



**Product Brochure
& Installation Manual**



Aluminum Facade System



A stand-alone facade system that offers maximum integration and design potential without compromising aesthetics or durability.

Alumitex™ Aluminum Facade System by Elemex offers maximum design flexibility and durability. Exceeding North American codes, Alumitex™ is a smart choice for any project requiring mixed-material facades.

Alumitex™ integrates seamlessly with other Elemex facade systems because it is mounted to our proprietary Unity™ attachment technology. At Elemex, we understand there are many steps in the life of a project and that the journey from concept to completion can be challenging. We support your vision with solid warranties and complete single point of contact service with our 360° Advantage.

To learn more about **UNITY™**, our proprietary attachment technology, see page 8.



Index

Aluminum Composite Material (ACM) Benefits.....	4-5
Aluminum Plate Benefits	6
Product Specifications	7
Unity™ Proprietary Attachment Technology	8
Rear Ventilated Rainscreen (RVR)	9
Shop Drawing Details	10
Packaging, Site Storage + Handling.....	10
System Components	11
Sub-Framing	12
Panel Installation.....	13
Infill Strips	14
Corners + Edges.....	15



Aluminum Composite Material (ACM)

Features & Benefits



Code Compliant

The Alumatex™ System has been proven to meet or exceed industry code standards throughout North America.



Climate Defiant

Resistant to expansion and contraction in high temperature or freezing conditions.



UV Resistant

The color is resistant to fading from exposure to the sun or extreme temperatures.



Corrosion Resistant

A PVdF finish protects the panels from the elements making them long-lasting, low maintenance, and corrosion-resistant.



Lightweight

ACM panels with a thickness of $\frac{5}{32}$ " (4mm) weigh approximately 2lbs per square foot.



Large Format

Large format ACM panels open a world of design possibilities.



Weatherproof

Weatherproof panels combined with a patented pressure-equalized rainscreen system provide the ultimate weather barrier.



Ease of Fabrication

The versatility of ACM allows for fast production and improved lead times.



Completely Customizable

ACM is available in over 30 pre-painted colors and in a range of finishes.



Aluminum Plate

Features & Benefits



Climate Defiant

Resistant to expansion and contraction in high temperature or freezing conditions.



UV Resistant

Color is resistant to fading from exposure to the sun or extreme temperatures.



Weatherproof

Weatherproof panels combined with a patented pressure-equalized rainscreen system provide the ultimate weather barrier.



Endless Versatility

Extremely durable. Aluminum plate offers the opportunity to create square, crisp lines and compound curves.



Completely Customizable

Aluminum plate is post-painted which allows an endless possibility of color choices.

Product Specifications

Aluminum Composite Material (ACM) Specifications

Composition + Materials

Aluminum Composite Material consists of two aluminum sheets sandwiching a solid core of extruded thermoplastic material, processed in a continuous process with no glues or adhesives between dissimilar materials. The pre-painted coils ensure color consistency and decrease construction schedules. A protective film is applied to the material in production that should be removed after the fabrication and once panels have been installed.

Sizing + Details

Top: 0.020" (0.5mm) aluminum skin coated with a PVdF roll-coated finish containing a minimum of 70% Kynar 500®/Hylar 5000® resins.

Core: Anti-toxic low density polyethylene (PE) or mineral-based fire rated (FR) core.

Bottom: 0.020" (0.5mm) aluminum skin coated with either a chrome or polyester finish.

1/8" (3mm)

Economical: Select applications (signage + interior)

5/32" (4mm)

Standard: Multi-storey to grade applications

1/4" (6mm)

High durability: Ideal for public spaces

Dimensions:

Thickness: 5/32" (4mm) standard with 1/8" (3mm) & 1/4" (6mm) also available.

Width: 40" (1020mm), 49" (1250mm), & 62" (1575mm).

Length: No limit. 196" (6000mm) maximum is recommended for convenient handling and delivery.

Aluminum Plate Specifications

Composition + Materials

Aluminum Plate is a high strength, low weight aluminum alloy sheet that is durable and has excellent formability. These panels are post-painted to any desired color. Solid aluminum plate panels are non-combustible and therefore have no installation limitations.

1/8" (3mm)

Solid: Select applications

Dimensions:

Thickness: 1/8" (3mm)

Width: 60" (1524mm)

Length: 120" (3048mm)



UNITY™

Unity™ is our proprietary concealed attachment technology that supports simple and elaborate designs from flat panels to complex shapes. It seamlessly integrates with all of Elemex's facade surfaces using one proven system that offers multi-panel surface integration and the ability to design and install with absolute confidence. Unity™ brings it all together for a new North American standard.

Framing System

The proprietary extruded aluminum framing consists of a perimeter frame and intermediate vertical supports that are fastened to a clip system attached to the substructure or sub-girt system.

Attaching

Aluminum composite material is mounted to the frame and stiffeners are adhered with structural silicone.



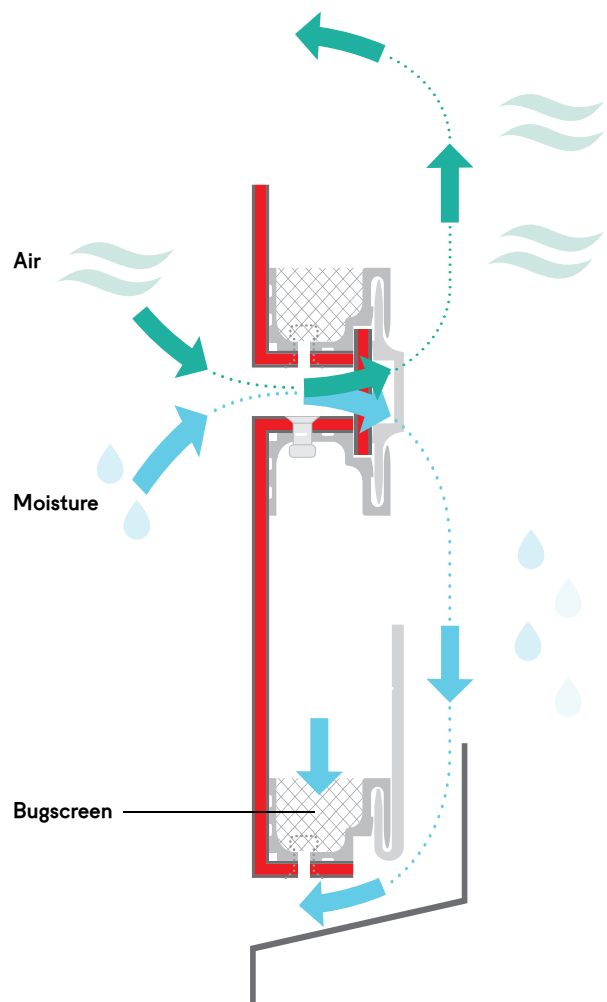
Rear Ventilated Rainscreen

Rear Ventilated Rainscreen (RVR)

Our Rear Ventilated Rainscreen (RVR) System breathes freely and allows panels to repel water and debris.

Pressure-Equalized Rainscreen

Pressure-equalization reduces the pressure difference across the cladding through the use of compartmentalization and back venting. Ingress of incidental water is reduced and residual moisture is returned to the exterior at the drainage plane.

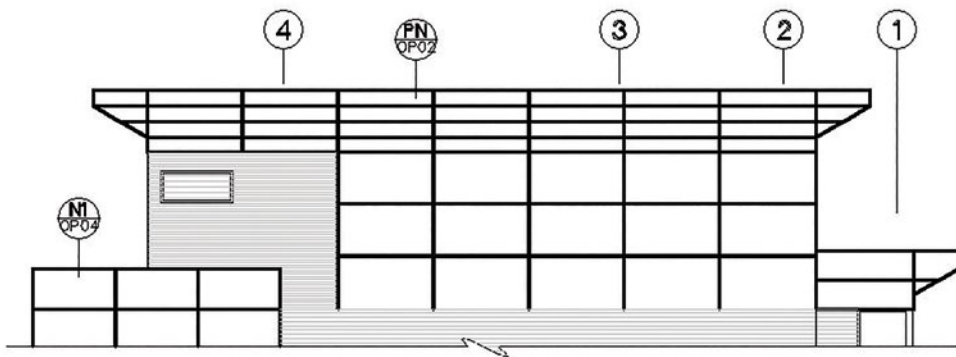


Shop Drawing Details

Shop Drawing Details

Alumitex™ panels are cut from shop drawings that are created by a team of experienced, qualified designers who work with the architect and installation contractor to meet the design intent. Once all Alumitex™ panel areas have been field measured and finalized with the installation crew, a set of fabrication tickets are created. The panels are then fabricated to the exact size in our highly automated, climate controlled production facility.

S2 Sample Shop Drawing



i All drawings must be reviewed by a local engineer following each region's building regulations and codes prior to fabrication.

Packaging, Site Storage + Handling



A protective film is attached to the front face of the panel to protect it from attracting dirt. There is no need to clean the panels once the film is removed after installation.



Skids and crates are custom built to ship panels to every project. Panels are numbered, packed and shipped in sequence based on the predetermined plan for installation.

A checklist is shipped with each skid so if any damage is sustained in the shipping process a replacement panel can be cut and expedited to the site. Panels are shipped in stages, based on a predetermined installation plan.

System Components

Supplies Checklist



Clamps



Screws



Drill



Level



Pry Bar



Spacers



Requires
2 Workers

The installation process includes a drill, screws, a level, spacers and a set of clamps to hold the panels in place. Aluminum clips are included to assist in the installation process.

There are two types of system applications:

Insulated Rainscreen

An insulated system starts with a predetermined air/vapor barrier that is affixed to a uniform substrate. Heavy (16-20 gauge) galvanized steel sub-framing attaches the Alumitex™ panel to the wall. The sub-framing provides a cavity for the insulation as well as providing a 1" (25mm) airspace.

Non-Insulated Rainscreen

A non-insulated system requires only an air barrier, and the panels may be mounted directly to the substrate providing a 1" (25mm) airspace.

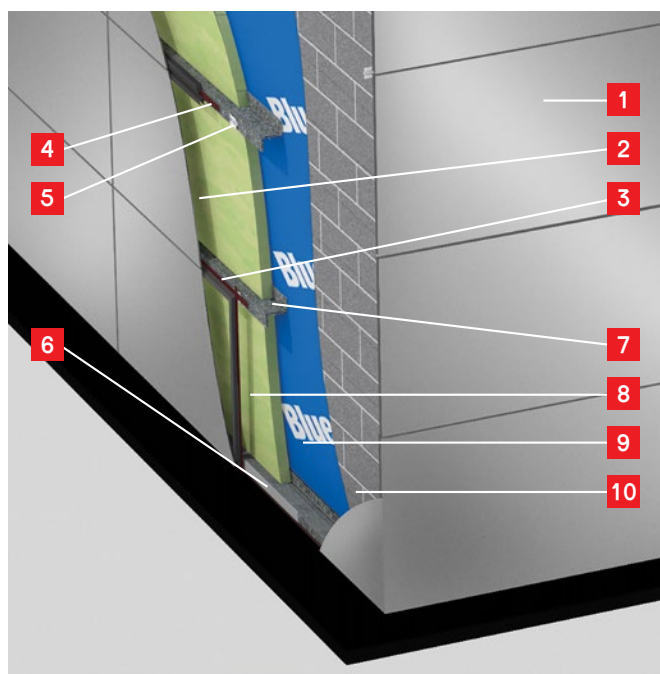


Diagram 1

Typical Outside Corner

Concrete Masonry Unit (CMU) Construction

- 1** Alumitex™ Aluminum Composite Material
- 2** 1" (25mm) Air Space
- 3** Unity™ Attachment Technology
- 4** Infill Strip
- 5** Aluminum Clip
- 6** Aluminum J-trim
- 7** "L" angles or Z-girt (Thermally Broken EnviroClip™)
- 8** 3" (76mm) Insulation
- 9** Air/Vapor Barrier
- 10** Concrete Masonry Unit (CMU) or other substrate

i Check your local building code for local structural, insulation and air/vapor barrier requirements.



Sub-Framing

The Alumitex™ Aluminum Facade System can be mounted on a vertical or horizontal adjustable thermally broken galvanized framing system. Z-girts or back to back "L" angles can be used both vertically and horizontally on concrete masonry units (CMU), concrete or metal structural framing with sheathing. The project design will dictate how the sub-framing will be installed, but in most cases vertical framing is used. If the substrate is constructed with vertical steel studs, horizontal framing is preferred.

Aluminum Composite Material panels are attached using mounting clips at a maximum of 24" (600mm) on center, along the length of the sub-framing.

i Technical data on panel size and including additional girts to the layout are available.

Typical Vertical Framing



Typical Horizontal Framing



Panel Installation



- 1** J-trim is mounted to the sub-framing at the base of the wall over top of the flashing.



- 2** Before installing the panels, the installer must ensure that the J-trim is clear of all debris.



- 3** To speed up installation, attachment clips can be installed to the panel perimeter to align with the sub-framing locations.



- 4** The panel is placed into the J-trim.



- 5** The installer ensures that the panel is level.



- 6** The full clip is attached to the sub-framing using a self-tapping hex screw with an extended hex head driver.



- 7** Repeat steps 3-5. The next panel is placed onto the J-trim and slid over to connect with the previous panel installed.



- 8** Minor adjustments can be made to the panel spacing. Spacers can be used to ensure consistent spacing between panels before they are attached to the framing system.



- i** In the example shown above, the side clip does not connect directly with the framing, but provides panel support, spacing and a guide for the infill strip.



Infill Strips



- 9** **Vertical** infill strips are measured and installed once a row of panels are installed.



- 10** **Horizontal** infill strips are then installed across the top of the row of panels.



Infill strips can match or complement the system frame color as part of the Alumitex™ Concealed Installation System. The infill strips conceal any visible clips or screws.

- i** Infill strips are also available in custom colors.



Corners + Edges

It's recommended that installation begins at a corner or window jamb. Corner and window jamb panels are custom cut and constructed based on approved shop drawings.



Corners or jambs are installed in the same manner flat panels are installed.



Routed infill strips will be required at inside corners and may be required behind windows and door jambs. Alternatively, flashings can be used at window and door jambs.



Infill strips can be routed from the back and bent to create a clean corner.



Once the installation is complete, the Alumatex™ protective dust-cover can be removed from the panels.



Architectural Facade Systems