

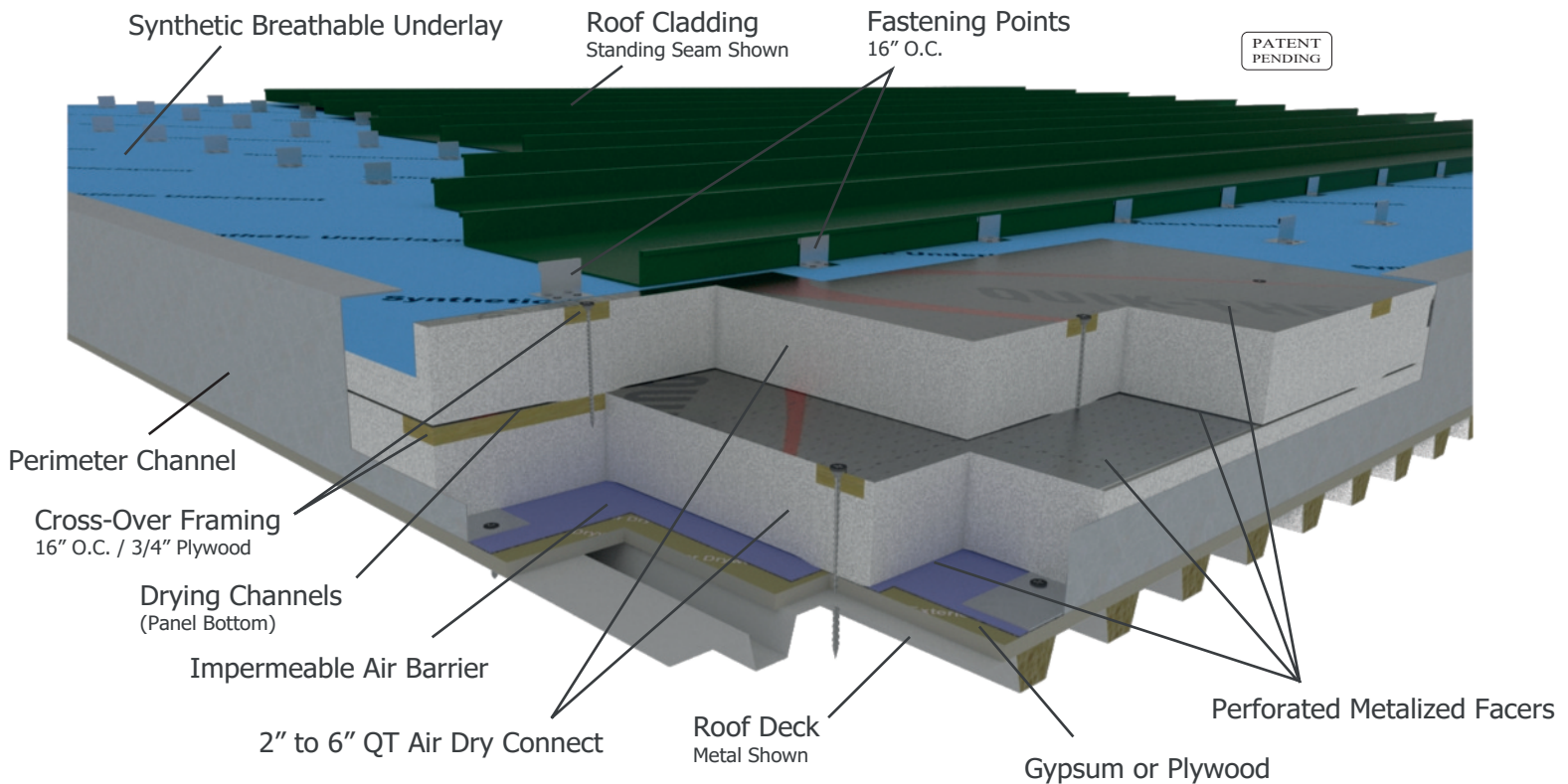


Inspired by Building Science

# MATRIX

## Insulated Roofing System

Continuous Insulation  
with Built-In Structure



The Patent Pending Quik-Therm Matrix Insulated Roof System (Matrix) is a science based composite rigid foam roofing insulation technology. Matrix integrates simply, intuitively and quickly with metal standing seam and screw down roofs. Alternative roof cladding systems may require an exterior layer of wood sheathing and/or furring strips. The Matrix system is vapour permeable, vented and perforated. Matrix consists of two or more layers of Quik-Therm Air Dry Connect running perpendicular to each other. Typically, the bottom layer runs peak to eave (high to low) and the top layer runs gable to gable (side to side). Spaced 16" OC., 3 precision 3/4" thick x 3" wide plywood battens / furring strips are embedded into Type 2 EPS rigid foam panels. Perforated, foil like metalized polymer facers are laminated to both sides of the panels.

## Highlights & Benefits

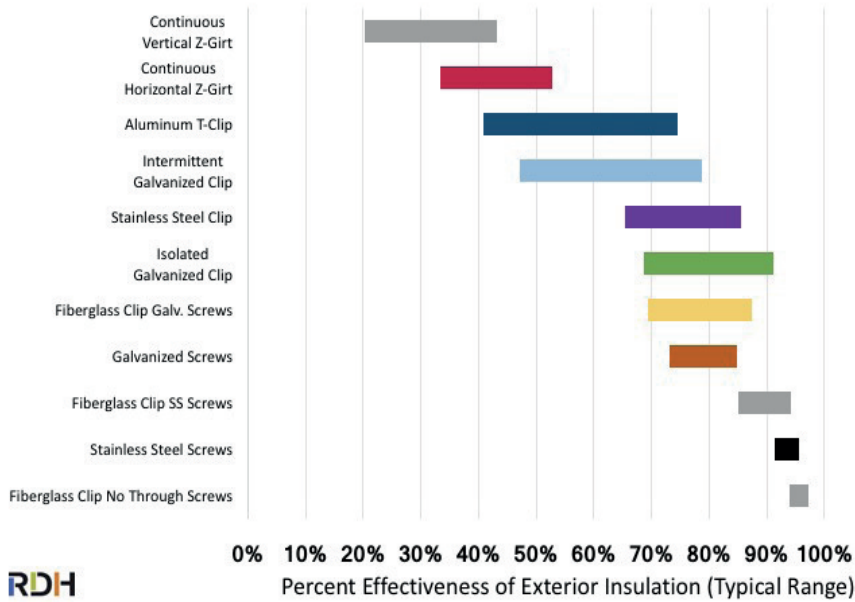
- **Virtually 100% Thermal Bridge Free.** Matrix offers significantly higher effective R-value performance than Clip and Rail and Continuous Steel Z-Girt systems. Matrix's plywood battens and fasteners are covered by, or encapsulated within it's EPS foam core. As a result, fastener condensation and dripping is effectively eliminated.
- **Robust, Lightweight & Stable.** The Matrix precision cross-over, staggered joint connection design provides superior durability and structural integrity. The clamping, pre-tension fastening system minimizes expansion and contraction. High compressive strength. Type 2 EPS panels @ 2,800 lbs/ft<sup>2</sup>. 4 Weather Resistant Barriers (WRB's).
- **Installs Intuitively, Fast and Easy.** Precision built-in plywood structure. Visual 16" O.C. connection points. 8" O.C. grid lines. T&G panel connections. 4x8 sheets. 2" to 6" thicknesses. Superior tape adhesion.
- **Manages Bulk Water and Vapour Diffusion.** Air Dry Connect is a hybrid version of Quik-Therm T&G Connect and Solar Dry. Shallow, free air, unobstructed venting encourages outward drying and drainage. Engineered perforations manage vapour diffusion. Low emissivity, foil like metalized polymer facers block radiation.
- **Code Compliant.** The Matrix system is Code compliant for wood and steel framed and most non-combustible buildings.
- **Sustainable & Healthy.** Matrix will not trap or absorb moisture. As a result, it mitigates the negative effects of material degradation. Matrix is inert - it will not promote or support mold growth. Matrix does not contain vitreous fibers or formaldehyde.

### Compare Matrix to Alternative Roof Assemblies

Product	R-value	Assembly	R-Effective	Material Cost	Installation	8" R-Eff	10" R-Eff	12" R-Eff
Air Dry Connect	4.18	Matrix	100%	Lowest	Fastest	33	42	50
Type 2 EPS	4	Steel Z-Bar	50%	Moderate	Slow	16	20	24
Type 2 EPS	4	Clip & Rail	75%	Expensive	Slowest	24	30	36
XPS	5	Steel Girts	50%	Moderate	Slow	20	25	30
XPS	5	Clip & Rail	75%	Expensive	Slowest	30	38	45
Polyiso	5.6	Steel Girts	50%	Moderate	Slow	22	28	34
Polyiso	5.6	Clip & Rail	75%	Expensive	Slowest	34	42	50
Mineral Wool	4.2	Steel Girts	50%	Moderate	Slow	17	21	25
Mineral Wool	4.2	Clip & Rail	75%	Expensive	Slowest	25	32	38

- Matrix system is 100% thermal bridge free. As a result, it performs at its nominal R-value; plus approximately R-2 for air films and materials.
- Steel z-bar systems perform at 50% or less of their nominal R-value.
- Depending on clip type, clip & rail systems perform at approximately 75% of their nominal R-value.

### Summary of Cladding Support Performance



**Quik-Therm Insulation Solutions Inc.**

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**Made in Canada**

Tested By Canadian Accredited Laboratories. Supported By Building Science Engineering

"The horizontal and vertical continuous Z-girts produced significant thermal degradation through the exterior insulation. Horizontal continuous Z-girts resulted in between 40% and 63% thermal degradation for the wood stud wall and between 56% and 72% thermal degradation for the steel stud backup wall. Vertical continuous Z-girts resulted in between 67% and 79% thermal degradation for the wood stud and between 77% and 84% thermal degradation for the steel stud backup wall." - *Thermal Bridging From Cladding Attachment Strategies Through Exterior Insulation, James Higgins, Dipl.T, Colin Shane, MEng, PEng & Graham Finch MASC P Eng - RDH Building Science Laboratories.*

"Most high-performance clip systems will result in less than 30% thermal degradation of the exterior insulation (i.e. 70% effectiveness of the exterior insulation)." - *Illustrated Guide to R22+ Effective Walls, Published by BC Housing, page 13.*