL/MCMWP 30-03 UCL/MCMWP 30-04
NFPA 285 (6mm FR ACM)	Met requirements	UCL/MCMWP 30-05
ASTM E119 (4mm ACM)	Fire Resistance Rating: 2hr	UCL/MCMWP 120-01
CAN/ULC S102 (4mm ACM)	Flame Spread Rating: 0 Smoke Developed Classification: 5	NA
CAN/ULC S102 (6mm FR ACM)	Flame Spread Rating: 0 Smoke Developed Classification: 0	NA
CAN/ULC S134 (4mm ACM)	Met requirements	UCL/MCMWP 25-01 UCL/MCMWP 25-02

Attribute	Value
Certificate Date of Expiry	December 31, 2025
Certificate Date of Initial Registration	January 7, 2022
Certificate Number	WHI22-32958101
Criteria	ASTM E119 (2012a)
Criteria	CAN / ULC S134 (2013) (R2018)
Criteria	CAN / ULC S102 (2018)
Criteria	NFPA 285 (2023)
Criteria	ASTM E84 (2023)
CSI Code	07 42 13 Metal Wall Panels
Intertek Services	Certification
Issue Status	6
Listed or Inspected	LISTED

Listing Section	BUILDING MATERIALS WITH SURFACE BURNING CHARACTERISTICS
Listing Section	WALL ASSEMBLIES
Report Number	G102654321, G104763106, G105966271, G105939384, G105887249, G105967416, G106183543
Spec ID	36858
Verification Testing	No

DRAWING INDEX

UCL/MCMWP 120-01
UCL/MCMWP 25-01
UCL/MCMWP 25-02
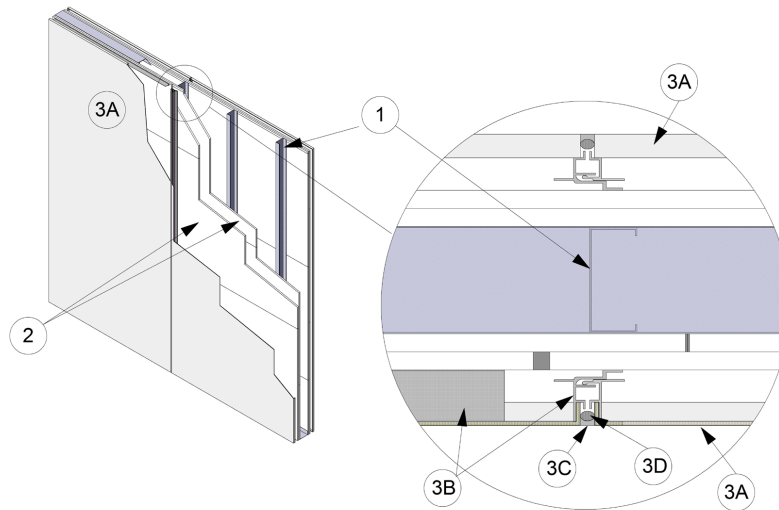UCL/MCMWP 30-01
UCL/MCMWP 30-03
UCL/MCMWP 30-04
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UCL/MCMWP 120-01

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Division 7 – Thermal and Moisture Protection
07 42 00 Wall Panels
07 42 13.23 Metal Composite Material Wall Panels

Alfrex, LLC
Design No. UCL/MCMWP 120-01
Non-Load Bearing Wall Assembly
ALFREX
ASTM E119
Rating: 2 Hour Fire Resistance

1. **STEEL FRAMING:** Install nominal 2-1/2 in. 25 GA steel studs spaced nominally 24 in. on center (oc), friction fit into 25 GA top and bottom steel tracks. Studs cut to be nominal 1/4 in. shorter than wall height.

2. **GYPSUM BOARD:** Apply two layers of 5/8 in. thick, Type X gypsum board to each side of the steel framing (Item 1) with the long dimension perpendicular to the steel studs. Secure base layer using #6 1-1/4 in. long, Type S screws spaced nominally 16 in. oc. Install face layer with joints offset min. 24 in. from the base layer joints. Secure face layer using #6 1-5/8 in. long, Type S screws spaced nominally 16 in. oc and offset 8 in. from the base layer screws.

A. JOINT TAPE AND COMPOUND (Not Shown) – Apply a level 2 finish of vinyl or casein, dry or premixed, joint compound applied in two coats to all exposed fastener heads and gypsum board joints. Embed min. 2 in. wide paper, plastic, or fiberglass tape in first layer of compound over joints in gypsum board (Item 3).

3. **CERTIFIED MANUFACTURER:** Alfrex, LLC

   CERTIFIED PRODUCT: Aluminum Composite Panels

   MODEL: ALFREX 4mm Panel

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EXTERIOR VENEER: Install aluminum composite panels using the following elements:

A. ALUMINUM COMPOSITE PANELS – Secure aluminum composite panels to aluminum extrusions (Item 5B) with #12 x 3/4 in. long self-drilling hex-head steel screws 24 in. oc. Where applicable secure aluminum composite panel to aluminum angles (Item 5A).

B. ALUMINUM EXTRUSIONS – Install aluminum extrusion to aluminum composite panels (Item 5A) prior to installation onto wall. Secure aluminum extrusion through the gypsum board (Item 2) into the steel framing (Item 1) using #12 x 3 in. long self-drilling TEK screws.

C. BACKER ROD – Install nominal 7/8 in. diameter foam backer rod compressed into joints between the aluminum composite panels (Item 5B). Install backer rod imbedded into the joint so that a min. 1/4 in. space is remaining between the backer rod and the exterior face of the aluminum composite panels (Item 5B).

D. SEALANT – Install a min. 1/4 in. thick bead of Dow Corning® 795 Silicone Building Sealant into joints between aluminum composite panels (Item 5B) over the backer rod. Sealant installed to be flush with the exterior surface of the aluminum composite panels (Item 5B).

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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UCL/MCMWP 25-01

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Alfrex, LLC
Design No. UCL/MCMWP 25-01
Exterior Wall Systems
ALFREX
CAN/ULC S134
Rating: Meets Conditions of Acceptance

1. **NON-COMBUSTIBLE WALL ASSEMBLY** (Not Shown)**:** ALFREX Aluminum Composite (ACM) Panels (Item 2) are to be installed on non-combustible, non-loadbearing wall assemblies as established by the applicable Code and criteria.

2. **CERTIFIED MANUFACTURER:** Alfrex, LLC

    CERTIFIED PRODUCT: Aluminum Composite Panels

    CERTIFIED MODEL: ALFREX 4 mm Panel

    EXTERIOR VENEER: Install aluminum composite panels using the following elements:

A. ALUMINUM ANGLES (Not Shown) – Where applicable (such as opening for windows and wall perimeters) install "L" shaped aluminum angle secured into the supporting construction of Item 1 using approved fasteners and methods.

B. ALUMINUM COMPOSITE PANELS – Secure aluminum composite panels to aluminum extrusions (Item 5C) with #12 × 3/4 in. long self-drilling hex-head steel screws min. 24 in. on center (oc). Where applicable secure aluminum composite panel to aluminum angles (Item 2A).
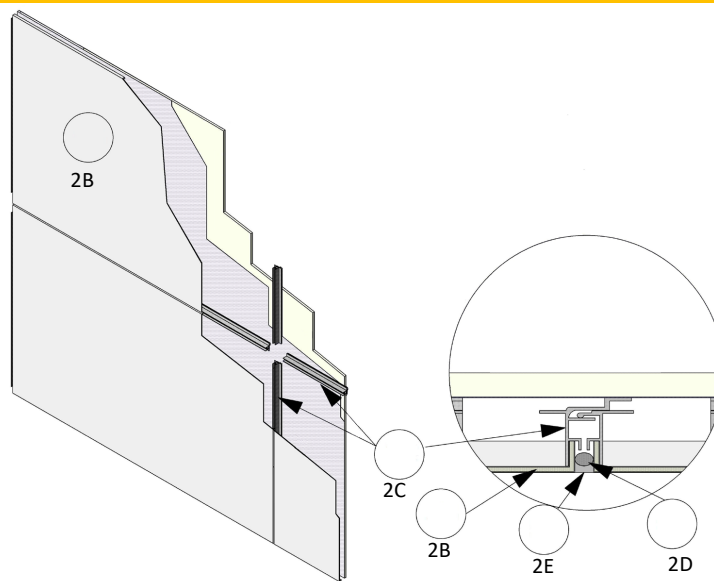

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Division 7 – Thermal and Moisture Protection
07 42 00 Wall Panels
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C. ALUMINUM EXTRUSIONS – Install aluminum extrusion to aluminum composite panels (Item 2B) prior to installation onto wall. Secure aluminum extrusion into the supporting construction of Item 1 using approved fasteners and methods.

D. BACKER ROD – Install nominal 7/8 in. diameter foam backer rod compressed into joints between the aluminum composite panels (Item 2B). Install backer rod imbedded into the joint so that a min. 1/4 in. space is remaining between the backer rod and the exterior face of the aluminum composite panels (Item 2B).

E. SEALANT – Install a min. 1/4 in. thick bead of Dow Corning® 795 Silicone Building Sealant into joints between aluminum composite panels (Item 2B) over the backer rod. Sealant installed to be flush with the exterior surface of the aluminum composite panels.

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UCL/MCMWP 25-02

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Division 07 – Thermal and Moisture Protection
07 42 00 Wall Panels
07 42 13.23 Metal Composite Material Wall Panels

Alfrex, Inc.
Design No. UCL/MCMWP 25-02
Exterior Wall Systems
4 mm Alfrex ACM Panels
CAN/ULC S134
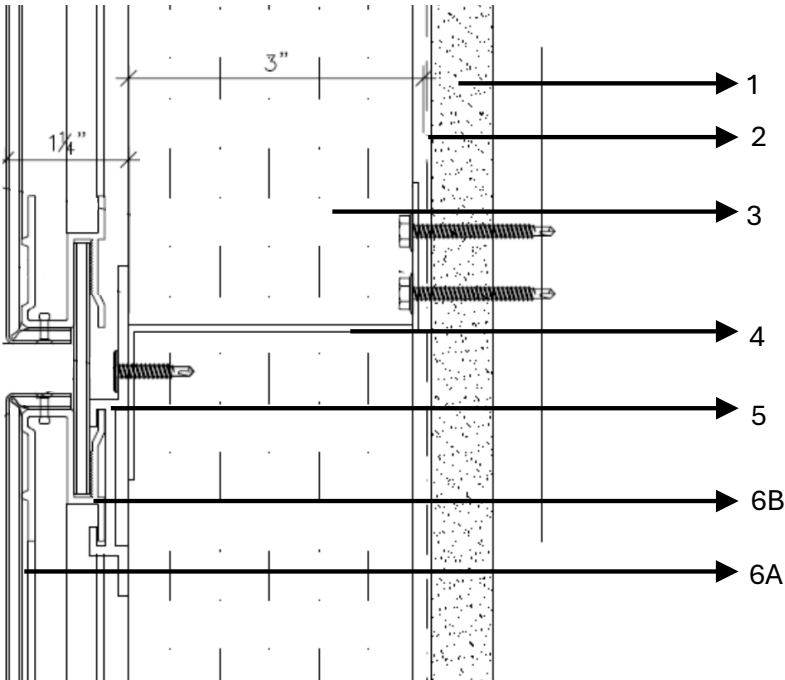**Rating: Meets Conditions of Acceptance**

Figure 1 – Wall Assembly

UCL/MCMWP 25-02 (2 OF 3)

Division 07 – Thermal and Moisture Protection
07 42 00 Wall Panels
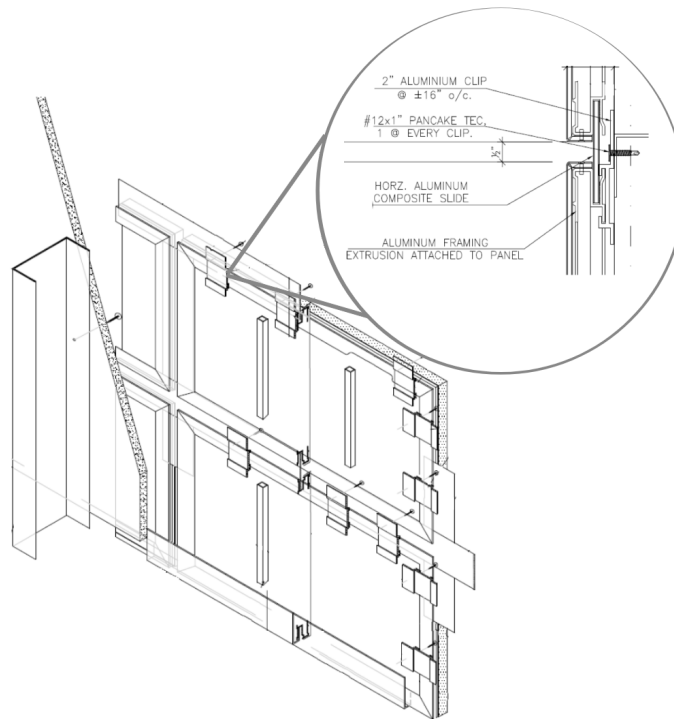07 42 13.23 Metal Composite Material Wall Panels

2" ALUMINIUM CLIP @ ±16" o/c.

#12x1" PANCAKE TEC, 1 @ EVERY CLIP.

HORZ. ALUMINUM COMPOSITE SLIDE

ALUMINUM FRAMING EXTRUSION ATTACHED TO PANEL

Figure 2 – ACM Attachment Details

1. **SUPPORTING WALL CONSTRUCTION:** Install nominal 2 x 6 in. 20 GA galvanized steel studs spaced 24 in. on center (oc). Attach the steel framing to 20 GA top and bottom steel tracks using #8 x 1/2 in. long pan-head framing screws. Install 4 ft. x 8 ft. x 5/8 in. thick DensGlass® Gold Exterior Sheathing perpendicular to the studs. Sheathing is secured with #6 x 1-1/4 in. long self-drill zinc-plated screws spaced 8 in. at the joints and perimeter and 12 in. in the field.

   INTERIOR SHEATHING (Not Shown): Install one layer of 4 ft. x 10 ft. x 1/2 in. thick, Type X gypsum board with the long dimension perpendicular to the studs.

   Sheathing is fastened to the framing with #6 x 1/14 in. long self-drill zinc-plated screws spaced 8 in. at the joints and perimeter and 12 in. in the field.

2. **WEATHER BARRIER:** Adhere a layer of VaproShield® WrapShield SA Self-Adhered Vapor Permeable Air Barrier oriented vertically.

3. **INSULATION:** Install nominal 3 in. thick mineral wool insulation between the weather barrier and the ACM panels using 3 in. long insulation pins distributed one at each corner, and one in the middle of each 4 x 8 in. insulation board. The density of the insulation is 6.2 pcf.

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Division 07 – Thermal and Moisture Protection
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4. **Z-GIRTS:** 3 x 3 x 3 in. 18 GA galvanized steel Z-girts installed horizontally at every horizontal panel joint and mid-span for panels over 48 in. in height. Z-grits are secured to the studs with #14 x 1-1/2 in. type "A" screws with two screws at each stud.

5. **WALL CLIPS:** Pre-install 2 in. x 3 in. aluminum wall clips to the top and left edge of each panel by clipping the wall clip into the pre-installed aluminum extrusion spacing the clips 24 in. oc.

6. **EXTERIOR CLADDING SYSTEM:**

   CERTIFIED PRODUCT: 4mm Alfrex Aluminum Composite Panels – Installed with CMPS-CP Attachment System

   Install the panels using the following Extrusion System components:

A. COMPOSITE PANEL – Secure the 4mm Alfrex ACM panels to the Z-girts by fastening the pre-installed clips to the Z-girts using #12 x 1 in. pancake tec fasteners with one fastener per clip. Install the next layer of panels by attaching the bottom profile of the pre-installed aluminum extrusion to the top mating edge of the wall clips. The panels are installed in a manner to leave a 1/2 in. reveal between panel edges, vertically and horizontally. An ACM spline is friction fitted into the gap.

B. PRE-INSTALLED ALUMINUM EXTRUSIONS – Aluminum extrusions are secured into the panel edge using countersink aluminum rivets along the perimeter of the panels.

7. **WINDOW OPENING (Not Shown):** Install 18 GA aluminum L-flashing spanning the wall thickness of 11 in. with a 2 in. vertical leg containing a 1/2 in. drip edge. Flashing is installed around the window opening sill, jambs, and header.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.
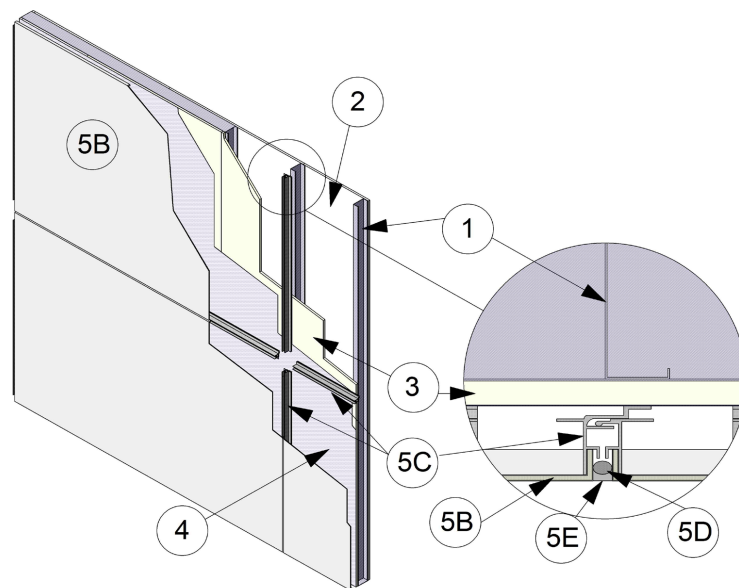
Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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UCL/MCMWP 30-01

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Division 7 – Thermal and Moisture Protection
07 42 00 Wall panels
07 42 13.23 Metal Composite Material Wall Panels

Alfrex, LLC
Design No. UCL/MCMWP 30-01
Exterior Wall Systems
ALFREX
NFPA 285
Rating: Meets Conditions of Acceptance

1. **STEEL FRAMING:** Install nominal 3-5/8 in. 20 GA steel studs spaced nominally 24 in. on center (oc). Attach steel studs to 20 GA top and bottom steel tracks using nominal 7/16 in. long pan-head framing screws attached to front and back of each steel stud. Nominal 1-1/2 in. x 1/2 in., 16 GA lateral bracing installed in the knockouts of the steel studs spaced 48 in. oc vertically up the wall. Nominal 4 in. thick, 4 pound per cubic foot (pcf) density mineral fiber insulation installed at the floor line for firestopping.

2. **INTERIOR GYPSUM:** Apply one layer of 5/8 in. thick, Type X gypsum board to the interior side

of the steel framing (Item 2) with the long dimension parallel to the steel studs. Secure using #6 1-1/4 in. long, Type S screws spaced nominally 8 in. oc around the perimeter and 12 in. oc in the field.

A. JOINT TAPE AND COMPOUND (Not Shown) – Apply a level 2 finish of vinyl or casein, dry or premixed, joint compound applied in two coats to all exposed fastener heads and gypsum board joints. Embed min. 2 in. wide paper, plastic, or fiberglass tape in first layer of compound over joints in gypsum board (Item 3).

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Division 7 – Thermal and Moisture Protection
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3. **EXTERIOR SHEATHING:** Install 5/8 in. thick DensGlass® Gold exterior sheathing to the exterior side of the steel framing (Item 2) with the long dimension perpendicular to the steel studs. Secure using #6 1-1/4 in. long, Type S screws spaced nominally 8 in. oc around the perimeter and 12 in. oc in the field.

4. **WEATHER BARRIER:** Install a single layer of DuPont™ Tyvek® vapor barrier to the exterior side of the exterior sheathing (Item 3) with min. 6 in. overlaps at the seams and attached with staples spaced 24 in. oc.

5. **CERTIFIED MANUFACTURER:** Alfrex, LLC

   CERTIFIED PRODUCT: Aluminum Composite Panels

   MODEL: ALFREX 4mm Panel

   EXTERIOR VENEER: Install aluminum composite panels using the following elements:

   A. ALUMINUM ANGLES (Not Shown) – Where applicable (such as opening for windows and wall perimeters) install "L" shaped aluminum angles secured through the exterior sheathing (Item 3) into the steel framing (Item 1). Secure aluminum composite panels (Item 5B) to aluminum angles using #12 x 3/4 in. long self-drilling screws spaced max. 24 in. oc.

   B. ALUMINUM COMPOSITE PANELS – Secure aluminum composite panels to aluminum extrusions (Item 5C) with #12 x 3/4 in. long self-drilling hex-head steel screws 24 in. oc. Where applicable secure aluminum composite panel to aluminum angles (Item 5A).

   C. ALUMINUM EXTRUSIONS – Install aluminum extrusion to aluminum composite panels (Item 5B) prior to installation onto wall. Secure aluminum extrusion through the exterior sheathing (Item 3) into the steel framing (Item 1) using #12 x 1-1/2 in. long self-drilling TEK screws.

   D. BACKER ROD – Install nominal 7/8 in. diameter foam backer rod compressed into joints between the aluminum composite panels (Item 5B). Install backer rod imbedded into the joint so that a min. 1/4 in. space is remaining between the backer rod and the exterior face of the aluminum composite panels (Item 5B).

   E. SEALANT – Install a min. 1/4 in. thick bead of Dow Corning® 795 Silicone Building Sealant into joints between aluminum composite panels (Item 5B) over the backer rod. Sealant installed to be flush with the exterior surface of the aluminum composite panels (Item 5B).

6. **FLASHING** (Not Shown)**:** Where applicable, min. 0.04 in. thick aluminum flashing shall be installed in openings spanning from the interior to the exterior side of the window opening.

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UCL/MCMWP 30-03

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Division 07 – Thermal and Moisture Protection
07 42 00 Wall Panels
07 42 13.23 Metal Composite Material Wall Panels

Alfrex, Inc.
Design No. UCL/MCMWP 30-03
Exterior Wall Systems
4 mm Alfrex ACM Panels
NFPA 285
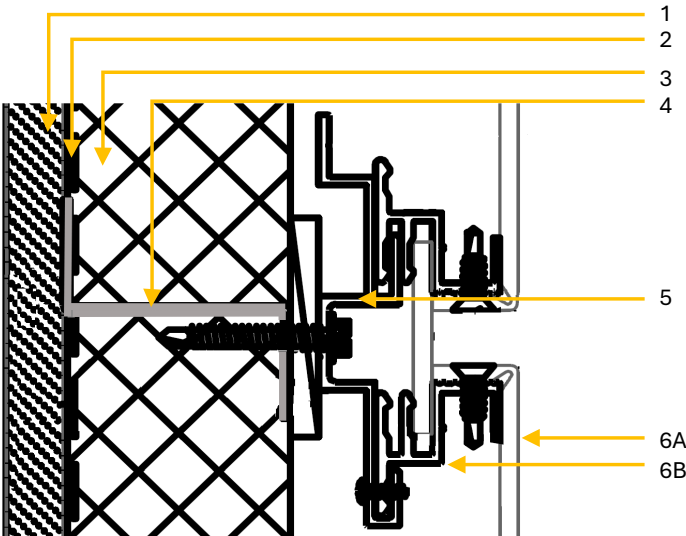**Rating: Meets Conditions of Acceptance**

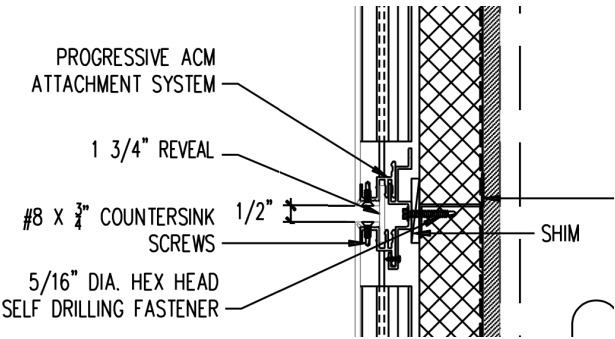**Figure 1 – Wall Assembly**

Figure 2 – ACM Attachment Details

UCL/MCMWP 30-03 (2 OF 2)

Division 07 – Thermal and Moisture Protection
07 42 00 Wall Panels
07 42 13.23 Metal Composite Material Wall Panels

1. **SUPPORTING WALL CONSTRUCTION:** Install nominal 2 x 6 in. 20 GA galvanized steel studs spaced 24 in. on center (oc). Attach the steel framing to 20 GA top and bottom steel tracks using #8 x 1/2 in. long pan-head framing screws. Install 4 ft. x 8 ft. x 5/8 in. thick DensGlass® Gold Exterior Sheathing perpendicular to the studs. Sheathing is secured with #6 x 1-1/4 in. long self-drill zinc-plated screws spaced 8 in. at the joints and perimeter and 12 in. in the field.

    INTERIOR SHEATHING (Not Shown): Install one layer of 4 ft. x 10 ft. x 5/8 in. thick, Type X gypsum board with the long dimension perpendicular to the studs. Sheathing is fastened to the framing with #6 x 1/14 in. long self-drill zinc-plated screws spaced 8 in. at the joints and perimeter and 12 in. in the field.

2. **WEATHER BARRIER:** Apply a layer of VaproShield® WrapShield SA Self-Adhered Vapor Permeable Air Barrier oriented horizontally. Staple the seams at 24 in. oc spacing.

3. **INSULATION:** Install nominal 3 in. thick mineral wool insulation between the weather barrier and the ACM panels. The insulation is friction fitted between the Z-girts. The density of the insulation is 6.2 pcf.

4. **Z-GIRTS:** 3 in. wide 18 GA galvanized steel Z-girts installed horizontally. Z-girts are spaced nominal 24 in. oc. Z-grits are secured to the studs with 2-1/4 in. long, 5/16 in. diameter hex-head self-drilling screws spaced 24 in. oc.

5. **WALL CLIPS:** Pre-install 2 in. x 3 in. aluminum wall clips to the perimeter of the top edge of each panel using 2-1/4 in. long, 5/16 in. diameter, hex drilling fasteners per clip. Clips are spaced at 24 in. oc around the perimeter of the panel. Clips are provided by the manufacturer with the ACM system.

6. **EXTERIOR CLADDING SYSTEM:**

    CERTIFIED PRODUCT: 4mm Alfrex Aluminum Composite Panels – Installed with Progressive ACM Attachment System

    Install the panels using the following Extrusion System components:

    A. COMPOSITE PANEL – Secure the 4mm Alfrex ACM panels to the z-girts by fastening the pre-installed clips to the Z-girts using 2-1/4 in. long, 5/16 in. diameter, hex drilling fasteners. Install the next layer of panels by attaching the bottom profile of the pre-installed aluminum extrusion to the top mating edge of the wall clips. The panels are installed in a manner to leave a 1-3/4 in. reveal between panel edges, vertically and horizontally. An ACM spline is friction fitted into the gap.

    B. PRE-INSTALLED ALUMINUM EXTRUSIONS – Aluminum extrusions are secured into the panel edge using #8 x 3/4 in. countersink screws along the perimeter of the panels.

7. **WINDOW OPENING (Not Shown):** Install 18 GA aluminum L-flashing spanning the wall thickness of 11-1/4 in. with a 2 in. return on the interior side of the wall. Flashing is installed around the window opening sill, jambs, and header.

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UCL/MCMWP 30-04

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07 42 13.23 Metal Composite Material Wall Panels

Alfrex, Inc.
Design No. UCL/MCMWP 30-04
Exterior Wall Systems
4 mm Alfrex ACM Panels
NFPA 285
Rating: Meets Conditions of Acceptance

1
2
3
4
5
6B
½"
6A

Figure 1 – Wall Assembly

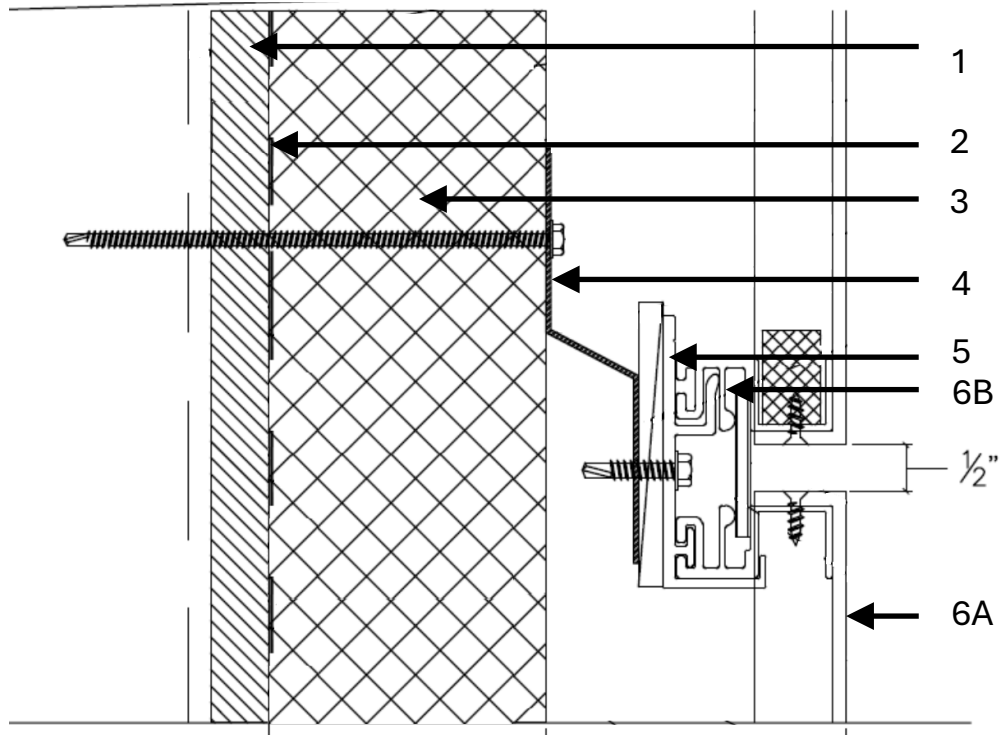| Date Revised: October 9, 2024	Page 1 of 3	Spec ID: 36858
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Division 07 – Thermal and Moisture Protection
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5" #12 TEK3 FASTENER
1" 18 GAUGE CONTINOUS ZGIRT
SHIM AS REQ'D
½"
4MM COMPOSITE SPLINE
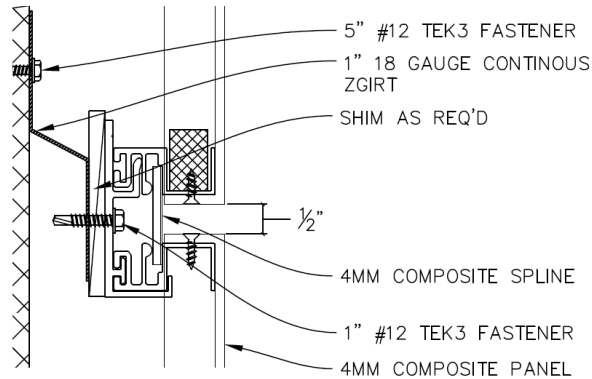1" #12 TEK3 FASTENER
4MM COMPOSITE PANEL

Figure 2 – ACM Attachment Details

1. **SUPPORTING WALL CONSTRUCTION:** Install nominal 6 in. 18 GA steel studs spaced 24 in. on center (oc). Attach the steel framing to 18 GA top and bottom steel tracks using #6 x 1/2 in. long self-drilling screws. Install 4 ft. x 8 ft. x 5/8 in. thick DensGlass® Gold Exterior Sheathing perpendicular to the studs. Sheathing is secured with 1-5/8 in. long bugle-head self-tapping screws spaced 8 in. at the joints and perimeter and 12 in. in the field.

    INTERIOR SHEATHING (Not Shown): Install one layer of 4 ft. x 10 ft. x 5/8 in. thick, Type X gypsum board with the long dimension perpendicular to the studs. Sheathing is fastened to the framing with 1-5/8 in. long bugle-head self-tapping screws spaced 8 in. at the joints and perimeter and 12 in. in the field.

2. **WEATHER BARRIER:** Apply a layer of VaproShield® Reveal Shield SA™ Self-Adhered Vapor Permeable Air Barrier oriented horizontally.

3. **INSULATION:** Install nominal 3 in. thick Dupont Thermax™ Sheathing Polyiso Insulation panels between the weather barrier and the ACM panels. Secure the insulation using 5 in. long #12 Tek 3 fasteners and plastic washers spaced at 24 in. oc in the field.

4. **Z-GIRTS:** 1 in. tall 18 GA galvanized steel Z-girts installed horizontally. Z-girts are spaced nominal 24 in. oc. Z-grits are secured with 5 in. long #12 Tek 3 fasteners.

5. **WALL CLIPS:** Install 2 in. x 3 in. aluminum wall clips to the Z-girts using #12 x 1-1/4 in. self-drilling fasteners. Clips are installed to align with the top corners of each panel. Clips are installed using optional shims to level the exterior surface. Max. panel width is 83-1/4 in. Clips are provided by the manufacturer with the ACM system.

UCL/MCMWP 30-04 (3 OF 3)

Division 07 – Thermal and Moisture Protection
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6. EXTERIOR CLADDING SYSTEM:

CERTIFIED PRODUCT: 4mm Alfrex Aluminum Composite Panels – Installed with Accu-Trac DS Rainscreen System

Install the panels using the following Extrusion System components:

A. COMPOSITE PANEL – Secure the 4mm Alfrex ACM panels to the wall clips spaced through the pre-installed aluminum extrusion at the corner of each panel.

The panels are installed in a manner to leave a 1/2 in. gap between panel edges, vertically and horizontally.

B. PRE-INSTALLED ALUMINUM EXTRUSIONS – Aluminum extrusions are riveted into the panel on each corner using #8 x 3/4 in. countersunk screws along the perimeter of the panels.

7. WINDOW OPENING (Not Shown): Install 18 GA aluminum closure trim around the perimeter of the window opening.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

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UCL/MCMWP 30-05

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Alfrex, Inc.
Design No. UCL/MCMWP 30-05
Exterior Wall Systems
6 mm Alfrex FR ACM Panels
NFPA 285
Rating: Meets Conditions of Acceptance

Figure 1 – Wall Assembly

- .040 ALUMINUM CLOSURE TRIM
- 4MM COMPOSITE SPLINE
- 6MM COMPOSITE PANEL
- 1" #12 TEK3 FASTENER
- 3" 18 GAUGE CONTINOUS ZGIRT
- 2" #12 TEK3 FASTENER
- 3" MINERAL WOOL 6.2 PSF SINGLE DENSITY INSULATION

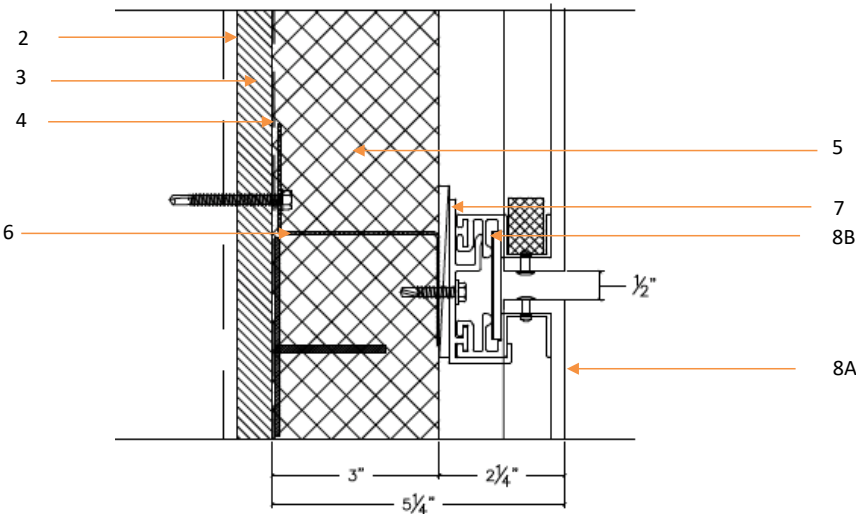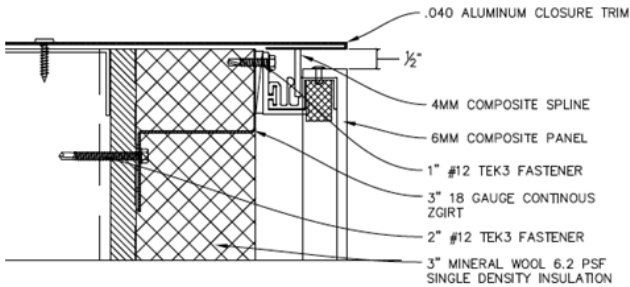**Figure 2 – ACM Attachment Details**

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07 42 00 Wall Panels
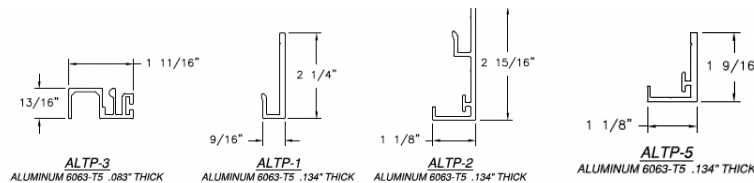07 42 13.23 Metal Composite Material Wall Panels

Figure 3- Wall Clip Details

1. **INTERIOR SHEATHING (Not Shown):** Install one layer of 4 ft. x 8 ft., 5/8 in. thick, Type X gypsum board with long dimension perpendicular to the studs. Secure the sheathing to the framing with #6 x 1-1/4 in. self-drilling, zinc-plated, bugle-head screws, spaced 8 in. on center (oc) around the perimeter and 12 in. oc in the field.

2. **FRAMING:** Install 3-5/8 in. x 18 ft., 18 GA steel studs spaced max. 24 in. oc. Attach the steel framing to 14 ft. x 3-5/8 in., 18 GA top and bottom steel tracks using #6 x 1/2 in. long self-drilling screws.

3. **EXTERIOR SHEATHING:** Install 4 ft. x 8 ft., 5/8 in. thick DensGlass® Gold Exterior Sheathing with long edges oriented perpendicular to the studs. Secure the exterior sheathing with #6, 1-1/4 in. self-drilling screws spaced 8 in. at the joints and around the perimeter with a 12 in. spacing in the field.

4. **WEATHER BARRIER:** Apply a single layer of VaproShield® PanelShield™ Self-Adhered Vapor Permeable Air Barrier over the exterior sheathing, oriented horizontally, and self-adhered into position.

5. **INSULATION:** Install 3 in. thick ROCKWOOL CavityRock® Semi-rigid Stone Wool Insulation Board, featuring a dual-density layer of 6.2 psf for outer layer and 3.8 psf for inner layer, between the weather vapor barrier and the ACM panels.

Secure the insulation using 3 in. long self-adhering pins distributed evenly along the perimeter.

6. **Z-GIRTS:** Install 3 in. tall 18 GA continuous steel Z-girts horizontally placed to align with the upper joints of the panels and on an average spacing of 16 in. vertically. Secure Z-girts with 2 in. long #12 Tek 3 fasteners to each framing member.

7. **WALL CLIPS:** The 2 in. x 3 in. 6063 T5 aluminum wall clips (Figure 3) are installed progressively as the ACM panels are installed. The wall clips are attached to the Z-girts using two #12 x 1-1/4 in. self-drilling fasteners per clip. Wall clips may use optional shims to level the exterior surface. The clips are provided by the ACM system Fabricator.

8. **EXTERIOR CLADDING:**

   CERTIFIED PRODUCT: 6mm Alfrex FR Aluminum Composite Panels – Installed with a Progressive ACM Attachment System

   A. COMPOSITE PANEL – The 6mm Alfrex FR ACM panels are fabricated with a rout-and-return edge on four sides.

   B. ALTP-3 Aluminum Extrusion – The extrusion is fixed to the panel edge with 1/8 in. 5052 alloy aluminum pop rivets located max. 3 in. from each end and spaced max. 16 in. oc.

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PANEL ATTACHMENT – Secure the first row of 6mm Alfrex FR ACM panels by inserting the bottom edge of the aluminum extrusions to the top mating edge of the starter wall clips (ALTP-1). Clips (ALTP-2) are located on vertical edges at each Z-girt and two clips are used on the top edge. Subsequent rows are installed progressively, leaving a 1/2 in. gap between vertical and horizontal panel edges.

Fill the vertical and horizontal joints with friction-fitted 4mm composite splines.

9. **WINDOW OPENING (Not Shown):** Install 0.040 in. thick (18 GA) aluminum closure trim, 10-1/2 in. wide with a 5/8 in. drip edge.

10. **FLOORLINE FIRETOPPING:** Nominal 4 in. thick, 4 pcf mineral fiber insulation must be installed at floorlines.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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