

E-SCREEN PRODUCT BROCHURE



RAINSCREEN DRAINAGE MAT AND COMPONENTS

ClarkDietrich E-Screen and Components

ClarkDietrich E-Screen can be used in stucco, stone veneer, brick, or under various siding installations to provide an effective method for drainage and ventilation in the wall system. Moisture penetration is a prevalent issue in these wall systems and creates a range of problems from cracking to complete failure of the wall. Without rainscreen, once the moisture has intruded past the outer surface of the wall, it becomes trapped in the system and creates issues with rusting and mold growth that can structurally compromise the system. By using the ClarkDietrich E-Screen system, the water inside the wall is drained away more efficiently and the increased ventilation properties allows the system to dry out more effectively.

FEATURES/BENEFITS

- 95% open design creates a continuous capillary break and a channel for moisture to drain away from the wall system while accelerating the drying time
- The durable polymer material is corrosion-resistant, rust-proof and mildew/mold-resistant
- Easy to Install - more cost effective and easier to install than traditional furring methods
- The 2-Ply design is comprised of a backer fabric that deflects the stucco away from the open design and improves the tensile and compressive strength properties of the rainscreen - this fabric also provides a built-in insect screen

E-SCREEN RAINSCREEN ROLLS

ClarkDietrich entangled mesh rainscreen rolls prove a capillary break to the moisture that may enter the wall, while creating a "ventilated air space" for drying out those surfaces as well. With Stucco and thin veneer stone applications over wood-based sheathings, this is now a Building Code Requirement.



INTERNATIONAL BUILDING CODE - CHAPTER 25

2510.6.2 - MOIST OR MARINE CLIMATES

In moist (A) or marine (C) climate zones, water-resistive barrier shall comply with one of the following:

1. In addition to complying with Item 1 or 2 of Section 2510.6.1, a space or drainage material not less than 3/16 inch (4.8mm) in depth shall be applied to the exterior side of the water-resistive barrier.
2. In addition to complying with Item 2 of Section 2510.6.1, drainage on the exterior side of the water-resistive barrier shall have a minimum drainage efficiency of 90 percent as measured in accordance with ASTM E273 or Annex A2 of ASTM E2925.

INTERNATIONAL RESIDENTIAL CODE - CHAPTER 7 - WALL COVERING

R703.1.1 - WATER RESISTANCE

The exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly by providing a water-resistant barrier behind the exterior cladding as required by Section R703.2 and a means of draining to the exterior water that penetrates the exterior cladding.

E-Screen



	E-Screen 6mm	E-Screen 10mm
Core Material	Polypropylene (Cornrow)	Polypropylene (Waffle)
Thickness	.25 in. (6mm)	.40 in. (10mm)
Roll Length	61.5 ft. (18.75m)	40 ft. (12.19m)
Roll Width	39 in. (99.06cm)	39 in. (99.06cm)
Roll Weight	14 lbs. (6.35kg)	16 lbs. (7.26kg)
Coverage Area	200 sq. ft. (18.58m ²)	130 sq. ft. (12.08m ²)

Mortar Deflection, Ventilation & Drainage Mat Options	E-Screen 6mm	E-Screen 10mm*
Mortar Deflection and Ventilation Material Thickness	.25 in. (6mm)	.40 in. (10mm)
Density / Specific Gravity (ASTM D 792, Method A)	.901 g/cm ³	.903 g/cm ³
Porosity (Open Space) ECTCTASC00197	93.80%	95.30%
Mass / Unit Area (Composite) (ASTM D 5261 / ASTM D 6566)	11.25 oz./sq. yd.	15.10 oz./sq. yd.
Hydraulic Transmissivity (ASTM D 4716)	3.70 gpm/ft. width	7.01 gpm/ft. width
Air Transmissivity (ASTM D 4716, mod)	15.8 cu. Ft/min/ft width	54.5 cu. Ft/min/ft width
Flame Spread and Smoke Index (ASTM E 84)	Class A Fire Rated	Class A Fire Rated

*Patent Pending

E-Screen System Components & Testing Data

E-SCREEN ACCESSORIES

To further assist in drainage and ventilation using the E-Screen rolls, ClarkDietrich has developed two (2) accessories that align the entangled mesh roll, with a bottom accessory with weep slots and a top accessory with ventilation slots. The PVC accessories can accommodate 6mm & 10mm rainscreens when installing 3-coat stucco or thin veneer stone. The rainscreen accessories can be used independently, or with any other comparable entangled mesh rainscreen brand, that facilitate draining and drying.

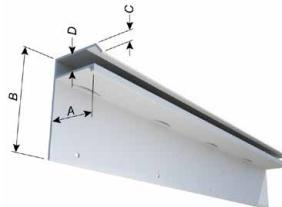
Top Vent Track (TVT-RS):

TVT assists in alignment of the rainscreen media with the vent slots to create proper ventilation of vapor pressure in the wall. TVT is produced from exterior-grade PVC in 4 colors (shown) or paintable white, to match wall finishes. TVT attaches to the wall up near the soffit and maintains a gap for the venting to take place. TVT-RS6 is designed for 6mm E-Screen, and TVT-RS10 is designed for the 10mm E-Screen or any entangled mesh rainscreen of the same thickness.

Gray Tan Brown Black

Product code	Ground (A)	Flange (B)	Drip (C)	Air Channel (D)	Length	Packaging
TVT78-RS6 (6mm)	1-1/8"	2-1/4"	1/4"	3/8"	10'	20 per box, 20 boxes/pallet
TVT78-RS10 (10mm)	1-1/4"	2-1/4"	1/4"	3/8"	10'	

*Patent Pending



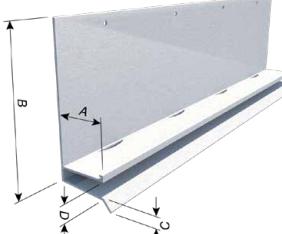
Drip Flashing for Rainscreen (DFL-RS):

DFL-RS assists in the alignment of the rainscreen media with the drain openings to provide proper drainage and ventilation in the wall. DFL-RS is produced of exterior grade PVC in 4 colors (shown) or paintable white. DFL-RS functions like a foundation weep screed too, with its 3.5" attachment flange. DFL-RS6 is designed for 6mm E-Screen and DFL-RS10 is designed for 10mm E-Screen, or any entangled mesh rainscreen of the same thickness.

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Product code	Ground (A)	Flange (B)	Drip (C)	Air Channel (D)	Length	Packaging
DFL78-RS6 (6mm)	1-1/8"	3-1/2"	1/4"	1/4" Nom. (Sloped)	10'	20 per box, 20 boxes/pallet
DFL78-RS10 (10mm)	1-1/4"	3-1/2"	1/4"	1/4" Nom. (Sloped)	10'	

*Patent Pending



E-SCREEN SYSTEM: TESTED AND PROVEN TO PERFORM

ClarkDietrich had an engineering analysis performed using a Computer Fluid Dynamics (CFD) steady flow on our E-Screen System, comprised of our 6mm Rainscreen along with ClarkDietrich PVC Top Vent track (TVT-RS) and PVC bottom Drain flashing (DFL-RS), with the goal to measure the water flow rate as well as pressure, vapor and water flow rate and velocity.

Ventilation: The CFD predicted flow rate is about 0.248 L/s, exceeding the design requirement (minimum flow rate should be higher than 0.1 L/s). Note: the flow rate 0.248 L/s is on the given dimensions and construction details with width = 3.937 feet. This test proved the advanced performance of the system surpassing the required engineering standards under similar conditions.

Drainage: The rainscreen could store/fill water about 16kg because of the 93.8% porosity. The rainscreen would drain all the water (16kg) through gravity load in about 9.0 seconds. The test refers to the drainage capacity and speed of the system on various boundary conditions.

The testing FEA Max protocol followed ASTM E-2925 - Standard Specification for Manufactured Polymeric Drainage and Ventilation Materials Used to Provide a Rainscreen Function and ASTM E2273- Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies.

Time Point	Water Velocity	Amount of Drained Water
2.3 s (1/4 drain time)	0.41 m/s	42.4%
3.0 s (1/3 drain time)	0.38 m/s	51.7%
4.5 s (1/2 drain time)	0.32 m/s	69.2%
9.0 s (full drain time)	0.039 m/s	100%

*Test performed by FEAmax LLC. Engineering Design & Analysis Service - 6/29/23

** Test performed by FEAmax LLC. Engineering Design & Analysis Service - 8/17/23



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