



Mechanically Attached Brick Rainscreen System AIA Presentation Overview

The evolution of brick continues. From multiple wythes and structural responsibilities the American brick has settled into one of the industry's most dependable and predictable veneers. Belden Brick, one of America's largest manufacturers of brick has led the way to the next level of brick wall assemblies. Answering two looming questions for the construction industry of "How to make a better performing brick wall?" and "How do we make it easier to install?". Desna Partners has introduced North America's first domestic rainscreen brick system.

The system is a fully engineered, rear ventilated, mechanically attached, open cavity, rainscreen brick veneer system that consists of full one-inch thick bricks, custom trays, and aluminum subframing. The system is typically installed with a 2" open cavity, continuous insulation and an uninterrupted air/moisture barrier. It is a fully tested rainscreen wall system suitable for all installations in North America.

Over the millennia, uses of brick have evolved and adapted to a frequently changing market. Mechanically anchored brick rainscreen assemblies, which are different from both traditional brick and thin brick adhered veneer, offer aesthetic, durable, cost-effective solutions. Fully engineered, anchored brick rainscreen systems are viable for Class A construction, meet the principles of ASHRAE 90.1, and are a fraction of the weight of traditional brick. They are mechanically and permanently anchored to trays or rails, eliminating both the reliance on adhesives as well as the problem of delimiting brick. The system also provides continuous insulation, rear ventilation, and an uninterrupted air/moisture barrier, and the sub-framing is thermally broken. Brick rainscreens can be installed in any weather, so there is no need for tenting, and fewer journeymen are needed to install these assemblies. Mechanically anchored brick rainscreen assemblies are a high-performing solution that meets the demands of a challenging, changing market.

Salient Points:

- The full system assembly incorporates continuous insulation meeting the principles of ASHRAE 90.1. The system will accommodate up to five inches of rigid or semi-rigid insulation materials taking thermal performance to unprecedented higher levels, increasing the thermal inefficiencies, lower HVAC/air conditioning costs, and increase creature comforts.
- The mechanically attached brick system provides a higher performance wall assembly compared to conventional brick veneers with an uninterrupted air/moisture barrier, rear ventilation, and water management capacities.
- The use of these systems will eliminate the need for the relieving angles at the floor lines and lintels above the openings.



- The system is compatible with a design load of L/360 which will save additional money on steel framing.
- The full systems weigh only 14 pounds per square foot.
- The assembly is easily installed by carpenters and laborers and not necessarily masons.
- The rainscreen wall system provides a very durable, long lasting, high performance, and low maintenance wall system that will endure for the life of your building.

The AIA/CES Course Number is 24244 entitled "Mechanically Attached Brick Rainscreen System." Our Provider Number is 404109049. One AIA/CES Learning Unit will be earned for participating in the presentation.

The learning objectives are listed below:

1. Review the history and traditional use of brick over the centuries, and how the brick industry has evolved in recent years.
2. Examine mechanically anchored brick rainscreen assemblies, including how they improve the performance of wall assemblies and why they are easier to install than traditional brick or brick veneer.
3. Understand why moisture management is imperative and how brick wall systems with a built-in rainscreen assembly can help to mitigate moisture and how to maximize the benefits of brick rainscreen assemblies to owner/clients including weight reductions, thermal performance, and water management facilities
4. Explore case studies where mechanically anchored brick rainscreen assemblies were used.

Sincerely,



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