THE

INFINITY®

WALL SYSTEM

The pressure equalized rainscreen engineered to prevent water infiltration.

dryvit

INFINITY is...

...the ultimate in an exterior insulation and finish system, offering the most comprehensive built-in method for eliminating the potential for water entering a building.

Dryvit Systems, Inc. has accomplished what architects and building owners have always sought — an exterior wall system that is *both* designed to prevent water intrusion and to deal with incidental moisture that may occur. Studies show that, for moisture penetration to occur, there must both be an opening for water and a force to drive the water through that opening. Over the life of a building, without proper maintenance and care, water will find a passage through imperfect seals at joints and around openings in the walls. This is true for all types of cladding, including brick, stone, aluminum and concrete. Dryvit meets the challenge with INFINITY, a patented wall system with several layers of built-in protection against water intrusion.

> *"The system works, and the condo residents have benefited by its reliability. We would consider INFINITY for other shore-front projects."*
>
> Mike Tuten, Construction Mgr.
> Greenwood Development Corporation

INFINITY graces Hampton Place, an ocean-front condominium located in Hilton Head, South Carolina. Buildings in this area are often subjected to moisture damage due to wind-driven rain. INFINITY has solved the water-intrusion problem completely.

Architect: FWA Group Architects
Developer: Greenwood Development Corporation
Contractor: Dan J. Sheehan Co.

A total system

INFINITY is unlike any other wall system. It is a proven assembly that incorporates a cavity wall, an air barrier and pressure equalized rainscreen technology into one system — a first for Dryvit and a first for the industry. And, because water penetration has the greatest likelihood of occurring primarily at the material intersections and sealants of a building, INFINITY addresses two of the most critical components of any wall assembly — the sheathing and the sealant. When you specify INFINITY, you can include Georgia-Pacific's Dens-Glass® Gold sheathing and superior silicone sealants from Dow Corning and have them warranted by Dryvit.

A total program

INFINITY is more than a system. It is a program, too. INFINITY is supported by quality assurance methods unparalleled in the EIFS industry. Specifying INFINITY activates Dryvit's **QMP** (**Q**uality **M**anagement **P**rogram), which helps ensure quality standards are maintained through all phases of design and installation.

INFINITY may only be installed by a pre-qualified **QMP** contractor.* In addition, Dryvit requires that this work be monitored by a third party inspector of the owner's choice. Project-specific interaction between the architect and Dryvit's technical staff is always available upon request.

** Dryvit does not warrant or guarantee the workmanship by the **QMP** contractor.*

The INFINITY System components:

INNER LAYER — sheathing and air/weather membrane.

CAVITY — compartmentalized, patented insulation board.

OUTER LAYER — elastomeric textured finish over reinforced base coat and vent assembly.

“Dryvit’s INFINITY System allowed us to construct the energy-efficient, weather-resistant building demanded for this important facility.”

Arthur Blum, Contract Manager
Kraft Construction

Prince George Law Courts in Prince George, British Columbia, is a 126,000 sq. ft. complex structure in a demanding climate where temperatures can plummet to -30°C (-22°F) and warmer months bring driving rain and humidity — conditions that led to leaking of the originally intended brick facade. The brick was replaced with Dryvit’s INFINITY System. The varied design and classical elements that give this building its commanding presence have been maintained with Dryvit INFINITY.

Architect: Howard/Bingham Hill Architects
General Contractor: Kraft Construction
Contractor: Dominion Stucco Ltd.

Engineering support

The Quality Management Program begins with a formal plan review on request. Dryvit technicians can also assist with critical details, such as window transitions, parapets, roof tie-ins and system penetrations. A water vapor transmission analysis may be recommended as well as a review of "impact zones" and suggestions for appropriate reinforcing mesh.

Design freedom

With INFINITY, weather conditions do not hamper design freedom. Like all Dryvit systems, INFINITY is compatible with nearly any classic or contemporary design. In fact, the ease with which you can construct sculpted contours, cornices, arches, pediments and columns gives it yet another advantage over all other cladding materials.

If it can be imagined, INFINITY can make it real.

"I was worried about air pressure differentials causing water intrusion. The vented compartmentalization/ pressure equalization component of the INFINITY System alleviated those concerns."

Steve Lin, Architect

"Installation was not as difficult as it first seemed - actually, it was quite easy."

Mike Signore, President
Signore Construction, Inc.

Although brick and block, as well as stucco, were considered, the developers of Villa Cortese Condominiums in Silver Spring, Maryland, chose INFINITY over these other wall claddings. In addition to eliminating water penetration concerns, the system made it easy to construct a number of details, shapes and "trompe l'oeil" paintings to enhance aesthetics of their Italian village look.

Architects: Smith/Williams Architects
Holle & Lin Architects, P.C.
Developer: IDI-MD, Inc.
Builder: Majestic Builders Corp.

Pressure equalization technology...harnessing the laws of physics

When the wind blows, a building can experience pressure differences between the cavity and exterior walls. Building diagnostic experts acknowledge that the problem of water infiltration is primarily a function of these pressure differentials.

Using pressure-equalized and rainscreen technology, the INFINITY System eliminates the potential for water infiltration by neutralizing the difference between the applied wind pressure (outside) and the cavity pressure. Equalization is achieved when the cavity pressure is equal in magnitude and opposite in direction to the applied wind pressure. The more rapidly this pressure is equalized through the wall, the more effective the system is in keeping out water.

High cost and water infiltration concerns raised questions about the metal panel system originally planned for Tulsa, Oklahoma's Tulsa Federal Employee Credit Union. The INFINITY System's engineered water protection, cost effectiveness and single-source warranty convinced owners to scrap the metal wall spec. The 30,000 sq. ft. installation is complemented by 10,000 sq. ft. of Dryvit's Ameristone™ finish.

Architect: Page-Zebrowski Architects
Owner: Tulsa Federal Employee Credit Union
Contractor: Harry B. True Plastering, Inc.

> *"A single-source warranty and the cost effectiveness of the system was of great importance to our client."*

Kathleen Page, Partner
Page-Zebrowski Architects

Fig. 1 Peak cladding load/time lag: The hypothetical relationship between applied wind pressure over time versus cavity pressure over time is shown. The sum of pressures (P_{out}, P_{in}) at time equal to t_1 represents peak cladding load. The difference between times t_1 and t_2 represents the time to equalization.

Fig. 2 INFINITY pressure equalization: The three overlapping plots indicate zero time lag and zero pressure differential.

INFINITY System components

THE INNER LAYER

The inner layer starts with Dens-Glass Gold or a recommended sheathing properly attached to the framing. Next, sheathing board joints are treated with specially designed grid tape, and a continuous air and water barrier is applied to the substrate. This barrier — a key component in the INFINITY concept — is extended with rubberized flashing tape to tie into adjacent materials such as windows, door openings and other through-the-wall elements. The result is an air and watertight membrane — the entire inner layer of the INFINITY System.

THE CAVITY

The cavity consists of Dryvit's patented EPS insulation board, another key component of the pressure-equalization function of the system. The INFINITY EPS board also provides a thermal barrier and drainage channels that capture, control and direct any incidental water out of the system.

THE OUTER LAYER

This INFINITY System outer layer is known as the rainscreen or lamina. The rainscreen consists of a flexible base coat, high alkali-resistant reinforcing mesh and a superior elastomeric finish, and offers protection for the inner layer and cavity components.

WINDOW HEAD DETAIL

*Framing is not part of the INFINITY System nor is it covered by Dryvit's warranty.
**The only approved sheathing warranted by Dryvit is Dens-Glass Gold.

The finish boasts Dryvit's exclusive **PMR** (**P**roven **M**ildew **R**esistant) and **DPR** (**D**irt **P**ickup **R**esistant) formulation. Exterior walls look and stay cleaner and brighter with this 21st Century technology.

The final element is a Dow Corning low modulus silicone or other approved sealant. Properly installed and maintained, the sealant provides watertight performance at intersections, transitions and joints and demonstrates superior weather durability. Dow Corning silicone sealant is the only sealant material warranted by Dryvit.

Weather wise and warranted

The INFINITY System is a wall system package that includes all components listed above. The entire system is backed by Dryvit's 12-year, single-source "through-the-wall" warranty against water intrusion which, when used, includes the Dens-Glass Gold sheathing and Dow Corning silicone sealants. A compound warranty, which extends the standard warranty, is also available when Tremco Spectrem 1, 3 or 4 silicone sealants are used. Consult Dryvit Systems, Inc. for full details.

Reshaping EIFS technology

Since 1969, building owners, architects and contractors have relied on Dryvit for innovative, cost-effective and energy-efficient insulation and finish systems.

Dryvit systems have been installed and continue to perform on 400,000-plus projects worldwide. More than a billion square feet of Dryvit materials protect and beautify commercial, institutional, industrial and residential structures in both new and retrofit applications.

Dryvit Systems, Inc. is an ISO 9001:2000 certified company. The ISO 9001:2000 standards have been established worldwide as a common denominator for product consistency and excellence. Obtaining ISO 9001:2000 certification helps to identify Dryvit as the recognized leader in EIFS technology. With leadership comes an obligation and commitment to research and development. The INFINITY System is a result of Dryvit's commitment to continuous improvement. By developing INFINITY, Dryvit has pioneered a new generation of EIFS technology. INFINITY represents an unmatched level of performance in a full wall system that sets the new industry standard for design integrity and longevity and is backed by a single-source warranty for all components.

See how the INFINITY System and the growing Dryvit family of products can enhance your next project. Our Technical Services group will be happy to assist you.

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INFINITY was specified to retrofit this old office building (left) in downtown Toronto, Ontario. Renamed The Ramsden, it is now an attractive luxury condominium complex that INFINITY totally transformed into a weathertight, highly energy-efficient building in a vital location. The "before" and "after" photos (above) speak for themselves.

Architect: Young & Wright Architects
Owner: Standard Life
Contractor: Granolite Company Ltd.

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