VacuSeal Roof System Frequently Asked Questions

Carlisle SynTec Systems is pleased to offer the VacuSeal Vent Secured Roofing System. This revolutionary assembly uses special vents that harness the power of the wind to suction and secure the newly installed roof. VacuSeal systems are quick and easy to install and save you money and labor by substantially reducing the amount of glue, ballast, or fasteners your project requires. This engineered system is designed to provide optimal performance while opening opportunities for retrofit and monolithic deck applications.

VACUSEAL™
Vent Secured Roofing Systems

Q: What is a vent secured system?

A: VacuSeal Vent Secured Roofing Systems use specialized vents to create negative air pressure that removes excess air beneath the roof membrane and creates a suction effect which holds the newly installed system securely in place.

Q: When is installing this system most beneficial or practical?

A: VacuSeal is a perfect solution for decks that can be difficult to attach to with traditional systems, specifically on monolithic decks like concrete, gypsum, or tectum. They are particularly beneficial on retrofit projects directly over a secure, existing roof system.

Q: What components are used in VacuSeal roofs compared with other systems?

A: VacuSeal utilizes special vents to pull air out from under the membrane and create a vacuum effect. The system utilizes vents, air seals, and distribution strips in lieu of traditional fasteners and adhesives to hold the newly installed roof system securely in place.

Q: How do you determine the placement of the vents? At what point do you need vents in the field of the roof?

A: The ideal locations for vents on a given roof are primarily outlined in our Technical Evaluation Report (TER 1401-02), and each roof is laid out according to the design recommendations. Each roof is evaluated separately to determine the location at which the vent will perform as effectively as possible. Interior vents are required on all roofs over 250' x 250'. At our discretion, we may include some interior vents on smaller areas.

Q: What type of jobsite startup assistance is provided?

A: Carlisle provides on-site startup training and assistance for every VacuSeal job, as well as phone calls and access to their technicians before, during, and after the installation to cover any questions or concerns that come up during the process.

Q: What types of warranties are offered for a VacuSeal roof?

A: Carlisle offers full system warranties up to 20 years for VacuSeal roofs. Please reference specifications for system requirements pertaining to warranty length.

Q: What are the minimum requirements for the roof size for a VacuSeal system?

A: Generally, a roof has to be a minimum of 25' wide in the shortest dimension. Small roofs, while possible, become much more expensive due to fixed job costs including travel and training requirements, freight, etc.

Q: What are the most common types of roof decks for VacuSeal systems?

A: Monolithic decks and roof decks with unique conditions that make mechanical attachment undesirable are the most common, although not exclusively. We consider monolithic decks to be all types of concrete, gypsum, cementitious wood fiber, etc.

Q: What is the detail to create a complete air seal around the perimeter and parapet walls?

A: We utilize a modified base tie-in/angle change securement detail. In place of RUSS strip or plates and fasteners, we install butyl tape behind the field membrane on the wall/curb. We then fasten the field membrane into the wall with termination bar and fasteners 6" O.C. We have details that illustrate and define this method (details V-5.1 and V-12.3).

Q: Does this system work as part of a metal roof overlay system with flute fill and insulation?

A: Yes, it is possible to do a retrofit system with VacuSeal. Existing metal panels are required to be sealed and airtight.

Q: Do you have Florida Product Approvals/Miami-Dade NOAs for VacuSeal?

A: Yes, we have Florida Product Approval (FL27944). FL29744 allows for installation in and outside of High Velocity Hurricane Zones (HVHZs) which are defined as Miami-Dade and Broward counties. A Miami-Dade Notice of Acceptance (NOA) is a local product approval to meet the code criteria in the HVHZ as defined by the Florida Building Codes (FBC). You can use either a Miami-Dade NOA or a Florida Product Approval that includes the approval for use in the HVHZ. Only one is necessary.

Q: Do you have Factory Mutual Global (FM) approvals for VacuSeal?

A: FM tests roofs by pressurizing the underside of the roof. Our system works by creating a negative pressure under the membrane, and by design, the FM test will not work with any loose-laid system. The VacuSeal System has achieved uplift testing at Underwriters Laboratories, see TGIK.R25921 for results. If the designer or building owner is looking to meet certain uplift criteria based on FM designations, we can provide calculated uplift pressures of our system to relate to their requirements. If it is FM-insured it is more of a challenge; we have been accepted on FM-insured projects, but it is burdensome.

Q: Can this roofing system be installed over a loose-laid membrane (i.e., after removing ballast stone from old roof), and will the existing membrane act as the air seal in this case?

A: While the existing roof may be airtight, it is not attached to the building in any way after the ballast is removed. Because of this, VacuSeal cannot be installed directly over a loose-laid membrane or air barrier. Vented systems do not have the ability to improve the wind load resistance of a roof in a recovery application. Depending on the deck type, either a complete removal or partial removal and new air seal to an airtight deck would be required.

Q: What is the best practice for installing a VacuSeal system? Do you install the outer edges first and get all the vents in place, or do you go in one direction?

A: Typically, we start in a corner or somewhere along the edge of a roof and work across; it is not recommended to install the perimeter first. Best practices include installing air seals daily and installing all vents for an area daily.

Q: What is best practice for keeping the system in place during the roofing process, before the system is complete?

A: Installing vents and air seals daily will ensure the roof is working and stays in place. Standard nighttime tie-in methods are required for overnight seals.

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