

EVOPANELS.COM

EVO
MAX

ci

BUILDING
ENVELOPE
SOLUTIONS

THE 4E WALL ASSEMBLY FOR THE FUTURE

As the first line of defense within the EVOMAXci™ system, the EVO™ panel performance will minimize exposure to water and wind on the Rmax Polyiso, enabling a superior performance for the double foil faced rigid insulation. The overall R-value of the system is enhanced because of the continuous insulation design and a barrier to any infiltration, subsequently, EVOMAXci™ eliminates thermal bridging.

4E...because the market requires greater consideration be given to understanding the consequences fifty years out, for decisions made today, as a developer... for consumers in the future.

4E | Effective | Efficient | Economical | Environmental

EFFECTIVE - EVOMAXci™ benefits the end-user because the superior design performance results in a better built wall assembly, that withstands the external elements of wind, water, air, vapour, thermal and fire, as a barrier between the outside of the building envelope and the working atmosphere for people inside.

EFFICIENT - EVOMAXci™ benefits the end-user through technical and engineered solutions, to gain more benefits from less output of resources that solves a problem, such as thermal bridging and air quality within retrofit or new construction.

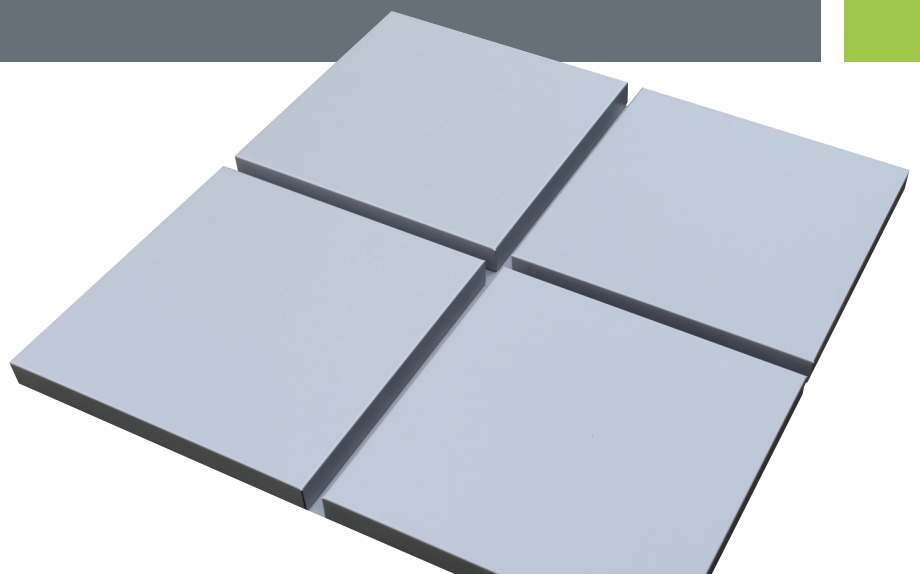
ECONOMICAL - EVOMAXci™ benefits the end-user directly as costs related to construction are reduced; costs for facilities management are lessened; seasonal demands on power supply are reduced; overhead could lessen; people will be healthier so fewer lost days of work and more upside for business and a healthier workplace; the health of the building will benefit and the investment pay back can be longer.

ENVIRONMENTAL - EVOMAXci™ benefits the end-user in diverse ways that are qualitative and quantitative. The benefits are not exhaustive or known in some cases, but will be future findings.

Qualitative gains begin in the process of manufacturing the components to higher standards, to meeting LEED requirements for materials and occupancy of buildings, right through to the safety aspects of air quality within the working space and actively benefiting the people. Lifespan of the structural form will be improved and remain functional longer, fulfilling all 4E's.

Quantitative measurements are both immediate and longitudinal. EVOMAXci™ uses fewer components to produce greater benefits in our 4E approach, resulting in less demand on resources. Compliance to ASHRAE 90.1 means optimum energy efficiency can be attained in this wall assembly design, minimizing financial and resource costs associated with power consumption for now and the future.

When tested under laboratory conditions the EVO™ exterior panel system withstood the replicated wind load in excess of 300 mph. Doing so was important for addressing the increasing climatic changes to our coastal and interior cities. Increasing the structural integrity of the exterior surface of buildings, benefits the life of our buildings and the safety of the occupants.





WORLD CLASS QUALITY ACM



larson® Aluminum Composite Panels (ACM) is a fully tested and certified, top quality architectural wall cladding panel providing the strength and flexibility required for the most demanding design criteria. larson® is especially recommended for new-construction ventilated façade sectors as well as renovation.

Made in Manning, South Carolina USA, it is a continuous process manufactured ACM panel consisting of two sheets of coil coated 3105 H24 alloy aluminum bonded to either a polyethylene (PE) or a mineral filled Fire Retardant (FR) extruded core. Typically, panels are fabricated via rout & return and installed with wet-seal, dry-seal, rain-screen wall systems, or integrated into curtain wall systems.

Larson by Alucoil® ACM is coil coated utilizing Duranar® coatings from PPG. Backed by a 30 year exterior performance warranty, these (PVdF) fluoropolymer paint finishes contain 70% Kynar 500® / Hylar 5000® resins and are formulated to meet or exceed industry performance requisites such as AAMA 620.

Larson by Alucoil® ACM panels are available in 25 standard colors matched to a combination of popular ACM and steel foam panel colors - enabling greater flexibility in design choice.

THE OFFERING INCLUDES:

12 Solid, 2 -coat finishes / 7 Mica, 2 -coat finishes / 6 Metallic, 3-coat finishes / 62" standard width for all standard colors / 50" and 39.97" widths on select colors / Finished panel inventory in key colors and sizes

Alucoil North America has partnered with Beckers to provide high quality paint systems that deliver bright, vibrant colors in gloss ranges from 10% to 80%, as well as 2 -coat and 3 -coat metallic finishes. Performance warranties range from 10 to 20 years depending on specific color formulation - making them ideal for meeting the dynamic and demanding requirements of corporate banded colors which, when combined with the benefits of ACM, make building design part of projecting a strong brand and image.

With a 1,000 square foot minimum for custom color production orders, Larson by Alucoil® takes a different approach to addressing a growing trend in the market. Available in 62", 50", and 39.37" widths, there are no hidden set up charges - just one price for the quantity required.

With the expansion of the larson ACM line of product, Alucoil is our choice for our EVO™ family of wall panels, because of their expertise, commitment to quality materials, top-rate service and ease of doing business with. Through continuing effort to excel in product design and partnering for performance, our confidence in growing together with the larson product line and the Alucoil management, is an easy decision.



CREATING INDUSTRY SOLUTIONS BASED ON BUILDING SCIENCE



For 37 years Rmax has been the leader in developing building insulation solutions. Rmax has continued to push-the-envelope through technological means, to invent new and more efficient insulating methods using polyisocyanurate. We are honoured to partner with Rmax to develop the EVOMAX wall assembly system. The superior R-value, performance and design of Rmax rigid insulation products, sets them above the rest for application and specification.

The Rmax organization demonstrates 'forward thinking', which compliments our visionary approach to finding better solutions for the building envelope. As building science plays an ever increasing role in designing healthier and more efficient structures, comfort can be felt in Rmax products being at the forefront of our industry's needs.

This partnership with Rmax is founded on the ingenuity and collaborative management style they demonstrate, which blends with our desire to remain a frontrunner in pursuit of greater efficiencies within the building envelope.



ARCHITECTURAL PANEL SYSTEM

EVOLVING VISION OF OUTER SIMPLICITY

The EVO™ RIVETLESS™ system forms the frame of the exterior façade panel that is the initial weather barrier for the EVOMAXci™ continuous insulation (ci) system. With the use of ALUCOIL's ACM substrate (larson), we affix our patent pending EVO™ RIVETLESS™ extrusions to the ACM to complete the exterior of the EVOMAXci™ wall assembly. The key element of the EVO™ design is its 100% fastener free panel face and perimeter. With the absence of fasteners penetrating individual panels, this cladding system out-performs others in AAMA 508 & ASTM testing. The panel design restricts the vacuum's ability to draw moisture from the exterior wall through the system to the substrate.

EVOMAXci™ is a Pressure Equalized Rainscreen (PER) wall assembly system, ideal for the progressive architect and owner who are mindful for the energy footprint they develop. The partnership of Rmax, larson and Carter in creating EVOMAXci™ for the building industry, is the result of understanding the necessity for maximizing energy-efficiency and air-quality within Building Science and the compliance to ASHRAE 90.1 and Leadership in Energy and Environmental Design – LEED certification.



EVOMAXci™ WALL SOLUTION

The EVOMAXci™ Wall Solution is a tested solution utilizing EVOMAXci™, R-SEAL 3000 and R-SEAL 6000. Rmax has engineered this solution to optimize compatibility of components and their performance in assembly tests. All testing is component specific and substitutions are not allowed. A brief description of these components is listed below. However, more detailed information and requirements can be found in the corresponding component data sheets and installation instructions.

EVOMAXci™ is an energy-efficient thermal insulation board composed of a closed-cell POLYISO foam core with heavy duty 10mil interior and 12mil exterior glass fiber reinforced aluminum foil facers. It utilizes a CFC, HCFC and HFC free blowing agent that has zero Ozone Depletion Potential (ODP) and negligible Global Warming Potential (GWP). This component provides continuous insulation eliminating thermal bridging through the studs.

ASSEMBLY PERFORMANCE IN DEPTH

CONTINUOUS INSULATION

Heat transfer takes the path of least resistance. Therefore, it is critical that the insulation covers the entire building envelope to avoid thermal bridging, i.e., continuous insulation. ASHRAE defines continuous insulation (c.i.) as “insulation that is continuous across all structural members without thermal bridges other than fasteners and service openings.” Thermal bridging occurs when two dissimilar materials exist in the same plane.

Since continuous insulation is “continuous” and does not have interruption from framing, the effective value equals the rated value. While continuous insulation is the most efficient way to insulate and reduce thermal bridging, it will be increasingly necessary to meet energy code requirements throughout all climate zones.

FIRE RESISTANCE

According to the IBC, exterior walls of buildings of Type I, II, III or IV construction of any height, containing foam plastic insulation, require additional fire testing. NFPA 285 is an assembly test, not a material test. Approval is dependent on all components of the assembly. NFPA 285 provides a method of determining the flammability characteristics of exterior, non-load-bearing wall assemblies, which contain combustible components.

The Rmax EVOMAXci™ Wall Solution passed NFPA 285 fire testing. All aspects, including components and installation, must be followed during construction. Final analyses and third party listings can be provided for specific instructions in addition to this document.

AIR BARRIER ASSEMBLY

An air barrier assembly is a collection of air barrier materials and accessories gathered together to control air infiltration and exfiltration through the building envelope by forming a continuous barrier. An air barrier material, such as POLYISO foam sheathing, serves to provide the principal plane of air tightness for the building envelope. Air barrier accessories, such as tapes, transition membranes and sealants, serve to connect and seal the primary air barrier material to complete the air barrier assembly. According to ABAA, “The performance of an air barrier assembly is of far greater importance than the air permeance of the material. When materials and accessories are installed proficiently, the benefits of the assembly have positive benefits for the entire life cycle of the building. The EVOMAXci™ Wall Solution has been tested in accordance with ASTM E2357 and resulted in a value that was well below the maximum allowable air leakage rate of 0.2 L/(s.m²) that defines an air barrier assembly.

WATER RESISTIVE-BARRIER

A water-resistive barrier consists of materials designed to work together to shield the building interior from rain penetration and water leakage through the exterior cladding. According to the ABAA, “A properly installed water resistive barrier (which includes proper flashing over doors and windows, continuity at seams, and sealing around penetrations) will improve the overall moisture efficiency and performance of the home or building’s wall system... Water will be channeled down the outside surface of the water resistive barrier, thus reducing the potential for condensation build-up in the wall assembly which reduces the likelihood of moisture problems, rot and degradation.” The EVOMAXci™ Wall Solution serves as a Water-Resistive Barrier and has been tested per the guidelines set forth in the ICC-ES AC71.

For more information on these assemblies, contact Rmax Technical at (800) 527-0890.

US OFFICES

221 E. Willis Road Bldg A #18
Chandler, AZ 85286

144 Bluffs Court
Canton, GA 30114

1.844.888.5088

CANADIAN OFFICE

326 Deerhurst Drive
Brampton, ON L6T 5H9

1.844.888.5088

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