

Rainscreen Systems with ZIP System® Sheathing

A rainscreen is a design concept that allows better management of moisture in wall assemblies by enhanced drainage, natural back ventilation and pressure equalization. A typical rainscreen system is composed of:

- cladding, with openings for drainage, natural ventilation and pressure equalization,
- air gap of at least 3/16" (~5mm) beneath the cladding and water-resistive barrier,
- properly integrated flashing details, and
- water/air resistive barrier applied over exterior sheathing.

ZIP System® sheathing with integrated water/air resistive barrier is an optimal choice to be used in wall assemblies with implemented rainscreen principle. Drainage and ventilation openings along with an air gap behind the cladding can improve the drainage and ventilation drying characteristics of wall assemblies resulting in highly durable and more robust wall systems.

Exterior Cladding

Exterior cladding is a material installed on the outer surface of a wall and its primary function is to control wind driven rain from penetration further into the wall assembly. Most exterior claddings are constructed either of permeable or impermeable materials such as brick, cementitious materials, wood, fiber cement, vinyl, tiles, laminates or metal. Openings and joints in the system allow pressure in the air cavity behind the cladding to equalize with exterior pressure and minimize water entry caused by air pressure difference across the cladding. At the same time some water is expected to bypass the cladding and enter air cavity behind the cladding, and therefore it is critical to design properly drainage paths and sloped flashing details at the bottom of the cavity to direct water out. ZIP System® sheathing (recognized in ICC-ES ESR-1474) must be covered with a code recognized exterior cladding or one that has third party code approval.

Rainscreen Products for Air Gap

The primary function of air gap installed between code-recognized exterior cladding and the water-resistive barrier layer is to:

- provide a capillary break between exterior cladding and rest of wall assembly
- enhance/promote drainage of any water that gets behind the exterior cladding, and
- promote ventilation/drying of the exterior cladding.

The current building codes such as International Building Code (IBC) and International Residential Code (IRC) do not require use of drainage gaps; however, it is highly recommended and considered as the best practice among many water-proofing consultants and building scientists. The presence of drainage gap/air cavity takes care of risk for water intrusion due to capillary effects, surface tension and gravity forces.

Below is a list of common rainscreen products with enhanced drainage that are compatible with ZIP System® sheathing:

- Sure Cavity™
- Home Slicker®
- Mortairvent®
- Delta-Dry®
- Driwall™
- Battons
- Cor-A-Vent®
- Roll-On Rainscreen™
- Furring Strips

For proper installation of rainscreen products, follow manufacturer’s guidelines. When using furring strips with ZIP System® sheathing, the furring strips should only be installed vertically. If horizontal furring strips are required, vertical furring strips or a minimum 3/16” air gap should be installed before installing the horizontal furring strips.

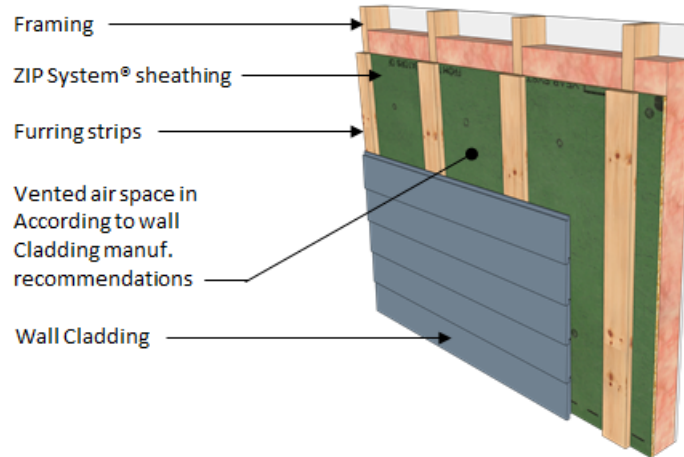


Figure 1: Typical Rainscreen Drainage Gap with ZIP System® sheathing

Open-Joint Rainscreen Cladding Panels

Recent trends in architecture emphasize use of open-joint rainscreen claddings in which the joints between the cladding panels are intentionally left open. Regardless of appealing aesthetics and obvious benefits associated with such design approach, open joints in rainscreen cladding systems increase dependence on water-resistant barrier as the sole line of defense against water intrusion. Currently, the use of ZIP System® sheathing is not approved with these types of claddings due to long term effect of ultraviolet radiation within the drainage cavity on the water-resistant barrier and seam sealing ZIP System™ tape unless continuous, a code-recognized and UV resistant rainscreen product or water-resistant barrier is installed over the face of ZIP System® Sheathing.

The following image represents a typical architectural open-joint rainscreen cladding system.

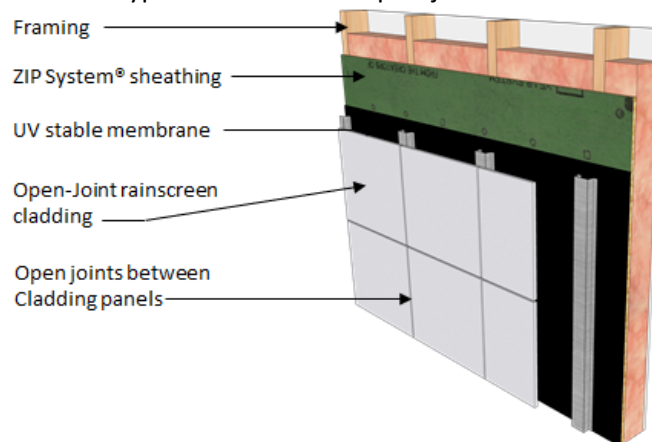


Figure 2: Typical Open-Joint Rainscreen Cladding System with Mechanically Fastened UV Membrane.

Please visit zipsystem.com or contact our technical department at 800-933-9220 Ext 2716 or at techquestions@huber.com with any questions or comments.